

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	102[2HB-1;2HB]BP	WOODFORD	18	1
		ILLINOIS	CONTRACT NO. 68G78	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

FAI 39 (I-39 / US 51)
SECTION 102[2HB-1;2HB]BP
PROJECT NHPP-QRMQ(387)
BRIDGE PAINTING
WOODFORD COUNTY

INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL NOTES
- 3 SUMMARY OF QUANTITIES
- 4 SCHEDULE OF QUANTITIES
- 5-18 EXISTING PLAN SHEETS

ILLINOIS HIGHWAY STANDARDS

000001-08	701106-02	701901-08
701001-02	701201-05	704001-08
701006-05	701400-11	
701011-04	701402-12	

ROADWAY CLASSIFICATION:

I-39 - INTERSTATE; ADT (2021) 17,900; SU=3.1%; MU=36.7%
 SN 102-0054 - FAS 359 (ROANOKE ROAD) - MAJOR COLLECTOR; ADT (2020) 400; TRUCKS=22%
 SN 102-0057 - TR 165 (CLEARVIEW ROAD) - LOCAL ROAD; ADT (2020) 300; TRUCKS=14%



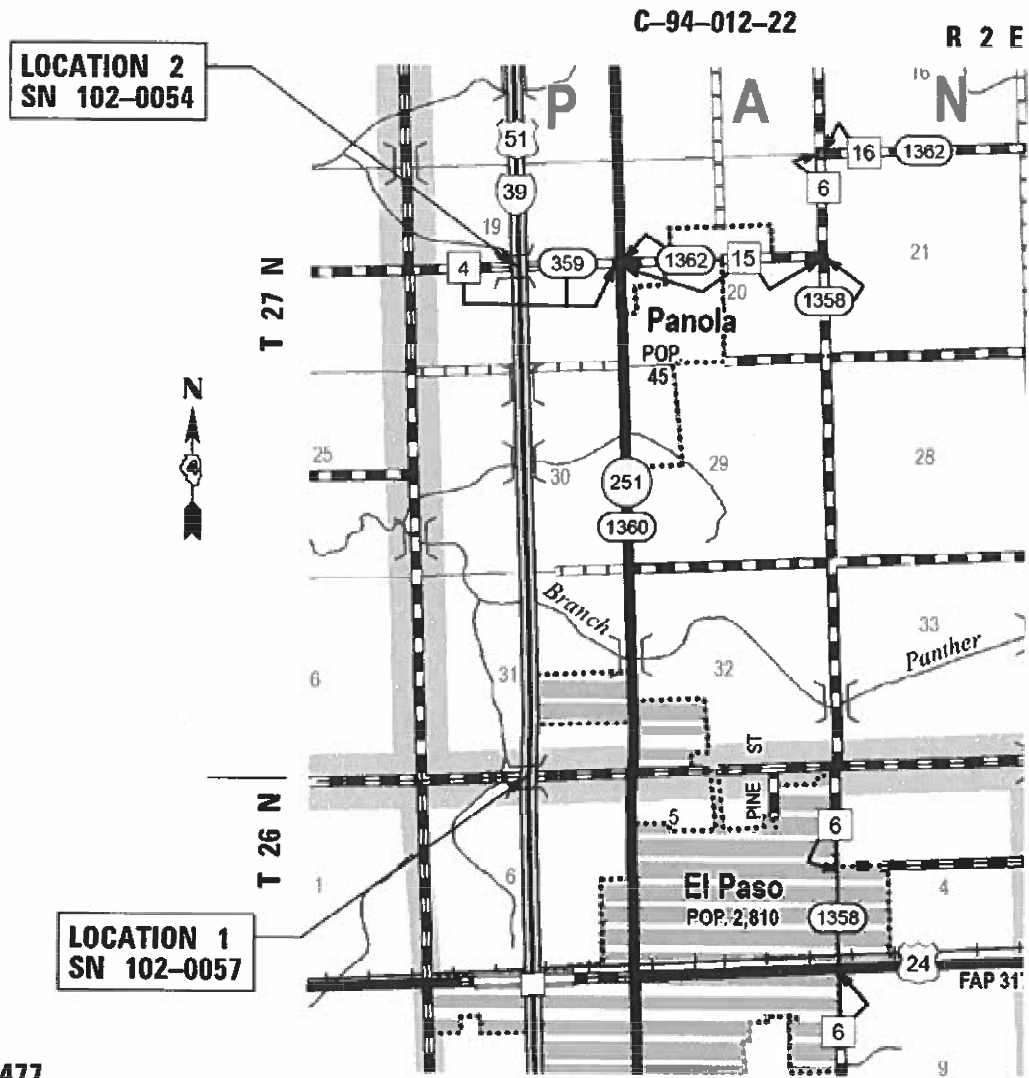
DESCRIPTION:
 PAINTING OF SN 102-0054 AND 102-0057
 OVER I-39 / US 51 IN WOODFORD COUNTY.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SUBMITTED Feb 04 2022
Rensel A. Barnett RSD
 REGIONAL ENGINEER

March 25 2022
[Signature]
 ENGINEER OF DESIGN AND ENVIRONMENT

March 3 2022
[Signature]
 DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION



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

PROJECT ENGINEER: MARK ECKHOFF (309) 671-4463
PROJECT MANAGER: BENJAMIN TELLEFSON (309) 671-4477

CONTRACT NO. 68G78
CATALOG NO. 036287-00D

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

FILE NAME: 01\21\15\23861\001 - DIST 4 - PTB 281-833\Work Order 82 - Bridge Painting\18.Templates\en\CAD Sheets\0468078-11-cover.dgn

GENERAL NOTES

ALL AREAS INDICATED ON THE PLANS SHALL BE PAINTED WITH THE PAINT SYSTEM 1-0Z/E/U. ALL BEAMS, BRACKETS, AND ALL OTHER STRUCTURAL STEEL SHALL BE CLEANED PER NEAR WHITE METAL BLASTED CLEANING SSPC-SPI0.

PROJECT SPECIFIC NOTES

DO NOT SCALE PLANS FOR CONSTRUCTION MEASUREMENTS. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN SCOPE.

LOCATION 1 SN 102-0057: PAINT ENTIRE STRUCTURE.

LOCATION 2 SN 102-0054: PAINT ENTIRE STRUCTURE.

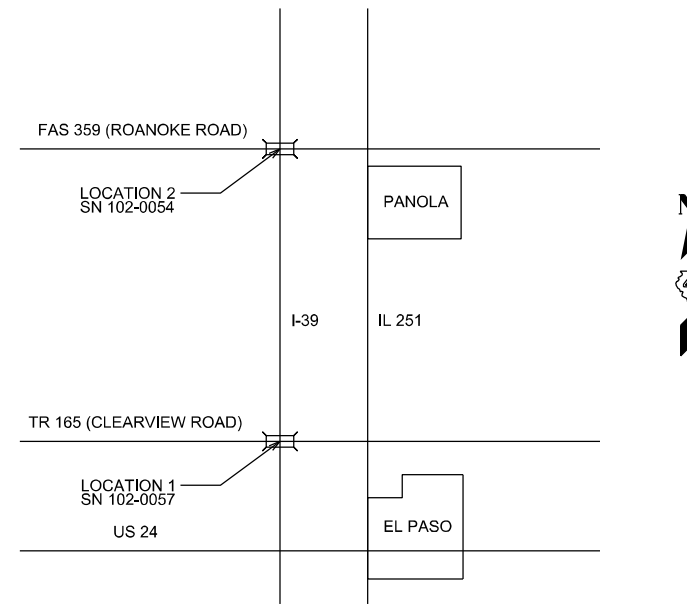
THE EXTERIOR FACES OF ALL FASCIA BEAMS SHALL BE RED BROWN (MUNSELL NO. 2.5YR 3/4) AND ALL INTERIOR SURFACES AND BEAM UNDERSIDES SHALL BE A LIGHT GRAY MUNSELL 5B 7/1)

COOPERATION WITH OTHER CONTRACTORS
A COOPERATIVE EFFORT IS REQUIRED WITH OTHER CONTRACTORS IN COORDINATING TRAFFIC CONTROL, SIGNING, TRAFFIC MANAGEMENT AND PROGRESSION, AND WORK AT OR NEAR THE PROJECT

BRIDGE LOCATIONS 1 AND 2 HAVE METAL SCREENS COVERING SOME OF THE BAYS BETWEEN GIRDERS AT THE FRONT WALL OF THE ABUTMENTS. THE SCREEN PANELS SHALL BE REMOVED PRIOR TO CLEANING AND PAINTING OPERATIONS. THE SCREEN PANELS AND MOUNTING HARDWARE SHALL BE DISPOSED OF BY THE CONTRACTOR. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT WILL BE CONSIDERED INCLUDED IN THE COST OF THE CLEANING AND PAINTING STEEL BRIDGE ITEMS.

COMMITMENTS

NO COMMITMENTS HAVE BEEN MADE FOR THIS PROJECT.



LINE DIAGRAM

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GENERAL NOTES

SCALE: none SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	102[2-HB1:2HB]BP	WOODFORD	18	2
CONTRACT NO. 68G78				
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE					
				BRIDGE					
				90% FED 10% STATE WOODFORD 0047 RURAL					
67100100	MOBILIZATION	L SUM	1	1					
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	4	4					
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1					
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	28	28					
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1200	1200					
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1200	1200					
70600250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4	4					
70600350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4	4					
X5060601	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1					
X5060602	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1	1					
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1					
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1	1					

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	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: none SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	102[2-HB1:2HB]BP	WOODFORD	18	3
			CONTRACT NO. 68G78	
		ILLINOIS	FED. AID PROJECT	

MOBILIZATION	
LOCATION	L SUM
JOBSITE	1

CHANGEABLE MESSAGE SIGN	
LOCATION	CAL DAYS
JOBSITE	28

*TWO SIGNS @ 7 DAYS EACH PER LOCATION

TRAFFIC CONTROL AND PROTECTION									
LOCATION				STANDARD 701201	STANDARD 701402	TEMP CONCRETE BARRIER*	RELOCATE TEMP CONC BARRIER	IMPACT ATTENUATORS TEMP (NRD) TL3	IMPACT ATTN RELOCATE (NRD) TL3
NO.	STRUCTURE NO.	FACILITY CARRIED	FEATURE CROSSED	L SUM	EACH	FOOT	FOOT	EACH	EACH
1	102-0057	TR 165	I-39 / US 51		2	600	600	2	2
2	102-0054	ROANOKE RD	I-39 / US 51		2	600	600	2	2
TOTAL				1	4	1200	1200	4	4

*Using Temporary Concrete Barrier on passing lane with lane closure of the passing lane on the opposite direction

LOCATION NO.	STRUCTURE NO.	CLEANING AND PAINTING STRUCTURAL STEEL	CONTAINMENT & DISPOSAL NON-LEAD RESIDUES
		LSUM	LSUM
1	102-0057	1	1
2	102-0054	1	1
TOTAL		2	2

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PLOT DATE = 2/3/2022	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCHEDULE OF QUANTITIES

SCALE: none SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	102[2-HB1:2HB]BP	WOODFORD	18	4
CONTRACT NO. 68G78				
ILLINOIS FED. AID PROJECT				

SN 102-0057 (TR 165 OVER I-39)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
EA 412	102-2HB	WOODFORD	35	11	17 SHEETS

Bench Mark: USC & GS marker (designation E 229 set in the top of a concrete post 0.95 mile north of El Paso. Elev. 724.14)
Existing Structure: None

DESIGN SPECIFICATIONS

AASHTO (1983) and 1984 IRLI RB8
Interims with exceptions or modifications as indicated.

LOADING HS 20-44

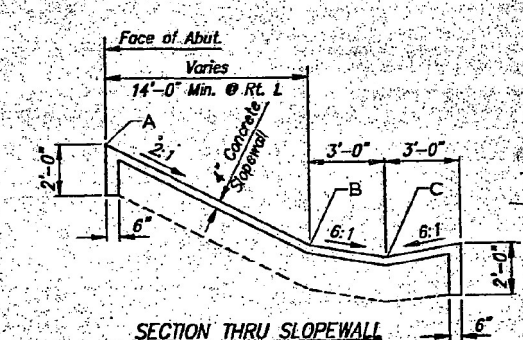
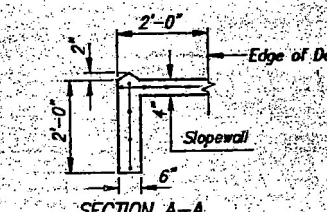
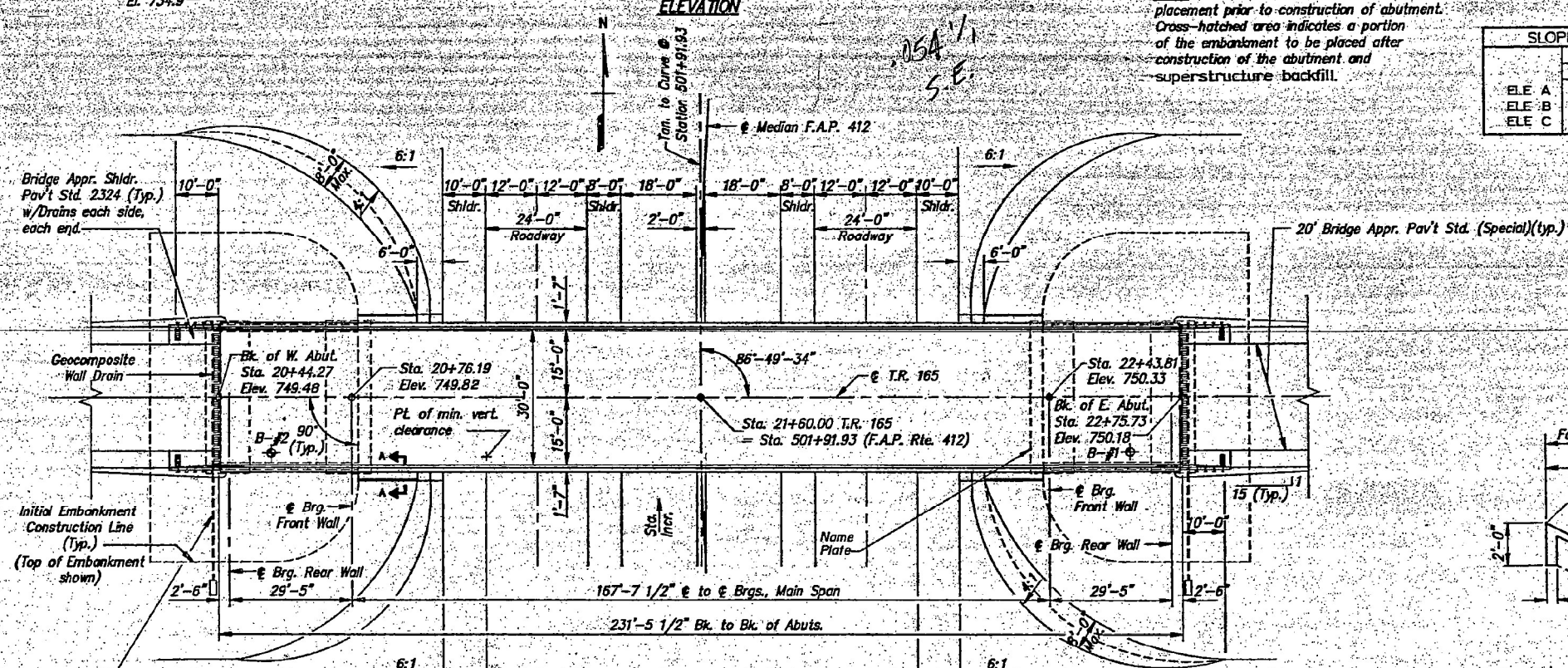
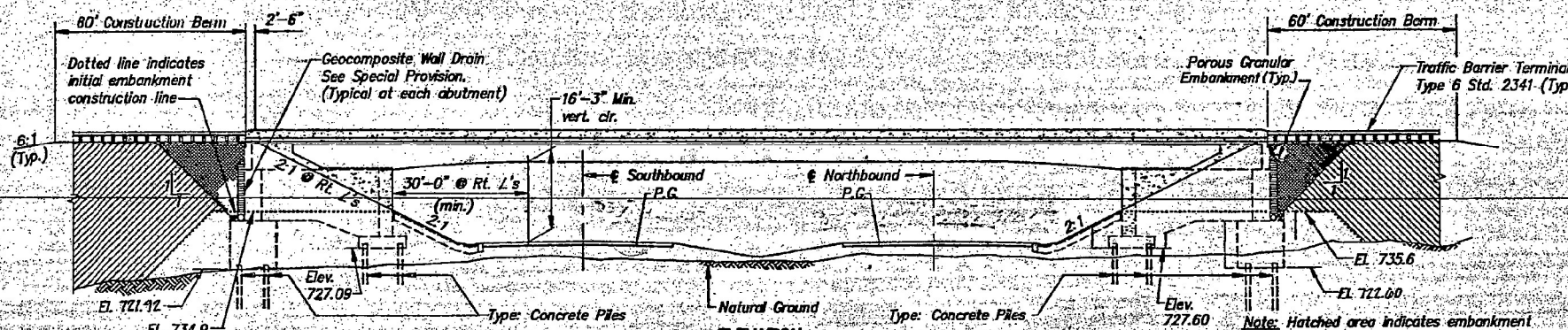
Allow 25#/sq. ft. for future wearing surface.

DESIGN STRESSES

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
 $f_y = 50,000$ psi (M223) Gr. 50 } Steel
 $f_y = 36,000$ psi (M183)

Max. range of temperature = 120F (-10° to 110° F)

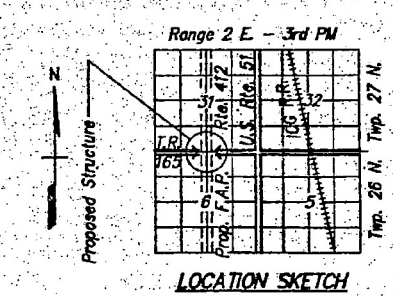
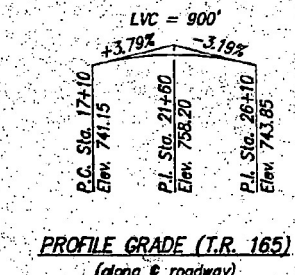
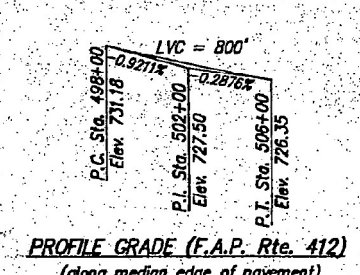
	SLOPE WALL ELEVATION			
	WEST		EAST	
	S	N	S	N
ELE A	728.81	728.07	730.66	729.78
ELE B	721.81	721.07	723.66	722.78
ELE C	721.31	720.57	723.16	722.28



CURVE DATA (F.A.P. 412)
P.I. Sta. 498 + 35.11
 $\Delta = 315'01''$ Rt.
 $D = 0'15'00''$
 $T = 650.23'$
 $R = 22,918.31'$
 $L = 1300.11'$
 $E = 9.22'$

HAZLET + ERDAL, INC.
CONSULTING ENGINEERS
FILE NUMBER: 562
DRAWN BY: D.C. & M.L.S.
CHECKED BY: T.J.P.
APPROVED BY: _____
October 4, 1988

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
John W. Clark
Registered Structural Engineer



GENERAL PLAN
F.A.P. ROUTE 412 SECTION 102-2HB
T.R. 165 OVER F.A.P. ROUTE 412
WOODFORD COUNTY
STATION 501+91.93
STRUCTURE NUMBER 102-0057

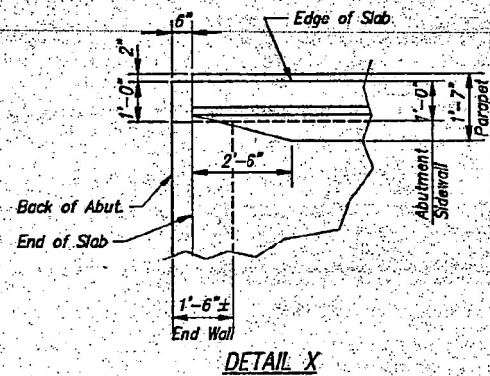
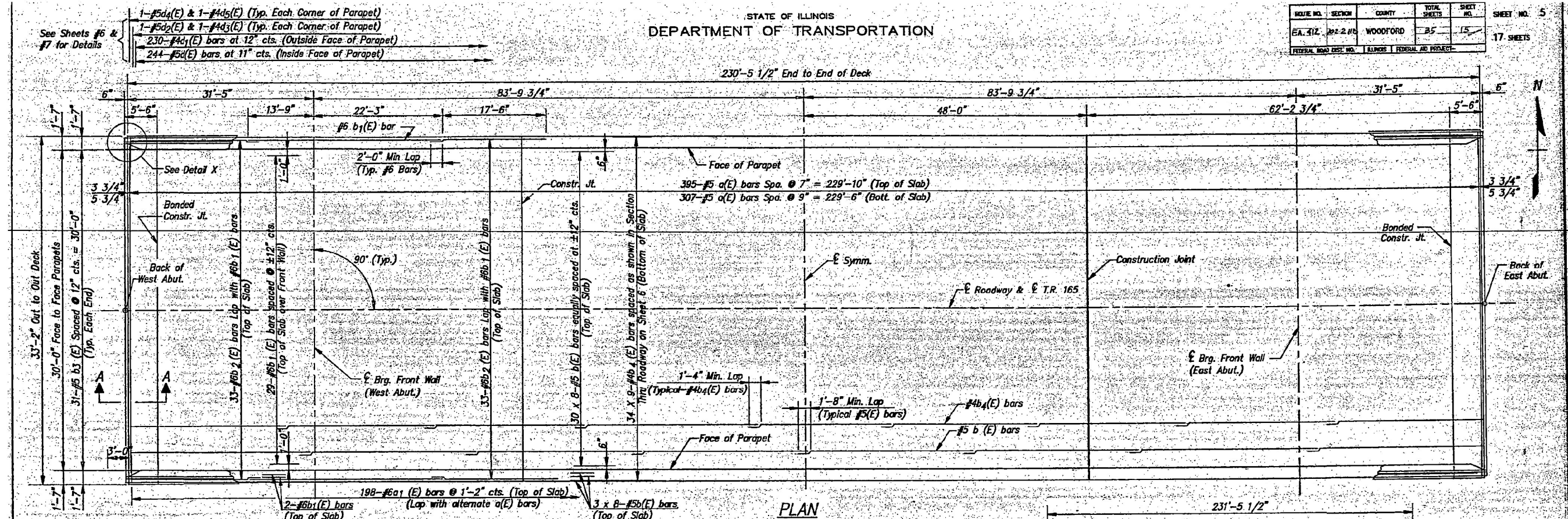
FOR INFORMATION ONLY

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DRAWN -	REVISED -	39			102(2HB-12)HB/BP	WOODFORD	18	5	
PLOT SCALE = \$SCALES	CHECKED -	REVISED -			CONTRACT NO. 68G78				
PLOT DATE = 2/3/2022	DATE -	REVISED -			SCALE: none	SHEET 1 OF 7 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT

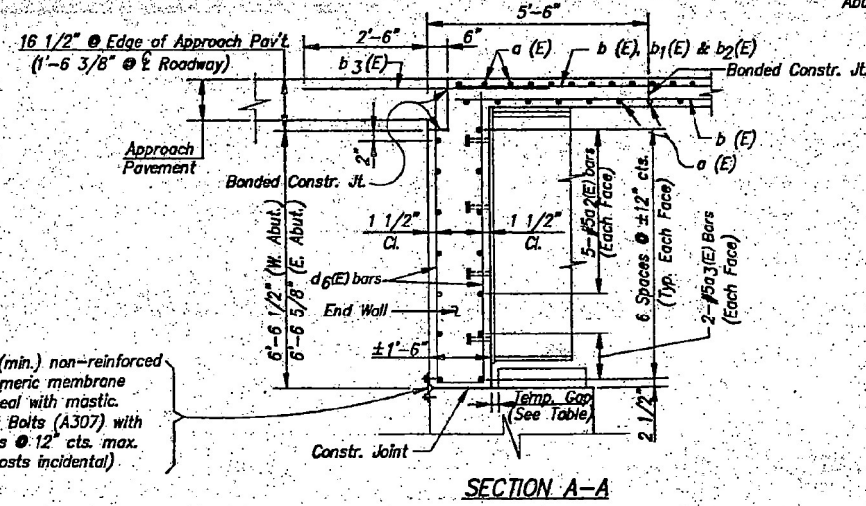
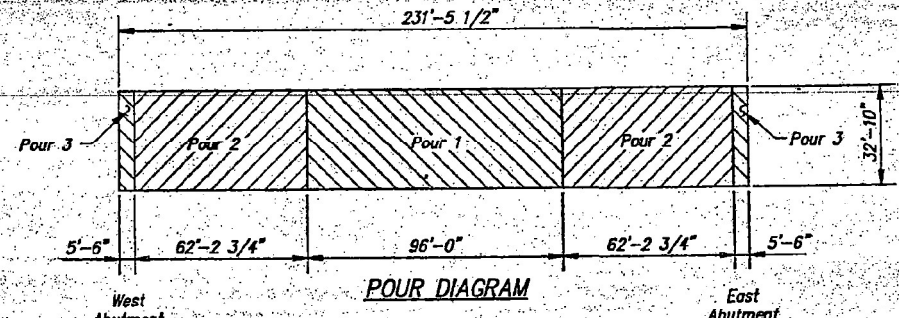
SN 102-0057 (TR 165 OVER I-39)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
EA. 412	102-2HB	WOODFORD	35	15	17 SHEETS
FEDERAL ROAD DIST. NO.			ILLINOIS FEDERAL AID PROJECT		



NOTES:
 Bars designation thus 30 x 8 - #5 etc. indicates 30 lines of bars with 8 lengths per line.
 Reinforcement bars designated (E) shall be epoxy coated.
 All edges shall have 3/4\"/>



10° F	5/8"
30° F	13/16"
50° F	1"
70° F	1 3/16"
90° F	1 3/8"

DECK DETAILS
 F.A.P. ROUTE 412 SECTION 102-2HB
 T.R. 165 OVER F.A.P. ROUTE 412
 WOODFORD COUNTY
 STATION 501+91.93

HAZELET + ERDAL, INC.
 CONSULTING ENGINEERS
 FILE NUMBER 582
 DRAWN BY: M.S.
 CHECKED BY: T.J.F.
 APPROVED BY:

FOR INFORMATION ONLY

USER NAME = \$USERS	DESIGNED -	REVISED -
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PLOT DATE = 2/3/2022	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION 1 - SN 102-0057
SUPERSTRUCTURE PLAN

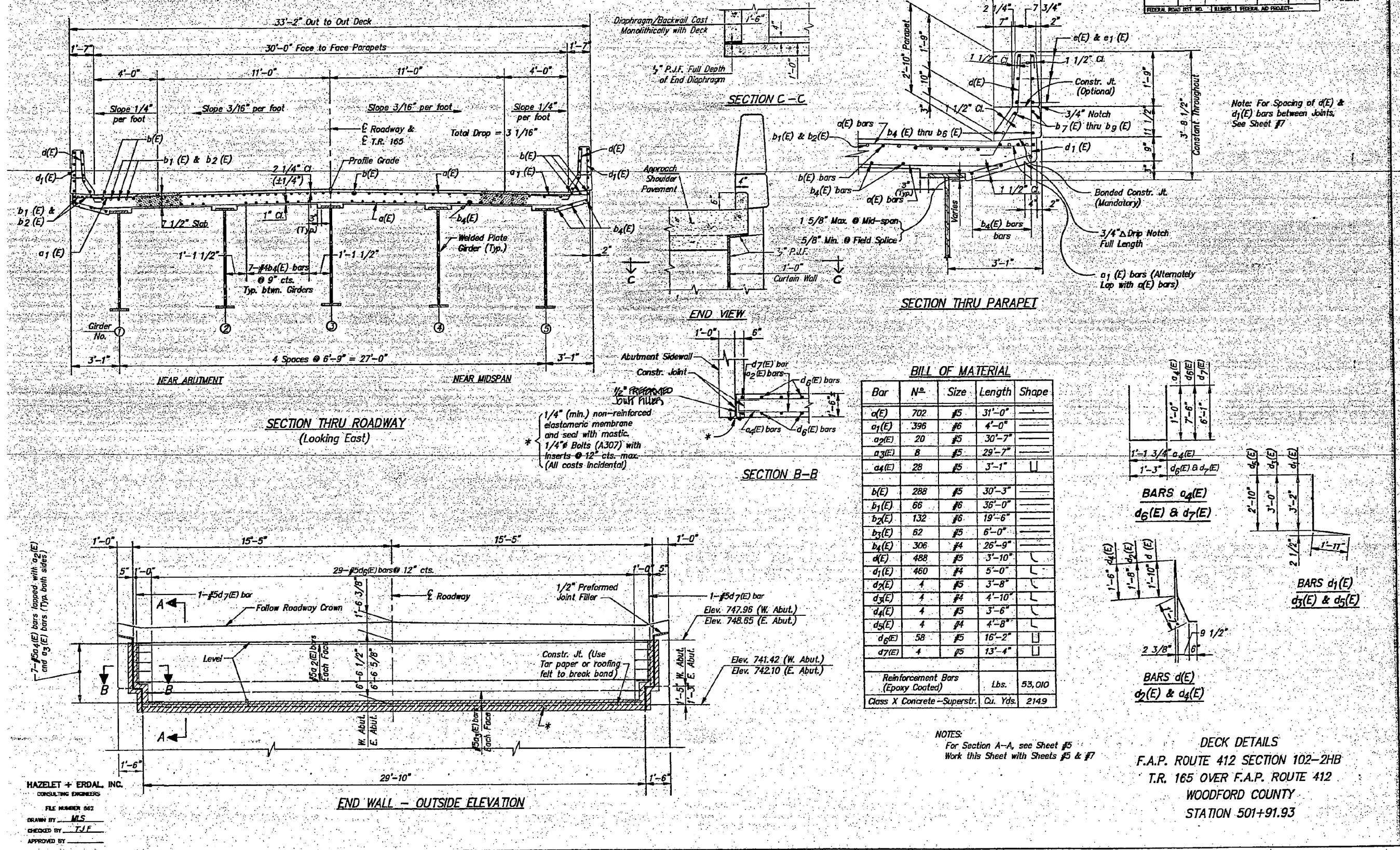
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	102(2HB-12HB)BP	WOODFORD	18	6
CONTRACT NO. 68G78				
ILLINOIS FED. AID PROJECT				

SN 102-0057 (TR 165 OVER I-39)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6 17 SHEETS
FA. 412	102-2 HB	WOODFORD	35	16	
FEDERAL ROAD DIST. NO. 1 ELMERS FEDERAL AID PROJECT					



FOR INFORMATION ONLY

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PLOT DATE = 2/3/2022	DATE -	REVISED -							

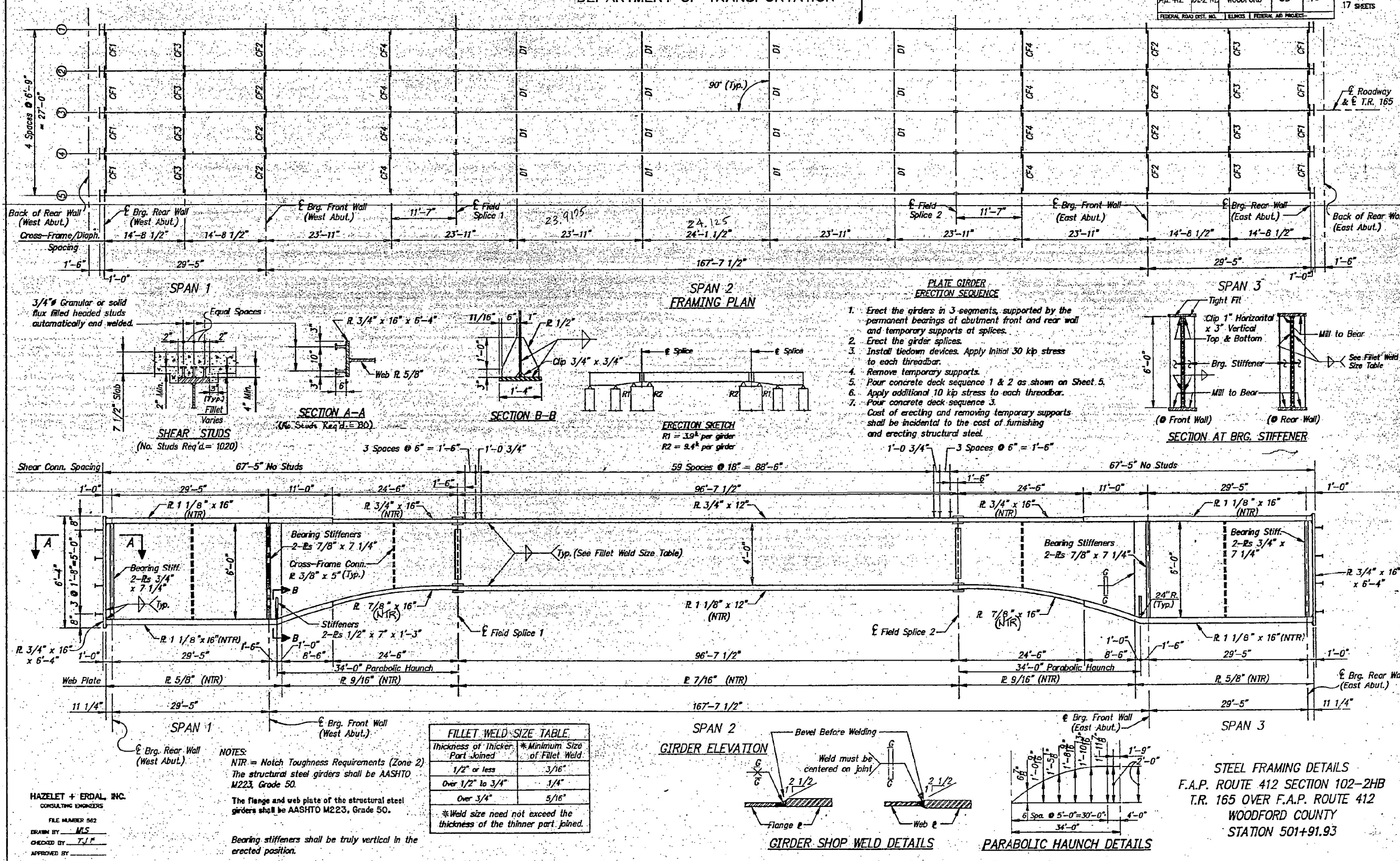
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 HAZELET + ERDAL, INC. CONSULTING ENGINEERS

SN 102-0057 (TR 165 OVER I-39)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 412	102-2 HB	WOODFORD	35	18
FEDERAL ROAD DIST. NO. ILLINOIS FEDERAL AID PROJECT				

SHEET NO. 8
17 SHEETS



FOR INFORMATION ONLY

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PLOT DATE = 2/3/2022	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION 1 - SN 102-0057
FRAMING PLAN

SCALE: none SHEET 4 OF 7 SHEETS STA. TO STA.

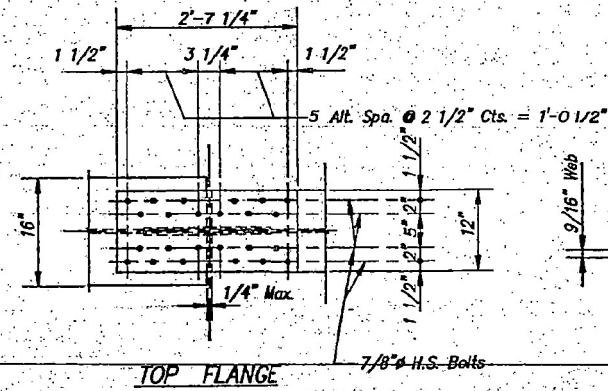
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39	102(2HB-12)HB	WOODFORD	18	8
CONTRACT NO. 68G78				
ILLINOIS FED. AID PROJECT				

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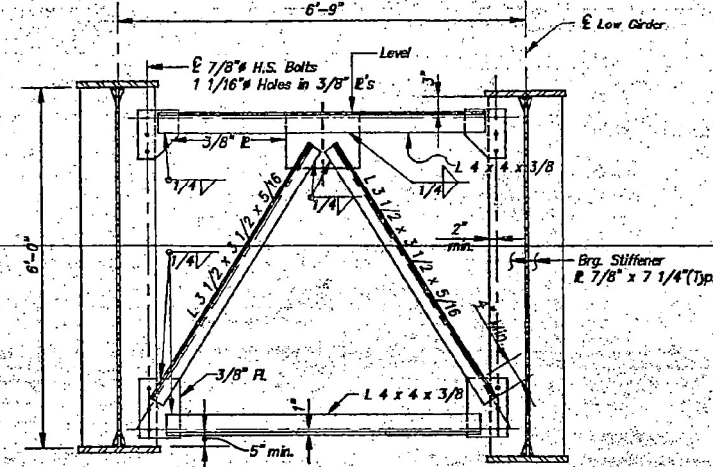
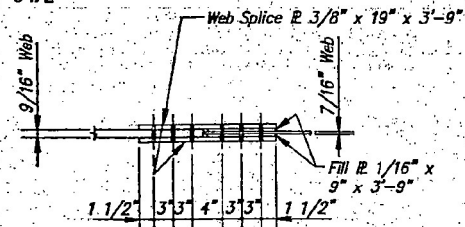
SN 102-0057 (TR 165 OVER I-39)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

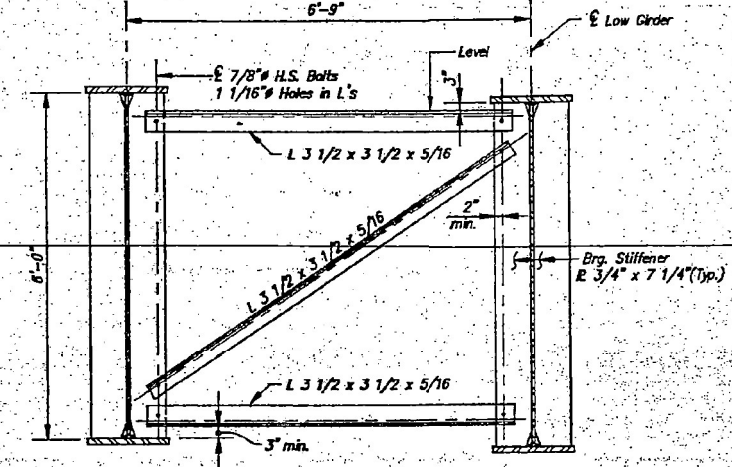
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F.A. 412	102-2HB	WOODFORD	35	19	17 SHEETS
FEDERAL ROAD DIST. NO.	ILLINOIS	FEDERAL AID PROJECT			



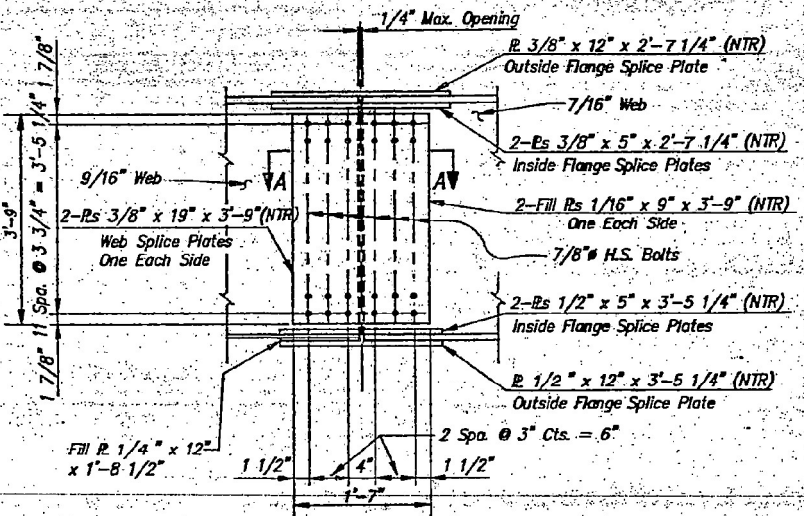
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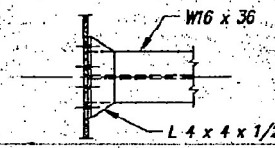
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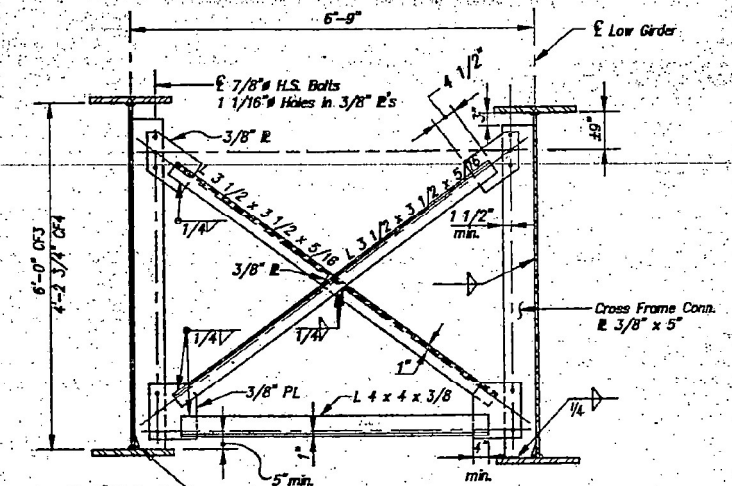
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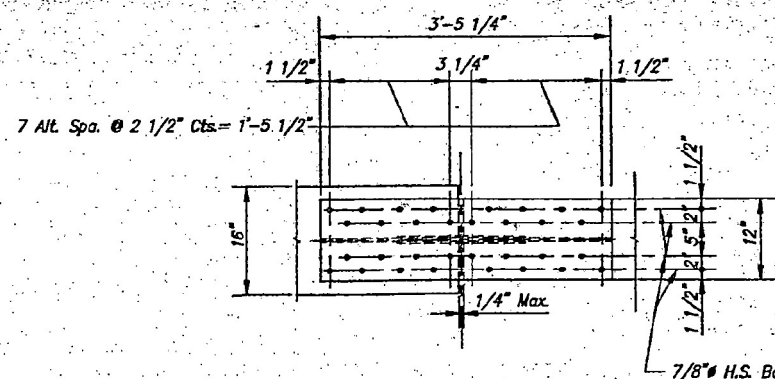
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SECTION B-B

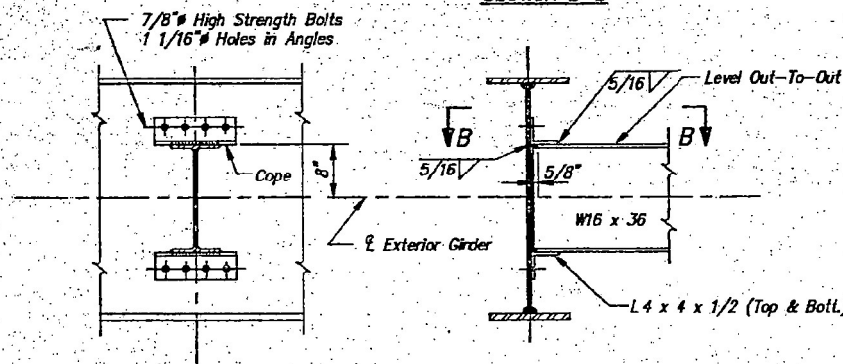


CROSS FRAMES CF3 & CF4
(CF3 - 8 Required)
(CF4 - 8 Required)



BOTTOM FLANGE

FIELD SPLICE DETAILS
(10 Required)



DIAPHRAGM D1
(16 Required)

NOTES:

- NTR = Notch Toughness Requirements (Zone 2)
- Cross Frame CF1 may be removed after pours 1 & 2 are complete.
- Two hardened washers shall be required over all 1 1/16" holes.
- All the splice plates shall be AASHTO M223, Grade 50.

STEEL FRAMING DETAILS
F.A.P. ROUTE 412 SECTION 102-2HB
T.R. 165 OVER F.A.P. ROUTE 412
WOODFORD COUNTY
STATION 501+91.93

HAZELET + ERDAL, INC.
CONSULTING ENGINEERS
FILE NUMBER: 052
DRAWN BY: M.S.
CHECKED BY: T.J.F.
APPROVED BY:

FOR INFORMATION ONLY

USER NAME = \$USERS	DESIGNED -	REVISED -
PLOT SCALE = \$SCALES	DRAWN -	REVISED -
PLOT DATE = 2/3/2022	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION 1 - SN 102-0057
STRUCTURAL STEEL DETAILS

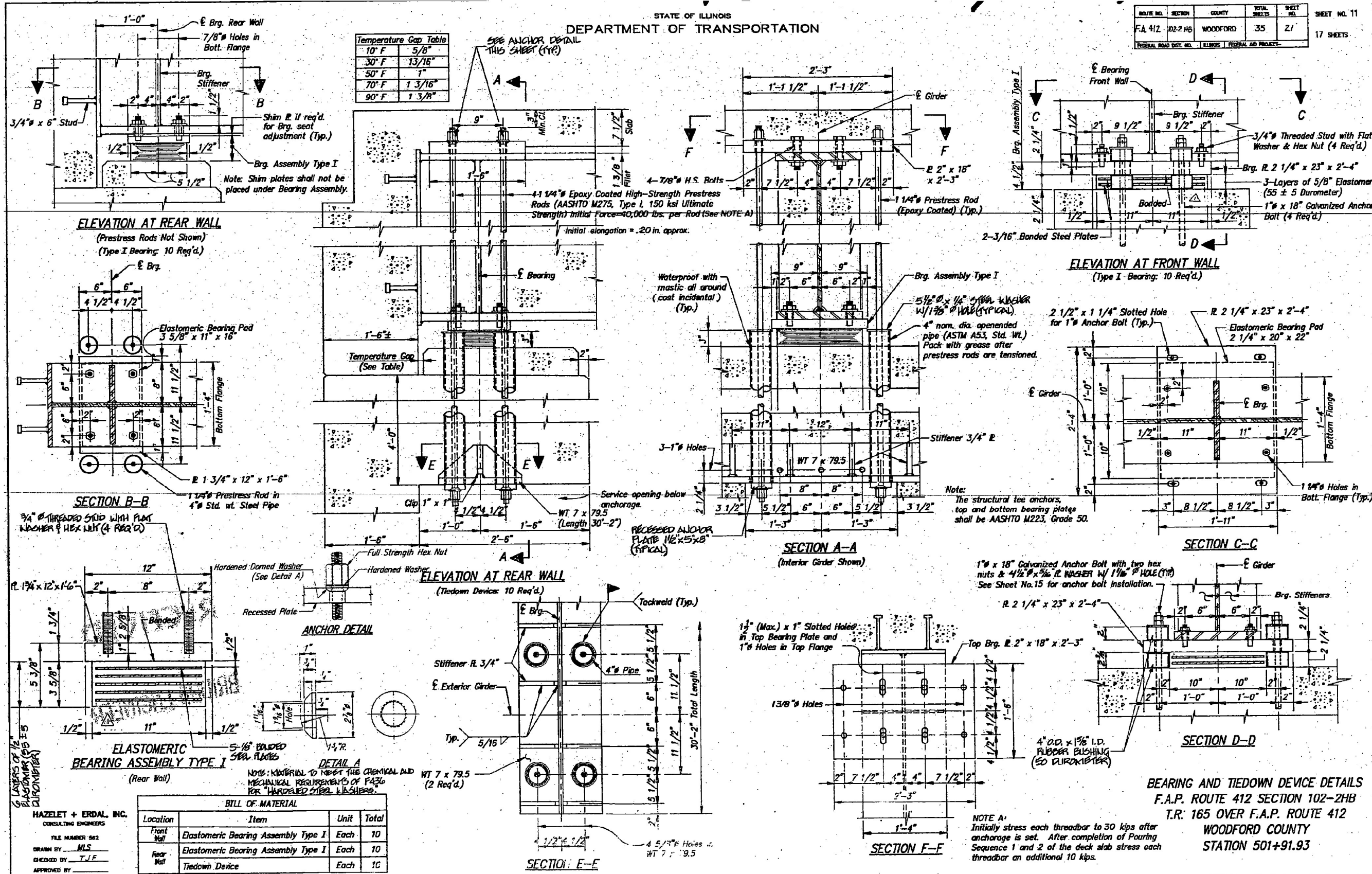
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	102(2HB-12HB)BP	WOODFORD	18	9
CONTRACT NO. 68G78				
ILLINOIS FED. AID PROJECT				

SN 102-0057 (TR 165 OVER I-39)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 11
FA 412	102-2 HB	WOODFORD	35	21	17 SHEETS
FEDERAL ROAD DIST. NO.	ILLINOIS	FEDERAL AID PROJECT			



FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION 1 - SN 102-0057
BEARING DETAILS

SCALE: none SHEET 7 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	102(2HB-12)HBP	WOODFORD	18	11
CONTRACT NO. 68G78			ILLINOIS FED. AID PROJECT	

SN 102-0054 (ROANOKE OVER I-39)

Bench Mark: USC & GS marker (designation Paola ECC) set in the top of a concrete post 3.65 miles north of El Paso. Elev. 728.01
Existing Structure: None

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.R.P. 412	102-2	WOODFORD	35	11
SHEET NO. 1 17 SHEETS				

DESIGN SPECIFICATIONS

AASHTO (1983) and 1984, 1985 & 1986 Interims with exceptions or modifications as indicated.

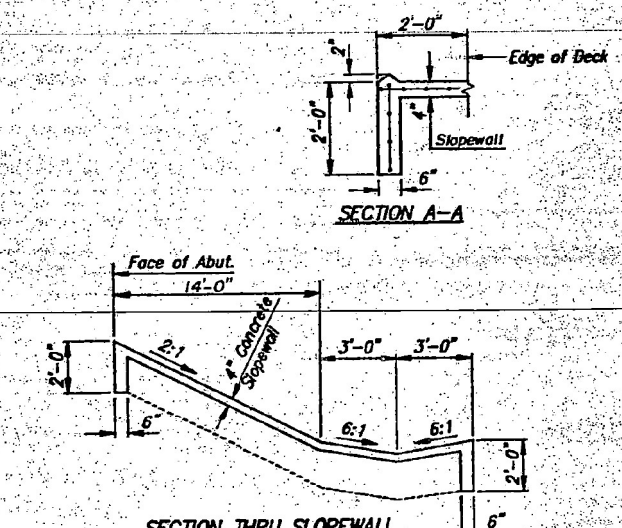
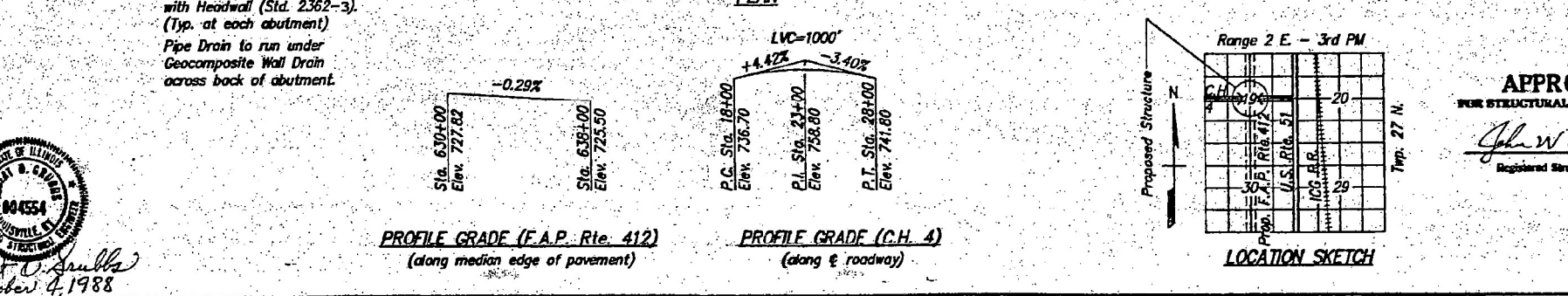
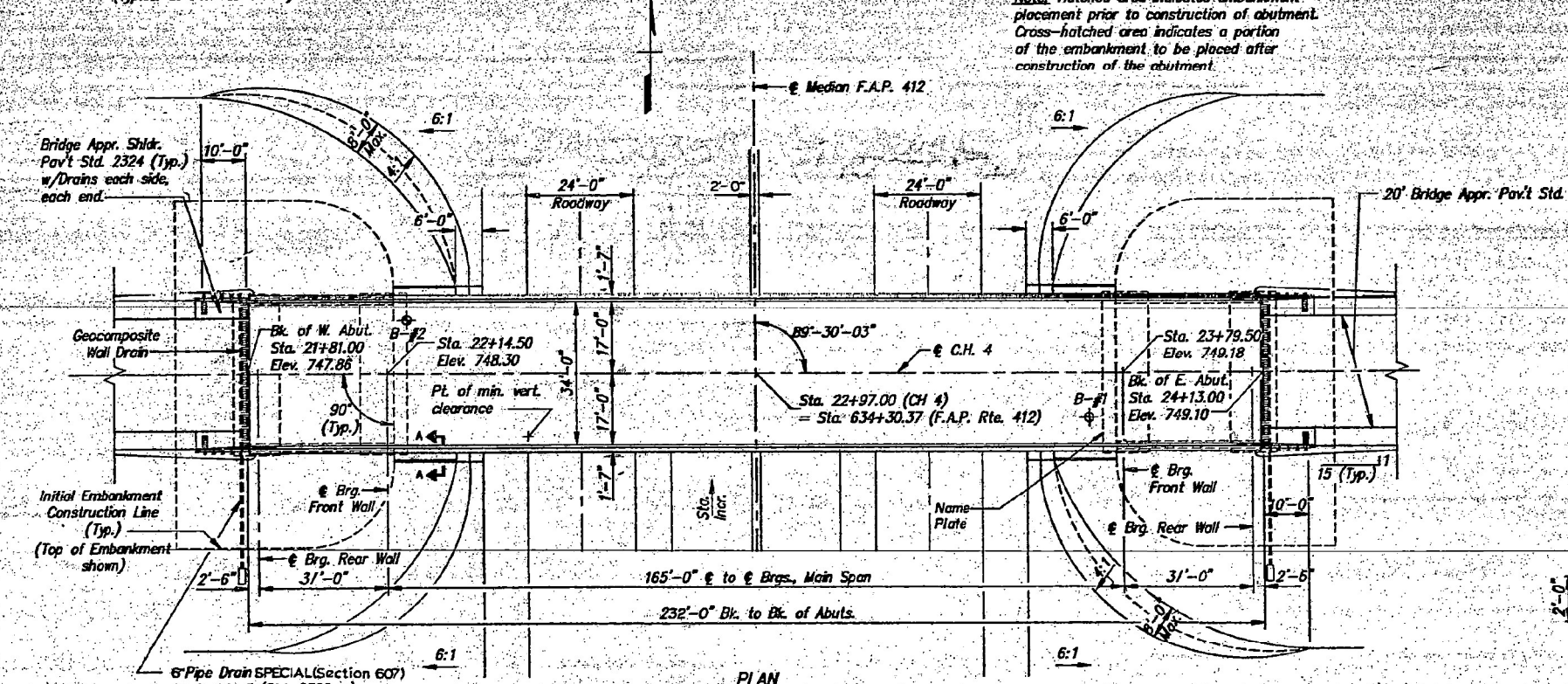
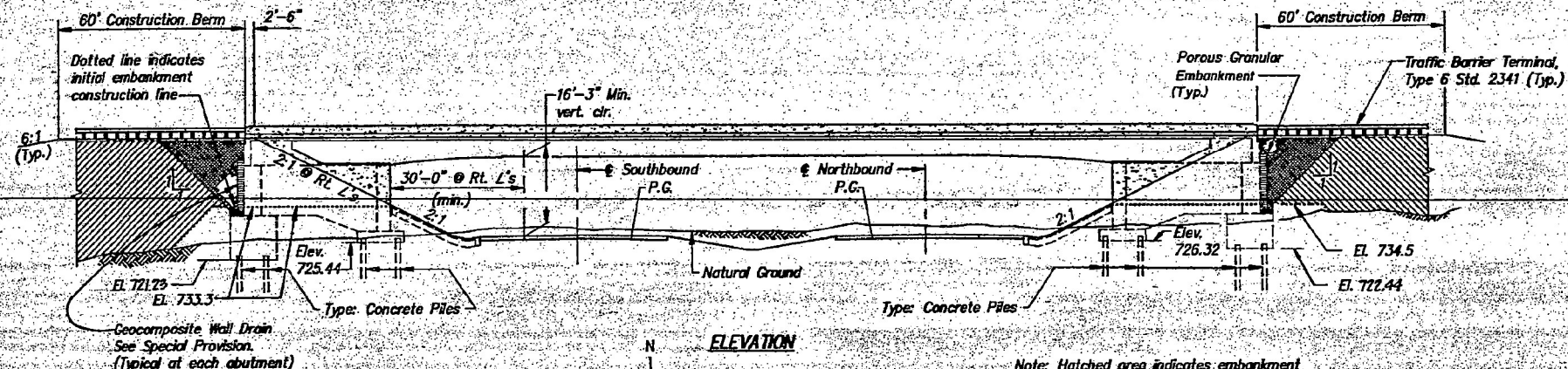
LOADING HS 20-44

Allow 25#/sq. ft. for future wearing surface.

DESIGN STRESSES

$f_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
 $f_y = 50,000$ psi (A223) Gr. 50 Structural Steel
 $f_y = 36,000$ psi (A183)

Max. range of temperature = 120F (-10° to 110° F)



APPROVED
FOR STRUCTURAL ADEQUACY ONLY
John W. Clark
Registered Structural Engineer

GENERAL PLAN
F.A.P. ROUTE 412 SECTION 102-2HB-1
C.H. 4 (Roanoke Road) OVER F.A.P. Rte. 412
WOODFORD COUNTY
STATION 634+30.37
STRUCTURE NO. 102-0054

HAZELET + ERDAL, INC.
CONSULTING ENGINEERS
FILE NUMBER: D.C.
DRAWN BY: J.P.F.
CHECKED BY: J.P.F.
APPROVED BY: [Signature]
October 4, 1988

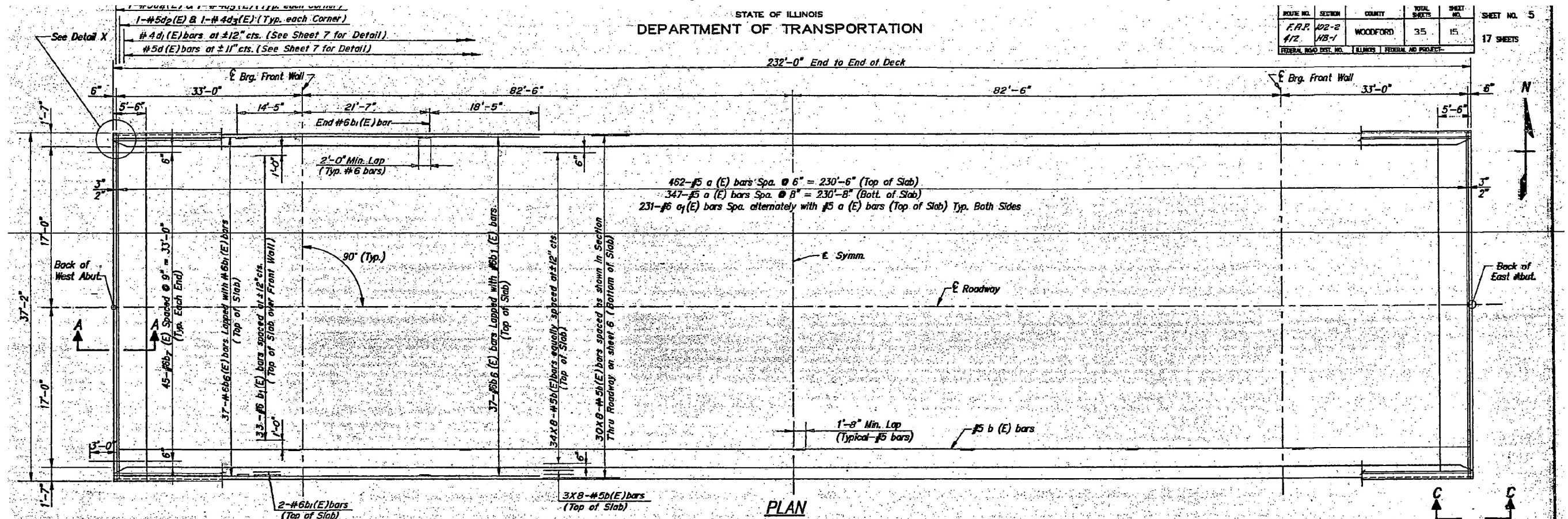
FOR INFORMATION ONLY

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PLOT DATE = 2/3/2022	CHECKED -	REVISED -		SCALE: none	SHEET 1 OF 7 SHEETS	STA.	TO STA.				
	DATE -	REVISED -									

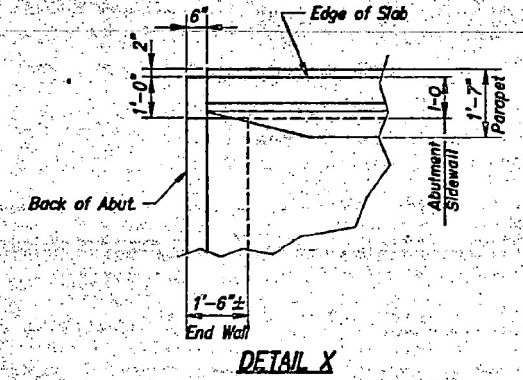
SN 102-0054 (ROANOKE OVER I-39)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 412	102-2 HB-1	WOODFORD	35	15
FEDERAL ROAD DIST. NO.	ILLINOIS	FEDERAL AID PROJECT		17 SHEETS



PLAN

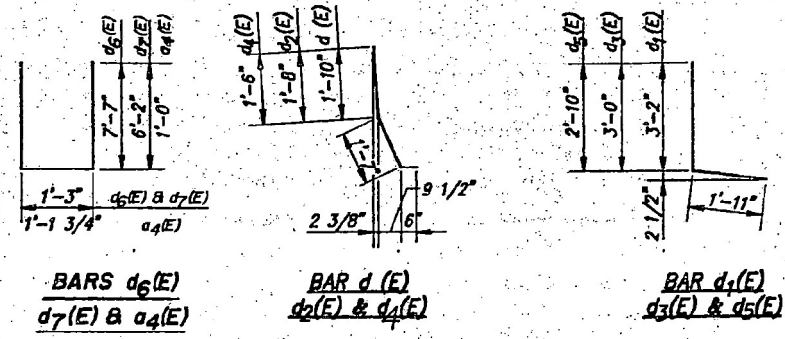


DETAIL X

NOTES:
 Bar designation thus - 40 x 6 - #5 b indicates 40 lines of bars with 6 lengths per line.
 All edges shall have 3/4" Chamfers.
 For Section A-A, See Sheet 6
 Reinforcement bars designated (E) shall be epoxy coated.
 For View C-C, See Sheet 7
 Work this Sheet with Sheets 6 and 7

BILL OF MATERIAL

Bar	N ^o	Size	Length	Shape
a (E)	809	#5	35'-0"	—
a ₁ (E)	462	#6	4'-0"	—
b (E)	560	#5	30'-4"	—
b ₁ (E)	74	#6	36'-0"	—
b ₆ (E)	148	#6	20'-5"	—
b ₇ (E)	90	#6	6'-0"	—
d (E)	496	#5	3'-10"	⌒
d ₁ (E)	468	#4	5'-0"	⌒
d ₂ (E)	4	#5	3'-8"	⌒
d ₃ (E)	4	#4	4'-10"	⌒
d ₄ (E)	4	#5	3'-6"	⌒
d ₅ (E)	4	#4	4'-8"	⌒
a ₂ (E)	20	#5	34'-7"	—
a ₃ (E)	8	#5	33'-7"	—
a ₄ (E)	28	#5	3'-1"	U
a ₅ (E)	66	#5	16'-4"	U
d ₇ (E)	4	#5	13'-6"	U
Reinforcement Bars (Epoxy Coated)		Lbs.	65,250	
Class X Concrete - Superstr.		Cu. Yds.	240.5	



HAZELET + ERDAL, INC.
CONSULTING ENGINEERS
 FILE NUMBER 562
 DRAWN BY M.S.
 CHECKED BY ABR & RL
 APPROVED BY P.O.G.

DECK REINFORCEMENT
 F.A.P. ROUTE 412 SECTION 102-2HB-1
 C.H. 4 (Roanoke Road) OVER F.A.P. Rte. 412
 WOODFORD COUNTY
 STATION 634+30.37

FOR INFORMATION ONLY

USER NAME = \$USERS	DESIGNED -	REVISED -
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	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION 2 - SN 102-0054
SUPERSTRUCTURE PLAN

SCALE: none SHEET 2 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	102(2HB-1)2HB1BP	WOODFORD	18	13
CONTRACT NO. 68G78			ILLINOIS FED. AID PROJECT	

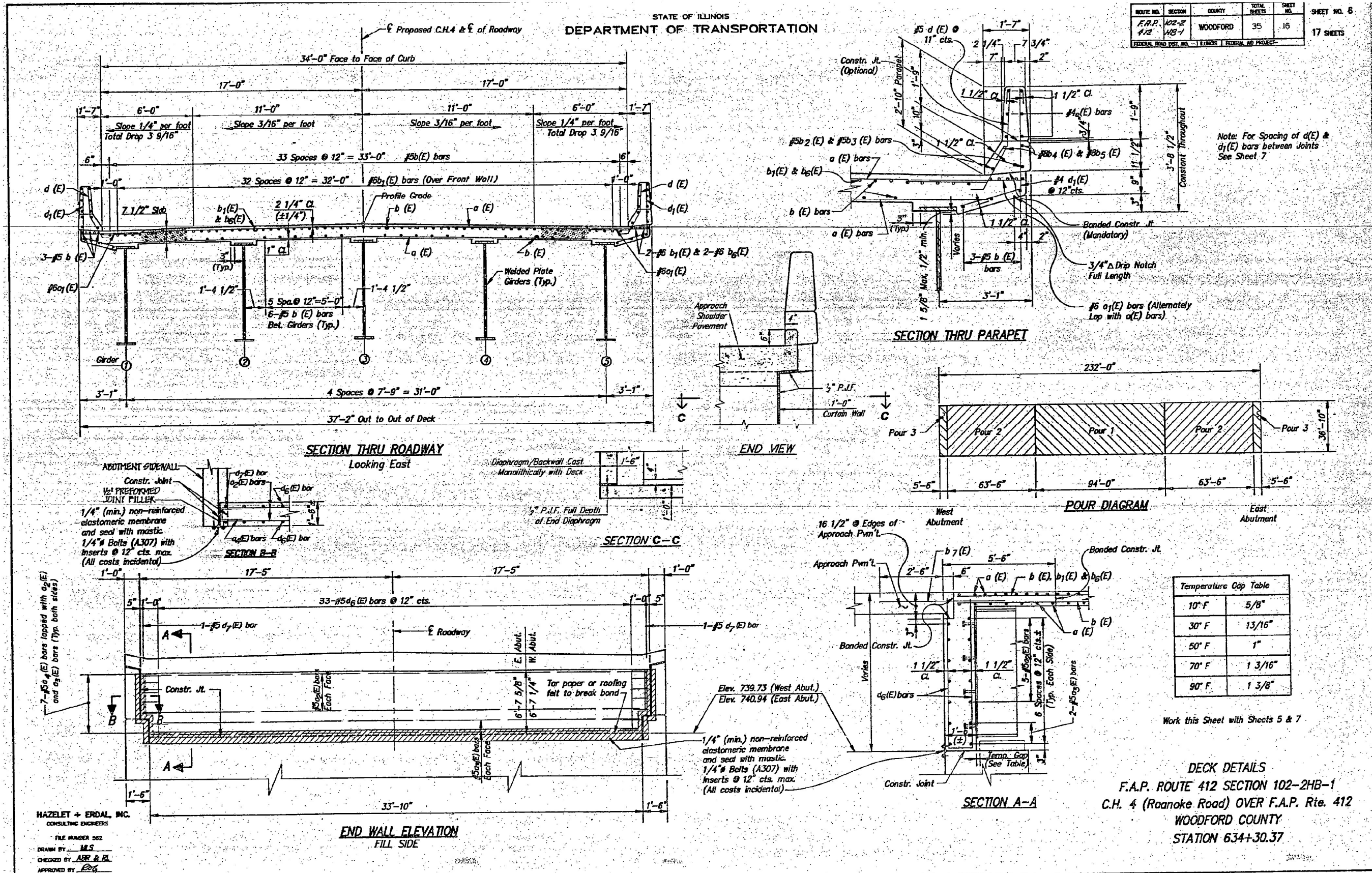
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SN 102-0054 (ROANOKE OVER I-39)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 412	102-2 HB-1	WOODFORD	35	16
FEDERAL ROAD DIST. NO. - 1 BRIDGE FEDERAL AID PROJECT -				

SHEET NO. 6
17 SHEETS



10° F	5/8"
30° F	13/16"
50° F	1"
70° F	1 3/16"
90° F	1 3/8"

DECK DETAILS
F.A.P. ROUTE 412 SECTION 102-2HB-1
C.H. 4 (Roanoke Road) OVER F.A.P. Rte. 412
WOODFORD COUNTY
STATION 634+30.37

HAZELET + ERDAL, INC.
CONSULTING ENGINEERS
FILE NUMBER 562
DRAWN BY: M.S.
CHECKED BY: ABR & BL
APPROVED BY: [Signature]

FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION 2 - SN 102-0054
SUPERSTRUCTURE DETAILS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	102(2HB-1)2HB-1	WOODFORD	18	14
CONTRACT NO. 68G78				

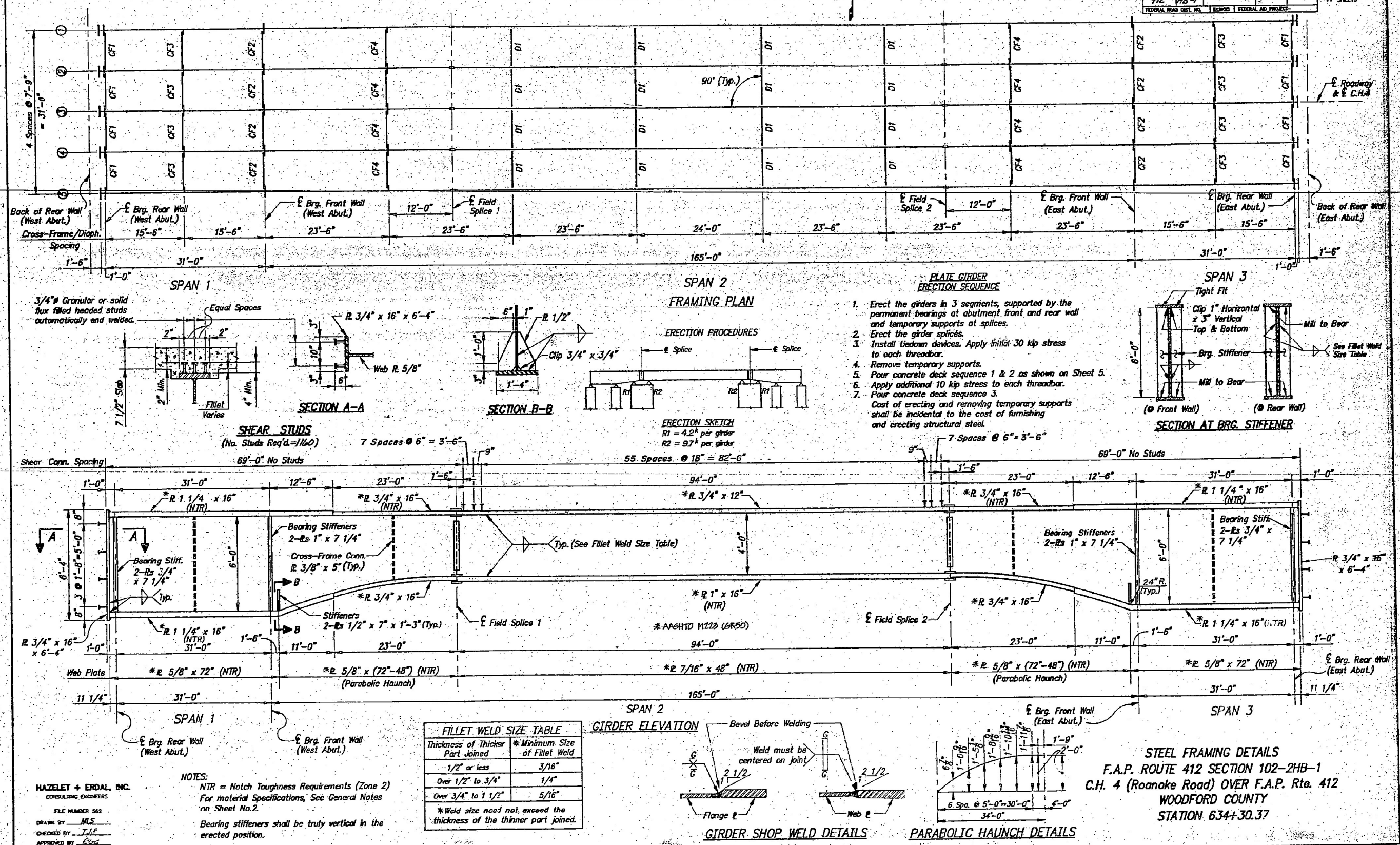
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ILLINOIS FED. AID PROJECT

SN 102-0054 (ROANOKE OVER I-39)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 412	102-2HB-1	WOODFORD	35	18
FEDERAL ROAD DIST. NO.		FEDERAL AID PROJECT		



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	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION 2 - SN 102-0054
FRAMING PLAN

SCALE: none SHEET 4 OF 7 SHEETS STA. TO STA.

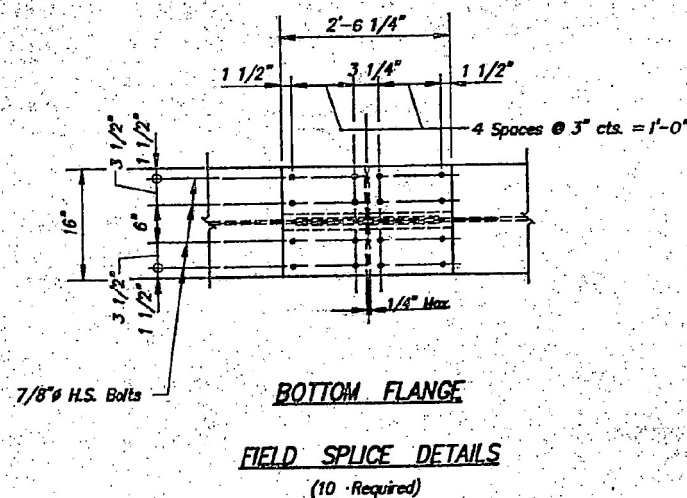
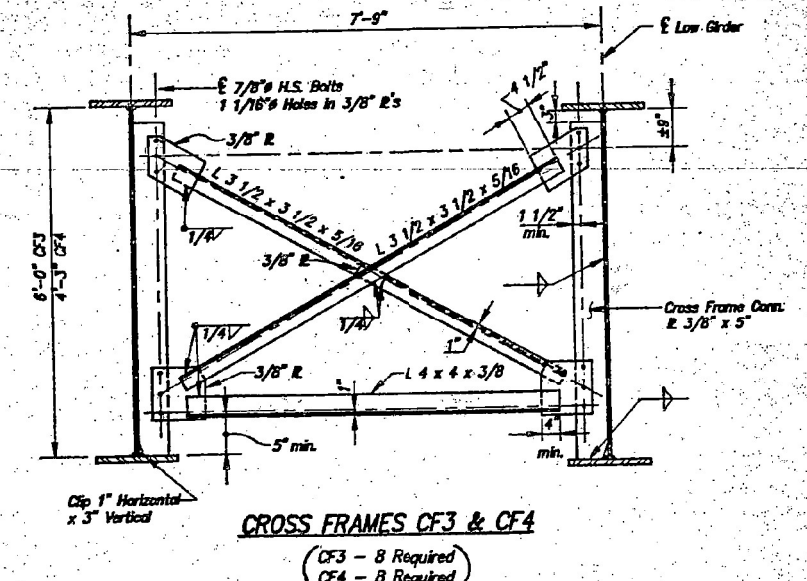
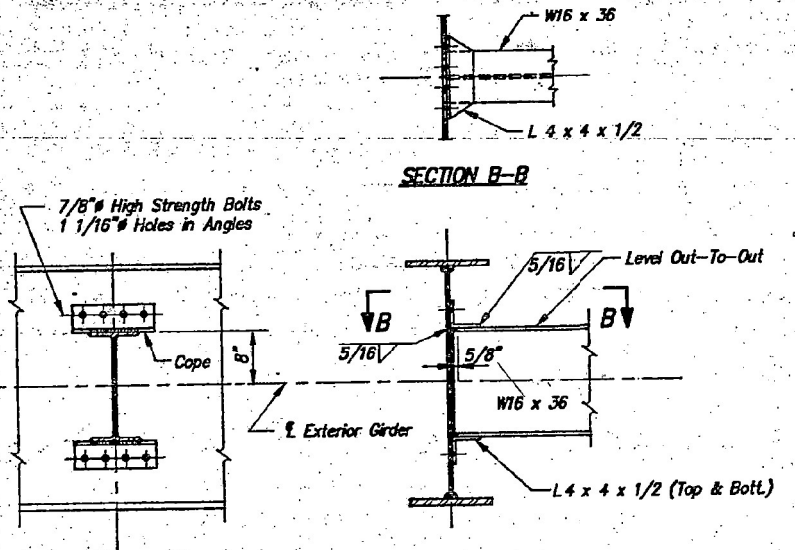
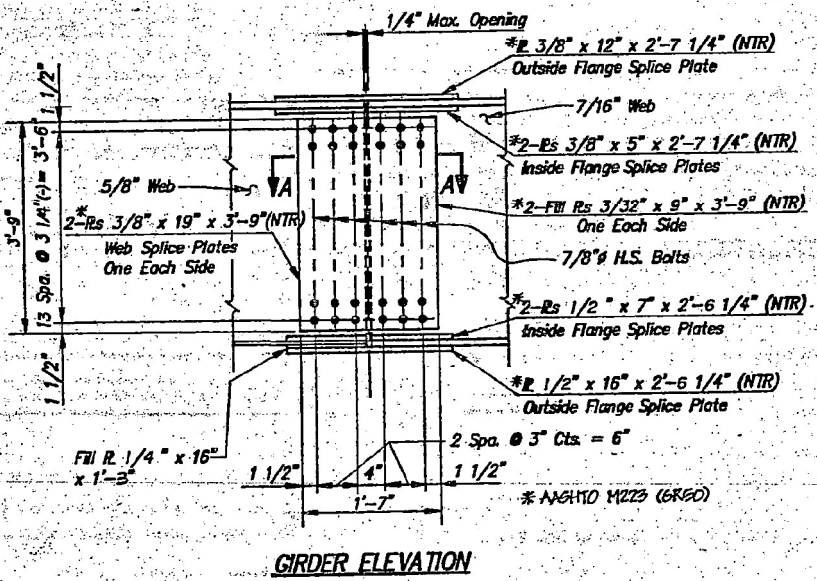
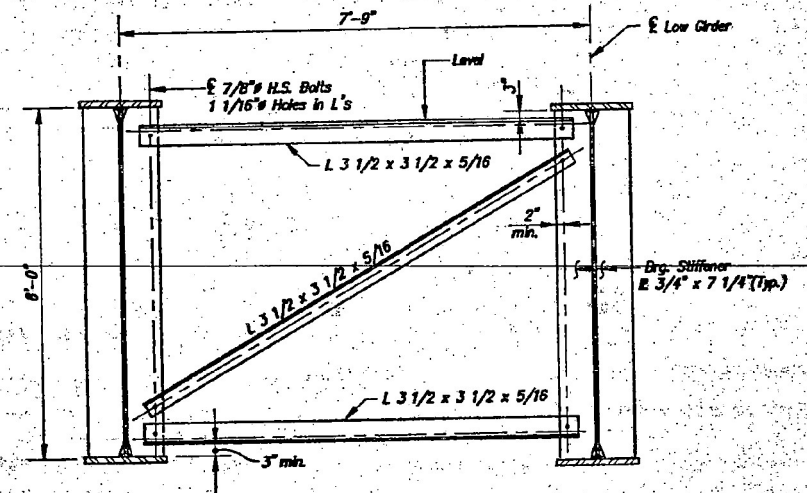
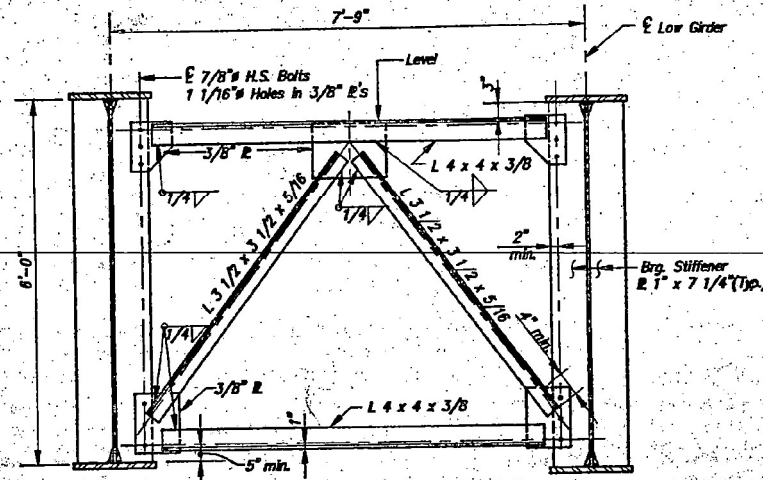
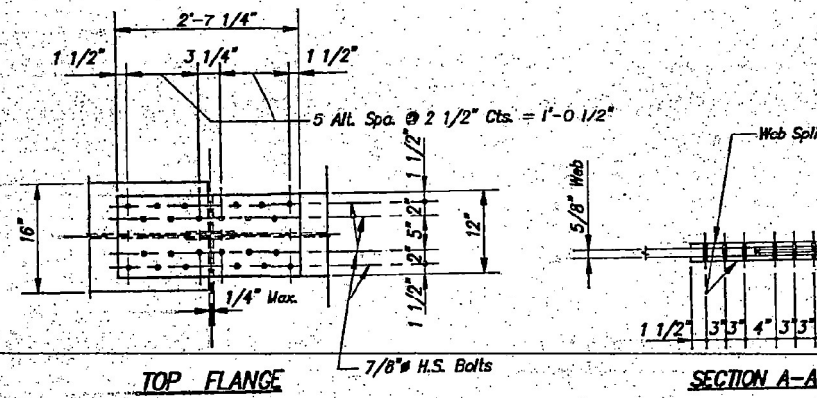
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39	102(2HB-1)2HB1P	WOODFORD	18	15
CONTRACT NO. 68G78			ILLINOIS FED. AID PROJECT	

SN 102-0054 (ROANOKE OVER I-39)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 412	102-2 HB-1	WOODFORD	35	19
FEDERAL ROAD DIST. NO. 1 ILLINOIS FEDERAL AID PROJECT				

SHEET NO. 9
17 SHEETS



NOTES:
NTR = Notch Toughness Requirements (Zone 2)
Cross Frame CF1 may be removed after pours 1 1/2 are complete.
Two hardened washers shall be required over all 1 1/16" holes.
For material Specifications, See General Notes on Sheet No.2

STEEL FRAMING DETAILS
F.A.P. ROUTE 412 SECTION 102-2HB-1
C.H. 4 (Roanoke Road) OVER F.A.P. Rte. 412
WOODFORD COUNTY
STATION 634+30.37

HAZELET + ERDAL, INC.
CONSULTING ENGINEERS
FILE NUMBER 542
DRAWN BY: M.S.
CHECKED BY: T.J.F.

FOR INFORMATION ONLY

USER NAME = \$USERS	DESIGNED -	REVISED -
PLOT SCALE = \$SCALES	DRAWN -	REVISED -
PLOT DATE = 2/3/2022	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION 2 - SN 102-0054	
STRUCTURAL STEEL DETAILS	
SCALE: none	SHEET 5 OF 7 SHEETS STA. TO STA.

F.A.I. RTE. 39	SECTION 102(2HB-1)2HB1BP	COUNTY WOODFORD	TOTAL SHEETS 18	SHEET NO. 16
CONTRACT NO. 68G78				
ILLINOIS FED. AID PROJECT				

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SN 102-0054 (ROANOKE OVER I-39)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 412	412-2	WOODFORD	35	20
FEDERAL ROAD DIST. NO.		ILLINOIS FEDERAL AID PROJECT		

17 SHEETS

	Unit	Front Wall	0.5 Sp.2
I_s	In^4	71,699	17,877
$I_s (1n)$	In^4		46,778
$I_s (3n)$	In^4		33,736
S_s	In^3	1,905	825
$S_c (1n)$	In^3		1,139
$S_c (3n)$	In^3		1,042
Q_{nc}	K/FL	1.426	0.943
Q_c	K/FL		0.350
M_R	FL-K	-3,128	866
M_{cR}	FL-K		444
M_L	FL-K	-1,273	961
M_{imp}	FL-K	-220	166
$5/3 (M_L + I)$	FL-K	-2,488	1,878
M_a	FL-K	-7,301	4,144
M_u	FL-K		
$f_s @ non-comp$	Ksi	19.7	12.6
$f_s @ comp.$	Ksi		5.1
$f_s 5/3 (L + I)$	Ksi	15.7	19.8
$f_s (Overload)$	Ksi	35.4	37.5
$f_s (Total)$	Ksi	46.0	48.8
VR	K		47.5

	Unit	Rear Wall		Front Wall
		Maximum ①	Minimum ②	
R_R	K	-58.5	-67.8	232.0
R_L	K	38.3	-25.6 ③	99.7
R_{imp}	K	11.5	-4.4 ③	17.2
R_{Total}	K	-8.7	-97.8	348.9

Girder	E Brg. West Abutment		Splice 1 **	Splice 2 **	E Brg. East Abutment	
	Rear Wall *	Front Wall *			Front Wall *	Rear Wall *
1	746.780	747.225	747.724	748.225	748.105	747.991
2	746.925	747.370	747.869	748.370	748.250	748.136
3	747.046	747.491	747.990	748.491	748.371	748.257
4	746.925	747.370	747.869	748.370	748.250	748.136
5	746.780	747.225	747.724	748.225	748.105	747.991

(-) INDICATES UPLIFT
① MAXIMUM DOWNWARD
② MINIMUM DOWNWARD OR MAXIMUM UPLIFT
③ CALCULATED IN ACCORDANCE WITH "UPLIFT AT END REACTIONS" PAGE III.2 OF THE BRIDGE MANUAL.

Notes:
Elevations marked (*) are final top of web elevations to be used in computing the bearing's seat elevations. Elevations marked (**) are theoretical top of web elevations before dead load deflection (= 2 1/16") due to weight of slab and steel.

NOTES:

I_s & S_s are the moment of inertia and section modulus of the steel section used in computing f_s due to the dead load and live load moments on non-composite section.

$I_c (1n)$ & $S_c (1n)$ are the moment of inertia and section modulus of the composite section based on 1n modular ratio, and is used in computing f_s due to live load moment on composite section.

$I_c (3n)$ & $S_c (3n)$ are the moment of inertia and section modulus of the composite section based on 3n modular ratio, and is used in computing f_s due to dead load moment on composite section.

Q_{nc} & Q_c are the uniform dead loads on non-composite section and composite section.

M_R & M_{cR} are moments due to non-composite dead load and composite dead load.

M_L & M_{imp} are moments due to live load and live load impact.

M_a is the applied moment due to $1.3[M_R + M_{cR} + 5/3 (M_L + I)]$

M_u is the full plastic moment for compact braced section.

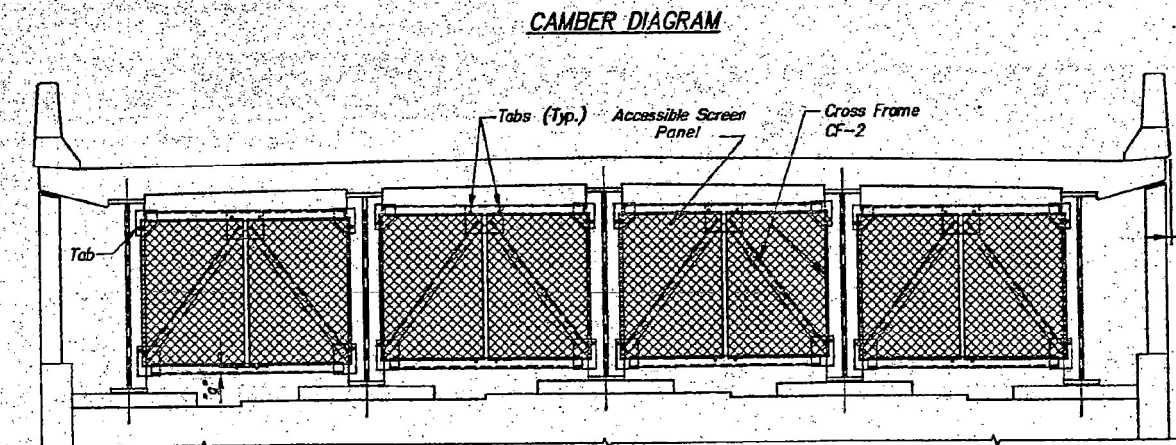
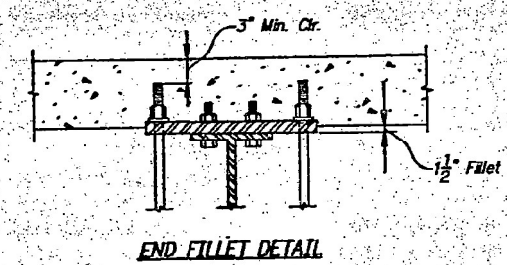
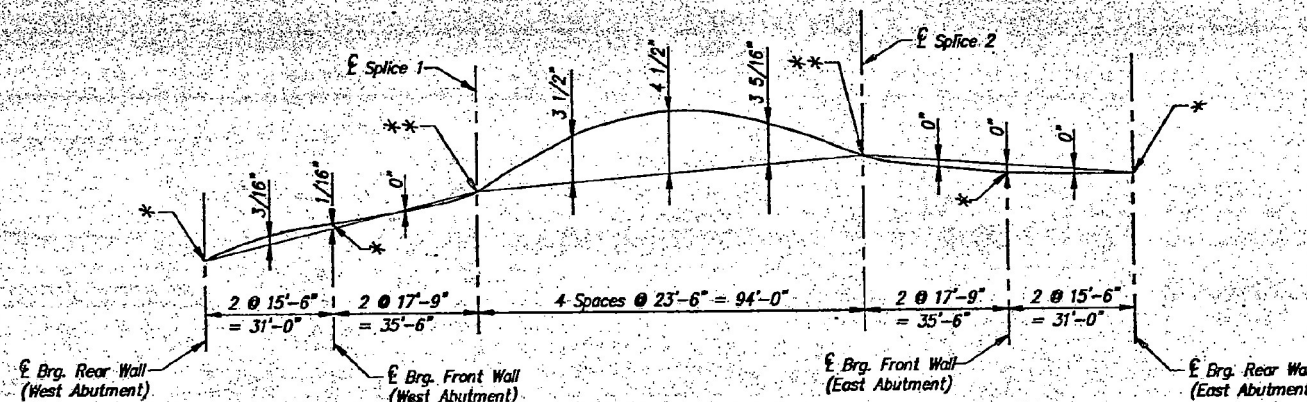
$f_s (Overload)$ is the sum of the stresses due to $M_R + M_{cR} + 5/3 (M_L + I)$

$f_s (Total)$ is the sum of the stresses due to $1.3[M_R + M_{cR} + 5/3 (M_L + I)]$

VR is the maximum $L + Impact$ Shear range in positive moment area used in designing shear connectors.

$R_R @$ Rear Wall includes the weight of End Wall concrete. The allowance for future wearing surfaces is not included in the maximum reaction.

HAZELT + ERDAL, INC.
CONSULTING ENGINEERS
FILE NUMBER 502
DRAWN BY M.S. & DRH
CHECKED BY T.J.F.
APPROVED BY P.C.



STANDARD CONSTRUCTION:

- MESH: 1 1/2" Diamond
- WIRE: No. 10 Washburn & Moen Gauge (Includes Coating)
- FRAME: 3/8" Round Rod

-All materials to be galvanized.
-Two wire-meshed frames shall be provided for each Screen Panel.
-Four tabs shall be provided for each wire-meshed frame.

ERECTION SEQUENCE FOR THE SCREEN PANELS:

- PERMANENT
 - Field connect the two wire-meshed frames with a clip-type connection.
 - Field drill holes at the connection plates and angles of the cross frames to match the location of the tabs.
 - Use high strength bolts.
 - The bolts shall be drawn up tight and the threads burred at the face of the nut with a pointed tool.
- ACCESSIBLE
Sequence similar to Permanent Screen Panels with exception to providing a clip-type connection.

TYPICAL SCREEN PANEL @ ABUTMENT FRONT WALL (8 Required)
Eight wire-meshed frames shall be required at each abutment

NOTES:

- The frame for screen panels shall be 3/8-inch rod and shall be attached to the structural steel cross frame with tabs.
- "g" indicates standard gage for angles. Clips shall be provided for Permanent Screen Panels only.
- One Accessible Screen Panel shall be provided at each Front Abutment.
- Provide hinged tabs at connections to the connection plates for the Accessible Screen Panel only.

STEEL FRAMING AND MISCELLANEOUS DETAILS
F.A.P. ROUTE 412 SECTION 102-2HB-1
C.H. 4 (Roanoke Road) OVER F.A.P. Rte. 412
WOODFORD COUNTY
STATION 634+30.37

REVISED BY HLC 6-10-81

FOR INFORMATION ONLY

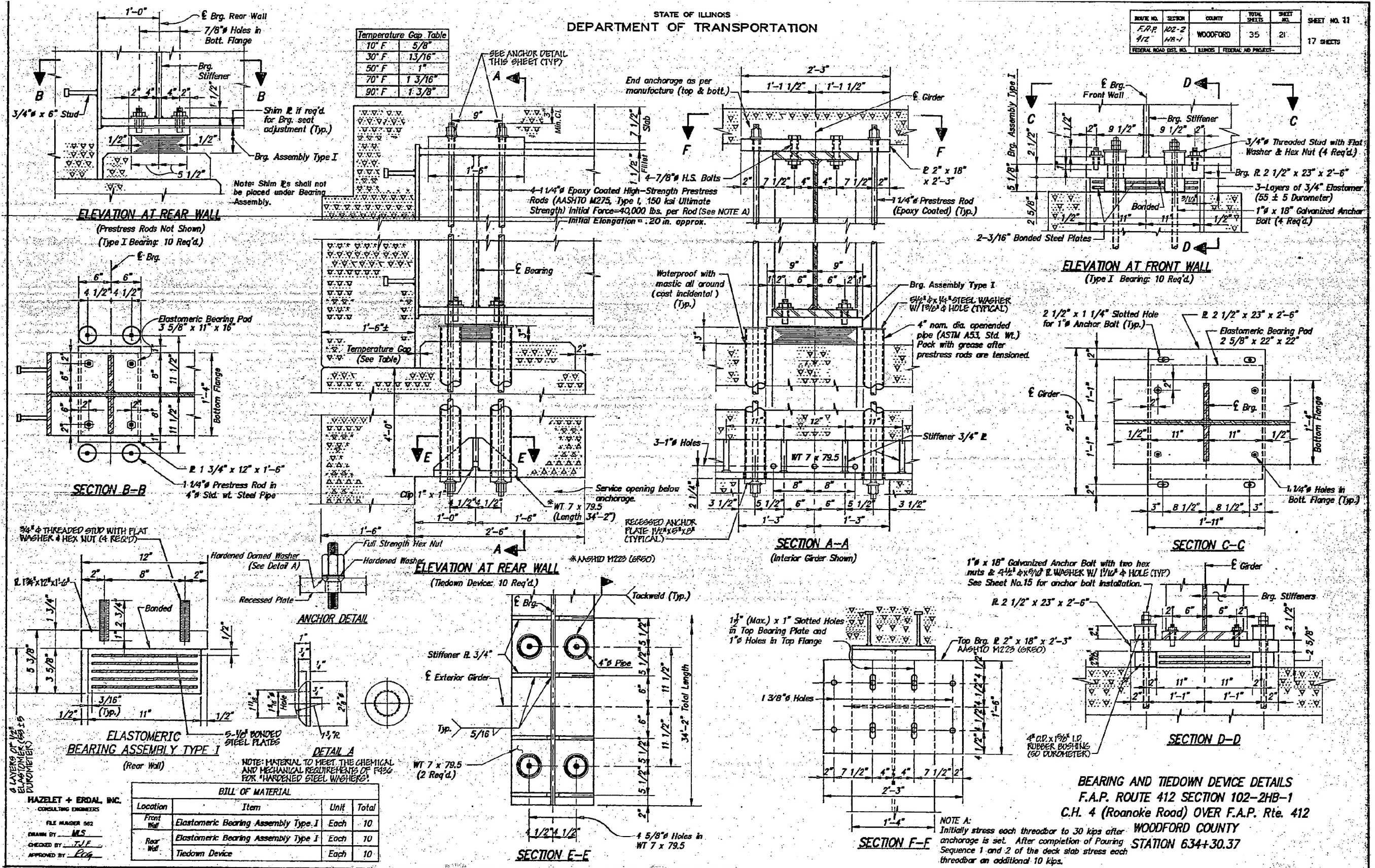
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SN 102-0054 (ROANOKE OVER I-39)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 412	102-2	WOODFORD	35	21
FEDERAL ROAD DIST. NO. ILLINOIS FEDERAL AID PROJECT			17 SHEETS	



FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION 2 - SN 102-0054
BEARING DETAILS

SCALE: none SHEET 7 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	102(2HB-12HB)BP	WOODFORD	18	18
CONTRACT NO. 68G78				

ILLINOIS FED. AID PROJECT