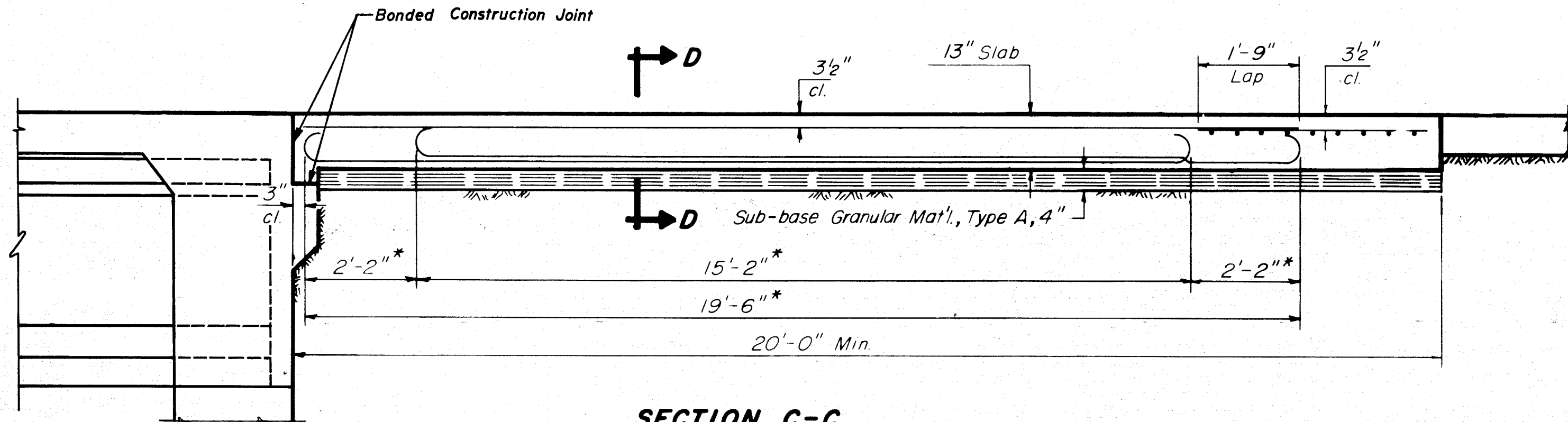
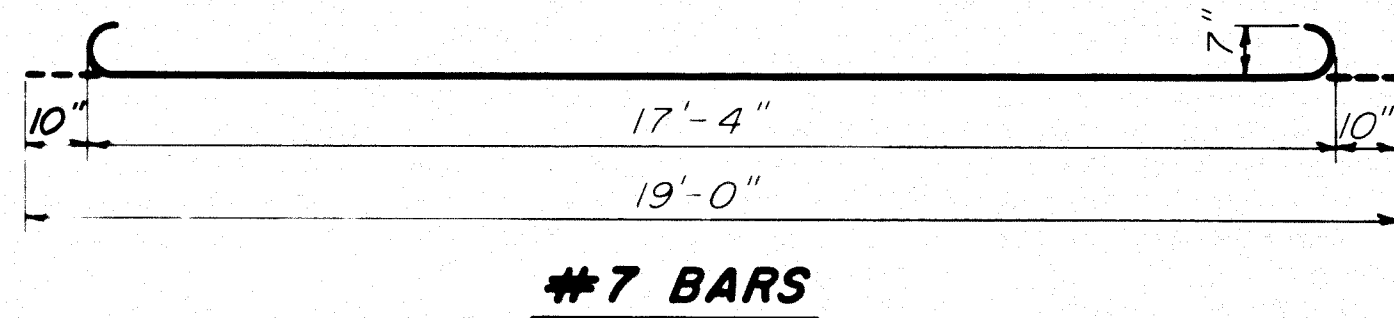
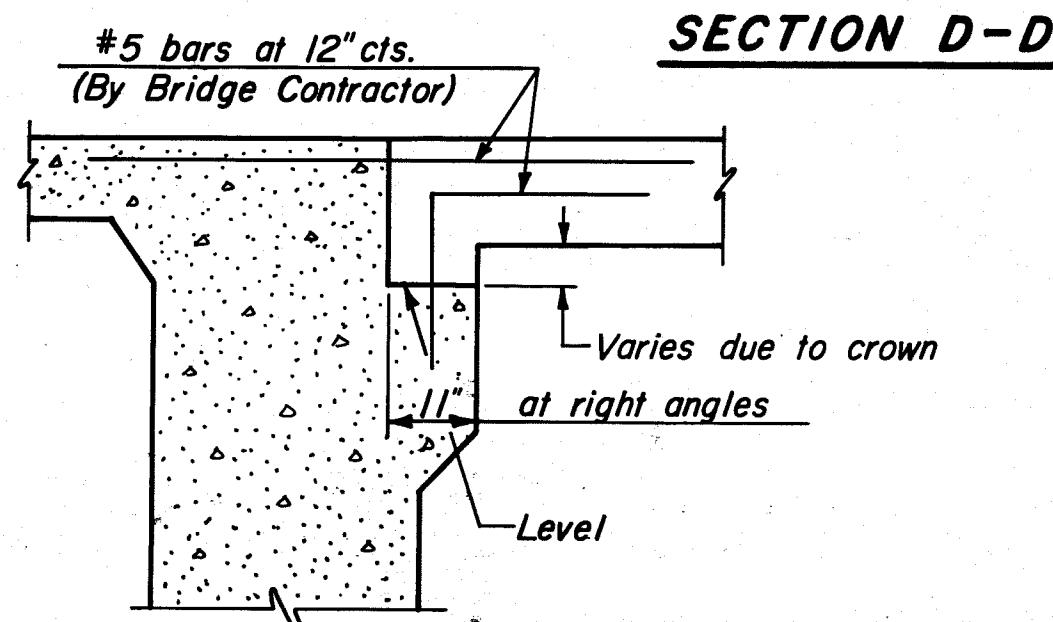
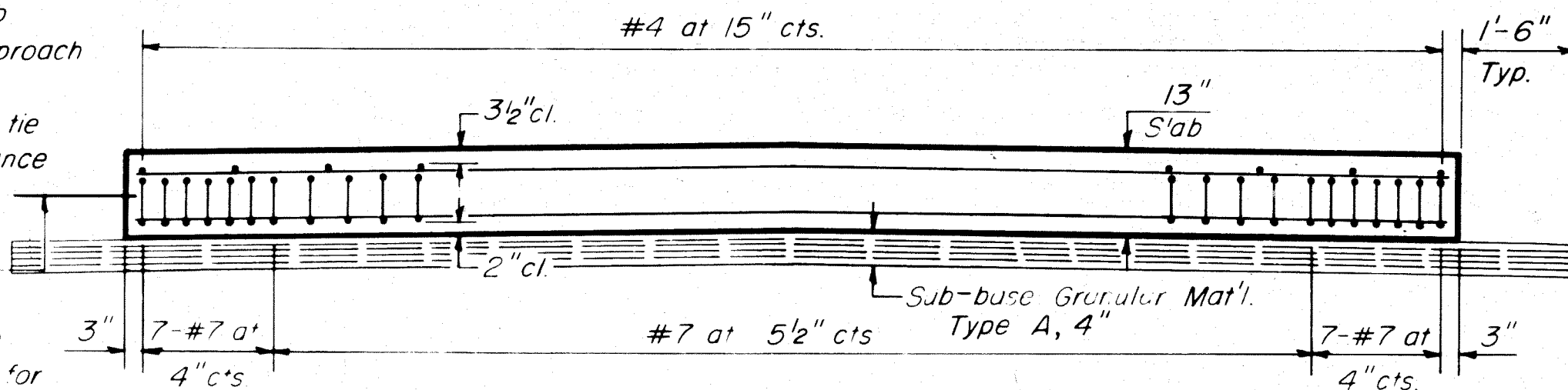




SECTION C-C
* Stagger alternate #7 bars as shown on plan - full width.



When the road plans show curb and gutter, gutter, or bridge approach shoulder pavement adjacent to approach slabs, place 1/2" ϕ steel tie bars at 2'-6" centers in accordance with the detail for Bulkhead Longitudinal Construction Joint shown on Standard 2323. Cost of the tie bars will be included in the contract unit price for the adjacent item. Transitions for curb and gutter or gutter shall be as shown on the plans.

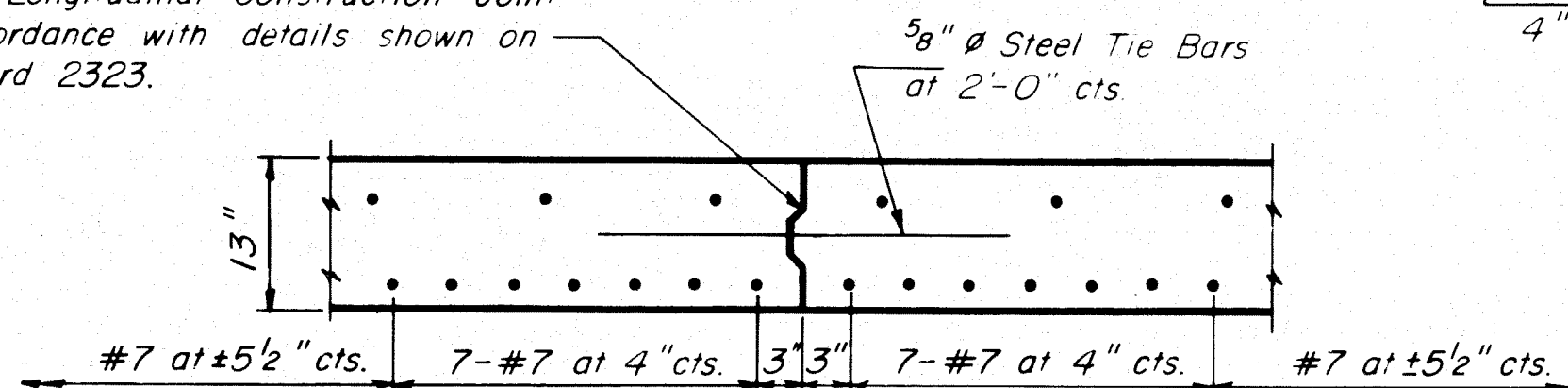


SECTION E-E

Notes:

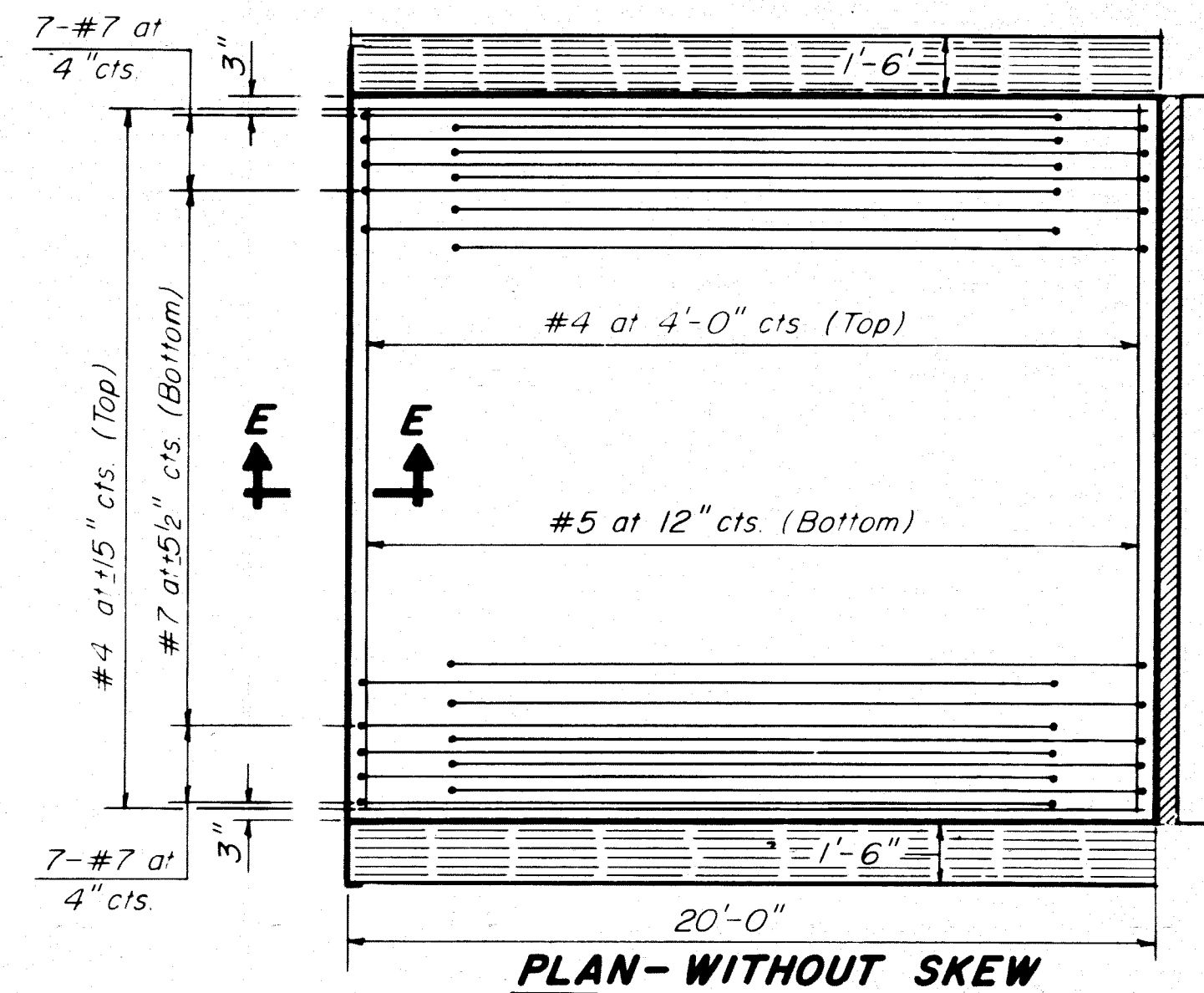
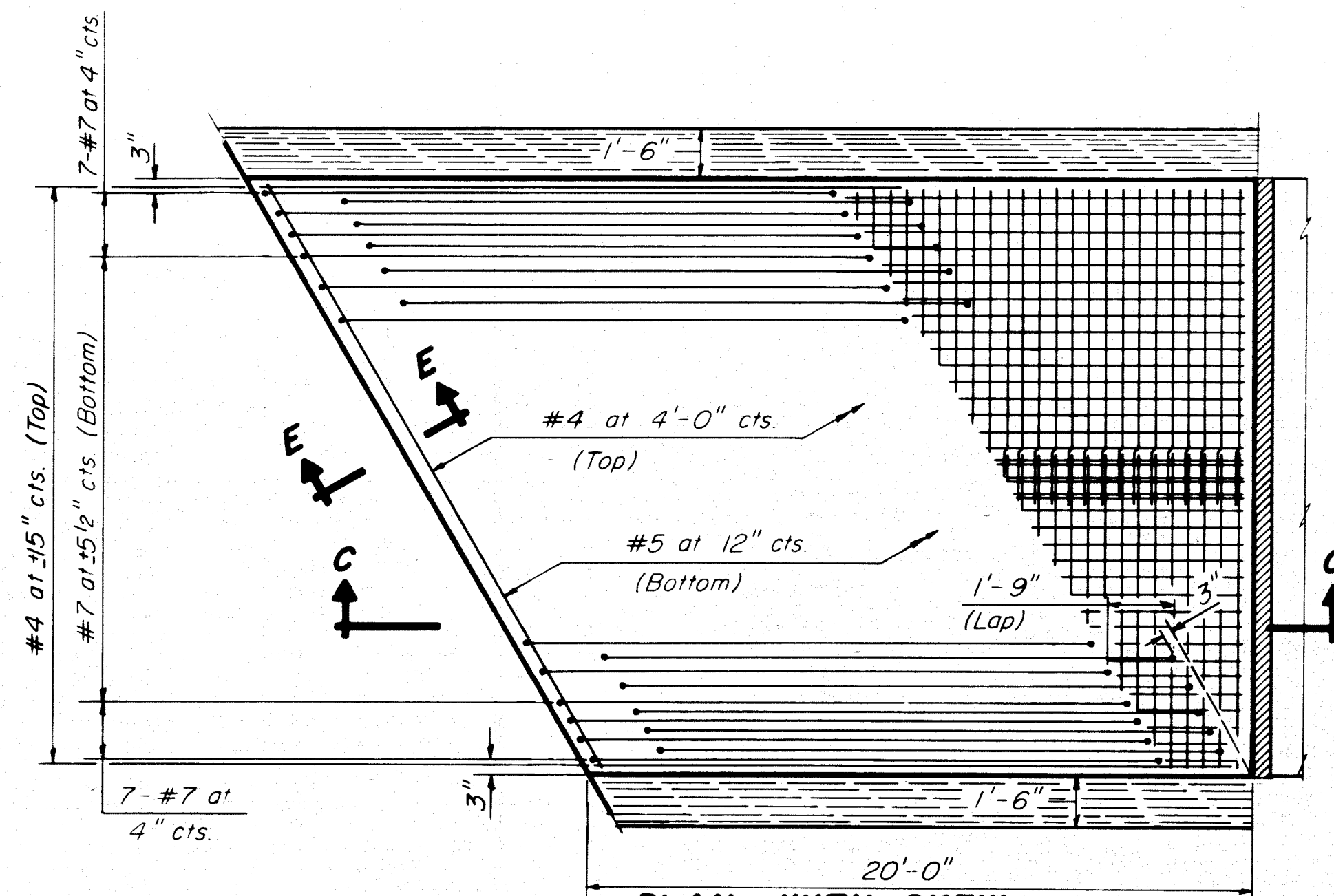
For skews of less than 10° omit wire fabric. For skews of 10° or more use Welded Wire Fabric, 6"x6"-W5.5 x W5.5, placed 3/2" below top of slab. Expanded Metal weighing not less than 78 Pounds per 100 Sq. Ft. or a welded bar mat weighing not less than 78 Pounds per 100 Sq. Ft. having members of equal size in both directions and spaced not over 8" apart may be used instead of the Welded Wire Fabric, 6"x6"-W5.5 x W5.5, provided the expanded metal or bar mat is furnished at no additional cost to the State. Reinforcement bars shall conform to the requirements of A.A.S.H.T.O. M. 31 or M. 53, Grade 60.

Keyed Longitudinal Construction Joint in accordance with details shown on Standard 2323.



OPTIONAL LONGITUDINAL CONSTRUCTION JOINT

As approved by the Engineer, the Contractor may elect to reduce the widths of pour by use of the Optional Longitudinal Construction Joint shown. Joints shall be located at the edge of a traffic lane.



GENERAL NOTES

The cost of tie bars, sub-base welded wire fabric and bituminous prime when required shall be considered as included in the unit cost of the Bridge Approach Pavement. (Special)

DESIGN STRESSES

$f_y = 60,000$ p.s.i.
 $f'_c = 3500$ psi
 $n = 8.5$

Width of Bridge Approach Slab shall be determined before the reinforcement bars are fabricated.

BRIDGE APPROACH PAVEMENT (SPECIAL)

Sheet 1 of 2

Note: The notation for the number of bars given as "4 x 2" indicates 4 lines of bars with 2 lengths per line. Min. bar lap = 1'-3"

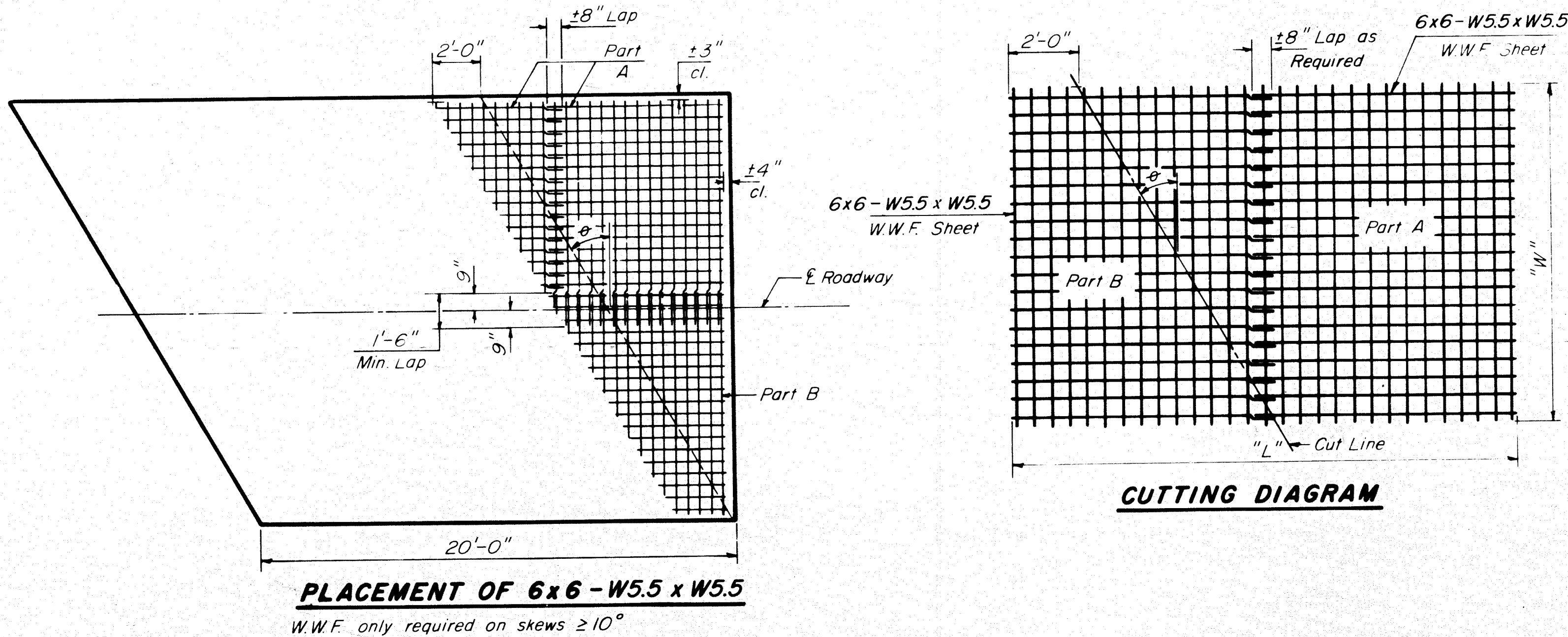
Skew Angle Degrees	Bottom Reinforcement			Top Reinforcement			Reinforcement (Total Weight) (Pounds)	Slab Area (Sq Yds.)	6x6-W5.5xW5.5 W.W.F.	
	Transverse #5		Longitudinal #7 No. Required	Transverse #4		Longitudinal #4 No. Required			Dimensions L (ft.)xW(ft)	Area* (Sq Yds.)
	No.	Length		No.	Length					
18'-0" PAVEMENT										
0	20	17'-6"	7 (Each Edge Beam) + 29 (Slab) at 5 1/2' cts. - 19'-0" long Weight = 1670 Pounds	6	17'-6"	15 bars - 19'-6" long Weight = 195 Pounds	2300	40.0	—	—
5	20	17'-7"		6	17'-7"		2302	41.6	—	—
10	20	17'-9"		6	17'-9"		2306	43.2	7'-0"x 9'-6"	7.4
15	20	18'-1"		5	18'-1"		2303	44.8	8'-6"x 9'-6"	9.0
20	19	18'-8"		5	18'-8"		2297	46.6	10'-6"x 9'-6"	11.1
25	18	19'-4"		5	19'-4"		2292	48.4	12'-3"x 9'-6"	12.9
30	18	20'-3"		5	20'-3"		2313	50.4	14'-3"x 9'-6"	15.0
35	17	21'-4"		5	21'-4"		2315	52.6	16'-6"x 9'-6"	17.4
40	16	22'-10"		4	22'-10"		2307	55.1	19'-0"x 9'-6"	20.1
45	14	24'-9"		4	24'-9"		2293	58.0	21'-9"x 9'-6"	23.0
50	13	27'-3"		4	27'-3"		2308	61.5	25'-6"x 9'-6"	26.9
55	12x2	15'-9"	3x2	15'-9"	3x2	2322	65.7	29'-9"x 9'-6"	31.4	
60	10x2	18'-0"		15'-0"		2313	71.2	35'-3"x 9'-6"	37.2	
24'-0" PAVEMENT										
0	20	23'-6"	7 (Each Edge Beam) + 42 (Slab) at 5 1/2' cts. - 19'-0" long Weight = 2175 Pounds	6	23'-6"	20 bars - 19'-6" long Weight = 260 Pounds	3019	53.3	—	—
5	20	23'-7"		6	23'-7"		3021	56.1	—	—
10	20	23'-10"		6	23'-10"		3028	58.9	8'-0"x 12'-6"	11.1
15	20	24'-4"		5	24'-4"		3024	61.9	10'-3"x 12'-6"	14.2
20	19	25'-0"		5	25'-0"		3014	64.9	12'-6"x 12'-6"	17.4
25	18	25'-11"		5	25'-11"		3008	68.2	15'-0"x 12'-6"	20.8
30	18	27'-2"		5	27'-2"		3036	71.8	17'-9"x 12'-6"	24.7
35	17	28'-8"		5	28'-8"		3039	75.7	20'-9"x 12'-6"	28.8
40	16x2	16'-0"		4x2	16'-0"		3055	80.2	24'-0"x 12'-6"	33.3
45	14x2	17'-3"		4x2	17'-3"		3031	85.3	27'-6"x 12'-6"	38.2
50	13x2	18'-10"		4x2	18'-10"		3046	91.4	32'-9"x 12'-6"	45.5
55	12x2	21'-1"	3x2	21'-1"	3x2	3047	99.0	38'-3"x 12'-6"	53.1	
60	10x2	24'-0"		24'-0"		3032	108.7	45'-6"x 12'-6"	63.2	

*Area does not include 8" longitudinal laps.
W.W.F. = Welded Wire Fabric

Skew Angle Degrees	Bottom Reinforcement			Top Reinforcement			Reinforcement (Total Weight) (Pounds)	Slab Area (Sq.Yds.)	6x6-W5.5xW5.5 W.W.F.	
	Transverse #5		Longitudinal #7	Transverse #4		Longitudinal #4			Dimensions L(ft.)xW(ft.)	Area* (Sq.Yds.)
	No	Length		No	Length					
20'-0" PAVEMENT										
0	20	19'-6"	7 (Each Edge Beam) + 33 (Slab) at 5 1/2' cts - 19'-0" long Weight = 1825 Pounds	6	19'-6"	17 bars - 19'-6" long Weight = 221 Pounds	2531	44.4	—	—
5	20	19'-7"		6	19'-7"		2533	46.4	—	—
10	20	19'-10"		6	19'-10"		2539	48.4	7'3" x 10'6"	8.5
15	20	20'-2"		5	20'-2"		2534	50.4	9'3" x 10'6"	10.8
20	19	20'-9"		5	20'-9"		2527	52.5	11'0" x 10'6"	12.8
25	18	21'-6"		5	21'-6"		2521	54.8	13'0" x 10'6"	15.2
30	18	22'-6"		5	22'-6"		2544	57.3	15'3" x 10'6"	18.0
35	17	23'-10"		5	23'-10"		2548	60.0	17'9" x 10'6"	20.7
40	16	25'-5"		4	25'-5"		2538	63.1	20'6" x 10'6"	23.9
45	14	27'-7"		4	27'-7"		2522	66.7	23'9" x 10'6"	27.7
50	13x2	15'-9"		4x2	15'-9"		2557	70.9	27'6" x 10'6"	32.1
55	12x2	17'-8"	3x2	17'-8"	2558	76.2	32'3" x 10'6"	37.6		
60	10x2	20'-2"	3x2	20'-2"	2548	82.9	38'6" x 10'6"	44.9		
22'-0" PAVEMENT										
0	20	21'-6"	7 (Each Edge Beam) + 38 (Slab) at 5 1/2' cts - 19'-0" long Weight = 2019 Pounds	6	21'-6"	18 bars - 19'-6" long Weight = 234 Pounds	2788	48.9	—	—
5	20	21'-7"		6	21'-7"		2790	51.3	—	—
10	20	21'-10"		6	21'-10"		2796	53.6	7'6" x 11'6"	9.6
15	20	22'-3"		5	22'-3"		2791	56.1	9'6" x 11'6"	12.1
20	19	22'-10"		5	22'-10"		2783	58.7	11'9" x 11'6"	15.0
25	18	23'-9"		5	23'-9"		2778	61.4	14'0" x 11'6"	17.9
30	18	24'-10"		5	24'-10"		2802	64.4	16'3" x 11'6"	20.8
35	17	26'-3"		5	26'-3"		2806	67.7	19'0" x 11'6"	24.3
40	16	28'-1"		4	28'-1"		2796	71.5	22'3" x 11'6"	28.4
45	14x2	15'-10"		4x2	15'-10"		2800	75.8	25'9" x 11'6"	32.9
50	13x2	17'-4"		4x2	17'-4"		2816	80.9	30'0" x 11'6"	38.3
55	12x2	19'-4"	3x2	19'-4"	2814	87.3	35'0" x 11'6"	44.7		
60	10x2	22'-2"	3x2	22'-2"	2804	95.5	41'9" x 11'6"	53.3		

Skew Angle Degrees	Bottom Reinforcement			Top Reinforcement			Reinforcement (Total Weight) (Pounds)	Slab Area (Sq. Yds.)	6x6-W5.5 x W5.5 W.W.F.	
	Transverse #5		Longitudinal #7 No. Required	Transverse #4		Longitudinal #4 No. Required			Dimensions L(ft.) x W(ft.)	Area* (Sq. Yds.)
	No.	Length		No.	Length					
26'-0" PAVEMENT										
0	20	25'-6"	7 (Each Edge Beam) + 46 (Slab) at 5 1/2' cts. - 19'-0" long Weight = 2330 Pounds	6	25'-6"	21 bars - 19'-6" long Weight = 274 Pounds	3238	57.8	---	---
5	20	25'-7"		6	25'-7"		3240	61.1	---	---
10	20	25'-11"		6	25'-11"		3249	64.4	8'-6" x 13'-6"	12.8
15	20	26'-5"		5	26'-5"		3243	67.8	11'-0" x 13'-6"	16.5
20	19	27'-2"		5	27'-2"		3233	71.4	13'-6" x 13'-6"	20.3
25	19	28'-2"		5	28'-2"		3227	75.3	16'-3" x 13'-6"	24.4
30	18x2	15'-3"		5x2	15'-3"		3278	79.5	19'-0" x 13'-6"	28.5
35	17x2	16'-1"		5x2	16'-1"		3282	84.1	22'-3" x 13'-6"	33.4
40	16x2	17'-2"		4x2	17'-2"		3269	89.3	25'-9" x 13'-6"	38.6
45	14x2	18'-6"		4x2	18'-6"		3243	95.3	30'-0" x 13'-6"	45.0
50	13x2	20'-4"		4x2	20'-4"		3264	102.5	35'-0" x 13'-6"	52.5
55	12x2	22'-9"	3x2	22'-9"	3265	111.4	41'-3" x 13'-6"	61.9		
60	10x2	26'-0"	3x2	26'-0"	3251	122.8	49'-0" x 13'-6"	73.5		
36'-0" PAVEMENT										
0	20x2	18'-3"	7 (Each Edge Beam) + 68 (Slab) at 5 1/2' cts. - 19'-0" long Weight = 3185 Pounds	6x2	18'-3"	29 bars - 19'-6" long Weight = 378 Pounds	4471	80.0	---	---
5	20x2	18'-4"		6x2	18'-4"		4475	86.3	---	---
10	20x2	18'-6"		6x2	18'-6"		4483	92.7	10'-0" x 18'-6"	20.6
15	20x2	18'-10"		5x2	18'-10"		4475	99.3	13'-6" x 18'-6"	27.7
20	19x2	19'-5"		5x2	19'-5"		4462	106.2	17'-0" x 18'-6"	34.9
25	18x2	20'-2"		5x2	20'-2"		4455	113.6	20'-6" x 18'-6"	42.1
30	18x2	21'-0"		5x2	21'-0"		4492	121.6	24'-9" x 18'-6"	50.8
35	17x2	22'-3"		5x2	22'-3"		4501	130.4	29'-0" x 18'-6"	59.6
40	16x2	23'-9"		4x2	23'-9"		4483	140.4	33'-9" x 18'-6"	69.4
45	14x2	25'-8"		4x2	25'-8"		4450	152.0	39'-6" x 18'-6"	81.2
50	13x2	28'-2"		4x2	28'-2"		4477	165.8	46'-6" x 18'-6"	95.6
55	12x3	21'-4"	3x3	21'-4"	4492	182.8	55'-0" x 18'-6"	113.0		
60	10x3	24'-4"	3x3	24'-4"	4471	204.7	65'-9" x 18'-6"	135.1		

*Area does not include 8" longitudinal laps.

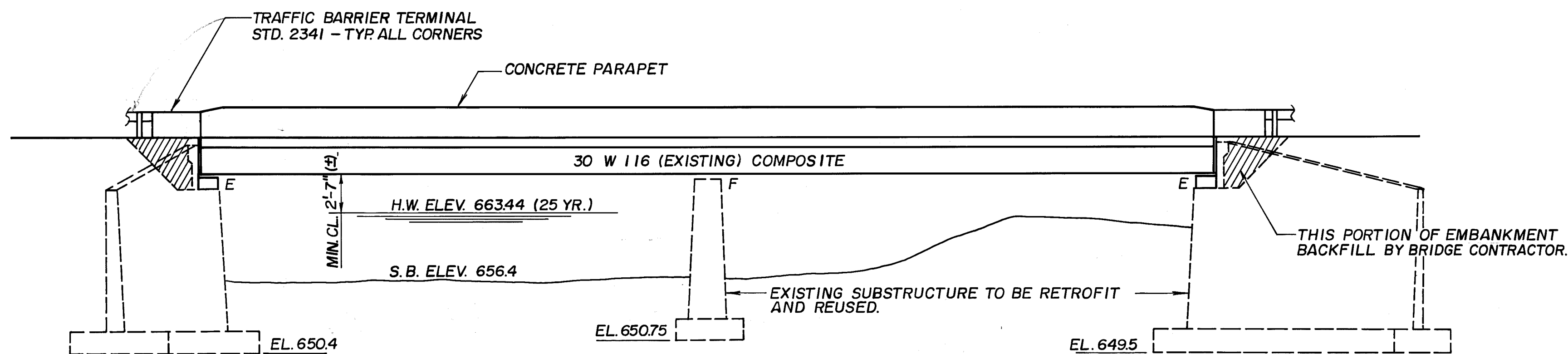


BRIDGE APPROACH PAVEMENT (SPECIAL)

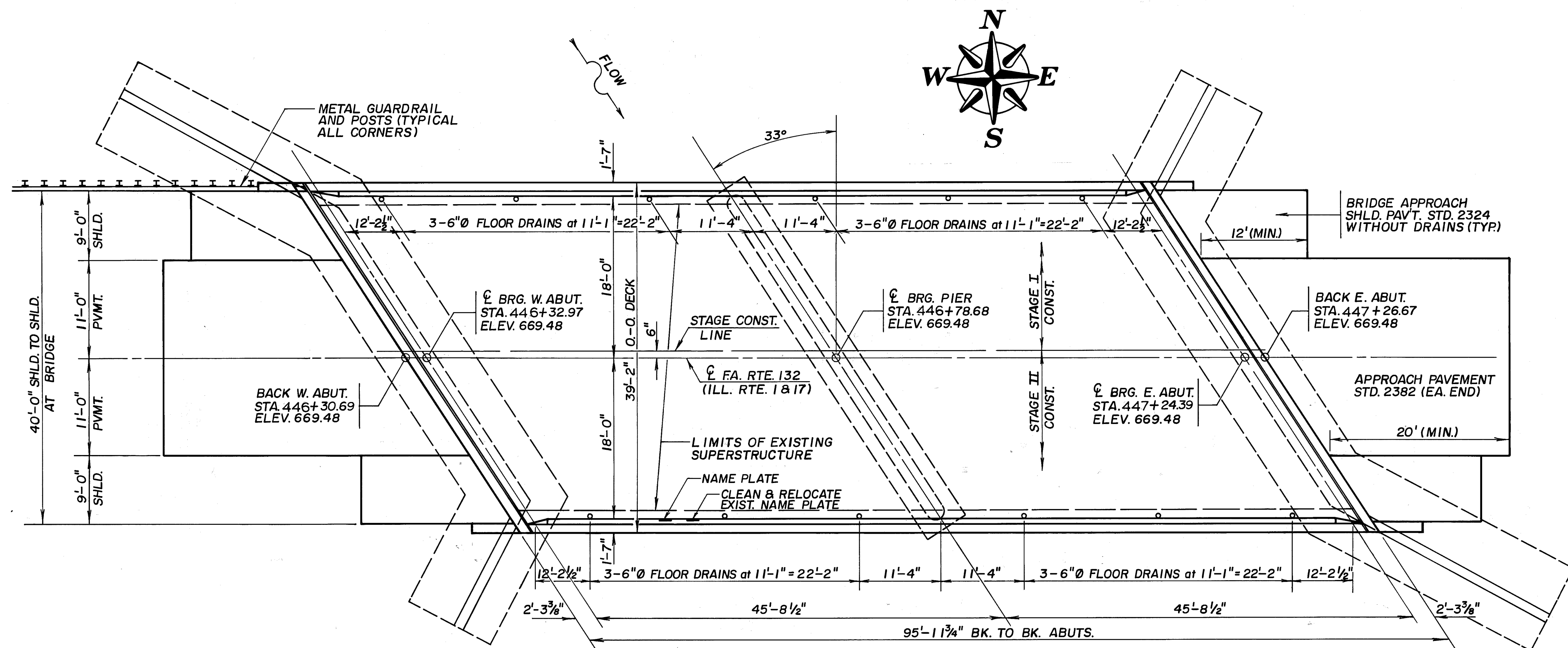
B.M. - RAILROAD SPIKE IN POWER POLE 68' LT.
STA. 447+96 ELEV. 662.13

EXISTING STRUCTURE: STA. 15+27, S.B.I. RTE.
1, SEC. 7-B-1 BUILT IN 1954, STRUCTURE NUMBER
046-0021. SUPERSTRUCTURE CONCRETE DECK ON
STEEL I-BEAMS. SUBSTRUCTURE CLOSED ABUTS.,
SOLID CONC. PIERS. CONCRETE DECK AND WINGWALLS
TO BE REMOVED AND STRUCTURE WIDENED IN STAGES.

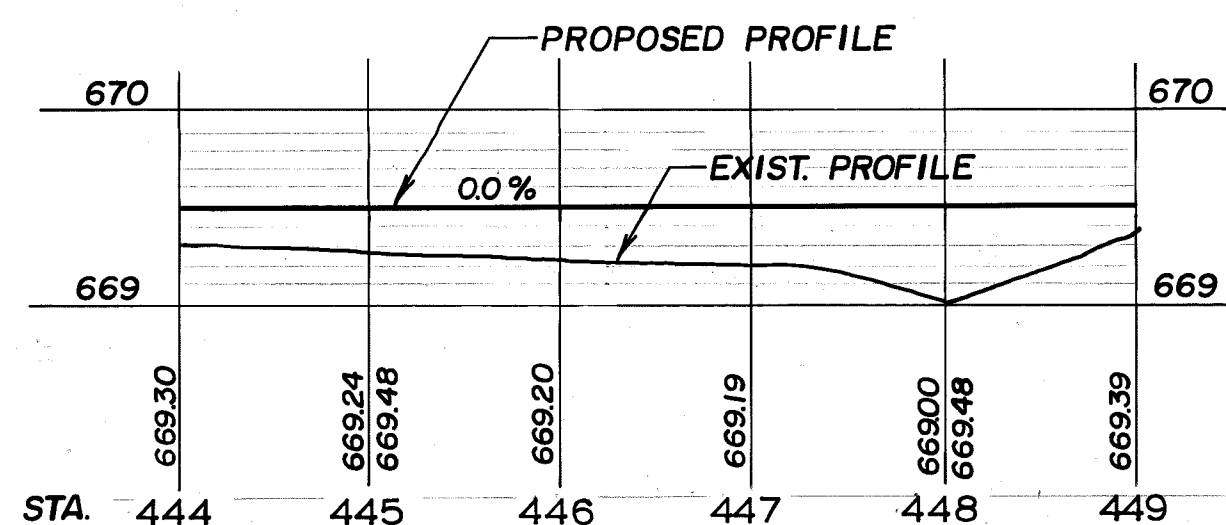
SALVAGE: SUBSTRUCTURE AND STRUCTURAL STEEL.
STAGE CONSTRUCTION SHALL BE USED
TO MAINTAIN ONE LANE TRAFFIC
DURING CONSTRUCTION.



ELEVATION



PLAN



PROFILE GRADE

FAP RTE. 132
(ALONG E ROADWAY)

STATION 446+78.68
REBUILT 199 BY
STATE OF ILLINOIS
FAP RT. 132 SEC. 7-BR-1
LOADING HS 20
STR. NO. 046-0021

NAME PLATE

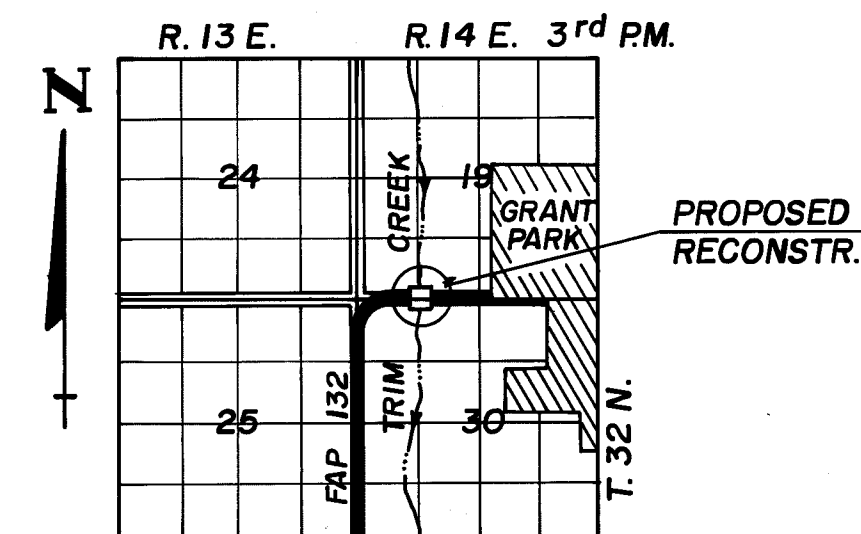
SEE STD. 2113

DESIGN STRESSES

f'_c = 3,500 psi
 f_y = 60,000 psi (REINF.)
 f_s = 18,000 psi (STRUCT.) (EXISTING BEAMS)
 f_y = 33,000 psi (STRUCT.) (EXISTING BEAMS)

DESIGN SPECIFICATIONS

1989 AASHTO
ALLOW 25#/SQ. FT. FOR FUTURE WEARING SURFACE.



LOCATION SKETCH

PREPARED BY:
HAROLD P. WENDLER & ASSOC. INC.
DIXON, ROCKFORD, PRINCETON, ILLINOIS

FA S ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
FA 132	7-BR-1	KANKAKEE		53

ILLINOIS PROJECT

BR. SHT. 1 OF 12 SHTS.

GENERAL NOTES

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND THE SURVEY WHICH 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 WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE FOR THE WORK.

THE EXISTING CONCRETE DECK INCLUDING ALL REINFORCEMENT BARS SHALL BE REMOVED IN ACCORDANCE WITH THE APPLICABLE PARTS OF SECTION 501, OF THE STANDARD SPECIFICATIONS.

THE CONCRETE ABUTMENT BACKWALLS SHALL BE REMOVED IN ACCORDANCE WITH APPLICABLE PARTS OF SECTION 501, OF THE STANDARD SPECIFICATIONS, TO THE PROPOSED GRADE, AS SHOWN ON THE DRAWINGS. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CU. YD. FOR CONCRETE REMOVAL.

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

The maximum height that a beam can be raised for "Jacking & Removal Exist. Brgs." is 18"
REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53, GRADE 60.

EXPANSION BOLTS SHALL CONSIST OF APPROVED EXPANSION ANCHORS, PROVIDING MINIMUM CERTIFIED PROOF LOAD = 4,080 LBS., AND 3/4 DIAMETER X 12" HOOKED BOLTS.

BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8 INCH. ADJUSTMENTS SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS. (FOR TYPE I ELASTOMERIC BEARINGS, SHIMS OF THE DIMENSIONS OF TOP PLATE SHALL BE PROVIDED AND PLACED AS DETAILED).

BRIDGE SEAT SEALER SHALL BE APPLIED TO SEAT AREA OF ABUTMENTS, EST. QUANTITY = 246 SQ. FT.

THE CONTRACTOR WILL BE REQUIRED TO MARK ON TOP OF THE CONCRETE DECK THE LOCATIONS OF THE TOP FLANGE OF ALL THE STEEL BEAMS OR GIRDERS, PRIOR TO ANY REMOVAL OF THE BRIDGE CONCRETE DECK. SAW CUTTING DIRECTLY OVER THE TOP OF THE BEAM OR GIRDER FLANGES IS NOT PERMITTED.

THE THREE-COAT, LEAD AND CHROMATE
FREE ALKYLID PAINT SYSTEM SHALL BE USED FOR PAINTING OF EXISTING AND NEW STRUCTURAL STEEL.
THE COLOR OF THE FINAL FINISH COAT SHALL BE MUNSSELL STANDARD NO. 75 G 4/8 INTERSTATE GREEN.
SEE SPECIAL PROVISIONS FOR CLEANING AND PAINTING STRUCTURAL STEEL. ALL CONTACT SURFACE AREAS OF THE EXISTING STRUCTURAL STEEL TO WHICH THE NEW STEEL IS TO BE CONNECTED SHALL BE FREE OF PAINT OR LACQUER.

THE ESTIMATED WEIGHT OF EXISTING STRUCTURAL STEEL IS 77,630 LBS.

Clean and paint all structural steel. All existing structural steel shall be cleaned using Method II, with the exception of the following which shall be cleaned by Method I: the end 10' of each beam at the abutments and piers; and the bearings. Following the removal of the concrete deck in the designated areas, the top flanges of the beams and the end diaphragms shall be cleaned using Method II. The steel thus exposed shall be field primed prior to forming the new deck. See Special Provisions for "Cleaning and Painting Steel Structures".

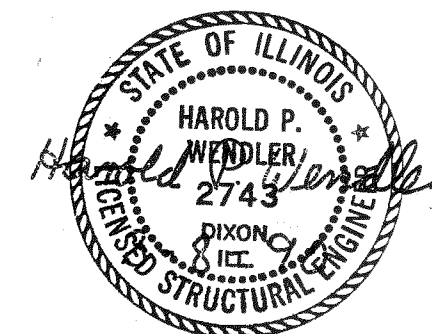
BILL OF MATERIAL - BRIDGE

ITEM	UNIT	SUPERSTR	SUBSTR.	TOTAL
CLASS X CONCRETE SUPERSTRUCTURE	CU. YDS.	110.6		110.6
CLASS X CONCRETE	CU. YDS.		21.1	21.1
CONCRETE REMOVAL	CU. YDS.		11.4	11.4
STUD SHEAR CONNECTORS	EACH	1404		1404
REINFORCEMENT BARS (EPOXY COATED)	LBS.	26,330	2,830	29,160
CLEANING AND PAINTING STEEL BRIDGE	LUMP SUM	1		1
FURNISHING AND ERECTING STRUCTURAL STEEL	LBS.	1144		1144
PREFORMED JOINT SEAL - 2 1/2"	LIN. FT.	94		94
FLOOR DRAINS	EACH	12		12
* PROTECTIVE COAT	SQ. YD.	449		449
EXPANSION BOLTS - 3/4" DIA.	EACH		48	48
REMOVAL OF EXISTING CONCRETE DECK	EACH	1		1
NAME PLATES	EACH		1	1
STRUCTURE EXCAVATION	CU. YDS.		52	52
POROUS GRANULAR EMBANKMENT	TONS		145	145
JACK AND REMOVE EXISTING BEARINGS	EACH	12		12
ELASTOMERIC BEARING ASSEMBLY TYPE I	EACH	12		12
BRIDGE SEAT SEALER	LUMP SUM			1

* INCLUDES QUANTITY FOR DECK SURFACE

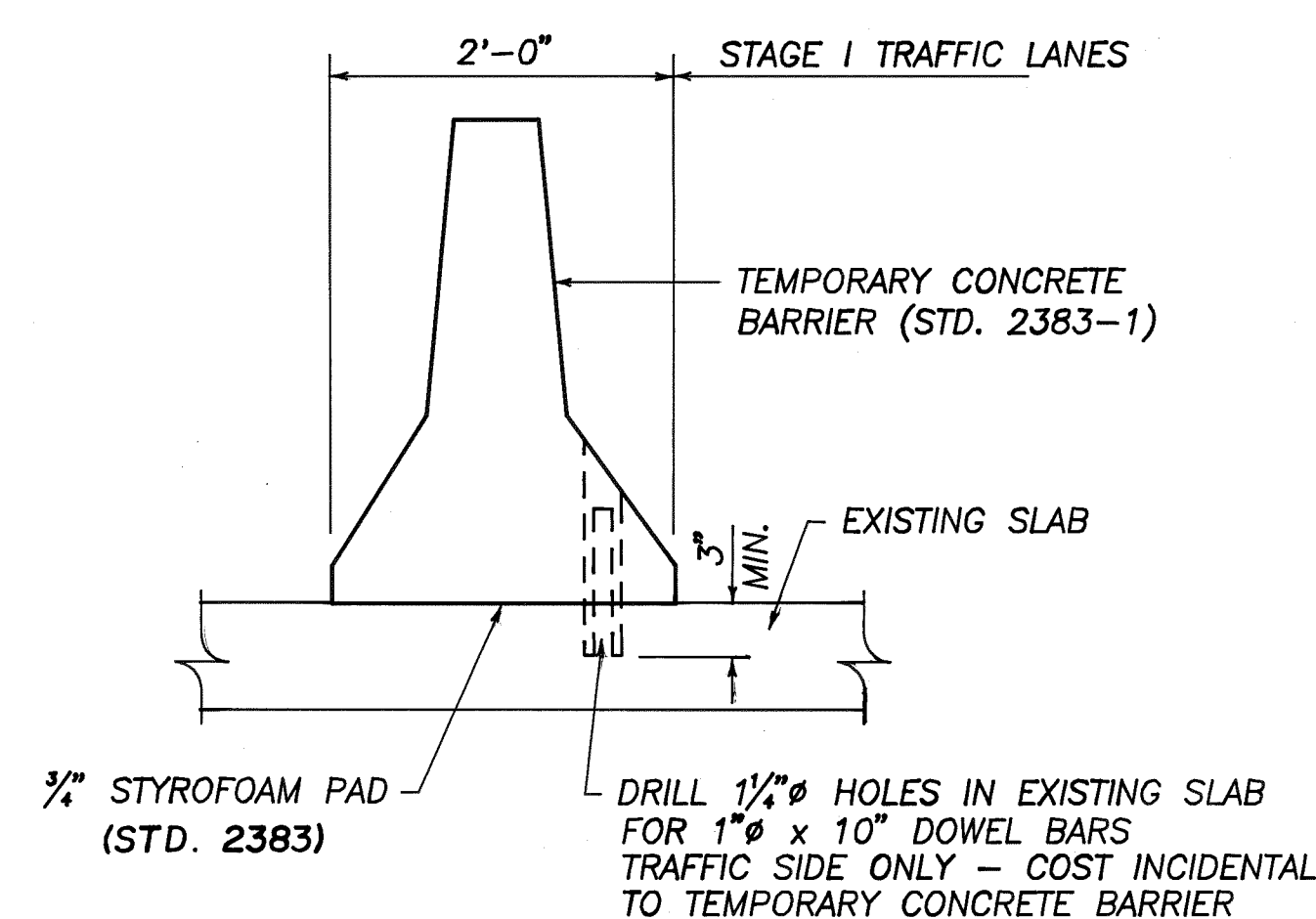
APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
Engineer of Bridges and Structures

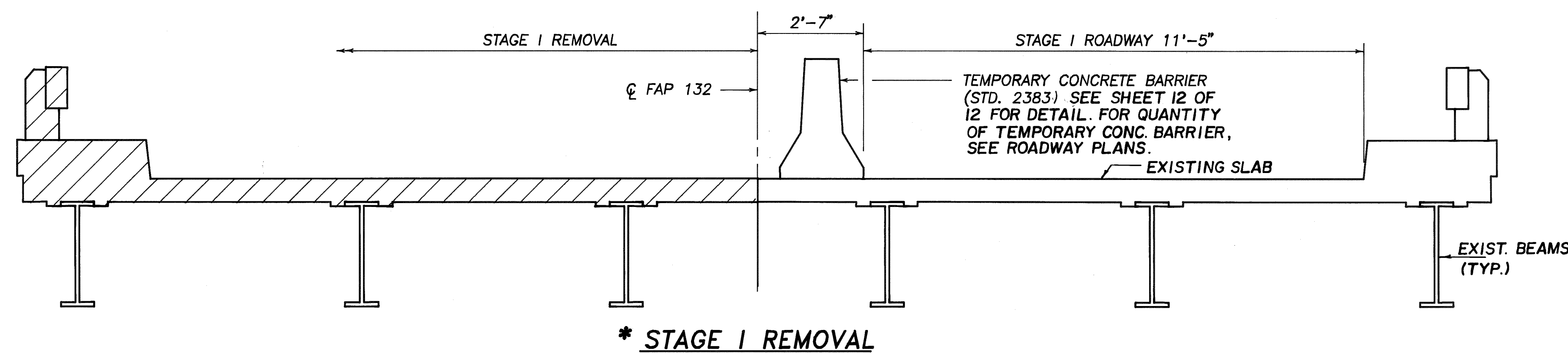


**GENERAL PLAN AND ELEVATION
SECTION 7-BR-1
TRIM CREEK
FAP ROUTE 132 (ILL. RTE. 1 & 17)
KANKAKEE COUNTY
S.N. 046-0021**

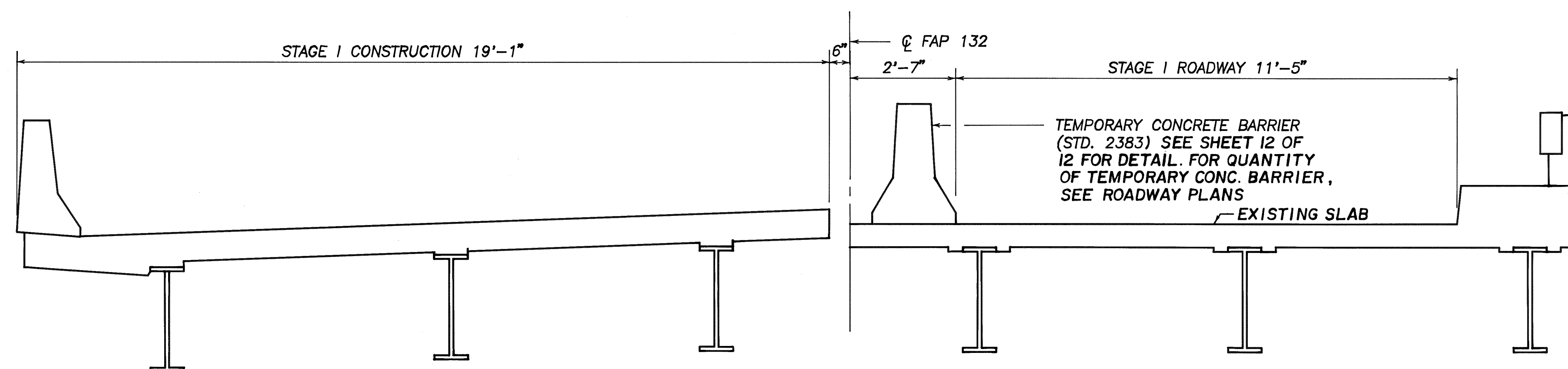
LOADING HS 20-44



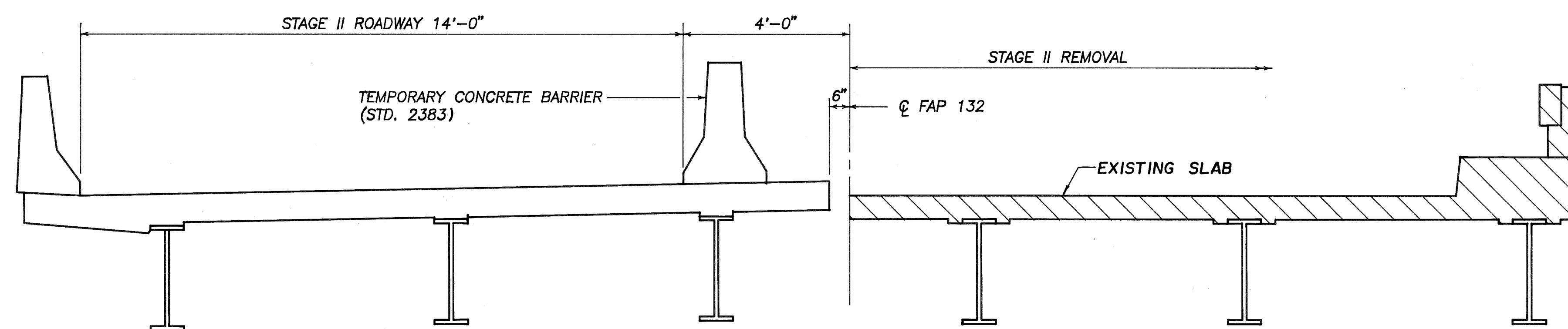
DETAIL "A"



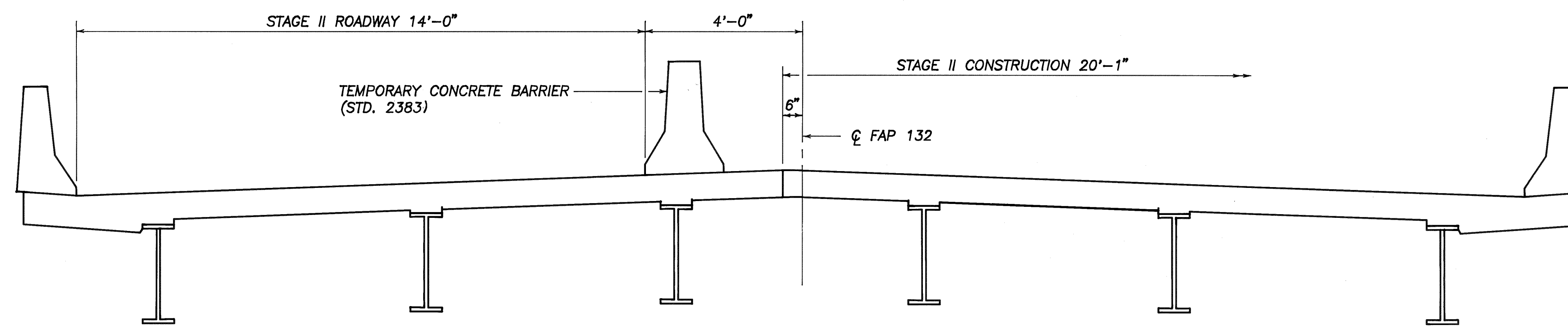
*** STAGE I REMOVAL**



*** STAGE I CONSTRUCTION**



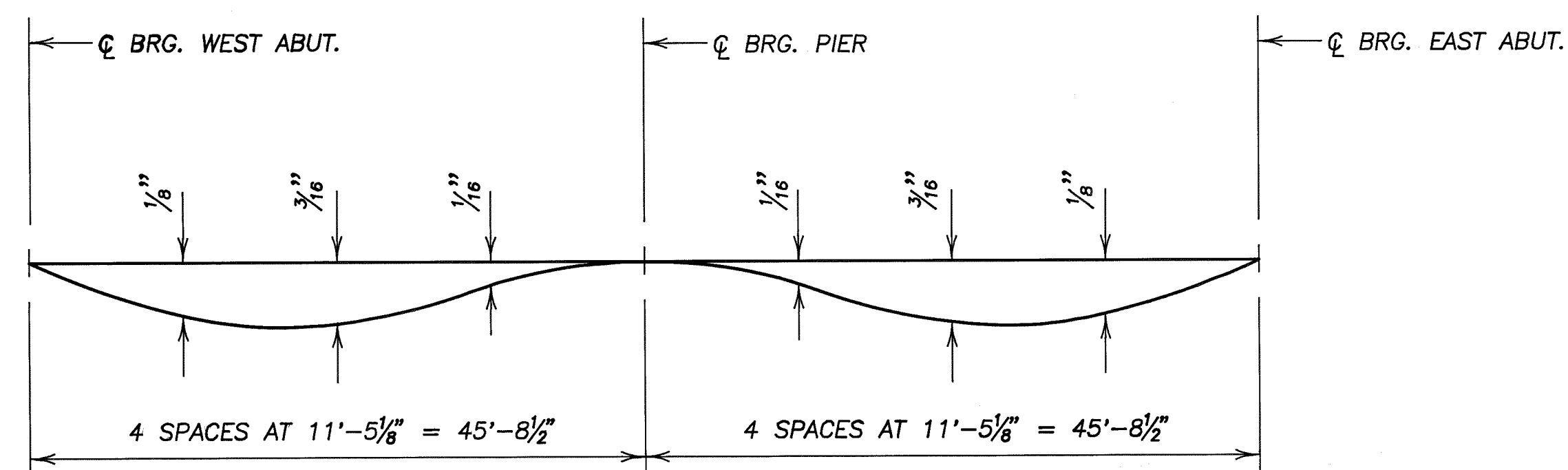
*** STAGE II REMOVAL**



*** STAGE II CONSTRUCTION**

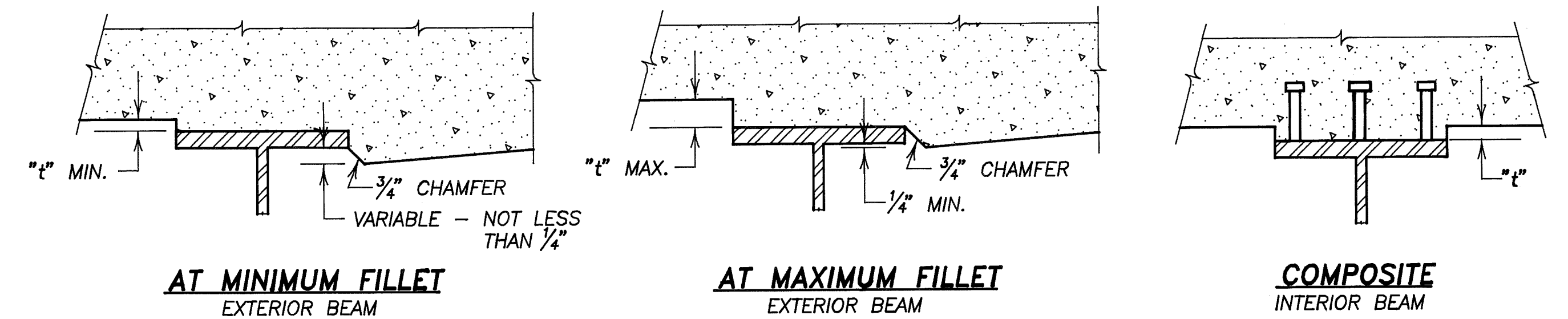
* LOOKING EAST

STAGE CONSTRUCTION DETAILS
F.A.P. ROUTE 132
SECTION 7-BR-1
KANKAKEE COUNTY
STATION 446+78.68



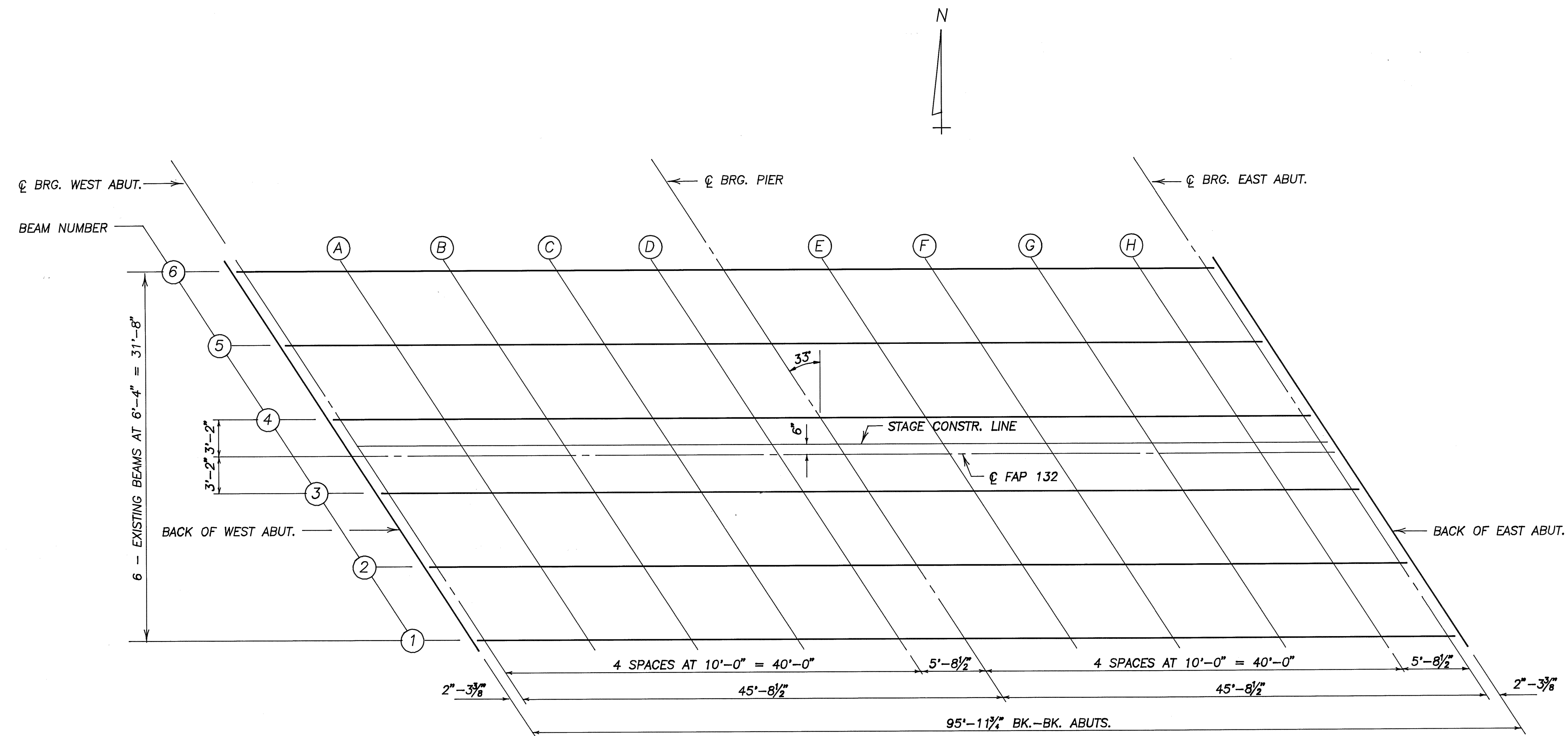
DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE ONLY)

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 SHEET 4 OF 12.



NOTE: TO DETERMINE "t" - 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 DEFLECTIONS, MINUS FLOOR THICKNESS, EQUALS THE FILLET HEIGHTS ABOVE TOP FLANGE OF BEAMS.

FILLET HEIGHTS



PLAN

DECK ELEVATIONS
F.A.P. ROUTE 132
SECTION 7-BR-1
KANKAKEE COUNTY
STATION 446+78.68

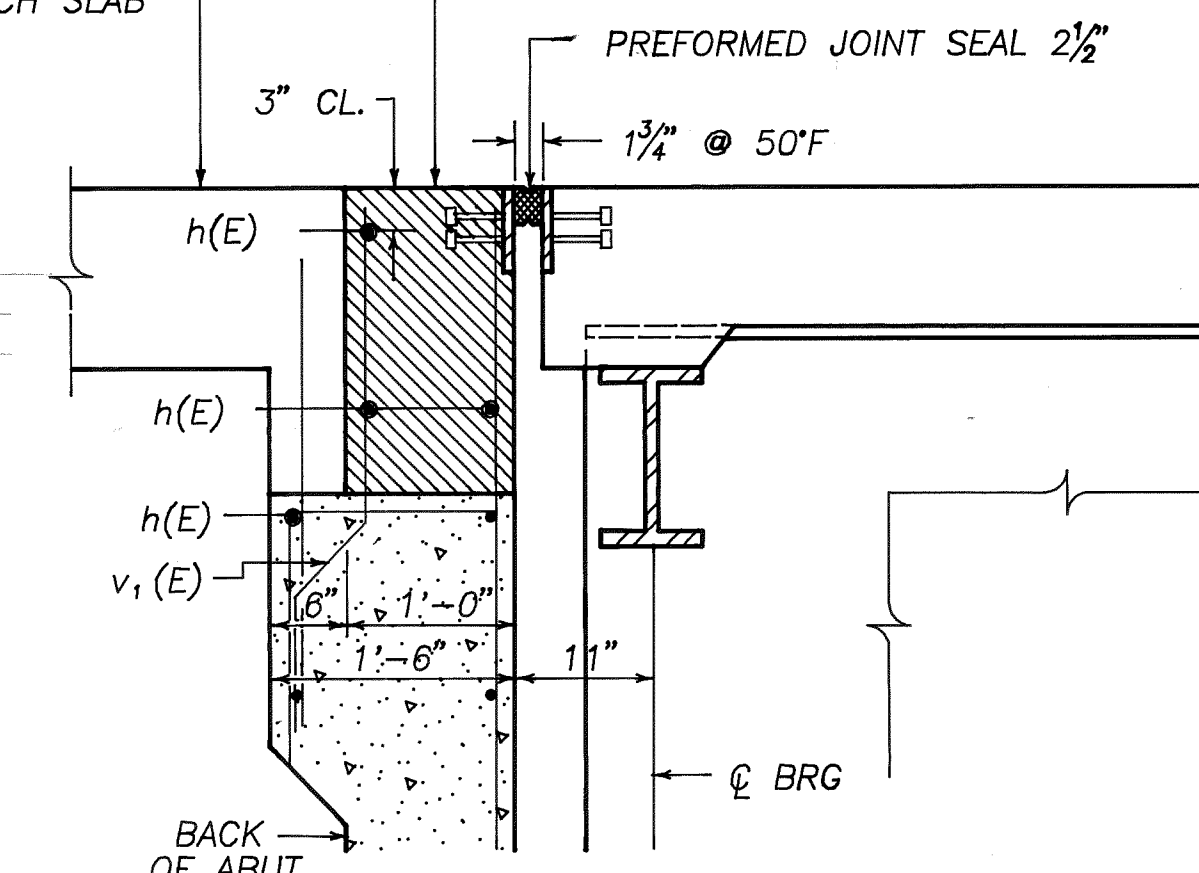
ROADWAY					BEAM 1					BEAM 2					BEAM 3				
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ADJ. FOR DEAD LOAD DEFLECTION	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ADJ. FOR DEAD LOAD DEFLECTION	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ADJ. FOR DEAD LOAD DEFLECTION	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ADJ. FOR DEAD LOAD DEFLECTION
BK. W. ABUT	246+30.69	0.00	669.480	669.480	BK. W. ABUT	246+40.97	15.833	669.233	669.233	BK. W. ABUT	246+36.86	9.500	669.332	669.332	BK. W. ABUT	246+32.75	3.167	669.430	669.430
CL BRG. W. ABUT	246+32.97	0.00	669.480	669.480	CL BRG. W. ABUT	246+43.26	15.833	669.233	669.233	CL BRG. W. ABUT	246+39.14	9.500	669.332	669.332	CL BRG. W. ABUT	246+35.03	3.167	669.430	669.430
A	246+42.97	0.00	669.480	669.495	A	246+53.26	15.833	669.233	669.248	A	246+49.14	9.500	669.332	669.347	A	246+45.03	3.167	669.430	669.445
B	246+52.97	0.00	669.480	669.501	B	246+63.26	15.833	669.233	669.253	B	246+59.14	9.500	669.332	669.352	B	246+55.03	3.167	669.430	669.451
C	246+62.97	0.00	669.480	669.495	C	246+73.26	15.833	669.233	669.247	C	246+69.14	9.500	669.332	669.346	C	246+65.03	3.167	669.430	669.445
D	246+72.97	0.00	669.480	669.484	D	246+83.26	15.833	669.233	669.236	D	246+79.14	9.500	669.332	669.335	D	246+75.03	3.167	669.430	669.434
CL BRG. PIER 1	246+78.68	0.00	669.480	669.480	CL BRG. PIER 1	246+88.96	15.833	669.233	669.233	CL BRG. PIER 1	246+84.85	9.500	669.332	669.332	CL BRG. PIER 1	246+80.74	3.167	669.430	669.430
E	246+88.68	0.00	669.480	669.488	E	246+98.96	15.833	669.233	669.240	E	246+94.85	9.500	669.332	669.339	E	246+90.74	3.167	669.430	669.438
F	246+98.68	0.00	669.480	669.499	F	247+08.96	15.833	669.233	669.251	F	247+04.85	9.500	669.332	669.350	F	247+00.74	3.167	669.430	669.449
G	247+08.68	0.00	669.480	669.500	G	247+18.96	15.833	669.233	669.252	G	247+14.85	9.500	669.332	669.351	G	247+10.74	3.167	669.430	669.450
H	247+18.68	0.00	669.480	669.490	H	247+28.96	15.833	669.233	669.242	H	247+24.85	9.500	669.332	669.341	H	247+20.74	3.167	669.430	669.440
CL BRG. E. ABUT	247+24.39	0.00	669.480	669.480	CL BRG. E. ABUT	247+34.67	15.833	669.233	669.233	CL BRG. E. ABUT	247+30.56	9.500	669.332	669.332	CL BRG. E. ABUT	247+26.45	3.167	669.430	669.430
BK. E. ABUT	247+26.67	0.00	669.480	669.480	BK. E. ABUT	247+36.95	15.833	669.233	669.233	BK. E. ABUT	247+32.84	9.500	669.332	669.332	BK. E. ABUT	247+28.73	3.167	669.430	669.430

NOTE:

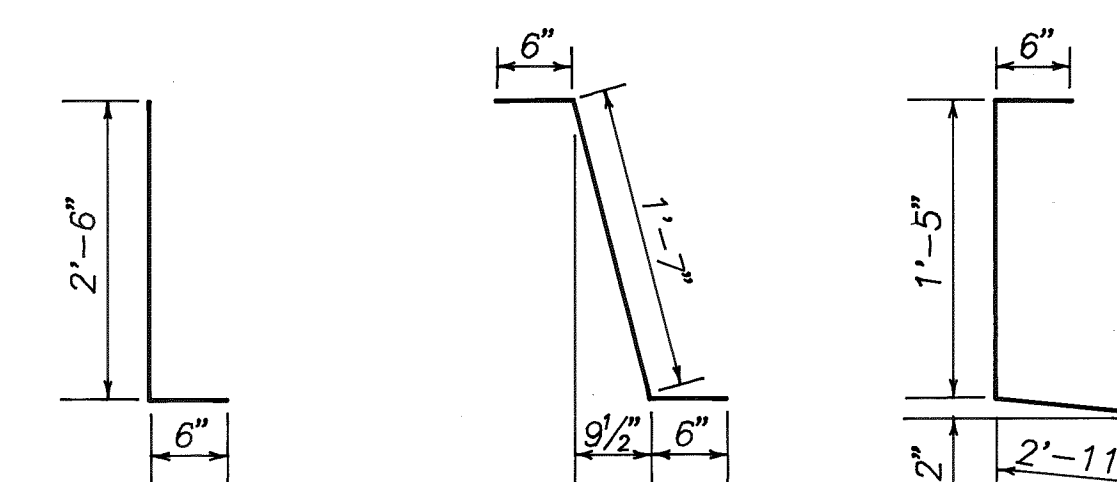
THE FIRST DIGIT OF ALL STATION ENTRIES ON THIS SHEET SHOULD BE "4" INSTEAD OF "2".

BEAM 4					BEAM 5					BEAM 6				
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ADJ. FOR DEAD LOAD DEFLECTION	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ADJ. FOR DEAD LOAD DEFLECTION	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ADJ. FOR DEAD LOAD DEFLECTION
BK. W. ABUT.	246+28.63	3.167	669.430	669.430	BK. W. ABUT	246+24.52	9.500	669.332	669.332	BK. W. ABUT	246+20.41	15.833	669.233	669.233
CL BRG. W. ABUT.	246+30.92	3.167	669.430	669.430	CL BRG. W. ABUT	246+26.80	9.500	669.332	669.332	CL BRG. W. ABUT	246+22.69	15.833	669.233	669.233
A	246+40.92	3.167	669.430	669.445	A	246+36.80	9.500	669.332	669.347	A	246+32.69	15.833	669.233	669.248
B	246+50.92	3.167	669.430	669.451	B	246+46.80	9.500	669.332	669.352	B	246+42.69	15.833	669.233	669.253
C	246+60.92	3.167	669.430	669.445	C	246+56.80	9.500	669.332	669.346	C	246+52.69	15.833	669.233	669.247
D	246+70.92	3.167	669.430	669.434	D	246+66.80	9.500	669.332	669.335	D	246+62.69	15.833	669.233	669.236
CL BRG. PIER 1	246+76.62	3.167	669.430	669.430	CL BRG. PIER 1	246+72.51	9.500	669.332	669.332	CL BRG. PIER 1	246+68.40	15.833	669.233	669.233
E	246+86.62	3.167	669.430	669.438	E	246+82.51	9.500	669.332	669.339	E	246+78.40	15.833	669.233	669.240
F	246+96.62	3.167	669.430	559.449	F	246+92.51	9.500	669.332	669.350	F	246+88.40	15.833	669.233	669.251
G	247+06.62	3.167	669.430	669.450	G	247+02.51	9.500	669.332	669.351	G	246+98.40	15.833	669.233	669.252
H	247+16.62	3.167	669.430	669.440	H	247+12.51	9.500	669.332	669.341	H	247+08.40	15.833	669.233	669.242
CL BRG. E. ABUT	247+22.33	3.167	669.430	669.430	CL BRG. E. ABUT	247+18.22	9.500	669.332	669.332	CL BRG. E. ABUT	247+14.11	15.833	669.233	669.233
BK. E. ABUT	247+24.61	3.167	669.430	669.430	BK. E. ABUT	247+20.50	9.500	669.332	669.332	BK. E. ABUT	247+16.39	15.833	669.233	669.233

DECK ELEVATIONS
F.A.P. ROUTE 132
SECTION 7-BR-1
KANKAKEE COUNTY
STATION 446+78.68



BAR $d_4(E)$



BAR $d_3(E)$

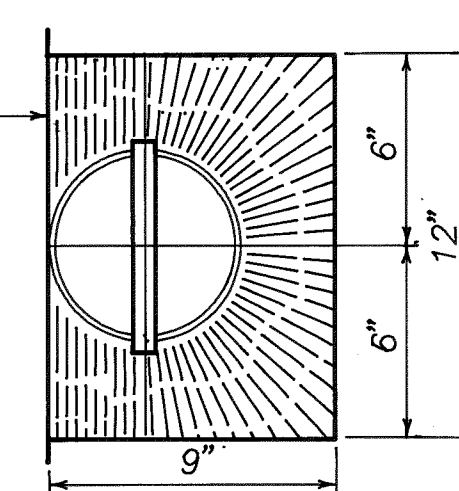
BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	268	#5	18'-9"	————
a ₁ (E)	268	#5	19'-9"	————
a ₂ (E)	156	#6	5'-0"	————
a ₃ (E)	4	#5	22'-4"	————
a ₄ (E)	4	#5	23'-7"	————
b(E)	126	#5	32'-6"	————
b ₁ (E)	39	#6	29'-4"	————
b ₂ (E)	148	#5	25'-0"	————
d(E)	192	#5	3'-0"	L
d ₁ (E)	192	#5	2'-7"	┘
d ₂ (E)	186	#4	3'-0"	L
d ₃ (E)	186	#4	4'-10"	┘
d ₄ (E)	12	#5	3'-8"	┘
e(E)	72	#4	15'-2"	————
e ₁ (E)	16	#8	25'-4"	————
e ₂ (E)	16	#5	24'-3"	————
h(E)	12	#6	24'-6"	————
CLASS X CONCRETE SUPERSTR.			CU. YD.	110.6
REINFORCEMENT BARS EPOXY COATED			LBS.	26,330
PREFORMED JOINT SEAL 2 1/2"			LIN. FT.	94
PROTECTIVE COAT			SQ. YD.	449

#5	2'-2"
#6	2'-7"
#8	4'-6"

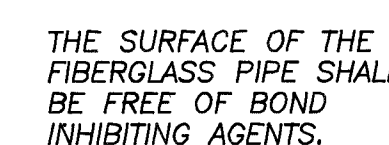
**SUPERSTRUCTURE
F.A.P. ROUTE 132
SECTION 7-BR-1
KANKAKEE COUNTY
STATION 446+78.68**

NOTE: FIBERGLASS PIPE SHALL CONFORM TO ASTM: D2996, WITH SHORT-TIME RUPTURE STRENGTH HOOP TENSILE STRESS OF 30,000 p.s.i. MINIMUM

THE EXTERIOR SURFACES OF THE FLOOR DRAIN SHALL BE PAINTED WITH THE VINYL ENAMEL COAT PAINTING SPECIFIED FOR STRUCTURAL STEEL. THE EXTERIOR SURFACES OF THE ALUMINUM TUBE SHALL BE CLEANED AND GIVEN A WASHCOAT PRETREATMENT IN ACCORDANCE WITH STEEL STRUCTURES PAINTING COUNCIL'S SPEC. SSPC-SP1 8 SSPC-PAINT 27 PRIOR TO PAINTING. FIBERGLASS TO HAVE PREWASH AS PER MTL-P-1532R.

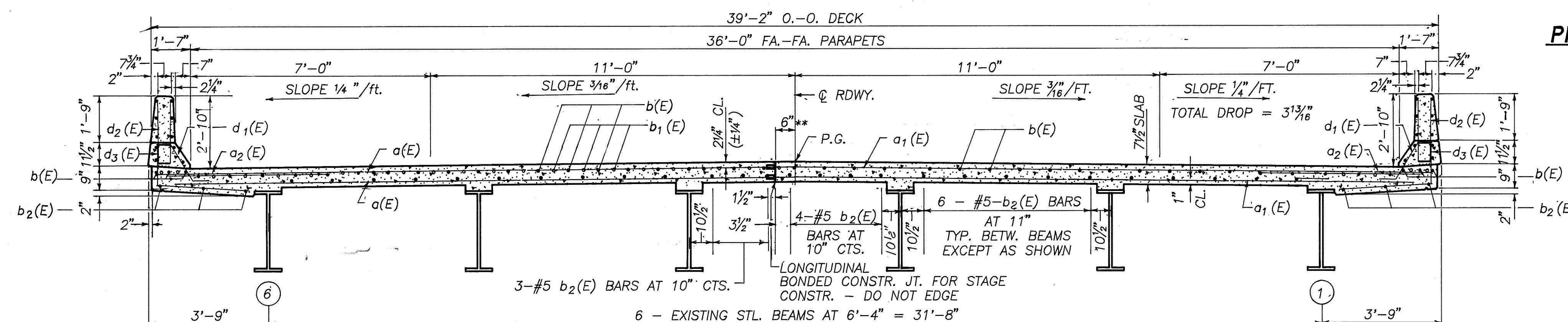


TOP PLAN



SECTION A-A

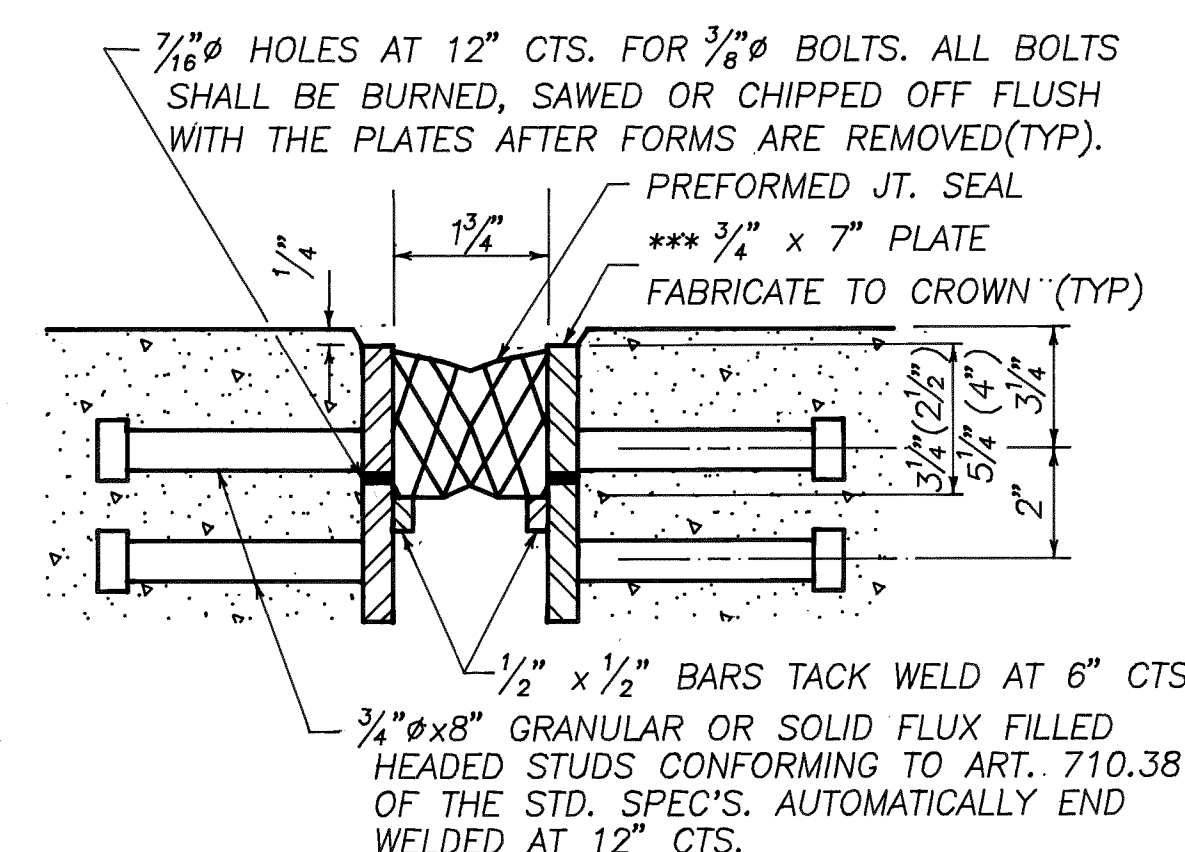
NOTE: FIBERGLASS PIPE SHALL CONFORM TO ASTM:D2996, WITH A SHORT-TIME RUPTURE STRENGTH HOOP TENSILE STRESS OF 30,000 P.S.I. MINIMUM.



CROSS SECTION
LOOKING EAST

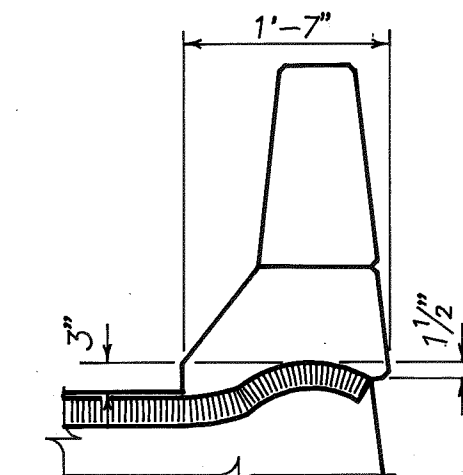
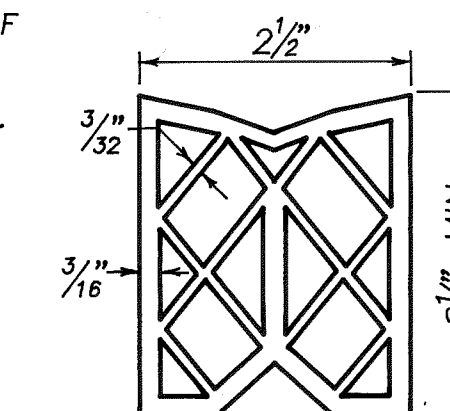
NEAR MIDSPAN

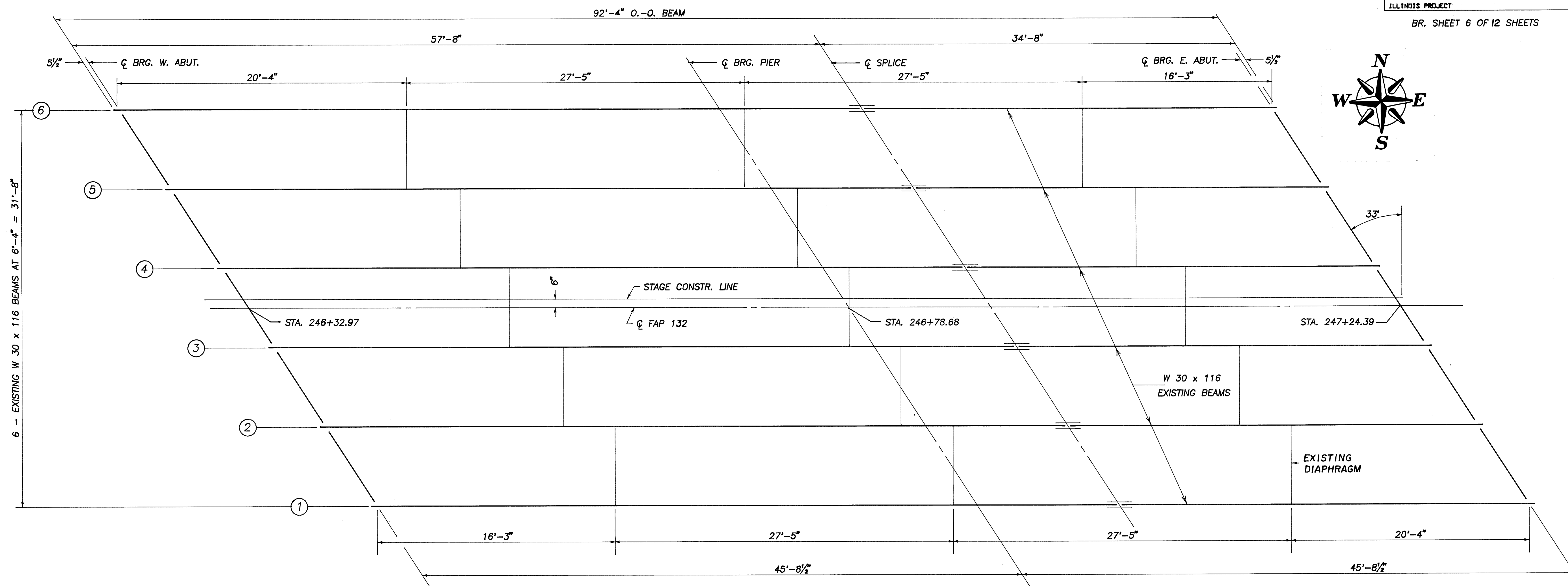
BARS INDICATED THUS 44x4 - #5 ETC
INDICATES 44 LINES OF BARS WITH 4
LENGTHS PER LINE.
** BAR SPLICER. FOR DETAILS SEE
BRIDGE SHEET 10



PREFORMED JOINT SEAL DETAILS

***FURNISH IN SEGMENTS 0
20 FT. MAX. LENGTH. MAX.
SPACE BETWEEN INSTALLED
SEGMENTS SHALL BE 3/16".
SEAL SPACE WITH SILICONE
SEALANT SUITABLE FOR
STRUCTURAL STEEL



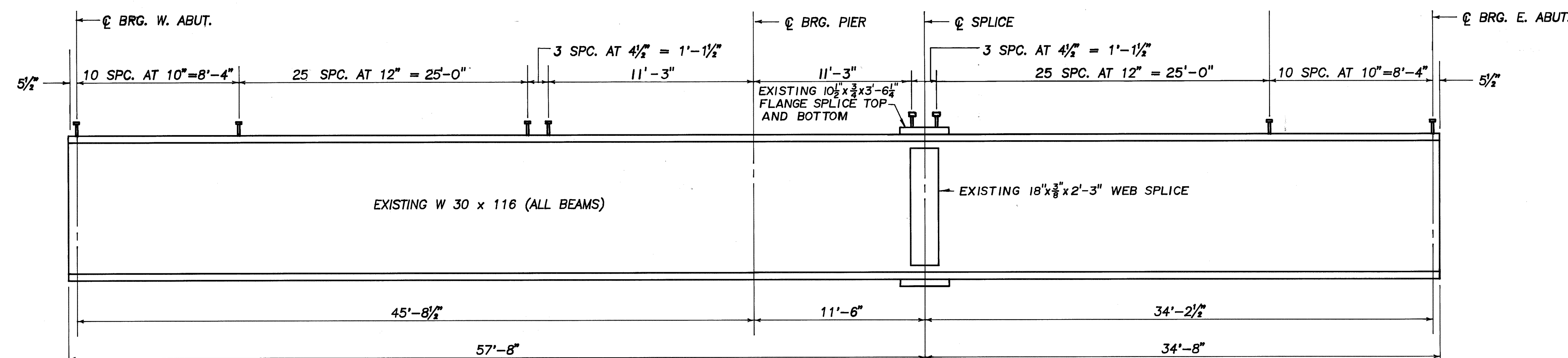


PROPOSED TOP OF BEAM ELEVATIONS

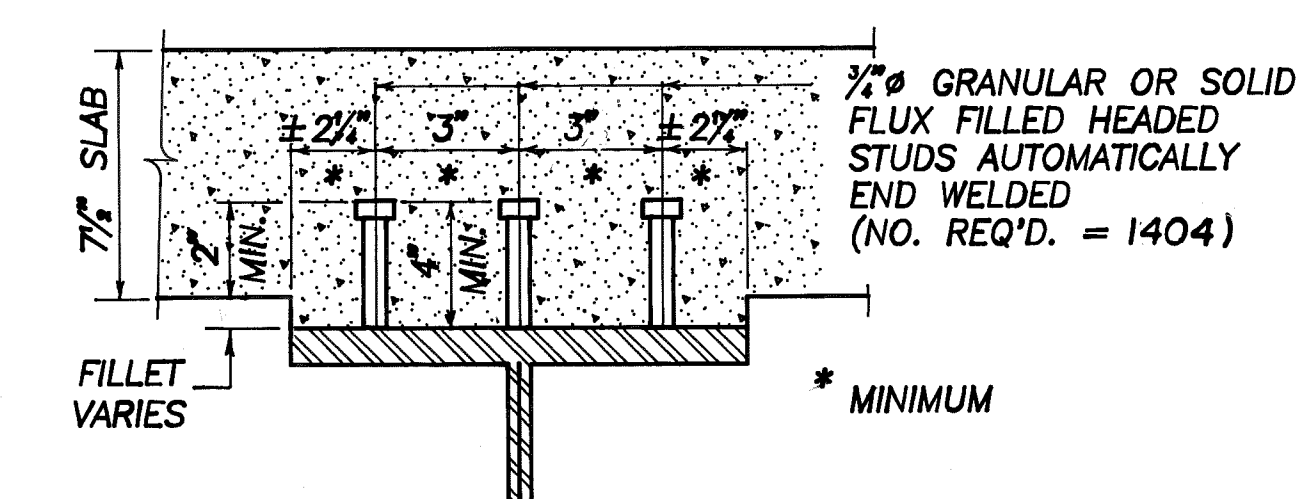
BEAM No.	1	2	3	4	5	6
LOCATION						
CL BRG. W. ABUT.	668.479	668.603	668.702	668.702	668.603	668.479
CL BRG. PIER	668.479	668.603	668.702	668.702	668.603	668.479
CL SPLICE	668.479	668.603	668.702	668.702	668.603	668.479
CL BRG. E. ABUT.	668.479	668.603	668.702	668.702	668.603	668.479

EXISTING STEEL FRAMING PLAN

NOTE: SPACE STUDS TO MISS EXISTING RIVETS IN SPLICE PLATE.



BEAM ELEVATION


SHEAR STUDS
ON ALL EXISTING BEAMS

STRUCTURAL STEEL
F.A.P. ROUTE 132
SECTION 7-BR-1
KANKAKEE COUNTY
STATION 446+78.68



	0.4 SPAN 1 OR 0.6 SPAN 2	PIER	
I_s (in^4)	4930	4930	
I_c (in^4)	13038		
S_s (in^3)	329	329	
S_c (in^3)	480		
$\bar{Q}$ ($k/ft.$)	0.732	1.027	
$M \bar{Q}$ ($ft.-k$)	107	249	
$s \bar{Q}$ ($k/ft.$)	0.295		
$M_s \bar{Q}$ ($ft.-k$)	51		
M_{LL} ($ft.-k$)	269	142	
M_{IMP} ($ft.-k$)	79	42	
$\frac{5}{3}(M_{LL}+M_{IMP})('k)$	580	307	
M_a ($ft.-k$)	959	723	
M_u ($ft.-k$)	1897		
$f_s \bar{P}(non-comp)(ksi)$	3.9	9.1	
$f_s \bar{P}(comp)(ksi)$	1.3		
$f_s \frac{5}{3}(LL+I)(ksi)$	14.5	11.2	
$f_s(overload)(ksi)$	19.7	20.3	
$f_s(total)(ksi)$		26.4	
VR (k)	45		



BEAM NO.	"t"	TOP OF FILL PLATE ELEVATION
1	3 1/2"	665.676
2	3 3/4"	665.800
3	4 1/8"	665.899
4	4 1/8"	665.899
5	3 3/4"	665.800
6	3 1/2"	665.676

TY FOR COMPACT,



ALL DIMENSIONS ARE ALONG INSIDE FACE OF PARAPET



12 REQUIRED

BEARING ASSEMBLY

ABUTMENTS



* EQUIVALENT ROLLED ANGLE WITH STIFFENERS WILL BE ALLOWED IN LIEU OF WELDED PLATES.

	W. ABUT. & E. ABUT.	PIER
R_{LL}^Q (k)	18.0	57.8
R_{LL} (k)	31.8	38.5
R_{IMP} (k)	9.3	11.3
R_{TOTAL} (k)	59.1	107.6



SUPERSTRUCTURE DETAILS AND BEARINGS
F.A.P. ROUTE 132
SECTION 7-BR-1
KANKAKEE COUNTY
STATION 446+78.68

STAGE CONSTRUCTION LINES
(SEE PLAN VIEW FOR LOCATION)

EL. 671.58
 5'-0"
 44-#5 v_3 (E) BARS at 12" cts.
 44-#4 v (E) BARS at 12" cts. - EA. FA.
 44-#4 v_1 (E) BARS at 12" cts.
 EL. 669.16
 12x2-#6 h(E)
 SEE SEC. A-A
 P.G. at C RDWY.
 EL. 669.48
 EL. 667.75
 EL. 669.16
 LEVEL
 EL. 665.60
 EL. 665.72
 EL. 665.82
 EL. 665.72
 EL. 665.60
 EL. 664.53 ±
 4-#3/4" Ø EXP. BOLTS
 AT EA. BRG. PAD
 2 STIRRUP BARS EA. PAD
 STAGE CONSTRUCTION LINES
 (SEE PLAN VIEW FOR LOCATION)
 5'-0"
 5-#5 v_2 (E) EA. FA. EA. WING
 at 12' cts.
 4-#5 h_3 (E) at 12" cts. EA. FA. EA. WING
 4-#5 h_2 (E) at 12" cts. EA. FA. LONG WING (N.W. & S.E. WINGS)
 4-#5 h_1 (E) at 12" cts. EA. FA. SHORT WING (S.W. & N.E. WING)

[illegible]

BAR $h_1(E)$

BAR $h_2(E)$



BAR s(E)



BAR $s_l(E)$

MIN. BAR LAP

#6 2'-7"

BAR	NO.	SIZE	LENGTH	SHAPE
$h(E)$	32	#6	24'-6"	
$h_1(E)$	16	#5	7'-0"	
$h_2(E)$	16	#5	7'-0"	
$h_3(E)$	32	#5	4'-8"	
$v(E)$	176	#4	3'-6"	
$v_1(E)$	88	#4	6'-0"	
$v_2(E)$	40	#5	6'-9"	
$v_3(E)$	44	#5	2'-0"	
$s(E)$	16	#4	8'-1"	
$s_1(E)$	4	#4	7'-9"	
$s_2(E)$	4	#4	7'-6"	

REINFORCEMENT BARS DESIGNATED (E) SHALL
BE EPOXY COATED.

BARS INDICATED THUS: 12 x 2-5 ETC. INDICATES
12 LINES OF BARS WITH 2 LENGTHS PER LINE.

**ABUTMENTS
SECTION 7-BR-1
TRIM CREEK
FAP ROUTE 132 (ILL. RTE. 1 & 17)
KANKAKEE COUNTY
S.N. 046-002 I**