

The Government of the Province of British Columbia
Department of Lands, Forests and Water Resources
Water Resources Service

Canada-British Columbia
Fraser River Flood Control 1968 Agreement
Project No. 3 The Township of Richmond

Contract No. 1
Sea Dyke Improvements

DRAWING LIST

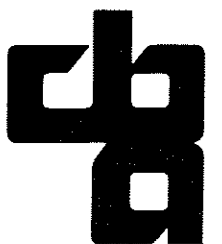
CONTRACT DRAWINGS

4795-1-1	GENERAL PLAN
4795-1-2	ALIGNMENT PLAN SHEET 1 OF 4
4795-1-3	ALIGNMENT PLAN SHEET 2 OF 4
4795-1-4	ALIGNMENT PLAN SHEET 3 OF 4
4795-1-5	ALIGNMENT PLAN SHEET 4 OF 4
4795-1-6	TYPICAL DYKE SECTIONS SHEET 1 OF 3
4795-1-7	TYPICAL DYKE SECTIONS SHEET 2 OF 3
4795-1-8	TYPICAL DYKE SECTIONS SHEET 3 OF 3

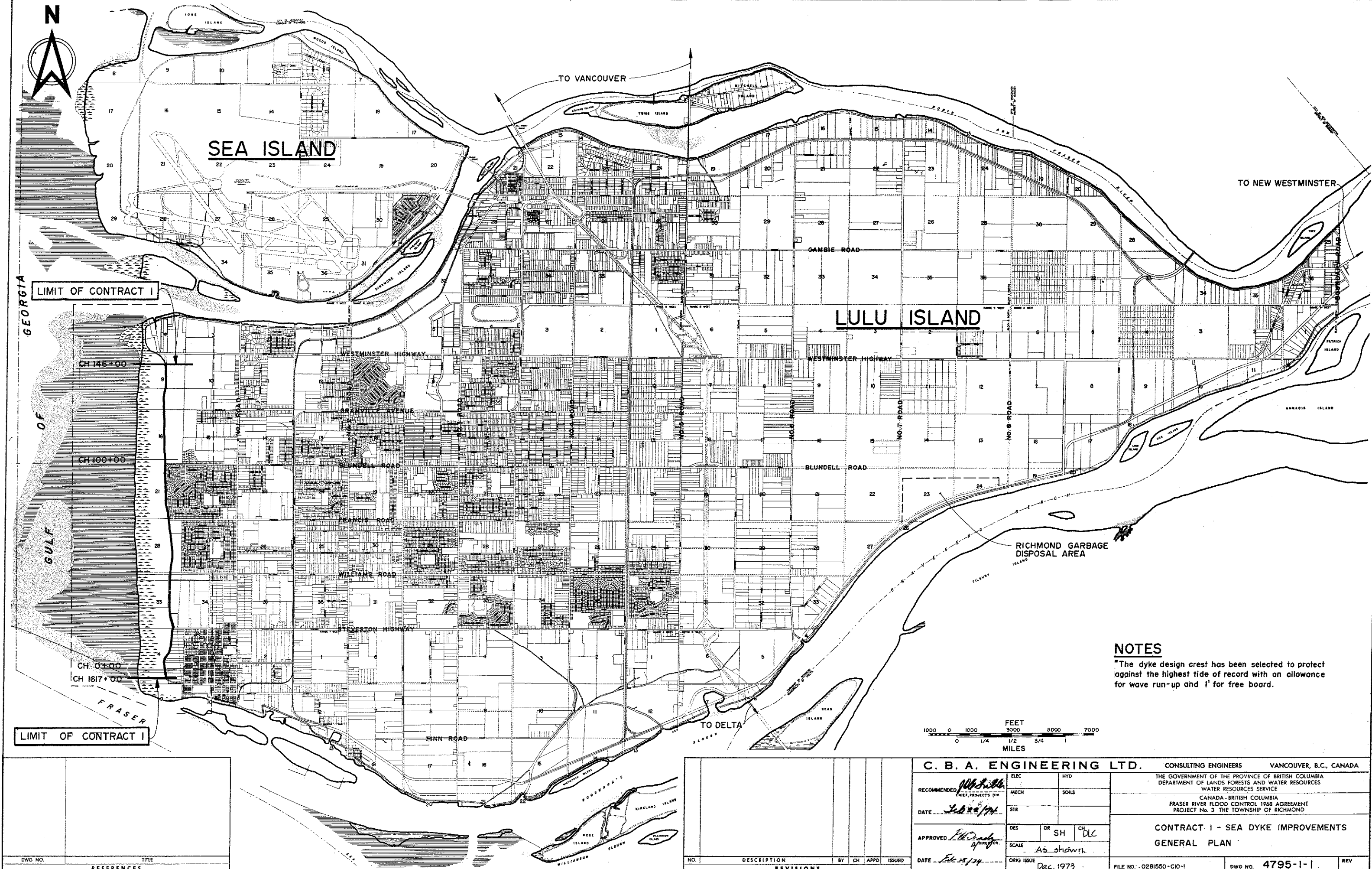
4795-1-9	MISCELLANEOUS DETAILS SHEET 1 OF 2
4795-1-10	MISCELLANEOUS DETAILS SHEET 2 OF 2
4795-1-11	DRAINAGE STRUCTURES FRANCIS & WILLIAMS ROADS GENERAL ARRANGEMENT & DETAILS
4795-1-12	DRAINAGE STRUCTURES FRANCIS & WILLIAMS ROADS DETAILS OF DISCHARGE PIPING
4795-1-13	DRAINAGE STRUCTURES FRANCIS & WILLIAMS ROADS DETAILS OF DISCHARGE STRUCTURES
4795-1-14	DRAINAGE STRUCTURES FRANCIS & WILLIAMS ROADS DETAILS OF PUMP DISCHARGE FLAPGATES

REFERENCE DRAWINGS

4795-1-15	PLAN SHOWING LOCATION OF EXISTING SURVEY MARKERS & UTILITIES SHEET 1 OF 6
4795-1-16	PLAN SHOWING LOCATION OF EXISTING SURVEY MARKERS & UTILITIES SHEET 2 OF 6
4795-1-17	PLAN SHOWING LOCATION OF EXISTING SURVEY MARKERS & UTILITIES SHEET 3 OF 6
4795-1-18	PLAN SHOWING LOCATION OF EXISTING SURVEY MARKERS & UTILITIES SHEET 4 OF 6
4795-1-19	PLAN SHOWING LOCATION OF EXISTING SURVEY MARKERS & UTILITIES SHEET 5 OF 6
4795-1-20	PLAN SHOWING LOCATION OF EXISTING SURVEY MARKERS & UTILITIES SHEET 6 OF 6



CBA ENGINEERING LTD
Consulting Engineers
Vancouver, Canada



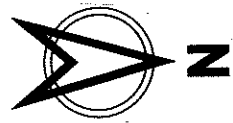
NOTES
 *The dyke design crest has been selected to protect against the highest tide of record with an allowance for wave run-up and 1' for free board.



DWG NO.	TITLE

NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REVISIONS					

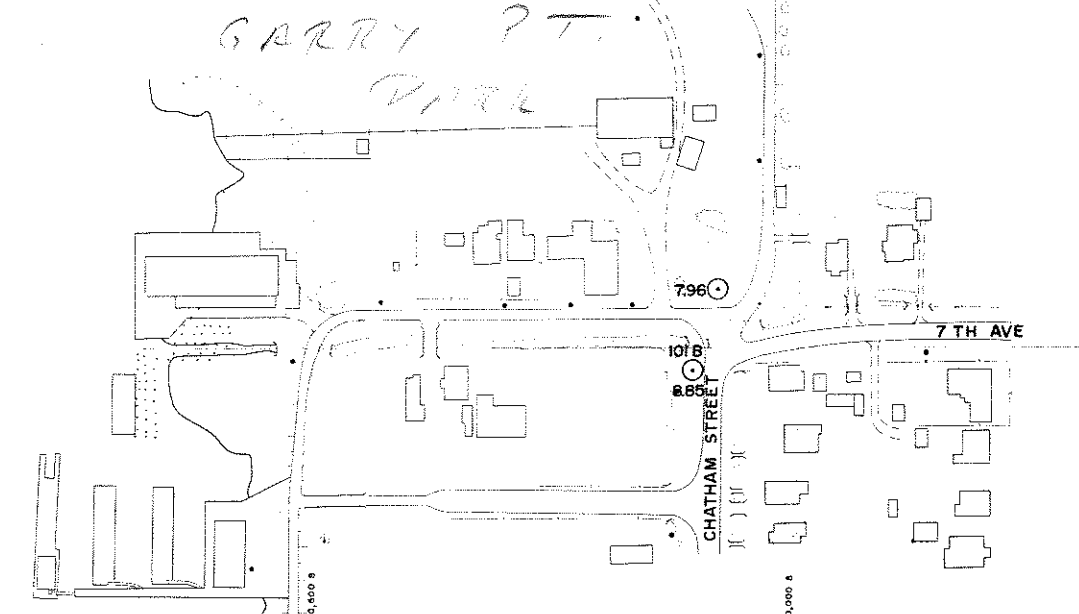
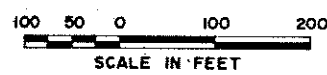
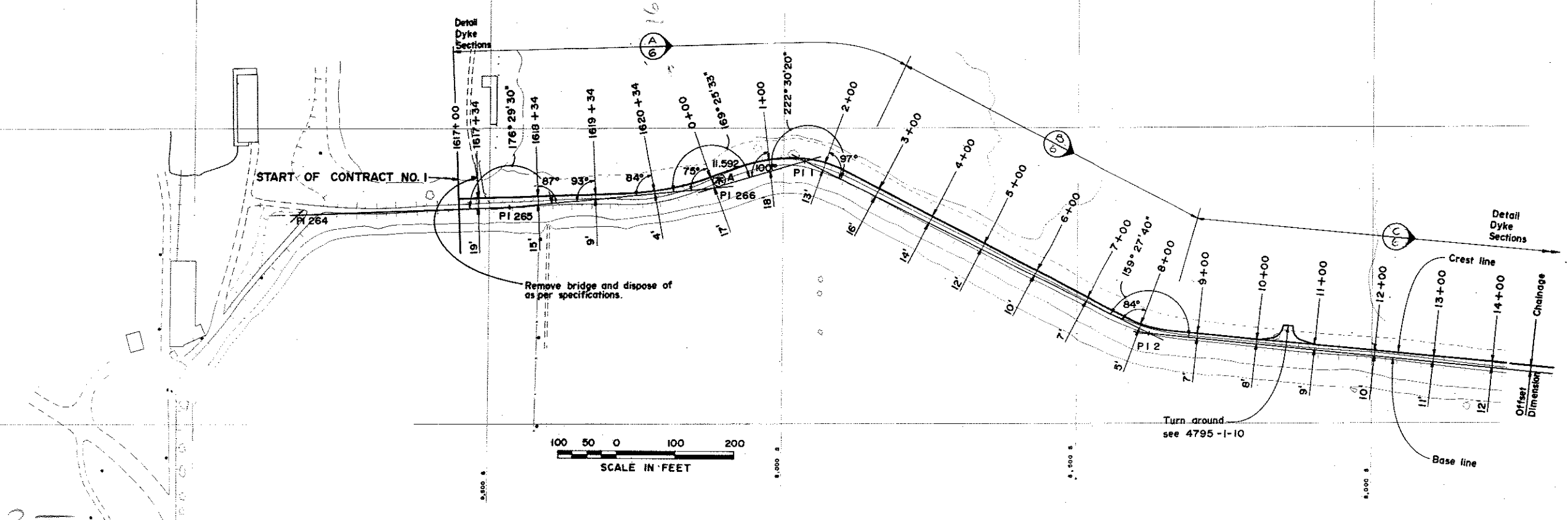
RECOMMENDED <i>[Signature]</i> DATE <i>Feb 22/74</i>		ELEC	HYD	THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF LANDS FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND	
		MECH	SOILS		
APPROVED <i>[Signature]</i> DATE <i>Feb 25/74</i>		STR	DES	CONTRACT 1 - SEA DYKE IMPROVEMENTS GENERAL PLAN	
		DR	SH		CH
SCALE <i>As shown</i>		ORIG ISSUE	FILE NO. 02B1550-C10-1	DWG NO. 4795-1-1	REV



21,000 E

22,000 E

1621133



BASE LINE DATA					
PI	BEARING	CHAINAGE	INTERVAL	CO-ORDINATES	
				SOUTH	EAST
264	N 01° 55' 33" W	1614 + 28.20	353.78	9 822.17	21 645.63
265	N 05° 26' 04" W	1617 + 81.98	351.34	9 468.59	21 633.74
*266	N 16° 00' 44" W	1621 + 33.32	162.04	9 118.83	21 600.47
1	N 26° 29' 36" W	1 + 62.04	656.54	8 963.07	21 555.77
2		8 + 18.58		8 375.48	21 848.65

* Chainage of PI 266 = 1621 + 33.32 or 0 + 0

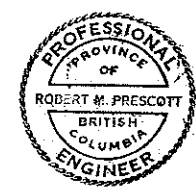
LEGEND

- △ 1A - Survey monument
- 8.85 (101 A) - Bench mark & geodetic elevation
- 11.592 (A) - Geodetic bench mark & elevation
- (A) - Section identification letter
Dwg. No. on which the section is drawn
(12) 4795-1-[6]

NOTES

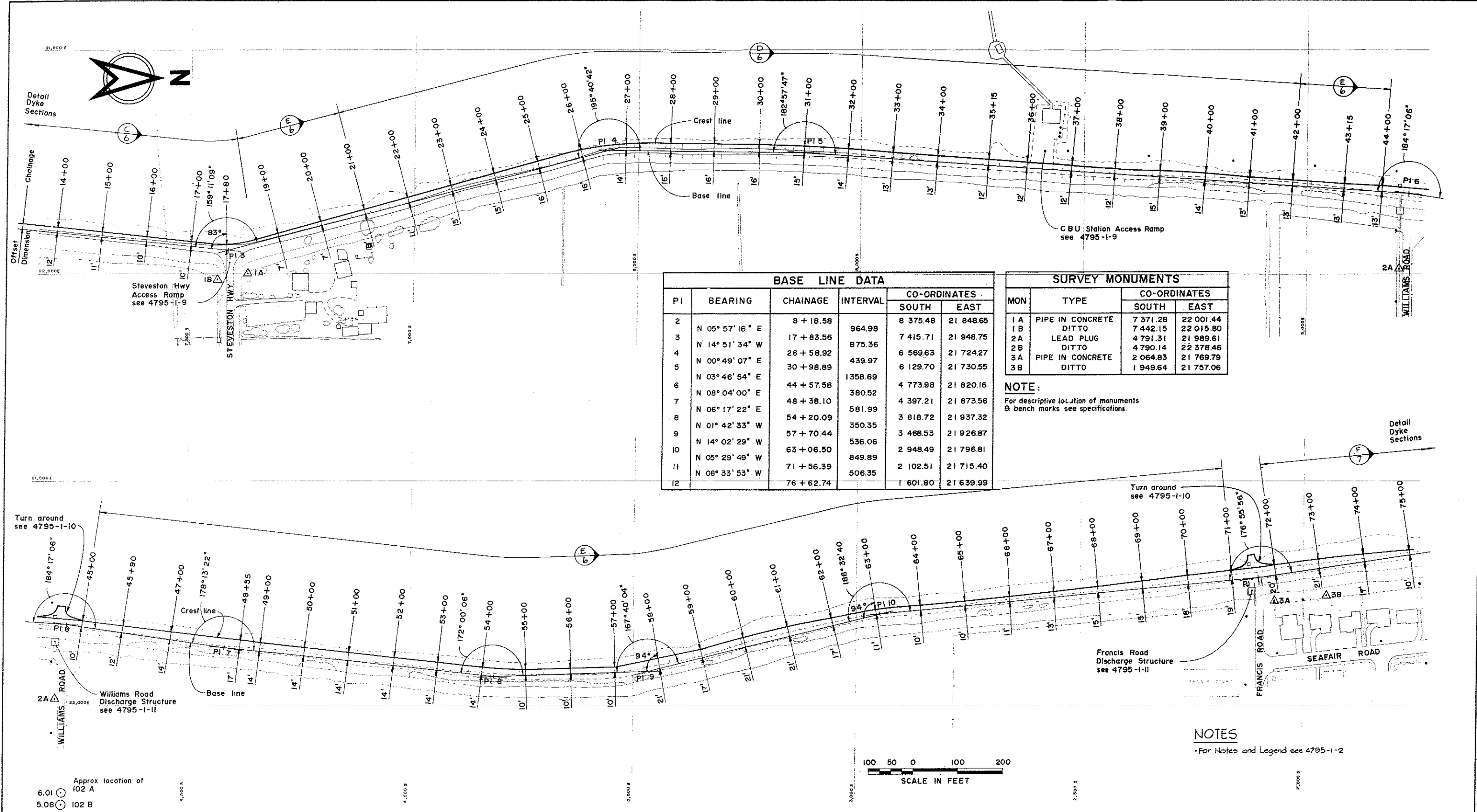
- Elevations refer to the Geodetic Survey of Canada.
- A smooth alignment should be maintained over the entire length of the dyke.
- Offset distances from base line to crest line are taken at EL 11.0.
- The angle of offset is 90° to base line unless otherwise indicated.
- The line defined as the crest line is the seaward shoulder of the dyke.

DWG NO.	TITLE
4795-1-10	Miscellaneous Details - SH 2 OF 2
4795-1-6	Typical Dyke Sections - SH 1 OF 3



NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REVISIONS											

RECOMMENDED <i>[Signature]</i> DATE: Feb 22/74		ELEC	HYD	THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF LANDS FORESTS AND WATER RESOURCES - WATER RESOURCES SERVICE CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND	
		MECH	SOILS		
APPROVED <i>[Signature]</i> DATE: Feb 25/74		DES	DR	CH	CONTRACT 1 - SEA DYKE IMPROVEMENTS ALIGNMENT PLAN SHEET 1 OF 4
		DLC	MH	HT SH	
		SCALE	As shown		FILE NO 0281550-C10-1
		ORIG ISSUE	Dec, 1973		DWG NO. 4795-1-2



BASE LINE DATA					
PI	BEARING	CHAINAGE	INTERVAL	CO-ORDINATES	
				SOUTH	EAST
2	N 05° 57' 16" E	8 + 18.58	964.98	8 375.48	21 848.65
3	N 14° 51' 34" W	17 + 83.56	875.36	7 415.71	21 948.75
4	N 00° 49' 07" E	26 + 58.92	439.97	6 569.63	21 724.27
5	N 03° 46' 54" E	30 + 98.89	1358.69	6 129.70	21 730.55
6	N 08° 04' 00" E	44 + 57.58	380.52	4 773.98	21 820.16
7	N 06° 17' 22" E	48 + 38.10	581.99	4 397.21	21 873.56
8	N 01° 42' 33" W	54 + 20.09	350.35	3 818.72	21 937.32
9	N 14° 02' 29" W	57 + 70.44	536.06	2 948.49	21 926.87
10	N 05° 29' 49" W	63 + 06.50	849.89	2 948.49	21 796.81
11	N 08° 33' 53" W	71 + 56.39	506.35	2 102.51	21 715.40
12		76 + 62.74		1 601.80	21 639.99

SURVEY MONUMENTS			
MON	TYPE	CO-ORDINATES	
		SOUTH	EAST
1A	PIPE IN CONCRETE	7 371.28	22 001.44
1B	DITTO	7 442.15	22 015.80
2A	LEAD PLUG	4 791.31	21 989.61
2B	DITTO	4 790.14	22 378.46
3A	PIPE IN CONCRETE	2 064.83	21 769.79
3B	DITTO	1 949.64	21 757.06

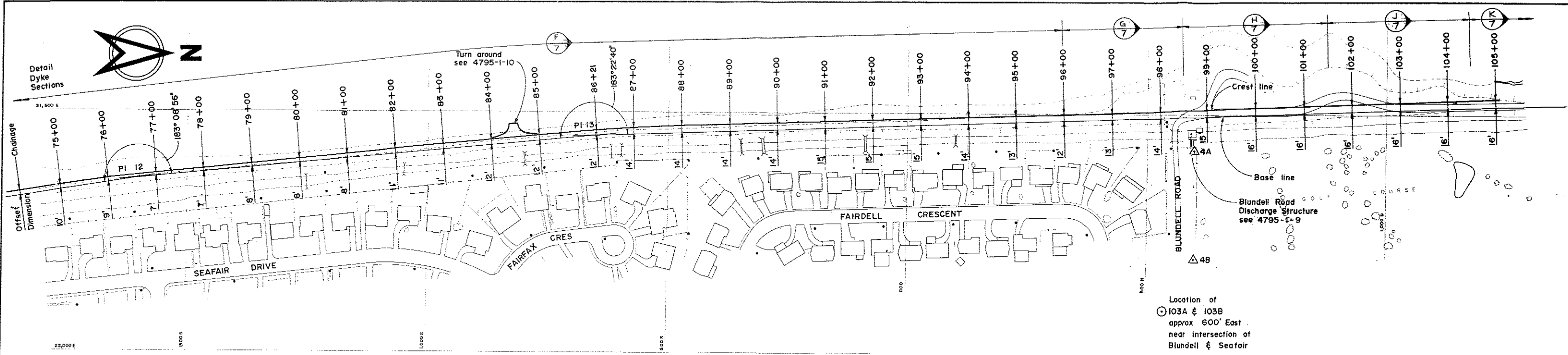
NOTE:
For descriptive location of monuments & bench marks see specifications.

DWG NO.	TITLE
4795-1-10	Miscellaneous Details - SH 2 OF 2
4795-1-11	General Arrangement & Details
4795-1-9	Miscellaneous Details - SH 1 OF 2
4795-1-7	Typical Dyke Sections - SH 2 OF 3
4795-1-2	Alignment Plan - SH 1 OF 4



NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REVISIONS											

C. B. A. ENGINEERING LTD.		CONSULTING ENGINEERS		VANCOUVER, B.C., CANADA	
RECOMMENDED: <i>[Signature]</i>	ELEC	HYD	THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF LANDS FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE		
DATE: <i>July 22/74</i>	MECH	SOILS	CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND		
APPROVED: <i>[Signature]</i>	STR		CONTRACT 1 - SEA DYKE IMPROVEMENTS ALIGNMENT PLAN SHEET 2 OF 4		
DATE: <i>Dec 1973</i>	DES: <i>[Signature]</i>	DR: HT SH	CH: <i>[Signature]</i>	FILE NO. 02BI550-C10-1	
	SCALE: As shown	ORIG ISSUE: Dec. 1973	DWG NO. 4795-1-3	REV	

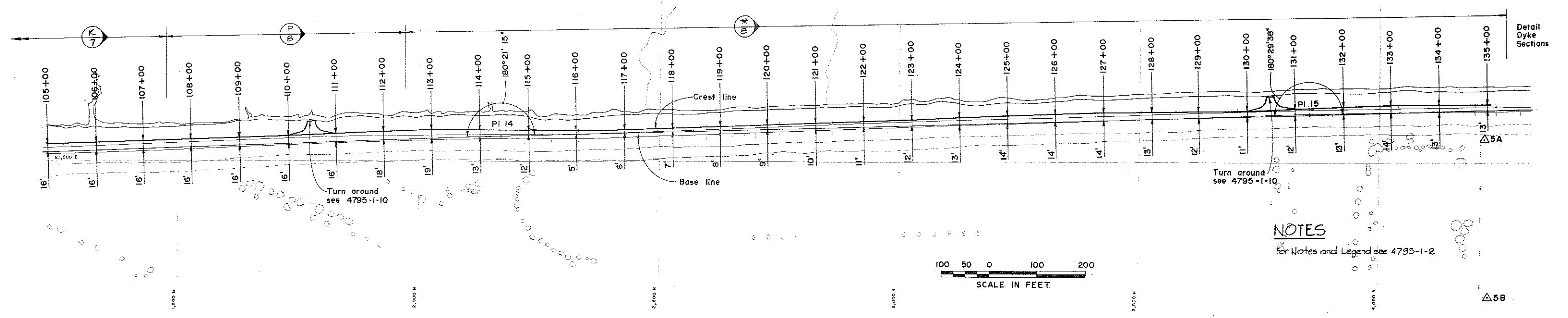


Location of
 103A & 103B
 approx 600' East
 near intersection of
 Blundell & Seafair

BASE LINE DATA					
PI	BEARING	CHAINAGE	INTERVAL	CO-ORDINATES	
				S/NORTH	EAST
12	N 05° 24' 58" W	76 + 62.74	954.28	S 1 601.80	21 639.99
13	N 02° 02' 17" W	86 + 17.02	2824.41	S 651.78	21 549.92
14	N 01° 41' 02" W	114 + 41.43	1685.30	2 170.84	21 449.47
15	N 01° 11' 25" W	131 + 26.73	1300.65	3 855.41	21 399.94
16		144 + 27.38		5 155.78	21 372.93

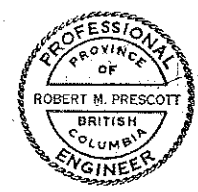
SURVEY MONUMENTS			
MON	TYPE	CO-ORDINATES	
		NORTH	EAST
4 A	PIPE IN CONCRETE	601.78	21 575.25
4 B	DITTO	601.51	21 803.02
5 A	DO	4 220.01	21 453.35
5 B	DO	4 217.31	21 778.88

NOTE:
 For descriptive location of monuments &
 bench marks see specifications.



NOTES
 For Notes and Legend see 4795-1-2

DWG NO.	TITLE
4795-1-9	Miscellaneous Details - SH 1 OF 2
4795-1-10	Miscellaneous Details - SH 2 OF 2
4795-1-8	Typical Dyke Sections - SH 3 OF 3
4795-1-7	Typical Dyke Sections - SH 2 OF 3
4795-1-6	Typical Dyke Sections - SH 1 OF 3
4795-1-2	Alignment Plan - SH 1 OF 4



NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REVISIONS											

C. B. A. ENGINEERING LTD. CONSULTING ENGINEERS VANCOUVER, B.C., CANADA

RECOMMENDED: *John J. Miller* (Chief, Projects Div.)

DATE: *20 22 / 74*

APPROVED: *P. Prescott* (Director)

DATE: *Ed 25 / 74*

DES: *DLC* | DR: *HT* | SH: *SH* | CH: *DLC*

SCALE: As shown

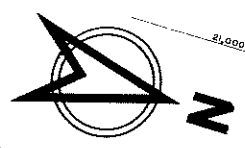
ORIG ISSUE: Dec, 1973

THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA
 DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
 WATER RESOURCES SERVICE

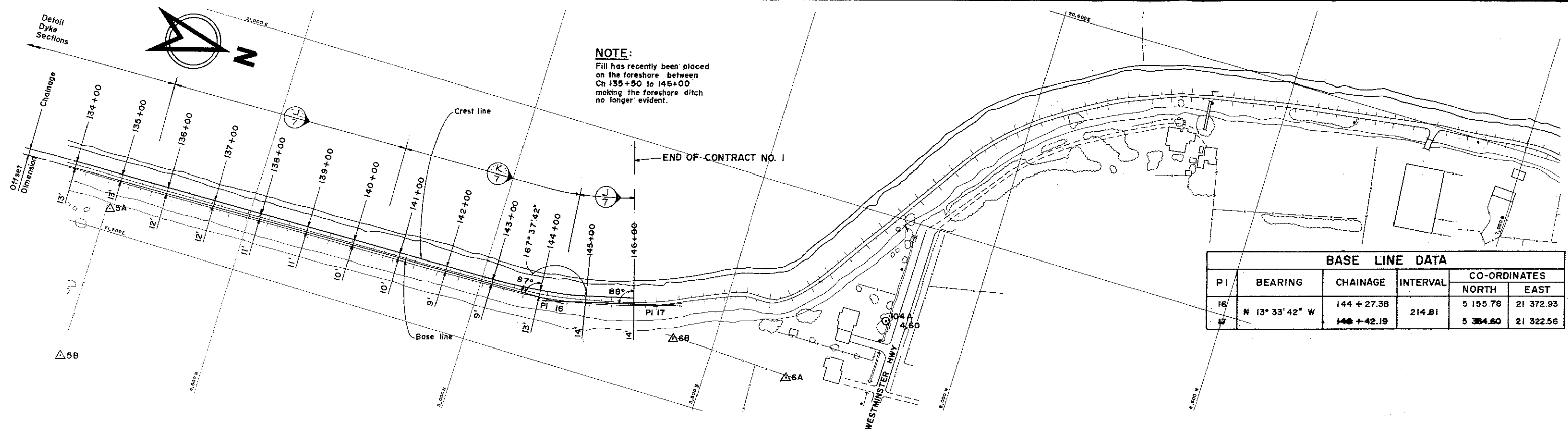
CANADA - BRITISH COLUMBIA
 FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
 PROJECT No. 3 THE TOWNSHIP OF RICHMOND

CONTRACT 1 - SEA DYKE IMPROVEMENTS
ALIGNMENT PLAN
SHEET 3 OF 4

FILE NO. 028550-C10-1 | DWG NO. **4795-1-4** | REV



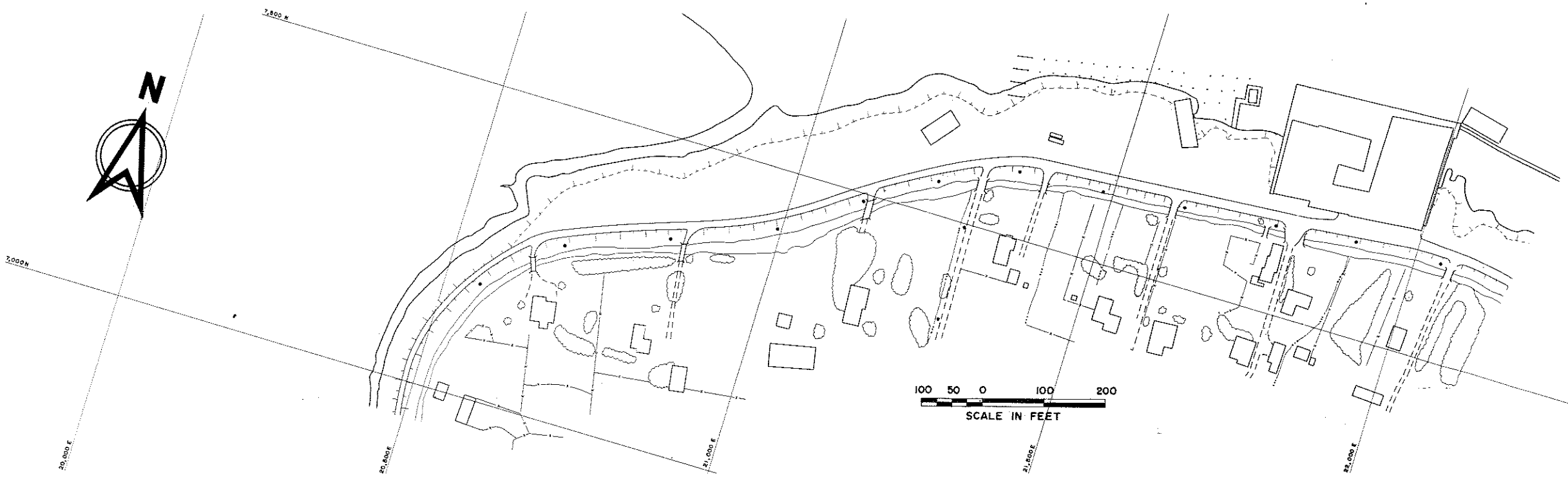
NOTE:
Fill has recently been placed on the foreshore between Ch 135+50 to 146+00 making the foreshore ditch no longer evident.



BASE LINE DATA					
PI	BEARING	CHAINAGE	INTERVAL	CO-ORDINATES	
				NORTH	EAST
16	N 13° 33' 42" W	144 + 27.38	214.81	5 155.78	21 372.93
17		146 + 42.19		5 354.60	21 322.56

SURVEY MONUMENTS			
MON	TYPE	CO-ORDINATES	
		NORTH	EAST
5A	PIPE IN CONCRETE	4 220.01	21 453.35
5B	DITTO	4 217.31	21 778.88
6A	DO	5 668.96	21 384.73
6B	DO	5 419.63	21 375.31

NOTE:
For descriptive location of monuments & bench marks see specifications.



NOTES
For Notes and Legend see 4795-1-2

4795-1-6 Typical Dyke Sections - SH 3 OF 3
4795-1-7 Typical Dyke Sections - SH 2 OF 3
4795-1-2 Alignment Plan - SH 1 OF 4



NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REVISIONS											

C. B. A. ENGINEERING LTD. CONSULTING ENGINEERS VANCOUVER, B.C., CANADA

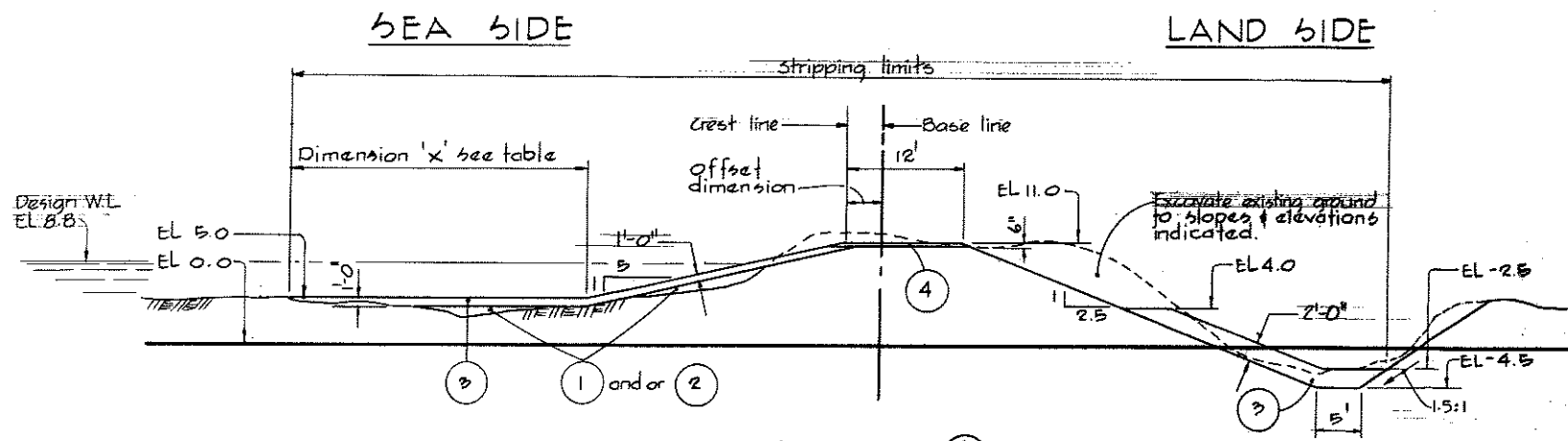
RECOMMENDED: *[Signature]* ELEC HYD
MECH SOILS
DATE: Feb 20/74 STR

APPROVED: *[Signature]* DES DR CH
DLC: MH HT SH DLC
SCALE: As shown
DATE: Feb 2/74 ORG ISSUE: Dec, 1973

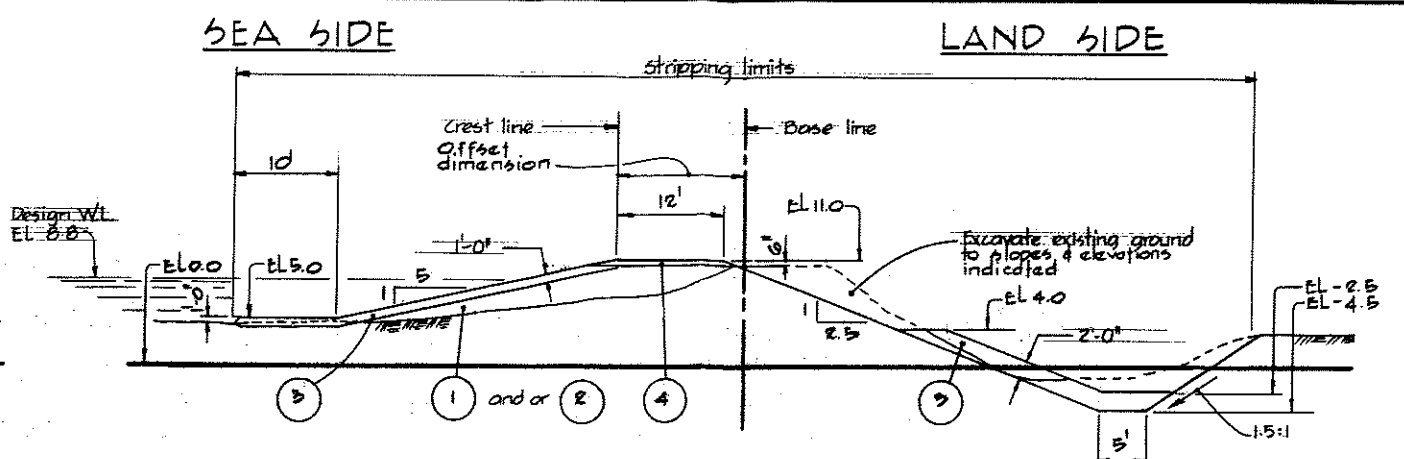
THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA
DEPARTMENT OF LANDS FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT No. 3 THE TOWNSHIP OF RICHMOND

**CONTRACT 1 - SEA DYKE IMPROVEMENTS
ALIGNMENT PLAN
SHEET 4 OF 4**

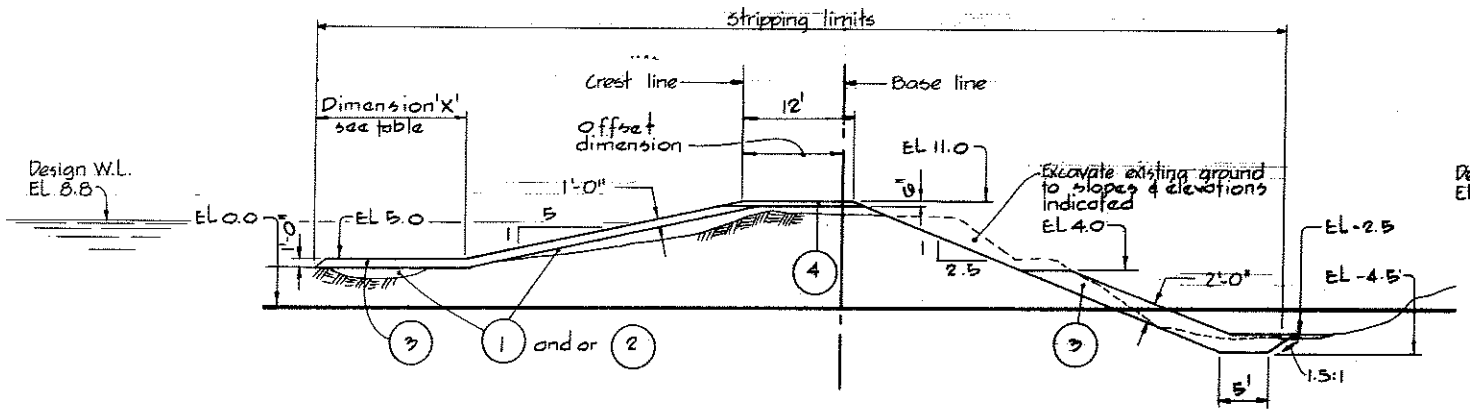
FILE NO. 0261550-C10-1 DWG NO. **4795-1-5** REV



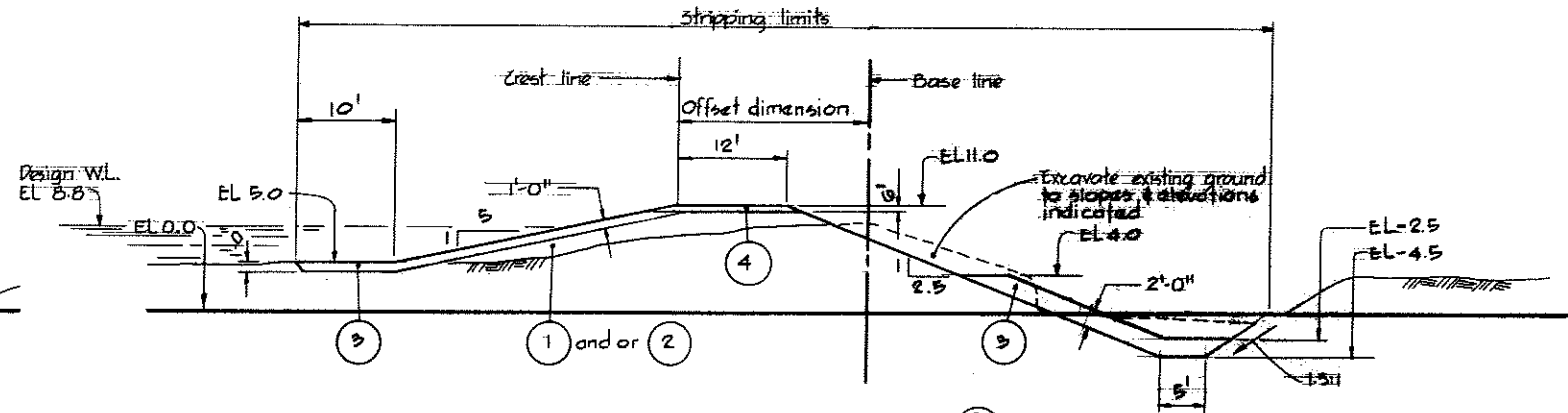
SECTION $\frac{A}{2}$
 TYP BTWN CH 1617+00 TO 1621+33 (0+00)
 † CH 0+00 TO 2+50



SECTION $\frac{B}{9}$
 TYP BTWN CH 21+00 TO 42+00

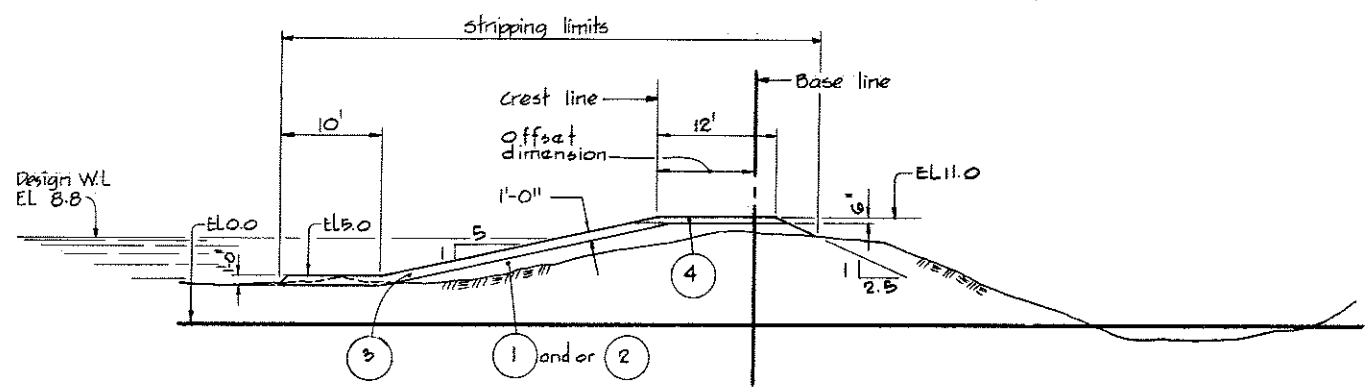


SECTION $\frac{D}{2}$
 TYP BTWN CH 2+50 TO 8+50



SECTION $\frac{E}{3}$
 TYP BTWN CH 18+50 TO 21+00
 † CH 42+00 TO 71+00

NOTE
 For details between
 CH 42+00 to 48+00 &
 CH 71+00 to 72+00
 see 4795-1-11



SECTION $\frac{C}{2} \& \frac{C}{3}$
 TYP BTWN CH 8+50 TO 18+50

CHAINAGE	DIM 'X'
1617+34	18'
1618+34	18'
1619+34	17'
1620+34	31'
0+00	16'
1+00	20'
2+00	17'
3+00	10'
4+00	11'
5+00	13'
6+00	22'
7+00	15'
8+00	10'

MATERIALS LEGEND

- ① silt
- ② sand
- ③ sand, gravel, cobbles
- ④ Crushed gravel
- ⑤ Light rip-rap

LEGEND

- Existing ground
- $\frac{D}{2}$ Section identification letter
- $\frac{10}{10}$ Drawing No. on which section is located (ie) 4795-1-2
- $\frac{2}{10}$ Detail identification number
- $\frac{10}{10}$ Drawing No. on which detail is drawn (ie) 4795-1-10

NOTE 5

Elevations refer to Geodetic Survey of Canada for offset dimensions see appropriate alignment plan.



DWG NO.	TITLE
4795-1-11	General Arrangement & Details
4795-1-3	Alignment Plan - SH 2 OF 4
4795-1-2	Alignment Plan - SH 1 OF 4



NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REVISIONS					

C. B. A. ENGINEERING LTD. CONSULTING ENGINEERS VANCOUVER, B.C., CANADA.

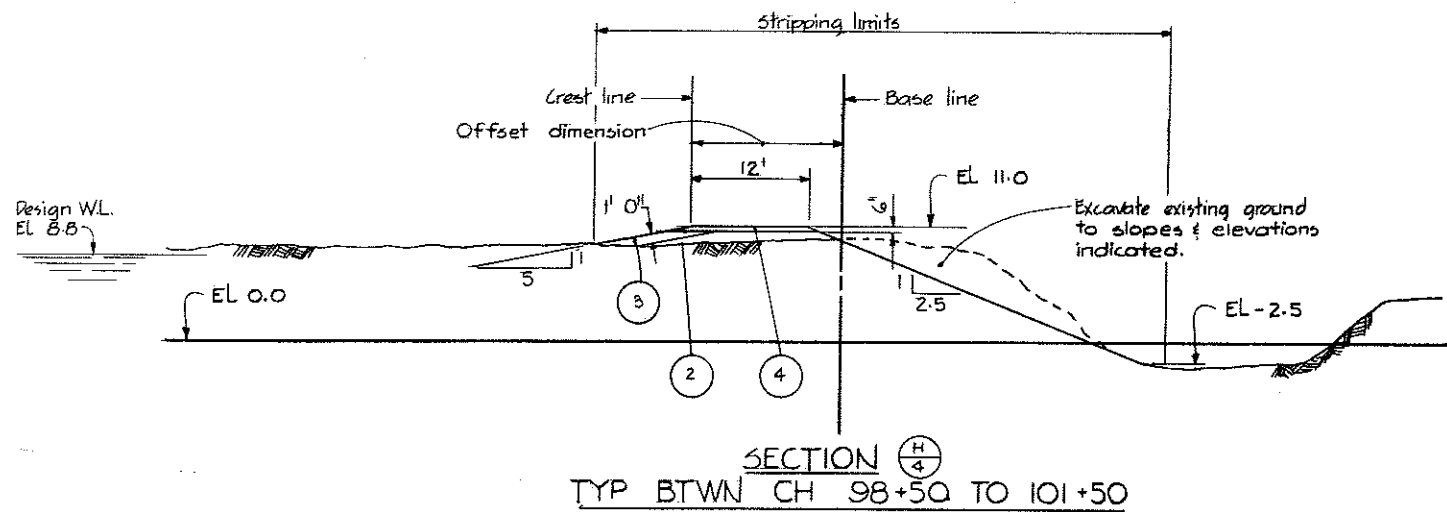
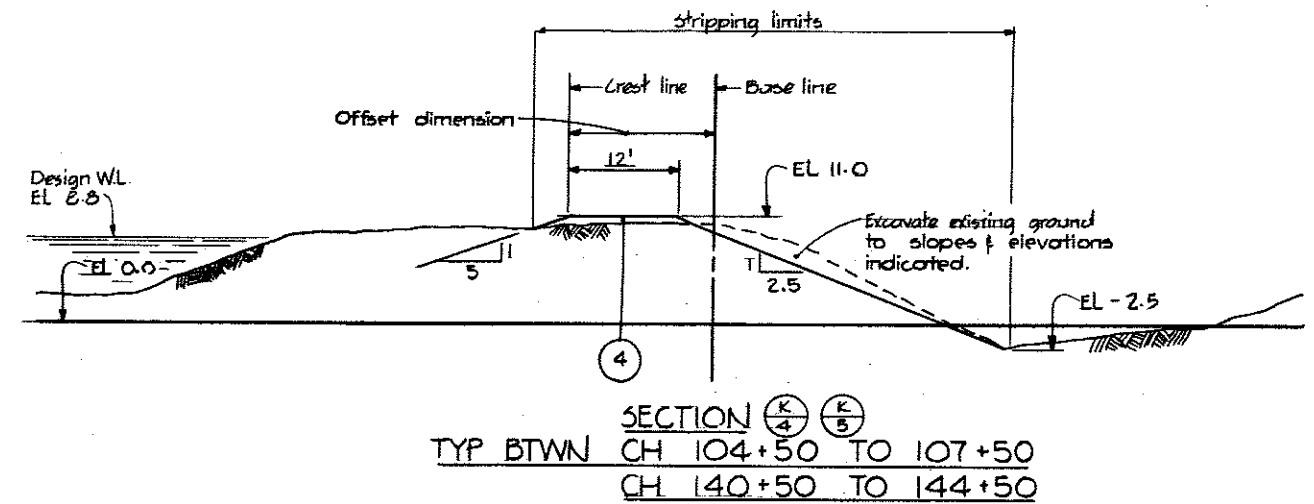
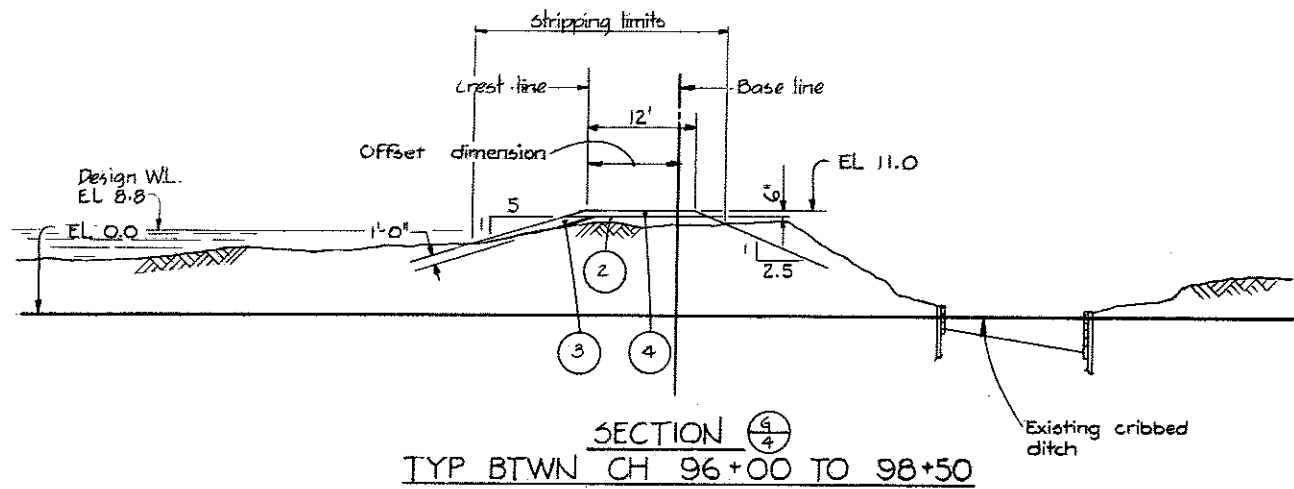
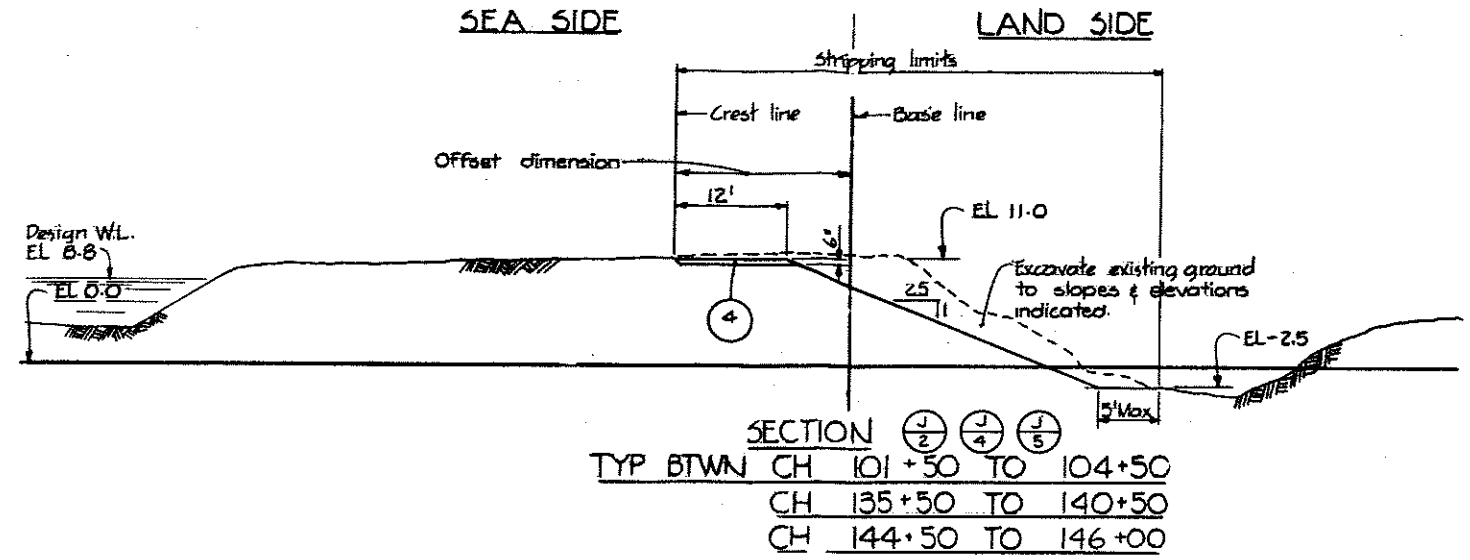
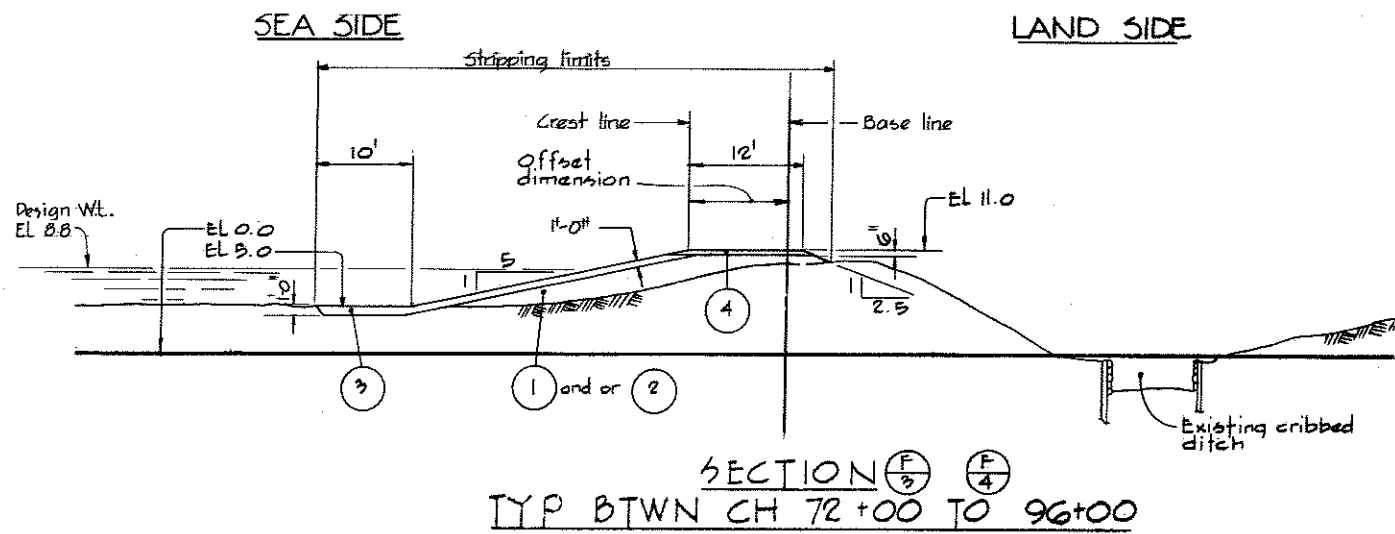
RECOMMENDED <i>[Signature]</i>	ELEC	HYD
DATE <i>Feb 22/79</i>	MECH	SOILS
APPROVED <i>[Signature]</i>	STR	
DATE <i>Feb 22/79</i>	DES: DLC:MH	DE: H.W
	SCALE: As shown	OR: DLG
	ORIG ISSUE: Dec, 1973	

THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA
 DEPARTMENT OF LANDS FORESTS AND WATER RESOURCES
 WATER RESOURCES SERVICE

CANADA - BRITISH COLUMBIA
 FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
 PROJECT No. 3 THE TOWNSHIP OF RICHMOND

CONTRACT 1 - SEA DYKE IMPROVEMENTS
TYPICAL DYKE SECTIONS
SHEET 1 OF 3

FILE NO. 0281550-C10-1 DWG NO. **4795-1-6** REV



NOTES

For Notes and Legend see 4795-1-6

DWG NO.	TITLE
4795-1-6	Typical Dyke Sections - SH 1 OF 3
4795-1-5	Alignment Plan - SH 4 OF 4
4795-1-4	Alignment Plan - SH 3 OF 4
4795-1-3	Alignment Plan - SH 2 OF 4

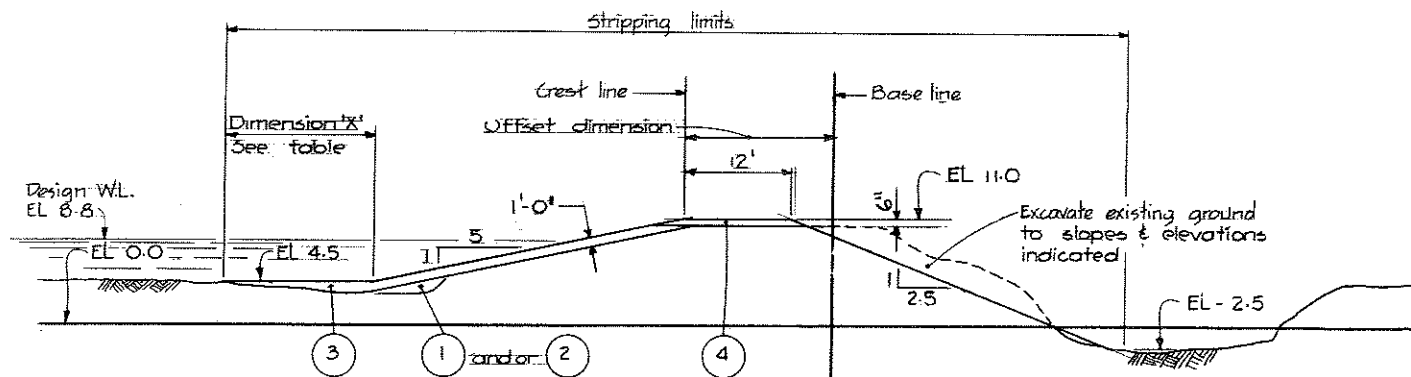


NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REVISIONS											

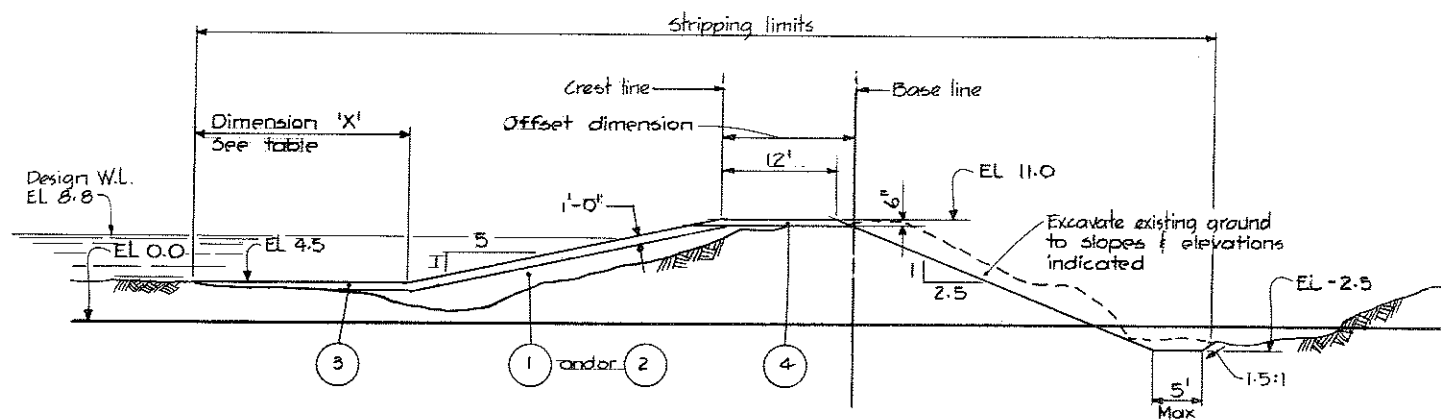
C. B. A. ENGINEERING LTD.		CONSULTING ENGINEERS		VANCOUVER, B.C., CANADA	
RECOMMENDED BY	ELEC	HTD	THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF LANDS FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE		
DATE	MECH	SOILS	CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND		
APPROVED	STR	CONTRACT 1 - SEA DYKE IMPROVEMENTS TYPICAL DYKE SECTIONS SHEET 2 OF 3			
DATE	DES	DR	CH	SCALE	
	DLC/MH	G	DLC	As shown	
	SCALE	ORG ISSUE			
	As shown	Dec, 1973			
FILE NO. 0291550-C10-1		DWG NO. 4795-1-7		REV	

SEA SIDE

LAND SIDE



SECTION $\frac{P}{4}$
TYP BTWN CH 107+50 TO 112+50



SECTION $\frac{R}{4}$
TYP BTWN CH 112+50 TO 135+50

CHAINAGE	DIM 'X'
108+00	26.5
109+00	12.5
110+00	16.5
111+00	14.5
112+00	12.5
113+00	6.5
114+00	15.5
115+00	15.5
116+00	19.5
117+00	18.5
118+00	17.5
119+00	13.5
120+00	18.5
121+00	14.5
122+00	12.5
123+00	15.5
124+00	14.5
125+00	17.5
126+00	17.5
127+00	17.5
128+00	14.5

CHAINAGE	DIM 'X'
129+00	15.5
130+00	16.5
131+00	17.5
132+00	17.5
133+00	16.5
134+00	14.5
135+00	14.5



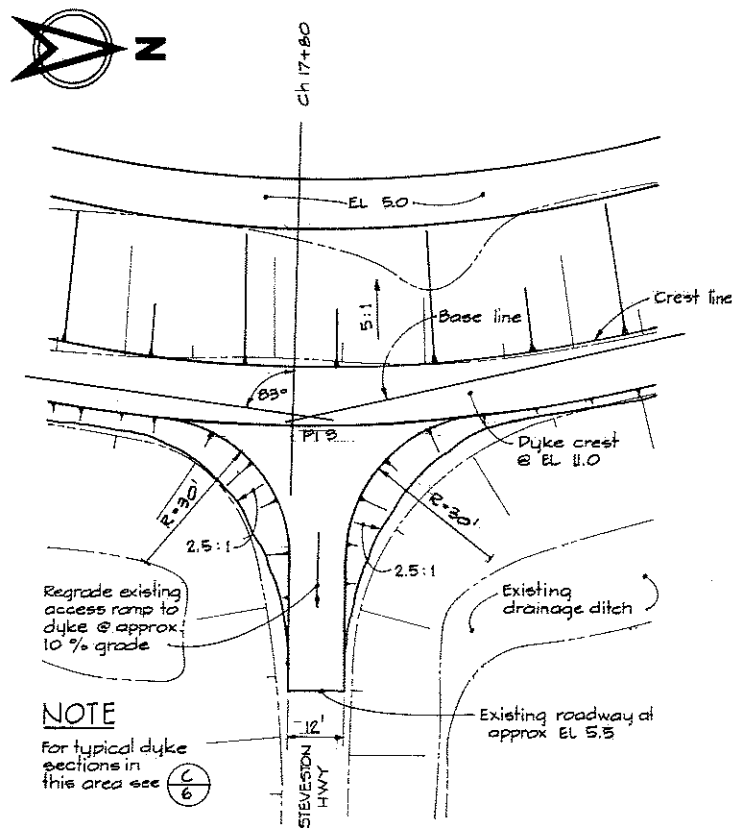
NOTES
For Notes & Legend see 4795-1-6

DWG NO.	TITLE
4795-1-6	Typical Dyke Sections - SH 1 OF 3
4795-1-5	Alignment Plan - SH 4 OF 4
4795-1-4	Alignment Plan - SH 3 OF 4

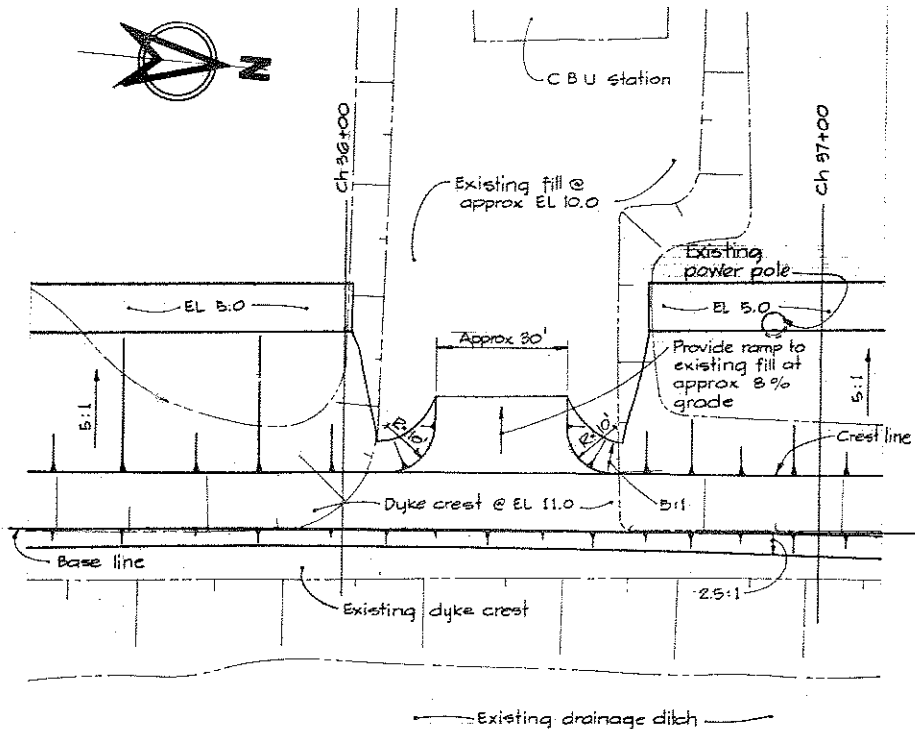


NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REVISIONS											

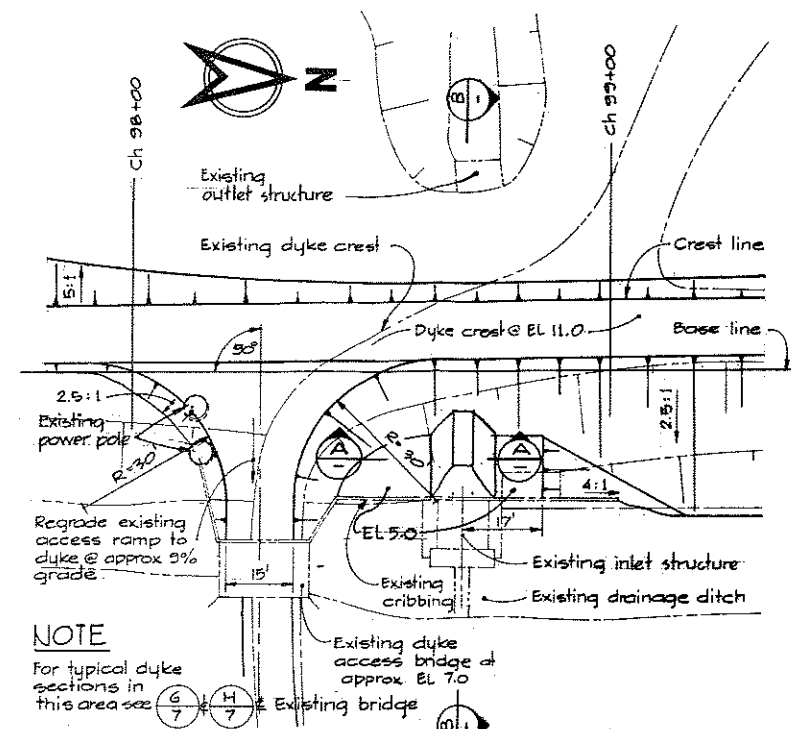
C. B. A. ENGINEERING LTD.		CONSULTING ENGINEERS VANCOUVER, B.C., CANADA	
RECOMMENDED <i>[Signature]</i>	ELEC	HYD	THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF LANDS FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND
DATE <i>Sub 22/71</i>	MECH	SOILS	
APPROVED <i>[Signature]</i>	STR		
DES <i>[Signature]</i>	DR	CH	CONTRACT 1 - SEA DYKE IMPROVEMENTS TYPICAL DYKE SECTIONS SHEET 3 OF 3
SCALE <i>As shown</i>	DR	CH	
DATE <i>22/71</i>	ORIG ISSUE	Dec, 1973	FILE NO. 02B1550-C10-1
	DWG NO.	4795-1-8	REV



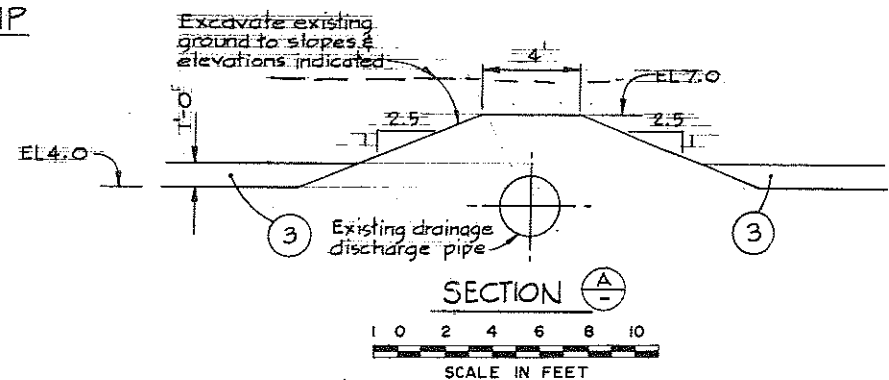
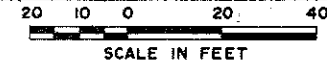
STEVESTON HWY ACCESS RAMP



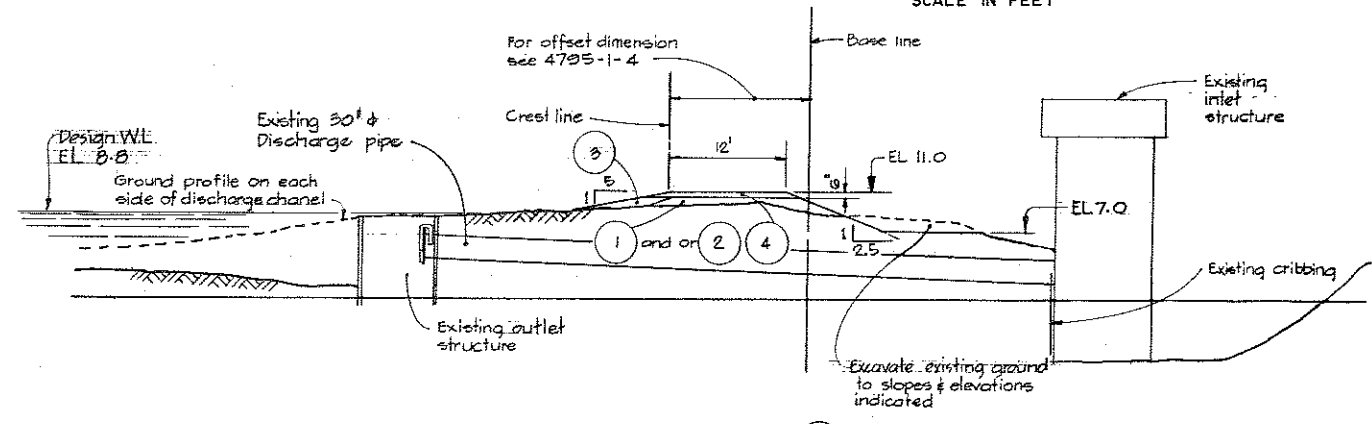
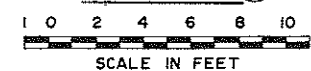
CBU STATION ACCESS RAMP



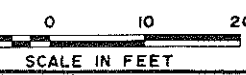
BLUNDELL ROAD DISCHARGE STRUCTURE



SECTION A-A



SECTION B-B



MATERIAL LEGEND

- 1 Silt
- 2 Sand
- 3 Sand, gravel, cobbles
- 4 Crushed gravel
- 5 Light rip-rap

LEGEND

- Existing ground surface (section)
- Existing ground & structures (plan)
- Section identification letter
- Drawing No. on which the section is drawn (ie) 4795-1-[7]
- Detail identification number
- Drawing No. on which the detail is drawn (ie) 4795-1-[7]

NOTES

- Elevations refer to the Geodetic Survey of Canada.
- For offset dimensions see appropriate chainage on Alignment Plans.
- Offset distances from base line to crest line are taken at EL 11.0.

DWG NO.	TITLE
4795-1-8	Typical Dyke Sections - 5h. 3 of 3
4795-1-7	Typical Dyke Sections - 5h. 2 of 3
4795-1-6	Typical Dyke Sections - 5h. 1 of 3



NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REVISIONS						REVISIONS					

C. B. A. ENGINEERING LTD. CONSULTING ENGINEERS VANCOUVER, B.C., CANADA

RECOMMENDED: *McDulla* (MECH, PROJECTS DIV.)
 DATE: *10/22/74*

APPROVED: *McDulla* (PROJECT)
 DATE: *Feb 22/74*

REC	HYD
MECH	SOILS
STR	

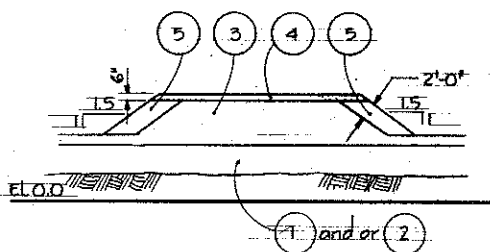
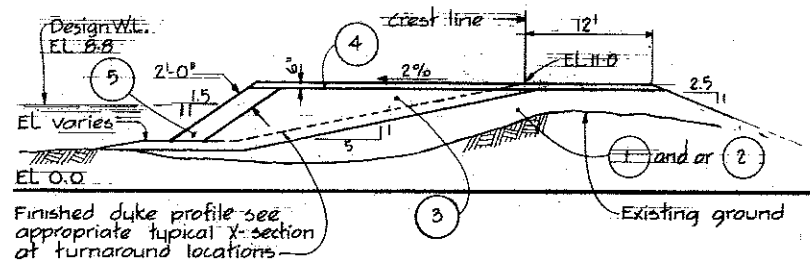
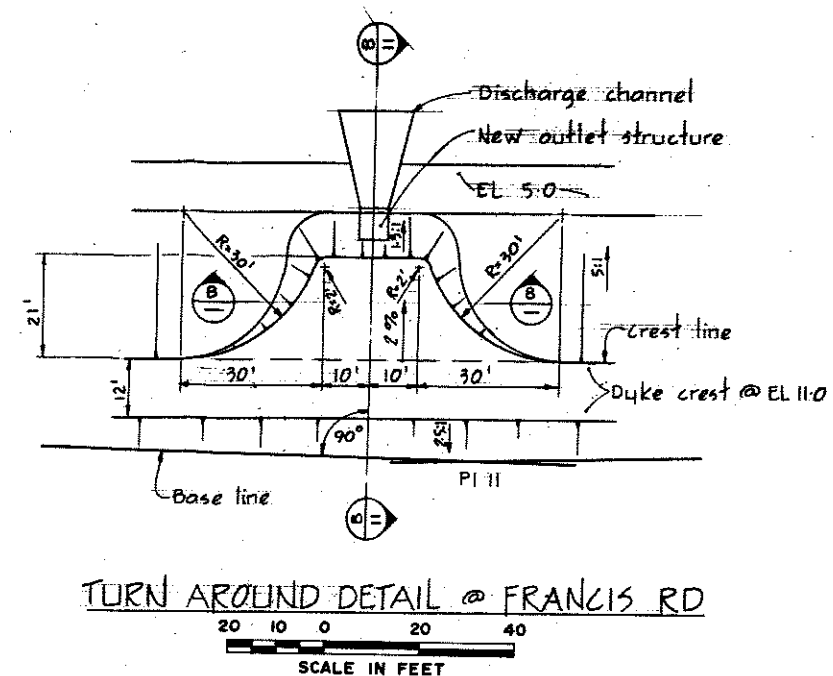
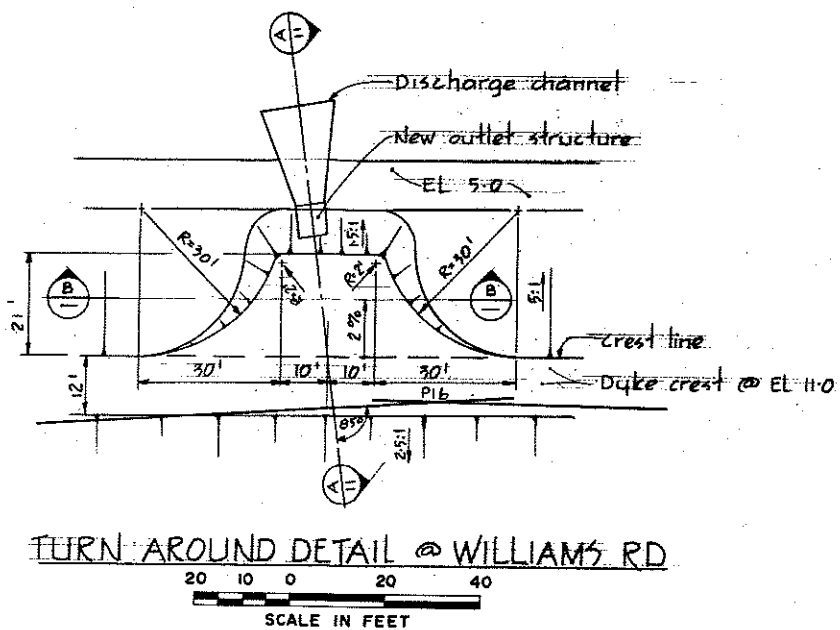
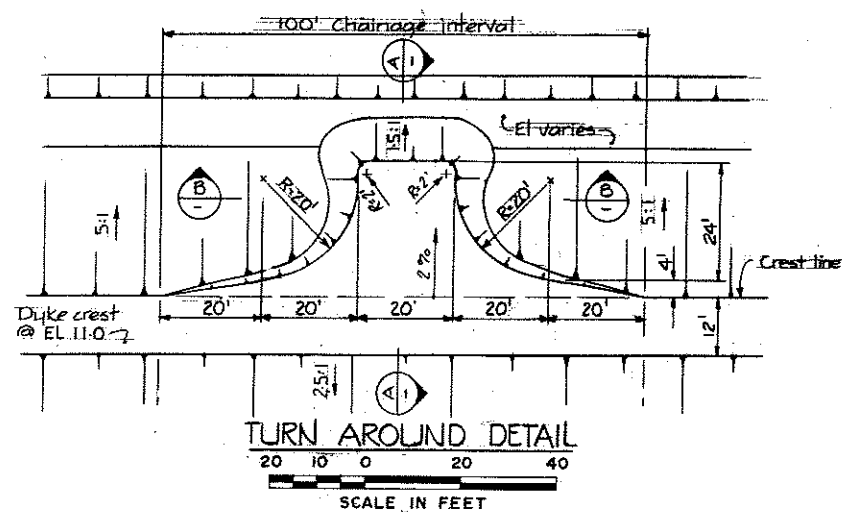
DES: *DLG/DJB* DR: *JJ/SH* CH: *DLG*
 SCALE: *As shown*
 ORIG ISSUE: *Dec. 1973*

THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA
 DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
 WATER RESOURCES SERVICE

CANADA - BRITISH COLUMBIA
 FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
 PROJECT No. 3 THE TOWNSHIP OF RICHMOND

CONTRACT 1 - SEA DYKE IMPROVEMENTS
MISCELLANEOUS DETAILS
SHEET 1 OF 2

FILE NO. 0281550-C10-1 DWG NO. **4795-1-9** REV



NOTES
For Notes, Material Legend & Legend
See 4795-1-9

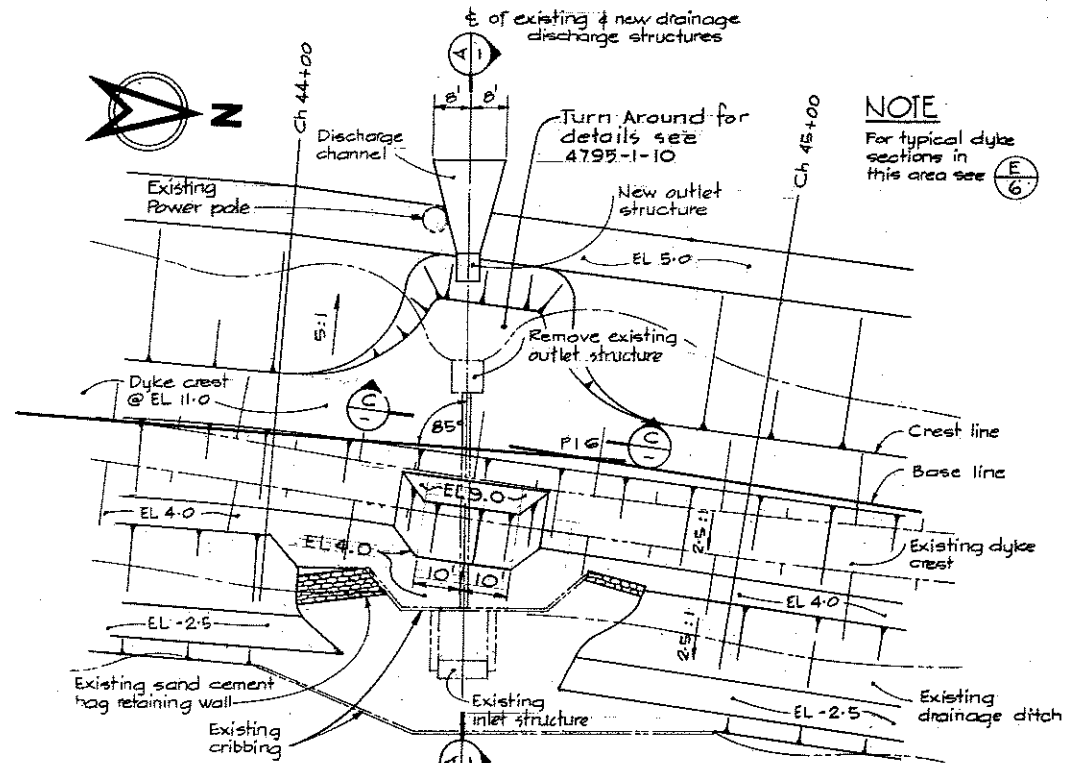
4795-1-11 General Arrangement & Details
4795-1-9 Miscellaneous Details - SH 1 OF 2



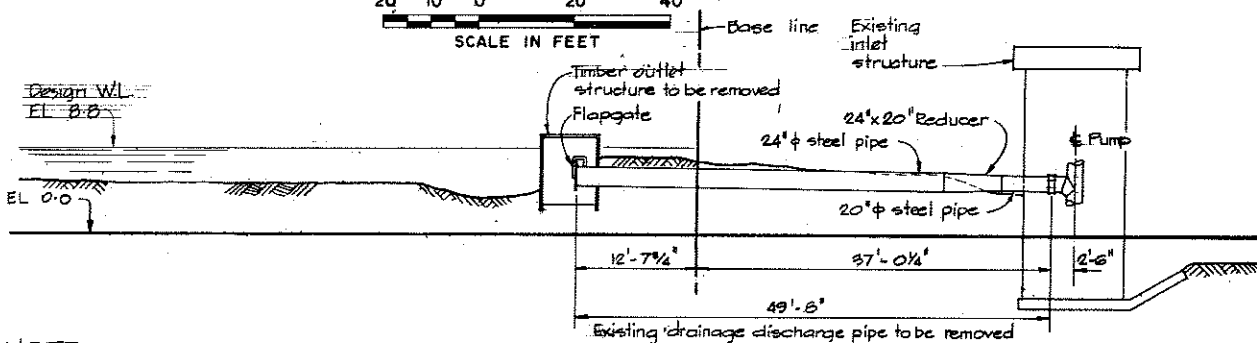
C. B. A. ENGINEERING LTD.		CONSULTING ENGINEERS		VANCOUVER, B.C., CANADA	
RECOMMENDED <i>Rob. Fuller</i> CHIEF PROJECTS DIV.	ELEC	HYD	THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE		
DATE <i>Feb 22/71</i>	MECH	SOILS	CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND		
APPROVED <i>Robert M. Prescott</i> ENGINEER	STR		CONTRACT 1 - SEA DYKE IMPROVEMENTS MISCELLANEOUS DETAILS SHEET 2 OF 2		
DATE <i>Feb 24/71</i>	DES <i>DL</i>	DR <i>DL</i>	CH <i>DL</i>	SCALE AS SHOWN	FILE NO. 0281550-C10-1
	ORIG ISSUE DEC, 1973			DWG NO. 4795-1-10	REV

NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REVISIONS						REVISIONS					

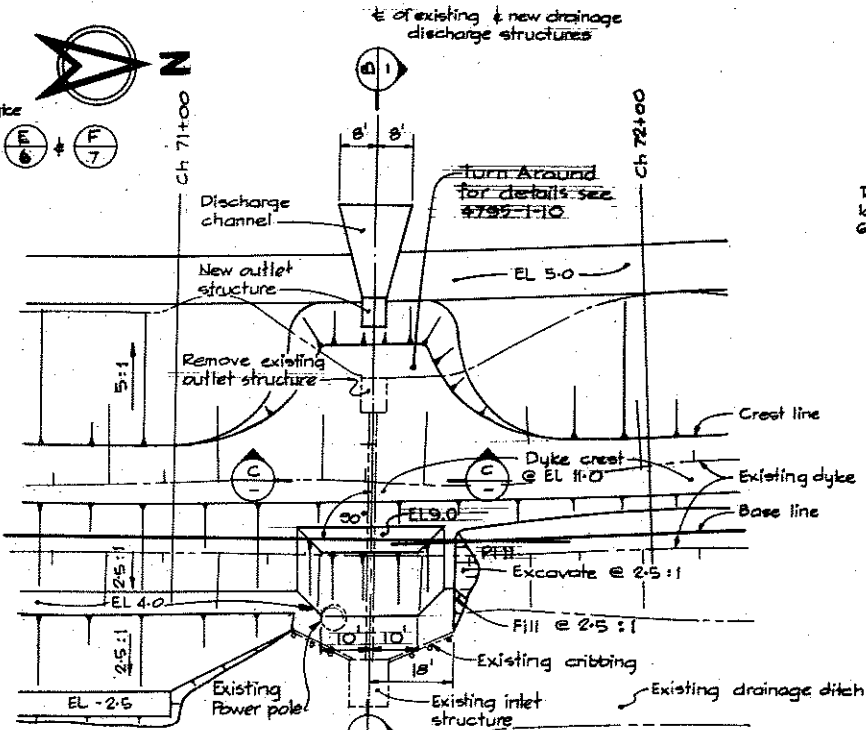
THIS ISSUE SUPERSEDES ALL ISSUES WITH LETTERS PREVIOUS TO



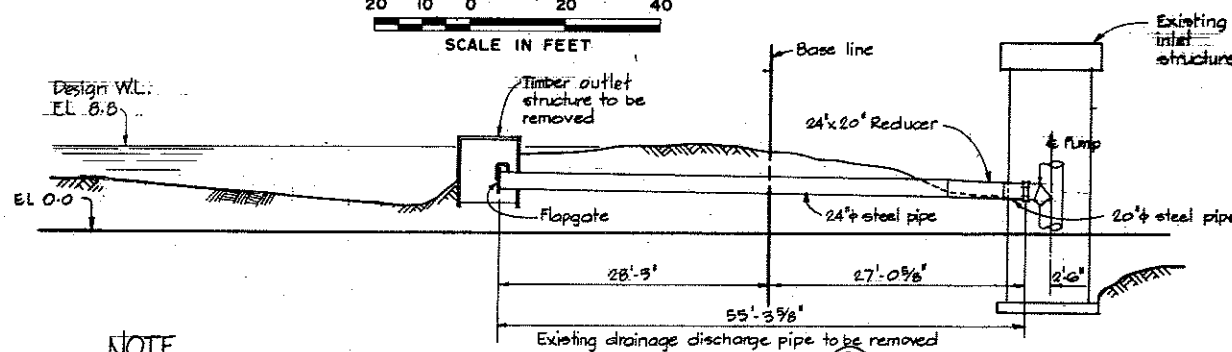
PLAN - WILLIAMS ROAD



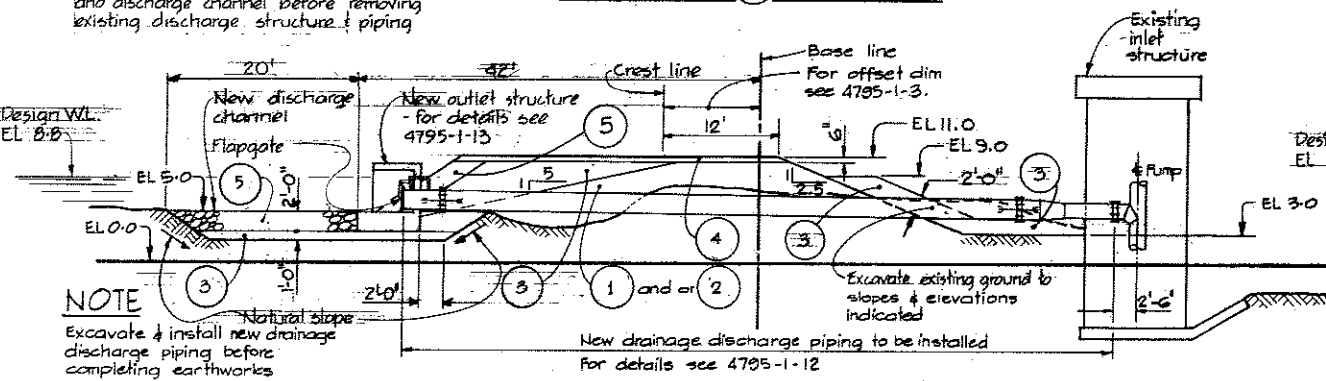
NOTE
Construct new outlet structure and discharge channel before removing existing discharge structure & piping



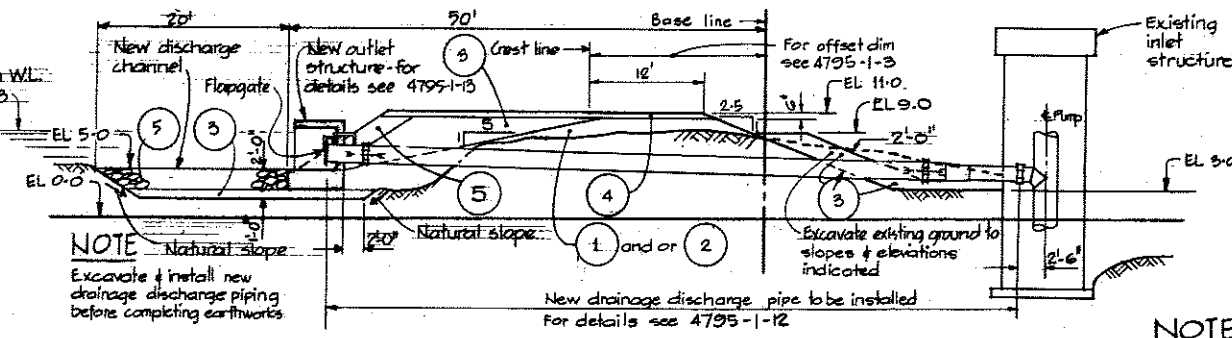
PLAN - FRANCIS ROAD



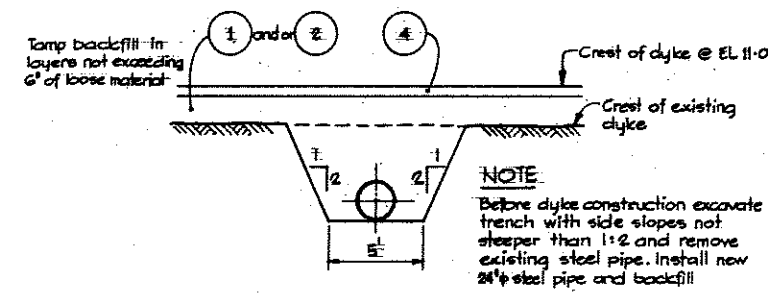
NOTE
Construct new outlet structure and discharge channel before removing existing discharge structure & piping



NOTE
Excavate & install new drainage discharge piping before completing earthworks



NOTE
Excavate & install new drainage discharge piping before completing earthworks



SECTION C

SCALE IN FEET

NOTES
For Notes, Materials Legend & Legend see 4795-1-9.

DWG NO.	TITLE
4795-1-10	Misc Details SH 2 OF 2
4795-1-7	Typical Dyke Sections SH 2 OF 3
4795-1-13	Details of Discharge Structures
4795-1-12	Details of Discharge Piping
4795-1-9	Miscellaneous Details - SH 1 OF 2
4795-1-6	Typical Dyke Sections - SH 1 OF 3
4795-1-3	Alignment Plan - SH 2 OF 4



NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REVISIONS											

C. B. A. ENGINEERING LTD. CONSULTING ENGINEERS VANCOUVER, B.C., CANADA

RECOMMENDED BY: *[Signature]*

DATE: *Feb 22/74*

APPROVED BY: *[Signature]*

DATE: *Feb 25/74*

DES: *[Signature]* DR: SH CH: DLL

SCALE: As shown

ORIG ISSUE: Dec, 1973

FILE NO. 0281550-C10-1

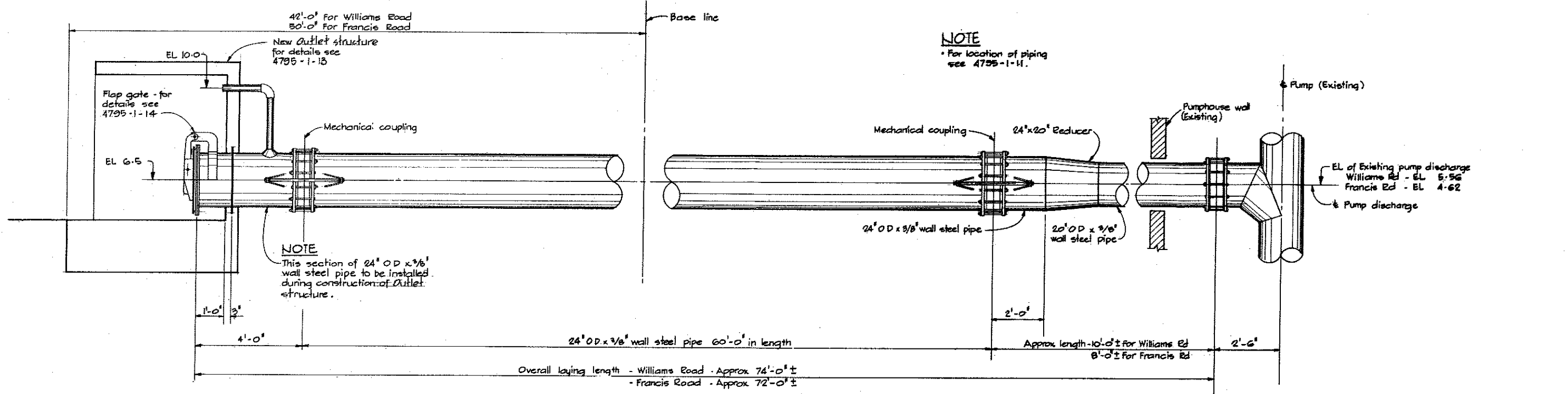
DWG NO. **4795-1-11**

REV

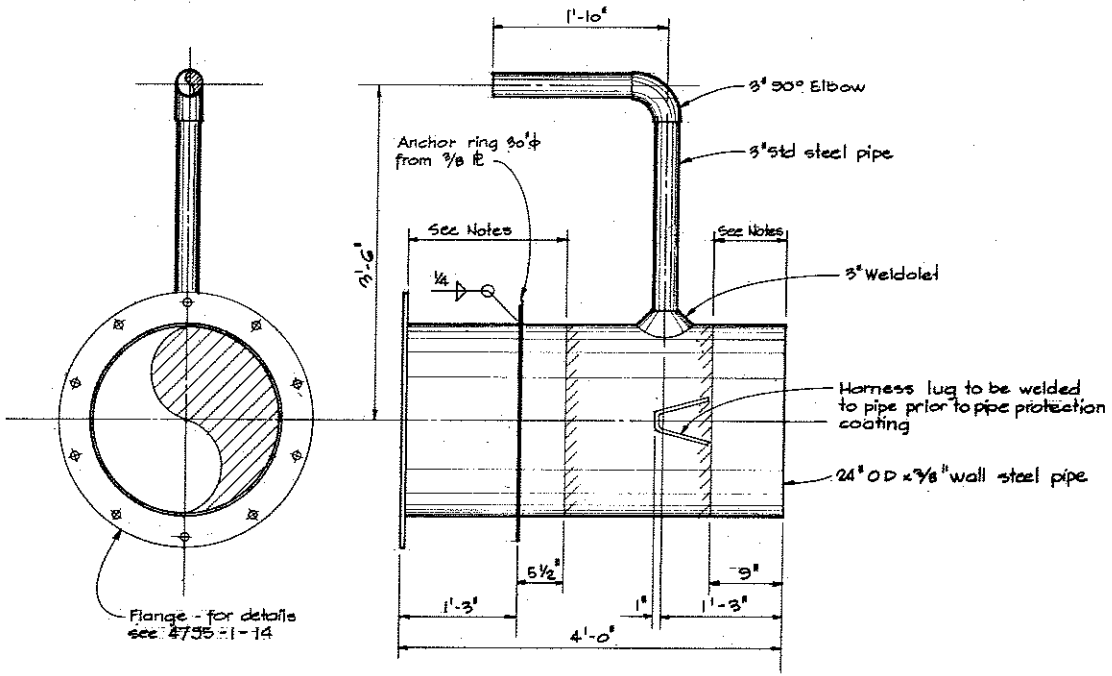
THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE

CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 THE TOWNSHIP OF RICHMOND

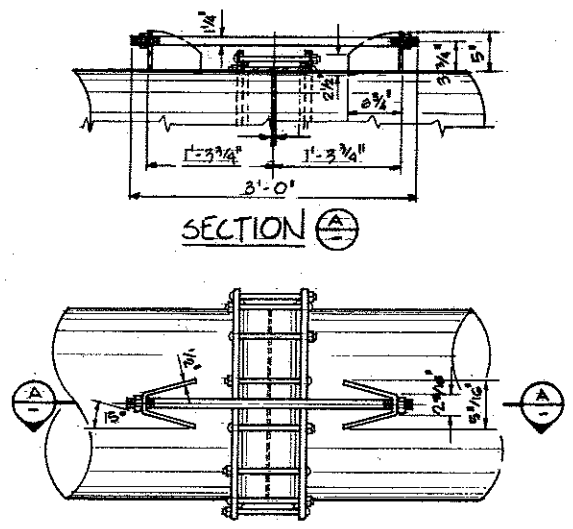
**CONTRACT 1 - SEA DYKE IMPROVEMENTS
DRAINAGE STRUCTURES - FRANCIS & WILLIAMS RDS
GENERAL ARRANGEMENT & DETAILS**



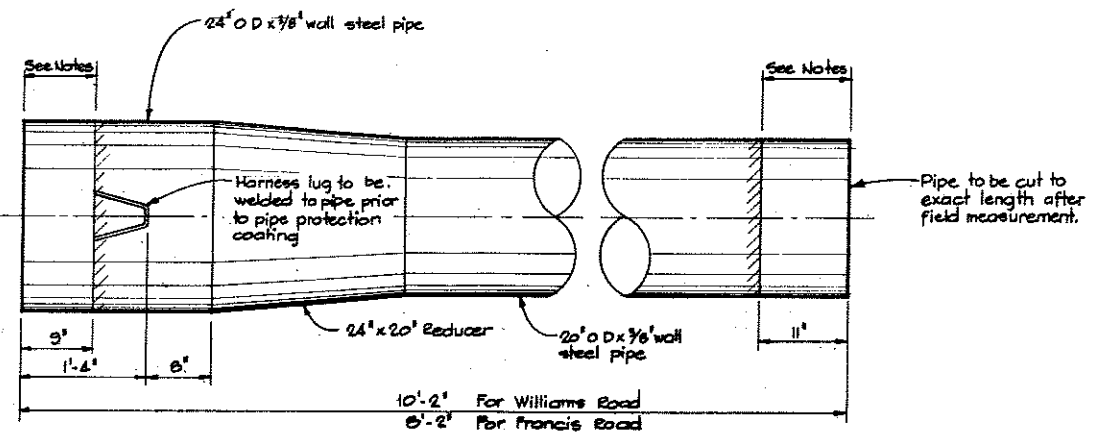
ELEVATION SCALE IN FEET



SCALE IN FEET



ELEVATION MECHANICAL COUPLING & HARNESS SCALE IN FEET



SCALE IN FEET

NOTES
 • Elevations refer to the Geodetic survey of Canada.
 • Pipe protective coating to be cut back in this section see specifications.

DWG NO.	TITLE
4795-1-14	Details of Pump Discharge Flap Gates
4795-1-13	Details of Discharge Structures
4795-1-11	General Arrangement & Details



NO.	DESCRIPTION	BY	CHK	APPD	ISSUED	NO.	DESCRIPTION	BY	CHK	APPD	ISSUED
REVISIONS						REVISIONS					

C. B. A. ENGINEERING LTD. CONSULTING ENGINEERS VANCOUVER, B.C., CANADA

RECOMMENDED BY: *McSherry* ELEC MECH STR

DATE: *Feb 22/73*

APPROVED BY: *McSherry* DR SH CH RHEF

DATE: *Feb 22/73* SCALE: As shown

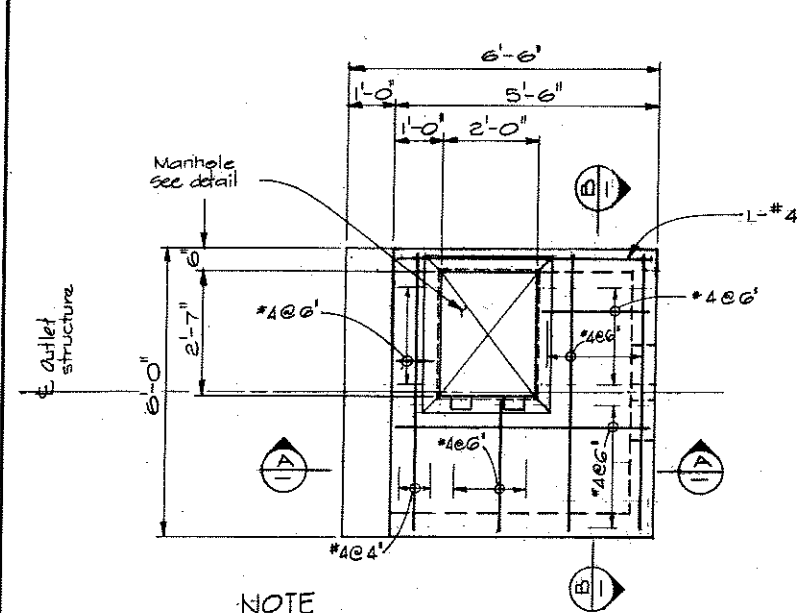
ORIG. ISSUE: Dec. 1973

THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA
 DEPARTMENT OF LANDS FORESTS AND WATER RESOURCES
 WATER RESOURCES SERVICE

CANADA-BRITISH COLUMBIA
 FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
 PROJECT No. 3 THE TOWNSHIP OF RICHMOND

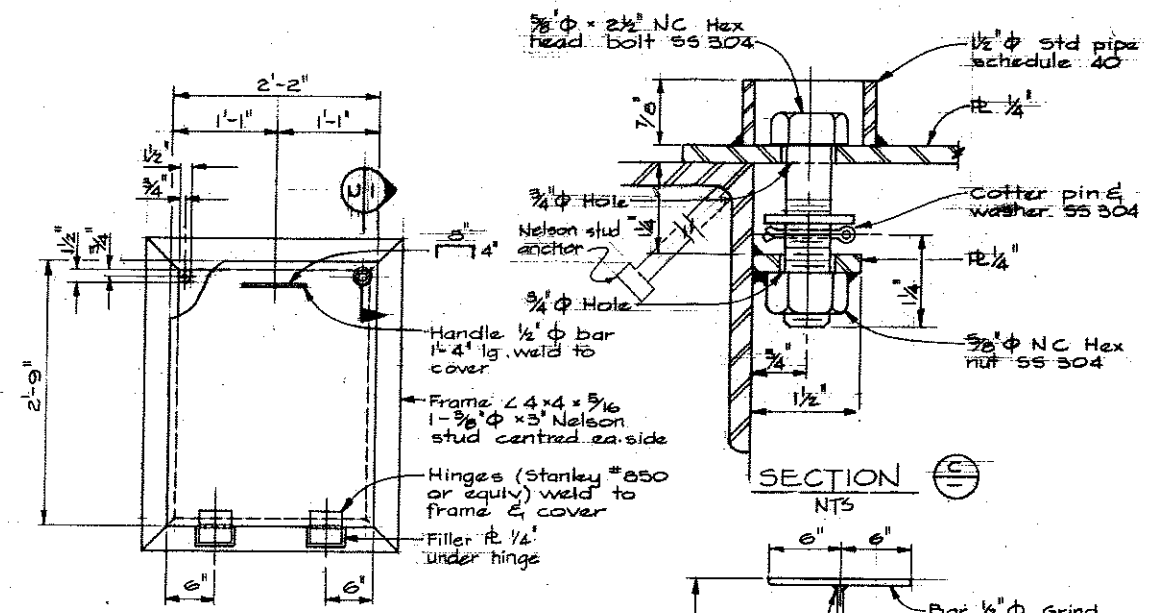
**CONTRACT 1 - SEA DYKE IMPROVEMENTS
 DRAINAGE STRUCTURES - FRANCIS & WILLIAMS RDS
 DETAILS OF DISCHARGE PIPING**

FILE NO. 0281550-C10-1 DWG NO. **4795-1-12** REV



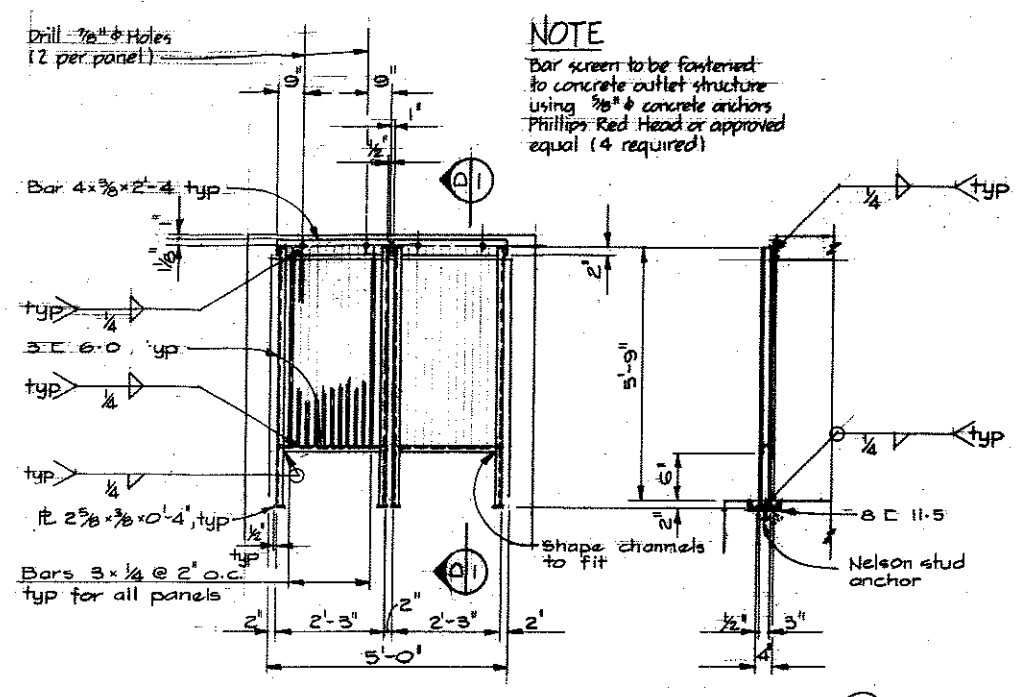
NOTE
 * For location of outlet structure see 4795-1-11

PLAN OUTLET STRUCTURE



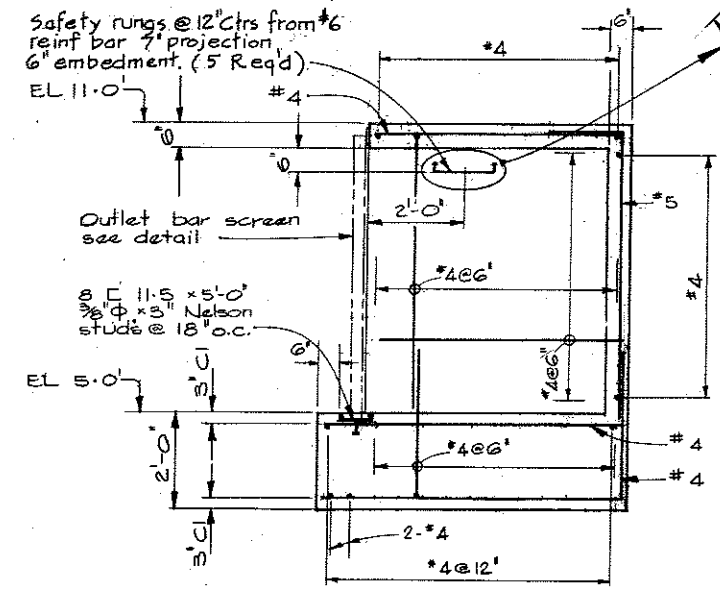
PLAN MANHOLE
 SCALE IN FEET

MANHOLE KEY
 SCALE IN FEET

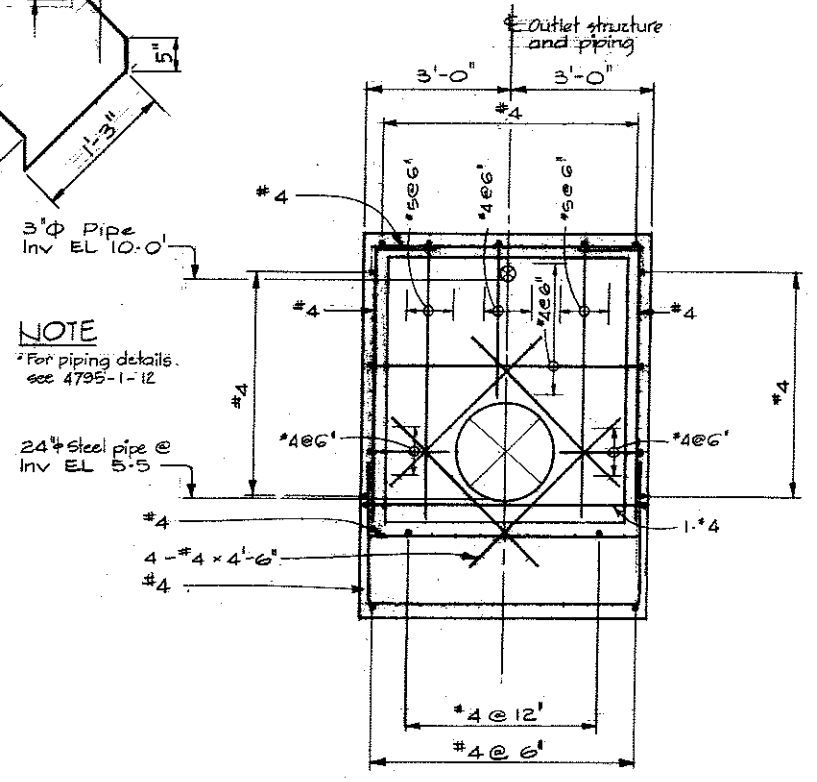


ELEVATION SECTION D-D
OUTLET BAR SCREEN

NOTE
 Bar screen to be fastened to concrete outlet structure using 3/8 inch concrete anchors Phillips Red Head or approved equal (4 required)



SECTION A-A



SECTION B-B

NOTE
 * For piping details see 4795-1-12

NOTES

- Elevations refer to the Geodetic Survey of Canada.
- Projecting concrete corners and edges shall have 1 inch fillets or chamfers unless noted otherwise.
- Minimum length of all splices and laps shall be 30 bar diameters.

2 1 0 2 4
 SCALE IN FEET Unless noted otherwise

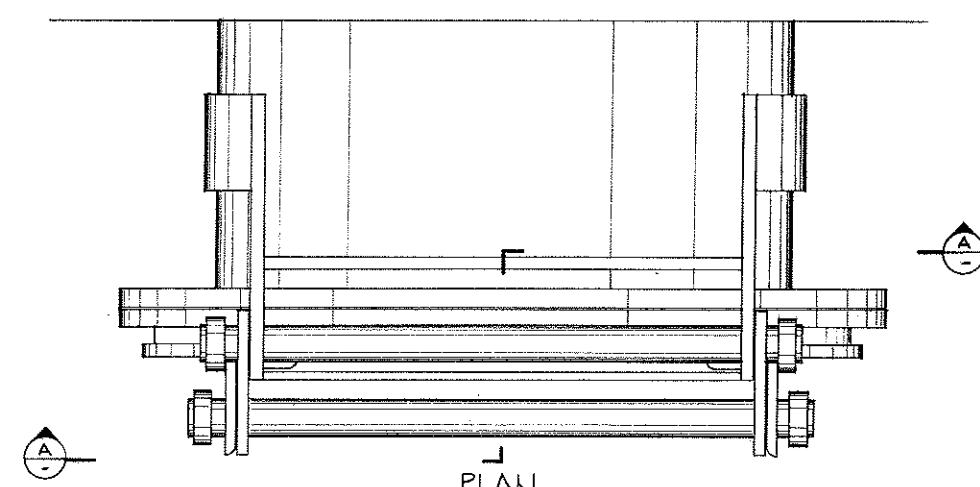
4795-1-12 Details of Discharge Piping
 4795-1-11 General Arrangements & Details



C. B. A. ENGINEERING LTD.		CONSULTING ENGINEERS	VANCOUVER, B.C., CANADA
RECOMMENDED BY: <i>John Hill</i>	ELEC	HYD	THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF LANDS FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE
DATE: Feb 22/74	MECH	SOILS	
APPROVED BY: <i>P.M. Smith</i>	STR		
DESIGN: DSN	DR: DCL	CH: DCL	CANADA-BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND
SCALE: As shown	CONTRACT 1 - SEA DYKE IMPROVEMENTS DRAINAGE STRUCTURES-FRANCIS & WILLIAMS RDS DETAILS OF DISCHARGE STRUCTURES		
DATE: Feb 27/74	ORIG ISSUE	Dec. 1973	FILE NO. 0281550-C10-1
			DWG NO. 4795-1-13

NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REVISIONS											

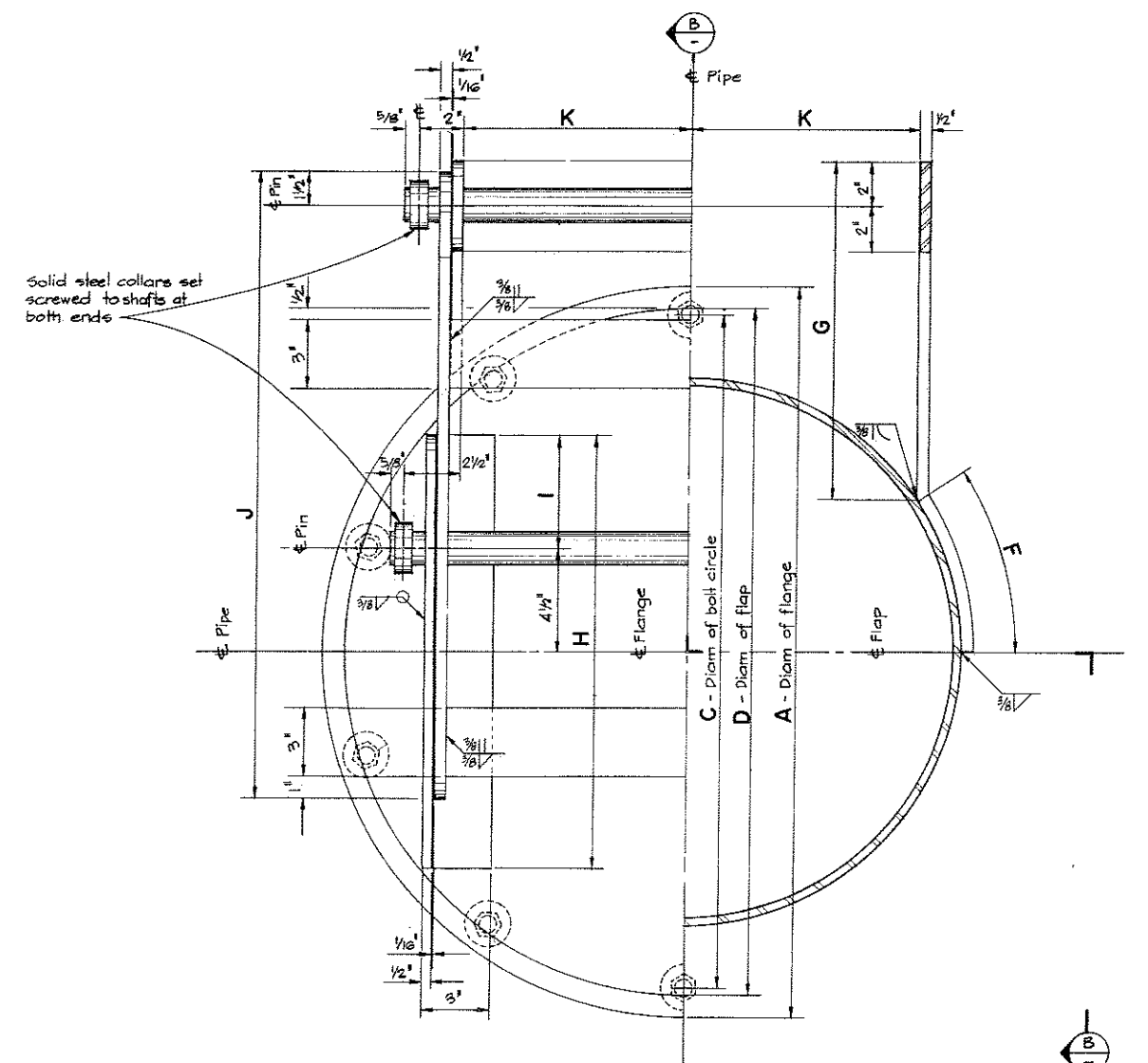
THIS ISSUE SUPERSEDES ALL ISSUES WITH LETTERS PREVIOUS TO



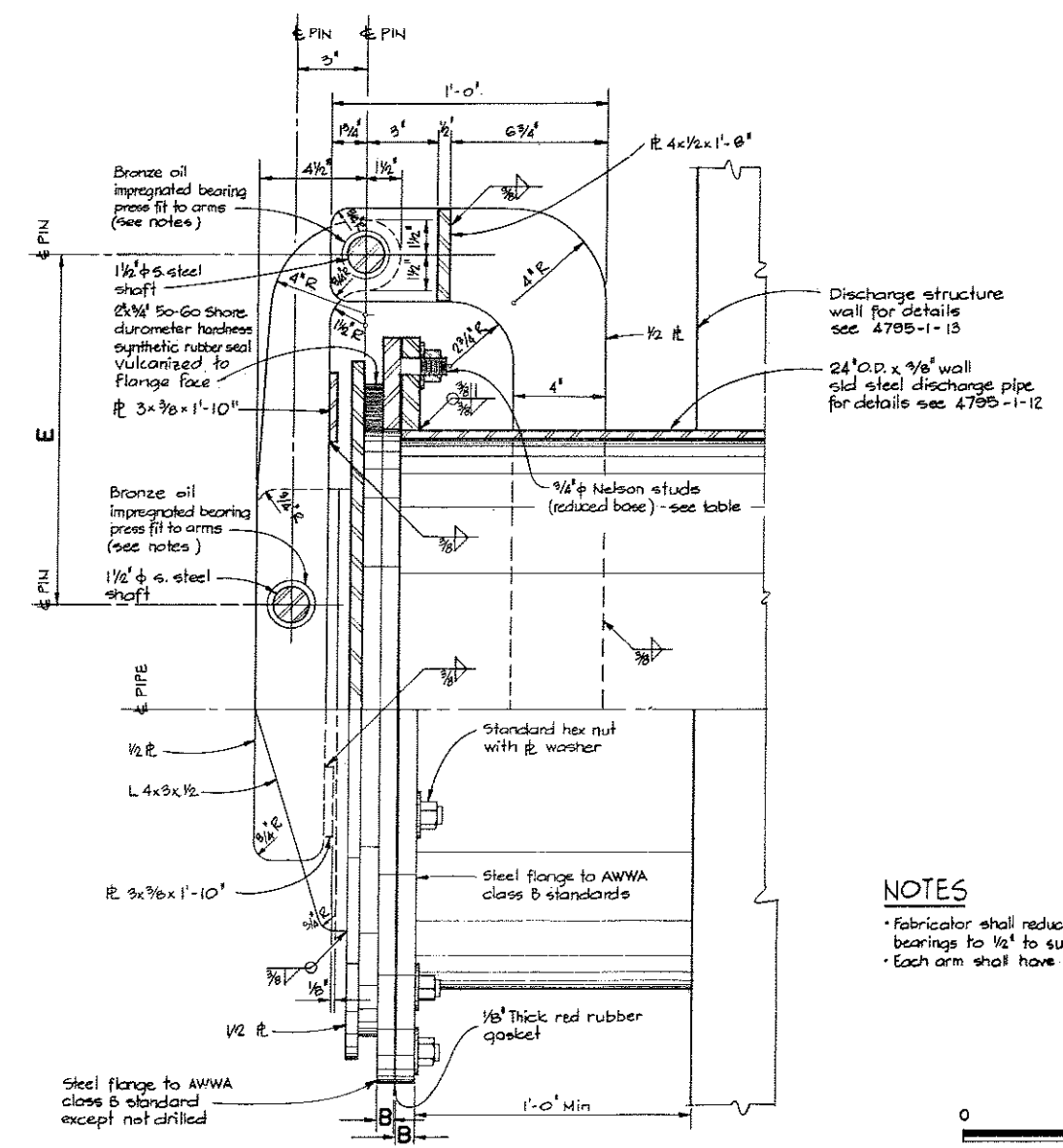
PLAN

NOMINAL PIPE SIZE	A	B	C	D	E	F	G	H	I	J	K
24"	2'-0"	3/4"	2'-5 1/2"	2'-6"	1'-3"	7/4"	1'-2 3/4"	1'-7"	5'	2'-3 1/2"	10"

NELSON STUDS - reduced base	
Diameter	3/4"
Length	2'
Thread	3/4-10NC-2
Length of thread	1 1/8"
Number of studs per flange	10



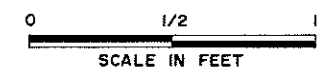
ELEVATION - SECTION A-A



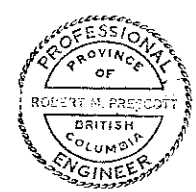
ELEVATION - SECTION B-B

NOTES

- Fabricator shall reduce length of bronze oil impregnated bearings to 1/2" to suit thickness of arms.
- Each arm shall have separate bearing.



DWG NO.	TITLE
4795-1-13	Details of Discharge Structures
4795-1-12	Details of Discharge Piping



NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REVISIONS											

C. B. A. ENGINEERING LTD. CONSULTING ENGINEERS VANCOUVER, B.C., CANADA

RECOMMENDED: *W. S. Sullivan*
 DATE: *Feb 22/74*

APPROVED: *W. S. Sullivan*
 DATE: *Feb 22/74*

ELEC	HYD
ARCH	SOILS
STR	

DES: RHBF DR: SH CH: RHBF
 SCALE: As shown
 ORIG ISSUE: Dec, 1973

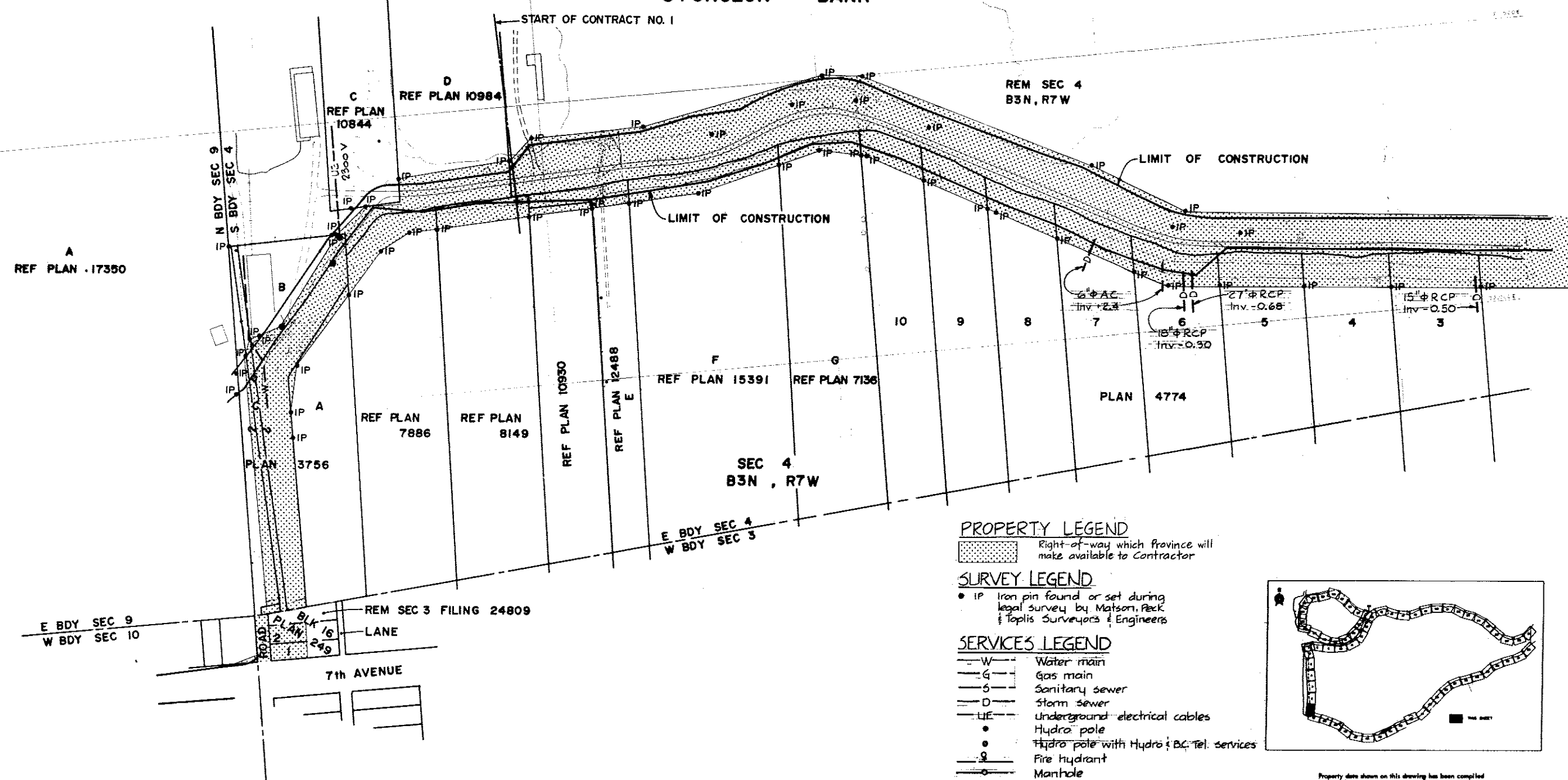
THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA
 DEPARTMENT OF LANDS FORESTS AND WATER RESOURCES
 WATER RESOURCES SERVICE
 CANADA - BRITISH COLUMBIA
 FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
 PROJECT No. 3 THE TOWNSHIP OF RICHMOND

**CONTRACT I - SEA DYKE IMPROVEMENTS
 DRAINAGE STRUCTURES - FRANCIS & WILLIAMS RDS
 DETAILS OF PUMP DISCHARGE FLAP GATES**

FILE NO. 0281550-C10-1 DWG NO. **4795-1-14** REV



STURGEON BANK



PROPERTY LEGEND

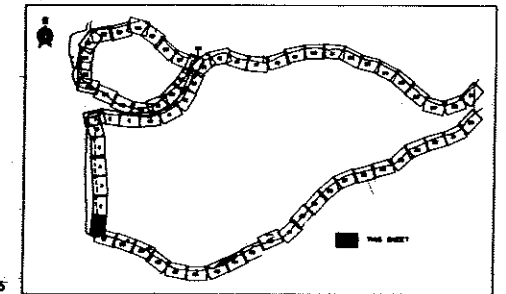
Right-of-way which Province will make available to Contractor

SURVEY LEGEND

• IP Iron pin found or set during legal survey by Matson, Peck & Toplis Surveyors & Engineers

SERVICES LEGEND

- W — Water main
- G — Gas main
- S — Sanitary sewer
- D — Storm sewer
- UE — Underground electrical cables
- Hydro pole
- Hydro pole with Hydro & BC Tel. services
- Fire hydrant
- Manhole



Property data shown on this drawing has been compiled from reference maps listed in the reference column. This data has been recorded in good faith, but is subject to errors inherent in assembling information from varied sources without field measurement. This drawing is for information only and does not constitute a legal document.



DATA COMPILED IN 1970

325-D-1000 Sheet Index
Municipality of Richmond 1"=200'
Section Property Maps
- Section 4 B3N R7W
- Section 9 B3N R7W
Municipality of Richmond Steveston
Aerial Survey Map Sh C2

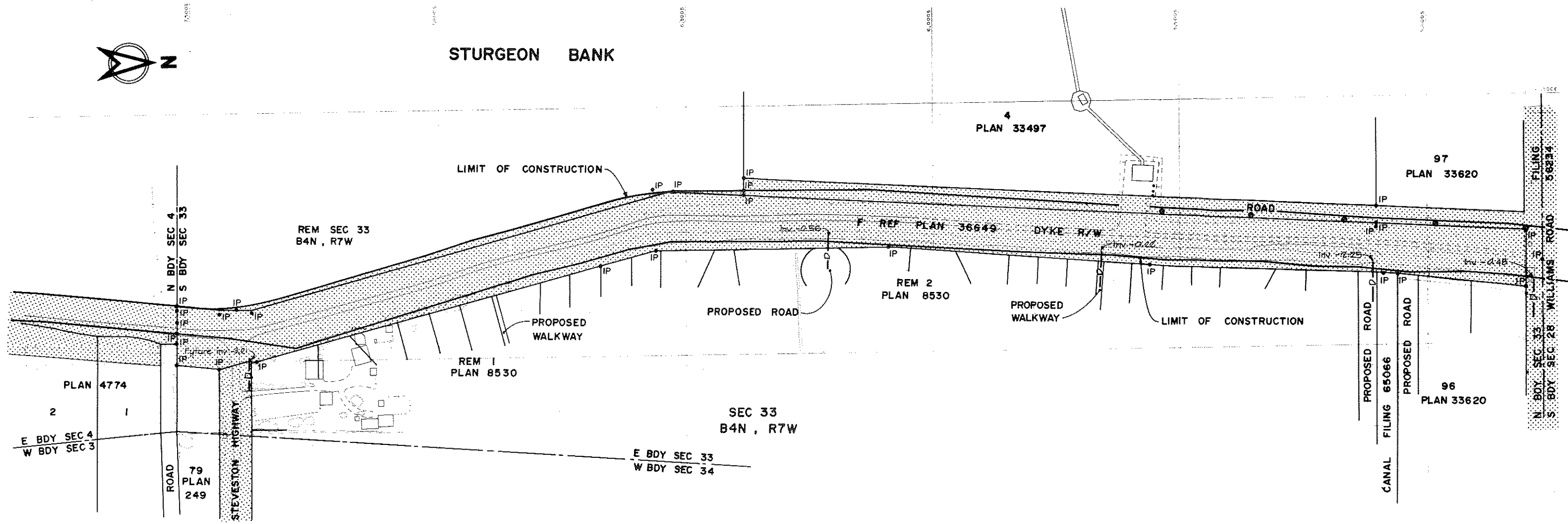
DWG NO.	TITLE
325-D-1000	REFERENCES

NO.	DESCRIPTION	BY	CHK	APPRO	ISSUED	NO.	DESCRIPTION	BY	CHK	APPRO	ISSUED
REVISIONS											

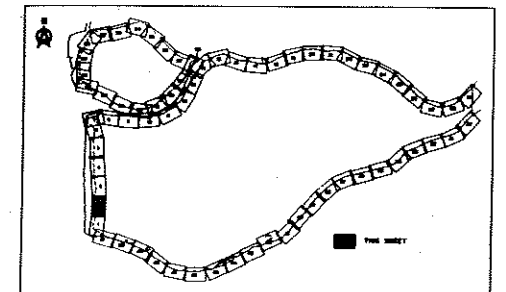
C. B. A. ENGINEERING LTD. CONSULTING ENGINEERS VANCOUVER, B.C., CANADA		ELEC _____ HYD _____ MECH _____ SOILS _____ STR _____	
		DR _____ CH _____ SH _____ DLC _____ SCALE As shown DATE Dec, 1973	
RECOMMENDED <i>Albert Fuller</i> <small>BY PROJECTS DIV.</small>		THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF LANDS FORESTS AND WATER RESOURCES - WATER RESOURCES SERVICE	
DATE <i>Jul 29/74</i>		CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND	
APPROVED <i>P. M. ...</i> <small>BY DIRECTOR</small>		CONTRACT 1 - SEA DYKE IMPROVEMENTS PLAN SHOWING SURVEY LOCATION OF EXISTING SURVEY MARKERS & UTILITIES SHEET 1 OF 6	
DATE <i>Feb 15/74</i>		FILE NO. 0281550-C10-1 DWG NO. 4795-1-15 REV _____	



STURGEON BANK



NOTES
 *For legends see 4795-1-15.



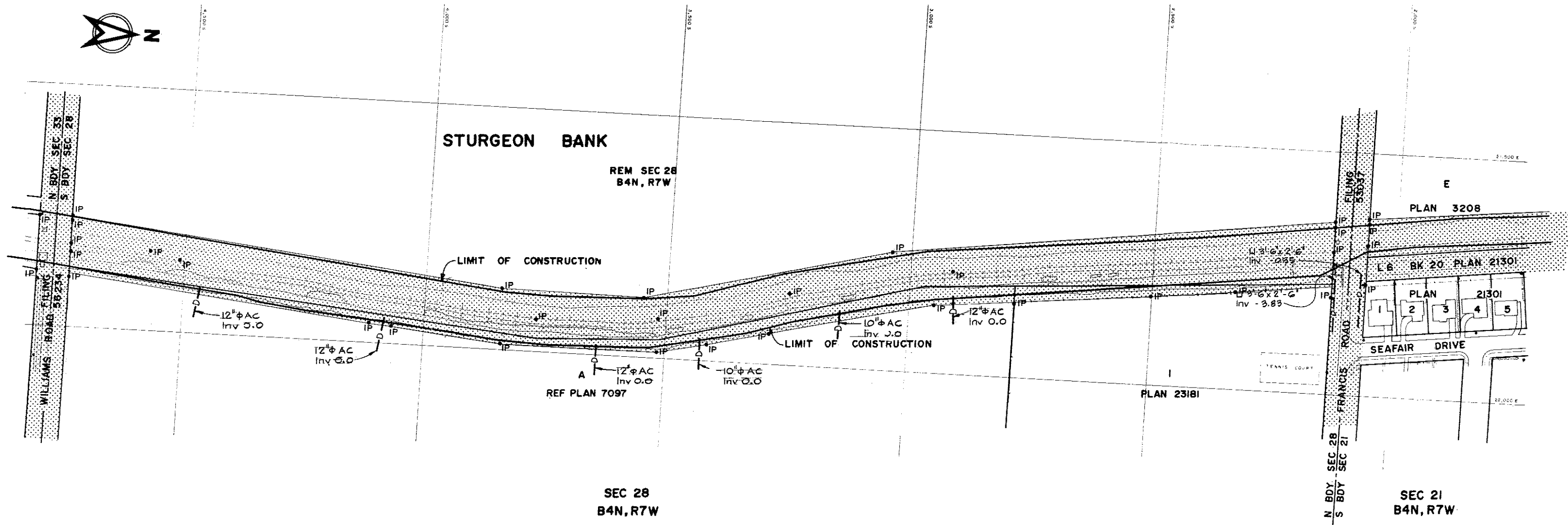
Property data shown on this drawing has been compiled from reference maps listed in the reference column. This data has been recorded in good faith but is subject to error inherent in assembling information from varied sources without field measurement. This drawing is for information only and does not constitute a legal document.

DATA COMPILED IN 1970

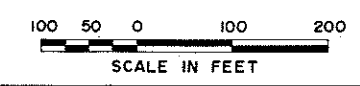
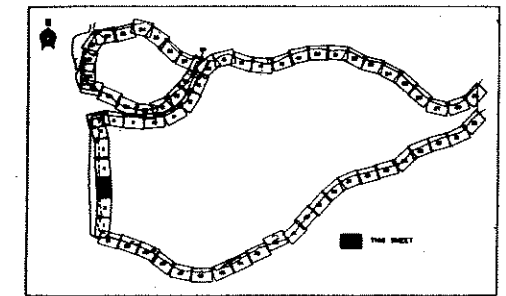
325-D-1000	Sheet Index Municipality of Richmond 1"=200' Section Property Maps -Section 4 B3N R7W -Section 33 B4N R7W
DWG NO.	TITLE
REFERENCES	

NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REVISIONS						REVISIONS					

C. B. A. ENGINEERING LTD.		CONSULTING ENGINEERS VANCOUVER, B.C., CANADA	
RECOMMENDED <i>Albert J. Miller</i> CHIEF PROJECTS DIV.	ELEC	HYD	MECH
DATE <i>Feb 22/74</i>	SOILS	STR	
APPROVED <i>M. Quady</i> DIRECTOR	DES	DR	SH
DATE <i>Feb 22/74</i>	SCALE	CH	DLC
	As shown		
	ORG ISSUE		
	Dec, 1973		
FILE NO. 0281550-010-1		DWG NO. 4795-1-16	
		REV	



NOTES
 *For legends see 4795-1-15.



Property data shown on this drawing has been compiled from reference maps listed in the reference column. This data has been recorded in good faith but is subject to errors inherent in assembling information from varied sources without field measurement. This drawing is for information only and does not constitute a legal document.
 DATA COMPILED IN 1970

325-D-1000 Sheet Index	
Municipality of Richmond 1"=200'	
Section Property Maps	
-Section 21 B4N R7W	
-Section 28 B4N R7W	
DWG NO.	TITLE
REFERENCES	

NO.	DESCRIPTION	BY	CHK	APPR	ISSUED	NO.	DESCRIPTION	BY	CHK	APPR	ISSUED
REVISIONS						REVISIONS					

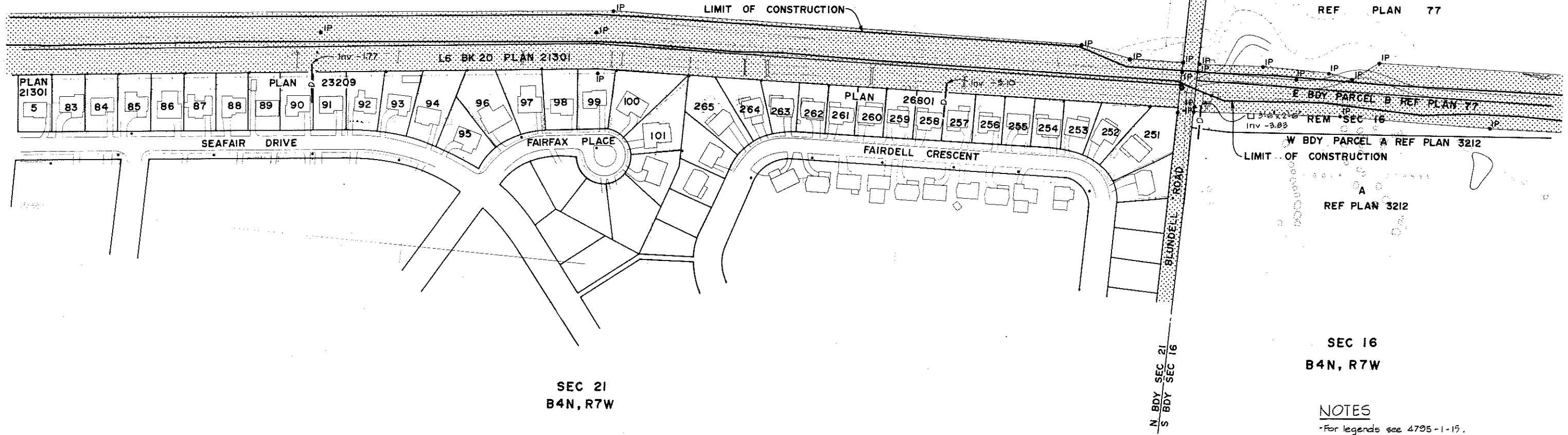
C. B. A. ENGINEERING LTD.		CONSULTING ENGINEERS		VANCOUVER, B.C., CANADA	
RECOMMENDED <i>John F. [Signature]</i> CHIEF, PROJECTS DIV.	ELC	HYD	THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE		
DATE <i>Feb 22/74</i>	MECH	SOILS	CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND		
APPROVED <i>[Signature]</i> SUPERVISOR	STR		CONTRACT 1 - SEA DYKE IMPROVEMENTS PLAN SHOWING SURVEY LOCATION OF EXISTING SURVEY MARKERS & UTILITIES SHEET 3 OF 6		
DATE <i>Feb 22/74</i>	DIS	DE	SH	CH	DLC
	SCALE	As shown			
	ORIG. ISSUE	Dec, 1973		FILE NO. 021550-C10-1	DWG NO. 4795-1-17

THIS ISSUE SUPERSEDES ALL ISSUES WITH LETTERS PREVIOUS TO



E
PLAN 3208

STURGEON BANK



B
REF PLAN 77

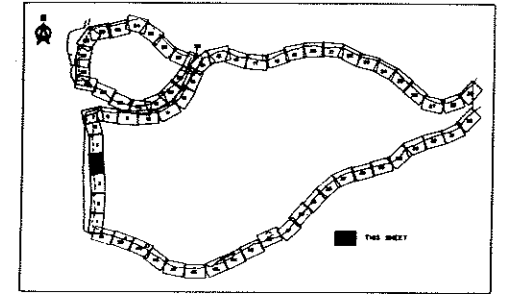
E BDY PARCEL B REF PLAN 77
REM SEC 16
W BDY PARCEL A REF PLAN 3212
LIMIT OF CONSTRUCTION
A
REF PLAN 3212

SEC 21
B4N, R7W

SEC 16
B4N, R7W

NOTES

-For legends see 4795-1-15.



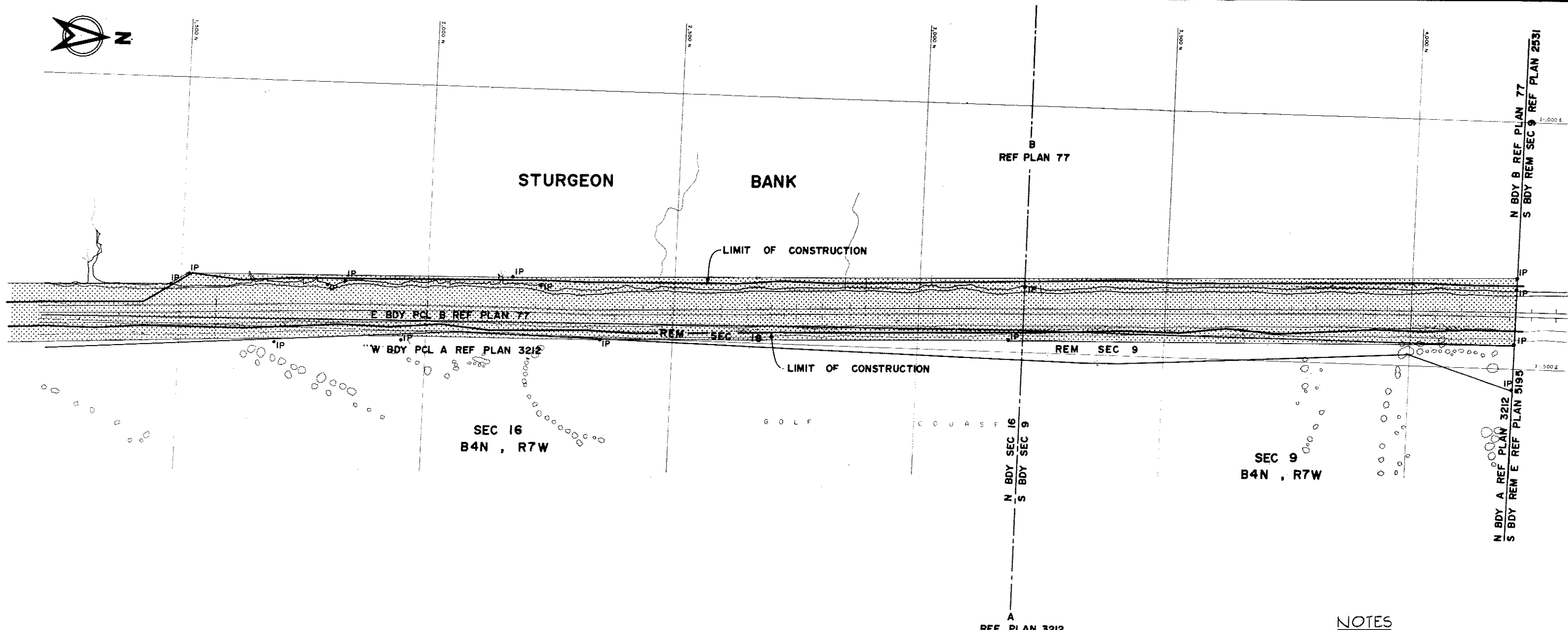
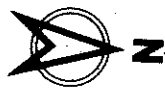
DATA COMPILED IN 1970

325-D-1000	Sheet Index Municipality of Richmond 1"=200' Section Property Maps -Section 21 B4N R7W
DWG NO.	TITLE
REFERENCES	

NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REVISIONS											

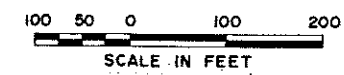
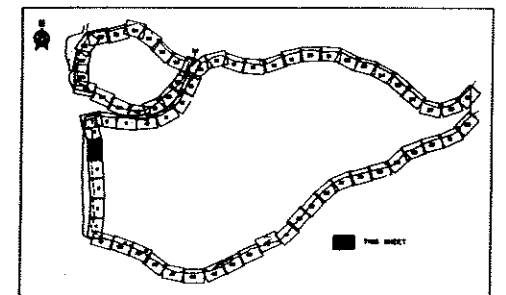
C. B. A. ENGINEERING LTD.			CONSULTING ENGINEERS		VANCOUVER, B.C., CANADA	
RECOMMENDED	ELEC	HYD	THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF LANDS FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE			
DATE	MECH	SOILS				
APPROVED	STR	DES	DR	SH	CH	DLC
DATE	SCALE	As shown		CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND		
DATE	ORG ISSUE	Dec, 1973				
FILE NO. 0281550-C10-1			DWG NO. 4795-1-18		REV	

THIS ISSUE SUPERSEDES ALL ISSUES WITH LETTERS PREVIOUS TO



NOTES

* For legends see 4795-1-15.



Property data shown on this drawing has been compiled from reference maps listed in the reference column. This data has been recorded in good faith but is subject to errors inherent in compiling information from varied sources without field measurement. This drawing is for information only and does not constitute a legal document.

DATA COMPILED IN 1970

325-D-1000 Sheet Index	
DWG NO.	TITLE
REFERENCES	

NO.	DESCRIPTION	BY	CHK	APPD	ISSUED	NO.	DESCRIPTION	BY	CHK	APPD	ISSUED
REVISIONS						REVISIONS					

C. B. A. ENGINEERING LTD. CONSULTING ENGINEERS VANCOUVER, B.C., CANADA

THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA
DEPARTMENT OF LANDS FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE

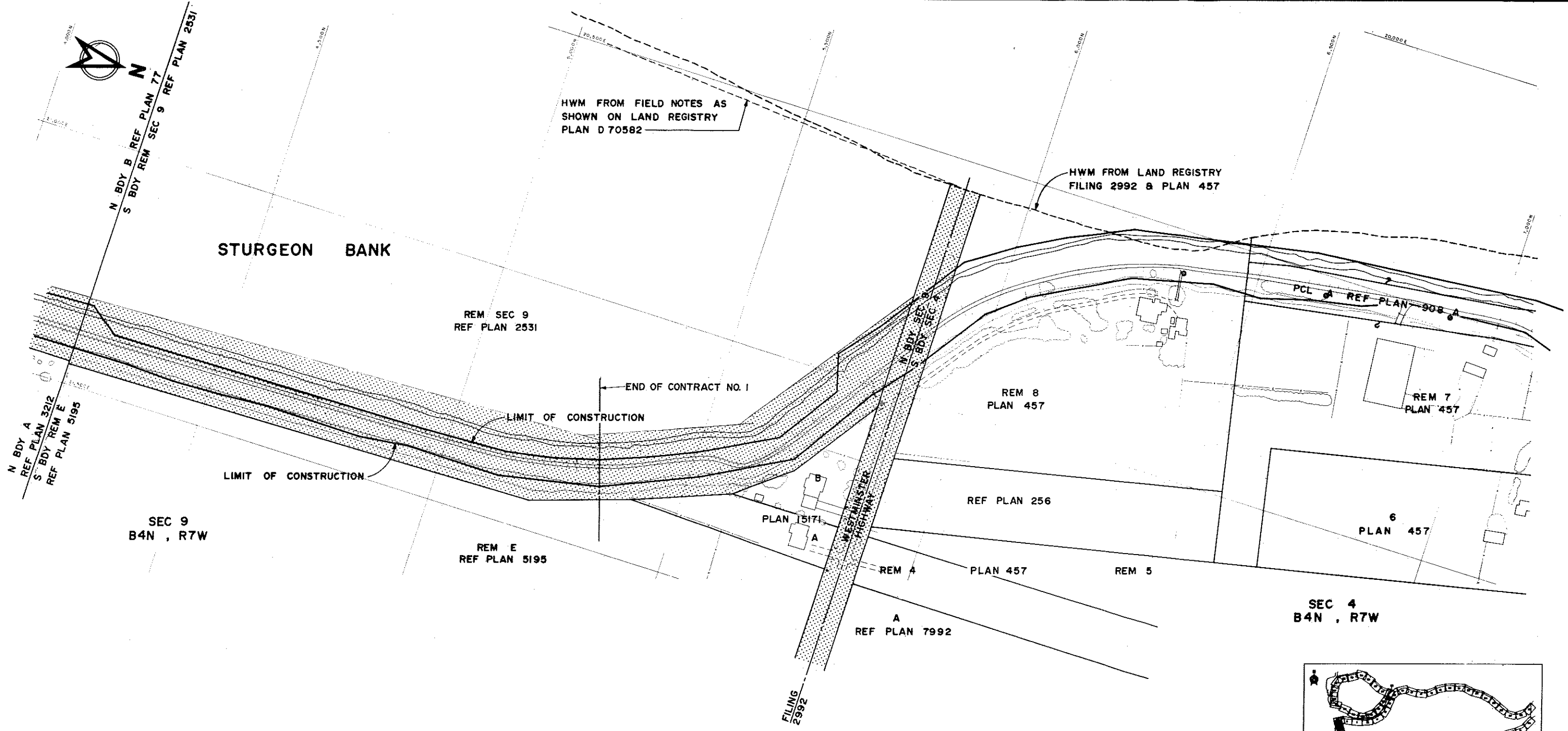
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT No. 3 THE TOWNSHIP OF RICHMOND

CONTRACT 1 - SEA DYKE IMPROVEMENTS
PLAN SHOWING LOCATION OF
EXISTING SURVEY MARKERS & UTILITIES
SHEET 5 OF 6

RECOMMENDED: *John Fuller* (MECH. PRODUCTS DIV.)
DATE: *Feb 22/73*
APPROVED: *P. B. [Signature]* (DIRECTOR)
DATE: *Edwin*

DES: [] DR: [] SH: [] CH: []
SCALE: As shown
ORIG ISSUE: Dec, 1973

FILE NO. 0281550-C10-1
DWG NO. 4795-1-19
REV



HWM FROM FIELD NOTES AS SHOWN ON LAND REGISTRY PLAN D 70582

HWM FROM LAND REGISTRY FILING 2992 & PLAN 457

STURGEON BANK

REM SEC 9
REF PLAN 2531

END OF CONTRACT NO. 1

LIMIT OF CONSTRUCTION

REM 8
PLAN 457

REM 7
PLAN 457

LIMIT OF CONSTRUCTION

SEC 9
B4N, R7W

REM E
REF PLAN 5195

PLAN 15171

REF PLAN 256

6
PLAN 457

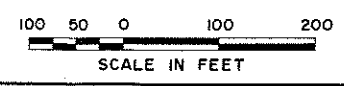
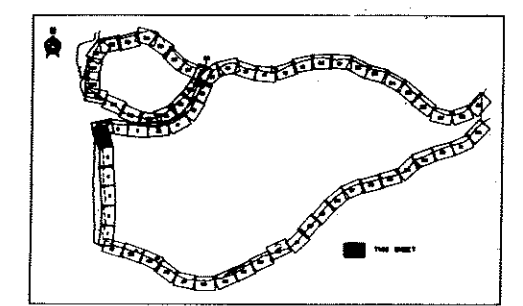
WESTMINSTER HIGHWAY
FILING 2992

REM 4
PLAN 457

REM 5

SEC 4
B4N, R7W

NOTES
For legends see 4795-1-15.



Property data shown on this drawing has been compiled from reference maps listed in the reference column. This data has been recorded in good faith but is subject to errors inherent in assembling information from varied sources without field measurement. This drawing is for information only and does not constitute a legal document.
DATA COMPILED IN 1970

325-D-1000 Sheet Index	
DWG NO.	TITLE
REFERENCES	

NO.	DESCRIPTION	BY	CHK	APPD	ISSUED	NO.	DESCRIPTION	BY	CHK	APPD	ISSUED
REVISIONS						REVISIONS					

C. B. A. ENGINEERING LTD. CONSULTING ENGINEERS VANCOUVER, B.C., CANADA

RECOMMENDED: *[Signature]* CHIEF, PROJECTS DIV.
DATE: Feb 22/74

APPROVED: *[Signature]* APPROVER
DATE: Feb 27/74

RECORD	HYD
MECH	SOILS
STR	
DES	DR SH CH DLC
SCALE	As shown
ORIG ISSUE	Dec, 1973

THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
CANADA, BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT No. 3 THE TOWNSHIP OF RICHMOND

CONTRACT 1 - SEA DYKE IMPROVEMENTS
PLAN SHOWING LOCATION OF
EXISTING SURVEY MARKERS & UTILITIES
SHEET 6 OF 6

FILE NO. 0281550-C10-1 DWG NO. 4795-1-20 REV