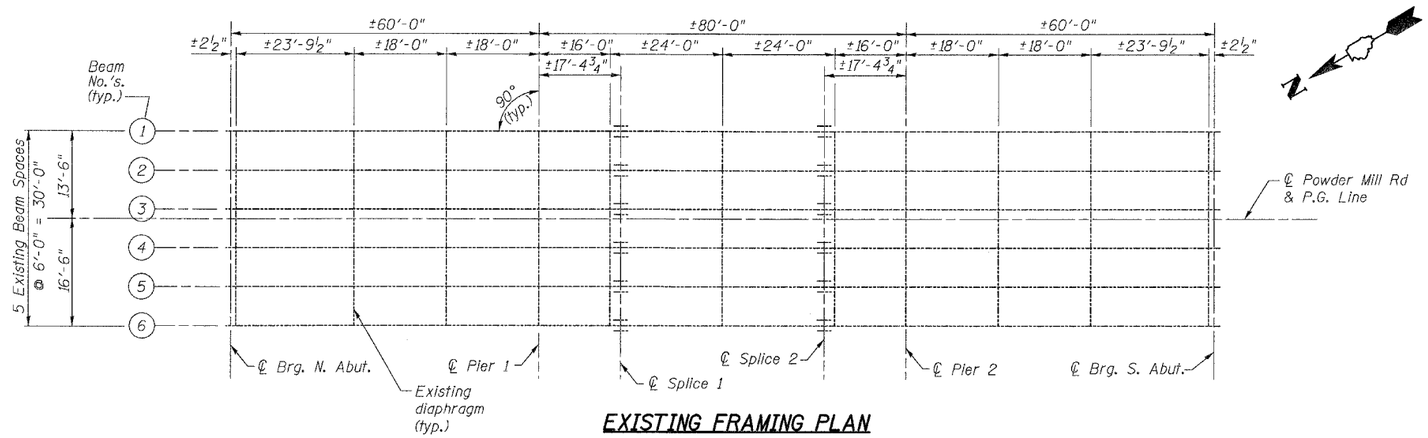
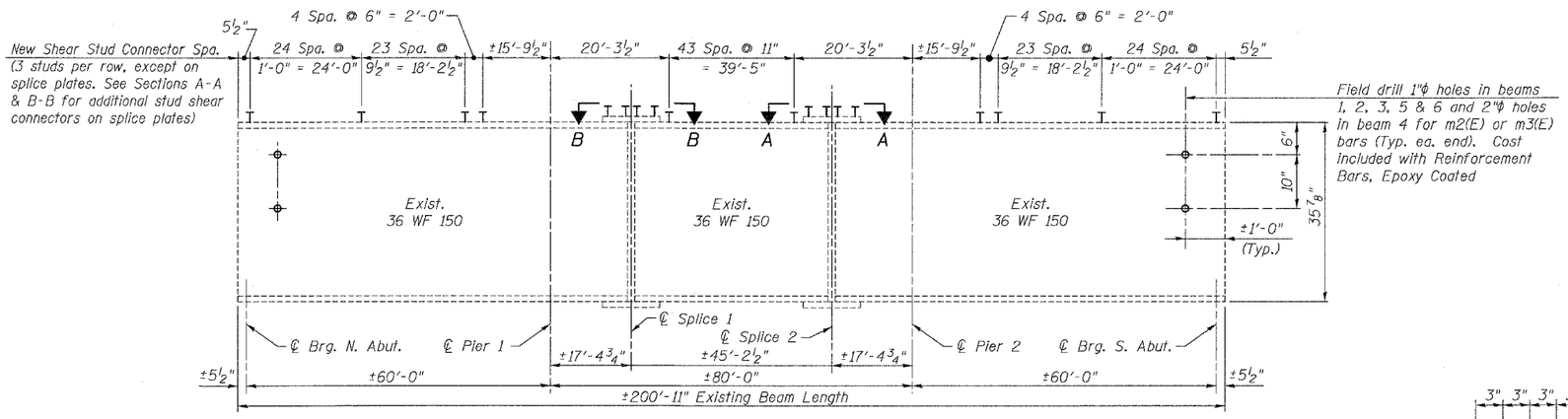
FAU ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
9003	03-00044-00-BR	MADISON	24	18
STA.	TO STA.			
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID URBAN-		

SHEET NO. 11
17 SHEETS

CONTRACT NO. 97256



EXISTING FRAMING PLAN



EXISTING BEAM ELEVATION

EXISTING INTERIOR BEAM MOMENT TABLE

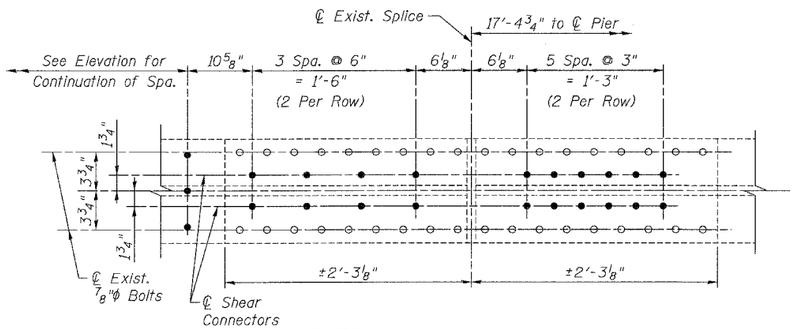
	0.4 SPAN 1 & 0.6 SPAN 3	PIER 1 & 2	0.5 SPAN 2
Is (in.4)	9040	12674	9040
Ic (in.4) (n=9)	21283	———	21283
Ic (in.4) (n=27)	15606	———	15606
Ss (in.3)	504	688	504
Sc (in.3) (n=9)	700	———	700
Sc (in.3) (n=27)	633	———	633
Z (in.3)	———	781	———
DL (k./ft.)	0.761	1.186	0.761
M(DL) (ft.k./beam)	166.7	605.4	204.0
s DL (k./ft.)	0.425	———	0.425
M(s DL) (ft.k./beam)	103.6	———	140.0
M(LL) (ft.k./beam)	368.9	269.7	435.2
M(Imp.) (ft.k./beam)	99.6	72.8	111.0
5/3 M(LL+Imp.) (ft.k./beam)	780.9	570.8	910.2
M(a) (ft.k.)	1366.6	1529.0	1630.6
M(u) (ft.k.)	2581.8	2147.8	2581.8
fs (DL non-comp) (k.s.i.)	3.97	10.56	4.86
fs (DL comp.) (k.s.i.)	1.96	———	2.65
fs 5/3 [M LL+M(Imp.)] (k.s.i.)	13.39	9.96	15.60
fs (Overload) (k.s.i.)	19.32	20.52	23.12
fs (Total) (k.s.i.)	———	———	———
VR (k)	45.4	———	43.3

INTERIOR BEAM REACTION TABLE

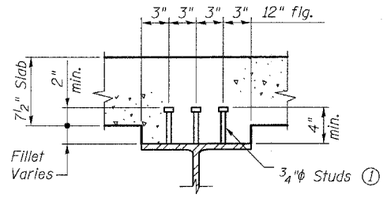
	N. & S. ABUT.(3)	PIER 1 & 2
R DL (K)	52.0	93.4
R LL (K)	36.1	42.3
R IMP. (K)	9.7	8.0
R TOTAL (K)	97.8	143.7

MOMENT TABLE NOTES:

1 I_S and S_S are the moment of inertia and section modulus of the steel section used in computing f_S (Total and Overload).
2 $I_{C(n)}$ and $S_{C(n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to live load.
3 $I_{C(3n)}$ and $S_{C(3n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead load.
4 VR is the maximum M_L + Impact Shear Range within the composite portion of the span.
5 Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.
6 Mu is the Plastic Moment capacity.
7 f_S (Total) is the sum of the stresses due to $1.3[M_D + M_{SD} + 5/3(M_L + M_{IMP})]$.
8 f_S (Overload) is the sum of the stresses due to $[M_D + M_{SD} + 5/3(M_L + M_{IMP})]$
9 M_D - moment due to dead loads on non-composite section.
10 M_{SD} - moment due to dead loads on composite section.
11 M_L - moment due to live load on non-composite or composite section.
12 M_{IMP} - moment due to live load impact on non-composite or composite section.
13 Ma (Applied Moment) = $1.3[M_D + M_{SD} + 5/3(M_L + M_{IMP})]$.



SECTION A-A (Shown)
SECTION B-B (Opp. Hd.)



TYPICAL SHEAR STUD DETAIL

(Typical, except use 2 studs per row at existing splice plates. See Sections A-A and B-B.)

TOP OF BEAM ELEVATIONS

Location	Exist. Beam 1	Exist. Beam 2	Exist. Beam 3	Exist. Beam 4	Exist. Beam 5	Exist. Beam 6
℄ Brg. N. Abut.	444.42	444.49	444.57	444.55	444.46	444.45
℄ Pier 1	443.14	443.24	443.26	443.25	443.18	443.17
℄ Splice 1	442.77	442.88	442.89	442.87	442.82	442.80
℄ Splice 2	441.91	442.05	442.11	442.07	441.98	441.91
℄ Pier 2	441.57	441.70	441.76	441.72	441.64	441.57
℄ Brg. S. Abut.	440.39	440.50	440.54	440.51	440.46	440.43

NOTES:

(1) All studs to be ¾"ϕ Granular or solid flux filled headed studs conforming to Article 1006.32 of the Standard Specifications automatically end welded to flange. (No. required = 2,904)
(2) Field drill 1" ϕ holes in existing end diaphragms at each abutment to receive s(E) bars. See sheet 8 of 17 for Section A-A at abutments and for number and spacing of bars. Cost to drill 1"ϕ holes is included in the cost for Reinforcement Bars, Epoxy Coated.
(3) Dead load reaction at abutments includes superstructure, diaphragm and approach pavement dead load (3.0 k/foot).

FRAMING PLAN
POWDER MILL ROAD OVER EAST FORK OF WOOD RIVER
SECTION 03-00044-00-BR
VILLAGE OF EAST ALTON
STA. 13+10
STRUCTURE NO. 060-6400