

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1539		MACON	57	1

PROJECT: 00-00155-00-BR

INDEX OF SHEETS

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30	NORTH ABUTMENT
31	NORTH ABUTMENT DETAILS
32	PIER REPAIR DETAILS
33	BAR SPLICER ASSEMBLY DETAILS
34-57	EXISTING BRIDGE PLANS

STANDARDS

000001-05	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
420401-07	BRIDGE APPROACH PAVEMENT
515001-03	NAME PLATE FOR BRIDGES
630001-08	STEEL PLATE BEAM GUARDRAIL
631031-07	TRAFFIC BARRIER TERMINAL TYPE 6
635011-02	REFLECTOR MARKER & MOUNTING DETAILS
701901-01	TRAFFIC CONTROL DEVICES
780001-02	TYPICAL PAVEMENT MARKINGS
BLR21-8	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

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

HLC PROJ. 4698

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

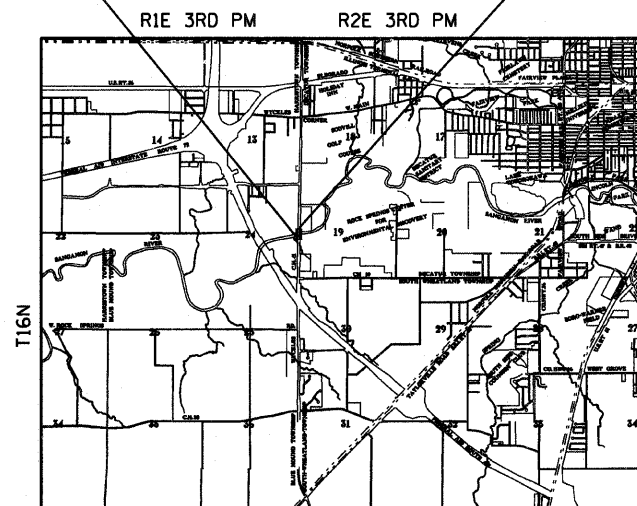
**PLANS FOR PROPOSED
BRIDGE DECK REPLACEMENT
& REHABILITATION PROJECT**

TO BE CONSTRUCTED UNDER THE PROVISIONS OF THE ILLINOIS HIGHWAY CODE

**F.A.S. ROUTE 1539
SEC. 00-00155-00-BR
PROJECT NO. BHS-1539 (105)
MACON COUNTY
C-97-052-09**

PROPOSED SEC 00-00155-00-BR
BEGINS STA 26+59.19

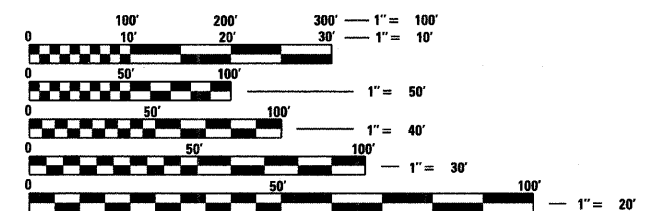
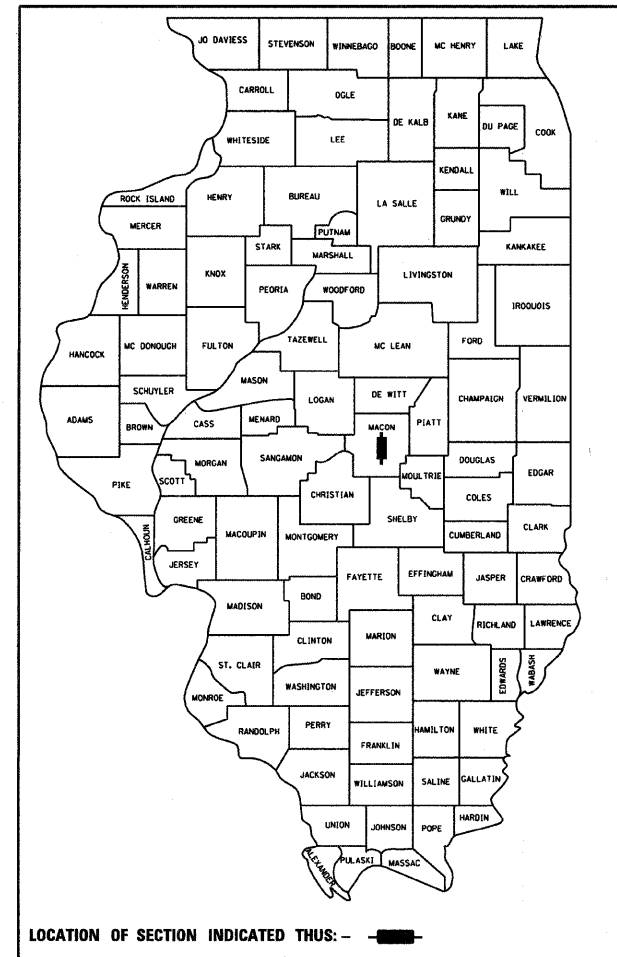
PROPOSED SEC 00-00155-00-BR
END STA 34+40.34



LOCATION MAP

NET LENGTH OF SECTION = 781.15 FEET = 0.148 MILES

FUNCTIONAL CLASSIFICATION - ARTERIAL
2008 ADT = 2100
2028 ADT = 2500
DESIGN SPEED = 65 MPH



PROFESSIONAL ENGINEER
JEREMY M. BUENING
092-080325
STATE OF ILLINOIS
1-26-09
Expires 11-30-09

APPROVED January 26 20 09
[Signature]
COUNTY ENGINEER

PASSED 2/5/09
Maureen Kasel 20
DISTRICT SEVEN ENGINEER OF
LOCAL ROADS AND STREETS

Releasing For
Bid Based on
Limited Review 2/5 20 09
Roger L. Dinkel
DEPUTY DIRECTOR OF HIGHWAYS
REGION FOUR ENGINEER
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HOMER L.
CHASTAIN
& ASSOCIATES, LLP
CONSULTING ENGINEERS
DECATUR (317) 422-8544
CHICAGO (773) 714-0050
ROCKFORD (815) 489-0050
184-001397

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539	•	MACON	57	2
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		
•00-00155-00-BR				

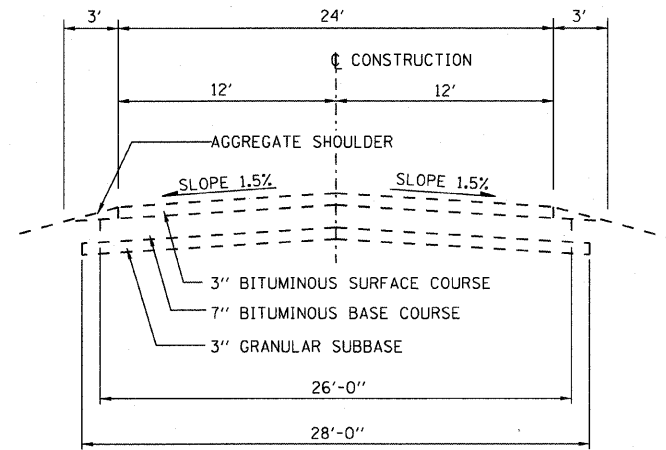
SUMMARY OF QUANTITIES

CODE NUMBER	ITEM	UNIT	QUANTITY
42001165	BRIDGE APPROACH PAVEMENT	SO YD	249
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SO YD	75
• 44004400	PAVEMENT REMOVAL (SPECIAL)	SO YD	214
50102400	CONCRETE REMOVAL	CU YD	29.7
• 50104720	REMOVAL OF EXISTING CONCRETE DECK	EACH	1
50300100	FLOOR DRAINS	EACH	88
50300225	CONCRETE STRUCTURES	CU YD	31.3
50300255	CONCRETE SUPERSTRUCTURE	CU YD	836.2
50300260	BRIDGE DECK GROOVING	SO YD	2645
50300300	PROTECTIVE COAT	SO YD	3410
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	15,550
50500505	STUD SHEAR CONNECTORS	EACH	4430
• 50500715	JACK AND REMOVE EXISTING BEARINGS	EACH	35
• 50600300	CLEANING AND PAINTING STEEL BRIDGE	L SUM	1
• 50606400	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES	L SUM	1
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	237,770
50800515	BAR SPLICERS	EACH	74
51500100	NAME PLATES	EACH	1
52000110	PREFORMED JOINT STRIP SEAL	FT	81
52000216	FINGER PLATE EXPANSION JOINT, 5"	FT	38.3
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	20
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	15
• 63000130	STEEL PLATE BEAM GUARD RAIL, TYPE A (SPECIAL)	FOOT	80
• 63100215	TRAFFIC BARRIER TERMINAL, TYPE 6 (SPECIAL)	EACH	4
63200310	GUARDRAIL REMOVAL	FOOT	252
67100100	MOBILIZATION	L SUM	1
70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1
• 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1762
• X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SO FT	46.3

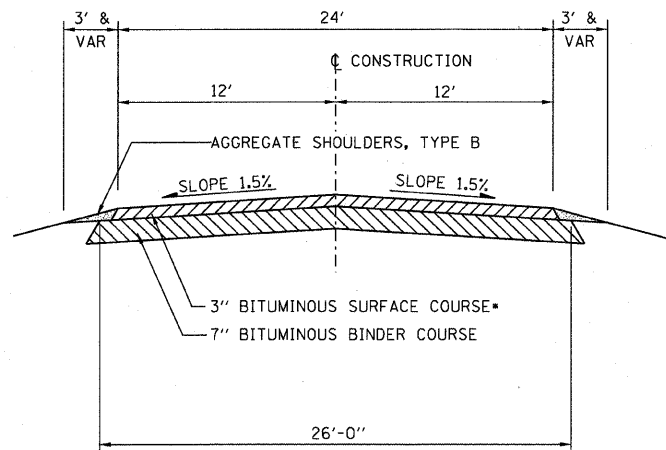
• SEE SPECIAL PROVISIONS
 • SPECIALTY ITEMS

GENERAL NOTES

- ALL UNSURFACED AREAS WITHIN THE RIGHT-OF-WAY THAT ARE DISTURBED BY CONSTRUCTION OF THIS PROJECT SHALL BE SEEDED, FERTILIZED AND MULCHED AS DIRECTED BY THE ENGINEER. MULCH SHALL BE APPLIED IN ACCORDANCE WITH METHOD I, SECTION 251 OF THE STANDARD SPECIFICATIONS. THIS WORK SHALL BE INCLUDED IN THE COST OF THE VARIOUS PAY ITEMS FOR THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THICKNESS AND TYPE OF ALL EXISTING PAVEMENT TO BE REMOVED. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR VARIATIONS IN EXISTING PAVEMENT THICKNESS OR TYPES SHOWN IN THE PLANS.
- WYCKLES ROAD CLOSURE SIGNS SHALL BE PLACED ACCORDING TO THE SPECIAL PROVISIONS, COLORING AND LETTERING SHALL MATCH W20-3101-36 IN STANDARD BLR21.

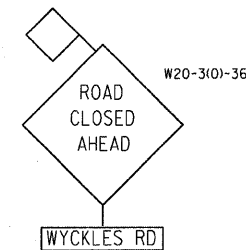


CROSS SECTION OF EXISTING PAVEMENT STRUCTURE
 NOT TO SCALE



CROSS SECTION OF PROPOSED BRIDGE APPROACH PAVEMENT CONNECTOR
 NOT TO SCALE

• 3" OR REQUIRED THICKNESS TO MATCH EXISTING PAVEMENT ELEVATION



ROAD CLOSED SIGN DETAIL

WYCKLES ROAD OVER THE SANGAMON RIVER

DETAILS, GENERAL NOTES & SUMMARY OF QUANTITIES

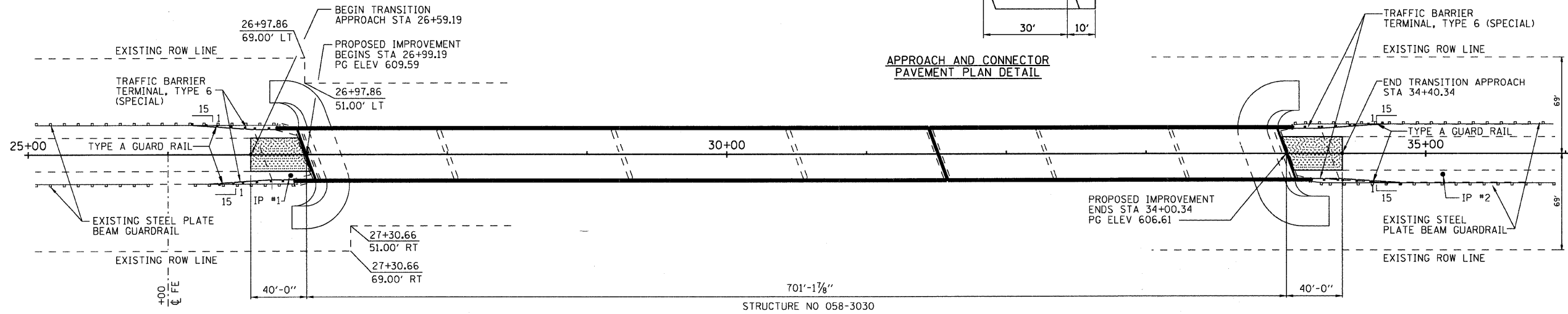
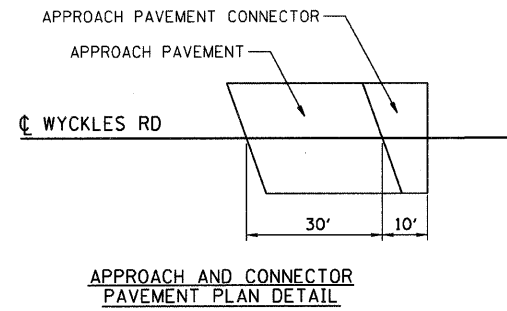
REVISIONS	FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE
NO. DATE INITIALS	STA 30+50.00	SN 058-3030	R KING 9/08
1		MACON COUNTY	CHECKED BY DATE
2			JMG 9/08
3			BOOK NUMBER
4			389
5			PROJECT NO.
6			4698
7			SHEET NO.
8			
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 184-00197

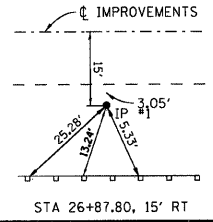
DECATUR CHICAGO
 (617) 422-8544 (773) 714-0050
 ROCKFORD
 (815) 489-0050

TBM
CHISELED SQUARE SOUTHWEST CORNER
OF SOUTHEAST WINGWALL
ELEVATION 611.21

PAVEMENT REMOVAL (SPECIAL)



DATE	
BY	
NO.	
NO.	



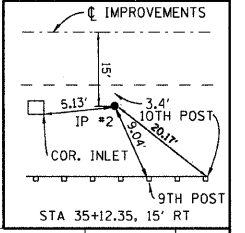
PAVEMENT REMOVAL (SPECIAL)		
STA	TO	SQ YD
26+59.19	26+99.19	107
34+00.34	34+40.34	107
TOTAL		214

GUARDRAIL REMOVAL			
STA	TO	STA	FEET
LT 26+16.5	26+77.5	61.0	
RT 26+29.6	26+90.6	61.0	
LT 34+05.3	34+70.1	64.8	
RT 34+18.4	34+83.2	64.8	
TOTAL			252

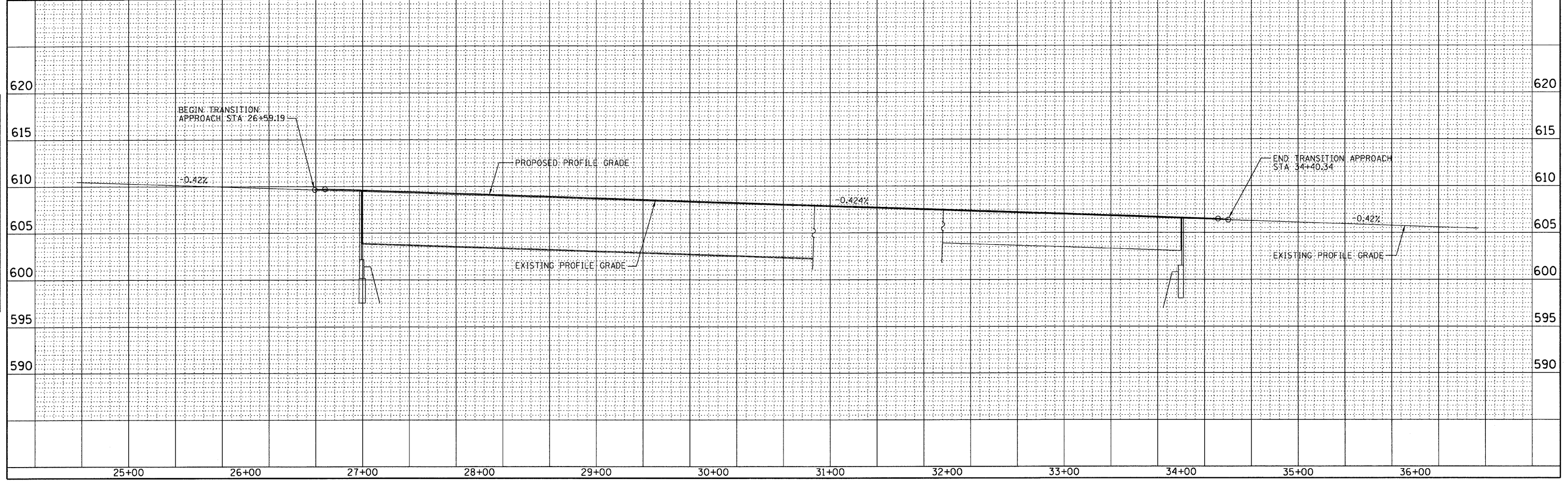
PAINT PAVEMENT MARKING LINE - 4"				
COLOR	STA	TO	STA	FEET
SOLID WHITE	LT 26+59.19	TO	34+40.34	781
SOLID WHITE	RT 26+59.19	TO	34+40.34	781
YELLOW SKIP DASH	26+59.19	TO	34+40.34	200
TOTAL				1762

TRAFFIC BARRIER TERMINAL, TYPE 6 (SPECIAL)			
STA	TO	STA	EACH
LT 26+34.4	26+78.1	1	
RT 26+47.5	26+91.2	1	
LT 34+04.7	34+48.4	1	
RT 34+17.8	34+61.5	1	
TOTAL			4

STEEL PLATE BEAM GUARD RAIL, TYPE A SPL			
STA	TO	STA	EACH
LT 26+16.5	26+34.4	17.9	
RT 26+29.6	26+47.5	17.9	
LT 34+48.4	34+70.1	21.7	
RT 34+61.5	34+83.2	21.7	
TOTAL			80



DATE	
BY	
NO.	
NO.	

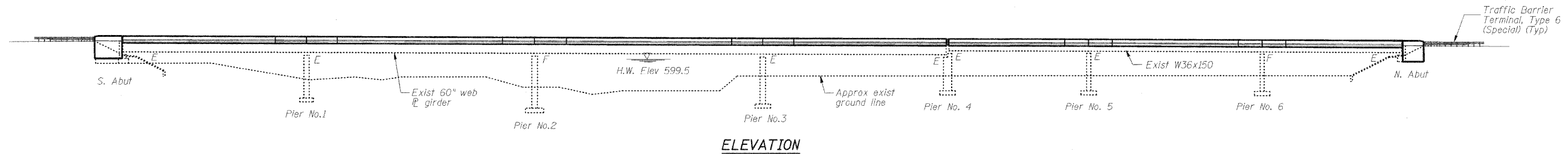


TBM
Chiseled square southwest corner
of southeast wingwall
Elevation 611.21

Sheet No 1
of 30 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539	*	MACON	57	4

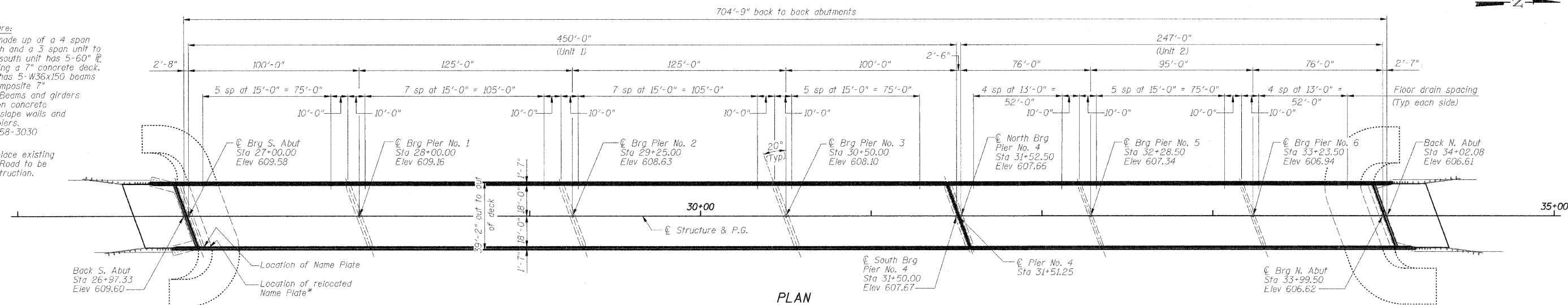
FEDERAL DISTRICT	STATE	PROJECT
00-00155-00-BR	ILLINOIS	



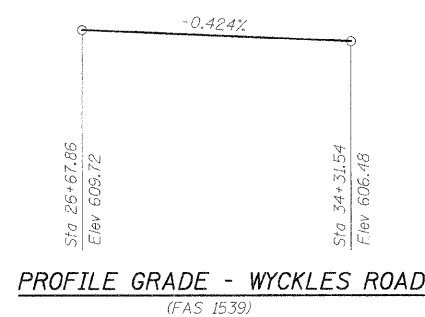
ELEVATION

Existing Structure:
7 span bridge made up of a 4 span unit to the south and a 3 span unit to the north. The south unit has 5-60" I girders supporting a 7" concrete deck. The north unit has 5-W36x150 beams supporting a composite 7" concrete deck. Beams and girders are supported on concrete abutments with slope walls and solid concrete piers. Structure No. 058-3030

Remove and replace existing concrete deck. Road to be closed for construction.



PLAN



PROFILE GRADE - WYCKLES ROAD
(FAS 1539)

BOYER'S FORD BRIDGE
SANGAMON RIVER
RE-BUILT 200 BY
MACON COUNTY
SEC 00-00155-00-BR
PROJECT NO. BHS-1539(105)
STA 30+50.00
STR NO 058-3030
LOADING HS20

NAME PLATE

See Std 515001
*Existing name plate shall be cleaned and relocated adjacent to new name plate. Cost included with "Name Plates."

DESIGN SPECIFICATIONS

2002 AASHTO 17th Edition
LOADING HS20-44
Allow 25 lb/sq ft for future wearing surface.

DESIGN STRESSES

New Construction
f'c = 3,500 psi (concrete)
fy = 60,000 psi (reinforcement)
fy = 36,000 psi (M270 Grade 36)
fy = 50,000 psi (M270 Grade 50)

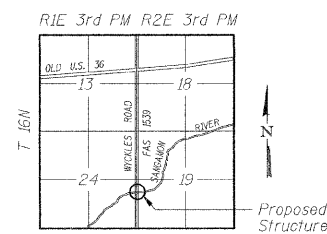
Existing Construction
f'c = 3,500 psi
fy = 40,000 psi (reinforcement)
fy = 36,000 psi (structural steel)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = .048
Site Coefficient (S) = 1.5

Thomas
1-21-09
CHICAGO STRUCTURAL ENGINEERS
Expires 11-30-10

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 the requirements of the current "AASHTO Standard Specifications for Highway Bridges."



LOCATION SKETCH

WYCKLES ROAD OVER THE SANGAMON RIVER

GENERAL PLAN AND ELEVATION

REVISIONS	FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE
1			R KING 9/08
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7			4698
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10			

STA 30+50.00 SN 058-3030 MACON COUNTY

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CONSULTING ENGINEERS
184-91397

DECATUR CHICAGO
(217) 422-8544 (773) 714-0050

ROCKFORD
(815) 489-0050

Sheet No 2
of 30 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539	•	MACON	57	5
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		
		•00-00155-00-BR		

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer.

Any cracks that cannot be removed by grinding 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures".

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

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts (in painted areas and M164 Type 3 in unpainted areas). Bolts - 7/8 in. ϕ , holes - 15/16 in. ϕ , unless otherwise noted.

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

Calculated weight of Structural Steel = 15,550 lbs.

Adjustments to the height of the Elastomeric Bearing Assemblies shall be made by grinding the bearing seat surface or by shimming the bearing. Two 1/8" adjusting shims, of the dimension of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, two 1/8" adjusting shims shall be provided for each bearing and placed as detailed.

All construction joints shall be bonded.

Anchor bolts shall be set before bolting diaphragms (bolting cross frames) over supports.

The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.

Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

The Contractor shall make allowance for the deflection of forms, shrinkage and settlement of falsework, in addition to allowance for dead load deflection. Forms for deck slab shall be removed prior to placement of bridge approach pavement.

Floor drains shall be located clear of all diaphragms and cross frames.

Finger plate expansion joints shall be assembled in their final relative position with the ends in place for shop inspection and acceptance.

The Contractor shall test the existing welds by non-destructive methods within 2 ft. of the end of the existing cover plates for cracks after removal of the existing concrete deck. Dye penetrant (PT), magnetic particle (MT), or other approved testing method shall be performed by qualified personnel approved by the Engineer. If cracks are found, report them to the Bureau of Bridges and Structures for disposition. The cost of testing is included in Removal of Existing Concrete Deck. The cost of crack repair, if necessary, will be paid for according to Article 109.04 of the Standard Specifications.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu Yd		29.7	29.7
Removal of Existing Concrete Deck	Each	1		1
Floor Drains	Each	88		88
Preformed Joint Strip Seal	Foot	81		81
Finger Plate Expansion Joint, 5"	Foot	38.3		38.3
Concrete Structures	Cu Yd		31.3	31.3
Concrete Superstructure	Cu Yd	836.2		836.2
Bridge Deck Grooving	Sq Yd	2645		2645
Protective Coat	Sq Yd	3410		3410
Elastomeric Bearing Assembly - Type I	Each		20	20
Elastomeric Bearing Assembly - Type II	Each		15	15
Formed Concrete Repair (Depth Equal to or Less Than 5")	Sq Ft		46.3	46.3
Furnishing and Erecting Structural Steel	Pound	15,550		15,550
Stud Shear Connectors	Each		4430	4430
Jack and Remove Existing Bearings	Each		35	35
Cleaning and Painting Steel Bridge	L Sum	1		1
Containment and Disposal of Lead Paint Cleaning Residues	L Sum	1		1
Reinforcement Bars, Epoxy Coated	Pound	233,080	4,690	237,770
Name Plates	Each	1		1
Bar Splicers	Each	74		74

WYCKLES ROAD OVER THE SANGAMON RIVER

GENERAL NOTES AND BILL OF MATERIAL

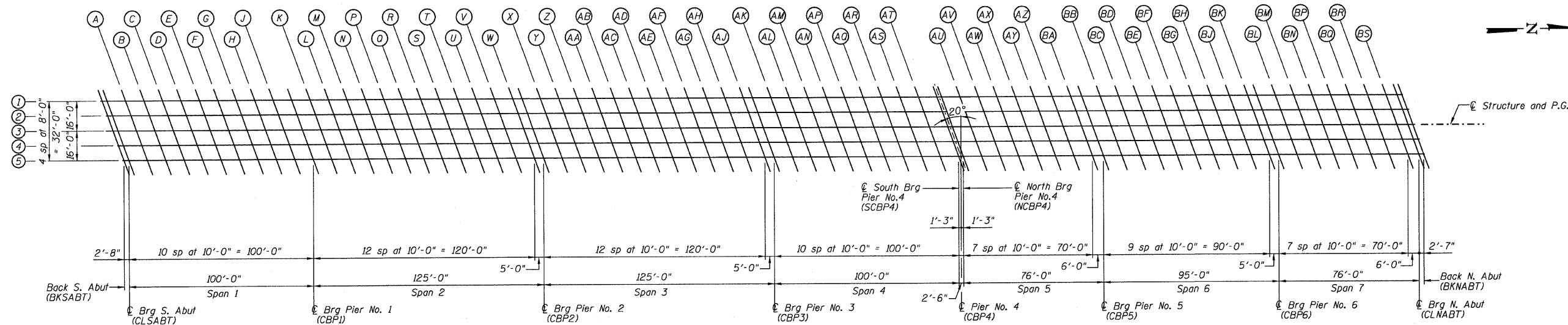
REVISIONS	FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE R KING 9/08
No. DATE INITIALS	STA 30+50.00	SN 058-3030	CHECKED BY DATE JMB 9/08
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CONSULTING ENGINEERS
184-001297

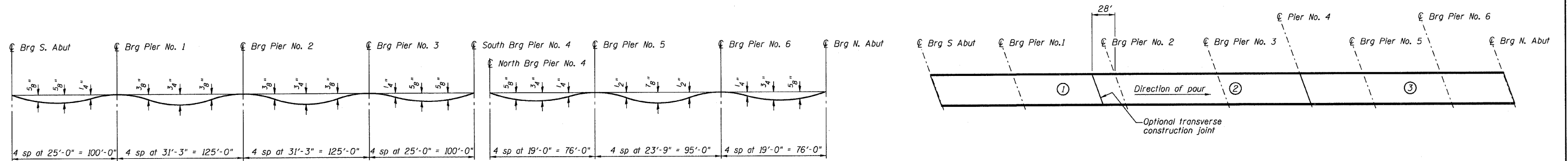
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(317) 422-8444 (773) 714-0650
ROCKFORD
(815) 489-0850

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539	•	MACON	57	6
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

• 00-00155-00-BR



DECK ELEVATION LAYOUT



DEAD LOAD DEFLECTION DIAGRAM

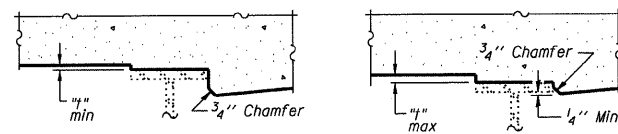
(Includes weight of concrete only.)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 4 & 5 of 30.

When the deck pour is stopped for the day at one or more of the Transverse 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 modulus of rupture of 650 psi or a minimum compressive strength of 3500 psi.

DECK POURING SEQUENCE



At Minimum Fillet

At Maximum Fillet

FILLET HEIGHTS

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams and girders shall be taken at intervals shown on Sheets 4 & 5 of 30. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheets 4 & 5 of 30, minus slab thickness, equals the fillet heights "t" above top flange of beams and girders.

WYCKLES ROAD OVER THE SANGAMON RIVER

DECK ELEVATION LAYOUT

REVISIONS		FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE R KING 9/08
1	DATE INITIALS	STA 30+50.00	SN 058-3030	CHECKED BY DATE JMB 9/08
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ROCKFORD
(815) 489-0050

SCREED INFORMATION FOR BEAM OR GIRDER = 1

Table with columns: LINE, STATION, OFFSET, THEORETICAL GRADE, ELEVATION, ADJUSTED FOR DEAD LOAD DEFLECTION. Rows include BKSABT, CLSABT, A, B, C, D, E, F, G, H, J, CBP1, K, L, M, N, P, Q, R, S, T, U, V, W, CBP2, X, Y, Z, AA, AB, AC, AD, AE, AF, AG, AH, AJ, CBP3, AK, AL, AM, AN, AP, AQ, AR, AS, AT, SCBP4, CBP4, NCBP4, AU, AV, AW, AX, AY, AZ, BA, CBP5, BB, BC, BD, BE, BF, BG, BH, BJ, BK, CBP6, BL, BM, BN, BP, BQ, BR, BS, CLNABT, BKNABT.

SCREED INFORMATION FOR BEAM OR GIRDER = 2

Table with columns: LINE, STATION, OFFSET, THEORETICAL GRADE, ELEVATION, ADJUSTED FOR DEAD LOAD DEFLECTION. Rows include BKSABT, CLSABT, A, B, C, D, E, F, G, H, J, CBP1, K, L, M, N, P, Q, R, S, T, U, V, W, CBP2, X, Y, Z, AA, AB, AC, AD, AE, AF, AG, AH, AJ, CBP3, AK, AL, AM, AN, AP, AQ, AR, AS, AT, SCBP4, CBP4, NCBP4, AU, AV, AW, AX, AY, AZ, BA, CBP5, BB, BC, BD, BE, BF, BG, BH, BJ, BK, CBP6, BL, BM, BN, BP, BQ, BR, BS, CLNABT, BKNABT.

SCREED INFORMATION FOR BEAM OR GIRDER = 3 AND P.G.

Table with columns: LINE, STATION, OFFSET, THEORETICAL GRADE, ELEVATION, ADJUSTED FOR DEAD LOAD DEFLECTION. Rows include BKSABT, CLSABT, A, B, C, D, E, F, G, H, J, CBP1, K, L, M, N, P, Q, R, S, T, U, V, W, CBP2, X, Y, Z, AA, AB, AC, AD, AE, AF, AG, AH, AJ, CBP3, AK, AL, AM, AN, AP, AQ, AR, AS, AT, SCBP4, CBP4, NCBP4, AU, AV, AW, AX, AY, AZ, BA, CBP5, BB, BC, BD, BE, BF, BG, BH, BJ, BK, CBP6, BL, BM, BN, BP, BQ, BR, BS, CLNABT, BKNABT.

Sheet No. 4 of 30 Sheets

Table with columns: ROUTE NO., SECTION, COUNTY, TOTAL SHEETS, SHEET NO. Values: FAS 1539, MAON, 57, 7.

00-00155-00-BR

WYCKLES ROAD OVER THE SANGAMON RIVER

DECK ELEVATIONS

Table with columns: REVISIONS, FAS 1539, SECTION 00-00155-00-BR, DRAWN BY DATE, R KING 9/08, CHECKED BY DATE, STA 30+50.00, SN 058-3030, MAON COUNTY, BOOK NUMBER, PROJECT No. 4698, SHEET No., HOMER L. CHASTAIN & ASSOCIATES, LLP, CONSULTING ENGINEERS, DECATUR CHICAGO (317) 432-8544 (773) 714-0050, ROCKFORD (815) 489-0050, 184-901397.

Sheet No. 5
of 30 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539	•	MACON	57	8
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

•00-00155-00-BR

SCREED INFORMATION FOR BEAM OR GIRDER = 4

SCREED INFORMATION FOR BEAM OR GIRDER = 5

LINE	STATION	OFFSET	ELEVATION	
			THEORETICAL GRADE ELEVATION	ADJUSTED FOR DEAD LOAD DEFLECTION
BKSABT	2700.245	-8.000	609.458	609.458
CLSABT	2702.912	-8.000	609.447	609.447
A	2712.912	-8.000	609.404	609.427
B	2722.912	-8.000	609.362	609.403
C	2732.912	-8.000	609.319	609.373
D	2742.912	-8.000	609.277	609.335
E	2752.912	-8.000	609.234	609.289
F	2762.912	-8.000	609.192	609.237
G	2772.912	-8.000	609.150	609.181
H	2782.912	-8.000	609.107	609.123
J	2792.912	-8.000	609.065	609.069
CBP1	2802.912	-8.000	609.022	609.022
K	2812.912	-8.000	608.980	608.986
L	2822.912	-8.000	608.938	608.955
M	2832.912	-8.000	608.895	608.927
N	2842.912	-8.000	608.853	608.899
P	2852.912	-8.000	608.810	608.868
Q	2862.912	-8.000	608.768	608.830
R	2872.912	-8.000	608.725	608.785
S	2882.912	-8.000	608.683	608.735
T	2892.912	-8.000	608.641	608.680
U	2902.912	-8.000	608.598	608.622
V	2912.912	-8.000	608.556	608.560
W	2922.912	-8.000	608.513	608.517
CBP2	2927.912	-8.000	608.492	608.492
X	2937.912	-8.000	608.450	608.455
Y	2947.912	-8.000	608.407	608.424
Z	2957.912	-8.000	608.365	608.396
AA	2967.912	-8.000	608.322	608.368
AB	2977.912	-8.000	608.280	608.337
AC	2987.912	-8.000	608.237	608.299
AD	2997.912	-8.000	608.195	608.255
AE	3007.912	-8.000	608.153	608.205
AF	3017.912	-8.000	608.110	608.150
AG	3027.912	-8.000	608.068	608.092
AH	3037.912	-8.000	608.025	608.030
AJ	3047.912	-8.000	607.983	607.986
CBP3	3052.912	-8.000	607.962	607.962
AK	3062.912	-8.000	607.919	607.924
AL	3072.912	-8.000	607.877	607.893
AM	3082.912	-8.000	607.834	607.865
AN	3092.912	-8.000	607.792	607.837
AP	3102.912	-8.000	607.750	607.804
AQ	3112.912	-8.000	607.707	607.765
AR	3122.912	-8.000	607.665	607.718
AS	3132.912	-8.000	607.622	607.663
AT	3142.912	-8.000	607.580	607.602
SCBP4	3152.912	-8.000	607.537	607.537
CBP4	3154.162	-8.000	607.532	607.532
NCBP4	3155.412	-8.000	607.527	607.527
AU	3165.412	-8.000	607.484	607.515
AV	3175.412	-8.000	607.442	607.495
AW	3185.412	-8.000	607.400	607.462
AX	3195.412	-8.000	607.357	607.370
AY	3205.412	-8.000	607.315	607.355
AZ	3215.412	-8.000	607.272	607.291
BA	3225.412	-8.000	607.230	607.234
CBP5	3231.412	-8.000	607.204	607.204
BB	3241.412	-8.000	607.162	607.172
BC	3251.412	-8.000	607.120	607.149
BD	3261.412	-8.000	607.077	607.127
BE	3271.412	-8.000	607.035	607.099
BF	3281.412	-8.000	606.992	607.059
BG	3291.412	-8.000	606.950	607.008
BH	3301.412	-8.000	606.907	606.948
BJ	3311.412	-8.000	606.865	606.884
BK	3321.412	-8.000	606.823	606.827
CBP6	3326.412	-8.000	606.801	606.801
BL	3336.412	-8.000	606.759	606.768
BM	3346.412	-8.000	606.716	606.744
BN	3356.412	-8.000	606.674	606.722
BP	3366.412	-8.000	606.632	606.692
BQ	3376.412	-8.000	606.589	606.649
BR	3386.412	-8.000	606.547	606.593
BS	3396.412	-8.000	606.504	606.524
CLNABT	3402.412	-8.000	606.479	606.479
BKNABT	3404.995	-8.000	606.468	606.468

LINE	STATION	OFFSET	ELEVATION	
			THEORETICAL GRADE ELEVATION	ADJUSTED FOR DEAD LOAD DEFLECTION
BKSABT	2703.157	-16.000	609.300	609.300
CLSABT	2705.824	-16.000	609.289	609.289
A	2715.824	-16.000	609.246	609.269
B	2725.824	-16.000	609.204	609.245
C	2735.824	-16.000	609.161	609.214
D	2745.824	-16.000	609.119	609.177
E	2755.824	-16.000	609.076	609.131
F	2765.824	-16.000	609.034	609.079
G	2775.824	-16.000	608.992	609.023
H	2785.824	-16.000	608.949	608.965
J	2795.824	-16.000	608.907	608.911
CBP1	2805.824	-16.000	608.864	608.864
K	2815.824	-16.000	608.822	608.828
L	2825.824	-16.000	608.779	608.797
M	2835.824	-16.000	608.737	608.769
N	2845.824	-16.000	608.695	608.741
P	2855.824	-16.000	608.652	608.710
Q	2865.824	-16.000	608.610	608.672
R	2875.824	-16.000	608.567	608.627
S	2885.824	-16.000	608.525	608.577
T	2895.824	-16.000	608.483	608.522
U	2905.824	-16.000	608.440	608.464
V	2915.824	-16.000	608.398	608.402
W	2925.824	-16.000	608.355	608.359
CBP2	2930.824	-16.000	608.334	608.334
X	2940.824	-16.000	608.292	608.297
Y	2950.824	-16.000	608.249	608.266
Z	2960.824	-16.000	608.207	608.238
AA	2970.824	-16.000	608.164	608.210
AB	2980.824	-16.000	608.122	608.179
AC	2990.824	-16.000	608.079	608.141
AD	3000.824	-16.000	608.037	608.097
AE	3010.824	-16.000	607.995	608.047
AF	3020.824	-16.000	607.952	607.992
AG	3030.824	-16.000	607.910	607.934
AH	3040.824	-16.000	607.867	607.872
AJ	3050.824	-16.000	607.825	607.828
CBP3	3055.824	-16.000	607.804	607.804
AK	3065.824	-16.000	607.761	607.766
AL	3075.824	-16.000	607.719	607.735
AM	3085.824	-16.000	607.676	607.707
AN	3095.824	-16.000	607.634	607.679
AP	3105.824	-16.000	607.592	607.646
AQ	3115.824	-16.000	607.549	607.607
AR	3125.824	-16.000	607.507	607.560
AS	3135.824	-16.000	607.464	607.505
AT	3145.824	-16.000	607.422	607.444
SCBP4	3155.824	-16.000	607.379	607.379
CBP4	3157.074	-16.000	607.374	607.374
NCBP4	3158.324	-16.000	607.369	607.369
AU	3168.324	-16.000	607.326	607.357
AV	3178.324	-16.000	607.284	607.337
AW	3188.324	-16.000	607.242	607.304
AX	3198.324	-16.000	607.199	607.212
AY	3208.324	-16.000	607.157	607.197
AZ	3218.324	-16.000	607.114	607.133
BA	3228.324	-16.000	607.072	607.076
CBP5	3234.324	-16.000	607.046	607.046
BB	3244.324	-16.000	607.004	607.014
BC	3254.324	-16.000	606.962	606.991
BD	3264.324	-16.000	606.919	606.969
BE	3274.324	-16.000	606.877	606.941
BF	3284.324	-16.000	606.834	606.901
BG	3294.324	-16.000	606.792	606.850
BH	3304.324	-16.000	606.749	606.790
BJ	3314.324	-16.000	606.707	606.726
BK	3324.324	-16.000	606.665	606.669
CBP6	3329.324	-16.000	606.643	606.643
BL	3339.324	-16.000	606.601	606.610
BM	3349.324	-16.000	606.558	606.586
BN	3359.324	-16.000	606.516	606.564
BP	3369.324	-16.000	606.474	606.534
BQ	3379.324	-16.000	606.431	606.491
BR	3389.324	-16.000	606.389	606.434
BS	3399.324	-16.000	606.346	606.366
CLNABT	3405.324	-16.000	606.321	606.321
BKNABT	3407.907	-16.000	606.310	606.310

WYCKLES ROAD OVER THE SANGAMON RIVER

DECK ELEVATIONS

REVISIONS	FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE R KING 9/08
1		STA 30+50.00	CHECKED BY DATE JMB 9/08
2		SN 058-3030	BOOK NUMBER
3		MACON COUNTY	PROJECT No.
4			4698
5			SHEET No.
6			
7			
8			
9			
10			

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539	•	MACON	57	9
FED. ROAD DIST. NO.		ILLINOIS	PROJECT	
•00-00155-00-BR				

WEST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End of South appr pavement	26+60.78	-18.00	609.44
A	26+70.78	-18.00	609.39
B	26+80.78	-18.00	609.35
Back S Abut	26+90.78	-18.00	609.31

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End of South appr pavement	26+62.97	-12.00	609.55
A	26+72.97	-12.00	609.51
B	26+82.97	-12.00	609.47
Back S Abut	26+92.97	-12.00	609.43

☉ STRUCTURE AND PGL

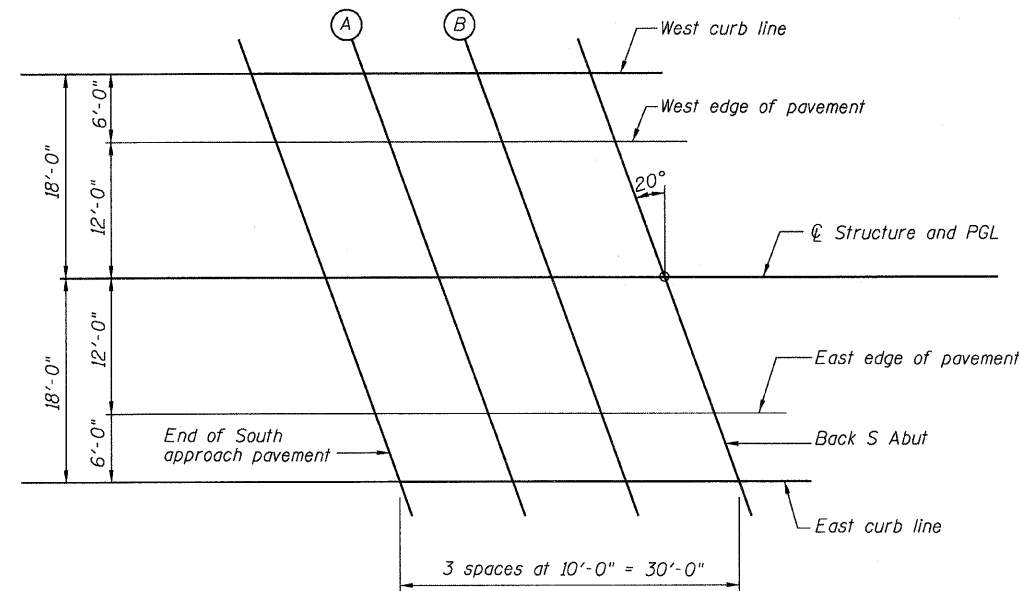
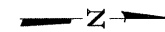
Location	Station	Offset	Theoretical Grade Elevations
End of South appr pavement	26+67.33	0.00	609.72
A	26+77.33	0.00	609.68
B	26+87.33	0.00	609.64
Back S Abut	26+97.33	0.00	609.59

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End of South appr pavement	26+71.70	12.00	609.52
A	26+81.70	12.00	609.47
B	26+91.70	12.00	609.43
Back S Abut	27+01.70	12.00	609.39

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End of South appr pavement	26+73.88	18.00	609.38
A	26+83.88	18.00	609.34
B	26+93.88	18.00	609.30
Back S Abut	27+03.88	18.00	609.25



PLAN

WYCKLES ROAD OVER THE SANGAMON RIVER

TOP OF SOUTH APPROACH SLAB ELEVATIONS

REVISIONS	FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE
1		SN 058-3030	R. KING 9/08
2		MACON COUNTY	CHECKED BY DATE
3			JMB 9/08
4			BOOK NUMBER
5			PROJECT NO.
6			4698
7			SHEET NO.
8			
9			
10			

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Sheet No. 7
of 30 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539	*	MACON	57	10
FED. ROAD DIST. NO.		ILLINOIS	PROJECT	
*00-00155-00-BR				

WEST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Back N Abut	33+99.53	-18.00	606.32
A	34+05.53	-18.00	606.28
B	34+15.53	-18.00	606.24
End of North appr pavement	34+25.53	-18.00	606.19

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Back N Abut	33+97.72	-12.00	606.44
A	34+07.72	-12.00	606.39
B	34+17.72	-12.00	606.35
End of North appr pavement	34+27.72	-12.00	606.31

☉ STRUCTURE AND PGL

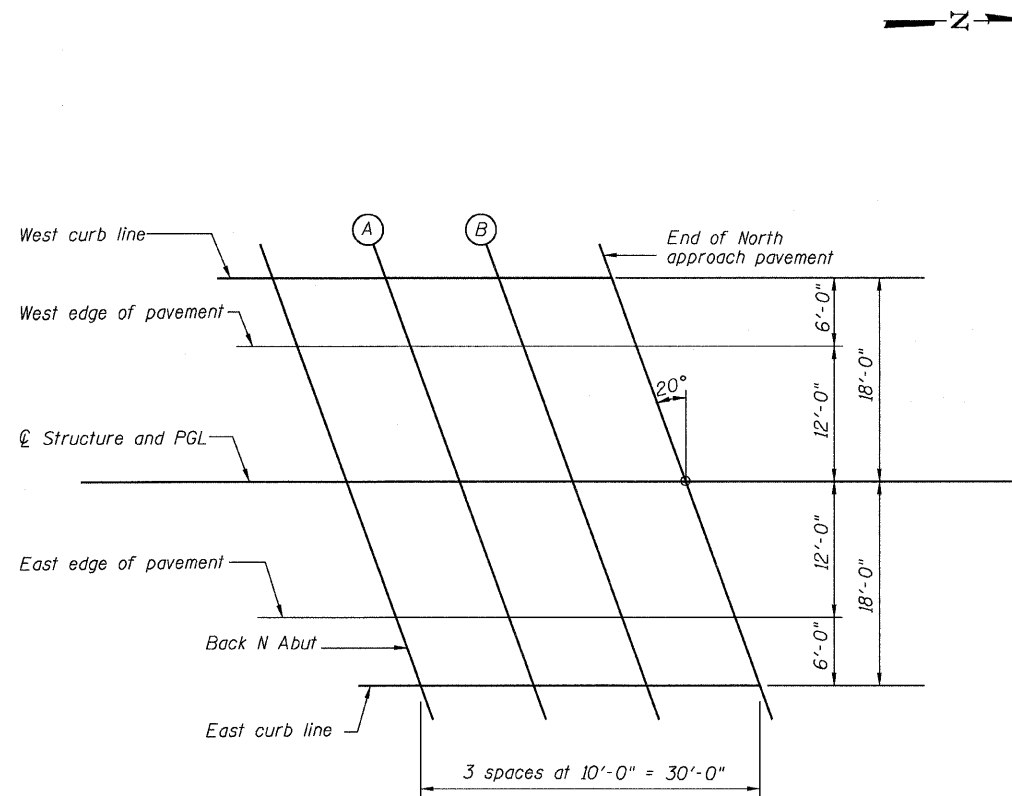
Location	Station	Offset	Theoretical Grade Elevations
Back N Abut	34+02.08	0.00	606.61
A	34+12.08	0.00	606.56
B	34+22.08	0.00	606.52
End of North appr pavement	34+32.08	0.00	606.48

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Back N Abut	34+06.45	12.00	606.40
A	34+16.45	12.00	606.36
B	34+26.45	12.00	606.32
End of North appr pavement	34+36.45	12.00	606.27

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Back N Abut	34+08.63	18.00	606.27
A	34+18.63	18.00	606.22
B	34+28.63	18.00	606.18
End of North appr pavement	34+38.63	18.00	606.14



PLAN

WYCKLES ROAD OVER THE SANGAMON RIVER

TOP OF NORTH APPROACH SLAB ELEVATIONS

REVISIONS	FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE
1		STA 30+50.00	R KING 9/08
2		SN 058-3030	CHECKED BY DATE
3		MACON COUNTY	JMB 9/08
4			BOOK NUMBER
5			PROJECT No.
6			4698
7			SHEET No.
8			
9			
10			

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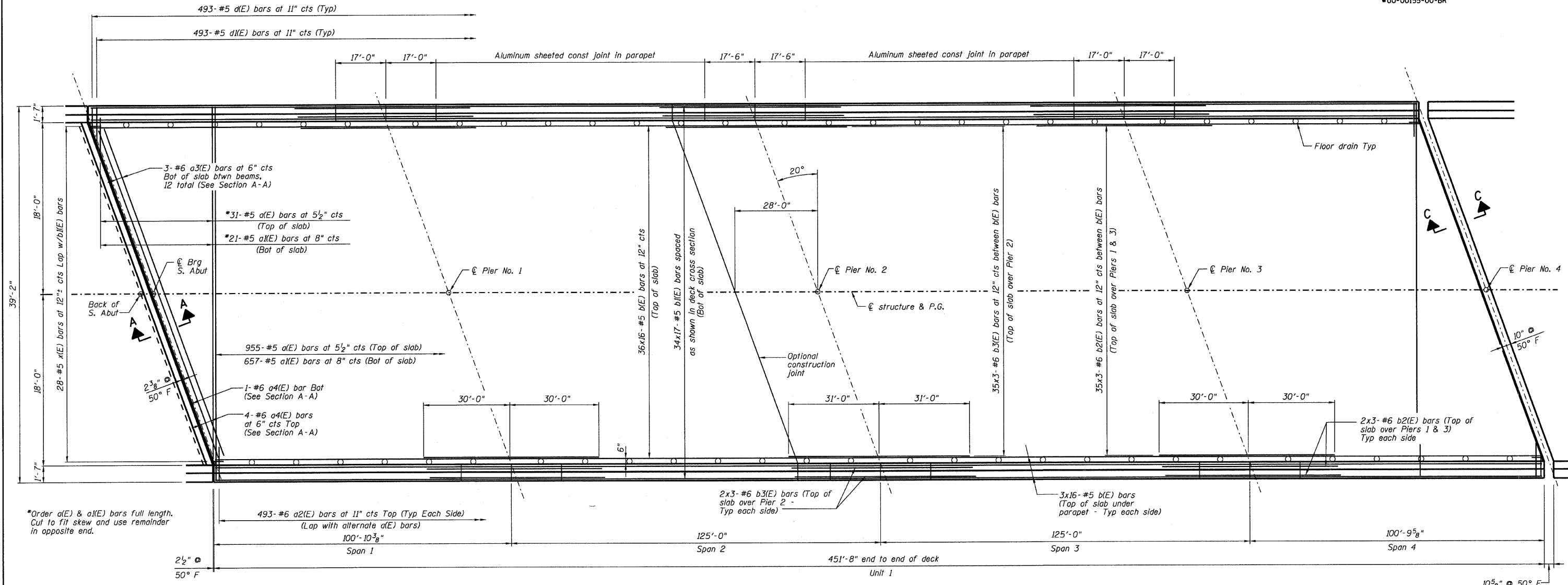
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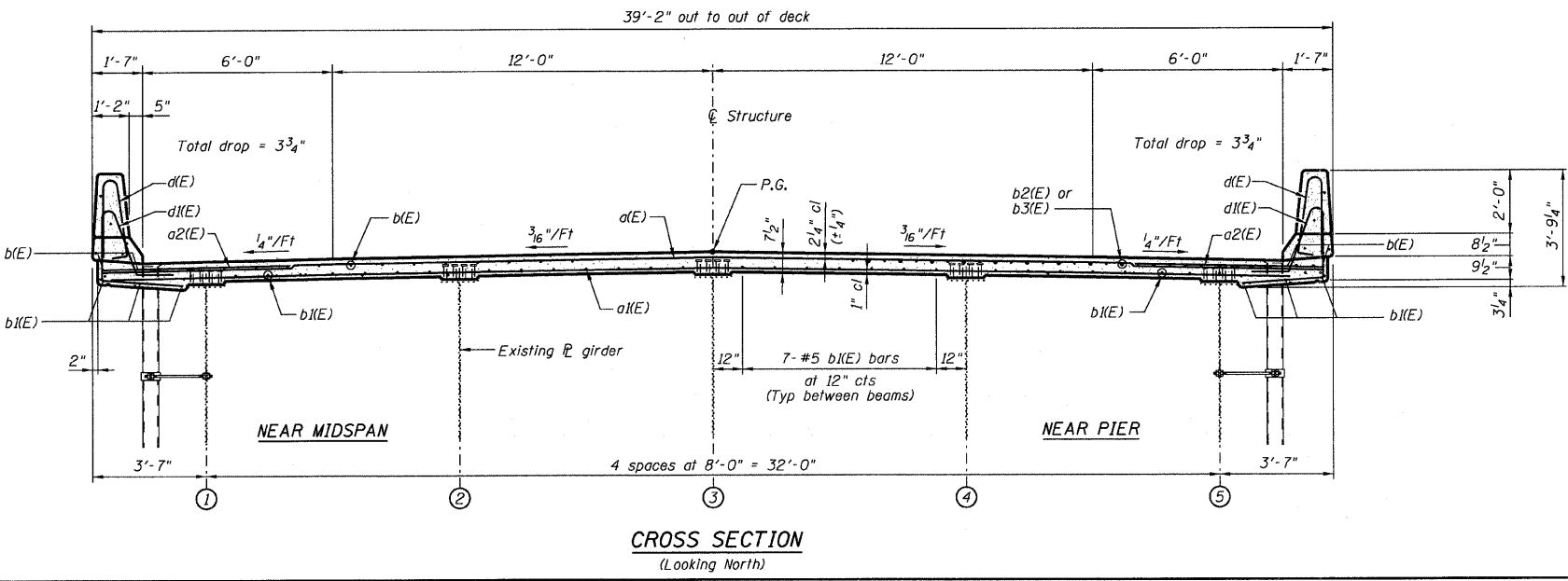
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539		MACON	57	11
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

#00-00155-00-BR

Sheet No 8 of 30 Sheets



PLAN - UNIT 1



CROSS SECTION
(Looking North)

MIN BAR LAP
 #5 bar = 1'-8"
 #6 bar = 2'-0"

- Notes:
- See Sheet 10 of 30 for parapet reinforcement, superstructure details and Bill of Material.
 - Reinforcement bars designated (E) shall be epoxy coated.
 - Bars indicated thus 3x10 etc indicates 3 lines of bars with 10 lengths per line.
 - For floor drain spacing see sheet 1 of 30.
 - For Sec A-A see Sheet 9 of 30.
 - For Sec C-C see Sheet 12 of 30.

WYCKLES ROAD OVER THE SANGAMON RIVER
DECK PLAN AND CROSS SECTION - UNIT 1

REVISIONS	FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE
1	STA 30+50.00	SN 058-3030	R KING 9/08
2		MACON COUNTY	CHECKED BY DATE
3			JMB 9/08
4			BOOK NUMBER
5			
6			PROJECT NO.
7			4698
8			SHEET NO.
9			
10			

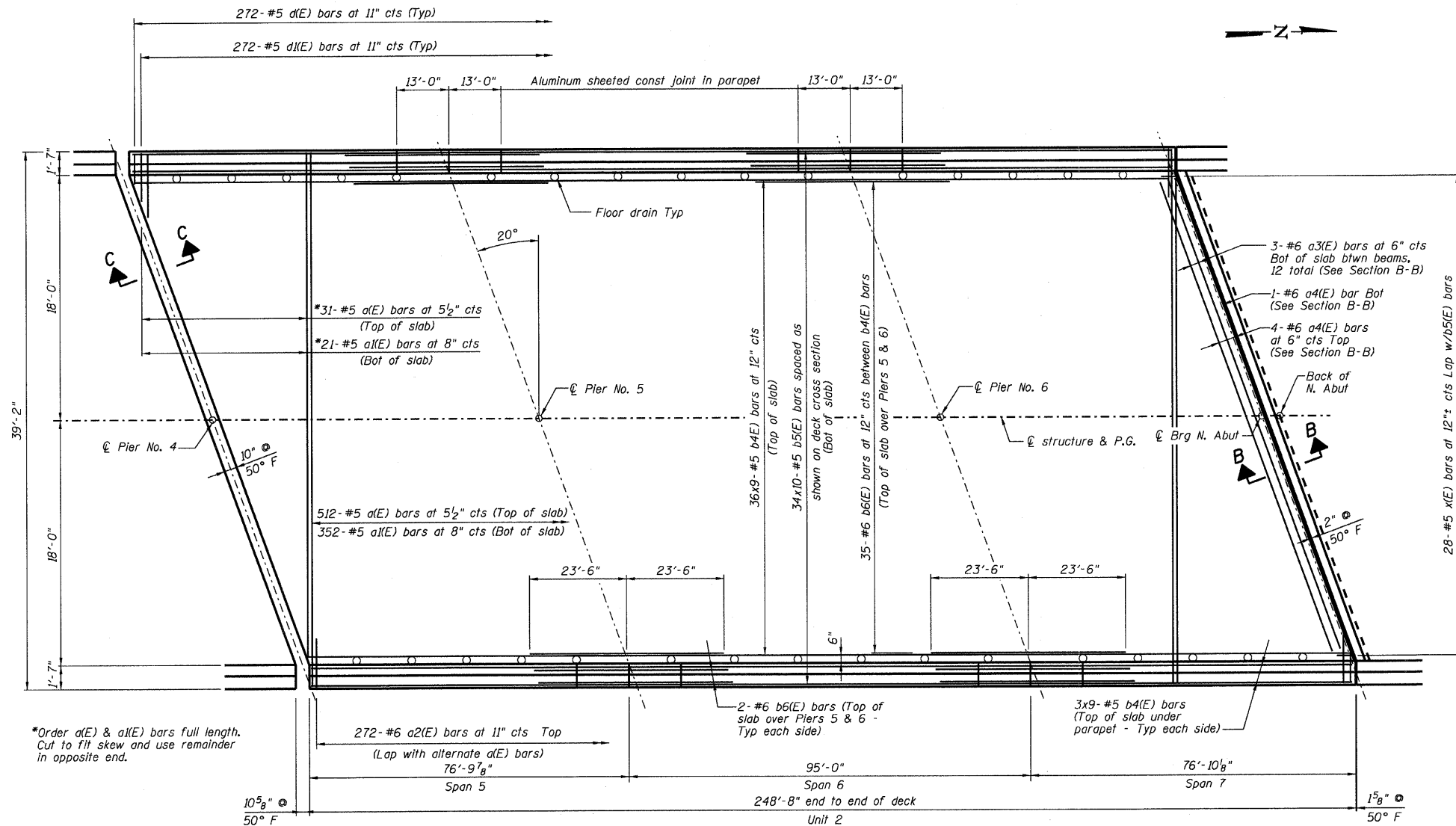
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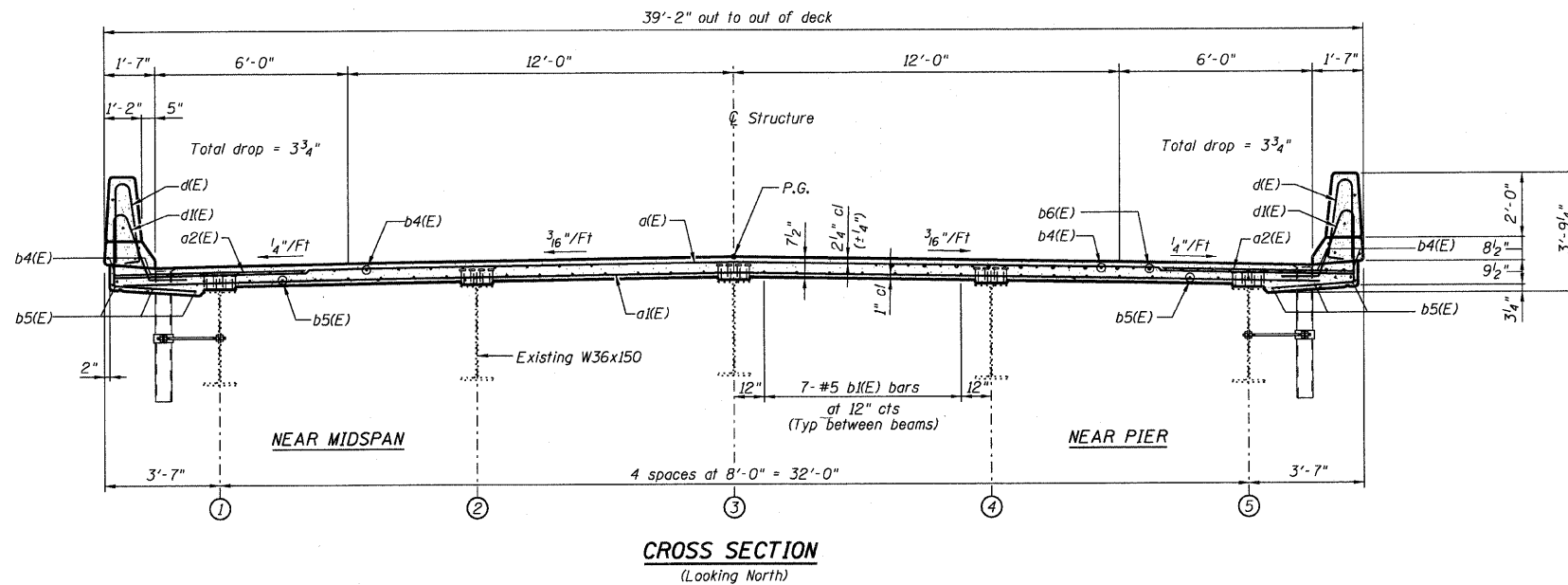
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539		MACON	57	12
FEDERAL DIST. NO.	ILLINOIS	PROJECT		

•00-00155-00-BR

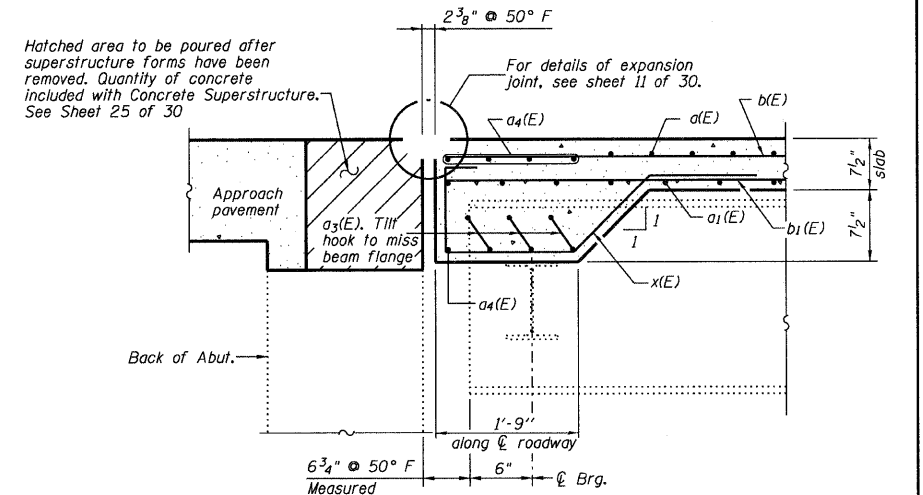


PLAN - UNIT 2

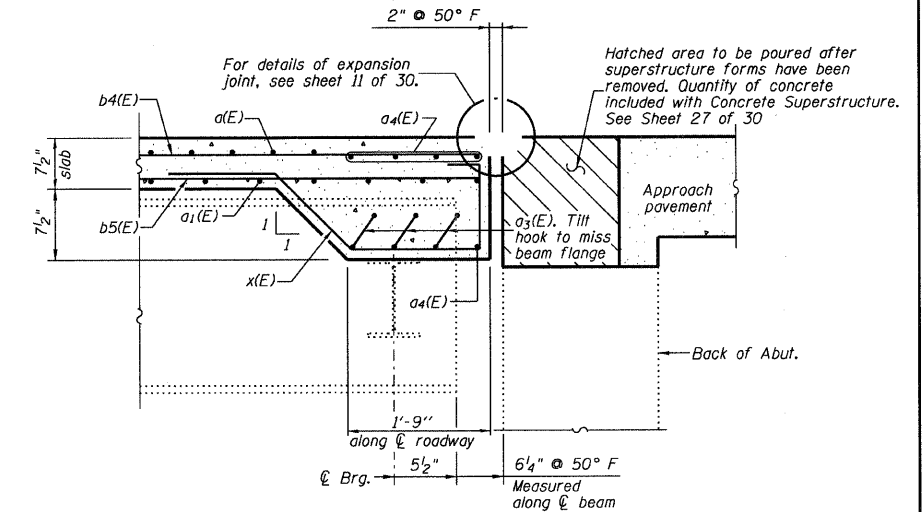
MIN BAR LAP
#5 bar = 1'-8"



CROSS SECTION
(Looking North)



SECTION A-A



SECTION B-B

Notes:
See Sheet 10 of 30 for parapet reinforcement, superstructure details and Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 3x10 etc indicates 3 lines of bars with 10 lengths per line.
For floor drain spacing see sheet 1 of 30.
For Sec C-C see Sheet 12 of 30.

WYCKLES ROAD OVER THE SANGAMON RIVER

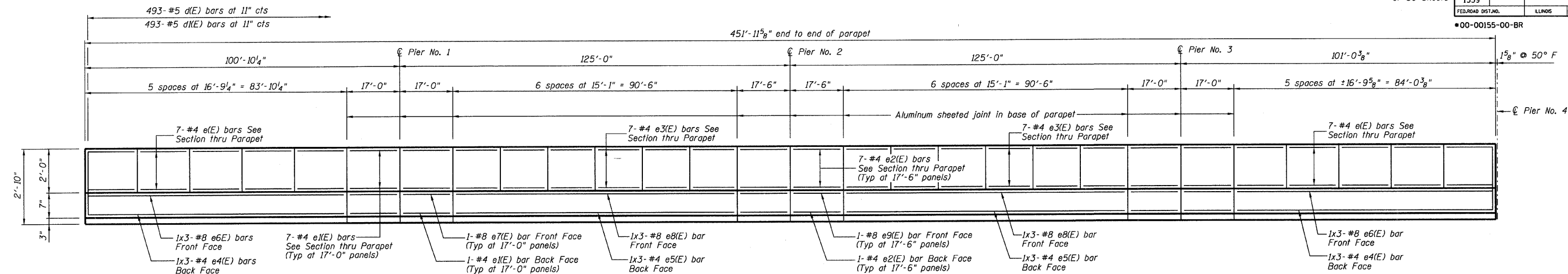
DECK PLAN AND CROSS SECTION - UNIT 2

REVISIONS	FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE
1	DATE INITIALS	STA 30+50.00	R KING 9/08
2		SN 058-3030	CHECKED BY DATE
3		MACON COUNTY	JME 9/08
4			BOOK NUMBER
5			PROJECT NO.
6			4698
7			SHEET NO.
8			
9			
10			

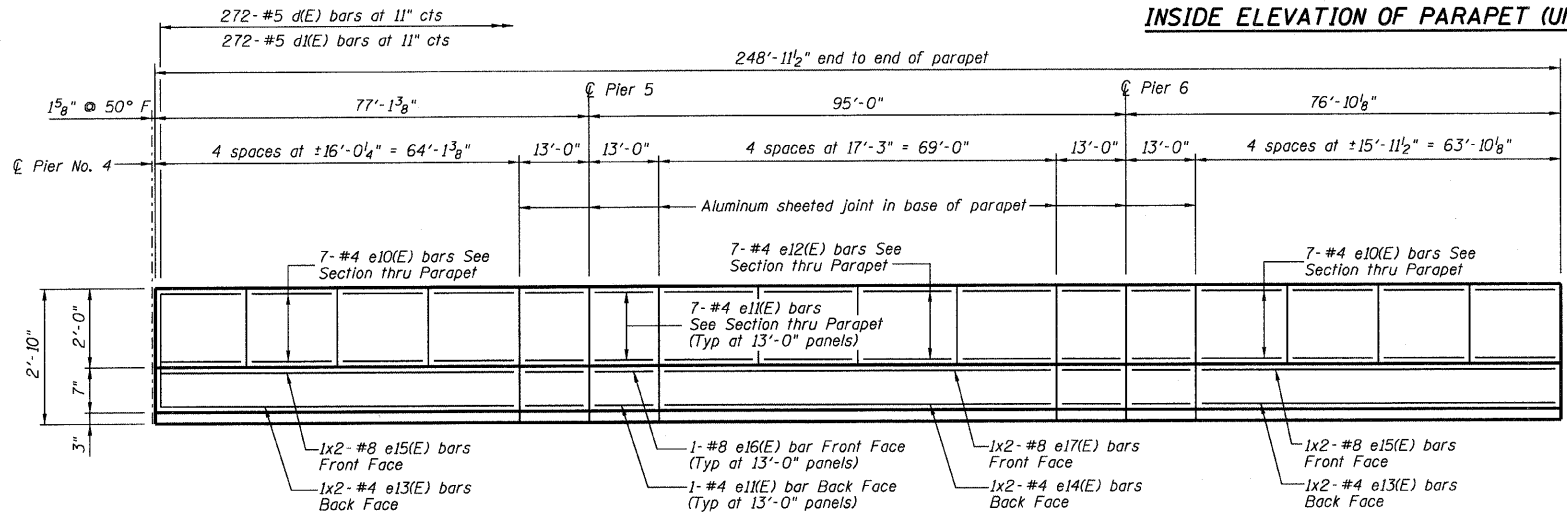
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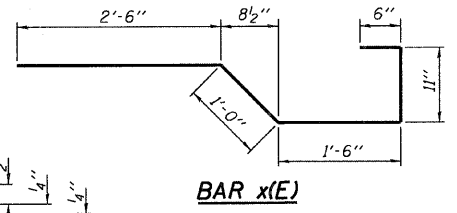
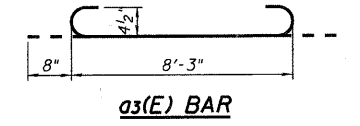
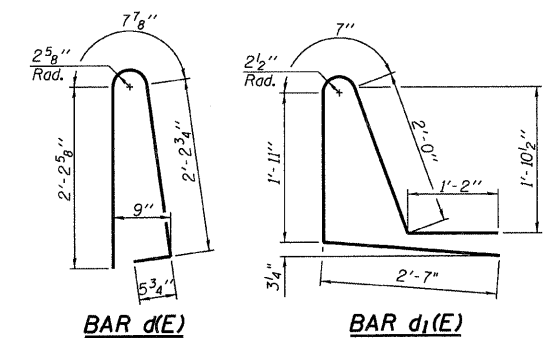
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539		MACON	57	13
FED. ROAD DIST. NO.		ILLINOIS	PROJECT	
*00-00155-00-BR				



INSIDE ELEVATION OF PARAPET (UNIT 1)



INSIDE ELEVATION OF PARAPET (UNIT 2)

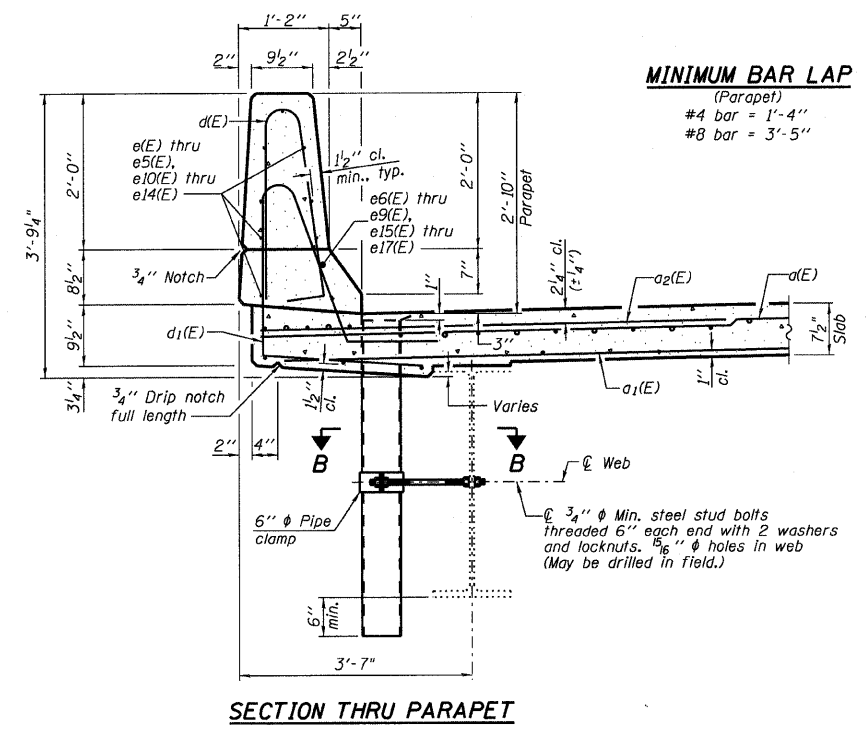


SUPERSTRUCTURE
BILL OF MATERIAL (UNIT 1)

Bar	No.	Size	Length	Shape
a(E)	986	#5	38'-6"	
a1(E)	678	#5	36'-9"	
a2(E)	986	#6	6'-0"	
a3(E)	12	#6	9'-7"	
a4(E)	5	#6	34'-0"	
b(E)	672	#5	29'-9"	
b1(E)	578	#6	28'-2"	
b2(E)	234	#6	21'-4"	
b3(E)	117	#6	22'-0"	
d(E)	986	#5	5'-7"	
d1(E)	986	#5	8'-3"	
e(E)	140	#4	16'-6"	
e1(E)	64	#4	16'-9"	
e2(E)	32	#4	17'-3"	
e3(E)	168	#4	14'-10"	
e4(E)	12	#4	28'-9"	
e5(E)	12	#4	31'-0"	
e6(E)	12	#8	30'-2"	
e7(E)	8	#8	16'-9"	
e8(E)	12	#8	32'-5"	
e9(E)	4	#8	17'-3"	
x(E)	28	#5	6'-5"	
Reinforcement Bars, Epoxy Coated		Pound	153,300	
Concrete Superstructure		Cu. Yds.	537.7	
Bridge Deck Grooving		Sq. Yd.	1706	
Protective Coat		Sq. Yd.	2198	

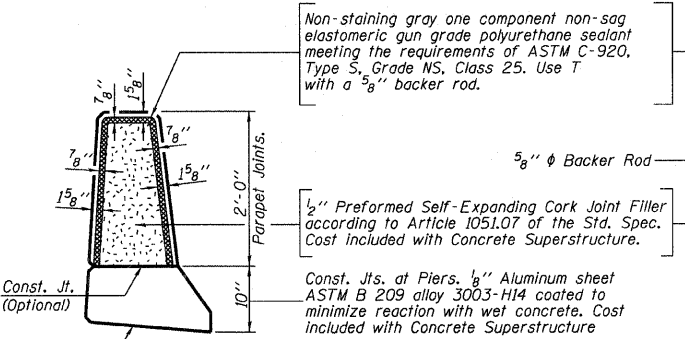
SUPERSTRUCTURE
BILL OF MATERIAL (UNIT 2)

Bar	No.	Size	Length	Shape
a(E)	543	#5	38'-6"	
a1(E)	373	#5	36'-9"	
a2(E)	544	#6	6'-0"	
a3(E)	12	#6	9'-7"	
a4(E)	5	#6	34'-0"	
b4(E)	378	#5	29'-1"	
b5(E)	340	#5	26'-4"	
b6(E)	78	#6	47'-0"	
d(E)	544	#5	5'-7"	
d1(E)	544	#5	8'-3"	
e10(E)	112	#4	15'-8"	
e11(E)	64	#4	12'-9"	
e12(E)	56	#4	17'-0"	
e13(E)	8	#4	32'-8"	
e14(E)	4	#4	35'-1"	
e15(E)	8	#8	33'-8"	
e16(E)	8	#8	12'-9"	
e17(E)	4	#8	36'-1"	
x(E)	28	#5	6'-5"	
Reinforcement Bars, Epoxy Coated		Pound	79,780	
Concrete Superstructure		Cu. Yds.	298.5	
Bridge Deck Grooving		Sq. Yd.	939	
Protective Coat		Sq. Yd.	1212	

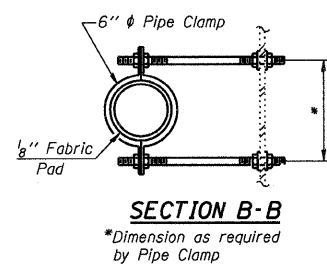


SECTION THRU PARAPET

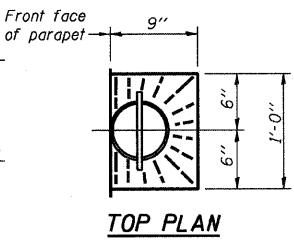
MINIMUM BAR LAP
(Parapet)
#4 bar = 1'-4"
#8 bar = 3'-5"



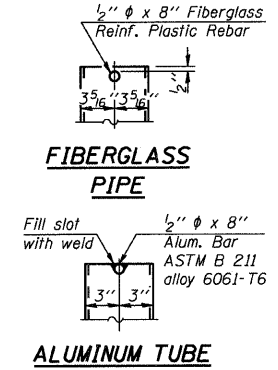
PARAPET JOINT DETAILS



SECTION B-B

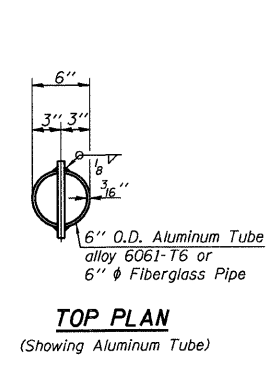


TOP PLAN



FIBERGLASS PIPE

ALUMINUM TUBE



TOP PLAN

Notes:
Drains shall be located clear of all diaphragms or cross frames.
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Society of Protective Coatings Spec. SSPC-SP1 prior to painting.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
Bars indicated thus 1 x 3 - #8 etc. indicates 1 line of bars with 3 lengths per line.
Galvanize clamping device according to AASHTO M232.

WYCKLES ROAD OVER THE SANGAMON RIVER

SUPERSTRUCTURE DETAILS

REVISIONS	FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE
1		SN 058-3030	R KING 9/08
2	STA 30+50.00	MACON COUNTY	CHECKED BY DATE
3			JMB 9/08
4			BOOK NUMBER
5			PROJECT NO.
6			4698
7			SHEET NO.
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9			
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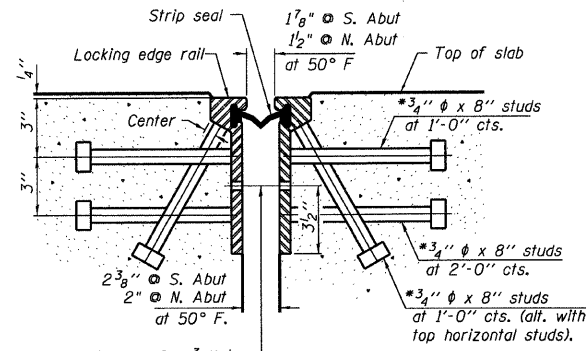
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539		MACON	57	14
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

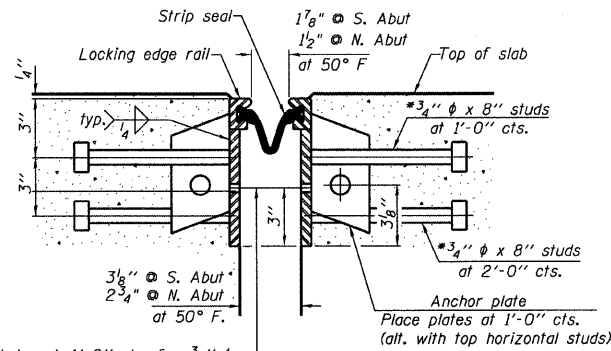
00-00155-00-BR

*Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



7/16 inch phi holes at 4'-0 inch cts. for 3/8 inch phi bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU ROLLED RAIL JOINT



7/16 inch phi holes at 4'-0 inch cts. for 3/8 inch phi bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU WELDED RAIL JOINT

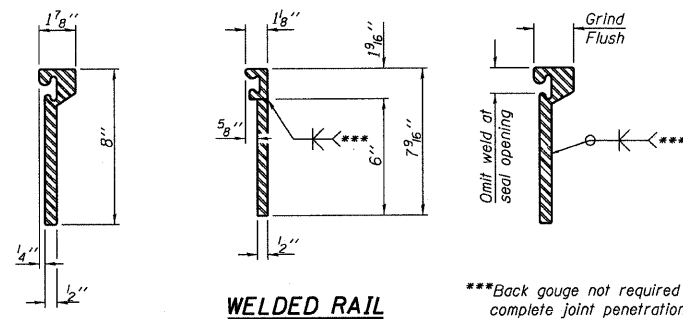
Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed. The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.



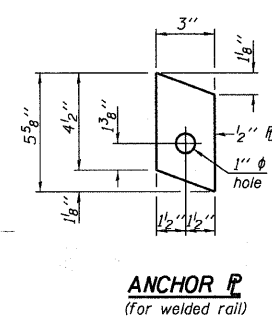
ROLLED EXTRUDED RAIL

WELDED RAIL

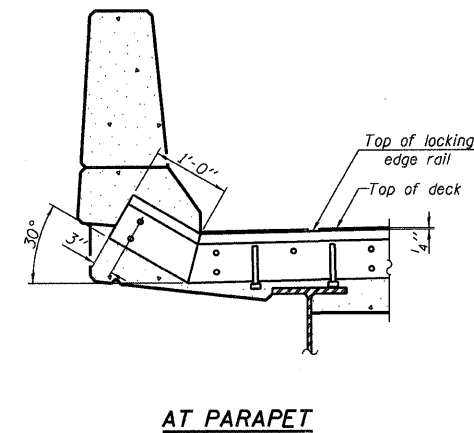
LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

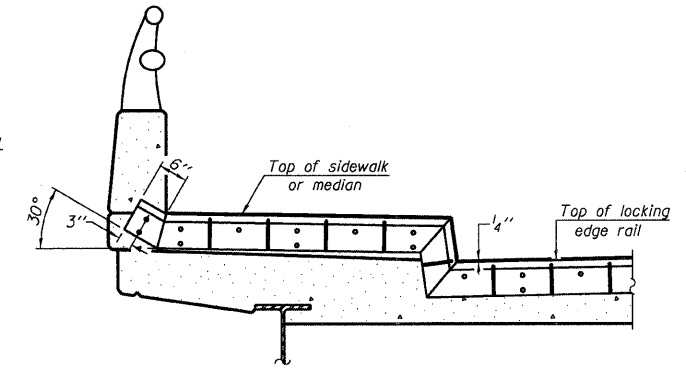
LOCKING EDGE RAILS



ANCHOR PLATE
(For welded rail)



AT PARAPET



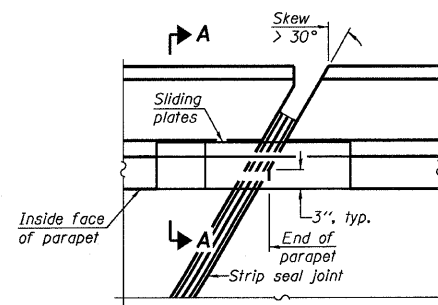
AT SIDEWALK OR MEDIAN

Shorter plates with a single row of studs at 12 inch cts. may be necessary on medians which are shallower than 9 inch. See manufacturer's recommendation.

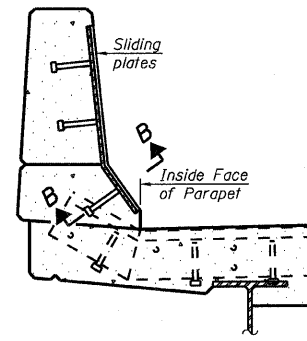
TYPICAL END TREATMENTS

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	81

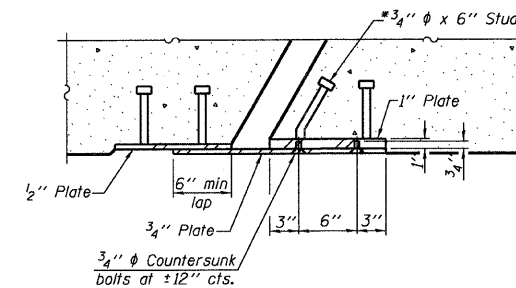


PLAN



SECTION A-A

POINT BLOCK DETAILS
(for skews > 30 degrees)



SECTION B-B

WYCKLES ROAD OVER THE SANGAMON RIVER

PREFORMED JOINT STRIP SEAL DETAILS

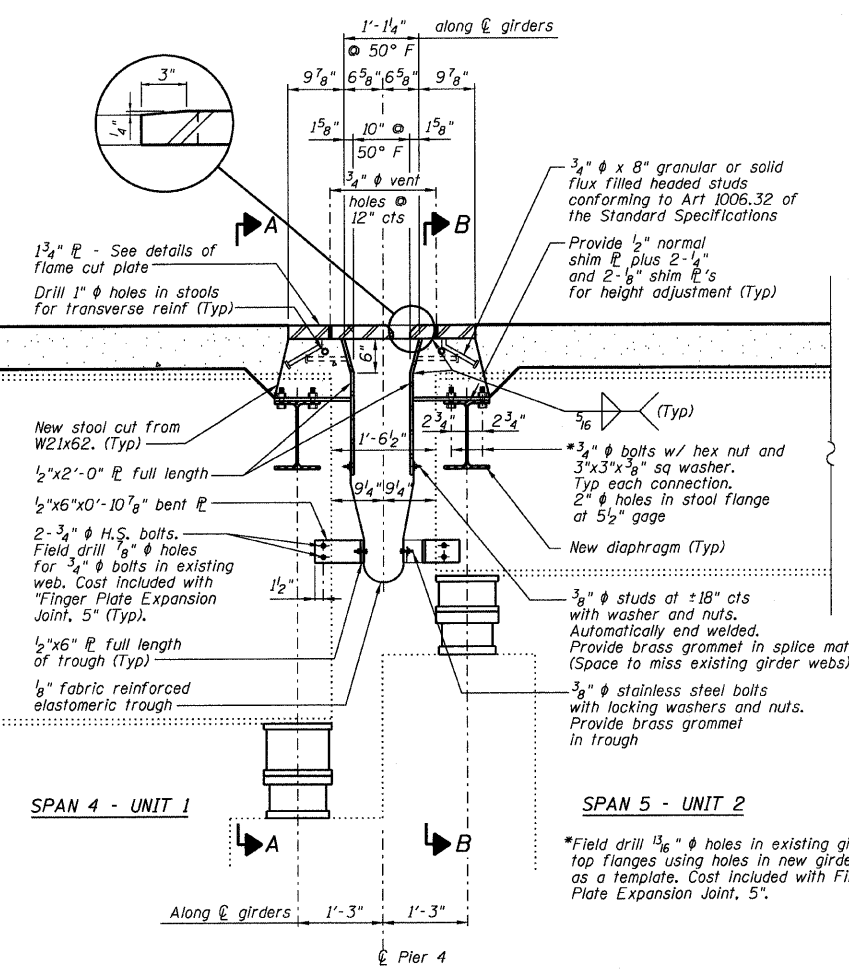
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3			PROJECT No. 4698
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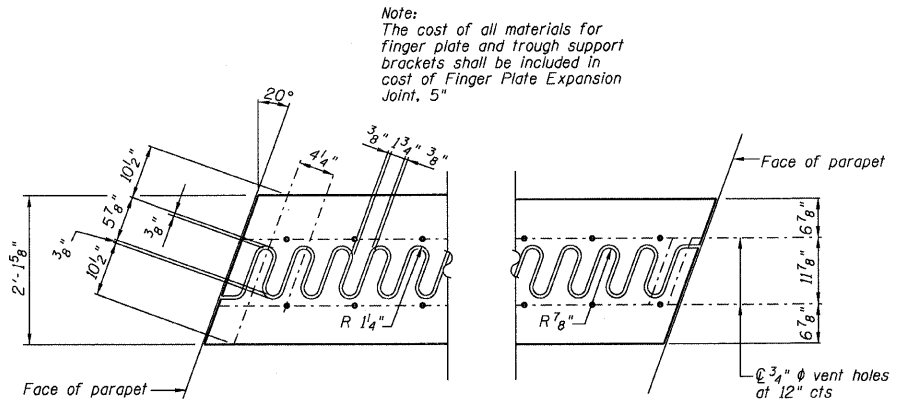
Sheet No 12
of 30 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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FED. ROAD DIST. NO.		KLINDS	PROJECT	

00-00155-00-BR

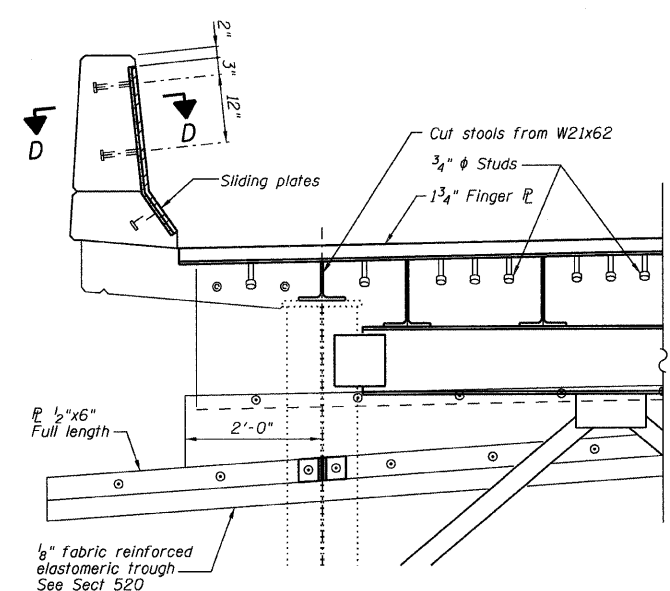


SECTION C-C

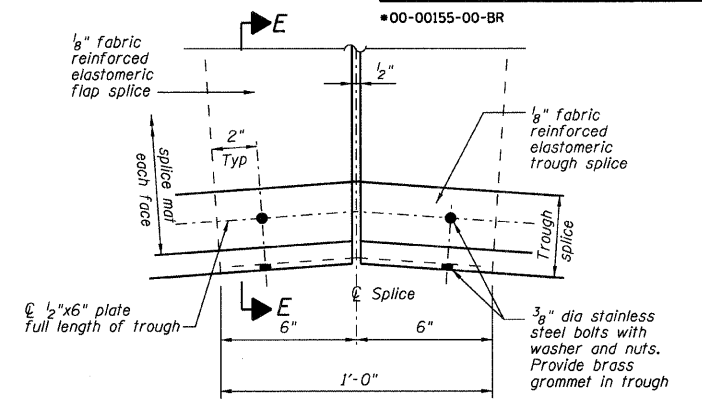


FLAME CUTTING DIAGRAM

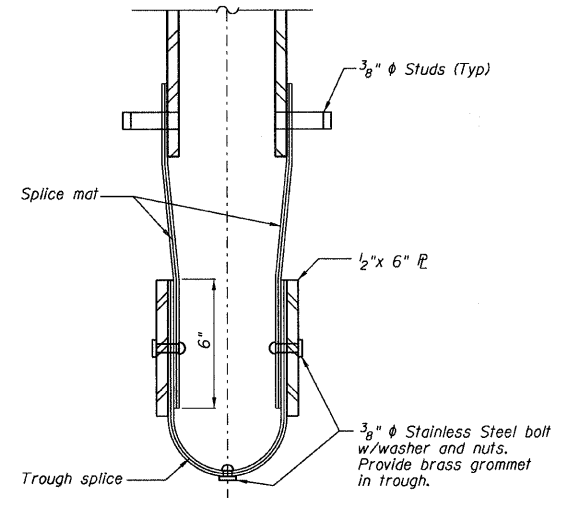
(Proposed Finger Plate - Cut from 1 3/4" x 2'-1 5/8" PL (M270, Grade 50))



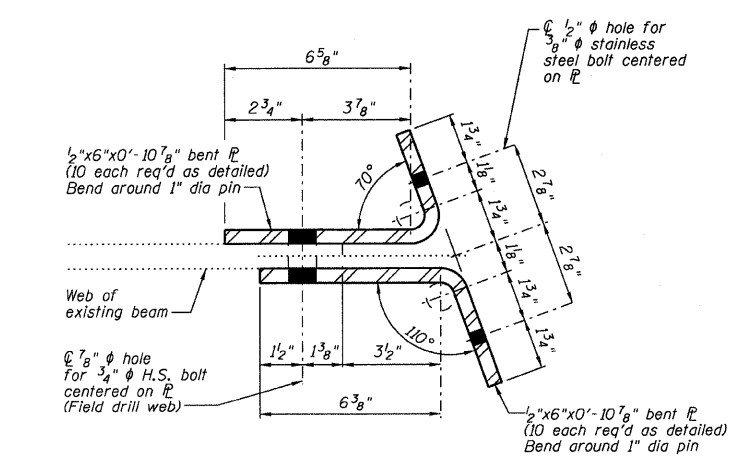
TYPICAL SECTION THRU PARAPET



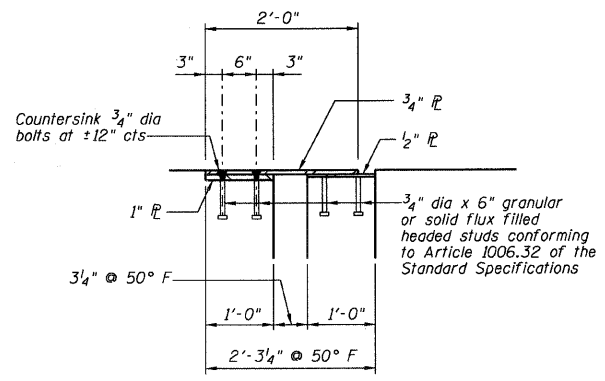
SIDE VIEW



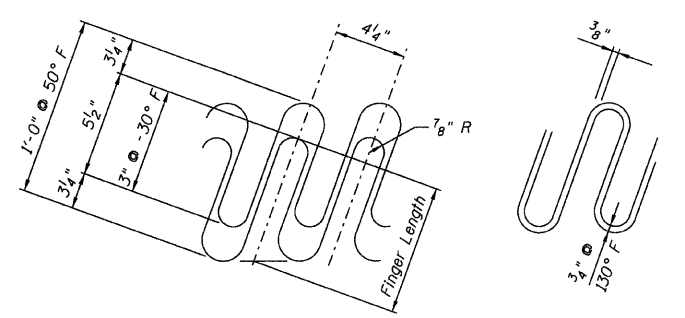
SECTION E-E



DETAILS OF CONNECTOR PLATES FOR NEOPRENE TROUGH



SECTION D-D



JOINT OPENING AND GEOMETRY DETAIL

WYCKLES ROAD OVER THE SANGAMON RIVER

FINGER PLATE DETAILS AT PIER 4

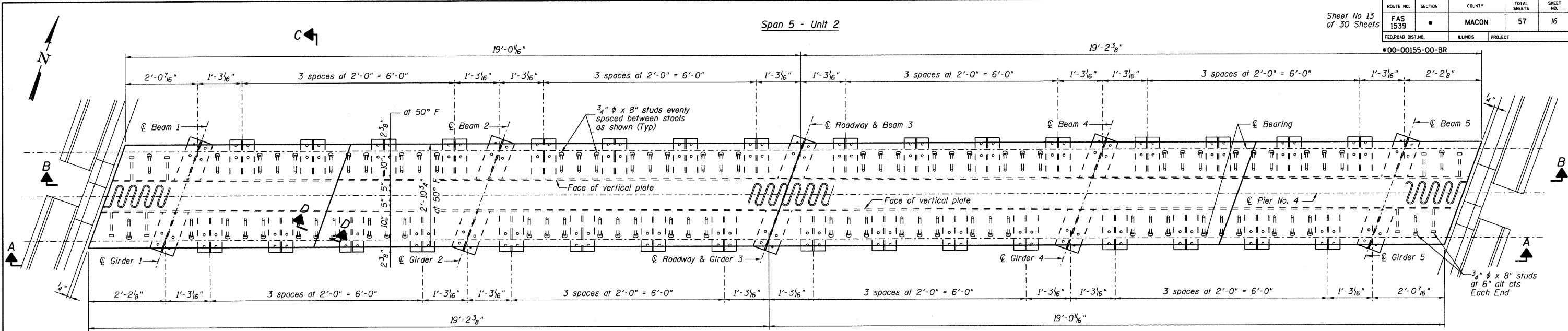
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1	STA 30+50.00	SN 058-3030	CHECKED BY DATE JMB 9/08
2		MACON COUNTY	BOOK NUMBER
3			PROJECT No.
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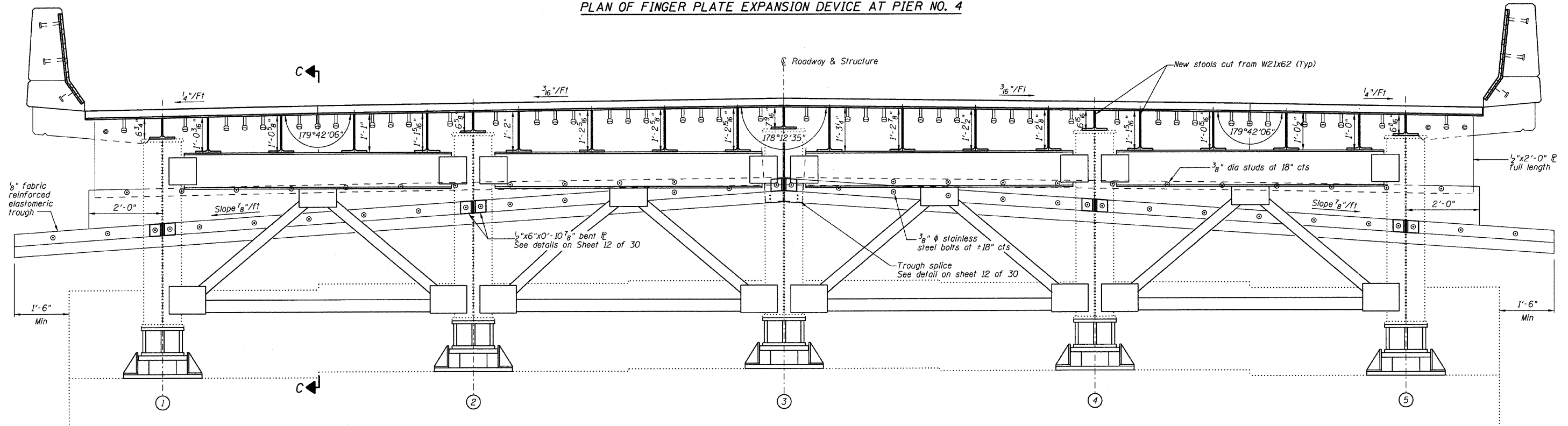
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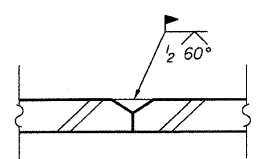
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539		MACON	57	16
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		



PLAN OF FINGER PLATE EXPANSION DEVICE AT PIER NO. 4



SECTION A-A



SECTION D-D

Note:
For Section B-B see Sheet 14 of 30.
For Section C-C see Sheet 12 of 30.

WYCKLES ROAD OVER THE SANGAMON RIVER
FINGER PLATE DETAILS AT PIER 4

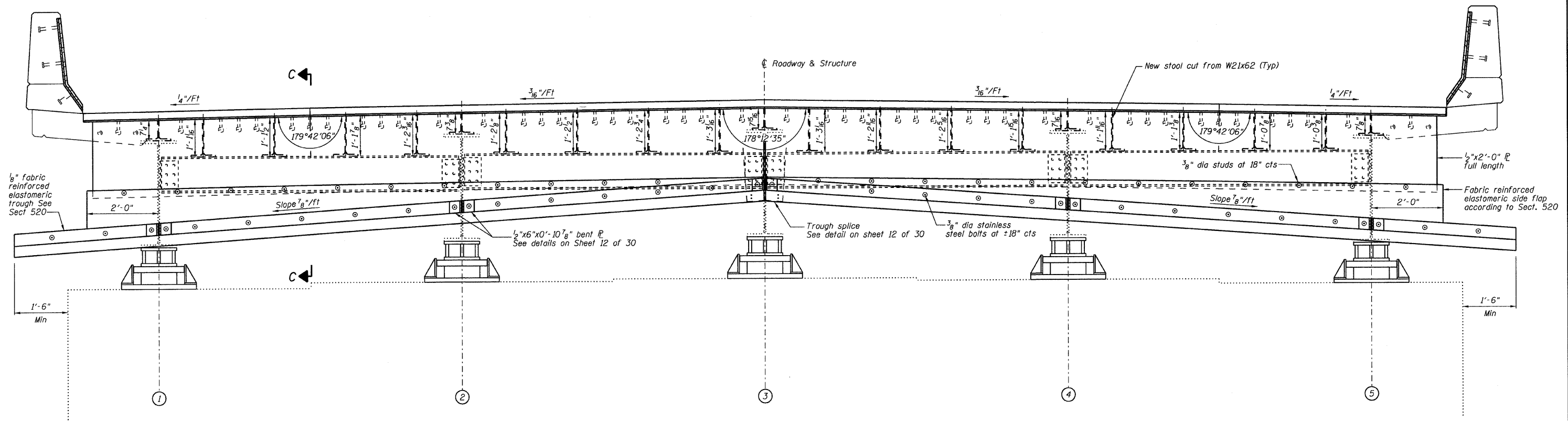
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No.	DATE	INITIALS	
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ROCKFORD (815) 489-0050		SHEET No.

Sheet No 14
of 30 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539	#	MACON	57	17
FEDERAL DIST. NO.		ILLINOIS	PROJECT	

00-00155-00-BR



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Finger Plate Expansion Joint, 5"	Foot	38.3

Note:
For Section C-C see Sheet 12 of 30.

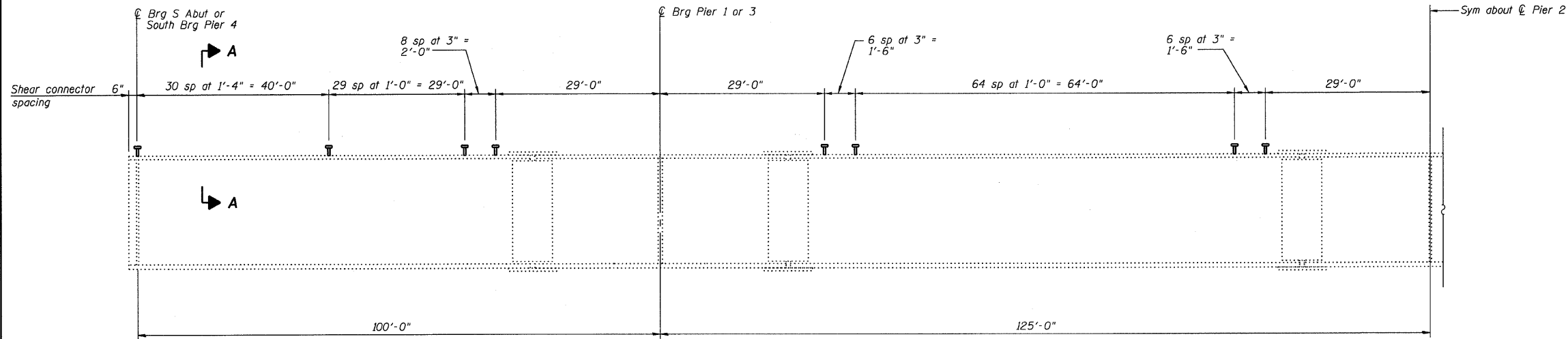
WYCKLES ROAD OVER THE SANGAMON RIVER

FINGER PLATE DETAILS AT PIER 4

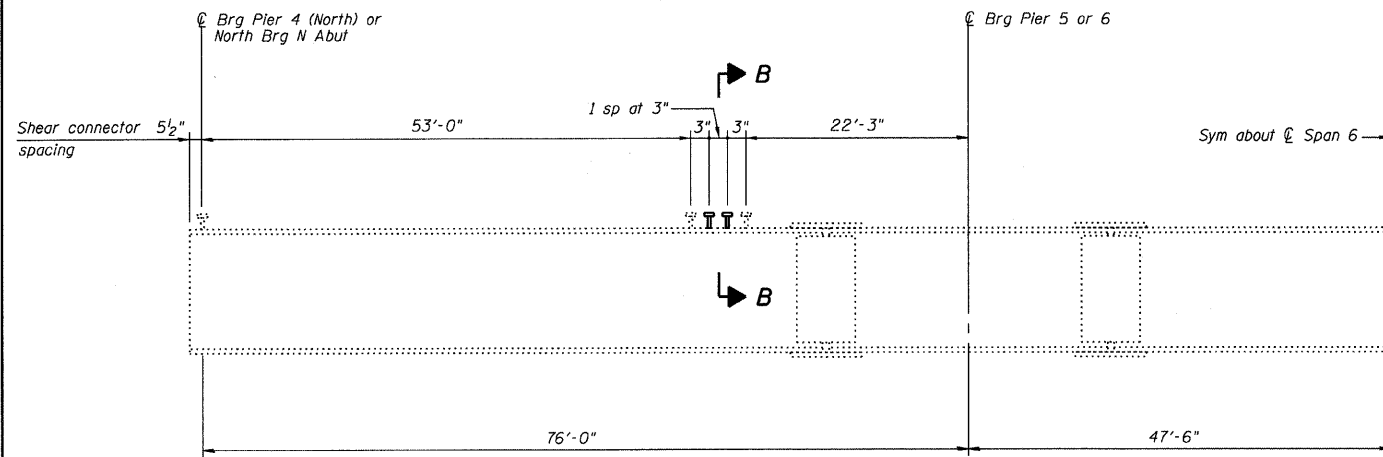
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HOMER L. CHASTAIN & ASSOCIATES, LLP CONSULTING ENGINEERS 184-00197			DECATUR CHICAGO (817) 422-8544 (773) 714-0050	PROJECT NO. 4698 SHEET NO.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539	•	MACON	57	18
FED. ROAD DIST. NO.		ILLINOIS	PROJECT	

•00-00155-00-BR



EXISTING GIRDER ELEVATION - SPANS 1 THRU 4 (SOUTH)



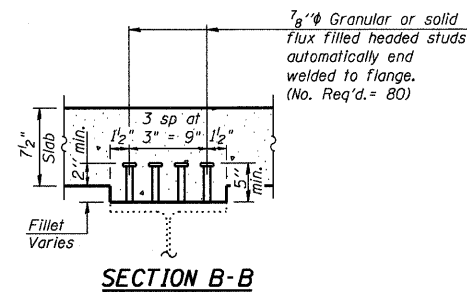
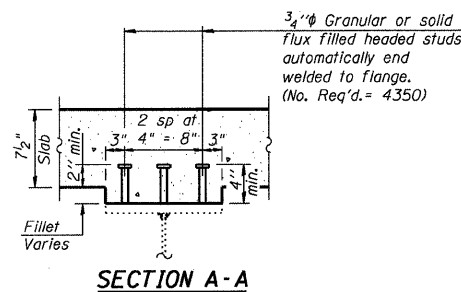
EXISTING BEAM ELEVATION - SPANS 5 THRU 7 (NORTH)

	0.4 Sp. 1 0.6 Sp. 4	Pier 1 & 3	0.5 Sp. 2 0.5 Sp. 3	Pier 2
Is (in ⁴)	36180	57015	36180	57015
Ic (in ⁴)	76510		76510	
Ic (3n) (in ⁴)	58140		58140	
Ss (in ³)	1162	1788	1162	1788
Sc (n) (in ³)	1473		1473	
Sc (3n) (in ³)	1368		1368	
Z (in ³)				
Q (k/ft.)	0.97	1.41	0.97	1.41
M _P (k)	633	1784	557	1827
s _P (k/ft.)	0.36		0.36	
M _{sP} (k)	251		242	
M _L (k)	926	869	971	954
M (Imp) (k)	206	183	194	191
5 ₃ [M _L +M(Imp)] (k)	1887	1753	1942	1908
M _a (k)	3602	4598	3563	4856
M _u (k)	4964		5791	
f _{sP} non-comp (k.s.i.)	6.5	12.0	5.8	12.3
f _{sP} (comp) (k.s.i.)	2.2		2.1	
f _{s5/8} (k+Imp) (k.s.i.)	15.4	11.8	15.8	12.8
f _s (Overload) (k.s.i.)	24.1	23.8	23.7	25.1
f _s (Total) (k.s.i.)		30.9		32.6
VR (k)	52.6	67.8	54.2	67.1

	0.4 Sp. 5 0.6 Sp. 7	Pier 5 & 6	0.5 Sp. 6
Is (in ⁴)	10660	17500	10660
Ic (n) (in ⁴)	28490		28490
Ic (3n) (in ⁴)	20500		20500
Ss (in ³)	534	919	534
Sc (n) (in ³)	920		920
Sc (3n) (in ³)	837		837
Z (in ³)			
Q (k/ft.)	0.95	1.41	0.95
M _P (k)	356	759	319
s _P (k/ft.)	0.39		0.39
M _{sP} (k)	160		165
M _L (k)	666	516	716
M (Imp) (k)	166	123	163
5 ₃ [M _L +M(Imp)] (k)	1387	1065	1465
M _a (k)	2474	2371	2534
M _u (k)	2808		3064
f _{sP} non-comp (k.s.i.)	8.0	9.9	7.2
f _{sP} (comp) (k.s.i.)	2.3		2.4
f _{s5/8} (k+Imp) (k.s.i.)	18.1	13.9	19.1
f _s (Overload) (k.s.i.)	28.4	23.8	28.7
f _s (Total) (k.s.i.)		31.0	
VR (k)	49.3	65.2	51.8

	S. Abut. S. Brg Pier 4	Pier 1 Pier 3	Pier 2
R _P (k)	49.4	169.0	169.2
R _L (k)	46.4	80.6	83.6
Imp. (k)	10.3	17.0	16.7
R (Total) (k)	106.2	266.6	269.5

	N. Brg Pier 4 or N. Abut	Pier 5 Pier 6
R _P (k)	38.2	129.9
R _L (k)	44.8	65.0
Imp. (k)	11.1	15.4
R (Total) (k)	94.2	210.3



Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).
 Ic(n) and Sc(n) are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.
 Ic(3n) and Sc(3n) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads.
 VR is the maximum Live Load + Impact shear range in span.
 Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.
 Ma (Applied Moment) = 1.3[M_P + M_{sP} + 5₃(M_L + M(Imp))].
 The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.
 fs (Overload) is the sum of the stresses due to M_P + M_{sP} + 5₃(M_L + M(Imp)).
 fs (Total) (Non-compaction section) is the sum of the stresses due to 1.3[M_P + M_{sP} + 5₃(M_L + M(Imp))].

BILL OF MATERIAL

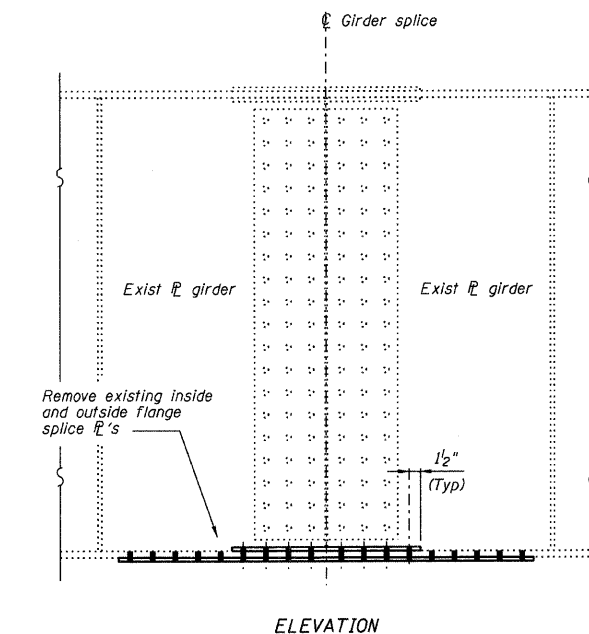
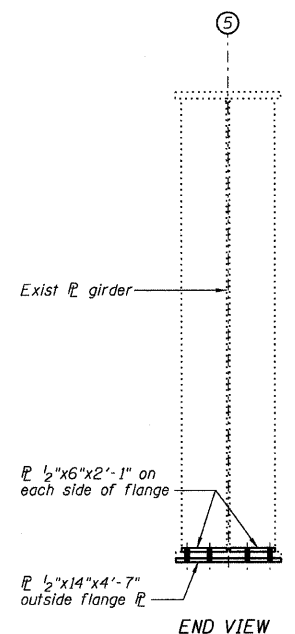
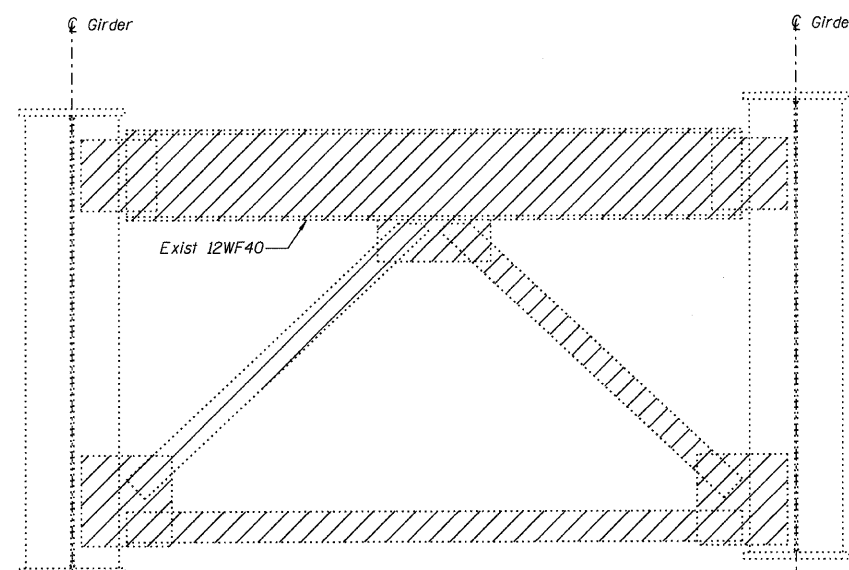
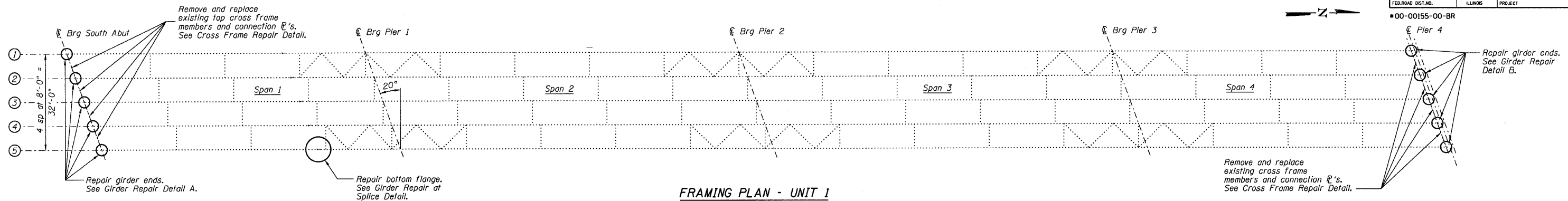
Item	Unit	Total
Stud Shear Connectors	Each	4430

WYCKLES ROAD OVER THE SANGAMON RIVER

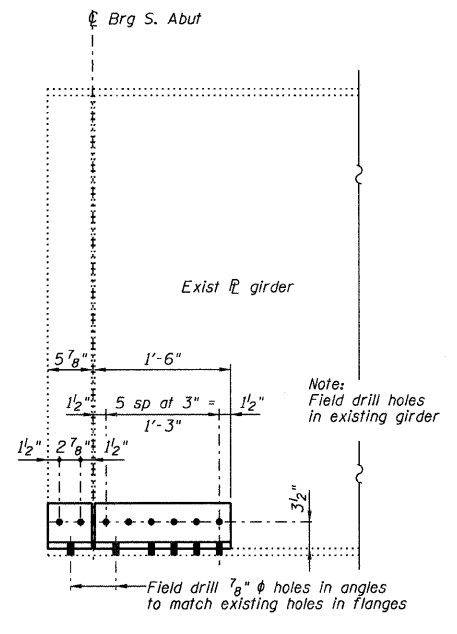
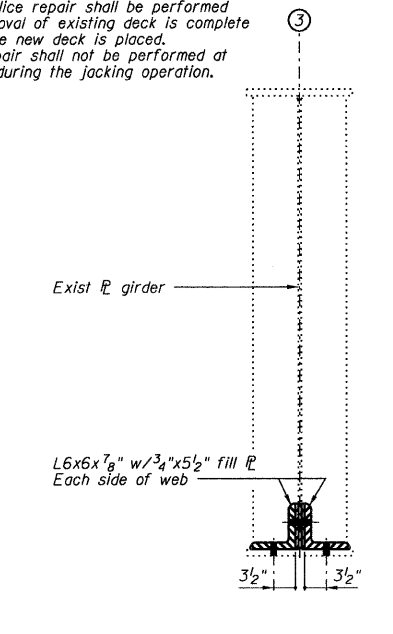
REVISIONS	FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE R. KING 9/08
NO. DATE INITIALS	STA 30+50.00	SN 058-3030	CHECKED BY DATE JMB 9/08
1		MACON COUNTY	BOOK NUMBER
2			
3			
4			PROJECT NO. 4698
5			SHEET NO.
6			
7			
8			
9			
10			

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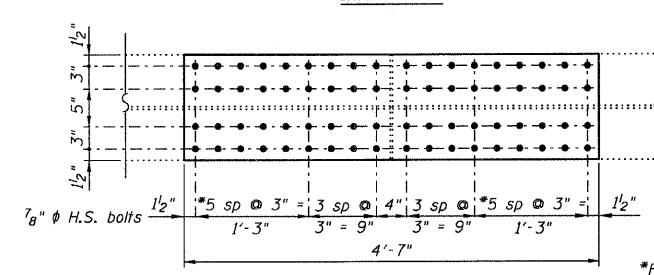
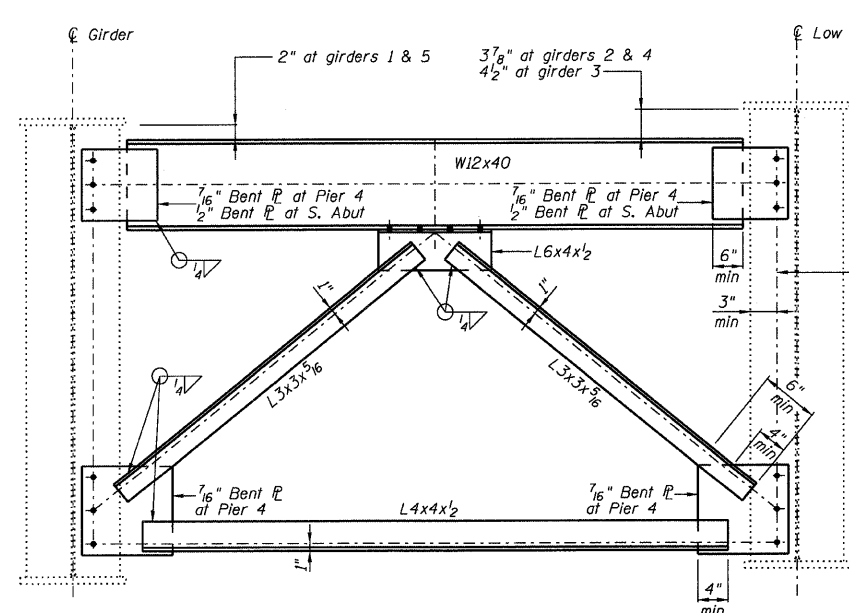
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539		MACON	57	19
FED. ROAD DIST. NO.		ILLINOIS	PROJECT	
00-00155-00-BR				



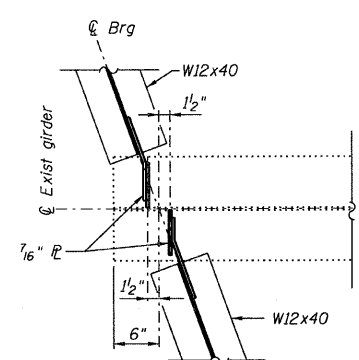
Note:
Flange splice repair shall be performed after removal of existing deck is complete and before new deck is placed.
Splice repair shall not be performed at any time during the jacking operation.



GIRDER REPAIR DETAIL A
(Beams 1 thru 5, S. Abut)



*Field drill 15/16" phi holes in existing flange. Cost included with "Furnishing and Erecting Structural Steel".



Note:
Hatched area indicates removal of existing structural steel. Cost included with "Furnishing and Erecting Structural Steel".
Contractor to field verify all dimensions.

WYCKLES ROAD OVER THE SANGAMON RIVER

STRUCTURAL STEEL REPAIR DETAILS - UNIT 1

REVISIONS	FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE R KING 9/08
1	STA 30+50.00	SN 058-3030	CHECKED BY DATE JMB 9/08
2		MACON COUNTY	BOOK NUMBER 389
3			PROJECT No. 4698
4			SHEET No.
5			
6			
7			
8			
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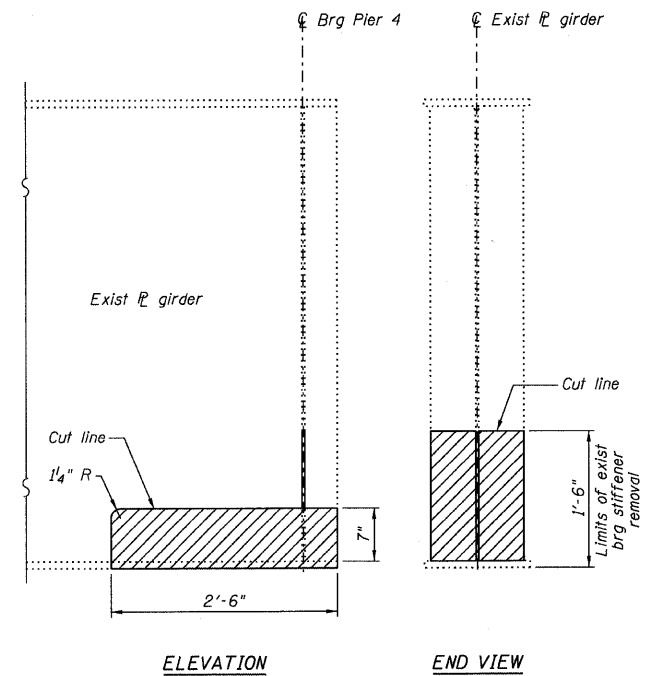
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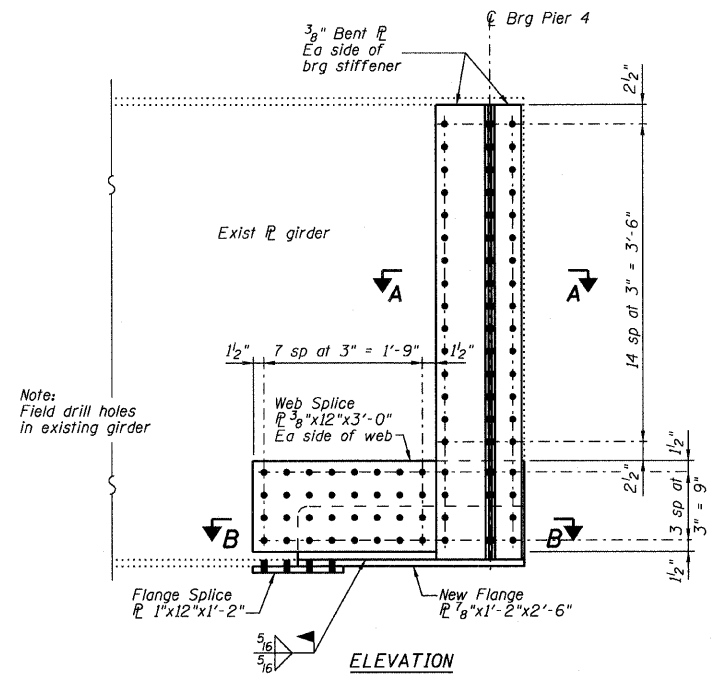
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(815) 489-0050

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539		MACON	57	20
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

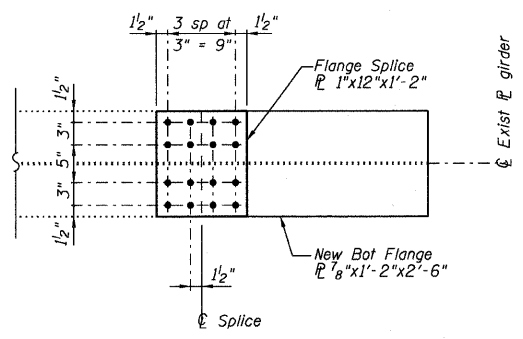
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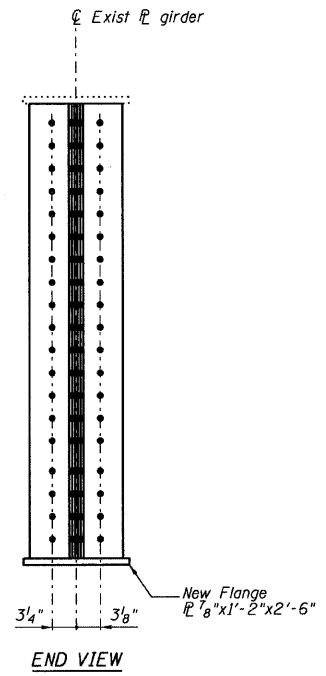
ELEVATION **END VIEW**
END OF GIRDER REMOVAL DETAIL
(Girders 1 thru 5 at Pier 4)



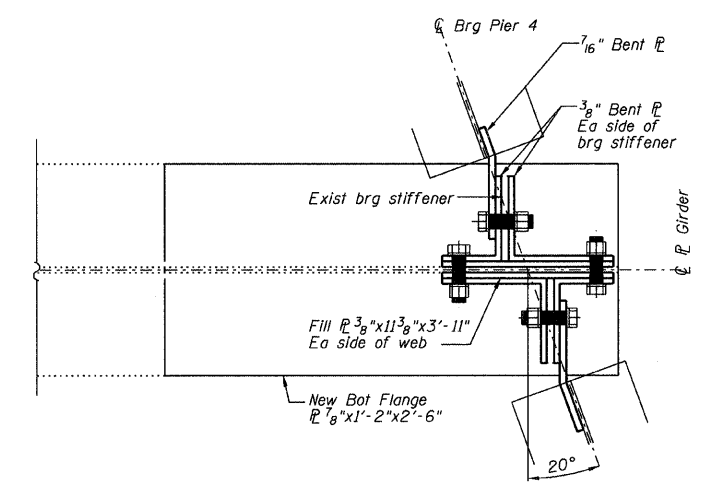
ELEVATION
GIRDER REPAIR DETAIL B
(Girders 1 thru 5 at Pier 4)



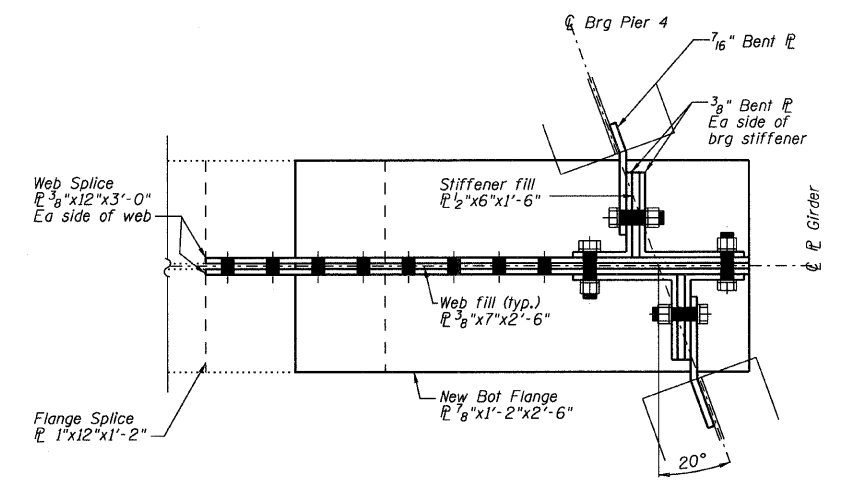
BOTTOM SPLICE PLATE DETAIL



END VIEW



SECTION A-A



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting	Pound	7790
Structural Steel		

Note:
Hatched area indicates removal of existing structural steel.
Cost included with "Furnishing and Erecting Structural Steel".
Contractor shall field verify dimensions before ordering materials.

WYCKLES ROAD OVER THE SANGAMON RIVER

STRUCTURAL STEEL REPAIR DETAILS - UNIT 1

REVISIONS	FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE R KING 9/08
1		STA 30+50.00	CHECKED BY DATE JMB 9/08
2		SN 058-3030	BOOK NUMBER 389
3		MACON COUNTY	PROJECT No. 4698
4			SHEET No.
5			
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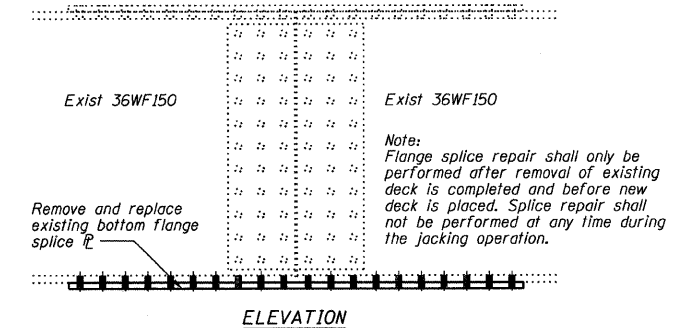
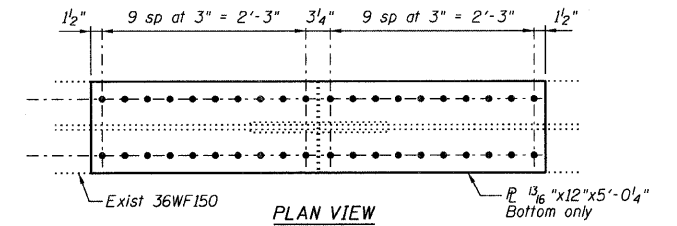
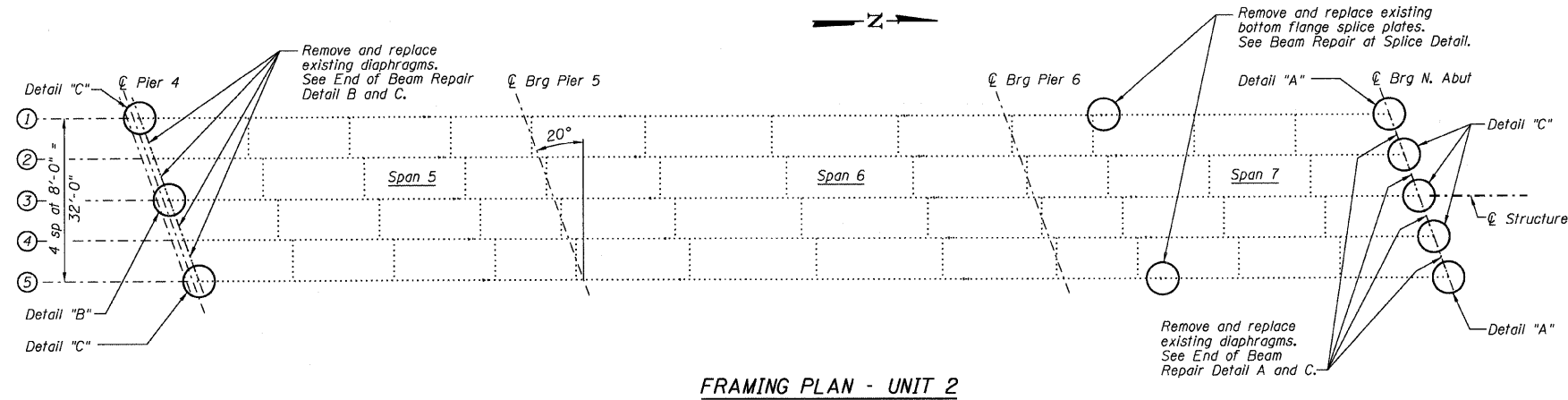
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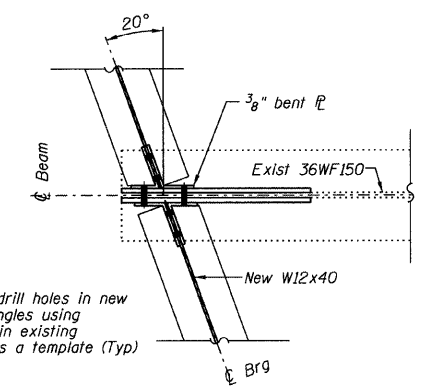
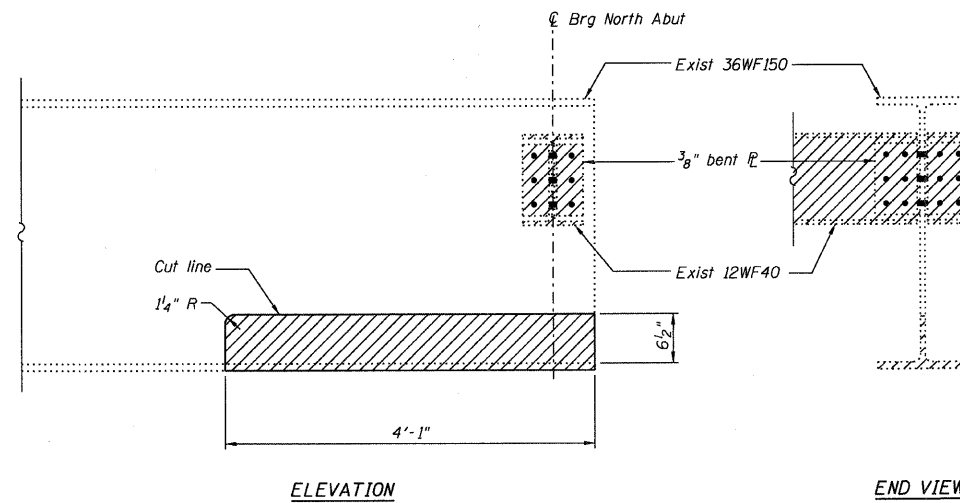
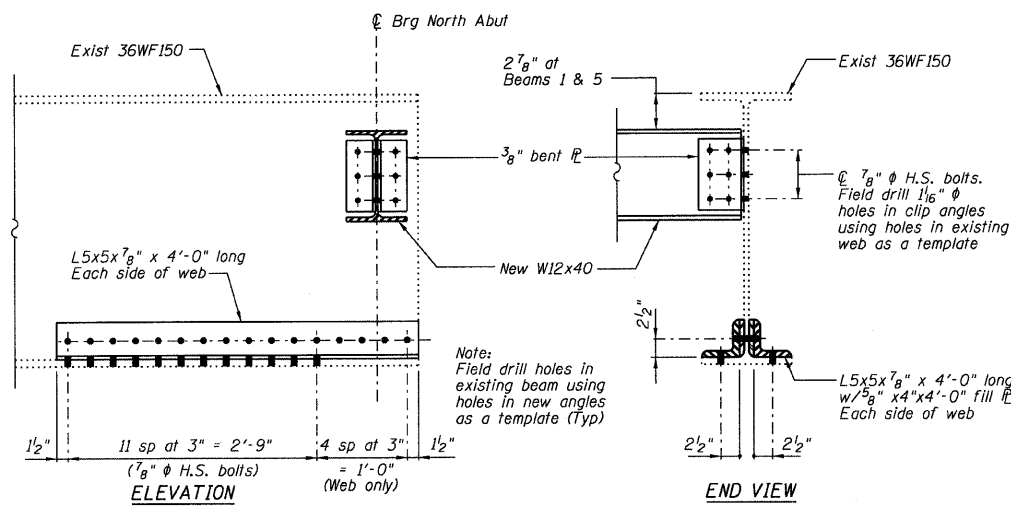
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539		MACON	57	21
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

00-00155-00-BR



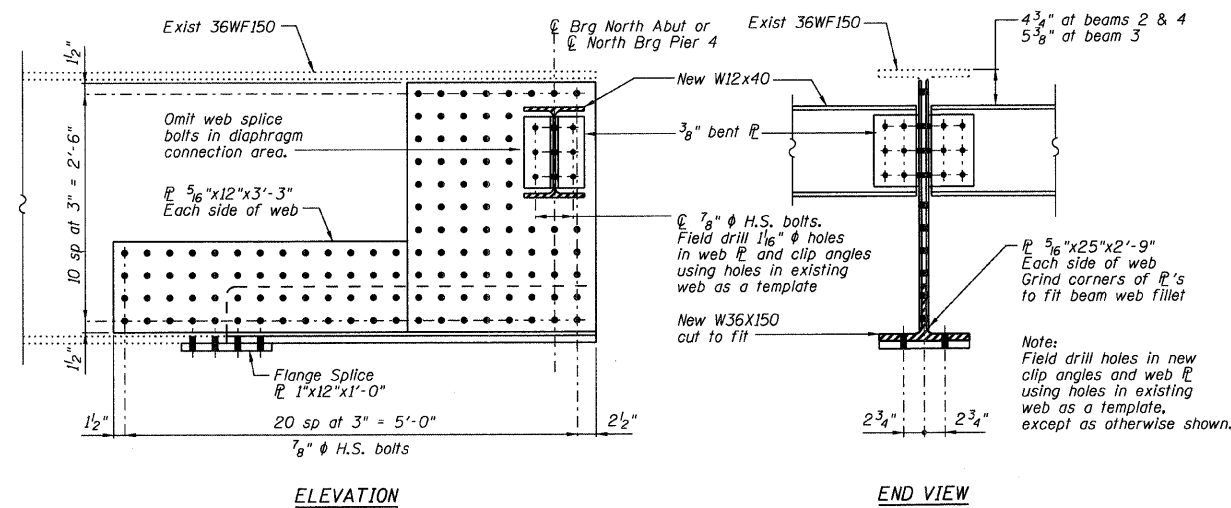
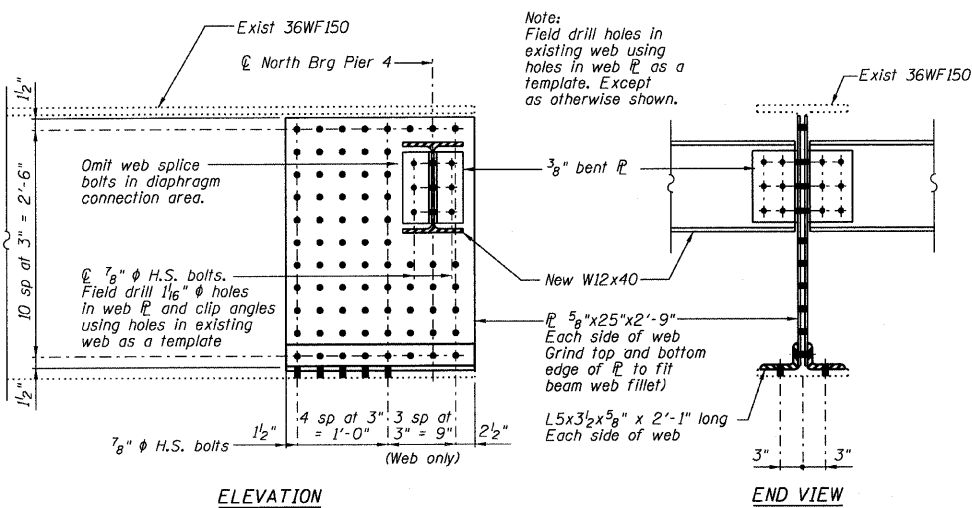
BEAM REPAIR AT SPLICE DETAIL
(At beams 1 and 5, Span 7)



BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	7760

Note: Hatched area indicates removal of existing structural steel. Cost included with "Furnishing and Erecting Structural Steel". Contractor to field verify all dimensions.



WYCKLES ROAD OVER THE SANGAMON RIVER

STRUCTURAL STEEL REPAIR DETAILS - UNIT 2

REVISIONS	FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE
NO.	DATE	INITIALS	R KING 9/08
1			CHECKED BY DATE
2			JMS 9/08
3			BOOK NUMBER
4			
5			PROJECT NO.
6			4698
7			SHEET NO.
8			
9			
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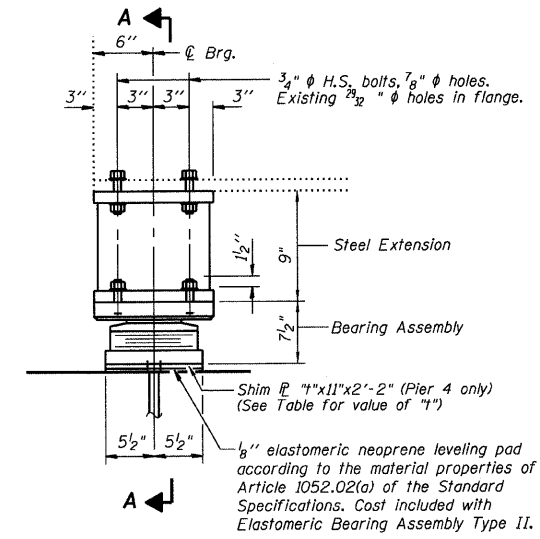
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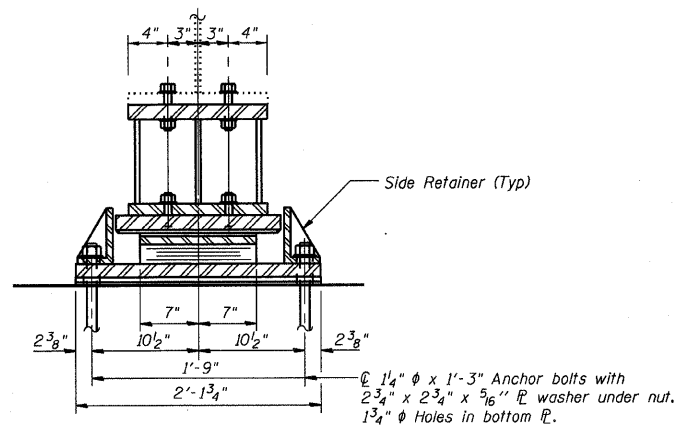
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539		MACON	57	22
FEDERAL DIST. NO.		ILLINOIS	PROJECT	

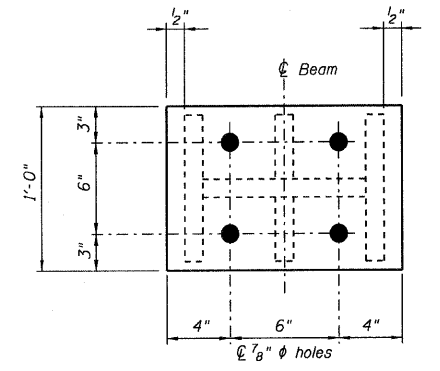
00-00155-00-BR



ELEVATION AT SOUTH ABUTMENT AND PIER 4 UNIT 1

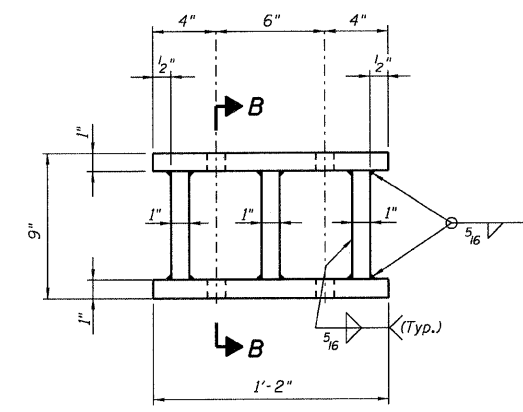


SECTION A-A

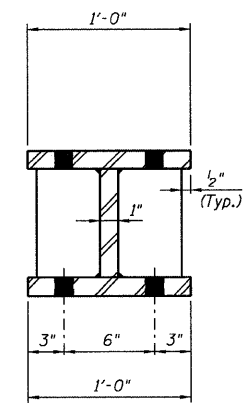


PLAN STEEL EXTENSION

Note:
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

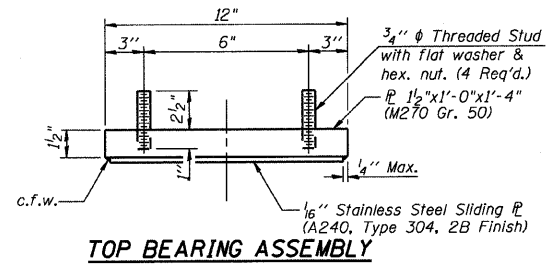


ELEVATION STEEL EXTENSION

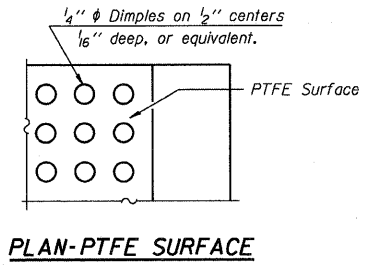


SECTION B-B

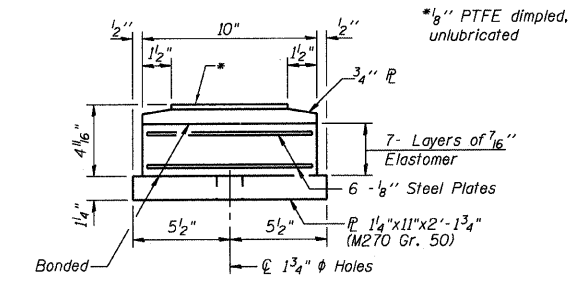
Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in 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.
Anchor bolts for Type II bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.
Side retainers, anchor bolts and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.



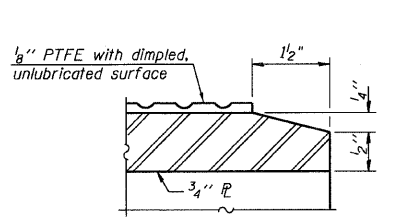
TOP BEARING ASSEMBLY



PLAN-PTFE SURFACE



BOTTOM BEARING ASSEMBLY



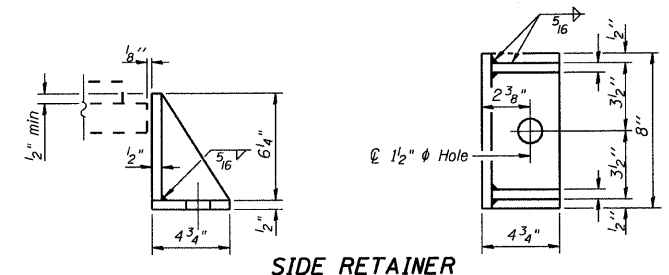
SECTION THRU PTFE

FABRICATED STEEL EXTENSION
(10 required)

TYPE II ELASTOMERIC EXPANSION BEARING

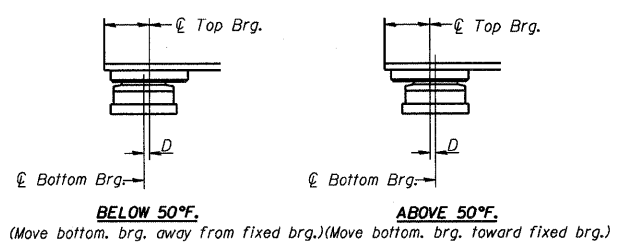
TABLE OF SHIM PLATE THICKNESSES (" in inches)

	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5
Pier 4	1/8"	--	--	--	--



SIDE RETAINER
(20 Req'd)

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



SETTING ANCHOR BOLTS AT EXP. BRG.

D=1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	10
Jack and Remove Existing Bearings	Each	10

SOUTH ABUTMENT & PIER NO. 4 UNIT 1
WYCKLES ROAD OVER THE SANGAMON RIVER

ELASTOMERIC BEARING DETAILS

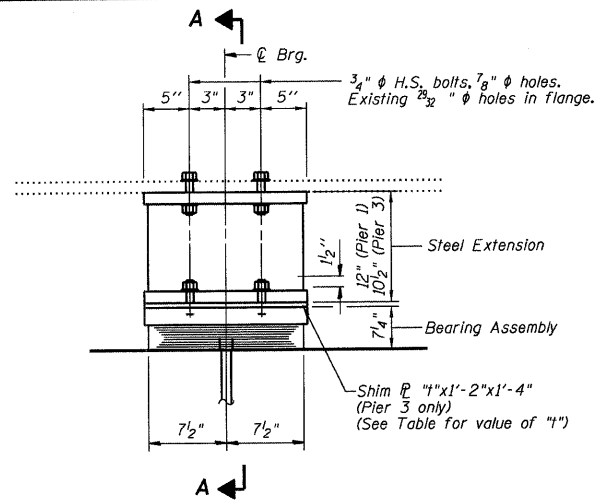
REVISIONS	FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE R KING 9/08
No. DATE INITIALS	STA 30+50.00	SN 058-3030	CHECKED BY DATE JMB 9/08
1		MACON COUNTY	BOOK NUMBER 389
2			PROJECT NO. 4698
3			SHEET NO.
4			
5			
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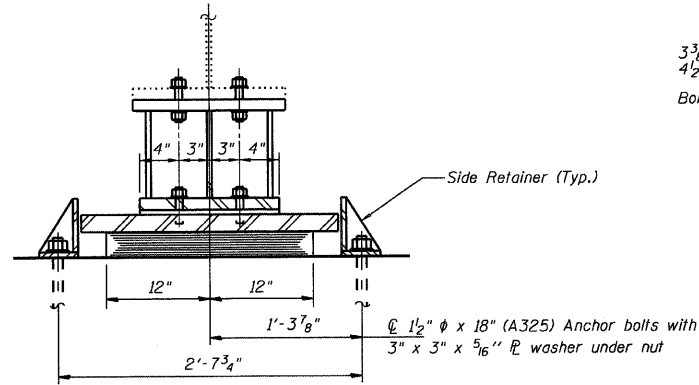
Sheet No. 20
of 30 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539	•	MACON	57	23
FEDERAL DIST. NO.		ILLINOIS	PROJECT	

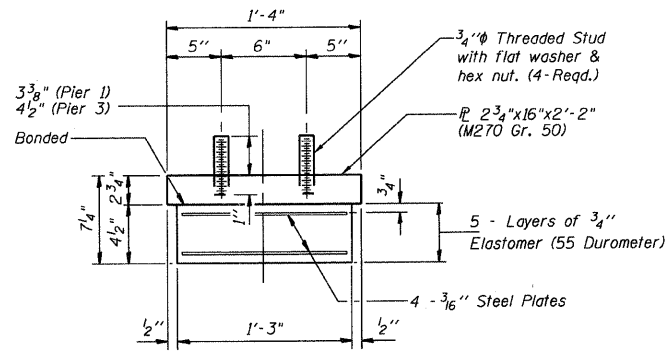
•00-00155-00-BR



ELEVATION AT PIERS 1 & 3 - UNIT 1

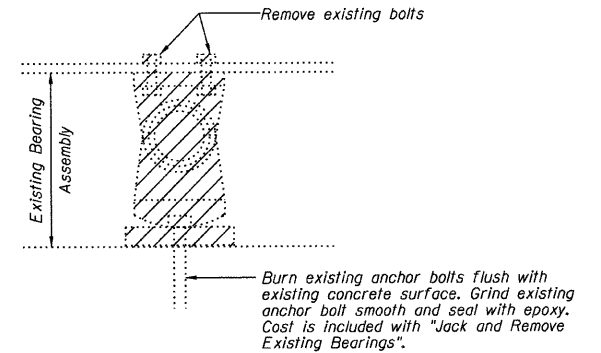


SECTION A-A



BEARING ASSEMBLY
(At Piers 1 & 3 Unit 1)

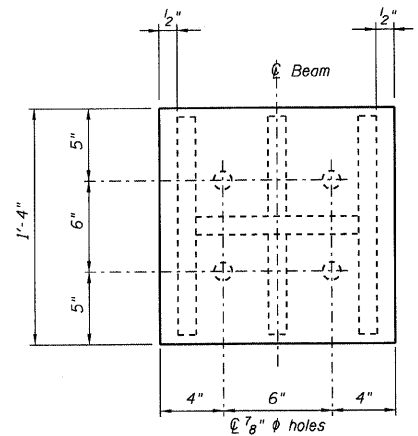
Note: Shim plates shall not be placed under Bearing Assembly.



EXISTING BEARING REMOVAL DETAIL

(S. Abut, Pier 1, Pier 3 and Pier 4)

TYPE I ELASTOMERIC EXPANSION BEARING

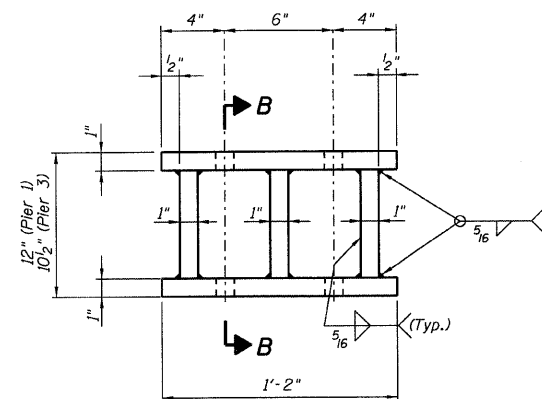


PLAN STEEL EXTENSION

TABLE OF SHIM PLATE THICKNESSES (" in inches)

	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5
Pier 3	3/4"	1 3/8"	--	1 1/4"	1 1/8"

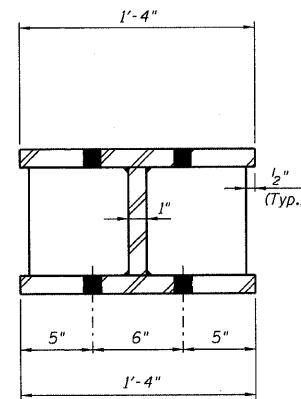
Note: Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.



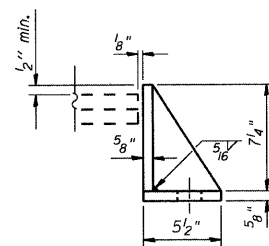
ELEVATION STEEL EXTENSION

FABRICATED STEEL EXTENSION

(10 required - 5 @ 12", 5 @ 10 1/2")



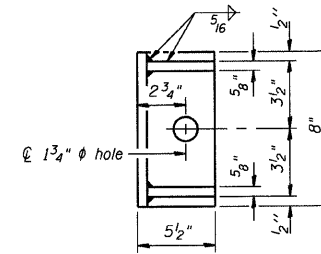
SECTION B-B



SIDE RETAINER

(20 Req'd)

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



Notes:
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.
Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers, anchor bolts and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	10
Jack and Remove Existing Bearings	Each	10

PIERS NO. 1 & 3
WYCKLES ROAD OVER THE SANGAMON RIVER

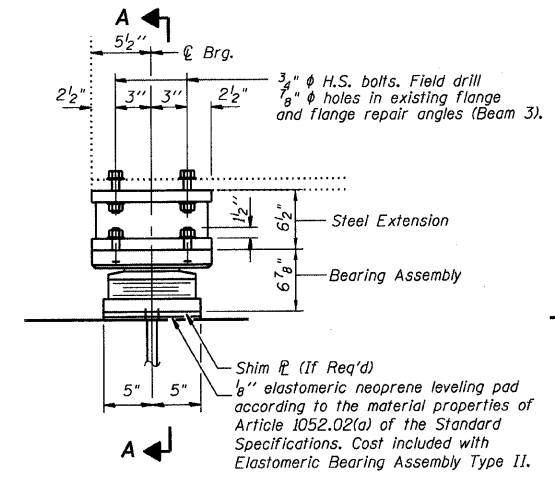
ELASTOMERIC BEARING DETAILS

REVISIONS	FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE R KING 9/08
No. DATE INITIALS	STA 30+50.00	SN 058-3030	MACON COUNTY
1			CHECKED BY DATE JMB 9/08
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4			4698
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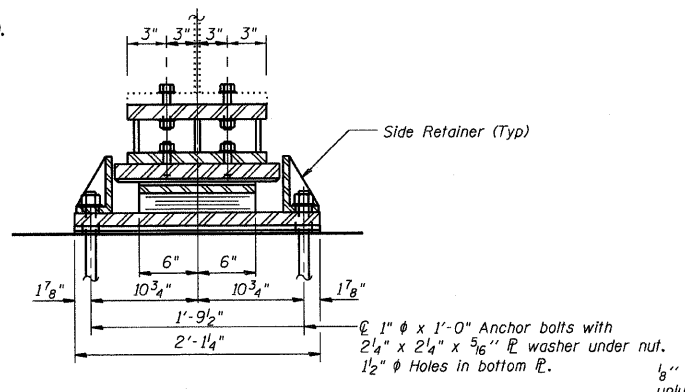
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539	•	MACON	57	24
FEDERAL DIST. NO.		ILLINOIS	PROJECT	

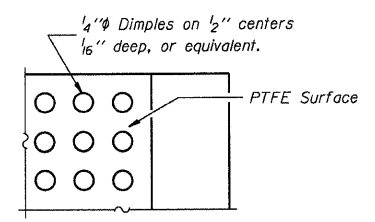
• 00-00155-00-BR



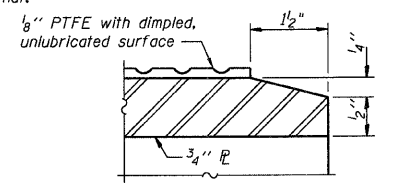
ELEVATION AT PIER 4 UNIT 2



SECTION A-A



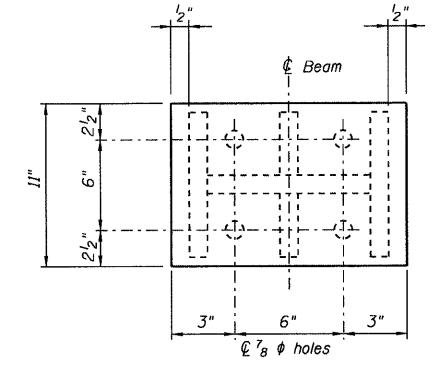
PLAN-PTFE SURFACE



SECTION THRU PTFE

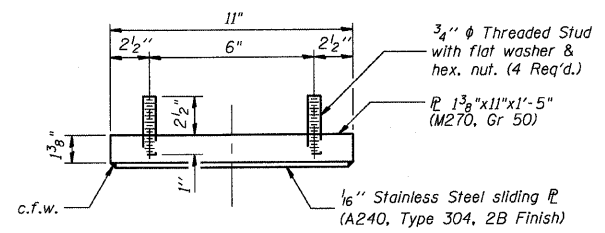
Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

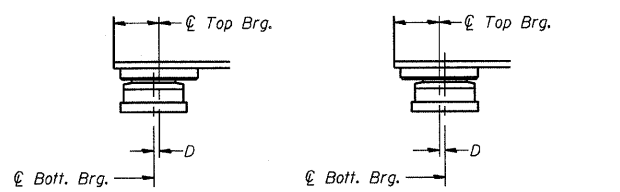


PLAN STEEL EXTENSION

Note: Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

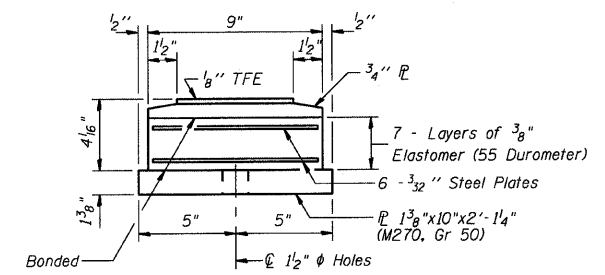


TOP BEARING ASSEMBLY



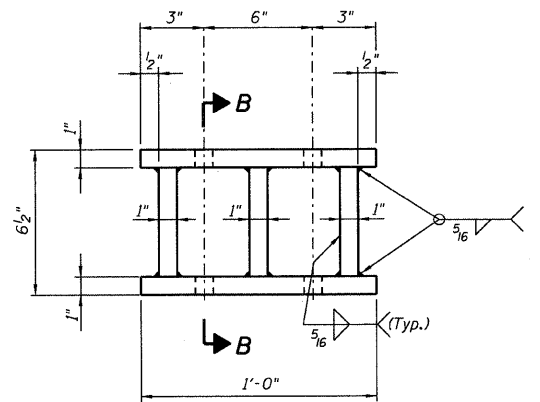
SETTING ANCHOR BOLTS AT EXP. BRG.

$D = 1/8$ " per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.



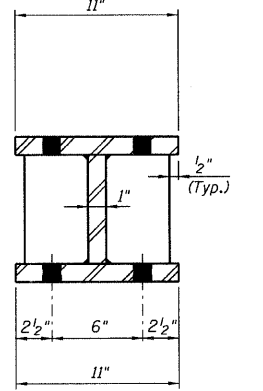
BOTTOM BEARING ASSEMBLY

TYPE II ELASTOMERIC EXPANSION BEARING

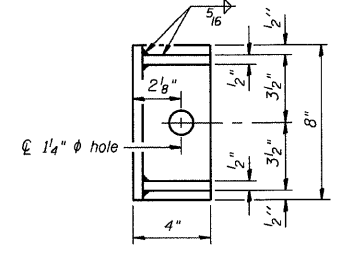
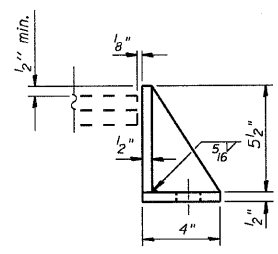


ELEVATION STEEL EXTENSION

FABRICATED STEEL EXTENSION (5 required)



SECTION B-B



SIDE RETAINER (10 Req'd)

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

Notes:

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.

Anchor bolts for Type II bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

Side retainers, anchor bolts and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	5
Jack and Remove Existing Bearings	Each	5

PIER NO. 4 - UNIT 2
WYCKLES ROAD OVER THE SANGAMON RIVER

ELASTOMERIC BEARING DETAILS

REVISIONS	FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE R KING 9/08
No. DATE INITIALS	SN 058-3030	MACON COUNTY	CHECKED BY DATE JMB 9/08
1	STA 30+50.00		BOOK NUMBER 389
2			PROJECT No. 4698
3			SHEET No.
4			
5			
6			
7			
8			
9			
10			

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CONSULTING ENGINEERS
184-001377

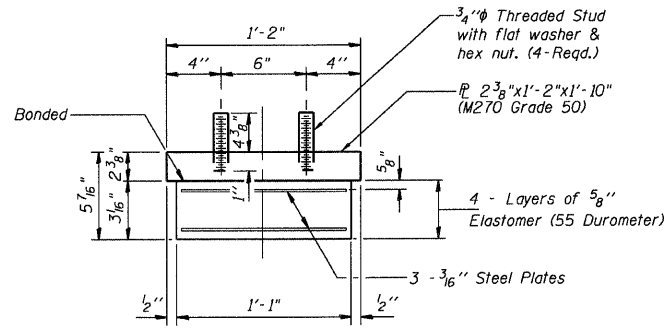
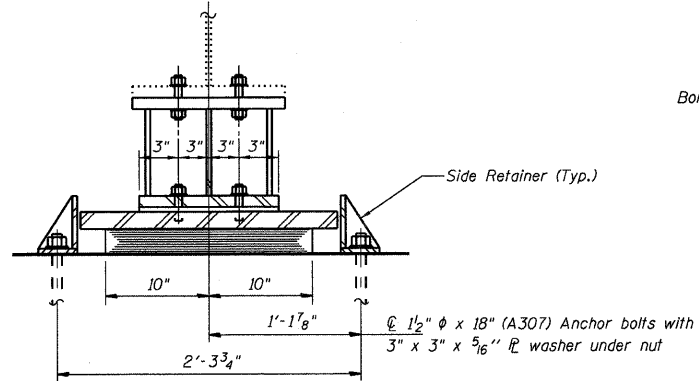
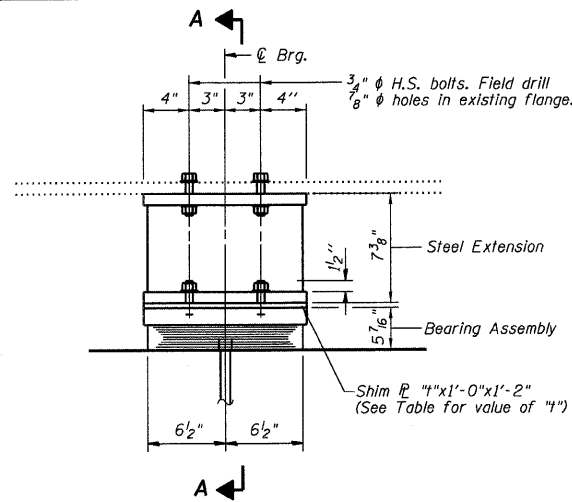
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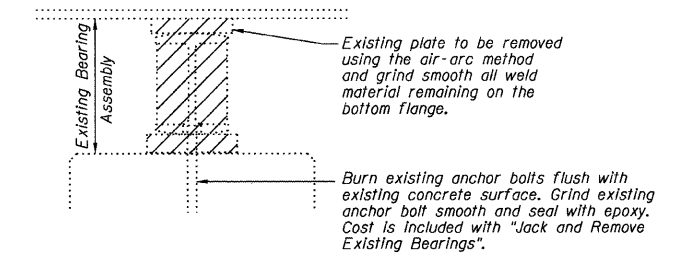
Sheet No. 22
of 30 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539		MACON	57	25
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

00-00155-00-BR



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



TYPE I ELASTOMERIC EXPANSION BEARING

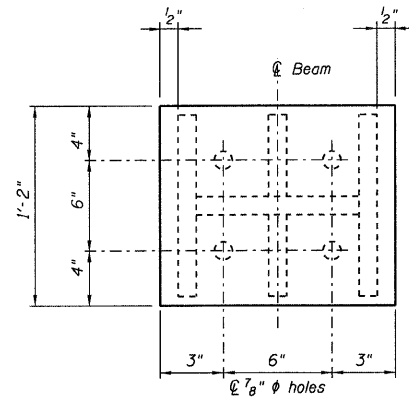
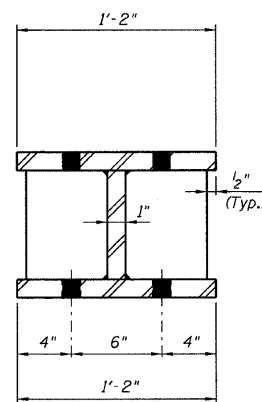
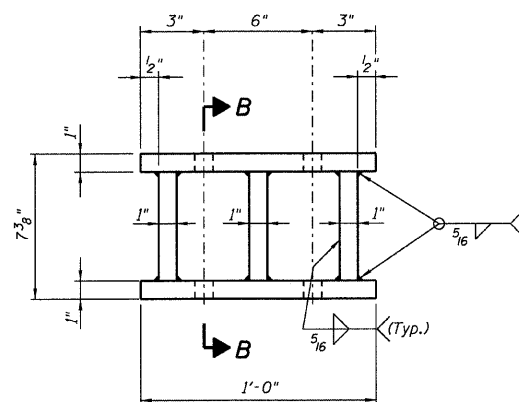


TABLE OF SHIM PLATE THICKNESSES (t in inches)

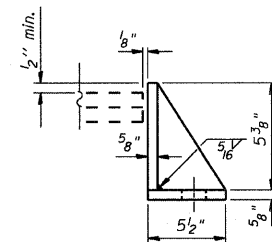
	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5
Pier 5	1 3/8"	1 1/2"	--	1 7/8"	2"

Note: Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

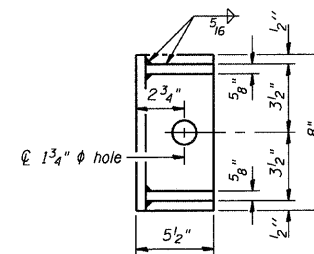
PLAN STEEL EXTENSION



FABRICATED STEEL EXTENSION
(5 required)



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



Notes:
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.
Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers, anchor bolts and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	5
Jack and Remove Existing Bearings	Each	5

PIER NO. 5
WYCKLES ROAD OVER THE SANGAMON RIVER

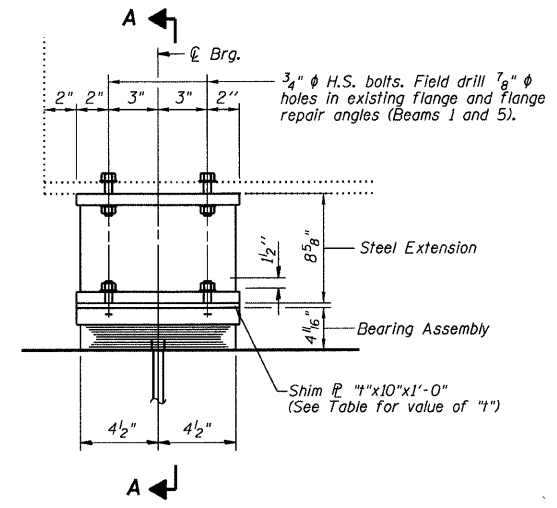
ELASTOMERIC BEARING DETAILS

REVISIONS	NO.	DATE	INITIALS	DESCRIPTION	DRAWN BY	DATE
	1				R. KING	9/08
	2				JMB	9/08
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					

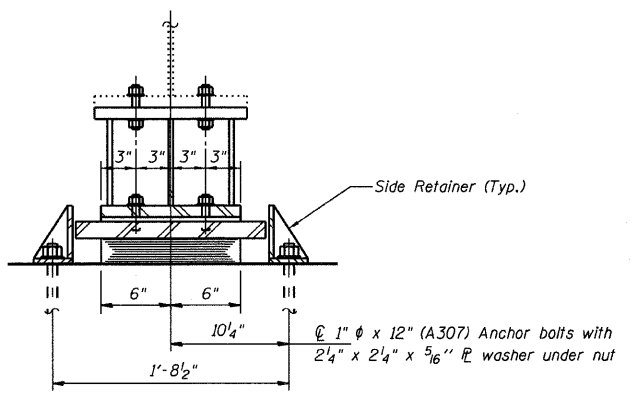
FAS 1539	SECTION 00-00155-00-BR	MACON COUNTY
STA 30+50.00	SN 058-3030	
HOMER L. CHASTAIN & ASSOCIATES, LLP CONSULTING ENGINEERS 184-001377		
DECATUR CHICAGO (317) 422-8544 (773) 714-0050		PROJECT No. 4698 SHEET No.
ROCKFORD (815) 489-0050		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539	*	MACON	57	26
FED. ROAD DIST. NO.		ILLINOIS	PROJECT	

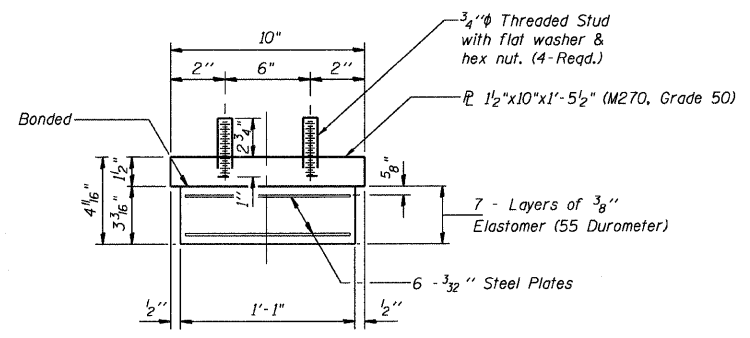
00-00155-00-BR



ELEVATION AT NORTH ABUTMENT



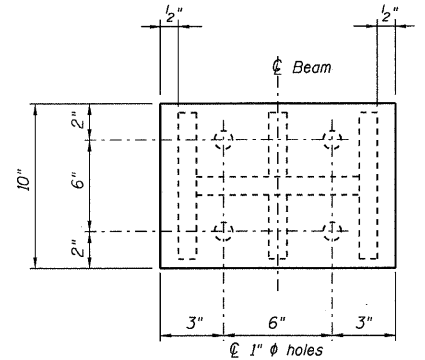
SECTION A-A



BEARING ASSEMBLY
(At Abut 2)

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

TYPE I ELASTOMERIC EXPANSION BEARING

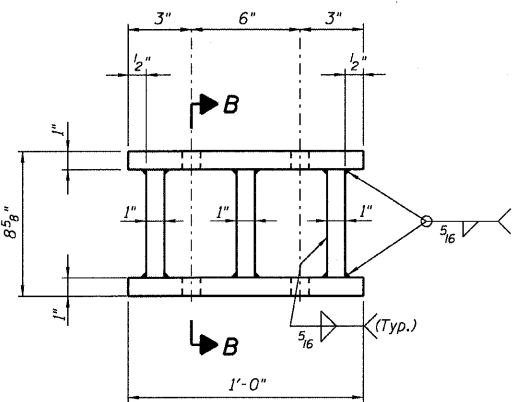


PLAN STEEL EXTENSION

TABLE OF SHIM PLATE THICKNESSES (t in inches)

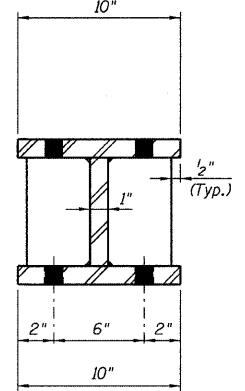
	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5
N Abut	5/8"	--	5/8"	3/4"	1/2"

Note: Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

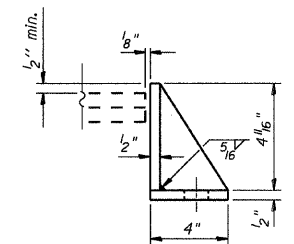


ELEVATION STEEL EXTENSION

FABRICATED STEEL EXTENSION
(5 required)

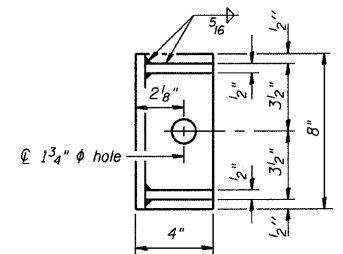


SECTION B-B



SIDE RETAINER
(10 Req'd)

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



Notes:
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.
Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers, anchor bolts and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	5
Jack and Remove Existing Bearings	Each	5

NORTH ABUTMENT
WYCKLES ROAD OVER THE SANGAMON RIVER

ELASTOMERIC BEARING DETAILS

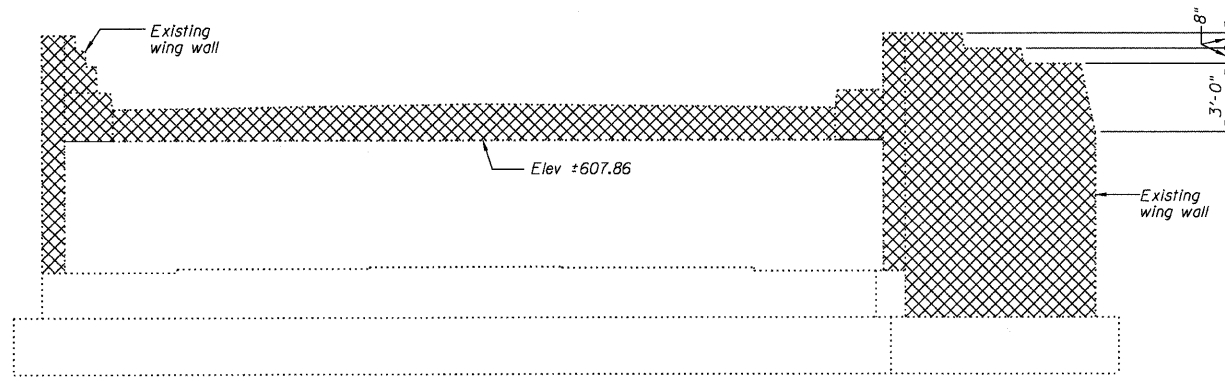
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No. DATE INITIALS	STA 30+50.00	SN 058-3030	MACON COUNTY
1			CHECKED BY DATE JMB 9/08
2			BOOK NUMBER 389
3			PROJECT No. 4698
4			SHEET No.
5			
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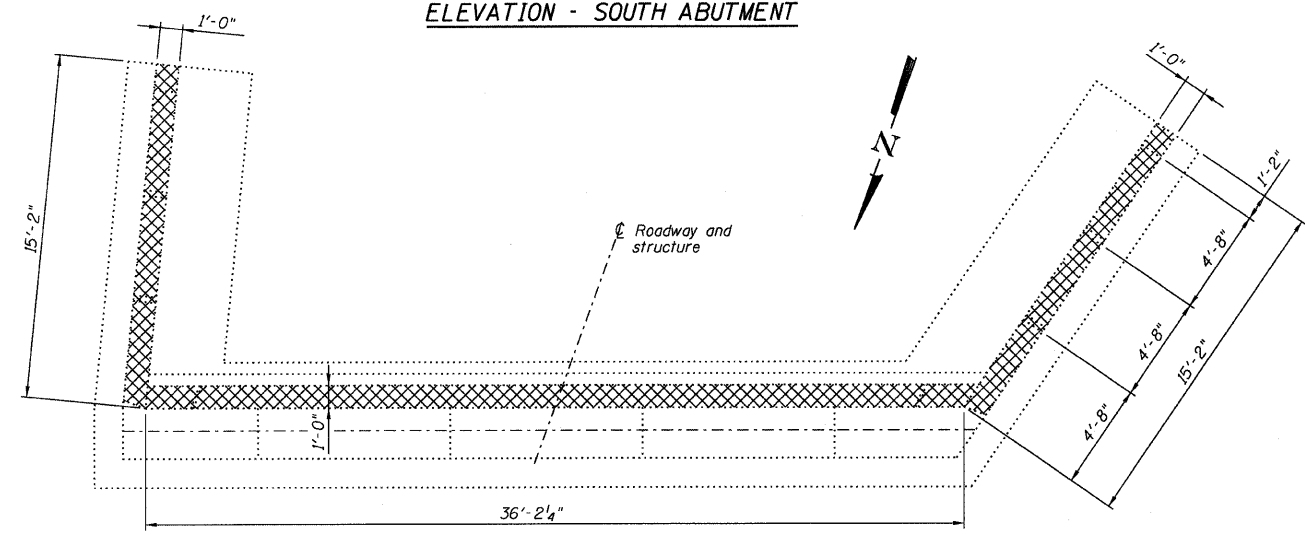
Sheet No. 24
of 30 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539		MACON	57	27
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

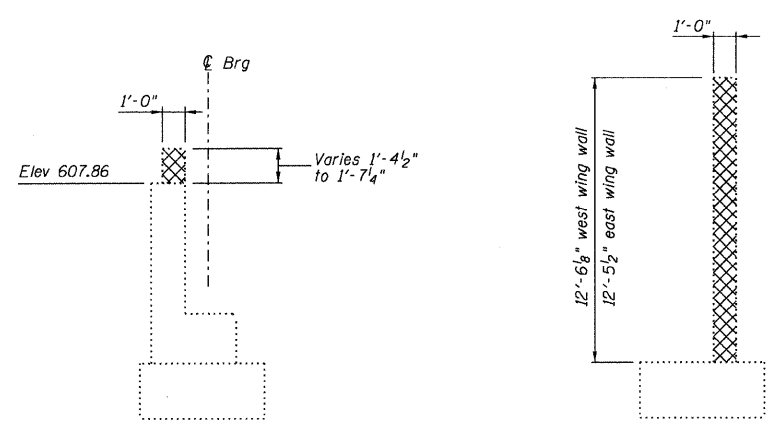
00-00155-00-BR



ELEVATION - SOUTH ABUTMENT



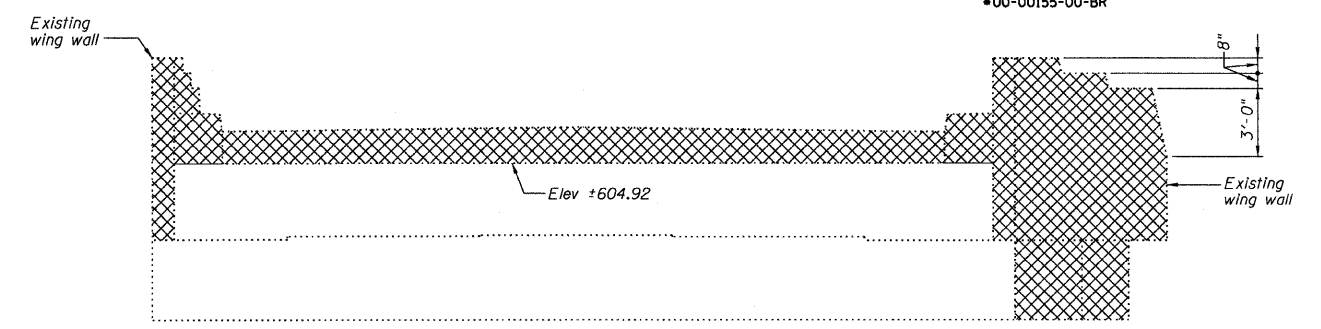
TOP VIEW - SOUTH ABUTMENT



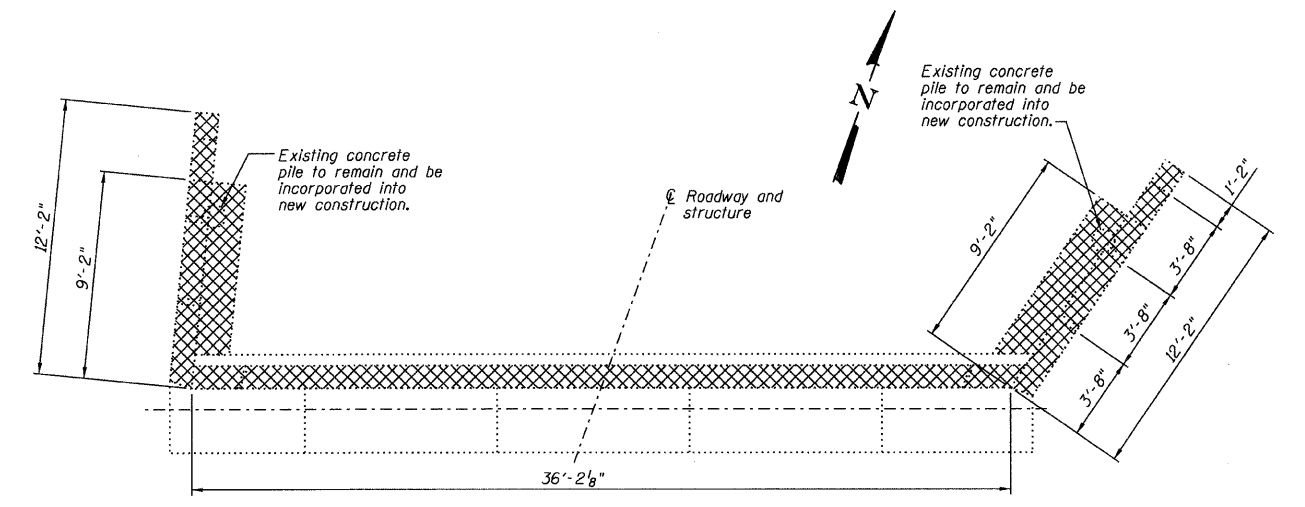
SECTION THRU EXISTING ABUTMENT

SECTION THRU EXISTING WING WALL

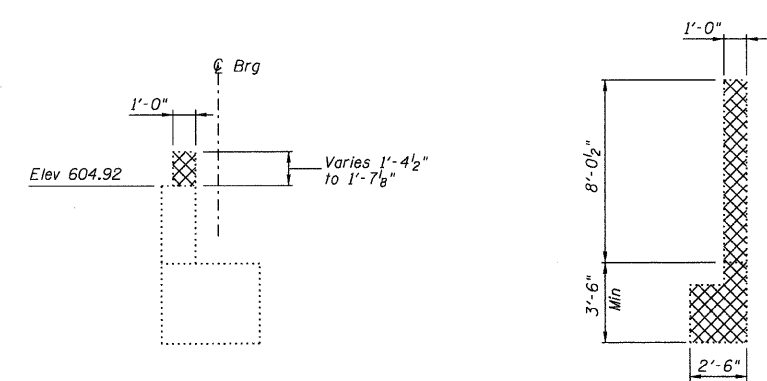
Notes:
Cross hatched area indicates "Concrete Removal".
See abutment details on Sheets 25 & 26 of 30.
Existing reinforcement extending into new construction shall be cleaned, straightened and incorporated into the new construction. Cost included with "Concrete Removal".
Existing reinforcement not extending into new construction shall be cut off flush and covered with a 2" layer of cement grout. Cost included with "Concrete Removal".



ELEVATION - NORTH ABUTMENT



TOP VIEW - NORTH ABUTMENT



SECTION THRU EXISTING ABUTMENT

SECTION THRU EXISTING WING WALL

Notes:
Cross hatched area indicates "Concrete Removal".
See abutment details on Sheets 27 & 28 of 30.
Existing reinforcement extending into new construction shall be cleaned, straightened and incorporated into the new construction. Cost included with "Concrete Removal".
Existing reinforcement not extending into new construction shall be cut off flush and covered with a 2" layer of cement grout. Cost included with "Concrete Removal".

WYCKLES ROAD OVER THE SANGAMON RIVER

ABUTMENT CONCRETE REMOVAL

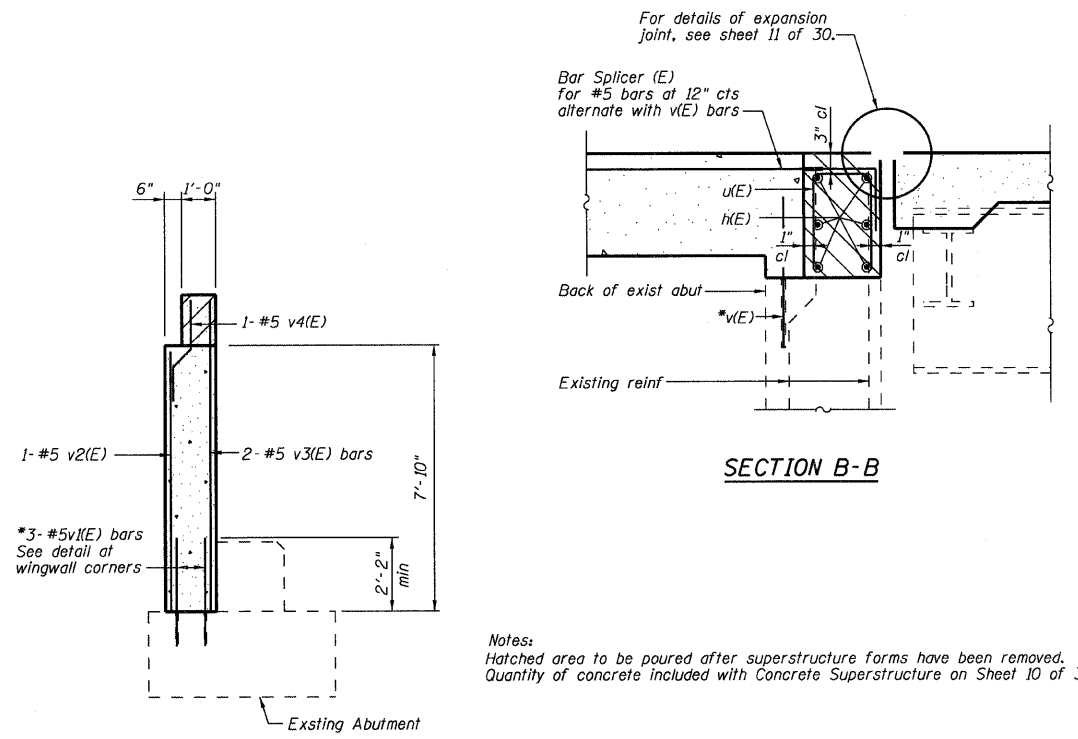
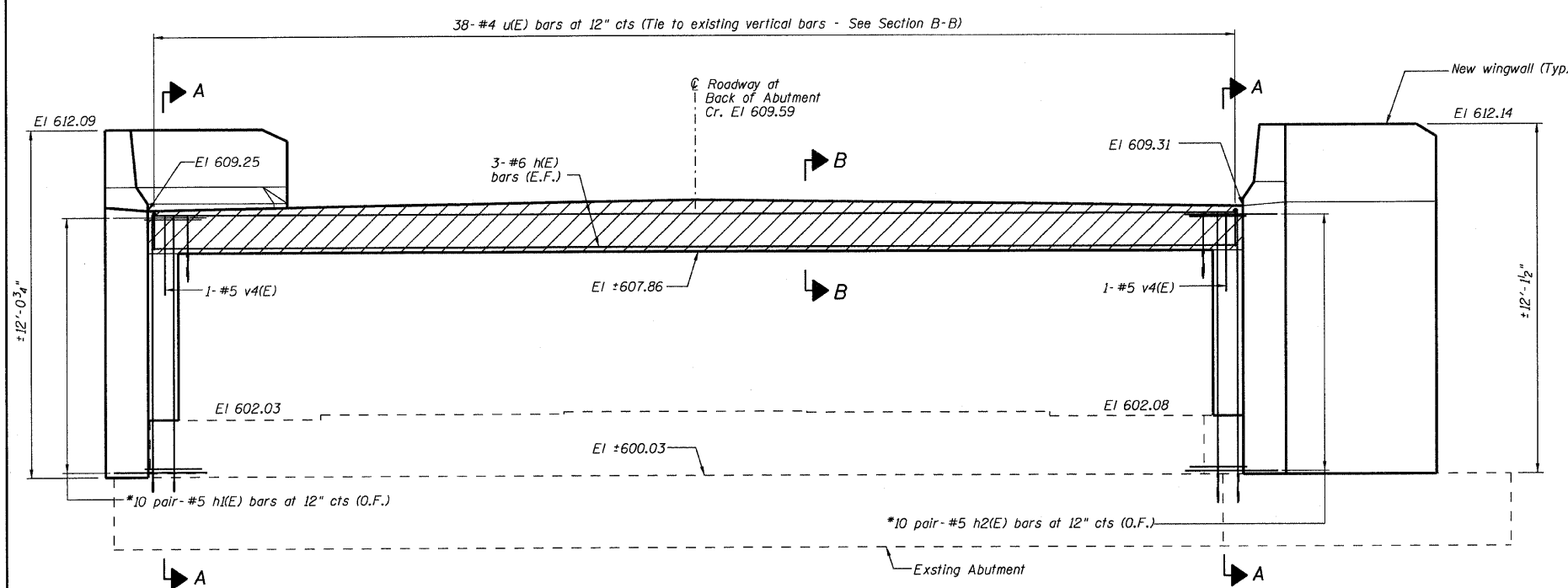
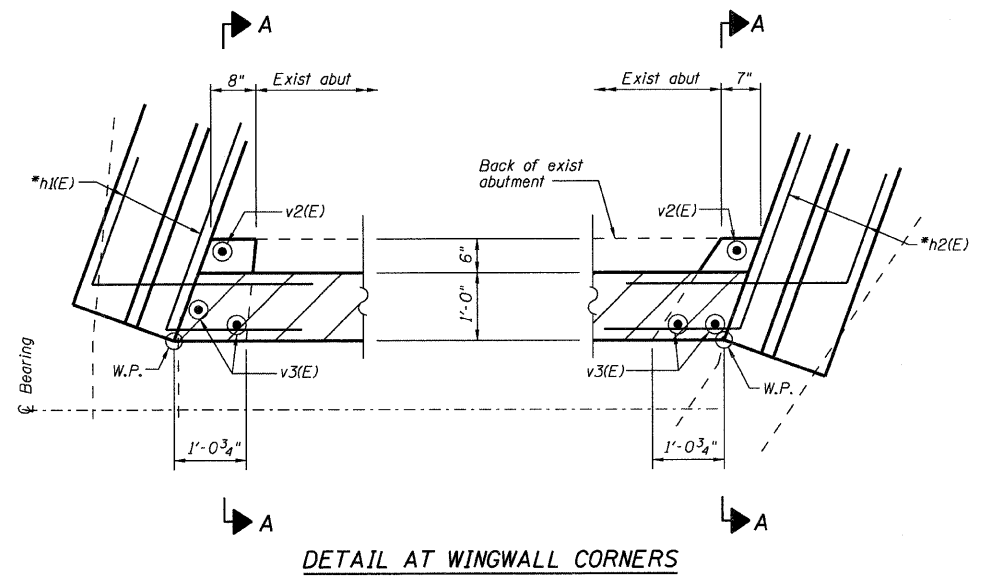
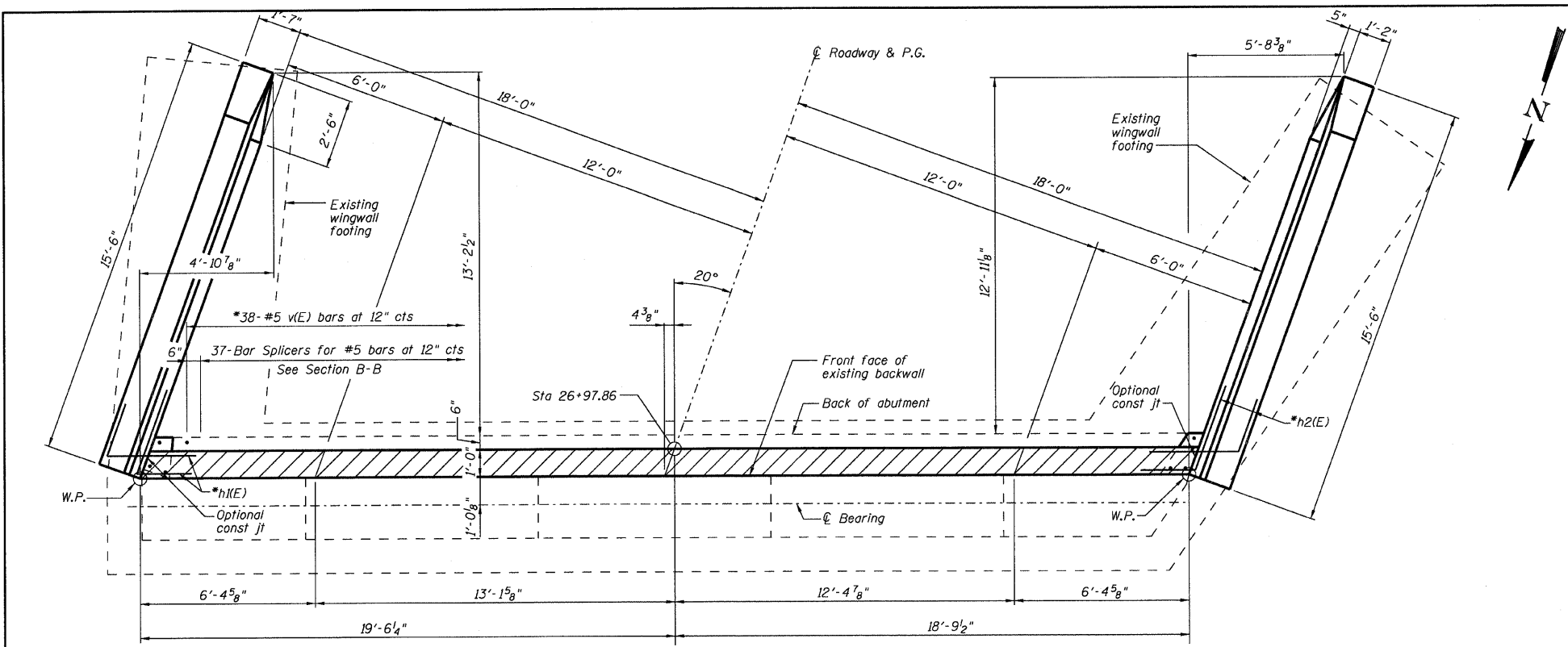
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1			R KING 9/08
2			CHECKED BY DATE
3			JMS 9/08
4			BOOK NUMBER
5			PROJECT NO.
6			4698
7			SHEET NO.
8			
9			
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539		MACON	57	28
FED. ROAD DIST. NO.		ILLINOIS	PROJECT	
			00-00155-00-BR	



*Epoxy grout h1(E), h2(E), v1(E) and v4(E) bars in 9" (min) drilled holes according to Section 584 of the Standard Specifications.

WYCKLES ROAD OVER THE SANGAMON RIVER

SOUTH ABUTMENT

REVISIONS	FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE R. KING 9/08
1	STA 30+50.00	SN 058-3030	CHECKED BY DATE JMB 9/08
2		MACON COUNTY	BOOK NUMBER
3			PROJECT NO. 4698
4			SHEET NO.
5			
6			
7			
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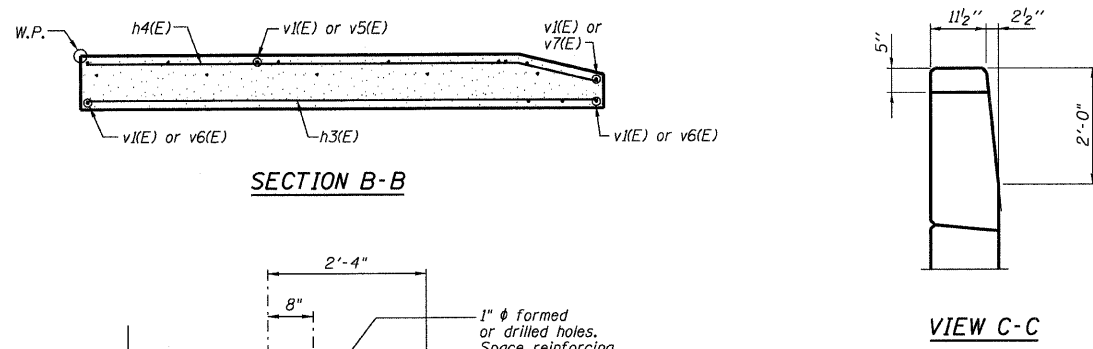
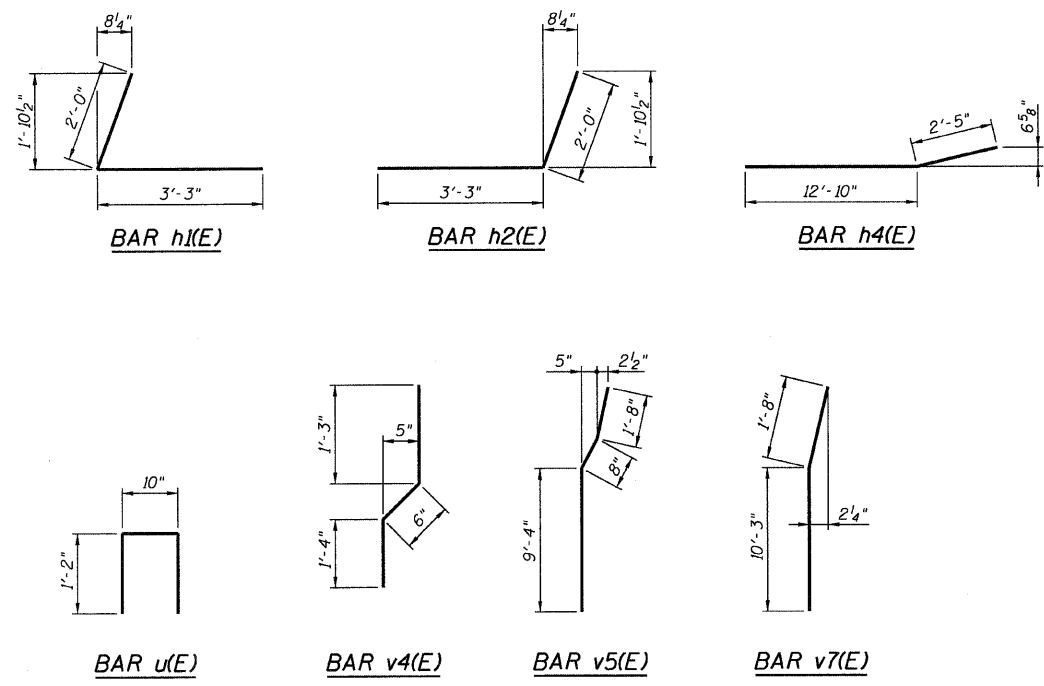
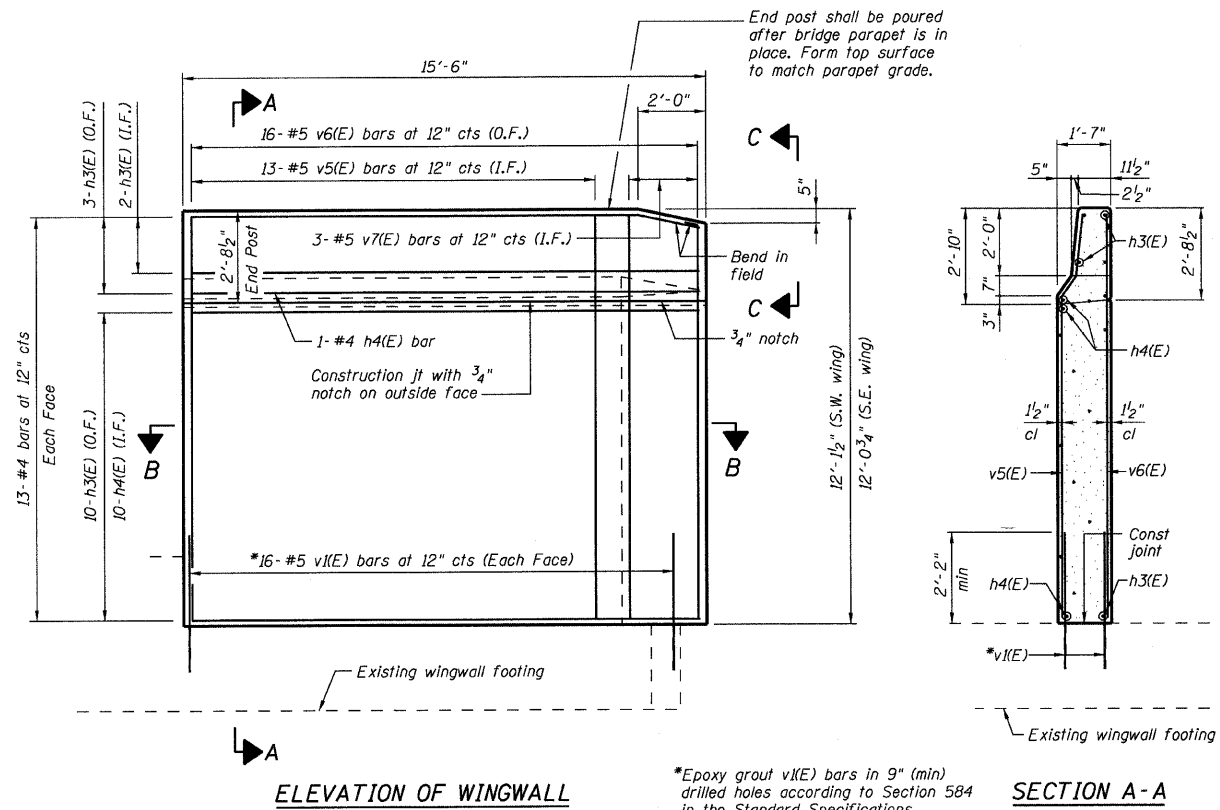
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539		MACON	57	29
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

00-00155-00-BR

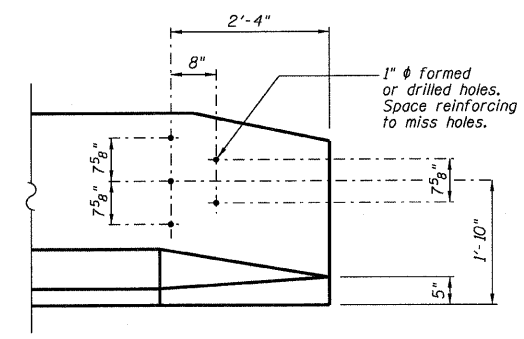
**BILL OF MATERIAL
SOUTH ABUTMENT**

Bar	No	Size	Length	Shape
h(E)	6	#6	38'-0"	—
h1(E)	20	#5	5'-3"	L
h2(E)	20	#5	5'-3"	L
h3(E)	30	#4	15'-3"	—
h4(E)	22	#4	15'-3"	—
u(E)	38	#4	3'-2"	□
v(E)	38	#5	2'-3"	—
v1(E)	70	#5	3'-3"	—
v2(E)	2	#5	7'-8"	—
v3(E)	4	#5	9'-1"	—
v4(E)	2	#5	3'-1"	—
v5(E)	26	#5	11'-8"	—
v6(E)	32	#5	11'-11"	—
v7(E)	6	#5	11'-11"	—
Concrete Structures	Cu Yd	17.8		
Reinforcement Bars Epoxy Coated	Pound	2350		
Concrete Removal	Cu Yd	15.2		

Reinforcement bars designated (E) shall be epoxy coated



**ANCHOR BOLT LOCATIONS FOR
TRAFFIC BARRIER TERMINAL, TYPE 6**
(Typ each parapet)



Notes:
Quantity of concrete in end post included with "Concrete Superstructure" on Sheet 10 of 30.

WYCKLES ROAD OVER THE SANGAMON RIVER

SOUTH ABUTMENT DETAILS

REVISIONS	FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE
No. DATE INITIALS	STA 30+50.00	SN 058-3030	R KING 9/08
1		MACON COUNTY	CHECKED BY DATE
2			JMB 9/08
3			BOOK NUMBER
4			PROJECT No.
5			4698
6			SHEET No.
7			
8			
9			
10			

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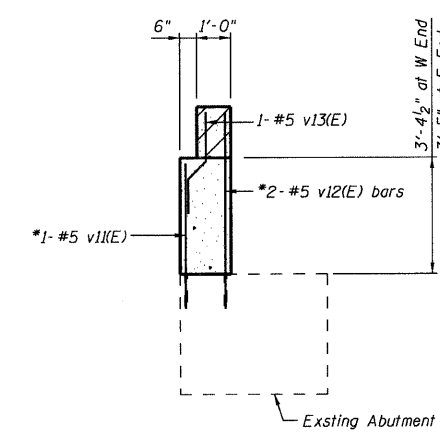
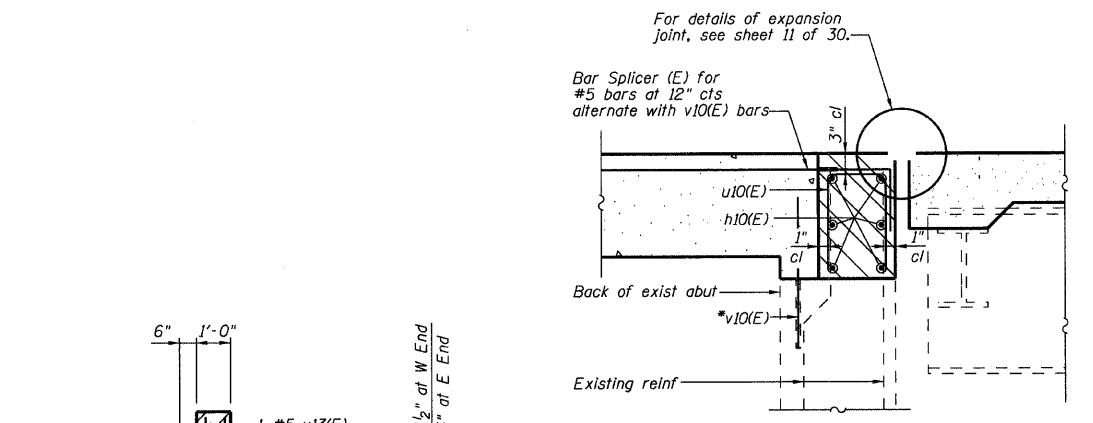
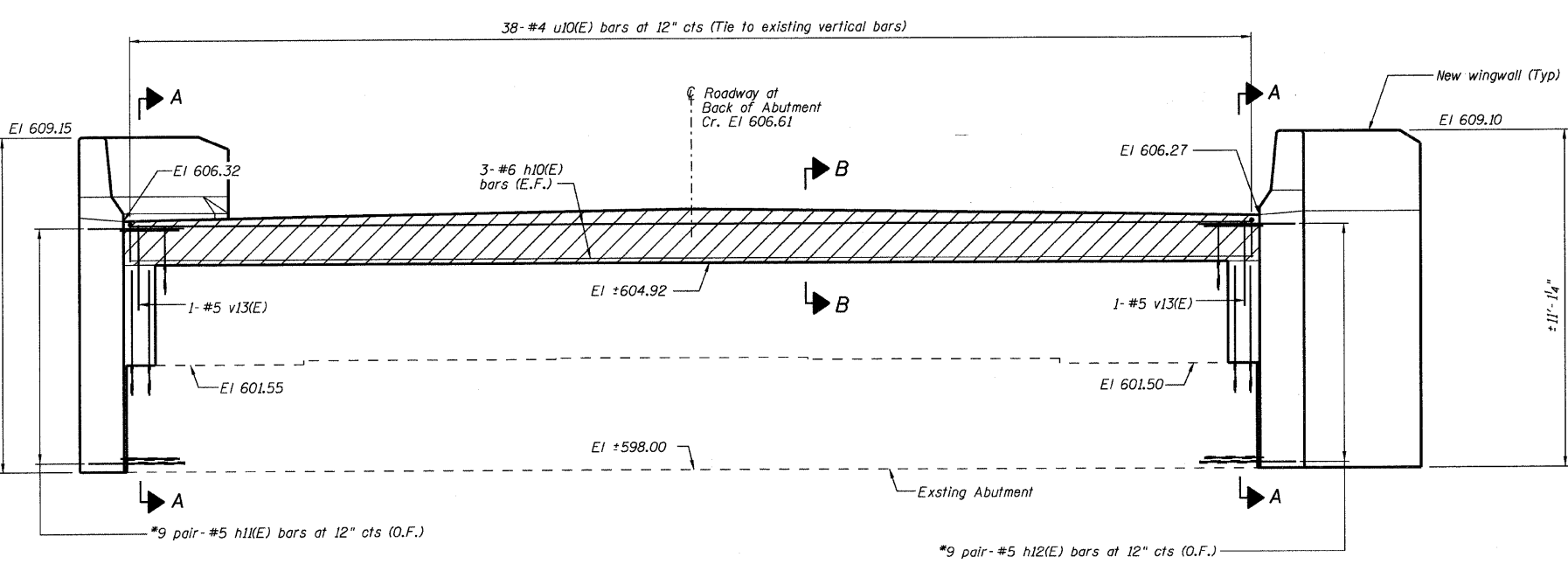
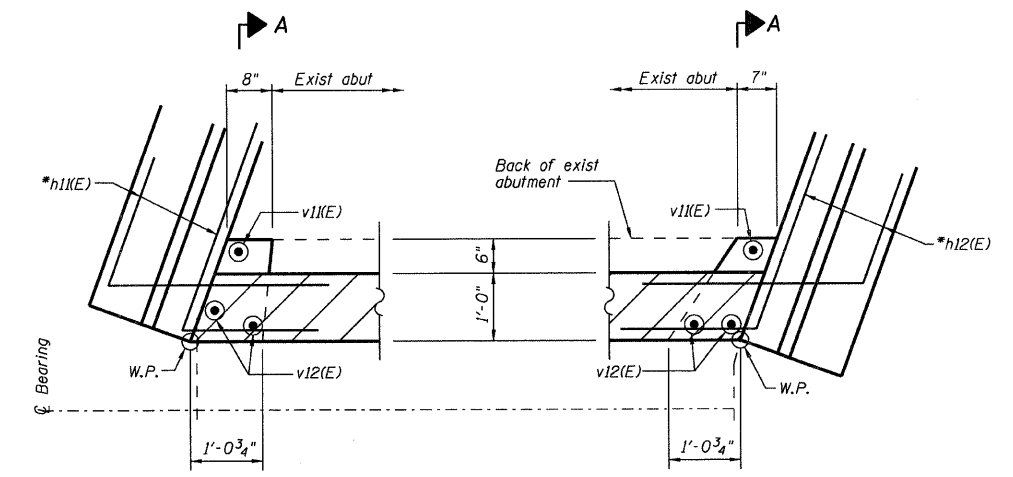
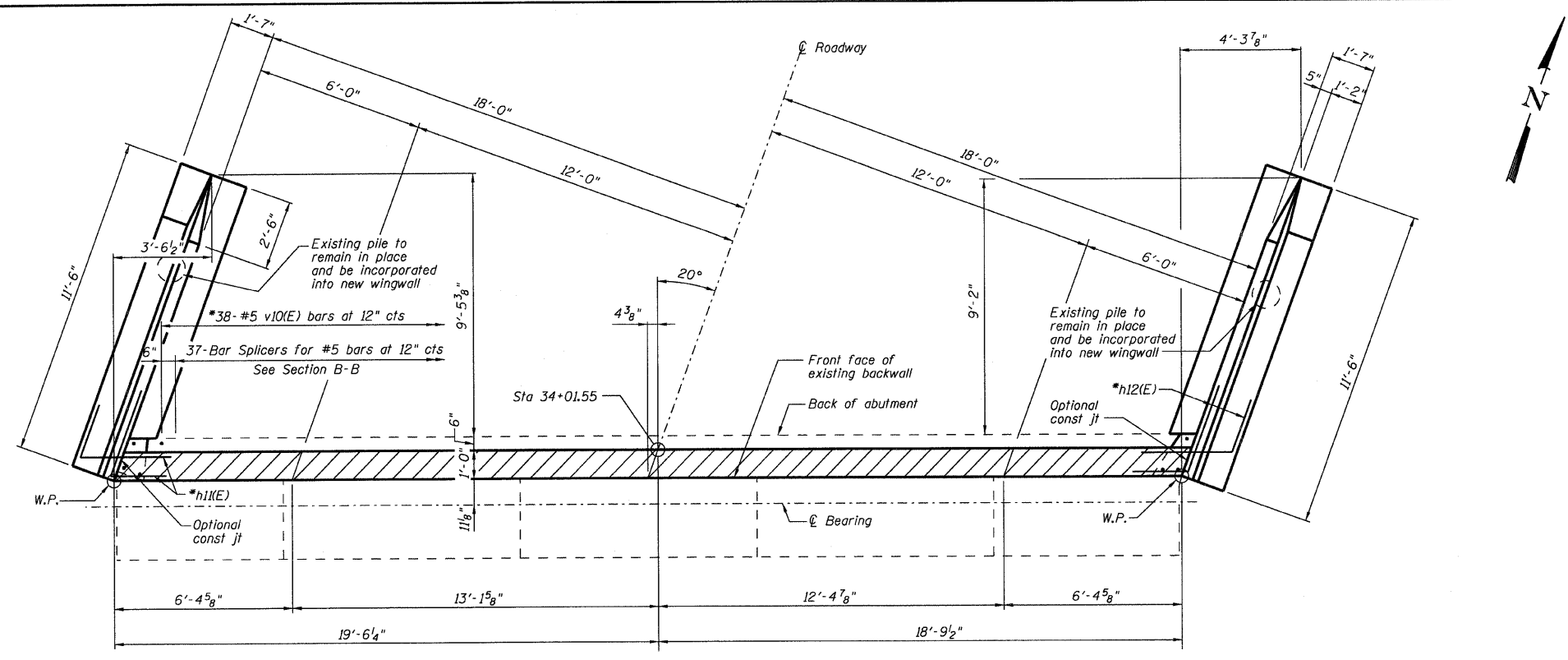
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Sheet No. 27
of 30 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539	*	MACON	57	30
FEDERAL DIST. NO.		ILLINOIS	PROJECT	

00-00155-00-BR



Notes:
Hatched area to be poured after superstructure forms have been removed.
Quantity of concrete included with Concrete Superstructure on Sheet 10 of 30.

WYCKLES ROAD OVER THE SANGAMON RIVER
NORTH ABUTMENT

REVISIONS		FAS 1539	SECTION 00-00155-00-BR		DRAWN BY DATE
1	DATE INITIALS	STA 30+50.00	SN 058-3030	MACON COUNTY	R. KING 9/08
2					CHECKED BY DATE
3					JMB 9/08
4					BOOK NUMBER
5					PROJECT NO.
6					4698
7					SHEET NO.
8					
9					
10					

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184-001397

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317-422-8644 773-714-0050

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*Epoxy grout h11(E), h12(E), v10(E), v11(E) and v12(E) bars in 9" (min) drilled holes according to Section 584 of the Standard Specifications.

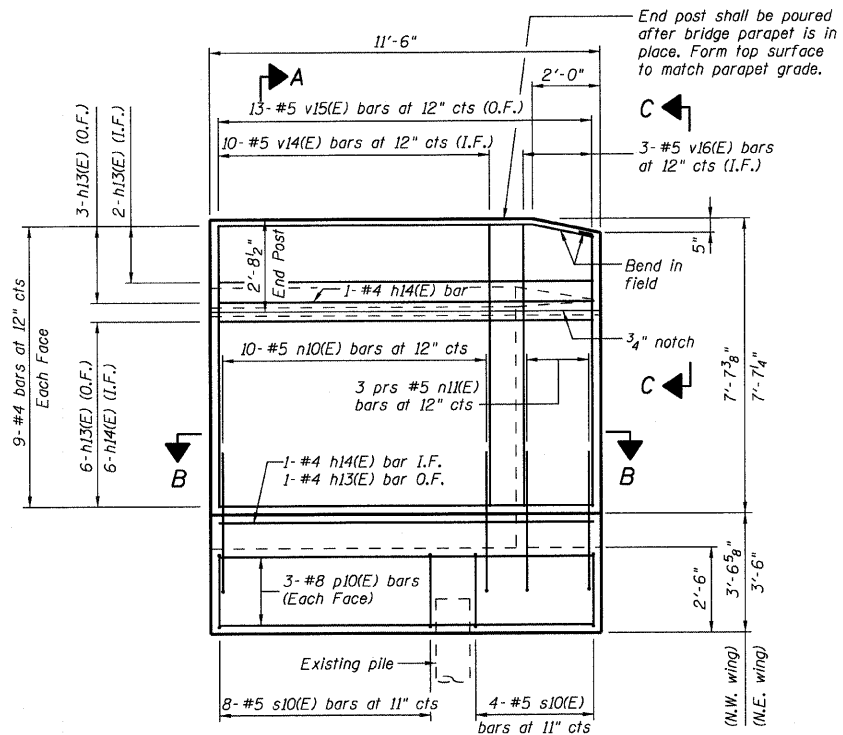
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539		MACON	57	31
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

00-00155-00-BR

**BILL OF MATERIAL
NORTH ABUTMENT**

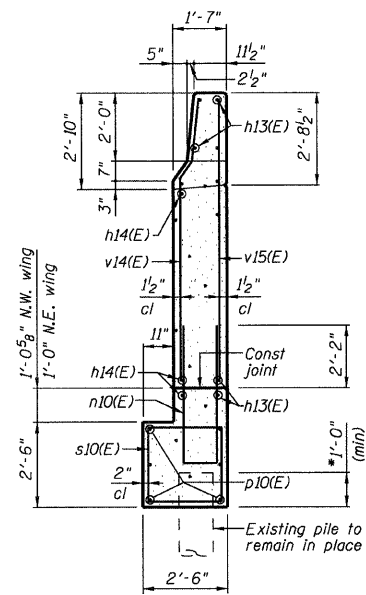
Bar	No	Size	Length	Shape
h10(E)	6	#6	38'-0"	
h11(E)	18	#5	5'-3"	L
h12(E)	18	#5	5'-3"	L
h13(E)	24	#4	11'-3"	
h14(E)	16	#4	11'-3"	
n10(E)	20	#5	12'-0"	
n11(E)	12	#5	6'-0"	
p10(E)	12	#8	11'-3"	
s10(E)	24	#5	9'-5"	
u10(E)	38	#4	3'-2"	
v10(E)	38	#5	2'-3"	
v11(E)	2	#5	4'-2"	
v12(E)	4	#5	5'-6"	
v13(E)	2	#5	3'-1"	
v14(E)	20	#5	7'-2"	
v15(E)	26	#5	7'-5"	
v16(E)	6	#5	7'-5"	
Concrete Structures	Cu Yd		13.5	
Reinforcement Bars Epoxy Coated	Pound		2340	
Concrete Removal	Cu Yd		14.5	

Reinforcement bars designated (E) shall be epoxy coated

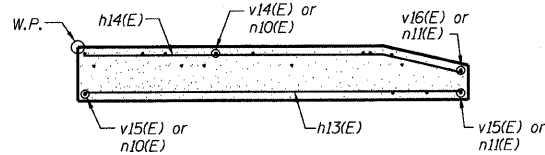


ELEVATION OF WINGWALL

*Bottom of wingwall elevation shall be lowered as necessary to provide a minimum pile embedment of 1'-0".

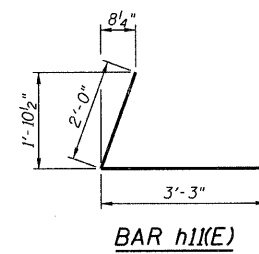
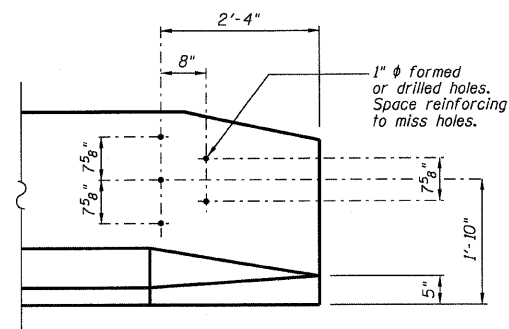


SECTION A-A

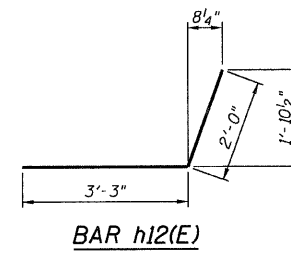


SECTION B-B

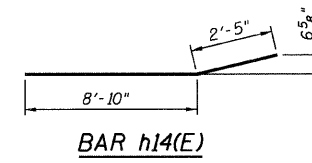
ANCHOR BOLT LOCATIONS FOR TRAFFIC BARRIER TERMINAL, TYPE 6
(Typ each parapet)



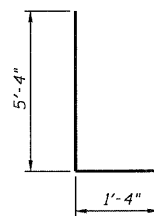
BAR h11(E)



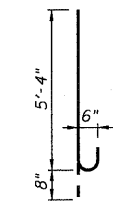
BAR h12(E)



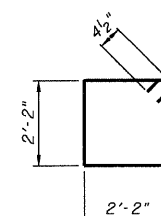
BAR h14(E)



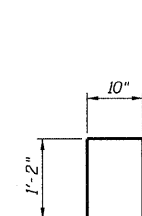
BAR n10(E)



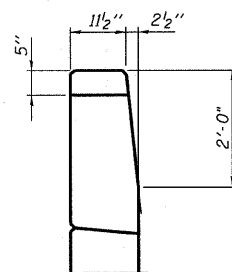
BAR n11(E)



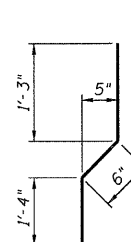
BAR s10(E)



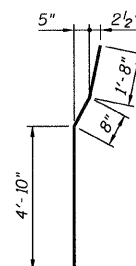
BAR u10(E)



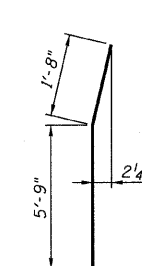
VIEW C-C



BAR v13(E)



BAR v14(E)



BAR v16(E)

Notes:
Quantity of concrete in end post included with "Concrete Superstructure" on Sheet 10 of 30.

WYCKLES ROAD OVER THE SANGAMON RIVER

NORTH ABUTMENT DETAILS

REVISIONS	FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE
1	DATE INITIALS	STA 30+50.00	R KING 9/08
2		SN 058-3030	CHECKED BY DATE
3		MACON COUNTY	JMB 9/08
4			BOOK NUMBER
5			PROJECT NO.
6			4698
7			SHEET NO.
8			
9			
10			

HOMER L. CHASTAIN & ASSOCIATES, LLP
CONSULTING ENGINEERS
184-001297

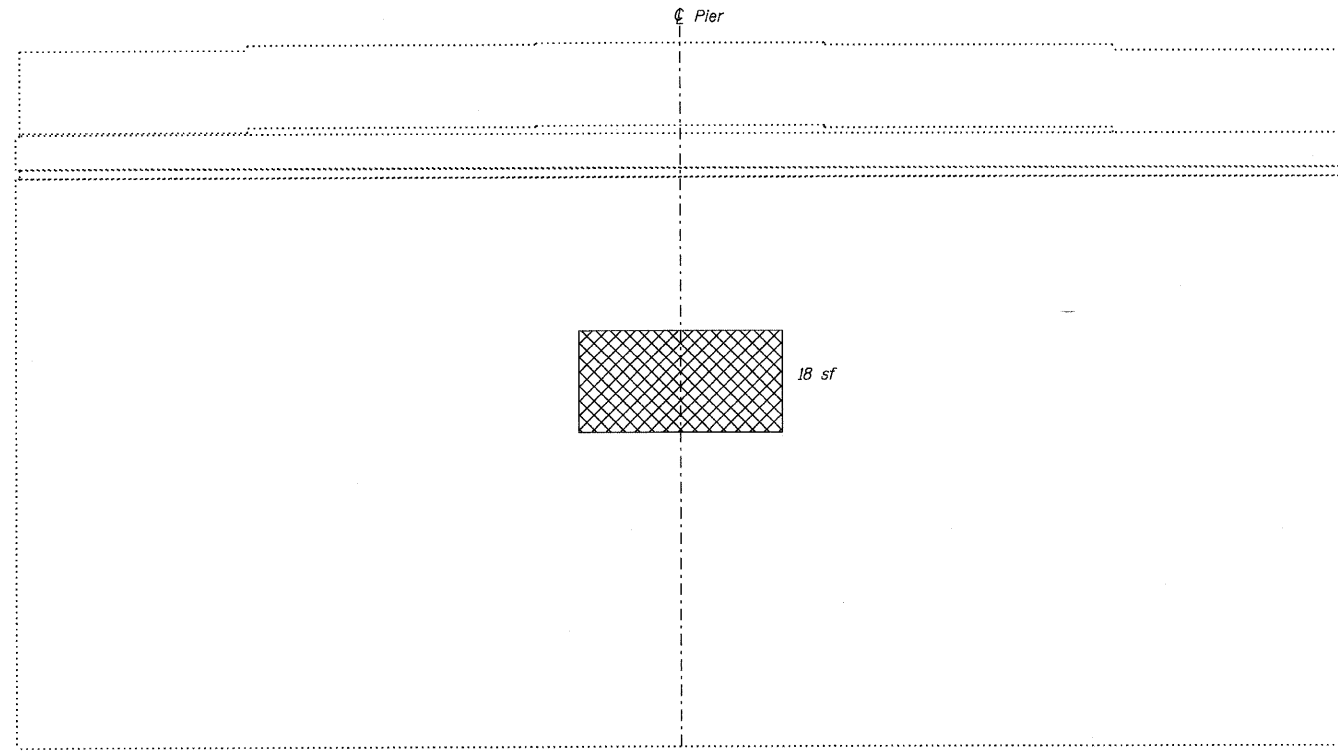
DECATUR CHICAGO
(317) 422-8544 (773) 714-0050

ROCKFORD
(815) 489-0050

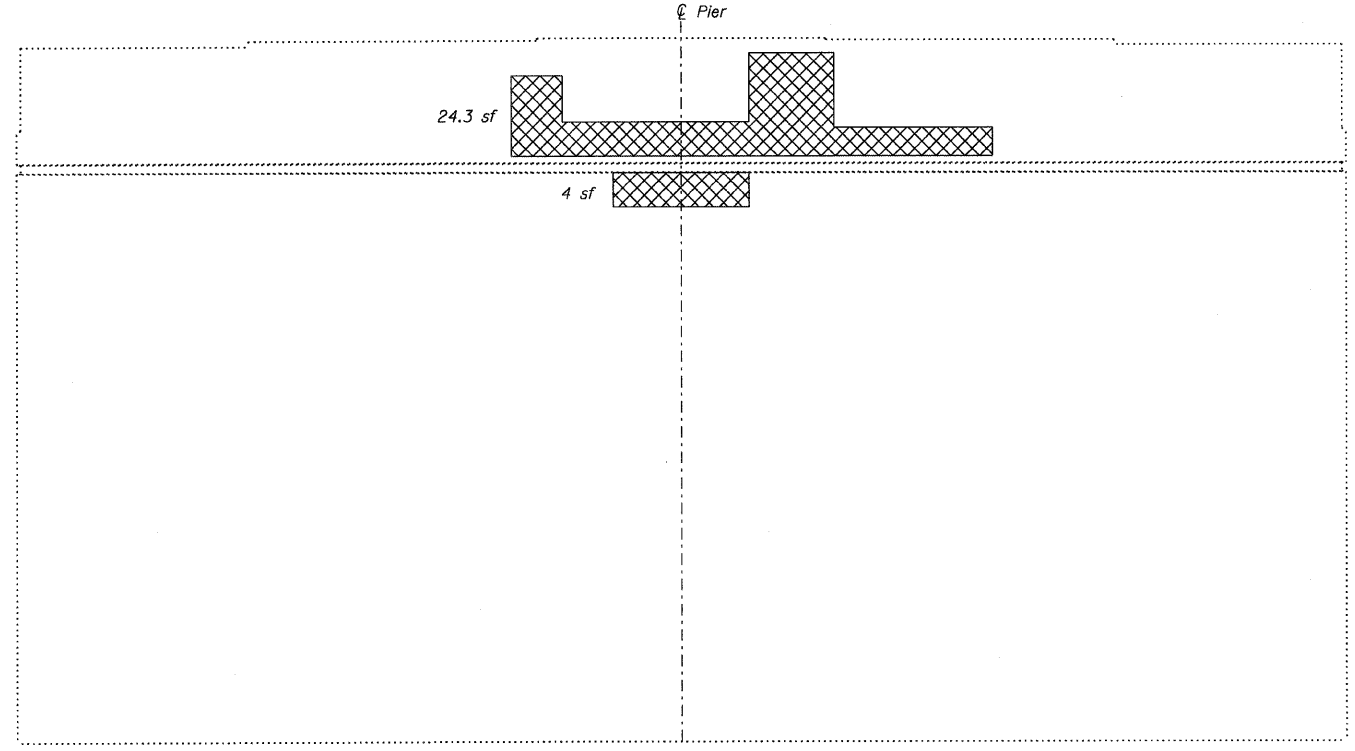
Sheet No. 29
of 30 Sheets

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539	•	MACON	57	32
FED. ROAD DIST. NO.		ILLINOIS	PROJECT	

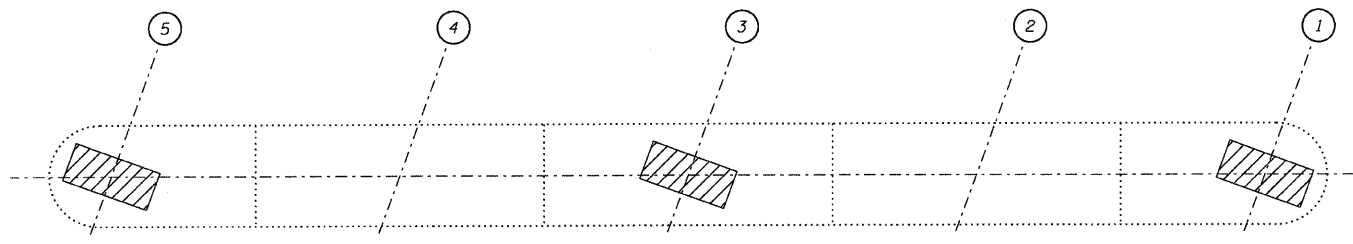
• 00-00155-00-BR



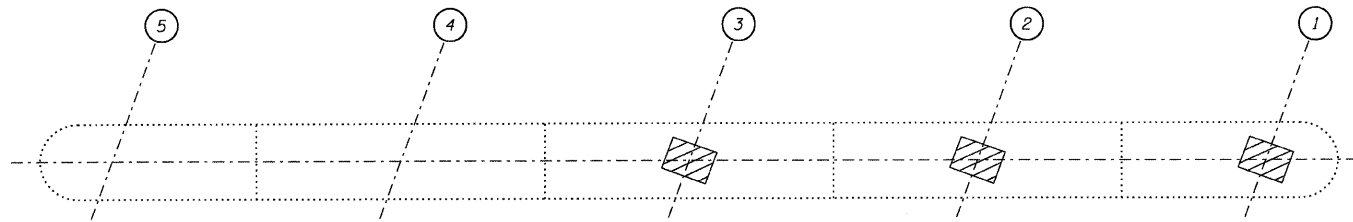
PIER 4 ELEVATION - SOUTH FACE



PIER 4 ELEVATION - NORTH FACE



PLAN - PIER NO. 3
(0.65 cu ft of non-shrink grout)



PLAN - PIER NO. 5
(0.45 cu ft of non-shrink grout)

BILL OF MATERIAL

Item	Unit	Total
Formed Concrete Repair Depth Equal to or Less Than 5"	Sq. Ft.	46.3

LEGEND

- Formed Concrete Repair Depth ≤ 5"
- Non-Shrink Grout*

*Fill void with approved non-shrink grout to provide full bearing. Grout shall conform to Section 1024 of the Standard Specifications. Cost included with "Jack and Remove Existing Bearings".

WYCKLES ROAD OVER THE SANGAMON RIVER

PIER REPAIR DETAILS

REVISIONS	FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE R KING 9/08
1	DATE INITIALS	SN 058-3030	CHECKED BY DATE JMB 9/08
2		MACON COUNTY	BOOK NUMBER 389
3			PROJECT No. 4698
4			SHEET No.
5			
6			
7			
8			
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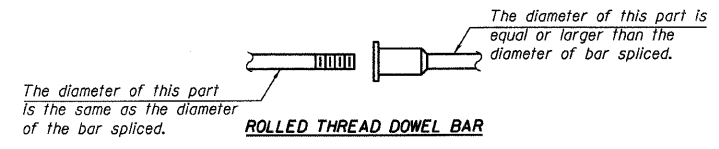
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DECATUR CHICAGO
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ROCKFORD
(815) 489-0050

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 1539	*	MACON	57	33
FED. ROAD DIST. NO.		ILLINOIS	PROJECT	

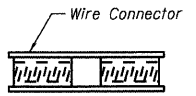
*00-00155-00-BR



ROLLED THREAD DOWEL BAR



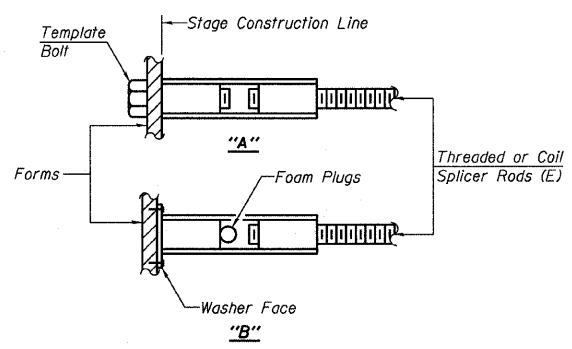
**** ONE PIECE**



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

**Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

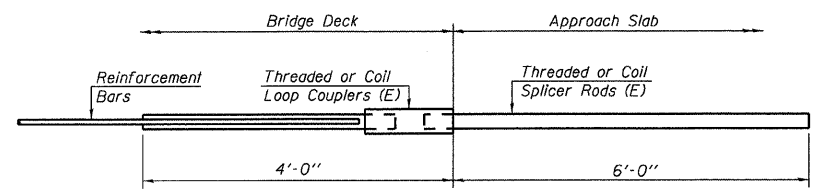
"A": Set bar splicer assembly by means of a template bolt.
 "B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
 All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
 Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

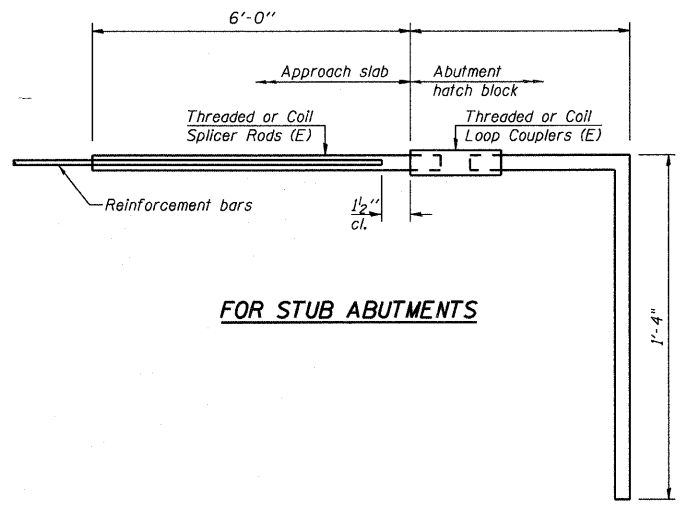
- ① Minimum Capacity = $1.25 \times f_y \times A_s$
(Tension in kips)
 - ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_s$
(Tension in kips)
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_s = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



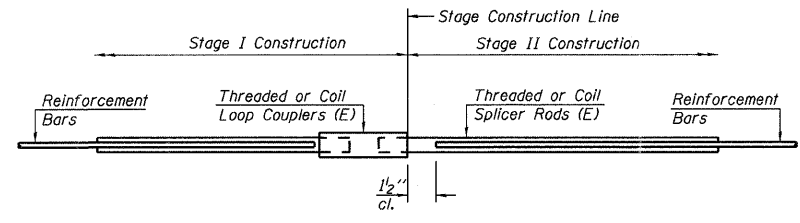
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	12.3 kips - tension
No. Required =	0



FOR STUB ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	12.3 kips - tension
No. Required =	74



STANDARD

Bar Size	No. Assemblies Required	Location
#5	37	South Abutment
#5	37	North Abutment

WYCKLES ROAD OVER THE SANGAMON RIVER

BAR SPLICER ASSEMBLY DETAILS

REVISIONS	FAS 1539	SECTION 00-00155-00-BR	DRAWN BY DATE R KING 9/08
No. DATE INITIALS	STA 30+50.00	SN 058-3030	CHECKED BY DATE JMB 9/08
1		MACON COUNTY	BOOK NUMBER
2			
3			
4			
5			
6			
7			
8			
9			
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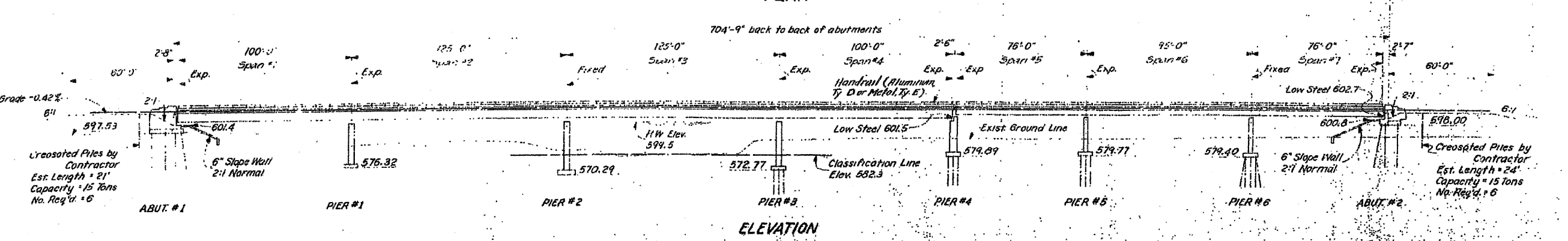
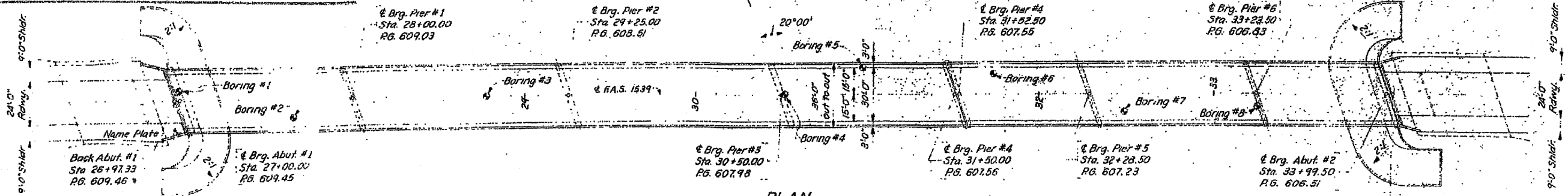
PROJECT No.
4698
SHEET No.

FOR INFORMATION ONLY

B.M. 3
R.R. spike in 30" twin maple. 120' Rt. Sta. 28+00.3
50' S. of river bank.
Elev. 588.89

B.M. 4
R.R. spike in maple cluster
170' E. Sta. 31+00.1 50' N. of
river bank. Elev. 588.50

Back Abut. #2
Sta. 34+02.09
R.G. 606.50



GENERAL NOTES

Concrete in piers shall be Class A. All other concrete shall be Class X. The concrete floor slab shall be finished in accordance with Article 51.19 of the Standard Specifications and shall be poured in one continuous operation between joints in accordance with Article 51.11

All rivets shall be 3/8" φ, holes 1/2" φ, except as noted.

Field connections shall be riveted or, at the option of the Contractor, high strength steel bolts of the same nominal diameter may be substituted. See Article 54.9 (i) of the Standard Specifications.

Coarse aggregate which is to be used in parapet, handrails and end posts must be absolutely free of chert, flint, limonite, lignite and soft sandstone.

Minimum lap for reinforcement bars shall be 20-bar diameters.

All structural steel shall be ASTM A-36.

All rivets, bolts, washers, bearing plates, lead plates, pintles and anchor bolts shall be fabricated and set in accordance with Article 51.15 of the Standard Specifications and are included in the quantity of structural steel. Est. wt. 24,400 lbs. (Inc. 11,700 lbs. Cast Steel)

Expansion devices shall be fabricated and erected in accordance with Article 51.13 (d) of the Standard Specifications and are included in the quantity of structural steel. Est. wt. 12,700 lbs.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint in accordance with Article 56.1 through 56.5 of the Standard Specifications.

Anchor bolts shall be set before installing diaphragms over the supports.

The contractor shall drive one concrete test pile at each abutment, in a permanent location and 4 timber test piles, one each near piers 3, 4, 5 & 6 all in accordance with Article 60.15 of the Standard Specifications, before ordering the remainder of the piles.

Permanent forms will not be permitted in forming the concrete floor slab.

A protective overlay shall be applied to the tops of the bridge seats on the abutments and pier No. 4 in accordance with the "Special Provisions for Bridge Seat Sealant."

DESIGN LOADING

Live: H20-S16-44 AASHTO 1961 Specs. and the Supplemental Specs. dated April 2, 1962.
Dead Load includes 194/sq. Ft. of roadway for future wearing surface.

DESIGN STRESSES

f_c = 400 p.s.i. Super. and Sub.
f_c = 75 p.s.i. Footings
f_s = 20,000 p.s.i. Reinforcing Steel
f_s = 20,000 p.s.i. Structural Steel (A-36)
n = 10
Live Load Deflection
= 1/200 for composite construction
= 1/1000 for non-composite construction

WATERWAY INFORMATION

Drainage Area: 1,010 Square Miles
Character: Level, Rolling, Cultivated
Required Opening (25 year flood): 6,820 Square Feet
Proposed Opening: 6,850 Square Feet
Ordinary Water: Elev. 581.3
Low Water: Elev. 581.3

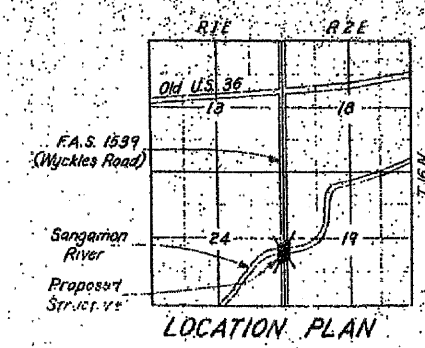
STA. 30+42.71
WYCKLES BRIDGE
BUILT 196
F.A.S. RT 1539 SEC. 37 Q
PROJ. 3-1539(101)
LOADING: H20-S16-44

LETTERING FOR NAME PLATE
(See Std. 2113)

TOTAL BILL OF MATERIAL

Item	Unit	Superstr.	Substr.	Total
Class A Excavation for Structures	Cu. Yd.		998	998
Class B Excavation for Structures	Cu. Yd.		757	757
Class A Concrete	Cu. Yd.		749.1	749.1
Class X Concrete	Cu. Yd.		109.0	858.7
Structural Steel	Lb.	804,000		804,000
Handrail (Alum. Ty. Or Metal Ty. E)	Lin. Ft.	1,402		1,402
Reinforcement Bars	Lb.	189,260	42,200	231,260
Crossed Timber Piles	Lin. Ft.		3,795	3,795
Test Piles - Timber	Each		4	4
Concrete Piles	Lin. Ft.		840	840
Test Piles - Concrete	Each		2	2
Name Plates	Each		1	1
Slope Wall # B	Sq. Yd.		855	855
Protective Coat	Sq. Yd.	3,130		3,130
Bridge Seat Sealant	Lamp/Run		1	1 Lamp/Run

PROFILE GRADE F.A.S. 1539



FOR INFORMATION ONLY

GENERAL PLAN & ELEVATION

MACON COUNTY

F.A.S. RT. 1539 SECTION 37 Q

HOMER L. CHASTAIN & ASSOCIATES
CONSULTING ENGINEERS
DECATUR, GEORGIA

REVISIONS

DATE

BY

DESCRIPTION

DATE

BY

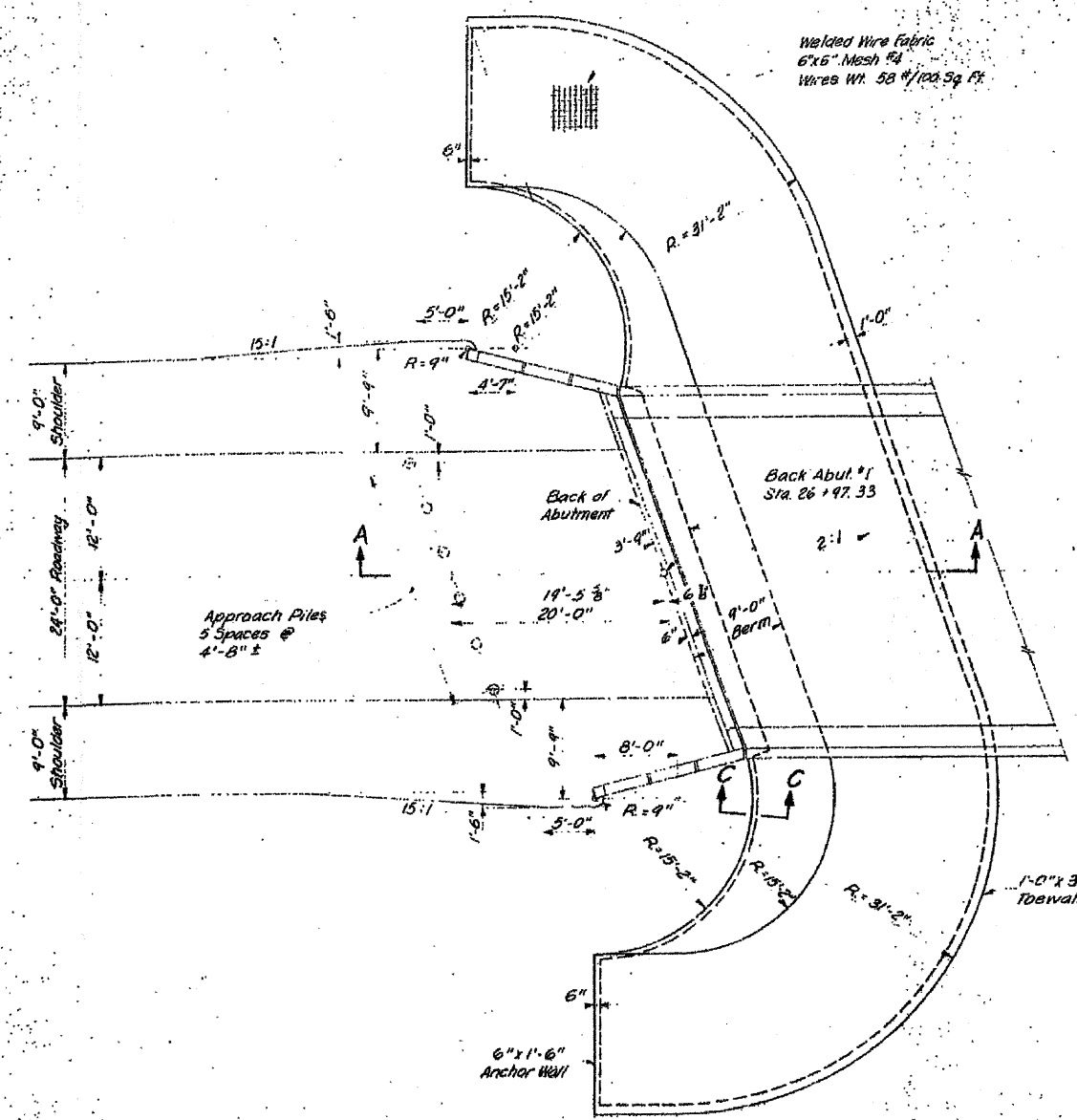
DESCRIPTION

DATE

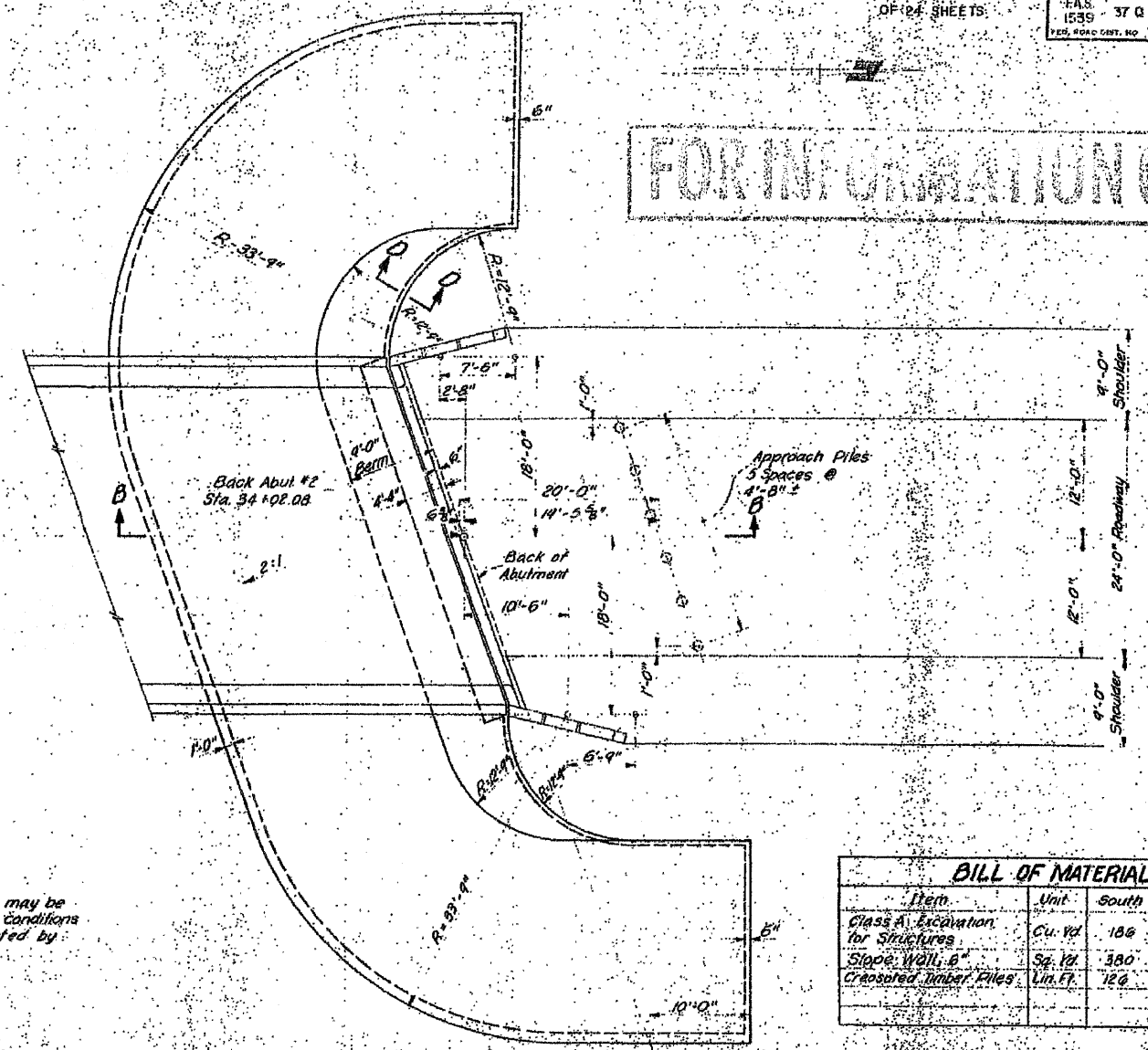
BY

DESCRIPTION

FOR INFORMATION ONLY

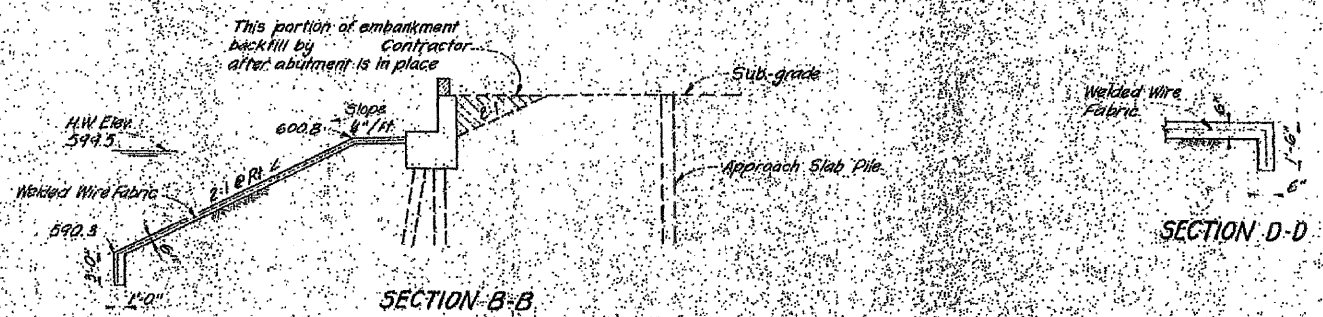
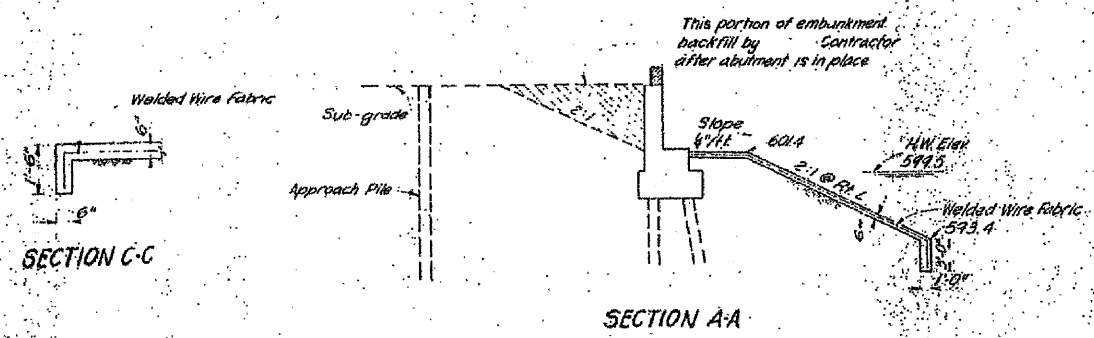


F.A.S. 1539



Note: Layout of Slope Walls may be varied to suit ground conditions in the field, as directed by the Engineer.

Item	Unit	South	North	Total
Class A Excavation for Structures	Cu. Yd.	188	29	215
Slope Wall, 6"	Sq. Yd.	380	475	855
Crossed Timber Piles	Lin. Ft.	126	144	270



FOR INFORMATION ONLY

REVISIONS		SLOPE WALLS		MACON COUNTY	
NO.	DATE	FA S. RT. 1539	SECTION 37 Q	DESIGNED BY	DATE
1				F.M.L. 3-63	
				PROJECT NO.	
				SHEET NO.	
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS					

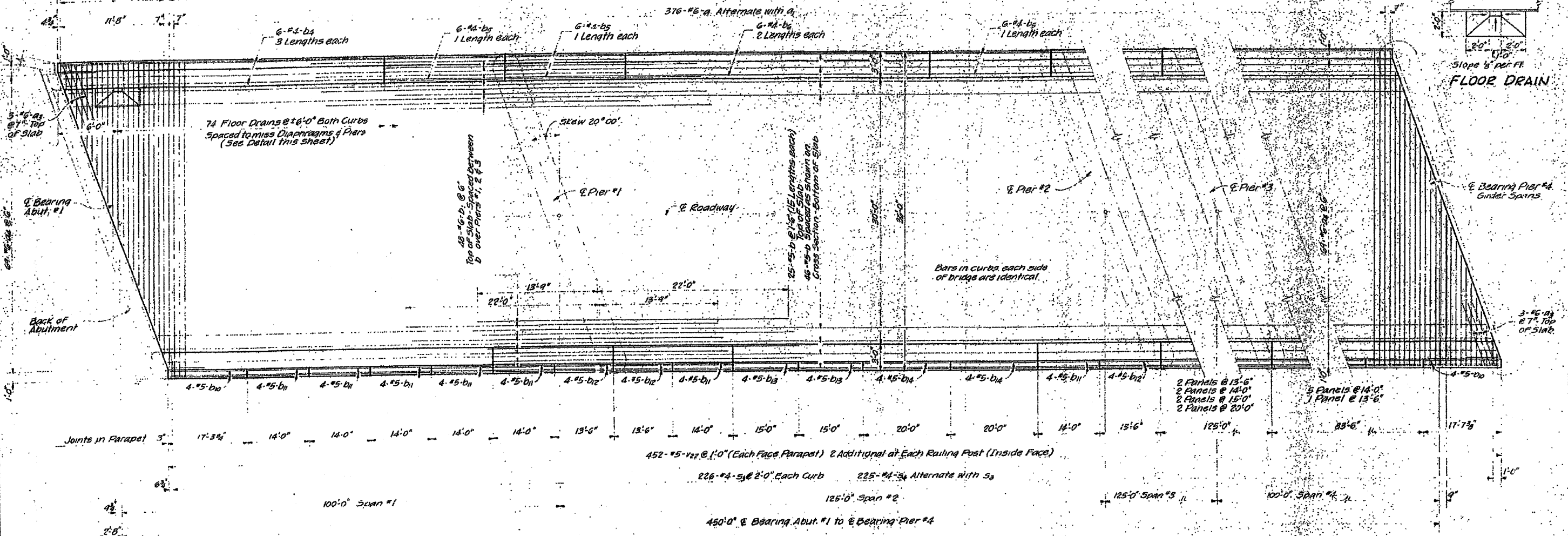
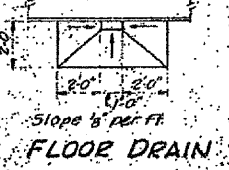
FOR INFORMATION ONLY

21-#6-a₁ @ 7" Top
21-#6-a₂ @ 7" Bottom
Order Full length - Cut to fit skew -
Use remainder of bars in opposite end

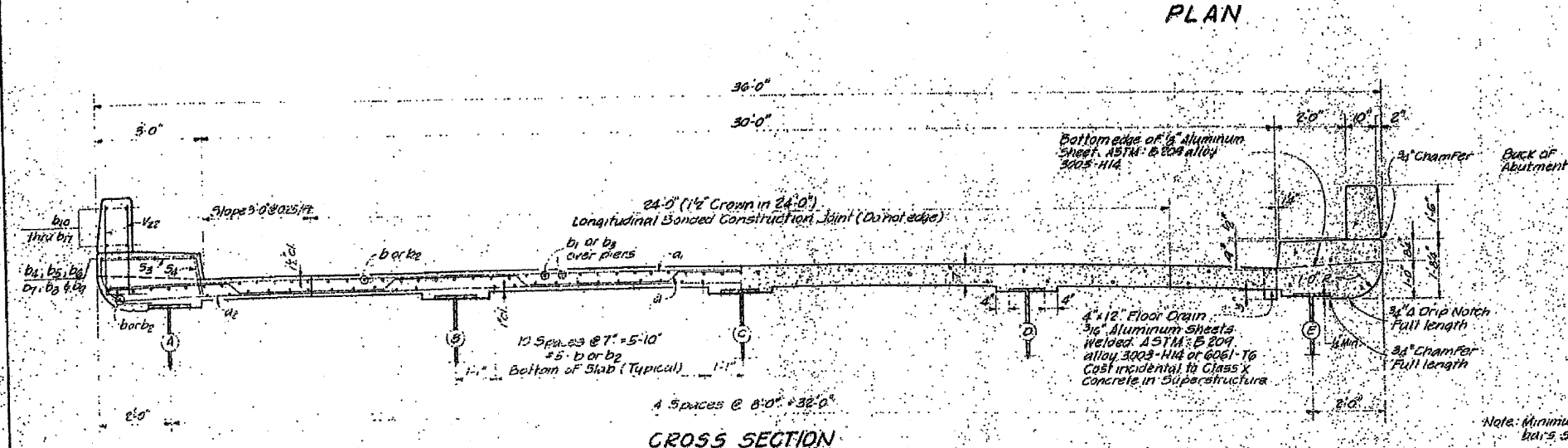
451-#6-a End to End of Deck

377-#6-a₁ @ 1'-0" Top 377-#6-a₂ @ 1'-0" Bottom

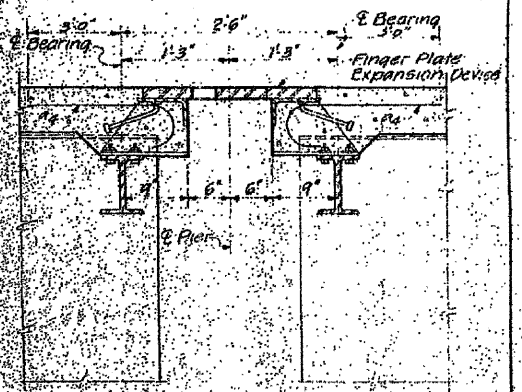
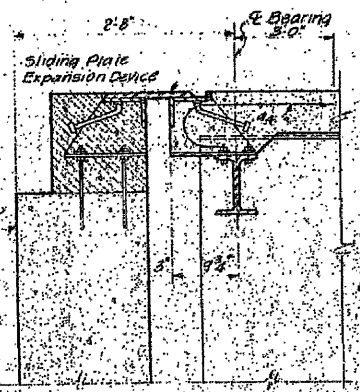
376-#6-a Alternate with a₁
6-#4-b₁ 3 Lengths each
6-#4-b₂ 1 Length each
6-#4-b₃ 1 Length each
6-#4-b₄ 2 Lengths each
6-#4-b₅ 1 Length each



PLAN



CROSS SECTION

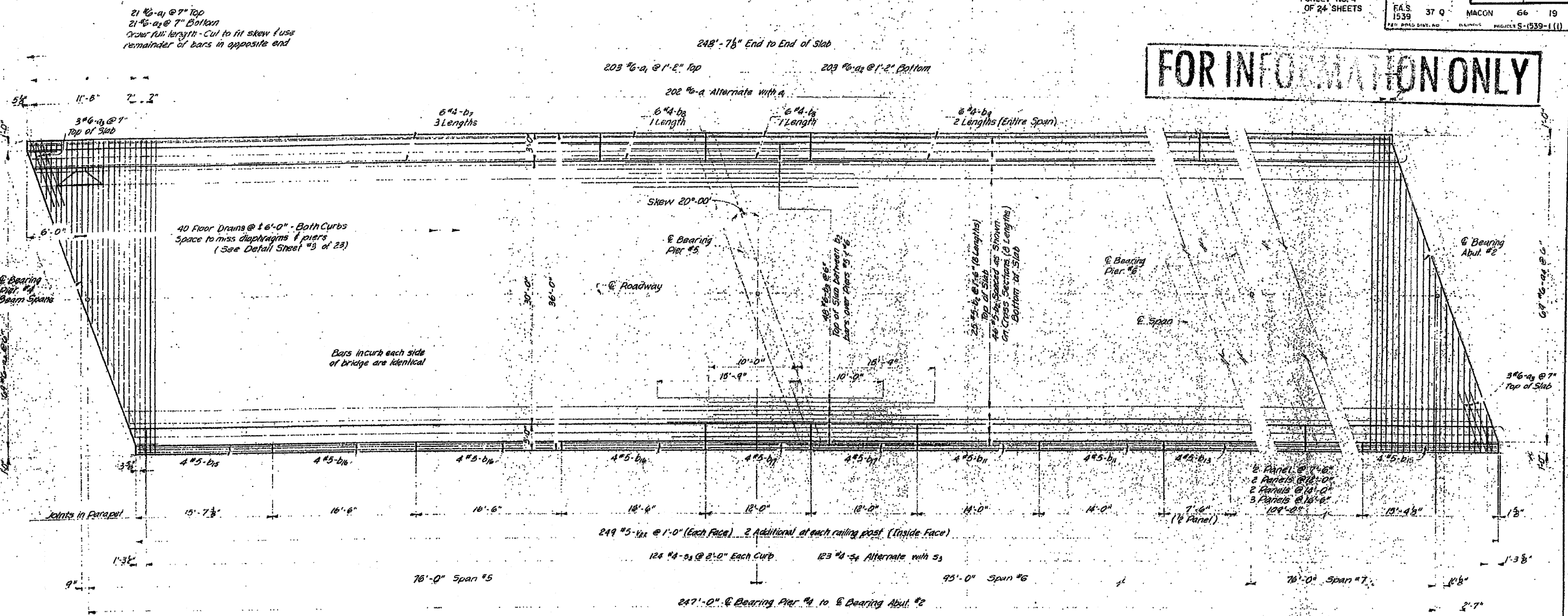


Note: Minimum lap for all reinforcement bars shall be twenty bar diameters.

FOR INFORMATION ONLY

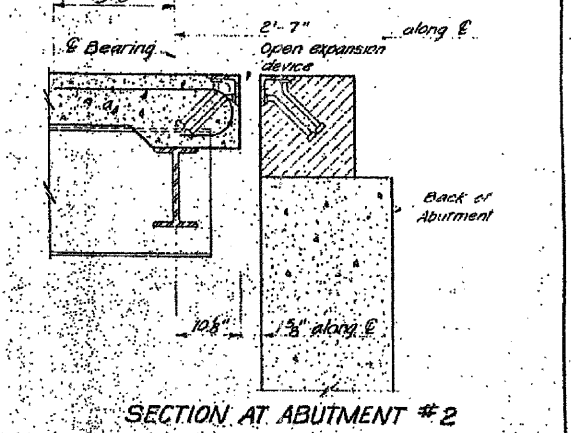
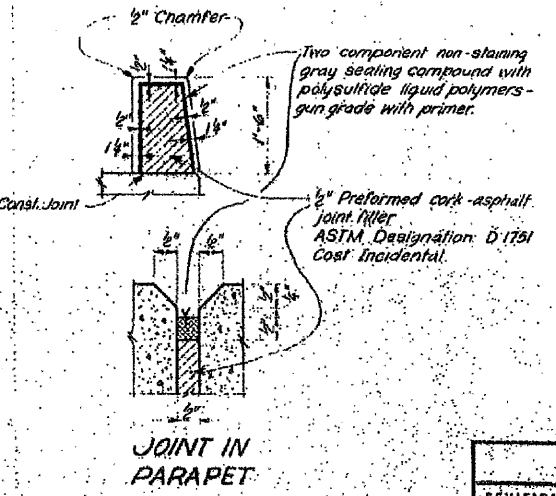
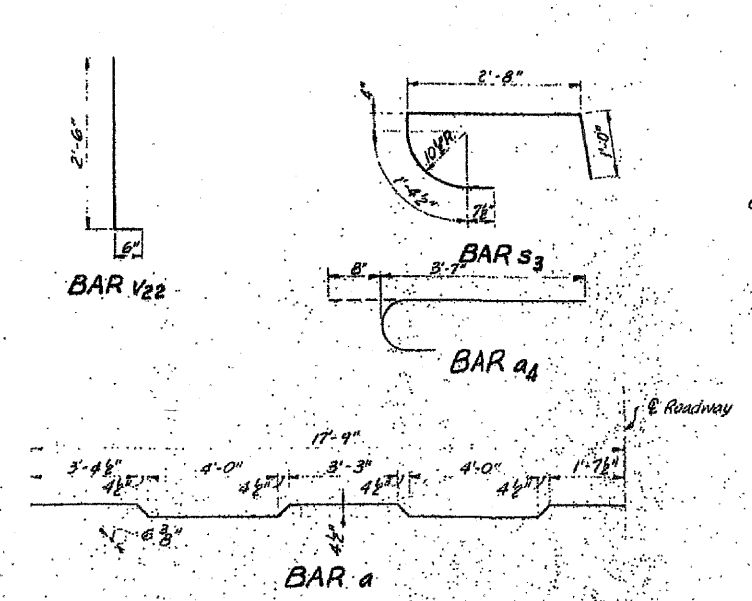
REVISIONS		CONCRETE DECK GIRDER SPANS		DATE	BY	CHKD	APP'D
		MACON COUNTY		DRAWN BY: J.L.H. 4-63			
		F.A.S. RT 1539 SECTION 37'0"		CHECKED BY: F.M.L. 4-63			
		HOMER L. CHASTAIN & ASSOCIATES		JOB NO.:			
		CONSULTING ENGINEERS		SHEET NO.:			
		DECATUR, ILLINOIS					

FOR INFORMATION ONLY



BILL OF MATERIAL

Bar	Size	Length	Shape	Number Required		Bar	Size	Length	Shape	Number Required		
				Straight	Beam Spans					Straight	Beam Spans	Total
a1	#6	36'-9"		376	202	578	b4	#5	19'-4"	32	0	32
a2	#6	35'-6"		398	224	622	b5	#5	10'-0"	0	16	16
a3	#6	35'-0"		390	224	614	b6	#5	16'-3"	0	48	48
a4	#6	7'-6"		6	6	12	b7	#5	11'-9"	0	32	32
a5	#6	4'-3"		138	180	318						
b1	#5	31'-0"		1065	0	1065						
b2	#5	35'-9"		144	0	144	s2	#4	6'-0"	452	248	700
b3	#5	32'-0"		0	568	568	s4	#4	1'-0"	180	246	426
b4	#5	25'-9"		0	16	16						
b5	#5	25'-0"		72	0	72						
b6	#5	25'-0"		72	0	72						
b7	#5	25'-0"		72	0	72						
b8	#5	25'-0"		72	0	72						
b9	#5	25'-0"		72	0	72						
b10	#5	25'-0"		72	0	72						
b11	#5	25'-0"		72	0	72						
b12	#5	25'-0"		72	0	72						
b13	#5	25'-0"		72	0	72						
b14	#5	25'-0"		72	0	72						
b15	#5	25'-0"		72	0	72						
b16	#5	25'-0"		72	0	72						
b17	#5	25'-0"		72	0	72						
b18	#5	25'-0"		72	0	72						
b19	#5	25'-0"		72	0	72						
b20	#5	25'-0"		72	0	72						
b21	#5	25'-0"		72	0	72						
b22	#5	25'-0"		72	0	72						
b23	#5	25'-0"		72	0	72						
b24	#5	25'-0"		72	0	72						
b25	#5	25'-0"		72	0	72						
b26	#5	25'-0"		72	0	72						
b27	#5	25'-0"		72	0	72						
b28	#5	25'-0"		72	0	72						
b29	#5	25'-0"		72	0	72						
b30	#5	25'-0"		72	0	72						
b31	#5	25'-0"		72	0	72						
b32	#5	25'-0"		72	0	72						
b33	#5	25'-0"		72	0	72						
b34	#5	25'-0"		72	0	72						
b35	#5	25'-0"		72	0	72						
b36	#5	25'-0"		72	0	72						
b37	#5	25'-0"		72	0	72						
b38	#5	25'-0"		72	0	72						
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b72	#5	25'-0"		72	0	72						
b73	#5	25'-0"		72	0	72						
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b94	#5	25'-0"		72	0	72						
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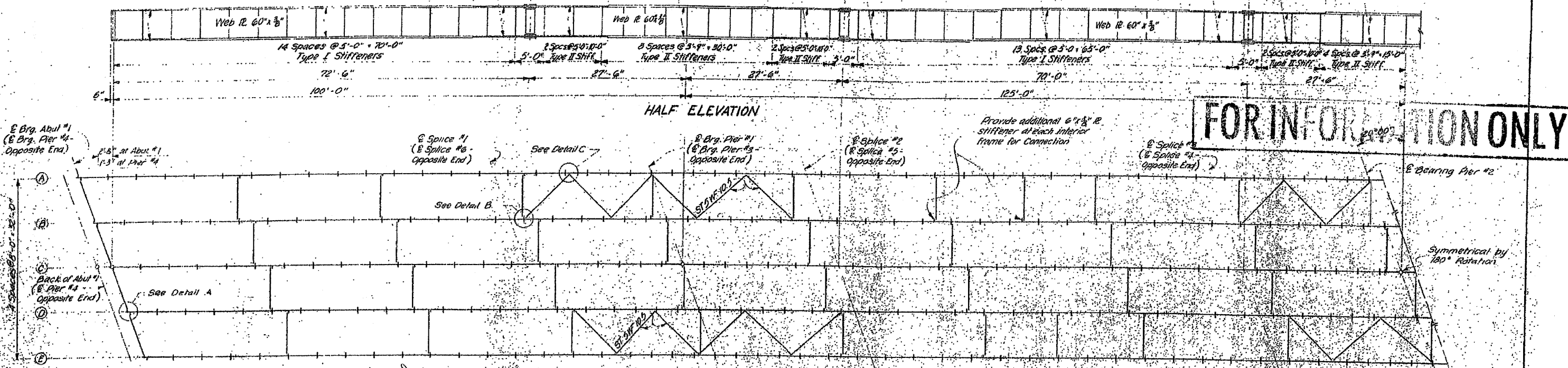
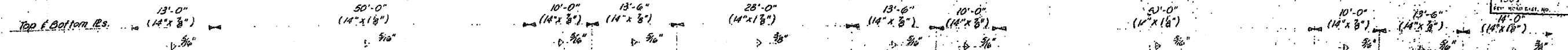


CONCRETE DECK-BEAM SPANS

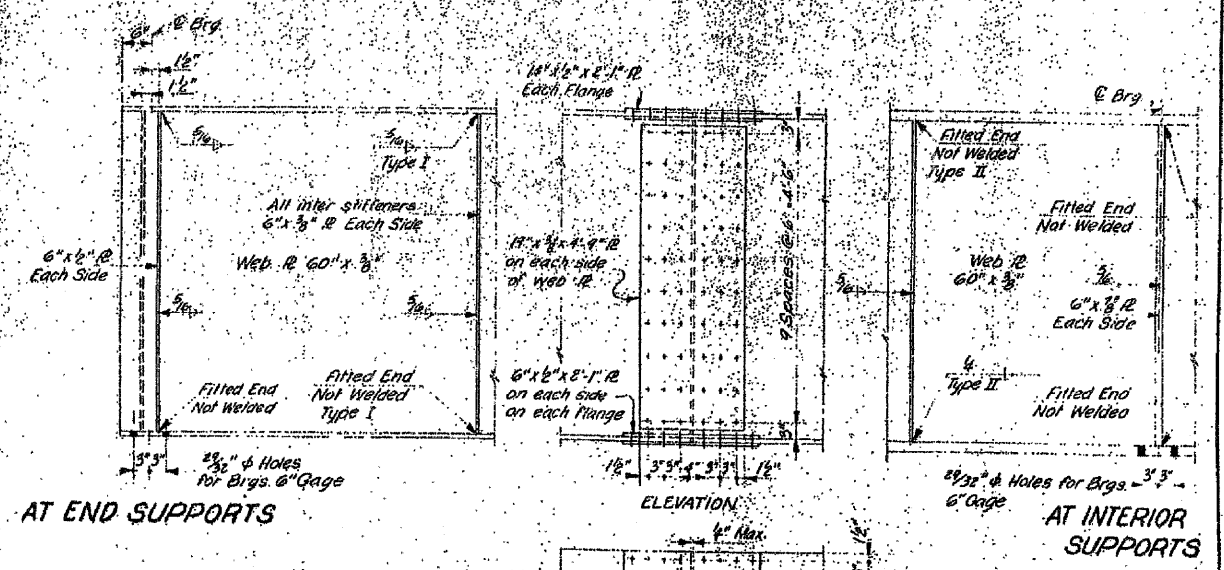
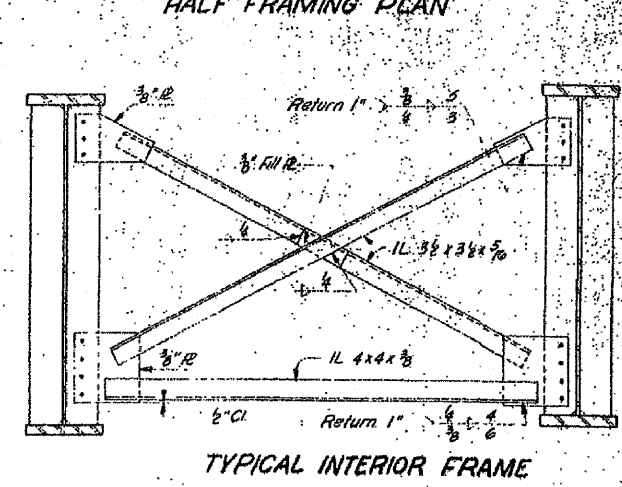
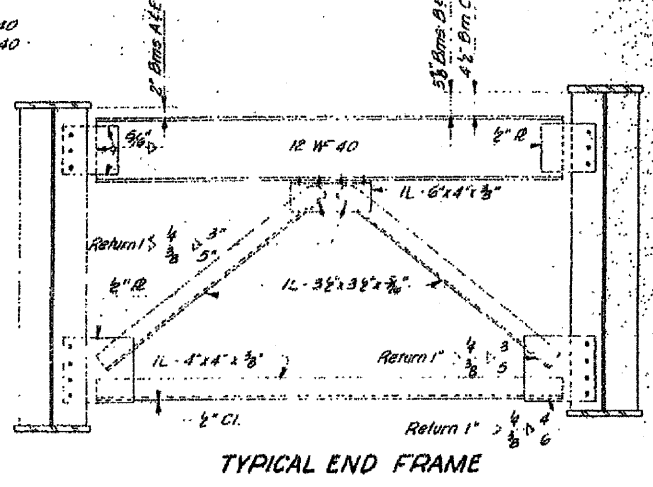
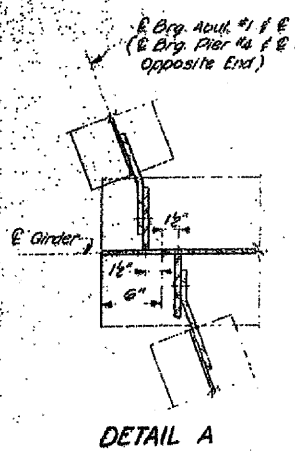
REVISIONS	MACON COUNTY	DESIGNED BY	DATE
	F.A.S. RT. 1539	SECTION 37 Q	3-23-66
		CHECKED BY	DATE
		F.H.L.	3-23-66
		PROJECT NO.	
		SHEET NO.	

HOMER L. CHASTAIN & ASSOCIATES
CONSULTING ENGINEERS
DECATUR, GEORGIA

FOR INFORMATION ONLY



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TOP OF GIRDER WEB PLATE ELEVATIONS*

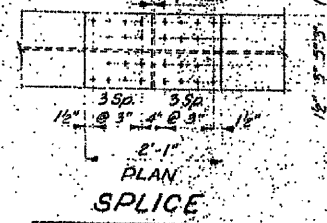
LOCATION	GIRDERS				
	A	B	C	D	E
E Bearing Abut #1	608.54	608.68	608.72	608.65	608.49
E Splice #1	608.28	608.41	608.46	608.39	608.23
E Bearing Pier #1	605.12	608.26	608.30	608.23	608.07
E Splice #2	608.05	608.19	608.23	608.16	608.00
E Splice #3	607.76	607.89	607.94	607.87	607.71
E Bearing Pier #2	607.59	607.73	607.78	607.71	607.54
E Splice #4	607.53	607.66	607.71	607.64	607.48
E Splice #5	607.23	607.37	607.42	607.35	607.19
E Bearing Pier #3	607.07	607.21	607.25	607.18	607.02
E Splice #6	607.00	607.13	607.18	607.11	606.95
E Bearing Pier #4	606.65	606.79	606.83	606.76	606.60

*These elevations are theoretical top of Girder Web Plate elevations and are to be used for fabrication of Structural Steel. They do not include any allowance for deflection.

FOR INFORMATION ONLY

See Sheet 7 of 24 for Details of Girder Shoes, Details of Girder Welds, Camber Diagram for Girder, Summary of Design Moments, Reactions and Shears.

Estimated weight of Structural Steel in girder spans = 516,800 lbs. (Excludes bearings and expansion devices.)



REVISIONS		STRUCTURAL STEEL	
MACON COUNTY		SECTION 37 Q	
F.A.S. RT. 1539		SECTION 37 Q	
HOMER L. CHASTAIN & ASSOCIATES		CONSULTING ENGINEERS	
DECATUR, ILLINOIS		PROJECT NO.	
		SHEET NO.	

FOR INFORMATION ONLY

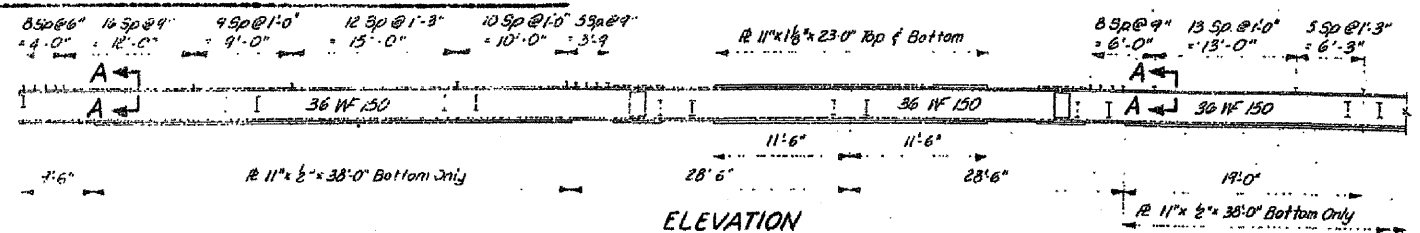
SHEET NO. 6
OF 24 SHEETS

F.A.S. 1539 SECTION 37 Q
MACON 66 21
PROJECT 9-1539-1(1)

TOP OF BEAM ELEVATIONS *

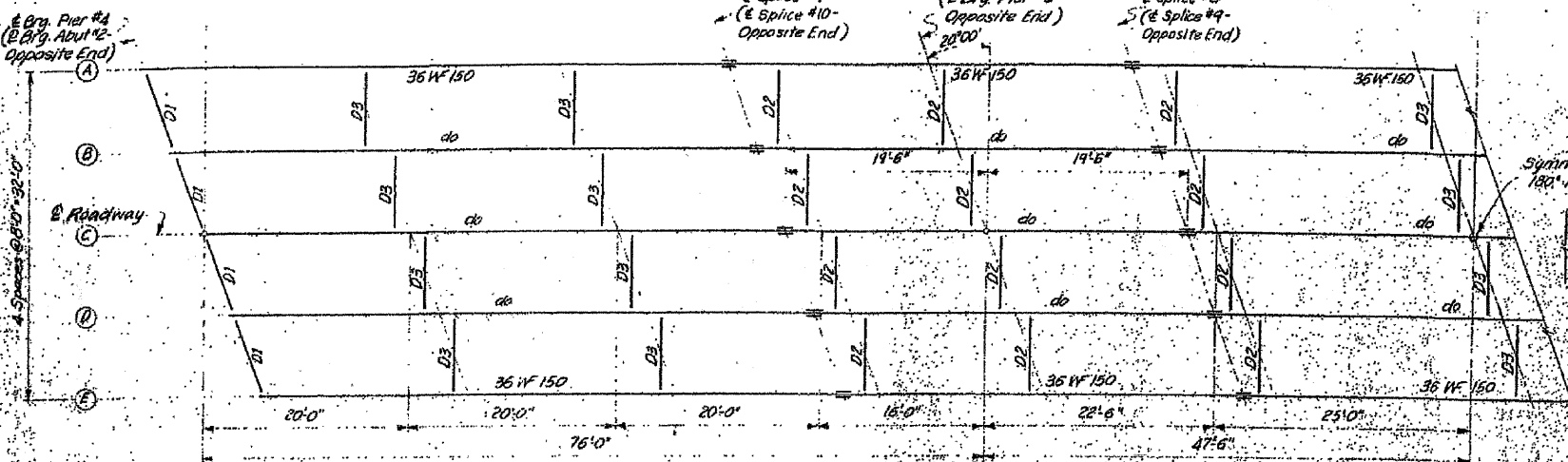
LOCATION	BEAMS				
	A	B	C	D	E
@ Bearing Pier #4	606.71	606.85	606.89	606.82	606.66
@ Splice #7	606.47	606.61	606.63	606.57	606.42
@ Bearing Pier #5	606.39	606.53	606.57	606.50	606.34
@ Splice #8	606.31	606.45	606.49	606.42	606.26
@ Splice #9	606.07	606.21	606.26	606.19	606.03
@ Bearing Pier #6	605.99	606.13	606.18	606.11	605.94
@ Splice #10	605.91	606.05	606.09	606.02	605.86
@ Bearing Abut. #2	605.67	605.81	605.86	605.79	605.62

* These elevations are theoretical top of WF elevations and are to be used for fabrication of structural steel. They do not include any allowance for deflection.



ELEVATION

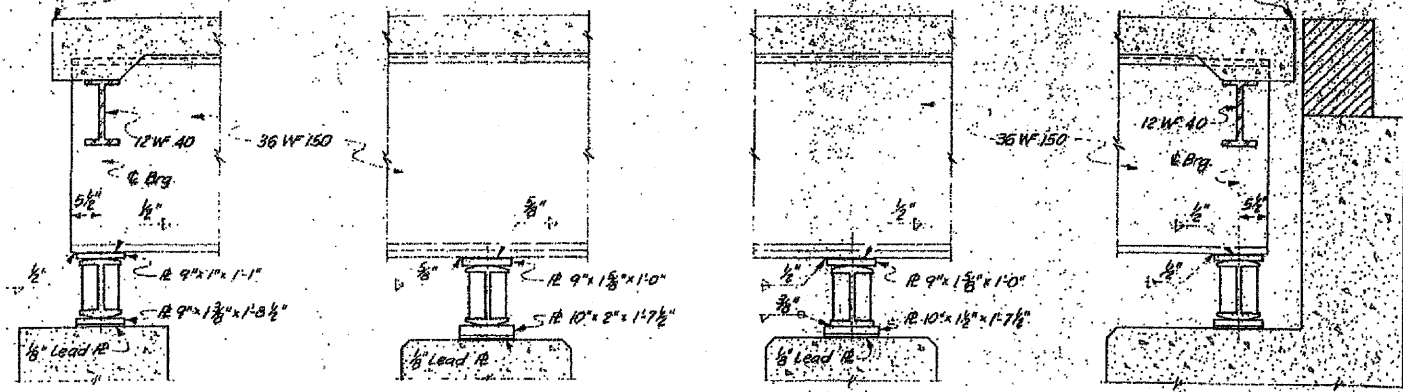
Do not Camber 36 WF 150 Beams



PLAN-STRUCTURAL STEEL LAYOUT

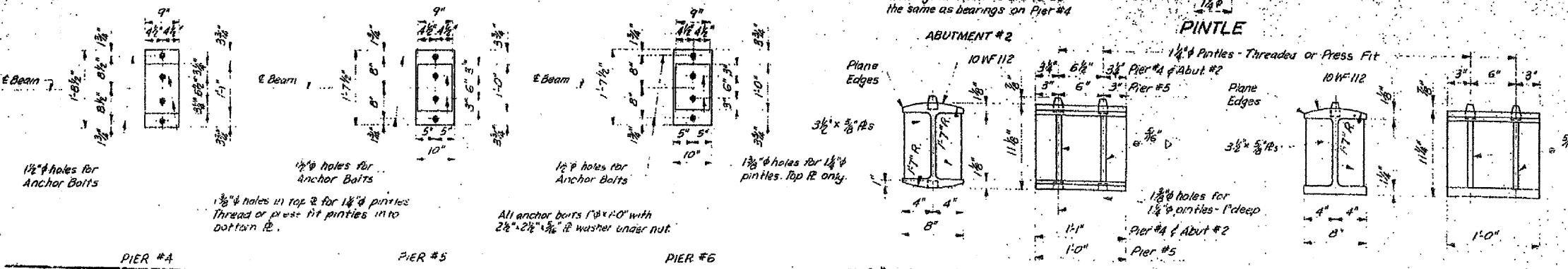
See Sheet 8 of 24 for Expansion Device

See Sheet 9 of 24 for Expansion Device



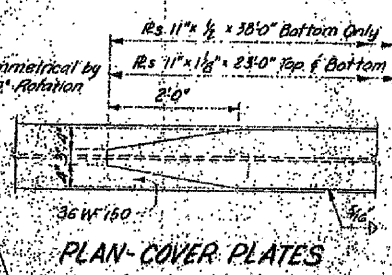
LONGITUDINAL SECTION

Bearings at Abut. #2 are to be the same as bearings on Pier #4

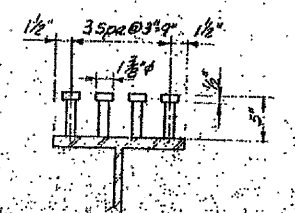


BEARING PLATES

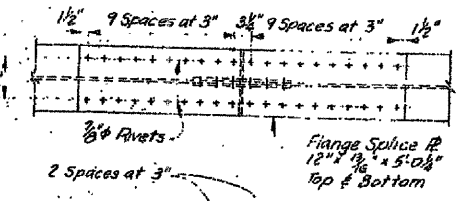
BEARINGS



PLAN-COVER PLATES

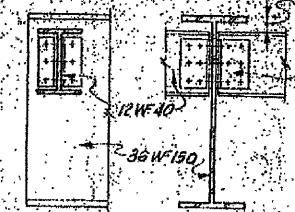


SHEAR CONNECTORS SECTION A-A



SPLICE

Estimated weight of structural steel in beam splices - 250,000 lbs. (Includes 3400 lbs. of shear connectors. Excludes bearings & expansion devices.)



DIAPHRAGM D1



DIAPHRAGMS D2 & D3

See sheet 7 of 24 for Summary of Design Moments, Reactions and Shears.

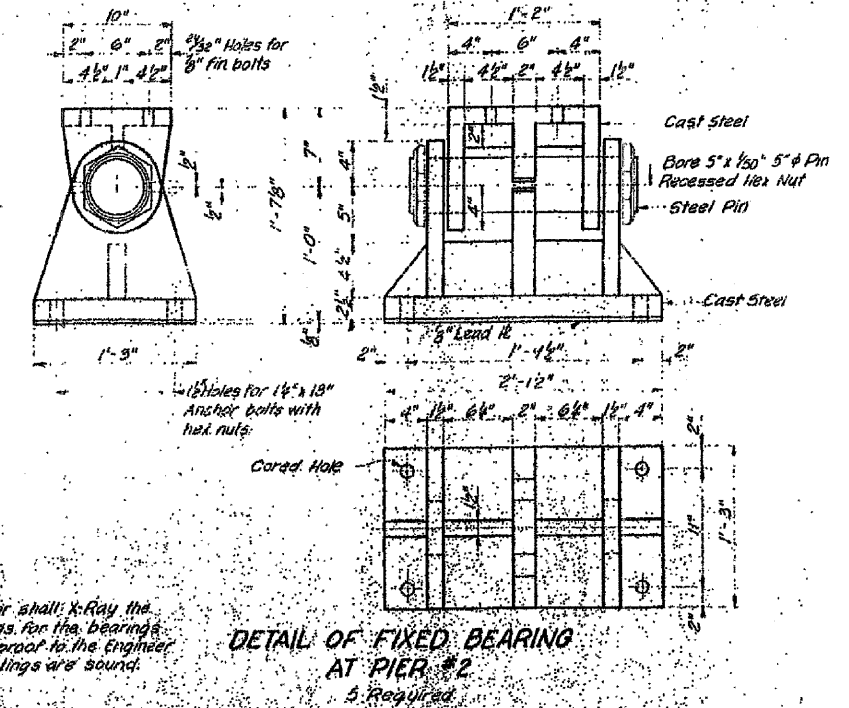
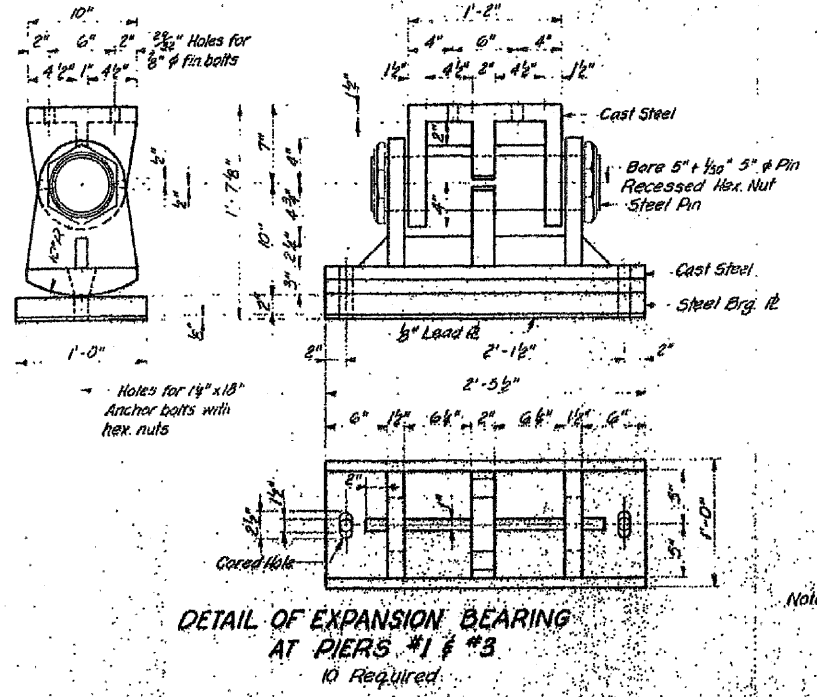
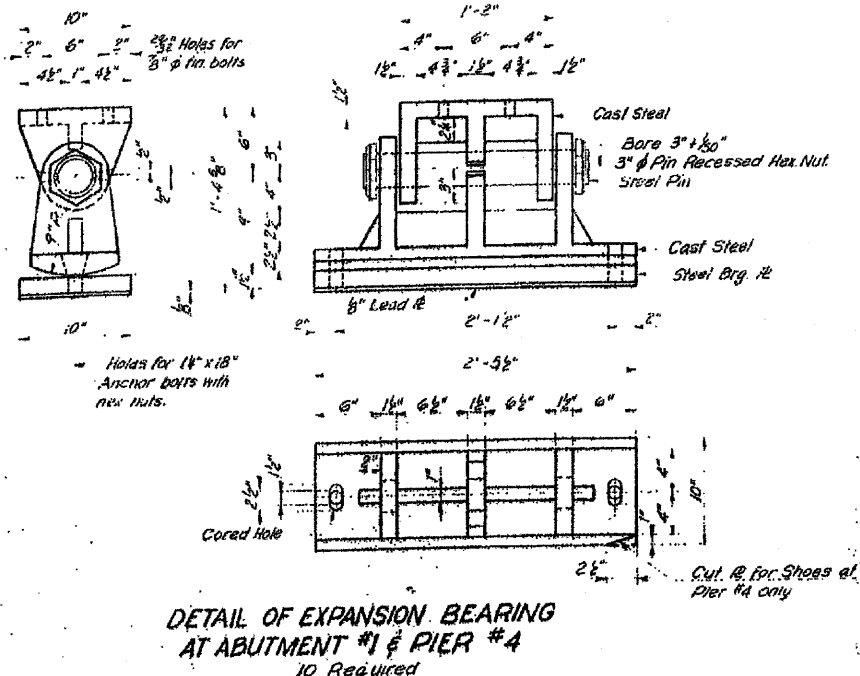
REVISIONS		STRUCTURAL STEEL	
NO.	DATE	DESCRIPTION	BY
		MACON COUNTY	
		SECTION 37 Q	
		F.A.S. RT. 1539	
		PROJECT NO.	
		SHEET NO.	
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, GEORGIA			

FOR INFORMATION ONLY

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SHEET NO. 7
OF 24 SHEETS

TOTAL SHEETS 57
SHEET NO. 40



Note: The Fabricator shall X-Ray the Steel Castings for the bearings and furnish proof to the Engineer that the castings are sound.

MISCELLANEOUS - GIRDER SPANS

TABLE OF MOMENTS, REACTIONS AND SHEARS - INTERIOR GIRDERS

Beam #1 (at Span #)	MOMENTS			REACTIONS			SHEARS				
	Pier #1	Span #2 (at Pier #2)	Pier #2	Abut #1	Pier #1	Pier #2	Span #1 at Abut #1	Span #1 at Pier #1	Span #2 at Pier #2		
D.L.	+803	-1615	+719	-1035	48.9	151.0	-130.5	+43.9	-76.2	+144.0	-133.5
S.D.L.	+833	-1641	+749	-1120	47.2	15.9	-88.9	+47.2	-51.1	+38.5	-53.0
L.L.	+194	-219	+178	-224	10.5	18.0	-17.7	+10.5	-10.8	+11.5	-10.8
Imp.	+980	-2575	+787	-2479	102.0	284.9	-206.5	+102.0	-158.1	+139.4	-139.9
Total	+1900	-3789	+1734	-3488	161.6	409.8	-334.7	+162.6	-227.1	+294.9	-283.3

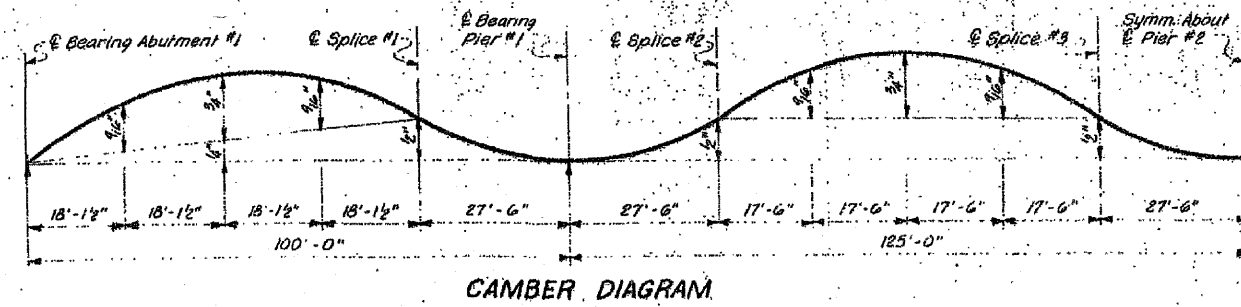
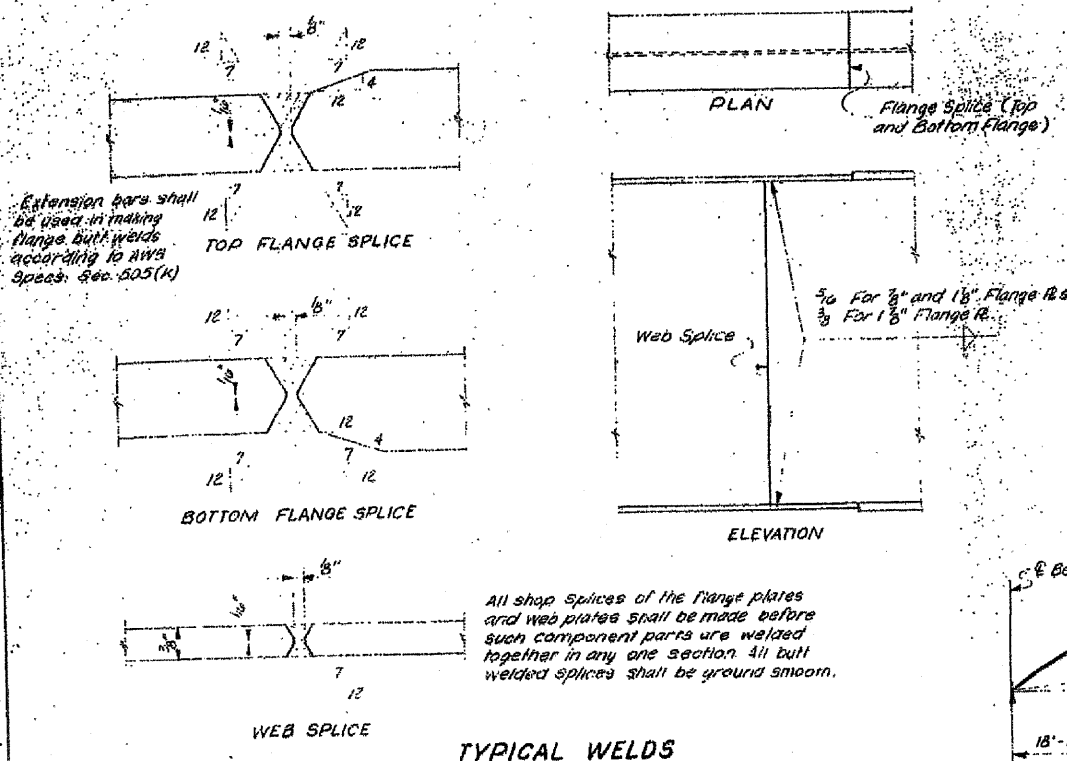
Moments are in Ft.-Kips
Reactions and Shears are in Kips

MISCELLANEOUS - BEAM SPANS

TABLE OF MOMENTS, REACTIONS AND SHEARS INTERIOR BEAMS

Span #1 (at Pier #1)	MOMENTS		REACTIONS	
	Pier #2	Span #2 (at Pier #2)	Pier #2	Pier #3
D.L.	+135	-257	131.0	25.7
S.D.L.	+104	-187	114	7.1
L.L.	+165	-275	171.0	46.5
Imp.	+660	-1261	660.0	11.6
Total	+1064	-1800	1076.0	66.9

Span #1 (at Pier #1)	SHEARS		Span #2 (at Pier #2)	Span #3 (at Pier #3)
	Pier #2	Pier #3		
D.L.	-1.6	4.6	-4.6	14.2
S.D.L.	-1.1	2.2	-2.2	11.6
L.L.	-1.6	4.6	-4.6	14.2
Imp.	-11.6	34.9	-34.9	112.0
Total	-14.9	41.4	-41.4	142.0



PROPERTIES

30 W 150 Bottom flange 11" x 6" concrete slab 8" x 7"	STEEL SECTION	
	I _x	10,430 in ⁴
S _x	534 in ³	
S _{xy}	649 in ³	
COMPOSITE SECTION		
I _c	25,460 in ⁴	
S _{xc}	1,790 in ³	
S _{yc}	876 in ³	

STRUCTURAL STEEL

REVISIONS

NO.	DATE	INITIALS

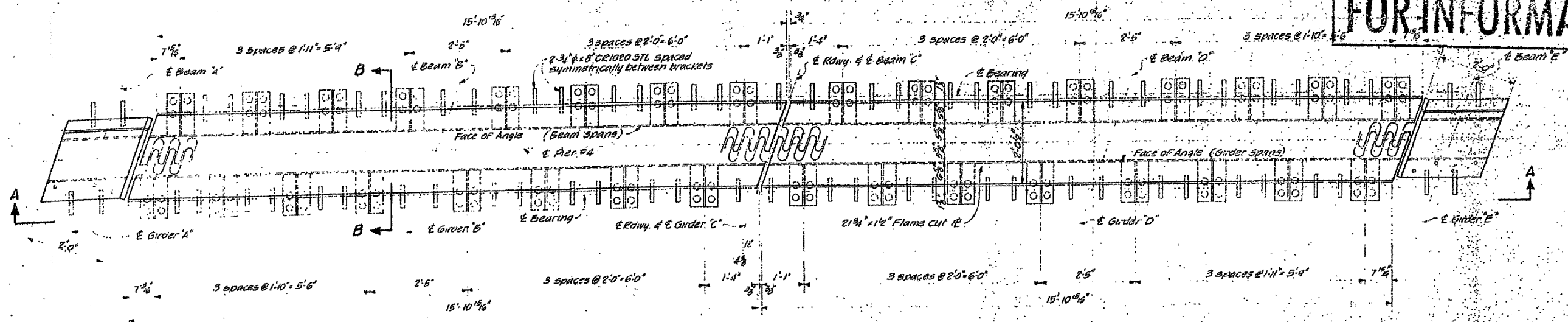
MACON COUNTY
F.A.S. RT. 1539 SECTION 37 Q

HOMER L. CHASTAIN & ASSOCIATES
CONSULTING ENGINEERS
DECATUR, ILLINOIS

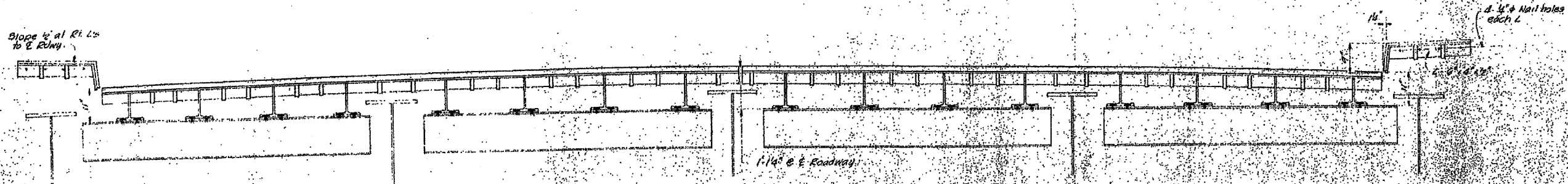
PROJECT NO.
SHEET NO.

FOR INFORMATION ONLY

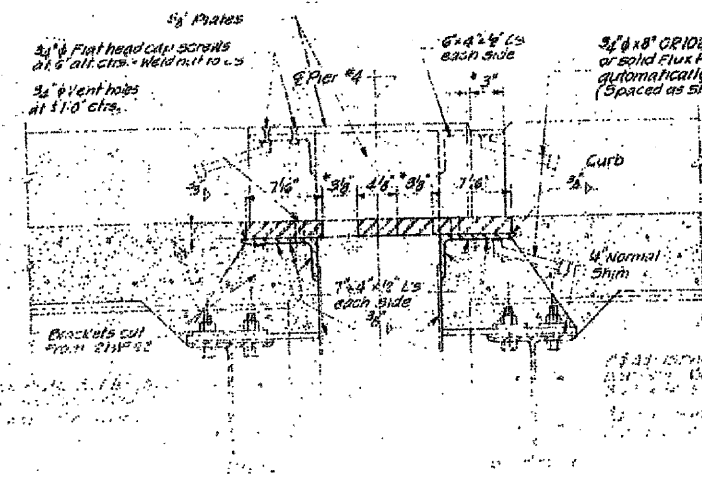
FOR INFORMATION ONLY



PLAN OF FINGER PLATE EXPANSION DEVICE AT PIER #4



SECTION A-A



SECTION B-B



DETAIL OF FLAME CUT PLATE
(Plates shall be match-marked)

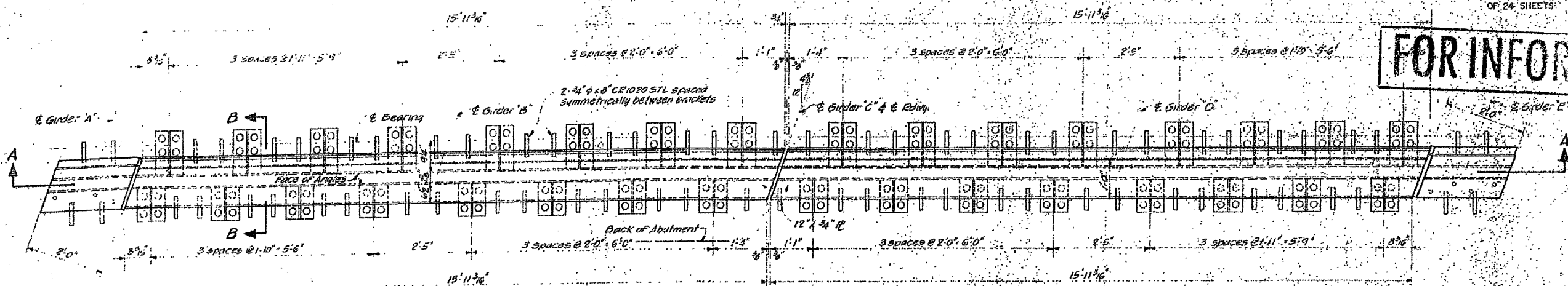
Note: Contractor shall provide nominal 1/4\"/>

* Increase these dimensions by 1/8\"/>

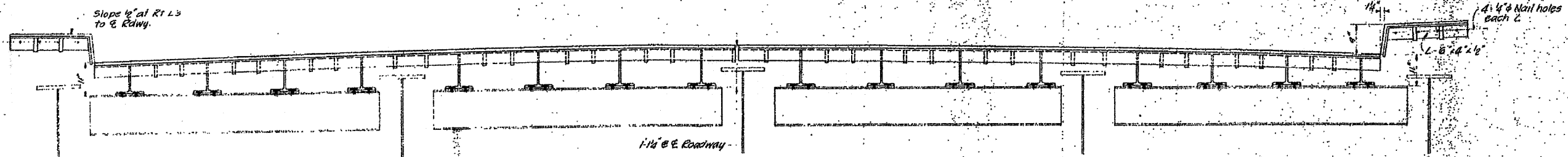
FOR INFORMATION ONLY

REVISIONS		STRUCTURAL STEEL		DATE
1	AS SHOWN	MACON COUNTY		JULY 4 63
2		FAS 1539	SECTION 37 Q	ENCLAS AT DATE
3		HOMER I. CHASTAIN & ASSOCIATES		IV/16 4-63
4		CONSULTING ENGINEERS		PROJECT NO.
5		DECATUR, GEORGIA		SHEET NO.

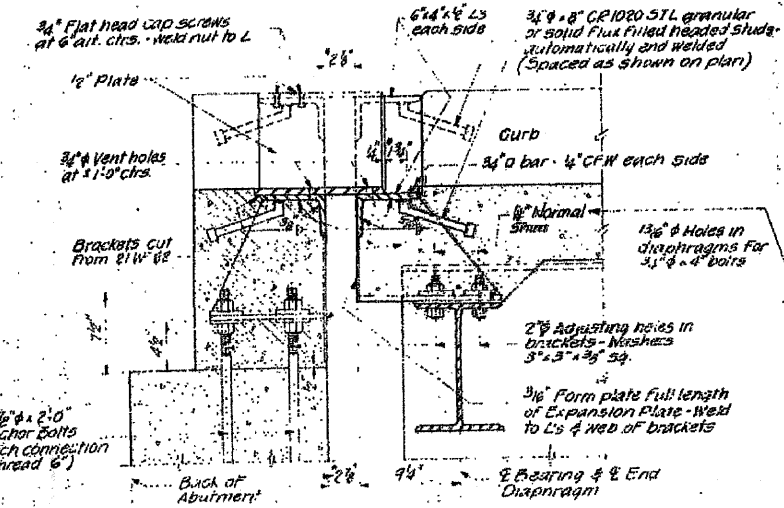
FOR INFORMATION ONLY



PLAN OF SLIDING PLATE EXPANSION DEVICE AT ABUTMENT #1



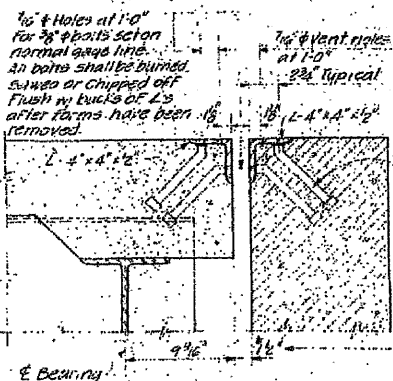
SECTION A-A



SECTION B-B

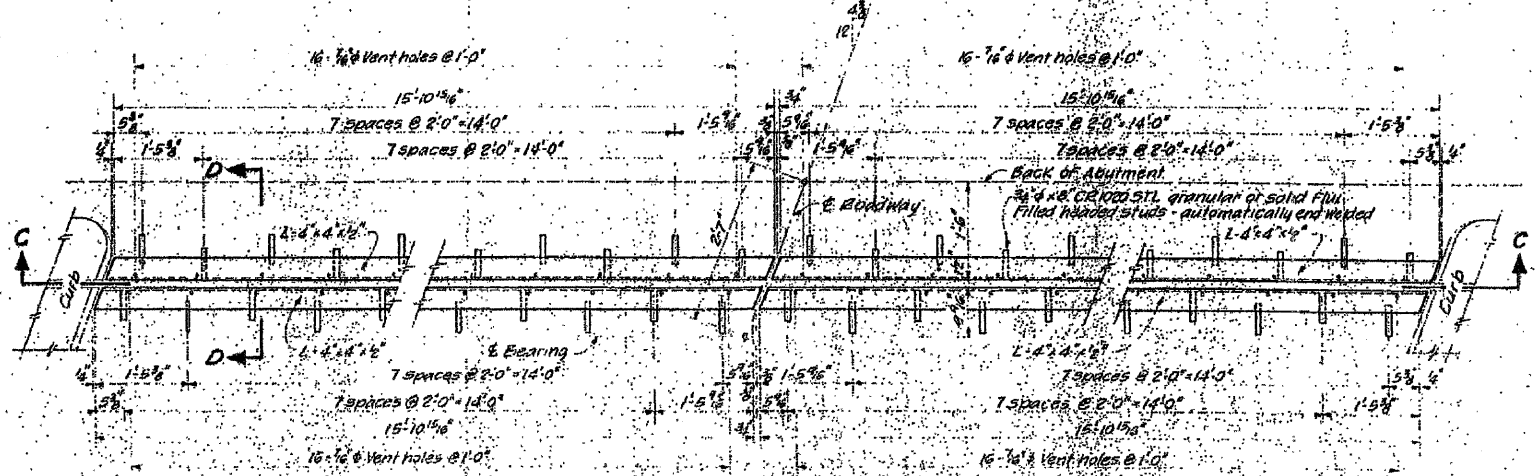
*Increase these dimensions by 1/4" for each 15°F variation under normal temperature of 50°F. Decrease dimensions the same amount for temperatures above normal.

Contractor shall provide normal 1/4" shim plus one 1/8" x 1 1/2" x 1/8" shim for height adjustment. Beam to be 1/2" curb plate to top sidewalk plate. Field weld curb plate to 3/4" roadway plate with 5/8" CRF. Field weld exposed portion of 1/2" curb angle to 1/2" roadway angle with 3/8" CRF. Hatched portion to be poured after expansion plate assembly has been adjusted.

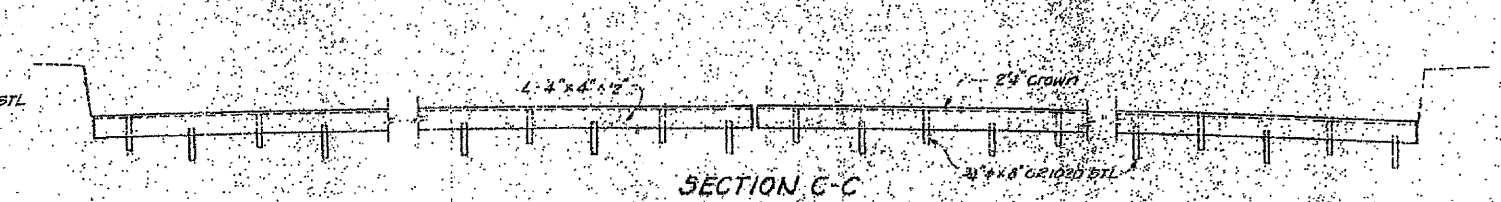


SECTION D-D

*Increase this dimension by 1/4" for each 10°F variation under normal temperature of 50°F. Decrease dimension the same amount for temperatures above normal.



PLAN OF EXPANSION GUARD AT ABUTMENT #2



SECTION E-C

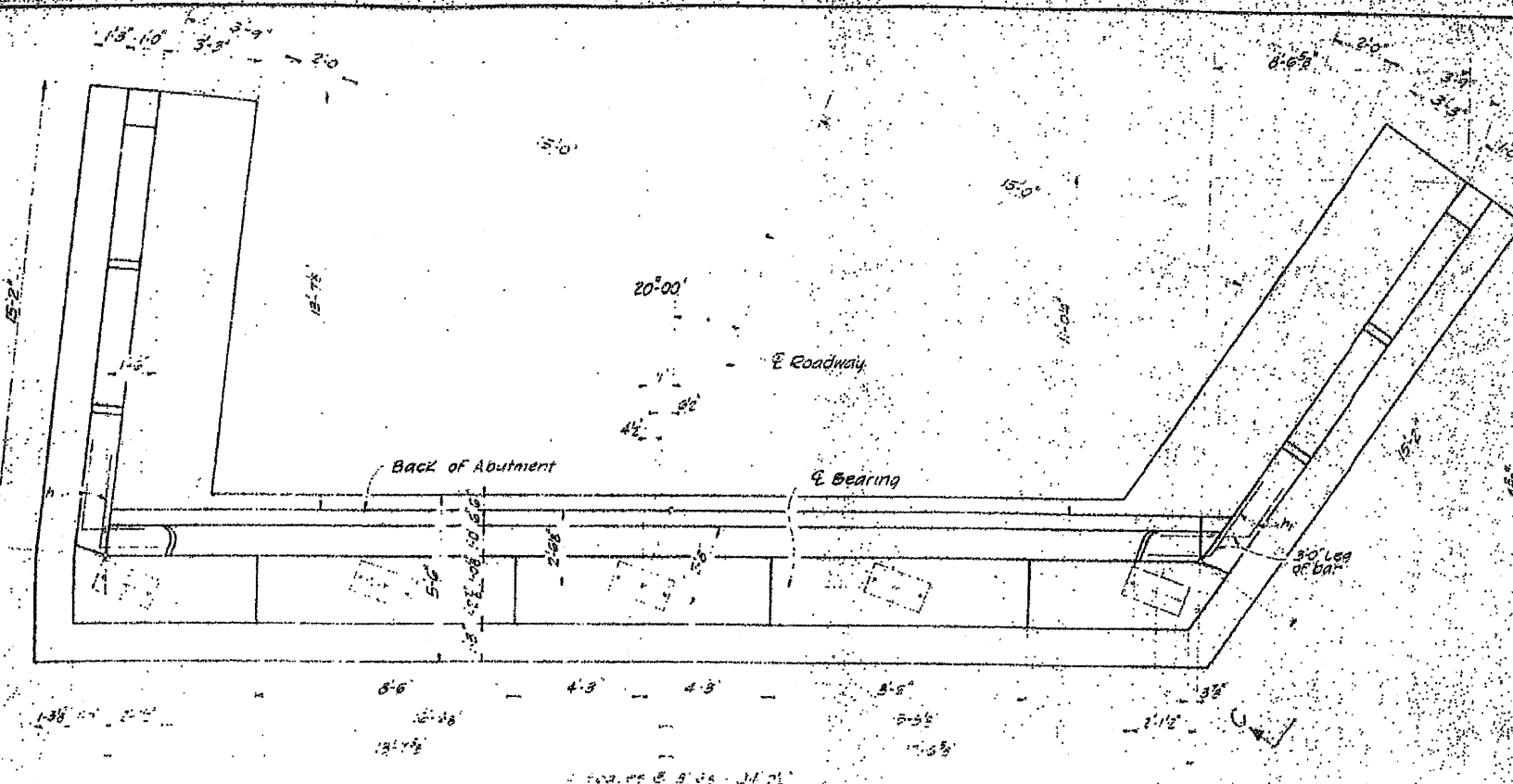
FOR INFORMATION ONLY

REVISIONS		STRUCTURAL STEEL	
1	AS SHOWN	MACON COUNTY	
2		SECTION 37Q	
3		HOMER L. CHASTAIN & ASSOCIATES	
4		CONSULTING ENGINEERS	
5		DECATUR, GEORGIA	

TOTAL SHEETS	SHEET NO.
57	43

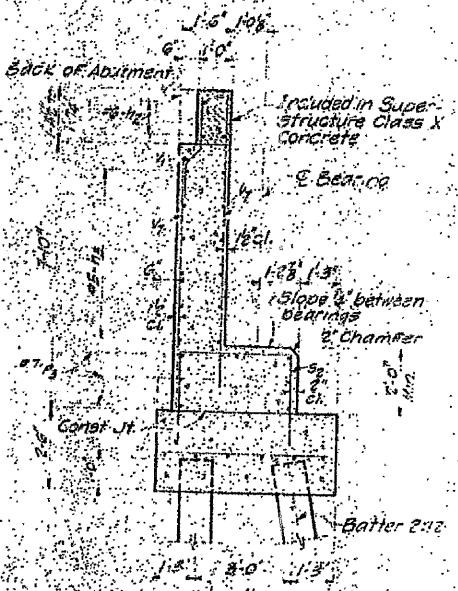
SHEET NO. 10
OF 24 SHEETS

DATE: 10/15/59
F.A.S. 376
PROJECT: 66 28
DRAWING: 3-1539-111



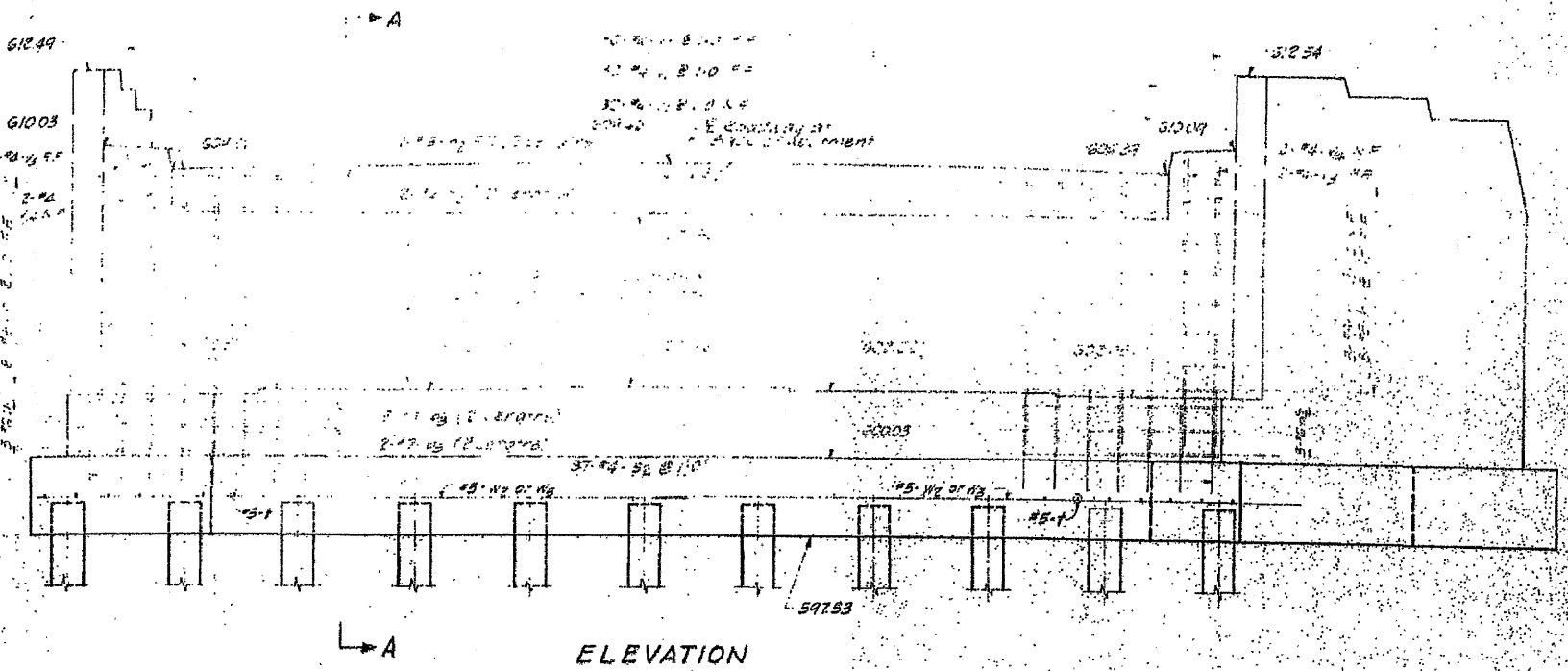
PLAN

ANCHOR BOLT LOCATION

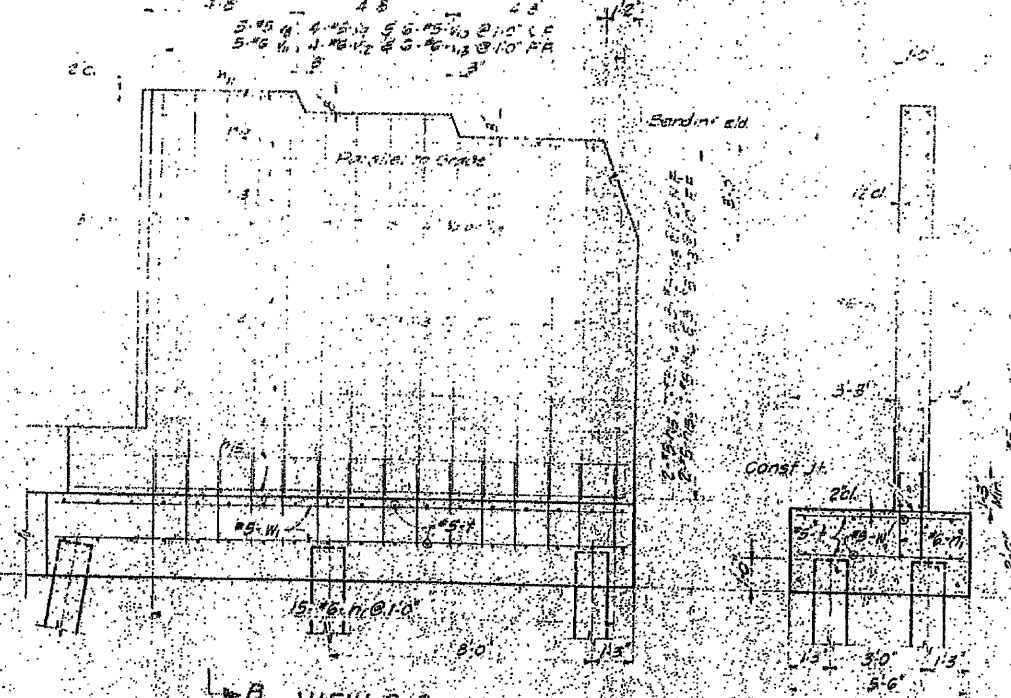


SECTION A-A

Minimum lap for all reinforcement bars shall be 20 diameters



ELEVATION



VIEW C-C

SECTION B-B

FOR INFORMATION ONLY

DESIGNED BY: [Name]
CHECKED BY: [Name]
DATE: [Date]
ENGINEER: [Name]

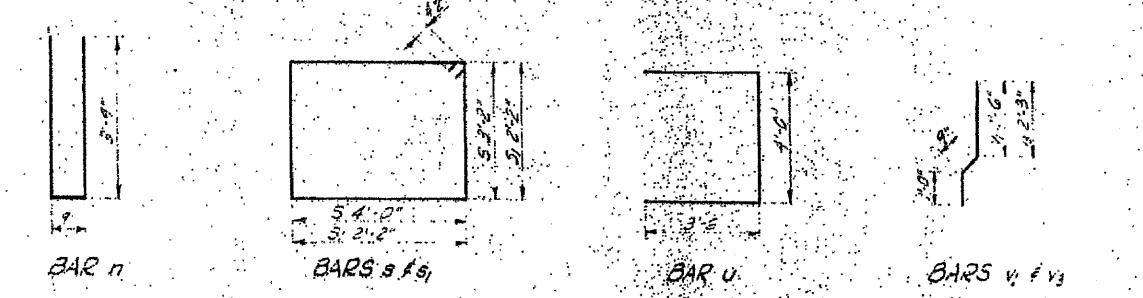
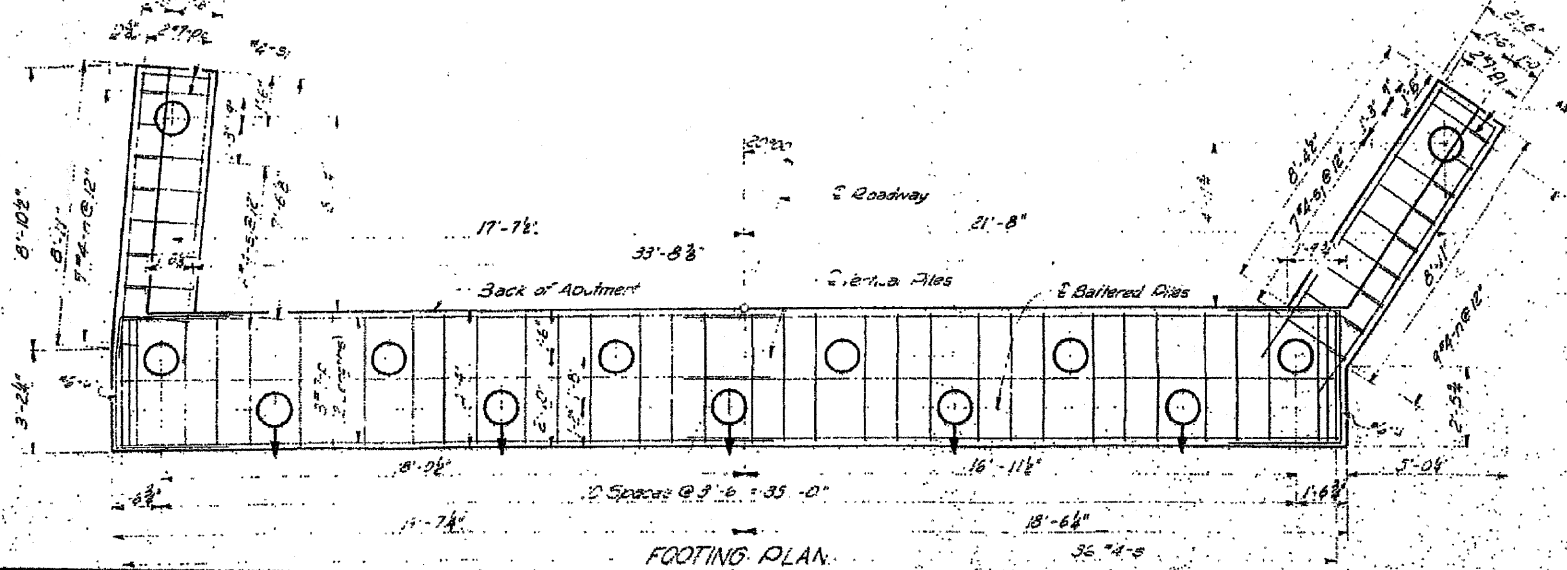
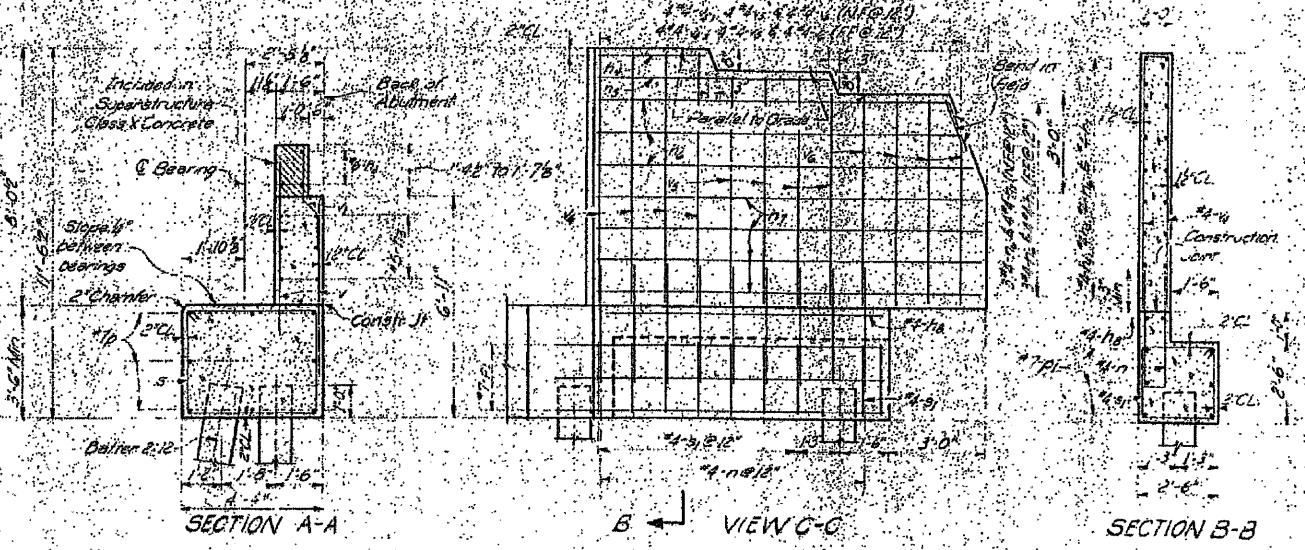
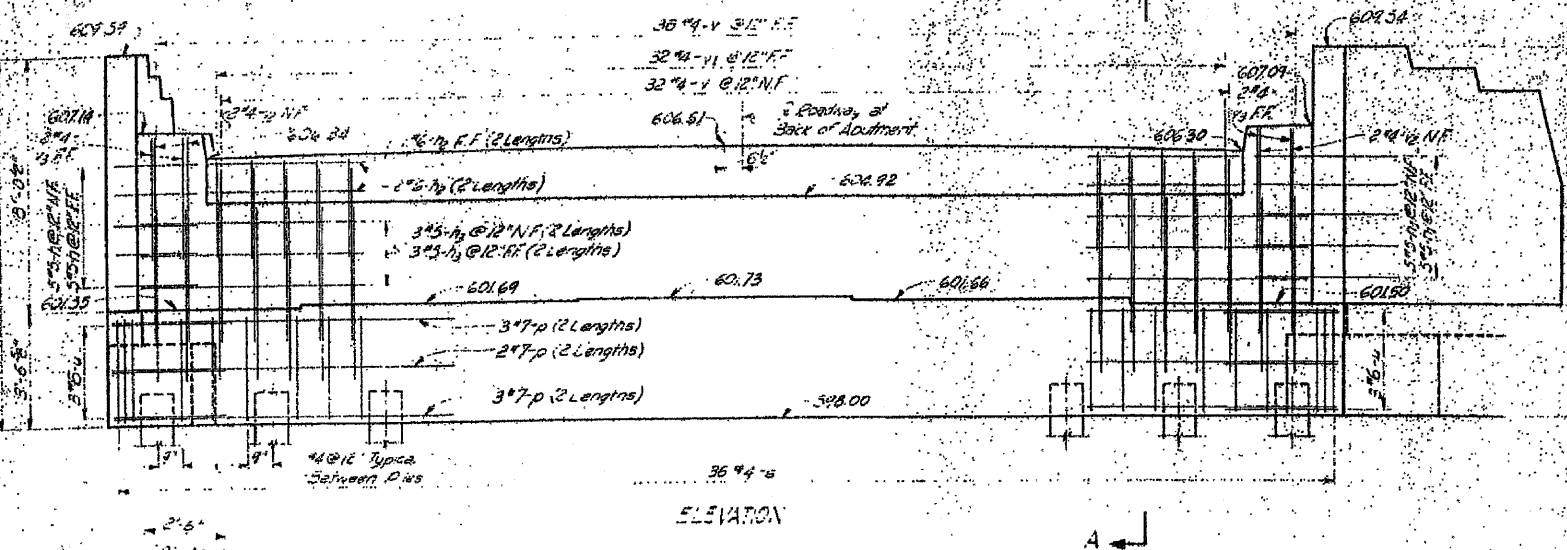
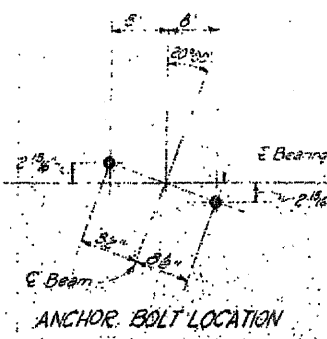
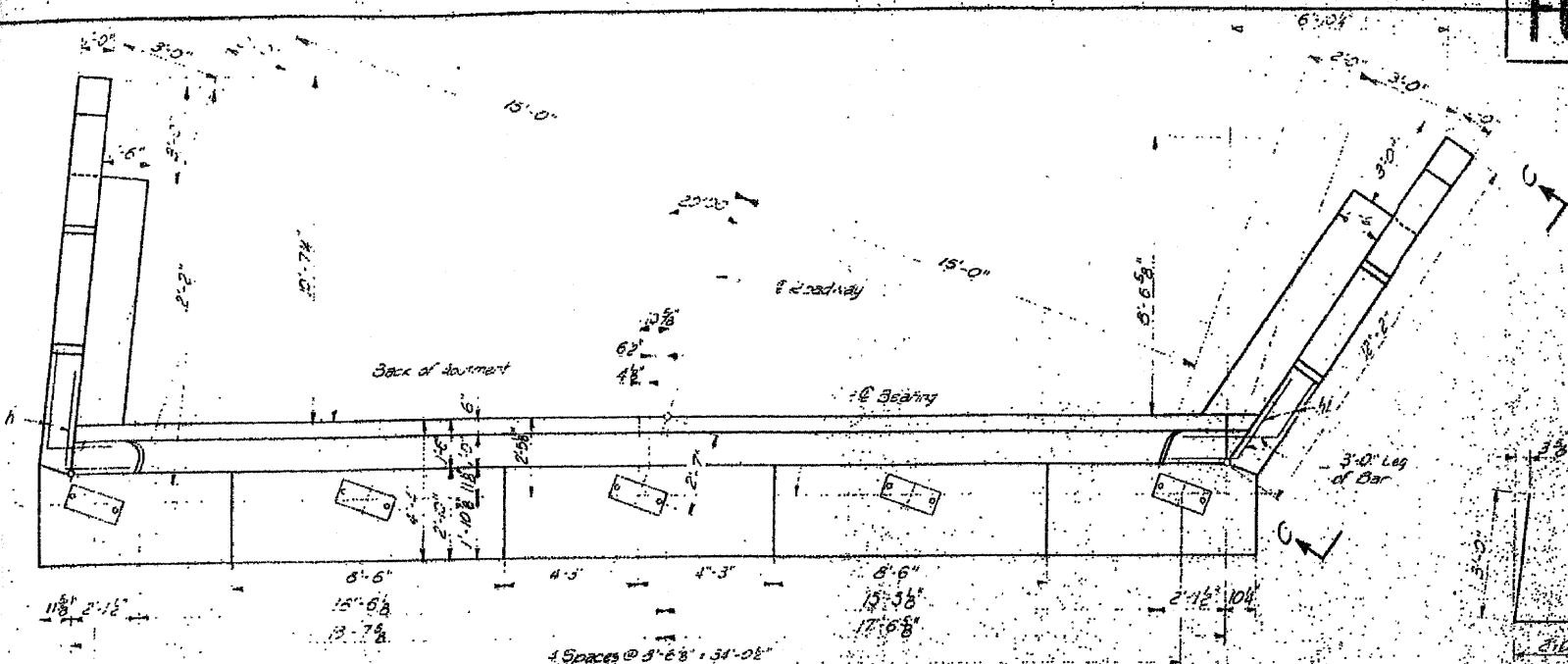
FOR INFORMATION ONLY

SHEET NO. 12
OF 24 SHEETS

F.A.S. 1539
370

TOTAL SHEETS	SHEET NO.
57	45

BILL OF MATERIALS									
Bar	No.	Size	Length	Shape	Bar	No.	Size	Length	Shape
1	2	#5	5'-0"	L	8	36	#4	15'	□
2	2	#5	3'-0"	L	9	17	#4	2'-5"	□
3	2	#5	2'-8"	L					
4	4	#5	18'-9"	L					
5	4	#5	3'-5"	L					
6	4	#5	7'-0"	L					
7	4	#5	11'-6"	L					
8	4	#5	11'-9"	L					
9	4	#5	8'-9"	L					
10	10	#5	8'-3"	L					
11	10	#5	8'-3"	L					
12	10	#5	8'-3"	L					
13	10	#5	8'-3"	L					
14	10	#5	8'-3"	L					
15	10	#5	8'-3"	L					
16	10	#5	8'-3"	L					
17	10	#5	8'-3"	L					
18	10	#5	8'-3"	L					
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96	10	#5	8'-3"	L					
97	10	#5	8'-3"	L					
98	10	#5	8'-3"	L					
99	10	#5	8'-3"	L					
100	10	#5	8'-3"	L					



PILE DATA

Type - Concrete

Capacity - 34 Tons

Est. Length - 40'

No. Req'd - 13

Minimum 20% reinforcement shall be provided

ABUTMENT NO. 2

MACON COUNTY

F.A.S. RT. 1539 SECTION 37 Q

HOMER L. CHASTAIN & ASSOCIATES

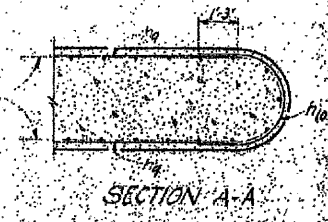
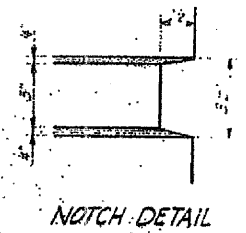
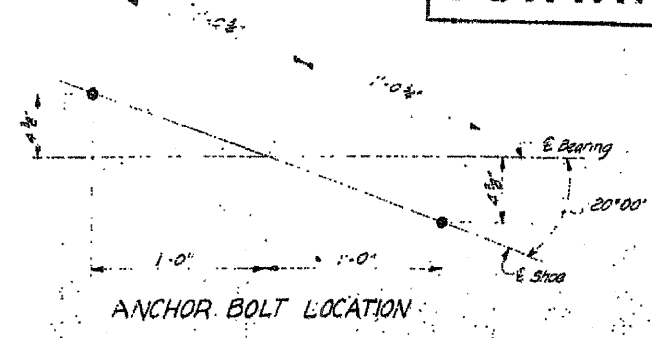
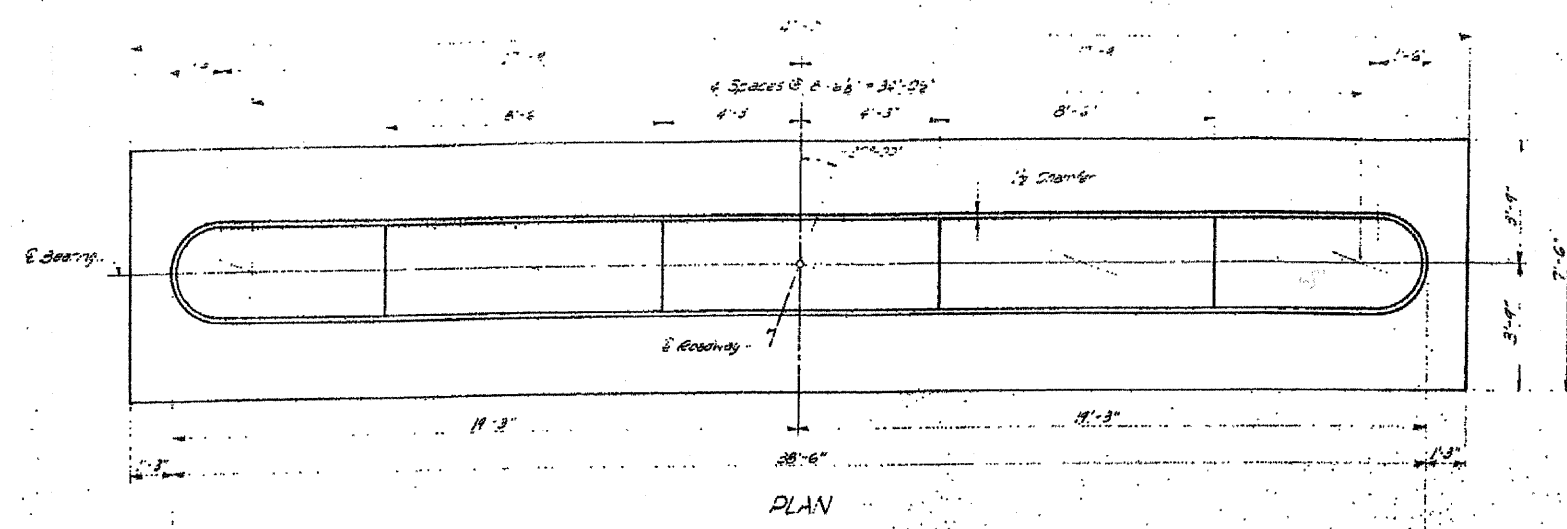
CONSULTING ENGINEERS

DECATUR, GEORGIA

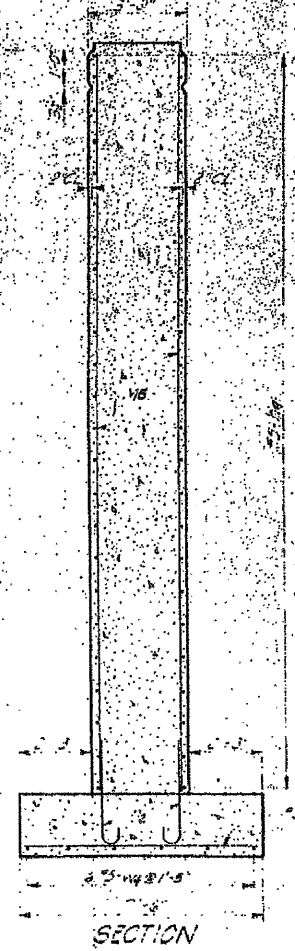
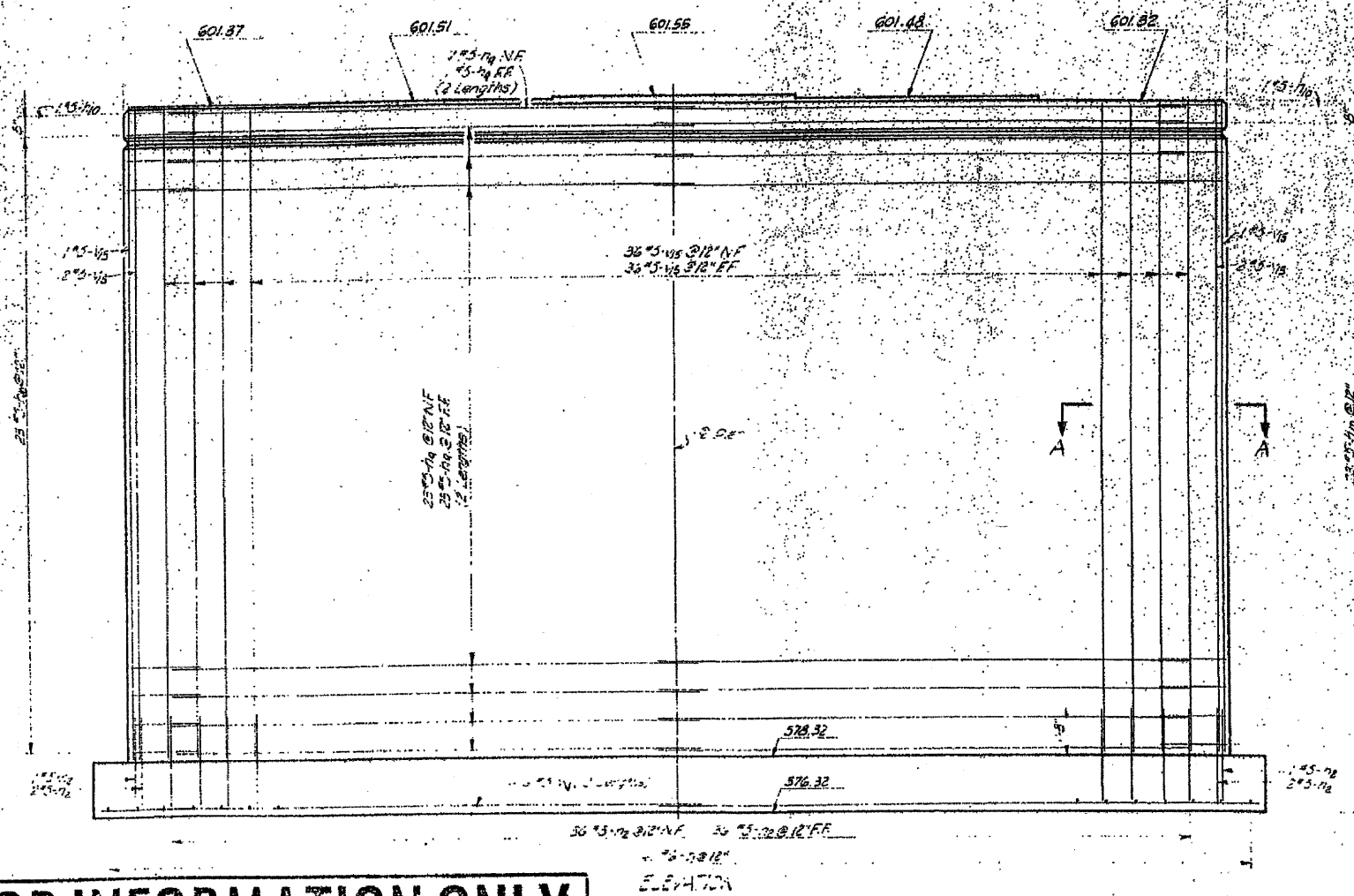
REVISIONS	DATE	BY

FOR INFORMATION ONLY

FOR INFORMATION ONLY



BILL OF MATERIAL				
BAR NO.	SIZE	LENGTH	SHAPE	
R1	#5	18'-6"	—	
R2	#5	6'-9"	—	
R3	#5	4'-0"	—	
R4	#6	7'-9"	—	
R5	#5	22'-0"	—	
R6	#5	21'-0"	—	
Class A Concrete			Cu. Yd.	120.0
Reinforcement Bars			Lb.	6080
Class A Excavation For Structures			Cu. Yd.	111
Class B Excavation For Structures			Cu. Yd.	115



Maximum Soil Pressure = 2.9 Tons/Sq. Ft.

FOR INFORMATION ONLY

Minimum lap for all reinforcement bars shall be 20 bar diameters

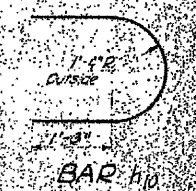
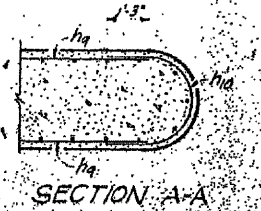
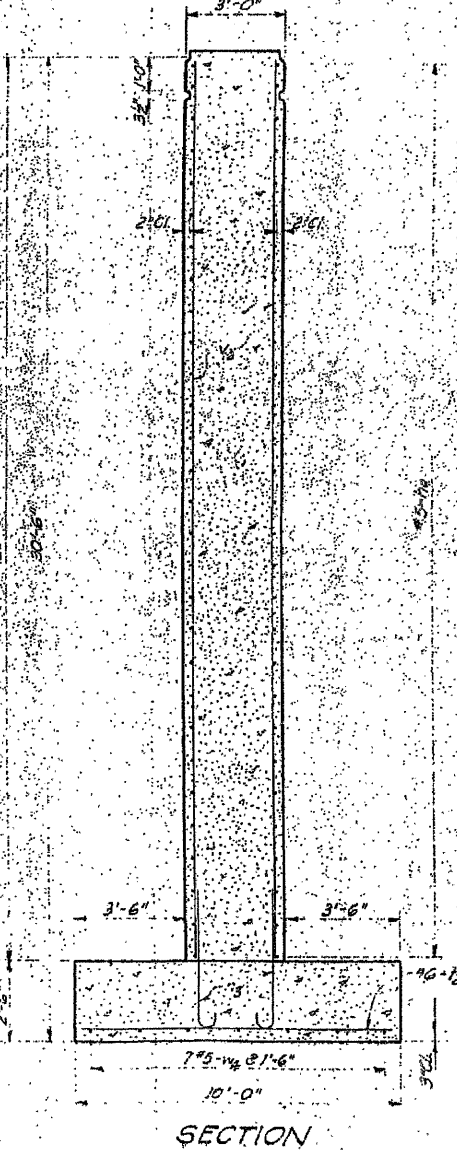
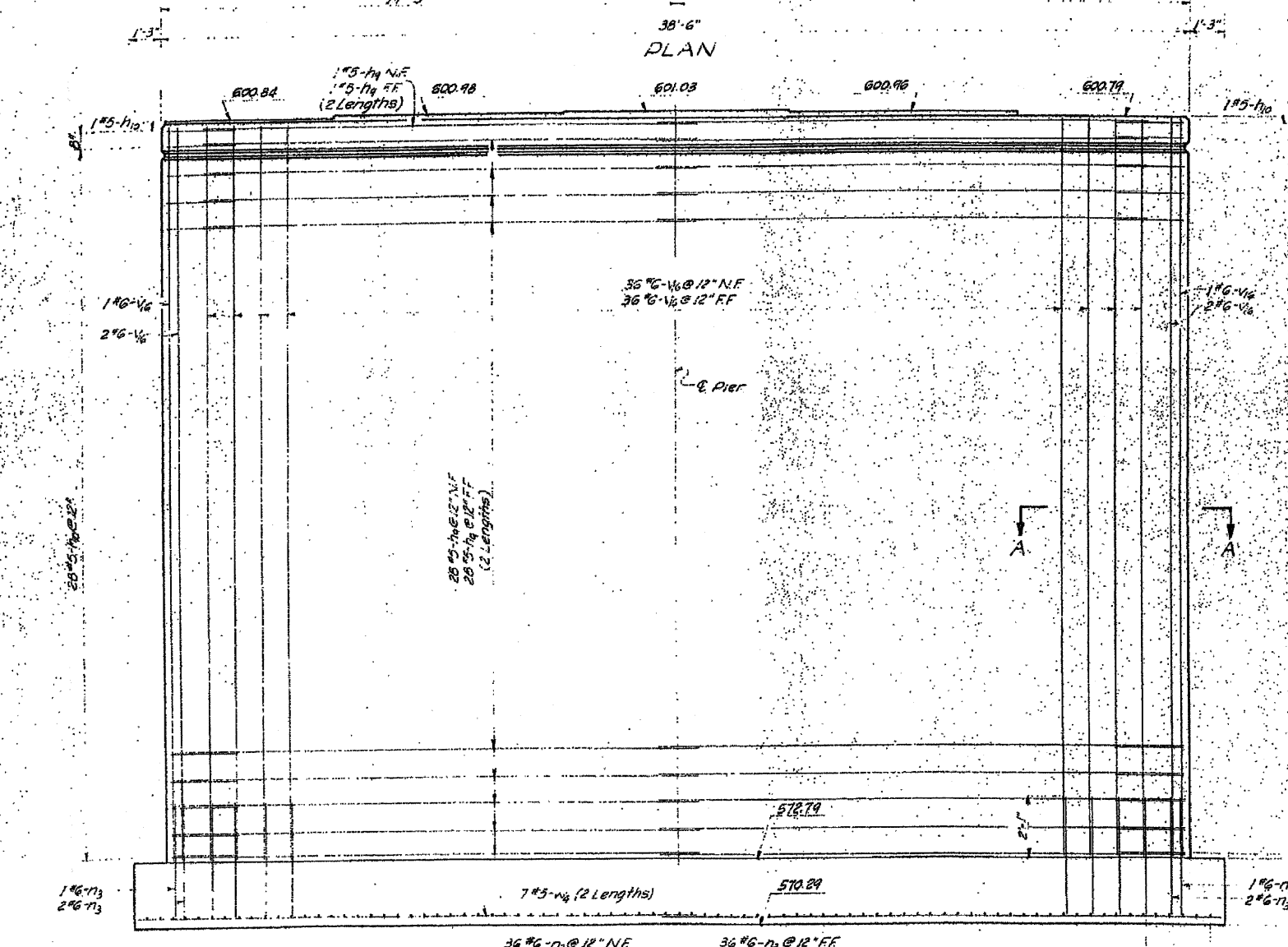
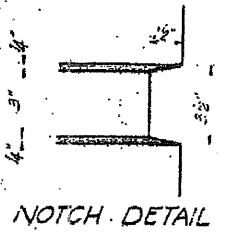
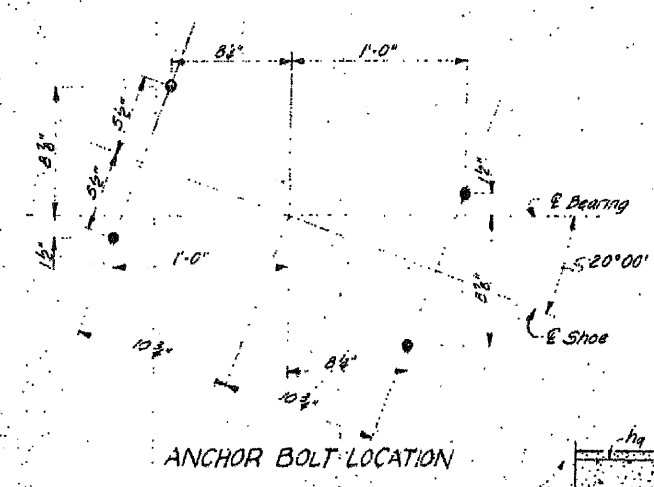
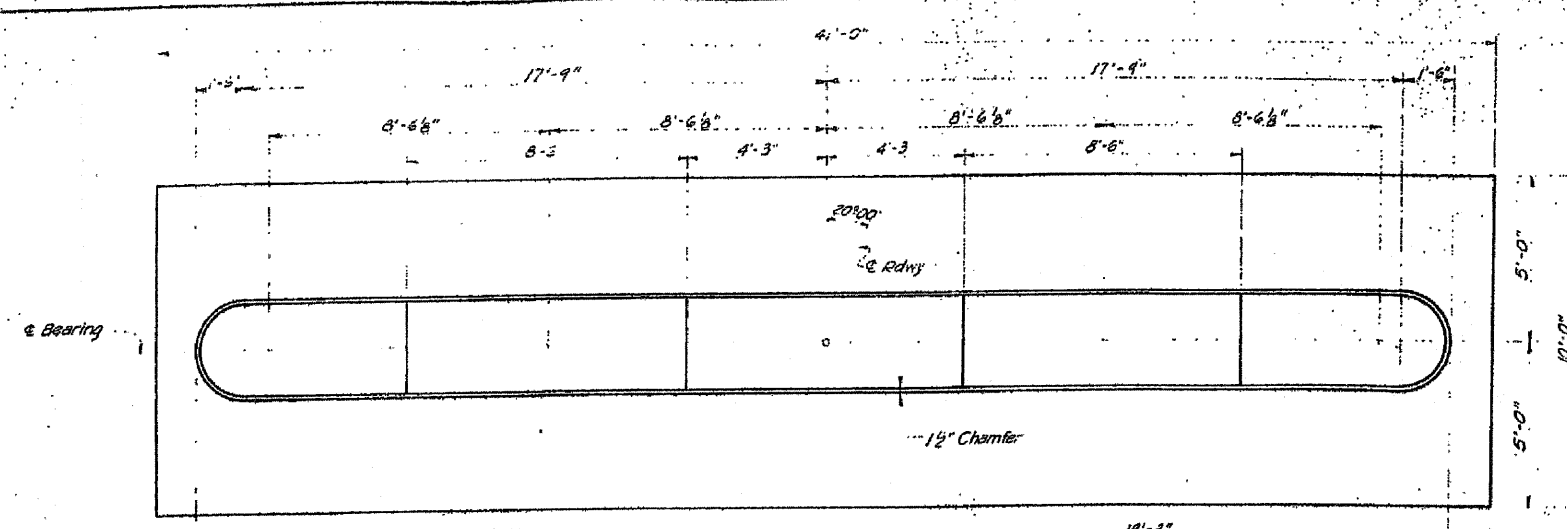
PIER NO. 1

MACON COUNTY	DATE: 3-63
F.A.S. RT. 1539 SECTION 370	CHECKED BY: F.L.C.
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS	

FOR INFORMATION ONLY

SHEET NO. 14
OF 24 SHEETS

F.A.S. 1539	SECTION 37 Q	MACON	66	29
PROJECT S-1539-1(1)				



BAR	No.	SIZE	LENGTH	SHAPE
#4	116	#5	18'-6"	
#4	58	#5	6'-9"	
#3	78	#5	5'-0"	
#2	81	#6	4'-6"	
#6	70	#8	27'-10"	
#4	14	#5	21'-0"	
Class A Concrete		Cu. Yd.	150.1	
Reinforcement Bars		Lb.	7980	
Class A Excavation for Structures		Cu. Yd.	33	
Class B Excavation for Structures		Cu. Yd.	280	

Maximum Soil Pressure = 3.2 Tons / Sq. Ft.

FOR INFORMATION ONLY

ELEVATION

Minimum lap for all reinforcement bars shall be 20 bar diameters

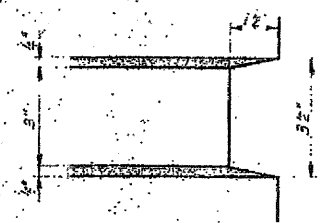
SECTION

PIER NO. 2		MACON COUNTY		DATE
F.A.S. RT. 1539		SECTION 37 Q		2-2-63
HOMER L. CHASTAIN & ASSOCIATES		CONSULTING ENGINEERS		PROJECT NO.
DECATUR, ILLINOIS				SHEET NO.

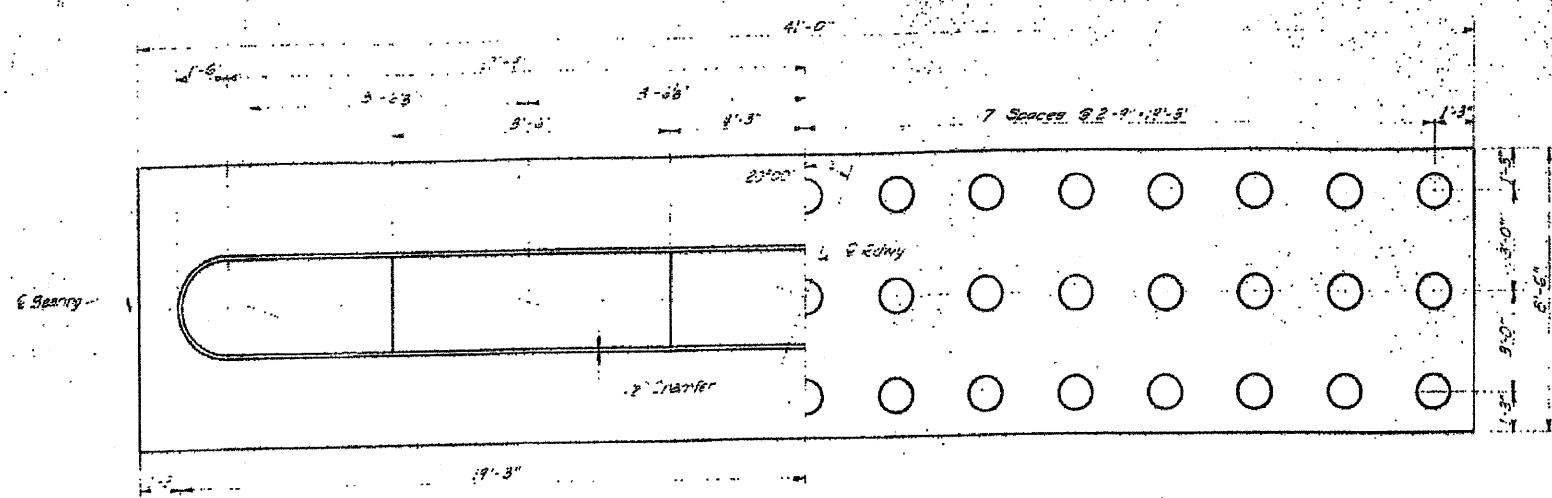
FOR INFORMATION ONLY

SHEET NO. 15
OF 24 SHEETS

F.A.S. 37 Q
1539
S-1539-1 (1)



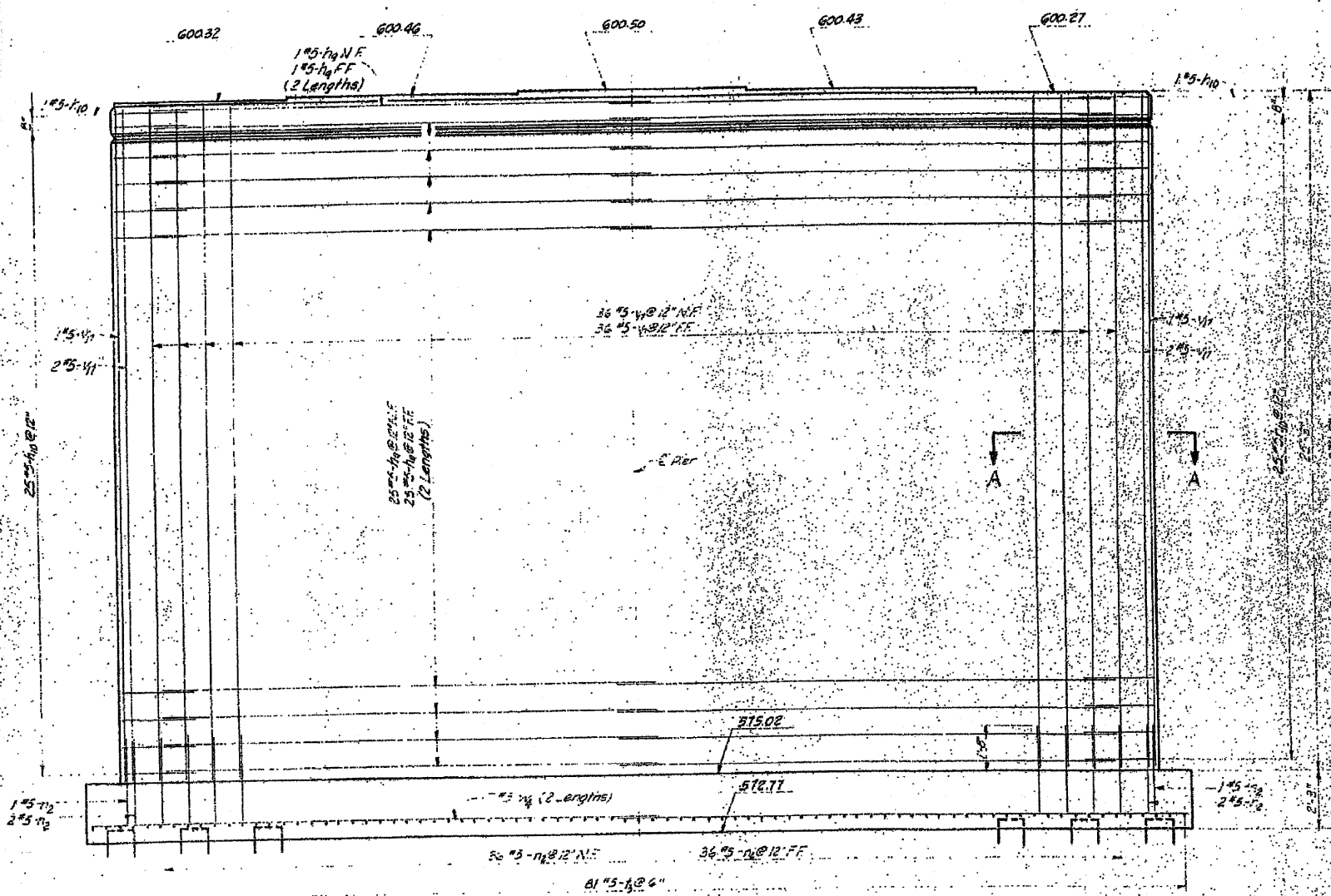
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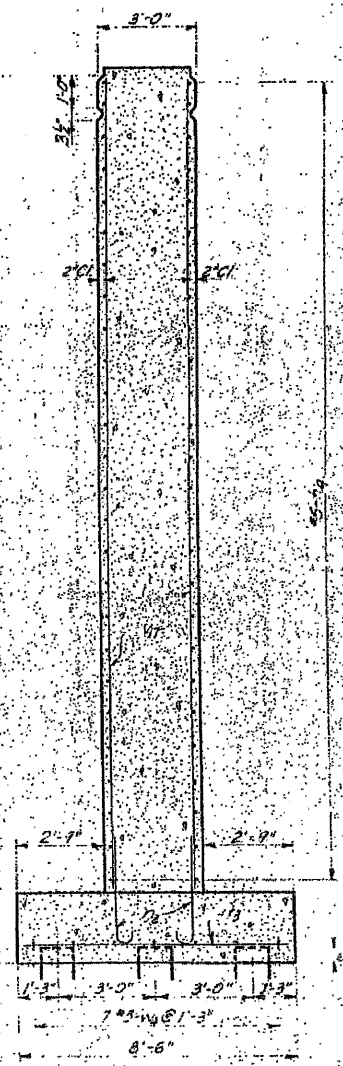
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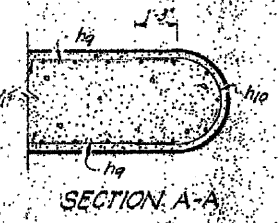
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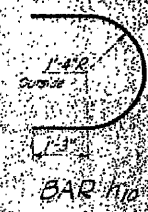
ELEVATION



SECTION



SECTION A-A



BAR #10



BAR #12

BILL OF MATERIAL				
BAR NO.	SIZE	LENGTH	SHAPE	
R1	#5	18'-6"		
R10	#5	6'-9"		
R2	#5	4'-0"		
R3	#5	6'-0"		
R4	#5	25'-0"		
R6	#5	21'-0"		
Class A Concrete			Cu Yd.	1850
Reinforcement Bars			Lb.	5730
Class A Excavation For Structures			Cu Yd.	146
Class B Excavation For Structures			Cu Yd.	198
Crossed Piles			Lin Ft.	1125
Test Piles - Timber			Each	1

PILE DATA
Type - Crossed Timber
Capacity - 25 Tons
Est. Length - 45'
45 Piles
1 Timber Test Pile

FOR INFORMATION ONLY

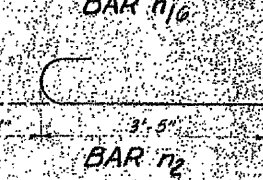
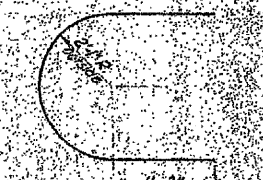
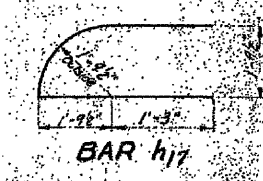
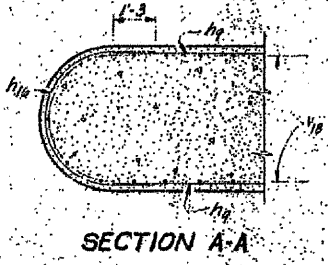
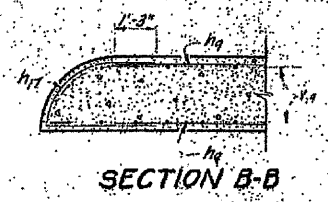
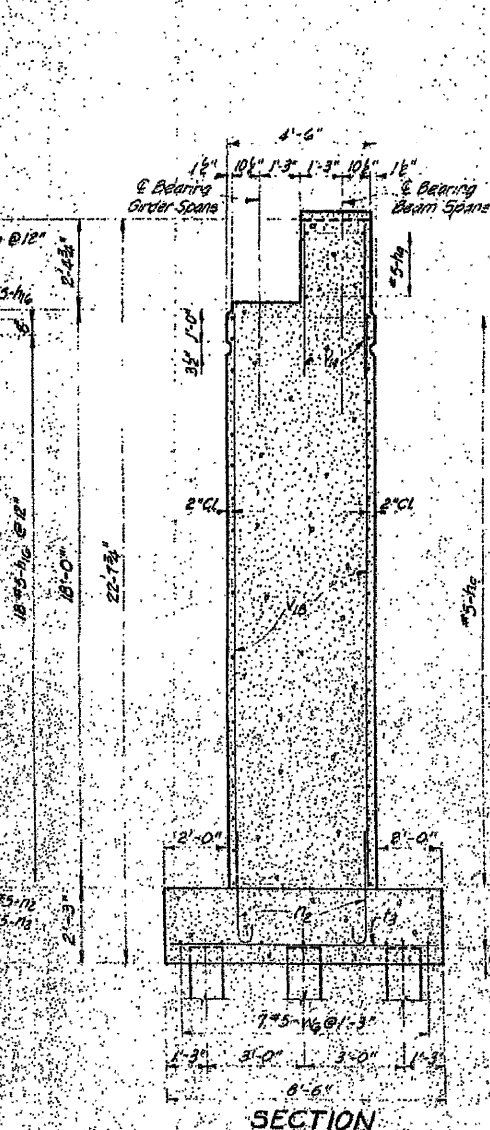
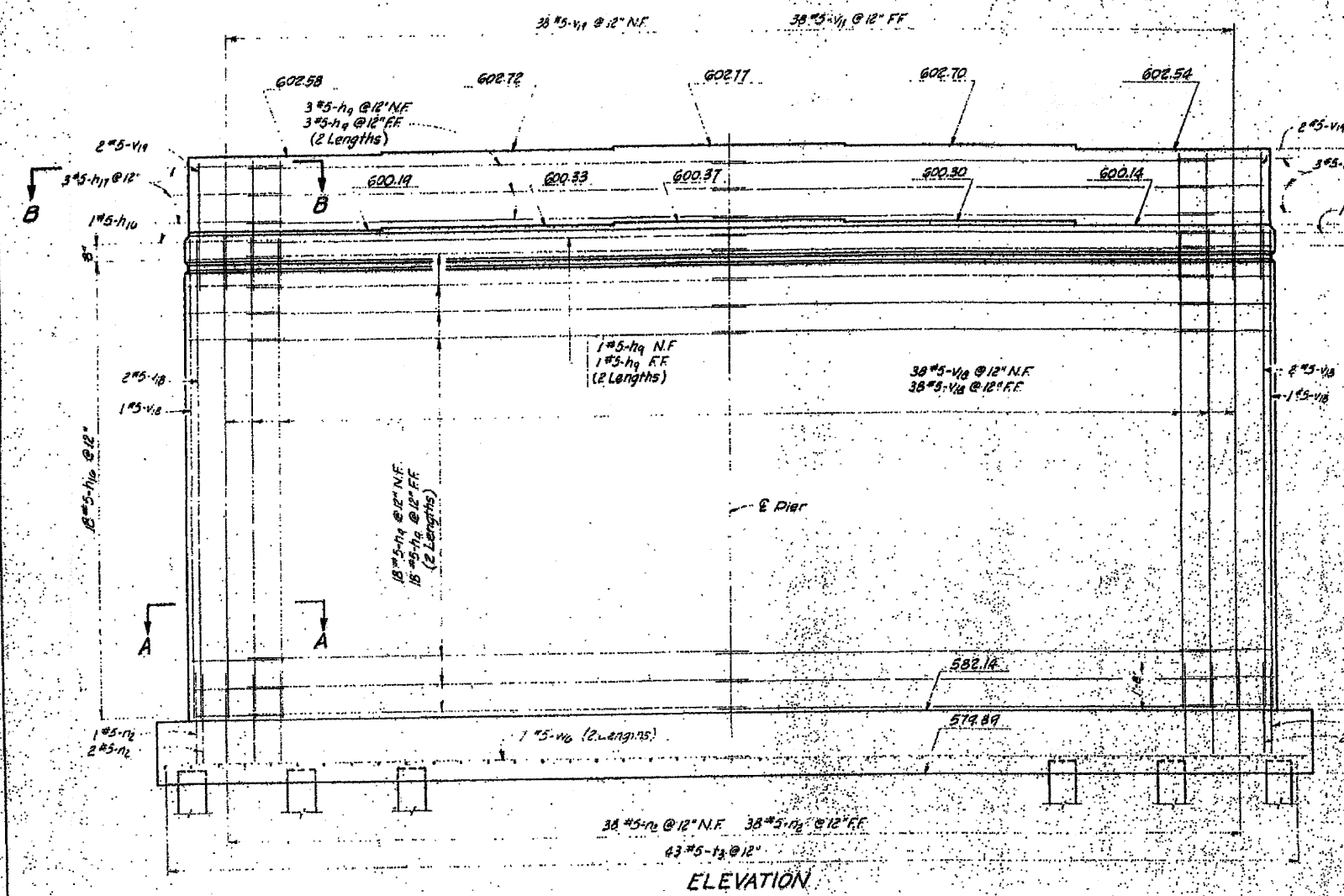
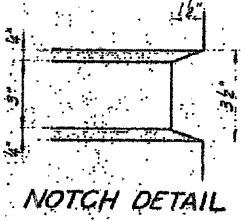
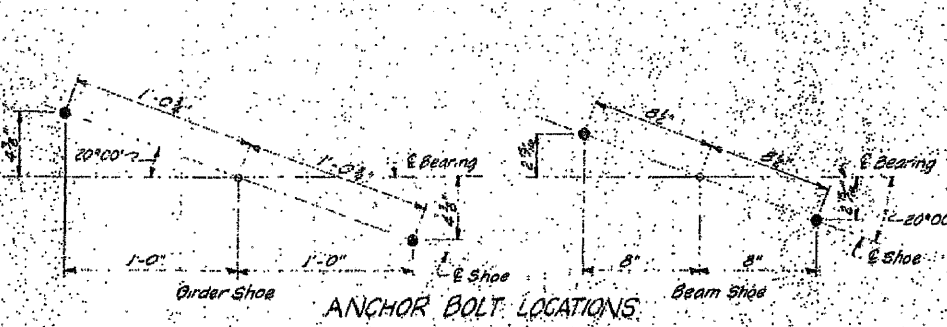
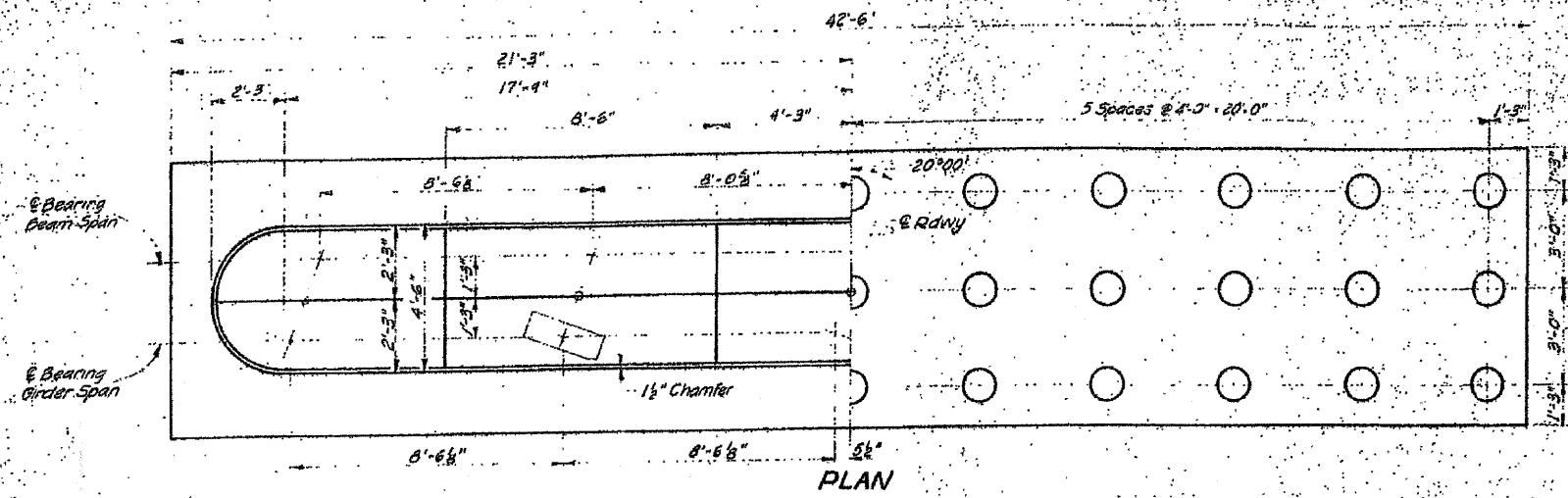
Minimum lap for all reinforcement bars shall be 20 bar diameters

PIER NO. 3		DESIGNED BY: BAC
MACON COUNTY		22-3-63
F.A.S. RT. 1539	SECTION 37 Q	CHECKED BY: BAC
HOMER L. CHASTAIN & ASSOCIATES		FILE 3-63
CONSULTING ENGINEERS		CODE NUMBER
DECATUR, ILLINOIS		PROJECT NO.
		SHEET NO.

FOR INFORMATION ONLY

SHEET NO. 16
OF 24 SHEETS

ROUTE NO. 1 SECTION
E.A.S. 1539 370
MACON G6 31
PROJECT S-1539-1(1)



BILL OF MATERIAL				
BAR NO.	SIZE	LENGTH	SHAPE	
h17	#5	18'-6"		
h16	#5	9'-0"	C	
h17	#5	7'-2"	C	
h2	#5	4'-0"	C	
h3	#5	6'-0"		
h4	#5	17'-9"		
h4	#5	4'-6"		
h4	#5	2'-9"		
Class A Concrete			Cu.Yd.	155.2
Reinforcement Bars			Lb.	5030
Class A Excavation For Structures			Cu.Yd.	161
Class B Excavation For Structures			Cu.Yd.	52
Crested Piles			Lin.Ft.	825
Test Piles-Timber			Each	1

PILE DATA
Type - Crested Timber
Capacity - 25 Tons
Est. Length - 25'
33' Piled
1 Timber Test Pile

FOR INFORMATION ONLY

Minimum lap for all reinforcement bars shall be 20 bar diameters

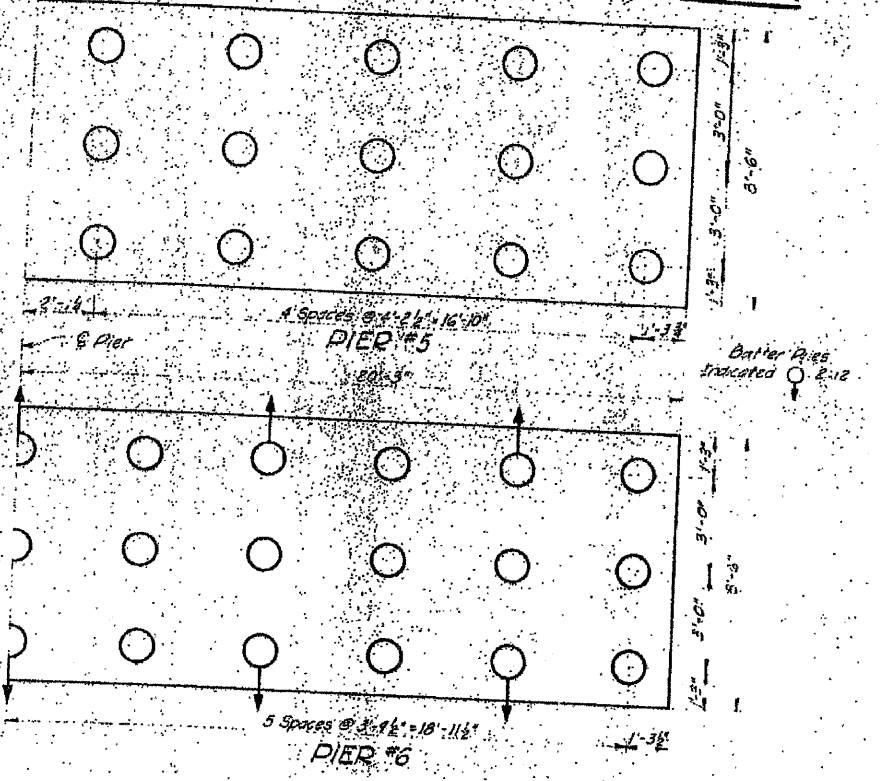
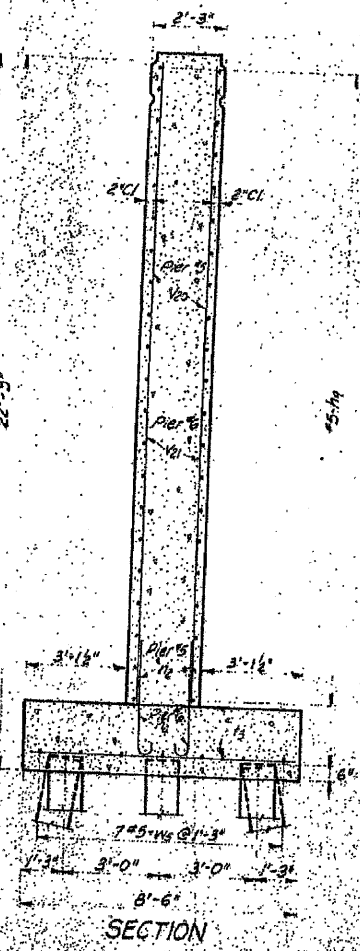
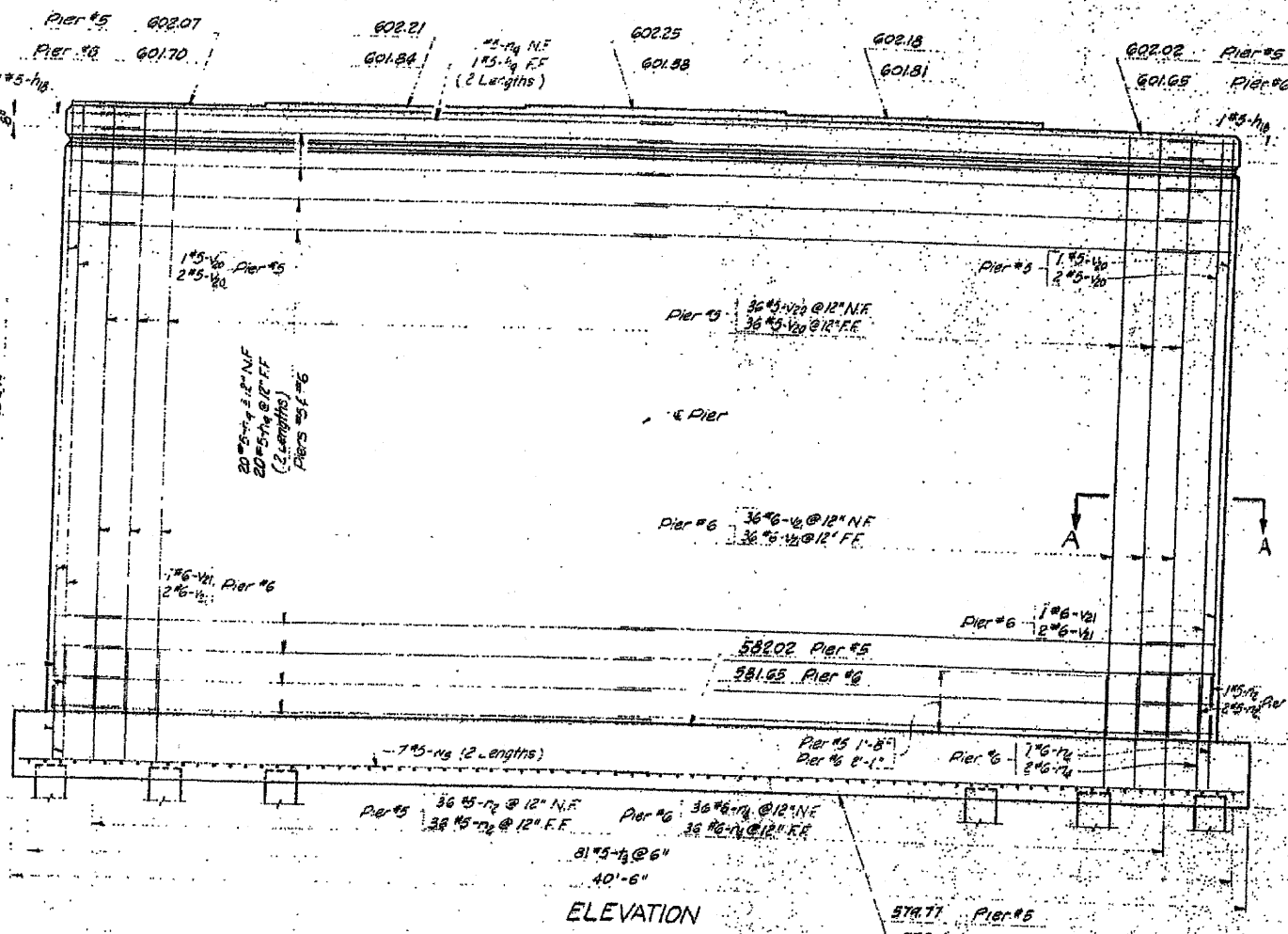
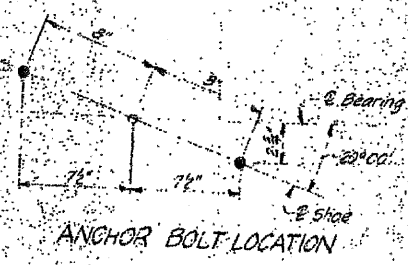
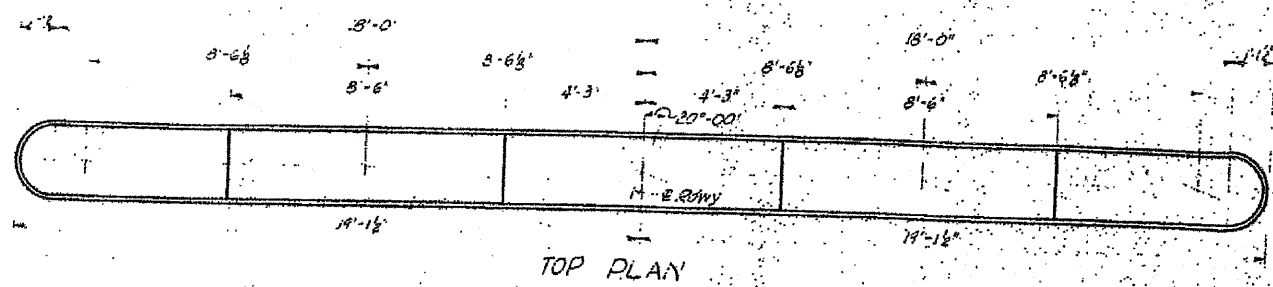
PIER NO. 4

REVISIONS	MACON COUNTY	DATE
1	E.A.S. RT. 1539	3-63
2	SECTION 37-Q	
HOMER L. CHASTAIN & ASSOCIATES		PROJECT NO.
CONSULTING ENGINEERS		SHEET NO.
DECATUR, ILLINOIS		

SHEET NO. 17
OF 24 SHEETS

MACON COUNTY
SECTION 37 Q
F.A.S. RT. 1539

FOR INFORMATION ONLY

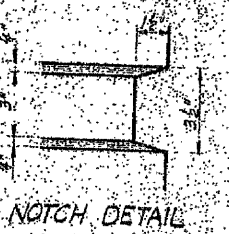
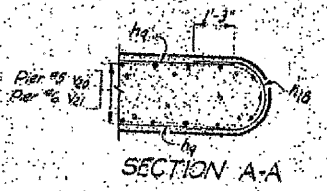
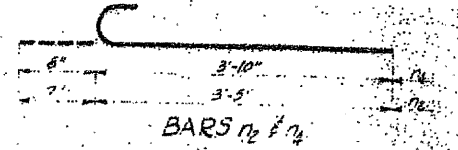
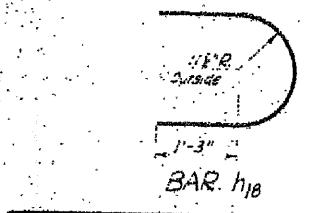


BILL OF MATERIAL

PIER #5				PIER #6			
BAR NO.	SIZE	LENGTH	SHAPE	BAR NO.	SIZE	LENGTH	SHAPE
h4	#5	18'-6"	D	h4	#5	18'-6"	D
h10	#5	5'-6"	D	h10	#5	5'-6"	D
h11	#5	8'-0"	C	h11	#5	8'-0"	C
h12	#5	8'-0"	C	h12	#5	8'-0"	C
h13	#5	8'-0"	C	h13	#5	8'-0"	C
h14	#5	17'-9"	C	h14	#5	17'-9"	C
h15	#5	20'-6"	C	h15	#5	20'-6"	C
h16	#5	20'-6"	C	h16	#5	20'-6"	C
h17	#5	20'-6"	C	h17	#5	20'-6"	C
h18	#5	20'-6"	C	h18	#5	20'-6"	C
h19	#5	20'-6"	C	h19	#5	20'-6"	C
h20	#5	20'-6"	C	h20	#5	20'-6"	C
h21	#5	20'-6"	C	h21	#5	20'-6"	C
h22	#5	20'-6"	C	h22	#5	20'-6"	C
h23	#5	20'-6"	C	h23	#5	20'-6"	C
h24	#5	20'-6"	C	h24	#5	20'-6"	C
h25	#5	20'-6"	C	h25	#5	20'-6"	C
h26	#5	20'-6"	C	h26	#5	20'-6"	C
h27	#5	20'-6"	C	h27	#5	20'-6"	C
h28	#5	20'-6"	C	h28	#5	20'-6"	C
h29	#5	20'-6"	C	h29	#5	20'-6"	C
h30	#5	20'-6"	C	h30	#5	20'-6"	C
h31	#5	20'-6"	C	h31	#5	20'-6"	C
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h58	#5	20'-6"	C	h58	#5	20'-6"	C
h59	#5	20'-6"	C	h59	#5	20'-6"	C
h60	#5	20'-6"	C	h60	#5	20'-6"	C
h61	#5	20'-6"	C	h61	#5	20'-6"	C
h62	#5	20'-6"	C	h62	#5	20'-6"	C
h63	#5	20'-6"	C	h63	#5	20'-6"	C
h64	#5	20'-6"	C	h64	#5	20'-6"	C
h65	#5	20'-6"	C	h65	#5	20'-6"	C
h66	#5	20'-6"	C	h66	#5	20'-6"	C
h67	#5	20'-6"	C	h67	#5	20'-6"	C
h68	#5	20'-6"	C	h68	#5	20'-6"	C
h69	#5	20'-6"	C	h69	#5	20'-6"	C
h70	#5	20'-6"	C	h70	#5	20'-6"	C
h71	#5	20'-6"	C	h71	#5	20'-6"	C
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h79	#5	20'-6"	C	h79	#5	20'-6"	C
h80	#5	20'-6"	C	h80	#5	20'-6"	C
h81	#5	20'-6"	C	h81	#5	20'-6"	C
h82	#5	20'-6"	C	h82	#5	20'-6"	C
h83	#5	20'-6"	C	h83	#5	20'-6"	C
h84	#5	20'-6"	C	h84	#5	20'-6"	C
h85	#5	20'-6"	C	h85	#5	20'-6"	C
h86	#5	20'-6"	C	h86	#5	20'-6"	C
h87	#5	20'-6"	C	h87	#5	20'-6"	C
h88	#5	20'-6"	C	h88	#5	20'-6"	C
h89	#5	20'-6"	C	h89	#5	20'-6"	C
h90	#5	20'-6"	C	h90	#5	20'-6"	C
h91	#5	20'-6"	C	h91	#5	20'-6"	C
h92	#5	20'-6"	C	h92	#5	20'-6"	C
h93	#5	20'-6"	C	h93	#5	20'-6"	C
h94	#5	20'-6"	C	h94	#5	20'-6"	C
h95	#5	20'-6"	C	h95	#5	20'-6"	C
h96	#5	20'-6"	C	h96	#5	20'-6"	C
h97	#5	20'-6"	C	h97	#5	20'-6"	C
h98	#5	20'-6"	C	h98	#5	20'-6"	C
h99	#5	20'-6"	C	h99	#5	20'-6"	C
h100	#5	20'-6"	C	h100	#5	20'-6"	C

PILE DATA
PIER #5
 Type - Creosoted timber
 Capacity - 84 Tons
 Est Length - 25'
 30' Reg'd
 1 Timber Test Pile

PIER #6
 Type - Creosoted timber
 Capacity - 89 Tons
 Est Length - 25'
 33' Reg'd
 1 Timber Test Pile



FOR INFORMATION ONLY

PIERS NO. 5 & NO. 6

MACON COUNTY
F.A.S. RT. 1539 SECTION 37 Q

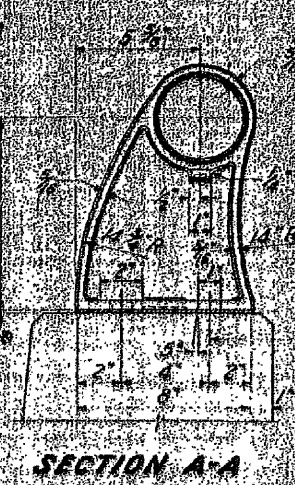
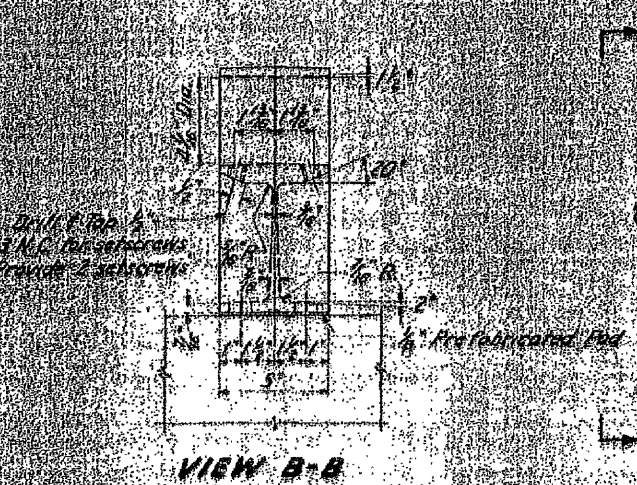
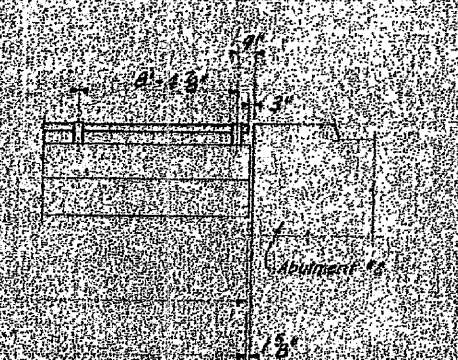
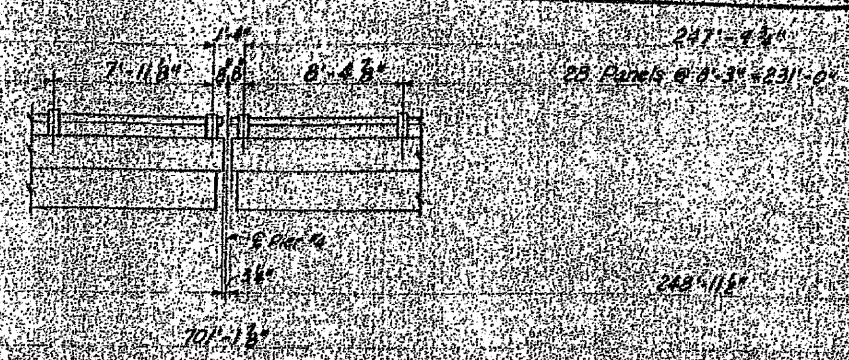
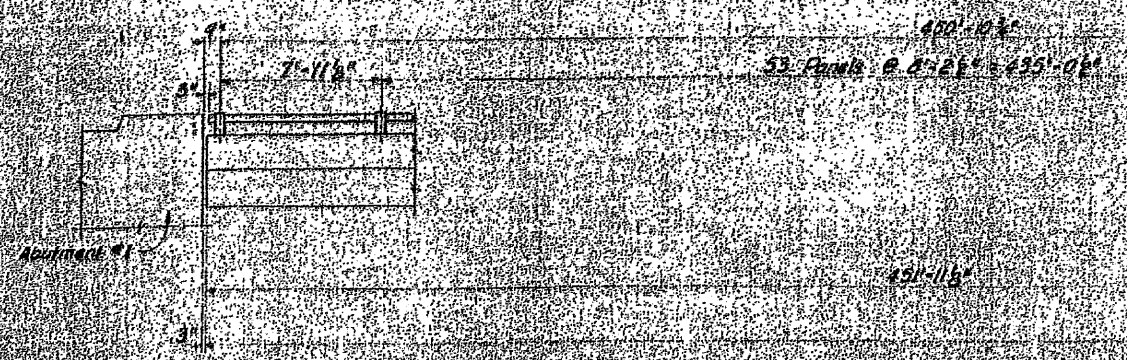
HOMER L. CHASTAIN & ASSOCIATES
CONSULTING ENGINEERS
DECATUR, ILLINOIS

REVISIONS

NO.	DATE	REVISION
1	3-23-63	ISSUED FOR BIDDING
2	3-23-63	REVISED PER COMMENTS
3	3-23-63	REVISED PER COMMENTS
4	3-23-63	REVISED PER COMMENTS
5	3-23-63	REVISED PER COMMENTS
6	3-23-63	REVISED PER COMMENTS
7	3-23-63	REVISED PER COMMENTS
8	3-23-63	REVISED PER COMMENTS
9	3-23-63	REVISED PER COMMENTS
10	3-23-63	REVISED PER COMMENTS

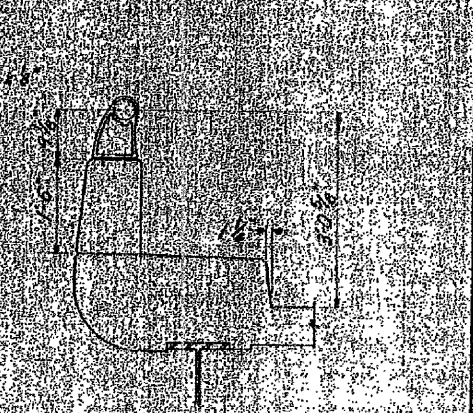
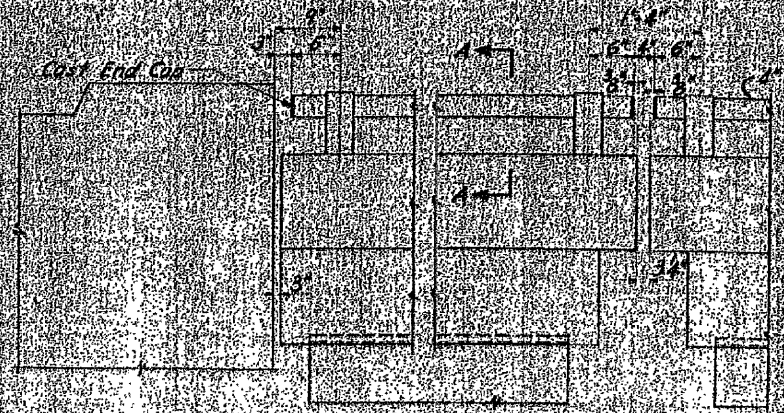
PROJECT NO. _____
 DRAWN BY _____ DATE 3-23-63
 CHECKED BY _____ DATE 3-23-63
 SCALE _____
 SHEET NO. _____

FOR INFORMATION ONLY



CAST END CAP
 DRIVE PIN TYPE
 3 Required
 Incident to Item
 Aluminum Handrail Type D

3/8" Threaded Inserts
 Provide 1" Stainless Steel Washer
 and 1" 304 S.S. Stainless
 Steel Bolt with each insert
 As Required each post



ELEVATION - END POST

SECTION THRU CURB

NOTES

- All Posts shall be placed normal to parapet.
- All Posts shall be of Aluminum conforming to ASTM Specification B-208 alloy 50, 70B-16.
- All Rail Toping shall be of Aluminum conforming to ASTM Specification B-225 alloy 6001-EB.
- Rail Toping shall be cut to a maximum length of three panels.

- Aluminum handrail shall be measured in lineal feet. The length paid for shall be the overall length along the top longitudinal railing member through all posts and gaps.
- The contract unit price for Aluminum Handrail Type D shall include furnishing, fabrication, transportation, and erection of all material.

- For material composition of Prefabricated Pad, see Art. 6.4 (F) (Bearings and Anchorage) of the STD-Spec.
- Set Screws shall be of Aluminum conforming to ASTM Specification B-211 alloy 5052 H14.

FOR INFORMATION ONLY

ALUMINUM HANDRAIL TYPE D	
REVISIONS	DATE
MACON COUNTY	
FACTORY 1539 SECTION 57 Q	
HOMER L. GHASTAIN & ASSOCIATES CONSULTING ENGINEERS	

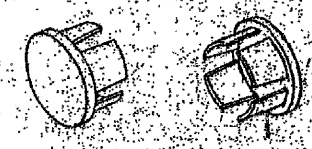
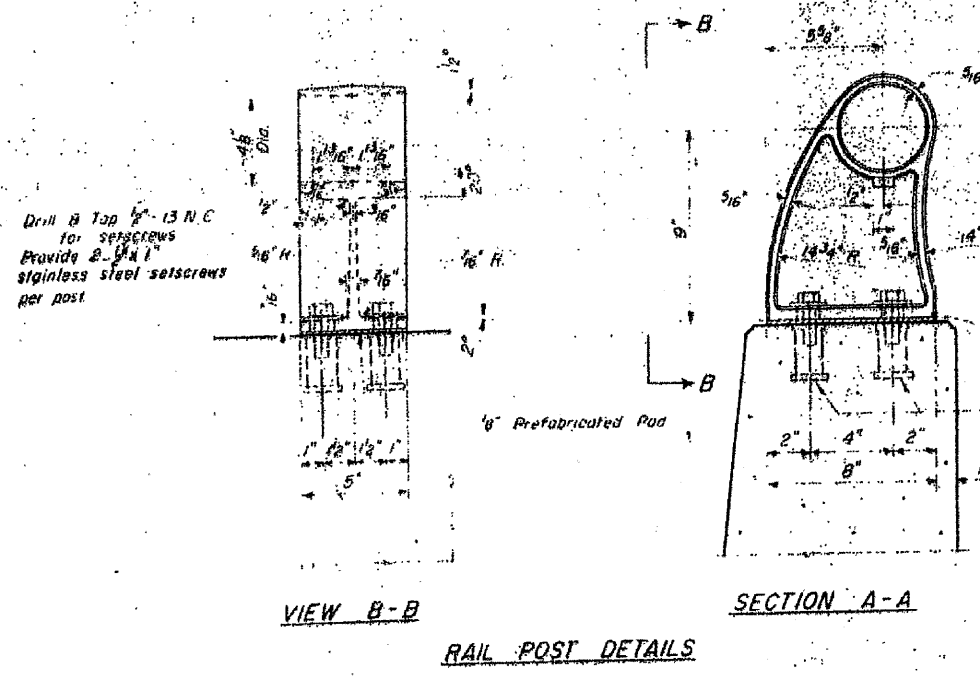
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

FAS	37Q	MACON	66	34
1539				

SHEET NO. 34
SHEETS

FOR INFORMATION ONLY

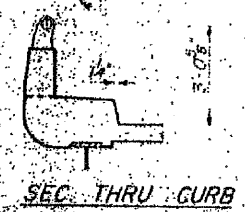
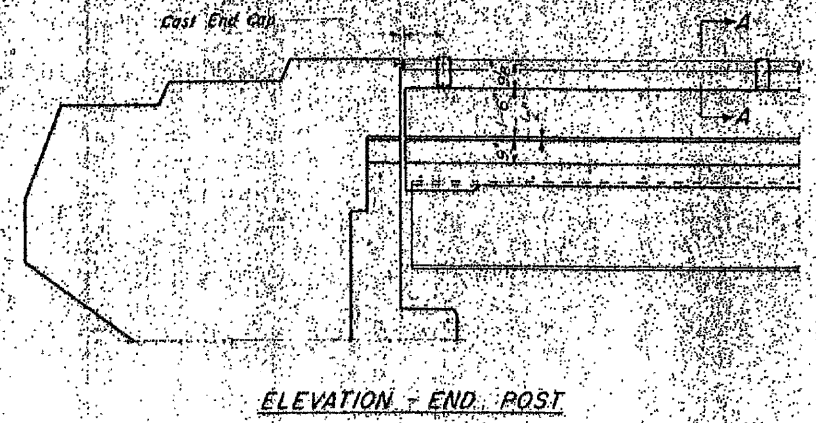
NOTE:
For handrail post spacing, see sheet No. 33.



3/8" Threaded Inserts. Provide 1" Stainless Steel Washer and 1-3/8" x 2" Stainless Steel Bolt with each Insert
4 Required each post
Inserts shall be cast in place.

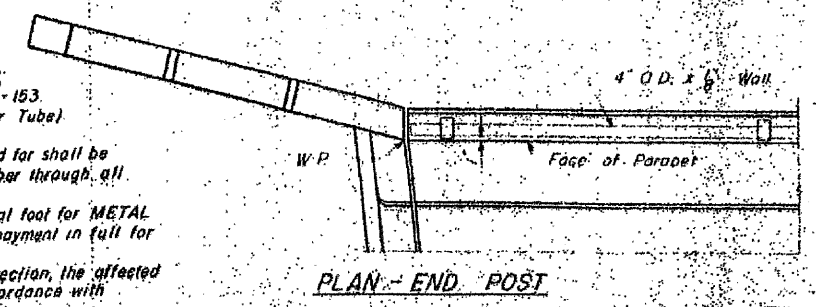
NOTES

All Posts shall be placed normal to parapet.
All Posts shall be malleable cast iron conforming to ASTM A-47, Grade 35018, or Grade 32510 galvanized to ASTM A-153.
All Rail Tubing shall conform to ASTM A-53, Grade B, (Pipe or Tube) galvanized to ASTM A-120.
Metal handrail shall be measured in linear feet. The length paid for shall be the overall length along the top longitudinal rail/ing member through all posts and gaps.
Metal handrail will be paid for at the contract unit price per linear foot for METAL HANDRAIL, measured as specified, which price shall be payment in full for all materials, fabrication, transportation, and erection.
If any of the galvanizing coat is damaged or removed during erection, the affected area shall be painted with one coat of zinc paint in accordance with Military Specification MIL-P-26915 Type I, air-dry cure.
Rail Tubing may be cut to random lengths.
For material composition of Prefabricated Pad, see Art. 542 (1), (Bearing and Anchorage), of the Standard Specifications.
Galvanized railing shall not be painted.



BILL OF MATERIAL

Item	Unit	Quantity
METAL HANDRAIL	Lin. Ft.	14.02



TYPE E METAL HANDRAIL

PROJECT S-1539-1(1)
F.A.S. ROUTE 1539
SECTION 37Q
MACON COUNTY

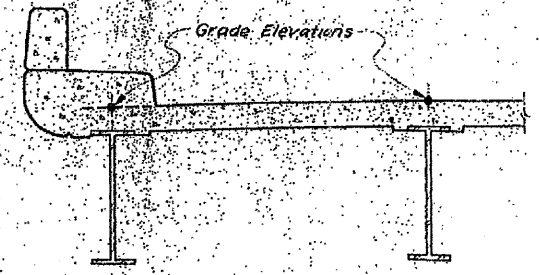
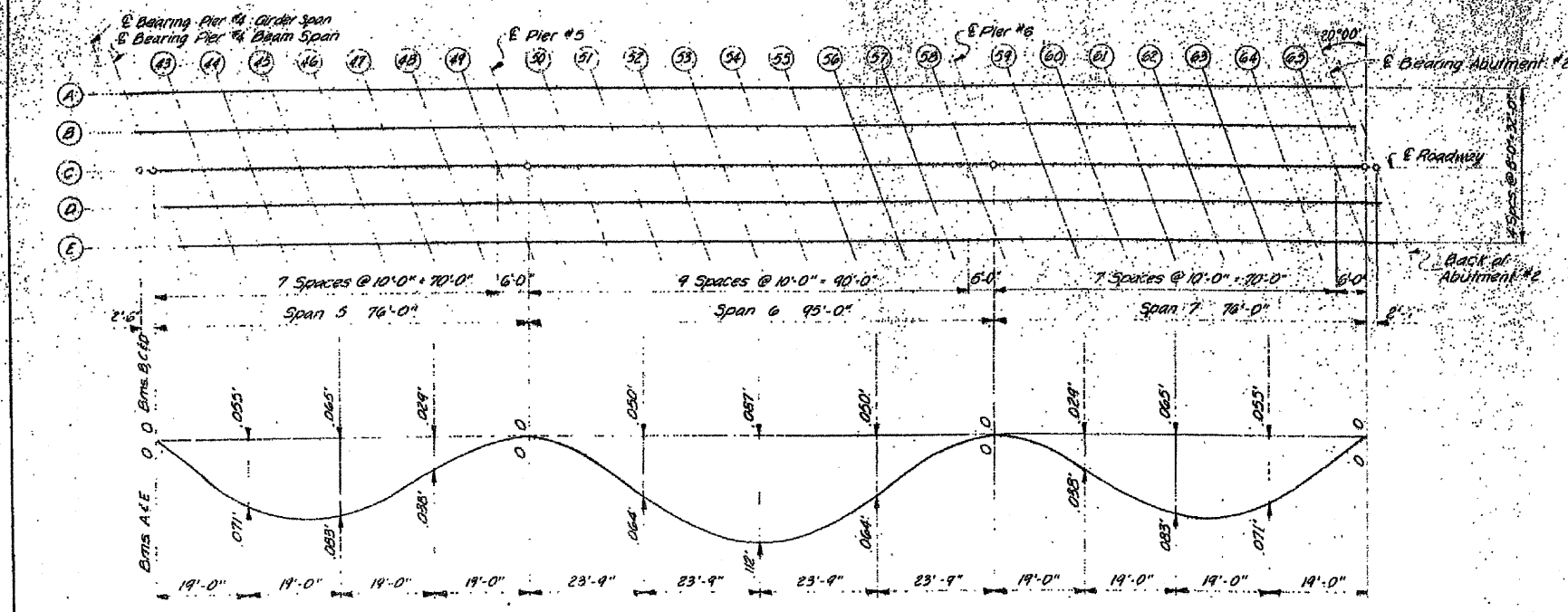
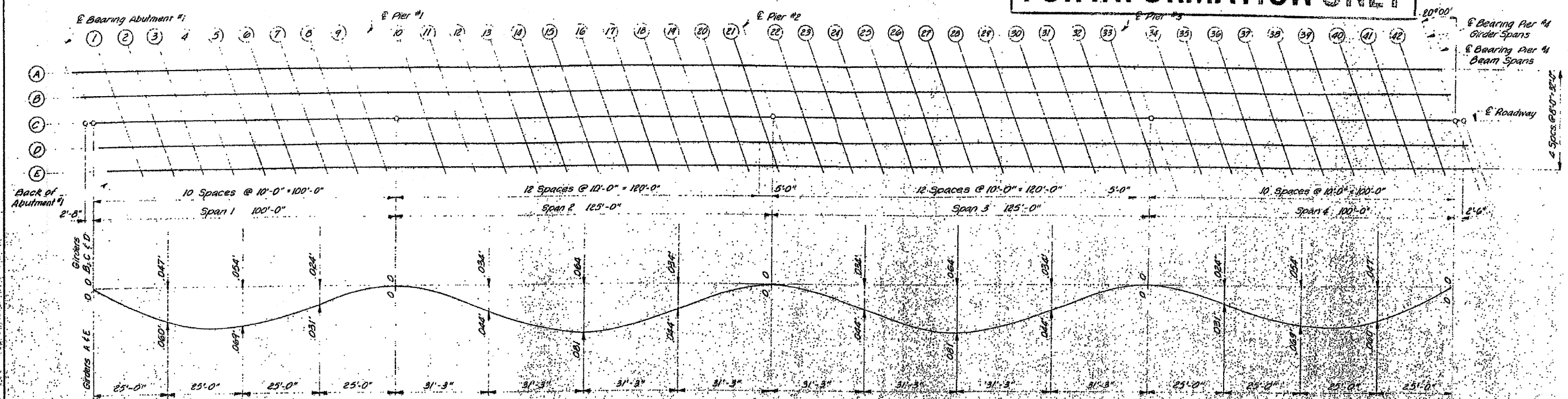
FOR INFORMATION ONLY

TOTAL SHEETS	SHEET NO.
57	53

SHEET NO. 20
OF 24 SHEETS

PROJECT NO. 1539
SECTION 37Q
MACON 66 36
PROJECT NAME: S-1539-1(1)

FOR INFORMATION ONLY



The above deflections are not for use in the field if the Engineer is working from the Theoretical Grade Elevations Adjusted for Dead Load Deflection.

FOR INFORMATION ONLY

DEAD LOAD DEFLECTION
(Excludes Weight of Structural Steel)

REVISIONS		DECK ELEVATIONS	
NO.	DATE	BY	INITIALS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

MACON COUNTY		DRAWN BY: DDL 4-63
F.A.S. RT. 1539	SECTION 37 Q	CHECKED BY: W.A.C. 4-63
HOMER L. CHASTAIN & ASSOCIATES		PROJECT NO.
CONSULTING ENGINEERS		SHEET NO.
DECATUR, ILLINOIS		

FOR INFORMATION ONLY

SHEET NO. 21 OF 24 SHEETS

F.A.S. 1539-37 Q

Table with columns: LOCATION, BEAM, STATION, OFFSET, THEORETICAL GRADE ELEVATIONS, THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS. Contains data for lines 29-44 and piers 29-44.

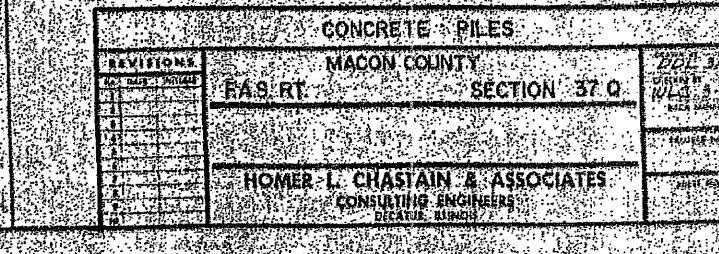
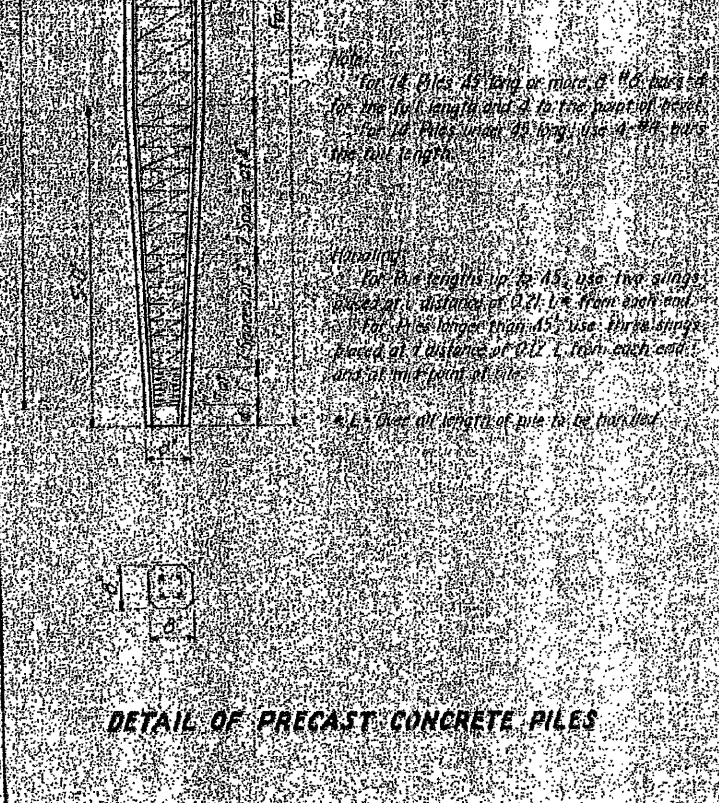
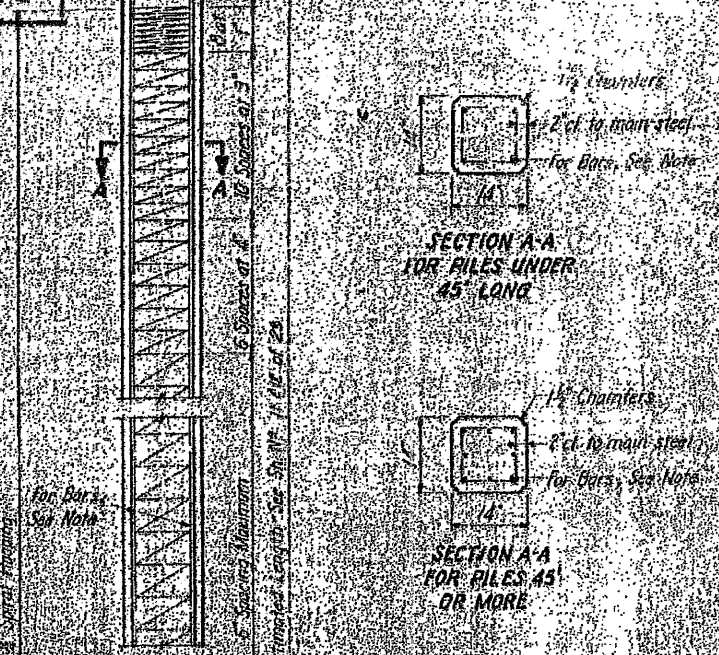
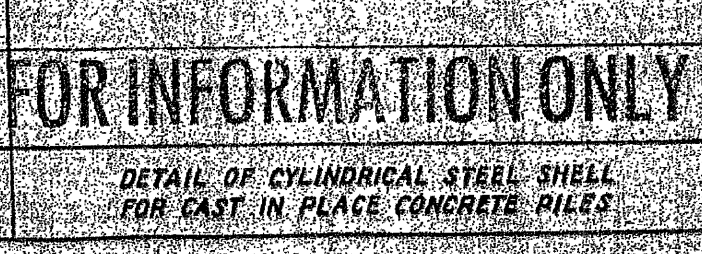
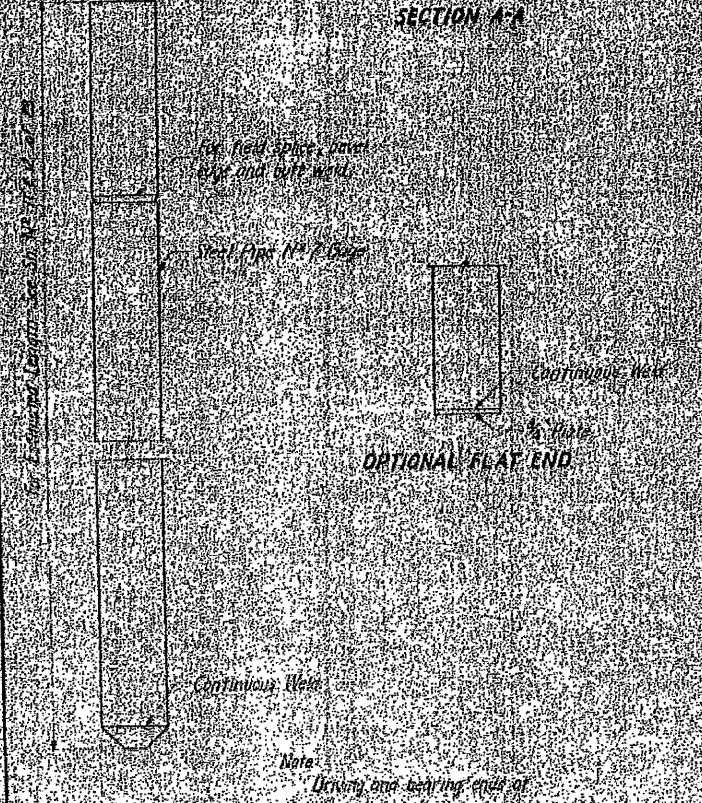
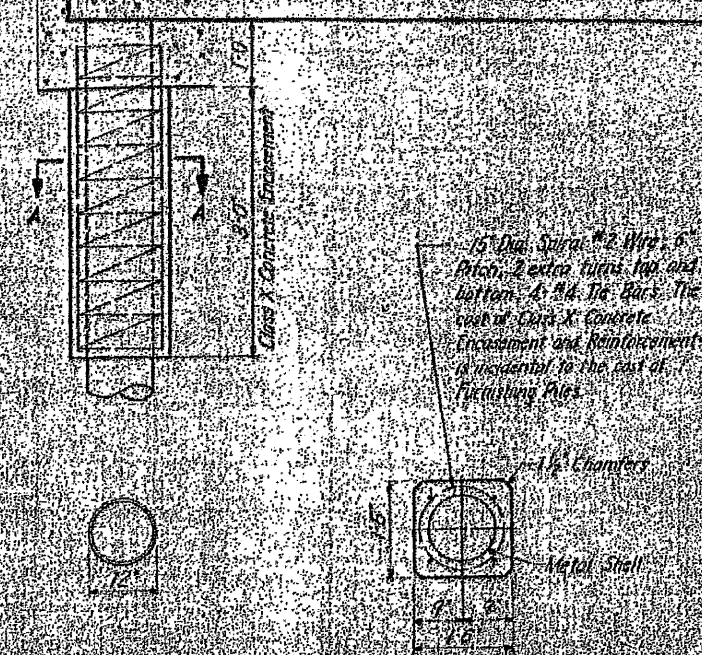
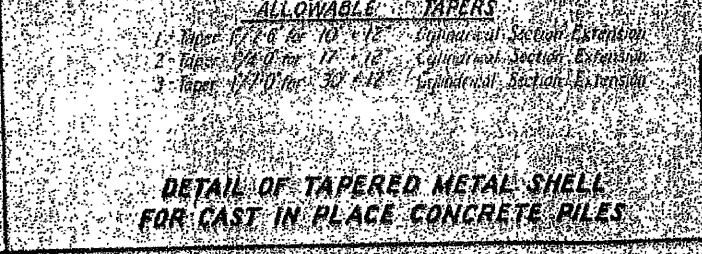
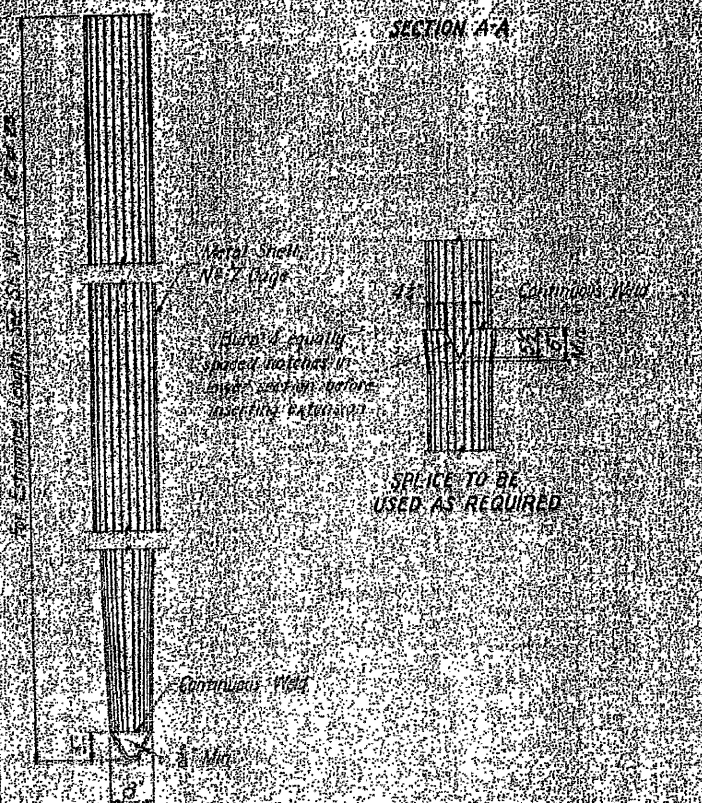
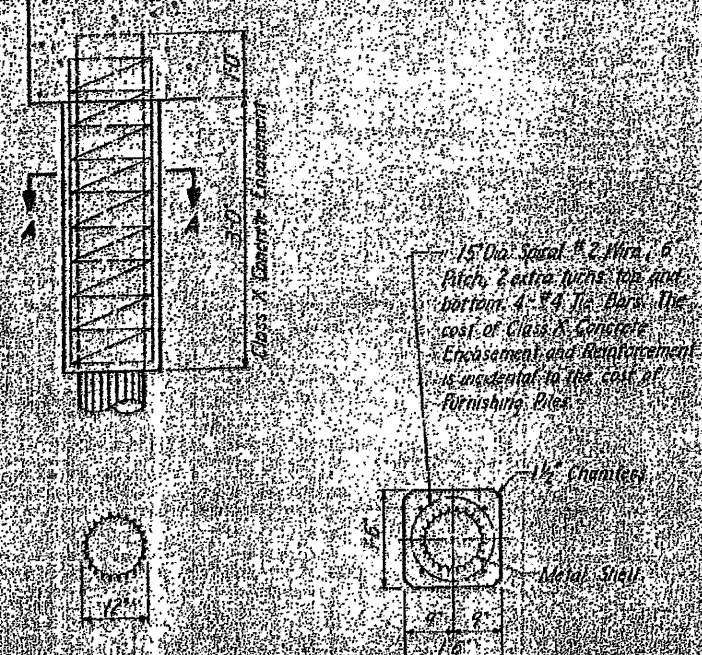
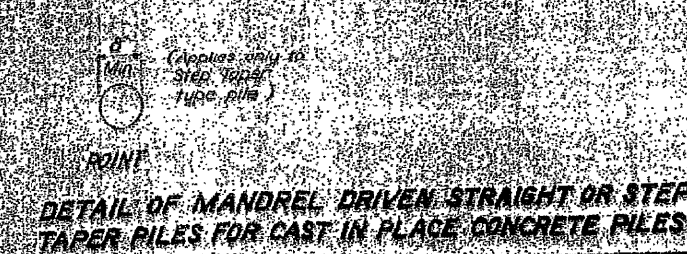
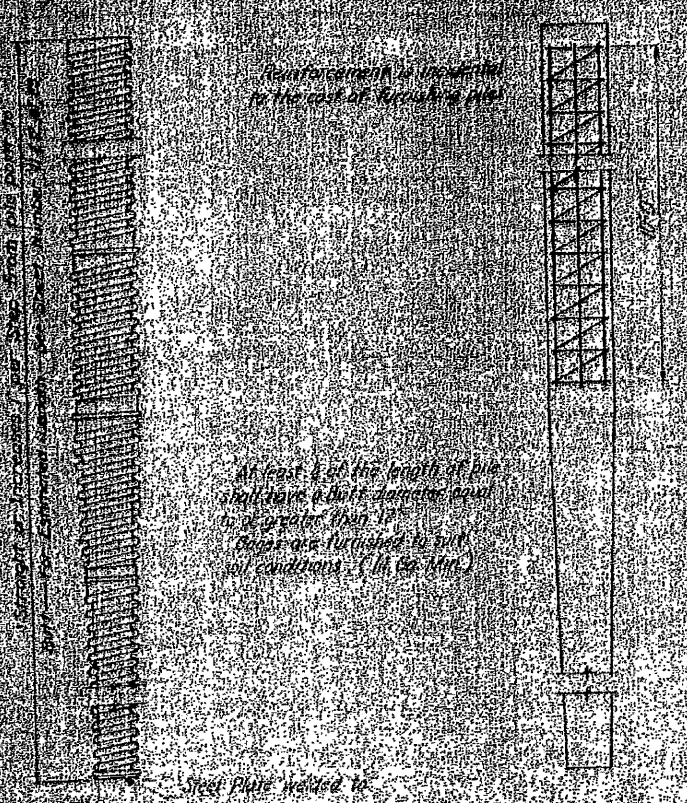
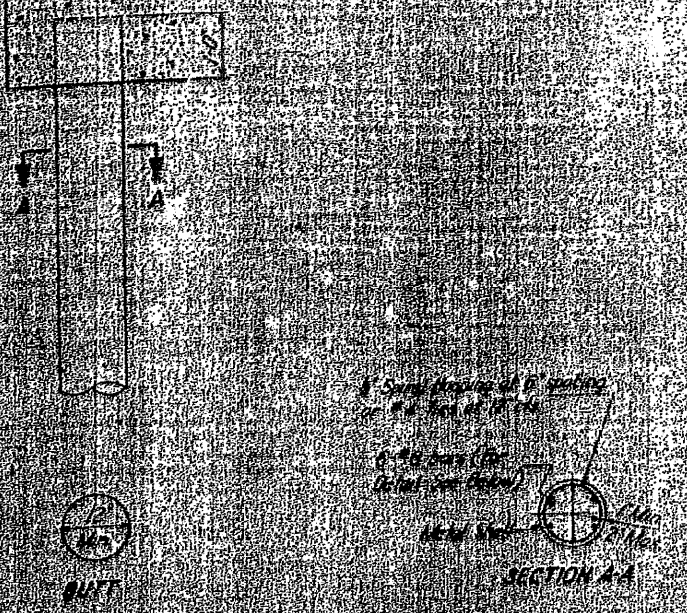
Table with columns: LOCATION, BEAM, STATION, OFFSET, THEORETICAL GRADE ELEVATIONS, THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS. Contains data for lines 29-44 and piers 29-44.

Table with columns: LOCATION, BEAM, STATION, OFFSET, THEORETICAL GRADE ELEVATIONS, THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS. Contains data for lines 45-65 and piers 45-65.

FOR INFORMATION ONLY

DECK ELEVATIONS, MAÇON COUNTY, F.A.S. RT. 1539 SECTION 37 Q, HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS

FOR INFORMATION ONLY



15 Dia. Spiral #2 Wire, 6 Pitch, 2 extra turns top and bottom. 4 #4 Tie Bars. The cost of Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing Piles.

15 Dia. Spiral #2 Wire, 6 Pitch, 2 extra turns top and bottom. 4 #4 Tie Bars. The cost of Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing Piles.

Note:
 For 14 Piles 45' long or more, use #6 bars for the full length and #4 to the point of break.
 For 14 Piles under 45' long, use #4 bars the full length.
 For pile lengths up to 45', use two rings spaced at a distance of 0.21 L from each end.
 For piles longer than 45', use three rings placed at a distance of 0.1 L from each end and at mid-point of pile.
 * L = Total length of pile to be installed.

ALLOWABLE TAPERS
 1. Taper 1/2" for 10' - 12' conical section Extension
 2. Taper 1/4" for 17' - 12' cylindrical section Extension
 3. Taper 1/2" for 30' - 42' conical section Extension

FOR INFORMATION ONLY

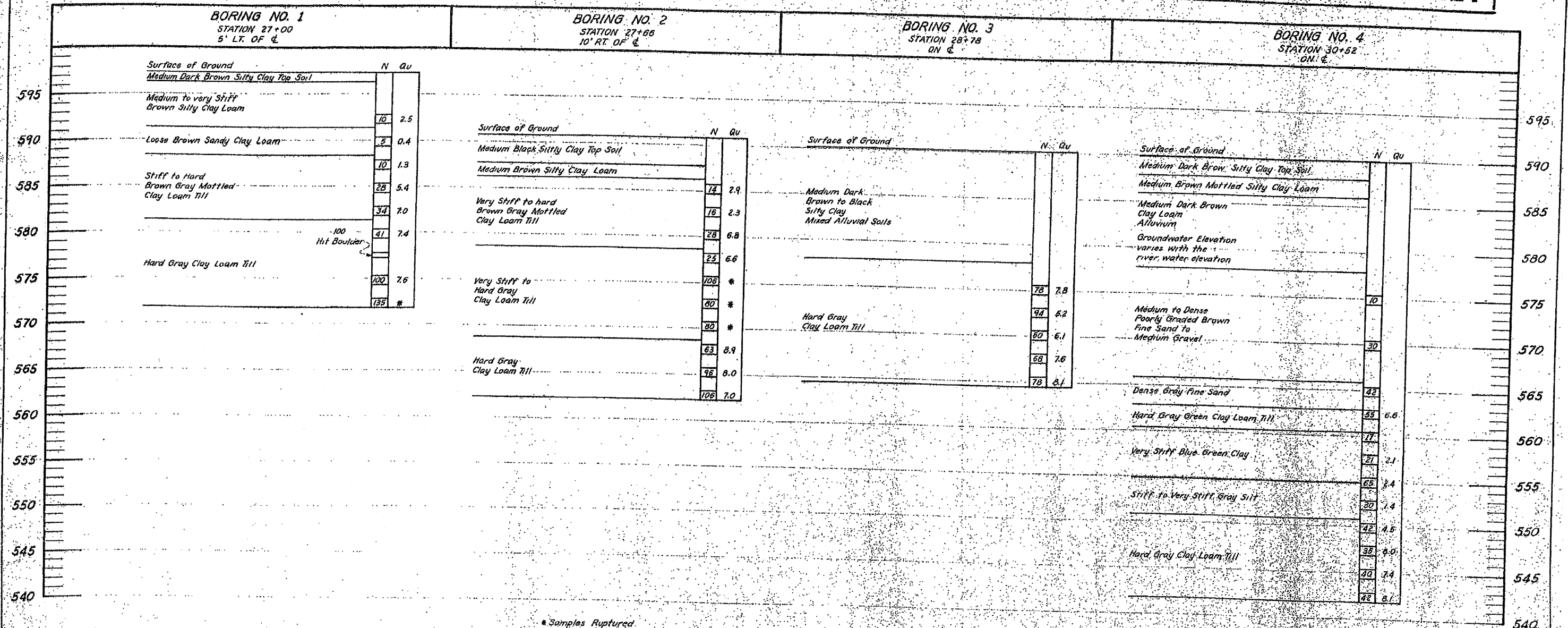
DETAIL OF PRECAST CONCRETE PILES

CONCRETE PILES		
REVISIONS	MACON COUNTY	SECTION 37.0
1	F.A.S. RT.	
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS BREVARD, FLORIDA		

SHEET NO. 25
OF 24 SHEETS

PROJECT NO. 1539
SECTION 37 Q
MACON
DATE 3-65
SHEET NO. 35
DES. BY J. L. CHASTAIN
CHECKED BY J. L. CHASTAIN
DATE 3-65

FOR INFORMATION ONLY



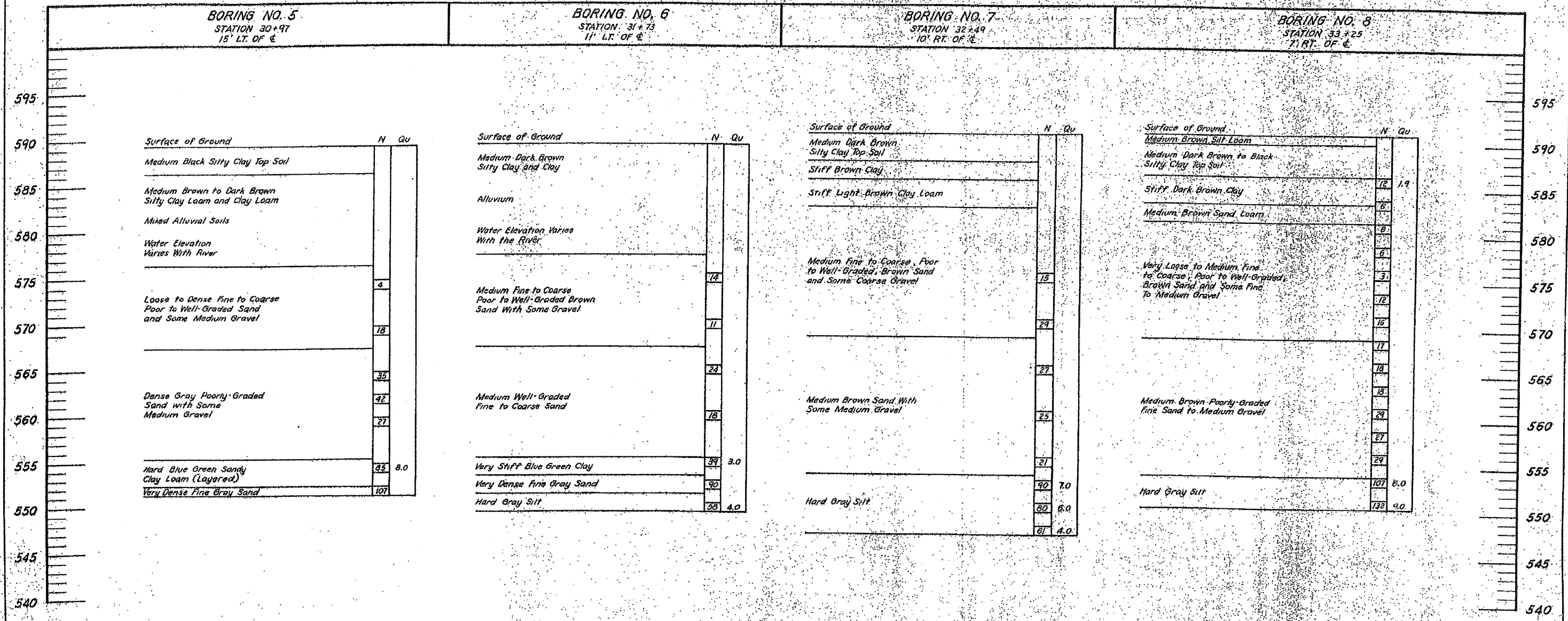
* Samples Ruptured

N = Standard Penetration Test - Blows per foot to drive 2" o.d. Split Spoon Sampler 12" with 140 lb. hammer falling 30"
Qu = Unconfined Compressive Strength in Tons Per Square Foot

FOR INFORMATION ONLY

REVISIONS		BORINGS	
NO.	DATE	MACON COUNTY	
1		SECTION 37 Q	
2		FAS RT. 1539	
3		DATE 3-65	
4		SHEET NO. 35	
5		PROJECT NO.	
6		HOMER L. CHASTAIN & ASSOCIATES	
7		CONSULTING ENGINEERS	
8		DECATUR, ILLINOIS	
9		SHEET NO.	

FOR INFORMATION ONLY



N = Standard Penetration Test - Blows per foot to drive 2" o.d. Split Spoon Sampler 12" with 140 lb. hammer falling 30"

Qu = Unconfined Compressive Strength in Ton Per Square Foot

FOR INFORMATION ONLY

REVISIONS		BORINGS	
NO.	DATE	MACON COUNTY	
1		F.A.S. RT. 1539 SECTION 37 Q	
2		DRAWN BY: DATE	
3		R.C.M. 5-63	
4		CHECKED BY: DATE	
5		W.L.C. 7-63	
6		100% HOURS	
7		PROJECT NO.	
8		SHEET NO.	
HOMER L. CHASTAIN & ASSOCIATES CONSULTING ENGINEERS DECATUR, ILLINOIS			