

76857

JER MADISON

#5

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-(10,11)RS	MADISON	158	1

158 Total Sheets

3-9-07 Letting, Item 005

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

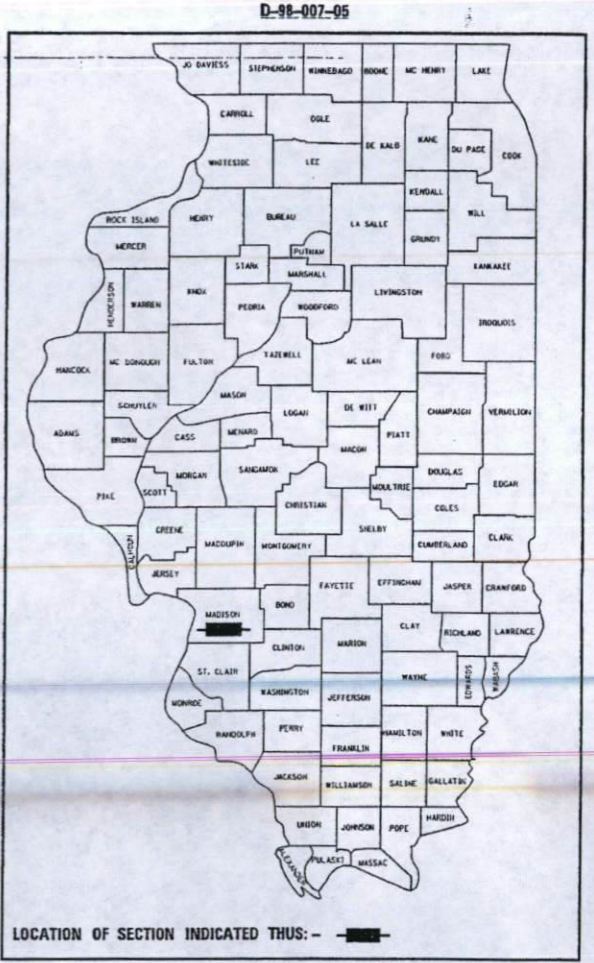
**PROPOSED
HIGHWAY PLANS**

FAI ROUTE 70
SECTION 60-(10, 11)RS
PROJECT: ACIM-070-1(181)018
MADISON COUNTY

C-98-025-05

FOR INDEX OF SHEETS, SEE SHEET NO. 2

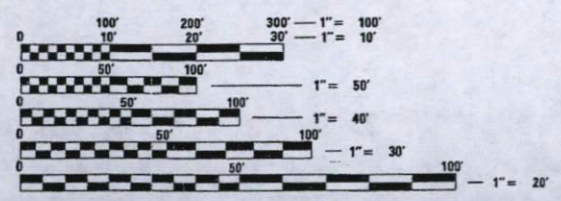
99%
5-24-2008



060-0182

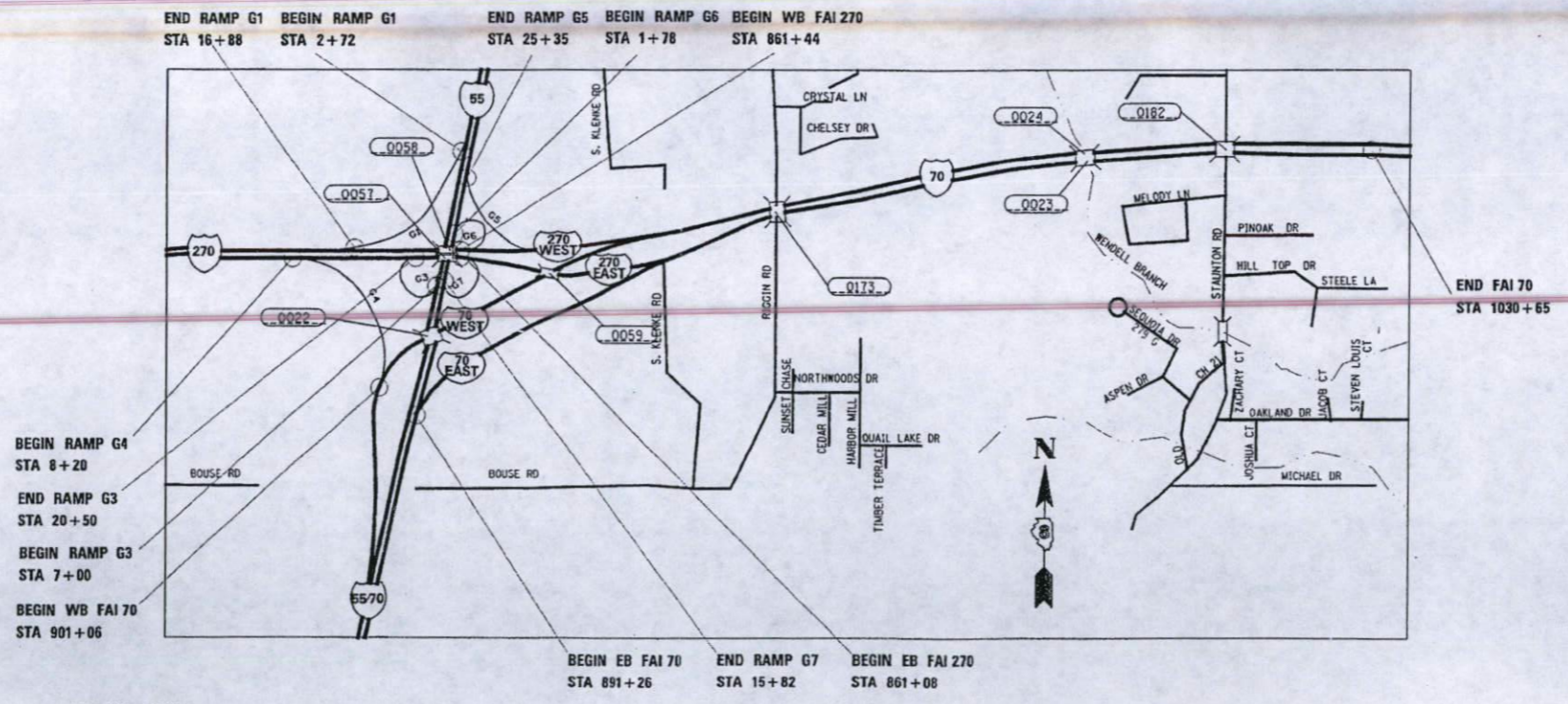
PROJECT ENGINEER: PATTI LEBEAU (618)346-3186
SQUAD LEADER: CHERYL KEPLAR (618)346-3186

MICROFILMED _____
REEL NUMBER _____
AWARDED _____
RESIDENT ENGINEER _____
AS BUILT CHANGES WERE MADE
ON THE FOLLOWING SHEETS



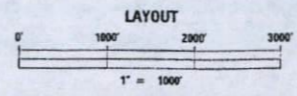
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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



2007 ADT - 31700
2027 ADT - 38700
MU% - 77.3, SU% - 4.9

GROSS LENGTH - 12959'
NET LENGTH - 12959'



CONTRACT NO. 76857 **060-0182** FUNCTIONAL CLASSIFICATION - INTERSTATE

COUNTY MADISON SECTION 60-(10,11)RS FAI ROUTE 70

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Dec 15, 2006
May C Lami
DEPUTY DIRECTOR OF HIGHWAYS
REGION FIVE ENGINEER

February 2, 2007
Eric S. Hansen
ENGINEER OF DESIGN AND ENVIRONMENT

February 2, 2007
Milton R. Sues, P.E.
DIRECTOR, DIVISION OF HIGHWAYS

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

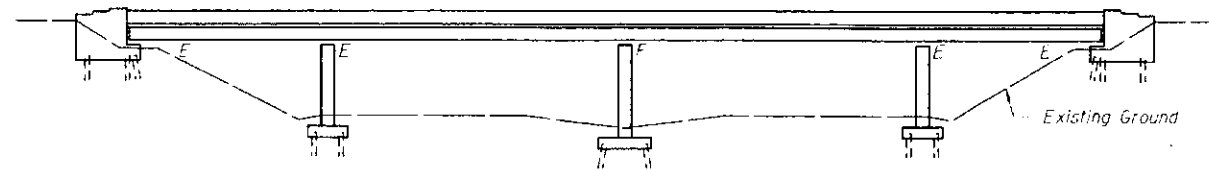
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS

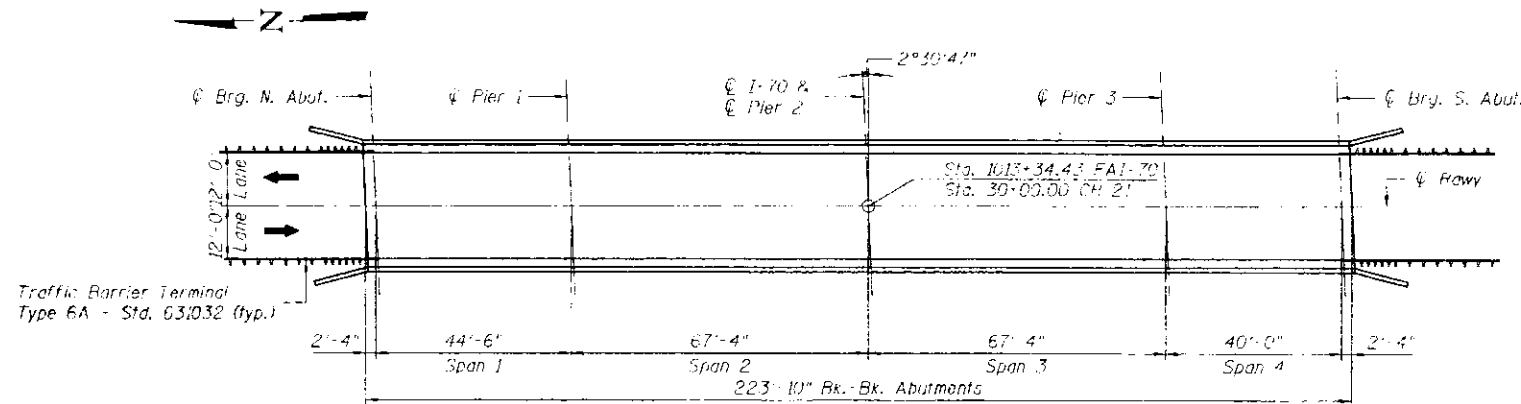
SHEET 1
OF 4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10HB-1	MADISON	156	123
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 76057	

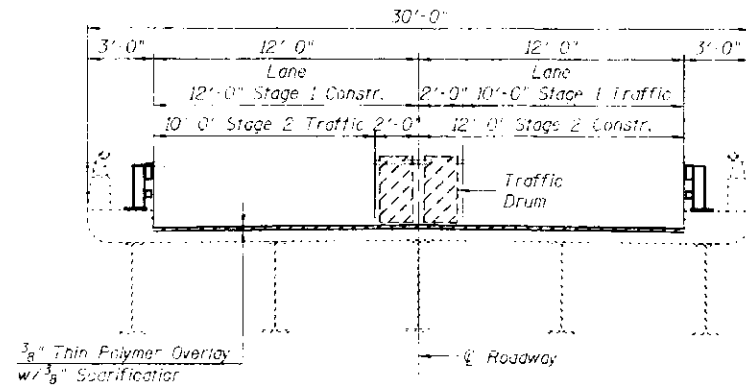
Sheet No.	Description
1	Gen. Plan, Gen. Notes & Total Bill of Mat'l
2	Deck Plan
3	Superstructure
4	Steel Bridge Rail



ELEVATION



PLAN



CROSS SECTION
(Looking South)

GENERAL NOTES

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.

All structural steel shall be AASHTO M 270 Grade 36, unless noted otherwise.

All new structural steel (for Floor Drain Extension) shall be shop painted with an inorganic zinc rich primer per AASHTO M300, Type 1. Field painting of structural steel shall be done under a separate painting contract.

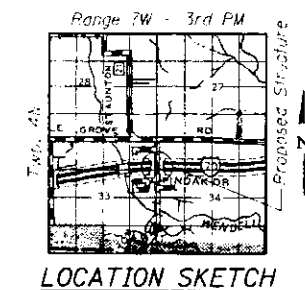
The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.

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

A Protective Coat shall be applied to the tops and inside faces of the parapets, sidewalks, and wings. The coat shall not be applied to the Polymer Overlay.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Protective Coat	Sq Yd	265		265
Floor Drain Extension	Each	12		12
Steel Railing, Type 2399	Foot	444		444
Concrete Bridge Deck Scarification (3/8 inch)	Sq Yd	592		592
Plug Existing Deck Drains	Each	14		14
Bridge Deck Thin Polymer Overlay 3/8"	Sq Yd	592		592
Deck Slab Repair (Full Depth, Type II)	Sq Yd	12		12
Deck Slab Repair (Partial)	Sq Yd	122		122



LOCATION SKETCH

GENERAL PLAN
STAUNTON ROAD (CH 21) OVER
INTERSTATE 70
FAI ROUTE 70 SECTION 60-10HB-1
MADISON COUNTY
STATION 1013+34.43
STRUCTURE NO. 060-0182

FILE: J:\00-10042.L 381.45 TO Br. See Remarks in S:\06-0182 STAUNTON ROAD 0182.DWG
USER: DCD
DATE: 01/12/2007 16:13:09

JD Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

DESIGNED: CDR	DRAWN: SJS
CHECKED: DCD	CHECKED: CDB/DCD

STATE OF ILLINOIS
DAVID C. DEPP
061-005117
LICENSED PROFESSIONAL ENGINEER

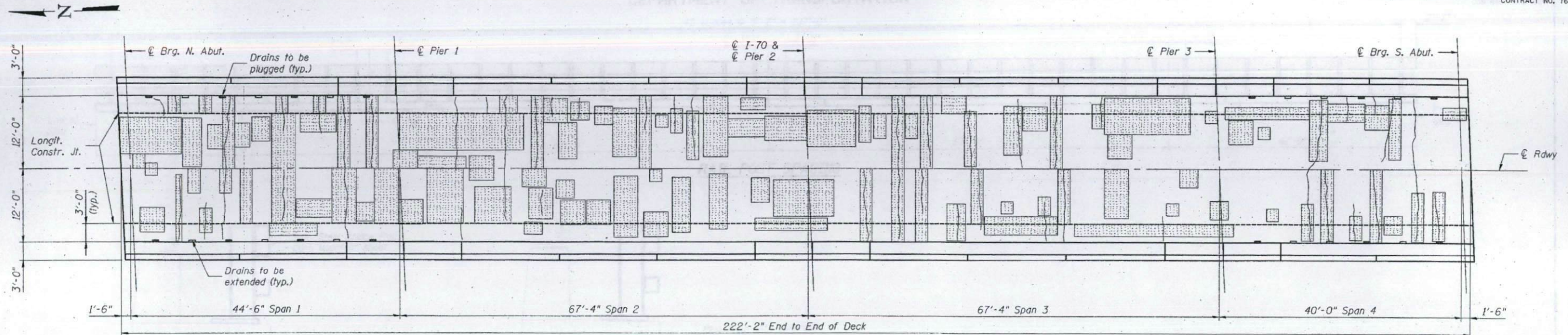
Signed: *David C. Depp*
Date: 1-15-2007
Lic. Expires: 11-30-2008

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

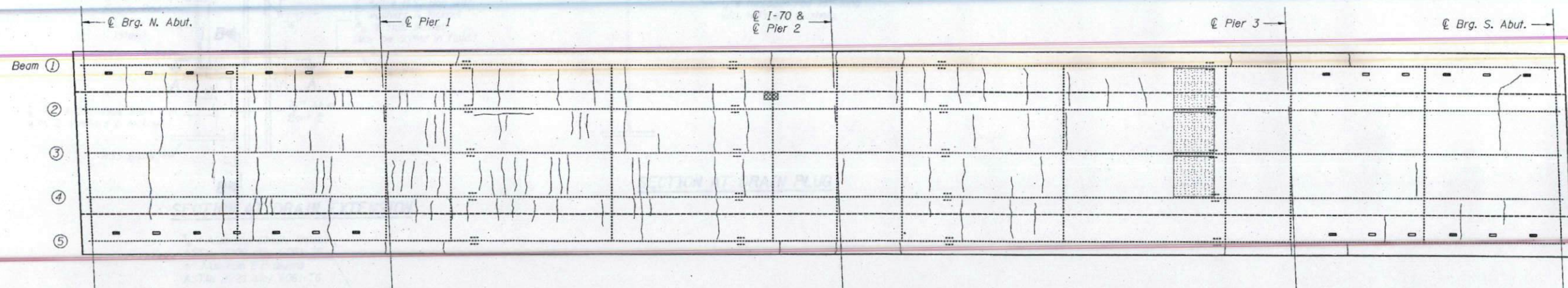
SHEET 2
OF 4

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10HB-1	MADISON	156	124
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76857







DECK PLAN-TOP



DECK PLAN-BOTTOM

LEGEND

-  Hollow or Unsound Concrete (2293 S.F.)
-  Spalled Concrete (0 S.F.)
-  Spalled Concrete with Exposed Rebar (2 S.F.)
-  Hairline Crack

NOTES:

Deck Condition Survey performed 8/14/2006.
The Engineer shall record actual locations of deck repair on the As-Built plans.

BILL OF MATERIAL

DECK PLAN
STAUNTON ROAD (CH 21) OVER
INTERSTATE 70
FAI ROUTE 70 SECTION 60-10HB-1
MADISON COUNTY
STATION 1013+34.43
STRUCTURE NO. 060-0182

JD Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

DESIGNED: CDB	DRAWN: P. Roy
CHECKED: DCD	CHECKED: CDB/DCD

DATE: 04/15/06 USER: USER# FILE: #FILES

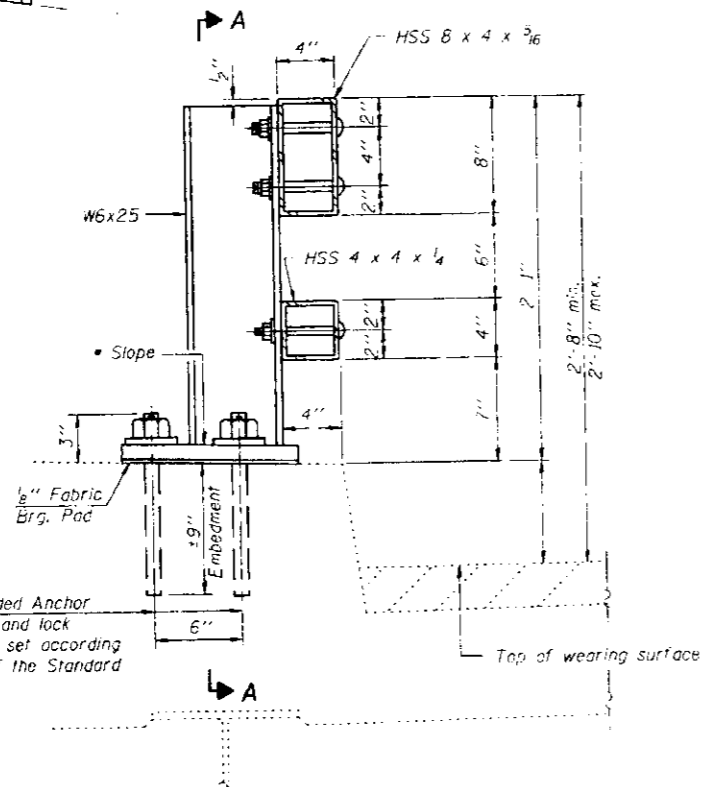
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET 4
OF 4

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TO	60-10HB-1	MADISON	156	124
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

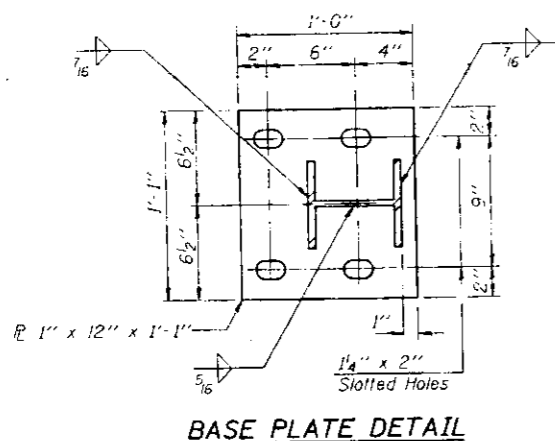
CONTRACT NO. T6657

• Cut bottom end of post to curb slope.

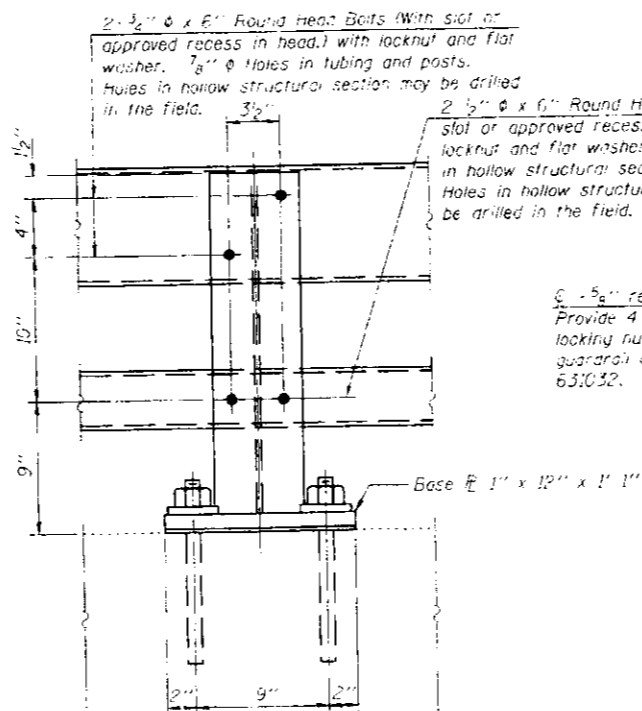


4- 1" ϕ H.S. Threaded Anchor Rods with hex nuts and lock washers, drilled and set according to Article 509.06 of the Standard Specifications.

SECTION AT RAIL POST

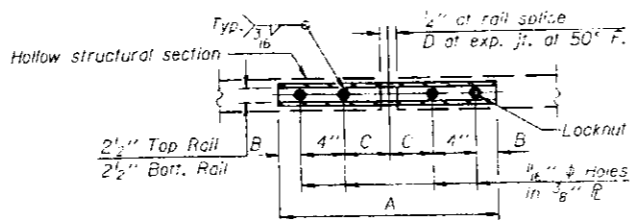
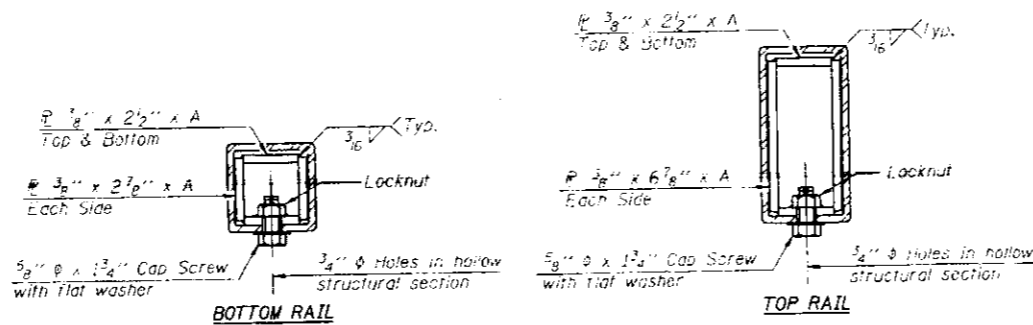


BASE PLATE DETAIL

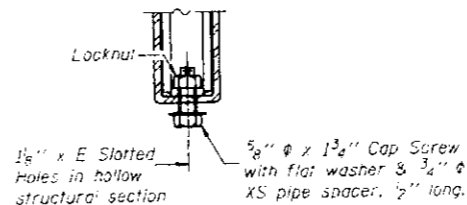


SECTION A-A

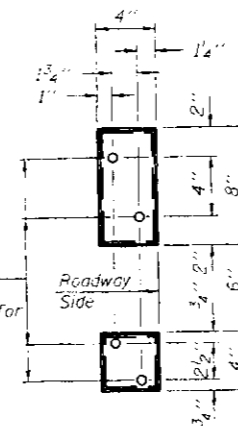
SECTIONS AT RAIL SPLICE



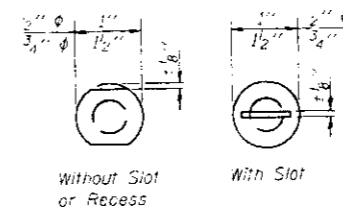
PLAN-BOTT. SPLICE TYPICAL



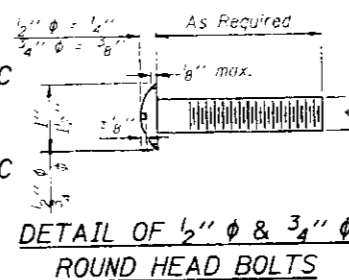
RAIL SPLICE CONNECTION AT EXPANSION JT.



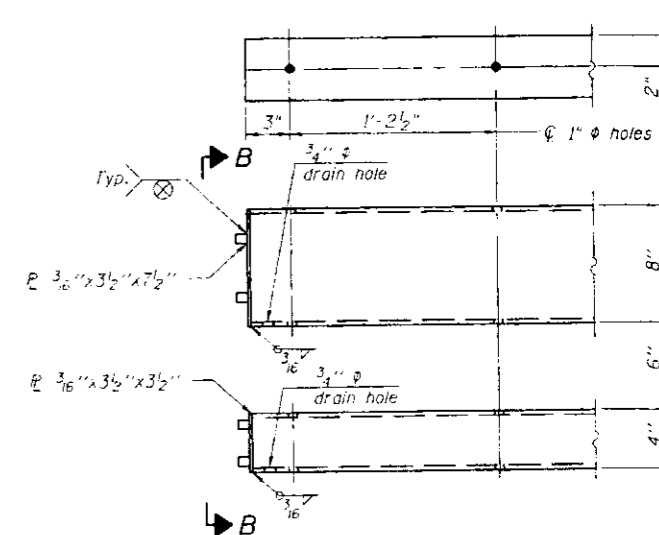
VIEW B-B



VIEW C-C



DETAIL OF 1/2" ϕ & 3/4" ϕ ROUND HEAD BOLTS



END OF RAIL DETAILS

Notes:

- All field drilled holes shall be coated with an approved zinc rich paint before erection.
- Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.
- Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.
- Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.
- All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	444

SPLICE DIMENSIONS

T	D	A	B	C	E
≤ 4"	2 1/2"	1'-8"	2"	4"	2 1/2"
> 4" ≤ 6 1/2"	3 1/2"	2'-0"	2 1/2"	5 1/2"	3 1/2"
> 6 1/2" ≤ 9"	5"	2'-4"	3 1/2"	6 1/2"	9"
> 9" ≤ 13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.

STEEL RAILING, TYPE 2399
STAUNTON ROAD (CH 21) OVER
INTERSTATE 70
FAI ROUTE 70 SECTION 60-10HB-1
MADISON COUNTY
STATION 1013+34.43
STRUCTURE NO. 060-0182

FILE: J:\JDD\04042 IL Drive\1-70 Bridge Rebar's\6-51060-082 Staunton rd\04steer\tdp\alldgn
USER: DCD
DATE: 01/22/2007 10:53:29

JD Johnson, Depp & Quisenberry
CONSULTING ENGINEERS
Springfield, Illinois

DESIGNED:	CDB	DRAWN:	SJS
CHECKED:	DCD	CHECKED:	CDB/DCD

R-31

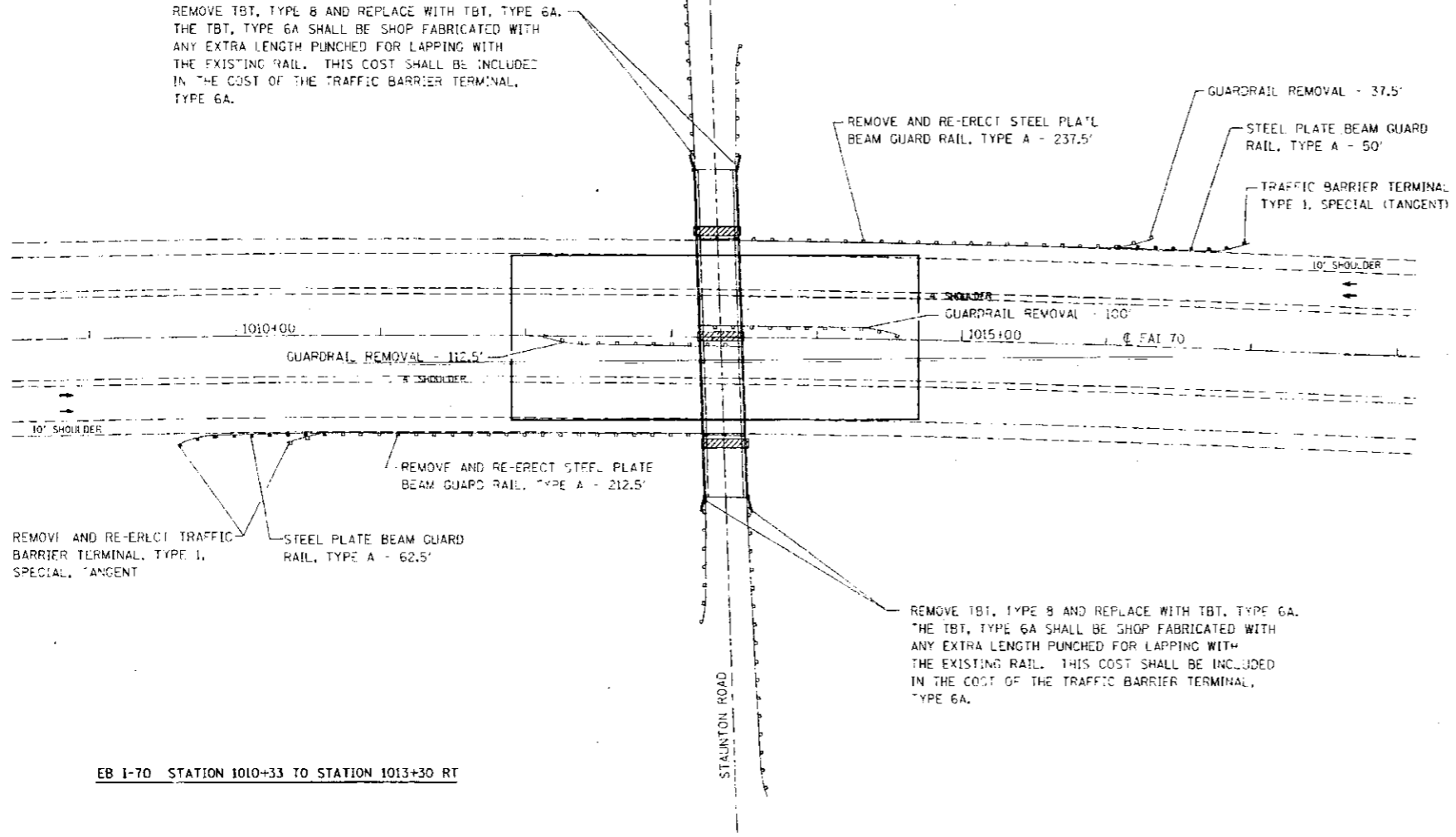
11-1-06

(6" 3" Maximum Post Spacing)

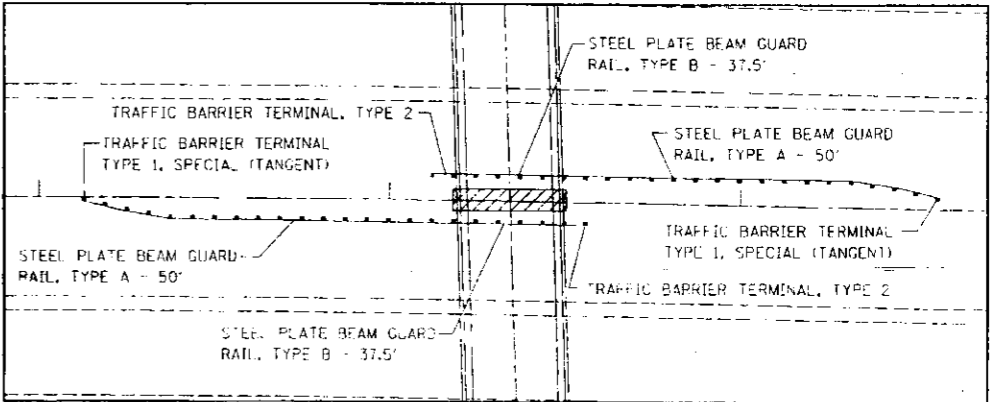
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-(10,11)RS	MADISON	156	132
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



WB I-70 STATION 1013+30 TO STATION 1016+25 RT



EB I-70 STATION 1010+33 TO STATION 1013+30 RT



INSET

EB I-70 STATION 1012+10 TO STATION 1013+50 LT
WB I-70 STATION 1013+00 TO STATION 1014+00 LT

- HAZARD
- EXISTING GUARDRAIL
- PROPOSED GUARDRAIL

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
GUARDRAIL DETAILS
 AT SN 060-0182
 I-70 AT STAUNTON ROAD
 FAI 70
 SECTION 60-(10,11)RS
 MADISON COUNTY

SCALE: VERT. _____
 HORIZ. _____

DATE _____ DRAWN BY _____
 CHECKED BY _____

PLOT DATE * NUMBER
 FILE NAME * #FILES
 PLOT SCALE * #SCALE
 REFERENCE * #REF

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

FEDERAL AID ROUTE NO.	SEC.	COUNTY	SHEET NO.	TOTAL SHEETS
FAI 70	60-10HB-1	MADISON	27	1

F-98-065-00

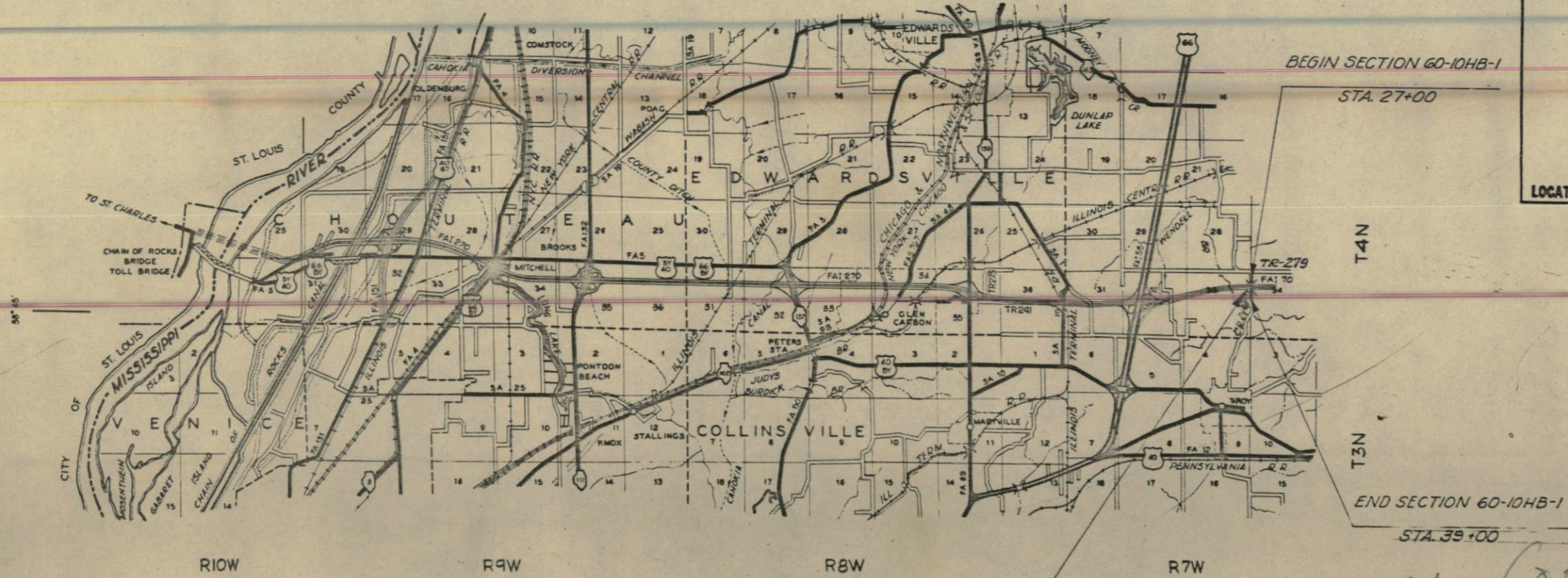
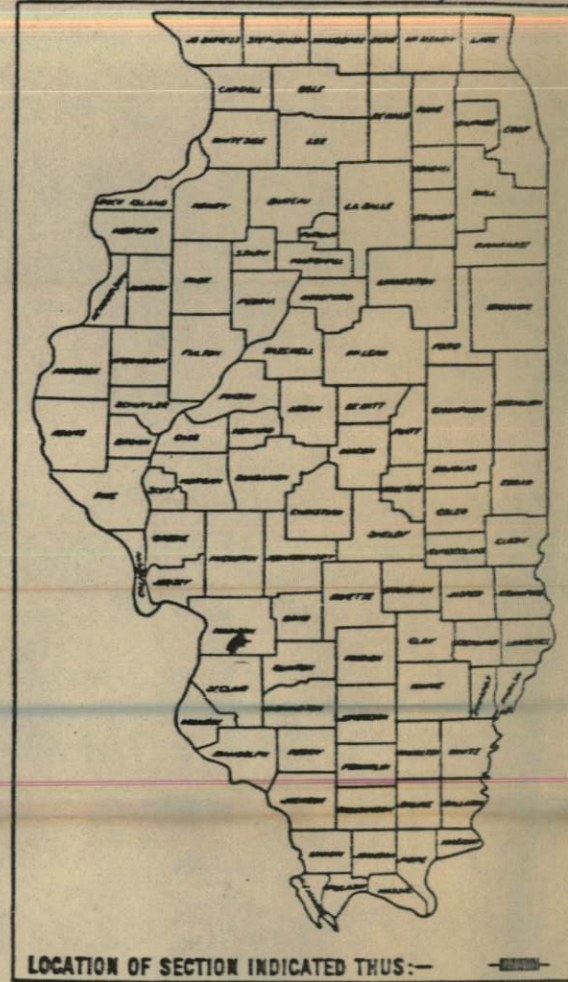
SET
NO
6

SCALES

PLAN	1 INCH	50 FT.
PROFILE HOR.	1 INCH	50 FT.
PROFILE VERT.	1 INCH	5 FT.
CROSS-SECTIONS	1 INCH	10 FT.

FAI ROUTE 70 SECTION 60-10HB-1
PROJECT I-70-2 (49)18
MADISON COUNTY

FILE COPY
6-5-64



BEGIN SECTION 60-10HB-1

STA. 27+00

T4N

T3N

END SECTION 60-10HB-1

STA. 39+00

97 ✓
6

SECTION 60-10HB-1 includes, in addition to the Roadway Relocation, the complete construction of one 4-Span W Beam Bridge at Sta. 30+00 carrying C.H. Rte. 21 over F.A.I. 70 at Sta. 1013+34.43 having 4 continuous spans at 44'-6", 67'-4", 67'-4" and 40'-0"

LAYOUT APPROXIMATE SCALE: 0 1 MI. 2 MI. 3 MI.

NET LENGTH TO BE IMPROVED: 1200.00 FEET (0.221 MILES) (CH21)
NET LENGTH OF BRIDGE: 222.43 FEET (0.042 MILES)
NET SECTION LENGTH: 1000.00 FEET (0.000 MILES)

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

DESIGNED BY: *John H. Conant*

EXAMINED: *April 25*

APPROVED: *April 28*

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED: _____

DIVISION ENGINEER: _____ DATE: _____

FILE COPY

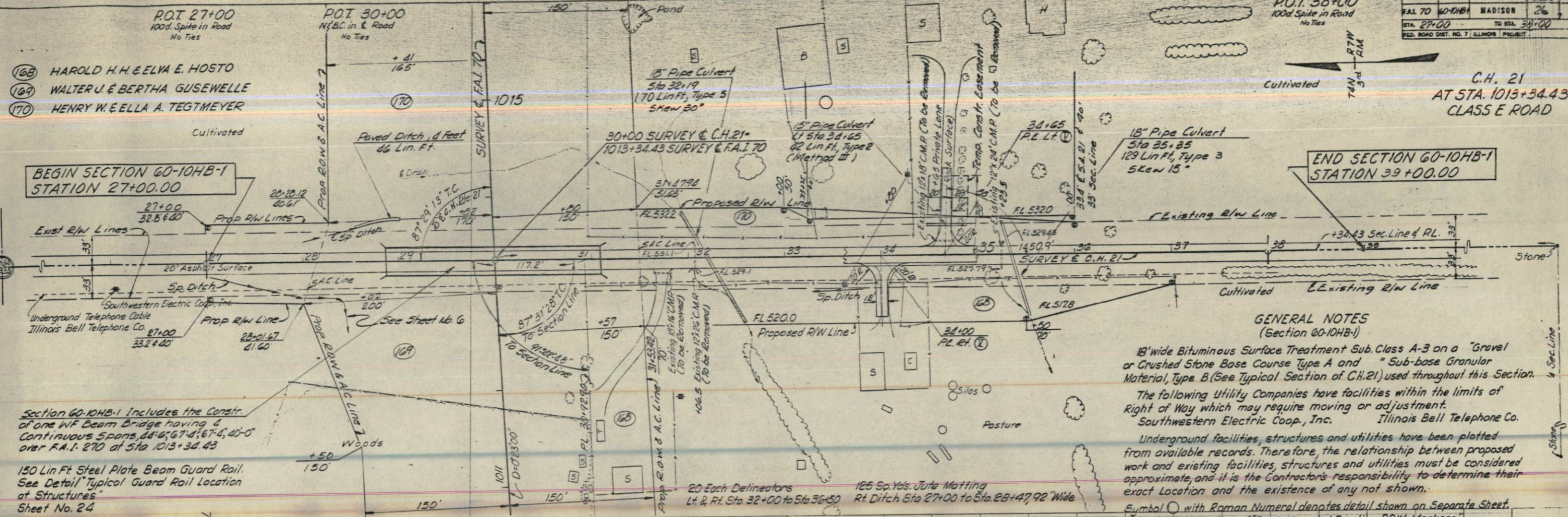
John H. Conant
May 21, 1963

REEL 8-58
1013+34.43

CONTRACT NO. 28272

ROAD CLASSIFICATION: 325 ADT-M-50

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAL 70	60-10HB-1	MADISON	26	5
STA. 27+00	TO STA. 39+00			
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT				



- (168) HAROLD H. & ELVA E. HOSTO
- (169) WALTER J. & BERTHA GUSEWELLE
- (170) HENRY W. & ELLA A. TEGMEYER

BEGIN SECTION 60-10HB-1
STATION 27+00.00

END SECTION 60-10HB-1
STATION 39+00.00

GENERAL NOTES
(Section 60-10HB-1)

18' wide Bituminous Surface Treatment Sub-Class A-3 on a "Gravel or Crushed Stone Base Course Type A and "Sub-base Granular Material, Type B (See Typical Section of C.H. 21) used throughout this Section.

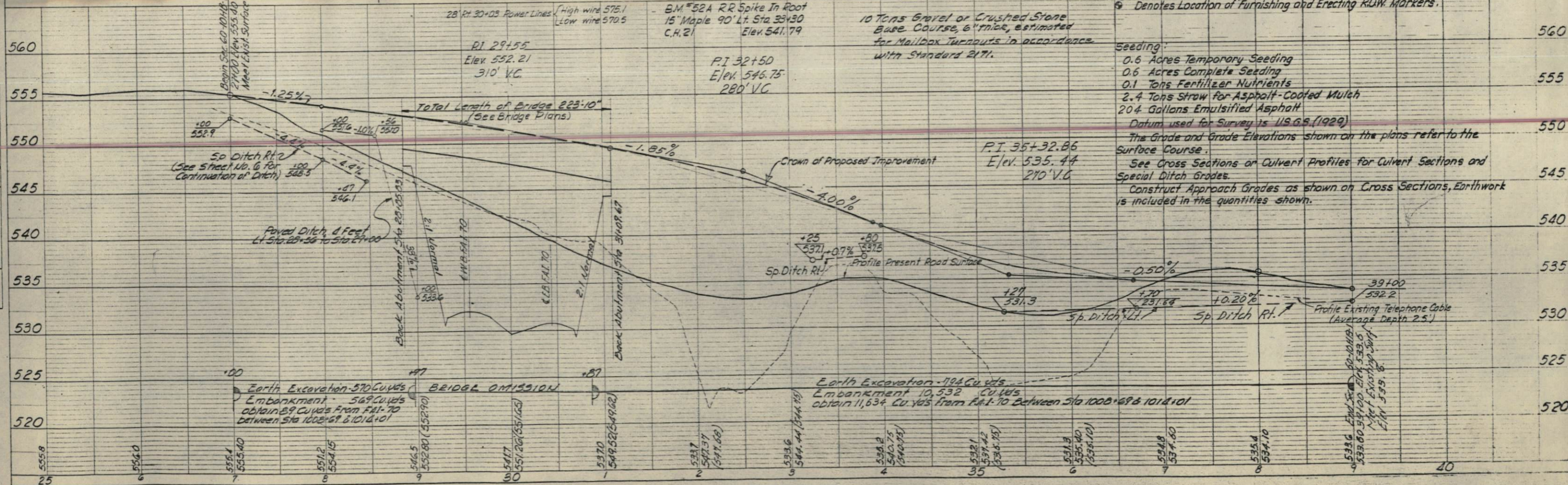
The following Utility Companies have facilities within the limits of Right of Way which may require moving or adjustment.
Southwestern Electric Coop., Inc. Illinois Bell Telephone Co.

Underground facilities, structures and utilities have been plotted from available records. Therefore, the relationship between proposed work and existing facilities, structures and utilities must be considered approximate, and it is the Contractor's responsibility to determine their exact location and the existence of any not shown.

Symbol \odot with Roman Numeral denotes detail shown on Separate Sheet.
 \odot Denotes Location of "Furnishing and Erecting R/W Markers."

Section 60-10HB-1 Includes the Constr. of one WF Beam Bridge having 6 Continuous Spans, 48'-6", 67'-4", 67'-4", 40'-0" over F.A.I. 270 at Sta 1013+34.43

150 Lin Ft Steel Plate Beam Guard Rail. See Detail Typical Guard Rail Location of Structures" Sheet No. 24



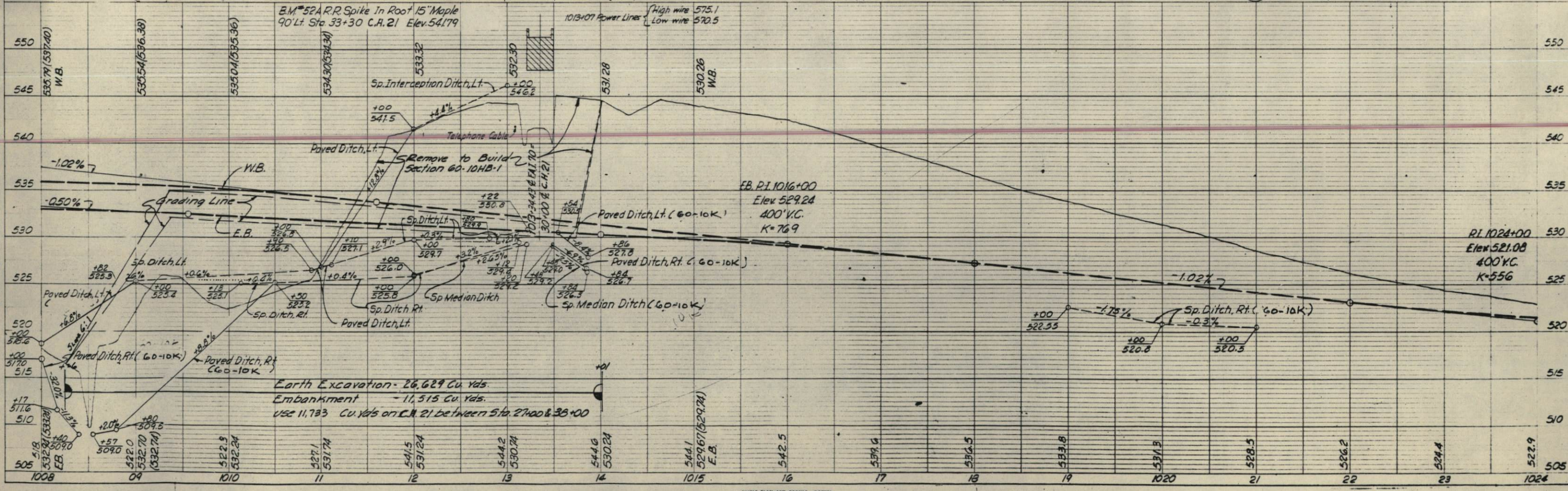
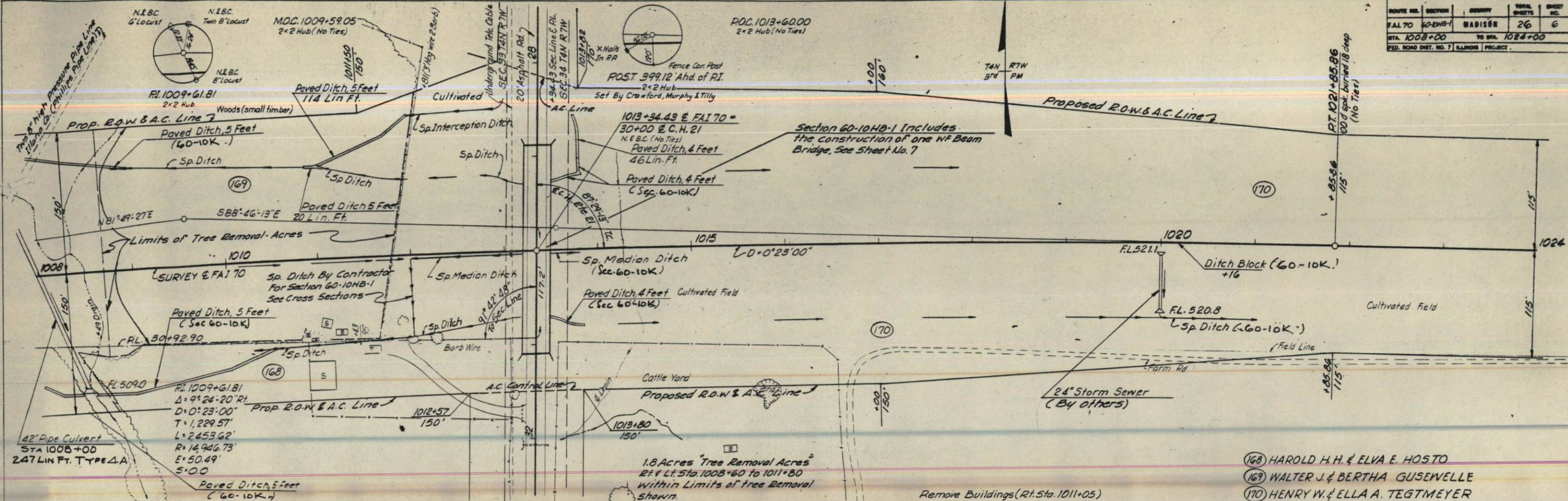
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10-1-70	J.P.P.	10-1-70	J.P.P.
10-1-70	J.P.P.	10-1-70	J.P.P.

PLAN
NOTE BOOK NO. B-1

DATE	BY	DATE	BY
10-1-70	J.P.P.	10-1-70	J.P.P.
10-1-70	J.P.P.	10-1-70	J.P.P.
10-1-70	J.P.P.	10-1-70	J.P.P.

PROFILE
NOTE BOOK NO. B-1

ROUTE NO.	DISTRICT	COUNTY	TOTAL SHEETS	SHEET NO.
FAL TO 60-10K-1		MADISON	26	6
STA. 1008+00				TO STA. 1024+00
FED. ROAD DIST. NO. 7 ALBANY PROJECT				



GENERAL NOTES

ANCHOR BOLTS: The Contractor shall drill the holes in the substructure and set the anchor bolts for beam bearings. Reinforcing steel must be secured accurately in position to avoid interference with drilling for anchor bolts.

BEARING AREAS: Bearing areas to receive superstructure shall be finished smooth and level at the proper elevation.

PAINT: All structural steel shall be given one shop coat of red lead paint and two field coats of aluminum paint in accordance with Articles 56.1 through 56.5 of the Standard Specifications. All paint shall be furnished and applied by the Contractor.

PILE DESIGN LOADS: Steel Piles in Abutments 31 tons maximum, in Piers 36 tons maximum.

PILE DRIVING: All piling shall be driven to a bearing value not less than the above maximum design load.

TEST PILES: Test piles shall be driven to serve as permanent piles in the location indicated on the footing plans, or as directed by the Engineer.

DESIGN: In accordance with Division I of the A.A.S.H.O. "Standard Specifications for Highway Bridges," 1961 Edition except as modified by the provisions, exceptions and interpretations of the notes on these drawings.

DESIGN LOADING: Live Load: H15-S12-44 (without provision for "overload")
Dead Load: Provision is made for a future wearing surface weighing 18 pounds per square foot.

Impact: No impact is included for substructure units.

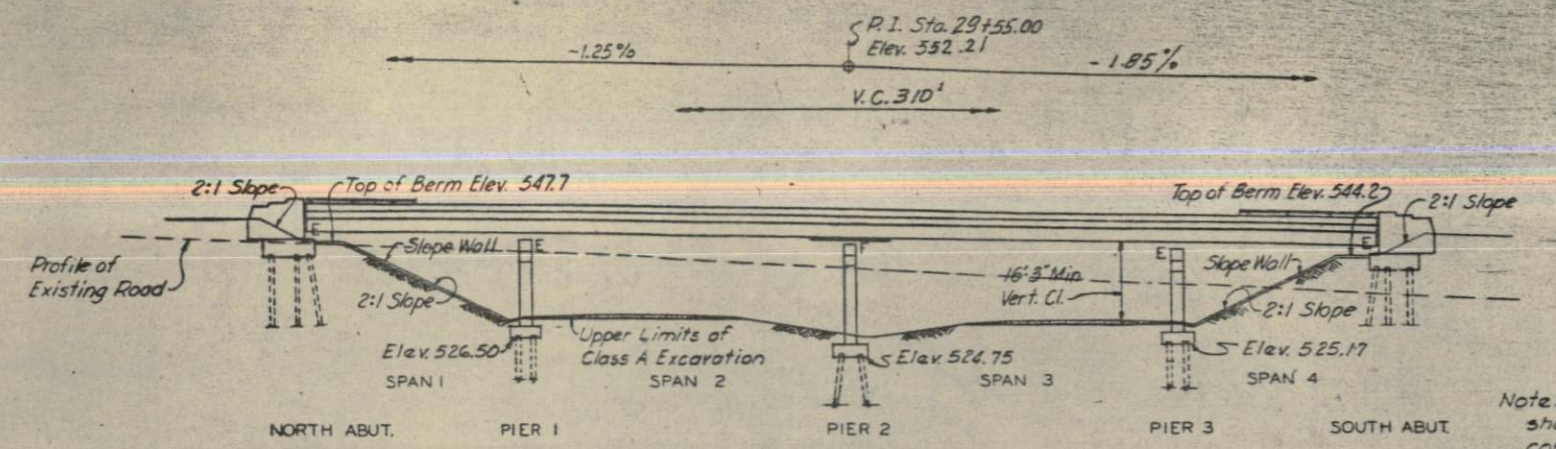
DESIGN UNIT STRESSES:

Concrete in flexure:	
Superstructure	1400 psi.
Substructure	1400 psi.
Vc in Footings	75 psi.
Reinforcing Steel	20000 psi.
Structural Steel:	20000 psi. ✓

CONCRETE: Class "X" Concrete shall be used throughout. Coarse aggregate to be used in handrail parapets and end posts must be absolutely free of chert, flint, limonite, lignite and soft sandstone. The concrete floor slab shall be finished in accordance with Article 51.13 of the Standard Specifications.

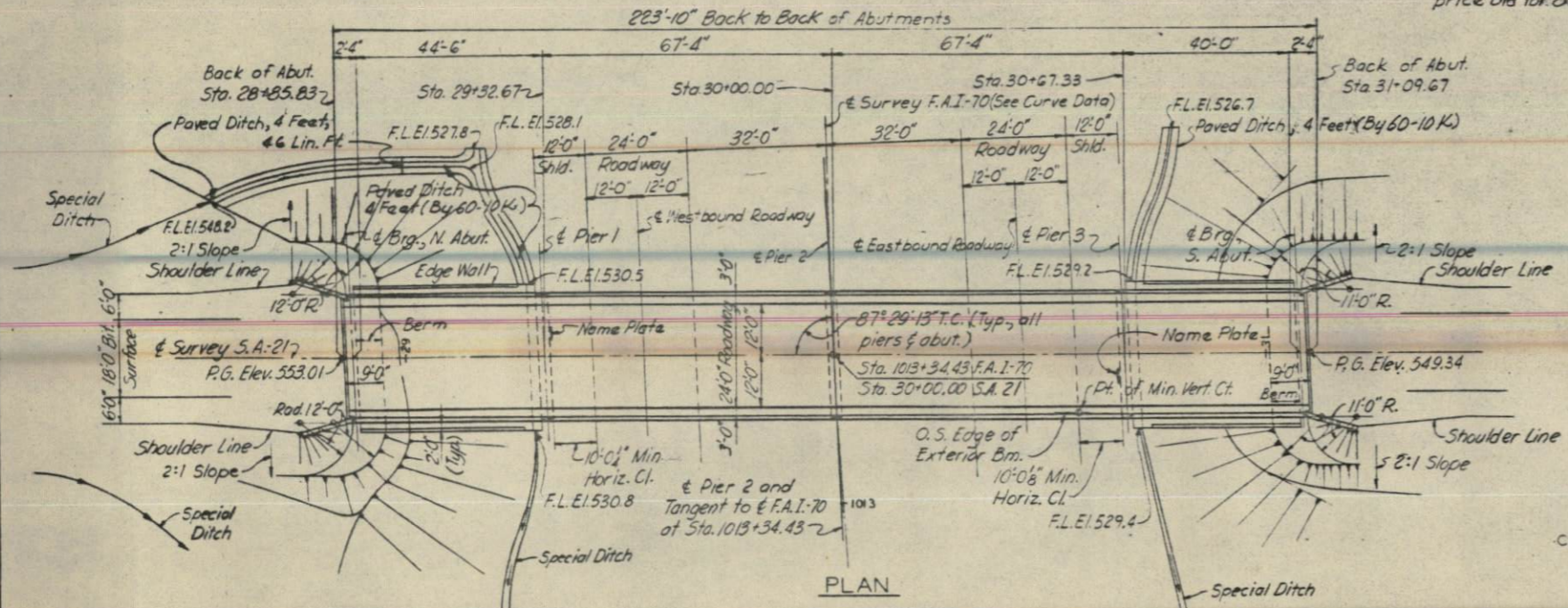
REINFORCEMENT: All dimensions to reinforcing steel on the drawings are to the center line of the bar except where the clear distance from the face of the concrete is noted. Reinforcing shall be lapped a minimum of 20 diameters at splices unless shown or noted otherwise on the drawings.

BEVELED EDGES: All exposed edges of concrete shall be beveled 3/4" unless otherwise shown or noted.



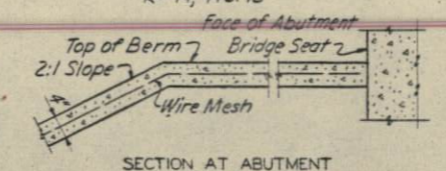
ELEVATION
Normal to E.F.A.I.-70

Note: Embankment of South Abutment shall be placed prior to abutment construction.
Roadway cut shall be excavated prior to structure excavation.
Excavation in embankment at South Abutment shall not be measured for payment, but the cost shall be included in the unit price bid for other items.

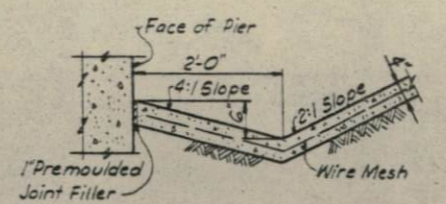


PLAN

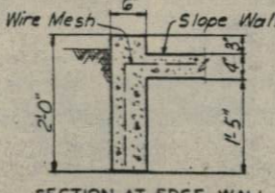
CURVE DATA ALONG E.F.A.I.-70
D = 0°23'00"
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SECTION AT ABUTMENT



SECTION AT FLOW LINE



SECTION AT EDGE WALL

Note: Concrete Slope Wall reinforced with 6x6 wire mesh. Wt. 58 lbs. per 100 sq. ft.

Note: Cost of Premoulded Bituminous Joint Filler will be considered incidental to Slope Wall.

Item	Units	N. Abut.	Pier 1	Pier 2	Pier 3	S. Abut.	Superstr.	Total
Class "A" Excavation for Structures	Cu. Yd.	50	39	45	39	5		188
Test Piles (Steel)	Each	1		1		1		3
Furnishing Steel Piles (10BP42)	Lin. Ft.	464	320	429	304	440		1957
Driving Steel Piles	Lin. Ft.	464	320	429	304	440		1957
Class "X" Concrete	Cu. Yd.	32.4	39.2	42.7	37.9	32.1	199.2	383.5
Reinforcement Bars	Lb.	2,330	3,330	4,210	3,750	2,330	41,660	58,110
Furnishing & Erecting Structural Steel	Lb.						164,510	164,510
Furnishing & Erecting Alum Handrail	Lin. Ft.						441	441
Slope Wall, 4 inch	Sq. Yd.	171				152		323
Name Plates	Each		1		1			2
Protective Coat	Sq. Yd.						842	842

* Includes 21 cu. yds. of excavation for Slope Wall.
** Denotes excavation for Slope Wall.

GENERAL PLAN AND ELEVATION

BRIDGE OVER - F.A.I.-70 CARRYING C.H. 21

STATION - 1013 + 34.43 060-3032

F.A.I. ROUTE - 70

SECTION - 60-10HB-1

MADISON COUNTY, ILLINOIS

SCALE - NONE

DRAWN - F. House Jr. Apr. 1963

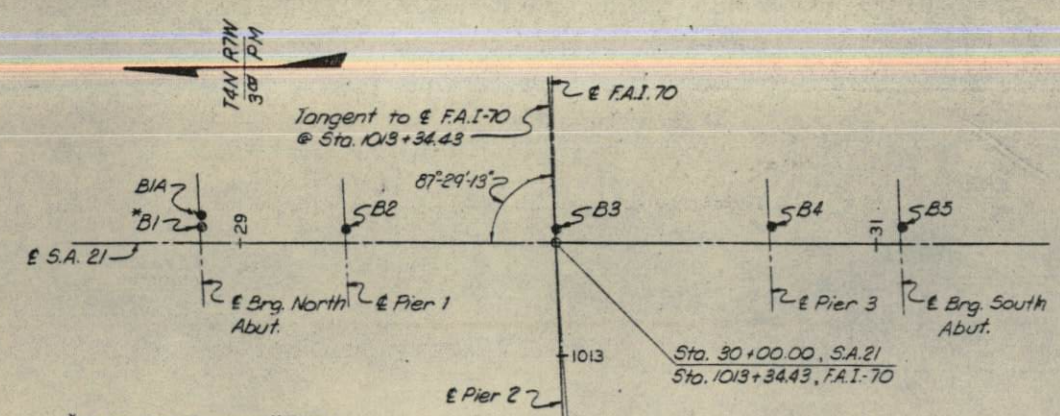
TRACED -

CHECKED - W. Littlefield Apr. 1963

OVERDRUP & PARCEL, INC.
ENGINEERS-ARCHITECTS
ST. LOUIS, MO.

Reviewed by JES & HC.

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*Note: Hole B1 conditions were not reliable; therefore BIA was used and B1 eliminated.

PLAN OF BORINGS

LOG OF BORINGS											
HOLE BIA		HOLE B2		HOLE B3		HOLE B4		HOLE B5		HOLE B6	
Station 28+88 (3 Lt.)		Station 29+33 (4' Lt.)		Station 30+00 (4' Lt.)		Station 30+67 (5' Lt.)		Station 31+08 (5' Lt.)		Station	
ELEV.	N QU LOG	N QU LOG	N QU LOG	N QU LOG	N QU LOG	N QU LOG	N QU LOG	N QU LOG	N QU LOG	N QU LOG	ELEV.
550	Ground Surface Elev. 547.0 Light red-gray-brown, with black spots, aeolian silt, moist, stiff.	Ground Surface Elev. 544.8 Brown, mottled with light red-gray, aeolian silt, moist, stiff.	Ground Surface Elev. 541.6 Light red-gray-brown, mottled with brown, aeolian silt, moist, medium.	Ground Surface Elev. 538.3 Light red-brown, aeolian silt, moist, medium.	Ground Surface Elev. 536.5 Gray-brown, mottled with brown and dark brown, aeolian silt, moist, stiff.						550
540	Brown aeolian silt, moist, medium.	Brown glacial till, clay, stiff, moist to wet.	Light red-brown, aeolian silt, wet and soft to wet and medium.	Light red-brown, mottled with brown, aeolian silt, moist, medium.	Mottled light red-gray and brown, aeolian silt, moist, stiff.						540
530	Brown glacial till, with small grit, clay, moist and stiff to wet and soft.	Brown, mottled with gray-brown, glacial till, with small grit, clay, moist, very stiff.	Dark brown glacial till, with small grit, clay, wet medium.	Light red-gray and brown, glacial till, sandy clay, wet stiff.	Mottled brown and gray glacial till, clay, wet, stiff.						530
520	Brown mottled with black, glacial till, with small grit and sandy clay, moist, very stiff.	Light gray-brown glacial till with small grit, clay, moist, very stiff.	Brown, mottled with dark brown, glacial till, with small grit, sandy clay.	Brown, mottled with light red-brown, glacial till, sandy clay, wet stiff.	Mottled gray, brown, light red-brown, glacial till, clay, wet, medium.						520
510	Gray glacial till, with small to medium grit, clay, moist, very stiff.	Gray glacial till, with small to medium grit, silty clay, moist, stiff.	Brown with dark brown spots, glacial till, with small grit, clay, moist, very stiff.	Light gray-brown, glacial till, with small grit, silty clay, moist, very stiff.	Brown, mottled with gray, glacial till, clay, wet, medium.						510
500	Gray glacial till, with small to medium grit, silty clay, moist, very stiff.	Brown, streaked with gray, glacial till, with small grit, clay, moist, very stiff.	Brown, with black spots, glacial till, with small grit, clay, moist, very stiff.	Gray glacial till, with medium grit, silty clay, moist, very stiff.	Gray glacial till, with large grit, clay, moist, very stiff.						500
490	Light brown glacial till, with small to medium grit, clay, moist.	Penetration is 0.0	Brown, mottled with gray-brown, glacial till, with small to medium grit, sandy clay, moist, very stiff.	Light gray, medium hard, calcareous.	Gray glacial till, with small to medium grit, clay, moist, very stiff.						490
480	Gray glacial till, with small to medium grit, clay, moist, very stiff.	Light gray soft fine grained sandstone.	Gray glacial till, with small to medium grit, sandy clay, very moist, stiff.	Gray soft weathered shale.	Gray glacial till, with small to medium grit, clay, moist, very stiff.						480
470	Gray, soft, fine grained sandstone.	Light gray soft weathered shale.	Brown mottled with gray, glacial till, with small grit, clay, moist, stiff.		Brown, streaked with gray glacial till, with small to medium grit, clay, moist.						470
					Light gray soft fine grained sandstone.						
					Gray soft weathered shale.						
DATE OF BORING	July 20, 1962	July 17, 1962	July 12, 1962	July 11, 1962	July 10, 1962						DATE OF BORING

NOTES

The subsurface data shown hereon were obtained by borings at the locations indicated. These data are furnished for information only and do not guarantee the actual conditions which may be found when the work is executed.
 "N" indicates blows per foot of penetration of 2" O.D. sampling spoon; Hammer weight=140 lbs; Drop=30 in.
 "Qu" indicates unconfined compressive strength in tons per square foot.
 W.L. indicates water level in hole.

LOG OF BORINGS

BRIDGE OVER—FAI-70 CARRYING C.H. 21
 STATION—1013+34.43
 F.A.I. ROUTE—70
 SECTION—60-10-B-1
 MADISON COUNTY, ILLINOIS
 SCALE NONE

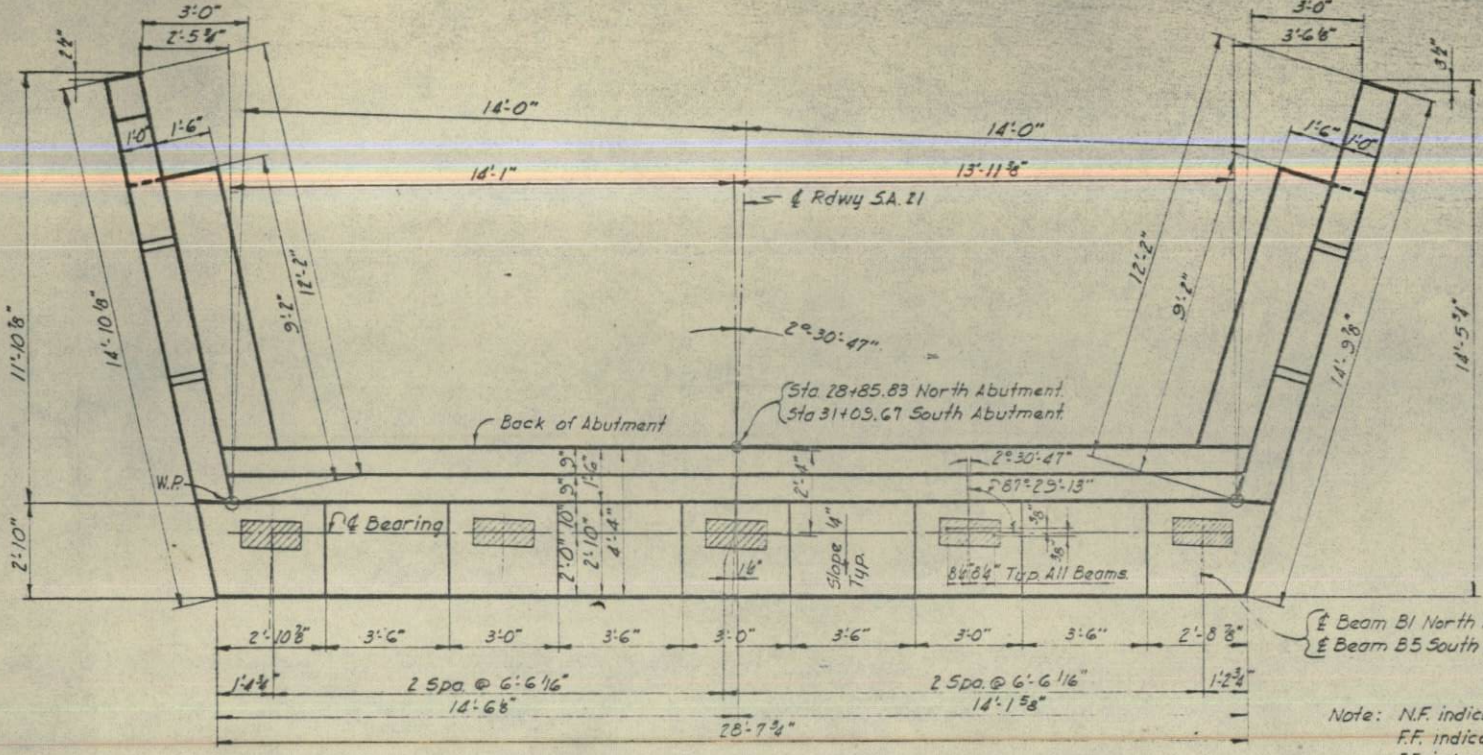
DRAWN *D.J. Conatth* - Oct. 1962
 TRACED
 CHECKED *F. Rainey* - March, 1963

OVERDRUP & PARCEL, INC.
 ENGINEERS-ARCHITECTS
 ST. LOUIS, MO.

Note: Do not scale this drawing. Follow dimensions.

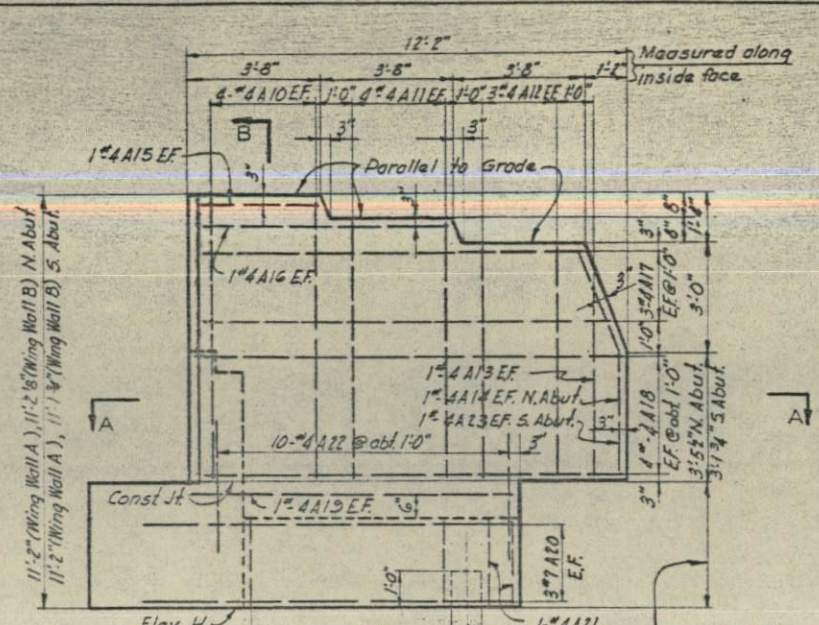
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WING WALL A



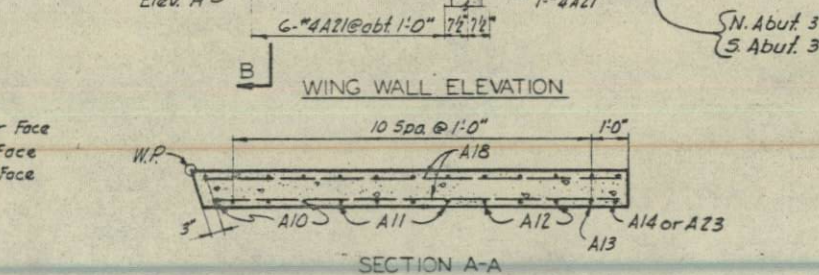
PLAN

Note: N.F. indicates Near Face
FF. indicates Far Face
EF. indicates Each Face



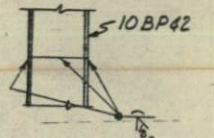
WING WALL ELEVATION

N. Abut 3'-6" (Wing Wall A), 3'-6" (Wing Wall B)
S. Abut. 3'-6" (Wing Wall A), 3'-6" (Wing Wall B)

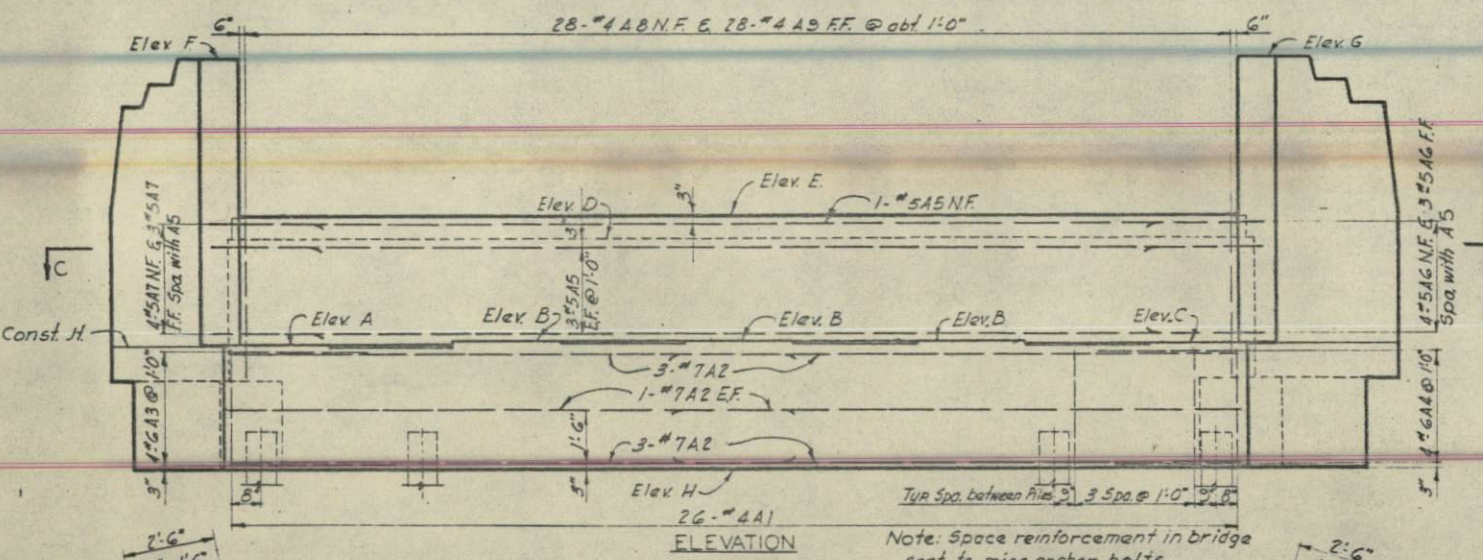


SECTION A-A

ELEVATIONS	
Elev. N. Abut	S. Abut.
A 548.44	544.87
B 548.54	544.95
C 548.45	544.85
D 551.46	547.87
E 551.98	548.39
F 556.11	552.52
G 556.12	552.50
H 544.94	541.35

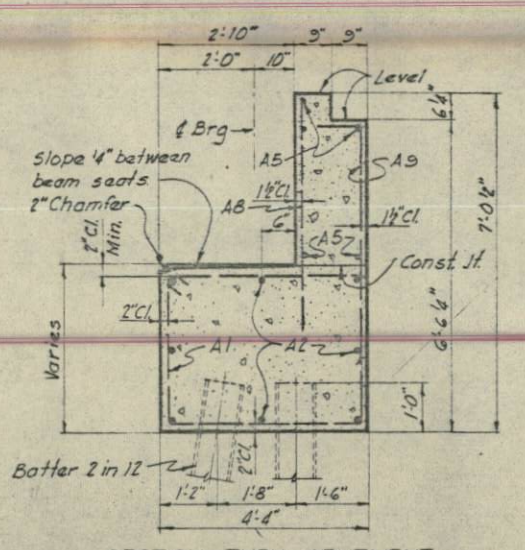


TYPICAL PILE SPLICE
Note: Top of lower section to be cut square.

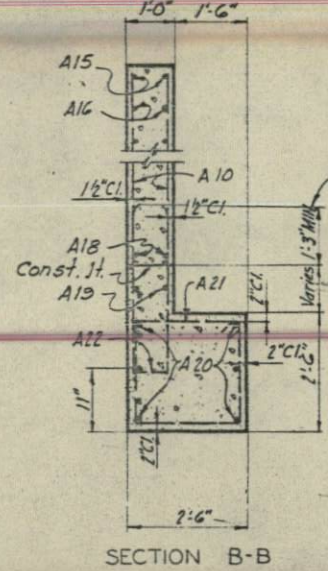


ELEVATION

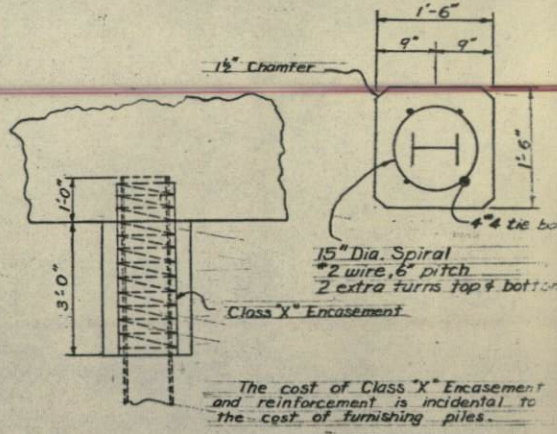
Note: Space reinforcement in bridge seat to miss anchor bolts.



SECTION THRU ABUTMENT



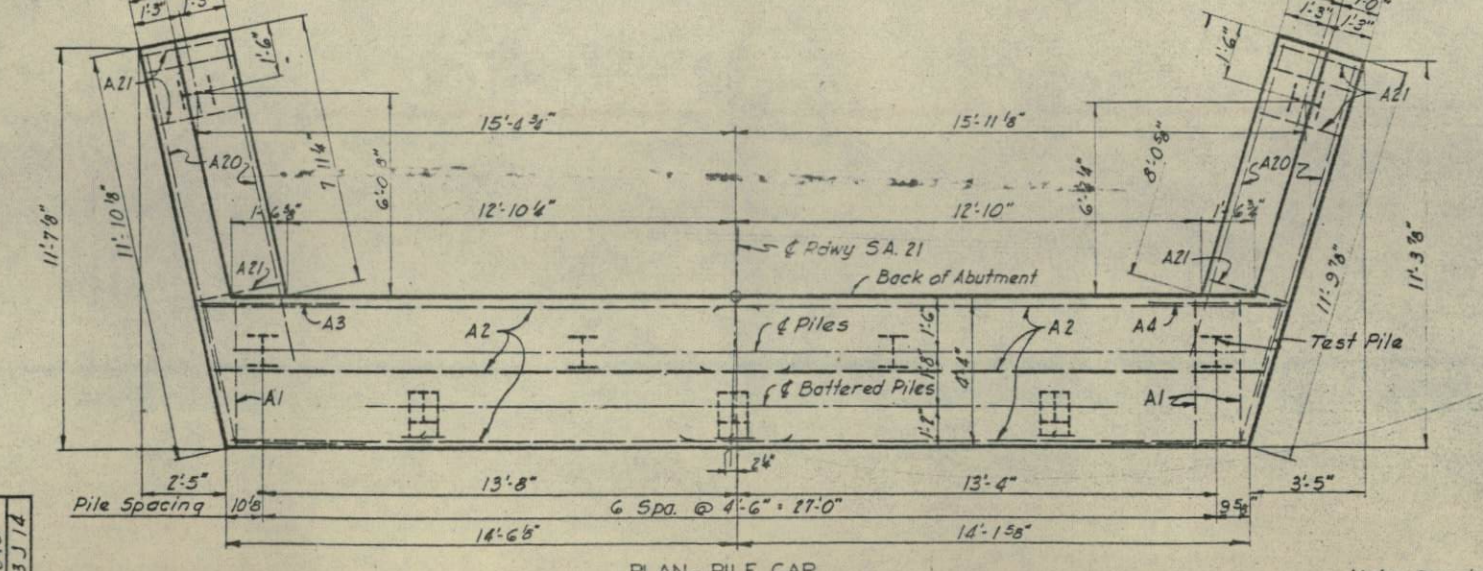
SECTION B-B



STEEL PILE ENCASEMENT DETAIL

For Abutments Only

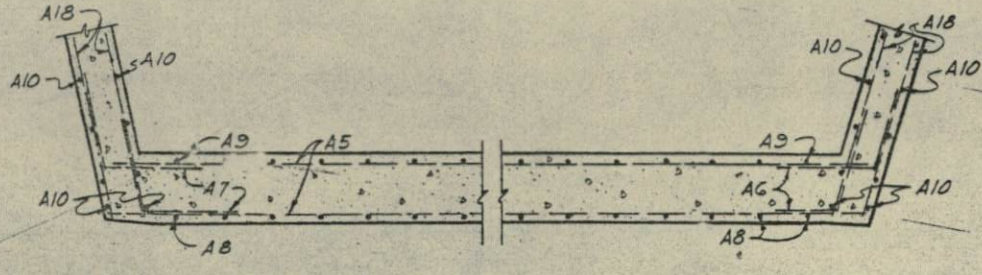
NORTH AND SOUTH ABUTMENTS



PLAN - PILE CAP

NOTE: 9-10 BP42 Piles, including one test pile, for each abutment (31 tons per pile capacity)
Estimated Length:
North Abutment - 58'
South Abutment - 55'

Note: Do not scale this drawing. Follow dimensions.



SECTION C-C

BRIDGE OVER - F.A.I. - 70 CARRYING C.H. 21

STATION - 1013+34.43
F.A.I. ROUTE - 70
SECTION - 60-10HB-1
MADISON COUNTY, ILLINOIS

DRAWN - Ft. House 3rd Mar 1963
TRACED - SVERDRUP & PARCEL ENGINEERING
CHECKED - J. Bader & W. Littlefield Mar 1963
ENGINEERS-ARCHITECTS
ST. LOUIS, MO.

Revisions: 7-18-63 Class 'X' Encasement Added SFM

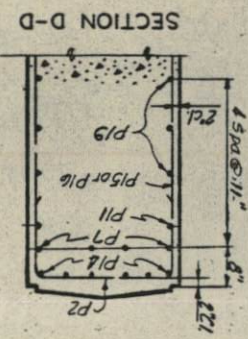
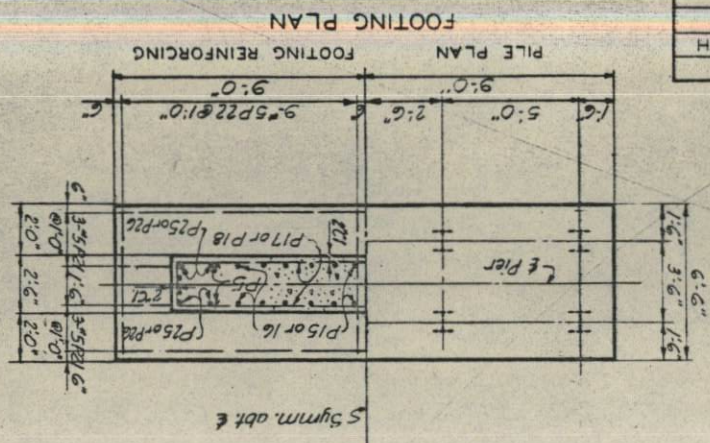
BRIDGE OVER - FAI - 70 CARRYING C.M.21
STATION - 1013+34.43
SECTION - 60-10HB-1
MADISON COUNTY, ILLINOIS
SCALE NONE

EL Howe Jr. March 1963
R Cronin Apr 1963

Note: All piling are 10BPA2, with a capacity of 36 tons per pile. Lengths are estimated.
* Includes 1 test pile
Note: Do not scale this drawing. Follow dimensions.

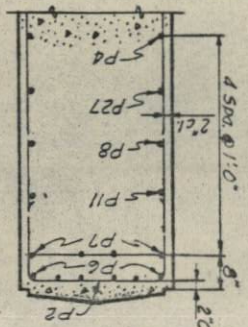
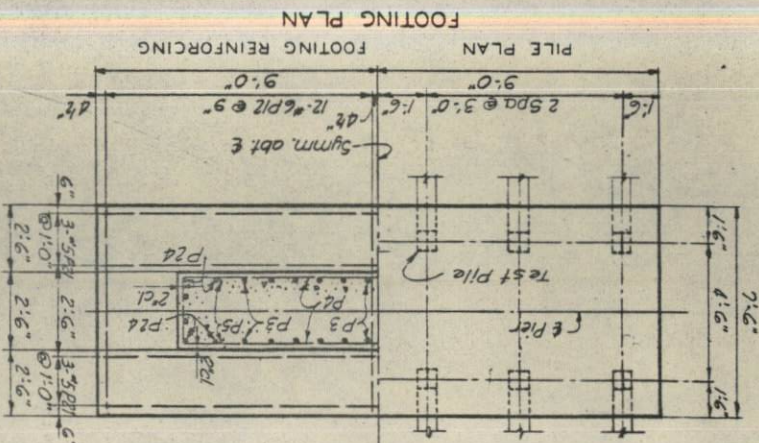
PIERING DATA	NO. OF PILING LENGTH	PIER 1	PIER 2	PIER 3
	40	B	*12	B
	39			
	38			

PIERS 1 & 3

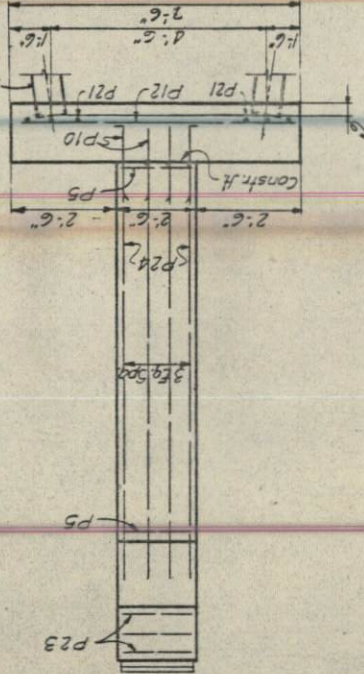


Note: For detail of pile splice see sheet 9.

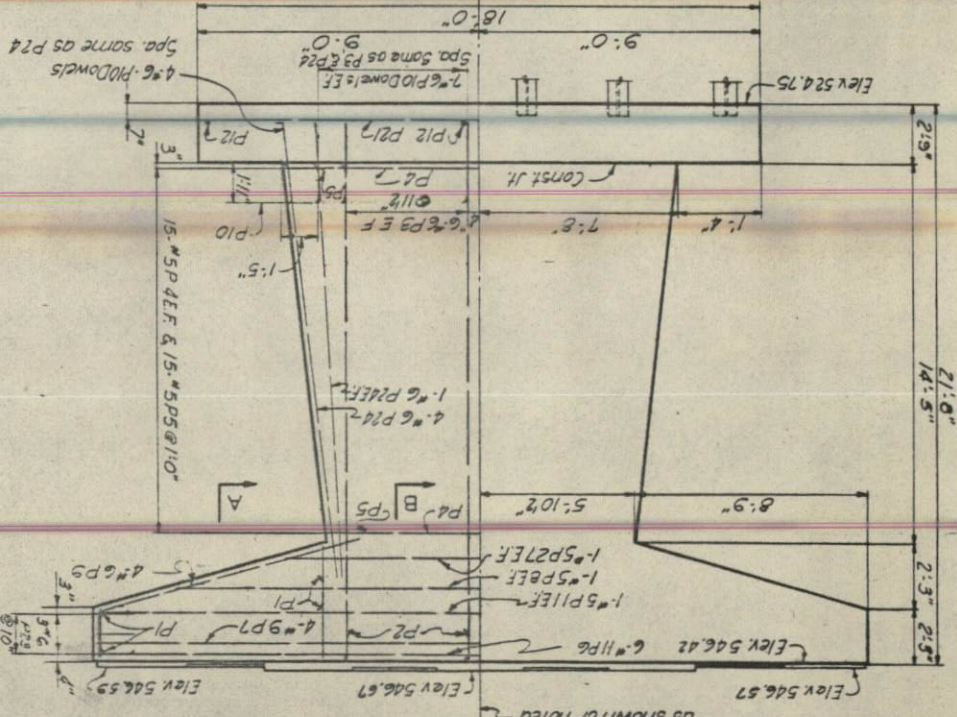
PIER 2



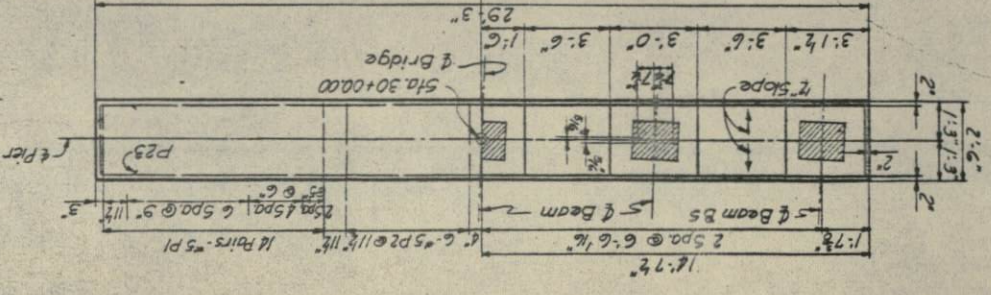
END ELEVATION



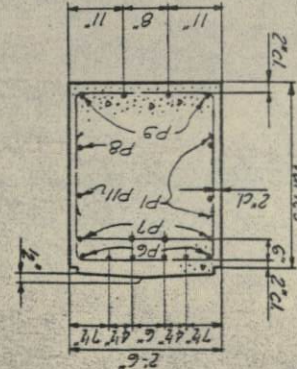
ELEVATION



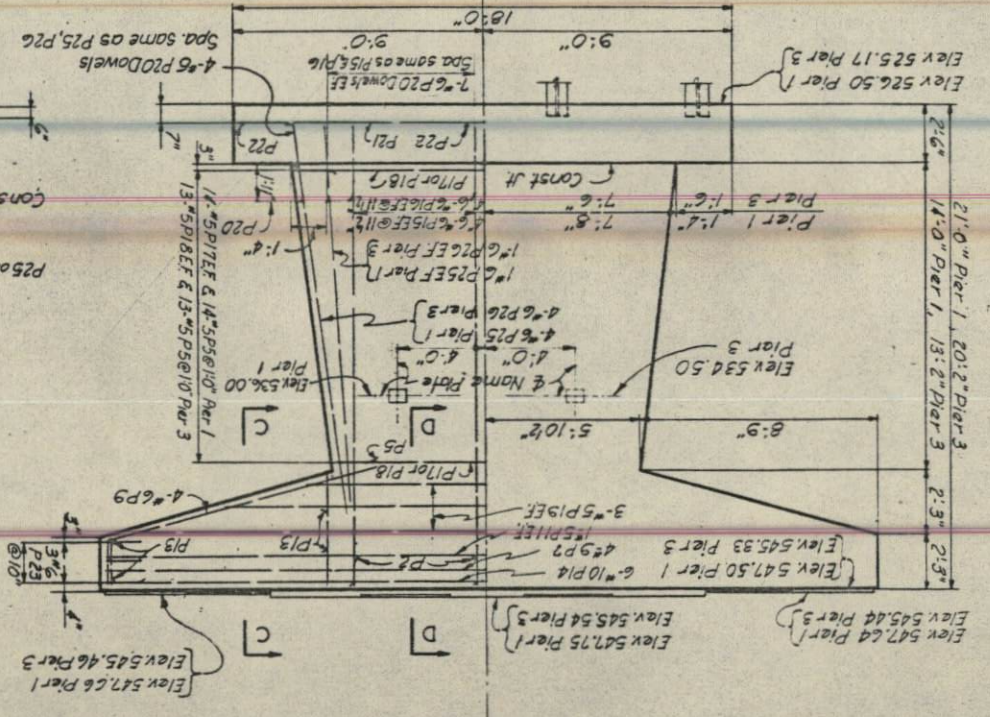
TOP PLAN



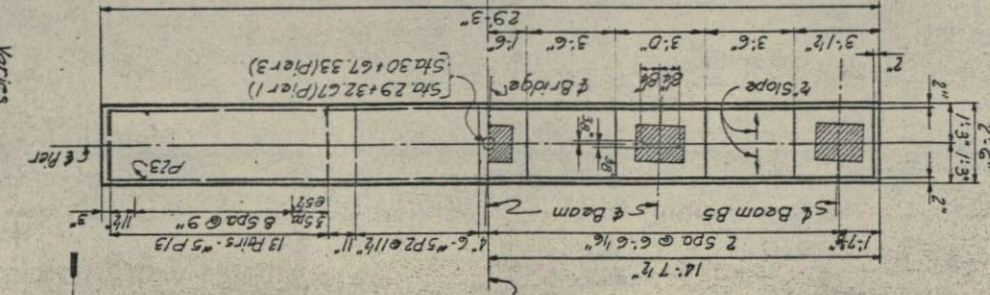
SECTION A-A



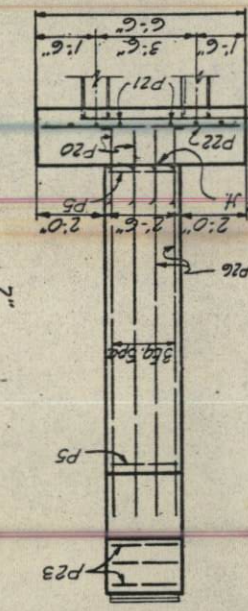
ELEVATION



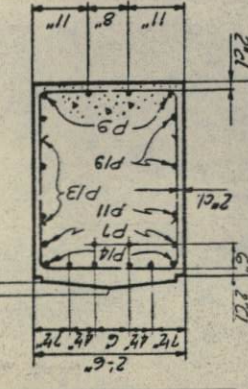
TOP PLAN



END ELEVATION



SECTION C-C



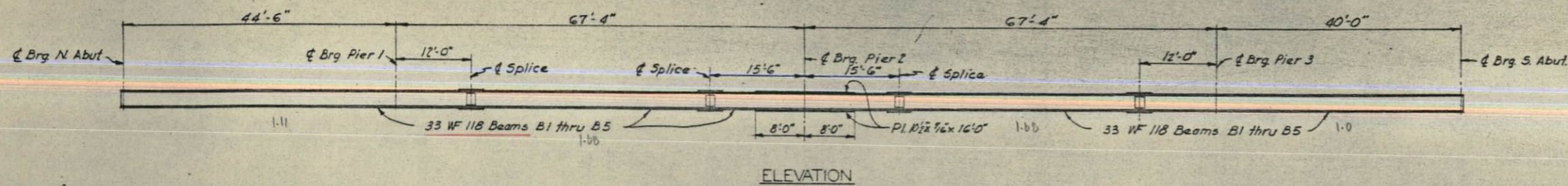
LETTERING FOR NAME PLATE

STATION - 1013+34.43
BUILT 19
BY
STATE OF ILLINOIS
FAJRT. TO SEC. 60-10HB-1
FAJROJ I-70-2(49)
LOADING M15-S12

Note: The name plates shall be embedded in the piers designated on the general plan sheet 7 and located as shown on this sheet. Embedment anchors shall be provided in accordance with the specifications. See standard 213, sheet 25.

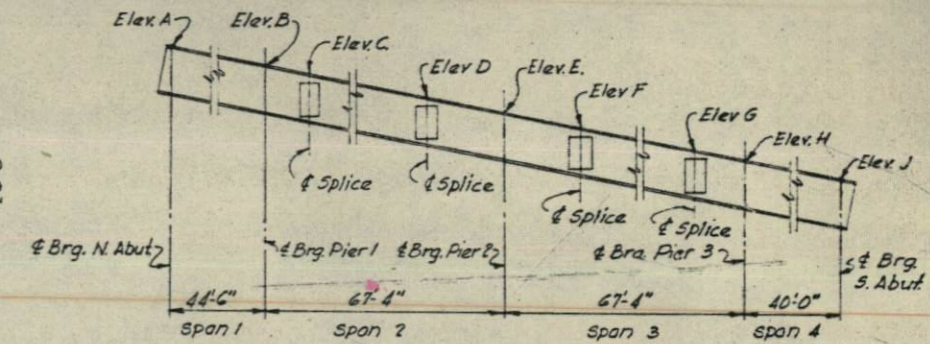
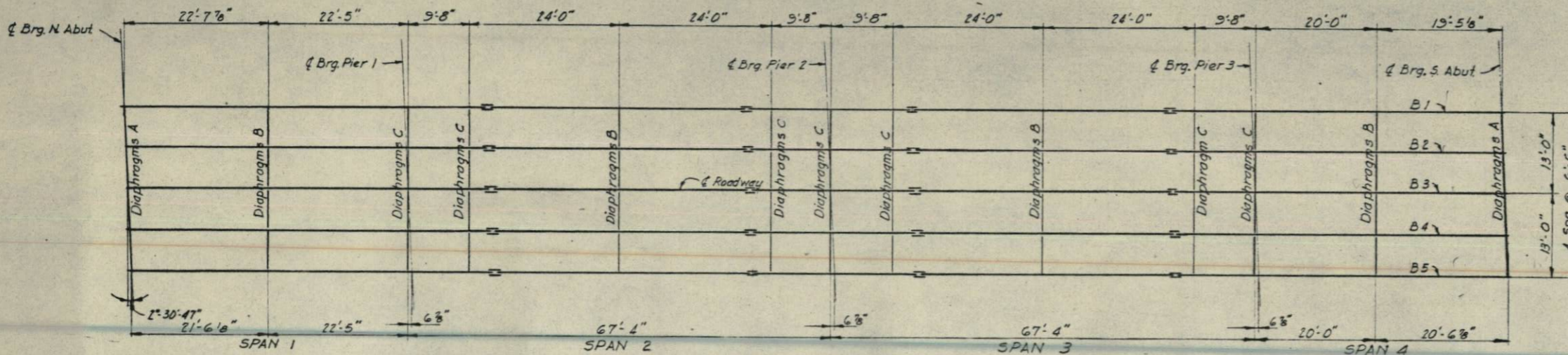
SHEET NO.	SHEETS	COUNTY	SECTION	NO.
10	26	MADISON	60-10HB-1	70

F.A. RT. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. SHEETS
70	60-10HB-1	MADISON	26	11	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJ. NO.		



	MOMENTS								REACTIONS				
	4 SP. 1	PIER 1	5 SP. 2	PIER 2	5 SP. 3	PIER 3	4 SP. 4	N. ABUT	PIER 1	PIER 2	PIER 3	S. ABUT	
D.L.	+79	-269	+181	-380	+181	-269	+79	12	53	62	53	12	
L.L.	+178	-205	+250	-242	+250	-205	+178	24	33	36	33	24	
IMP.	+53	-57	+65	-63	+65	-57	+53	7	9	9	9	7	
TOTAL	+310	-531	+496	-685	+496	-531	+310	43	95	107	95	43	

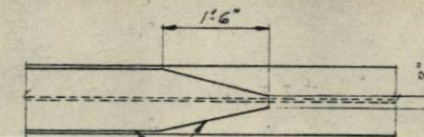
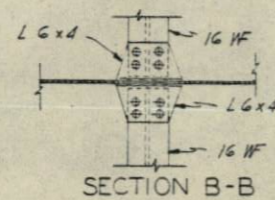
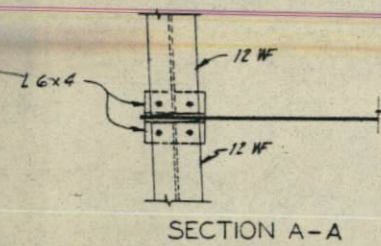
Moments are given in ft.-kips.
Reactions are given in kips.



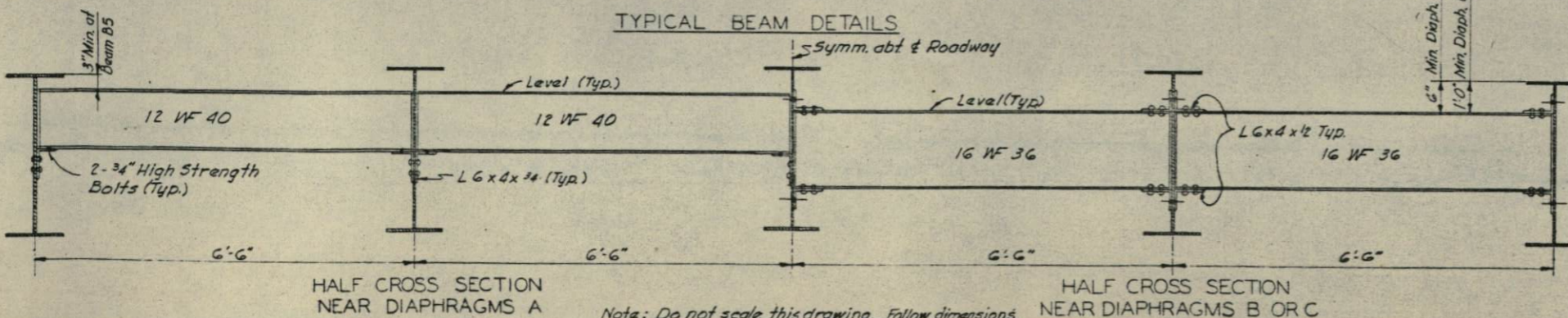
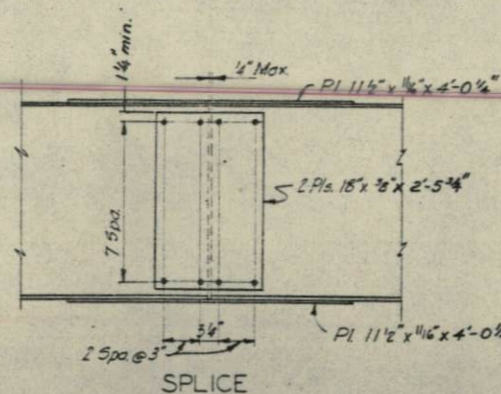
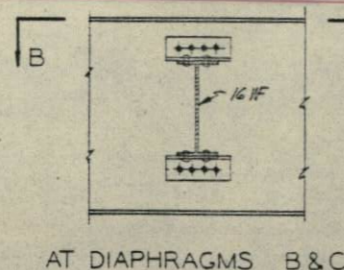
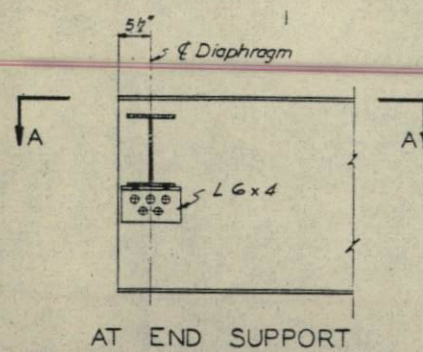
BEAM LAYOUT
Note: Cover Plates and Flange Splice Plates not shown.

BEAM	POINT									
	A	B	C	D	E	F	G	H	J	
B1	552.33	551.60	551.40	550.75	550.50	550.24	549.59	549.40	548.74	
B2	552.42	551.69	551.50	550.85	550.59	550.34	549.69	549.49	548.84	
B3	552.45	551.72	551.53	550.88	550.62	550.37	549.72	549.52	548.87	
B4	552.41	551.68	551.49	550.84	550.58	550.33	549.68	549.48	548.83	
B5	552.31	551.58	551.39	550.73	550.48	550.23	549.57	549.38	548.72	

Note: Elevations given at top of WF beams are theoretical and do not include any correction for dead load deflections.



Note: All flange splice plates shall be Universal Mill plates.
All rivets in flange splice shall be 7/8".



Note: Do not scale this drawing. Follow dimensions.

BEAM SPANS 1 THRU 4

BRIDGE OVER - F.A. 70 CARRYING C.H. 21
STATION - 1013+34.43
F.A. ROUTE - 70
SECTION - 60 - 10HB-1
MADISON COUNTY, ILLINOIS

SCALE: NONE

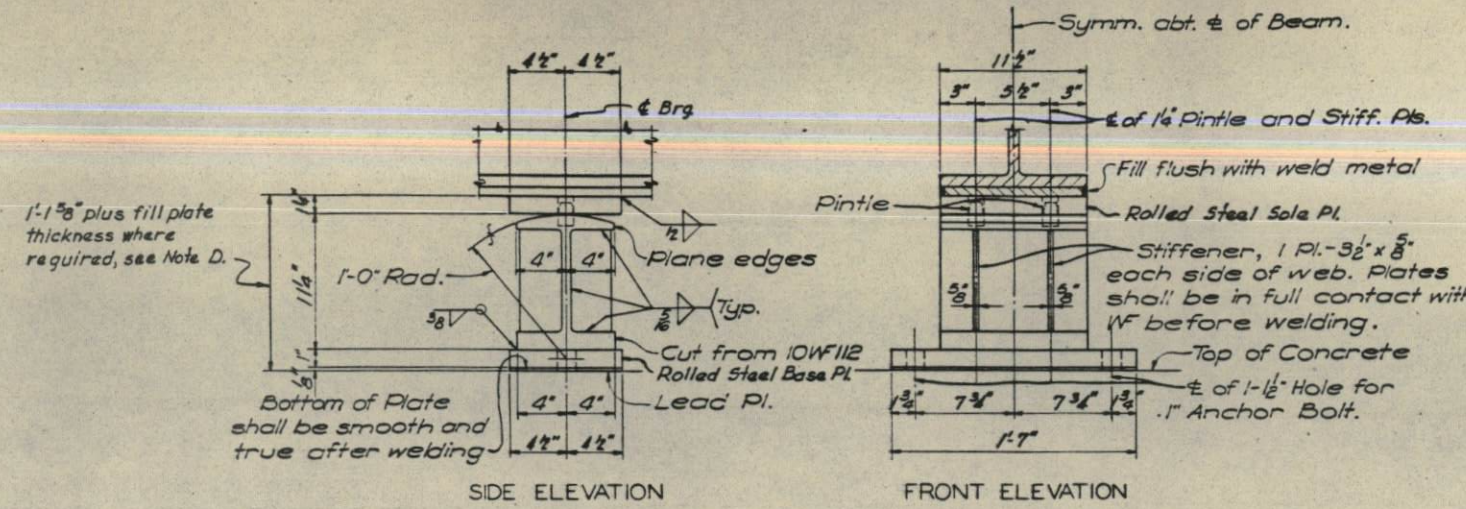
DRAWN - E.L. Hulse, Jr. Mar. 1963
TRACED -
CHECKED - W. Littlefield Mar. 1963
OVERDRUP & PARCEL ENGINEERS CO.
ENGINEERS-ARCHITECTS
ST. LOUIS, MO.

1845
65/12

Revisions: 7-18-63 Added Splice Plate Lengths, SFM

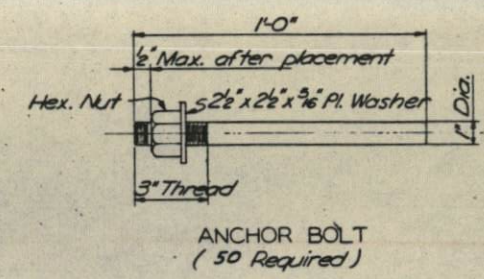
F.A.I. RT. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10HB-1	MADISON	26	12
FED. ROAD DIST. NO. 7			ILLINOIS FED. AID PROJ. NO.	

SHEET NO. SHEETS

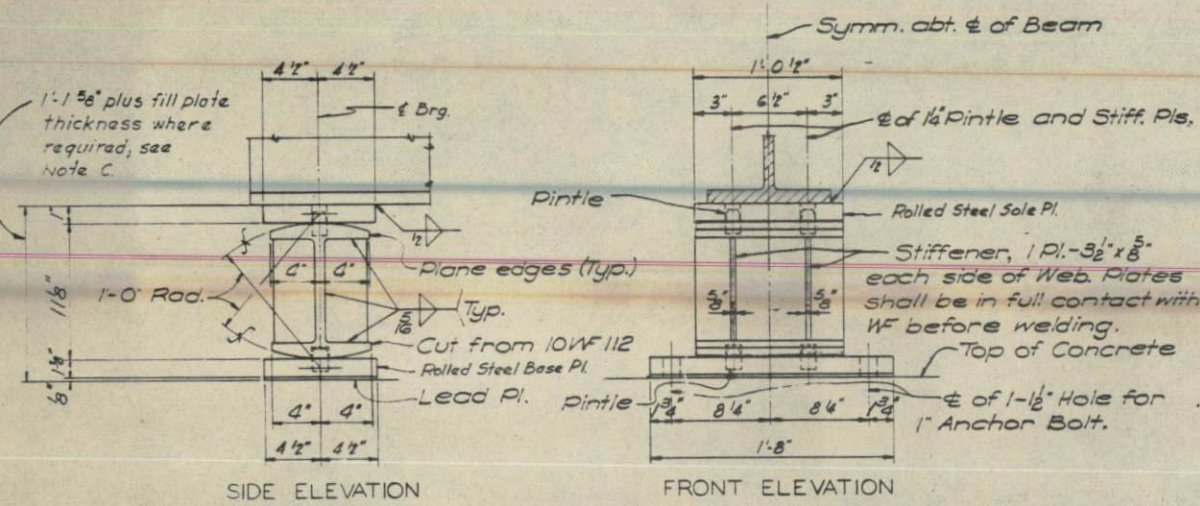


Note D: 1-Fill Plate 9"x6"x1-7" required for Beam B2.
1-Fill Plate 9"x2"x1-7" required for Beam B3.

**FIXED SHOE
PIER 2
(5 Req'd)**

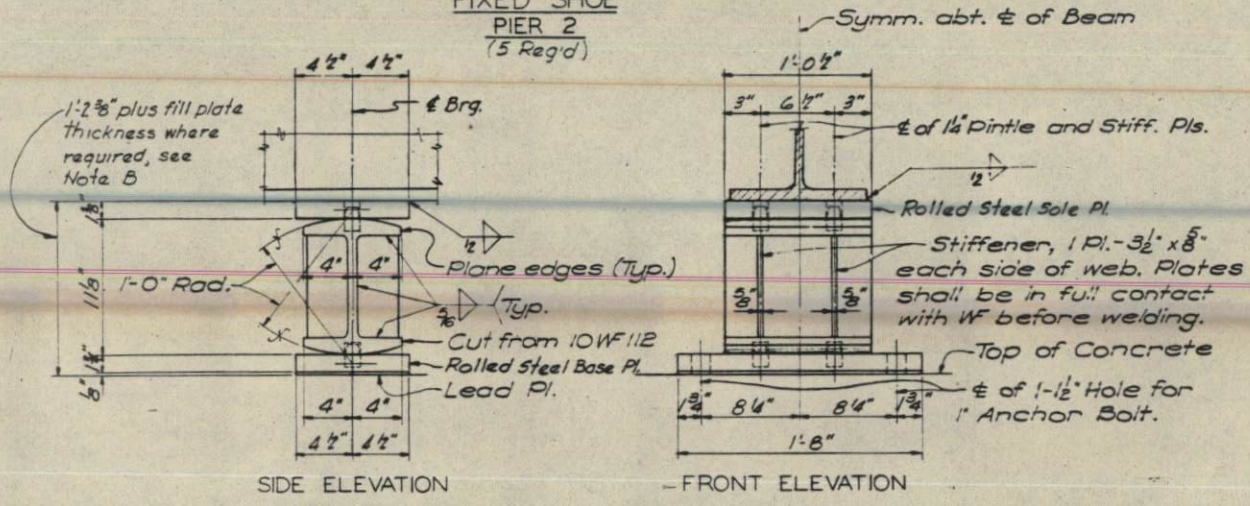


Note A: 1" penetration on bottom pintles of Expansion Shoes. Full depth hole all top pintles.



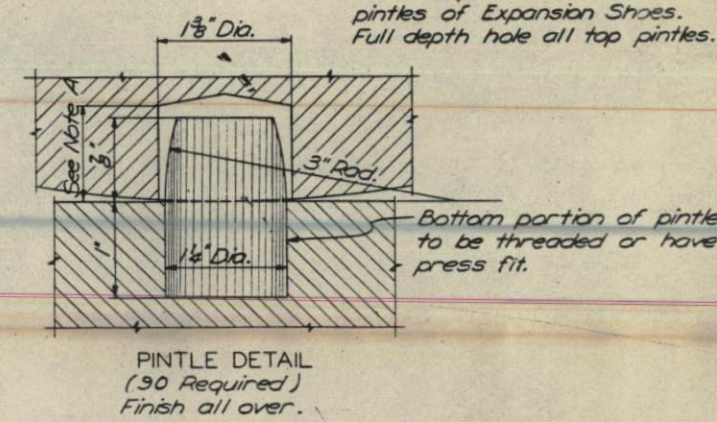
**EXPANSION SHOE
ABUTMENTS
(10 Req'd)**

Note C: 1-Fill Plate 9"x6"x1-8" required for Beam B2 at North & South Abutments.
1-Fill Plate 9"x2"x1-8" required for Beam B3 at North & South Abutments.



**EXPANSION SHOE
PIERS 1 & 3
(10 Req'd)**

Note B: 1-Fill Plate 9"x6"x1-8" required for Beam B2, Piers 1 & 3.
1-Fill Plate 9"x2"x1-8" required for Beam B3, Piers 1 & 3



NOTES

Finish all surfaces marked f.
All rockers, 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.
Estimated weight = 7,030#
All steel shall conform to A.S.T.M. designation A 36
Place Fill Plates between lead plate and base plate.

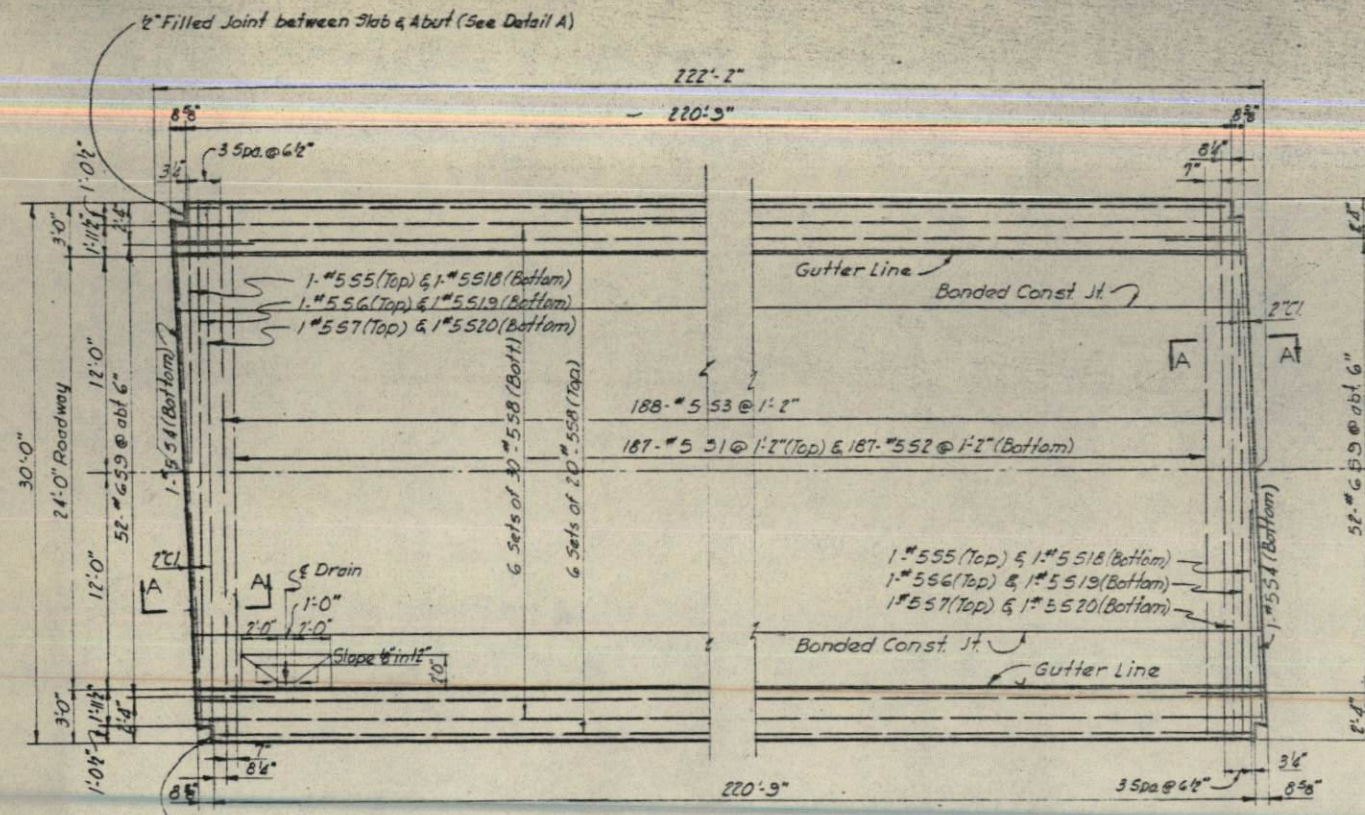
SHOES

BRIDGE OVER - F.A.I. - 70 CARRYING C.N. 21	
STATION - 1013 + 34.43	SCALE: NONE
F.A.I. ROUTE - 70	
SECTION - 60-10HB-1	
MADISON COUNTY, ILLINOIS	
DRAWN - F.L. House Jr. March 1963	EVERDRUP & PARCEL, INC. ENGINEERS-ARCHITECTS ST. LOUIS, MO.
TRACED	
CHECKED - W. Littlefield March 1963	

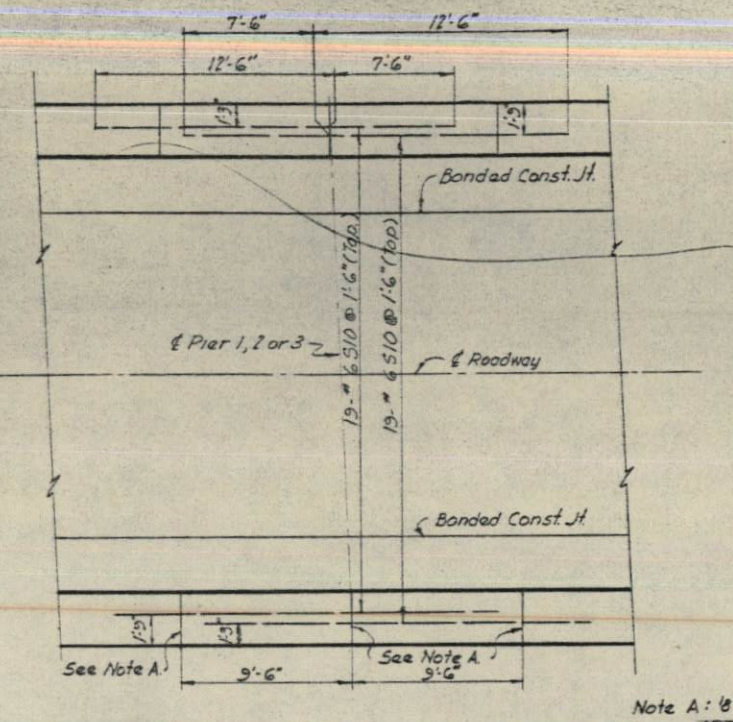
Note: Do not scale this drawing. Follow dimensions.

1845
63J15

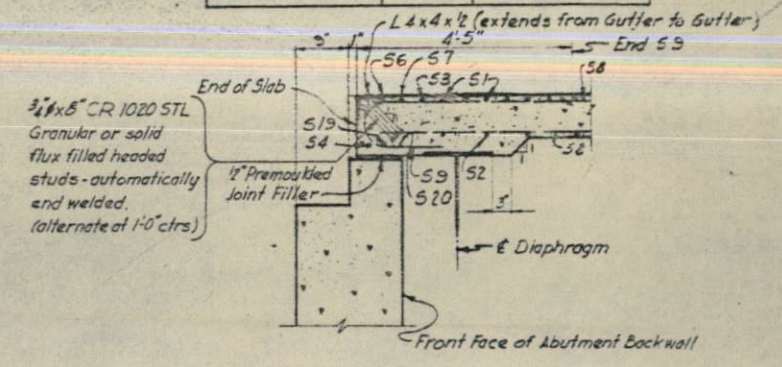
F.A.I. RT. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
70	60-10HB-1	MADISON	26	13	
FED. ROAD DIST. NO. 7			ILLINOIS FED. AID PROJ. NO.		



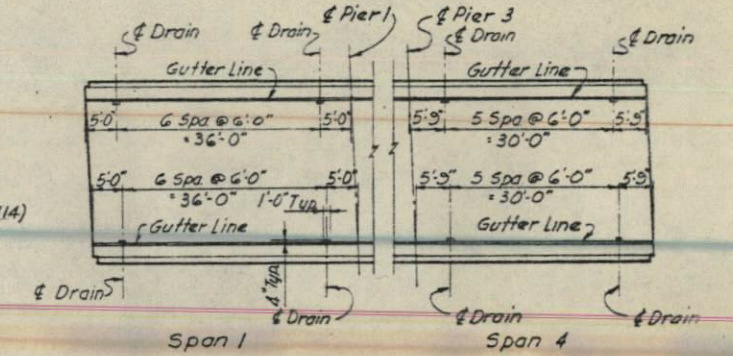
PLAN



PLAN OVER PIERS

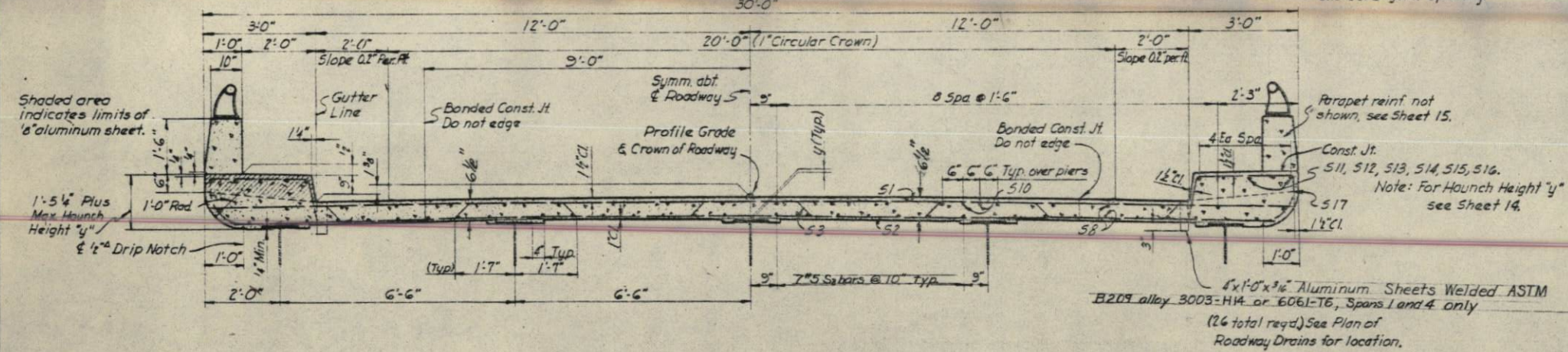


SECTION A-A
(Reinforcing in Abut. not shown)



PLAN OF ROADWAY DRAINS

Note A: 1/8" Aluminum Sheet
ASTM: B209 alloy (3003-H14)
in curb only. See Cross
Section for limits.

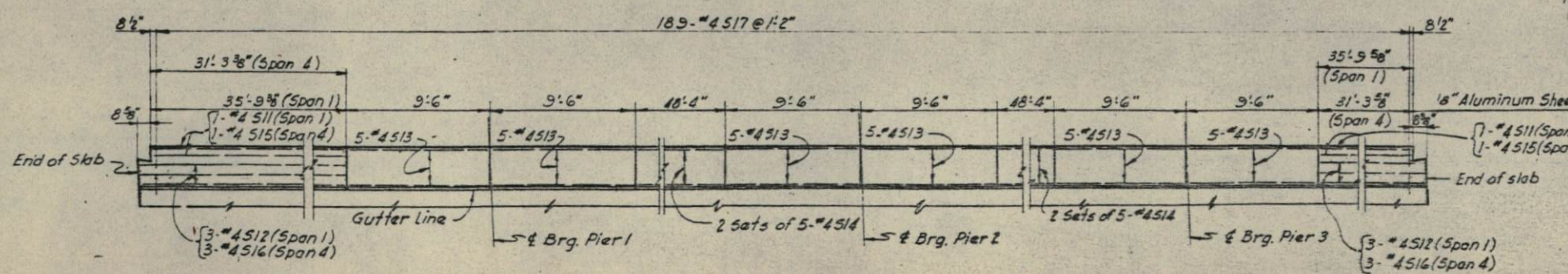


CROSS SECTION

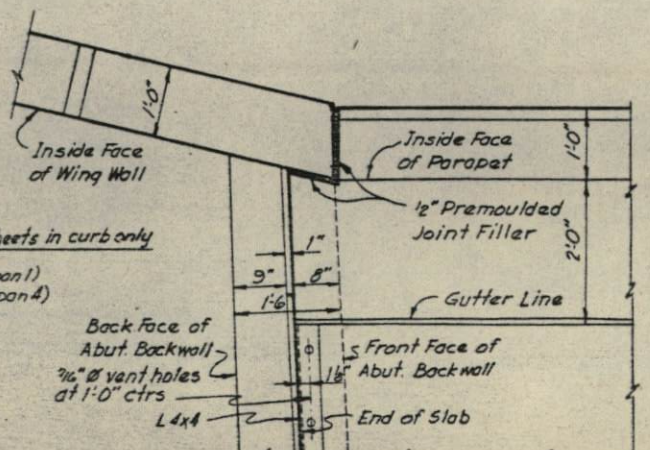
NOTES

All longitudinal dimensions shown are measured horizontally along top of slab.
For location of handrail post anchors, see Sheet 15.
Reinforcing may be bent or shifted slightly in field to clear drains or construction joints.
Aluminum sheets and drains will be included in the unit price bid per cu. yd. of concrete.
Edge angles and anchorages are included in the quantity of Structural Steel. Estimated Weight = 660 lbs.

4x1'-0"x3/8" Aluminum Sheets Welded ASTM
B209 alloy 3003-H14 or 6061-T6, Spans 1 and 4 only
(26 total reqd.) See Plan of
Roadway Drains for location.



PLAN OF CURB
(East curb shown, West curb same by
180° rotation and as noted.)



DETAIL A

SLAB DETAILS

BRIDGE OVER - F.A.I. 70 CARRYING C.H. 21
STATION - 1013+34.43
F.A.I. ROUTE - 70
SECTION - 60-10HB-1
MADISON COUNTY, ILLINOIS

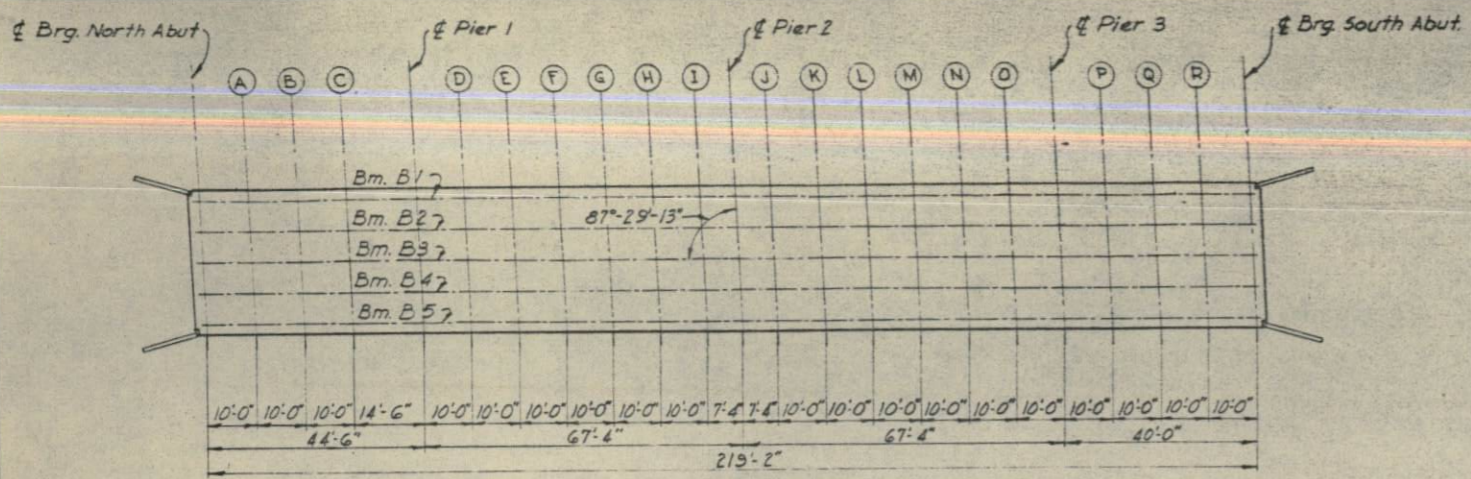
SCALE: NONE
DRAWN: F.L. House Jr. Mar 1963
TRACED: SVERDRUP & PARCEL ENGINEERS-ARCHITECTS CO. ST. LOUIS, MO.
CHECKED: J. Bender & W. Littlefield Mar 1963

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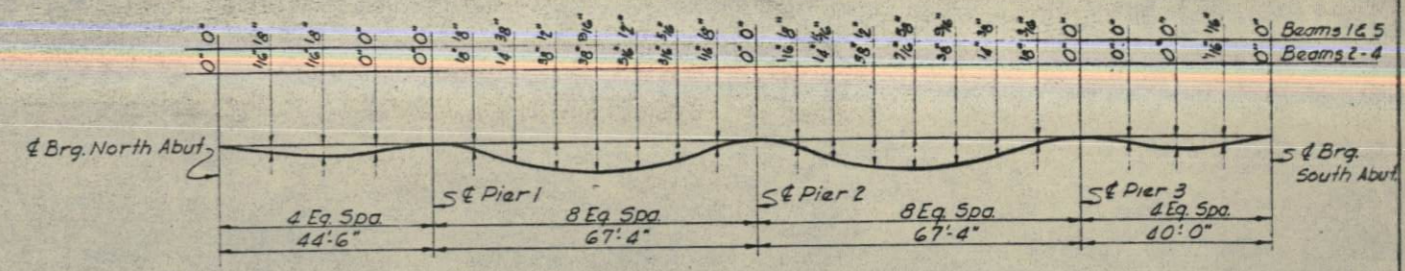
Revisions: 7-18-63 Alum. Tubing To Alum. Sheets for Floor Drains, SFM.

Note: Do not scale this drawing. Follow dimensions

F.A.I. RT. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	60-10HB-1	MADISON	26	14
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJ. NO.	



PLAN
All dimensions are measured horizontally.



DEAD LOAD DEFLECTION DIAGRAM
Note: Deflections include weight of concrete 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 Deflections".

SPAN 1

Beam	Station	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
B1	28187.596	552.642	552.642
B2	28187.781	552.941	552.941
B3	28188.167	552.972	552.972
B4	28188.452	552.933	552.933
B5	28188.737	552.891	552.891
B1	28197.596	552.704	552.712
B2	28197.881	552.796	552.804
B3	28198.167	552.829	552.835
B4	28198.452	552.790	552.796
B5	28198.737	552.687	552.696
B1	29107.596	552.569	552.569
B2	29107.881	552.653	552.660
B3	29108.167	552.684	552.691
B4	29108.452	552.644	552.651
B5	29108.737	552.542	552.552
B1	29117.596	552.412	552.416
B2	29117.881	552.506	552.509
B3	29118.167	552.537	552.542
B4	29118.452	552.497	552.502
B5	29118.737	552.395	552.399
B1	29132.096	552.195	552.195
B2	29132.381	552.289	552.289
B3	29132.667	552.320	552.320
B4	29132.952	552.281	552.281
B5	29133.237	552.178	552.178

SPAN 2

Beam	Station	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
B1	29142.096	552.044	552.060
B2	29142.381	552.137	552.148
B3	29142.667	552.168	552.179
B4	29142.952	552.129	552.140
B5	29143.237	552.026	552.042
B1	29152.096	551.890	551.926
B2	29152.381	551.984	552.008
B3	29152.667	552.014	552.039
B4	29152.952	551.975	552.000
B5	29153.237	551.872	551.908
B1	29162.096	551.734	551.781
B2	29162.381	551.828	551.860
B3	29162.667	551.859	551.891
B4	29162.952	551.819	551.851
B5	29163.237	551.716	551.762
B1	29172.096	551.577	551.619
B2	29172.381	551.670	551.700
B3	29172.667	551.701	551.730
B4	29172.952	551.661	551.691
B5	29173.237	551.559	551.601
B1	29182.096	551.417	551.443
B2	29182.381	551.511	551.529
B3	29182.667	551.541	551.559
B4	29182.952	551.502	551.519
B5	29183.237	551.399	551.425
B1	29192.096	551.256	551.262
B2	29192.381	551.349	551.357
B3	29192.667	551.380	551.384
B4	29192.952	551.340	551.344
B5	29193.237	551.237	551.243
B1	29199.429	551.136	551.136
B2	29199.715	551.229	551.229
B3	30+00.000	551.260	551.260
B4	30+00.285	551.220	551.220
B5	30+00.571	551.117	551.117

SPAN 3

Beam	Station	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
B1	30+06.763	551.015	551.023
B2	30+07.048	551.109	551.114
B3	30+07.333	551.139	551.144
B4	30+07.619	551.099	551.104
B5	30+07.904	550.996	551.004
B1	30+16.763	550.849	550.877
B2	30+17.048	550.942	550.962
B3	30+17.333	550.973	550.992
B4	30+17.619	550.933	550.952
B5	30+17.904	550.830	550.858
B1	30+26.763	550.687	550.727
B2	30+27.048	550.774	550.804
B3	30+27.333	550.804	550.836
B4	30+27.619	550.764	550.796
B5	30+27.904	550.661	550.707
B1	30+36.763	550.511	550.561
B2	30+37.048	550.604	550.638
B3	30+37.333	550.634	550.669
B4	30+37.619	550.594	550.629
B5	30+37.904	550.491	550.541
B1	30+46.763	550.338	550.378
B2	30+47.048	550.432	550.459
B3	30+47.333	550.462	550.489
B4	30+47.619	550.422	550.449
B5	30+47.904	550.319	550.358
B1	30+56.763	550.164	550.182
B2	30+57.048	550.257	550.270
B3	30+57.333	550.288	550.300
B4	30+57.619	550.247	550.260
B5	30+57.904	550.144	550.162
B1	30+66.763	549.988	549.988
B2	30+67.048	550.081	550.081
B3	30+67.333	550.112	550.112
B4	30+67.619	550.071	550.071
B5	30+67.904	549.968	549.968

SPAN 4

Beam	Station	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
B1	30+76.763	549.810	549.808
B2	30+77.048	549.903	549.902
B3	30+77.333	549.933	549.932
B4	30+77.619	549.893	549.892
B5	30+77.904	549.790	549.788
B1	30+86.763	549.630	549.633
B2	30+87.048	549.723	549.725
B3	30+87.333	549.753	549.755
B4	30+87.619	549.713	549.715
B5	30+87.904	549.610	549.612
B1	30+96.763	549.448	549.452
B2	30+97.048	549.541	549.542
B3	30+97.333	549.571	549.574
B4	30+97.619	549.531	549.534
B5	30+97.904	549.428	549.431
B1	31+06.763	549.265	549.265
B2	31+07.048	549.357	549.357
B3	31+07.333	549.387	549.387
B4	31+07.619	549.347	549.347
B5	31+07.904	549.244	549.244

METHOD OF DETERMINING HAUNCH HEIGHT "y"
After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at the stations shown. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection", minus slab thickness, equals the haunch heights above top of beams.

SLAB LAYOUT.

BRIDGE OVER - FAL - 70 CARRING C.N 21

STATION - 1013+34.43
F.A.I. ROUTE - 70
SECTION - 60-10HB-1
MADISON COUNTY, ILLINOIS

SCALE: NONE

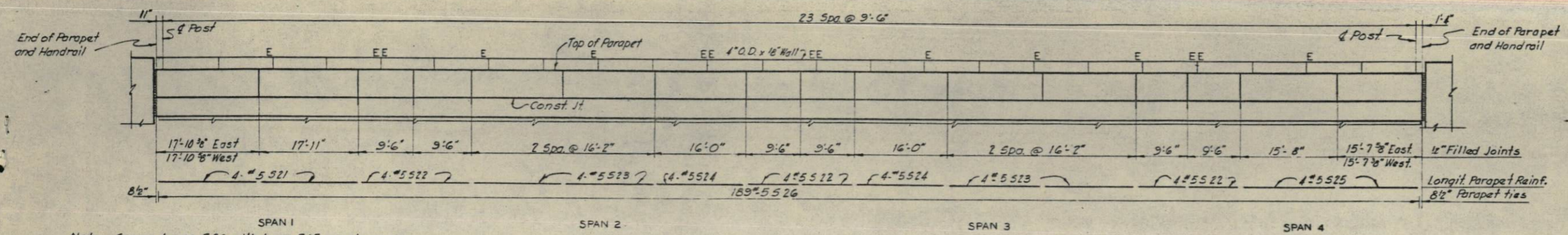
DRAWN: D. House Jr. Mar 1993
TRACED:
CHECKED: R. Cronin Apr. 1993

OVERDRUP & PARCEL, INC.
ENGINEERS-ARCHITECTS
ST. LOUIS, MO.

Note: Do not scale this drawing. Follow dimensions.

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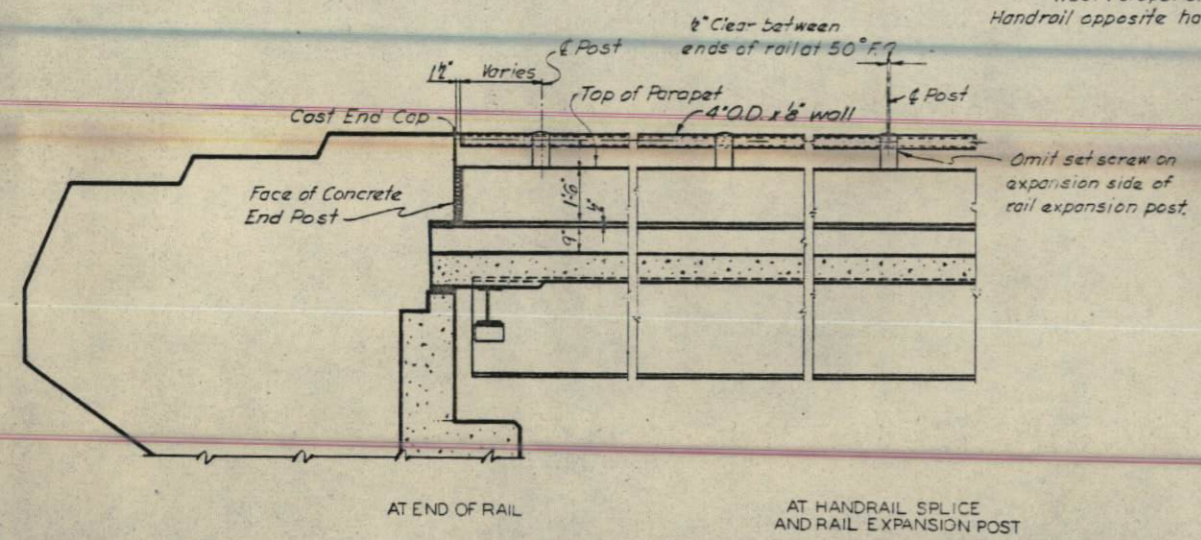
F.A.I. RT. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. SHEETS
70	60-10HB-1	MADISON	26	15	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJ. NO.			



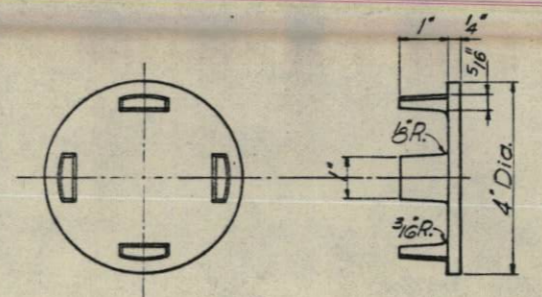
Note: Space bars S26 with bars S17 as shown on Sheet 13. Bars may be shifted slightly in field to clear 1/2" Filled Joints.

ELEVATION OF HANDRAIL AND PARAPET
 Note: All longitudinal dimensions are horizontal and are measured along center of Post Base at top of Parapet. Location of "E" indicates expansion side of rail expansion post. West Parapet and Handrail shown, East Parapet and Handrail opposite hand, except as noted.

Note: Add two #5 d bars at the inside face of the parapet at each rail post location.



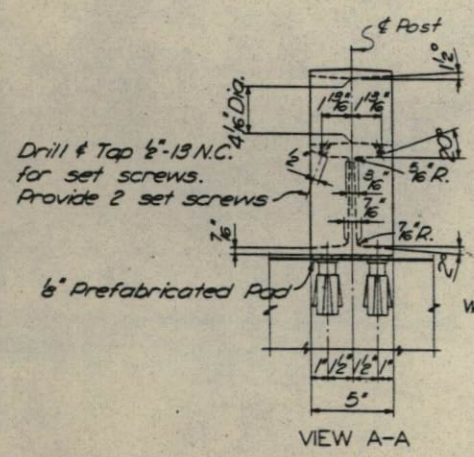
TYPICAL HANDRAIL DETAILS



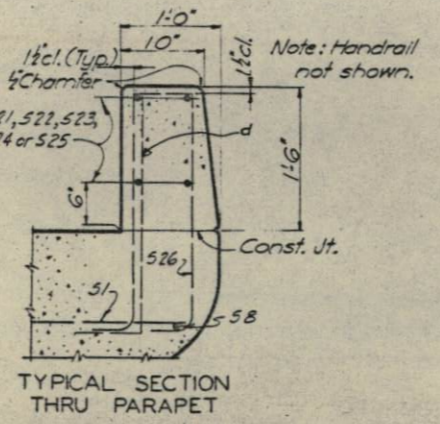
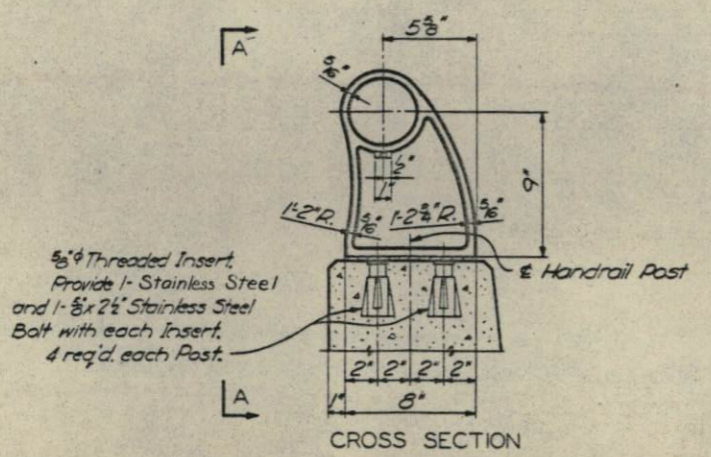
CAST ALUMINUM END CAP (4 Required)

NOTES
 All posts shall be placed normal to parapet. All posts shall conform to A.S.T.M. Specification B108 alloy 5G-70B-T6. All Rail Tubing shall conform to A.S.T.M. Specification B235 alloy 6061-T6, or 6062-T6.

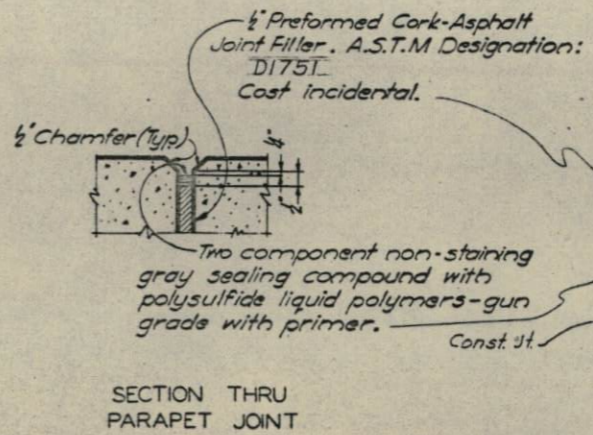
Rail Tubing may be cut to random lengths for material composition of Prefabricated Pad see Art. 54.9(f), (Bearings and Anchorage), of the Standard Specifications. Set screws shall be of Aluminum conforming to A.S.T.M. Specification B211 alloy 2024-T4. Aluminum handrail shall be measured in lineal feet. The length paid for shall be the overall length along the top longitudinal railing member through all posts and gaps. The contract unit price per lineal foot for aluminum handrail shall include the furnishing, fabrication, transportation and erection of all material.



RAIL POST DETAILS



TYPICAL SECTION THRU PARAPET



PARAPET JOINT DETAIL

PARAPET AND HANDRAIL DETAILS

BRIDGE OVER - F. A. I-70 CARRYING G.H. 21
 STATION - 1013+34.43
 F.A.I. ROUTE - 70
 SECTION - 60-10HB-1
 MADISON COUNTY, ILLINOIS

DRAWN: F.L. House Jr. March, 1963
 TRACED: [Signature]
 CHECKED: W. Littlefield March 1963
 EVERDRUP & PARCEL, INC. ENGINEERS-ARCHITECTS ST. LOUIS, MO.

Note: Do not scale this drawing. Follow dimensions.

Revisions: 7-18-68 Addition to Notes, Change of Alclad Washers to Stainless Steel, Change Joint Filler Designation to D1751, Rail Tubing Designation changed to B235 alloy 6061-T6, Set Screw Designation...

