CONTRACT NO. R-23637

R-23637
PART 5 OF 8

PLOT DATE & TIME: DEC 18, 1997 - 16:53:54

INDIANA DEPARTMENT OF TRANSPORTATION

BRIDGE PLANS
FOR SPANS OVER 20 FEET ON U.S. 24

PROJECT NO. F-144-6 (012) P.E.
( ) R/W
NH-144-6 (011) CONST
F-144-6 (17) CN

BRIDGES OVER 20' SPAN					
FEDERAL ROAD REGION NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	IND.	NH-144-6(011) F-144-6(17)		1	53

INDEX

PROJECT	STRUCTURE	TYPE	SPAN	OVER	STATION
NH-144-6(011) F-144-6(17)	24-52-6597B (W.B. STR.)	CONTINUOUS, COMPOSITE, WELDED PLATE GIRDER	125'-0; 125'-0	U.S. 31	349+99.85 "D"
	24-52-8165 (E.B. STR.)		133'-9; 124'-6.		

SHEET NO.	SHEET DESIGNATION	SUBJECT	F.H.W.A. APPROVAL
1	ONE SHEET	TITLE SHEET	–
2	ONE SHEET	TYPICAL CROSS SECTIONS-LINE "D"(FOR INFORMATION ONLY)	
3	ONE SHEET	TYPICAL CROSS SECTIONS-LINE"S-USR-31-G-RERUN"(FOR INFORMATION ONLY)	
4	ONE SHEET	PLAN & PROFILE-LINE "D"(FOR INFORMATION ONLY)	
5	ONE SHEET	PLAN & PROFILE-LINE"S-USR-31-G-RERUN"(FOR INFORMATION ONLY)	
6&7	TWO SHEETS	SOIL BORINGS	
8	R1	LAYOUT-W.B. STRUCTURE	
9	R2	GENERAL PLAN-W.B. STRUCTURE	
10	R3	BENT NO. 1	
11	R4	BENT NO. 2	
12	R5	BENT NO. 2 & COLLISIONWALL DETAILS	
13	R6	BENT NO. 3	
14	R7	FRAMING PLAN	
15	R8	WELDED PLATE GIRDER DETAILS	
16	R9	STRUCTURAL STEEL DETAILS	
17	R10	SUPERSTRUCTURE	
18	R11	SUPERSTRUCTURE DETAILS	
19&20	R12 & R13	SCREED DATA	
21	S1	LAYOUT-E.B. STRUCTURE	
22	S2	GENERAL PLAN-E.B. STRUCTURE	
23	S3	BENT NO. 1 & 3	
24&25	S4 & S5	BENT NO. 1 & 3 DETAILS	
26	S6	BENT NO. 2	
27	S7	BENT NO. 2 DETAILS	
28	S8	FRAMING PLAN	
29	S9	WELDED PLATE GIRDER DETAILS	
30	S10	STRUCTURAL STEEL DETAILS	
31	S11	SUPERSTUCTURE	
32	S12	SUPERSTRUCTURE DETAILS	
33&34	S13 & S14	SCREED DATA	
35	ONE SHEET	PIPE MATERIAL SHEET	
36	ONE SHEET	BRIDGE SUMMARY	

NOTE:
WHEREVER "INDIANA DEPARTMENT OF HIGHWAYS" APPEARS IN THESE PLANS, IT SHALL BE INTERPRETED AS "INDIANA DEPARTMENT OF TRANSPORTATION".

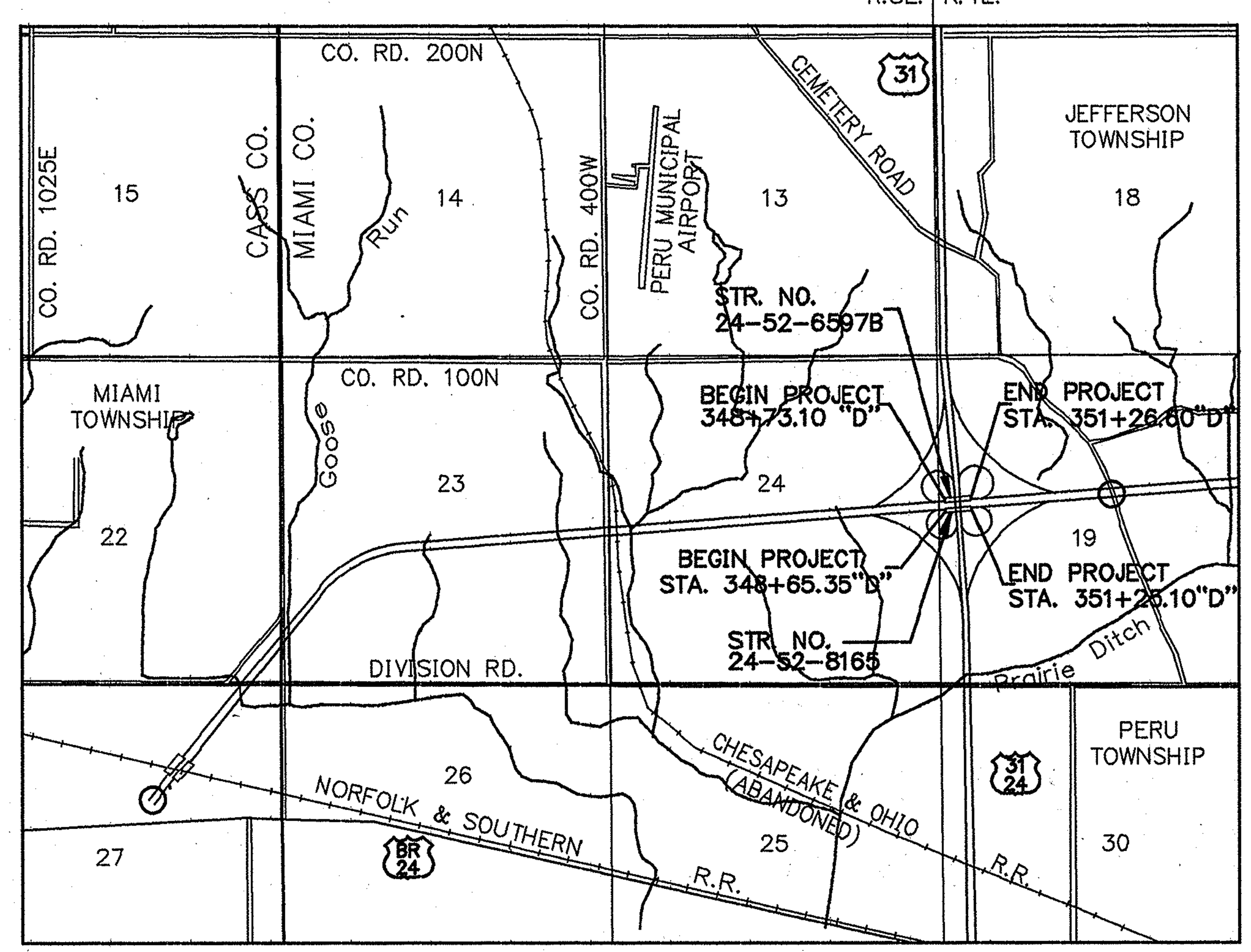
BEGINNING AT A POINT 43.92 FEET EAST OF THE EAST LINE OF SECTION 24, T.27N., R.3E., PERU TOWNSHIP, MIAMI COUNTY AND RUNNING 261.25 FEET EASTERLY TO A POINT ON EXISTING U.S.24 126.75 FEET EAST OF THE INTERSECTION OF U.S.24 AND U.S.31 IN SECTION 19, T.27N., R.4E., PERU TOWNSHIP, MIAMI COUNTY, INDIANA, AT R.P. 77+44.

BRIDGE LENGTH: 0.048 MI.(W.B. STR.) 0.049 MI.(E.B. STR.)
ROADWAY LENGTH:
TOTAL LENGTH:
MAX. GRADE: 2.00%

INDEX CONTINUED
SHEET DRAWINGS

SHEET NO.	SHEET DESIGNATION	SUBJECT	F.H.W.A. APPROVAL	ADOPTED "A" REVISION "R"
37	BRIDGE STD. BR1	CONCRETE BRIDGE RAILING TRANSITION TYPE TGB	3-9-93	A AUG 1992
38	BRIDGE STD. BR-1A	CONCRETE BRIDGE RAILING TRANSITION TYPE TGB	3-9-93	A AUG 1992
–	BRIDGE STD.	MISCELLANEOUS BRIDGE STANDARDS	–	–
–	BRIDGE STD.	MISCELLANEOUS BRIDGE STANDARDS	–	–
–	BRIDGE STD.	MISCELLANEOUS BRIDGE STANDARDS	–	–
–	BRIDGE STD.		–	–
39	BRIDGE STD. C1	MISCELLANEOUS BRIDGE STANDARDS	9-1-97	R 9-1-97
–	BRIDGE STD. C2	MISCELLANEOUS DETAILS	–	–
40	BRIDGE STD. C3	MISCELLANEOUS BRIDGE STANDARDS	1-26-95	R 1-3-95
–	BRIDGE STD. C4	MISCELLANEOUS DETAILS	–	–
41	BRIDGE STD. D	CASTING DETAILS ROADWAY DRAINS	1-11-89	R 9-1-88
–	BRIDGE STD. D1	ADJUSTING FRAME DETAILS FOR ROADWAY DRAINS	–	–
–	BRIDGE STD.		–	–
–	BRIDGE STD. PB	PRESTRESSED CONCRETE TYPE I-BEAMS	–	–
–	BRIDGE STD. PB	PRESTRESSED CONCRETE TYPE I-BEAMS	–	–
–	BRIDGE STD. PB6	PRESTRESSED BOX BEAMS	–	–
–	BRIDGE STD. PB	PRESTRESSED COMPOSITE BOX BEAMS WIDE	–	–
–	BRIDGE STD. PB	PRESTRESSED COMPOSITE BOX BEAMS WIDE	–	–
–	BRIDGE STD. PB10	TOLERANCES FOR FABRICATION OF PRESTRESSED BEAMS	–	–
–	BRIDGE STD. PB11	ELASTOMERIC BEARING PAD DETAILS	–	–
–	BRIDGE STD.		–	–
–	BRIDGE STD.		–	–
–	BRIDGE STD.		–	–
42	BRIDGE STD. R2B	BRIDGE LIGHTING DETAILS	5-19-88	R 4-4-88
43	BRIDGE STD. S1	MISCELLANEOUS DETAILS	1-22-87	R 12-1-86
–	BRIDGE STD. SH1	STEEL SHOE DETAILS	–	–
–	BRIDGE STD. T SHEET A	STANDARD TEMPORARY BRIDGE	–	–
–	BRIDGE STD. T SHEET B	STANDARD TEMPORARY BRIDGE	–	–
44	BRIDGE STD. SS-1A	STRUCTURAL EXPANSION JOINT CLASS "S-S"	12-14-94	A 12-1-94
45	BRIDGE STD. SS-1B	STRUCTURAL EXPANSION JOINT CLASS "S-S"	12-14-94	A 12-1-94
46	BRIDGE STD. SS-2	STRUCTURAL EXPANSION JOINT CLASS "S-S"	6-20-91	A APR. 1991
–	BRIDGE STD.		–	–
47	ROAD STD. SHEET CCPJ-4	TRANSVERSE CONSTRUCTION JOINTS	1-31-96	R 9-1-95
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
48	ROAD STD. SHEET MB2	MISCELLANEOUS STANDARDS	5-21-82	R 4-1-82
49	ROAD STD. SHEET MB4	MISCELLANEOUS STANDARDS	6-14-74	R 1-2-74
50	ROAD STD. SHEET MC	MISCELLANEOUS STANDARDS	1-11-89	R 9-1-88
51	ROAD STD. SHEET MD	MISCELLANEOUS STANDARDS	12-27-82	R 10-1-82
52	ROAD STD. SHEET ME2	MISCELLANEOUS STANDARDS	6-27-85	R 9-4-84
53	ROAD STD. SHEET MN	MISCELLANEOUS STANDARDS	9-24-85	R 6-3-85
–	ROAD STD. SHEET MP	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD. SHEET	MISCELLANEOUS STANDARDS	–	–
–	ROAD STD.		–	–
–	ROAD STD. SHEET CB2	TEMPORARY CONCRETE BARRIER	–	–
–			–	–
–	ROAD STD. SHEET 1 DETOURS	STANDARD DETOUR SIGNS	–	–
–	ROAD STD. SHEET 1A DETOURS	STANDARD DETOUR SIGNS	–	–
–	ROAD STD. SHEET 1B DETOURS	STANDARD DETOUR SIGNS	–	–
–	ROAD STD. SHEET 2 DETOURS	STANDARD DETOUR SIGNS	–	–
–	ROAD STD. SHEET 2A DETOURS	STANDARD DETOUR SIGNS	–	–
–	ROAD STD. SHEET 3 DETOURS	STANDARD DETOUR SIGNS	–	–
–	ROAD STD. SHEET 3A DETOURS	STANDARD DETOUR SIGNS	–	–
–	ROAD STD. SHEET 4 DETOURS	STANDARD DETOUR SIGNS	–	–
–	ROAD STD. SHEET 5 DETOURS	STANDARD DETOUR SIGNS	–	–
–	ROAD STD. SHEET 5A DETOURS	STANDARD DETOUR SIGNS	–	–

* F.H.W.A. APPROVAL PENDING



SCALE: 1" = 2000'

TRAFFIC DATA	U.S. 24	U.S. 31
A.D.T. (1990)	7,630 V.P.D.	14,720 V.P.D.
A.D.T. (2018 PROJECTED)	14,100 V.P.D.	27,180 V.P.D.
D.H.V. (2018 PROJECTED)	1,410 V.P.H.	2,718 V.P.H.
TRUCKS	D.H.V.9% A.D.T.16%	D.H.V.10% A.D.T.10%
DIRECTIONAL DISTRIBUTION	53%	52%
SHOULDER ESAL	500,000	500,000
FUNCTIONAL CLASSIFICATION	RURAL MAJOR ARTERIAL	RURAL MAJOR ARTERIAL
DESIGN DATA		
DESIGN SPEED	70 M.P.H.	70 M.P.H.
ACCESS CONTROL	PARTIAL LIMITED	PARTIAL LIMITED
ROAD CLASSIFICATION	RURAL MAJOR ARTERIAL	RURAL MAJOR ARTERIAL
TERRAIN	LEVEL	LEVEL
PROJECT DESIGN CRITERIA	NEW CONSTRUCTION	RECONSTRUCTION

REVISION	
DATE	SHEET NO.
3-16-98	26, 36, 8, 21

REVISION	
DATE	SHEET NO.
–	–

SHEET REVISED: MARCH 10, 1993

INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED 1995 TO BE USED WITH THESE PLANS.

PLANS PREPARED BY

SIECO, INC.
450 ST. JOHN RD.
SUITE 790
P.O. BOX 2010
MICHIGAN CITY, IN 46361

JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

CERTIFIED BY: John M. Broadus 12-18-97
PHONE (219) 874-6238 DATE

APPROVED FOR LETTING: Phelps H. Klika 2/19/98
CHIEF, DIVISION OF DESIGN DATE

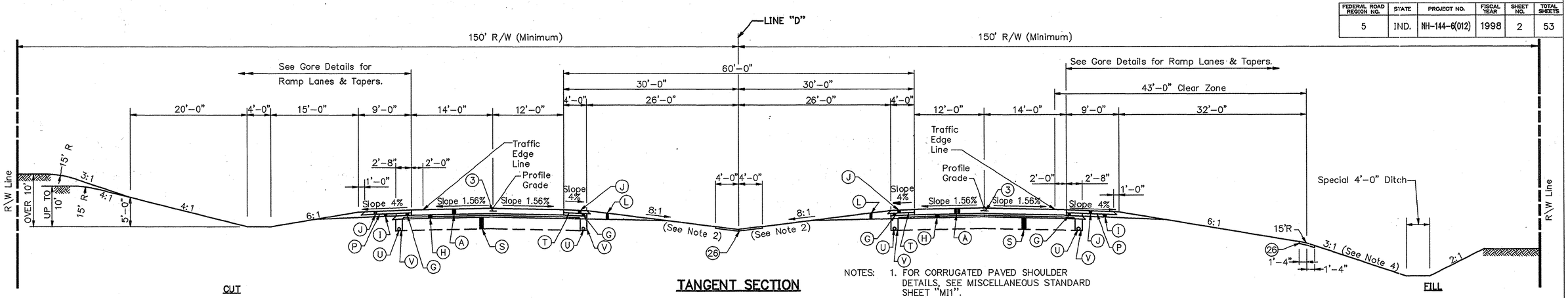
BRIDGE FILE: 24-52-6597B & 24-52-8165

DES. NO. 8902474 (WESTBOUND)

DES. NO. 9702475 (EASTBOUND)

24WBTIT/2000

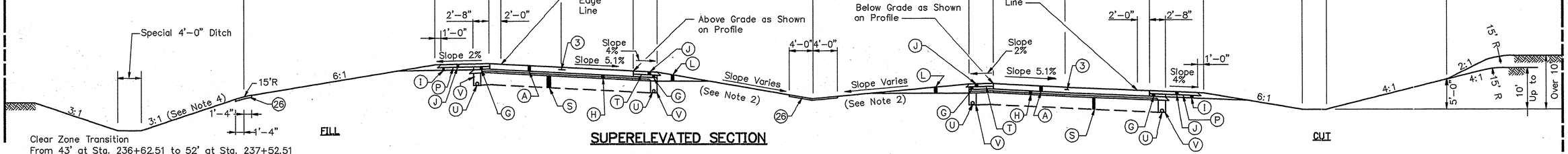
FEDERAL ROAD REGION NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	IND.	NH-144-6(012)	1998	2	53



TANGENT SECTION

STA. 234+13.61 "D" TO STA. 237+52.51 "D"
STA. 264+16.58 "D" TO STA. 372+50.00 "D"

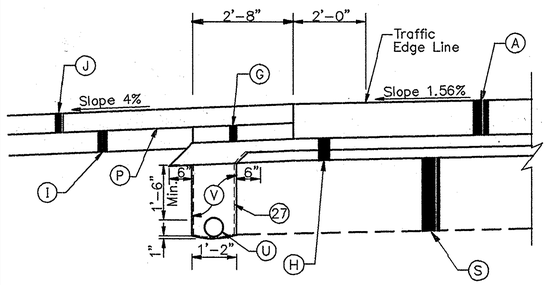
NOTES:
1. FOR CORRUGATED PAVED SHOULDER DETAILS, SEE MISCELLANEOUS STANDARD SHEET "MI1".
2. ON SHOULDER, PERFORMANCE GRADED BINDER 58-28 TO BE USED.
3. MINIMUM SLOPE 1" PER FT., MAXIMUM SLOPE 2" PER FT., FOR SPECIAL CENTER DITCH.
3. FOR DETAILS OF UNDERDRAIN, SEE DETAIL AND MISCELLANEOUS STANDARD SHEET "MN"
4. WHEN FILL HEIGHT EXCEEDS 30', USE 2:1 SLOPE. SEE CROSS SECTIONS.



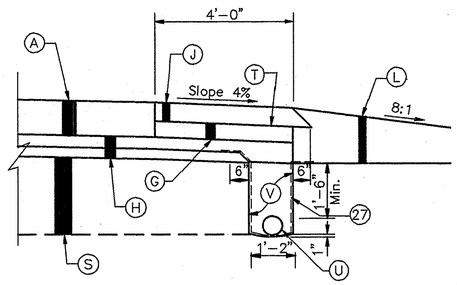
Clear Zone Transition
From 43' at Sta. 236+62.51 to 52' at Sta. 237+52.51
From 52' at Sta. 264+16.58 to 43' at Sta. 265+06.58

SUPERELEVATED SECTION

STA. 237+52.51 "D" TO STA. 264+16.58 "D"



UNDERDRAIN DETAIL – OUTSIDE SHOULDER



UNDERDRAIN DETAIL – MEDIAN SHOULDER

Scale: 1/2" = 1'-0"

LEGEND

- (A) Cement Concrete Pavement, Plain, 11"
- (G) 550#/Syd. QC/QA HMA Base 25.0mm, Shoulder
- (H) Subbase for Cement Concrete Pavement 4" Coarse Aggregate #8 on 3" Compacted Aggregate for Base, Type "O", Size No. 53
- (I) Compacted Aggregate Shoulder 6" Compacted Aggregate for Base, Type "O", Size No. 53
- (J) Corrugated Paved Shoulder 165#/Syd. QC/QA HMA Surface 9.5mm, Shoulder on 495#/Syd. QC/QA HMA Base 25.0mm, Shoulder
- (L) Compacted Aggregate Wedge, Type O, Size No. 53
- (P) Prime Coat (0.00146 Tons/Syd.)
- (S) 24" Special Subgrade Treatment (6" Compacted in place)
- (T) Tack Coat (0.000252 Tons/Syd.)
- (U) Pipe, Group "K" for Underdrain
- (V) Aggregate for Underdrain
- (3) Longitudinal Joint with Dowel
- (26) Sodding, Nursery
- (27) Geotextile for Underdrain

U. S. 24

INDIANA DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

SCALE: 1/8" = 1'-0"

FOR INFORMATION ONLY

JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER
12-18-97

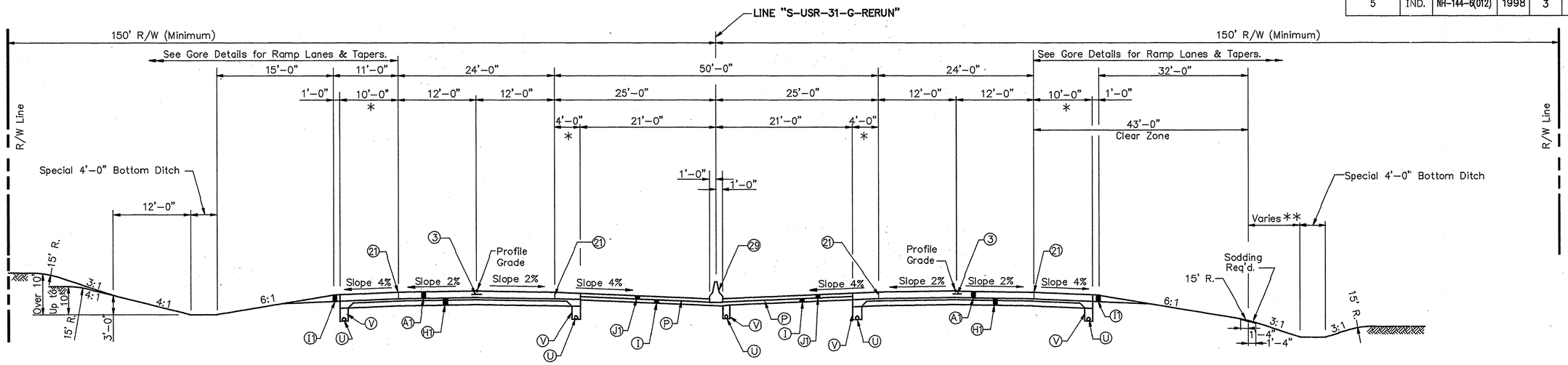
R-23637

M24TYP01/96

PLOT DATE & TIME: DEC 18, 1997 – 11:06:01

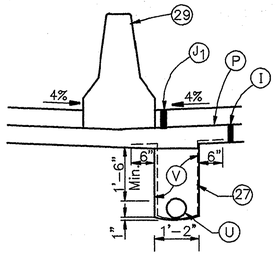
DESIGNED: TLS 12/92 CHECKED:
DRAWN: DKA 12/92 CHECKED: RDS 2/94
REVISED: SJW 12/97 CHECKED: PJK 12/97

FEDERAL ROAD REGION NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	IND.	NH-144-6(012)	1998	3	53



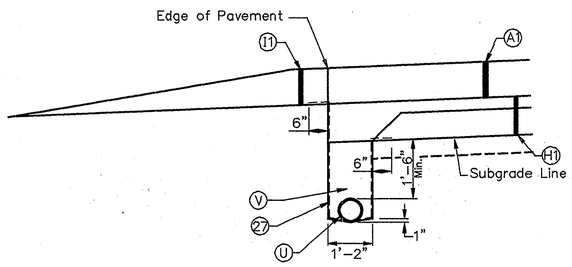
TANGENT SECTION AND CURVES OF 0° 29.99' OR LESS

Sta. 166+20.00 to 225+00.00 "S-USR-31-G-RERUN"



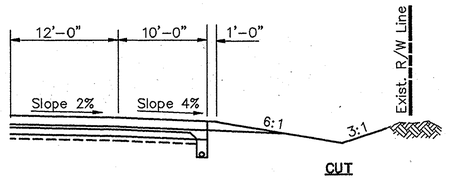
MEDIAN UNDERDRAIN DETAIL

1/2" = 1'-0"



UNDERDRAIN DETAIL

1/2" = 1'-0"



SPECIAL "V" DITCH

Sta. 217+00.00 to Sta. 225+00.00 "S-USR-31-G-RERUN"
1/8" = 1'-0"

LEGEND

- (A1) Cement Concrete Pavement, Plain, 12"
- (H1) Subbase for Cement Concrete Pavement 4" Coarse Aggregate #8 on 9" Compacted Aggregate for Base, Type "O", Size No. 53
- (I) Compacted Aggregate Shoulder 6" Compacted Aggregate for Base, Type "O", Size No. 53
- (I1) Compacted Aggregate Shoulder 12" Compacted Aggregate for Base, Type "O", Size No. 53
- (J1) Paved Shoulder 660#/Syd. QC/QA HMA Base 25.0mm, Shoulder with Seal Coat, Type 2
- (P) Prime Coat (0.00146 Tons/Syd.)
- (U) Pipe, Group "K" for Underdrain
- (V) Aggregate for Underdrain
- (3) Longitudinal Joint with Dowel
- (21) Longitudinal Construction Joint
- (27) Geotextile for Underdrain
- (29) Concrete Median Barrier
- * Corrugated Concrete Shoulder
- ** See Cross Sections

U. S. 31

INDIANA DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

SCALE: 1/8" = 1'-0"

FOR INFORMATION ONLY

JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

John M. Broadus 12-18-97

R-23637

M24TYP03/96

PLOT DATE & TIME: DEC 18, 1997 - 11:02:09

DESIGNED: CHECKED:
DRAWN: SJW 3/93 CHECKED:
REVISED: SJW 12/97 CHECKED: PJG 12/97

SHEET REVISED: JULY 20, 1992

FEDERAL ROAD REGION NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	IND.	NH-144-6(012)	1998	4	53

BRIDGE FILE NO. 24-52-6597B

BRIDGE FILE NO. 24-52-8165

ALL R/W ON THIS SHEET TO BE AS SHOWN. ALL R/W DESCRIBED FROM LINE "D" EXCEPT AS SHOWN. LIMITED ACCESS PROVISIONS TO APPLY WHERE INDICATED.

T.B.M. #25 -5/8" REBAR AT STA. 342+00 "D", EL.727.60
B.M. #F-38 -I.S.H.C. BRASS DISK, N.W. WINGWALL OF BRIDGE U.S. 24 OVER U.S. 31 EL. 720.15
T.B.M. #39 -S.E. COR. CONC. WINGWALL AT S.E. WING EASTBOUND U.S. 24 BRIDGE EL. 715.18
T.B.M. #40 -P.K. NAIL AT STA. 356+00 "D", @ ℄ EL. 705.44
T.B.M. #41 -P.K. NAIL AT STA. 360+00 "D", 27' RT. EL. 697.72
T.B.M. #42 -P.K. NAIL AT STA. 364+00 "D", 27' RT. EL. 689.74
T.B.M. #43 -P.K. NAIL AT STA. 368+00 "D", 27' RT. EL. 681.75

PLAN	BY	DATE
SURVEYED	CERTIFIED ENGINEERING	11/2/89
PLOTTED	BOYD E. PHELPS/SIECO INC.	DJH-2/93
ALIGNMENT CHECKED	-	-
RT. OF WAY CHECKED	-	-

NOTE BOOK No.16005T1

PROFILE	BY	DATE
SURVEYED	CERTIFIED ENGINEERING	11/2/89
PLOTTED	BOYD E. PHELPS/SIECO INC.	DJH-2/93
GRADES CHECKED	-	-
B. M.'s NOTED	-	-
STRUCTURE NOTATIONS CHECKED	-	-

NOTE BOOK No.16007L1

PLOT DATE & TIME: DEC 18, 1997 - 11:19:43

JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER 12-18-97

PLATE 1 - PLAN - PROFILE B. R. R. STANDARD 1975

R-23637

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	FILE
NH-144-6(012)	"D"	4	53	

TP114

M24PP05/100

FOR INFORMATION ONLY

FEDERAL ROAD REGION NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	IND.	NH-144-6(012)	1998	5	53

STR. NO. 84
400' of 4' x 2' Box Culvert Req'd. (200' Twin Structures)
INTERCHANGE SHEETS
Geometrics
Right of Way
Drainage
Construction Details
Ramp Grades
JOHN V. & RELNA D. WOLF
JAMES W. HUFF
STATE OF INDIANA (I.S.H.C.)
JOHN R. DE LUCA
Sec.24, T-27-N, R-3-E
Peru Township
Miami County
STR. NO. 77
Inlet Type H-5 w/100 Lft. of 15" Pipe and 1 Pipe End Section Req'd.
SECTION RANGE LINE
SOUTHBOUND U.S. 31
NORTHBOUND U.S. 31
LINE "S-USR-31-G-RERUN"
N05°53'08"W
STR. NO. 86
495' of 4' x 2' Box Culvert Req'd. (Double Structure)
RAYMOND E. MUSSELMAN FARMS, INC.
Sec.19, T-27-N, R-4-E
Peru Township
Miami County
GENCORP, INC.
CURVE DATA
P.I. 176+90.70 "S-USR-31-G-RERUN"
Δ = 5°49'00" Lt.
D = 00°20'05"
R = 17114.86'
T = 869.50'
L = 1737.50'
E = 22.07'
S.E.=N.C.
CURVE DATA
P.I. 216+44.72 "S-USR-31-G-RERUN"
Δ = 05°58'00" Rt.
D = 00°19'53"
R = 17,284.76'
T = 900.81'
L = 1800.00'
E = 23.46'
S.E.=N.C.
EQUATION:
P.O.T. 193+26.50, LINE "S-USR-31-G-RERUN"=
P.O.T. 349+99.85, LINE "D"=
P.O.T. 49+99.85, LINE "G" PROJ. ST-F-118(12)
ALL R/W ON THIS SHEET TO BE AS SHOWN. ALL R/W DESCRIBED FROM LINE "S-USR-31-G-RERUN" EXCEPT AS SHOWN. LIMITED ACCESS PROVISIONS TO APPLY WHERE INDICATED.
FOR T.B.M. NO.S 20,21,22, & 23 SEE SHEET NO.
P.V.I. 184+50
EL. 663.02
400 V.C.
P.V.I. 189+50
EL. 682.80
600 V.C.
P.V.I. 197+05
EL. 703.00
600 V.C.
P.V.I. 204+05
EL. 730.86
400 V.C.
P.T. 185+58.70 "S-USR-31-G-RERUN"
P.O.T 193+26.50 "S-USR-31-G-RERUN"
P.O.T 207+43.90 "S-USR-31-G-RERUN"
T.B.M. #28 -P.K. NAIL IN JOINT OF P.S.D., STA. 181+80 "S-USR-31-G-RERUN", 80' LT., EL. 650.13
T.B.M. #27 -5" STAMPED IN LEFT EDGE OF PAVT. STA. 185+00 "S-USR-31-G-RERUN", 59' LT., EL. 664.16
T.B.M. #26 -N.E. COR. OF CONC. LEFT BASE, STA. 189+57 "S-USR-31-G-RERUN", EL. 677.23
T.B.M. #196 -P.K. NAIL AT STA. 256+60 "S-USR-31-G-RERUN", 49' RT., EL. 702.79
T.B.M. #199 -P.K. NAIL AT STA. 199+00 "S-USR-31-G-RERUN", 49' RT., EL. 713.33
T.B.M. #202 -P.K. NAIL AT STA. 202+00 "S-USR-31-G-RERUN", 49' RT., EL. 723.58
T.B.M. #205 -P.K. NAIL AT STA. 205+00 "S-USR-31-G-RERUN", 49' RT., EL. 734.06
T.B.M. #208 -P.K. NAIL AT STA. 208+00 "S-USR-31-G-RERUN", 49' RT., EL. 744.40
JOHN M. BROADUS
REGISTERED No. 9600427
STATE OF INDIANA
PROFESSIONAL ENGINEER
12-18-97

PLATE 1 - PLAN - PROFILE B.R.R. STANDARD 1975

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	FILE
NH-144-6(012)	"S-USR-31-G-RERUN"	5	53	

TP114

R-23637

M24PP09/100

FOR INFORMATION ONLY

FEDERAL ROAD REGION NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	IND.	NH-144-6( )		6	52

SOIL BORINGS

BORING NO. TB31W-1

STATION 348+60 "D" — OFFSET 80' LT. — GROUND ELEV. 720.00

NO.	ELEV.	"N"	DESCRIPTION
	720.0		SURFACE ELEV.
1	717.5	2,2,3	LOAM, SOFT TO STIFF, BROWN, MOIST, W/ TRACE WOOD FRAGMENTS (FILL)
2	715.0	2,2,2	
3	712.5	8,8,6	8.0'
4	710.0	7,7,10	CLAY LOAM, VERY STIFF, BROWN, MOIST (FILL)
5	705.0	8,10,10	15.0'
			LOAM, VERY STIFF, BROWN, MOIST (FILL)
6	700.0	9,11,12	

AUGER REFUSAL AND END OF BORING DEPTH 20.0'

WATER LEVEL OBSERVATION
NONE

BORING NO. TB31W-1A

STATION 348+60 "D" — OFFSET 90' LT. — GROUND ELEV. 720.00

NO.	ELEV.	"N"	DESCRIPTION
	720.0		SURFACE ELEV.
			LOAM, SOFT TO STIFF, BROWN, MOIST, W/TRACE WOOD FRAGMENTS (VISUAL) (FILL)
			8.0'
			CLAY LOAM, VERY STIFF, BROWN, MOIST (VISUAL) (FILL)
			15.0'
			LOAM, VERY STIFF, BROWN, MOIST (VISUAL) (FILL)
	700.0		

AUGER REFUSAL AND END OF BORING DEPTH 20.0'

WATER LEVEL OBSERVATION
NONE

BORING NO. TB31W-1B

STATION 348+60 "D" — OFFSET 170' LT. — GROUND ELEV. 688.20

NO.	ELEV.	"N"	DESCRIPTION
	688.2		SURFACE ELEV. TOPSOIL (VISUAL) 0.5'
1	685.7	6,6,10	
2	683.2	5,5,7	LOAM, VERY STIFF TO STIFF, BROWN, MOIST
3	680.7	4,6,6	
4	678.2	4,6,10	9.0'
5	673.2	3,5,6	SILTY CLAY, VERY STIFF TO STIFF, BROWN TO GRAY AFTER 14", MOIST
6	668.2	4,6,10	20.0'
7	663.2	9,14,21	SAND, DENSE TO MEDIUM DENSE, BROWN, WET, W/OCCASIONAL SILTY CLAY SEAM (VISUAL)
8	658.2	8,8,21	
9	653.2	11,28,50/8"	34.0'
10	648.2	13,19,31	SILTY CLAY LOAM, HARD TO VERY STIFF, GRAY, SLIGHTLY MOIST
11	643.2	8,12,18	
12	638.2	9,14,20	

END OF BORING DEPTH 50.0'

WATER LEVEL OBSERVATION
27.2' WHILE DRILLING
29.6' AFTER BORING
DRY @ 58 HRS AFTER BORING

BORING NO. TB31W-2

STATION 350+07 "D" — OFFSET 80' LT. — GROUND ELEV. 694.20

NO.	ELEV.	"N"	DESCRIPTION
	694.2		SURFACE ELEV.
1	691.7	8,8,9	
2	689.2	5,12,11	LOAM, STIFF TO VERY STIFF, BROWN, MOIST (FILL TO 5')
3	686.7	7,7,8	8.0'
4	684.2	4,8,8	
5	679.2	10,7,8	CLAY LOAM, VERY STIFF TO HARD, BROWN, MOIST
6	674.2	14,18,20	20.0'
7	669.2	4,4,12	SANDY LOAM, VERY STIFF, BROWN, MOIST, W/ OCCASIONAL SAND SEAMS
8	664.2	14,12,15	30.0'
9	659.2	11,15,22	SILTY CLAY, VERY STIFF TO HARD, BROWN, MOIST
10	654.2	16,27,25	
11	649.2	7,11,15	45.0'
12	644.2	14,24,26	SILT, DENSE TO MEDIUM DENSE, GRAY, WET TO MOIST, W/ OCCASIONAL SAND SEAMS (VISUAL)
13	639.2	14,15,23	
14	634.2	14,9,9	60.0'
			SILTY CLAY, HARD, GRAY, MOIST W/ OCCASIONAL SILT SEAMS.
15	629.2	13,19,26	65.0'
			LOAM, HARD, GRAY, MOIST
16	624.2	15,24,26	

END OF BORING DEPTH 70'-0

WATER LEVEL OBSERVATION
16.2' WHILE DRILLING
15.3' AFTER BORING
15.2' @ 14 HRS. AFTER BORING

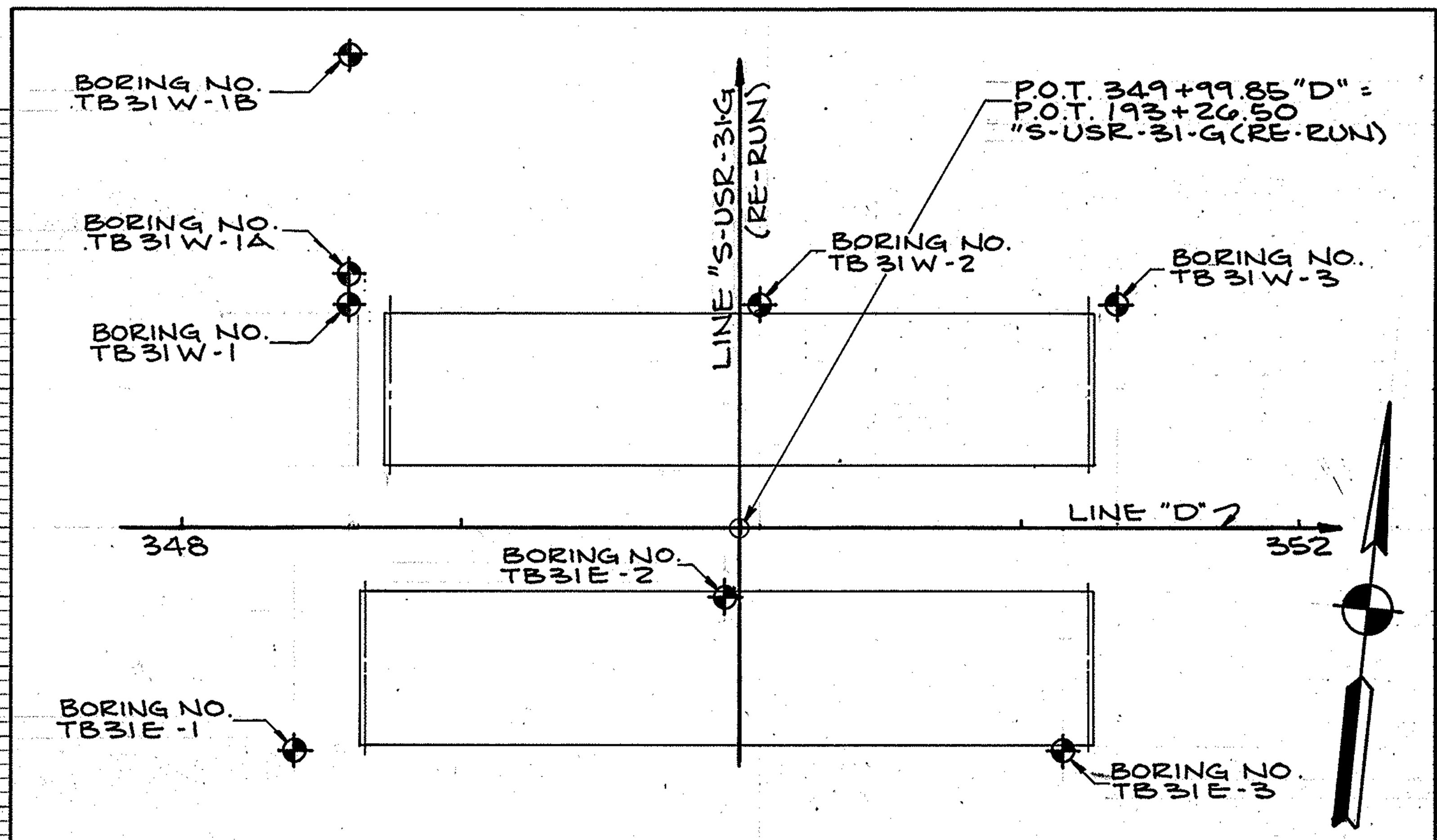
BORING NO. TB31W-3

STATION 351+35 "D" — OFFSET 80' LT. — GROUND ELEV. 713.00

NO.	ELEV.	"N"	DESCRIPTION
	713.0		SURFACE ELEV. TOPSOIL (VISUAL) 0.5'
1	710.5	3,5,8	
2	708.0	4,5,9	LOAM, STIFF TO VERY STIFF, BROWN, MOIST (FILL)
3	705.5	5,8,8	8.0'
4	703.0	4,6,7	
5	698.0	5,5,7	CLAY LOAM, STIFF TO VERY STIFF, BROWN, MOIST (FILL)
6	693.0	6,6,10	
7	688.0	10,6,7	27.0'
8	683.0	4,4,7	
9	678.0	7,9,9	SILTY CLAY, VERY STIFF, BROWN, MOIST, W/OCCASIONAL SILT SEAMS
10	673.0	4,8,11	
11	668.0	4,7,10	49.0'
12	663.0	5,9,12	SAND, MEDIUM DENSE, BROWN, WET (VISUAL)

END OF BORING DEPTH 50.0'

WATER LEVEL OBSERVATION
DRY WHILE DRILLING
DRY AFTER BORING
43.0' @24 HRS AFTER BORING



SOIL BORING LOCATION PLAN
NO SCALE

LEGEND:

- ◆ LOCATION OF TEST BORING
- "N" NUMBER OF BLOWS REQUIRED TO DRIVE A 2" O.D. SPLIT SPOON SAMPLER TO A DEPTH OF 6" BY MEANS OF A 140 LB. HAMMER FALLING 30"

PILE LOADING FOR GEOTECHNICAL TESTING (WESTBOUND)

Bent	No. 1	No. 2	No. 3
Design Load	60T	60T	60T
Factor of Safety	2.5	2.5	2.5
Factored Design Load	150T	150T	150T
Friction in Scour Zone	0T	0T	0T
Down Drag Friction	0T	0T	0T
Ultimate Load	150T	150T	150T
Testing Method	BY FORMULA, STD. SPEC. 701.06		

SOIL BORINGS
SCALE: 1"=5' VERT.
SUBMITTED FOR APPROVAL
John M. Broadus 12-18-97

JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

R-23637

PLAN — NOTE BOOK No. — SURVEYED, PLOTTED, ALIGNMENT CHECKED, RT. OF WAY CHECKED — BY S.L.G. — DATE 7/92

PROFILE — NOTE BOOK No. — SURVEYED, PLOTTED, GRADES CHECKED, B.M.'s NOTED, STRUCTURE NOTATIONS CHECKED — BY S.L.G. — DATE 7/92

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	FILE
NH-144-6( )	D	6	53	24-52-6597B

FEDERAL ROAD REGION NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	IND.	NH-144-6( )		7	52

NOTE:
FOR SOIL BORING LOCATION PLAN AND LEGEND, SEE SHEET 6.

BORING NO.	TB31E-1	TB31E-2	TB31E-3
STATION	348+40 "D"	349+94 "D"	351+15 "D"
OFFSET	80' RT.	23' RT.	80' RT.
GROUND ELEV.	712.80	690.60	684.30

TB31E-1

SAMPLE NO.	ELEV.	"N"	DESCRIPTION
	712.8		SURFACE ELEV. TOPSOIL (VISUAL) 0.5'
1	710.3	1,1,2	
2	707.8	5,6,8	LOAM, VERY SOFT TO VERY STIFF, BROWN, MOIST (POSSIBLE FILL TO 8')
3	705.3	4,7,7	
4	702.8	4,6,7	14.0'
5	697.8	4,7,11	
6	692.8	3,9,3	
7	687.8	6,7,8	SILTY CLAY, VERY STIFF TO MEDIUM STIFF, GRAY, MOIST TO VERY MOIST, W/ OCCASIONAL SILT AND SAND SEAMS
8	682.8	4,4,8	
9	677.8	3,4,6	
10	672.8	7,8,10	
11	667.8	7,12,14	49.0'
12	662.8	12,14,21	SILTY CLAY LOAM, HARD, GRAY, SLIGHTLY MOIST
13	657.8	10,15,20	

END OF BORING DEPTH 55.0'

WATER LEVEL OBSERVATION
17.2' WHILE DRILLING
25.1' AFTER BORING
8.6' @ 62 HRS. AFTER BORING

TB31E-2

SAMPLE NO.	ELEV.	"N"	DESCRIPTION
	690.6		SURFACE ELEV. TOPSOIL (VISUAL) 0.5'
1	688.1	5,10,10	CLAY LOAM, VERY STIFF, BROWN, MOIST
2	685.6	6,8,12	
3	683.1	7,9,9	8.0'
4	680.6	3,3,6	CLAY LOAM, MEDIUM STIFF, BROWN, MOIST, W/ OCCASIONAL SILT SEAMS; 13.0'
5	675.6	4,11,10	SILTY CLAY, VERY STIFF, BROWN, MOIST
6	670.6	7,8,9	23.0'
7	665.6	7,8,12	SAND AND GRAVEL, MEDIUM DENSE, GRAY, WET (VISUAL); 28.0'
8	660.6	13,10,13	SILTY CLAY LOAM, VERY STIFF TO HARD, GRAY, MOIST, W/ OCCASIONAL SILT SEAMS
9	655.6	10,26,23	38.0'
10	650.6	15,12,24	SILTY CLAY, HARD, GRAY, MOIST
11	645.6	12,18,17	48.0'
12	640.6	9,20,22	SILTY CLAY LOAM, HARD, GRAY, MOIST, W/ OCCASIONAL SILT SEAMS; 54.0'
13	635.6	7,10,14	
14	630.6	9,12,16	SAND, MEDIUM DENSE TO DENSE, GRAY, WET (VISUAL)
15	625.6	15,16,20	
16	620.6	13,17,17	

END OF BORING DEPTH 70.0'

WATER LEVEL OBSERVATION
21.8' WHILE DRILLING
19.6' AFTER BORING
19.6' @ 24 HRS. AFTER BORING

TB31E-3

SAMPLE NO.	ELEV.	"N"	DESCRIPTION
	684.3		SURFACE ELEV. TOPSOIL (VISUAL) 0.5'
1	681.8	9,5,5	CLAY LOAM, MEDIUM STIFF, BROWN, MOIST; 2.5'
2	679.3	14,21,21	SAND AND GRAVEL, DENSE TO MEDIUM DENSE, BROWN, MOIST, (VISUAL)
3	676.8	12,9,8	7.5' CLAY LOAM, MEDIUM STIFF, BROWN, MOIST
4	674.3	4,4,7	10.0'
5	669.3	3,5,5	SAND AND GRAVEL, MEDIUM DENSE TO LOOSE, BROWN, MOIST (VISUAL)
6	664.3	4,6,15	20.0'
7	659.3	9,11,14	
8	654.3	12,14,14	
9	649.3	15,16,17	SILTY CLAY, VERY STIFF TO HARD, GRAY, MOIST, W/ OCCASIONAL SILT SEAMS
10	644.3	12,17,19	
11	639.3	14,16,16	
12	634.3	11,15,15	

END OF BORING DEPTH 50.0'

WATER LEVEL OBSERVATION
DRY WHILE DRILLING
DRY AFTER BORING
DRY @ 24 HRS. AFTER BORING

PILE LOADING FOR GEOTECHNICAL TESTING (EASTBOUND)

Bent	No. 1	No. 2	No. 3
Design Load	70T	70T	70T
Factor of Safety	2.5	2.5	2.5
Factored Design Load	175T	175T	175T
Friction in Scour Zone	0T	0T	0T
Down Drag Friction	0T	0T	0T
Ultimate Load	175T	175T	175T
Testing Method	BY FORMULA, STD. SPEC. 701.06		

PLAN	BY	DATE
SURVEYED	S.L.G.	7/92
PLOTTED		
ALIGNMENT CHECKED		
RT. OF WAY CHECKED		
NOTE BOOK No.		

PROFILE	BY	DATE
SURVEYED	S.L.G.	7/92
PLOTTED		
GRADES CHECKED		
B. M.'s NOTED		
STRUCTURE NOTATIONS CHECKED		
NOTE BOOK No.		

SOIL BORINGS

SCALE: 1"=5' VERT.

SUBMITTED FOR APPROVAL

John M. Broadus 12-18-97

JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

R-23637

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	FILE
NH-144-6( )	D	7	53	24-52-8165

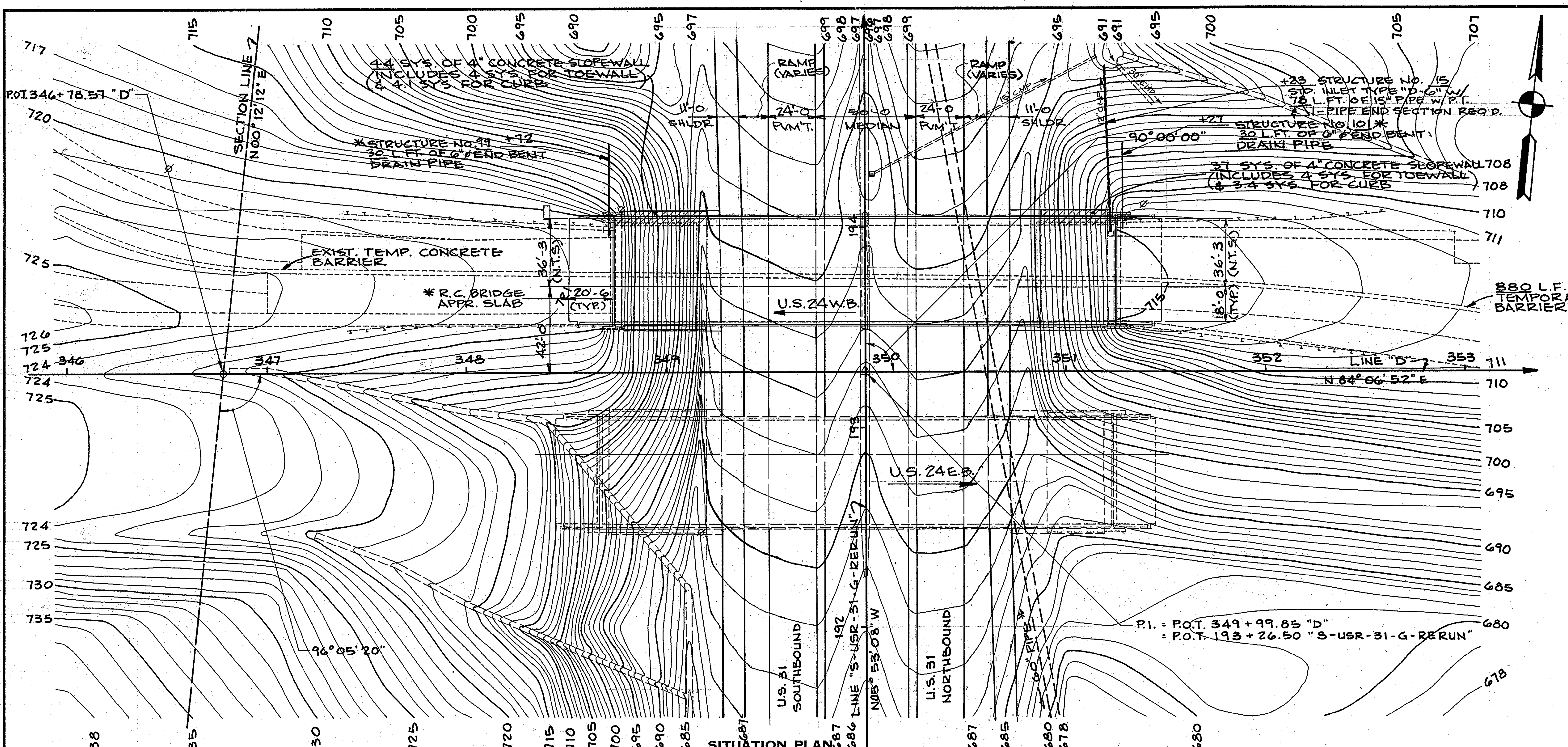
UTILITIES

TELEPHONE: INDIANA BELL
240 N. MERIDIAN ST.
INDIANAPOLIS, IN. 46204
PHONE: 317-265-2727

ELECTRIC: MIAMI-CASS REMC
P.O. BOX 168
PERU, IN. 46970
PHONE: 765-472-3361

GAS: NORTHERN IND. PUBLIC SERVICE CO.
1202 W. MAIN
PERU, IN. 46970
PHONE: 765-472-3361

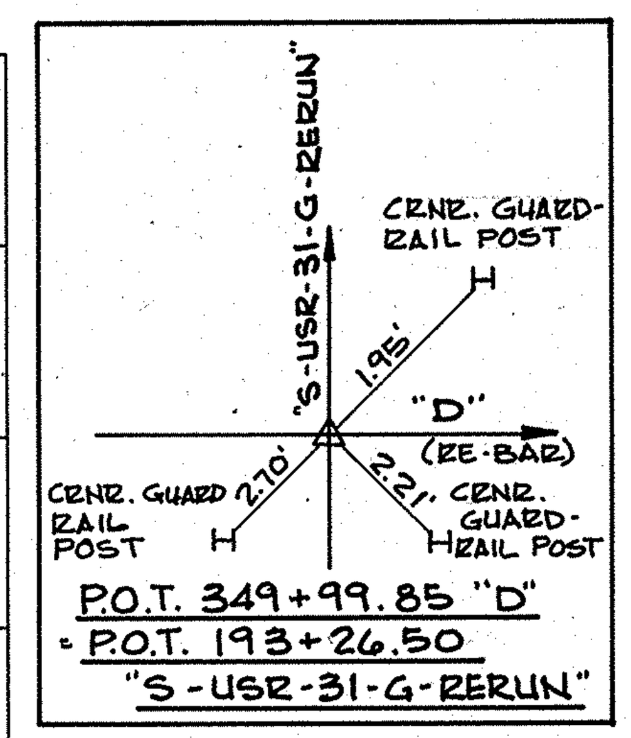
AMMONIA GAS: GULF CENTRAL STORAGE & TERMINAL CO.
P.O. BOX 11
WALTON, IN. 46994
PHONE: 219-626-2543

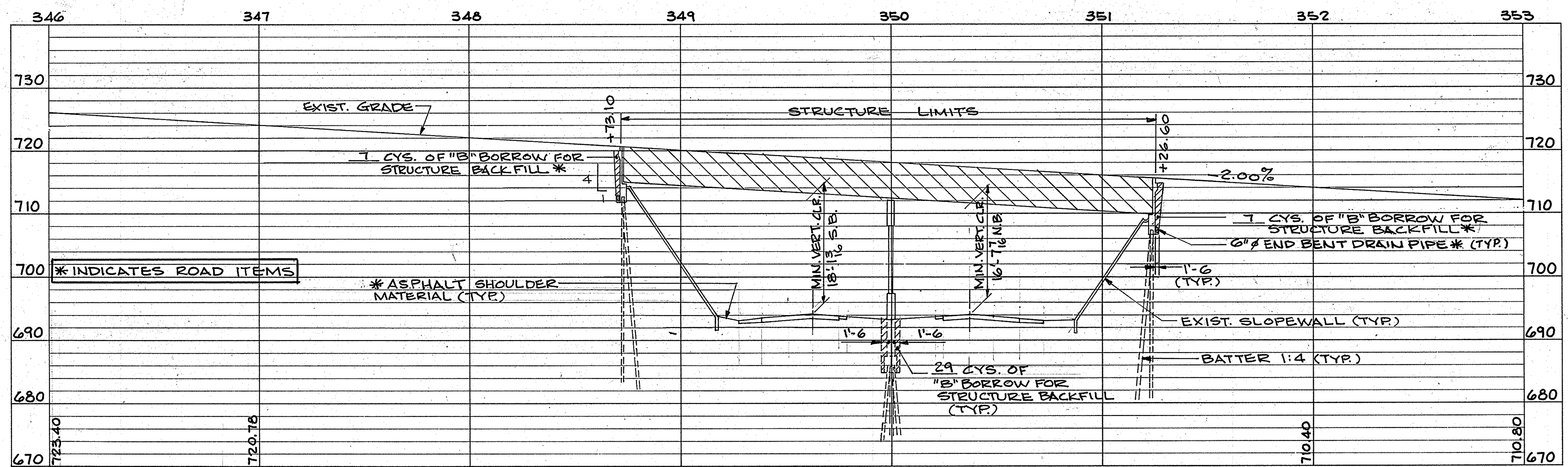


SITUATION PLAN

SCALE:-1"=30'-0". CONTOUR INTERVAL = 1 FT.

*INDICATES ROAD ITEMS





PROFILE ON PROPOSED ℄ ROADWAY - W.B. STR.

SCALES: HORIZ. 1"=30'-0" VERT. 1"=10'-0"

NOTE: FIELD NOTES, BOOK

DRAWN SJF C'K'D
DESIGNED C'K'D
TRACED C'K'D

SF-22396

LAYOUT - (W.B. STRUCTURE)

CONTINUOUS COMPOSITE WELDED PLATE GIRDER BRIDGE
2 SPANS: 1@125'-0; 1@125'-0 NO SKEW
54'-3 CLEAR ROADWAY U.S. 24 (W.B.)/U.S. 31

INDIANA DEPARTMENT OF TRANSPORTATION

MIAMI COUNTY

SCALE:-AS NOTED DATE:- DECEMBER 18 1997

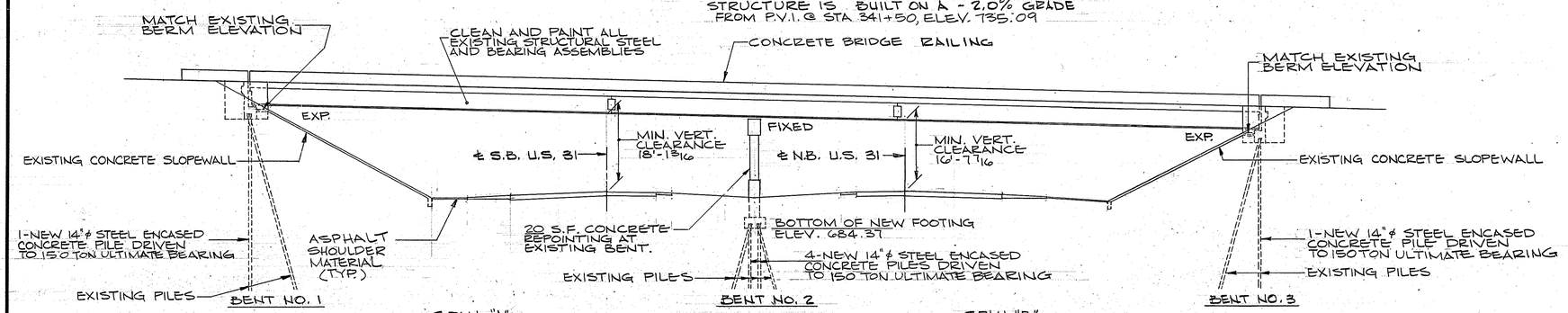
John M. Broadus

JOHN M. BROADUS REGISTERED No. 9600437 STATE OF INDIANA PROFESSIONAL ENGINEER

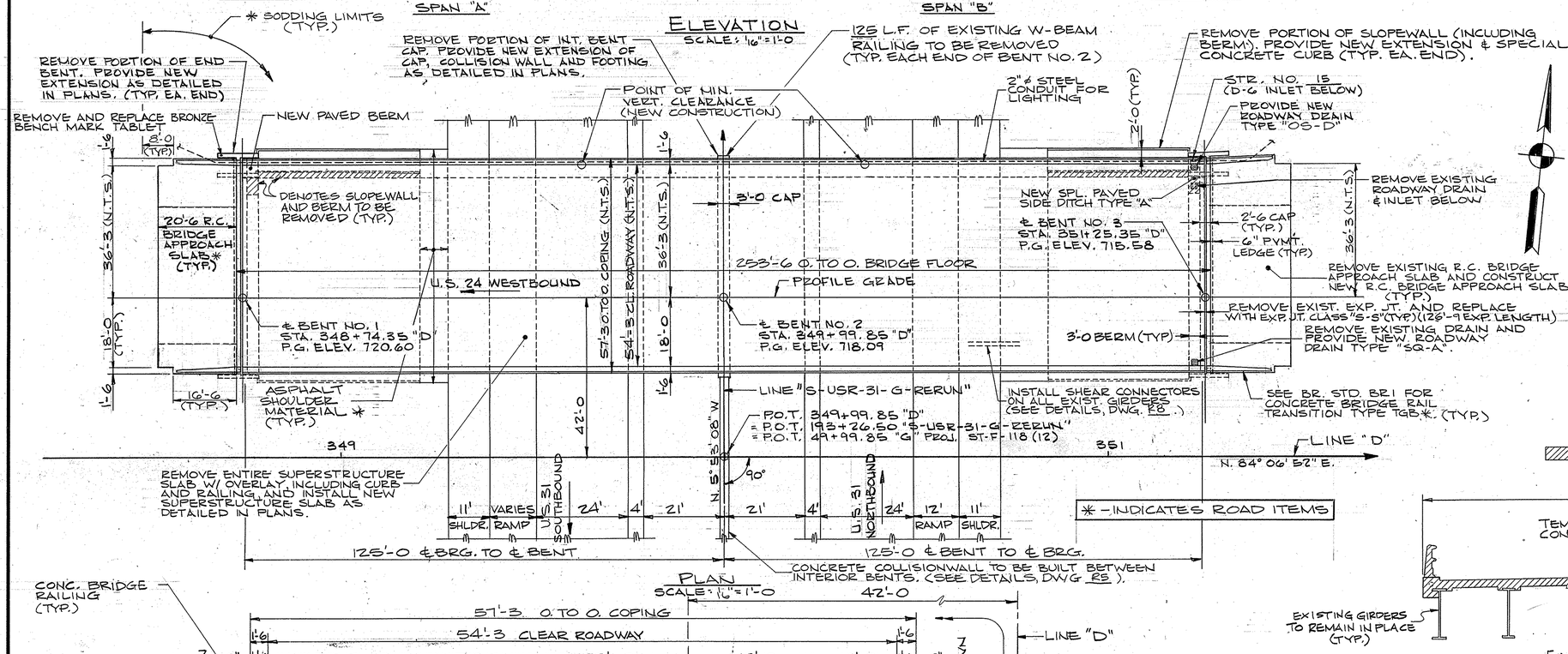
DRAWING:- R1 OF R13 SHEET:- 8 OF 53
PROJECT:- NH-144-6( ) STATION:-
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE:- 24-52-6597B

REVISED 3-16-98: UTILITY PHONE NUMBERS

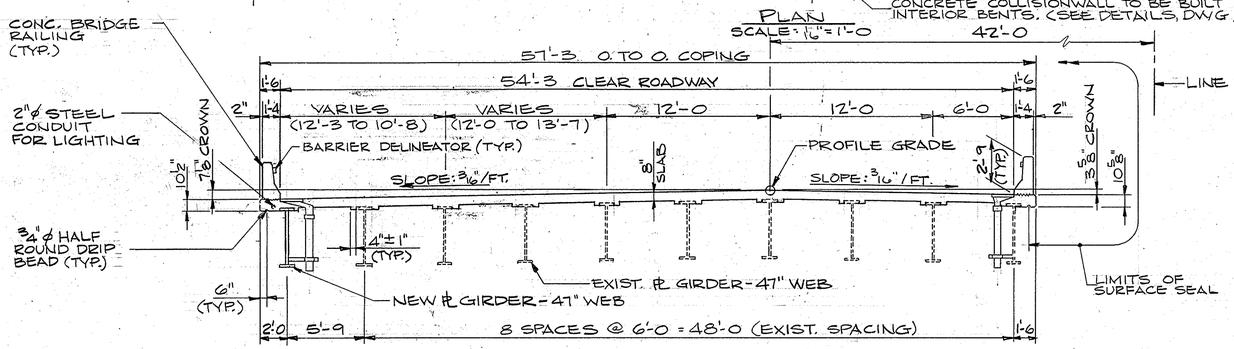
TP117



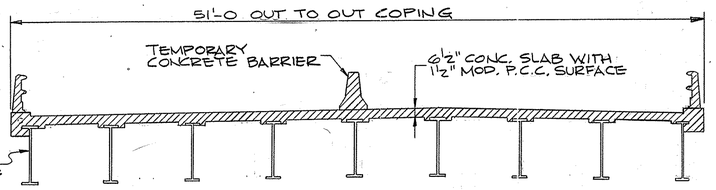
ELEVATION
SCALE: 1/16"=1'-0



PLAN
SCALE: 1/16"=1'-0



PROPOSED SECTION-WESTBOUND STRUCTURE
SCALE: 3/16"=1'-0



EXISTING SECTION-WESTBOUND STRUCTURE
SCALE: 3/16"=1'-0

ALLOWABLE DESIGN STRESSES

CLASS C CONCRETE	f'c = 4,000 P.S.I.
CLASS A CONCRETE	f'c = 3,500 P.S.I.
CLASS B CONCRETE	f'c = 3,000 P.S.I.
REINFORCING STEEL (GRADE 60)	fy = 60,000 P.S.I.

STANDARD DRAWINGS

BR. STD.	RD. STD.	PURPOSE
BR1		CONCRETE BRIDGE RAILING TRANSITION
BR1A		CONCRETE BRIDGE RAILING TRANSITION
C1		REINFORCING BAR NOTES AND DETAILS,
		PILE SHELL FIELD SPLICES
C3		JOINT DETAILS AND OPTIONAL RAILING
		VERTICAL REINFORCING SPLICE
D		ROADWAY DRAINS, TYPES "OS-D" AND "SQ-A"
S1		"B" BORROW FOR STRUCTURE BACKFILL
SS-1A		EXPANSION JOINT CLASS-SS
SS-1B		EXPANSION JOINT CLASS-SS
SS-2		EXPANSION JOINT CLASS-SS
R2B		2"ϕ STEEL PIPE CONDUIT FOR LIGHTING
		AND EXPANSION SLEEVE DETAIL
	CCPJ-4	TRANSVERSE CONSTRUCTION JOINT
	MB2	BRIDGE SLOPEWALL & PAVED BERM DETAILS
	MB4	PAVED SIDE DITCH TYPE "A" DETAILS
	MC	TYPE 6 INLET CASTING
	MD	TYPE D INLET
	ME2	PIPE END SECTIONS
	MN	BACKFILL FOR PIPE STRUCTURES

GENERAL NOTES

1. PLANS FOR EXISTING STRUCTURE (CONTRACT NO. R-10298) ARE ON FILE AT THE INDIANA DEPT. OF TRANSPORTATION. THE PLAN ARE AVAILABLE ON REQUEST.
2. THE TOP OF ENTIRE END BENT CAPS, FRONT FACE OF NEW AND EXISTING MUDWALLS, ALL EXPOSED SURFACES OF CONCRETE BRIDGE RAILING, TOP OF BRIDGE DECK, FACE OF DECK COPING AND UNDERSIDE OF BRIDGE DECK FROM COPING TO DRIP BEAD TO BE SURFACE SEALED.
3. PAINT ON EXISTING STRUCTURE IS NOT LEAD BASED. ESTIMATED WEIGHT OF EXISTING STRUCTURAL STEEL = 265,000 LBS.
4. FOR ADDITIONAL GENERAL NOTES, SEE DWG. S2.

DESIGN DATA

DESIGNED FOR H S20-44 LOADING IN ACCORDANCE WITH 1992 AASHTO SPECIFICATIONS, INCLUDING 1993 INTERIM SPECIFICATIONS. CHECKED FOR SPECIAL LOADING OF 2-24,000 LB. AXLES SPACED AT 4'-0 CENTERS.

DESIGNED IN ACCORDANCE WITH DIVISION I-A OF 1992 AASHTO SPECIFICATIONS, INCLUDING 1993 INTERIM SPECIFICATIONS, USING SEISMIC PERFORMANCE CATEGORY "A" AND 0.05 ACCELERATION COEFFICIENT.

GENERAL PLAN — W. B. STRUCTURE
CONTINUOUS COMPOSITE WELDED PLATE GIRDER BRIDGE

2 SPANS: 1@125'-0, 1@125'-0 — NO. SKEW
54'-3 CLEAR ROADWAY — U.S. 24 (W.B.) / U.S. 31

INDIANA DEPARTMENT OF TRANSPORTATION

DESIGNED ECF	C'K'D
DRAWN SJF	C'K'D LDS
TRACED	C'K'D

SF-22317

SCALE:- AS NOTED

DATE:- DECEMBER 18 1997

John M. Broadus

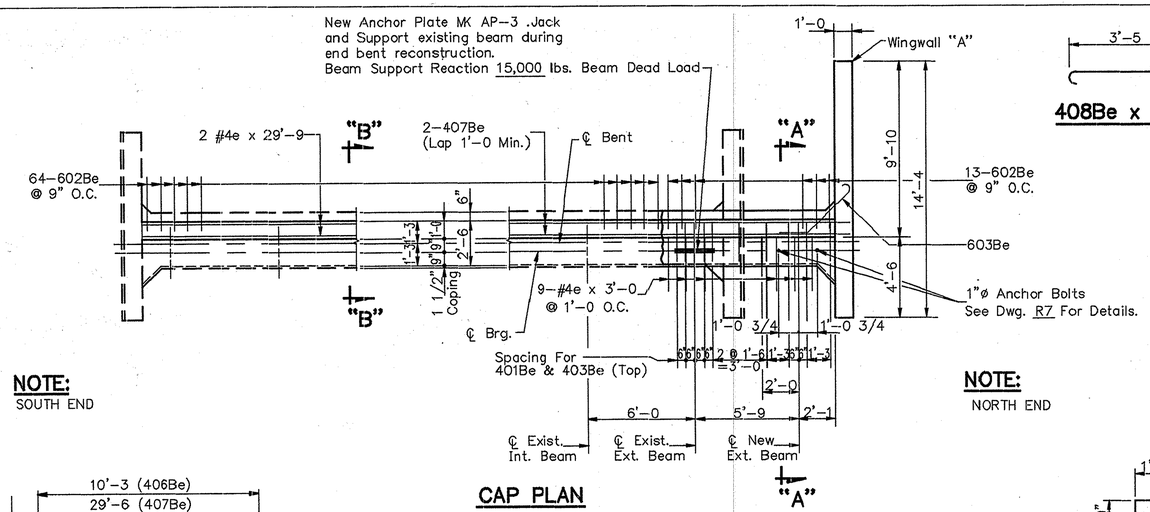
JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWING:- R2 OF R13 SHEET:- 9 OF 513

PROJECT:- NH-144-6( ) STATION:-

BRIDGE CONTRACT NO. R-23637

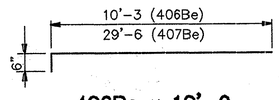
BRIDGE FILE:- 24-52-6597B



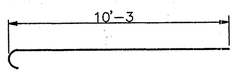
NOTE:
SOUTH END

NOTE:
NORTH END

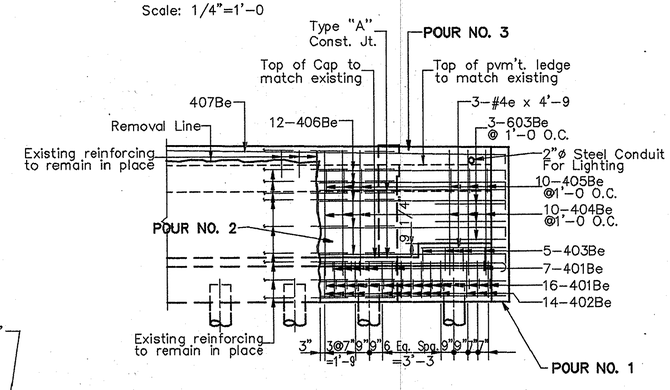
CAP PLAN
Scale: 1/4"=1'-0



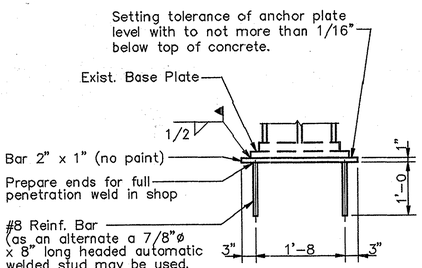
406Be x 10'-9
407Be x 30'-0



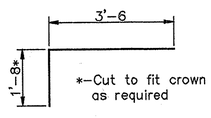
601Be x 10'-11



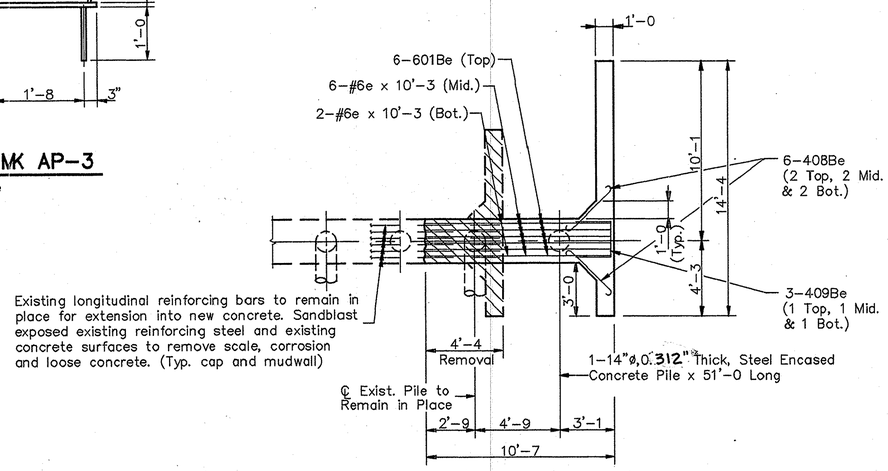
PARTIAL ELEVATION
Scale: 1/4"=1'-0



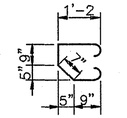
ANCHOR PLATE MK AP-3
No Scale



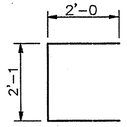
602Be x 5'-2



PARTIAL PILE PLAN LAYOUT
Scale: 1/4"=1'-0

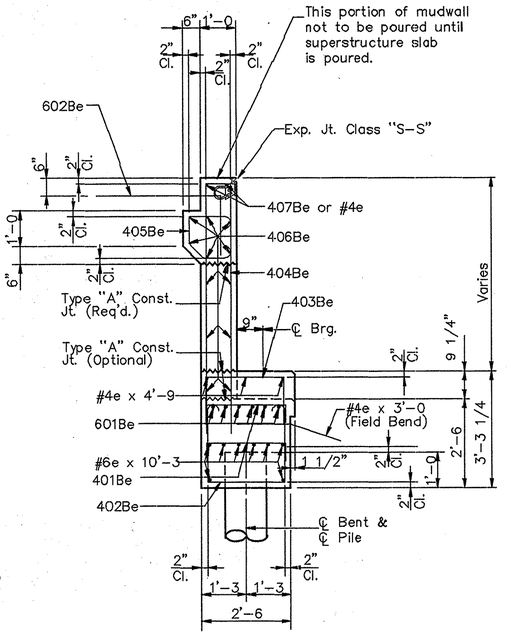


405Be x 4'-3

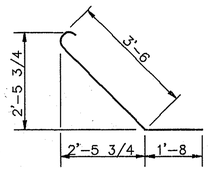


409Be x 6'-1

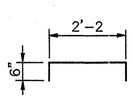
408Be x 4'-5



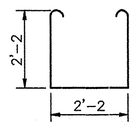
SECTION "A-A"
Scale: 1/2"=1'-0



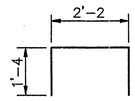
603Be x 5'-10



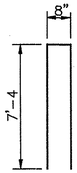
401Be x 3'-2



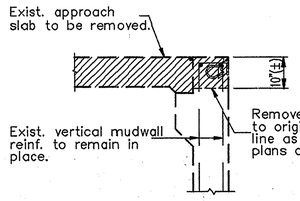
402Be x 7'-6



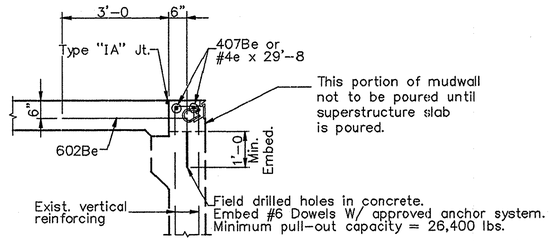
403Be x 4'-10



404Be x 15'-4



SECTION "B-B"
(SHOWING DEMOLITION)
Scale: 1/2"=1'-0



SECTION "B-B"
(SHOWING RECONSTRUCTION)
Scale: 1/2"=1'-0

NOTES:

1. For reinforcing bar notes, see Br. Std. C1.
2. For Type "A" Const. Jt., see Br. Std. C3.
3. For General Notes, see Dwg. R2.
4. For wingwall details, mudwall elevations and Bent No. 3 details see Dwg. R6.
5. Anchor Plates and Anchor Bolts to be preset in concrete.
6. Pour No. 3 to be poured after superstructure slab is poured.
7. The subscript "e" denotes epoxy coated reinforcing steel.

BILL OF MATERIALS

SIZE or MK	NO. of BARS	LENGTH	WEIGHT
601Be	6	10'-11	
602Be	77	5'-2	
603Be	3	5'-10	
#6e	8	10'-3	
	TOTAL #6e		846#
#5e	23	14'-0	
	TOTAL #5e		336#
401Be	23	3'-2	
402Be	14	7'-6	
403Be	5	4'-10	
404Be	10	15'-4	
405Be	10	4'-3	
406Be	12	10'-9	
407Be	2	30'-0	
408Be	6	4'-5	
409Be	3	6'-1	
#4e	2	29'-9	
#4e	4	14'-0	
#4e	10	8'-5	
#4e	12	8'-3	
#4e	3	4'-9	
#4e	9	3'-0	
	TOTAL #4e		649#
TOTAL EPOXY COATED REINF.			1831#
CONCRETE			
POUR NO. 1			4.4 C.Y.
POUR NO. 2			2.9 C.Y.
TOTAL CL. "A" CONCRETE			7.3 C.Y.
POUR NO. 3			3.8 C.Y.
TOTAL CL. "C" CONCRETE			3.8 C.Y.
MISCELLANEOUS			
SURFACE SEAL			514 S.F.
ANCHOR PLATE MK AP-3			1 EACH
1-14"ø, 0.312" THICK, STEEL ENCASED CONC. PILE x 51'-0			51.0 L.F.
BRONZE BENCH MARK TABLET			1 EACH
FIELD DRILLED HOLE IN CONCRETE			64 EACH

BENT NO. 1
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: AS NOTED

DATE: DECEMBER 18 1997

John M. Broadus

DRAWING: R3 OF R13 SHEET: 10 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-52-6597B

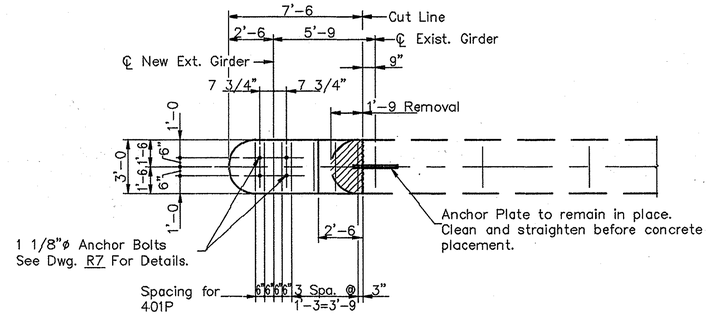
JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

24WBBNT1/48

PLOT DATE & TIME: DEC 17, 1997 - 10:16:05

DESIGNED: MP 3/93 CHECKED: JB
DRAWN: SG 8/93 CHECKED: MP 9/93
REVISED: CHECKED:

SHEET REVISED: SEPTEMBER 24, 1992

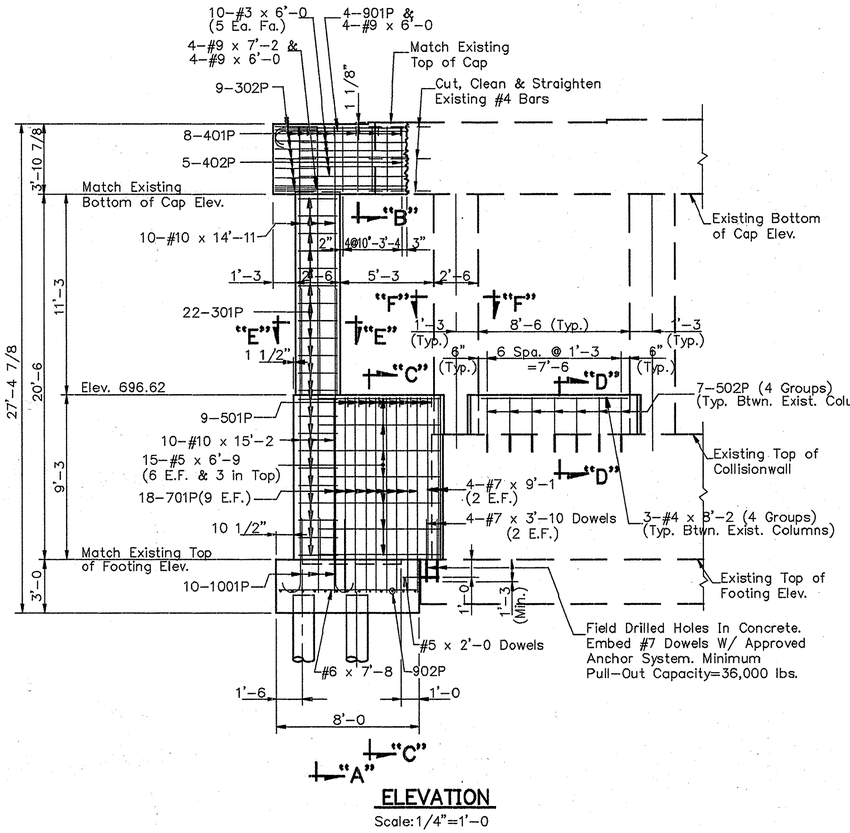


PARTIAL CAP PLAN

Scale: 1/4"=1'-0

NOTE:
NORTH END

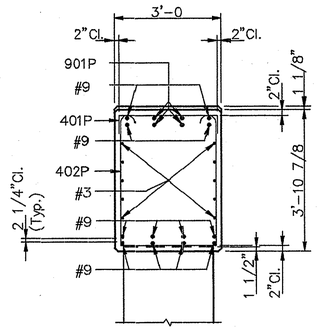
"A"
"B"



ELEVATION

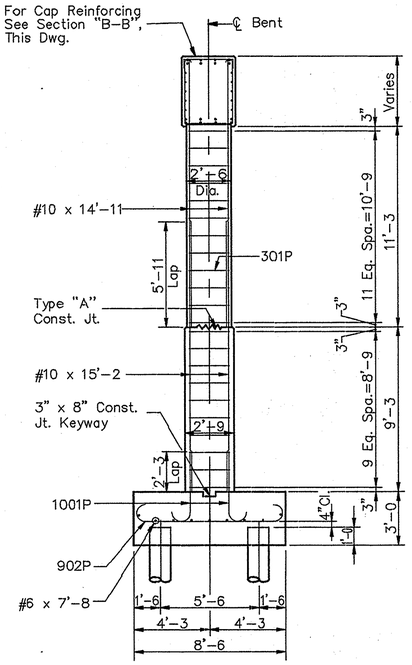
Scale: 1/4"=1'-0

PILING:
4-14"ø, 0.312" Thick, Steel Encased Concrete Piles x 27'-0 Long.



SECTION "B-B"

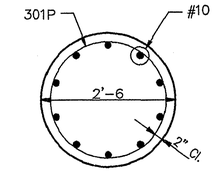
Scale: 1/2"=1'-0



SECTION "A-A"

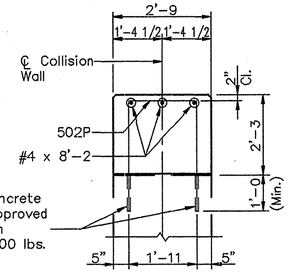
Scale: 1/4"=1'-0

NOTES:
1. For reinforcing bar notes, see Br. Std. C1.
2. For General Notes, see Dwg. S2.
3. For Type "A" Const. Jt., see Br. Std. C3.
4. For Footing Plan, additional sections and details, see Dwg. R5.



SECTION "E-E"

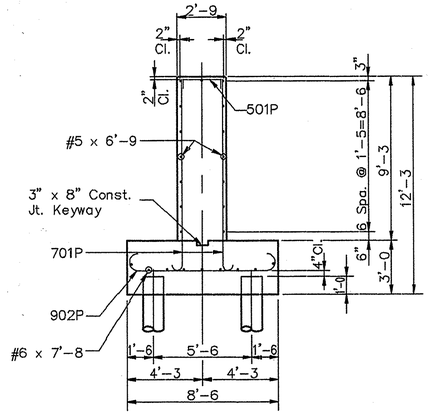
Scale: 3/4"=1'-0



Field Drilled Holes In Concrete Embed #5 Dowels w/ Approved Anchor System. Minimum Pull-out Capacity= 18,600 lbs. Per Leg.

SECTION "D-D"

Scale: 1/2"=1'-0



SECTION "C-C"

Scale: 1/4"=1'-0

BILL of MATERIALS

SIZE or NK	NO. of BARS	LENGTH	WEIGHT
1001P	10	5'-4	
#10	10	15'-2	
#10	10	14'-11	
TOTAL #10			1524#
901P	4	10'-0	
902P	13	10'-8	
#9	4	7'-2	
#9	8	6'-0	
TOTAL #9			868#
701P	18	11'-9	
#7	4	9'-1	
#7	4	3'-10	
TOTAL #7			538#
#6	9	7'-8	
TOTAL #6			104#
501P	9	3'-5	
502P	28	8'-1	
#5	15	6'-9	
#5	4	2'-0	
TOTAL #5			382#
401P	8	3'-8	
402P	5	10'-9	
#4	12	8'-2	
TOTAL #4			121#
301P	22	7'-10	
302P	9	6'-0	
#3	10	6'-0	
TOTAL #3			108#
TOTAL UNCOATED REINF.			3645#
CONCRETE			
FOOTING CL. "B"			7.5 C.Y.
COLLISIONWALL CL. "A"			7.2 C.Y.
COLLISIONWALL EXTENSIONS			
CL. "A" 4 @ 2.0 C.Y.			8.0 C.Y.
COLUMN CL. "A"			2.1 C.Y.
CAP CL. "A"			3.2 C.Y.
TOTAL CL. "A" CONCRETE			20.5 C.Y.
MISCELLANEOUS			
FIELD DRILLED HOLES IN CONCRETE			64 EACH
4-14"ø, 0.312" THICK, STEEL ENCASED CONC. PILES x 27'-0			108.0 L.F.

BENT NO. 2
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: AS NOTED

DATE: DECEMBER 18 1997

John M. Broadus

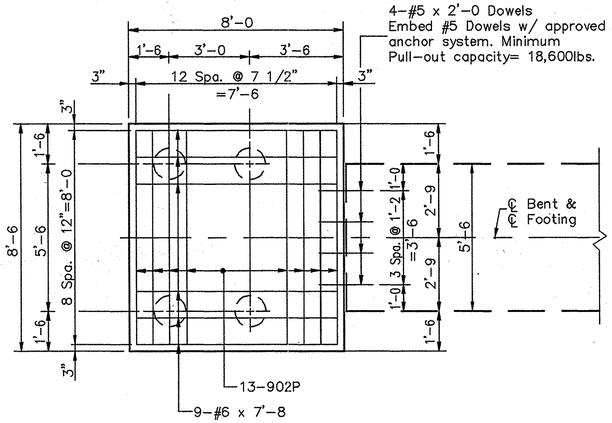
DRAWING: R4 OF R13 SHEET: 11 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-52-6597B

JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

24WBBNT2/48

PLOT DATE & TIME: DEC 17, 1997 - 10:19:29

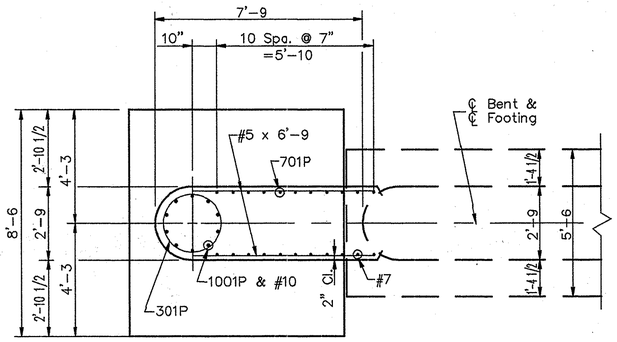
DESIGNED: MP 6/93 CHECKED: JB
DRAWN: SJG 9/93 CHECKED: MP 9/93
REVISED: CHECKED:
SHEET REVISED: SEPTEMBER 24, 1992



FOOTING PLAN

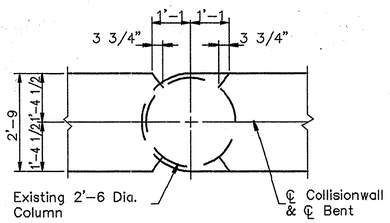
(SHOWING FOOTING REINFORCING & PILE LAYOUT)
Scale: 3/8"=1'-0

NOTE:
NORTH END



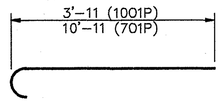
FOOTING PLAN

(SHOWING COLUMN & COLLISIONWALL REINFORCING)
Scale: 3/8"=1'-0

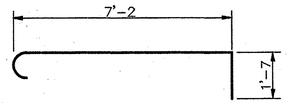


SECTION "F-F"

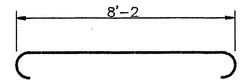
Scale: 1/2"=1'-0



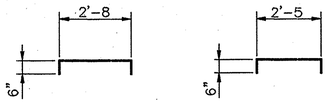
1001P x 5'-4
701P x 11'-9



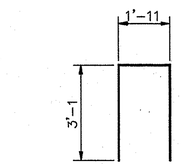
901P x 10'-0



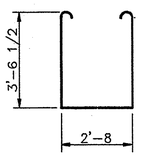
902P x 10'-8



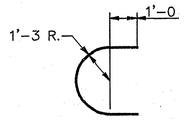
401P x 3'-8 **501P x 3'-5**



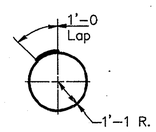
502P x 8'-1



402P x 10'-9



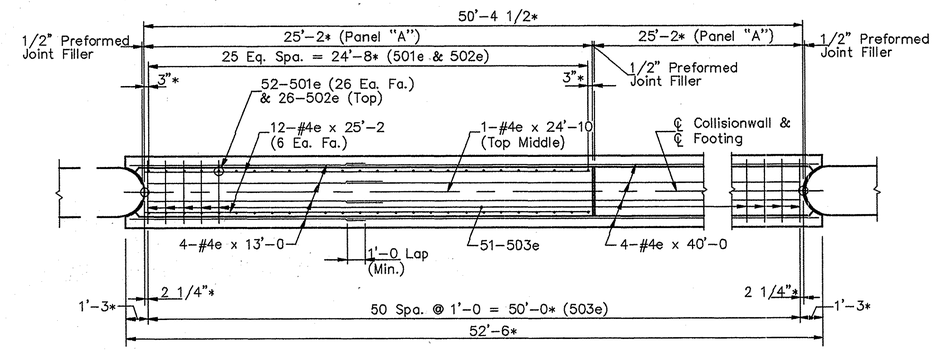
302P x 6'-0



301P x 7'-10

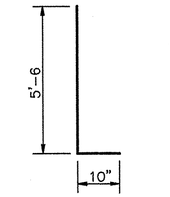
NOTES:

1. For reinforcing bar notes, See Br. Std. C1.
2. For General Notes, see Dwg. R2.

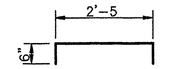


PLAN-CONCRETE MEDIAN COLLISIONWALL

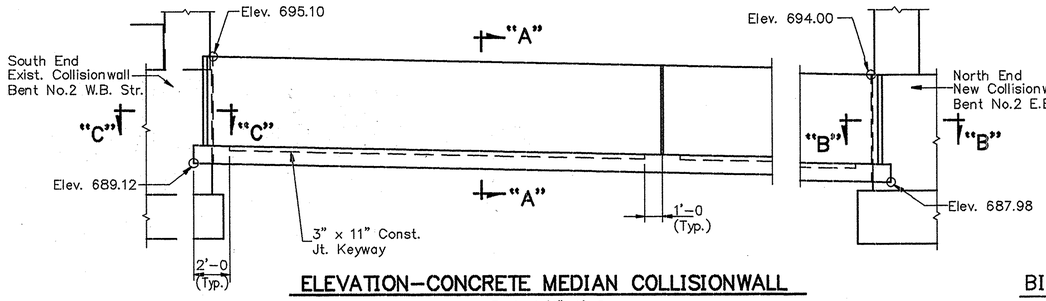
Scale: 1/4"=1'-0



501e x 6'-4

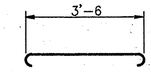


502e x 3'-5

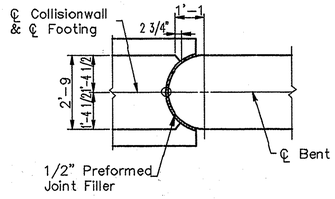


ELEVATION-CONCRETE MEDIAN COLLISIONWALL

Scale: 1/4"=1'-0

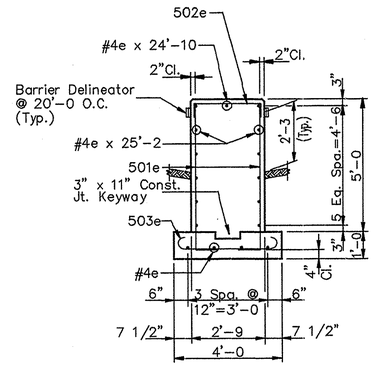


503e x 4'-8



SECTION "B-B"
SECTION "C-C" (By 180° Rotation)

Scale: 3/8"=1'-0



SECTION "A-A"

Scale: 3/8"=1'-0

NOTES:

1. e-denotes epoxy coated reinforcing steel.
2. *-denotes horizontal dimensions
3. Barrier delineators to be placed along int. bent collisionwalls and median collisionwall (both sides).

BILL of MATERIALS

CONCRETE MEDIAN COLLISIONWALL

SIZE or MK	NO.of BARS	LENGTH	WEIGHT
501e	104	6'-4	
502e	52	3'-5	
503e	51	4'-8	
TOTAL #5e			1121#
#4e	4	40'-0	
#4e	24	25'-2	
#4e	2	24'-10	
#4e	4	13'-0	
TOTAL #4e			578#
TOTAL EPOXY COATED REINF.			1699#
CONCRETE			
FOOTING CLASS "A" CONC.			7.2 C.Y.
WALL CLASS "A" CONC.			26.3 C.Y.
TOTAL CLASS "A" CONCRETE			33.5 C.Y.
SURFACE SEAL **			420 S.F.
BARRIER DELINEATOR			16 EA.

** Estimated Quantity

BENT NO.2 & COLLISIONWALL DETAILS
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: AS NOTED DATE: DECEMBER 18 1997

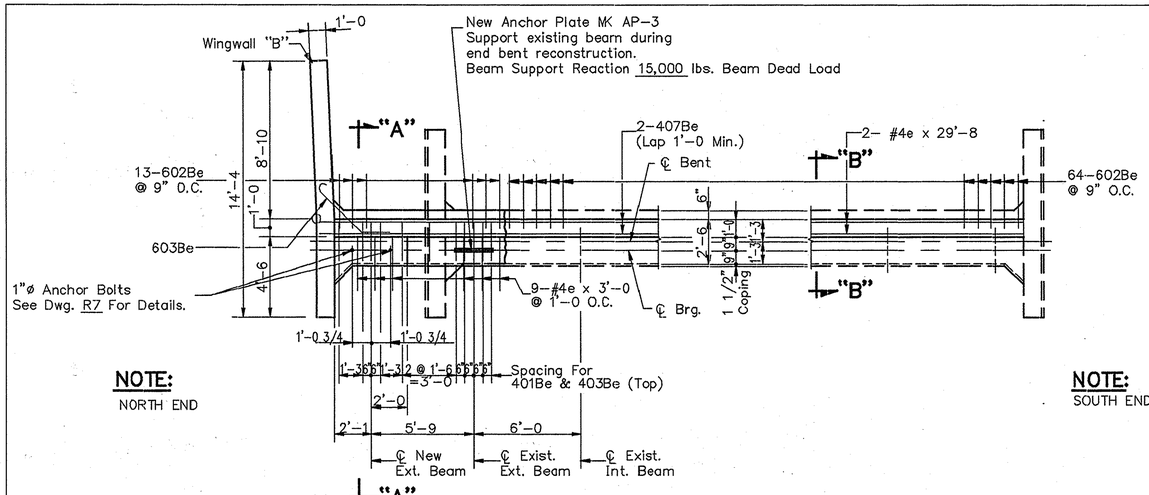
DRAWING: R5 OF R13 SHEET: 12 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-52-6597B

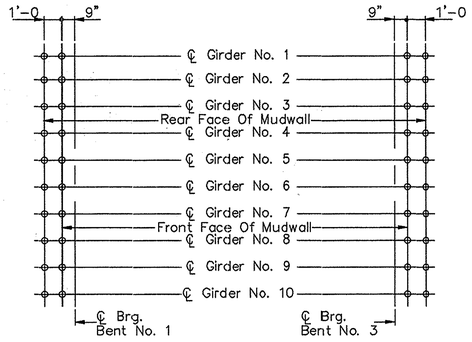
JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

24WBB2DT/32

DESIGNED MP 6/93 CHECKED JB
DRAWN SLG 10/93 CHECKED MP 11/93
REVISED CHECKED

SHEET REVISED: SEPTEMBER 24, 1992



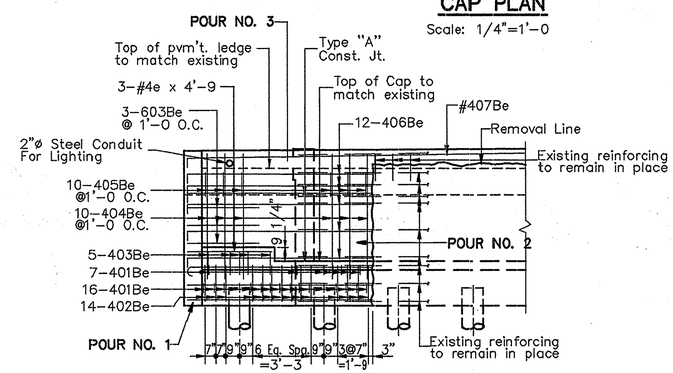


BILL OF MATERIALS

SIZE or NK	NO.of BARS	LENGTH	WEIGHT
601Be	6	10'-11	
602Be	77	5'-2	
603Be	3	5'-10	
#6e	8	10'-3	
TOTAL #6e			846#
#5e	23	14'-0	
TOTAL #5e			336#
401Be	23	3'-2	
402Be	14	7'-6	
403Be	5	4'-10	
404Be	10	15'-4	
405Be	10	4'-3	
406Be	12	10'-9	
407Be	2	30'-0	
408Be	6	4'-5	
409Be	3	6'-1	
#4e	2	29'-8	
#4e	4	14'-0	
#4e	12	8'-3	
#4e	10	8'-1	
#4e	3	4'-9	
#4e	9	3'-0	
TOTAL #4e			647#
TOTAL EPOXY COATED REINF.			1829#
CONCRETE			
POUR NO. 1			4.4 C.Y.
POUR NO. 2			2.8 C.Y.
TOTAL CL. "A" CONCRETE			7.2 C.Y.
POUR NO. 3			3.8 C.Y.
TOTAL CL. "C" CONCRETE			3.8 C.Y.
MISCELLANEOUS			
SURFACE SEAL			514 S.F.
ANCHOR PLATE MK AP-3			1 EACH
1-14"ø, 0.312"THICK, STEEL ENCASED CONC. PILE x 27'-0			27.0 L.F.
FIELD DRILLED HOLES IN CONCRETE			64 EACH

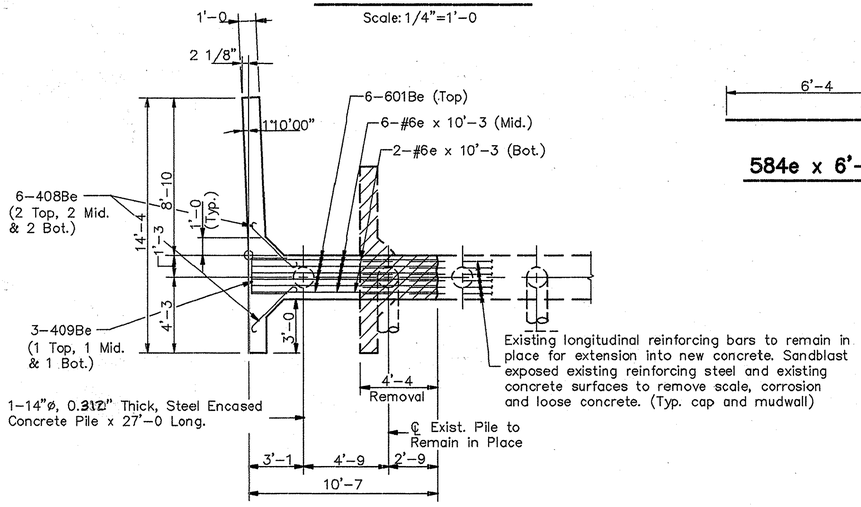
CAP PLAN

Scale: 1/4"=1'-0



PARTIAL ELEVATION

Scale: 1/4"=1'-0



PARTIAL PILE PLAN LAYOUT

Scale: 1/4"=1'-0

584e x 6'-11

NOTE:

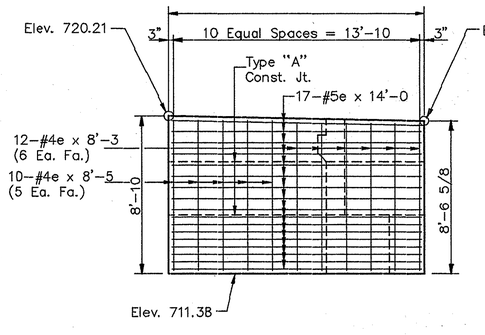
SOUTH END

MUDWALL ELEVATIONS

No Scale

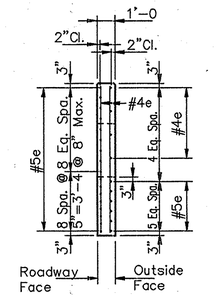
Table Of Mudwall Elevations

Location	Grd. No. 1	Grd. No. 2	Grd. No. 3	Grd. No. 4	Grd. No. 5	Grd. No. 6	Grd. No. 7	Grd. No. 8	Grd. No. 9	Grd. No. 10
R.F. Mudwall Bent No. 1	720.07	720.16	720.25	720.35	720.44	720.53	720.63	720.53	720.44	720.35
F.F. Mudwall Bent No. 1	720.05	720.14	720.23	720.33	720.42	720.51	720.61	720.51	720.42	720.33
F.F. Mudwall Bent No. 3	715.02	715.11	715.20	715.30	715.39	715.48	715.58	715.48	715.39	715.30
R.F. Mudwall Bent No. 3	715.00	715.09	715.18	715.28	715.37	715.46	715.56	715.46	715.37	715.28

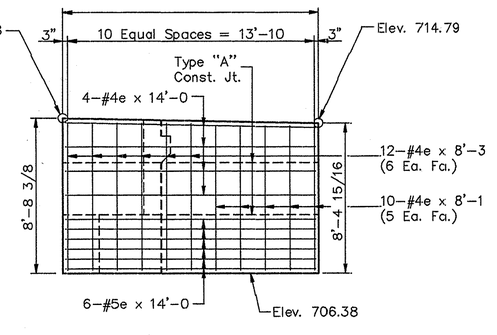


WINGWALL "A"

(SHOWING HORIZ. REINF. ROADWAY FACE)



TYPICAL SECTION



WINGWALL "B"

(SHOWING HORIZ. REINF. OUTSIDE FACE)

WINGWALL DETAILS

Scale: 1/4"=1'-0

NOTES:

1. For additional notes, sections and details, see Dwg. R3.

BENT NO. 3
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: AS NOTED

DATE: DECEMBER 18 1997

John M. Broadus

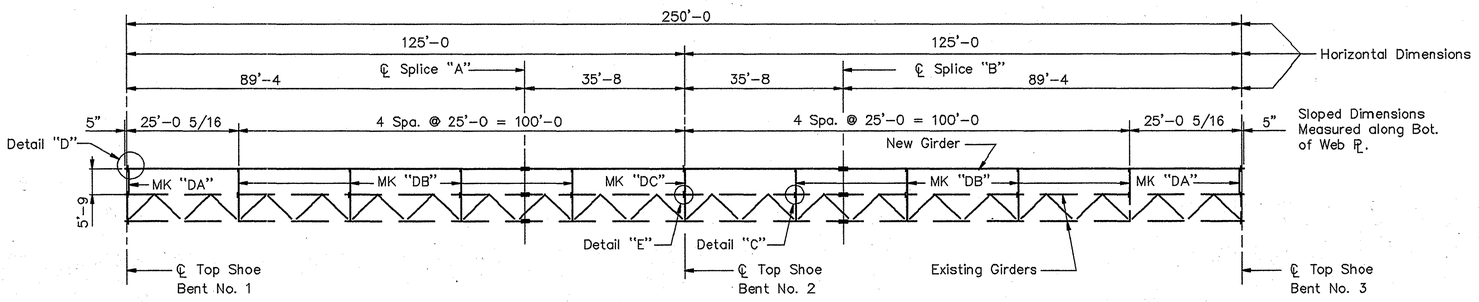
DRAWING: R6 OF R13 SHEET: 13 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-52-6597B

JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

24WBBNT3/48

PLOT DATE & TIME: DEC 17, 1997 - 10:23:02

DESIGNED: MP 3/93 CHECKED: JB
DRAWN: SLG 8/93 CHECKED: MP 9/93
REVISED: CHECKED:
SHEET REVISED: SEPTEMBER 24, 1992

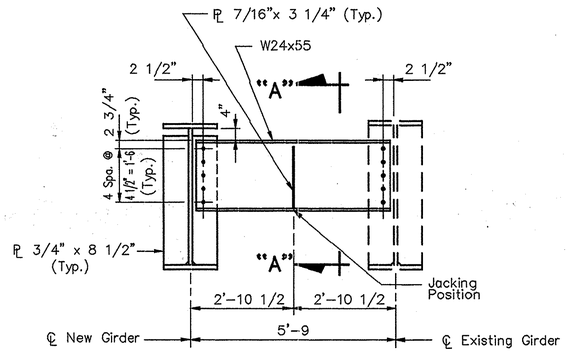


FRAMING PLAN

Scale: 1/16"=1'-0

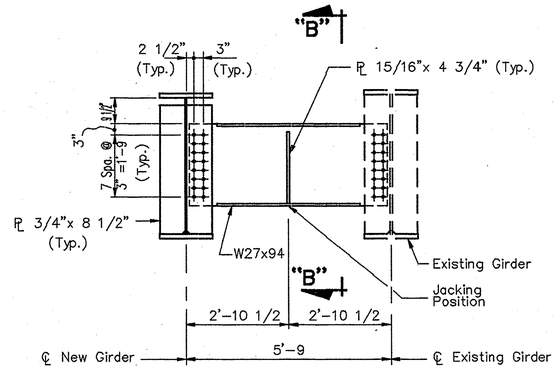
DESIGN DATA

Live Load	Designed for HS20-44 loading with impact and distribution of loads in accordance with 1992 AASHTO specifications,including 1993 Interim specifications. Checked for special loading of 2-24,000 LBS. axles spaced at 4'-0 centers.
Dead Load	Actual weight plus 19p.s.f. (composite) for future wearing surface.
Floor Slab	Designed for 16,000# wheel load plus impact. Structural depth of 6 1/2 inches.
Allowable Stresses	To be in accordance with 1992 AASHTO specifications,including 1993 Interim specifications.
Design Strengths	Class A concrete – f'c = 3,500 p.s.i. Class B concrete – f'c = 3,000 p.s.i. Class C concrete – f'c = 4,000 p.s.i. Reinforcing – fy = 60,000 p.s.i.
Design Methods	Superstructure – Strength Design Method Substructures – Service Load Design Method
Seismic Criteria	Designed in accordance with Division I-A OF 1992 AASHTO Specifications, including 1993 Interim specifications, using Seismic Performance Category "A" and 0.05 acceleration coefficient.



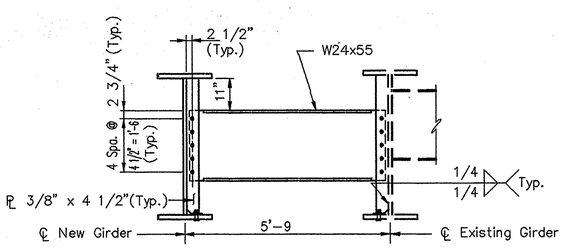
JACKING FRAME DETAIL MK "DA"

Scale: 1/2=1'-0



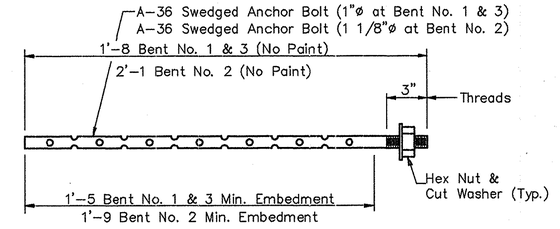
JACKING FRAME DETAIL MK "DC"

Scale: 1/2=1'-0



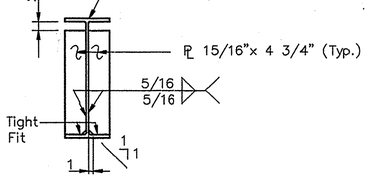
DIAPHRAGM DETAIL MK "DB"

Scale: 1/2=1'-0



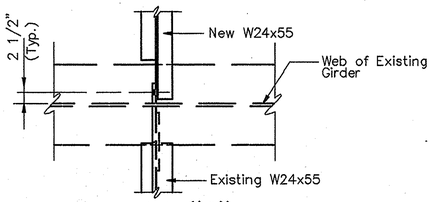
SWEDGED ANCHOR BOLT DETAIL

No Scale



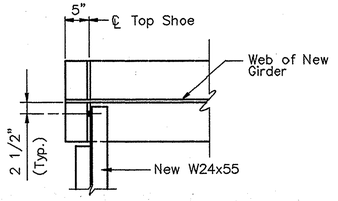
SECTION "B-B"

Scale: 3/4=1'-0



DETAIL "C"

Scale: 3/4=1'-0

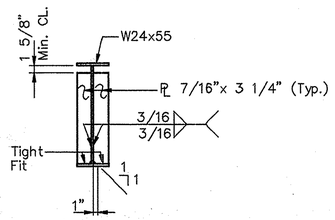


DETAIL "D"

Scale: 3/4=1'-0

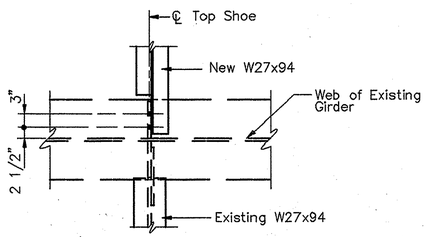
NOTES:

1. The weight of high strength bolts is not included in the estimated weight of structural steel.
2. Estimated weight of structural steel 84,895 lbs. (includes 263 lbs. for A-588.)
3. For additional details, see Dwg's. R8 & R9.



SECTION "A-A"

Scale: 3/4=1'-0



DETAIL "E"

Scale: 3/4=1'-0

FRAMING PLAN
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: AS NOTED

DATE: DECEMBER 18 1997

John M. Broadus

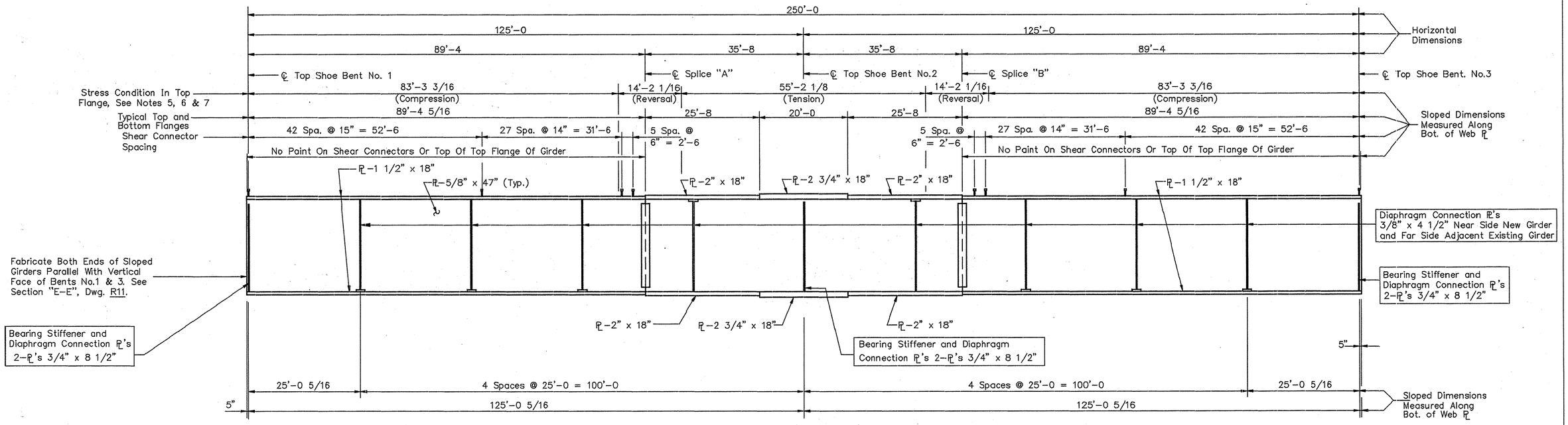
DRAWING: R7 OF R13 SHEET: 14 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-52-6597B

JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

24WBFRAM/192

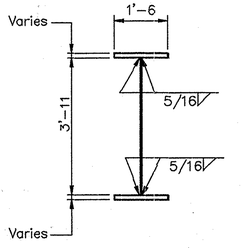
PLOT DATE & TIME: DEC 18, 1997 - 11:20:54

DESIGNED: MP CHECKED: JB
DRAWN: MKM 8/93 CHECKED: MP 2/94
REVISED: CHECKED:
SHEET REVISED: SEPTEMBER 24, 1992



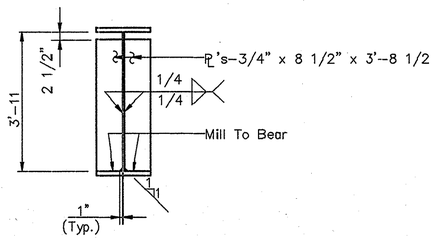
NEW GIRDER ELEVATION

No Scale



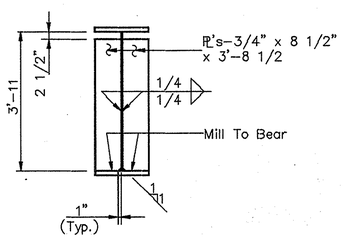
TYPICAL GIRDER SECTION

Scale: 1/2"=1'-0



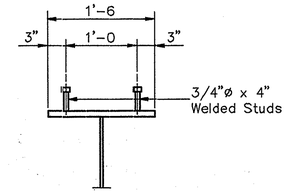
BEARING STIFFENERS @ BENT NO.1 & NO. 3

Scale: 1/2"=1'-0



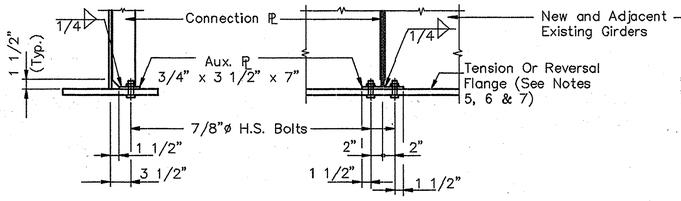
BEARING STIFFENERS @ BENT NO.2

Scale: 1/2"=1'-0



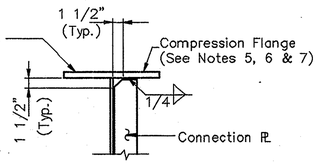
SHEAR CONNECTOR DETAIL NEW & EXISTING

No Scale



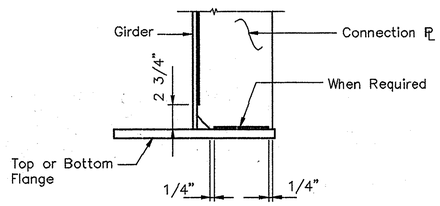
DETAIL "A" CONNECTION ℄ ATTACHMENT @ TENSION OR REVERSAL FLANGE

Scale: 1"=1'-0



DETAIL "B" CONNECTION ℄ ATTACHMENT @ COMPRESSION FLANGE

Scale: 1"=1'-0

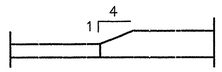


TYPICAL WELD DETAIL FOR DIAPHGRAM CONNECTION ℄'S

No Scale

NOTES:

1. For splice details, see Dwg. R9.
2. Clip corners of all stiffeners plates to clear plate girder welds, see details this sheet.
3. For details of jacking frames and diaphragms, see Dwg. R7.
4. All structural steel shall conform to ASTM A-36, except as noted on bearing details, Dwg. R9.
5. Compression stress condition in top flange also indicates tension stress condition in bottom flange.
6. Tension stress condition in top flange also indicates compression stress condition in bottom flange.
7. Reversal stress condition in top flange also indicates reversal stress condition in bottom flange.
8. Spacing for new shear connectors on existing girders same as shown on "New Girder Elevation", this Dwg.



TYPICAL FLANGE SPLICE DETAIL

No Scale

WELDED PLATE GIRDER DETAILS
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: AS NOTED

DATE: DECEMBER 18 1997

John M. Broadus

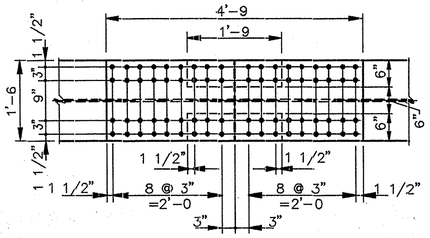
DRAWING: R8 OF R13 SHEETS 15 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-52-6597B

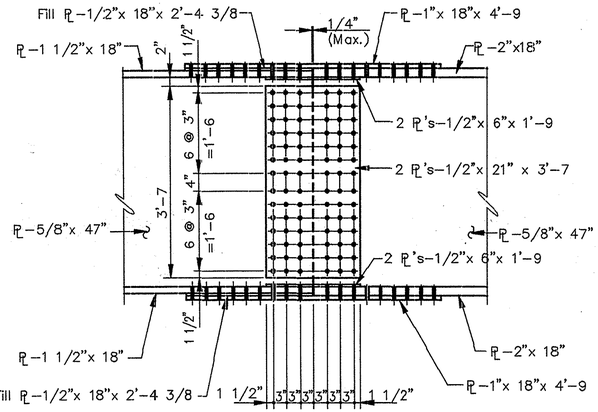
JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

24WBBMDT/24

PLOT DATE & TIME: DEC 17, 1997 - 10:28:46

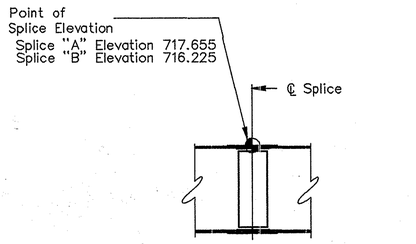
DESIGNED MD 5/93 CHECKED JB
DRAWN MKM 8/93 CHECKED MD 9/93
REVISED CHECKED
SHEET REVISED: SEPTEMBER 24, 1992





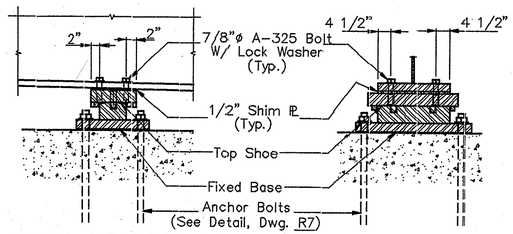
SPLICE "A" & "B" DETAIL

Scale: 3/4"=1'-0



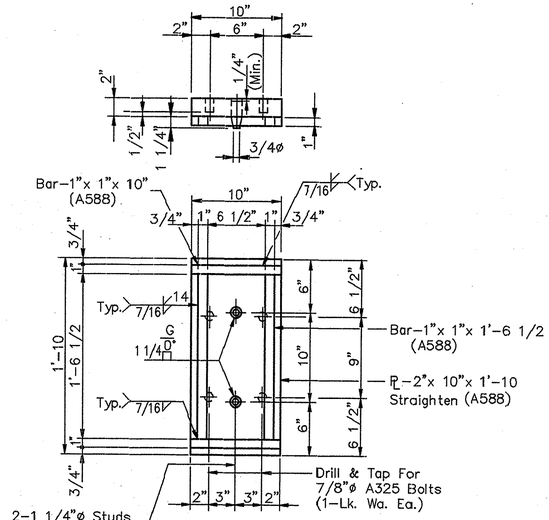
SPLICE ELEVATION DETAIL

Splice elevations are with falsework removed and carrying steel deadload only. Top of girder splice plate shall be adjusted to the above elevations before bolting field splices.



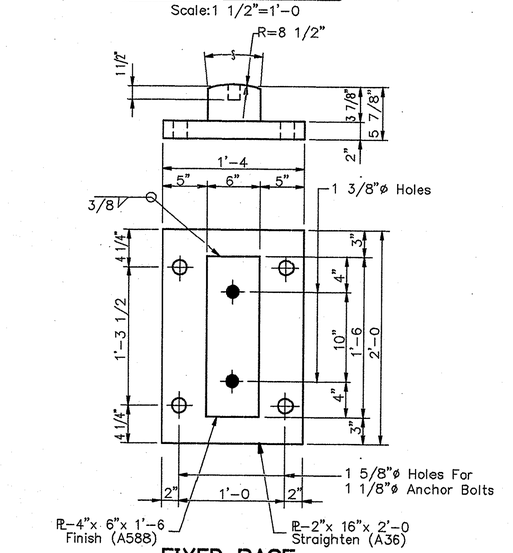
FIXED BEARING ASSEMBLY BENT NO. 2

No Scale



TOP SHOE PLATE

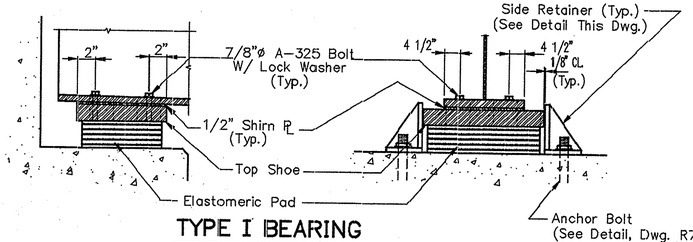
Scale: 1 1/2"=1'-0



FIXED BASE

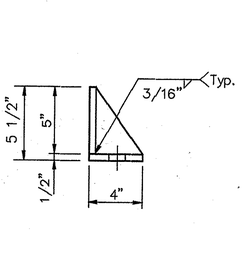
Scale: 1 1/2"=1'-0

FIXED BEARING DETAIL-BENT NO. 2



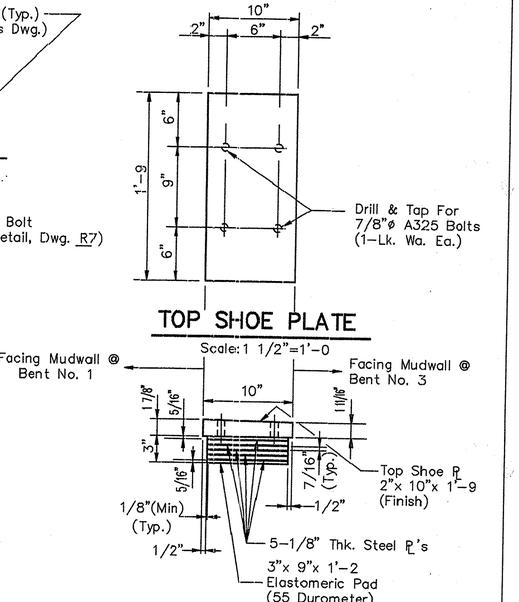
TYPE I BEARING ASSEMBLY BENT NO. 1 & NO. 3

No Scale



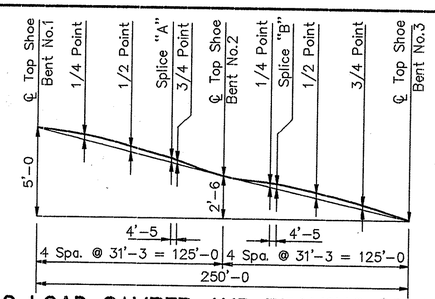
SIDE RETAINER

Scale: 3/16"=1'-0



ELASTOMERIC BEARING

Scale: 1 1/2"=1'-0



(All Dimensions are Horizontal)

NO LOAD CAMBER AND REAMING DIAGRAM

No Scale

Table Of Camber

	℄ Top Shoe Bent No.1	1/4 Point	1/2 Point	Splice "A"	3/4 Point	℄ Top Shoe Bent No.2	1/4 Point	Splice "B"	1/2 Point	3/4 Point	℄ Top Shoe Bent No.3
Steel Dead Load	0	0 1/2"	0 9/16"	0 1/4"	0 1/4"	0	0 1/4"	0 1/4"	0 9/16"	0 1/2"	0
Non-Comp. Dead Load	0	1 3/16"	1 5/16"	0 11/16"	0 9/16"	0	0 9/16"	0 11/16"	1 5/16"	1 3/16"	0
Comp. Dead Load	0	0 1/16"	0 1/8"	0 1/16"	0	0	0	0 1/16"	0 1/8"	0 1/16"	0
Sub-Total	0	1 3/4"	2"	1"	0 13/16"	0	0 13/16"	1"	2"	1 3/4"	0
Vertical Curve	0	0	0	0	0	0	0	0	0	0	0
Total Camber	0	1 3/4"	2"	1"	0 13/16"	0	0 13/16"	1"	2"	1 3/4"	0

STRUCTURAL STEEL DETAILS
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: AS NOTED

DATE: DECEMBER 18 1997

John M. Broadus

DRAWING: R9 OF R13 SHEET: 16 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-52-6597B

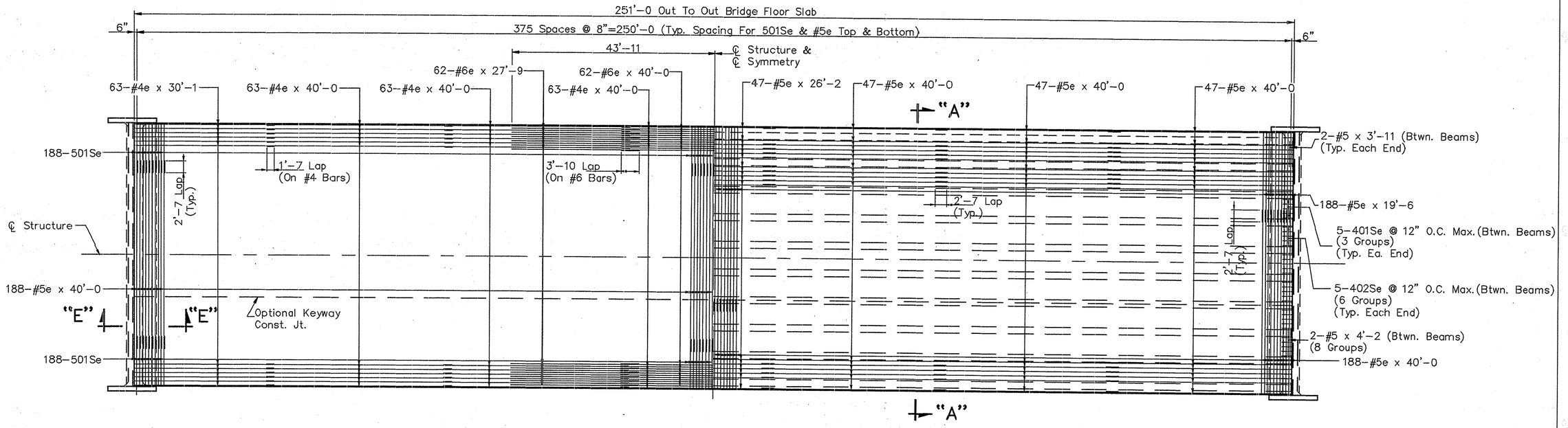
JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

24WBSTLD/24

PLOT DATE & TIME: DEC 17, 1997 - 10:37:11

DESIGNED MP 9/93 CHECKED JB
DRAWN MKM 9/93 CHECKED MP 9/93
REVISED CHECKED

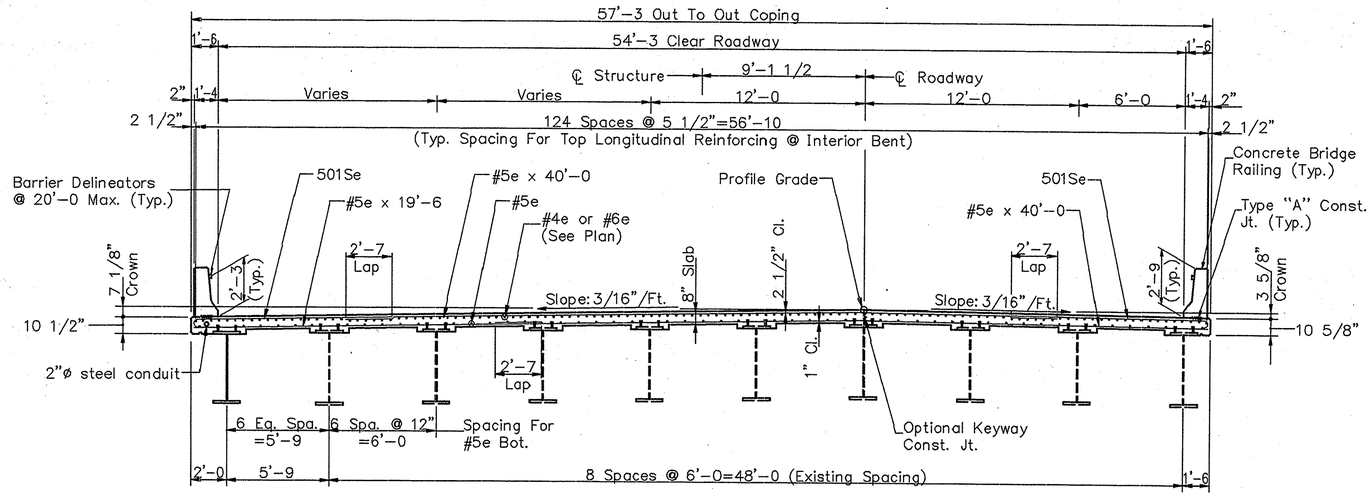
SHEET REVISED: SEPTEMBER 24, 1992



NOTE:
This half shows top slab reinforcing steel

NOTE:
This half shows bottom slab reinforcing steel

SUPERSTRUCTURE PLAN
Scale: 3/32"=1'-0



SECTION "A-A"
Scale: 1/4"=1'-0

NOTES:

1. For reinforcing bar notes, see Br. Std. C1.
2. After structural steel has been erected, concrete forms shall not be blocked against the expansion end of steel in making any pours adjacent to steel spans.
3. For general notes, see Dwg. R2.
4. Permanent metal deck forms shall not be substituted for removable forms at this structure.
5. The subscript "e" denotes epoxy coated reinforcing steel.
6. For additional sections and details, see Dwg. R11.

SUPERSTRUCTURE
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: AS NOTED

DATE: DECEMBER 18 1997

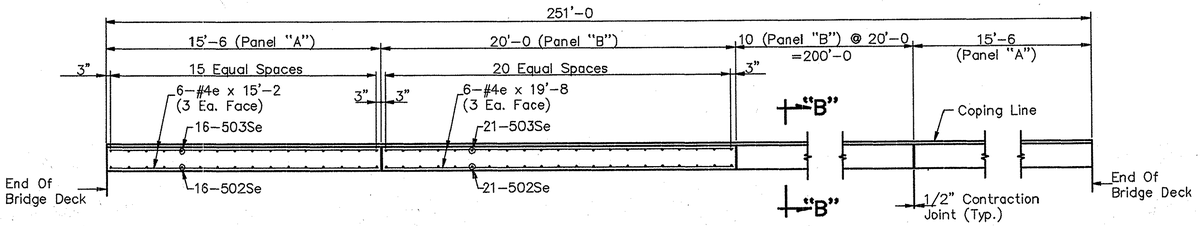
John M. Broadus

JOHN M. BROADUS
REGISTERED
No. 9600427
STATE OF
INDIANA
PROFESSIONAL ENGINEER

DRAWING: R10 OF R13 SHEET: 17 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-52-6597B

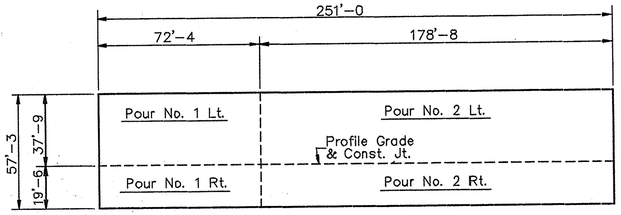
24WBSUP/128

DESIGNED: MP 3/93 CHECKED: JB
DRAWN: SLG 7/93 CHECKED: MP 9/93
REVISED: CHECKED:
SHEET REVISED: SEPTEMBER 24, 1992
PLOT DATE & TIME: DEC 17, 1997 - 10:38:43



TYPICAL CONCRETE BRIDGE RAIL PLAN

Scale: 1/4"=1'-0



SCHEDULE OF POURS

No Scale

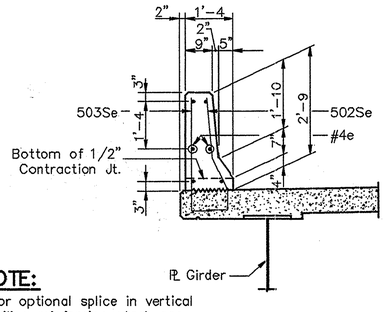
NOTE:

Sequence of pours to be made in the order of pour numbers. All superstructure construction joints are optional, except as noted, and pours may be made continuous provided the pours terminates at a construction joint indicated on the plans. The contractor may change the width of pours, sequence of pours or location of construction joints subject to the approval of the engineer.

BILL of MATERIALS

SIZE or MK	NO.of BARS	LENGTH	WEIGHT
#6e	62	40'-0	
#6e	124	27'-9	
TOTAL #6e			8894#
501Se	752	11'-8	
502Se	526	3'-11	
503Se	526	3'-9	
#5e	1034	40'-0	
#5e	47	26'-2	
#5e	376	19'-6	
#5e	32	4'-2	
#5e	4	3'-11	
#5e	16	3'-3	
#5e **	16	2'-6	
TOTAL #5e			65677#
401Se	30	3'-2	
402Se	60	3'-7	
#4e	315	40'-0	
#4e	126	30'-1	
#4e	132	19'-8	
#4e	24	15'-2	
#4e **	24	3'-9	
TOTAL #4e			13193#
TOTAL EPOXY COATED REINF.			87764#
CONCRETE			
POUR NO. 1 LT.			74.9 C.Y.
POUR NO. 1 RT.			38.9 C.Y.
POUR NO. 2 LT.			181.8 C.Y.
POUR NO. 2 RT.			94.3 C.Y.
TOTAL CL. C CONC. IN SLAB			389.9 C.Y.
TOTAL CL. C CONC. IN RAIL**			49.3 C.Y.
MISCELLANEOUS			
SURFACE SEAL			17815 S.F.
CLASS "S-S" EXP. JT.			112 L.F.
1-TYPE "SQ-A" ROADWAY DRAIN			192#
1-TYPE "QS-D" ROADWAY DRAIN			322#
1-6"ø CAST IRON DRAIN			
PIPE X 5'-0 LONG (EXTRA HEAVY)			95#
1-6"ø CAST IRON DRAIN			
PIPE X 5'-7 LONG (EXTRA HEAVY)			106#
BARRIER DELINEATORS			26 EACH
2"ø STEEL CONDUIT			251 L.F.
BEARING ASSEMBLY, TYPE I			2 EACH

** See Br. Std. BR-1A for additional railing pour and bar placement details.

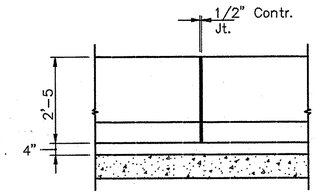


NOTE:

For optional splice in vertical railing reinforcing steel, see Br. Std. C3.

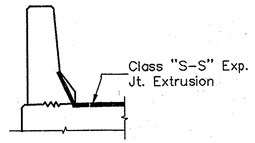
SECTION "B-B"

Scale: 1/2"=1'-0



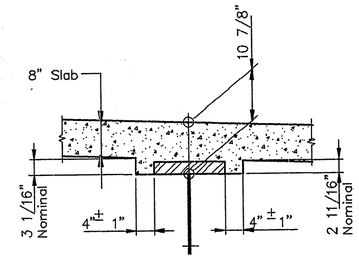
RAILING CONTRACTION JOINT DETAIL

Scale: 1/2"=1'-0



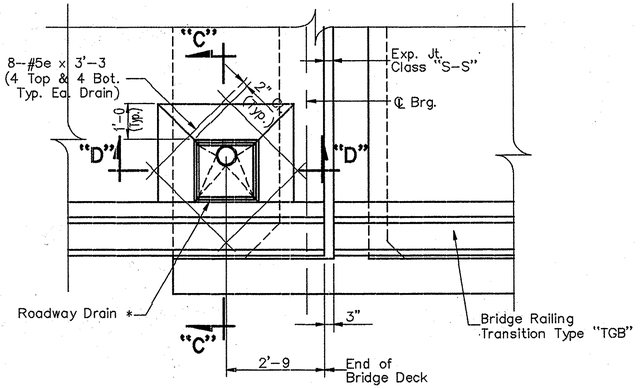
JOINT TREATMENT AT BRIDGE RAIL

Scale: 1/2"=1'-0



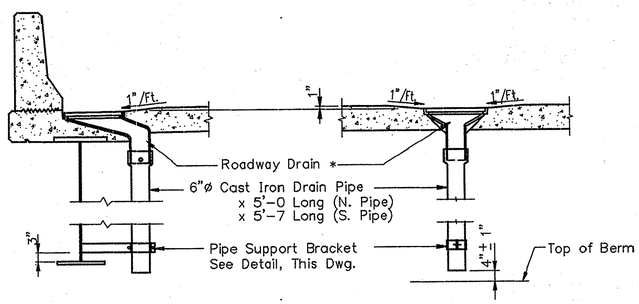
FILLET DETAIL

No Scale



CORNER DETAIL

(S.E. Corner Shown- All Others Similar)
Scale: 1/2"=1'-0



SECTION "C-C"

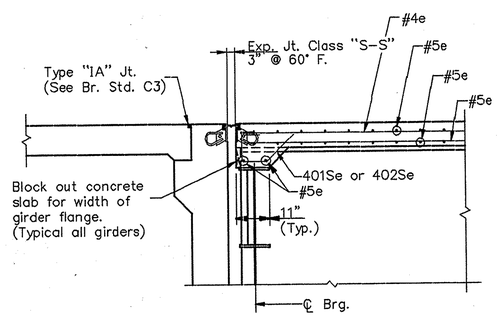
Scale: 1/2"=1'-0

SECTION "D-D"

Scale: 1/2"=1'-0

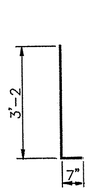
NOTE:

* See Dwg. R2 For Types of Roadway Drains.

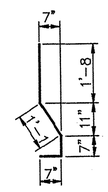


SECTION "E-E"

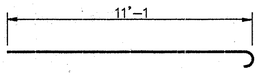
Scale: 1/2"=1'-0



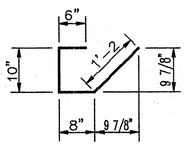
503Se x 3'-9



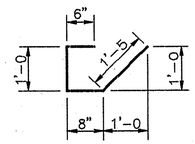
502Se x 3'-11



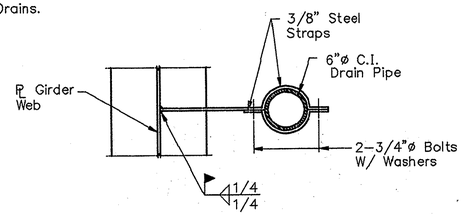
501Se x 11'-8



401Se x 3'-2



402Se x 3'-7



PIPE SUPPORT BRACKET DETAIL

No Scale

SUPERSTRUCTURE DETAILS
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: AS NOTED

DATE: DECEMBER 18 1997

John M. Broadus

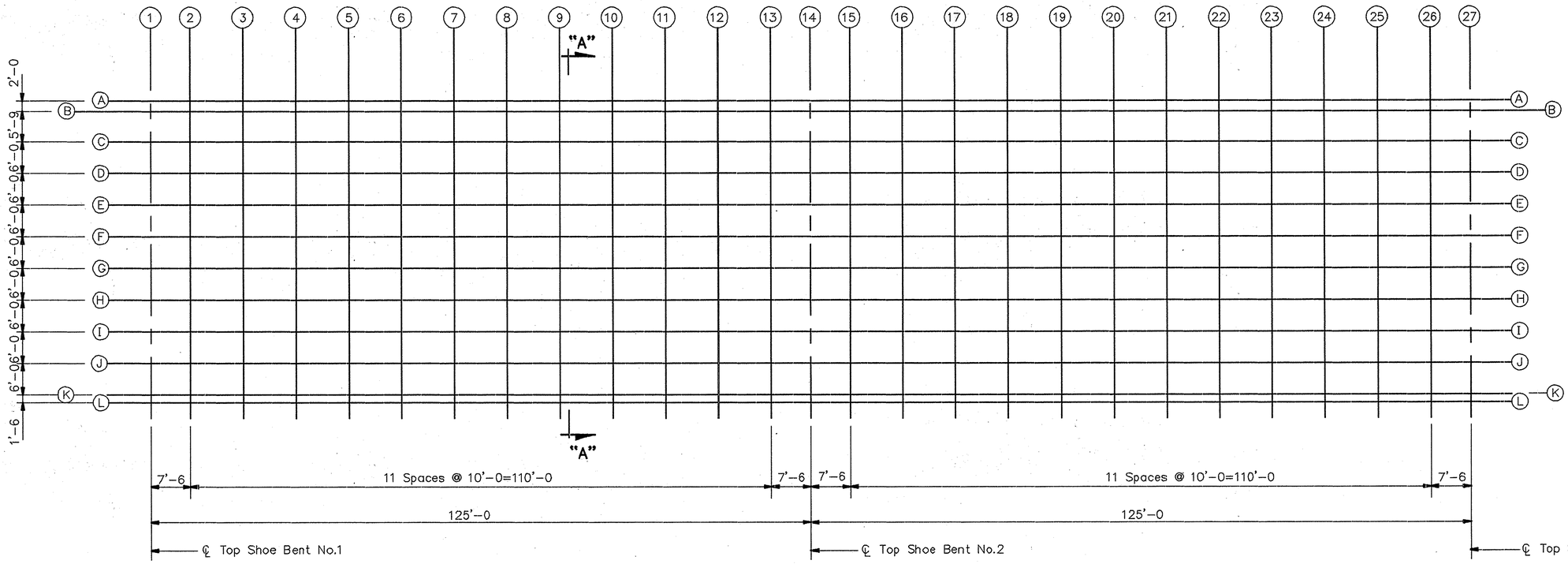
DRAWING: R11 OF R13 SHEET: 18 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-52-6597B

JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

24WBSUPD/48

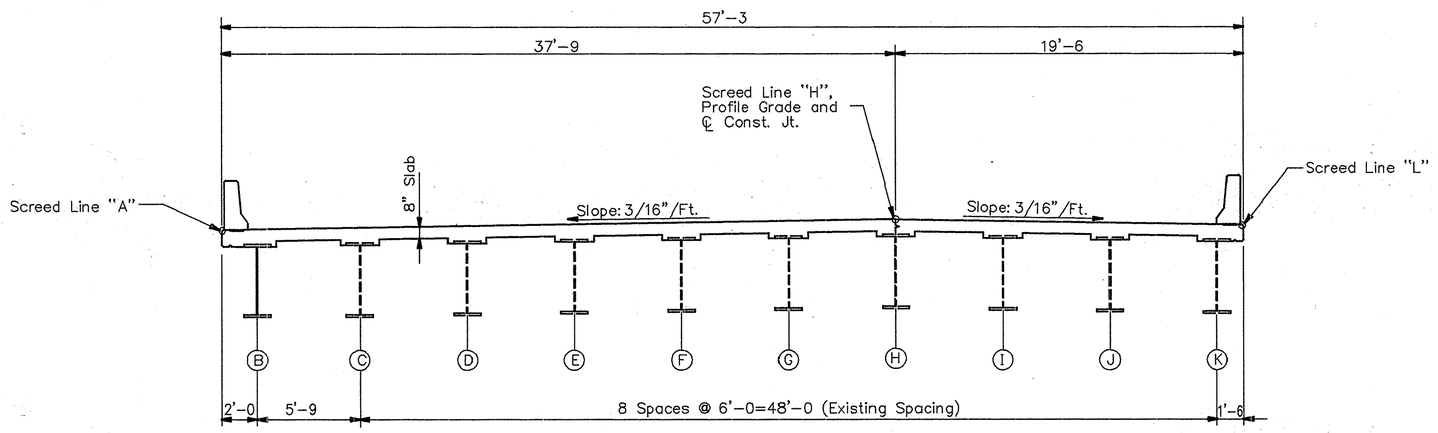
PLOT DATE & TIME: DEC 17, 1997 - 10:47:22

DESIGNED MP 5/93 CHECKED JB
DRAWN SLG 8/93 CHECKED MP 9/93
REVISED CHECKED
SHEET REVISED: SEPTEMBER 24, 1992



SCREED PLAN

Scale: 3/32"=1'-0



SECTION "A-A"

Scale: 1/4"=1'-0

NOTES:

1. "Screed Plan" shows location of screeds.
2. Table of "Screed Elevations", Dwg. R13 shows data for setting screed and coping forms so that the slab and coping will be at final grade elevation after all concrete has been poured.
3. See Dwg. R2 for General Notes.
4. See Dwg's. R10 & R11 for Additional Notes and Details.

GENERAL PROCEDURE

1. After all structural steel has been erected, take the elevations at all screed points on top of adjacent girders. Enter the elevations in the screed table, Dwg. R13. Subtract these elevations from the tabulated elevations and use the resulting dimension as the height for setting the screed or coping forms above that point. This dimension remains unchanged regardless of how much or in what order the concrete is poured. Do not set screed or coping forms by leveling.
2. No concrete in the deck is to be poured until the above operation is complete.

SCREED DATA
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: AS NOTED

DATE: DECEMBER 18 1997

John M. Broadus

DRAWING: R12 OF R13 SHEET: 19 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-52-6597B

JOHN M. BROADUS REGISTERED No 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

24WBSCR1/128

PLOT DATE & TIME: DEC 17, 1997 - 10:59:49

DESIGNED MP 5/93 CHECKED JB
DRAWN MKM 8/93 CHECKED MP 9/93
REVISED CHECKED

SHEET REVISED: SEPTEMBER 24, 1992

SCREED ELEVATIONS

POINT		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
A	ELEVATION–TOP OF SCREED	720.010	719.885	719.725	719.550	719.370	719.180	718.980	718.765	718.545	718.320	718.095	717.870	717.655	717.505	717.355	717.170	716.995	716.820	716.645	716.465	716.280	716.080	715.870	715.650	715.425	715.185	715.010
	ELEVATION–TOP OF BEAM																											
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																											
B	ELEVATION–TOP OF SCREED	720.040	719.920	719.755	719.585	719.405	719.210	719.010	718.800	718.580	718.350	718.125	717.905	717.690	717.535	717.390	717.205	717.025	716.850	716.680	716.500	716.310	716.110	715.905	715.685	715.455	715.220	715.040
	ELEVATION–TOP OF BEAM																											
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																											
C	ELEVATION–TOP OF SCREED	720.125	719.995	719.825	719.650	719.465	719.270	719.070	718.860	718.645	718.425	718.205	717.990	717.775	717.625	717.475	717.290	717.105	716.925	716.745	716.560	716.370	716.170	715.965	715.750	715.525	715.295	715.125
	ELEVATION–TOP OF BEAM																											
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																											
D	ELEVATION–TOP OF SCREED	720.220	720.090	719.920	719.745	719.560	719.365	719.165	718.955	718.740	718.520	718.300	718.080	717.870	717.720	717.570	717.380	717.200	717.020	716.840	716.655	716.465	716.265	716.060	715.845	715.620	715.390	715.220
	ELEVATION–TOP OF BEAM																											
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																											
E	ELEVATION–TOP OF SCREED	720.310	720.185	720.015	719.835	719.650	719.460	719.260	719.050	718.835	718.615	718.395	718.175	717.965	717.810	717.665	717.475	717.295	717.115	716.935	716.750	716.560	716.360	716.150	715.935	715.715	715.485	715.310
	ELEVATION–TOP OF BEAM																											
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																											
F	ELEVATION–TOP OF SCREED	720.405	720.280	720.105	719.930	719.745	719.555	719.350	719.145	718.925	718.710	718.490	718.270	718.060	717.905	717.760	717.570	717.390	717.210	717.025	716.845	716.650	716.455	716.245	716.030	715.805	715.580	715.405
	ELEVATION–TOP OF BEAM																											
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																											
G	ELEVATION–TOP OF SCREED	720.500	720.370	720.200	720.025	719.840	719.645	719.445	719.235	719.020	718.800	718.580	718.365	718.150	718.000	717.850	717.665	717.480	717.300	717.120	716.935	716.745	716.545	716.340	716.125	715.900	715.670	715.500
	ELEVATION–TOP OF BEAM																											
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																											
H	ELEVATION–TOP OF SCREED	720.595	720.465	720.295	720.120	719.935	719.740	719.540	719.330	719.115	718.895	718.675	718.455	718.245	718.095	717.945	717.755	717.575	717.395	717.215	717.030	716.840	716.640	716.435	716.220	715.995	715.765	715.595
	ELEVATION–TOP OF BEAM																											
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																											
I	ELEVATION–TOP OF SCREED	720.500	720.370	720.200	720.025	719.840	719.645	719.445	719.235	719.020	718.800	718.580	718.365	718.150	718.000	717.850	717.665	717.480	717.300	717.120	716.935	716.745	716.545	716.340	716.125	715.900	715.670	715.500
	ELEVATION–TOP OF BEAM																											
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																											
J	ELEVATION–TOP OF SCREED	720.405	720.280	720.105	719.930	719.745	719.555	719.350	719.145	718.925	718.710	718.490	718.270	718.060	717.905	717.760	717.570	717.390	717.210	717.025	716.845	716.650	716.455	716.245	716.030	715.805	715.580	715.405
	ELEVATION–TOP OF BEAM																											
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																											
K	ELEVATION–TOP OF SCREED	720.310	720.185	720.020	719.845	719.660	719.470	719.265	719.055	718.840	718.620	718.395	718.175	717.965	717.810	717.665	717.475	717.295	717.120	716.940	716.755	716.565	716.370	716.160	715.945	715.720	715.485	715.310
	ELEVATION–TOP OF BEAM																											
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																											
L	ELEVATION–TOP OF SCREED	720.290	720.165	719.995	719.820	719.635	719.445	719.245	719.035	718.815	718.595	718.375	718.155	717.940	717.790	717.640	717.455	717.275	717.095	716.915	716.735	716.545	716.345	716.135	715.920	715.695	715.465	715.290
	ELEVATION–TOP OF BEAM																											
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																											

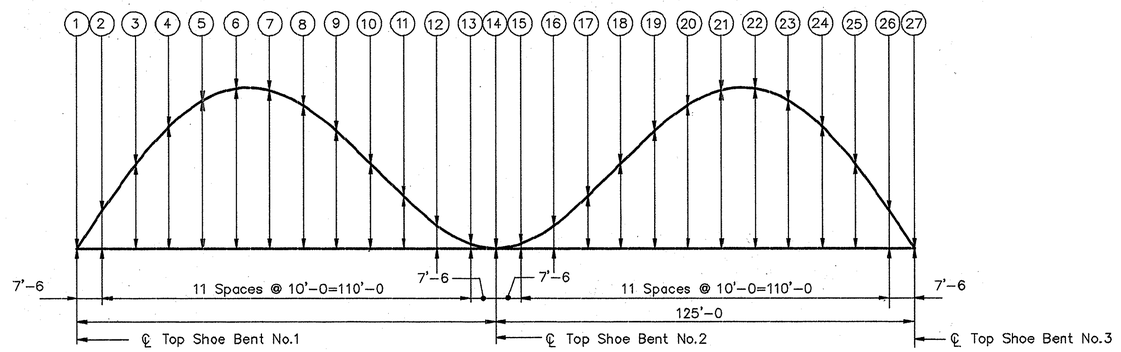
PLOT DATE & TIME: DEC. 17, 1997 – 11:01:49

DESIGNED MP 5/93 CHECKED JB
DRAWN MKM 8/93 CHECKED MP 9/93
REVISED CHECKED

SHEET REVISED: JUNE 16, 1992

TABLE OF CONCRETE DEAD LOAD DEFLECTIONS

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
LINES "A" & "B"	0.0044'	0.0337'	0.0696'	0.0986'	0.1184'	0.1274'	0.1255'	0.1134'	0.0934'	0.0680'	0.0417'	0.0186'	0.0039'	0.0000'	0.0039'	0.0186'	0.0417'	0.0680'	0.0934'	0.1134'	0.1255'	0.1274'	0.1184'	0.0986'	0.0696'	0.0337'	0.0044'
LINES "C" THRU "J"	0.0000'	0.0231'	0.0515'	0.0745'	0.0902'	0.0976'	0.0964'	0.0874'	0.0719'	0.0524'	0.0320'	0.0142'	0.0028'	0.0000'	0.0028'	0.0142'	0.0320'	0.0524'	0.0719'	0.0874'	0.0964'	0.0976'	0.0902'	0.0745'	0.0515'	0.0231'	0.0000'
LINES "K" & "L"	0.0000'	0.0252'	0.0561'	0.0810'	0.0981'	0.1061'	0.1048'	0.0949'	0.0780'	0.0568'	0.0347'	0.0154'	0.0031'	0.0000'	0.0031'	0.0154'	0.0347'	0.0568'	0.0780'	0.0949'	0.1048'	0.1061'	0.0981'	0.0810'	0.0561'	0.0252'	0.0000'



CONCRETE DEAD LOAD DEFLECTION DIAGRAM

No Scale

NOTE:

See Dwg. R12 for additional details, notes and General Procedure.

SCREED DATA
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: NO SCALE

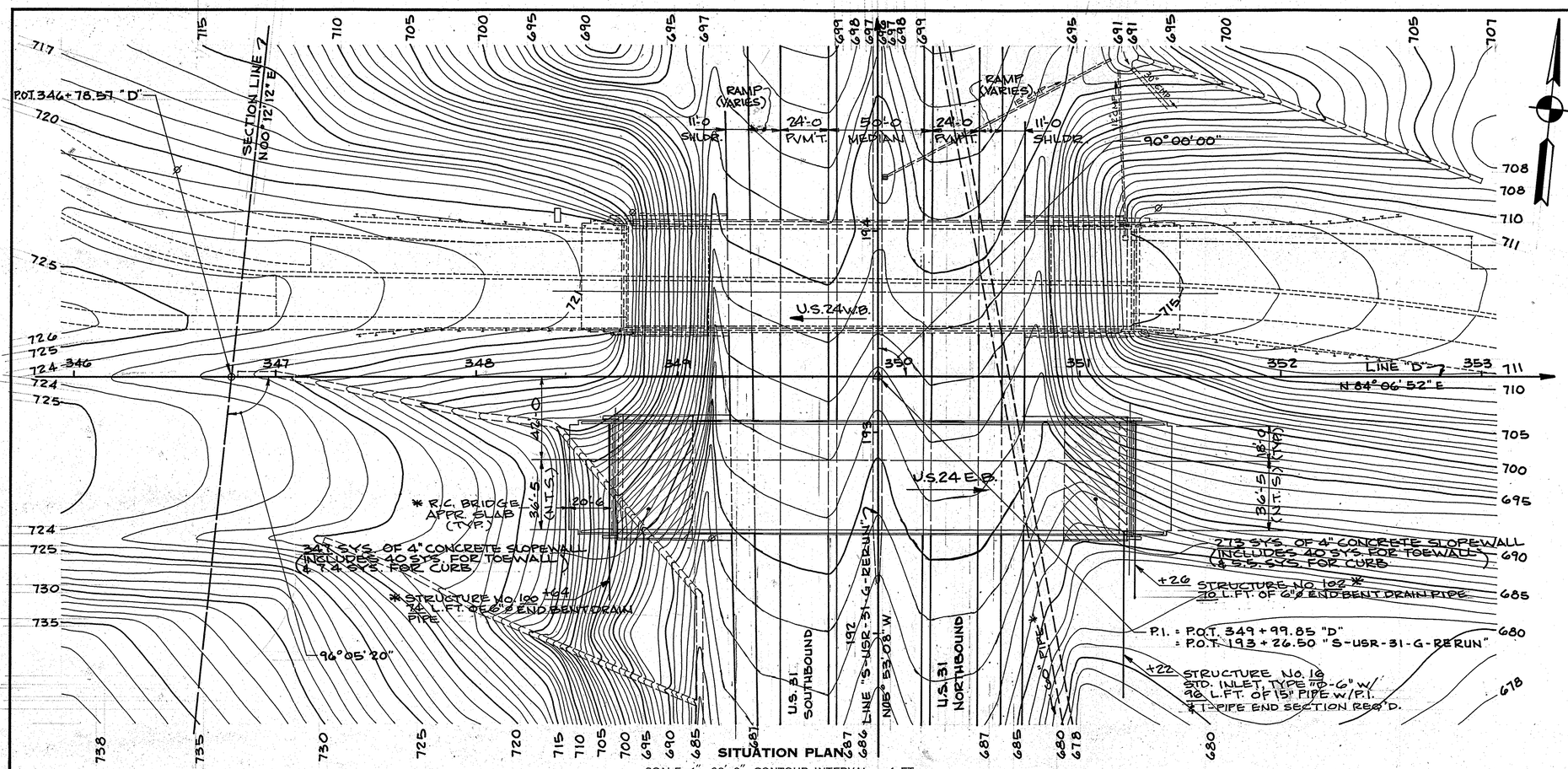
DATE: DECEMBER 18 1997

John M. Broadus

DRAWING: R13 OF R13 SHEET: 20 OF 53
PROJECT: NH–144–6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24–52–6597B

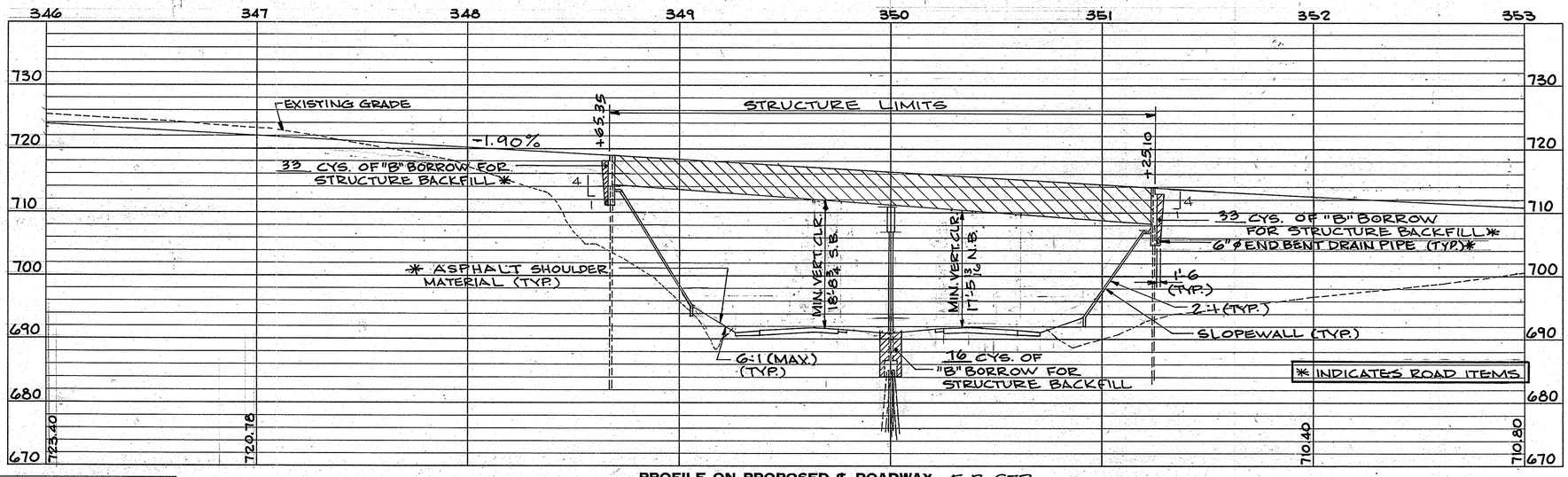
JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

24WBSCR2/48



SITUATION PLAN

SCALE:—1"=30'-0", CONTOUR INTERVAL = 1 FT.



PROFILE ON PROPOSED & ROADWAY – E.B. STR.

SCALES: HORIZ. 1"=30'-0" VERT. 1"=10'-0"

NOTE: FIELD NOTES, BOOK

UTILITIES

TELEPHONE : INDIANA BELL
240 N. MERIDIAN ST.
INDIANAPOLIS, IN. 46204
PHONE: 317-265-2727

ELECTRIC: MIAMI-CASS REMC
P.O. BOX 168
PERU, IN. 46970
PHONE: 765-472-3361

GAS: NORTHERN IND. PUBLIC SERVICE CO.
1202 W. MAIN
PERU, IN. 46970
PHONE 765-472-3361

AMMONIA GAS: GULF CENTRAL STORAGE & TERMINAL CO.
P.O. BOX 11
WALTON, IN 46994
PHONE: 219-626-2543

* INDICATES ROAD ITEMS

LAYOUT – (E.B. STRUCTURE)

CONTINUOUS COMPOSITE WELDED PLATE GIRDER BRIDGE
2 SPANS: 1 @ 133'-9, 1 @ 124'-6 NO SKEW
54'-5 CLEAR ROADWAY U.S.24 (E.B.) / U.S. 31

INDIANA DEPARTMENT OF TRANSPORTATION

MIAMI COUNTY

SCALE:—AS NOTED DATE:- DECEMBER 18 1997

DRAWING: S1 OF S14 SHEET: 21 OF 53

PROJECT:-NH-144-6( ) STATION:—

BRIDGE CONTRACT NO. R-23637

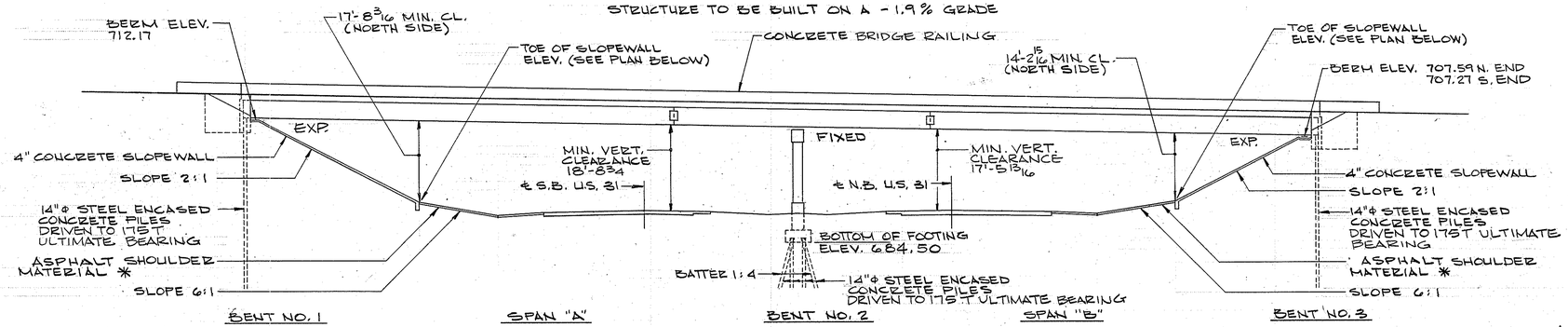
BRIDGE FILE:-24-52-8165

DRAWN SJF C'K'D LS
DESIGNED C'K'D
TRACED C'K'D

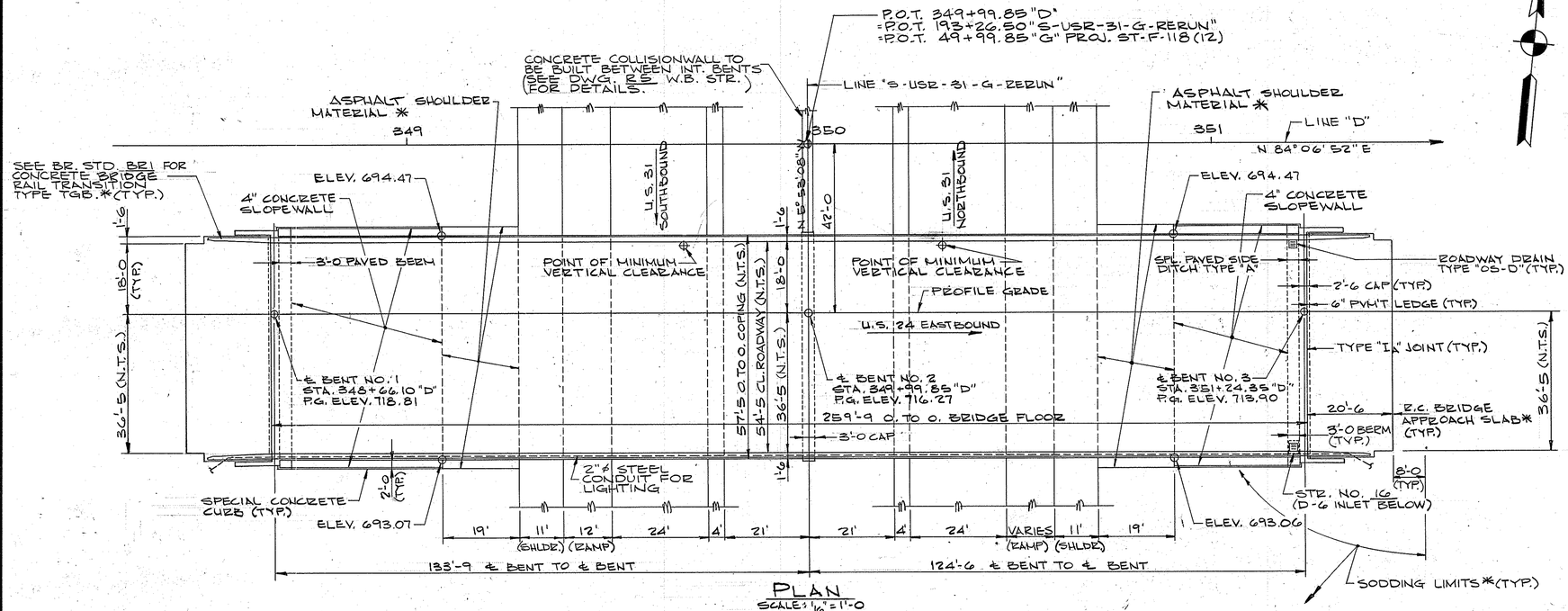
SF-22396

JOHN M. BROADUS REGISTERED No. 9800427 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISED 3-16-98: UTILITY PHONE NUMBERS

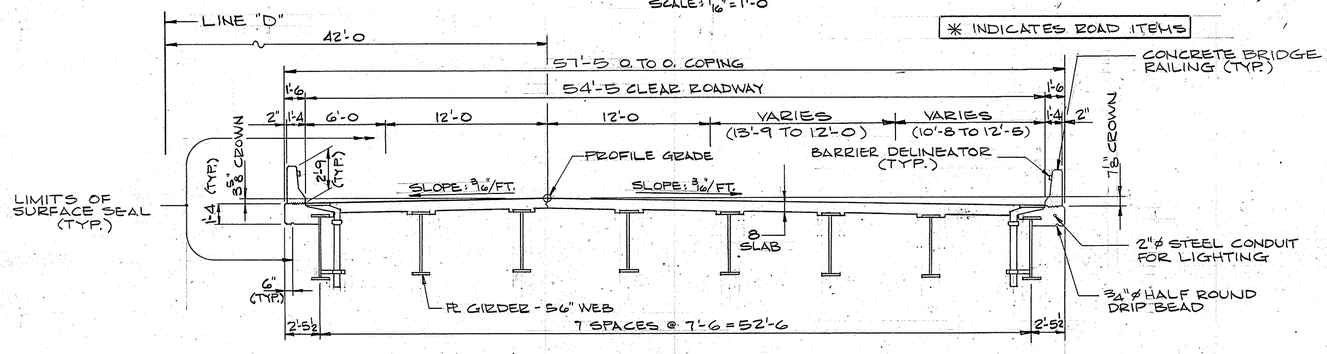


ELEVATION
SCALE: 1/16" = 1'-0



PLAN
SCALE: 1/16" = 1'-0

* INDICATES ROAD ITEMS



TYPICAL SECTION - EASTBOUND STRUCTURE
SCALE: 3/16" = 1'-0

GENERAL NOTES

1. REINFORCING STEEL COVERING SHALL BE 2½" IN TOP AND 1" MIN. IN BOTTOM OF FLOOR SLABS, 3" IN FOOTINGS EXCEPT BOTTOM STEEL WHICH SHALL BE 4" AND 2" IN ALL OTHER PARTS, UNLESS NOTED OTHERWISE.
2. ALL EXPOSED SURFACES OF CONCRETE BRIDGE RAILING, TOP OF BRIDGE DECK, FACE OF DECK COPING AND UNDERSIDE OF BRIDGE DECK FROM COPING TO DRIP BEAD TO BE SURFACE SEALED.

NOTE:
FOR WESTBOUND STRUCTURE GENERAL PLAN, LIST OF STANDARD DRAWINGS AND DESIGN DATA, SEE DWG. R2.

GENERAL PLAN - E.B. STRUCTURE

CONTINUOUS COMPOSITE WELDED PLATE GIRDER BRIDGE

2 SPANS: 1@133'-9, 1@124'-6 — NO SKEW
54'-5 CLEAR ROADWAY — U.S. 24 E.B./U.S. 31

INDIANA DEPARTMENT OF TRANSPORTATION

SCALE:—AS NOTED DATE:- DECEMBER 18 1997

John M. Broadus

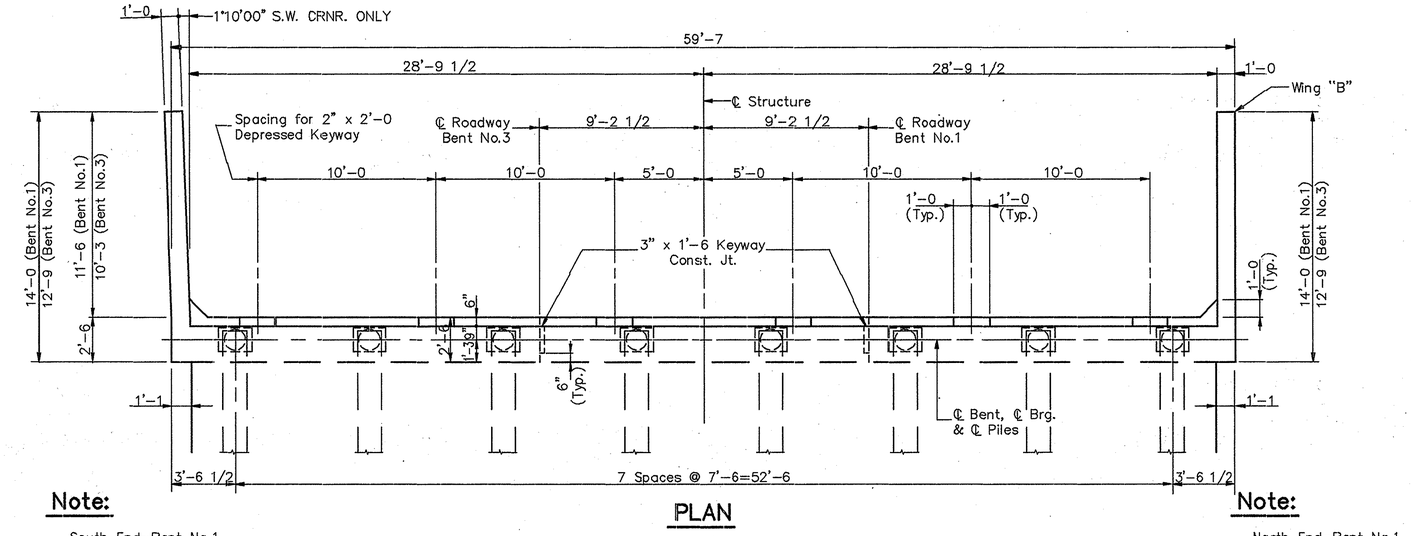
DRAWING:- S2 OF S14 SHEET:- 22 OF 53
PROJECT:-NH-144-6( ) STATION:—
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE:- 24-52-8165

JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

DESIGNED	EF	C'K'D	LS
DRAWN	SF	C'K'D	LS
TRACED		C'K'D	

SF-22317

TP101



Note:

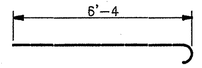
South End–Bent No.1
North End–Bent No.3

PLAN

(This view shows concrete dimensions and elevation call–outs)
Scale: 1/4"=1'-0

Note:

North End–Bent No.1
South End–Bent No.3



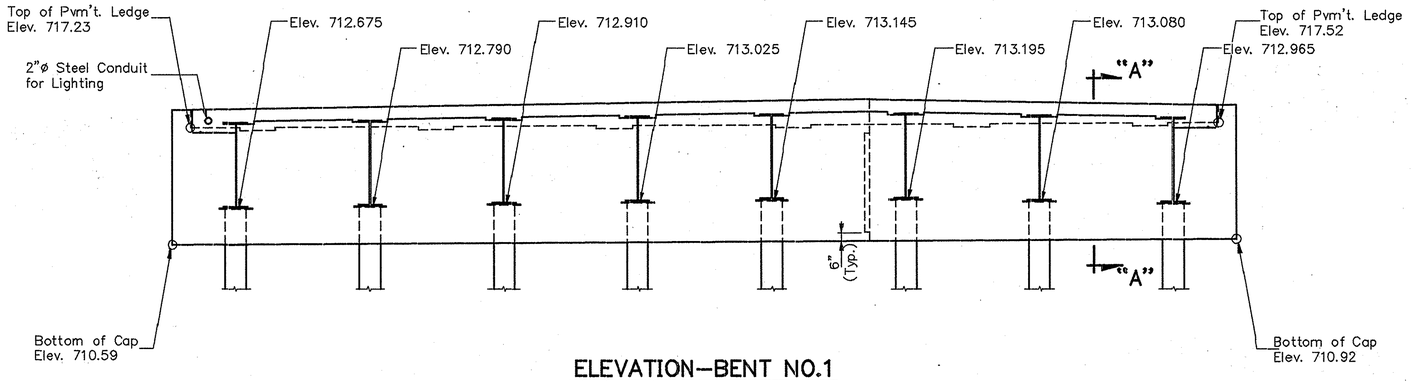
584e x 6'-11

BILL OF MATERIALS
BENT NO. 1

SIZE or MK	NO.of BARS	LENGTH	WEIGHT
#7e	22	31'-6	
#7e	12	13'-8	
#7e	35	7'-2	
TOTAL #7e			2,264#
601Be	25	16'-4	
602Be	28	16'-7	
603Be	53	9'-11	
#6e	32	6'-0	
#6e	76	5'-0	
#6e	28	3'-10	
TOTAL #6e			3,121#
#5e	6	30'-3	
#5e	32	13'-8	
TOTAL #5e			645#
401Be	106	3'-2	
402Be	16	6'-2	
403Be	16	4'-6	
#4e	8	13'-8	
#4e	40	7'-3	
#4e	58	3'-0	
TOTAL #4e			721#
TOTAL EPOXY COATED REINFORCING			6,751#
MISCELLANEOUS			
8–14"ø, 0.312" THICK, STEEL ENCASED CONCRETE PILES			
x 41'-0 LONG			328.0 L.F.

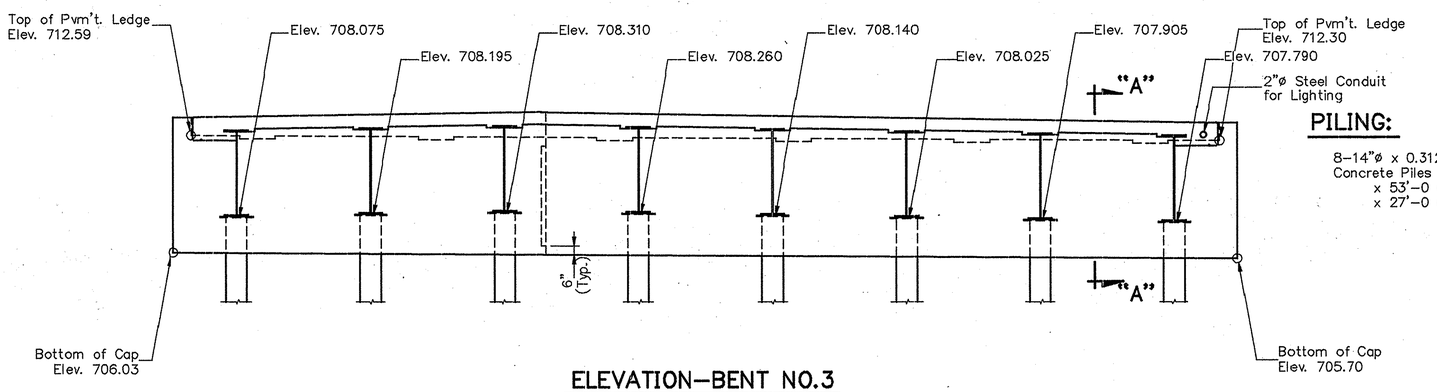
BILL OF MATERIALS
BENT NO. 3

SIZE or MK	NO.of BARS	LENGTH	WEIGHT
#7e	22	31'-6	
#7e	12	12'-5	
#7e	35	7'-2	
TOTAL #7e			2,234#
601Be	25	16'-4	
602Be	28	16'-7	
603Be	53	9'-11	
#6e	32	6'-0	
#6e	76	5'-0	
#6e	28	3'-10	
TOTAL #6e			3,121#
#5e	6	30'-3	
#5e	32	12'-5	
TOTAL #5e			604#
401Be	106	3'-2	
402Be	16	6'-2	
403Be	16	4'-6	
#4e	8	12'-5	
#4e	40	7'-0	
#4e	58	3'-0	
TOTAL #4e			708#
TOTAL EPOXY COATED REINFORCING			6,667#
MISCELLANEOUS			
8–14"ø, 0.312" THICK, STEEL ENCASED CONCRETE PILES			
x 51'-0 LONG			408.0 L.F.



ELEVATION–BENT NO.1

(This view shows concrete dimensions and elevation call–outs)
Scale: 1/4"=1'-0



ELEVATION–BENT NO.3

(This view shows concrete dimensions and elevation call–outs)
Scale: 1/4"=1'-0

PILING:

8–14"ø x 0.312" Thick, Steel Encased Concrete Piles
x 53'-0 (Bent No.1)
x 27'-0 (Bent No.3)

NOTES:

1. For reinforcing bar notes, see Br. Std. C1.
2. For General Notes, see Dwg. S2.
3. For Reinforcing Layout and additional Details, see Dwg's. S4 & S5.
4. The letter "e" denotes epoxy coated reinforcing steel.

BENT NO.1 & 3
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: 1/4"=1'-0

DATE: DECEMBER 18 1997

John M. Broadus

DRAWING: S3 OF S14 SHEET: 23 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-52-8165

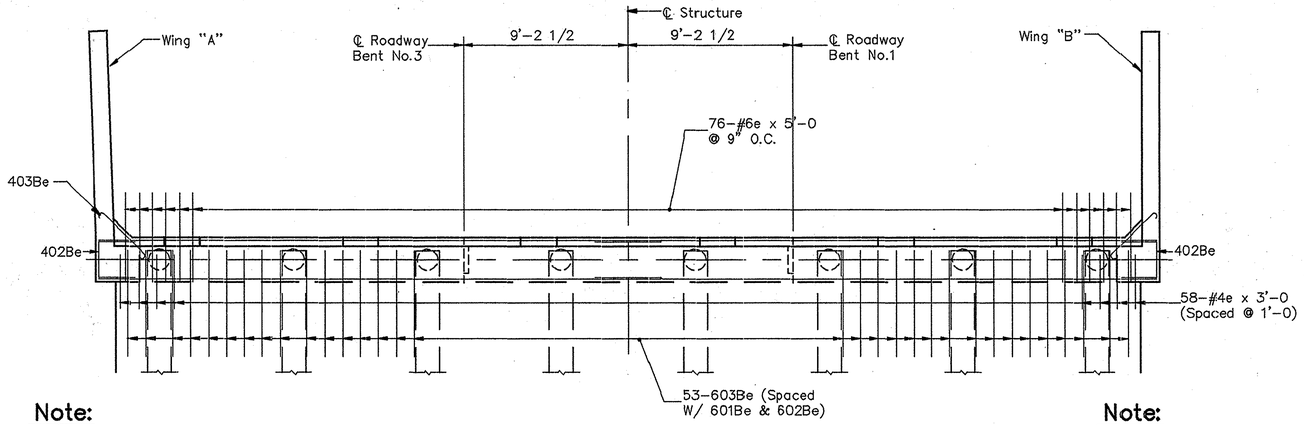
JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

24EBB1-3/48

PLOT DATE & TIME: DEC. 17, 1997 - 11:13:07

DESIGNED: MP 4/93 CHECKED: JB
DRAWN: SLG 5/93 CHECKED: MP 2/94
REVISED: CHECKED:

SHEET REVISED: SEPTEMBER 24, 1992

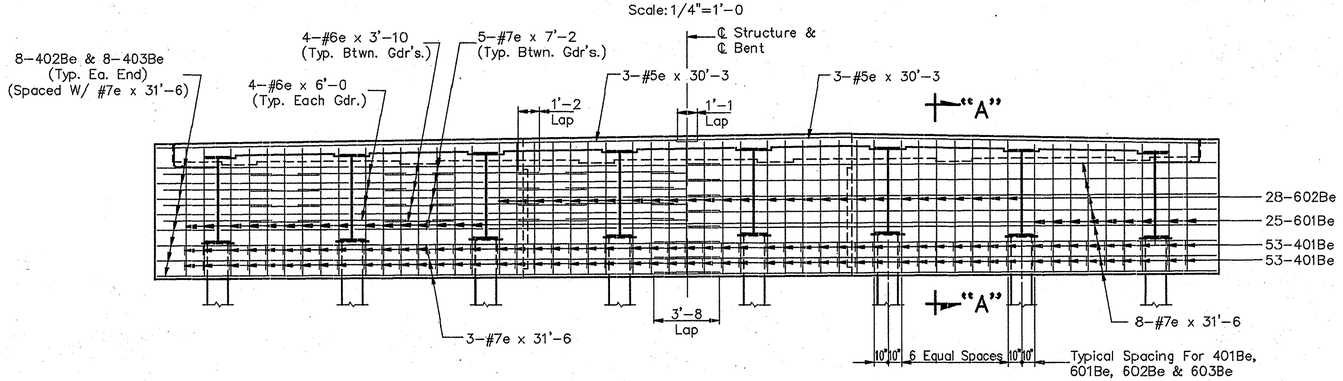


Note:
South End-Bent No.1
North End-Bent No.3

Note:
North End-Bent No.1
South End-Bent No.3

PLAN

(This view shows steel spacing and callouts)
Scale: 1/4"=1'-0

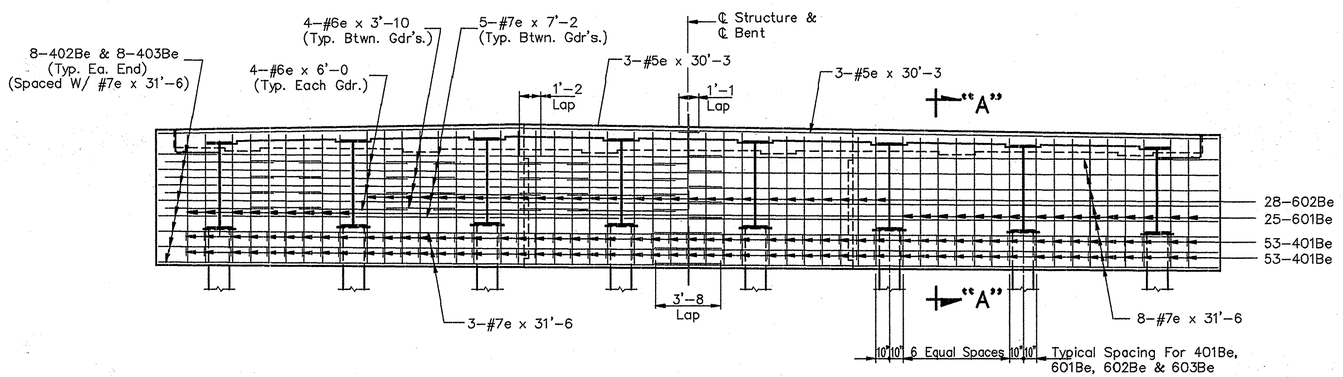


This Half Shows Front Face Steel

This Half Shows Rear Face Steel

ELEVATION-BENT NO.1

(This view shows steel spacing and callouts)
Scale: 1/4"=1'-0

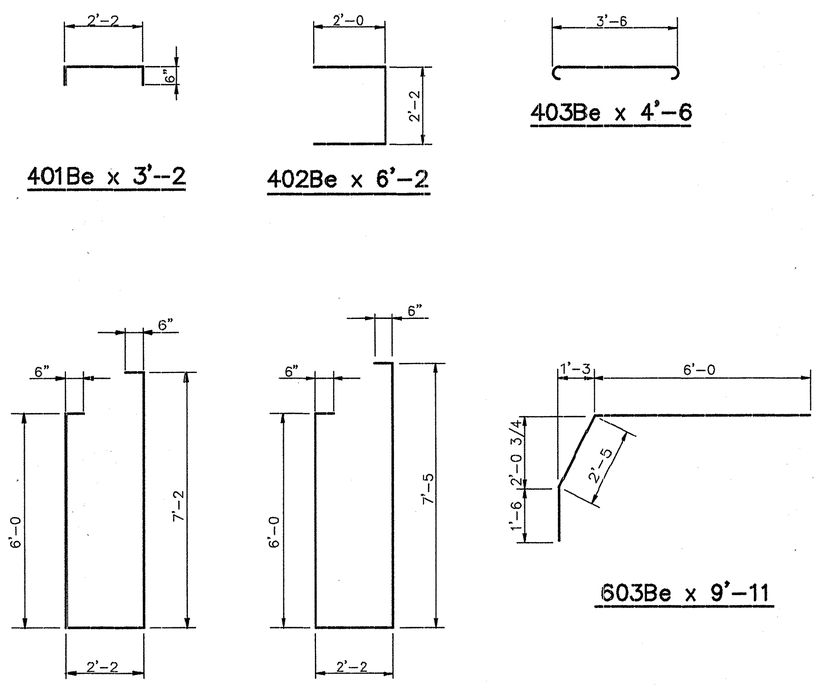


This Half Shows Front Face Steel

This Half Shows Rear Face Steel

ELEVATION-BENT NO.3

(This view shows steel spacing and callouts)
Scale: 1/4"=1'-0



NOTES:

1. For dimensions, elevation call-outs, bill of materials and additional details, see Dwg's. S3 & S5.
2. The letter "e" denotes epoxy coated reinforcing steel.

BENT NO. 1 & 3 DETAILS
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: 1/4"=1'-0 DATE: DECEMBER 18 1997

John M. Broadus

DRAWING: S4 OF S14 SHEET: 24 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-52-8165

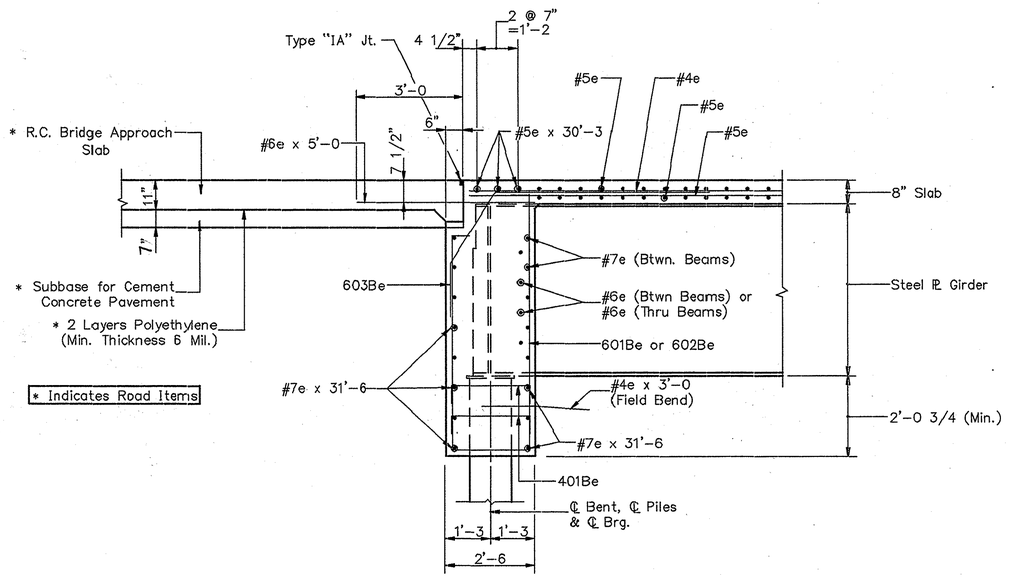
JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

24EB1-3D/48

DESIGNED MP 4/93 CHECKED JB
DRAWN SLG 5/93 CHECKED MP
REVISED CHECKED

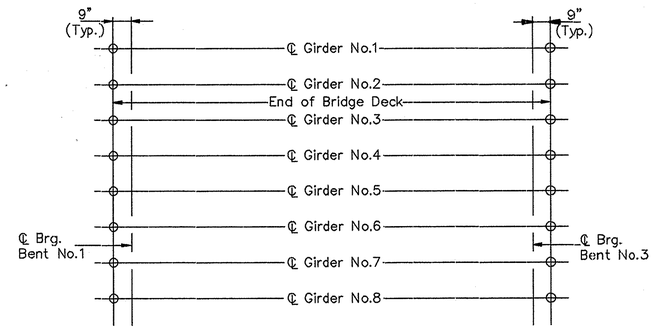
SHEET REVISED: SEPTEMBER 24, 1992

PLOT DATE & TIME: DEC. 17, 1997 - 11:18:22



SECTION "A-A"

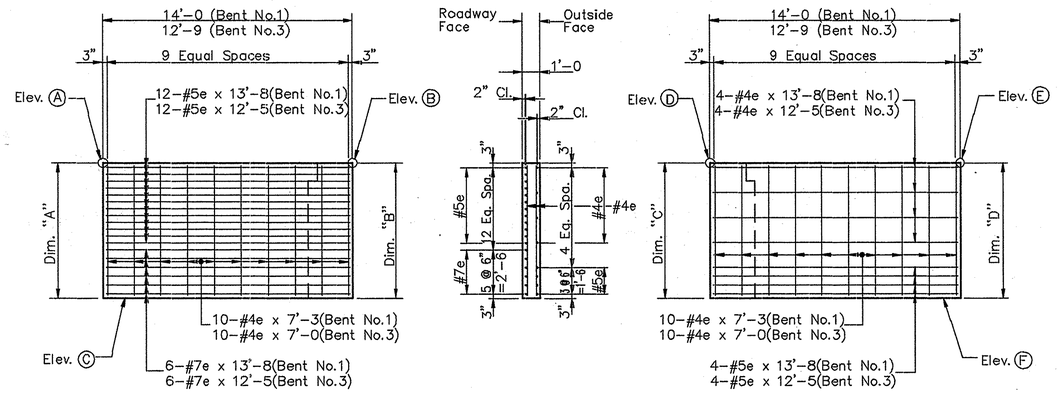
Scale: 1/2"=1'-0



END OF BRIDGE DECK ELEVATIONS

No Scale

End of Bridge Deck Elevations								
Location	Gdr. No.1	Gdr. No.2	Gdr. No.3	Gdr. No.4	Gdr. No.5	Gdr. No.6	Gdr. No.7	Gdr. No.8
Bent No.1	718.56	718.68	718.79	718.74	718.62	718.51	718.39	718.27
Bent No.3	713.62	713.74	713.86	713.81	713.69	713.57	713.45	713.34



WINGWALL "A"

(Showing Reinforcing in Roadway Face)

TYPICAL SECTION

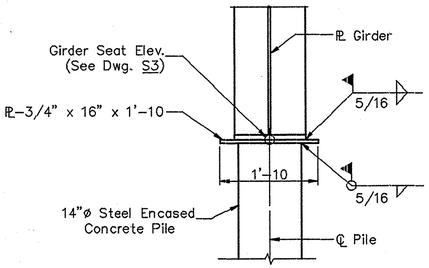
WINGWALL "B"

(Showing Reinforcing in Outside Face)

WINGWALL DETAILS

Scale: 1/4"=1'-0

Table of Wingwall Elevations & Dimensions										
Location	Elev. "A"	Elev. "B"	Elev. "C"	Elev. "D"	Elev."E"	Elev. "F"	Dim. "A"	Dim. "B"	Dim. "C"	Dim. "D"
Bent No.1	718.46	718.20	710.59	718.48	718.75	710.92	7'-10 1/2	7'-7 3/8	7'-6 3/4	7'-10
Bent No.3	713.38	713.62	706.03	713.34	713.09	705.70	7'-4 1/4	7'-7 1/8	7'-7 5/8	7'-4 5/8



BEARING DETAILS

Scale: 3/4"=1'-0

NOTES:

1. For additional details, see Dwg's. S3 & S4.
2. The letter "e" denotes epoxy coated reinforcing steel.

BENT NO.1 & 3 DETAILS
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: AS NOTED

DATE: DECEMBER 18 1997

John M. Broadus

DRAWING: S5 OF S14 SHEET: 25 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-52-8165

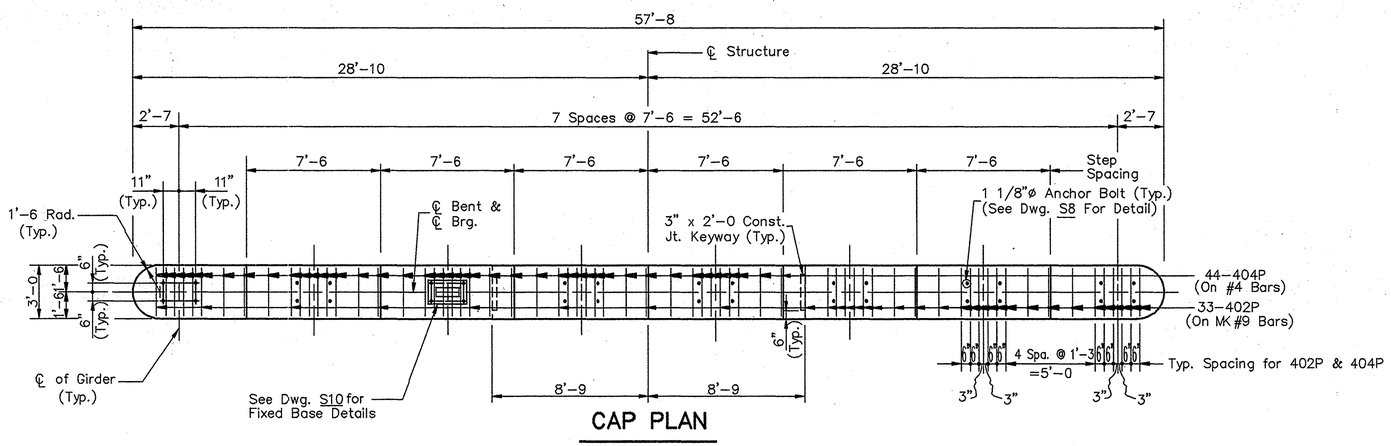
JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

24EB1-3T/48

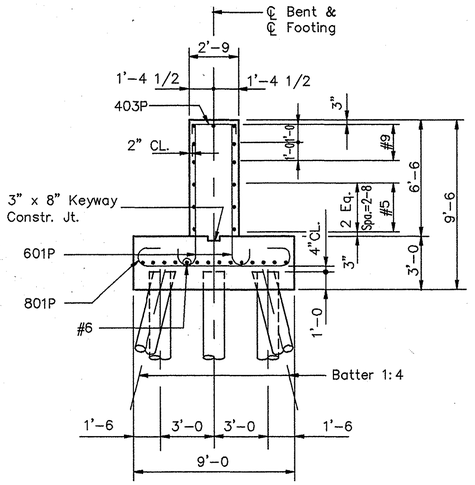
PLOT DATE & TIME: DEC 17, 1997 - 11:20:52

DESIGNED MP 4/93 CHECKED JB
DRAWN SG 5/93 CHECKED MP
REVISED CHECKED

SHEET REVISED: SEPTEMBER 24, 1992



CAP PLAN



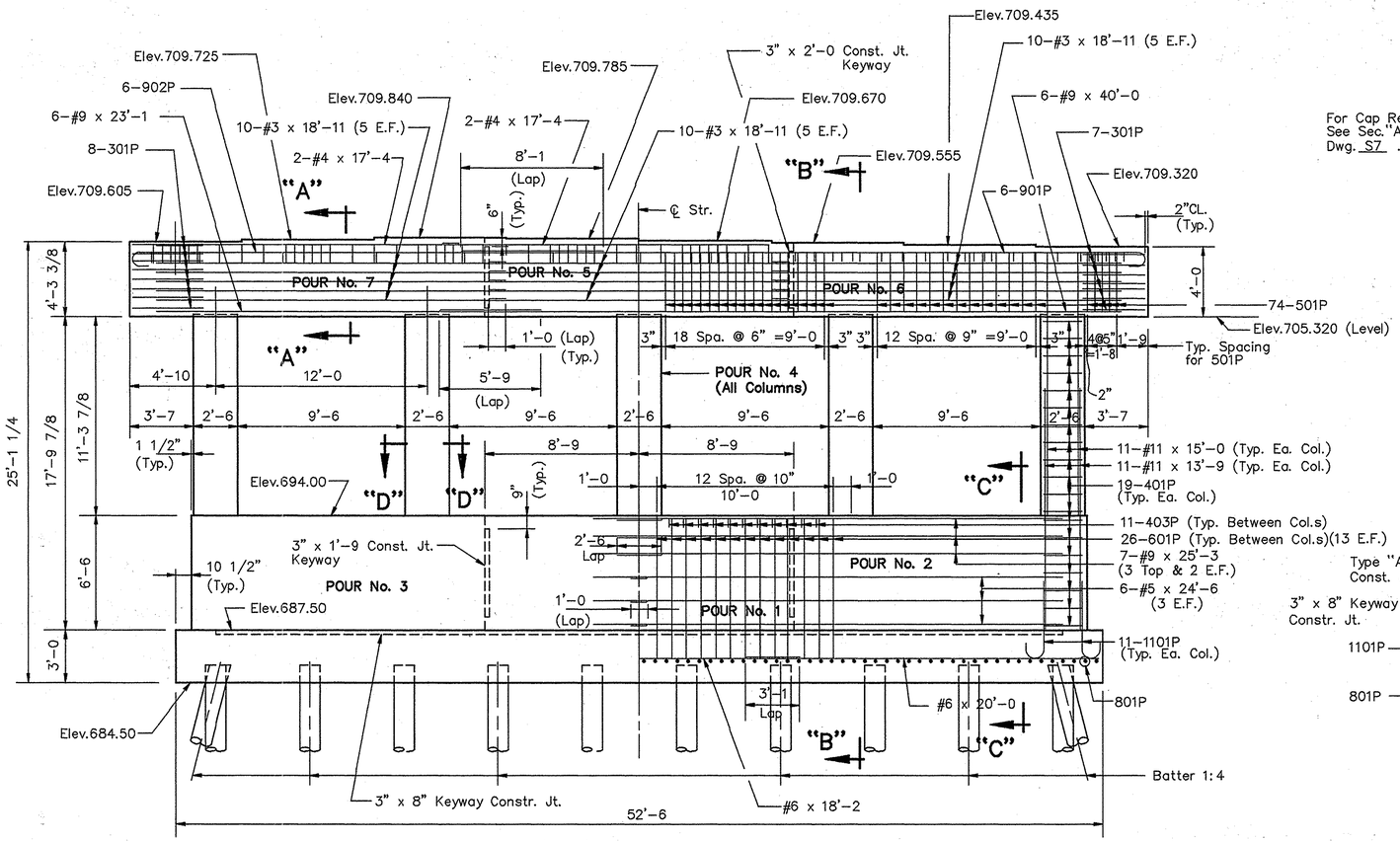
SECTION "C-C"

BILL of MATERIALS

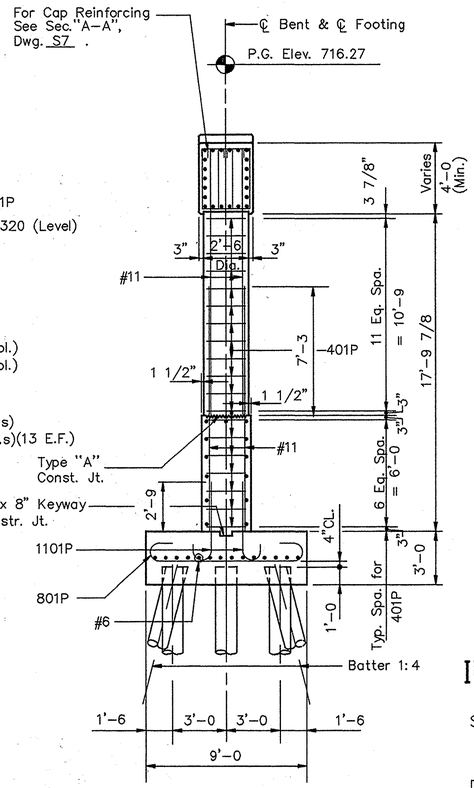
SIZE or MK	NO.of BARS	LENGTH	WEIGHT
1101P	55	6'-0	
#11	55	15'-0	
#11	55	13'-9	
TOTAL #11			10,154#
901P	6	40'-0	
902P	6	27'-11	
#9	6	40'-0	
#9	14	25'-3	
#9	6	23'-1	
TOTAL #9			3,874#
801P	84	10'-4	
TOTAL #8			2,318#
601P	104	8'-8	
#6	28	20'-0	
#6	14	18'-2	
TOTAL #6			2,578#
501P	148	10'-3	
#5	12	24'-6	
TOTAL #5			1889#
401P	95	7'-10	
402P	33	3'-8	
403P	44	3'-5	
404P	44	4'-8	
#4	4	17'-4	
TOTAL #4			862#
301P	15	6'-3	
#3	30	18'-11	
TOTAL #3			249#
TOTAL UNCOATED REINFORCING			21924#
CONCRETE			
TOTAL CLASS "B" CONCRETE			
IN FOOTING			52.5 C.Y.
POUR NO. 1 (COLLISIONWALL)			11.4 C.Y.
POUR NO. 2 (COLLISIONWALL)			10.9 C.Y.
POUR NO. 3 (COLLISIONWALL)			10.9 C.Y.
POUR NO. 4 (COLUMNS)			10.4 C.Y.
POUR NO. 5 (CAP)			8.4 C.Y.
POUR NO. 6 (CAP)			9.1 C.Y.
POUR NO. 7 (CAP)			9.7 C.Y.
TOTAL CLASS "A" CONCRETE			70.8 C.Y.
MISCELLANEOUS			
30-14"ø x 0.25" THICK, STEEL ENCASED CONCRETE PILES x 11'-0 LONG			330.0 L.F.

NORTH END

SOUTH END



ELEVATION



SECTION "B-B"

PILING:

30-14"ø x 0.250" Thick, Steel Encased Concrete Piles x 11'-0 Long.

NOTES:

1. For Reinforcing Bar Notes, See Br. Std. C1.
2. For General Notes, See Dwg. S2.
3. For Type "A" Const. Jt., See Br. Std. C3.
4. For Footing Plan, Reinforcing Bar Details And Additional Sections And Details, See Dwg. S7.

BENT NO.2
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: 1/4"=1'-0

DATE: DECEMBER 18 1997

John M. Broadus

DRAWING: S6 OF S14 SHEET: 26 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-52-8165

JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

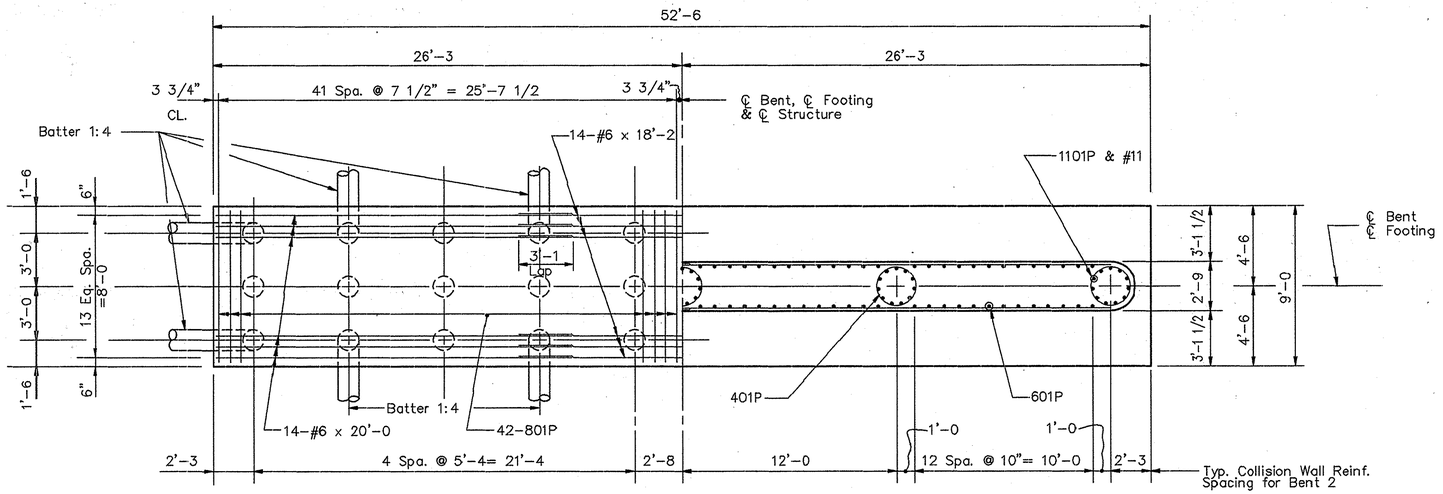
24EBB2/48

DESIGNED: MP CHECKED: JB
DRAWN: MKM 6/93 CHECKED: MP 2/94
REVISED: CHECKED:

PLOT DATE & TIME: MAR 17, 1998 - 12:48:34

SHEET REVISED: SEPTEMBER 24, 1992

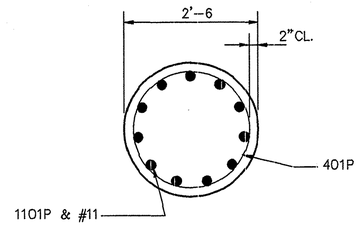
REVISED 3-16-98: Added Keyway Construction Joint; Changed Placement of 601P and 1101P Bars



HALF PLAN SHOWING PILE LAYOUT & FOOTING REINF.

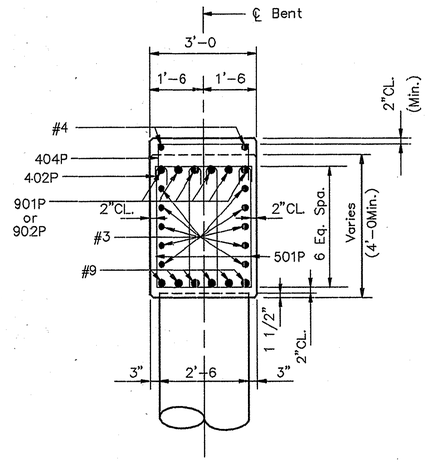
HALF PLAN SHOWING COLUMN & COLLISION WALL REINF.

Scale: 1/4"=1'-0



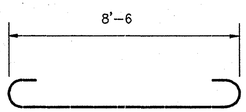
SECTION "D-D"

Scale: 3/4"=1'-0

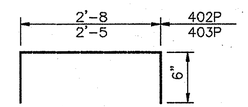


SECTION "A-A"

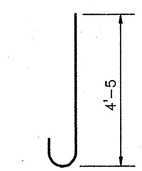
Scale: 1/2"=1'-0



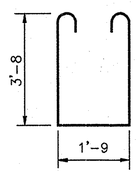
801P x 10'-4



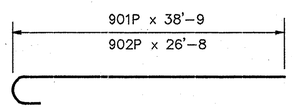
402P x 3'-8
403P x 3'-5



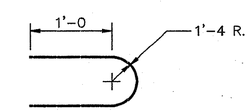
1101P x 6'-0



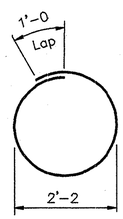
501P x 10'-3



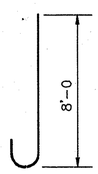
901P x 40'-0
902P x 27'-11



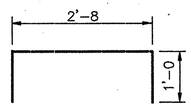
301P x 6'-3



401P x 7'-10



601P x 8'-8



404P x 4'-8

NOTES:

1. For General Notes, See Dwg. S2 .
2. For Reinforcing Bar Notes, See Br. Std. C1.

BENT NO. 2 DETAILS
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: AS NOTED

DATE: DECEMBER 18 1997

John M. Broadus

DRAWING: S7 OF S14 SHEET: 27 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-52-8165

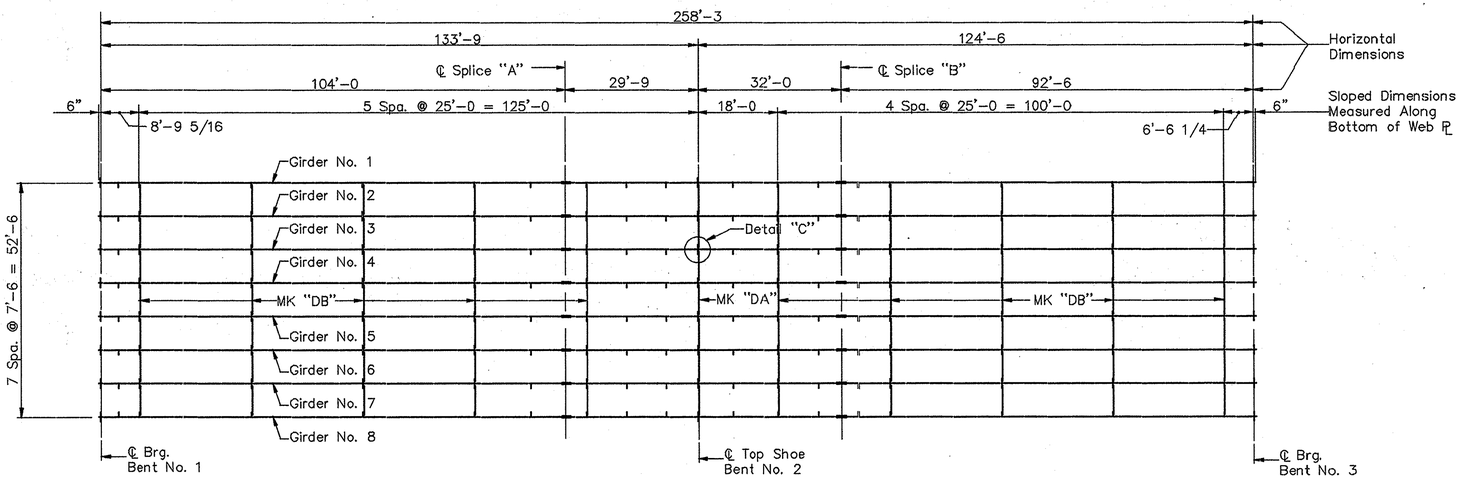
JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

24EBB2DT/48

PLOT DATE & TIME: DEC. 17, 1997 - 11:28:20

DESIGNED: MP CHECKED: JB
DRAWN: MKM 5/93 CHECKED: MP 2/94
REVISED: CHECKED:

SHEET REVISED: SEPTEMBER 24, 1992

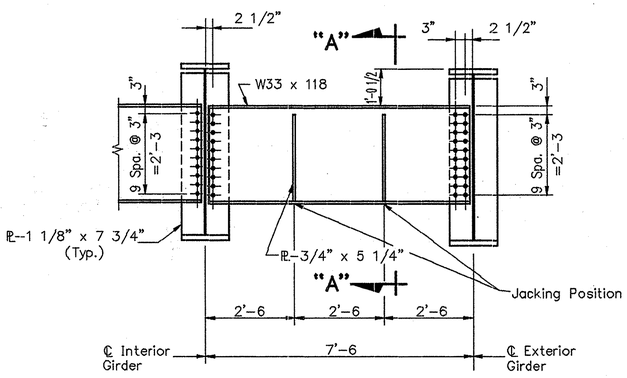


FRAMING PLAN

Scale: 1/16"=1'-0

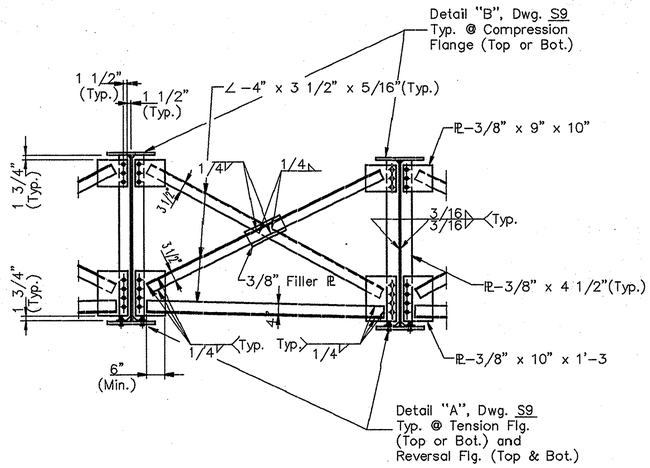
DESIGN DATA

Live Load	Designed for HS20-44 loading with impact and distribution of loads in accordance with 1992 AASHTO specifications, including 1993 Interim Specifications. Checked for special loading of 2-24,000 LB. axles spaced at 4'-0 centers.
Dead Load	Actual weight plus 35p.s.f. (composite) for future wearing surface and 15p.s.f. (non-composite) for permanent metal deck forms.
Floor Slab	Designed for 16,000# wheel load plus impact. Structural depth of 6 1/2 inches.
Allowable Stresses	To be in accordance with 1992 AASHTO Specifications, including 1993 Interim Specifications.
Design Strengths	Class A concrete - f'c = 3,500 p.s.i. Class B concrete - f'c = 3,000 p.s.i. Class C concrete - f'c = 4,000 p.s.i. Reinforcing - fy = 60,000 p.s.i.
Design Methods	Superstructure - Strength Design Method Substructures - Service Load Design Method
Seismic Criteria	Designed in accordance with Division I-A OF 1992 AASHTO Specifications, Including 1993 Interim Specifications, using Seismic Performance Category "A" and 0.05 acceleration coefficient.



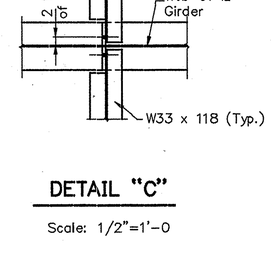
JACKING FRAME DETAIL MK "DA"

Scale: 1/2"=1'-0



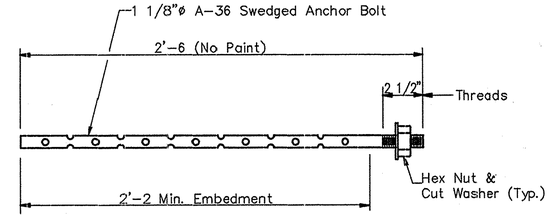
DIAPHRAGM DETAIL MK "DB"

Scale: 1/2"=1'-0



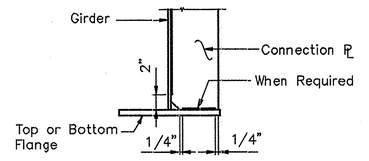
DETAIL "C"

Scale: 1/2"=1'-0



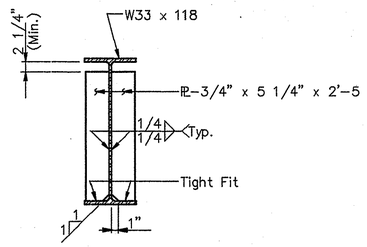
SWEDGED ANCHOR BOLT DETAIL

No Scale



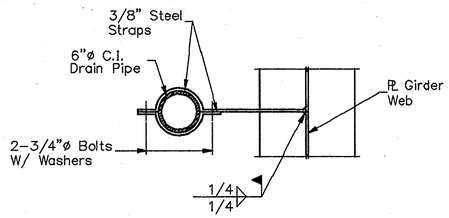
TYPICAL WELD DETAIL FOR DIAPHGRAM CONNECTION ℙ'S

Scale: None



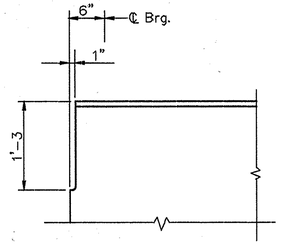
SECTION "A-A"

Scale: 3/4"=1'-0



PIPE SUPPORT BRACKET DETAIL

No Scale



GIRDER COPING DETAIL (@ BENT NO. 1 & 3)

Scale: 1"=1'-0

NOTES:

1. The weight of high strength bolts is not included in the estimated weight of structural steel.
2. Estimated weight of structural steel 442,035 lbs. (includes 391,983 lbs. for A-572 and 1,481 lbs. for A-588.)
3. For additional details, see Dwg's. S9 & S10.

FRAMING PLAN
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: AS NOTED

DATE: DECEMBER 18 1997

John M. Broadus

JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

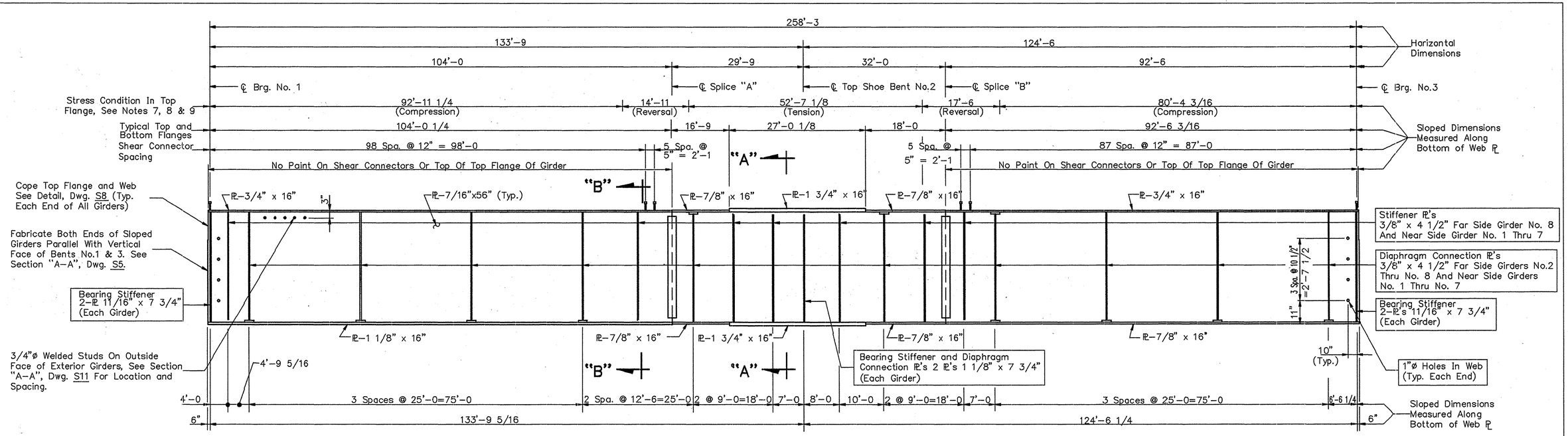
DRAWING: S8 OF S14 SHEET: 28 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-52-8165

24EBFRAM/192

PLOT DATE & TIME: DEC 17, 1997 - 11:40:05

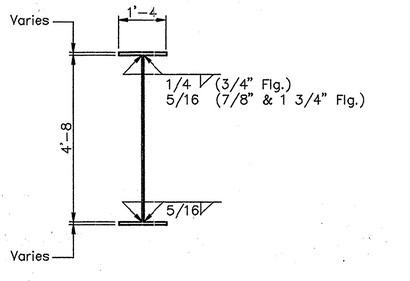
DESIGNED: MP CHECKED: JB
DRAWN: SLG 4-93 CHECKED: MP
REVISED: CHECKED:

SHEET REVISED: SEPTEMBER 24, 1992



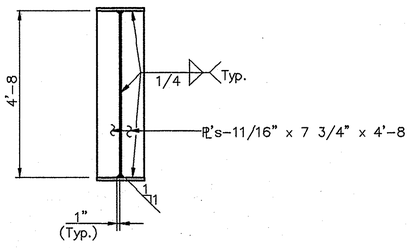
TYPICAL GIRDER ELEVATION

No Scale



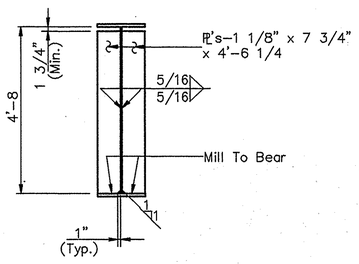
TYPICAL GIRDER SECTION

Scale: 1/2"=1'-0



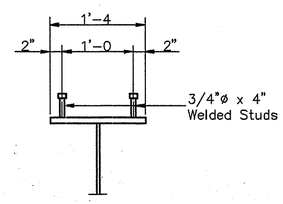
BEARING STIFFENERS @ BENT NO.1 & NO. 3

Scale: 1/2"=1'-0



BEARING STIFFENERS @ BENT NO.2

Scale: 1/2"=1'-0

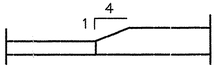


TYPICAL COMPOSITE GIRDER

No Scale

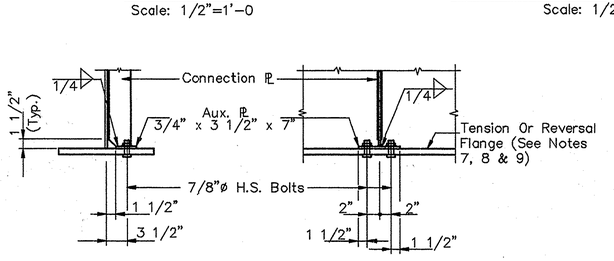
NOTES:

1. For interior girders use transverse stiffeners on one side only.
2. For exterior girders use transverse stiffeners on inside only.
3. For splice details, see Dwg. S10.
4. Clip corners of all stiffeners plates to clear plate girder welds, see details this sheet.
5. For details of jacking frames and diaphragms, see Dwg. S8.
6. All girder webs and flanges shall be ASTM A-572-50, all other steel including splice plates, diaphragm and stiffeners shall be ASTM A-36, except as noted on bearing details, Dwg. S10.
7. Compression stress condition in top flange also indicates tension stress condition in bottom flange.
8. Tension stress condition in top flange also indicates compression stress condition in bottom flange.
9. Reversal stress condition in top flange also indicates reversal stress condition in bottom flange.



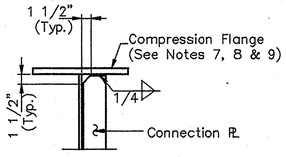
TYPICAL FLANGE SPLICE DETAIL

No Scale



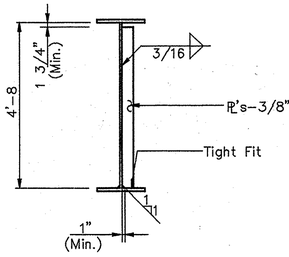
DETAIL "A" CONNECTION ℙ ATTACHMENT @ TENSION OR REVERSAL FLANGE

Scale: 1"=1'-0



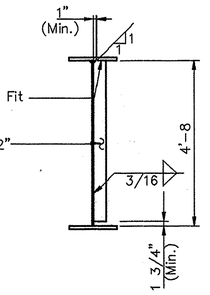
DETAIL "B" CONNECTION ℙ ATTACHMENT @ COMPRESSION FLANGE

Scale: 1"=1'-0



SECTION "A-A"

Scale: 1/2"=1'-0



SECTION "B-B"

Scale: 1/2"=1'-0

WELDED PLATE GIRDER DETAILS
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: AS NOTED

DATE: DECEMBER 18 1997

John M. Broadus

DRAWING: S9 OF S14 SHEET: 29 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-52-8165

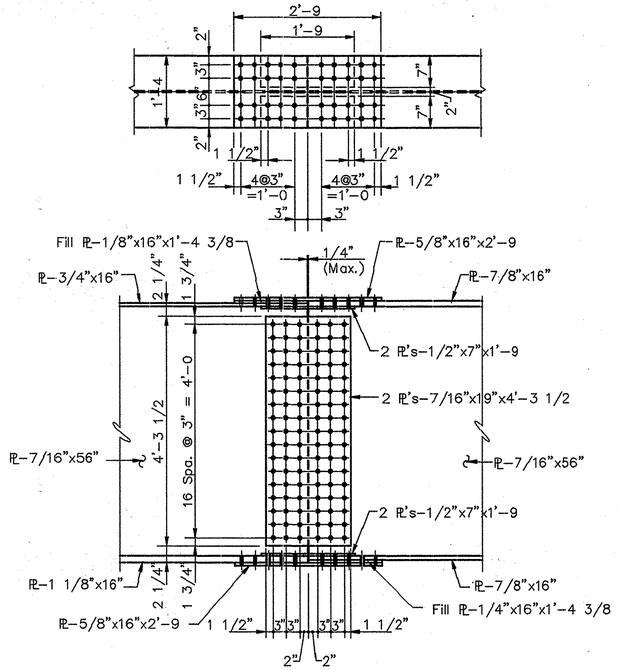
JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

24EBBMDT/24

PLOT DATE & TIME: DEC 18, 1997 - 11:56:31

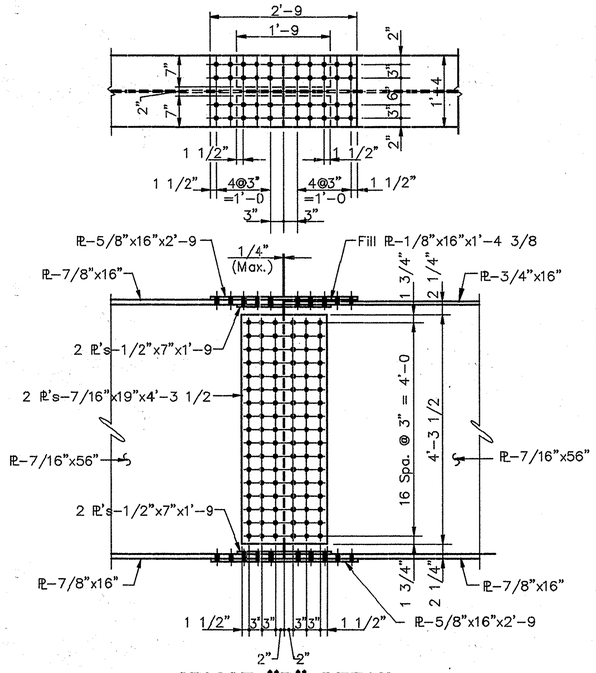
DESIGNED: MP CHECKED: JB
DRAWN: SLG 4-93 CHECKED: MP
REVISED: CHECKED:

SHEET REVISED: SEPTEMBER 24, 1992



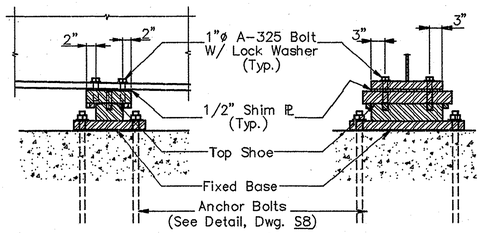
SPLICE "A" DETAIL

Scale: 3/4"=1'-0



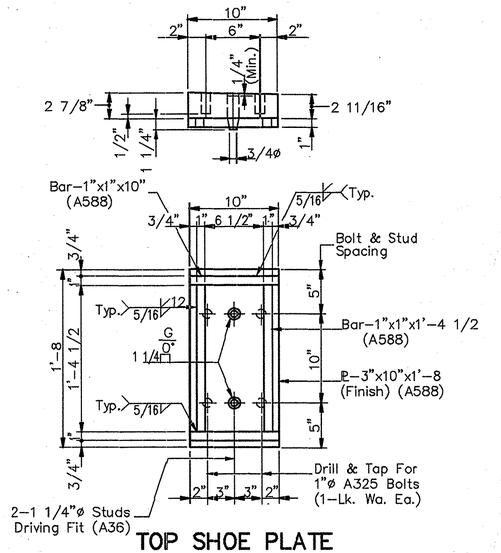
SPLICE "B" DETAIL

Scale: 3/4"=1'-0



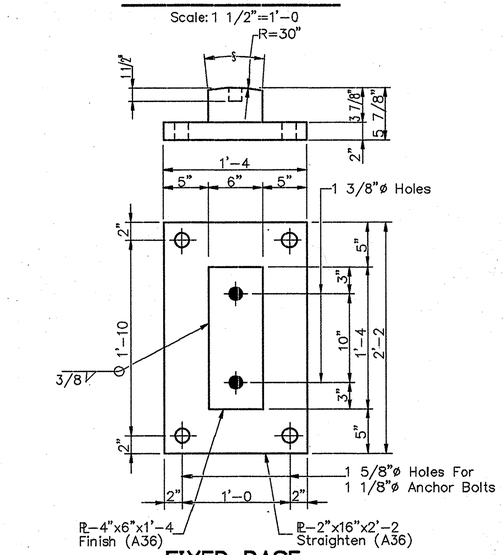
FIXED BEARING ASSEMBLY BENT NO. 2

No Scale



TOP SHOE PLATE

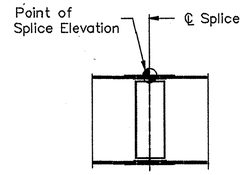
Scale: 1 1/2"=1'-0



FIXED BASE

Scale: 1 1/2"=1'-0

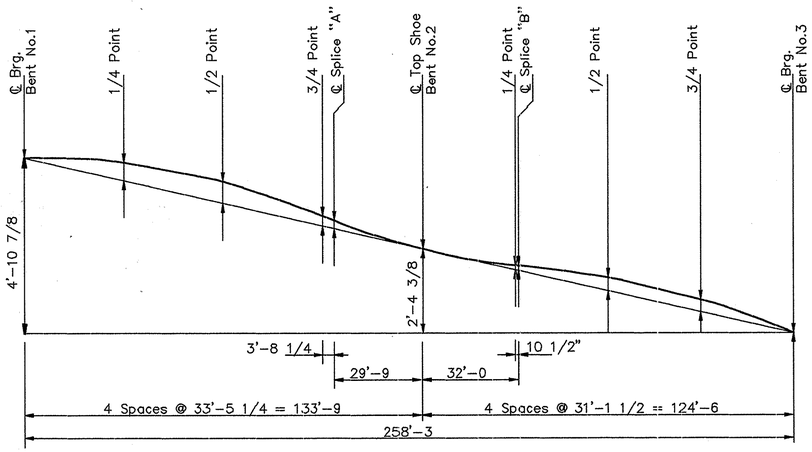
FIXED BEARING DETAIL-BENT NO. 2



Splice elevations are with falsework removed and carrying steel deadload only. Top of girder splice plate shall be adjusted to the elevations below before bolting field splices.

SPLICE ELEVATION DETAIL

Splice Elevation Table								
Location	Gdr. No. 1	Gdr. No. 2	Gdr. No. 3	Gdr. No. 4	Gdr. No. 5	Gdr. No. 6	Gdr. No. 7	Gdr. No. 8
Splice "A"	715.975	716.080	716.195	716.145	716.025	715.910	715.790	715.690
Splice "B"	714.765	714.870	714.990	714.935	714.820	714.700	714.585	714.475



NO LOAD CAMBER AND REAMING DIAGRAM

No Scale

Table Of Cambers										
	℄ Brg. Bent No.1	1/4 Point	1/2 Point	3/4 Point	Splice "A"	℄ Top Shoe Bent No.2	1/4 Point	Splice "B"	1/2 Point	3/4 Point	℄ Brg. Bent No.3
Girder No. 1 & 8											
Steel Dead Load	0	0 9/16"	0 11/16"	0 5/16"	0 1/4"	0	0 1/8"	0 1/8"	0 3/8"	0 3/8"	0
Non-Comp. Dead Load	0	2 11/16"	3 1/8"	1 7/16"	1 3/16"	0	0 11/16"	0 11/16"	2"	1 13/16"	0
Comp. Dead Load	0	0 1/8"	0 3/16"	0 1/16"	0 1/16"	0	0 1/16"	0 1/16"	0 1/8"	0 1/16"	0
Sub-Total	0	3 3/8"	4"	1 13/16"	1 1/2"	0	0 7/8"	0 7/8"	2 1/2"	2 1/4"	0
Vertical Curve	0	0	0	0	0	0	0	0	0	0	0
Total Camber	0	3 3/8"	4"	1 13/16"	1 1/2"	0	0 7/8"	0 7/8"	2 1/2"	2 1/4"	0
Girder No. 2 Thru 7											
Steel Dead Load	0	0 9/16"	0 11/16"	0 5/16"	0 1/4"	0	0 1/8"	0 1/8"	0 3/8"	0 3/8"	0
Non-Comp. Dead Load	0	2 5/16"	2 11/16"	1 1/4"	1"	0	0 9/16"	0 5/8"	1 11/16"	1 9/16"	0
Comp. Dead Load	0	0 1/8"	0 3/16"	0 1/16"	0 1/16"	0	0 1/16"	0 1/16"	0 1/8"	0 1/16"	0
Sub-Total	0	3"	3 9/16"	1 5/8"	1 5/16"	0	0 3/4"	0 13/16"	2 3/16"	2"	0
Vertical Curve	0	0	0	0	0	0	0	0	0	0	0
Total Camber	0	3"	3 9/16"	1 5/8"	1 5/16"	0	0 3/4"	0 13/16"	2 3/16"	2"	0

STRUCTURAL STEEL DETAILS
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: AS NOTED

DATE: DECEMBER 18 1997

John M. Broadus

DRAWING: S10 OF S14 SHEET: 30 OF 53

PROJECT: NH-144-6(012)

BRIDGE CONTRACT NO. R-23637

BRIDGE FILE: 24-52-8165

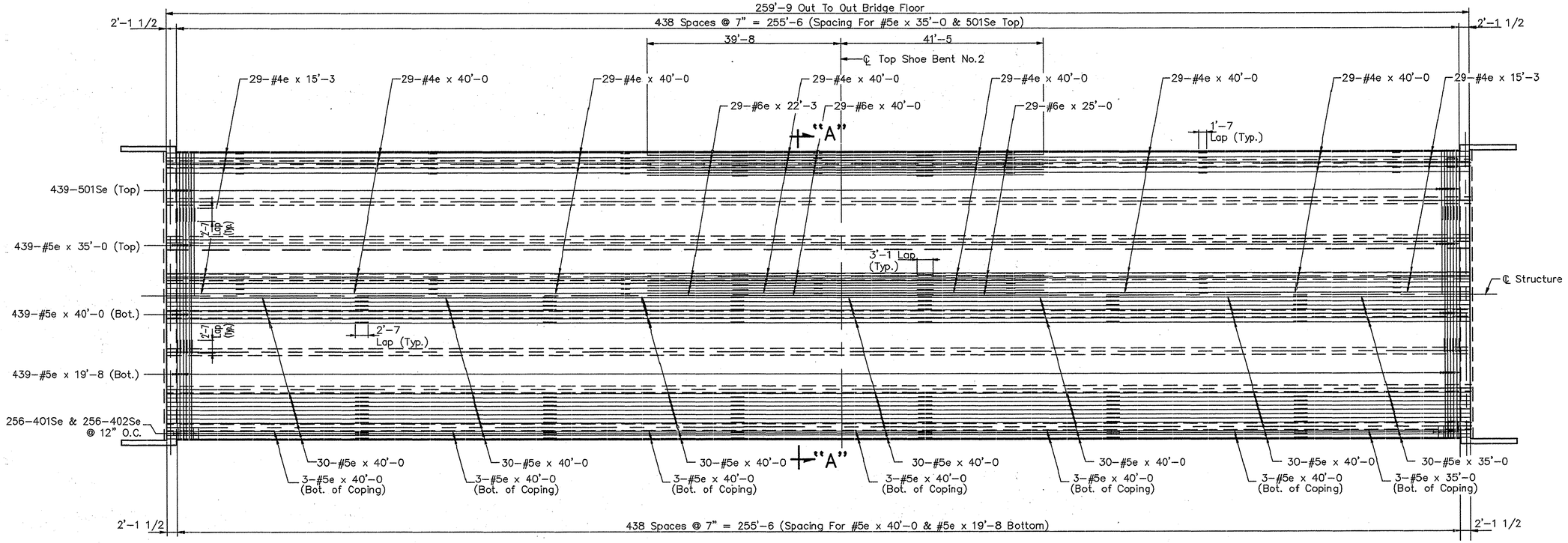
JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

24EBSTLD/24

PLOT DATE & TIME: DEC 17, 1997 - 13:08:03

DESIGNED: MP CHECKED: JB
DRAWN: SJC 4-93 CHECKED: MP
REVISED:

SHEET REVISED: SEPTEMBER 24, 1992

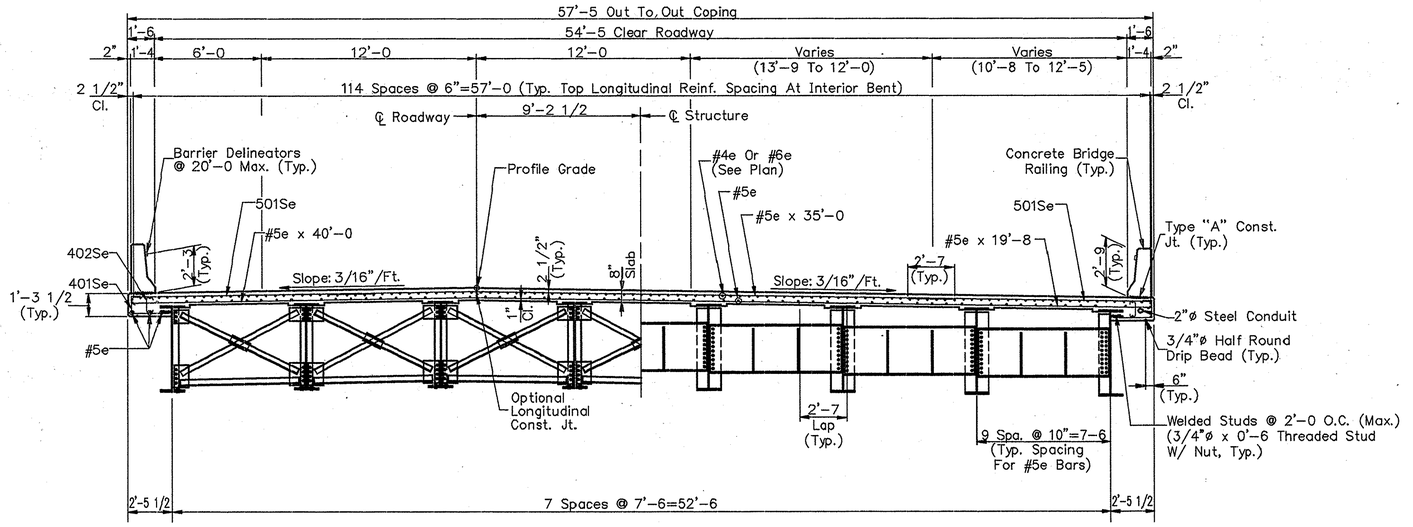


SUPERSTRUCTURE PLAN

Scale: 3/32"=1'-0

NOTE:

Top half shows top slab reinforcing steel.
Bottom half shows bottom slab reinforcing steel.



This Half Shows Diaphragm MK "DB"

SECTION "A-A"

Scale: 1/4"=1'-0

This Half Shows Jacking Frame MK "DA"

NOTES:

1. For reinforcing bar notes, see Br. Std. C1.
2. After structural steel has been erected, concrete forms shall not be blocked against the expansion end of steel in making any pours adjacent to steel spans.
3. For General Notes, see Dwg. S2.
4. Permanent metal deck forms may be substituted for removable forms at this structure.
5. For sections and additional details, see Dwg. S12.
6. For additional reinforcing layout at end of deck, see Dwg. S4.
7. For Joint Details, see Br. Std. C3.
8. For Design Data, see Dwg. S8.
9. The letter "e" Denotes Epoxy Coated Reinforcing Steed.

SUPERSTRUCTURE
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: AS NOTED

DATE: DECEMBER 18 1997

John M. Broadus

DRAWING: S11 OF S14 SHEET: 31 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-52-8165

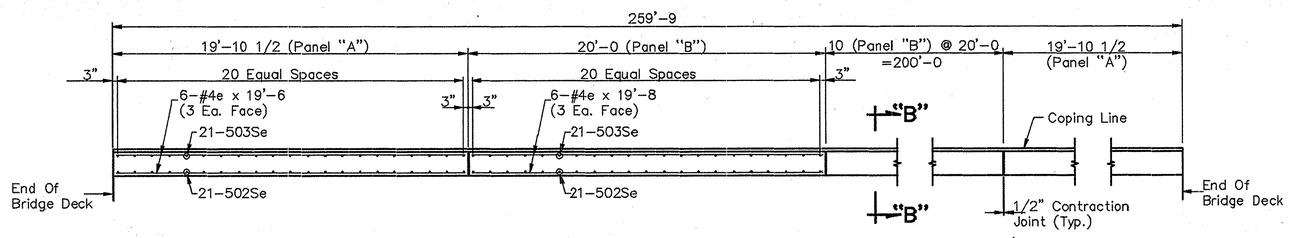
JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

24EBSUP/128

PLOT DATE & TIME: DEC 17, 1997 - 14:35:59

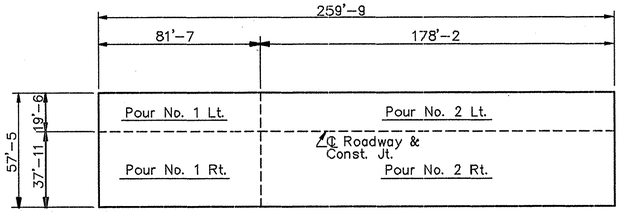
DESIGNED MP CHECKED JB
DRAWN S.G.S./SS CHECKED MP
REVISED CHECKED

SHEET REVISED: SEPTEMBER 24, 1992



TYPICAL CONCRETE BRIDGE RAIL PLAN

Scale: 1/4"=1'-0



SCHEDULE OF POURS

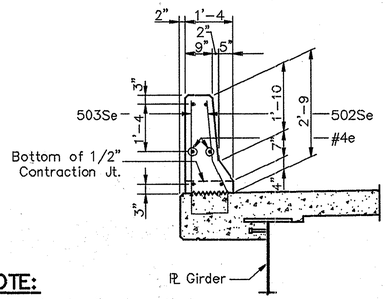
No Scale

NOTE:

Sequence of pours to be made in the order of pour numbers. All superstructure construction joints are optional, except as noted, and pours may be made continuous provided the pour terminates at a construction joint indicated on the plans. The contractor may change the width of pours, sequence of pours or location of construction joints subject to the approval of the engineer.

BILL of MATERIALS

SIZE or MK	NO. of BARS	LENGTH	WEIGHT
#6e	57	40'-0	
#6e	57	25'-0	
#6e	57	22'-3	
TOTAL #6e			7470#
501Se	878	14'-3	
502Se	546	3'-11	
503Se	546	3'-9	
#5e	835	40'-0	
#5e	505	35'-0	
#5e	439	19'-8	
#5e	16	3'-3	
TOTAL #5e			79746#
401Se	512	3'-7	
402Se	512	2'-0	
#4e	348	40'-0	
#4e	132	19'-8	
#4e	24	19'-6	
#4e	116	15'-3	
TOTAL #4e			14437#
TOTAL EPOXY COATED REINFORCING			101653#
CLASS "C" CONCRETE			
POUR NO. 1 Lt.			62.5 C.Y.
POUR NO. 1 RT.			113.3 C.Y.
POUR NO. 2 LT.			115.8 C.Y.
POUR NO. 2 RT.			211.7 C.Y.
TOTAL CLASS "C" CONCRETE IN SLAB			503.3 C.Y.
TOTAL CLASS "C" CONCRETE IN RAILING			50.6 C.Y.
MISCELLANEOUS			
SURFACE SEAL			18488 S.F.
BARRIER DELINEATORS			26 Each
2-ROADWAY DRAINS TYPE "OS-D"			644#
2-6"ø C.I. DRAIN PIPE x 4'-5 LONG (EXTRA HEAVY)			169#
2"ø STEEL CONDUIT			260 L.F.

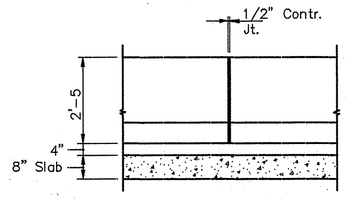


NOTE:

For optional splice in vertical railing reinforcing steel, see Br. Std. C3.

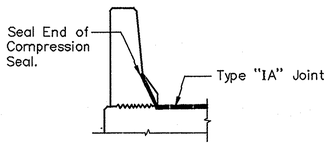
SECTION "B-B"

Scale: 1/2"=1'-0



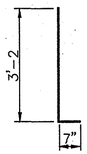
RAILING CONTRACTION JOINT DETAIL

Scale: 1/2"=1'-0

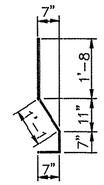


TYPE "IA" JOINT TREATMENT AT BRIDGE RAIL

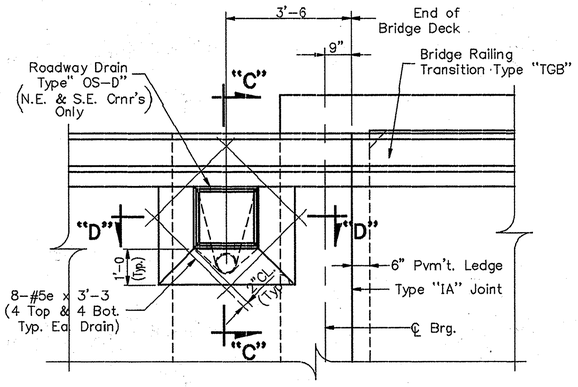
Scale: 1/2"=1'-0



503Se x 3'-9

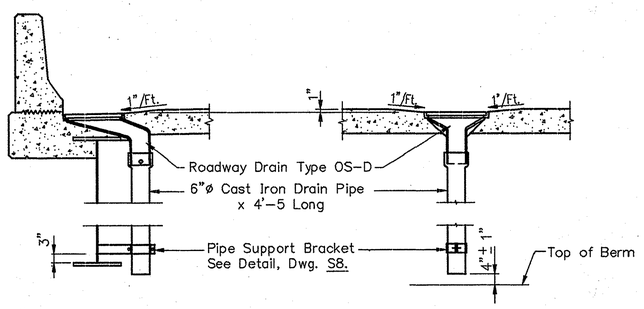


502Se x 3'-11



TYPICAL CORNER DETAIL

Scale: 1/2"=1'-0

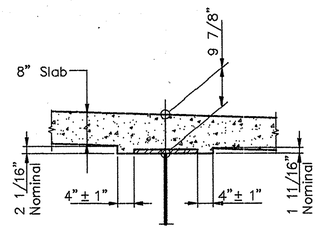


SECTION "C-C"

Scale: 1/2"=1'-0

SECTION "D-D"

Scale: 1/2"=1'-0

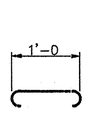


FILLET DETAIL

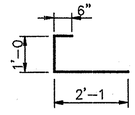
No Scale

NOTE:

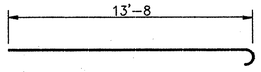
See Dwg. S11 for Notes.



402Se x 2'-0



401Se x 3'-7



501Se x 14'-3

DESIGNED MP CHECKED JB
DRAWN SLG 4/93 CHECKED MP 2/94
REVISED CHECKED

PLOT DATE & TIME: DEC 17, 1997 - 14:44:23

SHEET REVISED: SEPTEMBER 24, 1992

SUPERSTRUCTURE DETAILS
INDIANA DEPARTMENT OF TRANSPORTATION

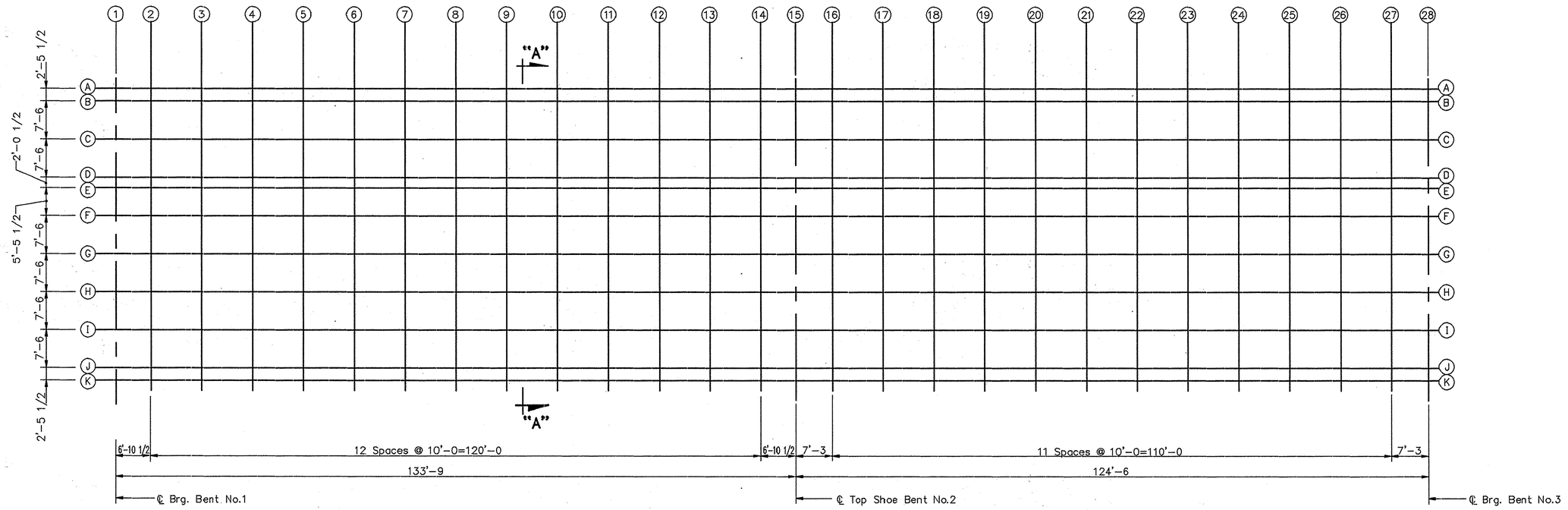
SCALE: AS NOTED DATE: DECEMBER 18 1997

John M. Broadus

DRAWING: S12 OF S14 SHEET: 32 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-52-8165

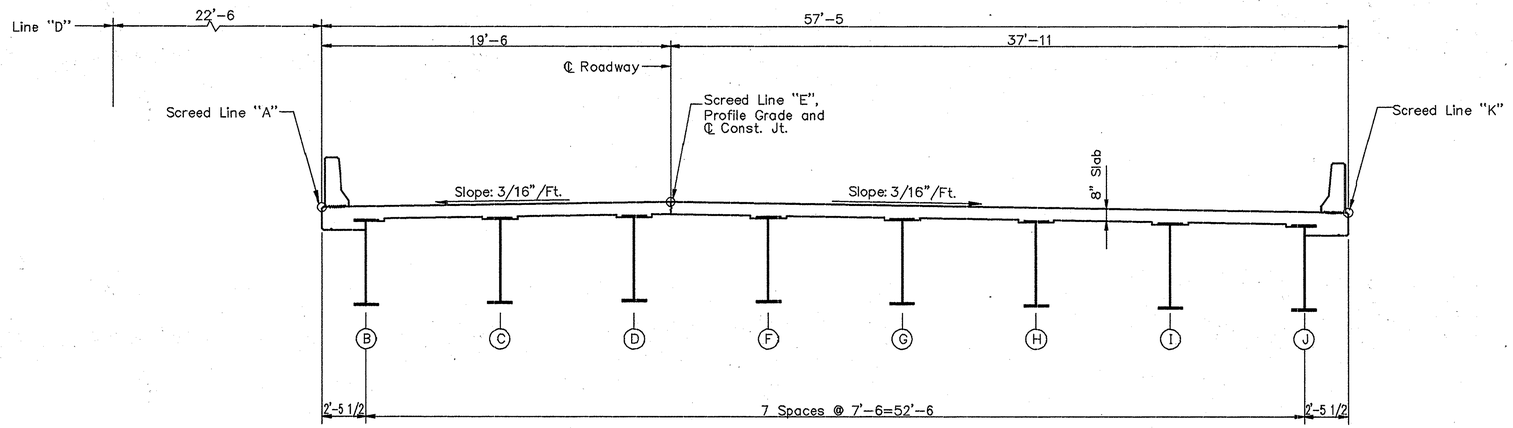
JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

24EBSUPD/48



SCREED PLAN

Scale: 3/32"=1'-0



SECTION "A-A"

Scale: 1/4"=1'-0

NOTES:

1. "Screed Plan" shows location of screeds.
2. "Screed Elevations Table", Dwg. S14, shows data for setting screed and coping forms so that the slab and coping will be at final grade elevation after all concrete has been poured.
3. See Dwg. S2 for General Notes.
4. See Dwg's. S11 & S12 for additional notes and details.

GENERAL PROCEDURE

1. Take elevations at all screed points on top of the adjacent beam, enter these elevations in the "Screed Elevation" Table, Dwg. S14. Subtract these elevations from the tabulated elevations and use the resulting dimension as the height for setting the screed or coping forms above that point. This dimension remains unchanged regardless of how much or in what order the concrete is poured. Do not set screed or coping forms by leveling.
2. No concrete in the deck is to be poured until the above operation is completed.

SCREED DATA
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: AS NOTED

DATE: DECEMBER 18 1997

John M. Broadus

DRAWING: S13 OF S14 SHEET: 33 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-52-8165

JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

24EBSCR1/128

DESIGNED: MP CHECKED: JB
DRAWN: SLG 4-93 CHECKED: MP 2/94
REVISED: CHECKED:

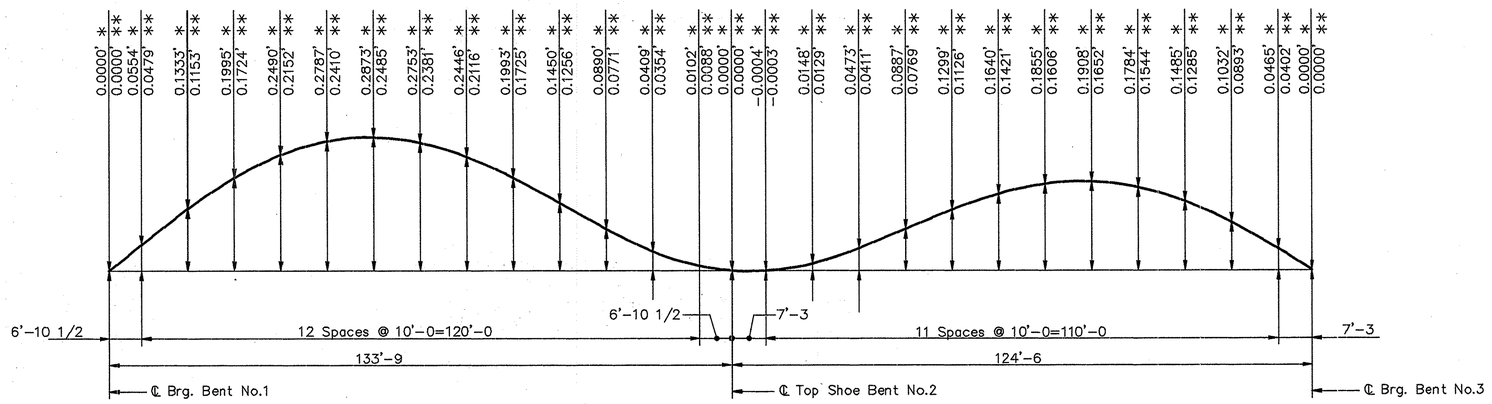
PLOT DATE & TIME: DEC 17, 1997 - 14:46:60
SHEET REVISED: SEPTEMBER 24, 1992

SCREED ELEVATIONS

POINT		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
A	ELEVATION–TOP OF SCREED	718.505	718.430	718.320	718.195	718.055	717.895	717.715	717.510	717.290	717.055	716.810	716.565	716.330	716.105	715.965	715.830	715.655	715.495	715.345	715.200	715.045	714.875	714.690	714.485	714.265
	ELEVATION–TOP OF BEAM																									
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																									
B	ELEVATION–TOP OF SCREED	718.545	718.470	718.360	718.235	718.095	717.935	717.755	717.550	717.330	717.095	716.850	716.605	716.365	716.145	716.005	715.865	715.690	715.535	715.385	715.235	715.080	714.915	714.730	714.525	714.305
	ELEVATION–TOP OF BEAM																									
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																									
C	ELEVATION–TOP OF SCREED	718.665	718.580	718.460	718.325	718.180	718.015	717.830	717.630	717.415	717.185	716.950	716.710	716.480	716.260	716.120	715.985	715.805	715.645	715.490	715.335	715.175	715.005	714.820	714.620	714.405
	ELEVATION–TOP OF BEAM																									
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																									
D	ELEVATION–TOP OF SCREED	718.780	718.700	718.575	718.440	718.295	718.130	717.950	717.750	717.530	717.300	717.065	716.825	716.595	716.380	716.240	716.100	715.925	715.765	715.610	715.455	715.295	715.120	714.935	714.735	714.520
	ELEVATION–TOP OF BEAM																									
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																									
E	ELEVATION–TOP OF SCREED	718.810	718.730	718.605	718.475	718.325	718.165	717.980	717.780	717.565	717.335	717.095	716.860	716.625	716.410	716.270	716.135	715.955	715.795	715.640	715.485	715.325	715.155	714.970	714.770	714.550
	ELEVATION–TOP OF BEAM																									
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																									
F	ELEVATION–TOP OF SCREED	718.725	718.645	718.520	718.390	718.240	718.075	717.895	717.695	717.480	717.250	717.010	716.775	716.540	716.325	716.185	716.050	715.870	715.710	715.555	715.400	715.240	715.070	714.885	714.685	714.465
	ELEVATION–TOP OF BEAM																									
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																									
G	ELEVATION–TOP OF SCREED	718.610	718.525	718.405	718.270	718.125	717.960	717.780	717.575	717.360	717.130	716.895	716.655	716.425	716.210	716.070	715.930	715.755	715.590	715.440	715.285	715.125	714.950	714.765	714.565	714.350
	ELEVATION–TOP OF BEAM																									
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																									
H	ELEVATION–TOP OF SCREED	718.495	718.410	718.285	718.155	718.005	717.845	717.660	717.460	717.245	717.015	716.780	716.540	716.305	716.090	715.950	715.815	715.635	715.475	715.320	715.165	715.005	714.835	714.650	714.450	714.230
	ELEVATION–TOP OF BEAM																									
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																									
I	ELEVATION–TOP OF SCREED	718.375	718.295	718.170	718.035	717.890	717.725	717.545	717.345	717.125	716.895	716.660	716.420	716.190	715.975	715.835	715.695	715.520	715.360	715.205	715.050	714.890	714.715	714.530	714.330	714.115
	ELEVATION–TOP OF BEAM																									
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																									
J	ELEVATION–TOP OF SCREED	718.260	718.185	718.070	717.945	717.805	717.645	717.465	717.265	717.040	716.805	716.565	716.315	716.080	715.860	715.715	715.580	715.405	715.245	715.100	714.950	714.795	714.625	714.440	714.240	714.020
	ELEVATION–TOP OF BEAM																									
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																									
K	ELEVATION–TOP OF SCREED	718.220	718.145	718.030	717.910	717.770	717.610	717.425	717.225	717.005	716.770	716.525	716.280	716.040	715.820	715.680	715.540	715.365	715.210	715.060	714.910	714.755	714.585	714.400	714.200	713.980
	ELEVATION–TOP OF BEAM																									
	DISTANCE–TOP OF BEAM TO TOP OF SCREED																									

SCREED ELEVATIONS

POINT		26	27	28
A	ELEVATION–TOP OF SCREED	714.030	713.785	713.600
	ELEVATION–TOP OF BEAM			
	DISTANCE–TOP OF BEAM TO TOP OF SCREED			
B	ELEVATION–TOP OF SCREED	714.070	713.825	713.640
	ELEVATION–TOP OF BEAM			
	DISTANCE–TOP OF BEAM TO TOP OF SCREED			
C	ELEVATION–TOP OF SCREED	714.175	713.935	713.755
	ELEVATION–TOP OF BEAM			
	DISTANCE–TOP OF BEAM TO TOP OF SCREED			
D	ELEVATION–TOP OF SCREED	714.290	714.050	713.875
	ELEVATION–TOP OF BEAM			
	DISTANCE–TOP OF BEAM TO TOP OF SCREED			
E	ELEVATION–TOP OF SCREED	714.325	714.085	713.905
	ELEVATION–TOP OF BEAM			
	DISTANCE–TOP OF BEAM TO TOP OF SCREED			
F	ELEVATION–TOP OF SCREED	714.235	714.000	713.820
	ELEVATION–TOP OF BEAM			
	DISTANCE–TOP OF BEAM TO TOP OF SCREED			
G	ELEVATION–TOP OF SCREED	714.120	713.880	713.705
	ELEVATION–TOP OF BEAM			
	DISTANCE–TOP OF BEAM TO TOP OF SCREED			
H	ELEVATION–TOP OF SCREED	714.005	713.765	713.585
	ELEVATION–TOP OF BEAM			
	DISTANCE–TOP OF BEAM TO TOP OF SCREED			
I	ELEVATION–TOP OF SCREED	713.885	713.645	713.470
	ELEVATION–TOP OF BEAM			
	DISTANCE–TOP OF BEAM TO TOP OF SCREED			
J	ELEVATION–TOP OF SCREED	713.785	713.535	713.350
	ELEVATION–TOP OF BEAM			
	DISTANCE–TOP OF BEAM TO TOP OF SCREED			
K	ELEVATION–TOP OF SCREED	713.745	713.495	713.315
	ELEVATION–TOP OF BEAM			
	DISTANCE–TOP OF BEAM TO TOP OF SCREED			



* Deflections on Lines A,B,J & K
** Deflections on Lines C Thru I

CONCRETE DEAD LOAD DEFLECTIONS

No Scale

NOTE:

See Dwg. S13 for additional details and notes.

SCREED DATA
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: NO SCALE DATE: DECEMBER 18 1997

DRAWING: S14 OF S14 SHEET: 34 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-54-8165

JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

24EBSCR2/48

DESIGNED-MP CHECKED-JB
DRAWN-SLG 4-93 CHECKED-MP
REVISED- CHECKED-

SHEET REVISED: JUNE 16, 1992

PLOT DATE & TIME: DEC 17, 1997 - 14:49:41

PLOT DATE & TIME: DEC 18, 1997 - 12:21:27

STRUCTURE NUMBER

			15	16	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
PIPE GROUP			L	L	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
SMOOTH PIPE SIZE																								
CORRUGATED PIPE SIZE																								
RCP/RCHEP (S)	CLASS		II	II																				
	D 0.01 RATING		1000	1000																				
NON-REINFORCED CONCRETE PIPE, CLASS 3 (S)			OK	OK																				
CORRUGATED PE PIPE, TYPE S (S) *																								
RIBBED PE PIPE (S) *																								
~~SMOOTH WALL PE PIPE (S) +/ MAXIMUM DR~~																								
PROFILE WALL PVC PIPE (S)																								
SMOOTH WALL PVC PIPE (S) *																								
VITRIFIED CLAY PIPE, EXTRA STRENGTH (S)			OK	OK																				
CORRUGATED STEEL PIPE / PIPE - ARCH	FULLY BIT. PAVED & LINED (S)	CORR. PROFILE	1/2" x 2-2/3"	1/2" x 2-2/3"																				
		THICKNESS	0.109	0.109																				
	ZINC COATED (C)	CORR. PROFILE																						
		THICKNESS																						
	ZINC COATED W/ BPI (C)	CORR. PROFILE																						
		THICKNESS																						
	ALUM. COATED TYPE 2 (C)	CORR. PROFILE																						
		THICKNESS																						
	ALUM. COATED TYPE 2 W/ BPI (C)	CORR. PROFILE																						
		THICKNESS																						
	POLYMER PRECOATED GALVANIZED (C)	CORR. PROFILE																						
		THICKNESS																						
	POLYMER PRECOATED GALVANIZED W/ BPI (C)	CORR. PROFILE																						
		THICKNESS																						
	FIBER BONDED BITUMINOUS COATED (C)	CORR. PROFILE																						
		THICKNESS																						
	FIBER BONDED BITUMINOUS COATED W/ BPI (C)	CORR. PROFILE																						
		THICKNESS																						
	CORRUGATED ALUM. ALLOY PIPE (C)	CORR. PROFILE																						
		THICKNESS																						
	CORRUGATED ALUM. ALLOY PIPE W/ BPI (C)	CORR. PROFILE																						
		THICKNESS																						
	STR. PLATE ALUMINUM ALLOY PIPE (C)	CORR. PROFILE																						
		THICKNESS																						
	STR. PLATE ALUMINUM ALLOY PIPE W/ CFP (C)	CORR. PROFILE																						
		THICKNESS																						
	STR. PLATE STEEL PIPE (C)	CORR. PROFILE																						
		THICKNESS **																						
	STR. PLATE STEEL PIPE W/ CFP (C)	CORR. PROFILE																						
		THICKNESS **																						

STRUCTURE NUMBER

			–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
PIPE GROUP			–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
SMOOTH PIPE SIZE																				
CORRUGATED PIPE SIZE																				
RCP/RCHEP (S)	CLASS																			
	D 0.01 RATING																			
NON-REINFORCED CONCRETE PIPE, CLASS 3 (S)																				
CORRUGATED PE PIPE, TYPE S (S) *																				
RIBBED PE PIPE (S) *																				
~~SMOOTH WALL PE PIPE (S) +/ MAXIMUM DR~~																				
PROFILE WALL PVC PIPE (S)																				
SMOOTH WALL PVC PIPE (S) *																				
VITRIFIED CLAY PIPE, EXTRA STRENGTH (S)																				
CORRUGATED STEEL PIPE / PIPE - ARCH	FULLY BIT. PAVED & LINED (S)	CORR. PROFILE																		
		THICKNESS																		
	ZINC COATED (C)	CORR. PROFILE																		
		THICKNESS																		
	ZINC COATED W/ BPI (C)	CORR. PROFILE																		
		THICKNESS																		
	ALUM. COATED TYPE 2 (C)	CORR. PROFILE																		
		THICKNESS																		
	ALUM. COATED TYPE 2 W/ BPI (C)	CORR. PROFILE																		
		THICKNESS																		
	POLYMER PRECOATED GALVANIZED (C)	CORR. PROFILE																		
		THICKNESS																		
	POLYMER PRECOATED GALVANIZED W/ BPI (C)	CORR. PROFILE																		
		THICKNESS																		
	FIBER BONDED BITUMINOUS COATED (C)	CORR. PROFILE																		
		THICKNESS																		
	FIBER BONDED BITUMINOUS COATED W/ BPI (C)	CORR. PROFILE																		
		THICKNESS																		
	CORRUGATED ALUM. ALLOY PIPE (C)	CORR. PROFILE																		
		THICKNESS																		
	CORRUGATED ALUM. ALLOY PIPE W/ BPI (C)	CORR. PROFILE																		
		THICKNESS																		
	STR. PLATE ALUMINUM ALLOY PIPE (C)	CORR. PROFILE																		
		THICKNESS																		
	STR. PLATE ALUMINUM ALLOY PIPE W/ CFP (C)	CORR. PROFILE																		
		THICKNESS																		
	STR. PLATE STEEL PIPE (C)	CORR. PROFILE																		
		THICKNESS **																		
	STR. PLATE STEEL PIPE W/ CFP (C)	CORR. PROFILE																		
		THICKNESS **																		

LEGEND

RCP	REINFORCED CONCRETE PIPE
RCHEP	REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE
PE	POLYETHYLENE
DR	DIMENSION RATIO
PVC	POLYVINYL CHORIDE
BIT	BITUMINOUS
CORR	CORRUGATION
BPI	BITUMINOUS PAVED INVERT
ALUM	ALUMINUM
STR	STRUCTURAL
CFP	CONCRETE FIELD PAVING
(S)	SMOOTH PIPE MATERIAL
(C)	CORRUGATED PIPE MATERIAL
OK	ACCEPTABLE FOR USE
(LS)	LOCK SEAM PIPE REQUIRED
*	REFER TO STANDARD DRAWING 715-PHCL-18 OR 19 FOR NOMINAL DIAMETER APPROPRIATE FOR PAY ITEM DIAMETER
**	TABULATED THICKNESS REFERS TO TOP & SIDE PLATES.. BOTTOM PLATES SHALL BE OF NEXT GREATER AVAILABLE THICKNESS.

JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: John M. Broadus 12-18-97
DESIGN ENGINEER DATE

DESIGNED: DRAWN: MKM 12/97
CHECKED: CHECKED: JMB 12/97
REVISED:

INDIANA DEPARTMENT OF TRANSPORTATION

PIPE MATERIAL SHEET

HORIZONTAL SCALE	BRIDGE FILE NO.
NONE	24-52-6597B & 24-52-8165
VERTICAL SCALE	DESIGNATION NO.
NONE	8902474&8902475
SURVEY BOOK NO.	SHEETS
	35 of 53
CONTRACT NO.	PROJECT NO.
R-23637	NH-144-06(012)

ENGLISH (PIPSPEC3) VER.3

STRUCTURE QUANTITIES

BRIDGE FILE	ITEM	CONCRETE CLASS C SUPERSTR CU. YDS.	CONCRETE CLASS A SUBSTR CU. YDS.	CONCRETE CLASS B IN FTG CU. YDS.	FIELD DRILLED HOLES IN CONCRETE EACH	CONCRETE RAILING CLASS C CU. YDS.	SURFACE SEAL * SQ. FT.	REINF. STEEL TOTAL LBS.	STRUCT. STEEL *** LBS.	EPOXY COATED STEEL LBS.	ANCHOR PLATES MK AP-3 EACH	2" ø STEEL CONDUIT LIN. FT.	BRONZE BENCH MARK TABLET EACH	PILES 14"ø, 0.312" S.E.C. NO.	PILES 14"ø, 0.312" S.E.C. LIN. FT.	PILES 14"ø, 0.250" S.E.C. NO.	PILES 14"ø, 0.250" S.E.C. LIN. FT.	CAST IRON DRAIN PIPE LBS.	CAST IRON GRATES, BASINS & FITTINGS LBS.	REMOVE GUARDRAIL LIN.FT.	FOUNDATION EXCAVATION UNCLASSIFIED CU. YDS.	EXPANSION JOINT, CLASS SS LIN. FT.	REPOINTING MASONRY IN STRUCTURES SQ. FT.	BEARING ASSEMBLY, TYPE I EACH	BARRIER DELINEATOR EACH	"B" BORROW FOR STRUCTURE BACKFILL CU. YDS.	INLET REMOVE EACH	SLOPEWALL REMOVE SQ. YDS.	SLOPEWALL CONCRETE (4") SQ. YDS.	REMOVE CONCRETE BARRIER WALL LIN. FT.
I	**W.B.STRUCTURE 24-52-6597B**																														
	BENT NO.1	3.8	7.3		64		514			1831	1		1	1	51						7										
	BENT NO.2		20.5	7.5	64			3645						4	108						44		20				29				
	BENT NO.3	3.8	7.2		64		514			1829	1			1	27						7										
	SUPERSTRUCTURE	389.9				49.3	17815		84895	87764		251						201	514			112		2	26						
	CONCRETE MEDIAN COLLISIONWALL		33.5				420			1699															16						
	MISCELLANEOUS																			250							1	21	81	880	
	SUBTOTAL	397.5	68.5	7.5	192	49.3	19263	3645	84895	93123	2	251	1	6	186			201	514	250	58	112	20	2	42	29	1	21	81	880	
	E.B. STRUCTURE 24-52-8165																														
	BENT NO.1									6751				8	328																
	BENT NO.2		70.8	52.5				21924						30	330						143						76				
	BENT NO.3									6667				8	408																
	SUPERSTRUCTURE	503.3				50.6	18488		442035	101653		260						169	644						26						
	MISCELLANEOUS																												620		
	SUBTOTAL	503.3	70.8	52.5		50.6	18488	21924	442035	115071		260		46	1066			169	644		143				26	76			620		
	TOTALS	900.8	139.3	60.0	192	99.9	37751	25569	526930	208194	2	511	1	52	1252			370	1158	250	201	112	20	2	68	105	1	21	701	880	

* Estimated Quantity

APPROACH STRUCTURES

BRIDGE FILE	STRUCT. NO.	LOCATION	DESCRIPTION SIZE	DESCRIPTION KIND	LENGTH LIN.FT.	CONC.CL.A IN STRS. CU.YDS.	REINF. STEEL LBS.	PIPE END SECTION EACH	"B" BORROW FOR STR. BACKFILL CU. YDS.	REMARKS
I	**W.B.STRUCTURE 24-52-6597B**									
	15	351+23 Lt.		Std. Inlet Type "D-6"						
			15"	Pipe, Group "L"	78			1	3.5	
	E.B. STRUCTURE 24-52-8165									
	16	351+22 Rt.		Std. Inlet Type "D-6"						
			15"	Pipe, Group "L"	96			1	4	
	TOTALS								7.5	Totals for Reinf. Steel carried to "Structure Quantities"

APPROACH TABLE

LOCATION LT/RT	LOCATION STATION	DESCRIPTION	WIDTH FT.	RADII FT.	GRADE %	LENGTH FT.	DISTANCE BEYOND R/W IN FT.	EXCAVATION(CYS) CUT	EXCAVATION(CYS) FILL	BIT. SURFACE #/SQ.YD.	BIT. SURFACE TONS	BIT. BINDER #/SQ.YD.	BIT. BINDER TONS	BIT. BASE #/SQ.YD.	BIT. BASE TONS	COMP. AGG. BASE DEPTH(IN.)	COMP. AGG. BASE TONS

NOTES:
Weight of spirals includes weight of 1 1/2 extra turns, top and bottom.
Spacers and 1 1/2 turns at laps are included in the cost of the spiral.
*** The weight of the structural steel is approximate only, and it shall be the Contractor's responsibility to determine the weight on which he bases his bid.
For Test Bar Samples, see Bridge Standard C1.

REVETMENT RIPRAP SIDE DITCH AND SODDING SUMMARY

LEFT or RIGHT	STATION to STATION	REVETMENT RIPRAP CYS	REVETMENT RIPRAP TONS	GEOTEXTILES SYS	SODDING (SQ. YD.) FOR PSD	FOR DITCHES	SHOULDERS	OTHER	TOTAL SOD

REVISIONS	
DATE	ITEM
3-16-98	STRUCTURE DESIGNATION ON STRUCTURE TABLE

BRIDGE SUMMARY
INDIANA DEPARTMENT OF TRANSPORTATION

SCALE: NONE

DATE: DECEMBER 18 1997

John M. Broadus

JOHN M. BROADUS REGISTERED No. 9600427 STATE OF INDIANA PROFESSIONAL ENGINEER

SHEET: 36 OF 53
PROJECT: NH-144-6(012)
BRIDGE CONTRACT NO. R-23637
BRIDGE FILE: 24-52-6597B & 24-52-8165

24WEBSUM/48

PLOT DATE & TIME: MAR 17, 1998 - 12:43:32
SHEET REVISED: JULY 22, 1992
DESIGNED: CHECKED:
DRAWN: MKM 6/93 CHECKED: MP 6/93
REVISED: CHECKED: