ACKNOWLEDGEMENT

The author wishes to thank all the associated departments within Ontario Hydro who provided the design and technical advice during the construction phase.

REFERENCES

1. The hydraulic lift climbing system provided by SCAN-AM Hydraulic Inc., 2950 Botham, Montreal, Quebec, H4S 1J1

2. The epoxy bonder provided by Cappar Limited, 39 Selby Road, Brampton, Ontario, L6W 1K5.

TABLE 1
International Control Dam – Service Deck – Span 4

Placing Date: 84.07.17 Class of Concrete: 35.0 MPa (Prescription)

American Side

Epoxy Spraying Start	Epoxy Spraying Finish	Forming Start	Forming Finish	Placing From	Placing To	Quantity cu.m.	Time	Slump mm	Temp °C	Remarks
08:15	09:00	09:00	10:00	10:15/1/	10:42	6 cum.	09:32	130	25	Test Ready-mix Yard
							09:52	100	27	Initial Conc. Char at Site
							10:10	200	28	3.5 gal Superplastizer
							10:30			3 Conc. Cyls Made
Canadian Side										
11:15	11:40	11:40	1:05	1:23/2/	1:35	4 cum.	12:45	100	28	Initial Conc. Char at Site
							1:12	180	29	9.1 L Superplastizer

/1/ Concrete Left Batching Plant at 09:35. Arrived at Site 09:48.
/2/ At the Start of Placing Epoxy on Old Concrete Tacky.

TABLE 2
Typical Location of Thermocouples and Readings (^{o}C)

Location		American Side			Canadian Side	
Time		8:30 am	12:15 pm	1:40 pm	12:00 pm	1:30 pm
1	Downstream along side of Service Deck	20	22	22	21	21
2	Downstream along side of Service Deck	19	25	26	23	27
3	Centre Location of Service Deck Front Face	20	21	22	20	21
4	Centre Location of Service Deck Front Face	20	26	27	22	26
5	Centre Location of Service Deck Front Face	20	25	27	23	27
6	Upstream ≈ 1425 mm along Front Face	19	23	23	20	22
7	Upstream ≈ 1425 mm along Front Face	20	26	26	23	27

View of International Control Dam in Background With Bailey Structure Erected — Horseshoe Falls in Foreground

FIGURE 1

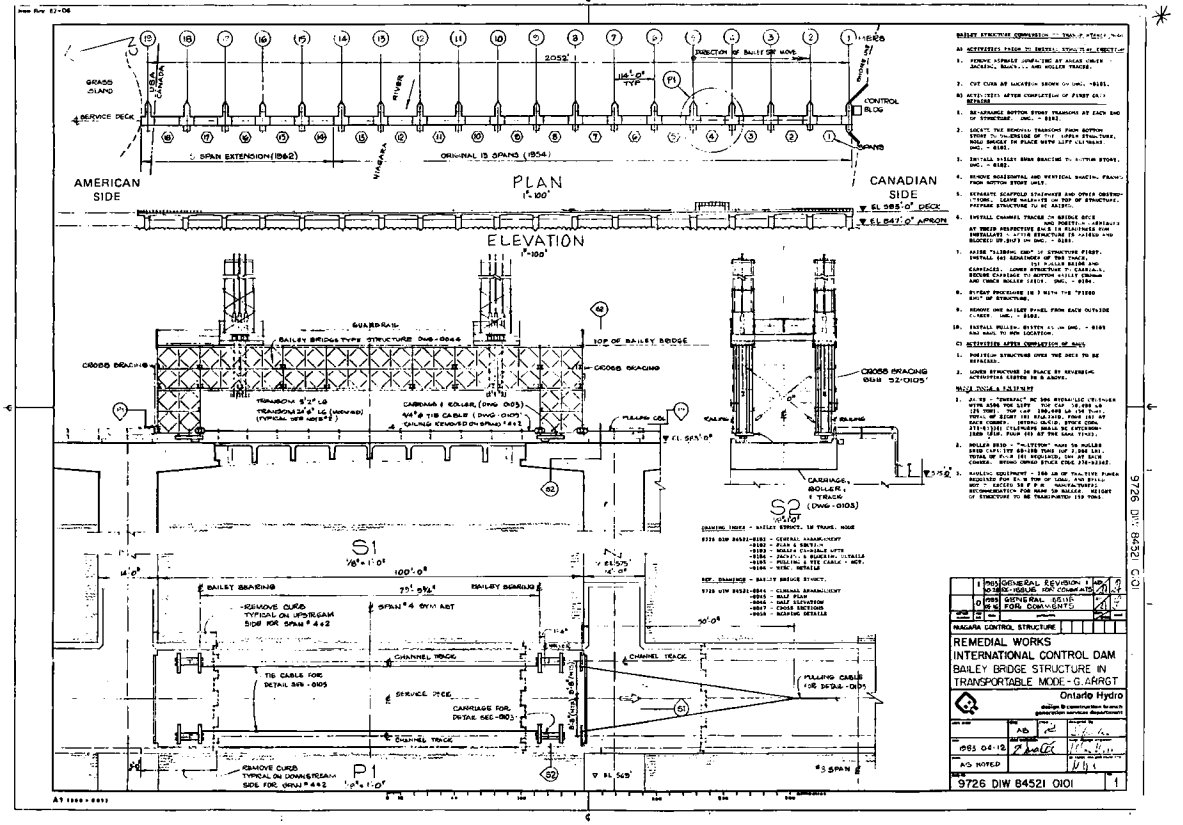
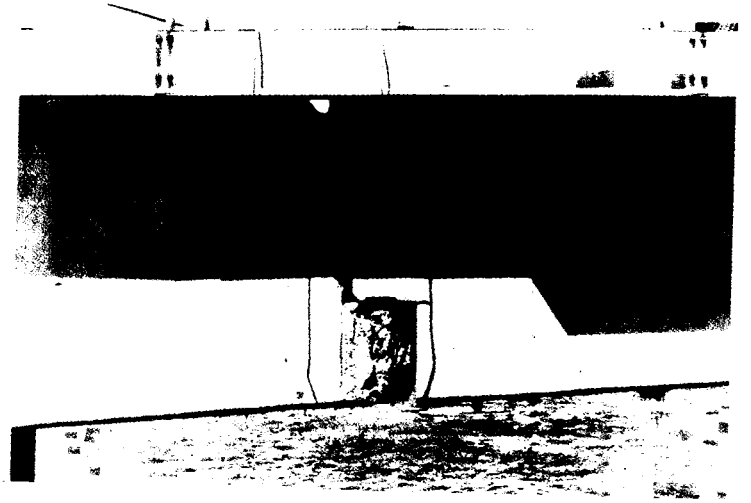


FIGURE 2



Typical View Prior to Lifting Span

Typical After Repair of Span

FIGURE 3

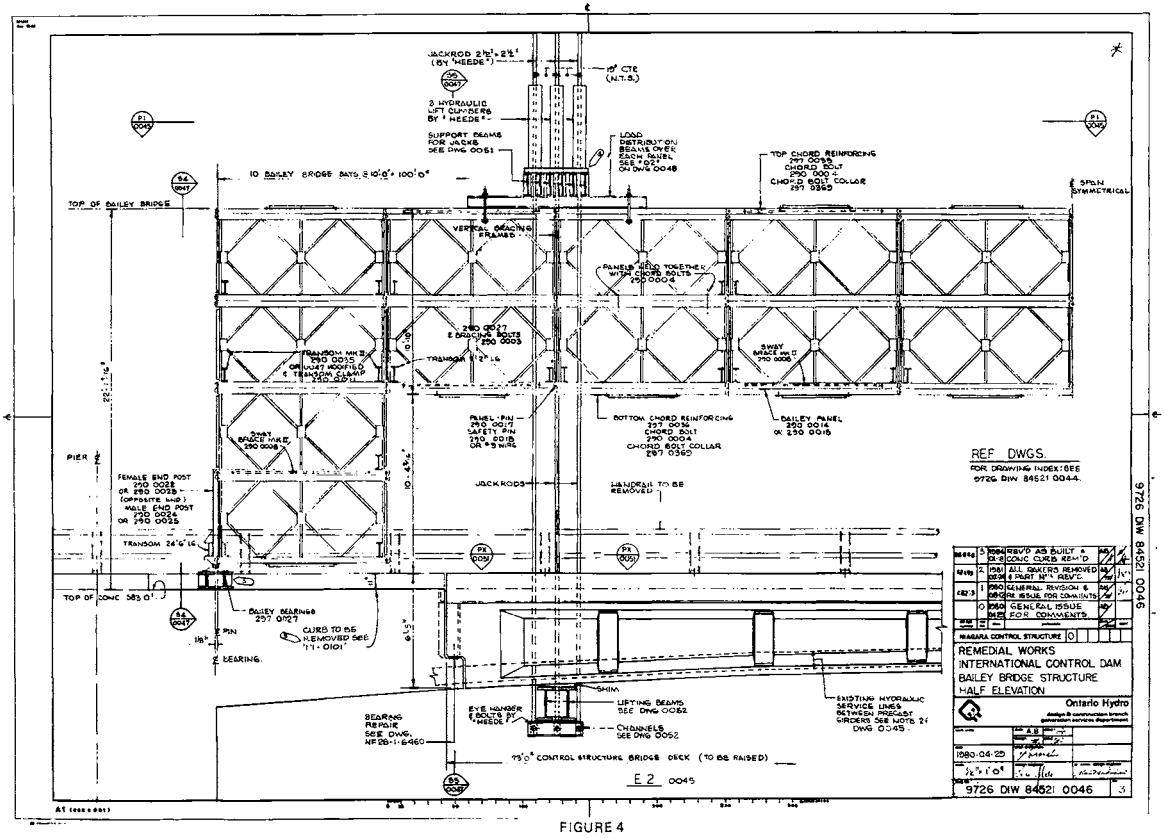


FIGURE 4

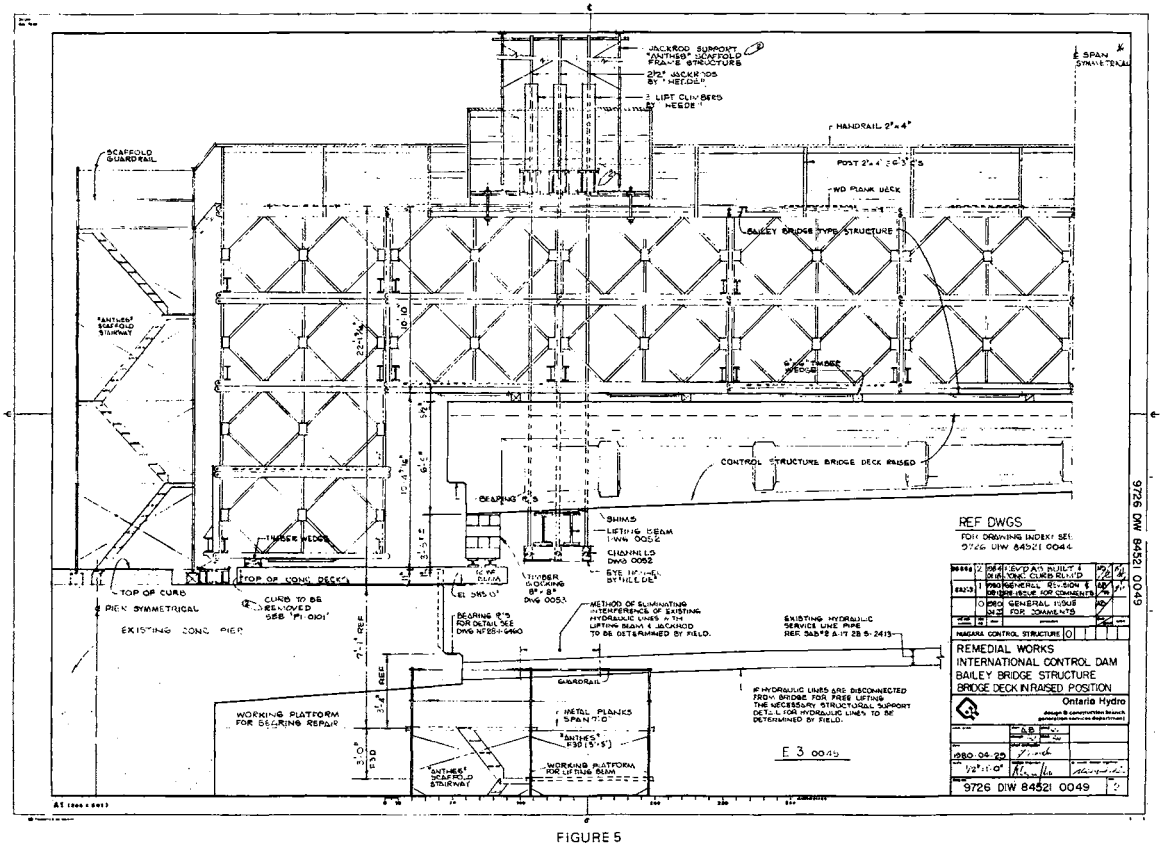


FIGURE 5

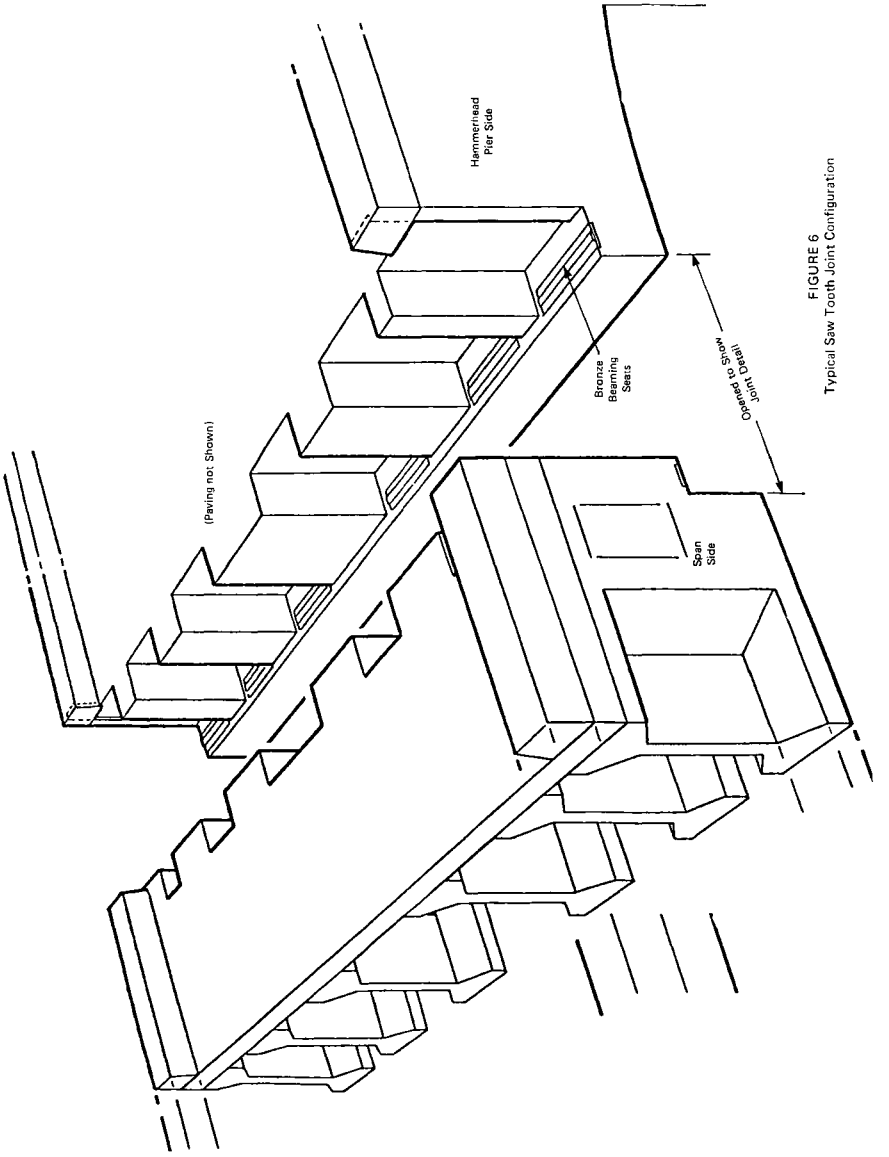
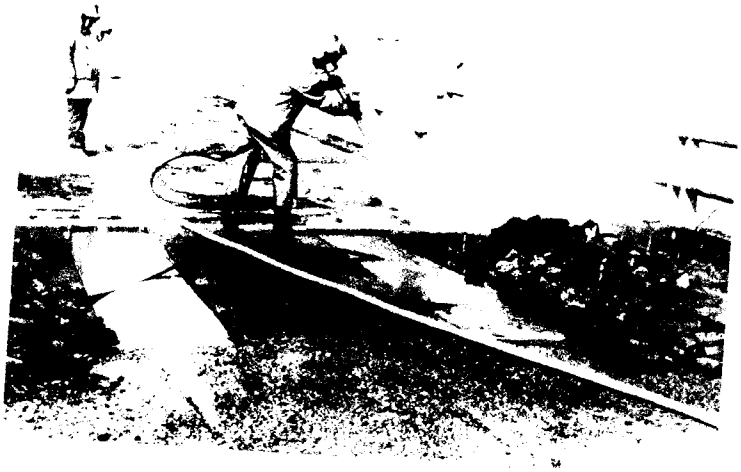


FIGURE 6
Typical Saw Tooth Joint Configuration

Mechanical Hand Chipping/Drilling of Rubberized Tar Filler

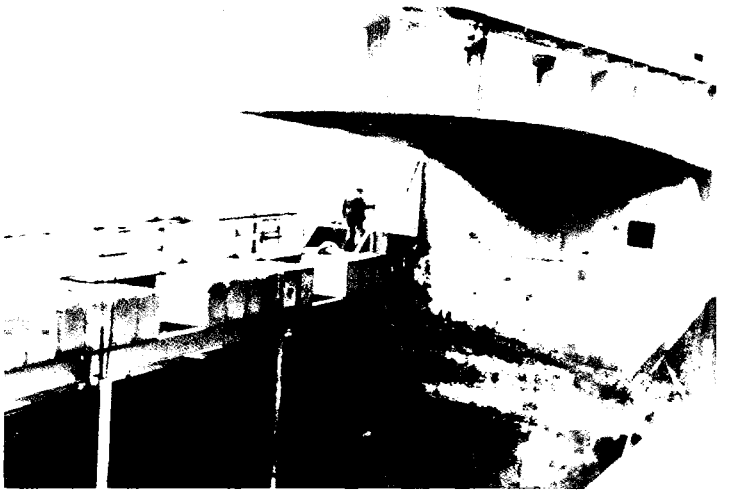
Diamond Core Drilling of Saw Tooth Expansion Joint

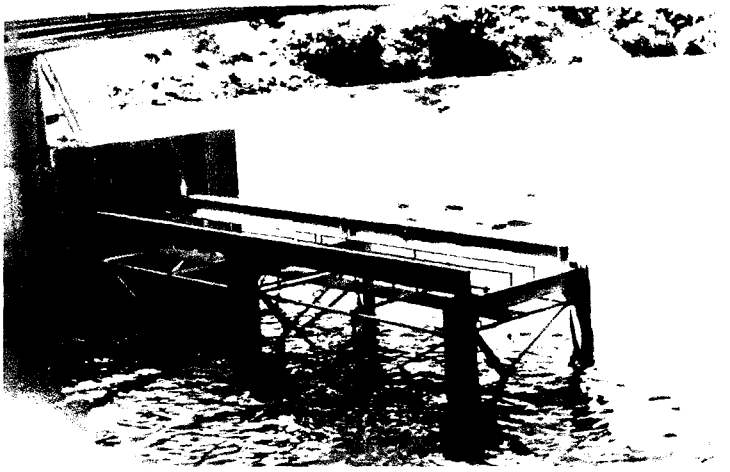
FIGURE 7



Waterblasting of Rubberized Tar Filler

FIGURE 8





Installation of Frame Cofferdam

FIGURE 9