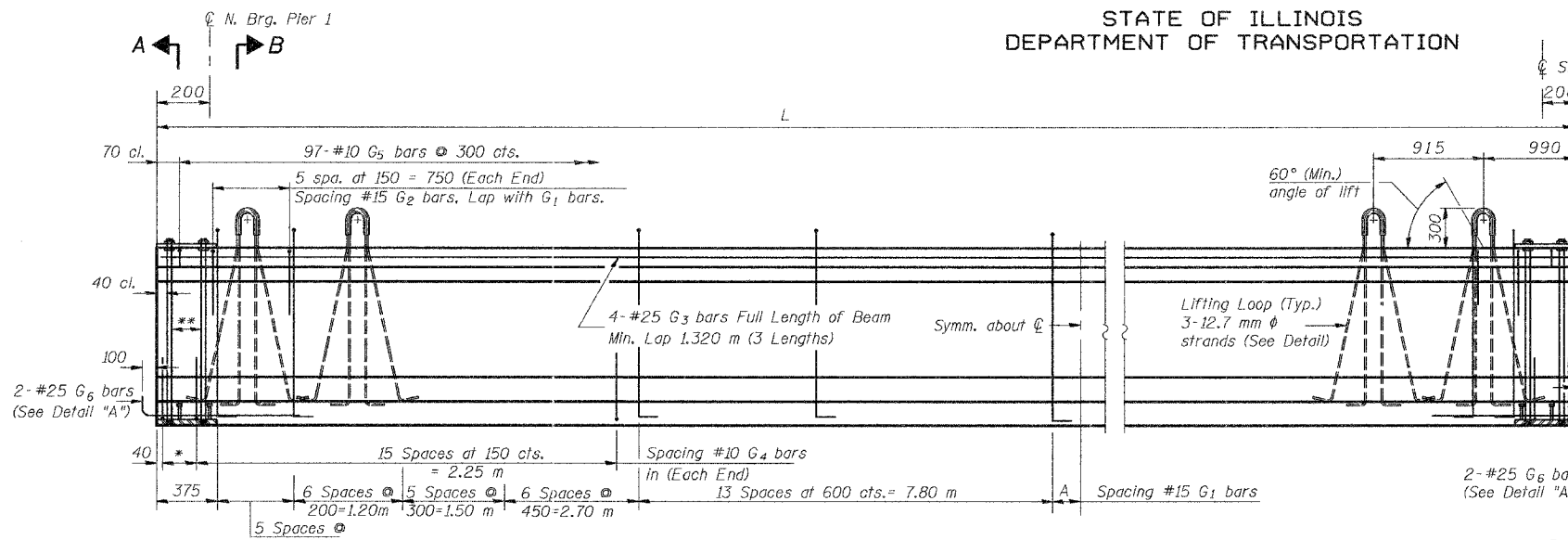


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

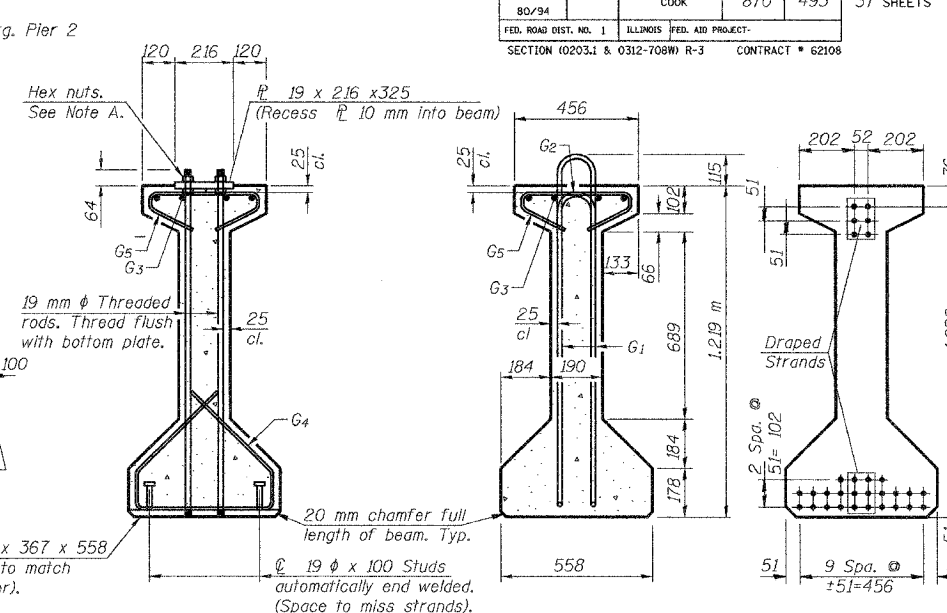
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 20
F.A.I. 80/94		COOK	870	493	37 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS FED. AID PROJECT-		CONTRACT # 62108		
SECTION (0203.1 & 0312-708W) R-3					



ELEVATION OF BEAM (SPAN 2)
(Showing Reinforcement & Dimensions)

* 3 spaces @ 75 = 225
** 4-19 mm ϕ threaded dowel rods @ 75 cts. Each Face

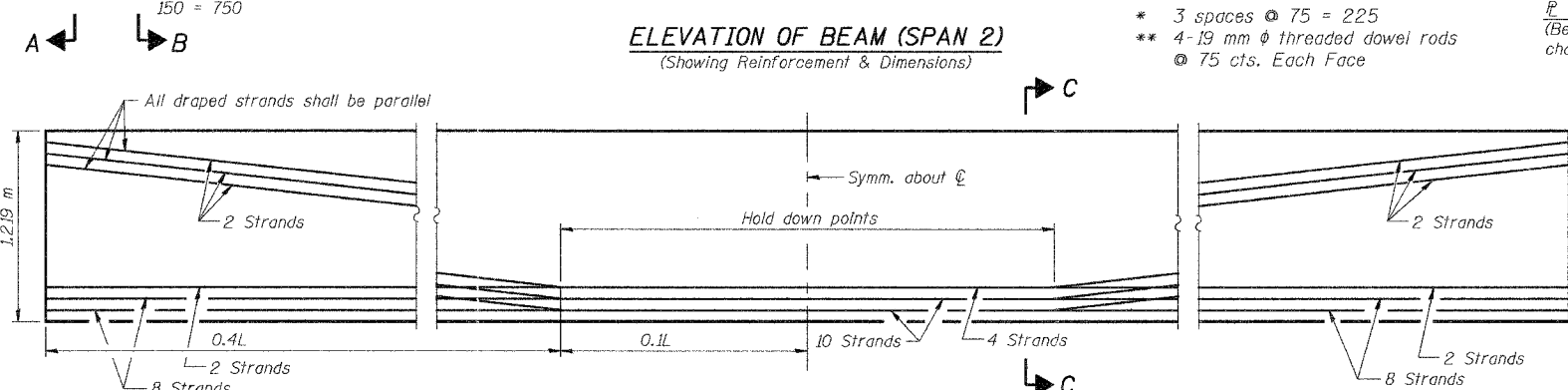
ϕ 25 x 367 x 558 (Bevel to match chamfer).



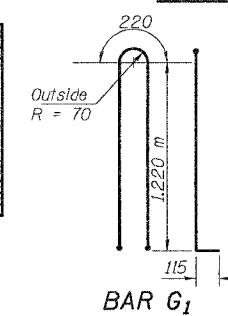
SECTION A-A

SECTION B-B

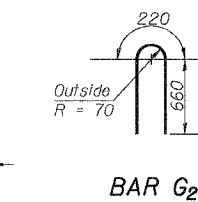
SECTION C-C



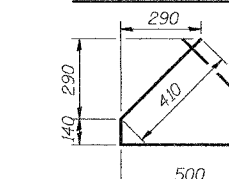
ELEVATION OF BEAM (SPAN 2)
(Showing Prestressing Steel)



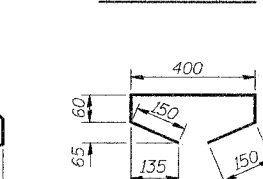
BAR G1



BAR G2



BAR G4



BAR G5

*** BAR LIST**

Bar No.	Size	Length (m)	Shape
G1	#15	2.89	U
G2	#15	1.54	n
G3	#25	10.68	—
G4	#10	1.60	—
G5	#10	0.82	—
G6	#25	1.07	—

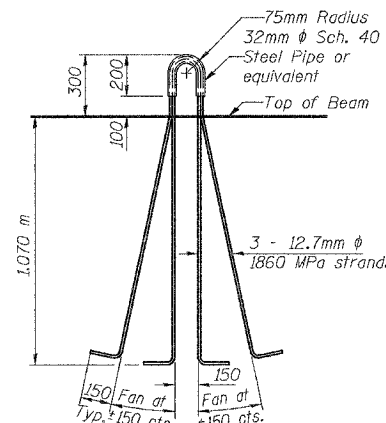
* For one beam only.

BEAM DIMENSIONS

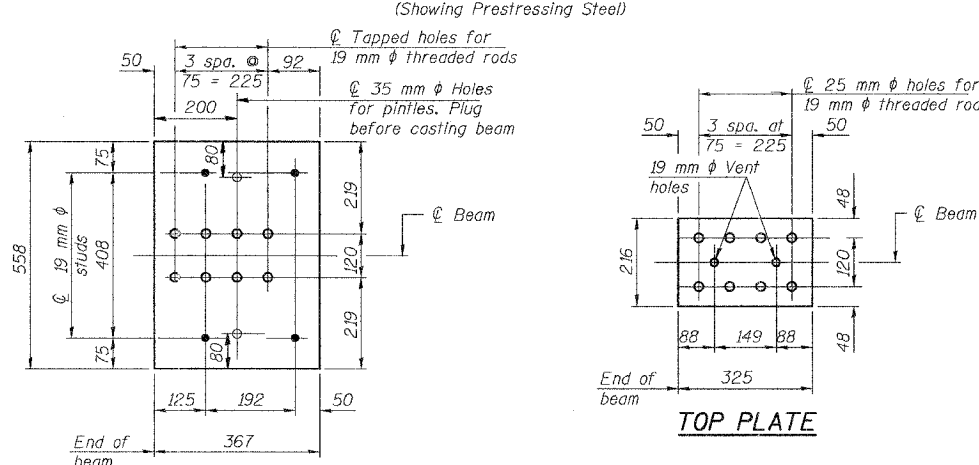
Beam	L (m)	0.4L (m)	0.1L (m)	A
9	29.085	11.634	2.909	217
10	29.049	11.620	2.905	200
11	29.012	11.605	2.901	181
12	28.975	11.590	2.898	163
13	28.939	11.576	2.894	145
14	28.903	11.561	2.890	127
15	28.867	11.547	2.887	108
16	28.830	11.532	2.883	90

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 1219 mm	m	231.7

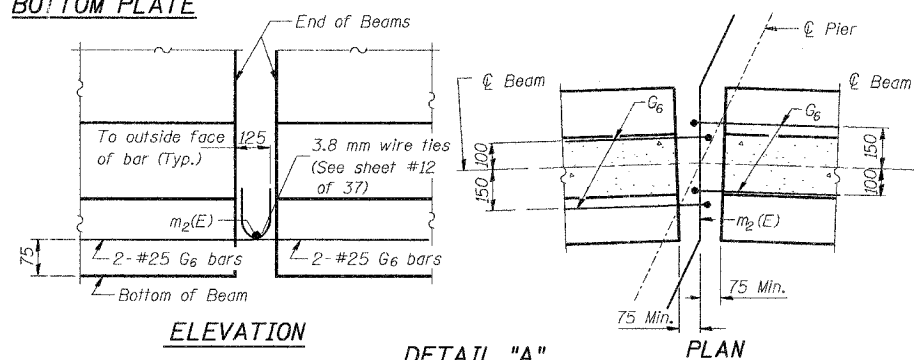


LIFTING LOOP DETAIL



TOP PLATE

BOTTOM PLATE



ELEVATION

DETAIL "A"

PLAN

Notes:

All inserts and threaded dowel rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete I-Beams shall be included in the contract unit price per meter of "Furnishing and Erecting Precast Prestressed Concrete I-Beams, 1219 mm."
Inserts for 20 mm threaded dowel rods are to be two strut, coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams.
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand (Fu=1860 MPa).
The nominal diameter shall be 12.7 mm and the nominal cross-sectional area shall be 98.71 sq. mm.
Non-prestressing steel shall conform to AASHTO designation M-31M or M-322M Grade 400.
Lifting loops shall be 3-12.7 mm ϕ strands (Fu=1860 MPa), as shown. Required release strength, f'ci, shall be 35 MPa.
A minimum 64mm ϕ lifting pin shall be used to engage the lifting loops during handling.
Cut G6 bars when necessary to maintain 40 mm clearance. The bottom plates and studs shall be galvanized according to AASHTO M111 and ASTM A385.
Threaded rods shall be ASTM F 1554 Grade 370.
The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A 780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc.
A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to all portions of the beams, except the top surface of the top flange and the bottom surface of the bottom flange, starting at each beam end and extending out a distance of 1.219 m. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.
Reinforcement bars designated (E) shall be epoxy coated.
All dimensions are in millimeters (mm) except as noted.
See sheet No. 21 of 37 for Moment and Reaction Table.

DESIGNED	M.R./ H.T.
CHECKED	H.T.
DRAWN	J.B./ J.S.
CHECKED	H.T./ M.R.

ILLINOIS DEPARTMENT OF TRANSPORTATION
I-94/IL 394 SOUTH BOUND
BEAM DETAILS 2 OF 3
SB IL. ROUTE 394 OVER CANADIAN NATIONAL RR
F.A.P. 332 SECTION (0203.1 & 0312-708W) R-3
COOK COUNTY
STA. 39+752.246 S.N. 016-2798 (INSIDE LANES)
DATE: July 18, 2005
SCALE: NONE
Soodan
Soodan & Associates, Inc.
100 North LaSalle Street, Suite 1800
Chicago, Illinois 60602