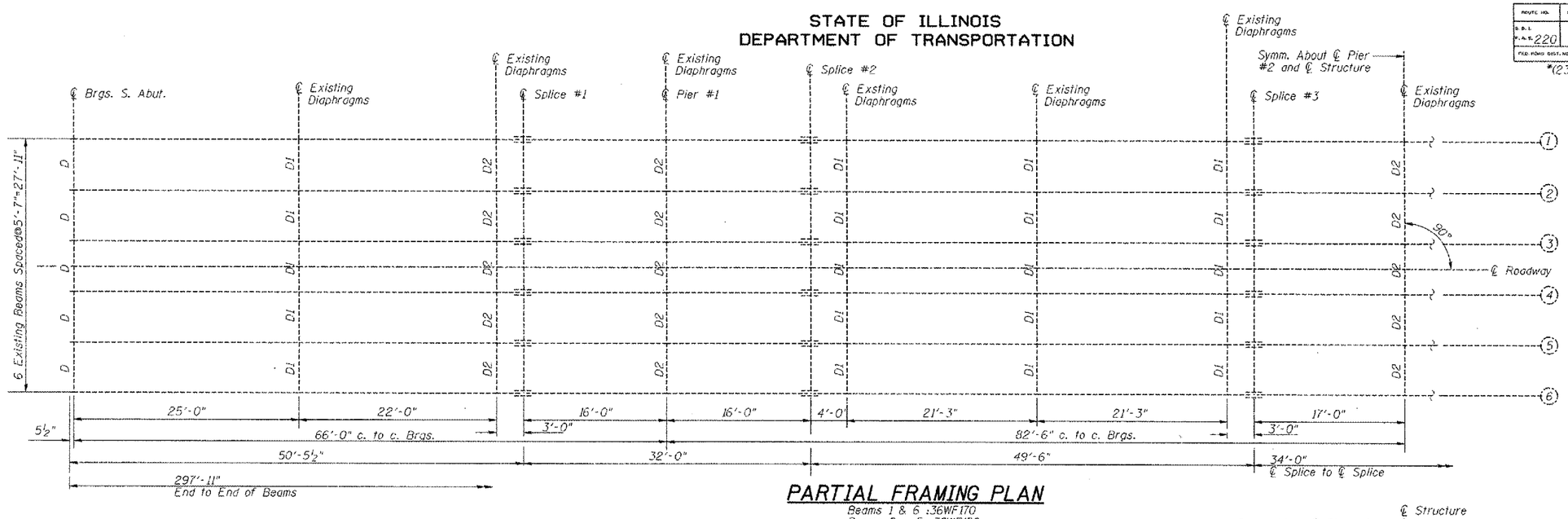
CONTRACT NO. 68085

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.S. 220	*	Mercer	50	26
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

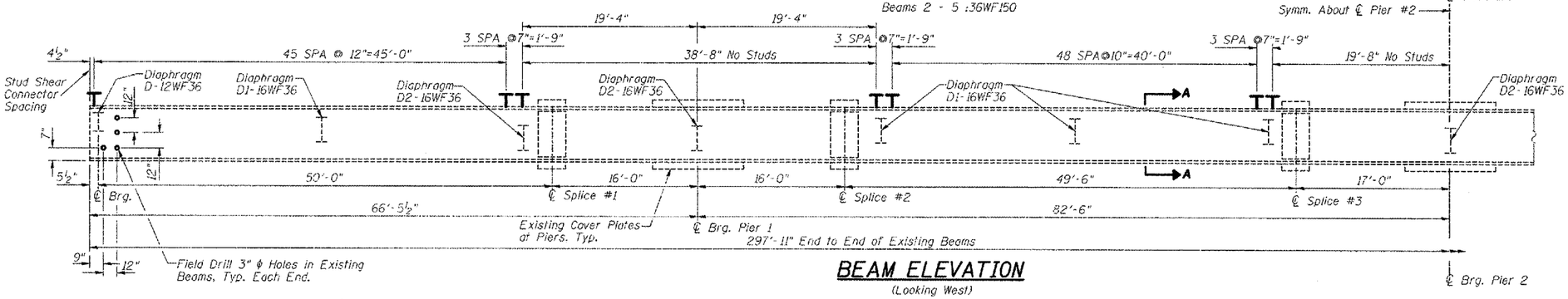
*(23-BR) 1

SHEET NO. 14
SHEETS 23



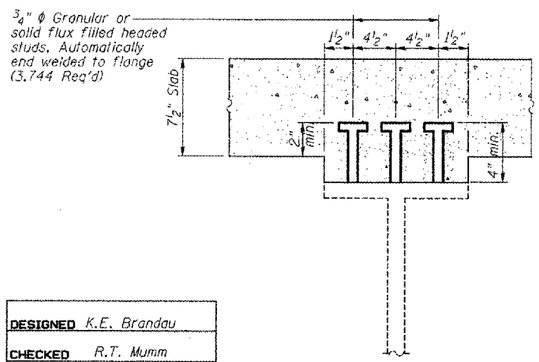
PARTIAL FRAMING PLAN

Beams 1 & 6 :36WF170
Beams 2 - 5 :36WF150



BEAM ELEVATION

(Looking West)



SECTION A-A

DESIGNED	K.E. Brandau
CHECKED	R.T. Mumm
DRAWN	L.A. Roif
CHECKED	K.E. Brandau

I-2-B 4-30-99

INTERIOR GIRDER MOMENT TABLE

		0.4 Sp. 1	Pier 18.3	0.5 Sp. 28.3	Pier 2	0.6 Sp. 4
Is	(in⁴)	9012	12314	9012	12314	9012
Ic (n)	(in⁴)	21415		21415		21415
Ic (3n)	(in⁴)	15564		15564		15564
Ss	(in³)	502.9	668.5	502.9	668.5	502.9
Sc (n)	(in³)	705.9		705.9		705.9
Sc (3n)	(in³)	634.0		634.0		634.0
Z	(in³)		762		762	
wℓ	(K/ft.)	0.720	1.120	0.720	1.120	0.720
Mwℓ	('K)	211.9	604.4	193.3	628.1	211.9
sℓ	(K/ft.)	0.400		0.400		0.400
Msℓ	('K)	133.5		143.4		133.5
Mℓ	('K)	394.3	278.0	431.2	304.7	394.3
M (Imp)	('K)	103.3	69.8	103.9	73.4	103.3
⅗(Mℓ+I)	('K)	829.3	579.6	891.8	630.2	829.3
Ma	('K)	1527.1	1539.2	1597.0	1635.8	1527.1
Mu	('K)	2761		2761		2761
fsℓ non-comp	(k.s.i.)	5.1	10.8	4.6	11.3	5.1
fsℓ (comp)	(k.s.i.)	2.5		2.7		2.5
fs⅗(ℓ+I)	(k.s.i.)	14.1	10.4	15.2	11.3	14.1
fs (Overload)	(k.s.i.)	21.7	21.2	22.5	22.6	21.7
fs (Total)	(k.s.i.)		27.6		29.4	
VR	(K)	42.7		45.1		42.7

INTERIOR GIRDER REACTION TABLE

		S. Abut.	Pier 18.3	Pier 2	N. Abut.
Rℓ	(K)	27.8	92.0	93.0	27.8
Rℓ	(K)	30.7	41.4	43.0	30.7
Imp.	(K)	8.0	10.4	10.4	8.0
R (Total)	(K)	66.5	143.8	146.4	66.5

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs (Total & Overload).
VR is the maximum live Load + Impact shear range in span.
Z is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite areas.
Ma (Applied Moment)=1.3[Mℓ + Msℓ + ⅗(Mℓ + I)].
Mu is the Full Plastic Moment Capacity for Compact, Braced section.
fs (Overload) is the sum of the stresses due to Mℓ + Msℓ +⅗(Mℓ + I).
fs (Total) is the sum of the stresses due to 1.3[Mℓ + Msℓ +⅗(Mℓ + I)].

STRUCTURAL STEEL DETAILS
F.A.S. ROUTE 220 (IL ROUTE 94)
OVER EDWARDS RIVER
SECTION (23-BR) I
MERCER COUNTY
STRUCTURE NO. 066-0008
STATION 104+73.75

FRAUENHOFFER & ASSOCIATES, P.C.