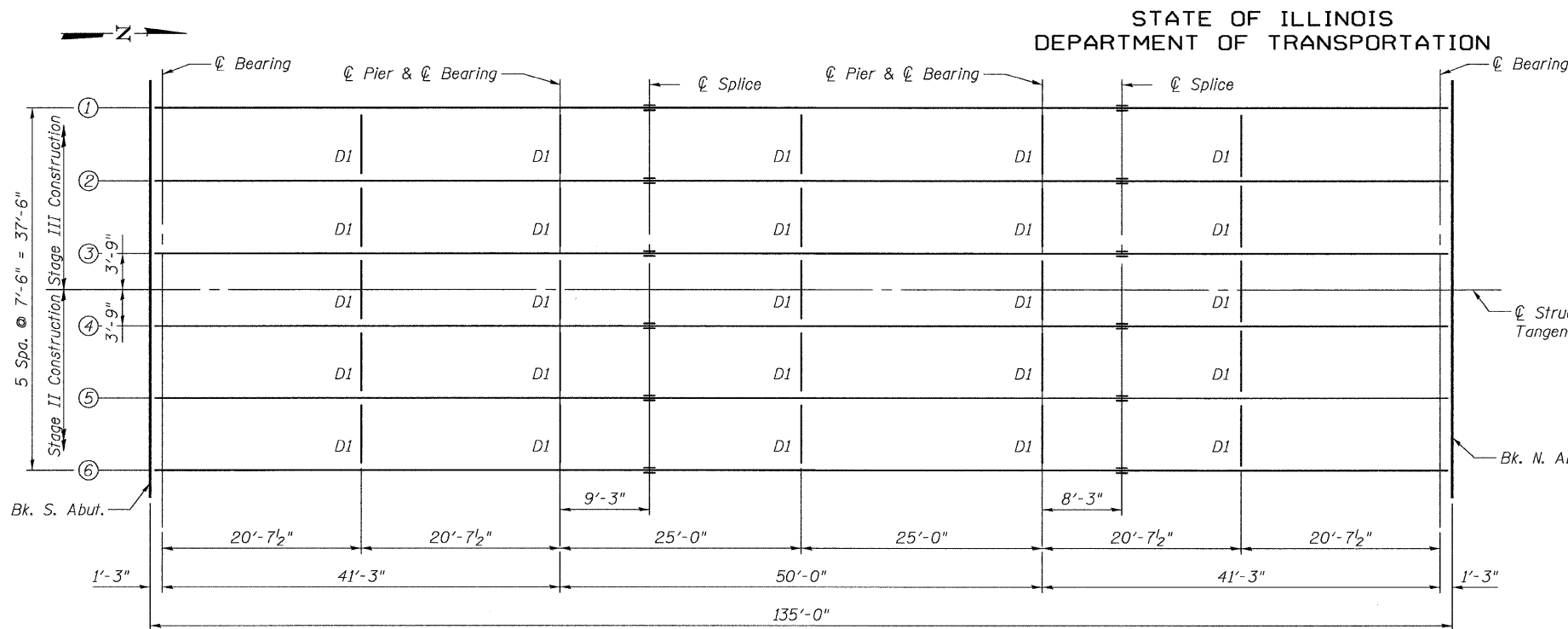


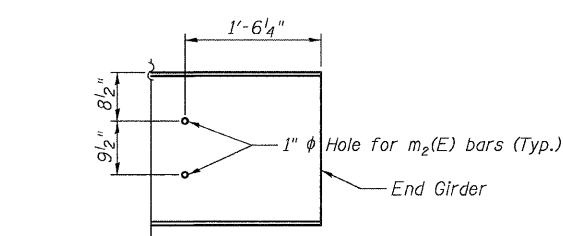
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. FAP 328	SECTION (UOBR- 2)B-1	COUNTY WAYNE	TOTAL SHEETS 11	SHEET NO. 14
FED. ROAD DIST. NO. 7			ILLINOIS FED. AID PROJECT	

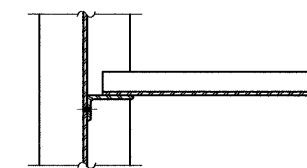
Contract # 74040



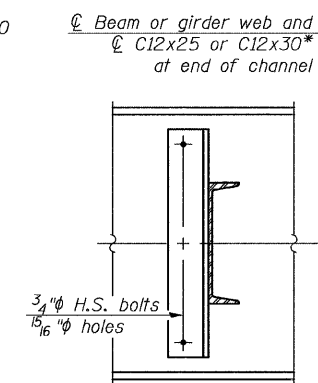
FRAMING PLAN



HOLE LOCATIONS FOR m₂(E) BARS



SECTION B-B

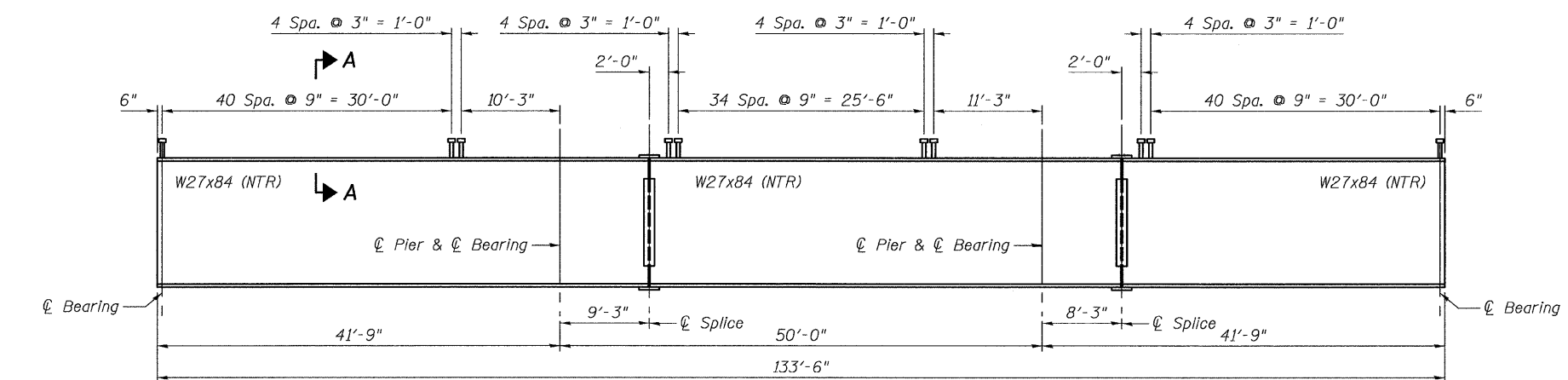


INTERIOR DIAPHRAGM (D1)
(25 Required)

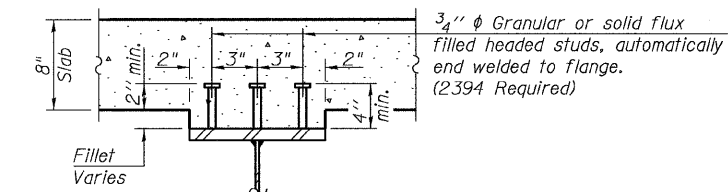
Note:
Two hardened washers required for each set of oversized holes.

* Alternate channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.

All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.



ELEVATION



SECTION A-A

	Abut.	Pier
R _l (K)	22.4	70.0
R _t (K)	41.5	47.2
Imp. (K)	12.5	14.2
R (Total) (K)	76.3	131.4

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total & Overload).

I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s (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.

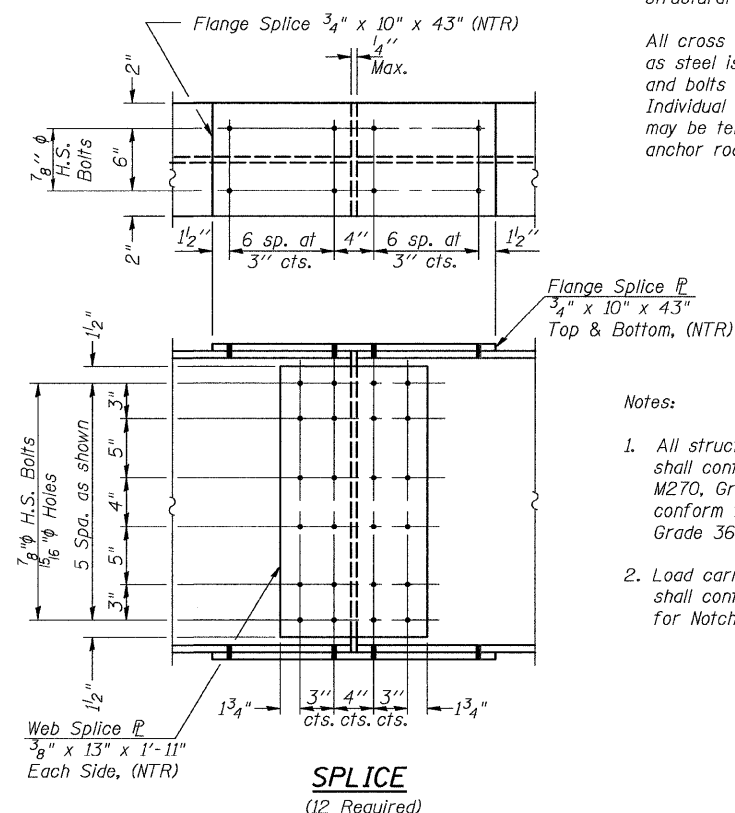
M_a (Applied Moment) = 1.3[M_l + M_s(M_t + I)].

M_u is the Full Plastic Moment Capacity for Compact, Braced section.

f_s (Overload) is the sum of the stresses due to M_l + M_s(M_t + I).

f_s (Total) (Non-compact section) is the sum of the stresses due to 1.3[M_l + M_s(M_t + I)].

	.4 Sp. 1 & .6 Sp. 3	Pier	.5 Sp. 2
I _s (in ⁴)	2850	2850	2850
I _c (in ⁴)	8979	-	8979
I _c (3n) (in ⁴)	6863	-	6863
S _s (in ³)	213	213	213
S _c (in ³)	338	-	338
S _c (3n) (in ³)	307	-	307
Z (in ³)	-	244	-
φ (K/ft.)	0.844	1.369	0.844
M _l (K)	104.0	264	89.2
s _l (K/ft.)	0.525	-	0.525
M _s (K)	74.5	-	82.3
M _t (K)	275	144	308
M (Imp) (K)	82.5	42.2	88.1
φ ₃ (M _t +I) (K)	596	310	660
M _a (K)	1007	747	1081
M _u (K)	1406	-	1406
f _s non-comp (k.s.i.)	7.6	19.3	6.5
f _s comp (k.s.i.)	3.8	-	4.2
f _s φ ₃ (k+I) (k.s.i.)	21.2	17.5	23.4
f _s (Overload) (k.s.i.)	32.6	36.8	34.2
f _s (Total) (k.s.i.)	-	47.9	-
VR (K)	51.7	-	42.5



SPlice
(12 Required)

- Notes:
- All structural steel for girders and splice plates shall conform to the requirements of AASHTO M270, Grade 50. All other structural steel shall conform to the requirements of AASHTO M270, Grade 36.
 - Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

BENTON & ASSOCIATES, INC.

DESIGNED	MBH
CHECKED	NRF
DRAWN	MBH
CHECKED	NRF

FRAMING & BEAM DETAILS
US 45 / DEER CREEK
F.A.P. RT. 328
WAYNE COUNTY
SN. 096-0068