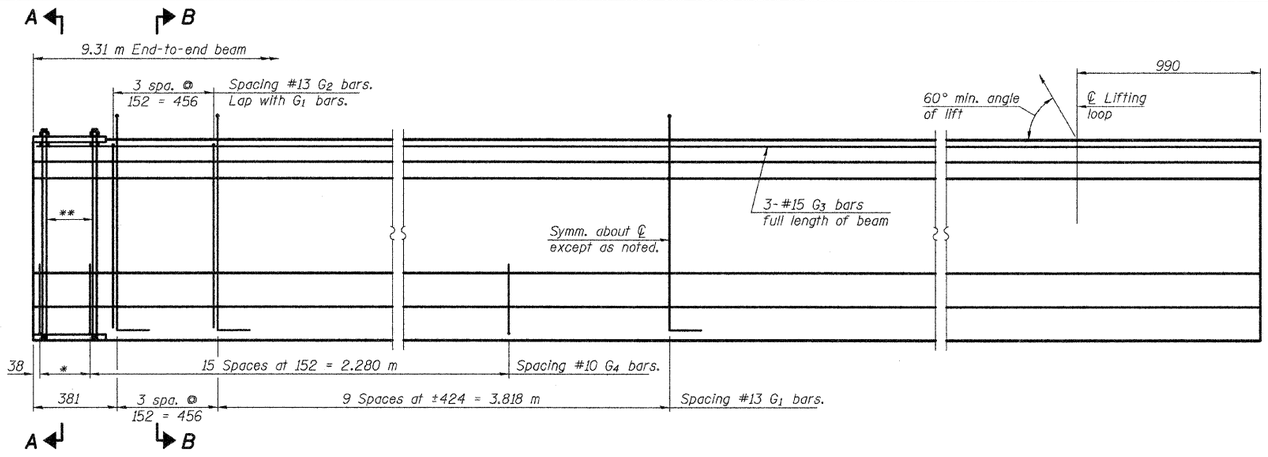
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. F. A. P. 310	*	MADISON	239	146
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

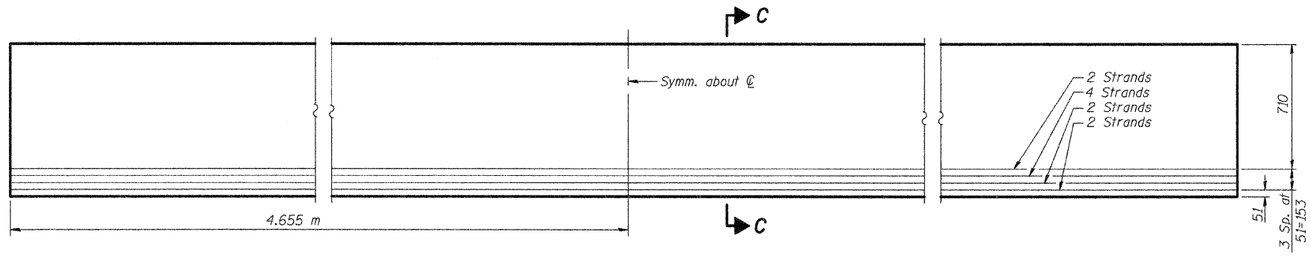
SHEET NO. 24
48 SHEETS

* 60-15HB-1 CONTRACT NO. 76635



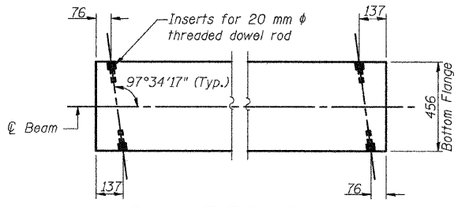
ELEVATION OF BEAM
(Showing reinforcement & dimensions)

*3 spaces at 76 = 228
**4- 20 mm ϕ threaded dowel rods at 76 cts., Each Face.



ELEVATION OF BEAM
(Showing Prestressing Steel)

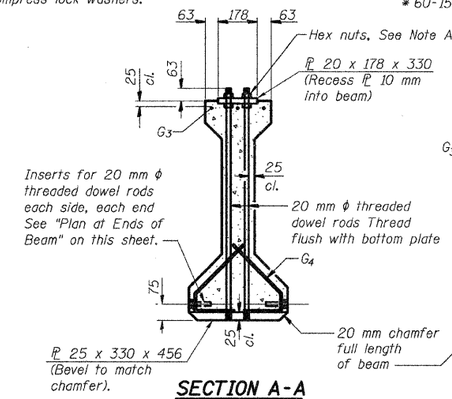
INTERIOR BEAM REACTION TABLE		
		Abut. & Appr. Bent
R℄	(kN)	73
R$_{s}$℄	(kN)	25
R$_{L}$	(kN)	149
Imp.	(kN)	45
R (Total)	(kN)	292



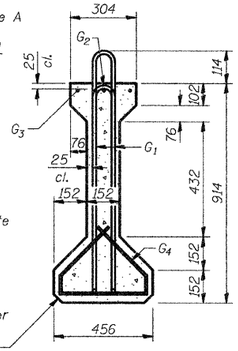
PLAN AT ENDS OF BEAM
(Showing Inserts)

DESIGNED	ADL
CHECKED	WLW
DRAWN	ADL/DGM
CHECKED	WLW

Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



SECTION A-A



SECTION B-B

INTERIOR BEAM MOMENT TABLE		
		0.5 Span
I	(10^6 mm^4)	20,249
I′	(10^6 mm^4)	81,557
S$_b$	(10^3 mm^3)	51,867
S$_b$′	(10^3 mm^3)	107,490
S$_t$	(10^3 mm^3)	38,643
S$_t$′	(10^3 mm^3)	525,268
w℄	(kN/m)	16.16
M℄	(kN·m)	166
s℄	(kN/m)	5.47
Ms℄	(kN·m)	56
M$_L$	(kN·m)	256
M (Imp)	(kN·m)	77

I and I′ are the moment of inertia and composite moment of interia of the beam section.

S$_b$ and S$_b$′ are the non-composite and composite section modulus for the bottom fiber of the prestressed beam.

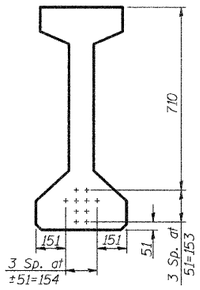
S$_t$ and S$_t$′ are the non-composite and composite section modulus for the top fiber of the prestressed beam.

M℄ is the moment due to dead loads on the non-composite prestressed beam.

Ms℄ is the moment due to dead loads on the composite section.

M$_L$ is the moment due to live load on the composite section.

M (Imp) is the moment due to live load impact on the composite section.

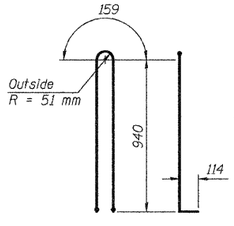


SECTION C-C

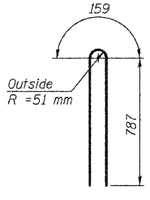
* BAR LIST

Bar	No.	Size	Length (m)	Shape
G1	25	#13	2.267	
G2	8	#13	1.733	
G3	3	#15	9.230	
G4	38	#10	1.244	

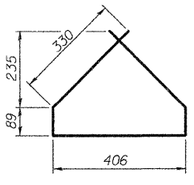
* For one beam only. (12 required)



BAR G1



BAR G2



BAR G4

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 914 mm	m	111.7

36" P.P.C. I-BEAM & DETAILS (EAST APPROACHES)
FAP RTE. 310 (IL RTE. 255) OVER CH ROUTE 4 (HUMBERT ROAD)
SECTION 60-15HB-1
MADISON COUNTY
STATION 38+829.909
SN 060-0308 (NB) & 060-0309 (SB)

Klingner & Assoc., P.C.