

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

DRAWING LIST

CONTRACT DRAWINGS

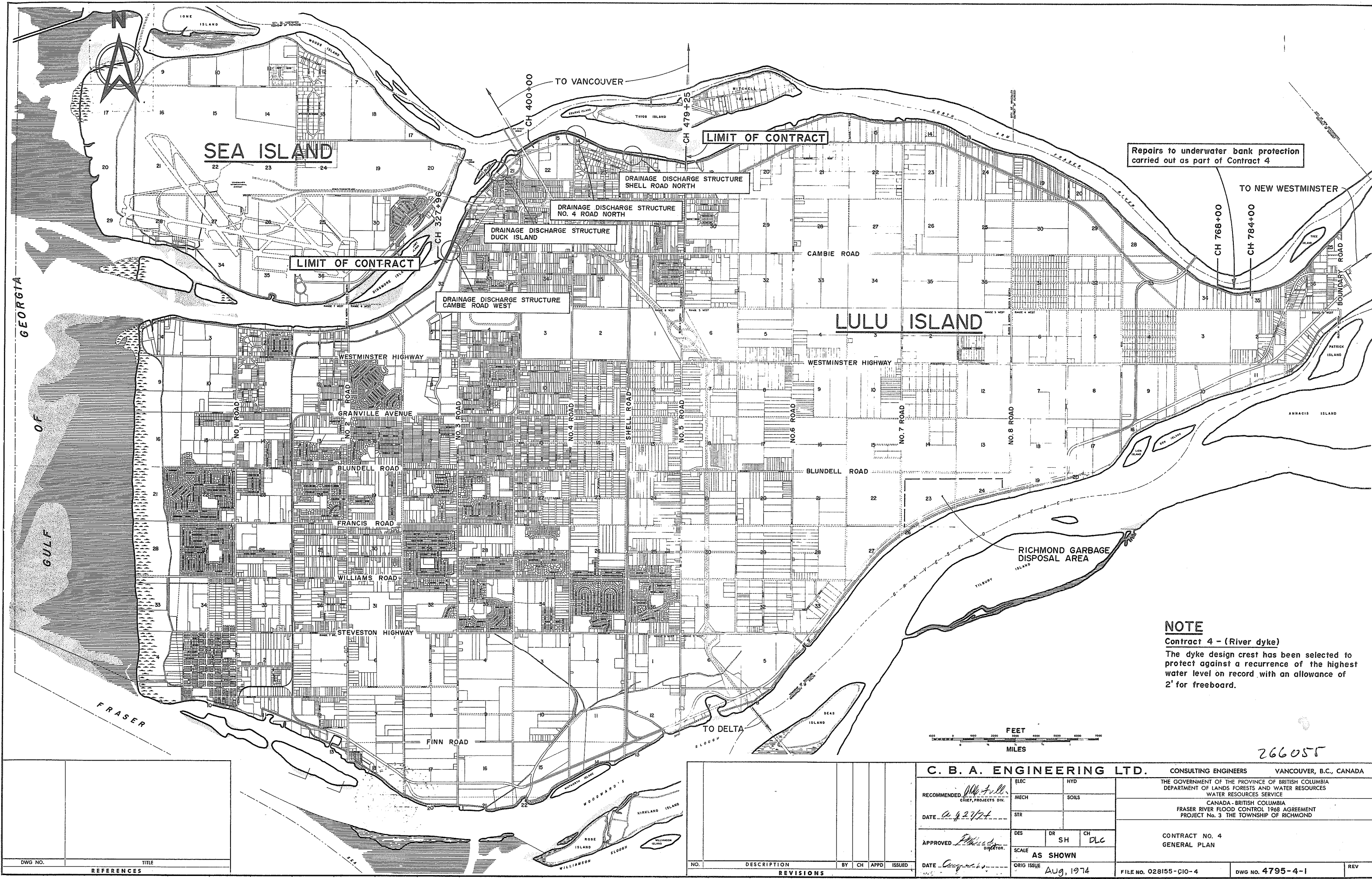
4795-4-1	GENERAL PLAN	4795-4-39	SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ENTRY CULVERT CONCRETE OUTLINE	4795-4-75	CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE ELECTRICAL SCHEMATIC DIAGRAM SHEET 1 OF 2
4795-4-2	ALIGNMENT PLAN CH 327+96 TO CH 365+52	4795-4-40	CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE REINFORCING - SHEET 1 OF 3	4795-4-76	CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE ELECTRICAL SCHEMATIC DIAGRAM SHEET 2 OF 2
4795-4-3	ALIGNMENT PLAN CH 365+52 TO CH 425+35	4795-4-41	CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE REINFORCING - SHEET 2 OF 3	4795-4-77	NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ELECTRICAL SCHEMATIC DIAGRAM SHEET 1 OF 2
4795-4-4	ALIGNMENT PLAN CH 425+35 TO CH 479+25	4795-4-42	CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE REINFORCING - SHEET 3 OF 3	4795-4-78	NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ELECTRICAL SCHEMATIC DIAGRAM SHEET 2 OF 2
4795-4-5	TYPICAL DYKE SECTIONS SHEET 1 OF 10	4795-4-43	NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE REINFORCING - SHEET 1 OF 3	4795-4-79	SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ELECTRICAL SCHEMATIC DIAGRAM SHEET 1 OF 2
4795-4-6	TYPICAL DYKE SECTIONS SHEET 2 OF 10	4795-4-44	NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE REINFORCING - SHEET 2 OF 3	4795-4-80	SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ELECTRICAL SCHEMATIC DIAGRAM SHEET 2 OF 2
4795-4-7	TYPICAL DYKE SECTIONS SHEET 3 OF 10	4795-4-45	NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE REINFORCING - SHEET 3 OF 3	4795-4-81	DUCK ISLAND DRAINAGE DISCHARGE STRUCTURE ONE LINE DIAGRAM AND ELECTRICAL LAYOUT
4795-4-8	TYPICAL DYKE SECTIONS SHEET 4 OF 10	4795-4-46	SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE REINFORCING - SHEET 1 OF 3	4795-4-82	DUCK ISLAND DRAINAGE DISCHARGE STRUCTURE EQUIPMENT KIOSKS
4795-4-9	TYPICAL DYKE SECTIONS SHEET 5 OF 10	4795-4-47	SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE REINFORCING - SHEET 2 OF 3	4795-4-83	DUCK ISLAND DRAINAGE DISCHARGE STRUCTURE ELECTRICAL SCHEMATIC DIAGRAM
4795-4-10	TYPICAL DYKE SECTIONS SHEET 6 OF 10	4795-4-48	SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE REINFORCING - SHEET 3 OF 3	4795-4-84	CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE ARCHITECTURAL DETAILS SHEET 1 OF 2
4795-4-11	TYPICAL DYKE SECTIONS SHEET 7 OF 10	4795-4-49	DUCK ISLAND DRAINAGE DISCHARGE STRUCTURE REINFORCING - SHEET 1 OF 2	4795-4-85	CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE ARCHITECTURAL DETAILS SHEET 2 OF 2
4795-4-12	TYPICAL DYKE SECTIONS SHEET 8 OF 10	4795-4-50	NOT USED	4795-4-86	NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ARCHITECTURAL DETAILS SHEET 1 OF 3
4795-4-13	TYPICAL DYKE SECTIONS SHEET 9 OF 10	4795-4-51	CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE ENTRY CULVERT REINFORCING	4795-4-87	NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ARCHITECTURAL DETAILS SHEET 2 OF 3
4795-4-14	TYPICAL DYKE SECTIONS SHEET 10 OF 10	4795-4-52	NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ENTRY CULVERT REINFORCING	4795-4-88	NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ARCHITECTURAL DETAILS SHEET 3 OF 3
4795-4-15	MARINA AREA CH 338+00 TO 350+00 DYKE DETAILS - SHEET 1 OF 2	4795-4-53	SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ENTRY CULVERT REINFORCING	4795-4-89	SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ARCHITECTURAL DETAILS SHEET 1 OF 2
4795-4-16	MARINA AREA CH 338+00 TO 350+00 DYKE DETAILS - SHEET 2 OF 2	4795-4-54	DRAINAGE DISCHARGE STRUCTURES ROOF REINFORCING	4795-4-90	SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ARCHITECTURAL DETAILS SHEET 2 OF 2
4795-4-17	CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE DETAILS OF EARTHWORKS	4795-4-55	CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE ARRANGEMENT OF MECHANICAL AND ELECTRICAL EQUIPMENT		
4795-4-18	DUCK ISLAND DRAINAGE DISCHARGE STRUCTURE DETAILS OF EARTHWORKS	4795-4-56	NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ARRANGEMENT OF MECHANICAL AND ELECTRICAL EQUIPMENT		
4795-4-19	NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE DETAILS OF EARTHWORKS	4795-4-57	SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ARRANGEMENT OF MECHANICAL AND ELECTRICAL EQUIPMENT		
4795-4-20	SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE DETAILS OF EARTHWORKS	4795-4-58	DUCK ISLAND DRAINAGE DISCHARGE STRUCTURE ARRANGEMENT OF MECHANICAL AND ELECTRICAL EQUIPMENT		
4795-4-21	MISCELLANEOUS DETAILS	4795-4-59	CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE PUMP SUPPORT FRAME AND FLOOR PLATING		
4795-4-22	BANK PROTECTION ALIGNMENT CH 768+00 TO CH 784+00	4795-4-60	NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE PUMP SUPPORT FRAME AND FLOOR PLATING		
4795-4-23	BANK PROTECTION SECTIONS SHEET 1 OF 5	4795-4-61	SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE PUMP SUPPORT FRAME AND FLOOR PLATING		
4795-4-24	BANK PROTECTION SECTIONS SHEET 2 OF 5	4795-4-62	DRAINAGE DISCHARGE STRUCTURES MAINTENANCE FLOOR SUPPORT FRAMES AND GRATING		
4795-4-25	BANK PROTECTION SECTIONS SHEET 3 OF 5	4795-4-63	NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE DETAILS OF 30" DIA. DISCHARGE PIPEWORK		
4795-4-26	BANK PROTECTION SECTIONS SHEET 4 OF 5	4795-4-64	CAMBIE ROAD WEST AND SHELL ROAD NORTH DETAILS OF 24" DIA. DISCHARGE PIPEWORK		
4795-4-27	BANK PROTECTION SECTIONS SHEET 5 OF 5	4795-4-65	DRAINAGE DISCHARGE STRUCTURES DETAILS OF 12" DIA. DISCHARGE PIPEWORK		
4795-4-28	EXISTING DRAINAGE DISCHARGE STRUCTURES WORKS TO BE REMOVED	4795-4-66	CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE ENTRY SCREEN	4795-4-91	PLAN SHOWING LOCATION OF EXISTING SURVEY MARKERS AND UTILITIES SHEET 1 OF 6
4795-4-29	CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE LAYOUT AND POWER SUPPLY	4795-4-67	DRAINAGE DISCHARGE STRUCTURES MISCELLANEOUS SCREENS	4795-4-92	PLAN SHOWING LOCATION OF EXISTING SURVEY MARKERS AND UTILITIES SHEET 2 OF 6
4795-4-30	NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE LAYOUT AND POWER SUPPLY	4795-4-68	DRAINAGE DISCHARGE STRUCTURES MISCELLANEOUS DETAILS	4795-4-93	PLAN SHOWING LOCATION OF EXISTING SURVEY MARKERS AND UTILITIES SHEET 3 OF 6
4795-4-31	SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE LAYOUT AND POWER SUPPLY	4795-4-69	CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE ONE LINE ELECTRICAL DIAGRAM	4795-4-94	PLAN SHOWING LOCATION OF EXISTING SURVEY MARKERS AND UTILITIES SHEET 4 OF 6
4795-4-32	DUCK ISLAND DRAINAGE DISCHARGE STRUCTURE LAYOUT AND POWER SUPPLY	4795-4-70	NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ONE LINE ELECTRICAL DIAGRAM	4795-4-95	PLAN SHOWING LOCATION OF EXISTING SURVEY MARKERS AND UTILITIES SHEET 5 OF 6
4795-4-33	CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE CONCRETE OUTLINE	4795-4-71	SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ONE LINE ELECTRICAL DIAGRAM	4795-4-96	PLAN SHOWING LOCATION OF EXISTING SURVEY MARKERS AND UTILITIES SHEET 6 OF 6
4795-4-34	NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE CONCRETE OUTLINE	4795-4-72	CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE ELECTRICAL LAYOUT		
4795-4-35	SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE CONCRETE OUTLINE	4795-4-73	NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ELECTRICAL LAYOUT		
4795-4-36	DUCK ISLAND DRAINAGE DISCHARGE STRUCTURE CONCRETE OUTLINE	4795-4-74	SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ELECTRICAL LAYOUT		
4795-4-37	CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE ENTRY CULVERT CONCRETE OUTLINE				
4795-4-38	NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ENTRY CULVERT CONCRETE OUTLINE				

REFERENCE DRAWINGS

4795-4-91	PLAN SHOWING LOCATION OF EXISTING SURVEY MARKERS AND UTILITIES SHEET 1 OF 6
4795-4-92	PLAN SHOWING LOCATION OF EXISTING SURVEY MARKERS AND UTILITIES SHEET 2 OF 6
4795-4-93	PLAN SHOWING LOCATION OF EXISTING SURVEY MARKERS AND UTILITIES SHEET 3 OF 6
4795-4-94	PLAN SHOWING LOCATION OF EXISTING SURVEY MARKERS AND UTILITIES SHEET 4 OF 6
4795-4-95	PLAN SHOWING LOCATION OF EXISTING SURVEY MARKERS AND UTILITIES SHEET 5 OF 6
4795-4-96	PLAN SHOWING LOCATION OF EXISTING SURVEY MARKERS AND UTILITIES SHEET 6 OF 6

Canada – British Columbia
Fraser River Flood Control 1968 Agreement
Project No. 3 The Township of Richmond
Contract No. 4
North Dyke Improvements
Cambie Road to No. 5 Road





Repairs to underwater bank protection carried out as part of Contract 4

NOTE

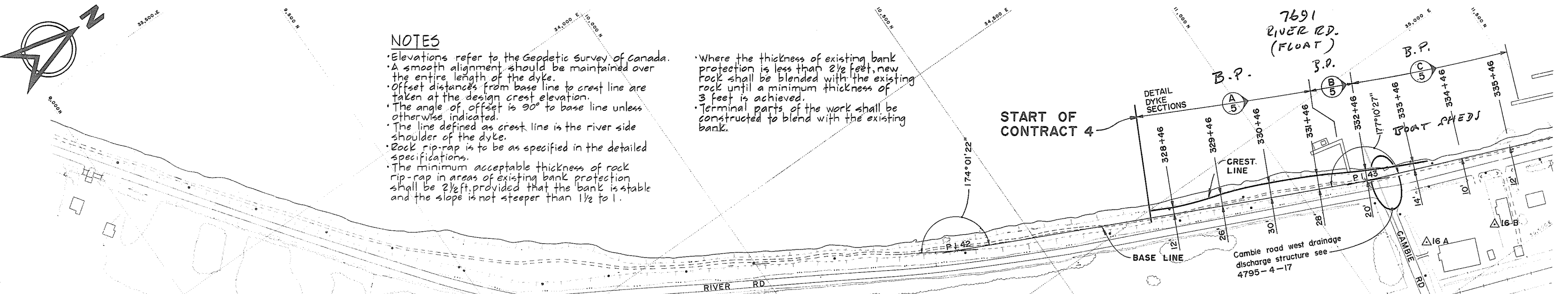
Contract 4 - (River dyke)
The dyke design crest has been selected to protect against a recurrence of the highest water level on record with an allowance of 2' for freeboard.



266055

DWG NO.	TITLE
REFERENCES	

C. B. A. ENGINEERING LTD.					CONSULTING ENGINEERS VANCOUVER, B.C., CANADA	
RECOMMENDED <i>W. J. Fuller</i> CHIEF, PROJECTS DIV.					ELEC	HYD
DATE <i>Aug 27/74</i>					MECH	SOILS
APPROVED <i>W. J. Fuller</i> DIRECTOR					STR	
DATE <i>Aug 27/74</i>					DES	DR SH CH
					SCALE	AS SHOWN
					ORIG ISSUE	Aug, 1974
NO. DESCRIPTION BY CH APPD ISSUED					CONTRACT NO. 4 GENERAL PLAN	
REVISIONS					FILE NO. 028155-CIO-4	DWG NO. 4795-4-1
						REV



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 the design crest elevation.
- The angle of offset is 90° to base line unless otherwise indicated.
- The line defined as crest line is the river side shoulder of the dyke.
- Rock rip-rap is to be as specified in the detailed specifications.
- The minimum acceptable thickness of rock rip-rap in areas of existing bank protection shall be 2 1/2 ft. provided that the bank is stable and the slope is not steeper than 1 1/2 to 1.
- Where the thickness of existing bank protection is less than 2 1/2 feet, new rock shall be blended with the existing rock until a minimum thickness of 3 feet is achieved.
- Terminal parts of the work shall be constructed to blend with the existing bank.

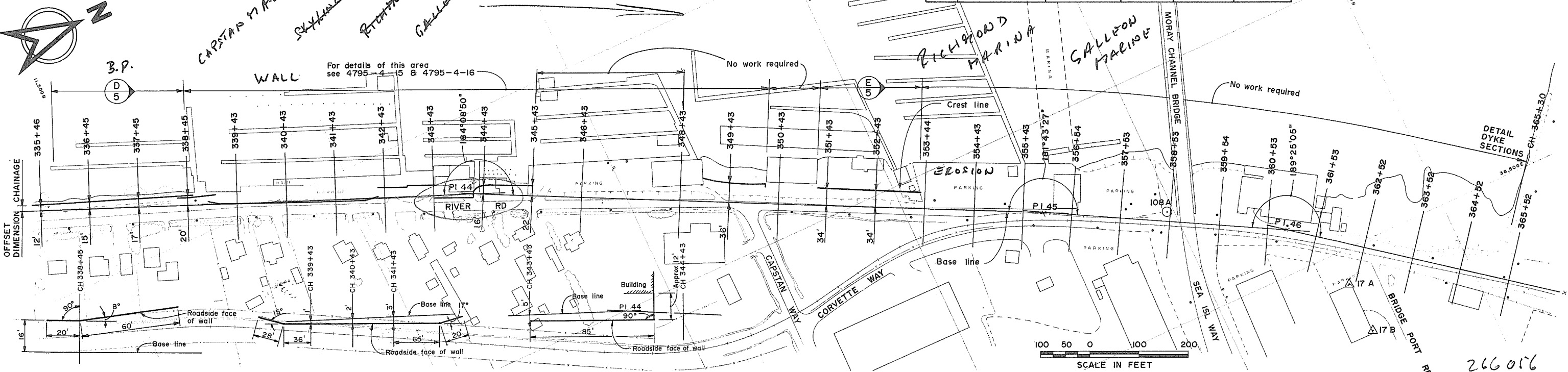
LEGEND

- △ 1A — Survey monument
- 8.85 ○ 101A — Bench mark & geodetic elevation
- ⓐ 5 — Section identification letter
Dwg No. on which the section is drawn
(ie) 4795-4-5

BASE LINE DATA					
PI	BEARING	CHAINAGE	INTERVAL	CO-ORDINATES	
				NORTH	EAST
41	N 31° 17' 08" E	316 + 96.63	692.60	9 762.49	34 479.61
42	N 25° 18' 30" E	323 + 89.23	854.98	10 354.33	34 839.25
43	N 22° 28' 57" E	332 + 44.21	1191.44	11 127.26	35 204.75
44	N 26° 37' 47" E	344 + 35.65	1152.11	12 228.20	35 660.38
45	N 28° 21' 13" E	355 + 87.76	493.55	13 258.10	36 176.78
46		360 + 81.31		13 692.31	36 411.18
NOTE: CHAINAGE CORRECTION P.I. 46 360 + 81.31 BACK = 360 + 90.02 FORWARD					
46	N 37° 47' 13" E	360 + 90.02	579.83	13 692.31	36 411.18
47		366 + 69.85		14 150.36	36 766.30

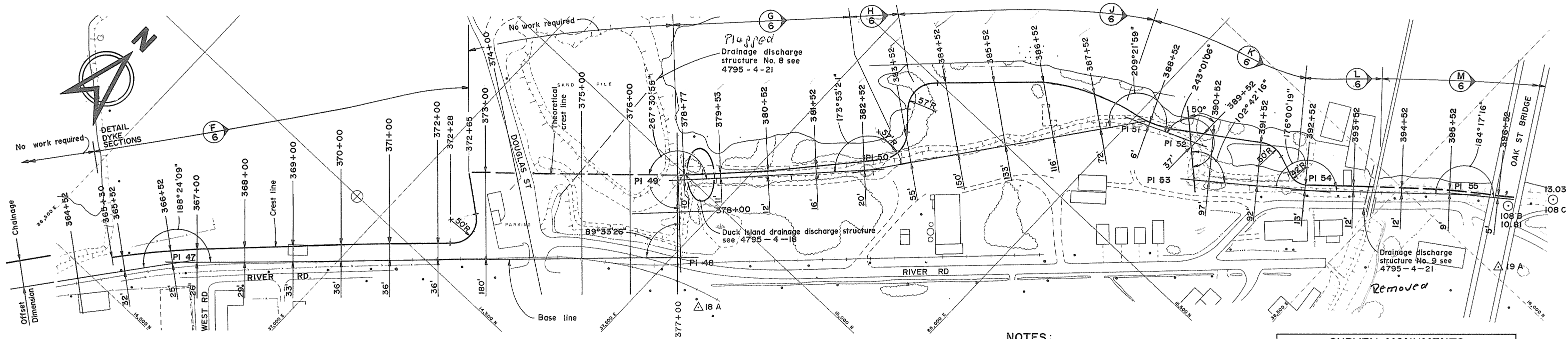
SURVEY MONUMENTS			
MON	TYPE	CO-ORDINATES	
		NORTH	EAST
15 A	PIPE IN CONCRETE	9 550.75	34 433.43
15 B	DITTO	9 187.63	34 760.80
16 A	DO	11 154.04	35 382.52
16 B	DO	11 289.77	35 432.05
17 A	DO	13 763.84	36 564.31
17 B	DO	13 763.96	36 674.50

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



DWG NO.		TITLE		REFERENCES	
C. B. A. ENGINEERING LTD. CONSULTING ENGINEERS VANCOUVER, B.C., CANADA					
RECOMMENDED <i>John Fuller</i> CHIEF, PROJECTS DIV.		DATE <i>Aug 27/74</i>		APPROVED <i>PHB</i> DIRECTOR	
DATE <i>Aug 27/74</i>		APPROVED <i>PHB</i> DIRECTOR		DATE <i>Aug 27/74</i>	
DES <i>DLG</i>		DR <i>JJ</i>		CH <i>DLG</i>	
SCALE <i>AS SHOWN</i>		ORIG ISSUE <i>Aug 1974</i>		FILE NO. 0281550-C10-4	
CONTRACT NO. 4		ALIGNMENT PLAN		CH 327+96 TO CH 365+52	
CANADA - BRITISH COLUMBIA		FRASER RIVER FLOOD CONTROL 1968 AGREEMENT		PROJECT No. 3 THE TOWNSHIP OF RICHMOND	
DWG NO. 4795-4-2		REV <i>4</i>		266016	

BRIDGE POINT DEVELOPMENT



NOTES:

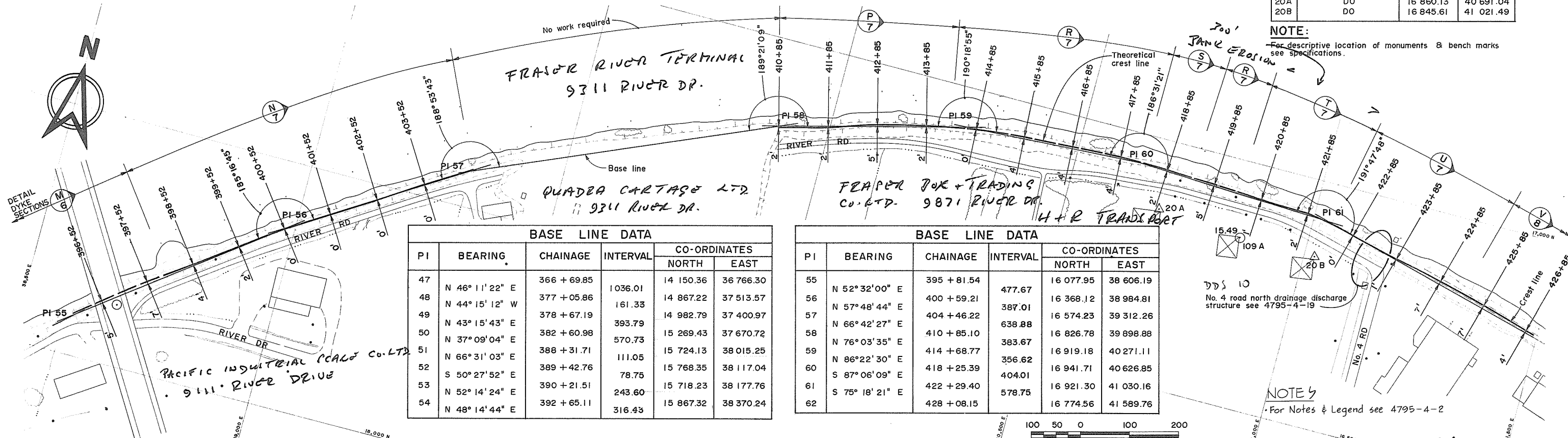
Fill has recently been placed on and near the dyke between ch 410+85 to ch 425+00. Sections P to U incl may no longer be representative.

SURVEY MONUMENTS

MON	TYPE	CO-ORDINATES	
		NORTH	EAST
18A	PIPE IN CONCRETE	14 817.68	37 613.09
18B	DITTO	14 816.06	37 829.47
19A	DO	16 022.40	38 759.44
19B	DO	15 868.25	38 853.07
20A	DO	16 860.13	40 691.04
20B	DO	16 845.61	41 021.49

NOTE:

For descriptive location of monuments & bench marks see specifications.



BASE LINE DATA

PI	BEARING	CHAINAGE	INTERVAL	CO-ORDINATES	
				NORTH	EAST
47		366 + 69.85		14 150.36	36 766.30
48	N 46° 11' 22" E	377 + 05.86	1036.01	14 867.22	37 513.57
49	N 44° 15' 12" W	378 + 67.19	161.33	14 982.79	37 400.97
50	N 43° 15' 43" E	382 + 60.98	393.79	15 269.43	37 670.72
51	N 37° 09' 04" E	388 + 31.71	570.73	15 724.13	38 015.25
52	N 66° 31' 03" E	389 + 42.76	111.05	15 768.35	38 117.04
53	S 50° 27' 52" E	390 + 21.51	78.75	15 718.23	38 177.76
54	N 52° 14' 24" E	392 + 65.11	243.60	15 718.23	38 177.76
	N 48° 14' 44" E		316.43	15 867.32	38 370.24

BASE LINE DATA

PI	BEARING	CHAINAGE	INTERVAL	CO-ORDINATES	
				NORTH	EAST
55	N 52° 32' 00" E	395 + 81.54	477.67	16 077.95	38 606.19
56	N 57° 48' 44" E	400 + 59.21	387.01	16 368.12	38 984.81
57	N 66° 42' 27" E	404 + 46.22	638.88	16 574.23	39 312.26
58	N 76° 03' 35" E	410 + 85.10	383.67	16 826.78	39 898.88
59	N 86° 22' 30" E	414 + 68.77	356.62	16 919.18	40 271.11
60	S 87° 06' 09" E	418 + 25.39	404.01	16 941.71	40 626.85
61	S 75° 18' 21" E	422 + 29.40	578.75	16 921.30	41 030.16
62		428 + 08.15		16 774.56	41 589.76

SCALE IN FEET
100 50 0 100 200

C. B. A. ENGINEERING LTD.

CONSULTING ENGINEERS VANCOUVER, B.C., CANADA

RECOMMENDED *John Fuller*
DATE *Aug 27/74*
APPROVED *John Fuller*
DATE *Aug 27/74*

ELEC
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STR
DES
SCALE
AS SHOWN
ORIG ISSUE
Aug 1974

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. 4
ALIGNMENT PLAN
CH 365+52 TO CH 425+35

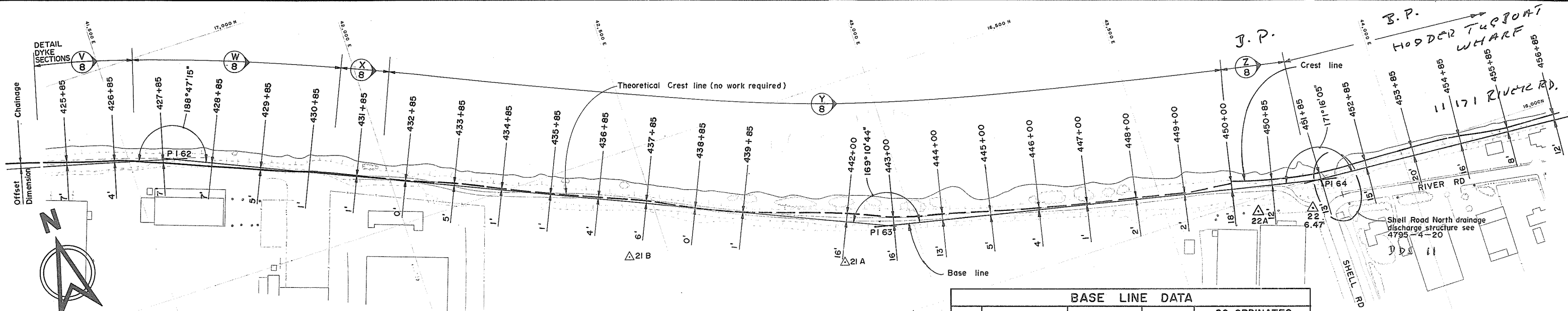


NO.	DESCRIPTION	BY	CH	APPD	ISSUED

NO.	DESCRIPTION	BY	CH	APPD	ISSUED

DWG NO.	TITLE

FILE NO.	DWG NO.	REV
0281550-C10-4	4795-4-3	4

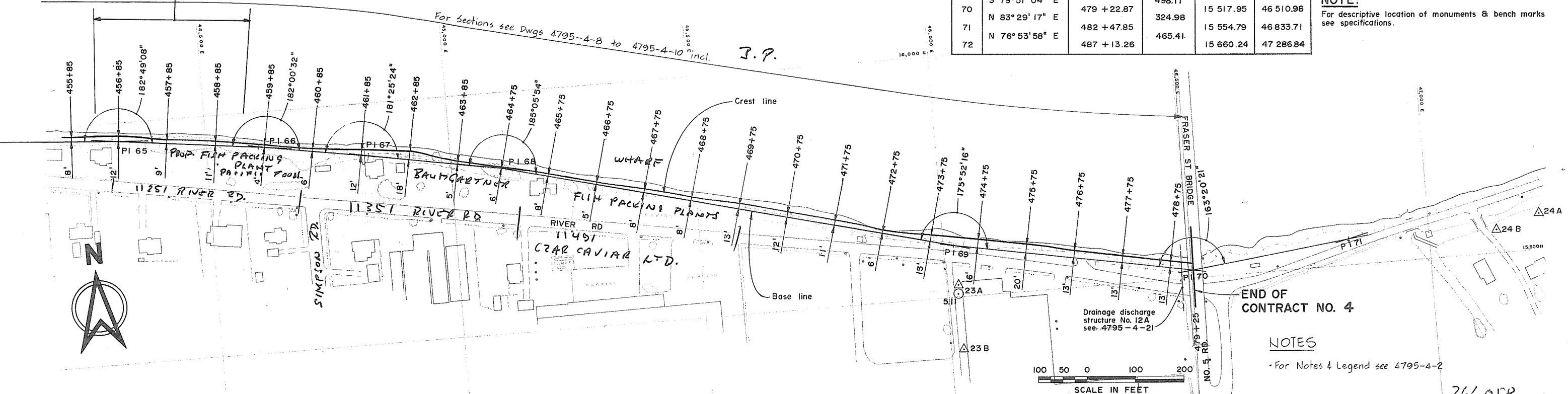


NOTE
Bank protection portion of construction done as emergency bank protection work June 1974

BASE LINE DATA					
PI	BEARING	CHAINAGE	INTERVAL	CO-ORDINATES	
				NORTH	EAST
62	S 66° 31' 06" E	428 + 08.15	1476.28	16 774.56	41 589.76
63	S 77° 20' 23" E	442 + 84.43	889.25	16 186.55	42 943.27
64	S 86° 04' 19" E	451 + 73.68	514.35	15 991.74	43 810.54
65	S 83° 15' 11" E	456 + 88.03	284.11	15 956.52	44 323.43
66	S 81° 14' 39" E	459 + 72.14	225.30	15 923.16	44 605.42
67	S 79° 49' 15" E	461 + 97.44	276.42	15 888.88	44 827.97
68	S 75° 43' 20" E	464 + 73.86	950.84	15 840.05	45 099.90
69	S 79° 51' 04" E	474 + 24.70	498.11	15 605.68	46 020.87
70	N 83° 29' 17" E	479 + 22.87	324.98	15 517.95	46 510.98
71	N 76° 53' 58" E	482 + 47.85	465.41	15 554.79	46 833.71
72		487 + 13.26		15 660.24	47 286.84

SURVEY MONUMENTS			
MON	TYPE	CO-ORDINATES	
		NORTH	EAST
21 A	PIPE IN CONCRETE	16 140.94	42 840.05
21 B	DITTO	16 289.22	42 421.73
22 A	DO	15 964.67	43 680.43
22 B	DO	15 935.11	43 791.20
23 A	DO	15 527.40	46 026.50
23 B	DO	15 391.30	46 025.89
24 A	DO	15 575.66	47 228.61
24 B	DO	15 548.64	47 139.38

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

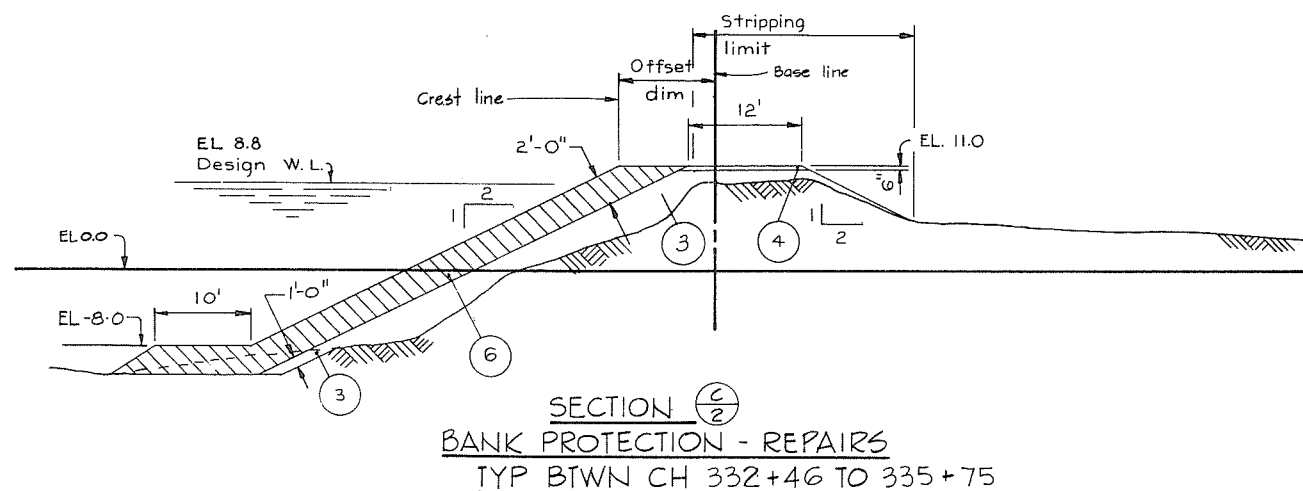
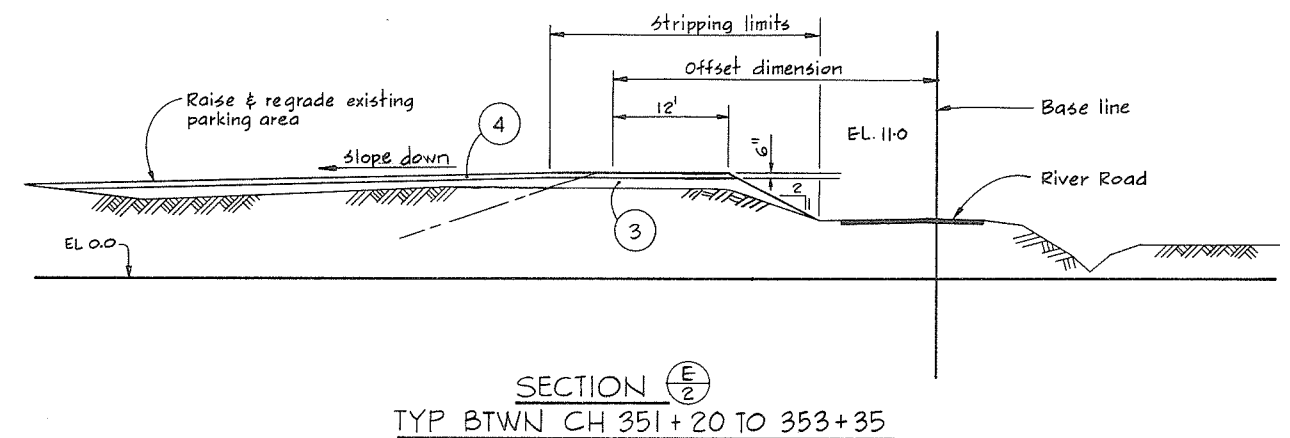
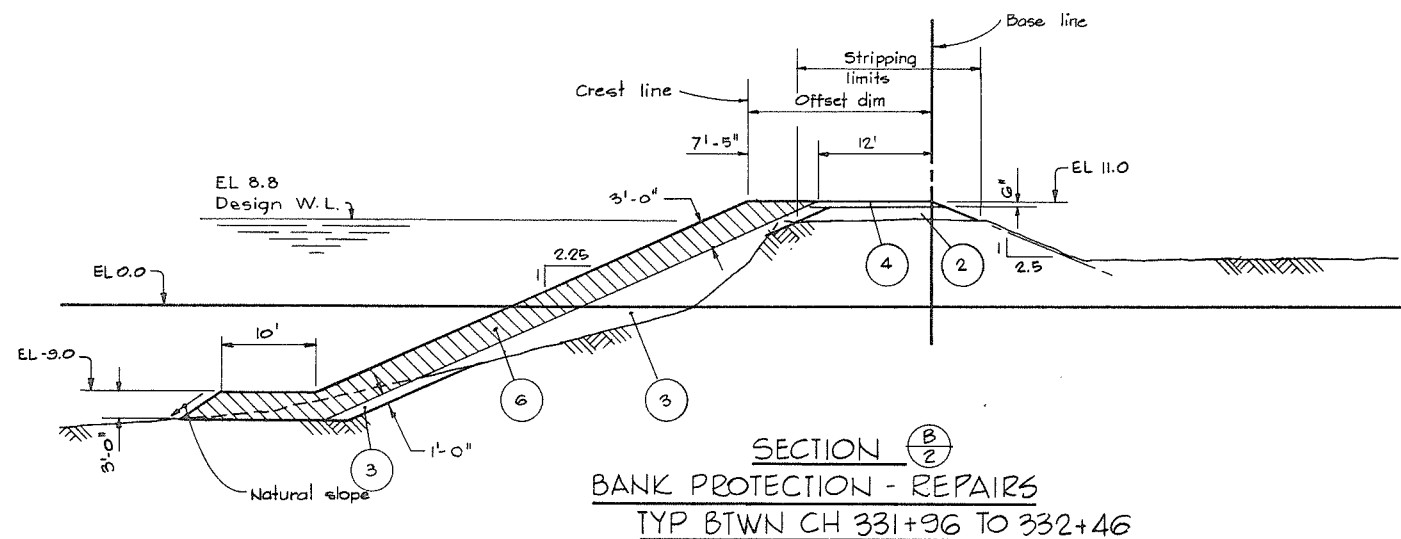
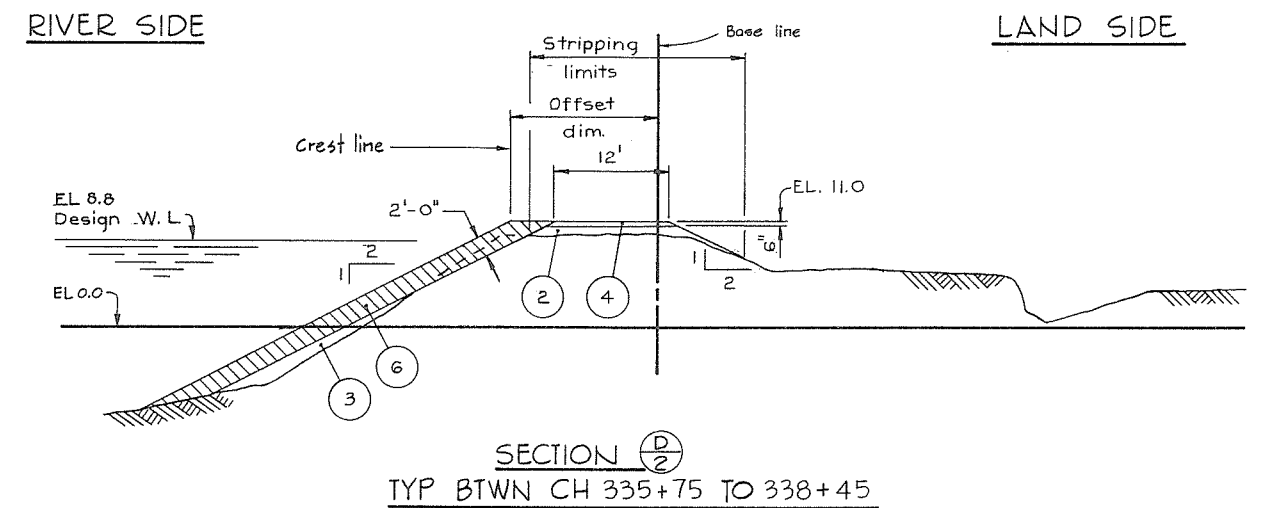
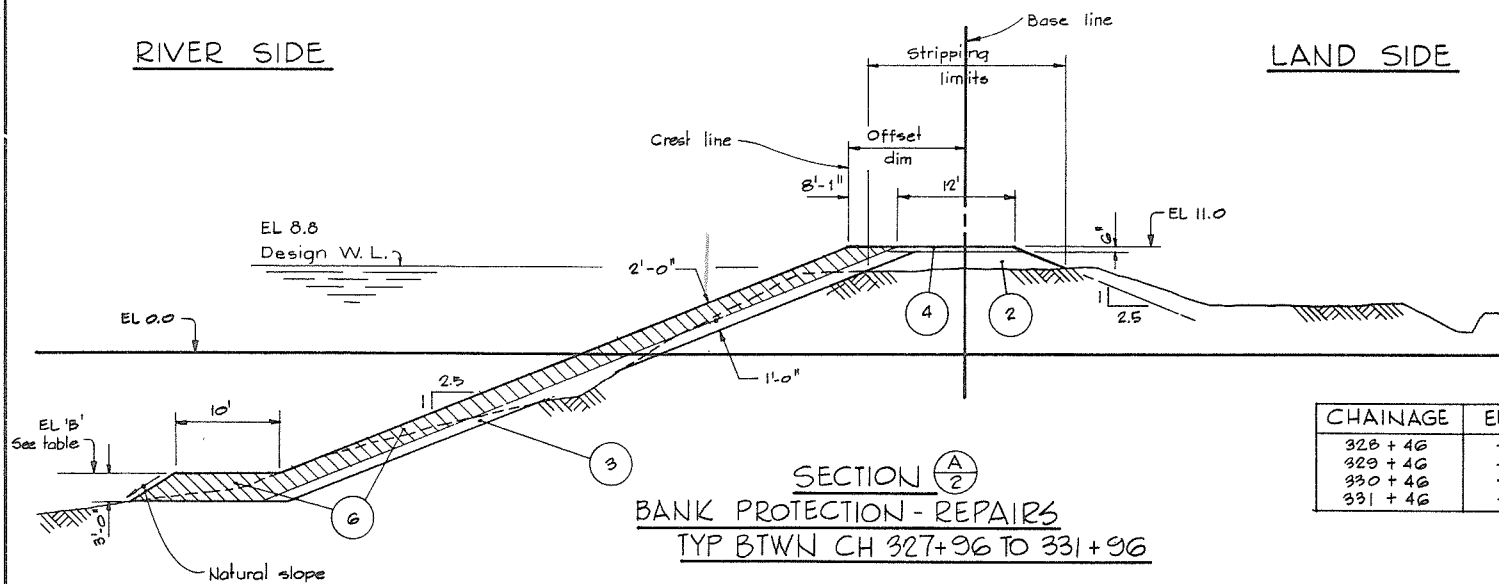


END OF CONTRACT NO. 4

NOTES
For Notes & Legend see 4795-4-2

266018

DWG NO.		TITLE		NO.		DESCRIPTION		BY	CH	APPD	ISSUED	NO.		DESCRIPTION		BY	CH	APPD	ISSUED
C. B. A. ENGINEERING LTD. CONSULTING ENGINEERS VANCOUVER, B.C., CANADA RECOMMENDED <i>[Signature]</i> EEC HYD MECH SOILS STR DATE <i>Aug 27/74</i> APPROVED <i>[Signature]</i> DES DR CH DLC & EMH JJ DLC SCALE AS SHOWN DATE <i>Aug 27/74</i> ORIG ISSUE CONTRACT NO. 4 ALIGNMENT PLAN CH 425+35 TO CH 479+25 FILE NO. 0281550-C10-4 DWG NO. 4795-4-4 REV <i>A</i>																			



MATERIAL LEGEND

- ① Silt
- ② Sand
- ③ Sand, gravel, cobbles
- ④ Crushed gravel
- ⑤ light riprap
- ⑥ Riprap

LEGEND

- Existing ground surface
- J/2 — Section identification letter Drawing No. which shows the location of the section (i.e. 4795-4-[2])
- 2/7 — Detail identification number Drawing No. on which the detail is drawn (i.e.) 4795-4-[7]

NOTES

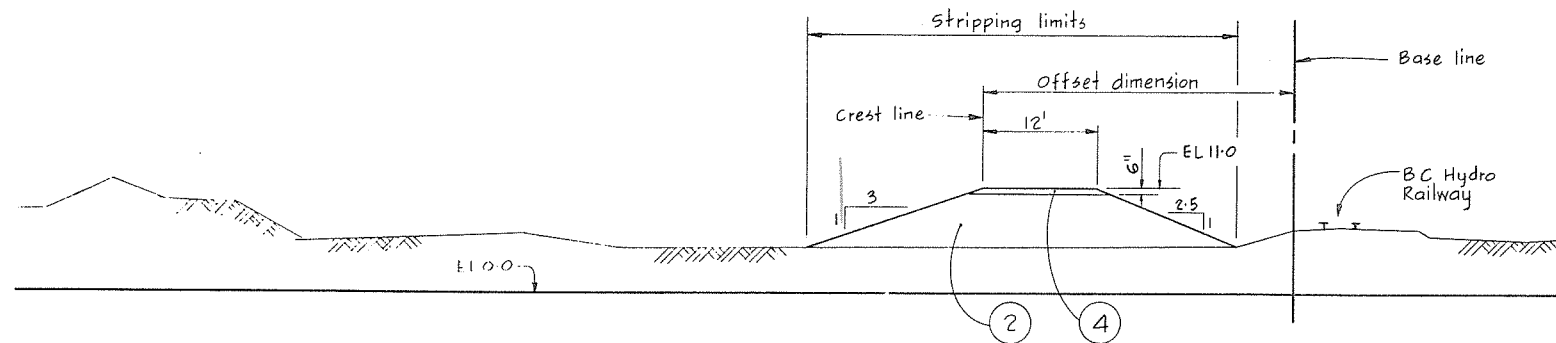
- Elevations refer to the Geodetic Survey of Canada
- For offset dimensions see appropriate chainage on Alignment Plans.
- Offset distances from base line to crest line are taken at the design crest elevation.

266059

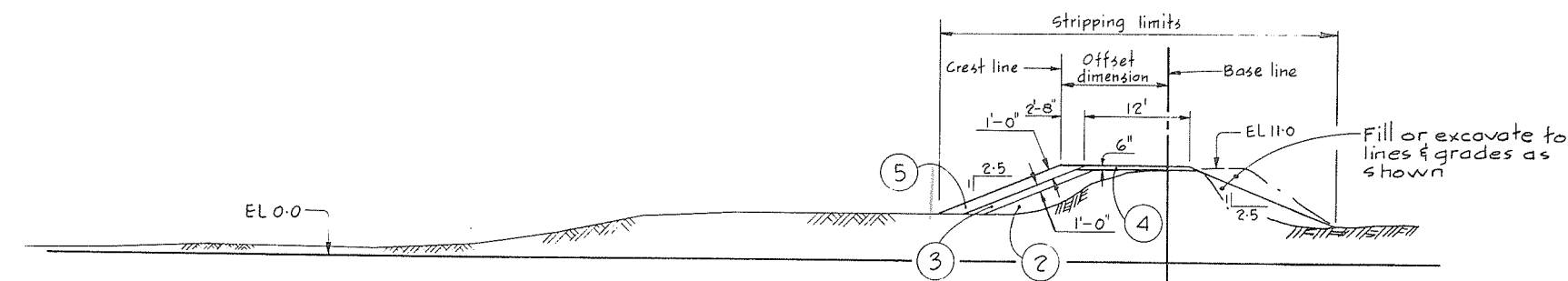
DWG NO.		TITLE		REFERENCES				REVISIONS NO. DESCRIPTION BY CH APPD ISSUED		REVISIONS NO. DESCRIPTION BY CH APPD ISSUED		C. B. A. ENGINEERING LTD. CONSULTING ENGINEERS VANCOUVER, B.C., CANADA		THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF LANDS FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND		CONTRACT NO. 4 TYPICAL DYKE SECTIONS SHEET 1 OF 10		FILE NO. 0281550-C10-4 DWG NO. 4795-4-5 REV A	
RECOMMENDED <i>W. J. Miller</i> DATE <i>Aug 27/74</i>		APPROVED <i>P. B. Smith</i> DATE <i>Aug 27/74</i>		ELEC MECH STR		DES DR CH		SCALE AS SHOWN		ORIG ISSUE Aug, 1974		ELEC MECH STR		DES DR CH		SCALE AS SHOWN		ORIG ISSUE Aug, 1974	

RIVER SIDE

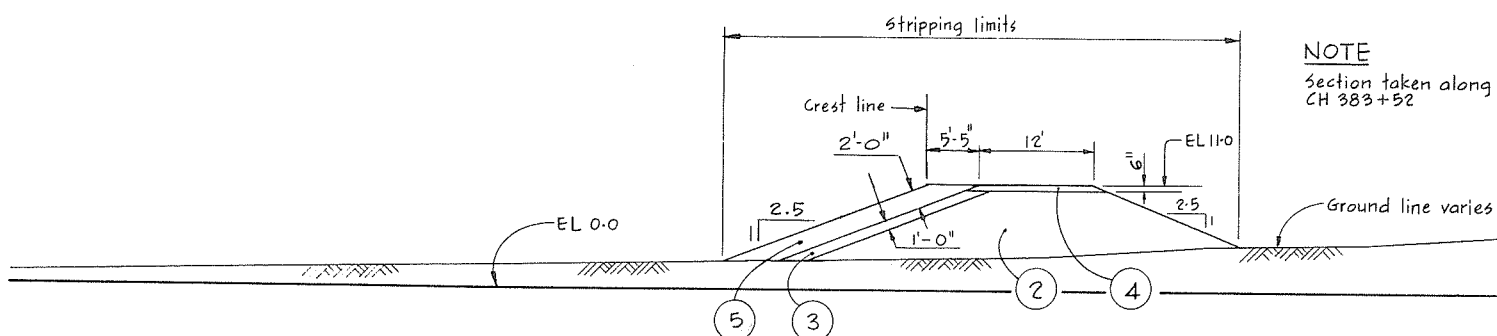
LAND SIDE



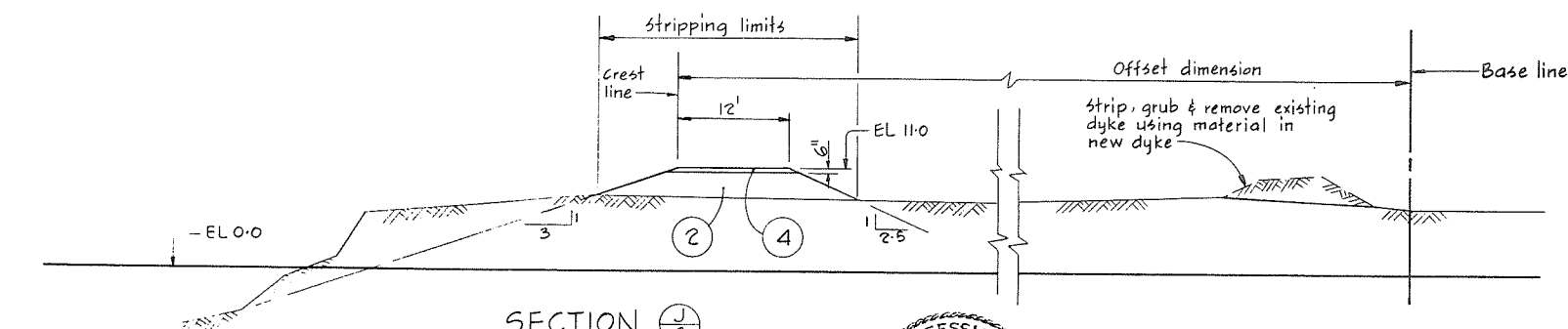
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TYP BTWN CH 365+30 TO 372+65



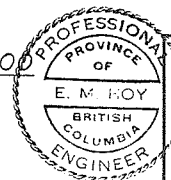
SECTION $\frac{G}{3}$
TYP BTWN CH 378+70 TO 383+00



SECTION $\frac{H}{3}$
TYP BTWN CH 383+00 TO 384+50



SECTION $\frac{J}{3}$
TYP BTWN CH 384+00 TO 388+00



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO.	BY	REVISIONS	DATE
A	Revised	As built	

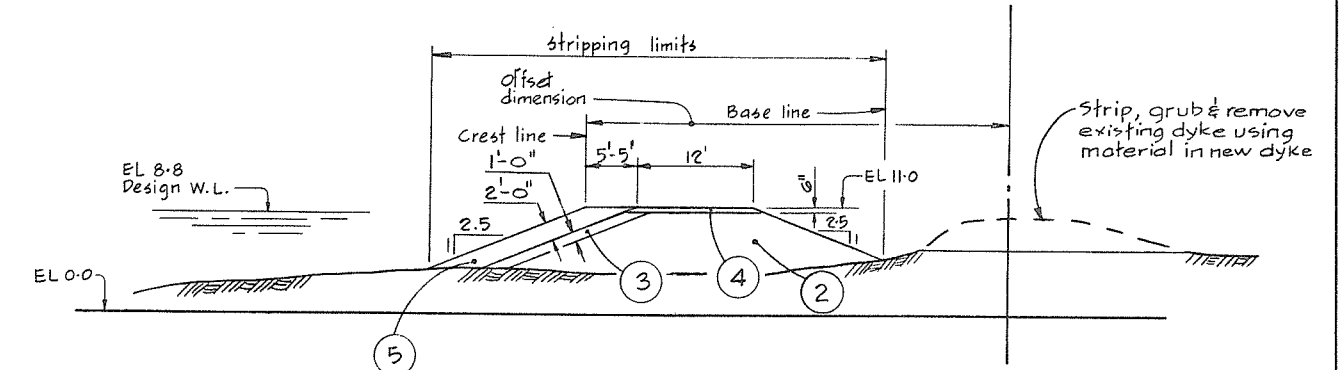
RECOMMENDED	By <i>Fuller</i>
DATE	Aug 27/74
APPROVED	<i>Phinney</i>
DATE	Aug 28/74

BRITISH COLUMBIA DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT	PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND CONTRACT NO. 4 TYPICAL DYKE SECTIONS
--	---

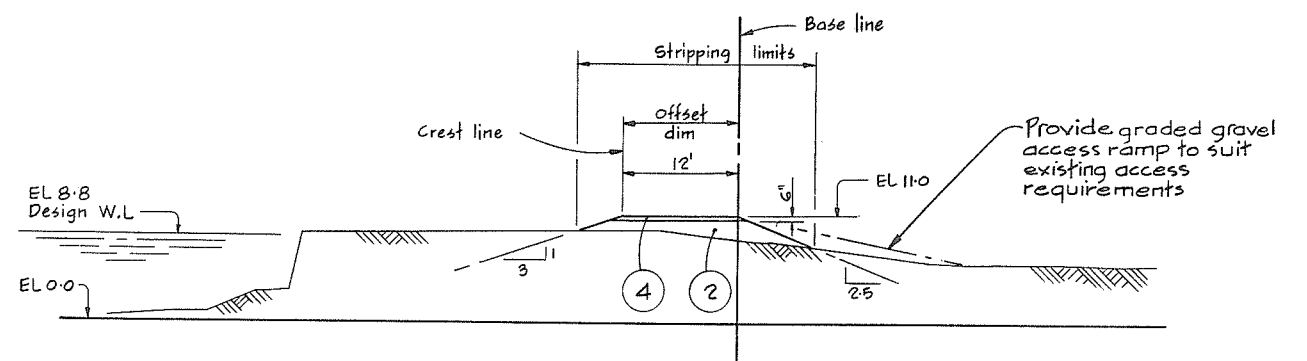
DESIGNED	DLC & EMH	SURVEYED	ES
DRAWN	JL	DATE	1969-70
CHECKED	DLC	FILE NO.	0281550 - C10-4
SCALE	AS SHOWN	DATE	Aug. 1974
DWG. NO.	4795-4-6	SHEET	2 OF 10 SHEETS

RIVER SIDE

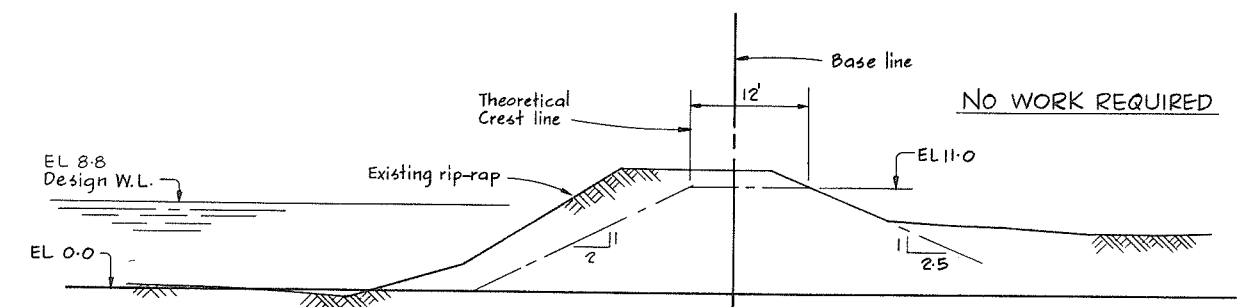
LAND SIDE



SECTION $\frac{K}{3}$
TYP BTWN CH 388+00 TO 392+52



SECTION $\frac{L}{3}$
TYP BTWN CH 392+30 TO 394+00

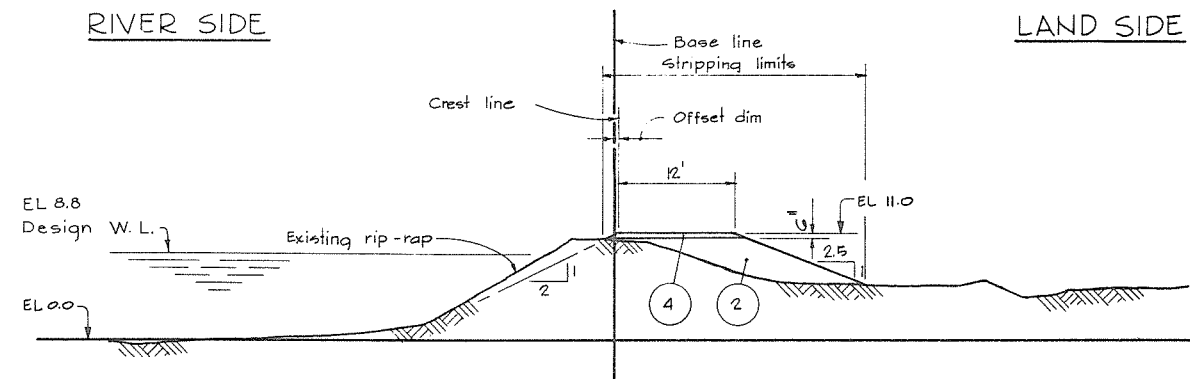


SECTION $\frac{M}{3}$
TYP BTWN CH 394+00 TO 398+00

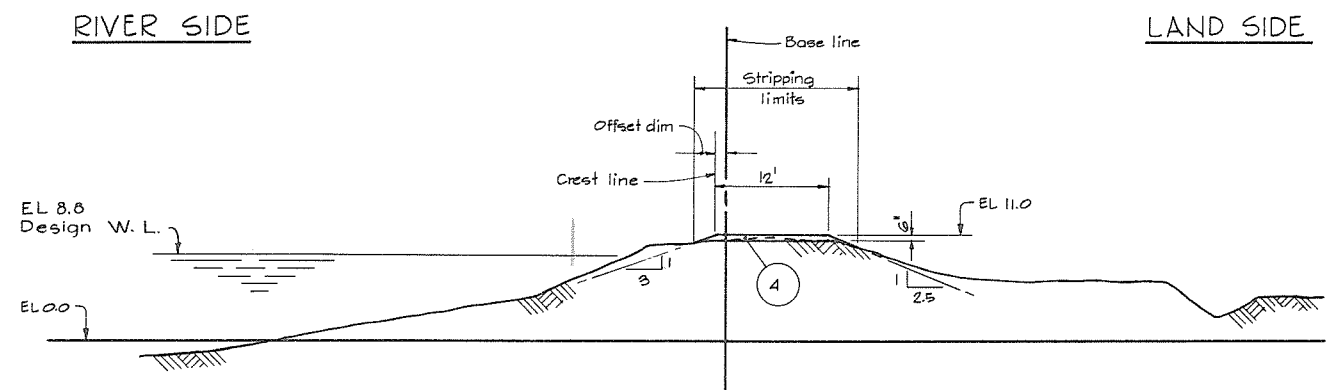


NOTES
For Notes, Material legend and legend
see 4795-4-5

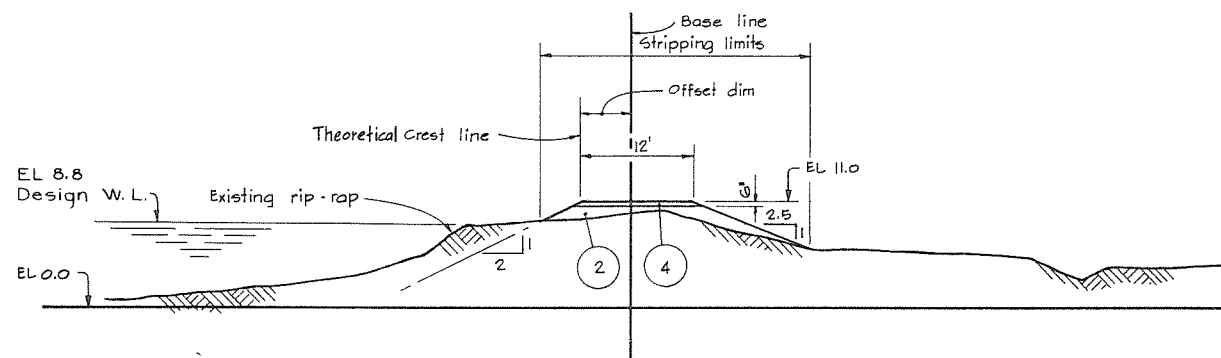
266 060



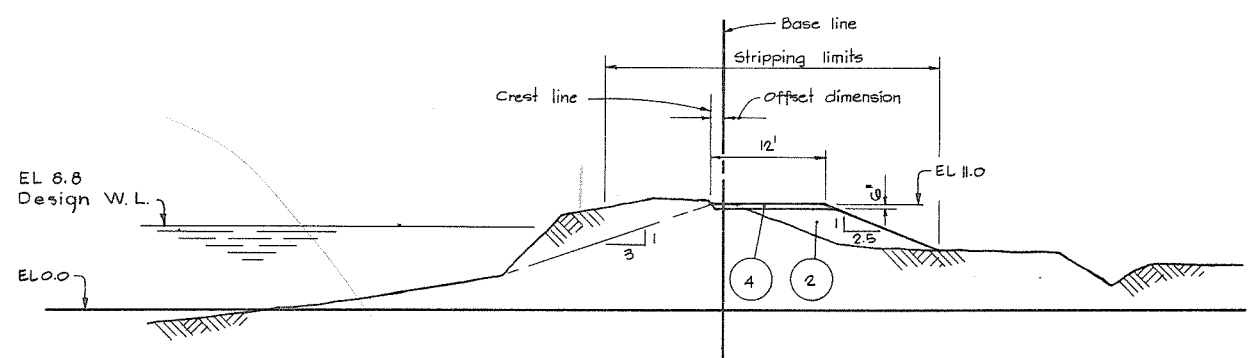
SECTION $\frac{N}{3}$
TYP BTWN CH 398+00 TO 405+50



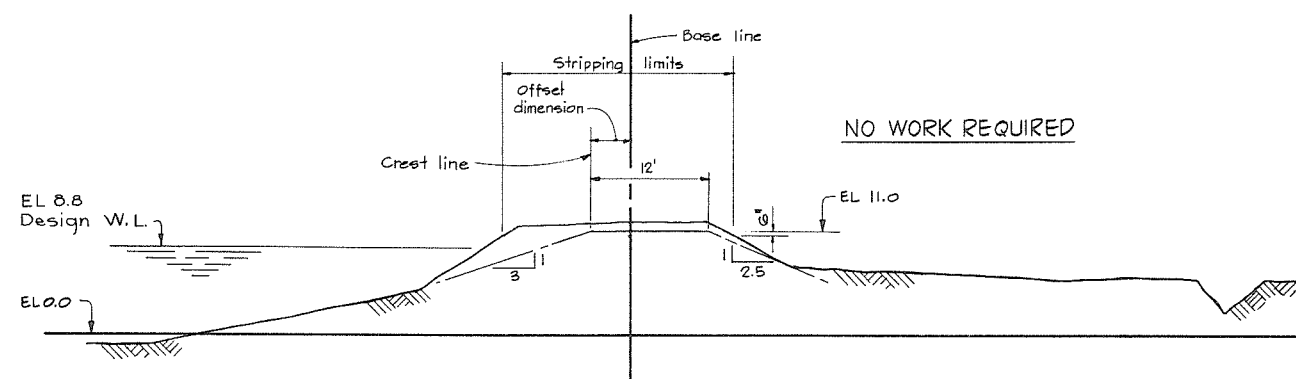
SECTION $\frac{S}{3}$
TYP BTWN CH 418+35 TO 419+35



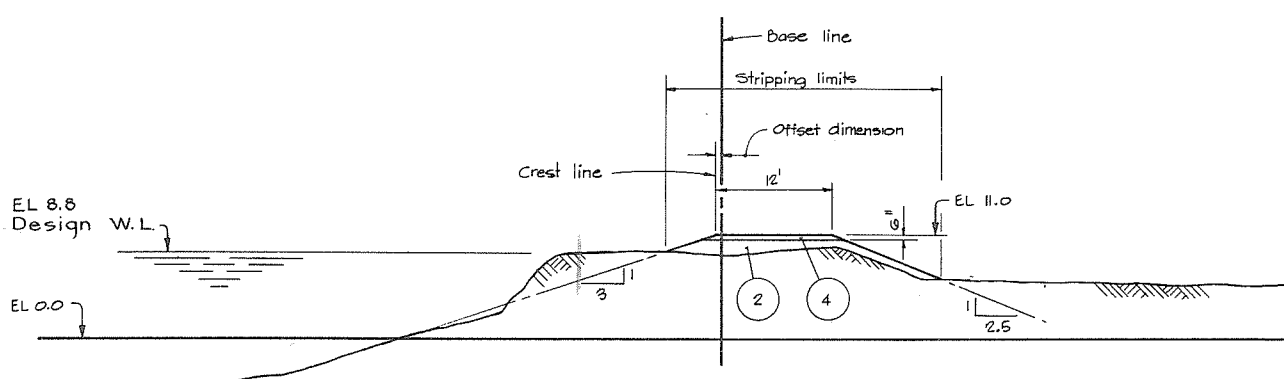
SECTION $\frac{P}{3}$
TYP BTWN CH 410+85 TO 414+35



SECTION $\frac{T}{3}$
TYP BTWN CH 420+35 TO 422+35



SECTION $\frac{R}{3}$
TYP BTWN CH 414+35 TO 418+35
CH 419+35 TO 420+35

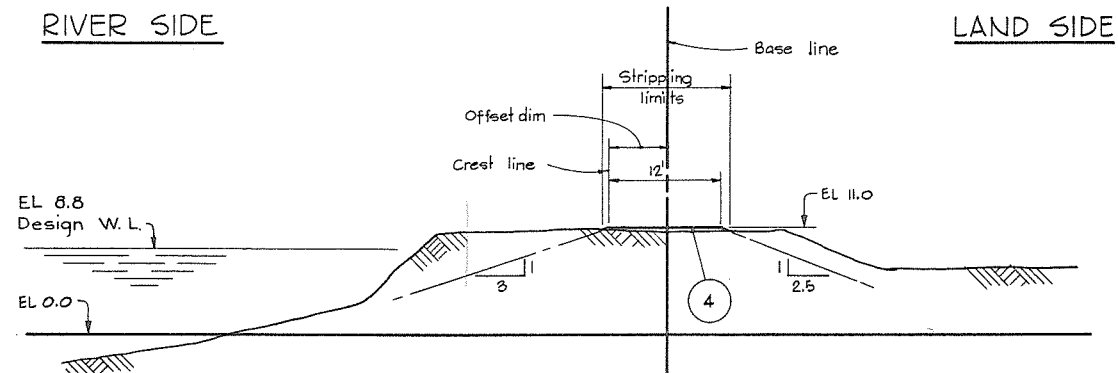


SECTION $\frac{U}{3}$
TYP BTWN CH 422+35 TO 425+35

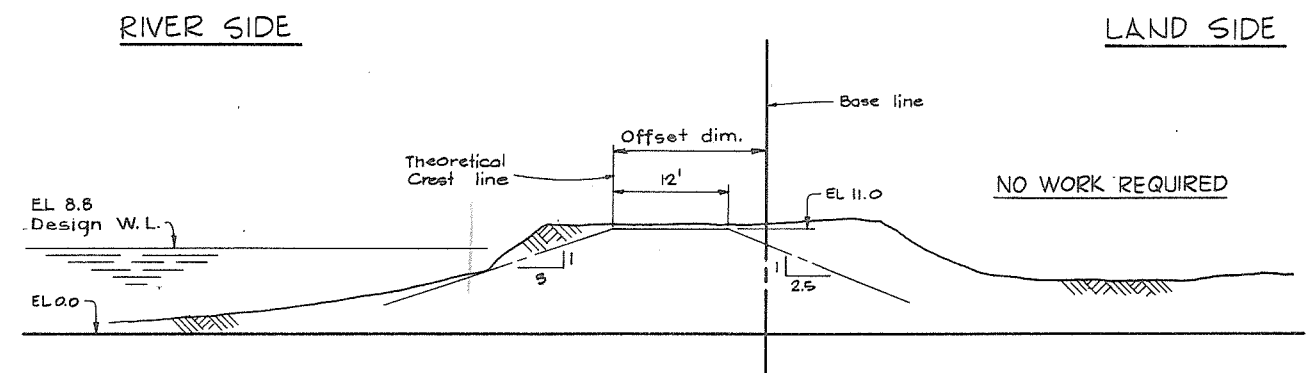


NOTES 266061
For Notes, Material legend, and legend see 4795-4-5

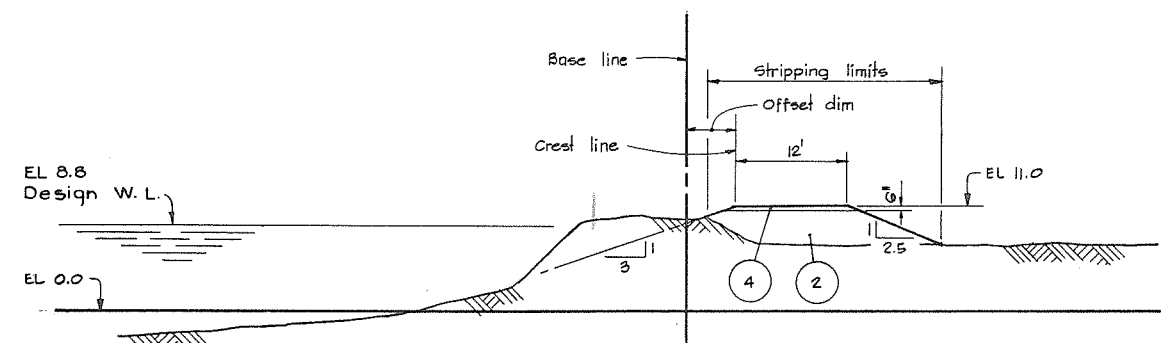
DWG NO.		TITLE		REFERENCES				NO.		DESCRIPTION		BY	CH	APPD	ISSUED	NO.		DESCRIPTION		BY	CH	APPD	ISSUED
C. B. A. ENGINEERING LTD. CONSULTING ENGINEERS VANCOUVER, B.C., CANADA RECOMMENDED <i>M. G. Sullivan</i> CHIEF, PROJECTS DIV. DATE <i>Aug 27/74</i> APPROVED <i>P. Brady</i> DIRECTOR DATE <i>Aug 27/74</i> ORIG ISSUE <i>Aug 1974</i> CONTRACT NO. 4 TYPICAL DYKE SECTIONS SHEET 3 OF 10 FILE NO. 0281550-C10-4 DWG NO. 4795-4-7 REV																							



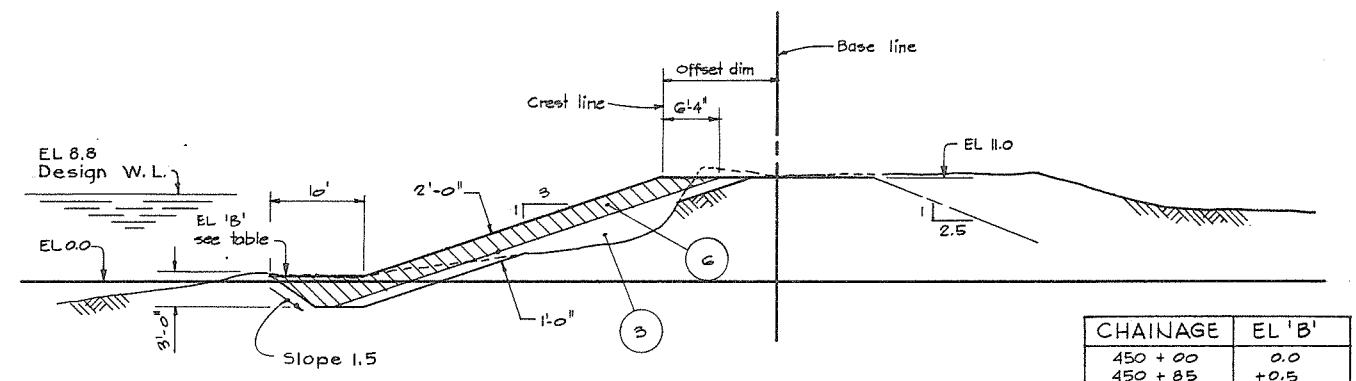
SECTION $\frac{V}{3}$ $\frac{V}{4}$
TYP BTWN CH 425+35 TO 427+35



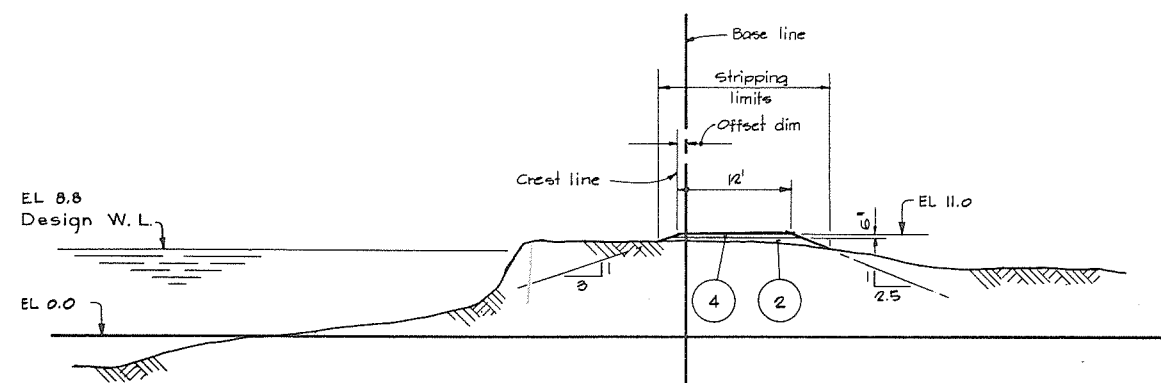
SECTION $\frac{Y}{4}$
TYP BTWN CH 432+35 TO 450+00



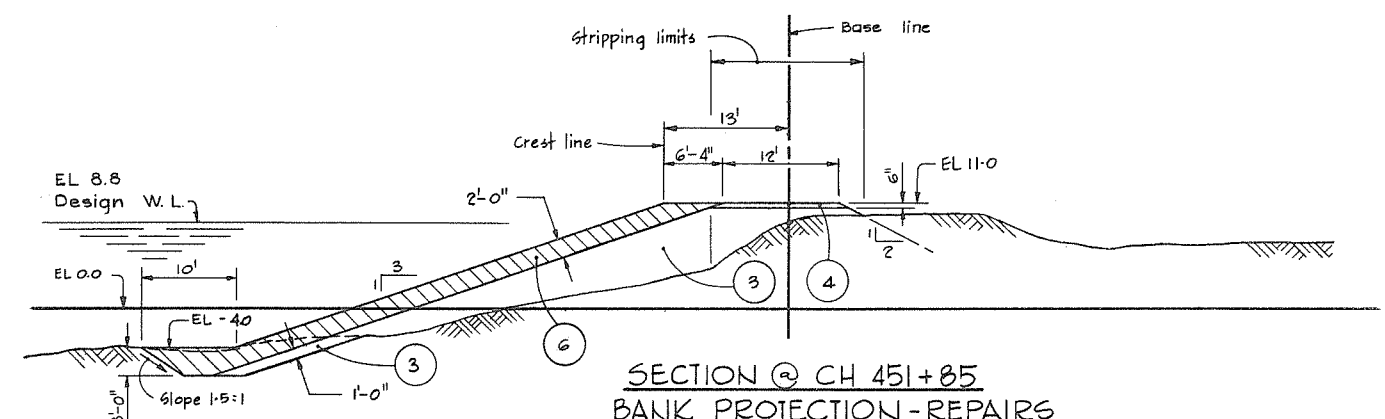
SECTION $\frac{W}{4}$
TYP BTWN CH 427+35 TO 431+35



SECTION $\frac{Z}{4}$
BANK PROTECTION - NEW WORK
TYP BTWN CH 450+00 TO 450+85



SECTION $\frac{X}{4}$
TYP BTWN CH 431+35 TO 432+35



SECTION @ CH 451+85
BANK PROTECTION - REPAIRS



NOTES
*For Notes, Material Legend, and Legend see 4795-4-5
*For Location of Sections see 4795-4-4.

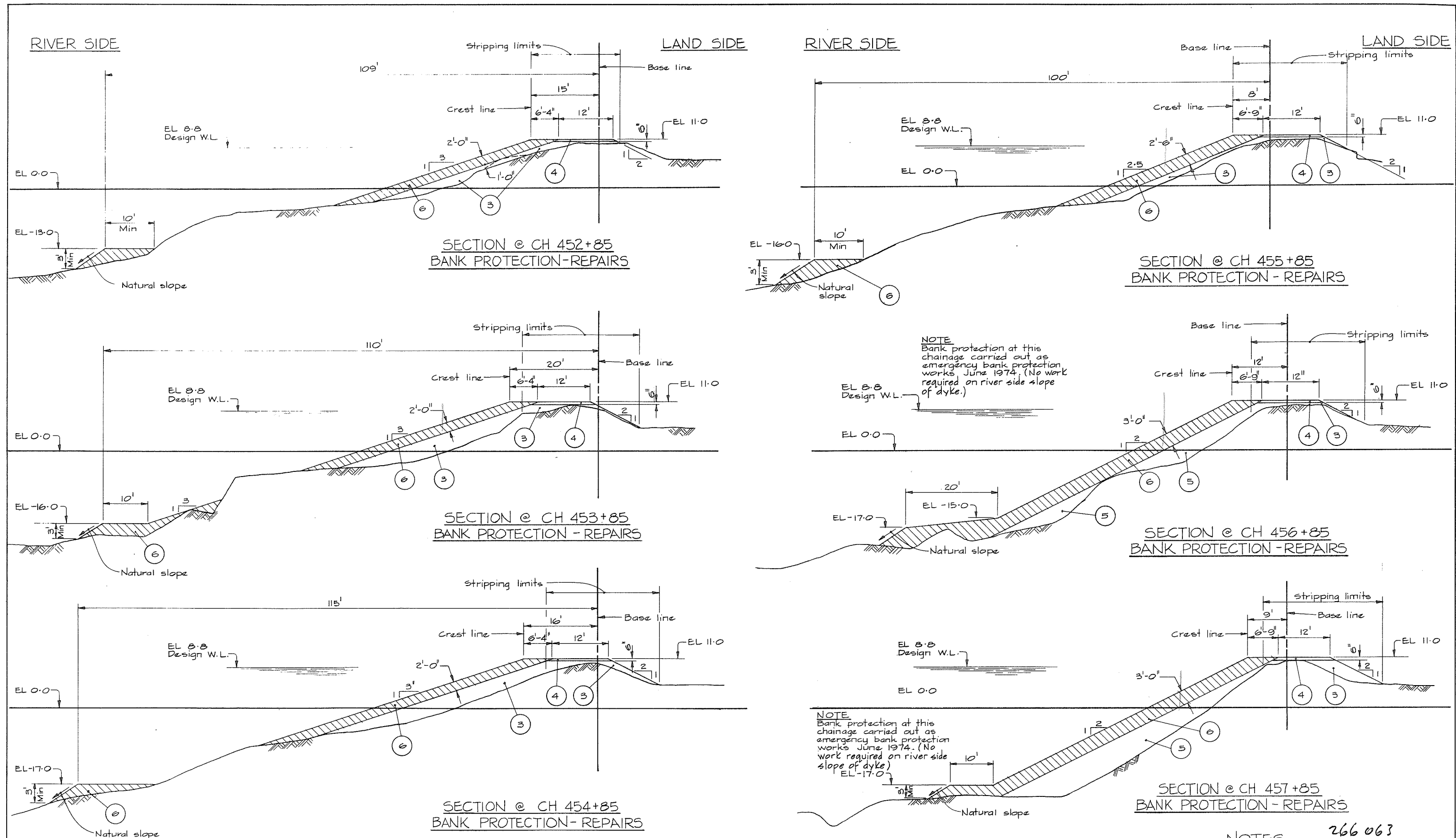
266 062

C. B. A. ENGINEERING LTD.		CONSULTING ENGINEERS		VANCOUVER, B.C., CANADA	
RECOMMENDED DATE Aug 27/74	ELEC MECH STR	HYD SOILS	THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF LANDS FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE		
APPROVED DATE Aug 27/74	DES SCALE AS SHOWN	DR CH DLC	CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND		
ORIG ISSUE Aug, 1974			CONTRACT NO. 4 TYPICAL DYKE SECTIONS SHEET 4 OF 10		
FILE NO. 0281550-C10-4			DWG NO. 4795-4-8		REV A



A Revised As-built

DWG NO.	TITLE	NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REFERENCES		REVISIONS											



NOTES 266 063

- For Notes, Material Legend and Legend see 4795-4-5.
- For location of Sections see 4795-4-4.



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

RECOMMENDED	<i>Phyllis Fuller</i>
DATE	Aug 27/74
APPROVED	<i>Phyllis Fuller</i>
DATE	Aug 28/74

BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT

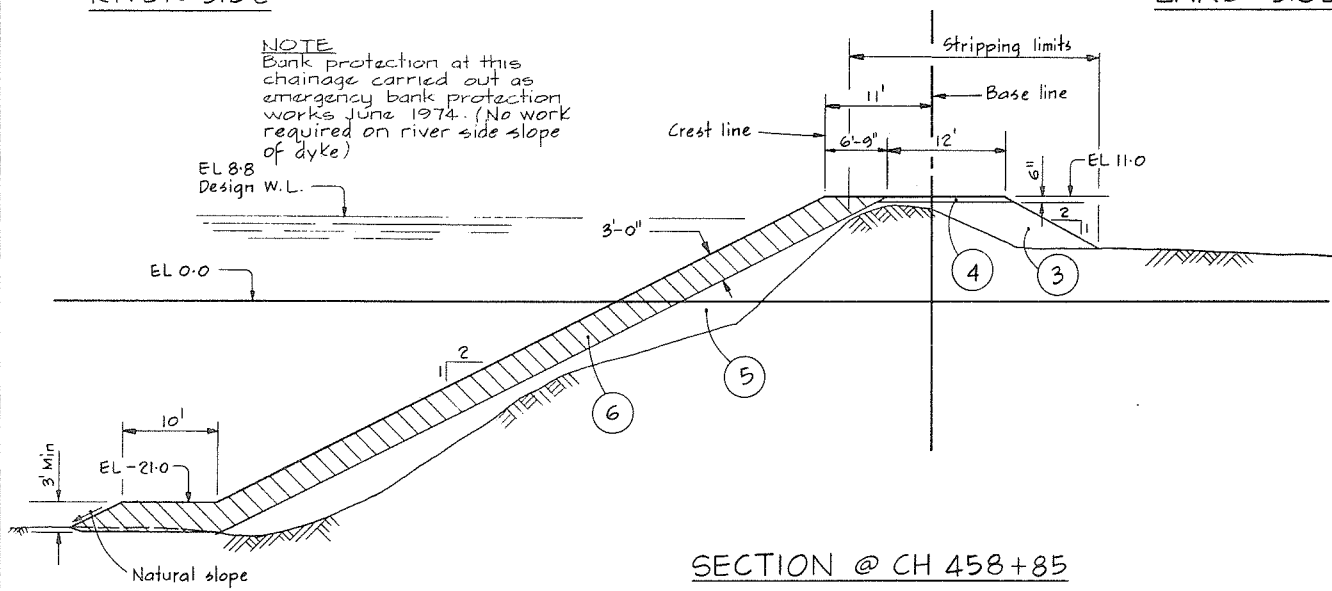
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
TYPICAL DYKE SECTIONS

DESIGNED	DLC & F.M.H.	SURVEYED	ES & DPW
DRAWN	DLC	DATE	1969/70 & 1974
CHECKED	DLC	FILE NO.	0281550-C10-4
SCALE	As shown	DATE	Aug, 1974
DWG. NO.	4795-4-9	SHEET	5 OF 10 SHEETS

RIVER SIDE

LAND SIDE

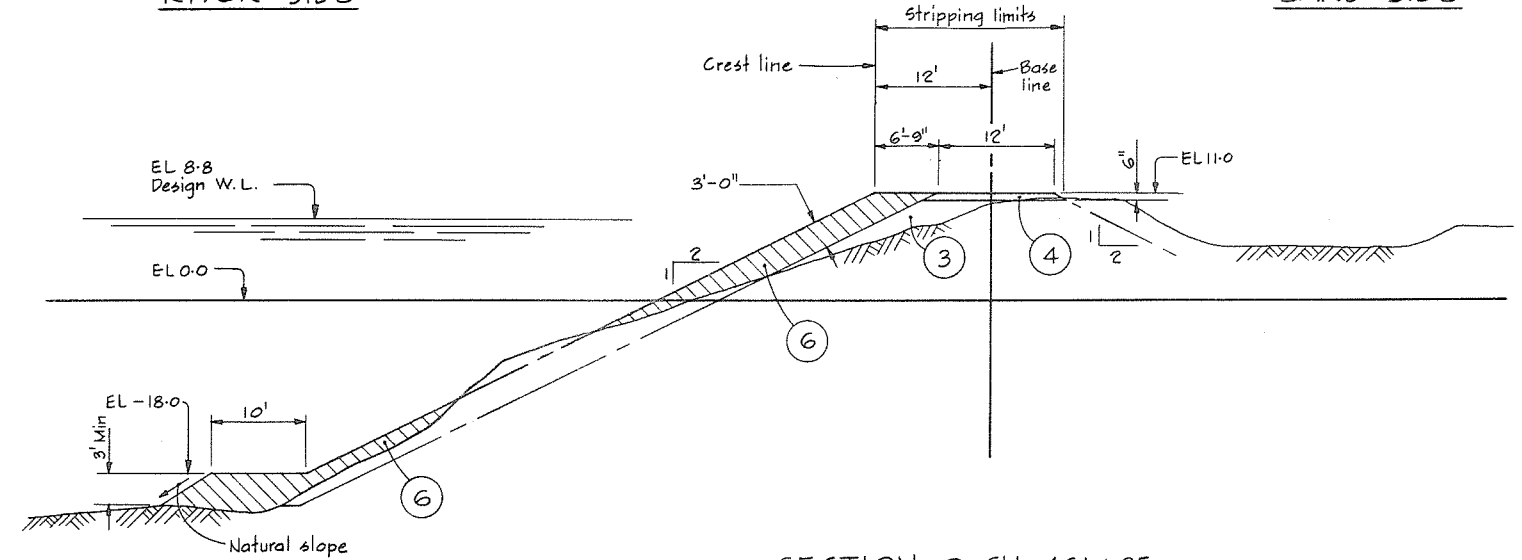
NOTE
Bank protection at this
chainage carried out as
emergency bank protection
works June 1974. (No work
required on river side slope
of dyke)



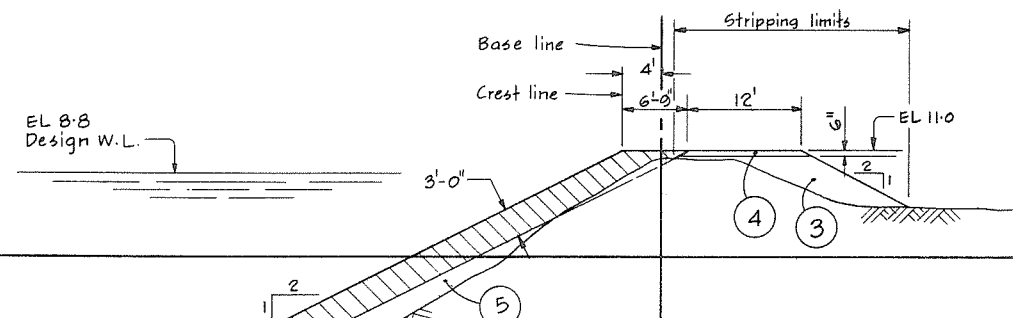
SECTION @ CH 458+85
BANK PROTECTION REPAIRS

RIVER SIDE

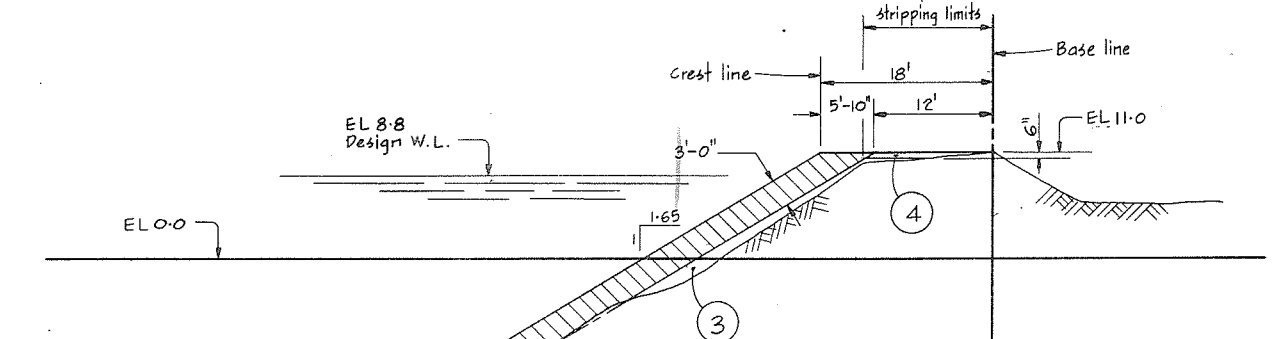
LAND SIDE



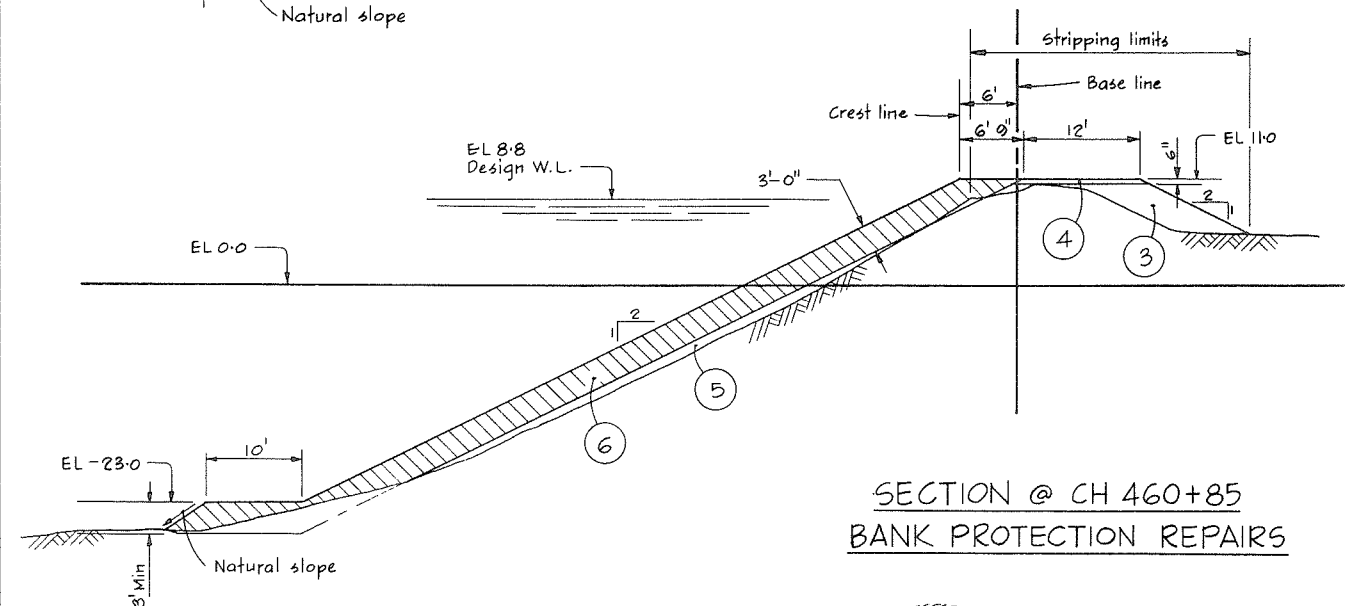
SECTION @ CH 461+85
BANK PROTECTION REPAIRS



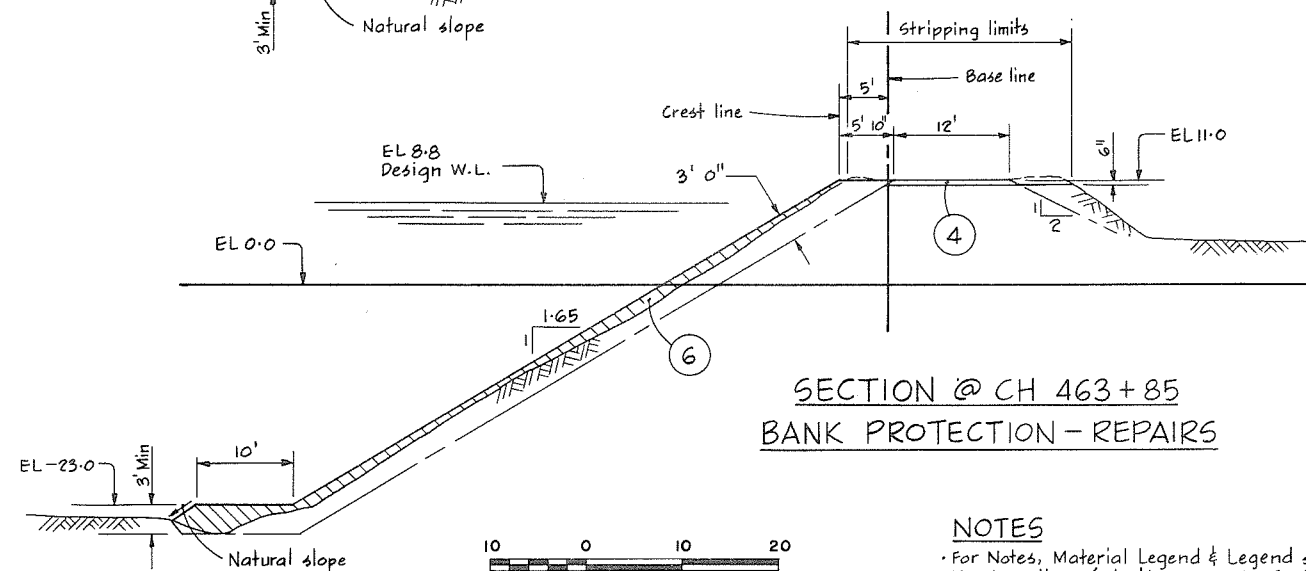
SECTION @ CH 459+85
BANK PROTECTION REPAIRS



SECTION @ CH 462+85
BANK PROTECTION REPAIRS



SECTION @ CH 460+85
BANK PROTECTION REPAIRS



SECTION @ CH 463+85
BANK PROTECTION REPAIRS



NOTES

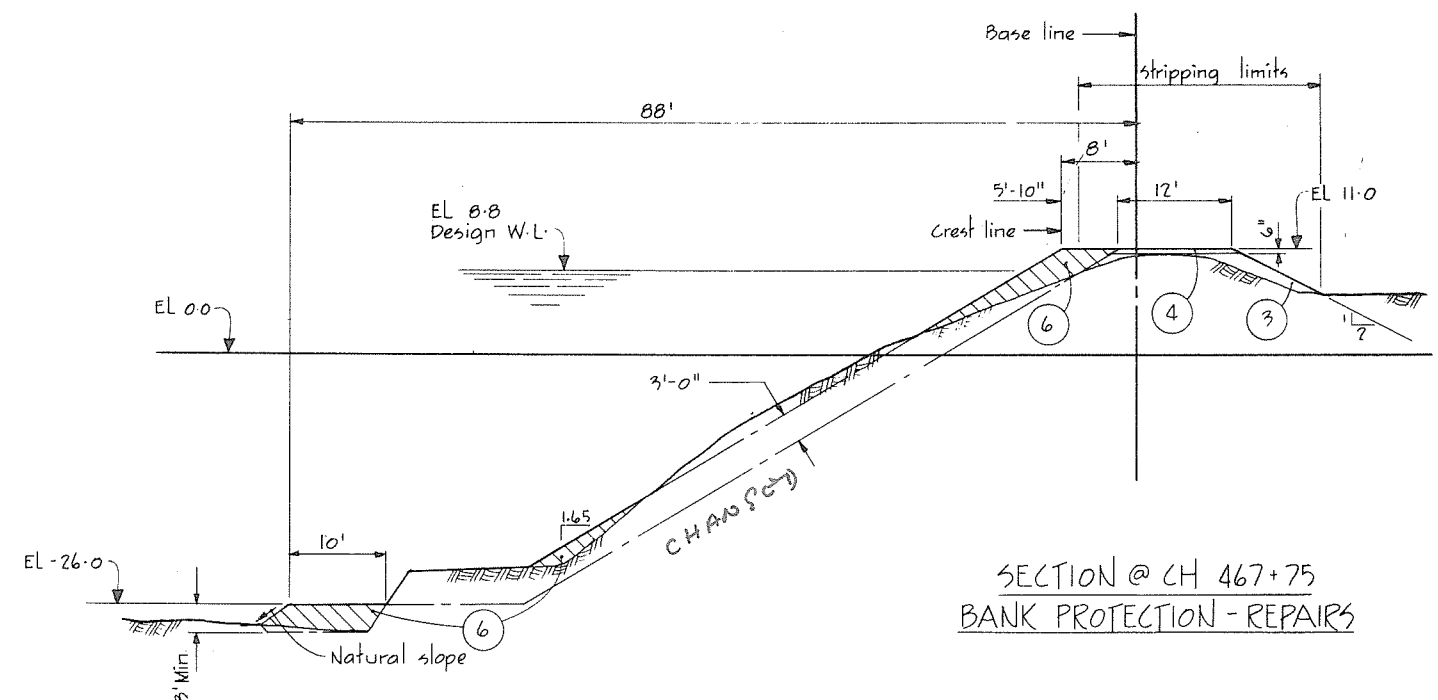
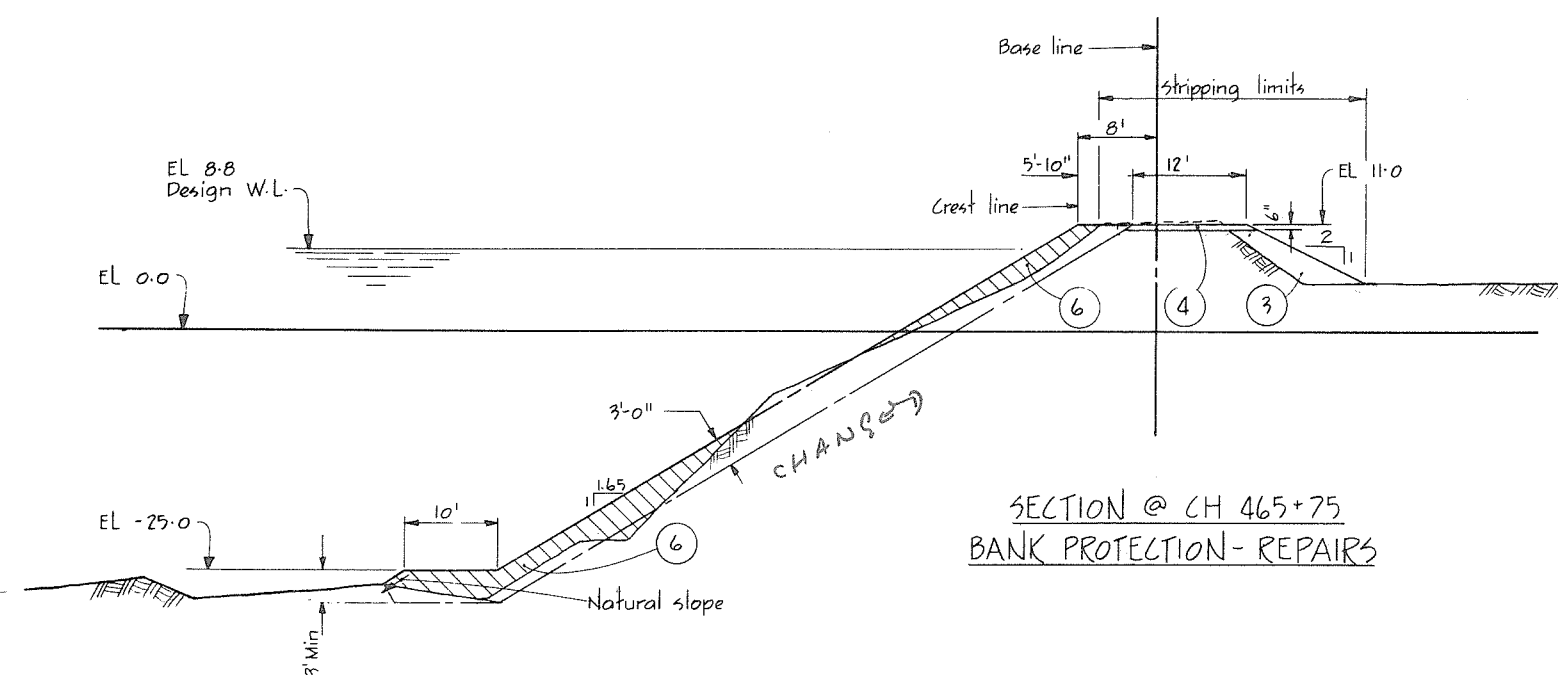
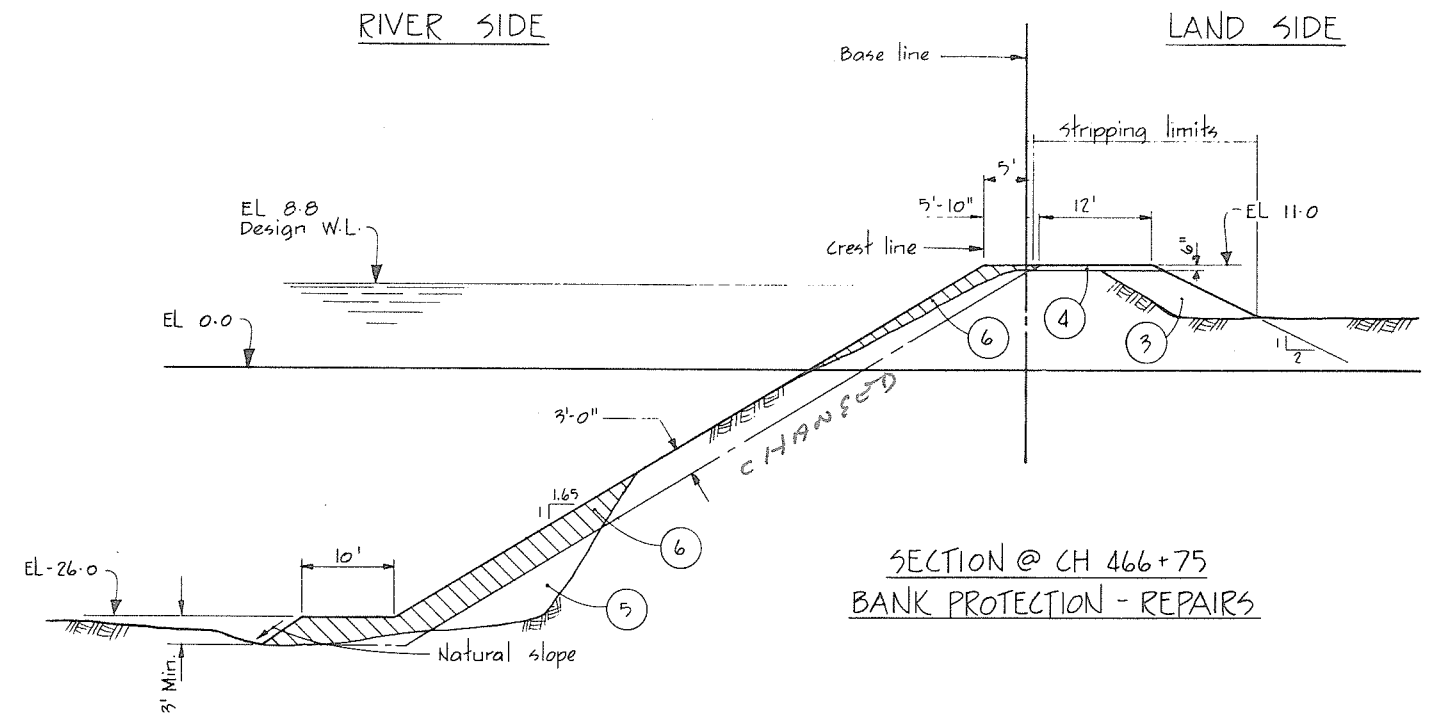
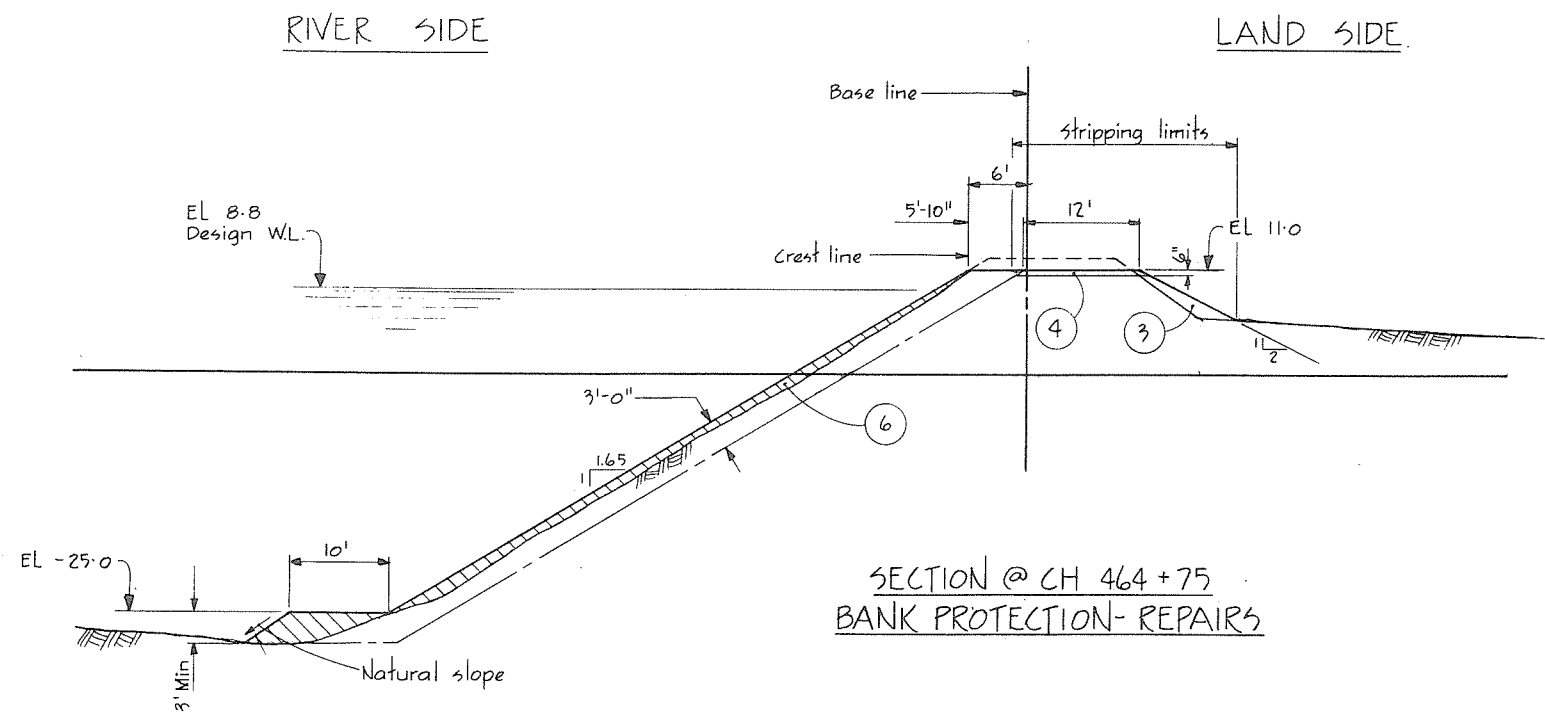
- For Notes, Material Legend & Legend see 4795-4-5
- For Location of sections see 4795-4-4

266 064



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

RECOMMENDED <i>Phil Zeller</i> CHIEF, PROJECTS DIV.	DESIGNED <i>DLC & EMH</i>	SURVEYED <i>ES & DPW</i>
DATE <i>Aug 27/74</i>	DRAWN <i>JL</i>	DATE <i>1969-70 & 1974</i>
APPROVED <i>Phil Zeller</i> CHIEF ENGINEER	CHECKED <i>DLC</i>	FILE NO. <i>0281550-C10-4</i>
DATE <i>Aug 24/74</i>	SCALE <i>As shown</i>	DATE <i>Aug. 1974</i>
	DWG. NO. <i>4795-4-10</i>	SHEET <i>6</i> OF <i>10</i> SHEETS



10 0 10 20
SCALE IN FEET

NOTES

For Notes, Material Legend & Legend see 4795-4-5
For Location of sections see 4795-4-4



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

C
B
A

NO. BY REVISIONS DATE

RECOMMENDED *W. H. Fuller*
CHIEF, PROJECTS DIV.
DATE *Aug 27/74*
APPROVED *W. H. Fuller*
CHIEF ENGINEER
DATE *Aug 28/74*

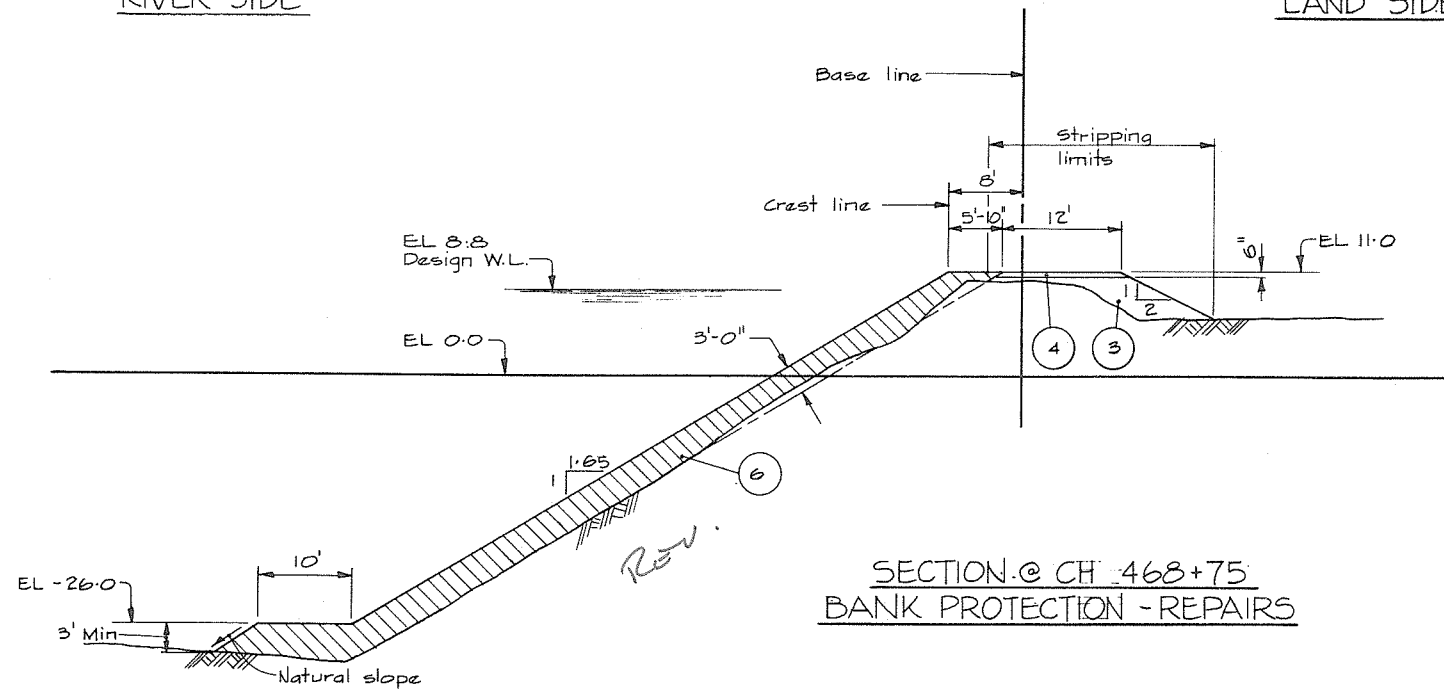
BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
TYPICAL DYKE SECTIONS

DESIGNED *DLC & EMH*
DRAWN *G*
CHECKED *DLC*
SCALE *As shown*
DWG. NO. *4795-4-11*
SURVEYED *ES & DPW*
DATE *1969-70 & 1974*
FILE NO. *0281550-C10-4*
DATE *Aug 1974*
SHEET *7* OF *10* SHEETS

266065

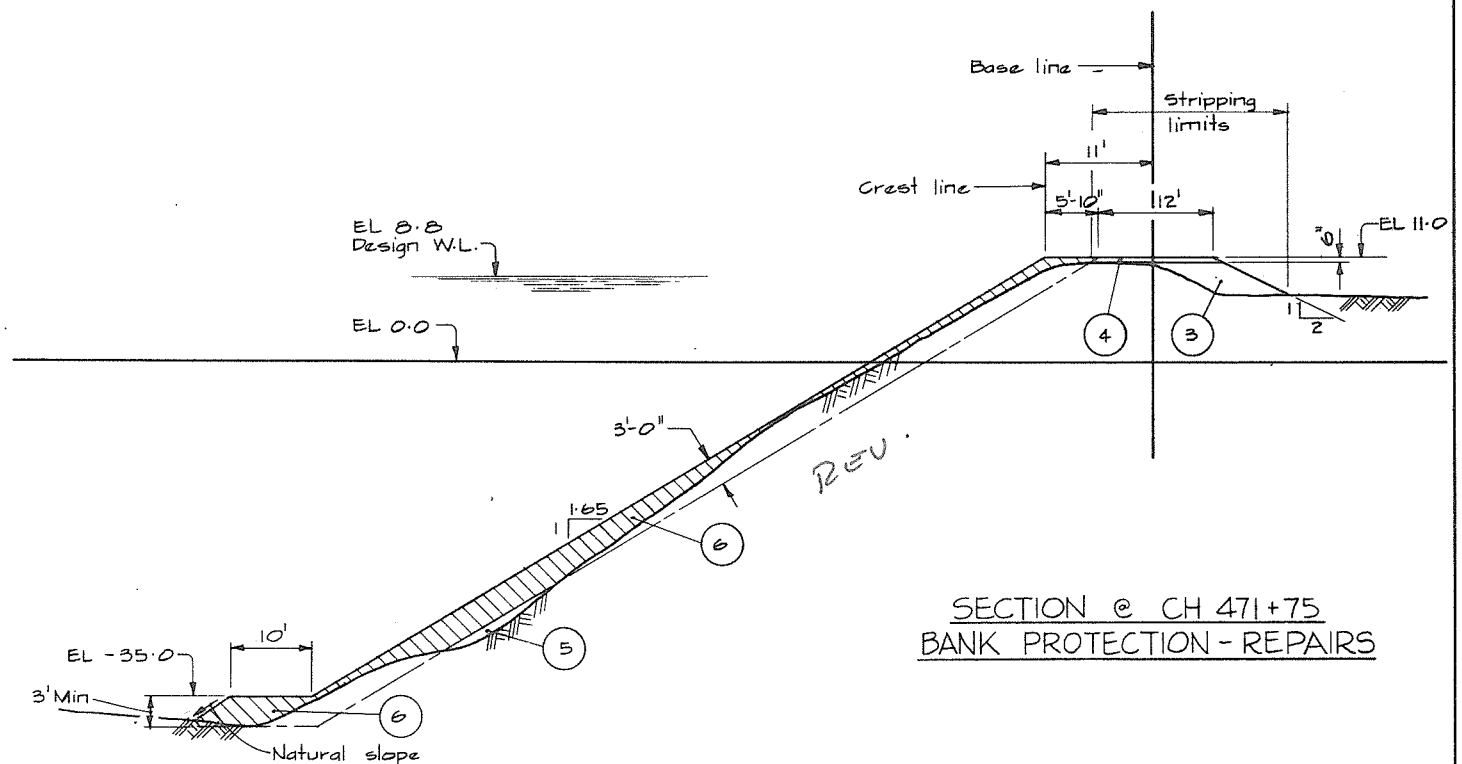
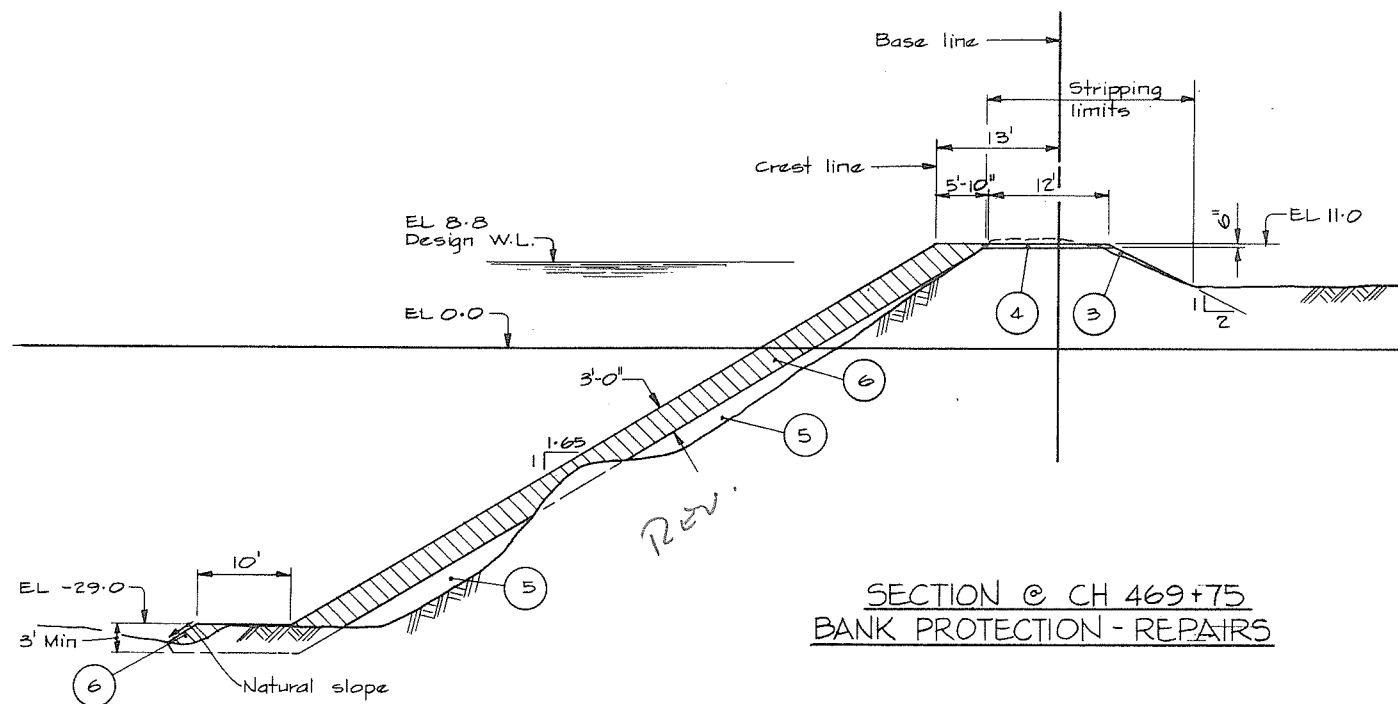
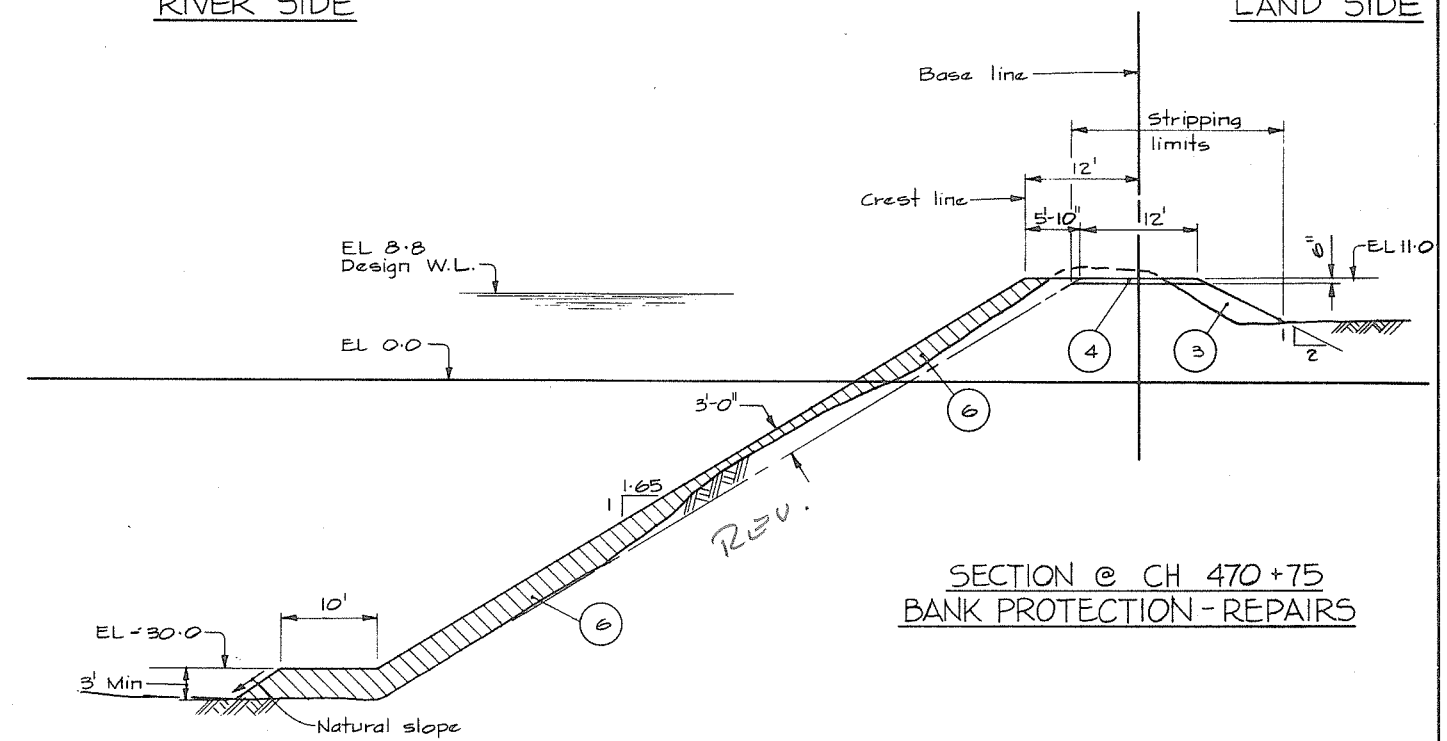
RIVER SIDE

LAND SIDE



RIVER SIDE

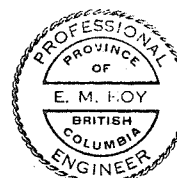
LAND SIDE



NOTES

- For Notes, Material Legend and Legend see 4795-4-5.
- For location of Sections see 4795-4-4.

266066

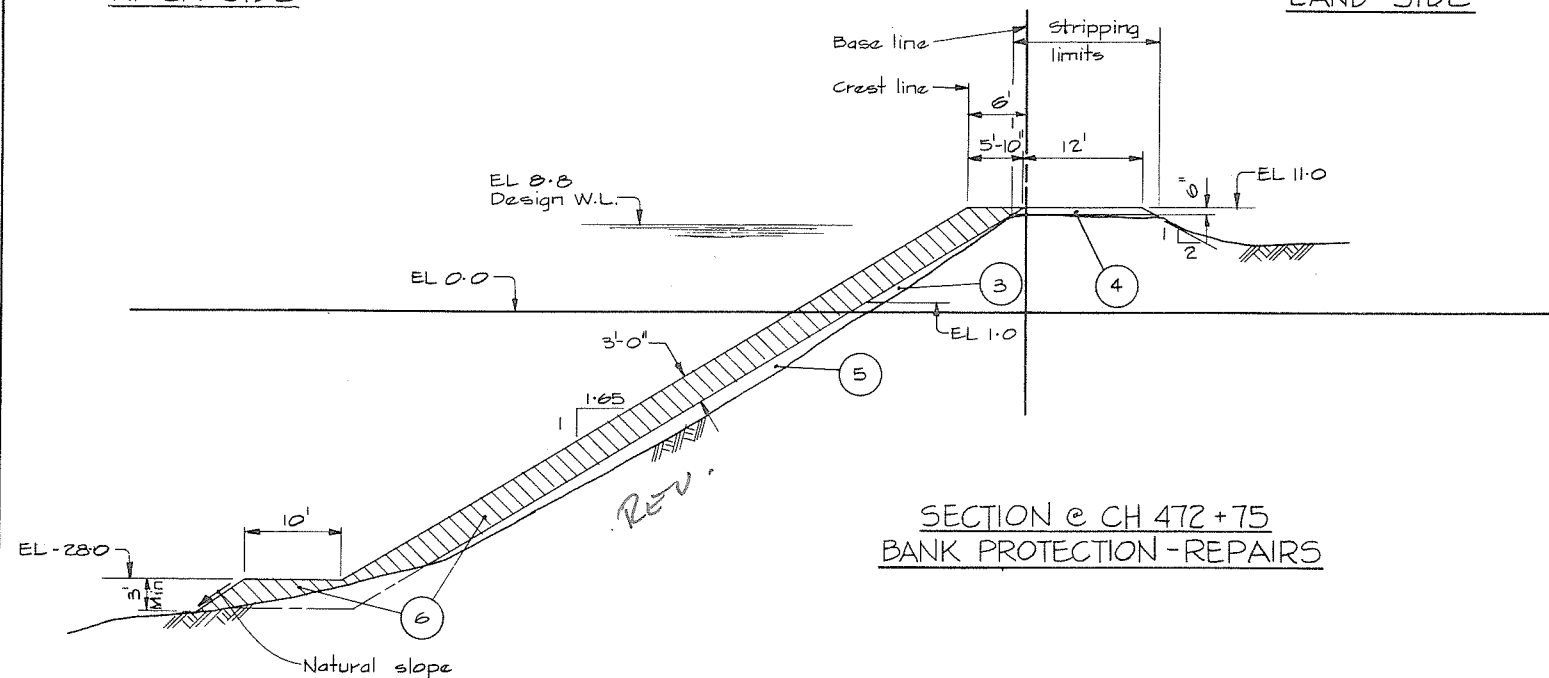


CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

RECOMMENDED DATE APPROVED DATE	DESIGNED DRAWN CHECKED SCALE DWG. NO.	SURVEYED DATE FILE NO. DATE SHEET
RECOMMENDED <i>DL</i> DATE <i>Aug 27/74</i> APPROVED <i>DL</i> DATE <i>Aug 27/74</i>	DESIGNED <i>DL</i> DRAWN <i>DL</i> CHECKED <i>DL</i> SCALE <i>As shown</i> DWG. NO. <i>4795-4-12</i>	SURVEYED <i>ES</i> DATE <i>1969-70 & 1974</i> FILE NO. <i>0281550-C10-4</i> DATE <i>Aug. 1974</i> SHEET <i>8</i> OF <i>10</i> SHEETS

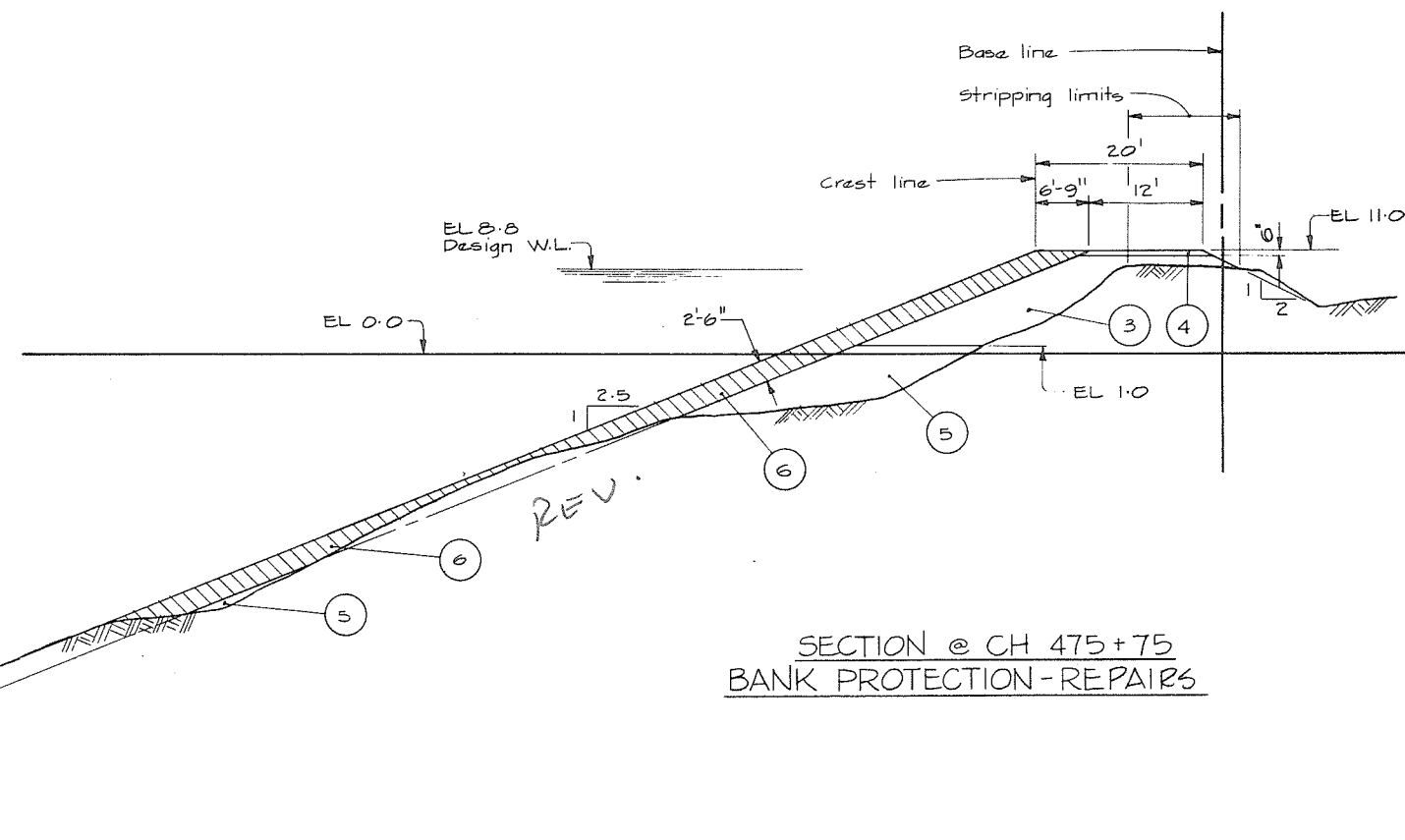
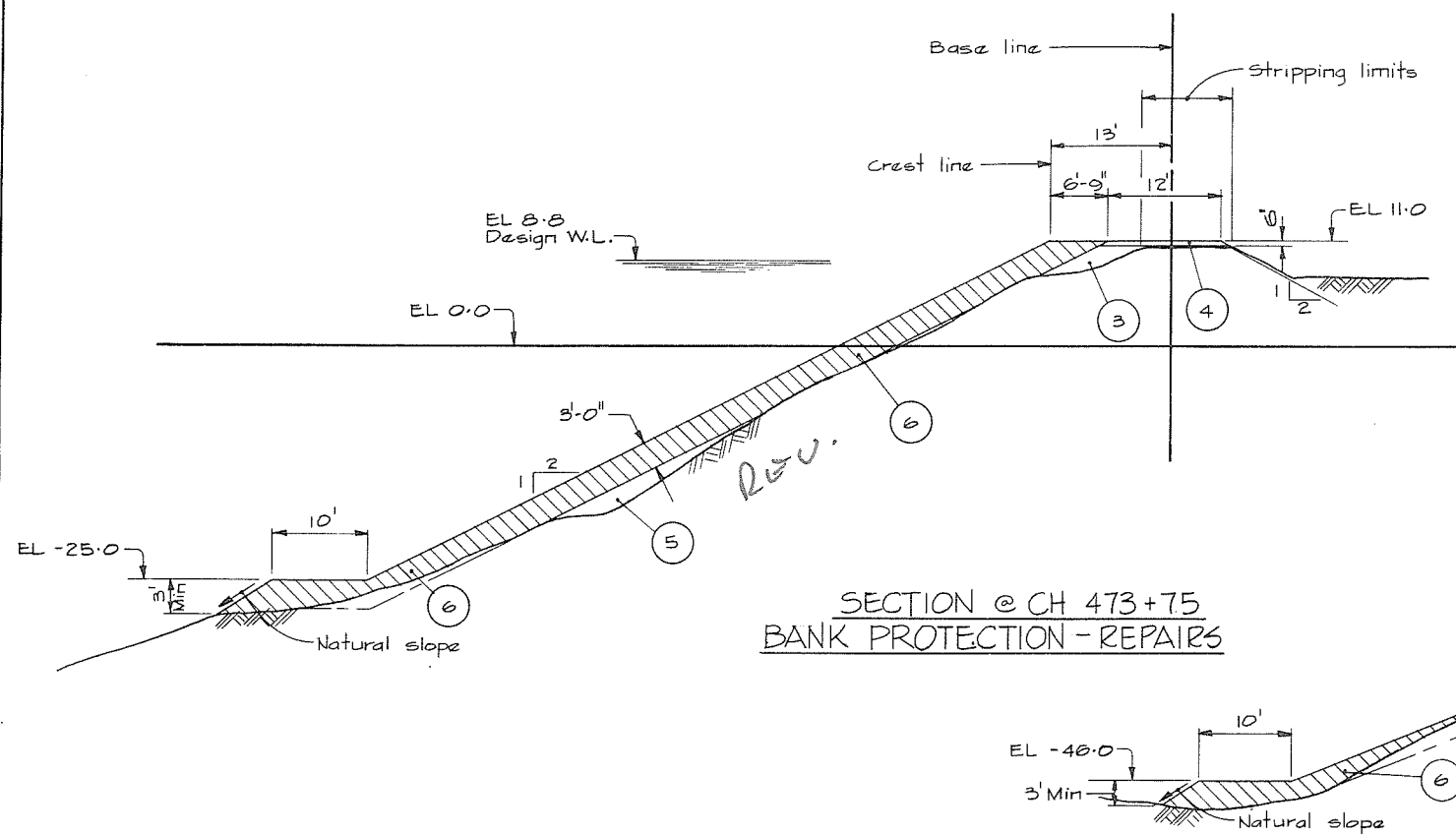
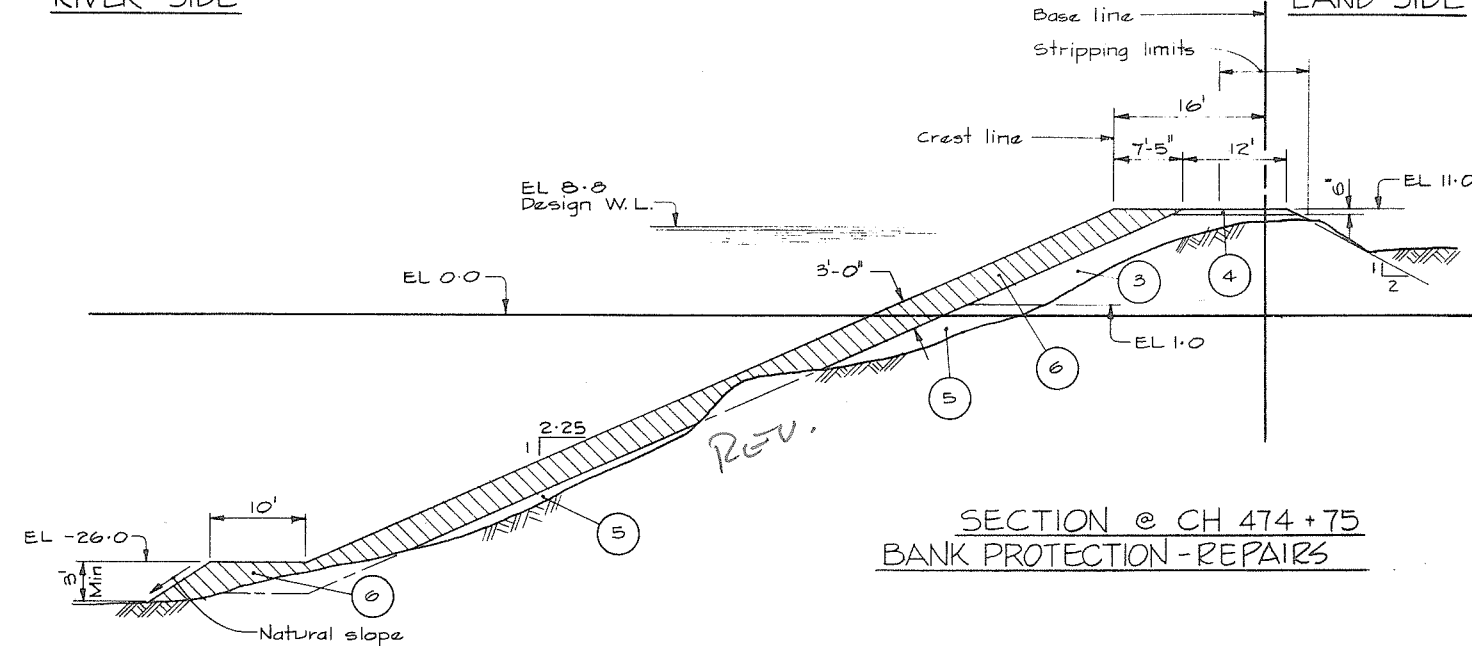
RIVER SIDE

LAND SIDE



RIVER SIDE

LAND SIDE



NOTES

- For Notes, Material Legend and Legend see 4795-4-5.
- For location of Sections see 4795-4-4



266 067



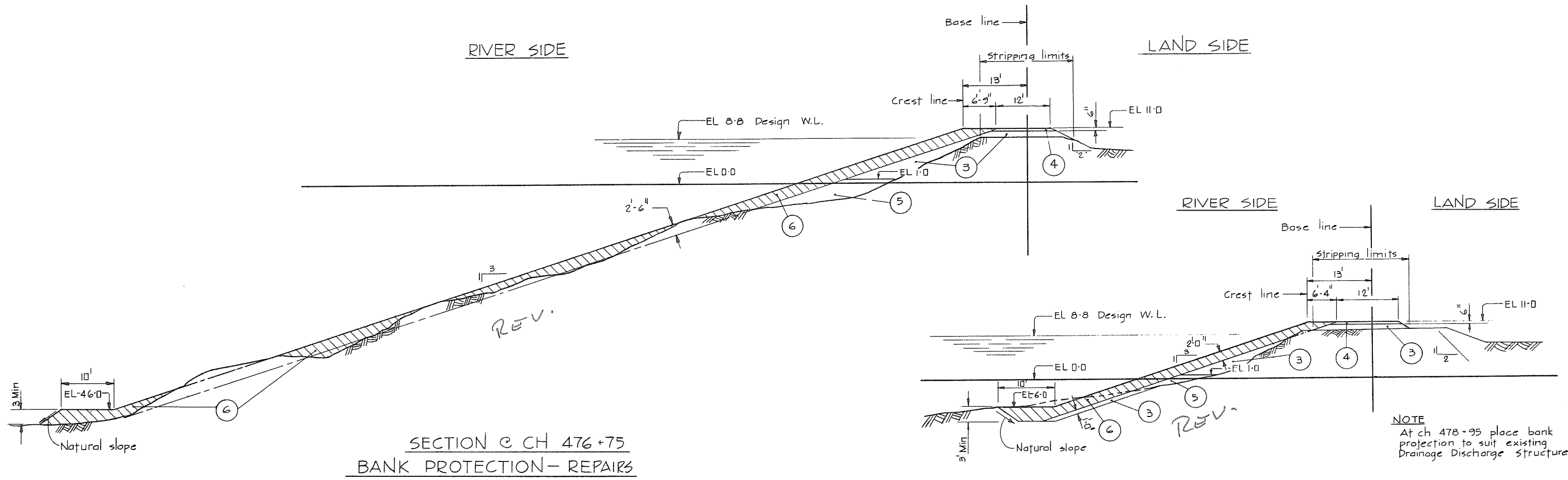
CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO.	BY	REVISIONS	DATE
1	CBA		

RECOMMENDED *[Signature]*
CHIEF, PROJECTS DIV.
DATE *Aug 27/74*
APPROVED *[Signature]*
CHIEF ENGINEER
DATE *Aug 28/74*

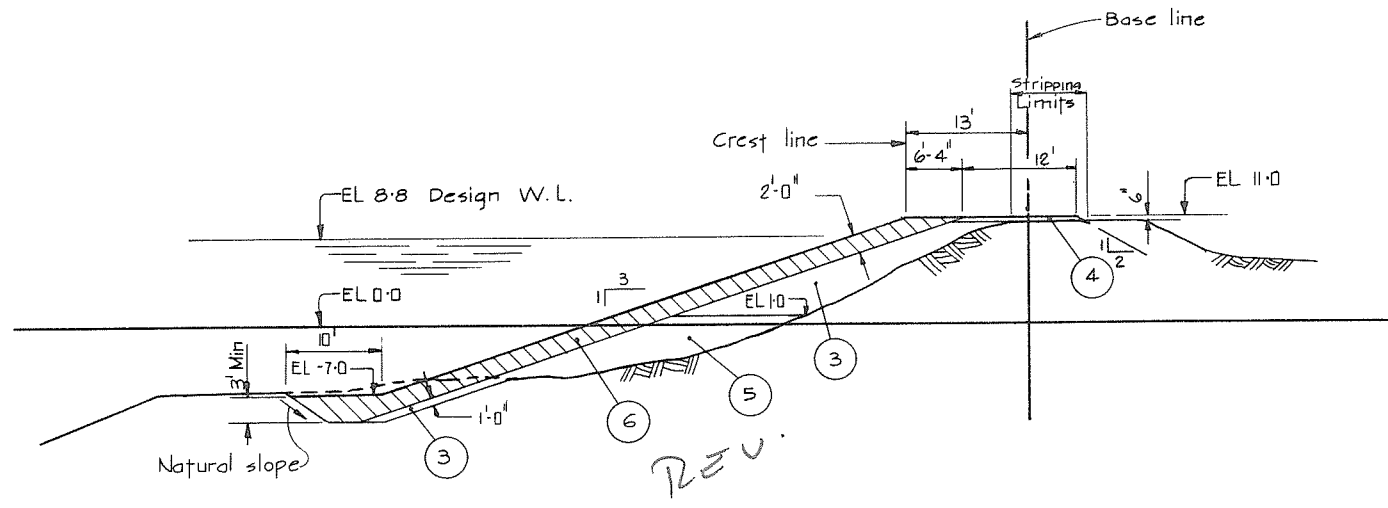
BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
TYPICAL DYKE SECTIONS

DESIGNED <i>DLC & EMH</i>	SURVEYED <i>ES & DPW</i>
DRAWN <i>DLC</i>	DATE <i>1969-70 & 1974</i>
CHECKED <i>DLC</i>	FILE NO. <i>0281550-C10-4</i>
SCALE <i>As shown</i>	DATE <i>Aug, 1974</i>
DWG. NO. <i>4795-4-13</i>	SHEET <i>9</i> OF <i>10</i> SHEETS



SECTION @ CH 476+75
BANK PROTECTION - REPAIRS

SECTION @ CH 478+75
BANK PROTECTION - REPAIRS



SECTION @ CH 477+75
BANK PROTECTION - REPAIRS

NOTES
For Notes Material legend and legend
see 4795-4-5
For location of sections see 4795-4-4



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

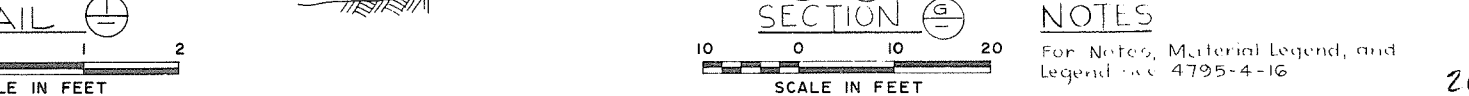
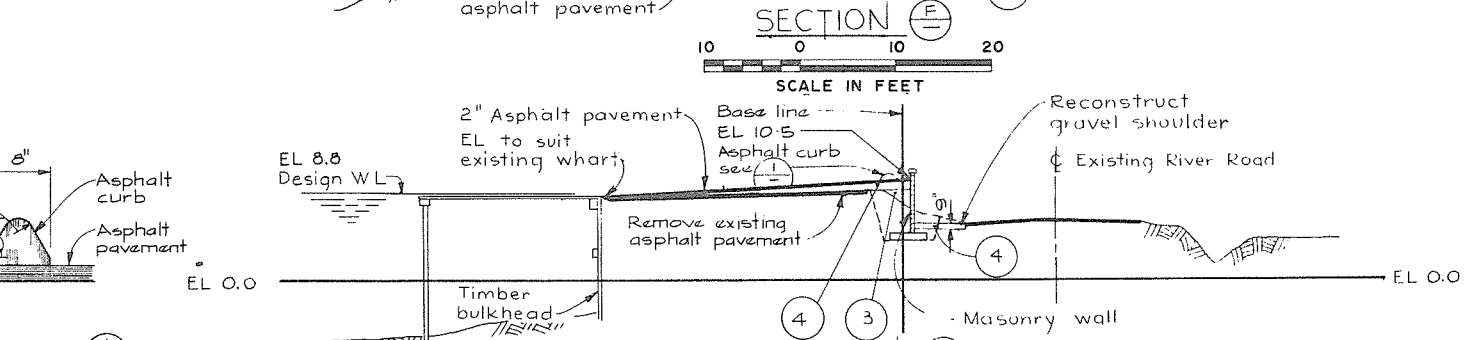
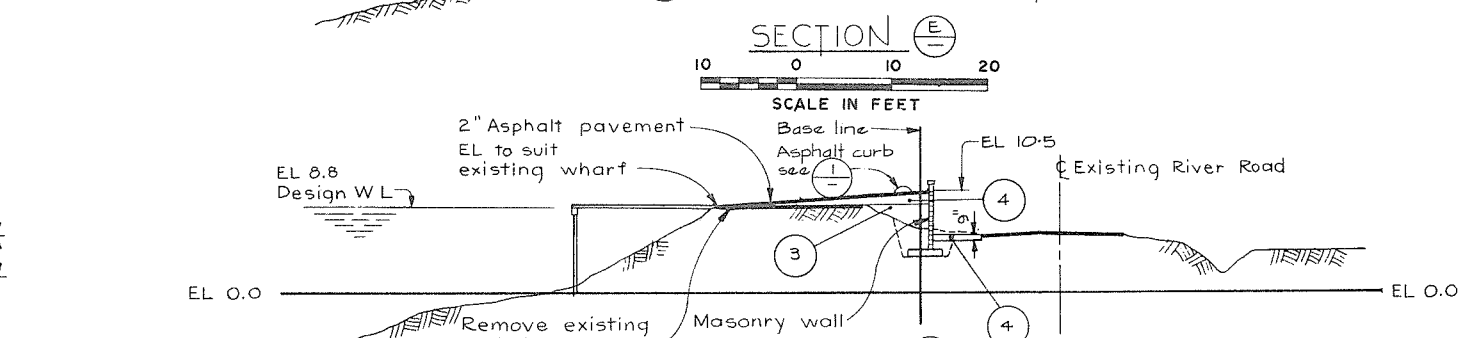
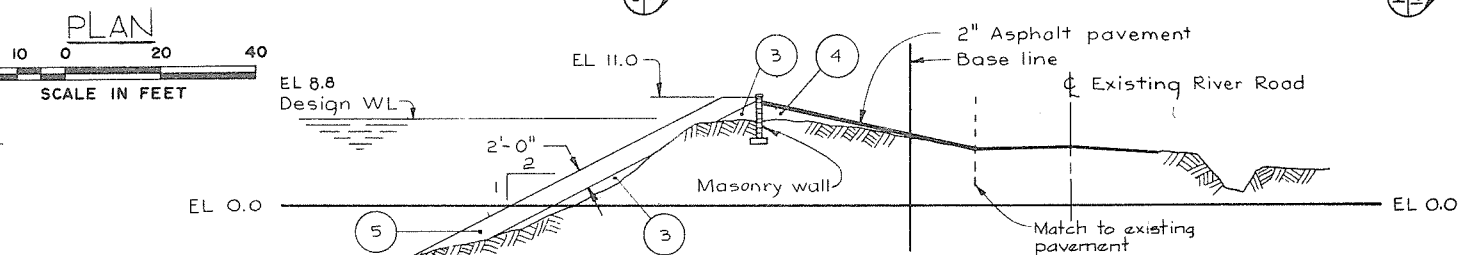
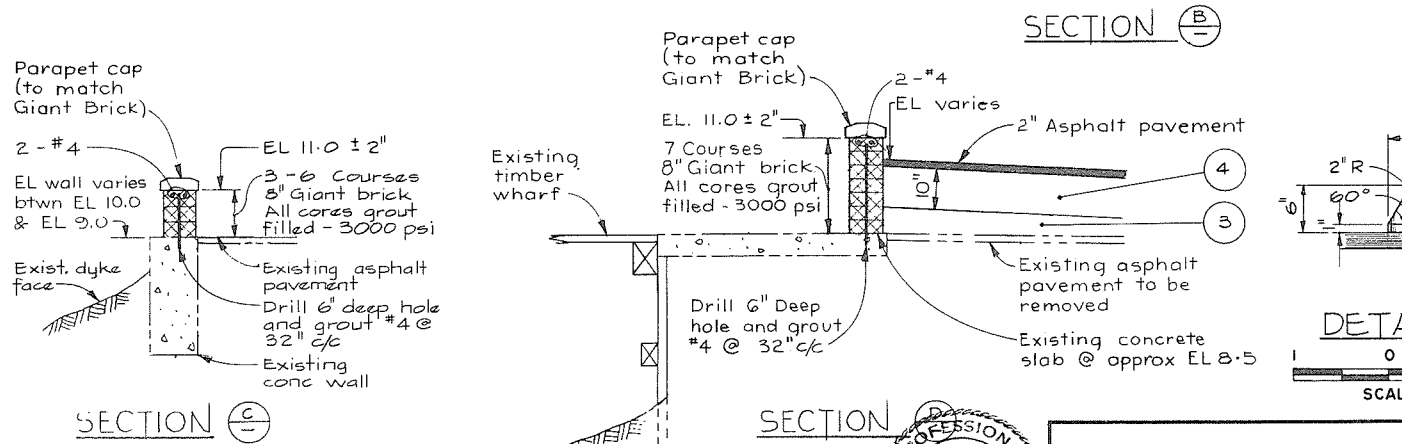
NO.	BY	REVISIONS	DATE
1	3A		

RECOMMENDED	<i>Phil Fuller</i> CHIEF, PROJECTS DIV.
DATE	<i>Aug 27/74</i>
APPROVED	<i>Phil Fuller</i> CHIEF ENGINEER
DATE	<i>Aug 28/74</i>

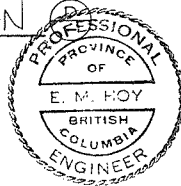
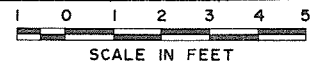
BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
TYPICAL DYKE SECTIONS

DESIGNED	DLC & EMH	SURVEYED	ES & DPW
DRAWN	SP	DATE	1969-70 & 1974
CHECKED	DLC	FILE NO.	0281550 - C10-4
SCALE	As shown	DATE	Aug. 1974
DWG. NO.	4795-4-14	SHEET	10 OF 10 SHEETS

266068

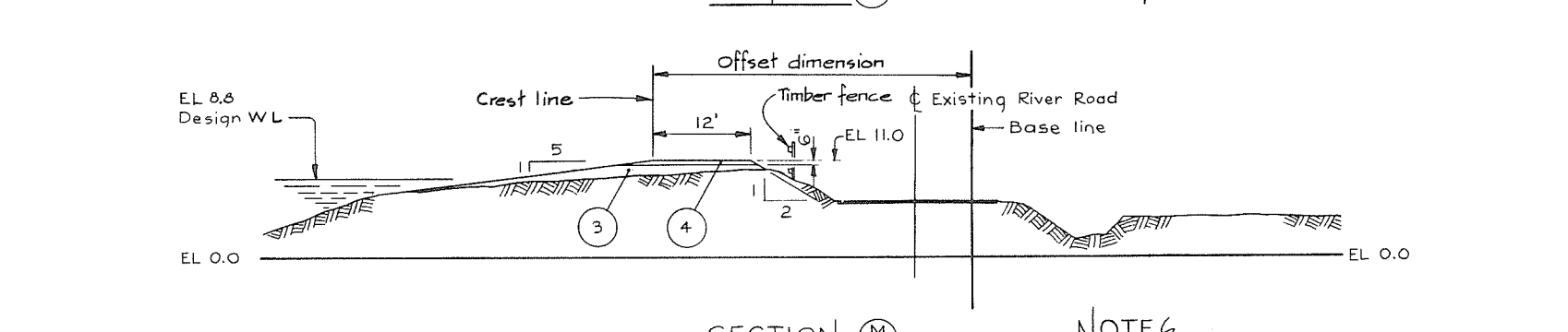
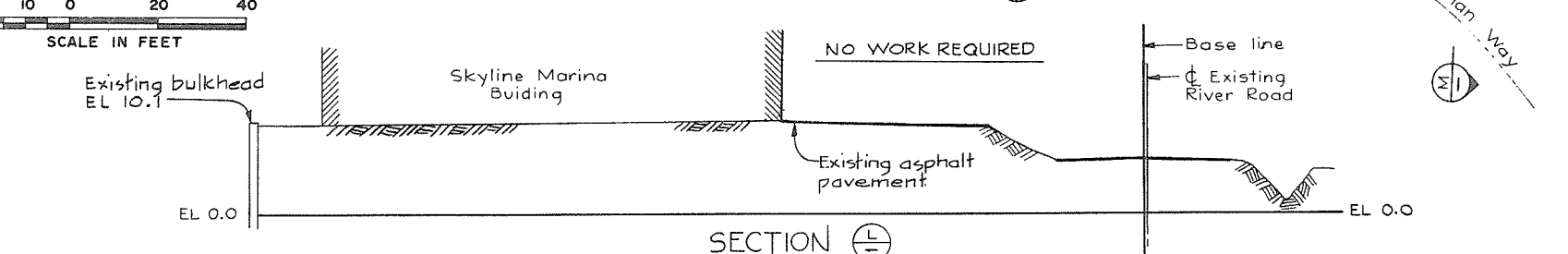
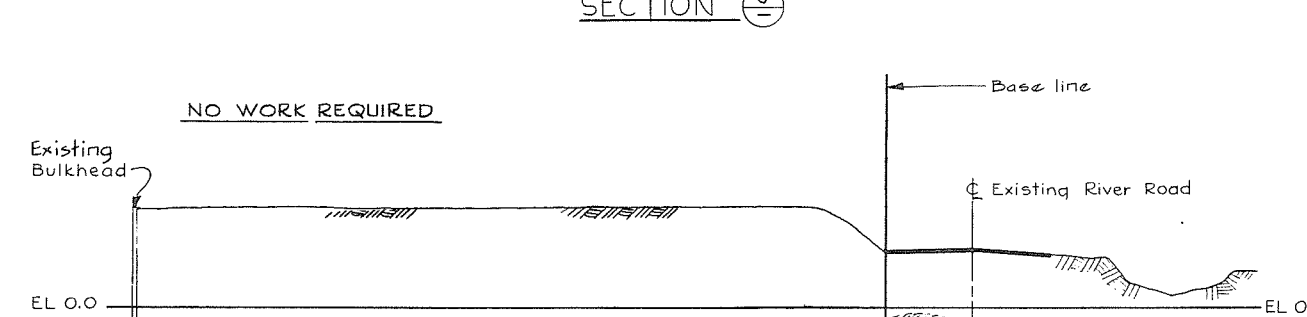
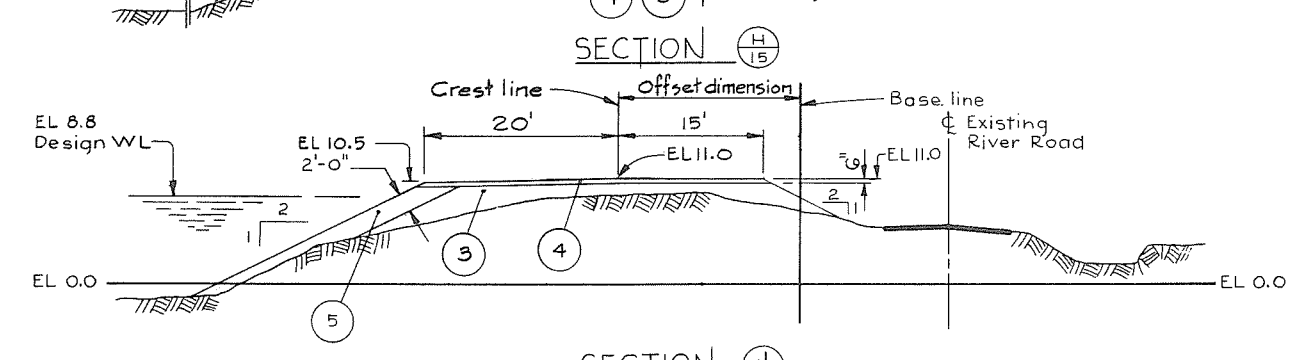
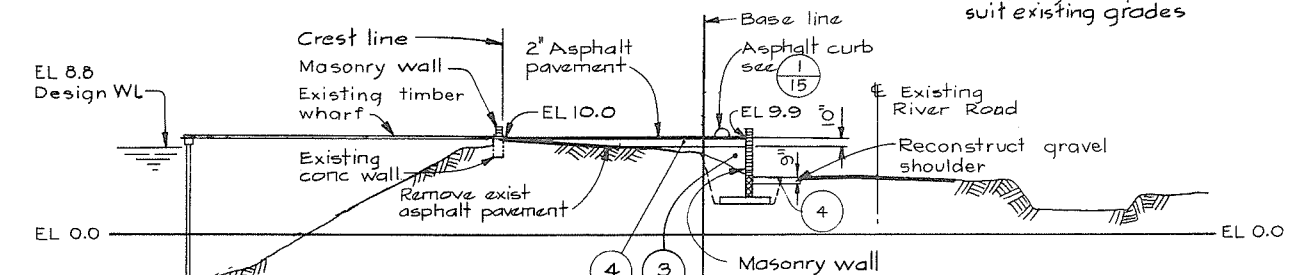
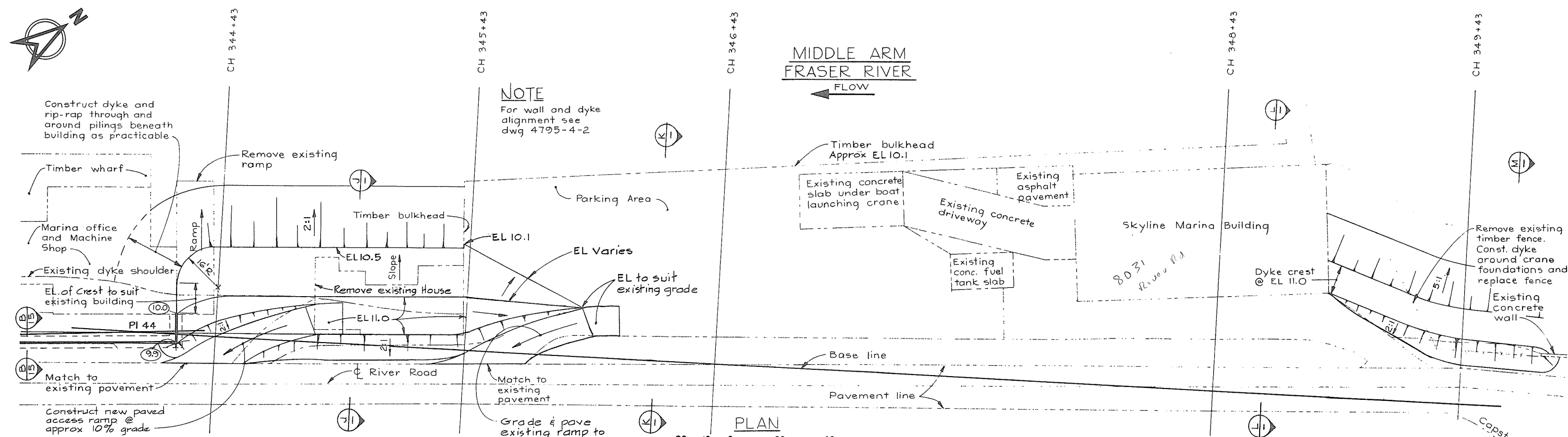


MASONRY RETAINING WALL DETAILS



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

B A				RECOMMENDED <u>W. Fuller</u> CHIEF, PROJECTS DIV.	BRITISH COLUMBIA DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT	DESIGNED <u>A.W. + E.M.H.</u>	SURVEYED <u>ES & RP</u>
				DATE <u>Aug 27/74</u>		DRAWN <u>JA</u>	DATE <u>1969-70 & 1974</u>
				APPROVED <u>P.M. Brady</u> DIRECTOR	PROJECT NO. 3 THE TOWNSHIP OF RICHMOND CONTRACT 4 MARINA AREA CH 338 + 00 TO 350 + 00 DYKE DETAILS	CHECKED <u>DLC</u>	FILE NO. <u>0281550-C10-4</u>
	NO.	BY	REVISIONS	DATE	DATE <u>Aug 28/74</u>		SCALE <u>As shown</u>
						DWG. NO. <u>4795-4-15</u>	SHEET <u>1</u> OF <u>2</u> SHEETS



LEGEND

- Existing ground surface (section)
- Existing ground and structures (plan)
- Finished pavement elevations
- 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]

MATERIAL LEGEND

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

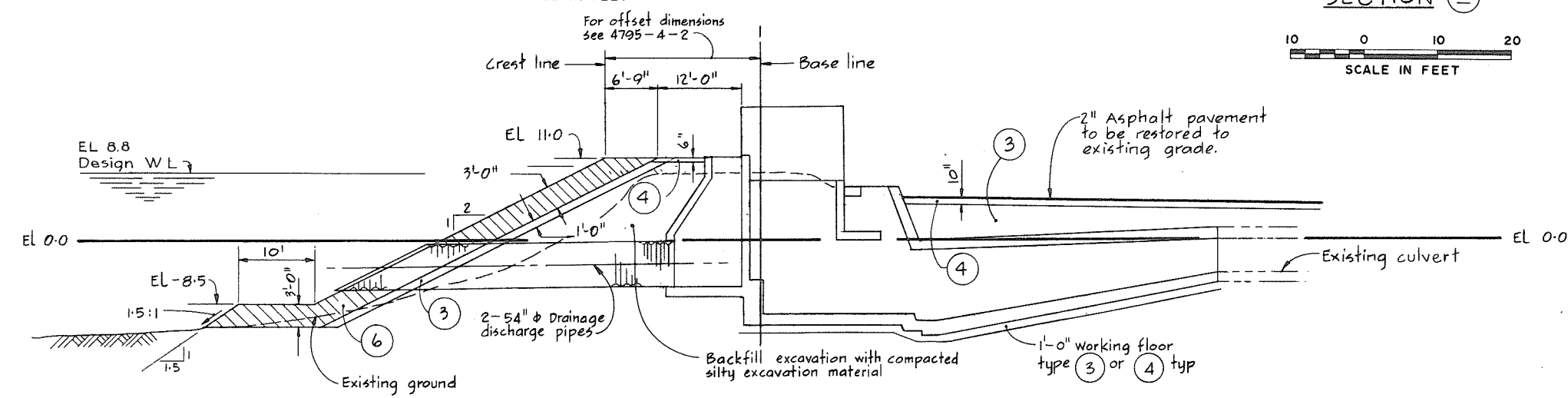
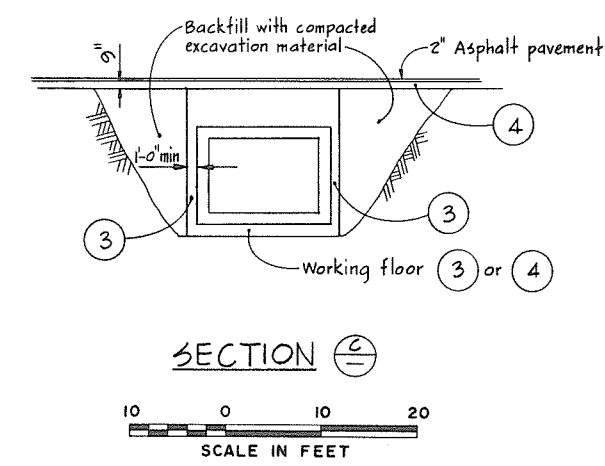
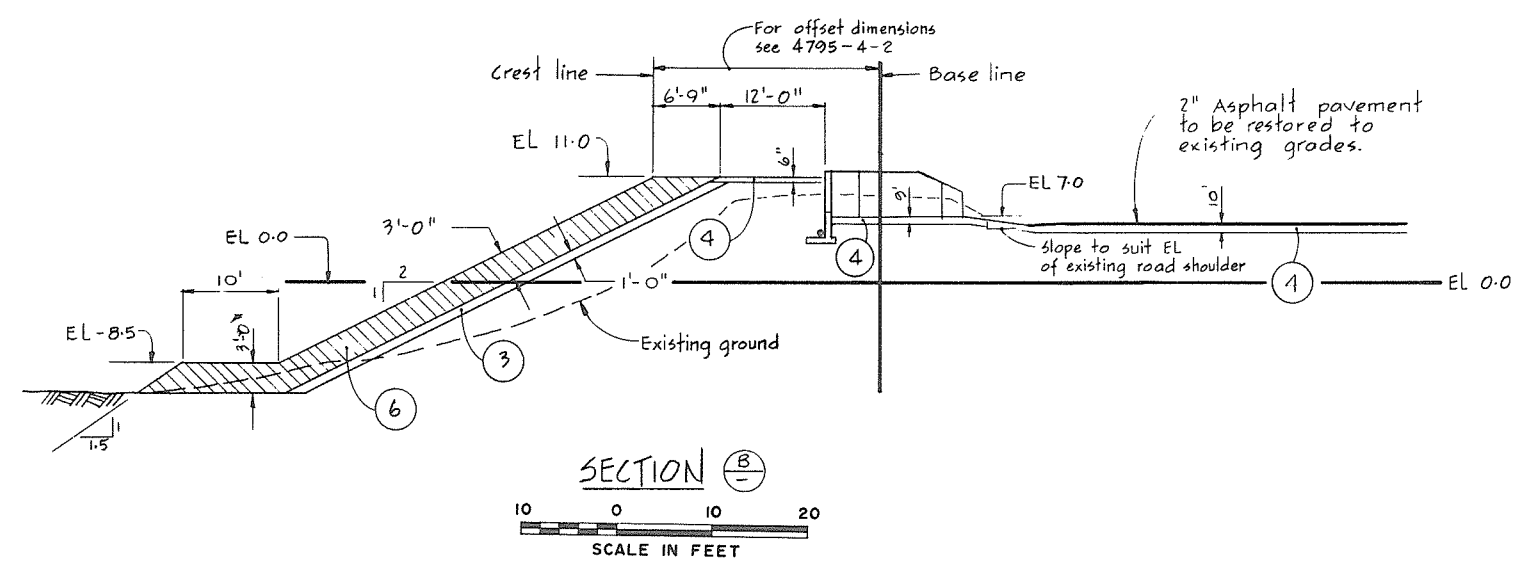
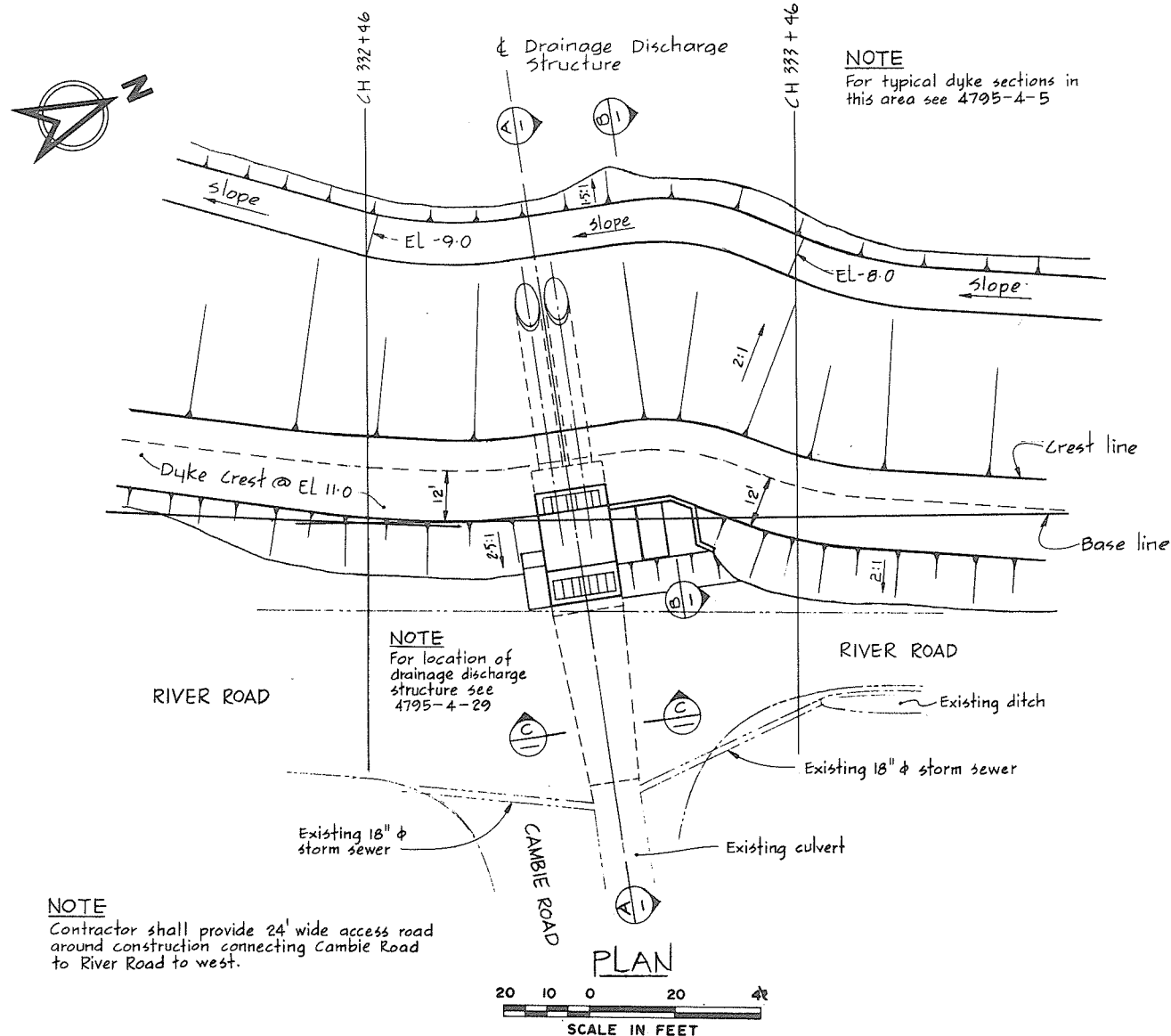
NOTES

- 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

266070

SCALE IN FEET Unless otherwise noted

		CBA ENGINEERING LTD. CONSULTING ENGINEERS - VANCOUVER - CANADA	NO.	BY	REVISIONS	DATE	RECOMMENDED <i>W. J. Fuller</i> CHIEF, PROJECTS DIV.	DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT	DESIGNED <i>PLC & EMH</i>	SURVEYED <i>ES&RP</i>
							DATE <i>Aug 27/74</i>		CONTRACT NO. 3 - THE TOWNSHIP OF RICHMOND MARINA AREA CH 338+00 TO 350+00 DYKE DETAILS	DRAWN <i>J. N.</i>
							APPROVED <i>P. B. B. B.</i> DIRECTOR		CHECKED <i>PLC</i>	FILE NO. <i>0281550-C10-4</i>
							DATE <i>Aug 27/74</i>		SCALE <i>As shown</i>	DATE <i>Aug 1974</i>
									DWG. NO. <i>4795-4-16</i>	SHEET <i>2</i> OF <i>2</i> SHEETS



MATERIAL LEGEND

- (1) silt
- (2) sand
- (3) sand, gravel, cobbles
- (4) crushed gravel
- (5) Light rip-rap
- (6) Rip-rap

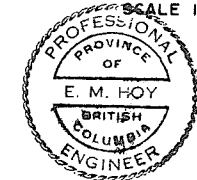
LEGEND

- Existing ground surface (section)
- Existing ground & structures (plan)
- Section identification letter
Drawing No. on which the section is drawn (ie) 4795-4-C77
- Detail identification number
Drawing No. on which the detail is drawn (ie) 4795-4-C77

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.

266071

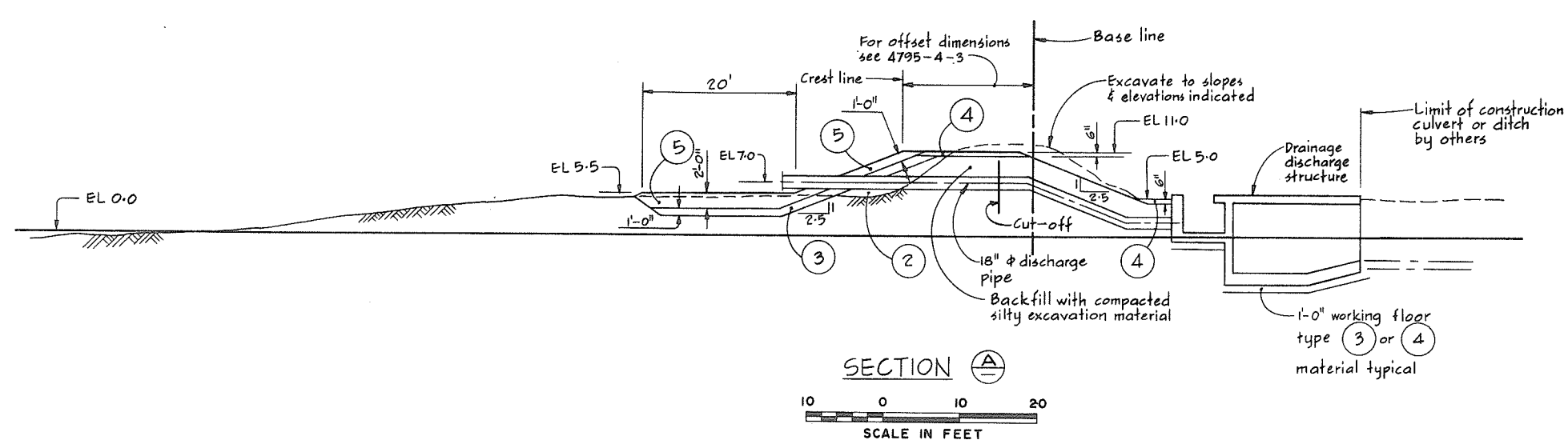
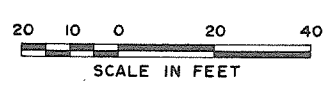
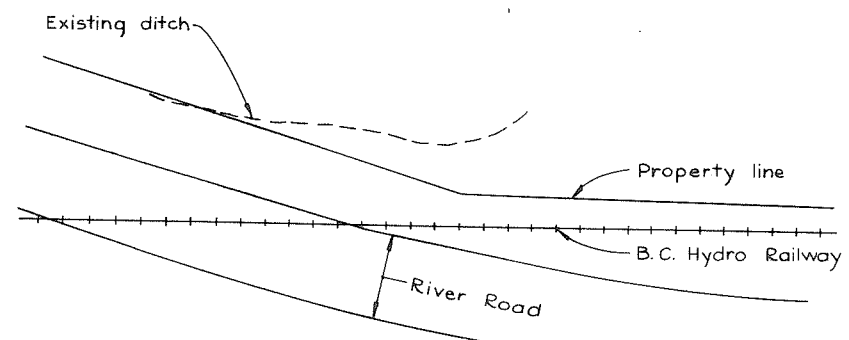
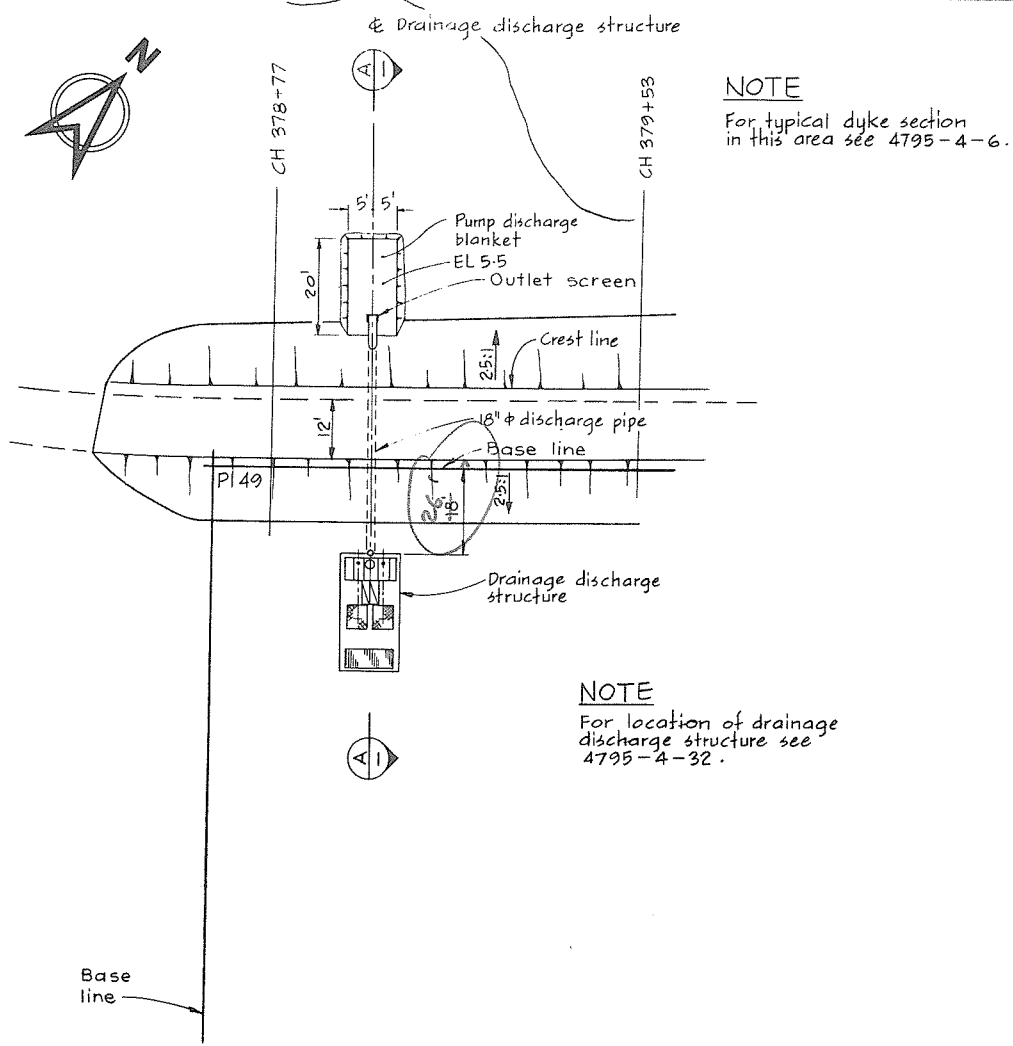


CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

RECOMMENDED	<i>Fuller</i>
DATE	Aug 27/74
APPROVED	<i>PM</i>
DATE	Aug 27/74

BRITISH COLUMBIA DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO 3- THE TOWNSHIP OF RICHMOND CONTRACT NO. 4 CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE DETAILS OF EARTH WORKS

DESIGNED	DLC & CMH	SURVEYED	ES
DRAWN	CD	DATE	1969-70
CHECKED	DLC	FILE NO.	0281550-C10-4
SCALE	AS SHOWN	DATE	Aug. 1974
DWG. NO.	4795-4-17 A	SHEET	OF SHEETS



NOTES
For Notes, Material Legend & Legend
see 4795-4-17

266072



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO.	BY	REVISIONS	DATE
A		DIM REV.	

RECOMMENDED *John Fuller*
CHIEF, PROJECTS DIV.
DATE *Aug 27/74*
APPROVED *John Fuller*
DIRECTOR
DATE *Aug 28/74*

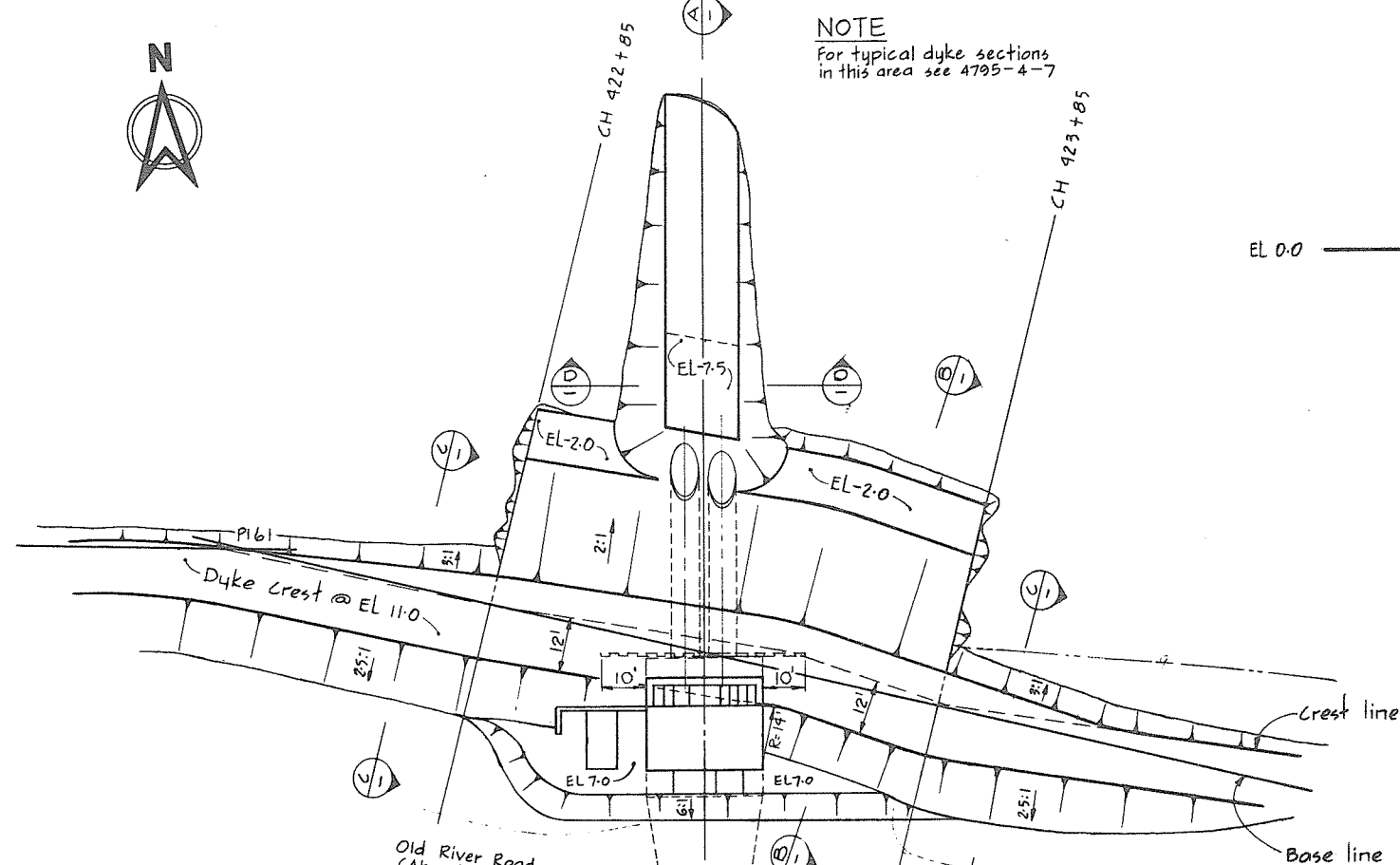
DESIGNED <i>DLC & EMH</i>	SURVEYED <i>ES</i>
DRAWN <i>JL</i>	DATE <i>1969-70</i>
CHECKED <i>DLC</i>	FILE NO. <i>0281550-C10-4</i>
SCALE <i>As shown</i>	DATE <i>Aug, 1974</i>
DWG. NO. <i>4795-4-18 A</i>	SHEET <i>1</i> OF <i>1</i> SHEETS

BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
DUCK ISLAND DRAINAGE DISCHARGE STRUCTURE
DETAILS OF EARTHWORKS



Drainage Discharge structure

NOTE
For typical dyke sections
in this area see 4795-4-7



NOTE
For location of drainage
discharge structure see
4795-4-30

Existing ditch

PLAN

SCALE IN FEET

Extent of discharge
channel excavation

EL 0.0

EL -7.5

Existing ground

SECTION A

SCALE IN FEET

For offset dimensions
see 4795-4-9

Crest line

EL 11.0

Base line
Varies (12' min)

EL 8.0

Steel sheet pile
cut-off wall

EL -25.0

2-72" & drainage
discharge pipes

Backfill excavation with compacted
silty excavation material

1'-0" working floor
type (3) or (4) (typ)

SECTION E

SCALE IN FEET

Culvert & ditch backfill
by others

EL 0.0

NOTES

For Notes, Material Legend & Legend
see 4795-4-17

266 073



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

RECOMMENDED *John J. J. J.*
CHIEF, PROJECTS DIV.

DATE *Aug 27/74*

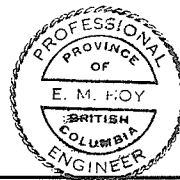
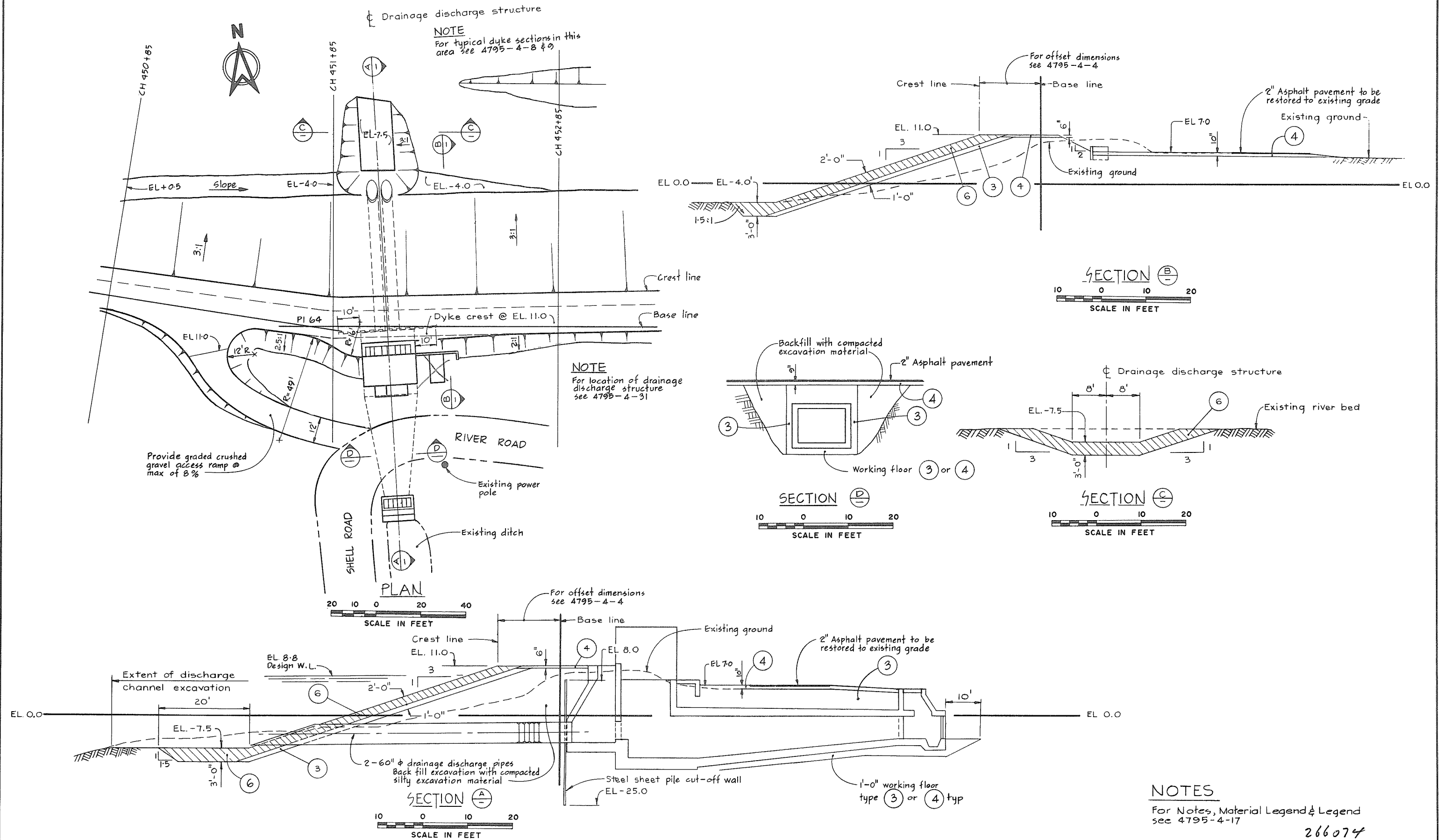
APPROVED *P. J. J.*
DIRECTOR

DATE *Aug 28/74*

BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT

PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE
DETAILS OF EARTH WORKS

DESIGNED <i>DLC</i>	SURVEYED <i>ES</i>
DRAWN <i>D</i>	DATE 1969-70
CHECKED <i>DLC</i>	FILE NO. 0281550-C10-4
SCALE AS SHOWN	DATE Aug 1974
DWG. NO. 4795-4-19	SHEET OF SHEETS



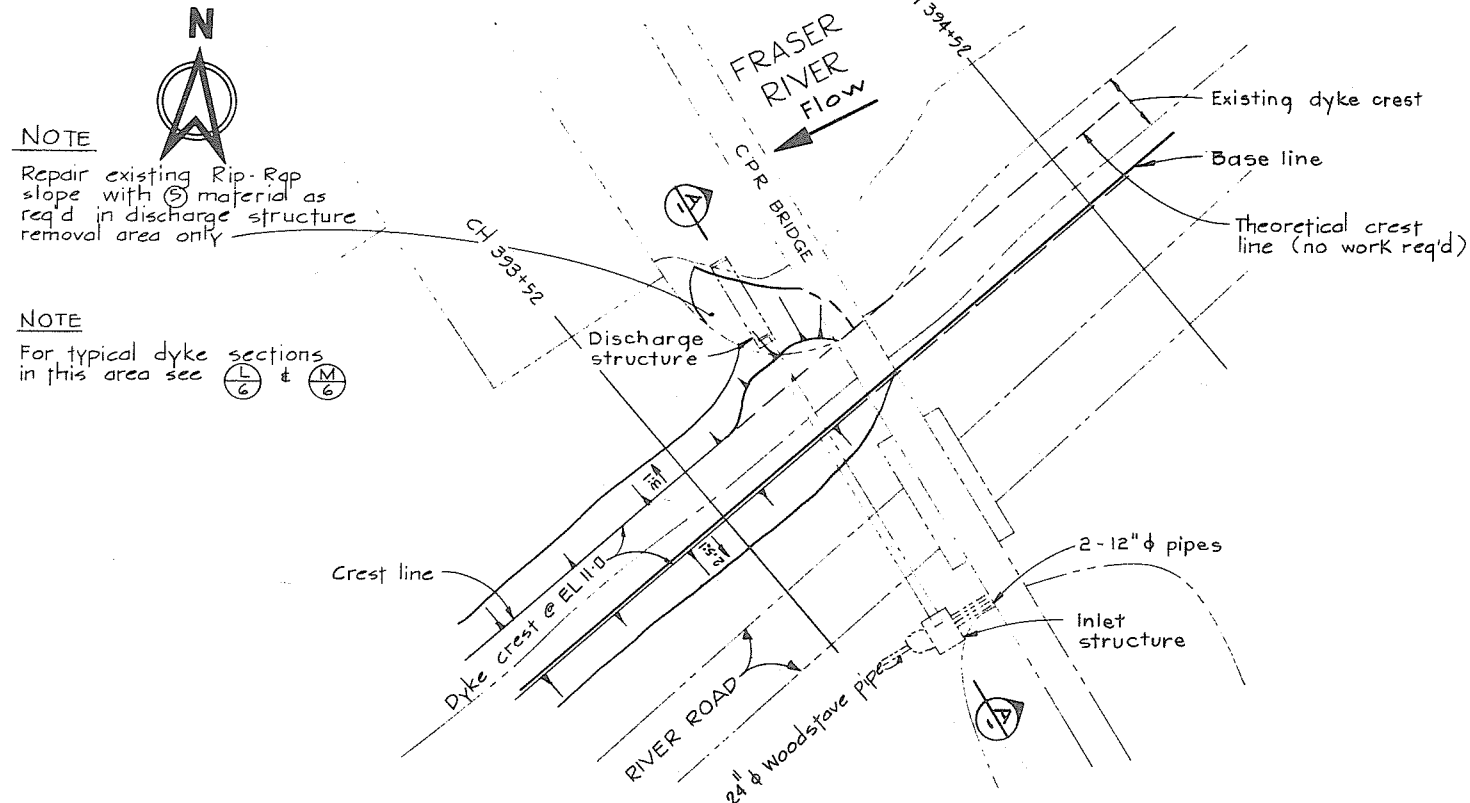
CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO.	BY	REVISIONS	DATE
1			
2			
3			

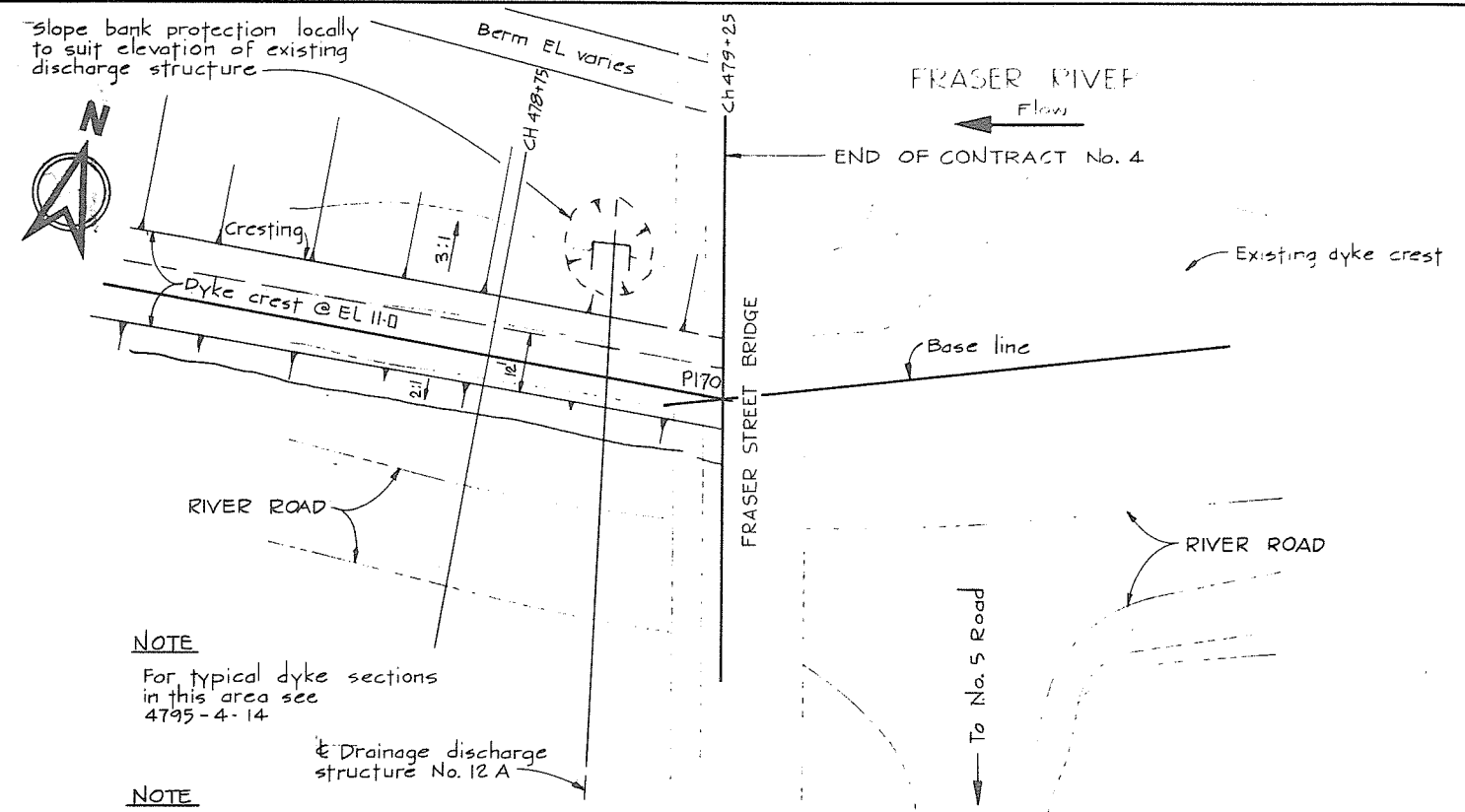
RECOMMENDED	<i>John Fuller</i> CHIEF, PROJECTS DIV.
DATE	Aug 27/74
APPROVED	<i>P. Brady</i> DIRECTOR
DATE	Aug 28/74

BRITISH COLUMBIA DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND CONTRACT NO. 4 SHELL ROAD DRAINAGE DISCHARGE STRUCTURE DETAILS OF EARTH WORKS

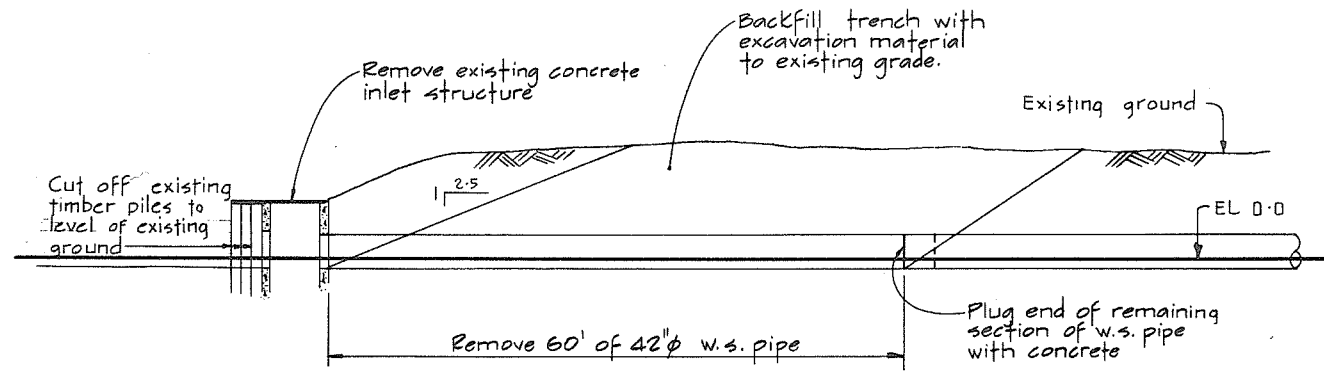
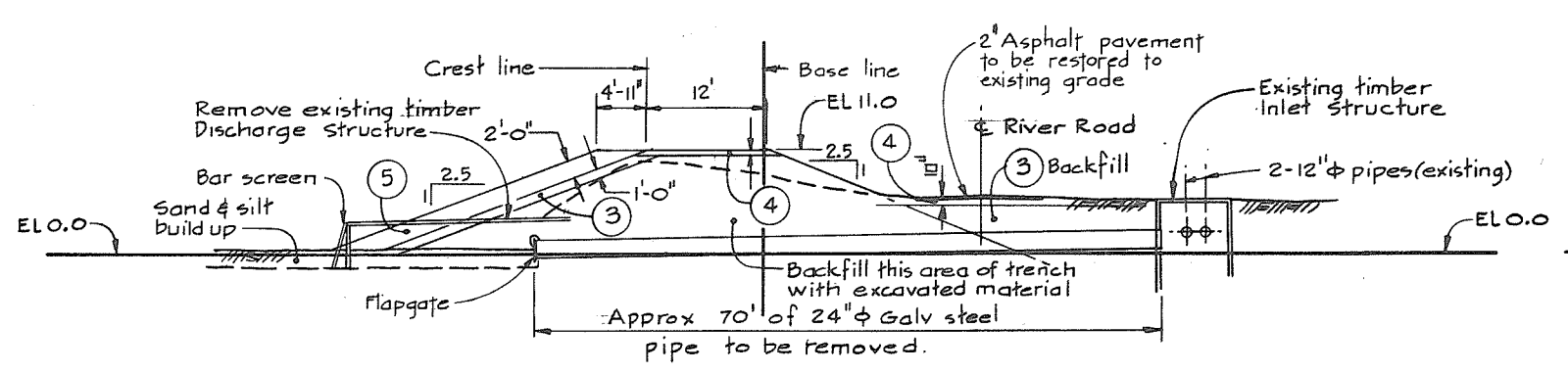
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DRAWN	<i>SA</i>	DATE	1969-70
CHECKED	DLC	FILE NO.	0281550-C10-4
SCALE	AS SHOWN	DATE	Aug 1974
DWG. NO.	4795-4-20	SHEET	OF SHEETS



DRAINAGE DISCHARGE STRUCTURE
No. 9 AT CH 393+75



DRAINAGE DISCHARGE STRUCTURE
No. 12A AT CH 479+00



DRAINAGE DISCHARGE STRUCTURE
No. 8 AT CH 375+00

NOTES
For Notes, Material Legend & Legend see 4795-4-17



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

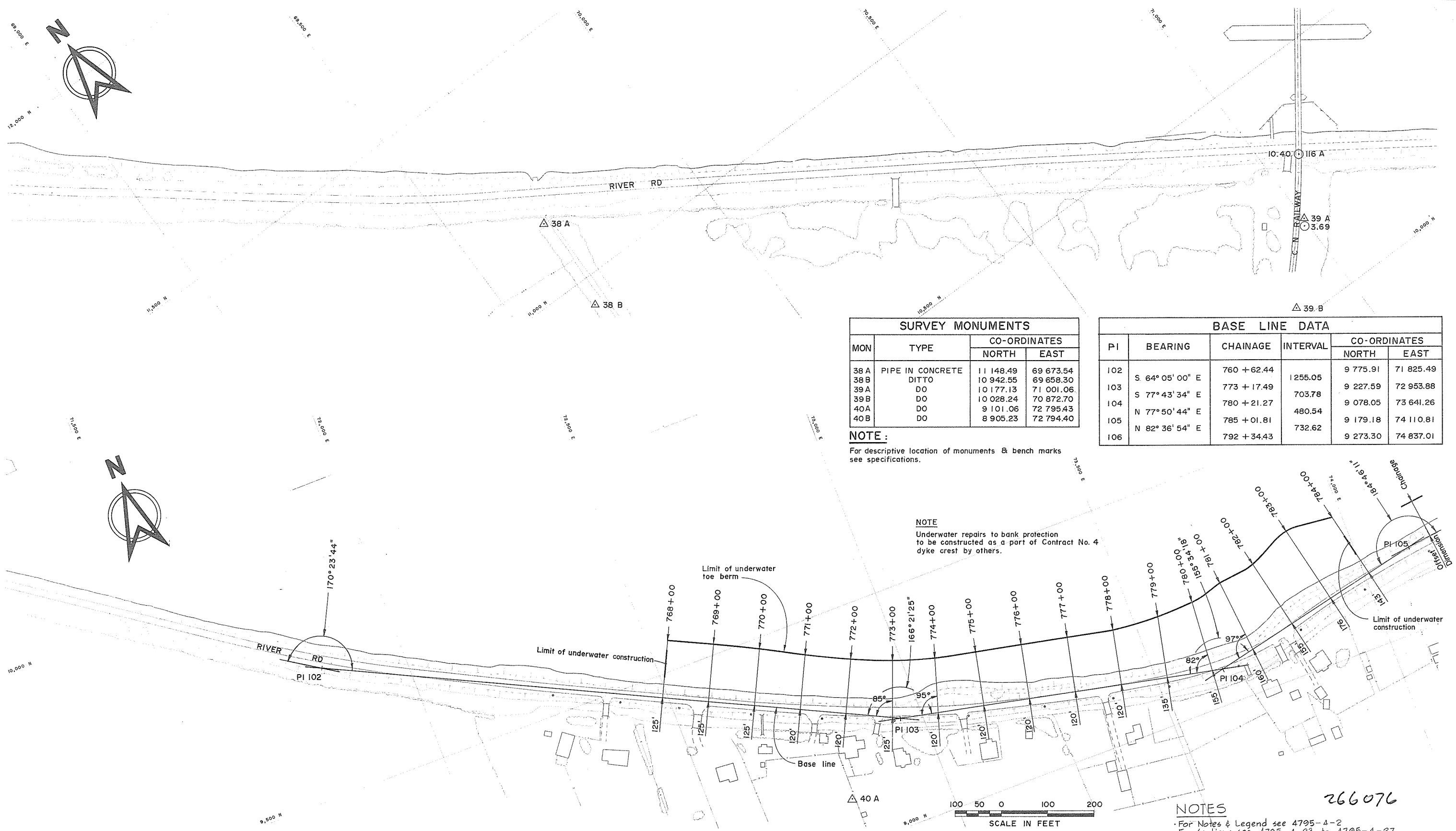
RECOMMENDED	DATE	APPROVED	DATE
<i>[Signature]</i>	Aug 27/74	<i>[Signature]</i>	Aug 27/74

BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT

PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
MISCELLANEOUS DETAILS

DESIGNED	DLC & EMH	SURVEYED	ES
DRAWN	PA	DATE	1969-70
CHECKED	DLC	FILE NO.	0281550-C10-4
SCALE	AS SHOWN	DATE	Aug 1974
DWG. NO.	4795-4-21	SHEET	OF SHEETS

266075



SURVEY MONUMENTS			
MON	TYPE	CO-ORDINATES	
		NORTH	EAST
38 A	PIPE IN CONCRETE	11 148.49	69 673.54
38 B	DITTO	10 942.55	69 658.30
39 A	DO	10 177.13	71 001.06
39 B	DO	10 028.24	70 872.70
40 A	DO	9 101.06	72 795.43
40 B	DO	8 905.23	72 794.40

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

BASE LINE DATA					
PI	BEARING	CHAINAGE	INTERVAL	CO-ORDINATES	
				NORTH	EAST
102	S 64° 05' 00" E	760 + 62.44	1255.05	9 775.91	71 825.49
103	S 77° 43' 34" E	773 + 17.49	703.78	9 227.59	72 953.88
104	N 77° 50' 44" E	780 + 21.27	480.54	9 078.05	73 641.26
105	N 82° 36' 54" E	785 + 01.81	732.62	9 179.18	74 110.81
106		792 + 34.43		9 273.30	74 837.01

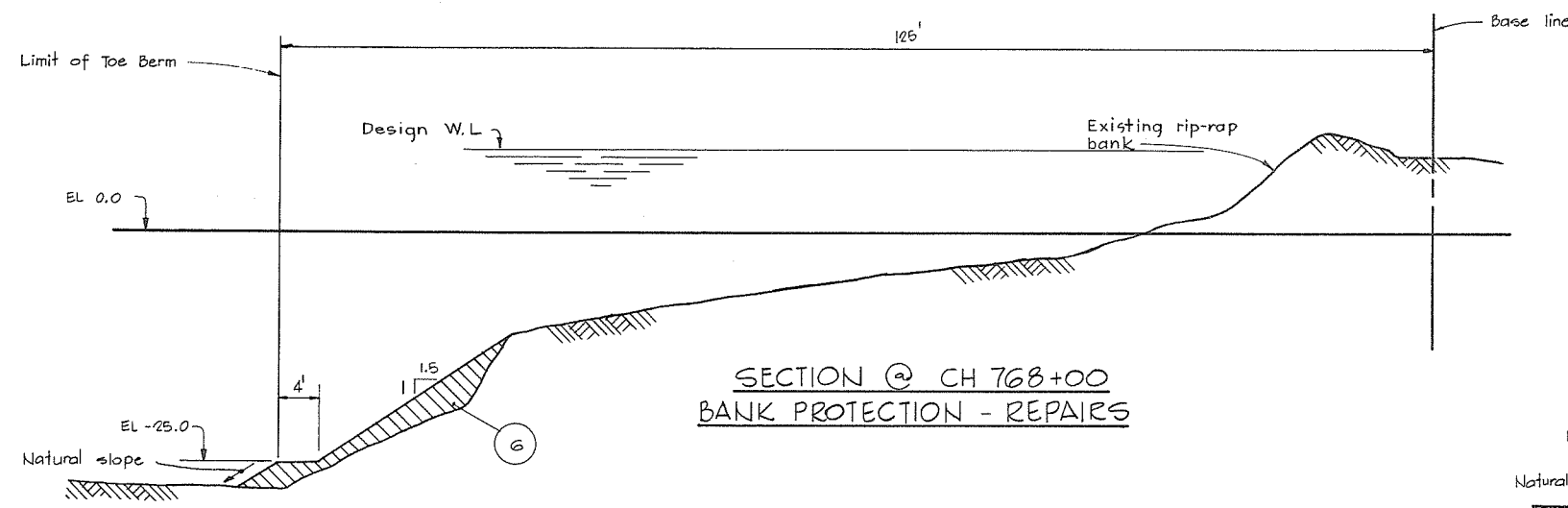
NOTE
Underwater repairs to bank protection to be constructed as a part of Contract No. 4 dyke crest by others.

NOTES
For Notes & Legend see 4795-4-2
For sections see 4795-4-23 to 4795-4-27

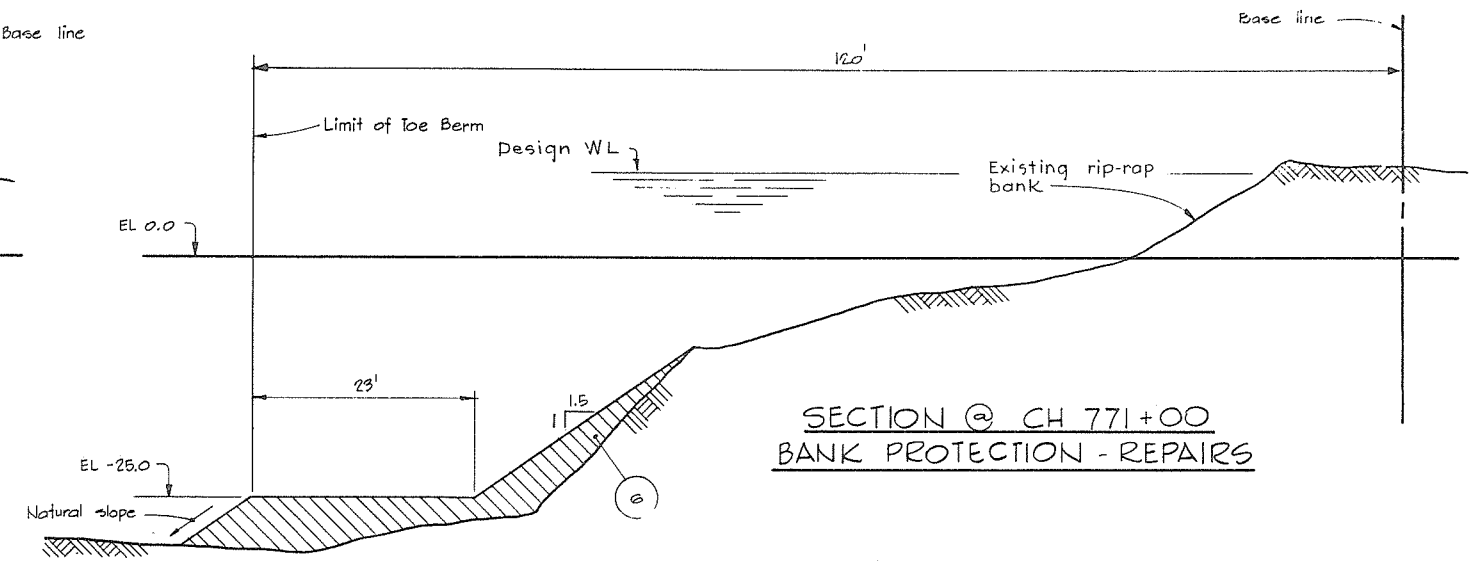
266076

DWG NO.		TITLE		NO.		DESCRIPTION		BY		CH		APPD		ISSUED		NO.		DESCRIPTION		BY		CH		APPD		ISSUED	
REFERENCES				REVISIONS												REVISIONS											

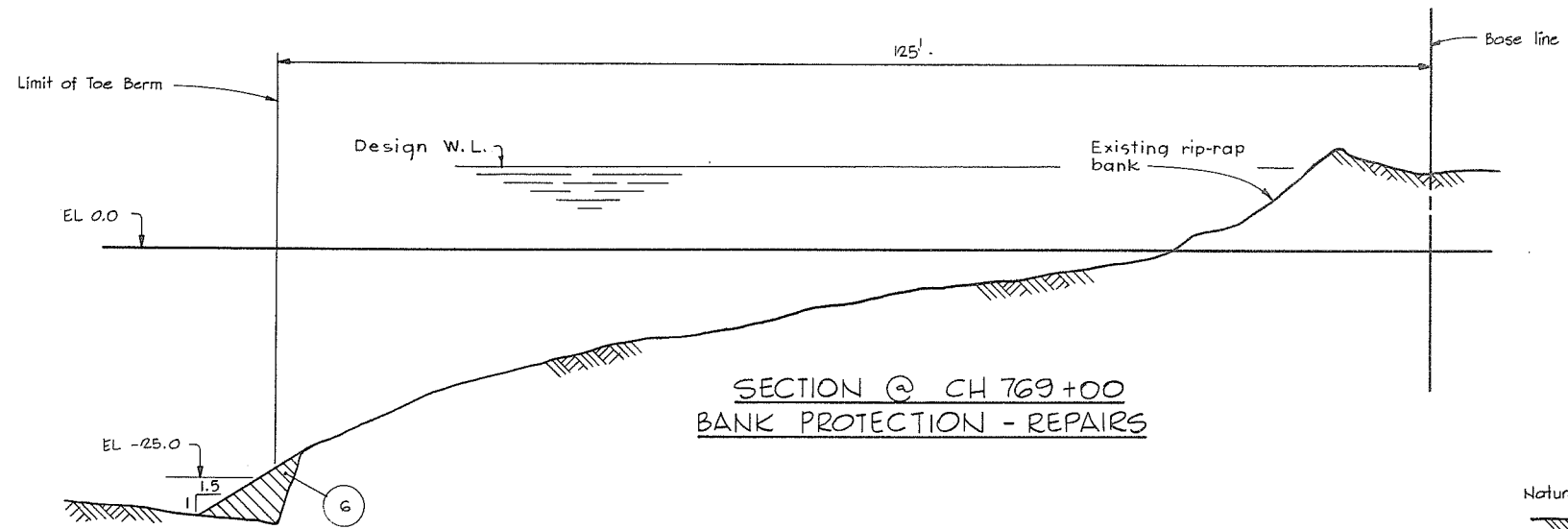
C. B. A. ENGINEERING LTD.				CONSULTING ENGINEERS VANCOUVER, B.C., CANADA					
RECOMMENDED <i>McSullivan</i> CHIEF, PROJECTS DIV.				THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF LANDS FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE					
DATE <i>Aug 27/74</i>				CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND					
APPROVED <i>PhD</i> DIRECTOR				CONTRACT NO. 4 BANK PROTECTION ALIGNMENT CH 768+00 TO CH 784+00					
DATE <i>Aug 27/74</i>				FILE NO. 0281550-C10-4		DWG NO. 4795-4-22			
SCALE AS SHOWN				REV					
ORIG ISSUE									



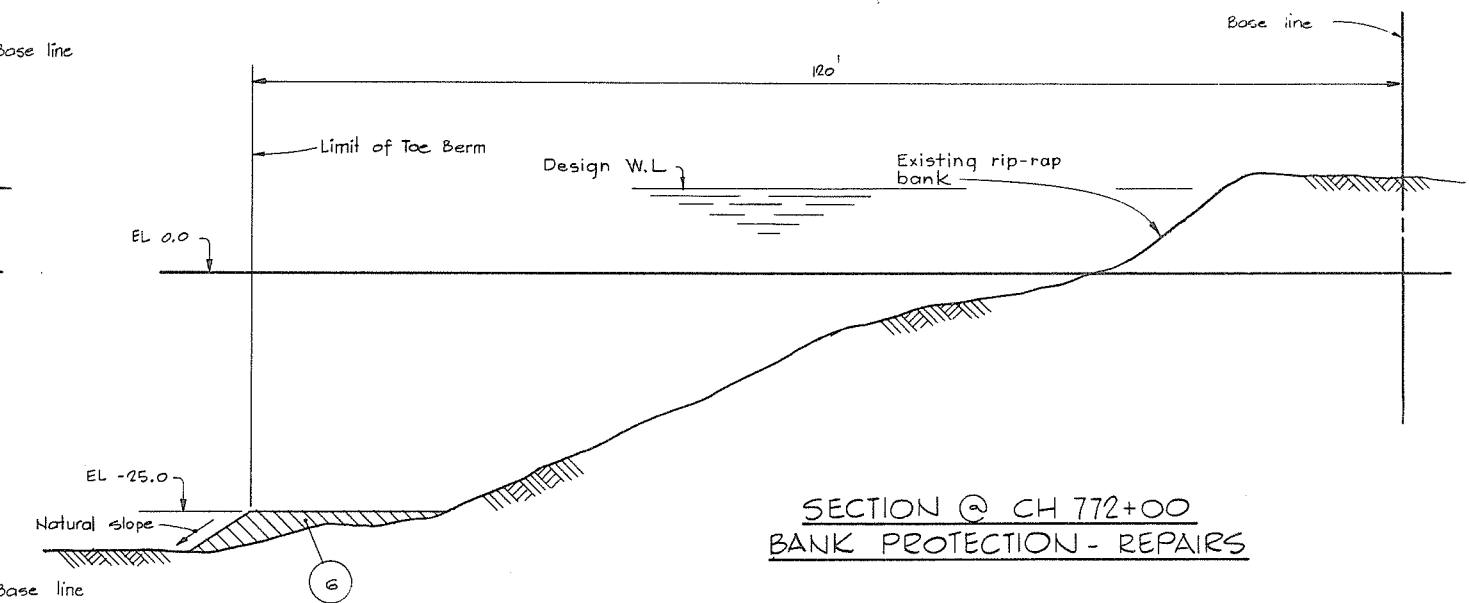
SECTION @ CH 768+00
BANK PROTECTION - REPAIRS



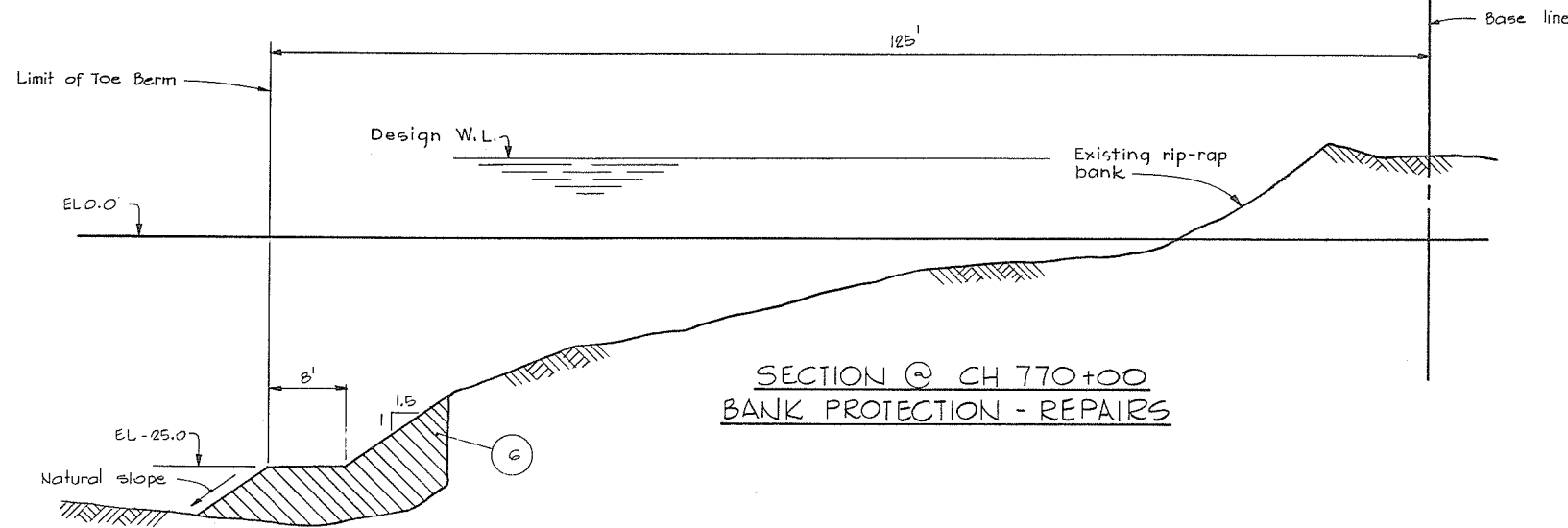
SECTION @ CH 771+00
BANK PROTECTION - REPAIRS



SECTION @ CH 769+00
BANK PROTECTION - REPAIRS



SECTION @ CH 772+00
BANK PROTECTION - REPAIRS



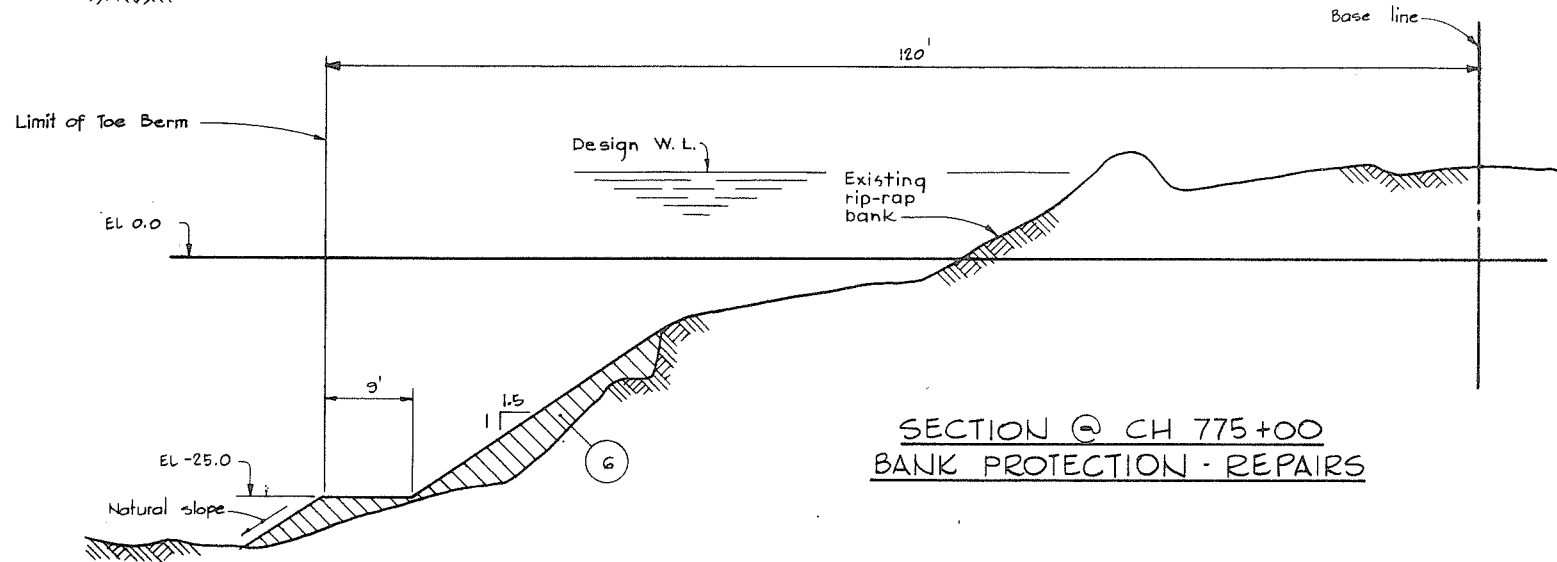
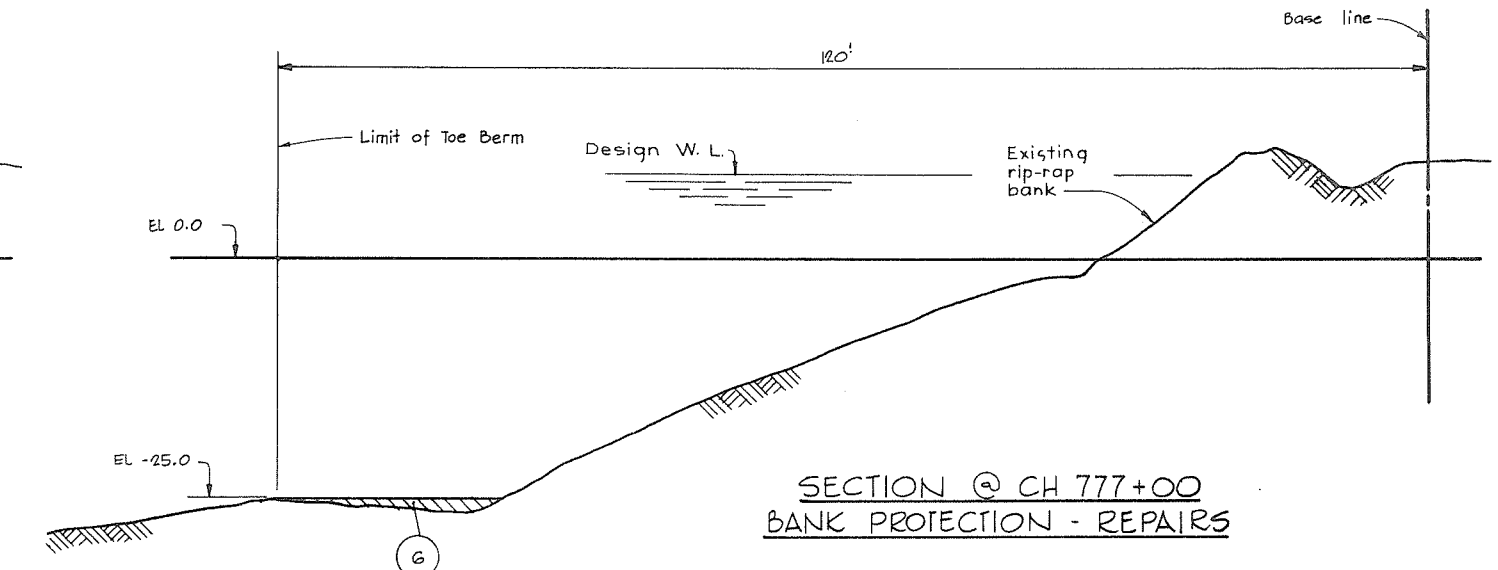
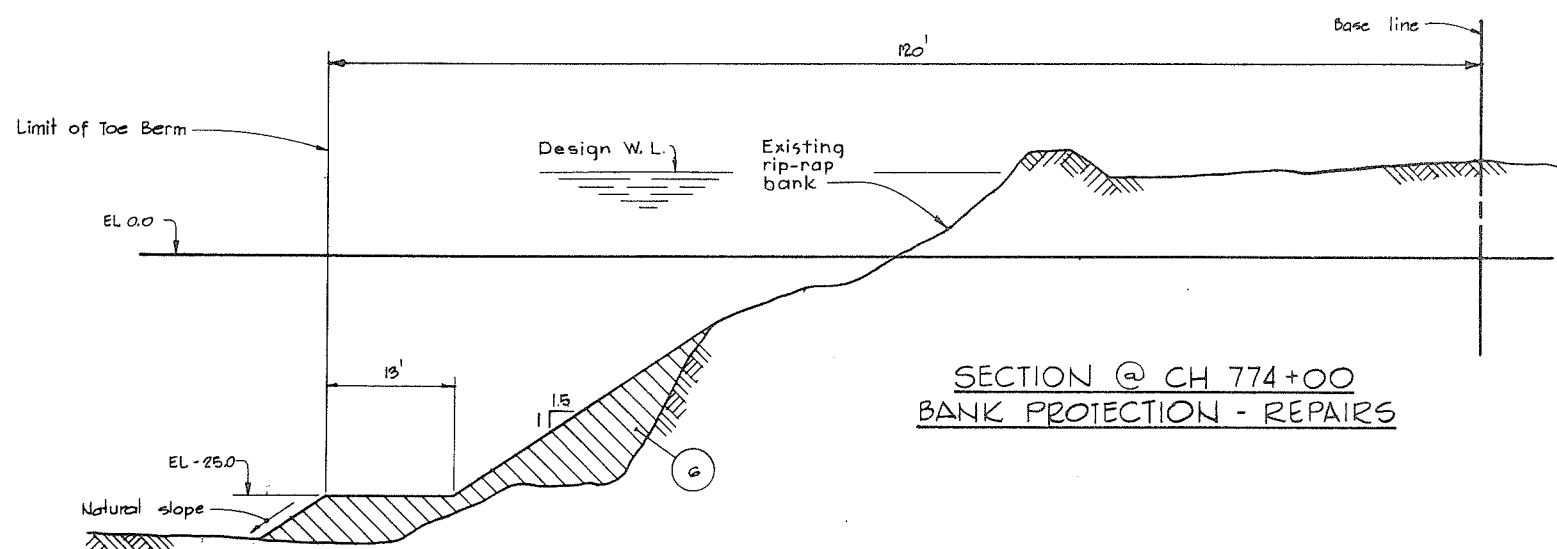
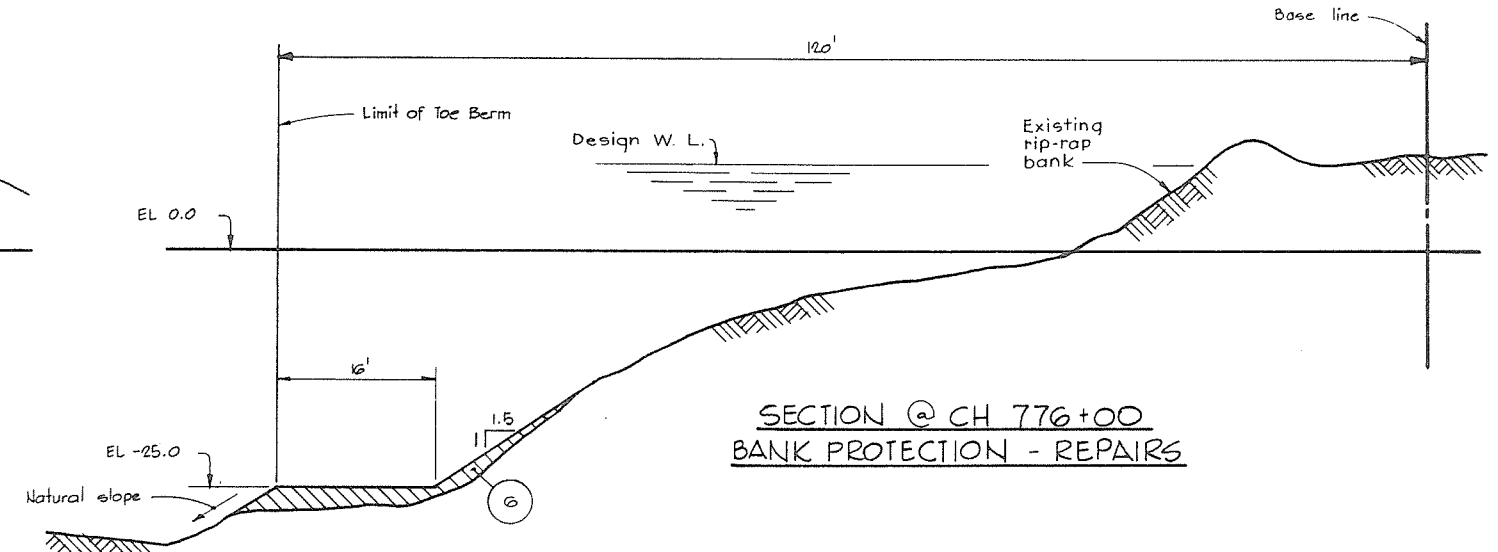
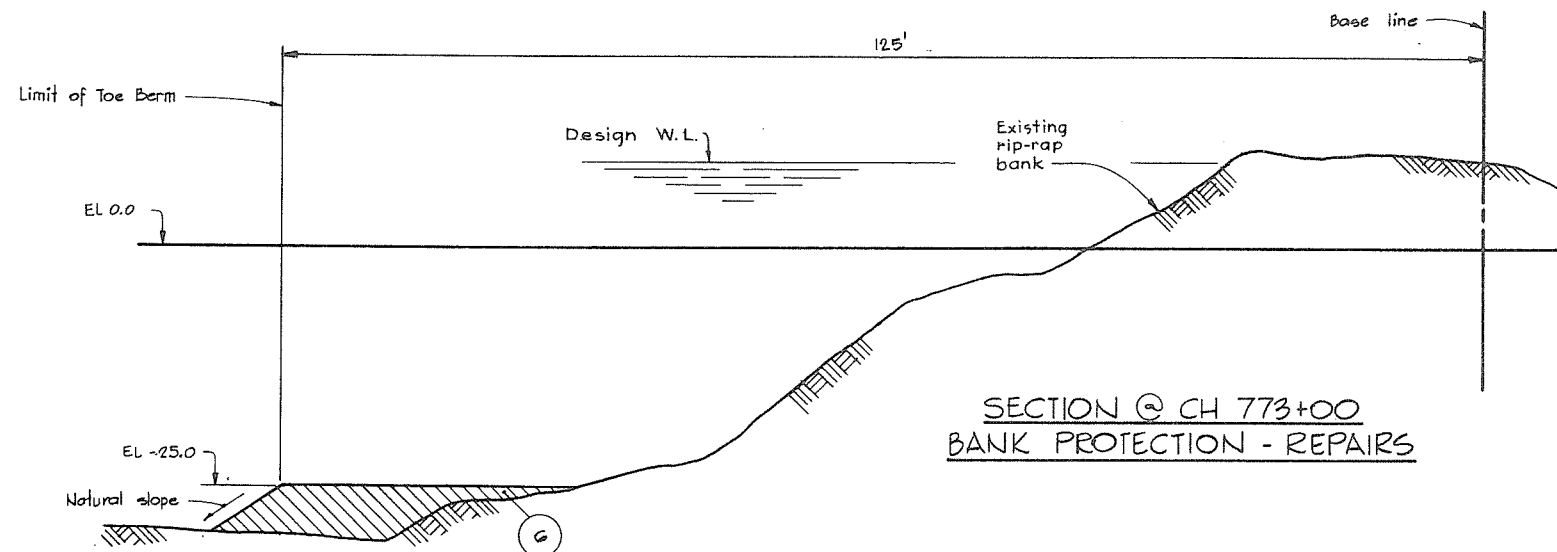
SECTION @ CH 770+00
BANK PROTECTION - REPAIRS



NOTES
 For Notes, Material Legend & Legend see 4795-4-2
 For Location of Sections see 4795-4-22

266 077

DWG NO.		TITLE		NO.		DESCRIPTION		BY	CH	APPD	ISSUED	NO.		DESCRIPTION		BY	CH	APPD	ISSUED	C. B. A. ENGINEERING LTD.		CONSULTING ENGINEERS		VANCOUVER, B.C., CANADA		
REFERENCES																				RECOMMENDED <i>Alb. Yull</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>Aug 27/74</i>		MECH	SOILS	CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND		
																				APPROVED <i>[Signature]</i> DIRECTOR		DES	DR	CH	CONTRACT NO. 4 BANK PROTECTION SECTIONS, SHEET 1 OF 5	
																				DATE <i>Aug 27/74</i>		SCALE	AS SHOWN	FILE NO. 0281550-C10-4		
																				ORIG ISSUE		Aug 1974	DWG NO. 4795-4-23			
																						REV				



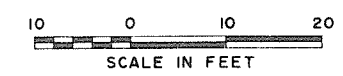
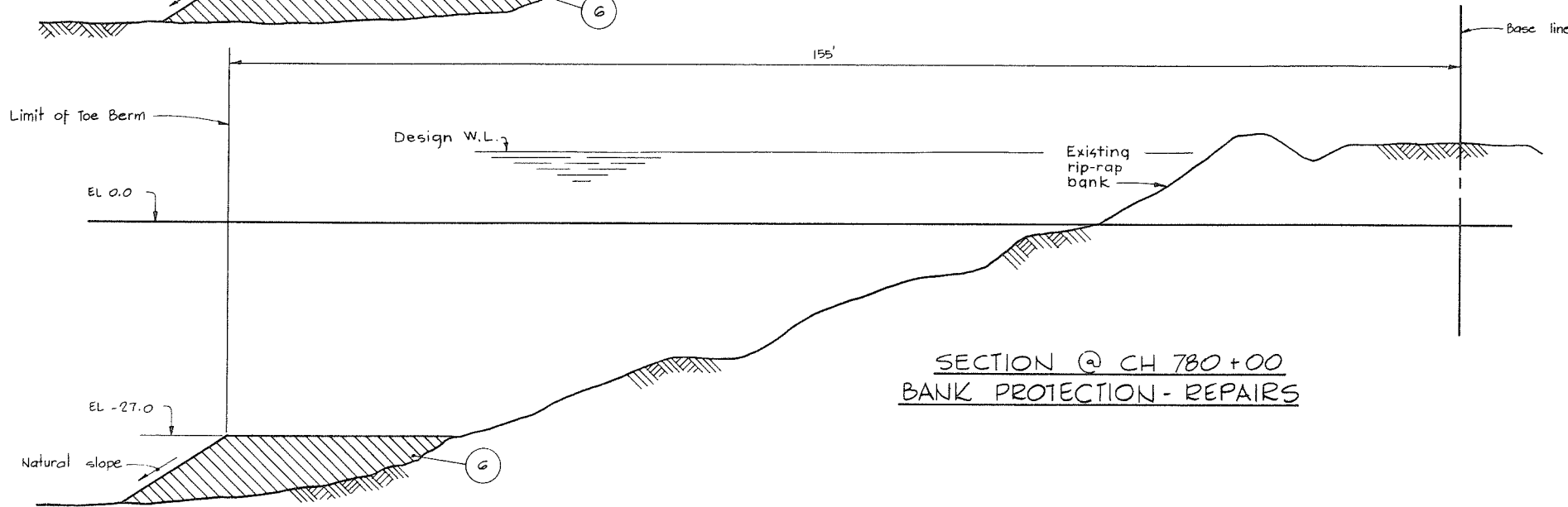
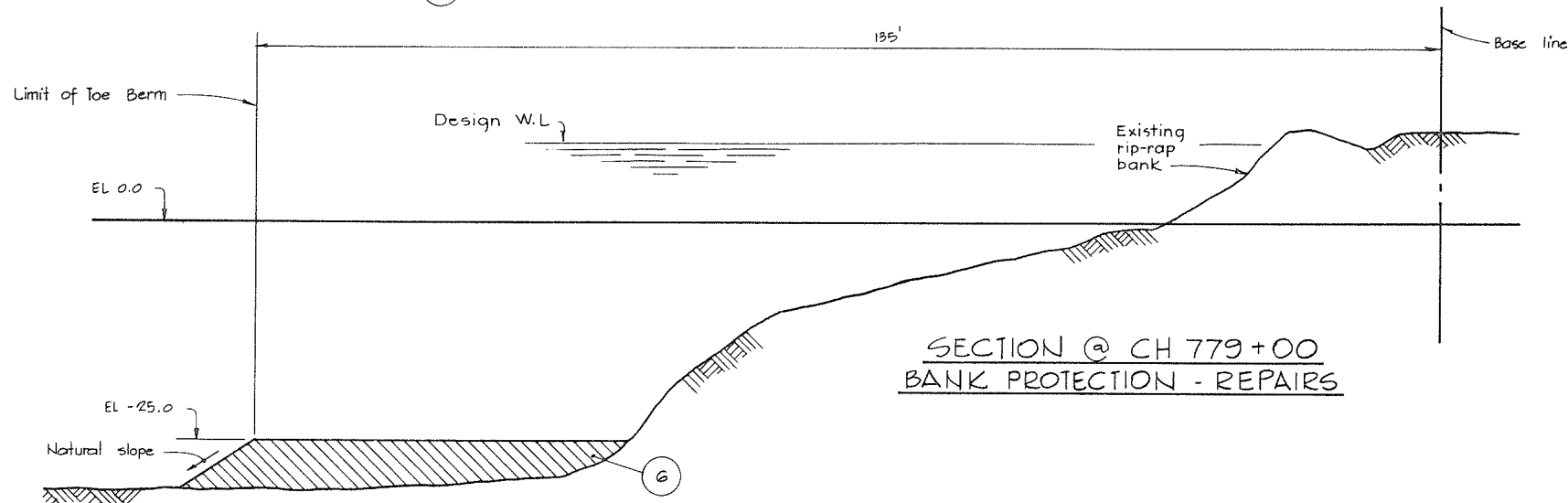
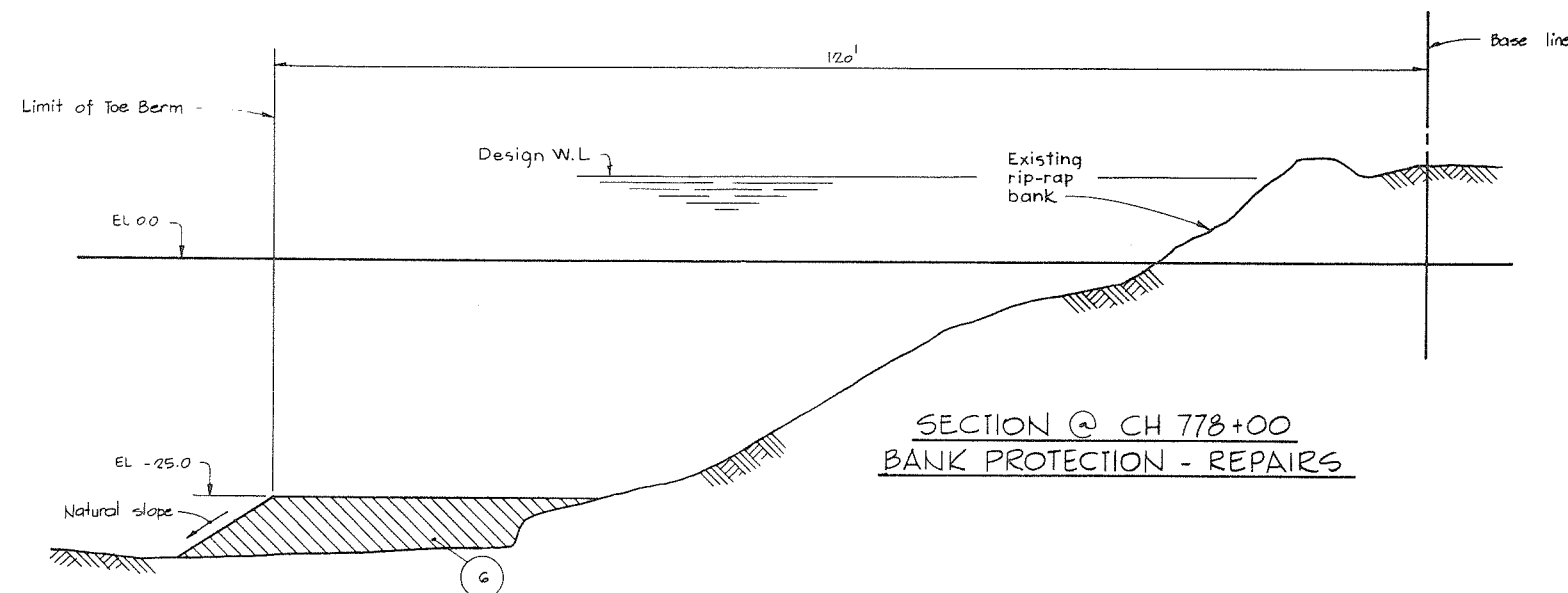
NOTES

- For Notes, Material Legend, Legend see 4795-4-2
- For Location of Sections see 4795-4-22

266078

DWG NO.		TITLE		NO.		DESCRIPTION		BY	CH	APPD	ISSUED	NO.		DESCRIPTION		BY	CH	APPD	ISSUED
REFERENCES				NO.		DESCRIPTION		BY	CH	APPD	ISSUED	NO.		DESCRIPTION		BY	CH	APPD	ISSUED

C. B. A. ENGINEERING LTD.				CONSULTING ENGINEERS				VANCOUVER, B.C., CANADA			
RECOMMENDED <i>M. J. Kelly</i>				ELEC		HYD		THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA			
DATE <i>Aug 22/74</i>				MECH		SOILS		DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES			
APPROVED <i>P. Smith</i>				STR				WATER RESOURCES SERVICE			
DATE <i>Aug 22/74</i>				DES <i>B</i>		DR <i>SH</i>		CANADA - BRITISH COLUMBIA			
				SCALE <i>AS SHOWN</i>		CH <i>DLC</i>		FRASER RIVER FLOOD CONTROL 1958 AGREEMENT			
				ORIG ISSUE		Aug 1974		PROJECT No. 3 THE TOWNSHIP OF RICHMOND			
								CONTRACT NO. 4			
								BANK PROTECTION SECTIONS			
								SHEET 2 OF 5			
								FILE NO. 0281550-C10-4			
								DWG NO. 4795-4-24			
								REV			

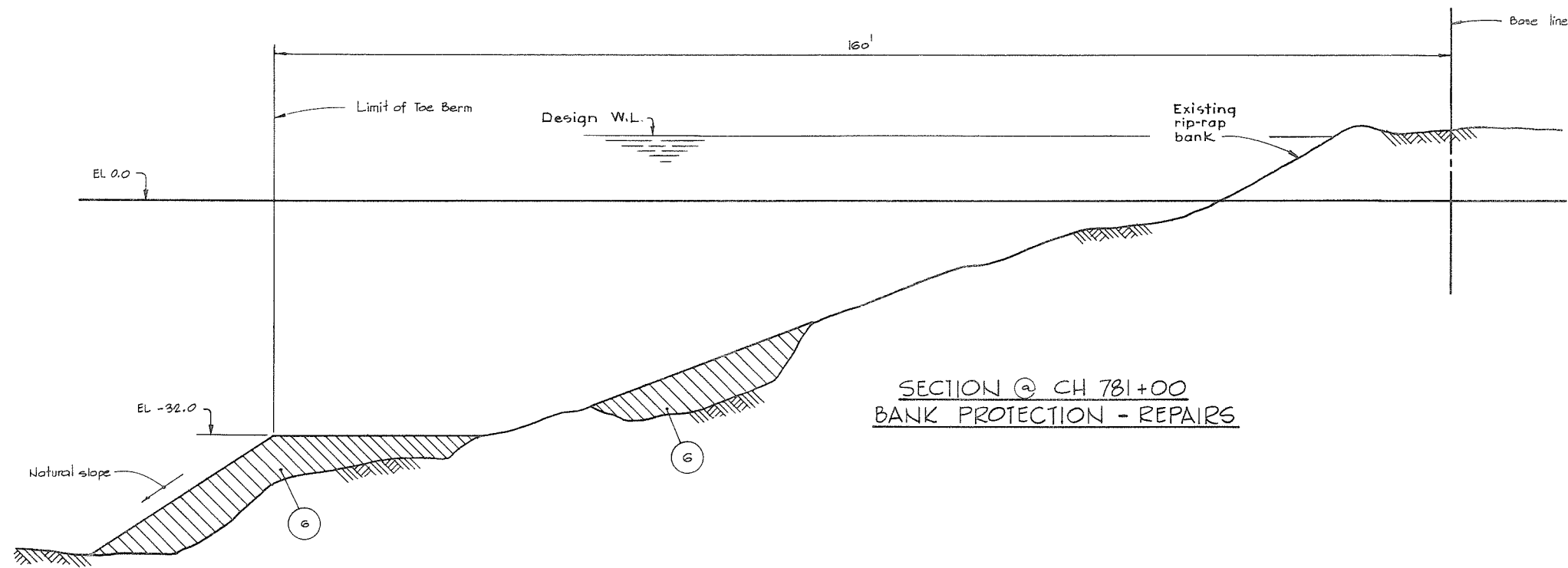


NOTES
 • For Notes, Material Legend & Legend see 4795-4-2
 • For location of sections see 4795-4-22

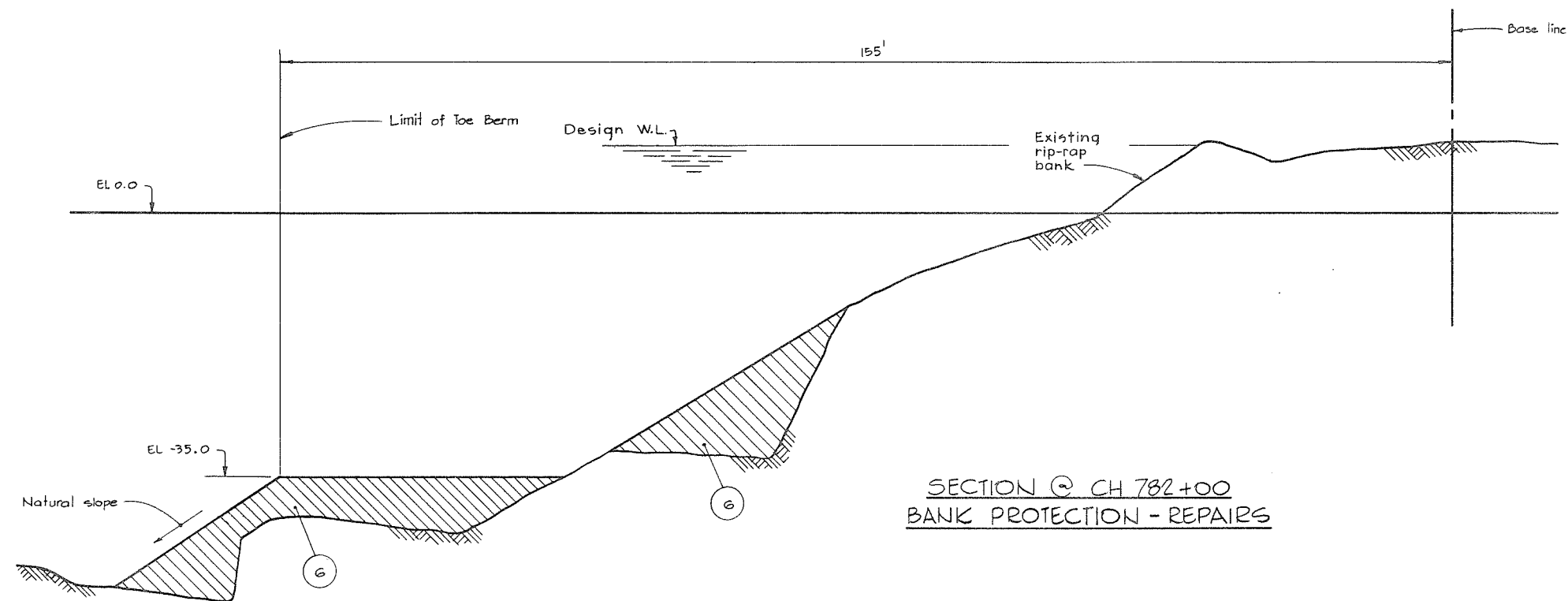
266 079

DWG NO.		TITLE		NO.		DESCRIPTION		BY	CH	APPD	ISSUED	NO.		DESCRIPTION		BY	CH	APPD	ISSUED
REFERENCES				NO.		DESCRIPTION		BY	CH	APPD	ISSUED	NO.		DESCRIPTION		BY	CH	APPD	ISSUED

C. B. A. ENGINEERING LTD.		CONSULTING ENGINEERS		VANCOUVER, B.C., CANADA	
RECOMMENDED	<i>Rob. Gulla</i>	ELEC	HYD	THE GOVERNMENT OF THE PROVINCE OF BRITISH COLUMBIA DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE	
DATE	Aug 27/74	MECH	SOILS	CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND	
APPROVED	<i>Rob. Gulla</i>	STR		CONTRACT NO. 4 BANK PROTECTION SECTIONS SHEET 3 OF 5	
DATE	Aug 27/74	DES	DR	CH	DLC
		SCALE	AS SHOWN		
		ORIG ISSUE	Aug, 1974		
		FILE NO.	0281550-C10-4		DWG NO. 4795-4-25
					REV



SECTION @ CH 781+00
BANK PROTECTION - REPAIRS



SECTION @ CH 782+00
BANK PROTECTION - REPAIRS

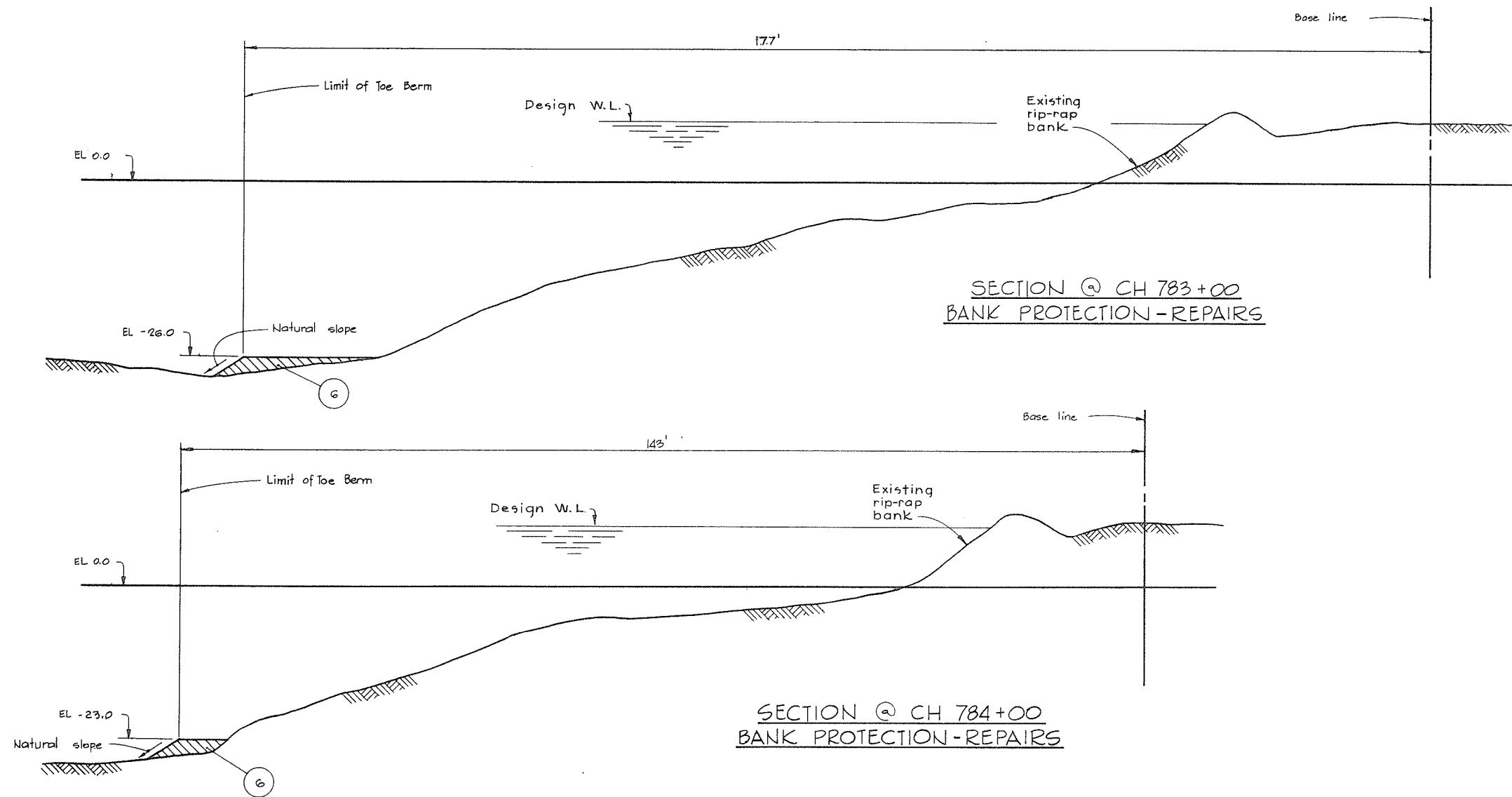


NOTES

- For Notes, Material Legend & Legend see 4795-4-2
- For Location of Sections see 4795-4-22

266080

DWG NO. _____ TITLE _____ REFERENCES _____		<table border="1"> <tr> <td>NO.</td> <td>DESCRIPTION</td> <td>BY</td> <td>CH</td> <td>APPD</td> <td>ISSUED</td> <td>NO.</td> <td>DESCRIPTION</td> <td>BY</td> <td>CH</td> <td>APPD</td> <td>ISSUED</td> </tr> <tr> <td colspan="6">REVISIONS</td> <td colspan="6">REVISIONS</td> </tr> </table>										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 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. 4 BANK PROTECTION SECTIONS SHEET 4 OF 5									
												NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED																						
REVISIONS						REVISIONS																																							
RECOMMENDED <i>[Signature]</i> DATE <i>Aug 27/74</i> APPROVED <i>[Signature]</i> DATE <i>Aug 27/74</i>										ELEC _____ HYD _____ MECH _____ SOILS _____ STR _____ DES <i>[Signature]</i> DR SH CH DLC SCALE AS SHOWN ORIGIN ISSUE Aug, 1974										FILE NO. 0281550-C10-4 DWG NO. 4795-4-26 REV _____																									



SECTION @ CH 783+00
BANK PROTECTION-REPAIRS

SECTION @ CH 784+00
BANK PROTECTION-REPAIRS



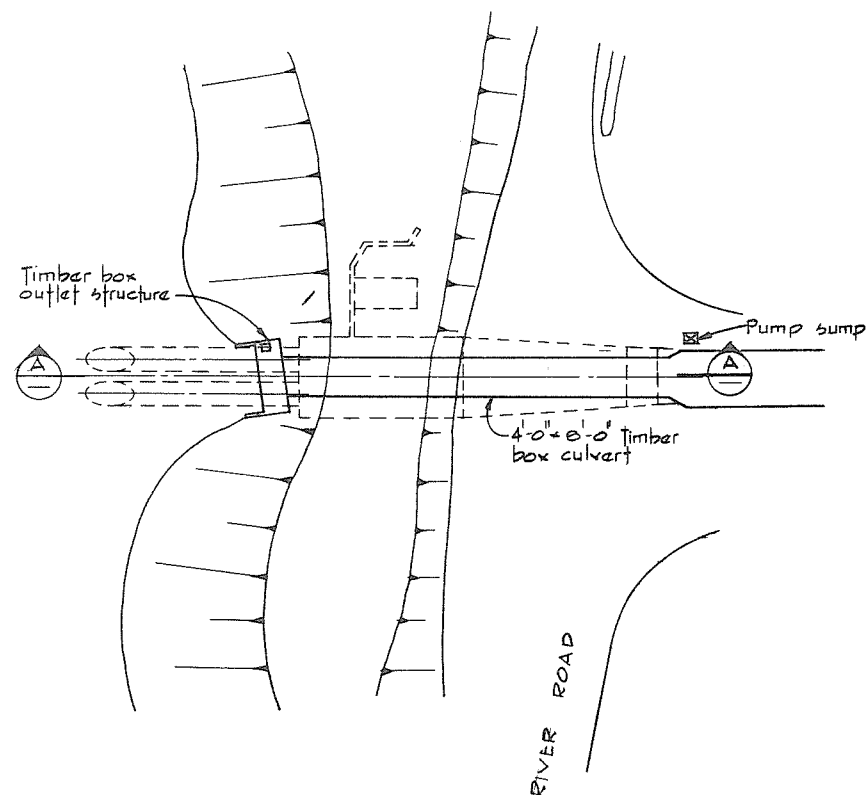
NOTES

- For Notes, Material Legend's Legend see 4795-4-2
- For Location of sections see 4795-4-22

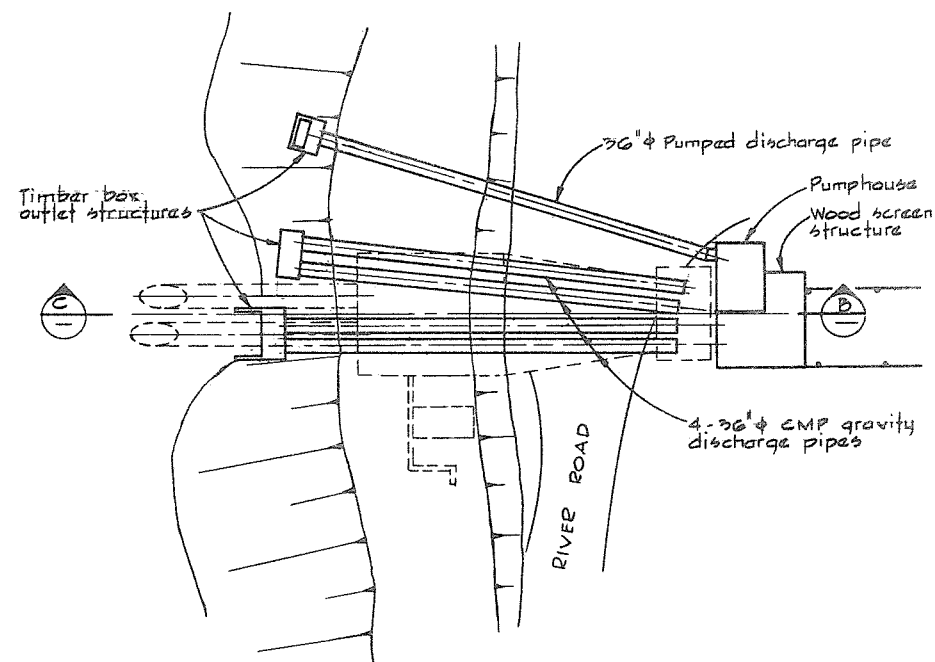
266 081

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>Aug 27/74</i>	MECH	SOILS			
APPROVED <i>[Signature]</i>	STR		CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT No. 3 THE TOWNSHIP OF RICHMOND		
DATE <i>Aug 27/74</i>	DES <i>[Signature]</i>	DR <i>[Signature]</i>			
SCALE AS SHOWN	CH <i>[Signature]</i>	DLC	CONTRACT NO. 4 BANK PROTECTION SECTIONS SHEET 5 OF 5		
ORIG ISSUE	Aug, 1974				
FILE NO. 0281550-C10-4	DWG NO. 4795-4-27	REV			

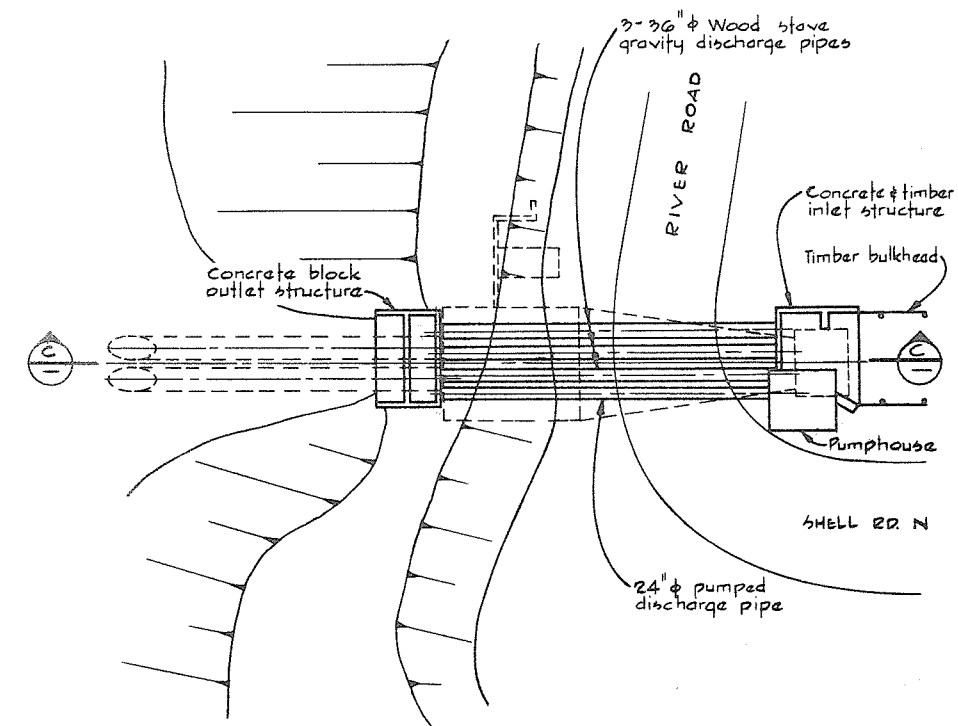
DWG NO.	TITLE	NO.	DESCRIPTION	BY	CH	APPD	ISSUED	NO.	DESCRIPTION	BY	CH	APPD	ISSUED
REFERENCES		REVISIONS				REVISIONS							



PLAN
CAMBIE ROAD - WEST



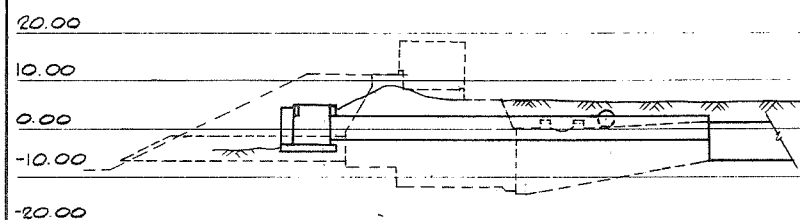
PLAN
#4 ROAD - NORTH



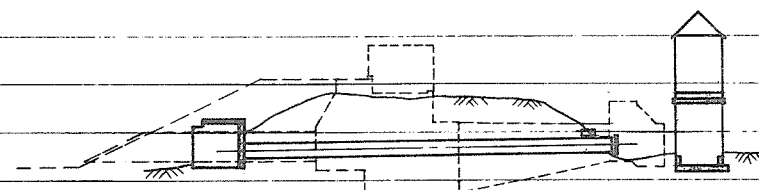
PLAN
SHELL ROAD - NORTH

NOTES

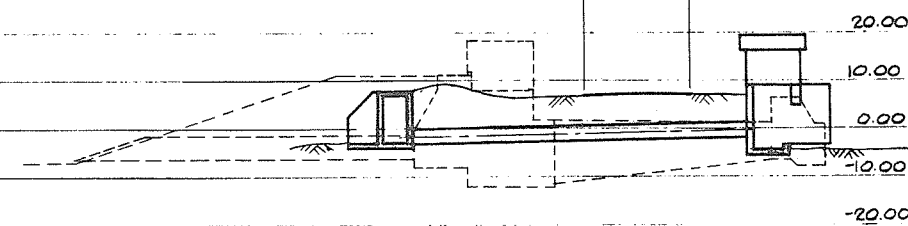
- Proposed new works shown in dotted line, thus ----
- See 4795-4-21 for culverts to be removed @ CH 393+90 & CH 375+00.
- Refer to Specifications for maintenance of existing drainage discharge facilities during construction.



SECTION A-A



SECTION B-B



SECTION C-C

266 092

No As-built report.



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO. BY REVISIONS DATE

RECOMMENDED *W. Fuller*
CHIEF, PROJECTS DIV.

DATE *Aug 27/74*

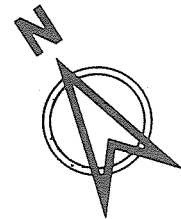
APPROVED *P. Brady*
DIRECTOR

DATE *Aug 27/74*

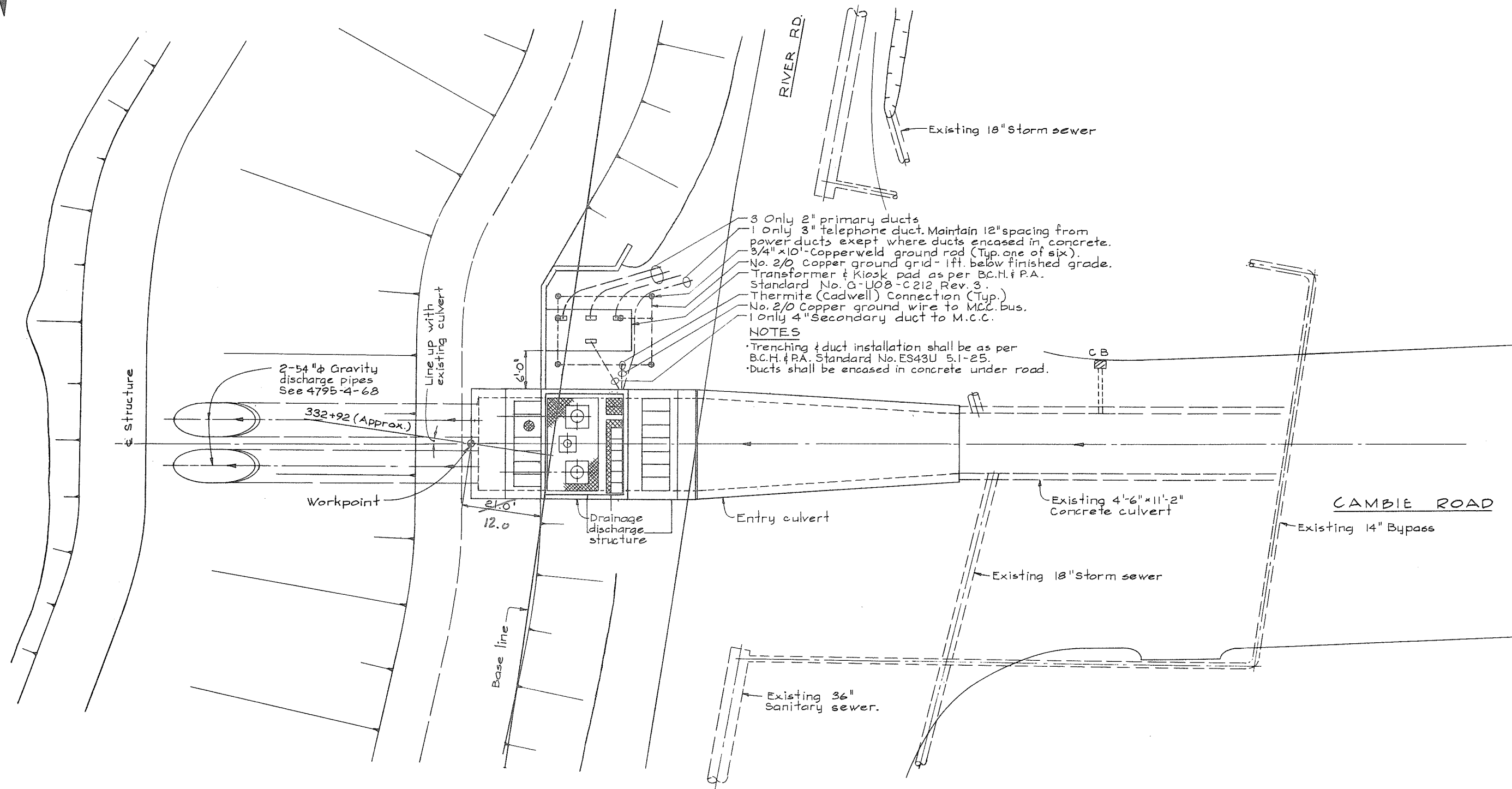
BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT

PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
EXISTING DRAINAGE DISCHARGE STRUCTURES
WORKS TO BE REMOVED

DESIGNED	SURVEYED
DRAWN	DATE
CHECKED	FILE NO.
SCALE	DATE
DWG. NO.	SHEET



FRASER RIVER - MIDDLE ARM
FLOW



2 0 4 8 12 16 20
SCALE IN FEET

266083

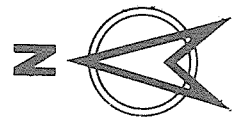


CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

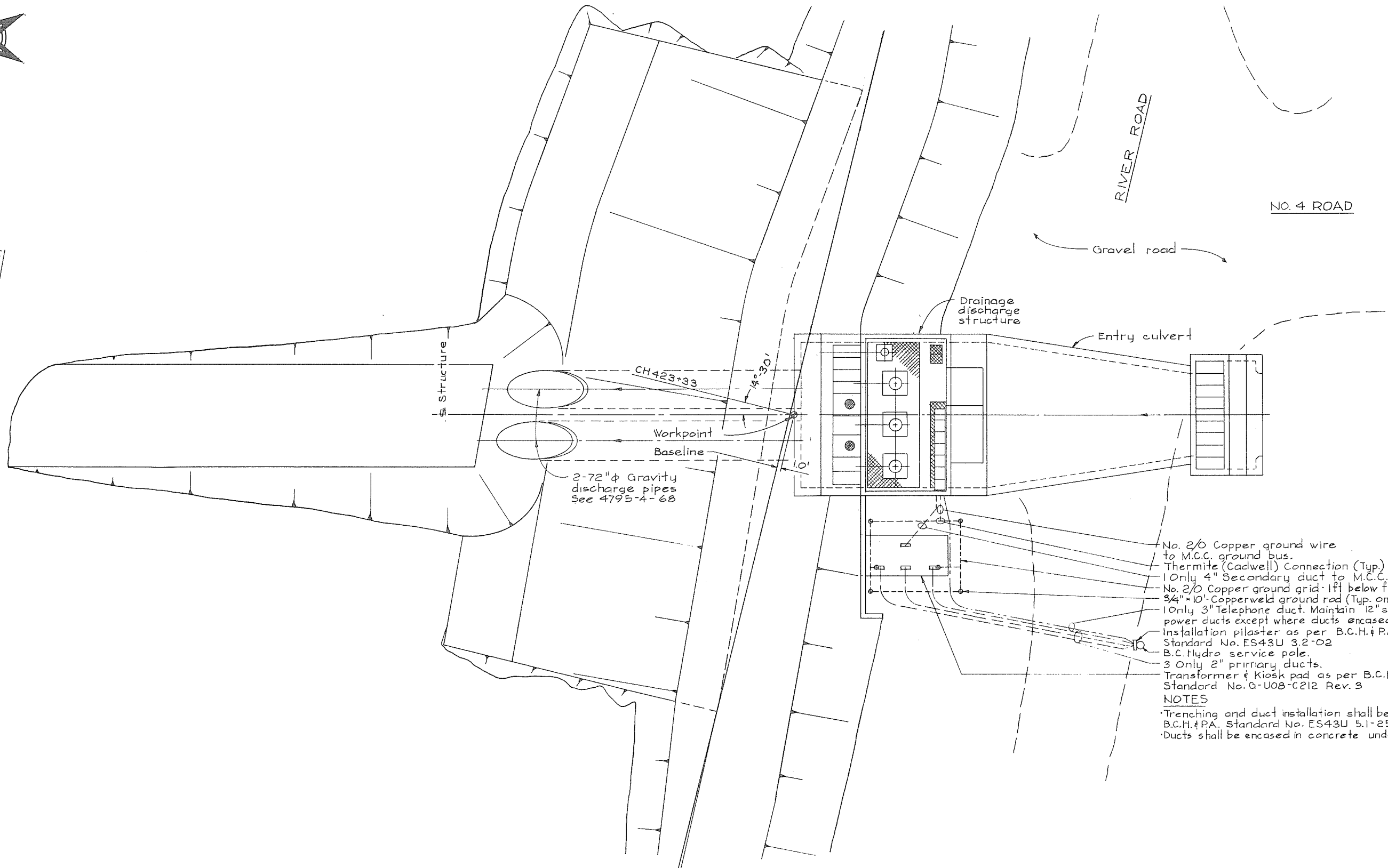
RECOMMENDED	<i>John Fuller</i> CHIEF, PROJECTS DIV.
DATE	<i>Aug 27/74</i>
APPROVED	<i>P. Smith</i> DIRECTOR
DATE	<i>Aug 28/74</i>

BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE
LAYOUT & POWER SUPPLY

DESIGNED	PR	SURVEYED	
DRAWN	H6	DATE	
CHECKED	PR	FILE NO.	0281550-C10-4
SCALE	As shown	DATE	Aug 1974
DWG. NO.	4795-4-29	SHEET	OF SHEETS



FRASER RIVER
NORTH ARM
FLOW



- No. 2/0 Copper ground wire to M.C.C. ground bus.
- Thermite (Cadwell) Connection (Typ.)
- 1 Only 4" Secondary duct to M.C.C.
- No. 2/0 Copper ground grid 1ft below finished grade.
- 3/4" x 10" Copperweld ground rod (Typ. one of six).
- 1 Only 3" Telephone duct. Maintain 12" spacing from power ducts except where ducts encased in concrete.
- Installation pilaster as per B.C.H. & P.A.
- Standard No. ES43U 3.2-02
- B.C. Hydro service pole.
- 3 Only 2" primary ducts.
- Transformer & Kiosk pad as per B.C.H. & P.A.
- Standard No. G-U08-C212 Rev. 3

NOTES
Trenching and duct installation shall be as per B.C.H. & P.A. Standard No. ES43U 5.1-25.
Ducts shall be encased in concrete under road.

2 0 4 8 12 16 20
SCALE IN FEET

266084



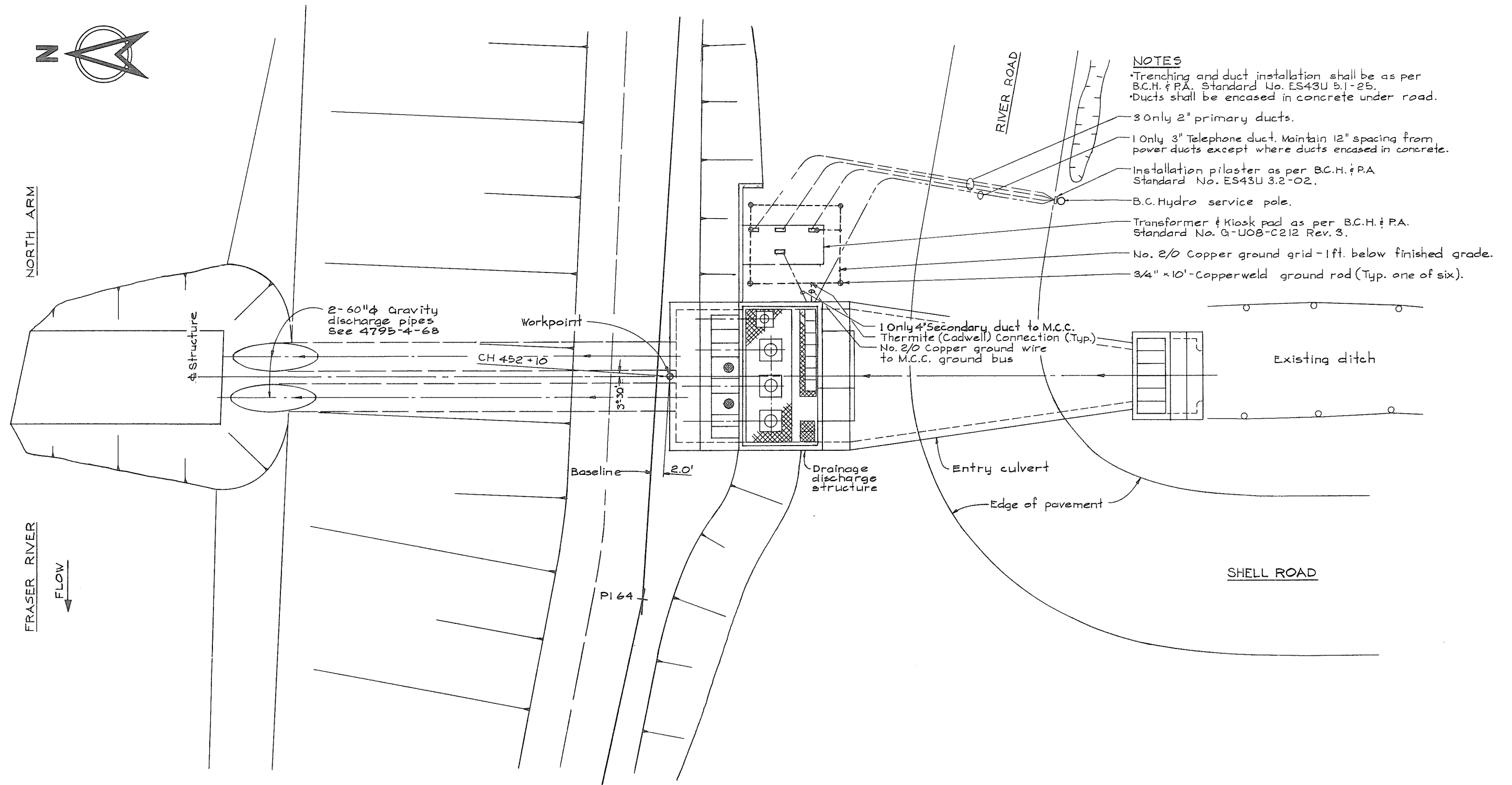
CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO.	BY	REVISIONS	DATE
A	AS-BUILT		

RECOMMENDED <i>John Fella</i> CHIEF, PROJECTS DIV.
DATE <i>Aug 27/74</i>
APPROVED <i>Mike</i> DIRECTOR
DATE <i>Aug 27/74</i>

DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4 NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE LAYOUT & POWER SUPPLY

DESIGNED PL	SURVEYED
DRAWN HS	DATE
CHECKED PK	FILE NO. 0281550-C10-4
SCALE As shown	DATE Aug 1974
DWG. NO. 4795-4-30	SHEET OF SHEETS



2 0 4 8 12 16 20
SCALE IN FEET

266 085



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

B A				RECOMMENDED <i>PBS Siller</i> CHIEF, PROJECTS DIV.	BRITISH COLUMBIA DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA — BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT NO. 3 — THE TOWNSHIP OF RICHMOND CONTRACT NO. 4 SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE LAYOUT & POWER SUPPLY	DESIGNED <i>PR</i>	SURVEYED	
			DATE <i>Aug 27/74</i>	DRAWN <i>H6</i>		DATE		
			APPROVED <i>PMB</i> DIRECTOR	CHECKED <i>PR</i>		FILE NO. <i>0281550-C10-4</i>		
			DATE <i>Aug 28/74</i>	SCALE <i>As shown</i>		DATE <i>Aug 1974</i>		
NO.	BY	REVISIONS	DATE	DATE <i>Aug 28/74</i>	DWG. NO. <i>4795-4-31</i>	SHEET	OF	SHEETS



DUCK ISLAND SLOUGH

CH 378+97

outlet screen

outlet pipe

Workpoint

Valve pit
Pump sump

Culvert
by others

Base line

Equipment
kiosk

- Transformer & Kiosk pad as per BCH & PA Standard No. G-UOB-C212 Rev.3
- 3 Only 2" primary ducts.
- 1 Only 3" Telephone duct. Maintain 12" spacing from power ducts except where ducts encased in concrete.
- 3/4" x 10' Copperweld ground rod. (Typ one of six)
- No. 2/0 Copper ground grid - 1 ft below finished grade.
- 1 Only 4" secondary duct to MCC.
- Thermite (Cadwell) Connection. (Typ)
- No. 2/0 Copper ground wire to MCC ground bus.

Property line

B.C. Hydro Railway

RIVER ROAD

MH to be located in the field. MH shall be cast in place by this contractor as per BCH & PA Std. G-UOB-D59 Rev.2

Installation pilaster as per BCH & PA Standard No. E543U 3.2-02
BCH & PA service pole.

NOTES

- Trenching and duct installation shall be as per BCH & PA Standard No. E543U 3.1-25.
- Ducts shall be encased in concrete under road and suitably protected under the railway.
- Refer to Contract 4, subsection 10.07 for complete electrical service specifications.



266 086



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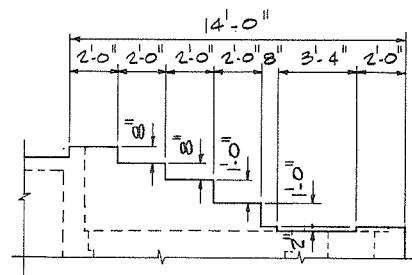
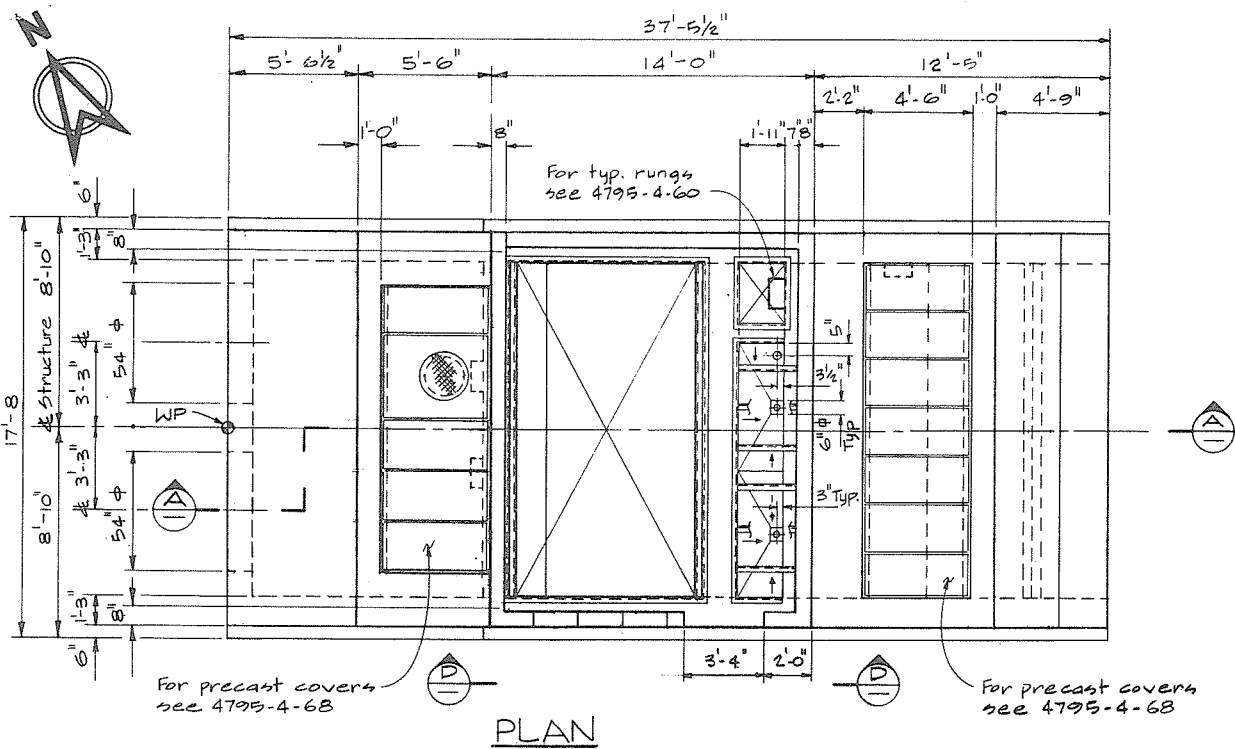
C
B
A

NO. BY REVISIONS DATE

RECOMMENDED *John Fuller*
CHIEF, PROJECTS DIV.
DATE *Aug 27/74*
APPROVED *PM Bandy*
DIRECTOR
DATE *Aug 28/74*

BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
DUCK ISLAND DRAINAGE DISCHARGE STRUCTURE
LAYOUT AND POWER SUPPLY

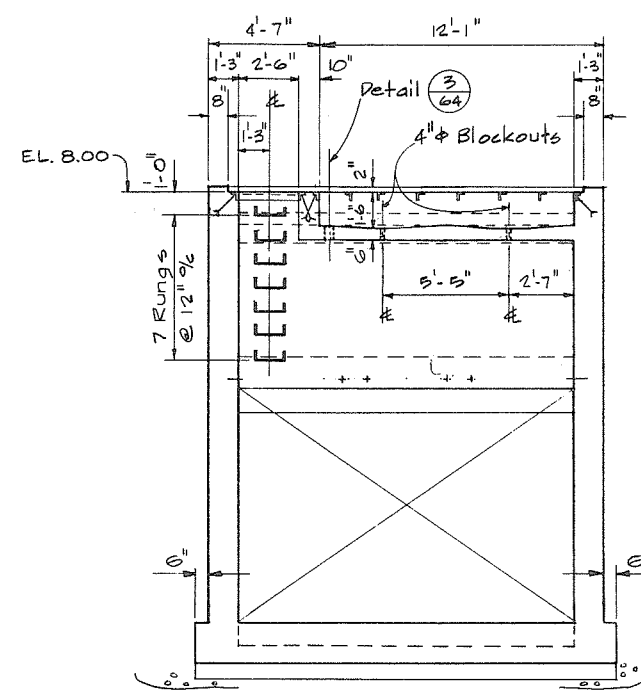
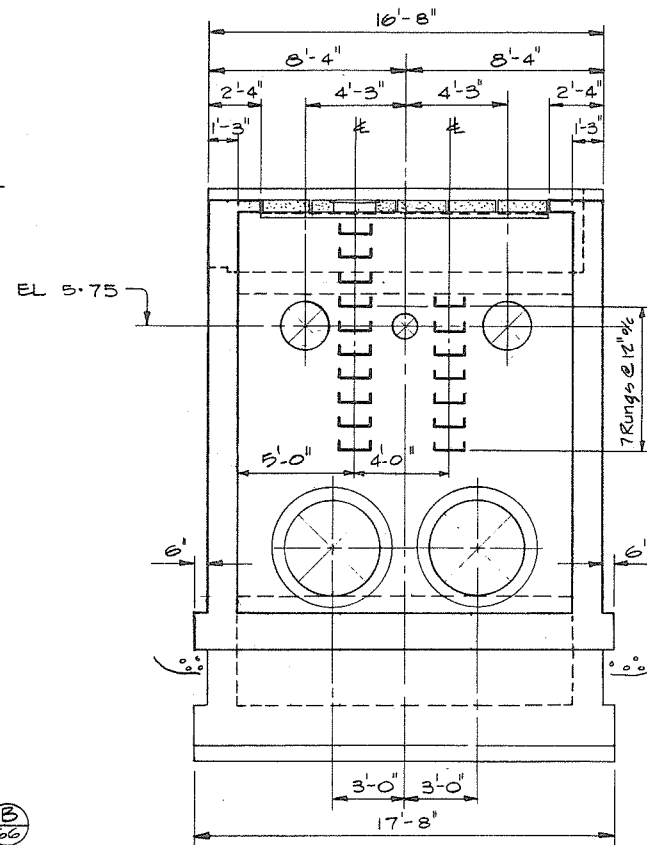
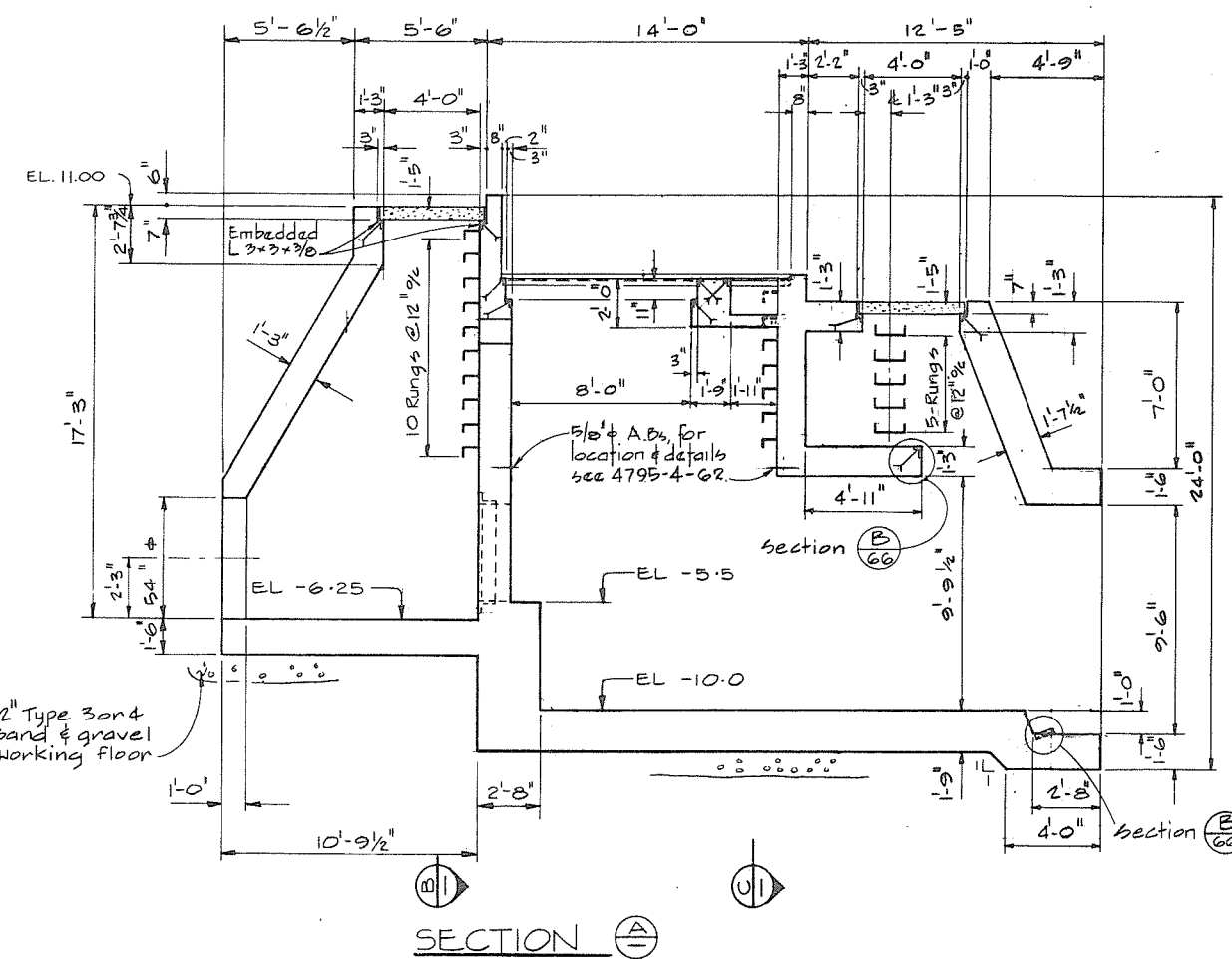
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SCALE <i>As shown</i>	DATE <i>Aug 17/74</i>
DWG. NO. <i>4795-4-32 C</i>	SHEET OF SHEETS



VIEW D

GENERAL NOTES - STRUCTURAL

- Design is in accordance with CSA A23.3 - 1970, Code for the Design of Plain or Reinforced Concrete Structures.
- Construction shall be in accordance with ACI 301-72, Specifications for Structural Concrete for Buildings.
- Specified strength of concrete $f'_c = 4000$ psi.
- Reinforcing steel shall be deformed bars conforming to CSA G302-1972, Grade 40.
- Cover over reinforcing steel to be 2" to all faces except 3" for the underside of the footings.
- Reinforcing steel to be of lengths indicated with construction joints as shown unless otherwise approved by the Engineer.
- CONCRETE FINISHES:
 - Floors & base slabs - steel trowel.
 - Exposed horizontal surfaces - broom.
 - Beams, exterior & interior exposed walls - rubbed.
 - See specs for details.
- CHAMFERS - $\frac{3}{4}" \times \frac{3}{4}"$ for all exposed corners.
- For embedded angles not called up see 4795-4-59.



SECTION A-A

SECTION B-B

SECTION C-C

No Print req'd

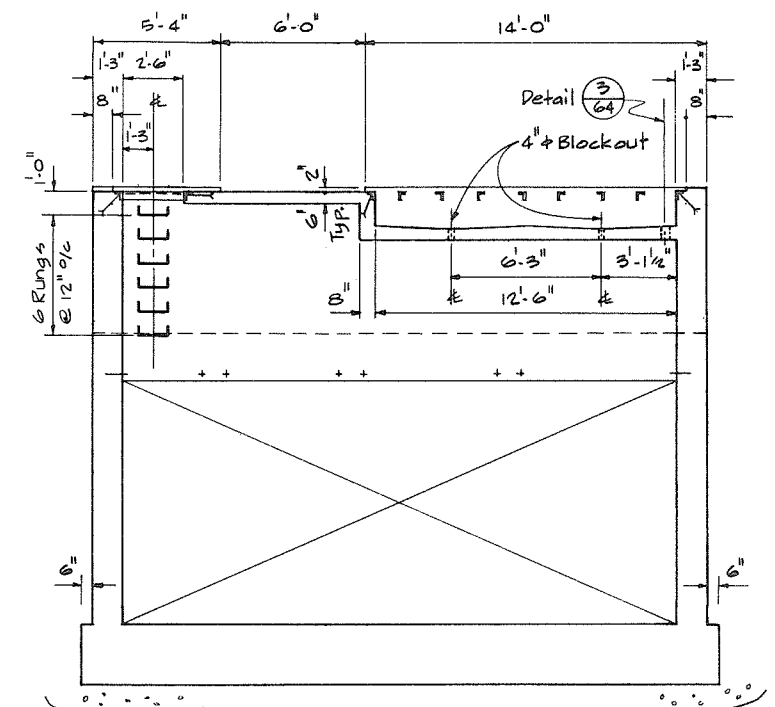
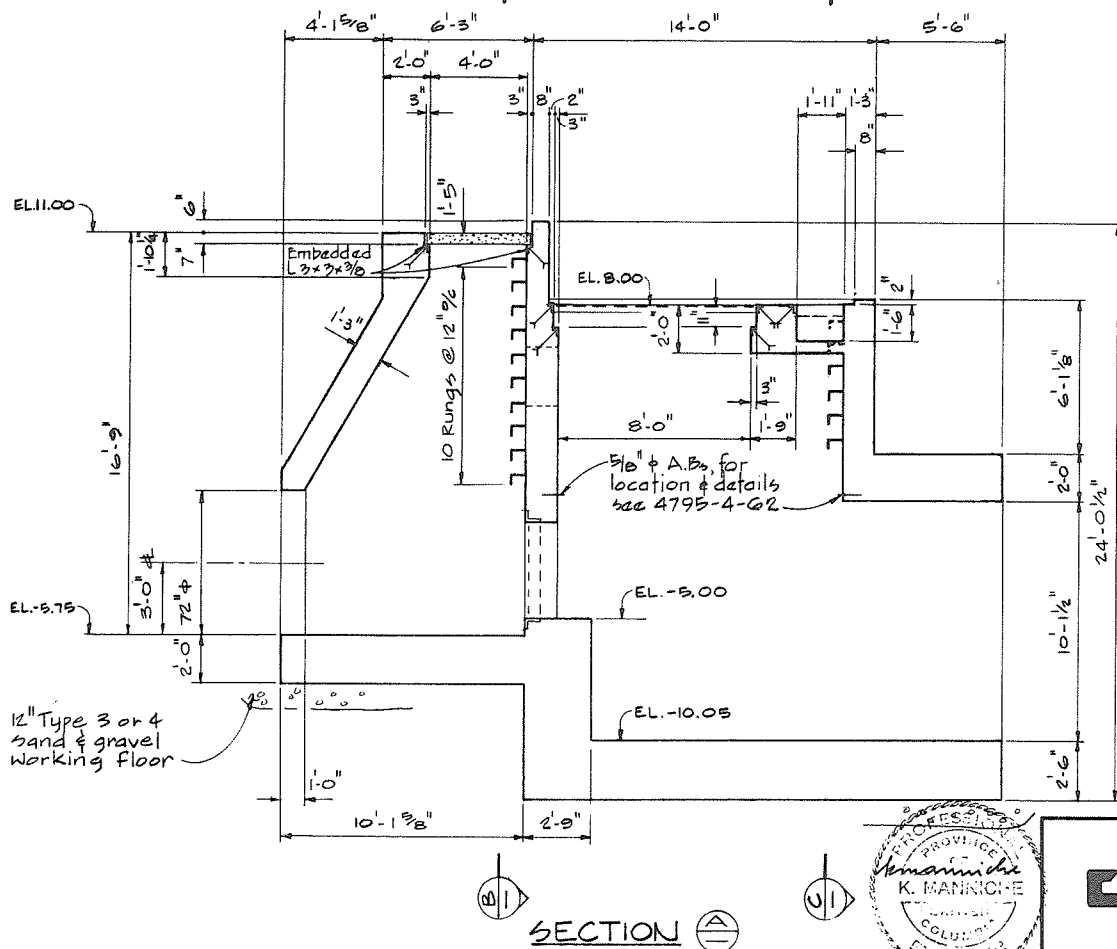
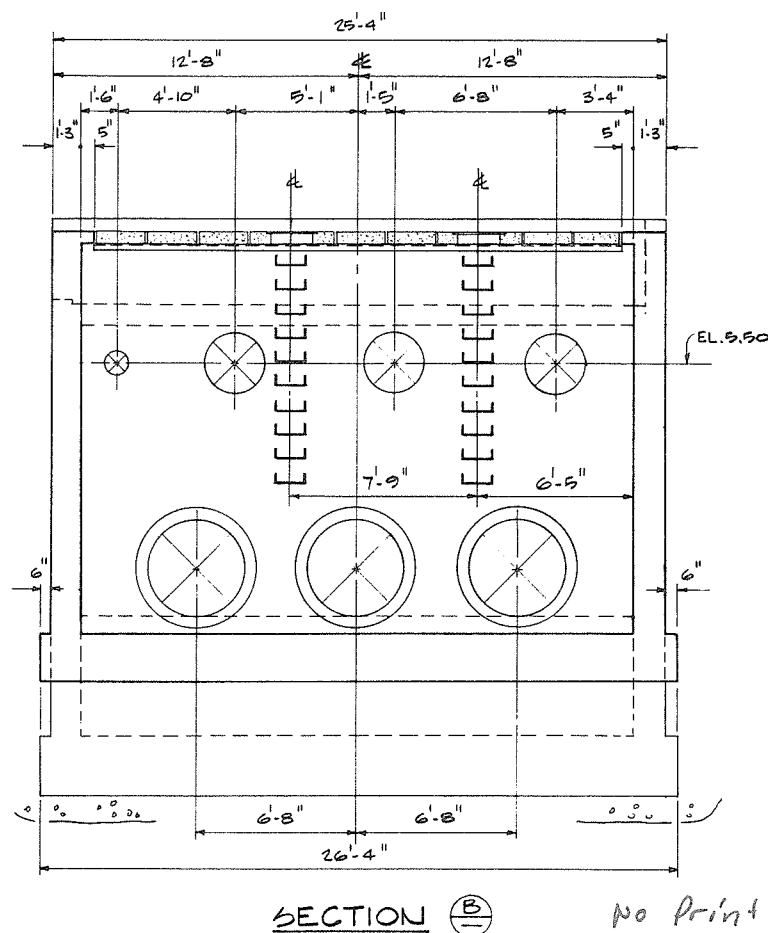
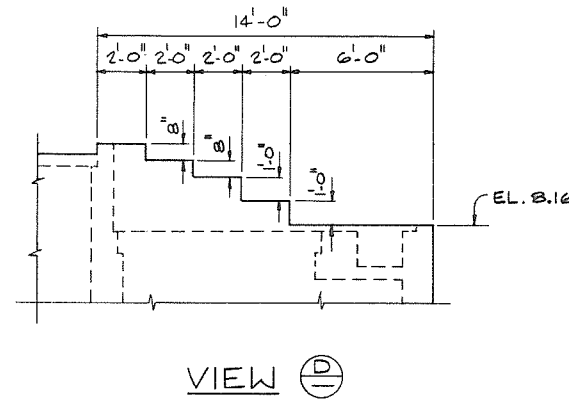
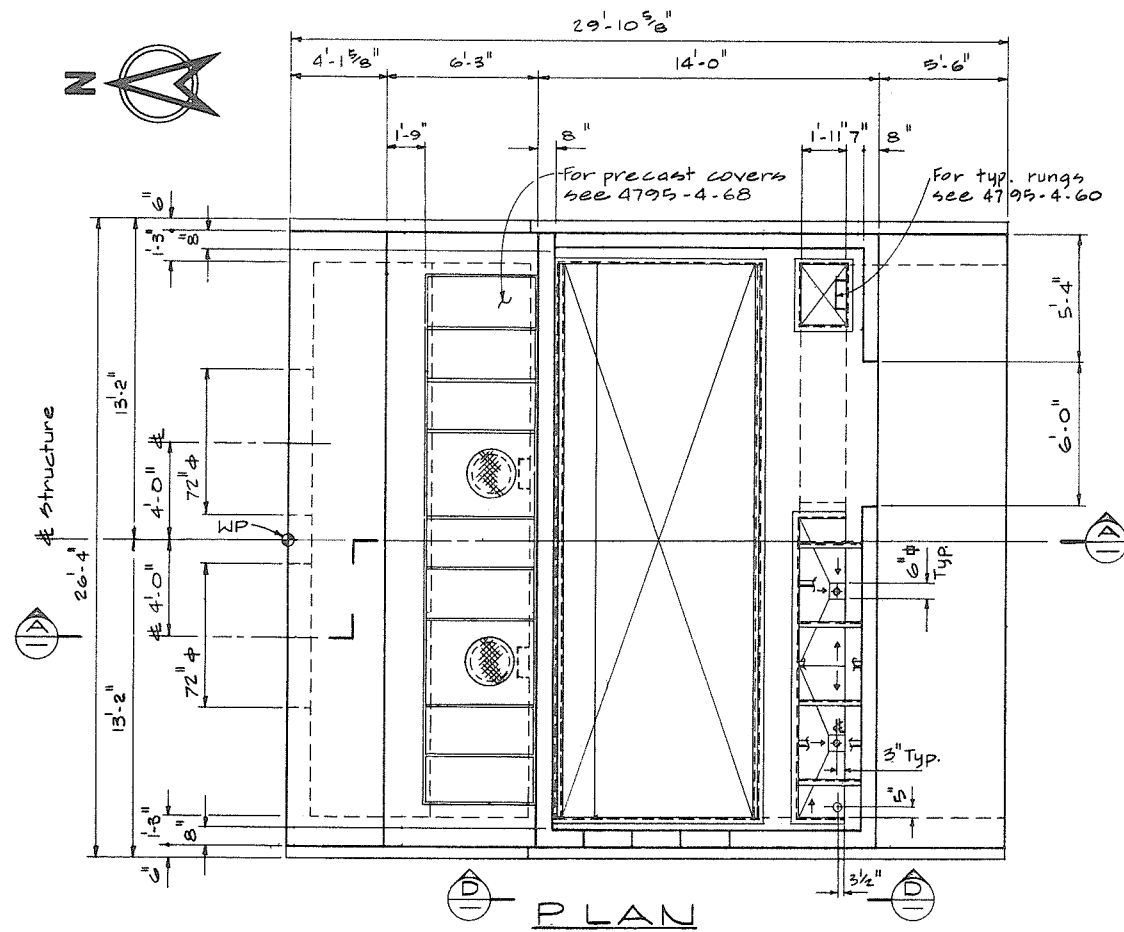


CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

C R A				RECOMMENDED <i>JLB Fuller</i> CHIEF, PROJECTS DIV.	BRITISH COLUMBIA DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA — BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT	DESIGNED <i>GA</i>	SURVEYED
			DATE <i>Aug 27/74</i>			DRAWN <i>AR</i>	DATE
			APPROVED <i>PMBready</i> DIRECTOR	PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND		CHECKED <i>HS</i>	FILE NO. <i>0281550-C10-4</i>
			DATE <i>Aug 27/74</i>	CONTRACT NO. 4 CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE CONCRETE OUTLINE		SCALE <i>As shown</i>	DATE <i>Aug. 1974</i>
NO. BY	REVISIONS	DATE	DATE <i>Aug 27/74</i>			DWG. NO. <i>4795-4-33</i>	SHEET _____ OF _____ SHEETS



Kmanniche



GENERAL NOTES-STRUCTURAL

- Design is in accordance with CSA A 23.3-1970, Code for the Design of Plain or Reinforced Concrete Structures.
- Construction shall be in accordance with ACI 301-72, Specifications for Structural Concrete for Buildings
- Specified strength of concrete $f'_c = 4000$ psi.
- Reinforcing steel shall be deformed bars conforming to CSA G 30.12-1972, Grade 40.
- Cover over reinforcing steel to be 2" to all faces except 3" for the underside of the footings.
- Reinforcing steel to be of lengths indicated with construction joints as shown unless otherwise approved by the Engineer.
- CONCRETE FINISHES:-
Floors and base slabs - steel trowel
Exposed horizontal surfaces - broom
Beams, exterior and interior
Exposed walls - rubbed.
See specifications for details.
- CHAMFERS:- $\frac{3}{4}" \times \frac{3}{4}"$ for all exposed corners.
- For sizes of embedded angles not called up see 4795-4-60.

1 0 2 4 6 8 10
SCALE IN FEET
266088



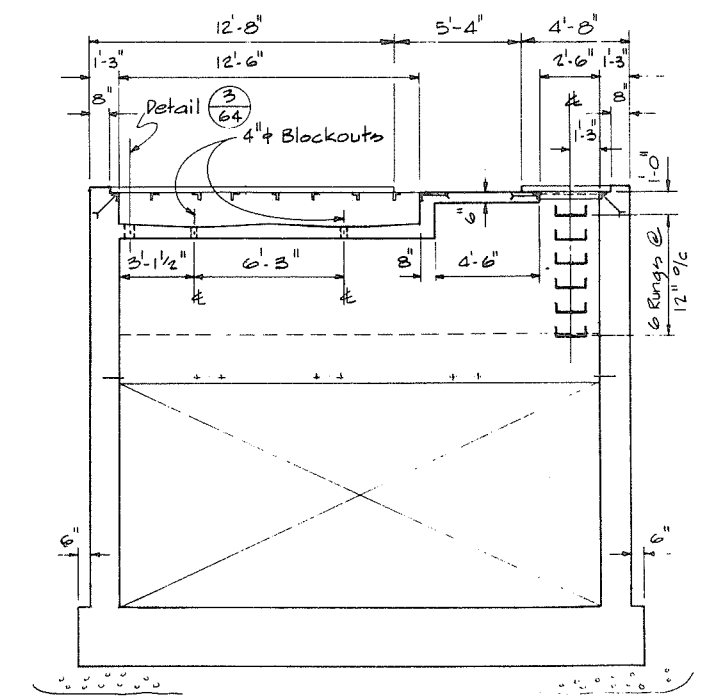
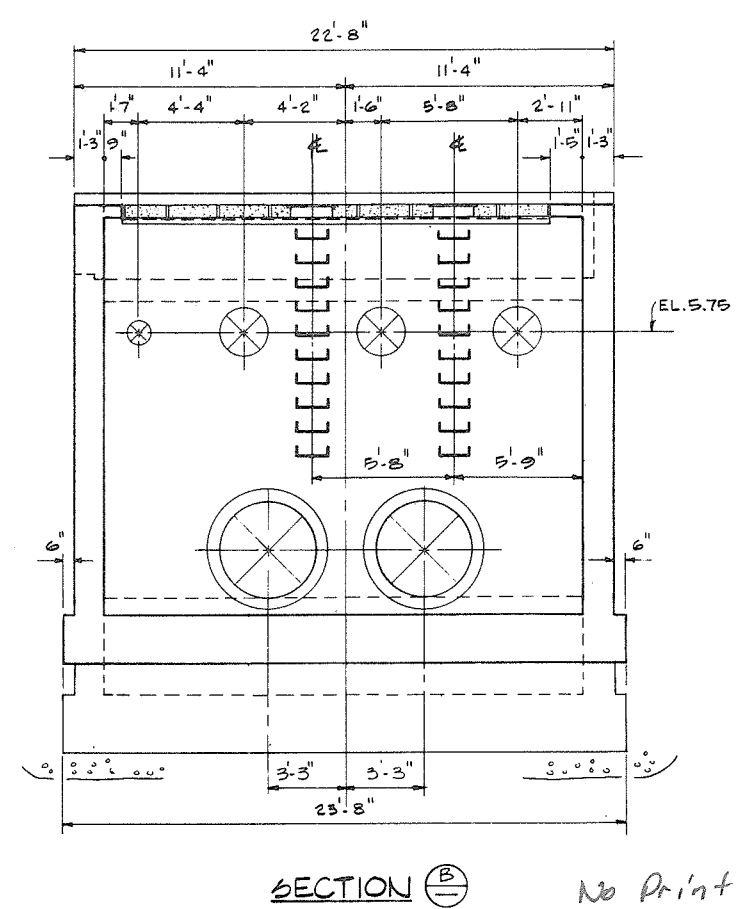
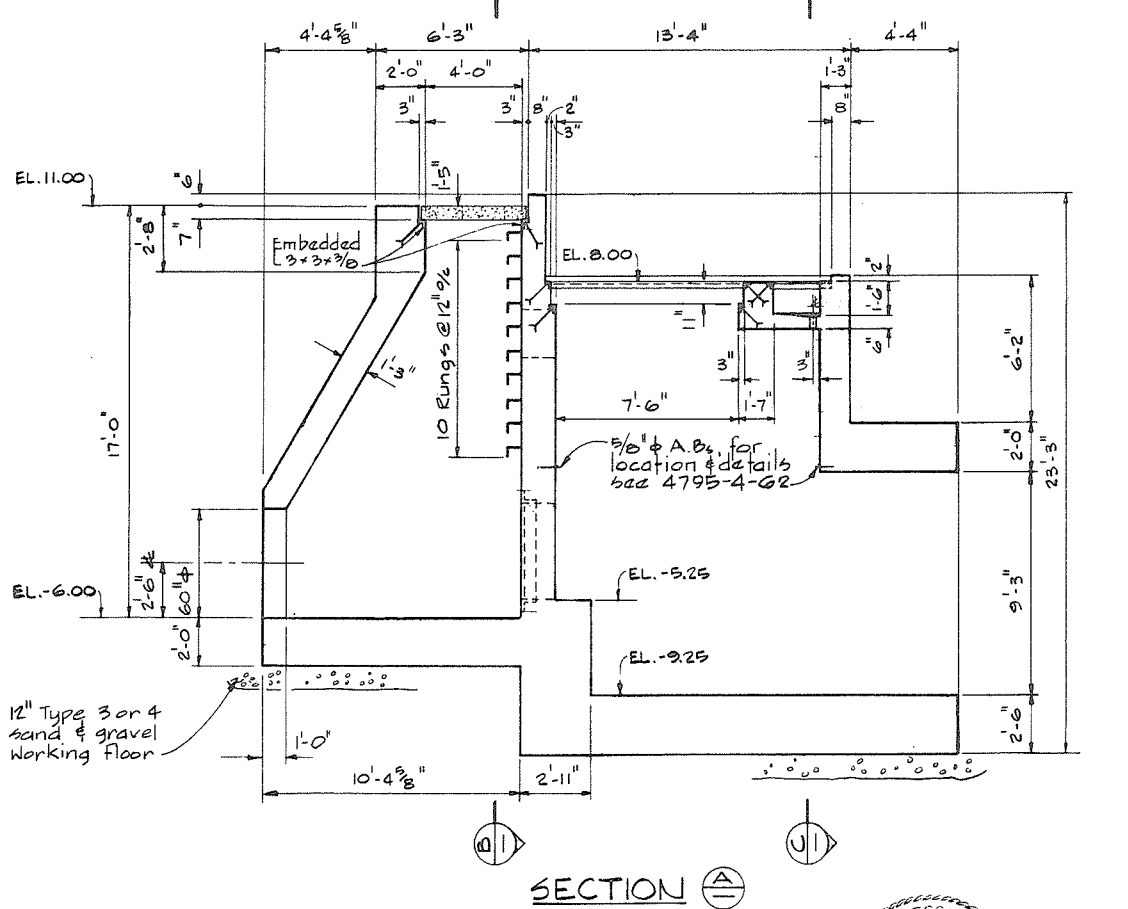
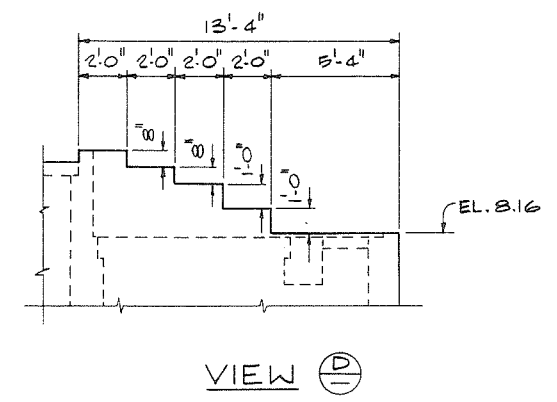
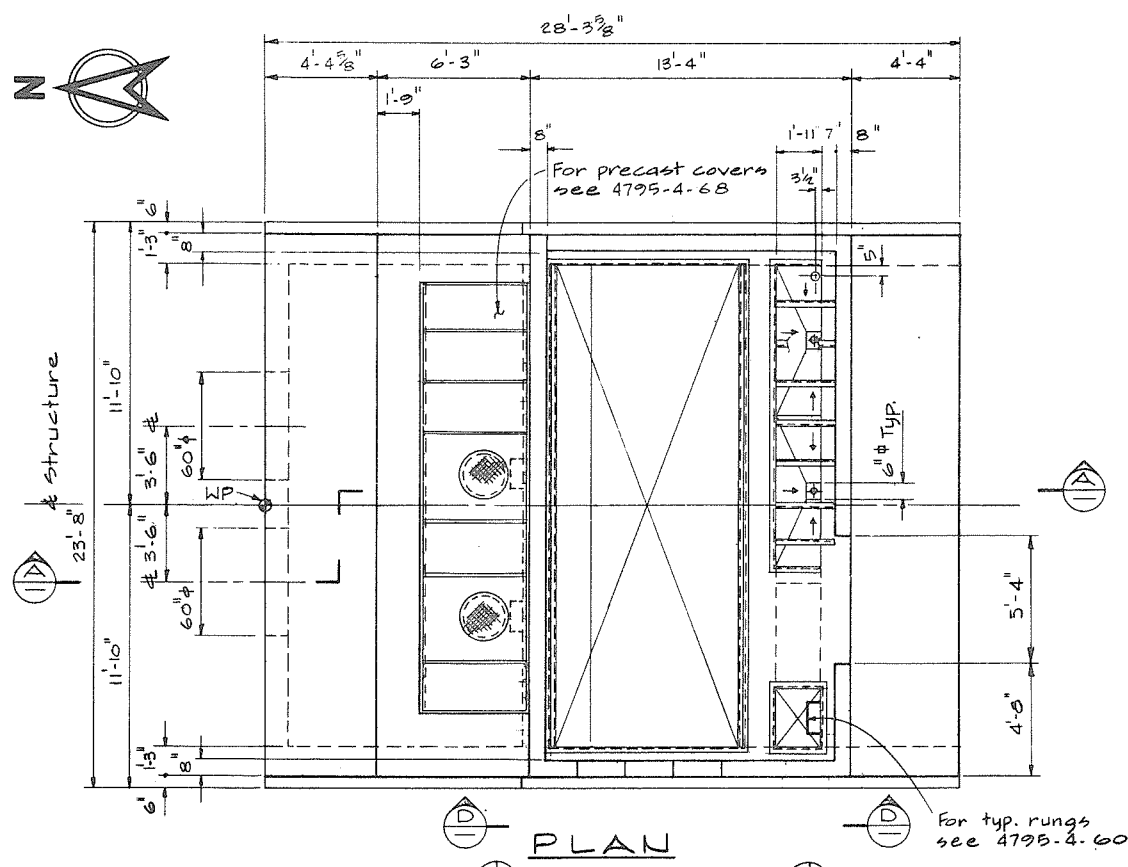
CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO.	BY	REVISIONS	DATE
1	CM		
2	CM		
3	CM		

RECOMMENDED <i>John Fuller</i> CHIEF, PROJECTS DIV.
DATE <i>Aug 27/74</i>
APPROVED <i>John Fuller</i> DIRECTOR
DATE <i>Aug 27/74</i>

DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4 NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE CONCRETE OUTLINE

DESIGNED GA	SURVEYED
DRAWN AR	DATE
CHECKED HS	FILE NO. 0281550-C10-4
SCALE As shown	DATE Aug. 1974
DWG. NO. 4795-4-34	SHEET OF SHEETS



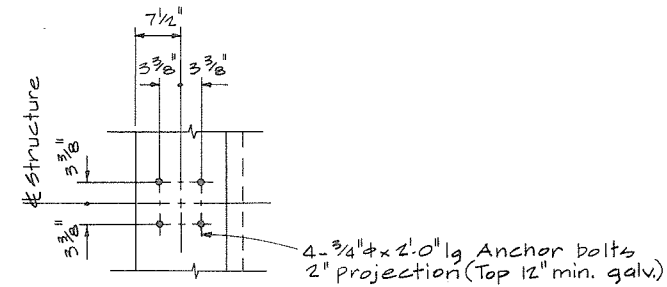
- GENERAL NOTES- STRUCTURAL**
- Design is in accordance with CSA A 23.3-1970, Code for the Design of Plain or Reinforced Concrete Structures.
 - Construction shall be in accordance with ACI 301-72, Specifications for Structural Concrete for Buildings.
 - Specified strength of concrete $f_c = 4000$ psi.
 - Reinforcing steel shall be deformed bars conforming to CSA G30.12-1972, Grade 40.
 - Cover over reinforcing steel to be 2" to all faces except 3" for the underside of the footings.
 - Reinforcing steel to be of lengths indicated with construction joints as shown unless otherwise approved by the Engineer.
 - CONCRETE FINISHES:-
 - Floors & base slabs - steel trowel.
 - Exposed horizontal surfaces - broom.
 - Beams, exterior & interior exposed walls - rubbed.
 - see specs for details.
 - CHAMFERS - $\frac{3}{4} \times \frac{3}{4}$ " for all exposed corners.
 - For sizes of embedded angles not called up see 4795-4-61



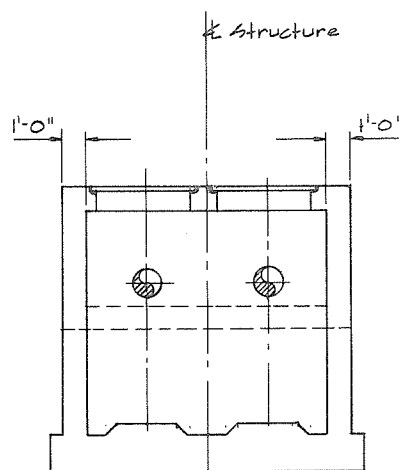
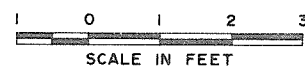
CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO.	BY	REVISIONS	DATE	RECOMMENDED J. A. Fuller CHIEF, PROJECTS DIV. DATE Aug 27/74	APPROVED P. Manniche DIRECTOR DATE Aug 27/74	BRITISH COLUMBIA DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND CONTRACT NO. 4 SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE CONCRETE OUTLINE	DESIGNED G.A. DRAWN AK CHECKED HS SCALE As shown DWG. NO. 4795-4-35	SURVEYED DATE FILE NO. 0281550-C10-4 DATE Aug. 1974 SHEET OF SHEETS
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DETAIL 



SECTION (B)



2
A

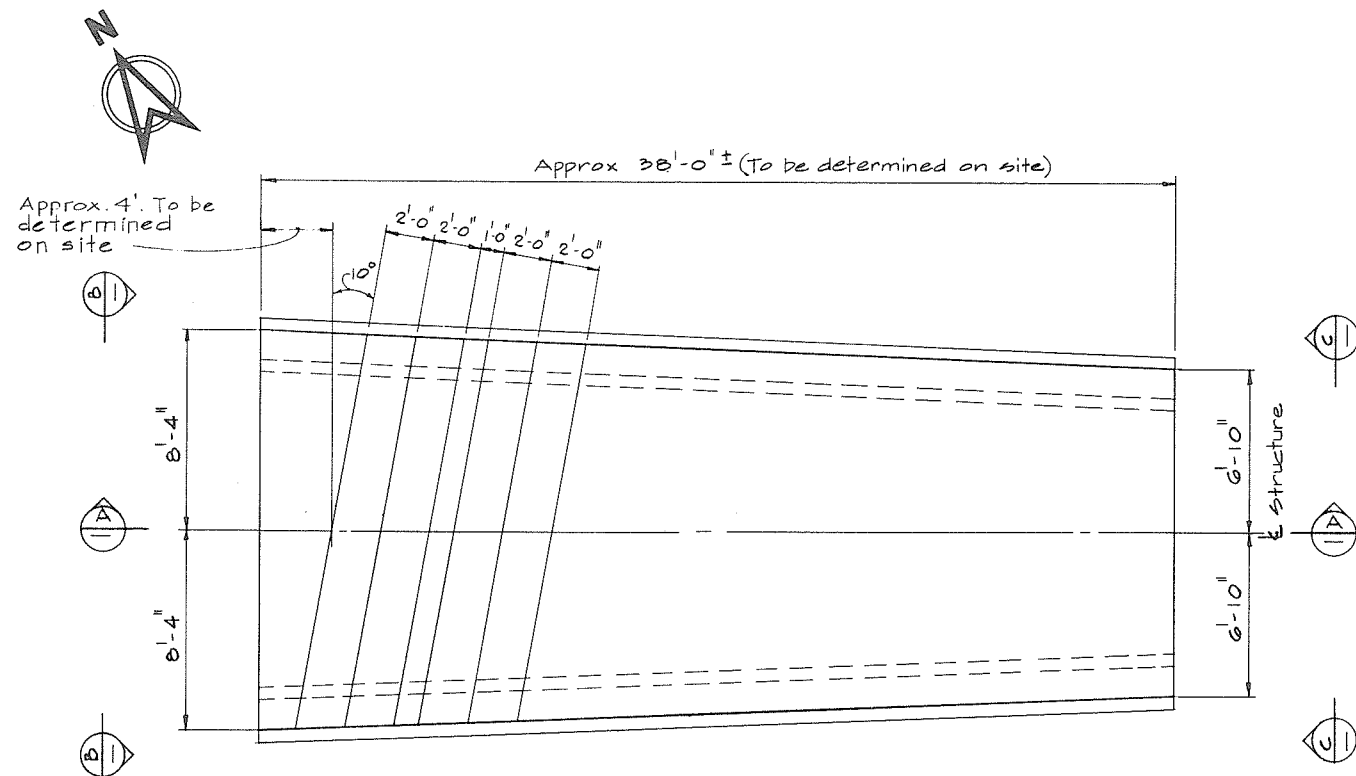
RECOMMENDED	<i>John Fuller</i> CHIEF, PROJECTS DIV.
DATE	<i>Aug 27/74</i>
APPROVED	<i>PHB</i> DIRECTOR
DATE	<i>Aug 28/74</i>

BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA — BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT

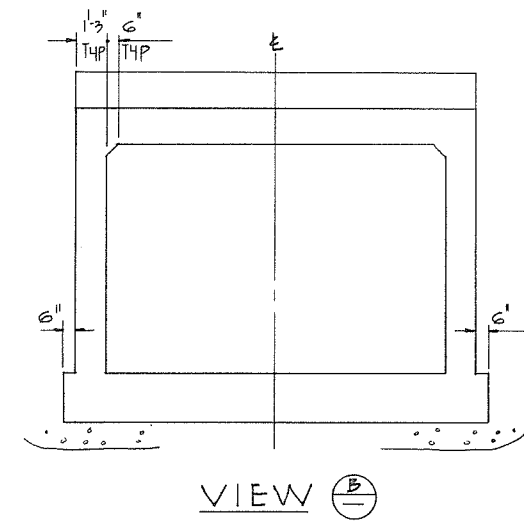
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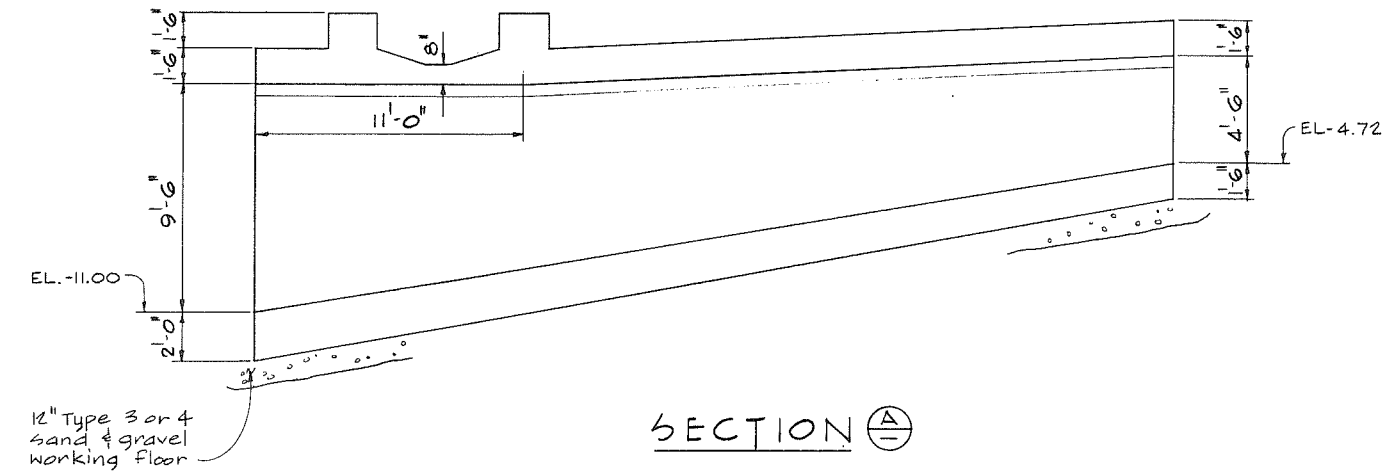
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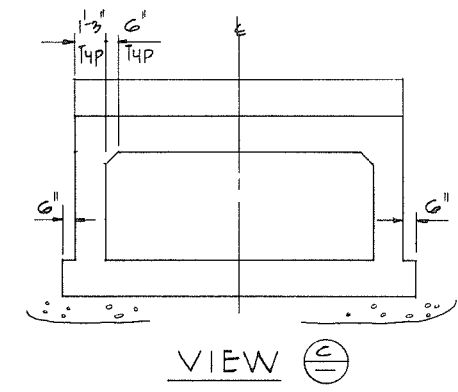
PLAN



VIEW B

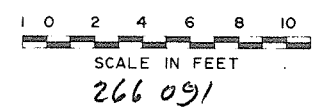


SECTION A



VIEW C

NOTES
For General Notes see 4795-4-33

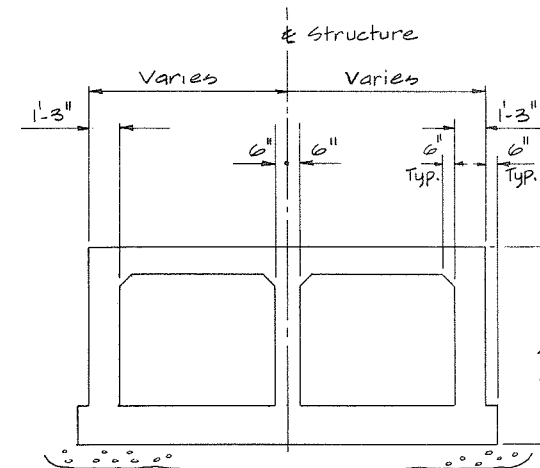
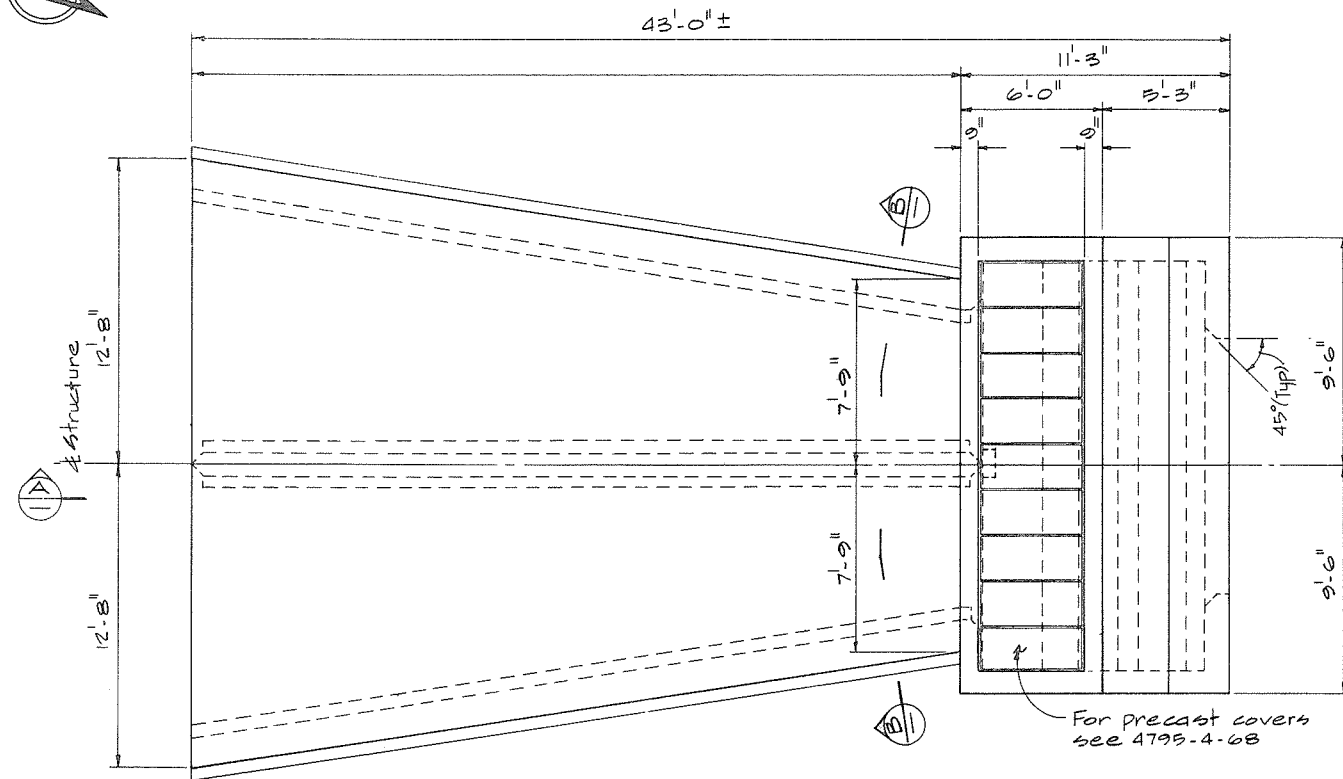


No Print requ'd.



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

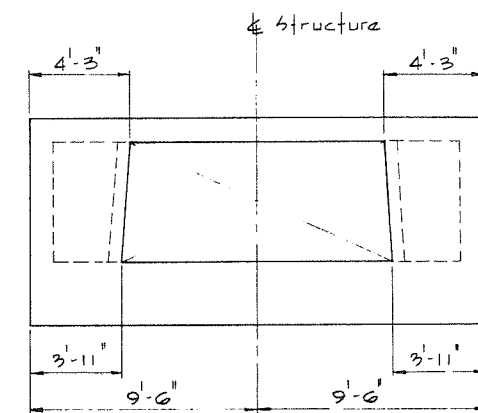
NO.	BY	REVISIONS	DATE	RECOMMENDED <i>[Signature]</i> CHIEF, PROJECTS DIV. DATE <i>Aug 27/74</i>	BRITISH COLUMBIA DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND CONTRACT NO. 4 CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE ENTRY CULVERT CONCRETE OUTLINE	DESIGNED <i>C.A.</i> DRAWN <i>H.W.</i> CHECKED <i>H.S.</i> SCALE <i>As shown</i> DWG. NO. <i>4795-4-37</i>	SURVEYED DATE FILE NO. <i>0281550-C10-4</i> DATE <i>Aug 1974</i> SHEET <i>1</i> OF <i>1</i> SHEETS
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SECTION (B)

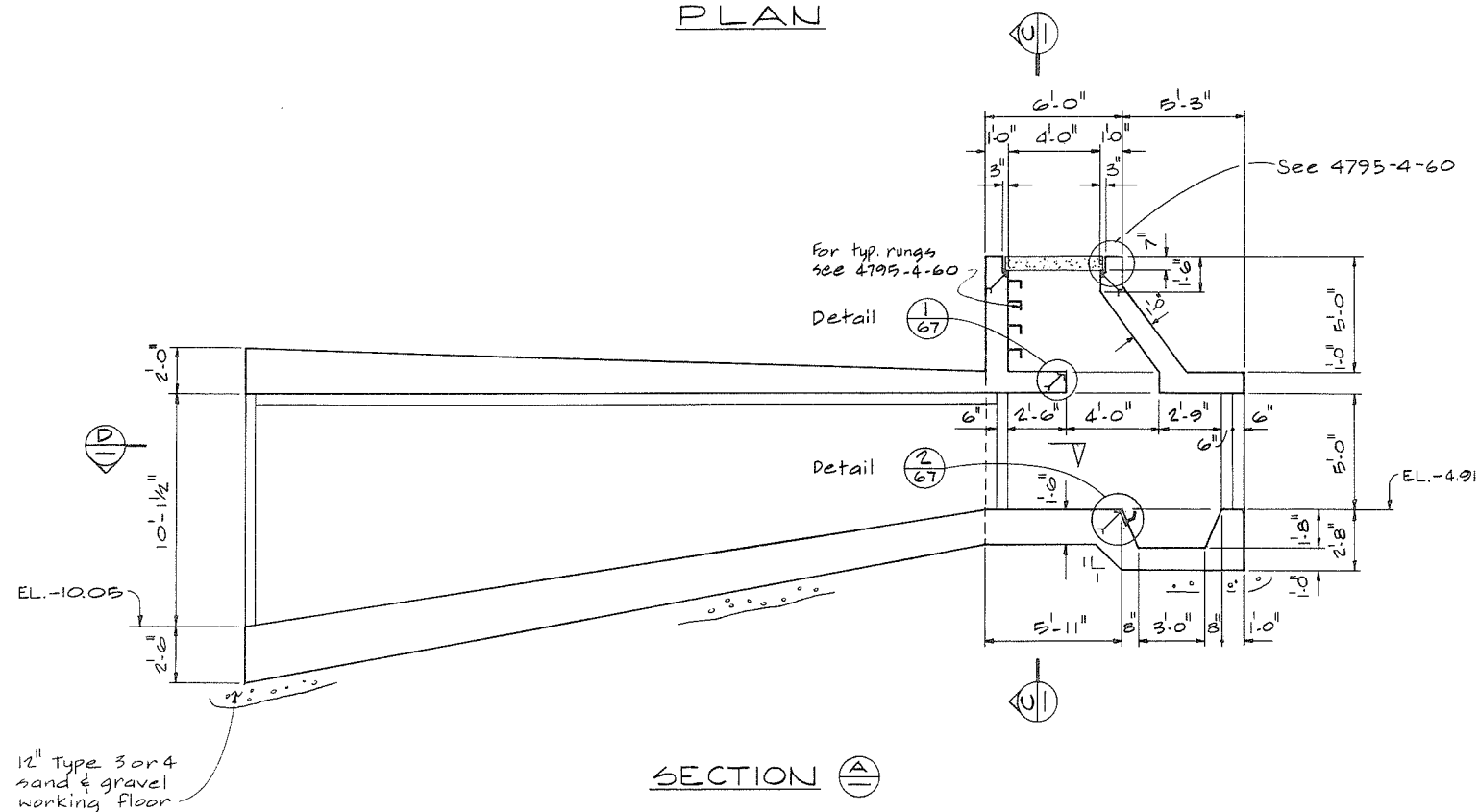


SECTION D

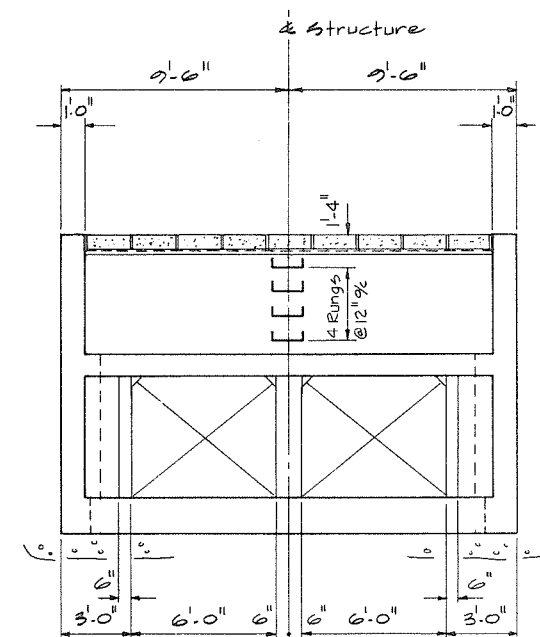


VIEW 

- For General Notes see 4795-4-34

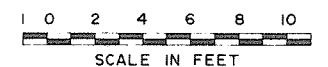


SECTION 



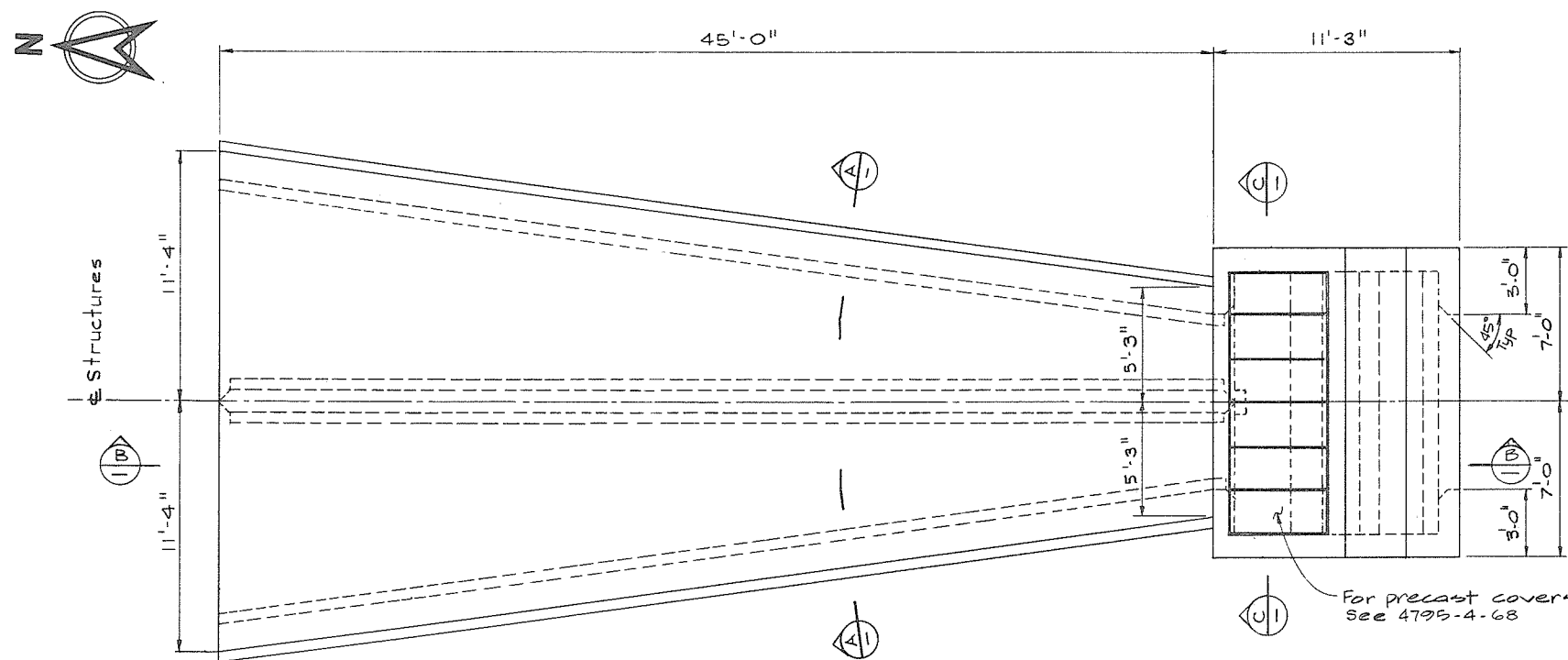
SECTION C

No Print req'd

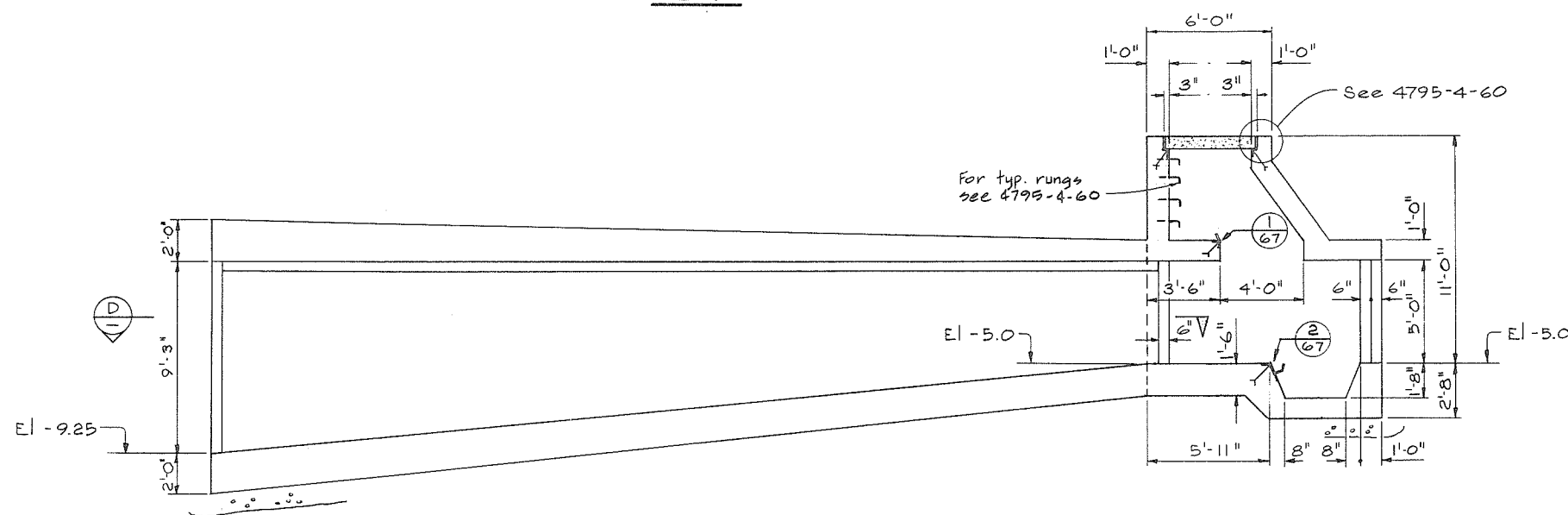


CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

A	NO. BY	REVISIONS	DATE	RECOMMENDED <u>J. G. Fuller</u> CHIEF, PROJECTS DIV.	DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA — BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1969 AGREEMENT PROJECT NO. 3 — THE TOWNSHIP OF RICHMOND	DESIGNED <u>CA</u>	SURVEYED
				DATE <u>Aug 29/74</u>		DRAWN <u>AK</u>	DATE
				APPROVED <u>P. Brando</u> DIRECTOR	CONTRACT NO. 4 NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ENTRY CURBLINE CONCRETE OUTLINE	CHECKED <u>..</u>	FILE NO. <u>028159-010-4</u>
				DATE <u>Aug 28/74</u>		SCALE <u>As shown</u>	DATE <u>Aug. 1974</u>
						DWG. NO. <u>4795-4-38</u>	SHEET <u>1</u> OF <u>1</u> SHEETS

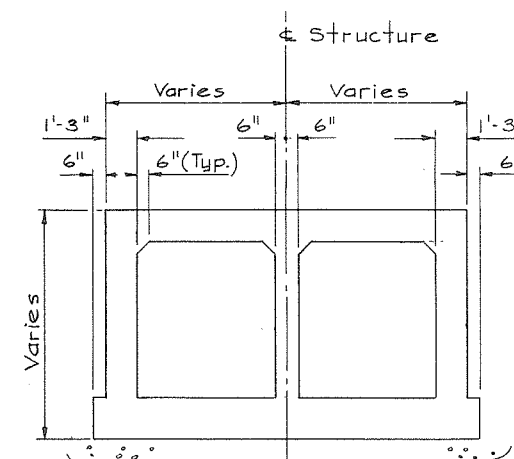


PLAN

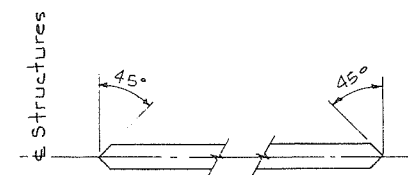


SECTION B-B

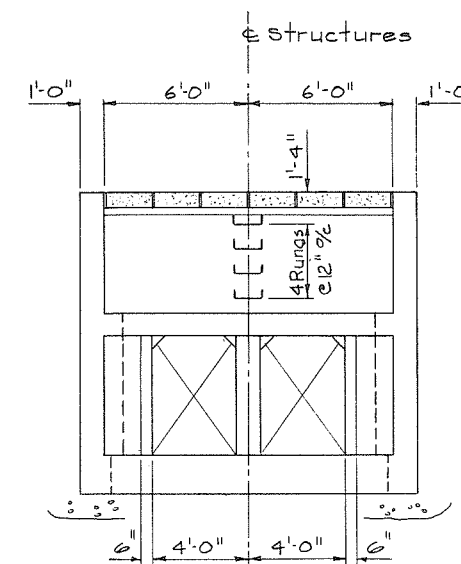
12" Type 3 or 4 sand & gravel working floor



SECTION A-A



SECTION D-D



SECTION C-C

NOTES
For General Notes see 4795-4-35



SCALE IN FEET
266 093



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

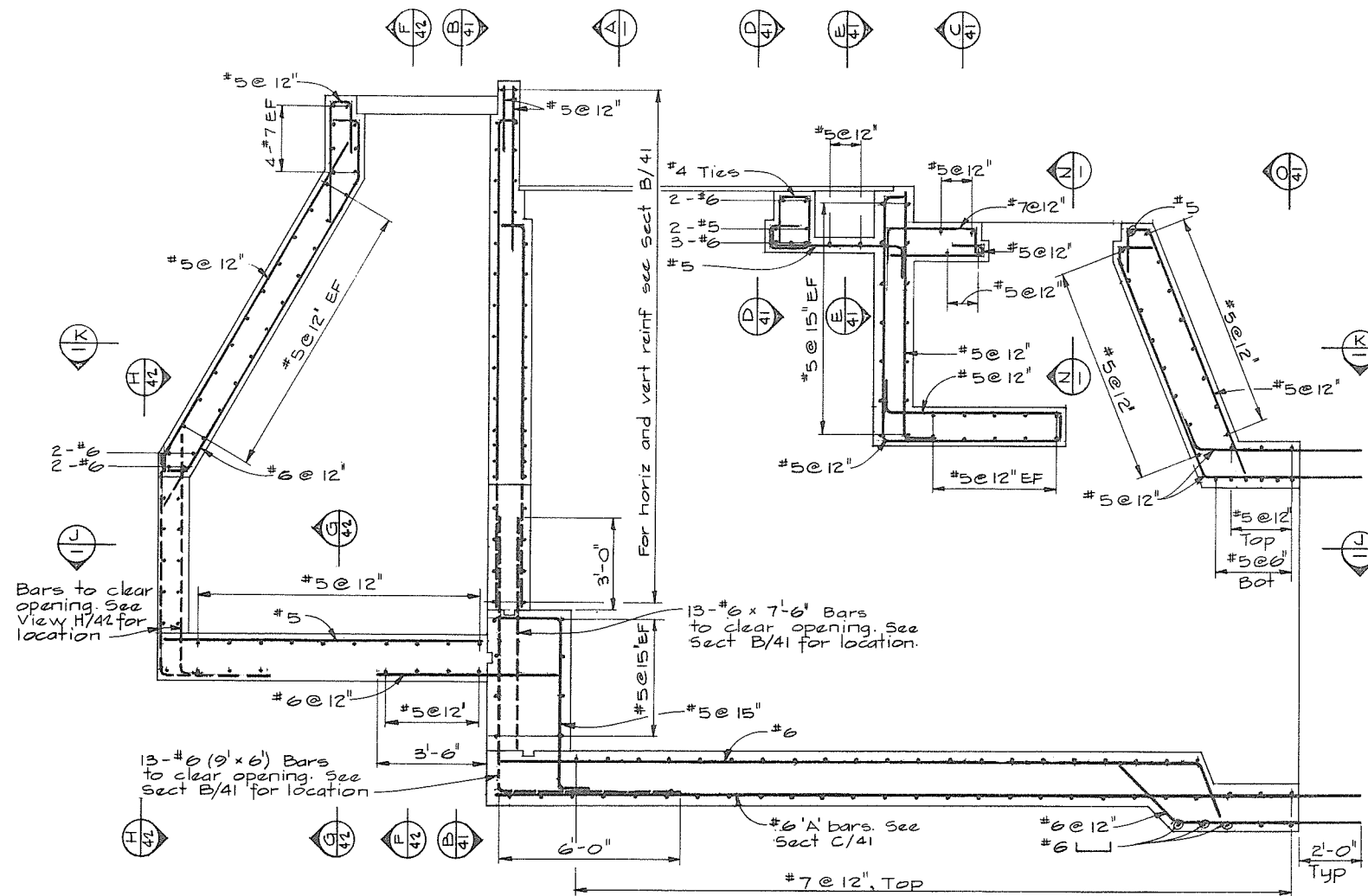
NO.	BY	REVISIONS	DATE
1	GA		Aug 27/74

RECOMMENDED	GA
DATE	Aug 27/74
APPROVED	GA
DATE	Aug 27/74

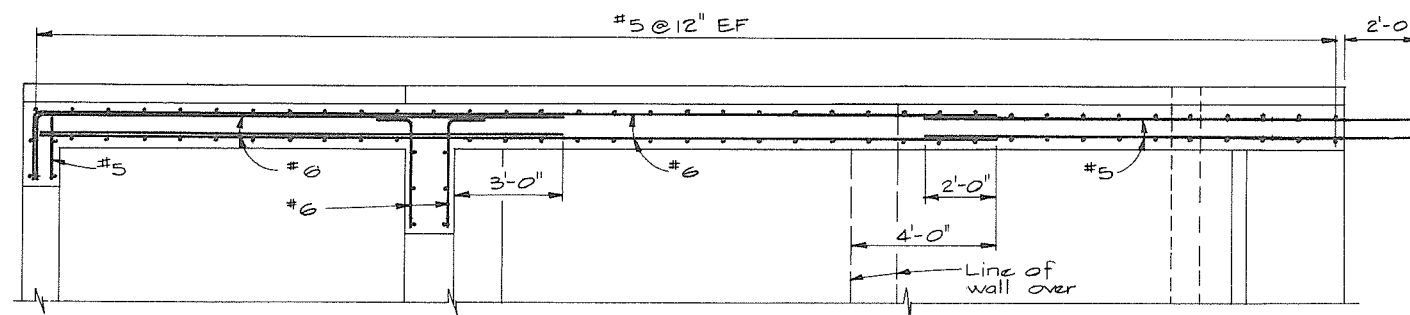
BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE
ENTRY CULVERT CONCRETE OUTLINE

DESIGNED	GA	SURVEYED	
DRAWN	HCS	DATE	
CHECKED	GA	FILE NO.	028550-C10-4
SCALE	As shown	DATE	Aug. 1974
DWG. NO.	4795-4-39	SHEET	OF SHEETS

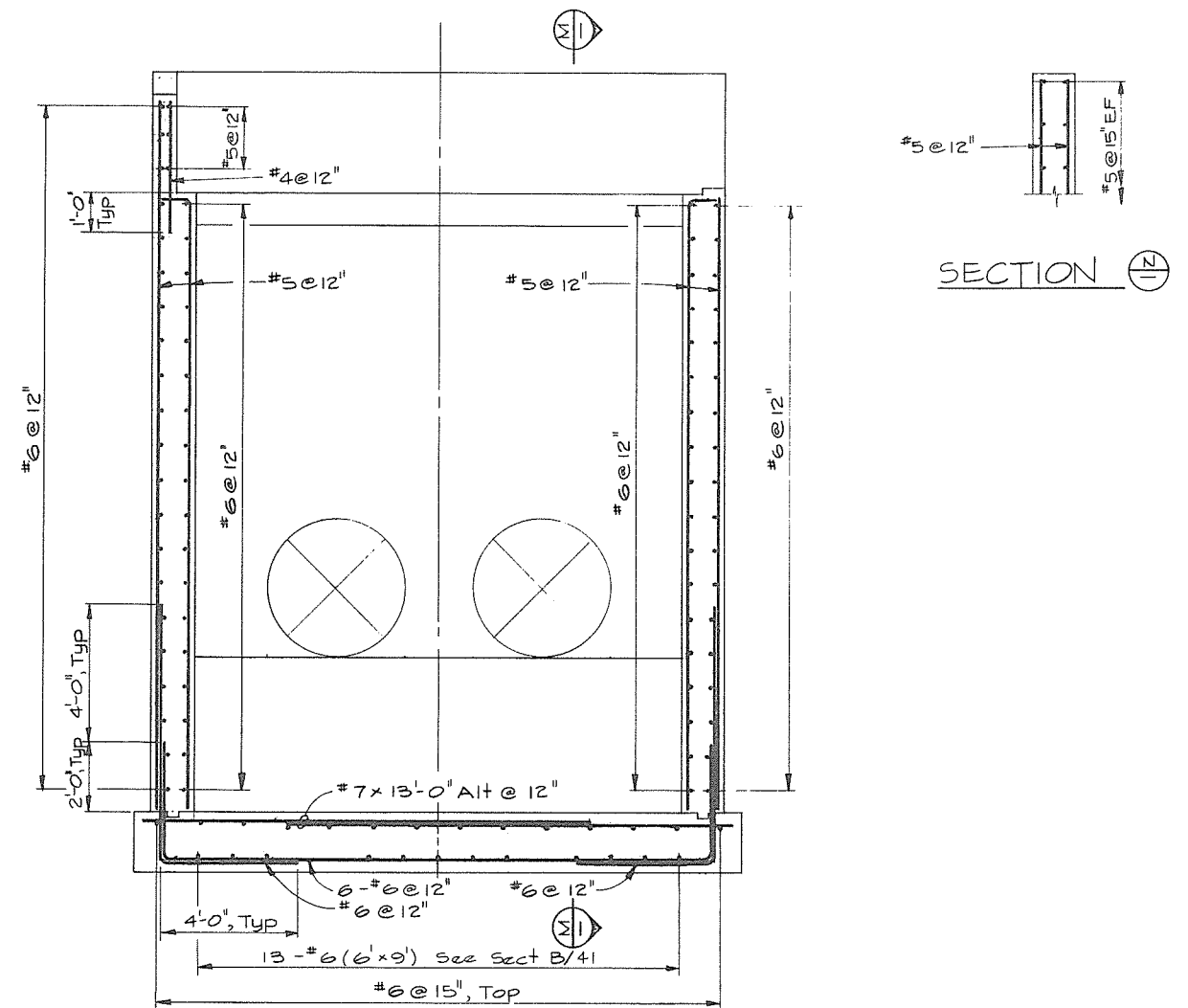
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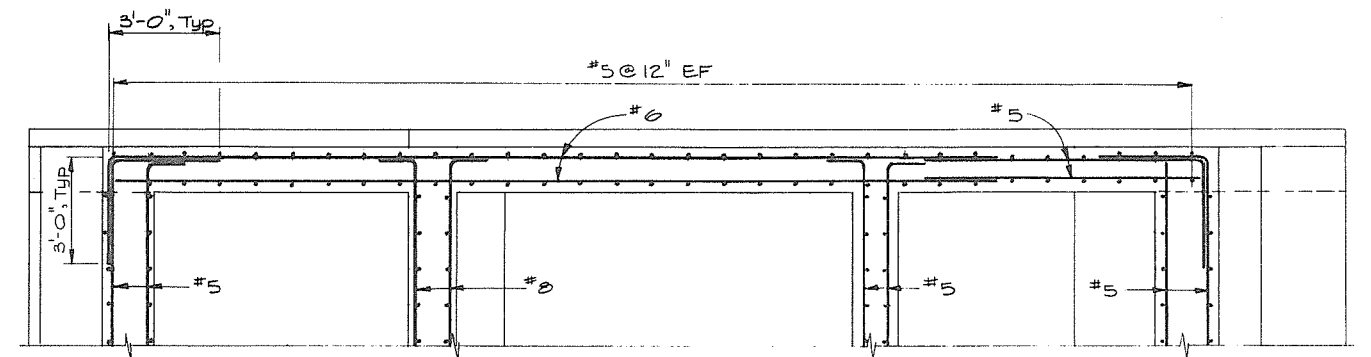
LONGITUDINAL SECTION M
For location see Section A



SECTION J



SECTION A



SECTION K

NOTES
• For Notes see 4795-4-33



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SCALE IN FEET
266094



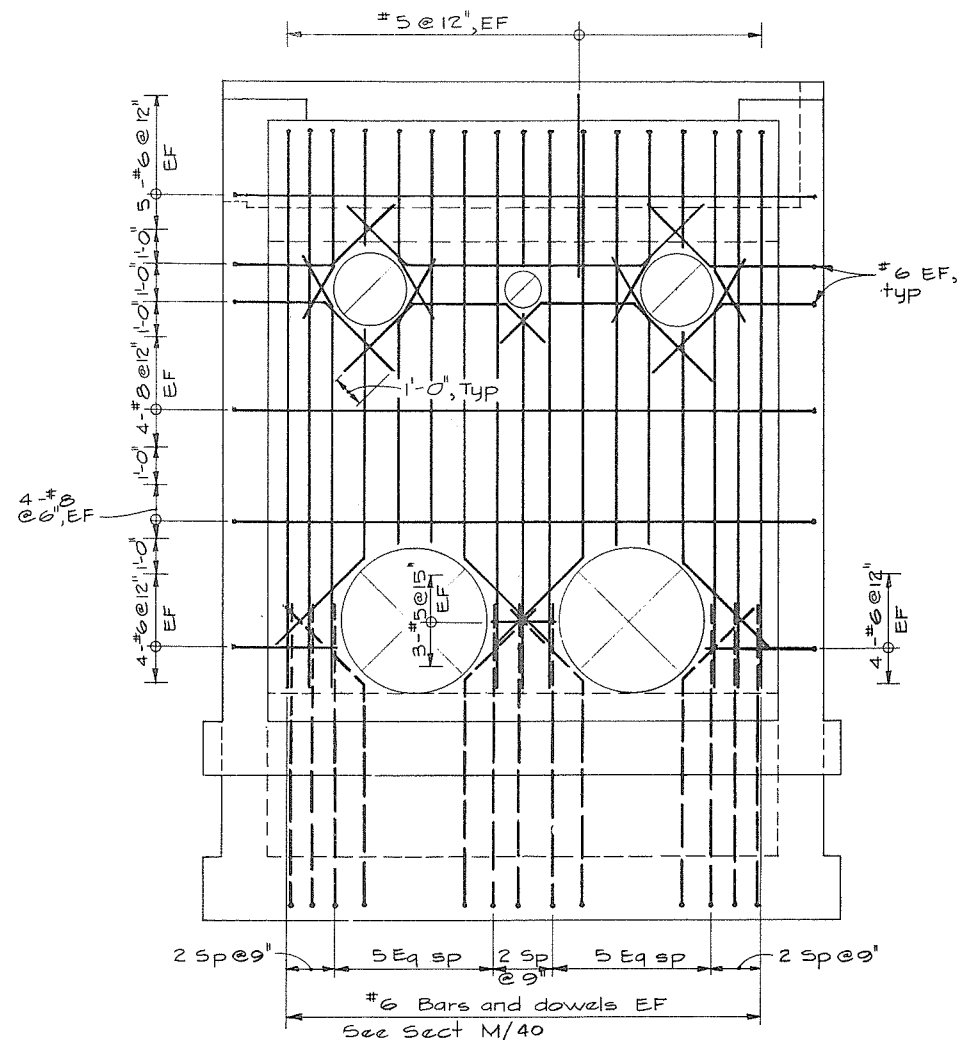
CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO.	BY	REVISIONS	DATE
A			

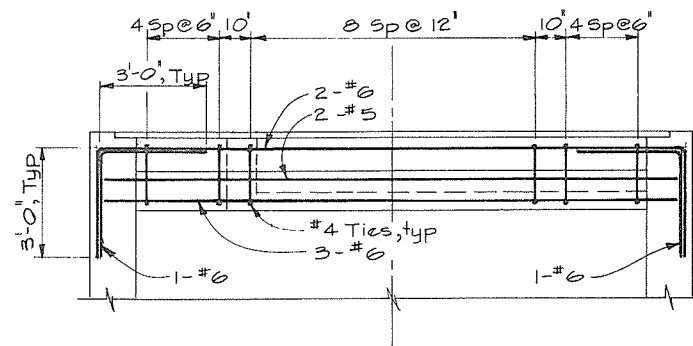
RECOMMENDED <i>W. Fuller</i> CHIEF, PROJECTS DIV.	DATE <i>Aug 23/74</i>
APPROVED <i>W. Fuller</i> DIRECTOR	DATE <i>Aug 23/74</i>

DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND CONTRACT NO. 4 CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE REINFORCING
--

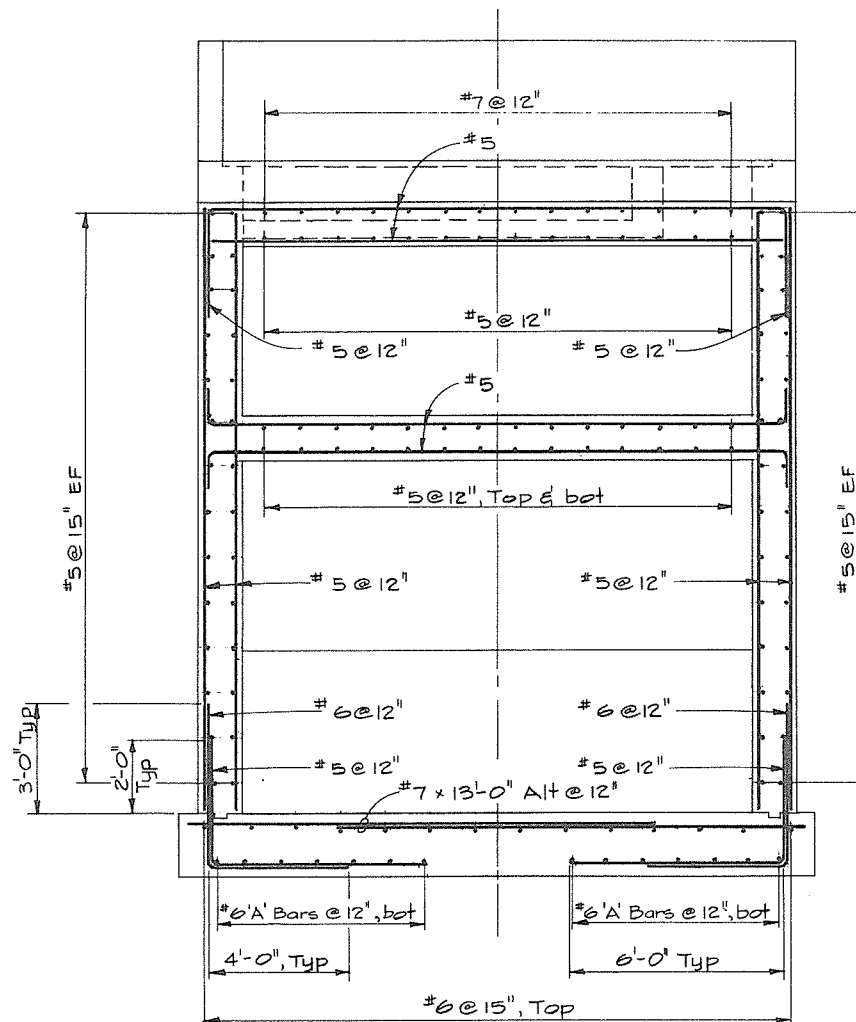
DESIGNED <i>G.C.W.</i>	SURVEYED
DRAWN <i>DL</i>	DATE
CHECKED <i>AAW</i>	FILE NO. 0281550-C10-4
SCALE <i>As shown</i>	DATE <i>Aug. 1974</i>
DWG. NO. 4795-4-40	SHEET 1 OF 3 SHEETS



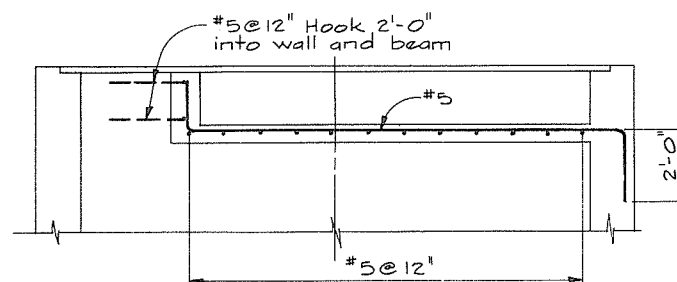
SECTION B-40



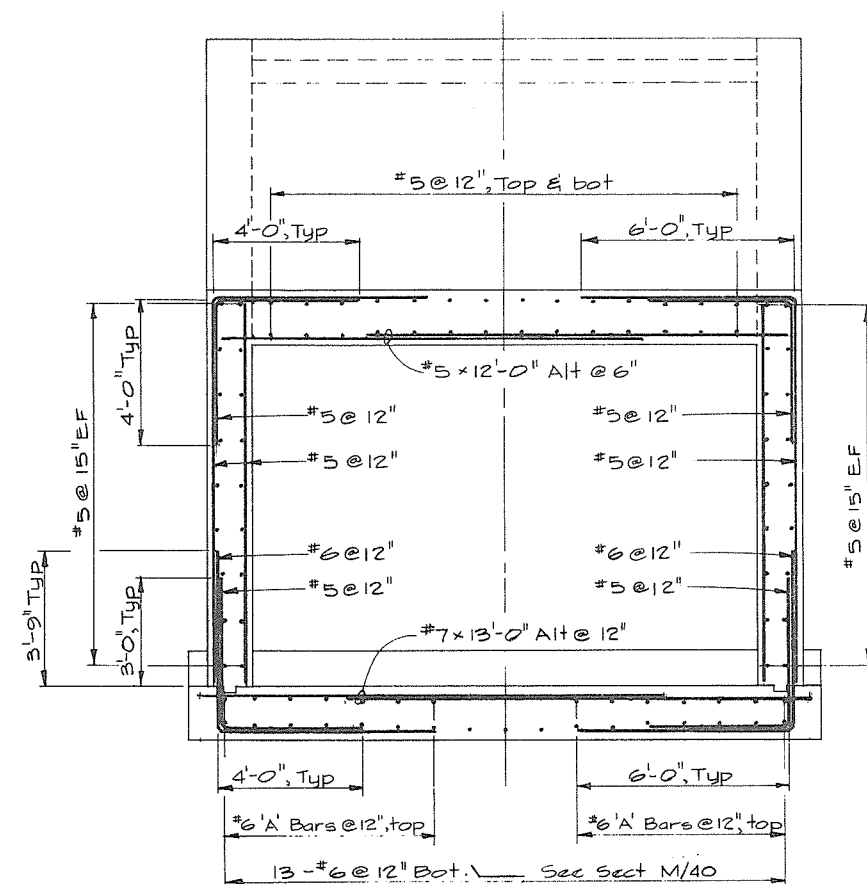
SECTION D-40



SECTION C-40



SECTION E-40



SECTION O-40

NOTES

For Notes see 4795-4-33



SCALE IN FEET
1 0 1 2 3 4 5 6 7
266 095



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO. BY REVISIONS DATE

RECOMMENDED *J. D. Fuller*
CHIEF, PROJECTS DIV.
DATE *Aug 27/74*
APPROVED *P. M. Smith*
DIRECTOR
DATE *Aug 28/74*

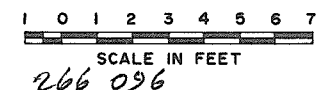
BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE
REINFORCING

DESIGNED *G. C. W.*
DRAWN *DEL*
CHECKED *A. A. W.*
SCALE *As shown*
DWG. NO. *4795-4-41*

SURVEYED
DATE
FILE NO. *0281550-C10-4*
DATE *Aug. 1974*
SHEET *2* OF *3* SHEETS

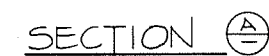


NOTES
• For Notes see 4795-4-33



No print req'd

 CBA ENGINEERING LTD. CONSULTING ENGINEERS - VANCOUVER - CANADA					RECOMMENDED <i>file Fuller</i> CHIEF, PROJECTS DIV.	BRITISH COLUMBIA DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT	DESIGNED <i>GCW</i>	SURVEYED
					DATE <i>Aug 27/74</i>	PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND	DRAWN <i>GCW</i>	DATE
					APPROVED <i>P. Brady</i> DIRECTOR	CONTRACT NO. 4 CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE REINFORCING	CHECKED <i>AAW</i>	FILE NO. <i>0281550-CIQ-4</i>
					DATE <i>Aug 27/74</i>		SCALE <i>As shown</i>	DATE <i>Aug. 1974</i>
NO.	BY	REVISIONS	DATE				DWG. NO. <i>4795-4-42</i>	SHEET <i>3</i> OF <i>3</i> SHEETS



• For Notes see 4795-4-34

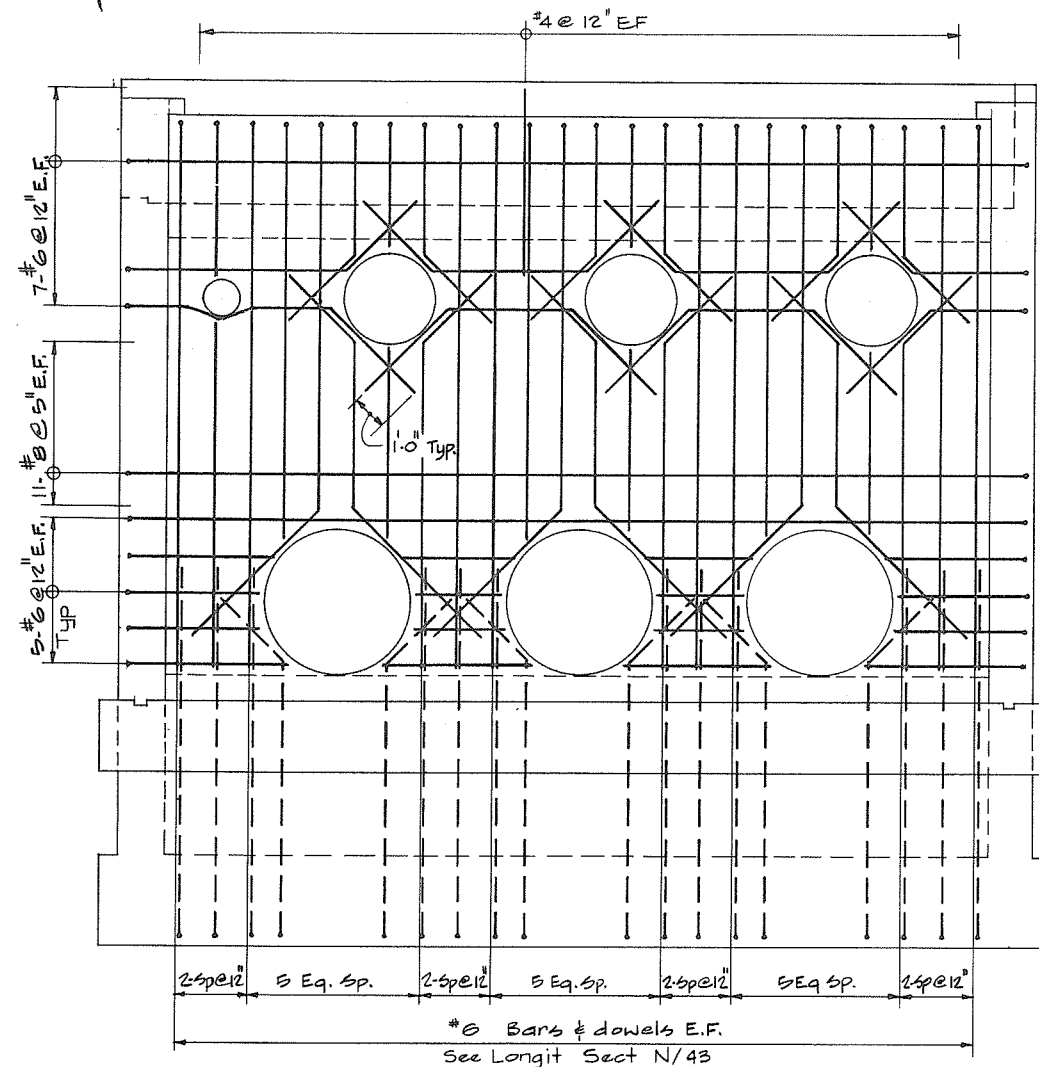


SCALE IN
266 097

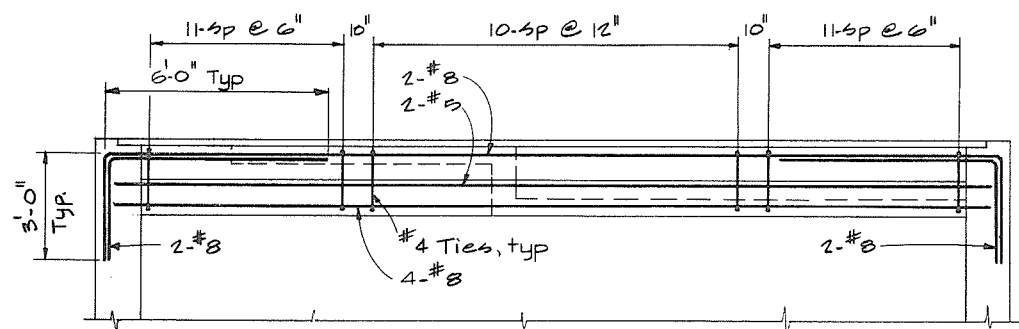


BA

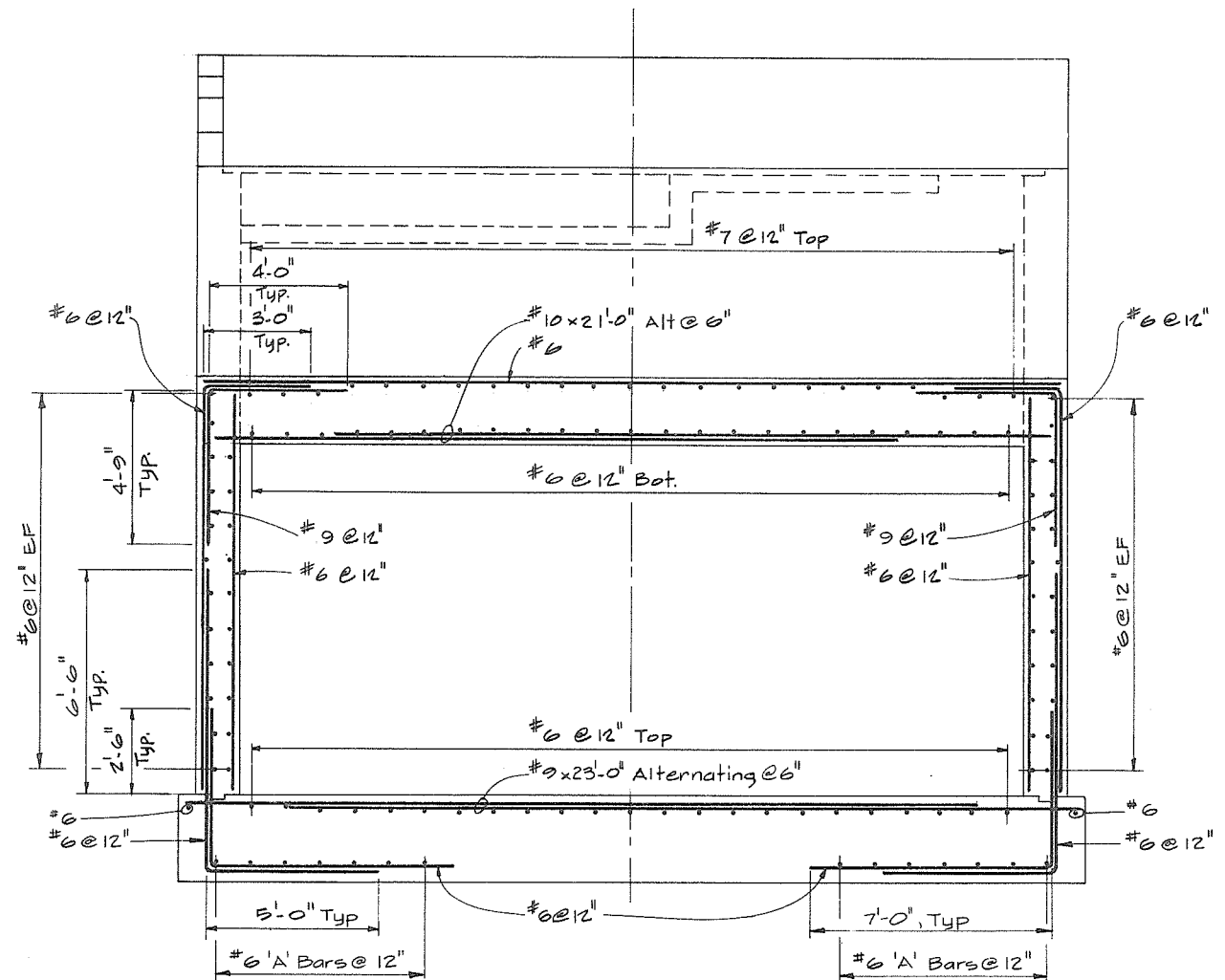
DESIGNED	GCW	SURVEYED	
DRAWN	DL	DATE	
CHECKED	AAW	FILE NO.	0281550-C10-4
SCALE	As shown	DATE	Aug. 1974
DWG. NO.	4795-4-43	SHEET	1 OF 3 SHEETS



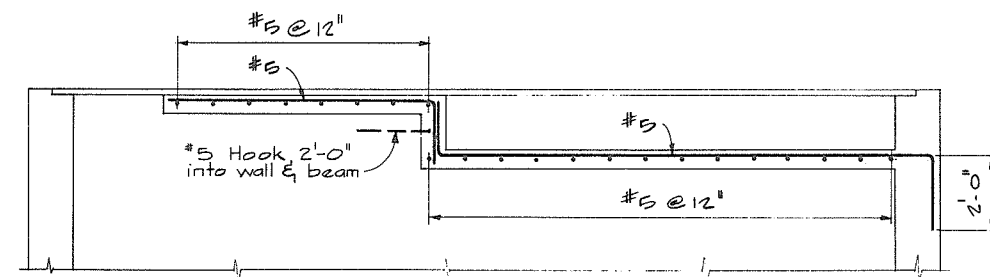
SECTION B-43



SECTION D-43



SECTION C-43



SECTION E-43

NOTES
For Notes see 4795-4-34



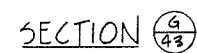
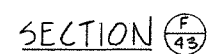
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SCALE IN FEET

266 098

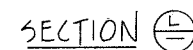


CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO.	BY	REVISIONS	DATE	RECOMMENDED <i>Mike Fuller</i> CHIEF, PROJECTS DIV.	DATE <i>Aug. 27/74</i>	APPROVED <i>P. M. B. B.</i> DIRECTOR	DATE <i>Aug. 27/74</i>	BRITISH COLUMBIA DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND CONTRACT NO. 4 NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE REINFORCING	DESIGNED <i>GCW</i>	SURVEYED
									DRAWN <i>AK</i>	DATE
									CHECKED <i>AAW</i>	FILE NO. <i>028550-C10-4</i>
									SCALE <i>As shown</i>	DATE <i>Aug. 1974</i>
									DWG. NO. <i>4795-4-44</i>	SHEET 2 OF 3 SHEETS



SIMILAR TO SECT F
EXCEPT AS SHOWN



NOTES

• For Notes see 4795-4-34



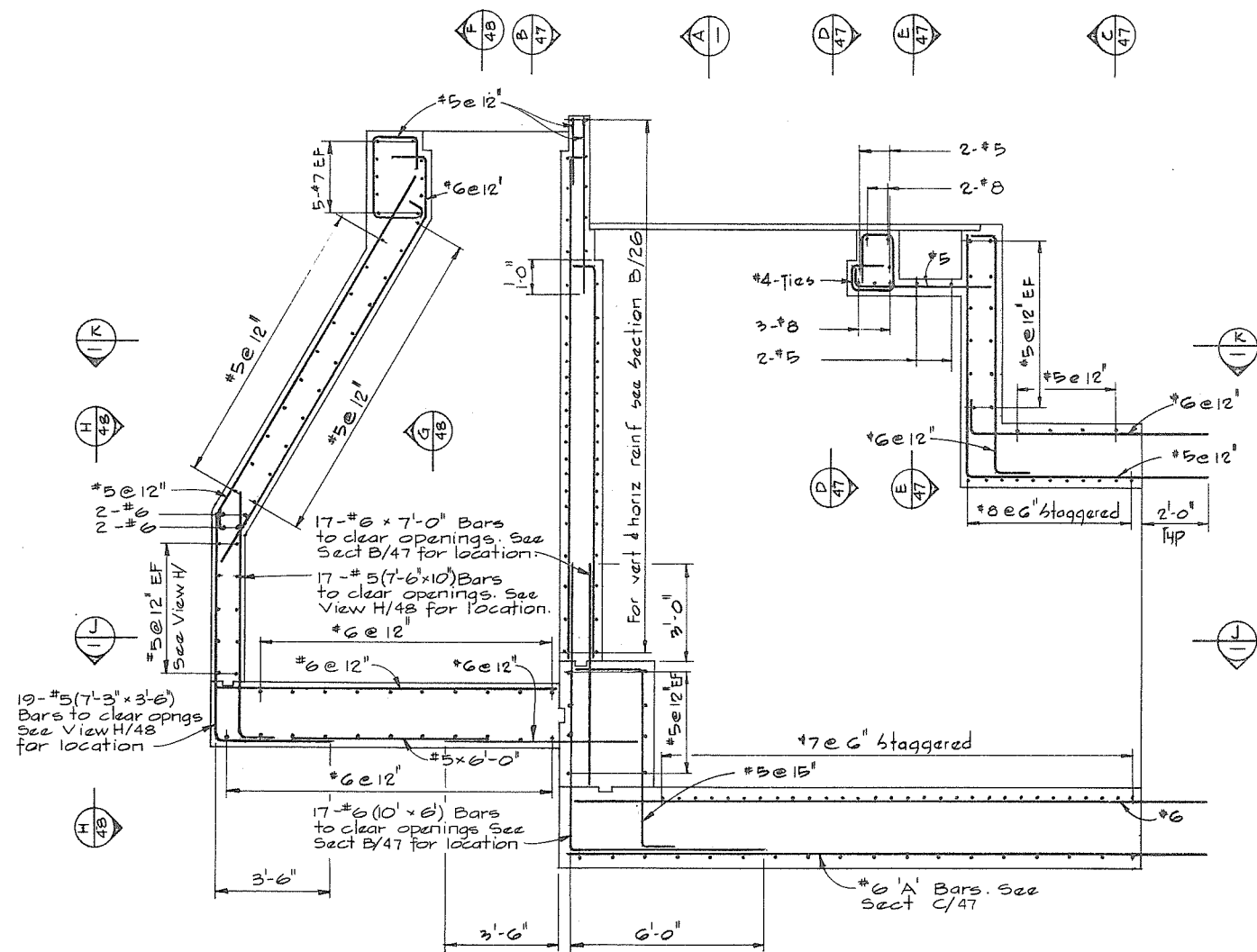
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SCALE IN FEET

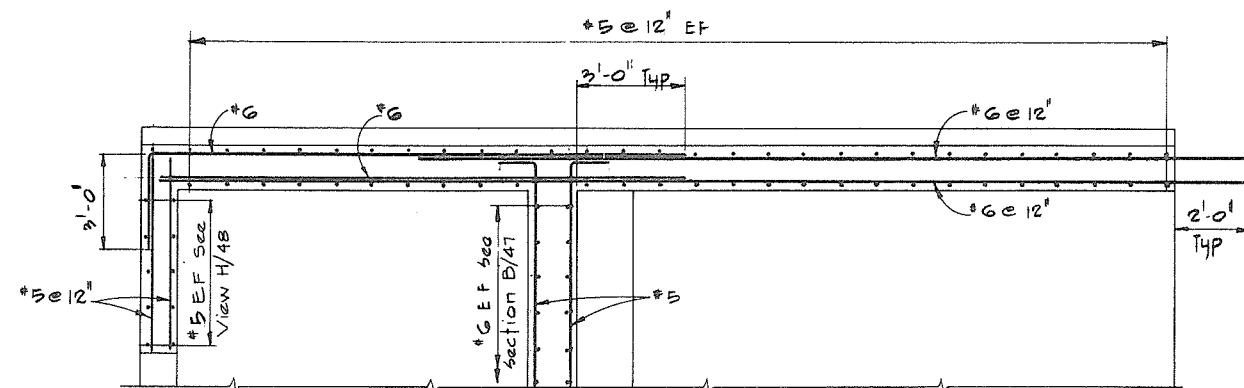
266 09

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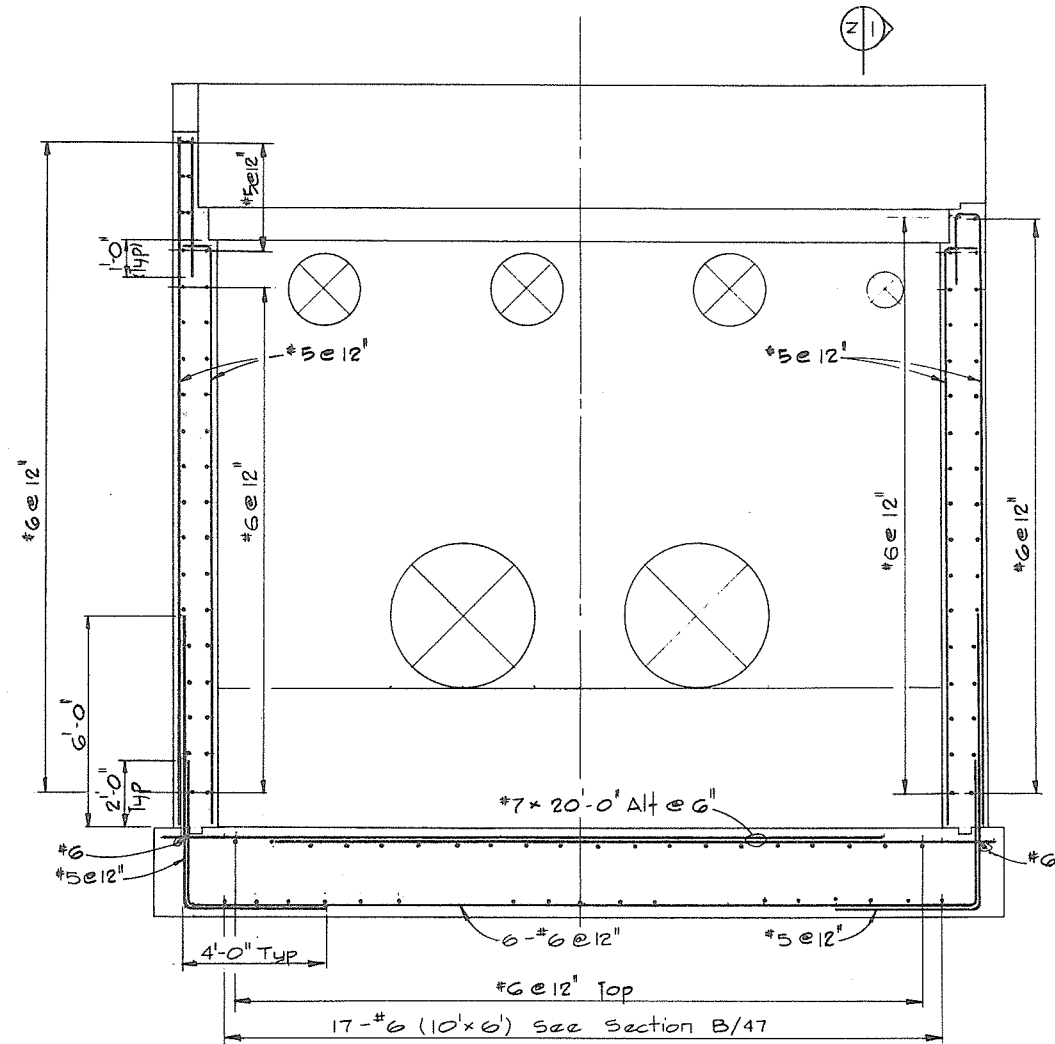
 CBA ENGINEERING LTD. CONSULTING ENGINEERS - VANCOUVER - CANADA	RECOMMENDED <i>Rob Fuller</i> CHIEF, PROJECTS DIV.		DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT		DESIGNED <i>GCW</i>	SURVEYED
	DATE <i>Aug 27/74</i>				DRAWN <i>G</i>	DATE
	APPROVED <i>PM Bunch</i> DIRECTOR		PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND		CHECKED <i>AAW</i>	FILE NO. <i>0281550-C10-4</i>
	DATE <i>Aug 28/74</i>		CONTRACT NO. 4 NO. 4 ROAD NORTH - DRAINAGE DISCHARGE STRUCTURE REINFORCING		SCALE <i>As shown</i>	DATE <i>Aug 1974</i>
NO.	BY	REVISIONS	DATE	DATE <i>Aug 28/74</i>	DWG. NO. <i>4795-4-45</i>	SHEET <i>3</i> OF <i>3</i> SHEET



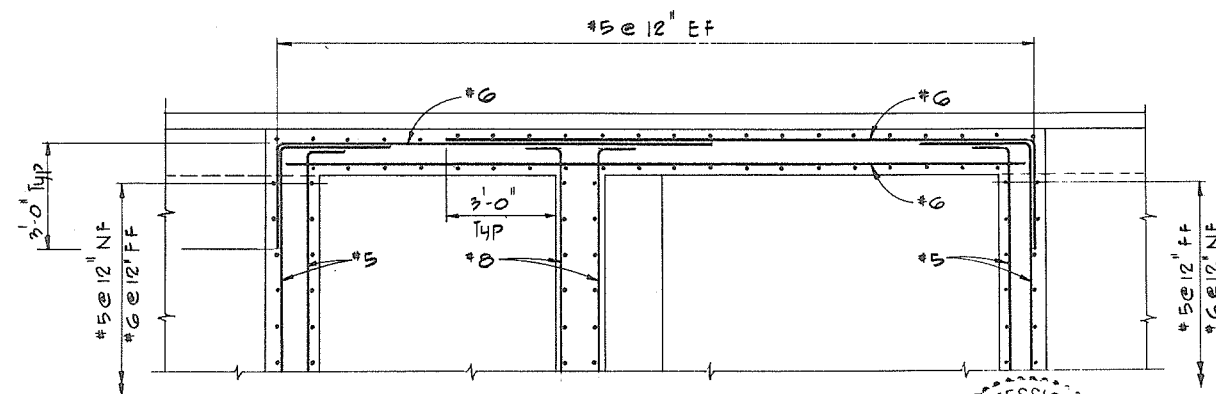
LONGITUDINAL SECTION A-A
For location see section A



SECTION B-B

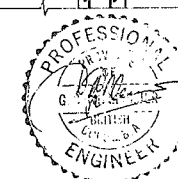


SECTION C-C



SECTION D-D

NOTES
• For Notes see 4795-4-35



266100

SCALE IN FEET
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CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

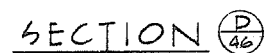
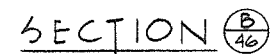
NO. BY REVISIONS DATE

RECOMMENDED *W. J. Fuller*
CHIEF, PROJECTS DIV.
DATE *Aug 27/74*
APPROVED *W. J. Fuller*
DIRECTOR
DATE *Aug 27/74*

BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
SHELL NORTH ROAD DRAINAGE DISCHARGE STRUCTURE
REINFORCING

DESIGNED *GCW*
DRAWN *H.W.*
CHECKED *AAW*
SCALE *As shown*
DWG. NO. *4795-4-46*
SURVEYED
DATE
FILE NO. *028155Q-C10-4*
DATE *Aug. 1974*
SHEET *1* OF *3* SHEETS

No print required

A circular professional engineer seal for the Province of British Columbia. The outer ring contains the text "PROFESSIONAL" at the top and "ENGINEER" at the bottom. Inside the ring, the text "PROV. OF B.C." is at the top, "G.D. VANCE" is in the center, and "BRITISH COLUMBIA" is at the bottom. A signature is written across the center of the seal.

1 0 1 2 3 4 5 6 7

SCALE IN FEET

No print requ'd.



1

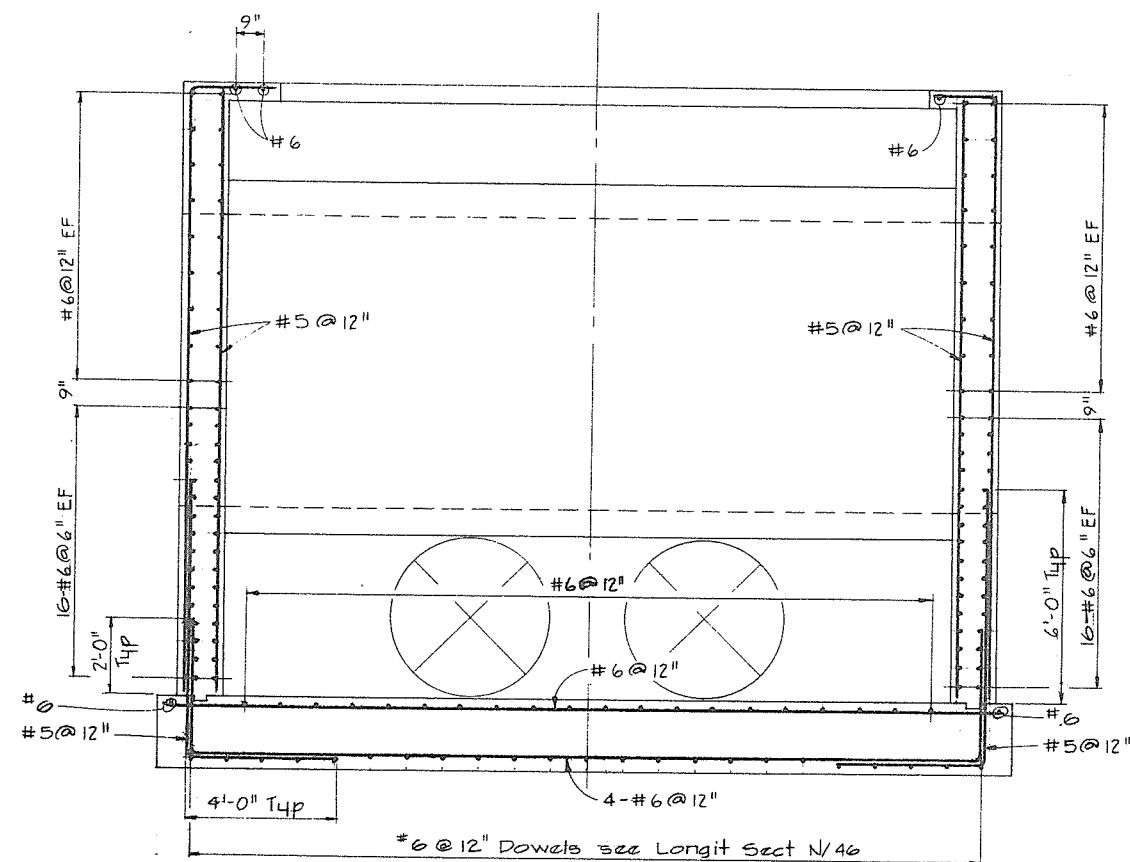
NO.	BY
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REVISIONS

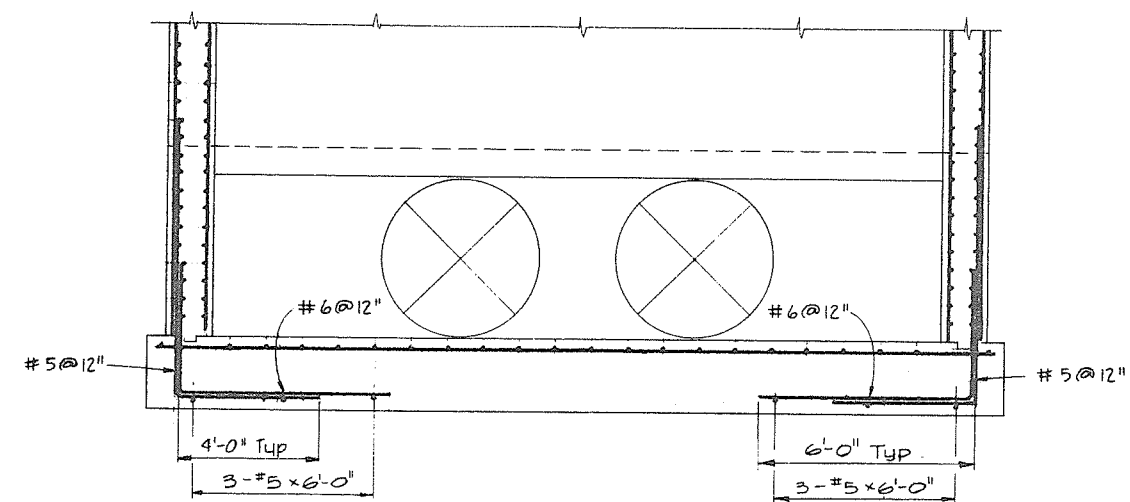
DATE

DATE Aug 28/24

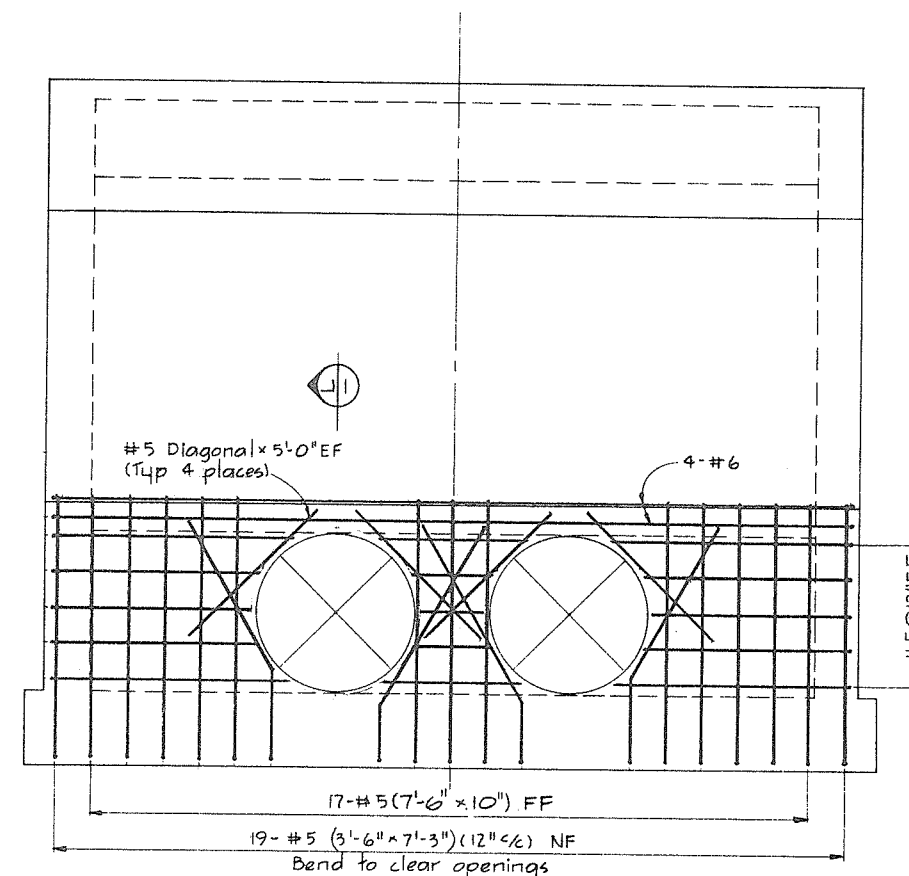
DESIGNED <i>GCW</i>	SURVEYED
DRAWN <i>H.W.</i>	DATE
CHECKED <i>AAW</i>	FILE NO. <i>0281550-C10-4</i>
SCALE <i>As shown</i>	DATE <i>Aug. 1974</i>
DWG. NO. <i>4755-4-47</i>	SHEET <i>2</i> OF <i>3</i> SHEETS



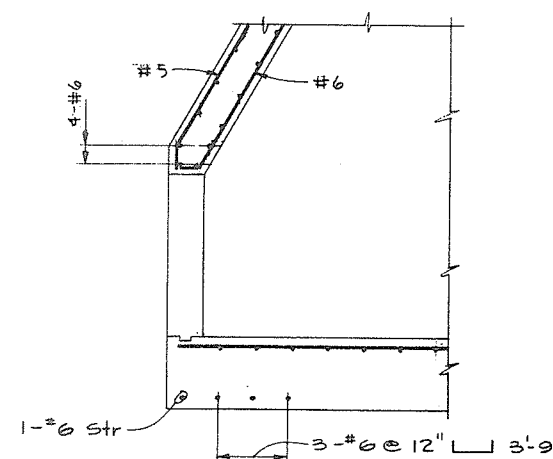
SECTION F 46



SECTION G 46 SIMILAR TO SECT F EXCEPT AS SHOWN



VIEW H 46



SECTION L 46

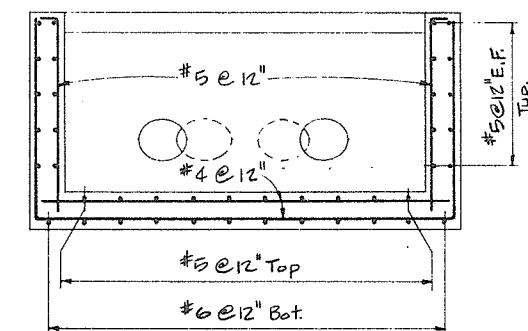
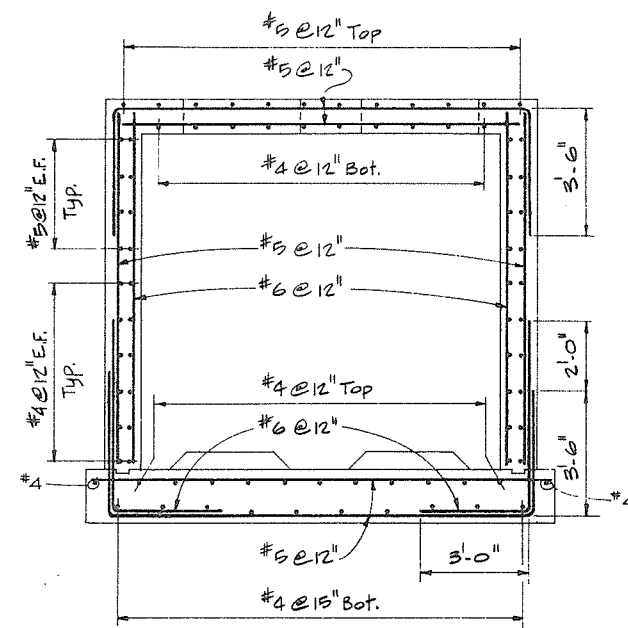
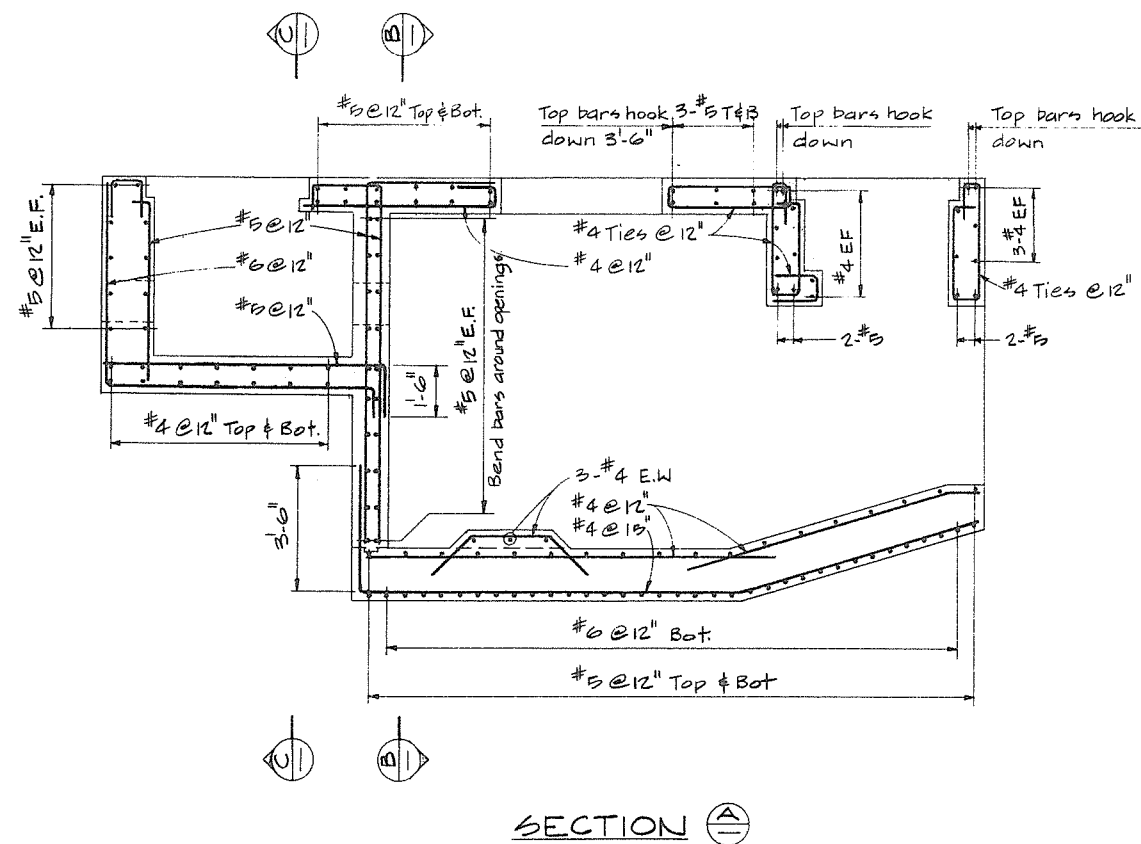
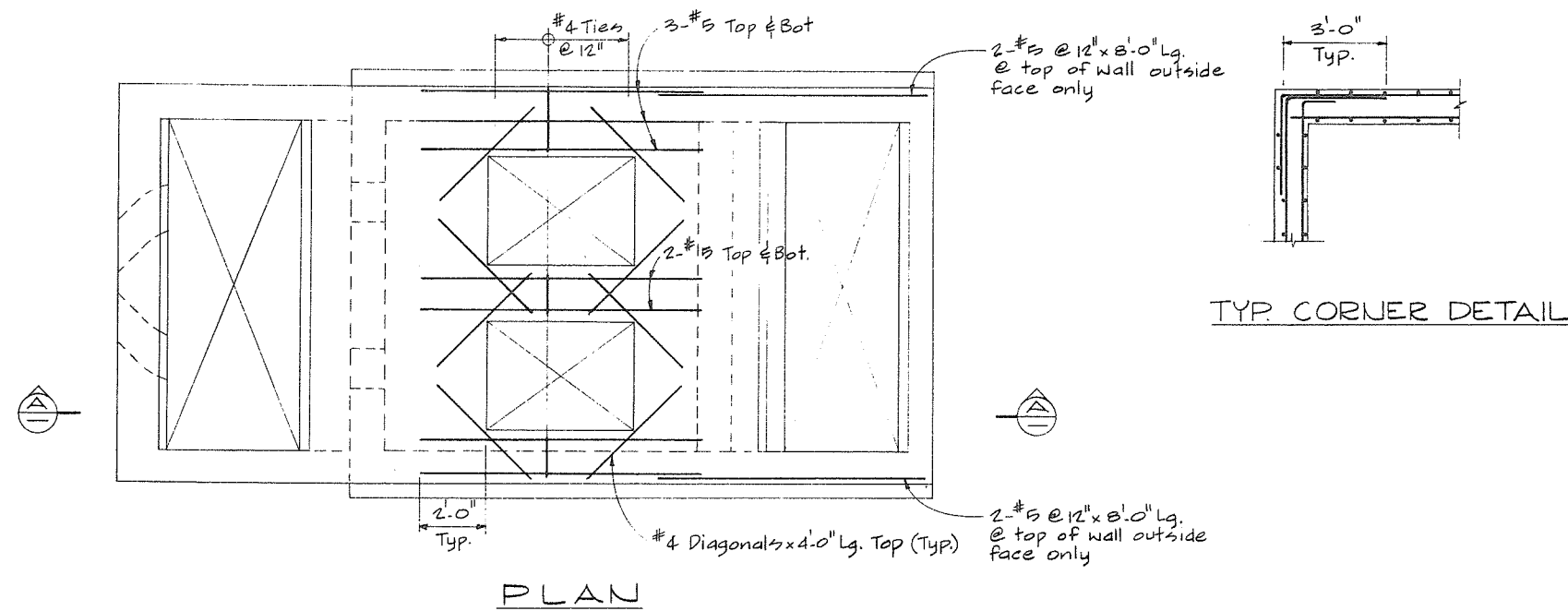
NOTES
• For Notes see 4795-4-35



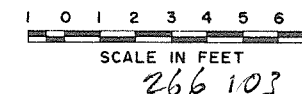
266 102
1 0 1 2 3 4 5 6 7
SCALE IN FEET

No print requ'a

 CBA ENGINEERING LTD. CONSULTING ENGINEERS - VANCOUVER - CANADA	NO. BY A REVISIONS DATE	RECOMMENDED <i>John Miller</i> CHIEF, PROJECTS DIV. DATE <i>Aug 27/74</i> APPROVED <i>John Miller</i> DIRECTOR DATE <i>Aug 27/74</i>	BRITISH COLUMBIA DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND CONTRACT NO. 4 SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE REINFORCING	DESIGNED GCW DRAWN <i>B</i> CHECKED AAW SCALE As shown DWG. NO. 4795-4-48 SURVEYED DATE FILE NO. 0291550-C10-4 DATE Aug. 17/74 SHEET 3 OF 3 SHEETS



No print required



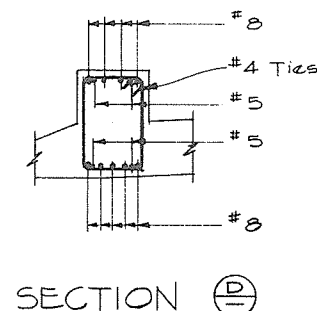
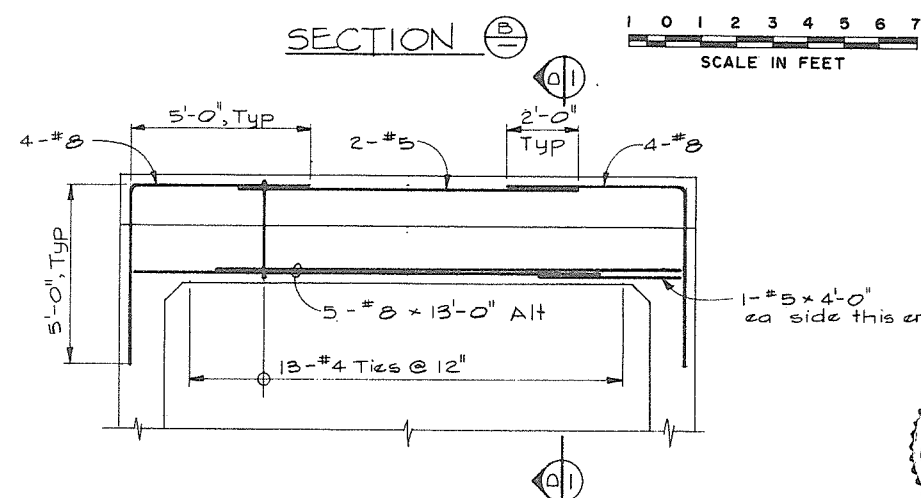
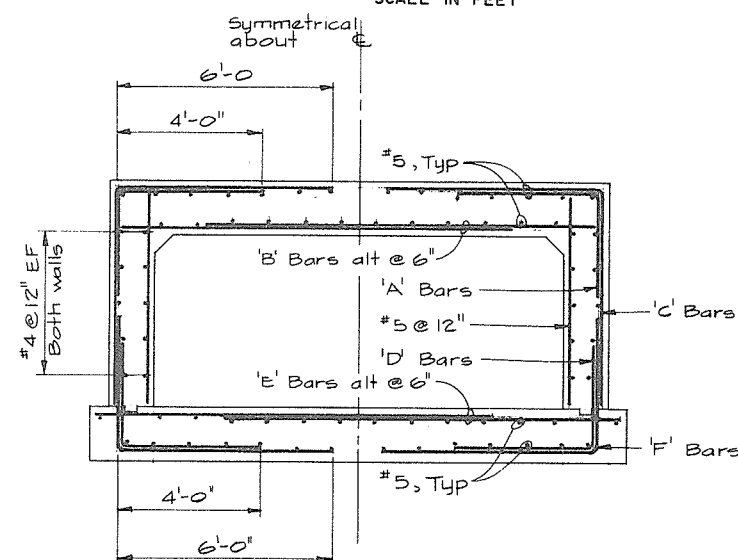
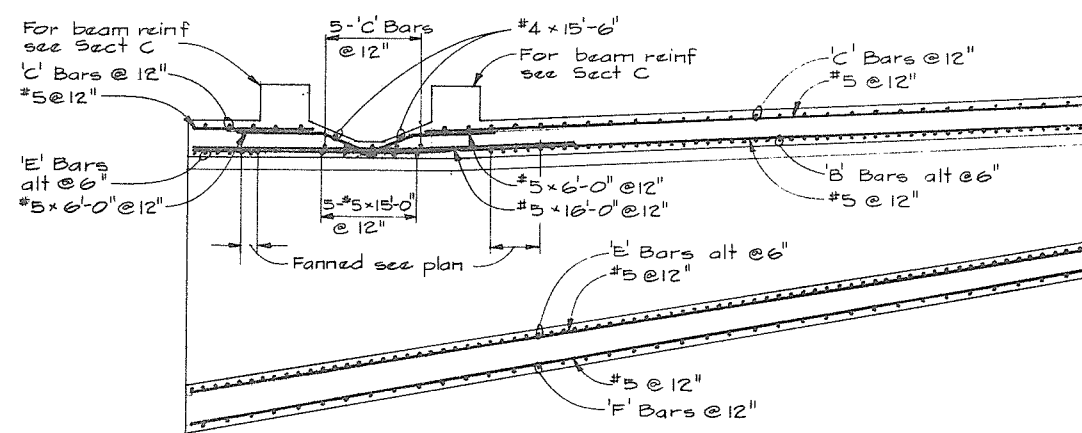
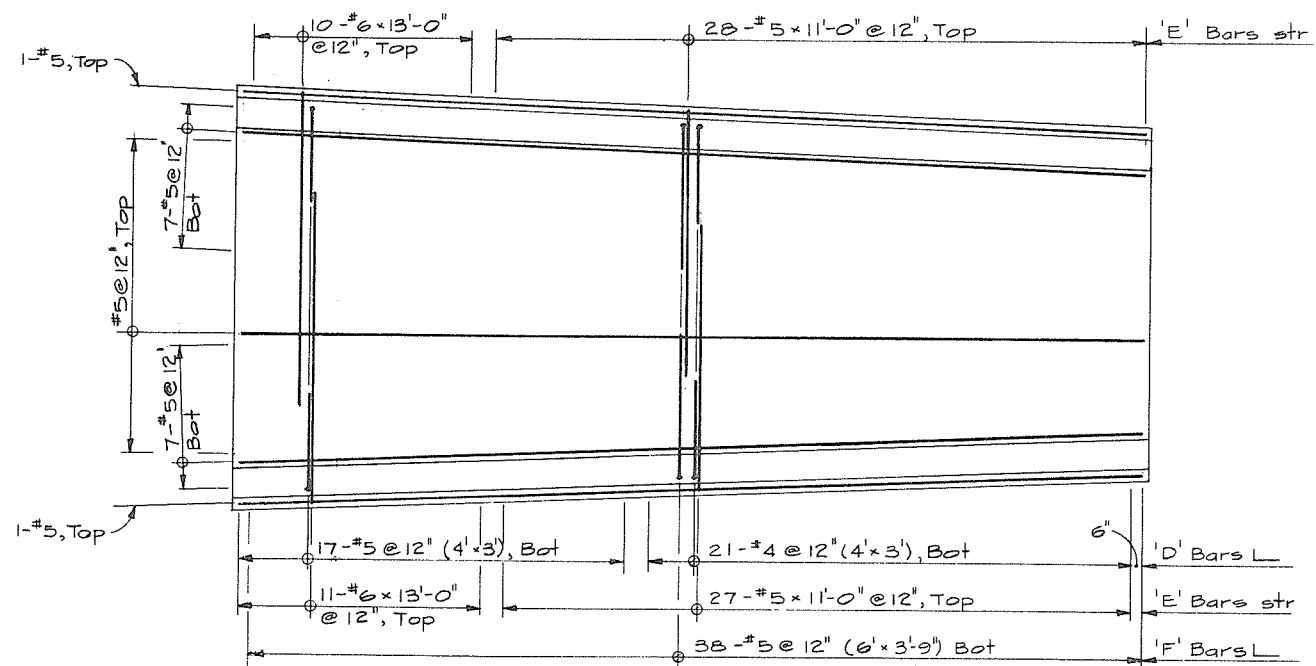
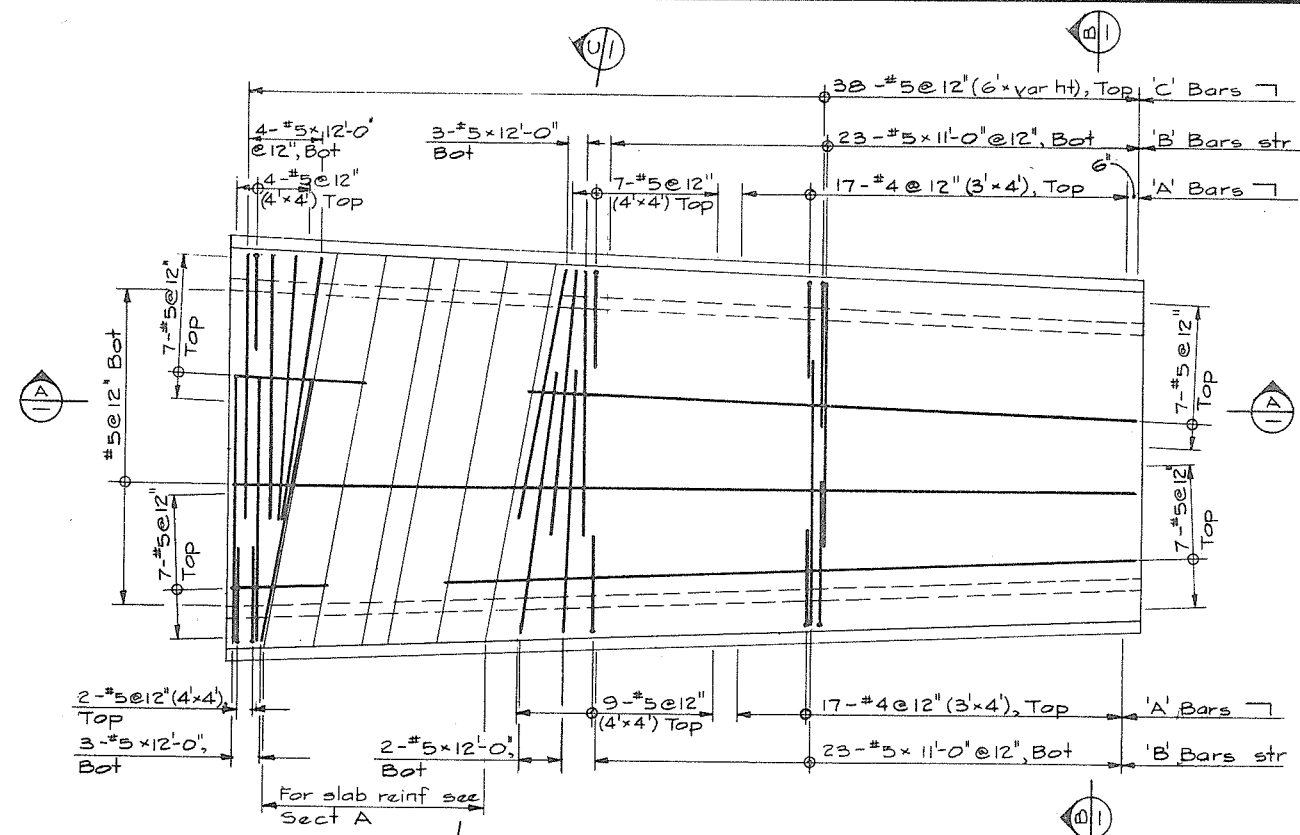
CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO. BY REVISIONS DATE

RECOMMENDED *Rob Fuller*
CHIEF, PROJECTS DIV.
DATE *Aug 27/74*
APPROVED *P. M. Smith* DIRECTOR
DATE *Aug 28/74*

BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
DUCK ISLAND DRAINAGE DISCHARGE STRUCTURE
REINFORCING

DESIGNED GCW	SURVEYED
DRAWN AR	DATE
CHECKED A.W.	FILE NO. 0281550-C10-4
SCALE As shown	DATE Aug. 1974
DWG. NO. 4795-4-49A	SHEET OF SHEETS



NOTES

For Notes see 4795-4-33



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO. BY REVISIONS DATE

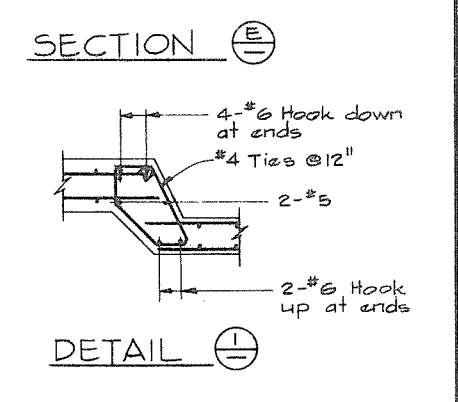
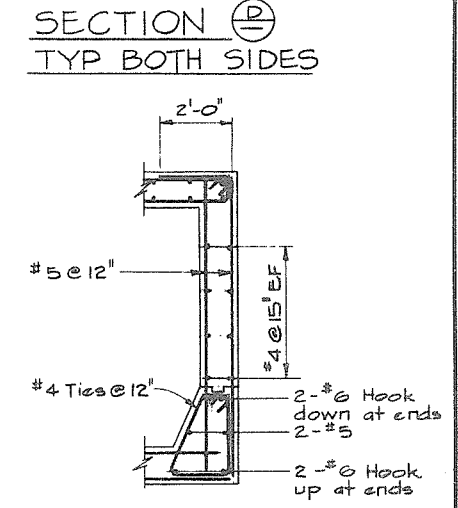
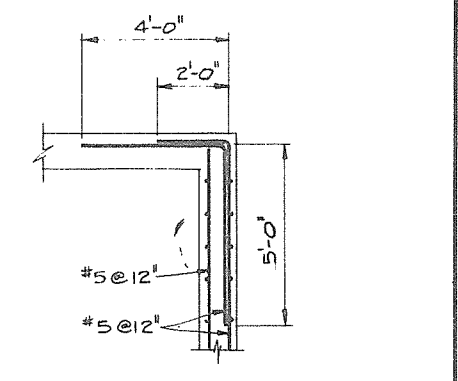
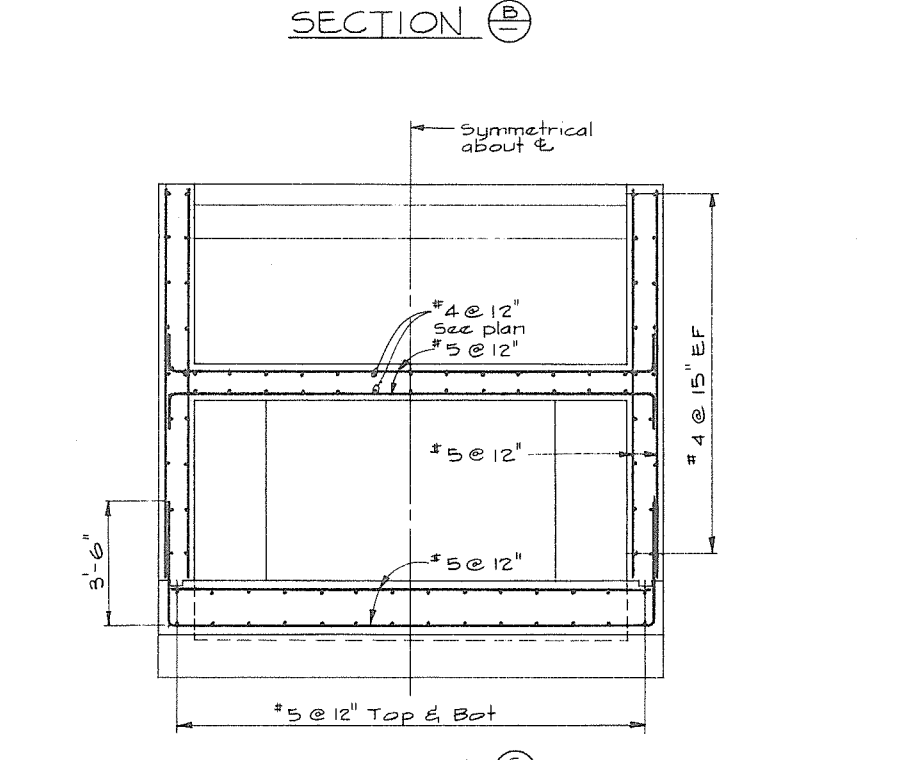
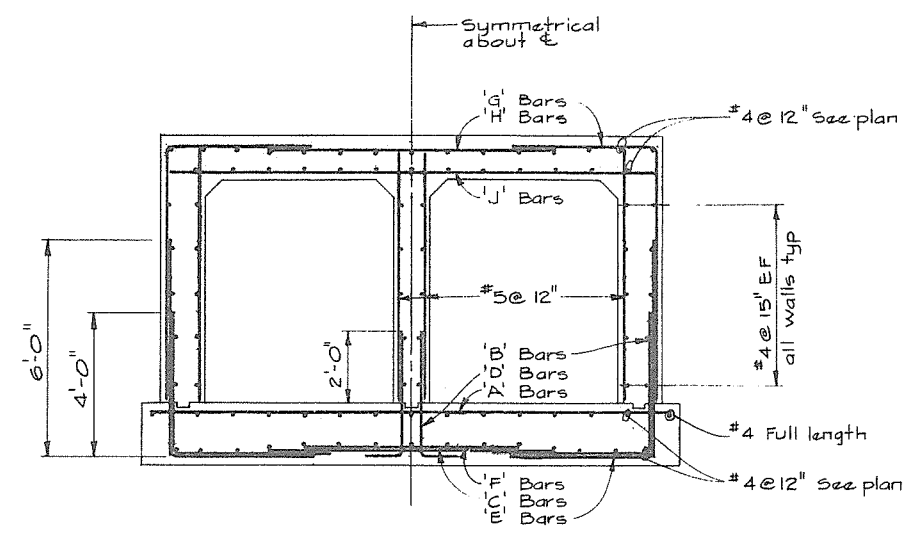
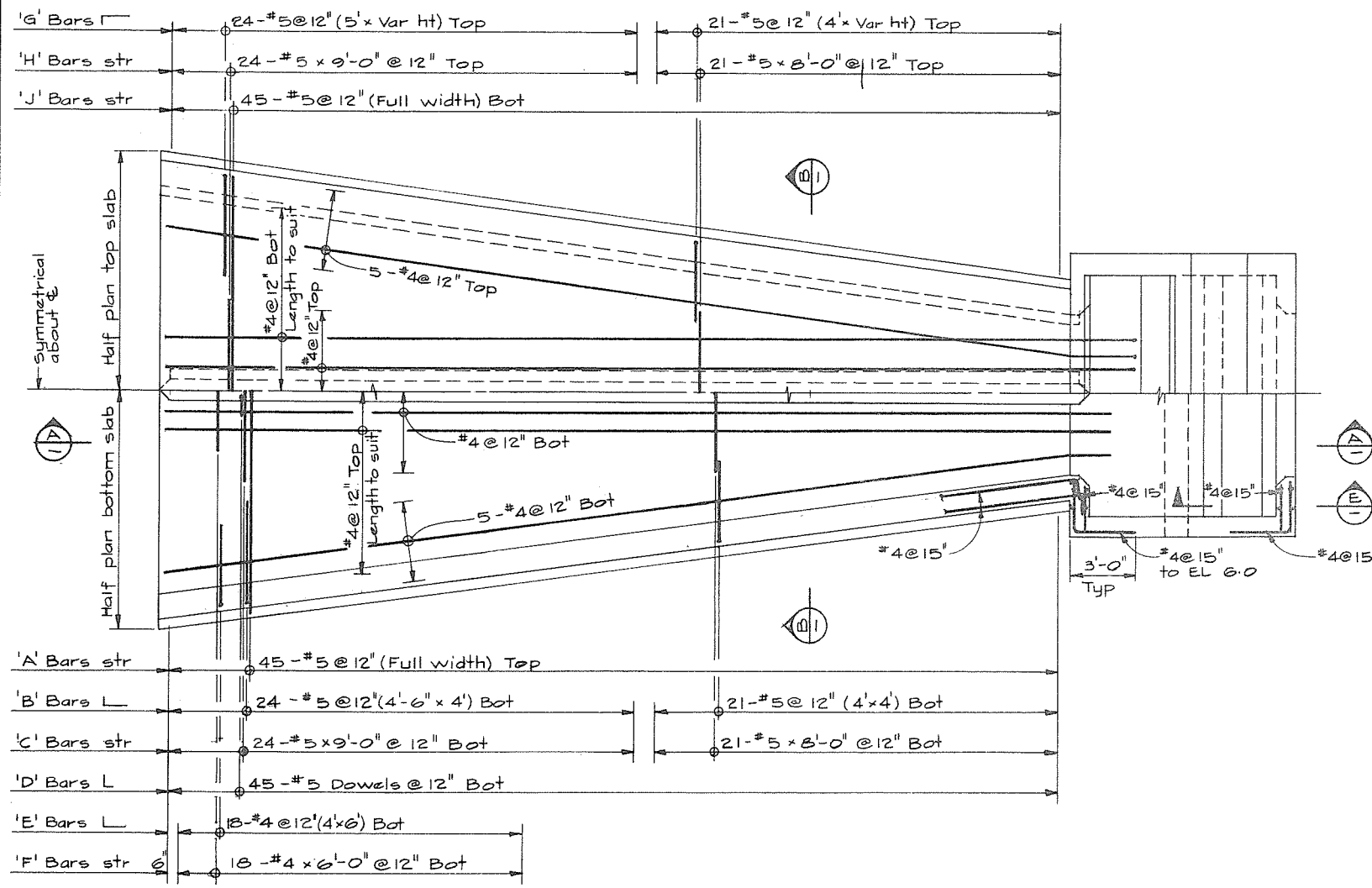
RECOMMENDED *G. J. Miller*
CHIEF, PROJECTS DIV.
DATE *Aug 27/74*
APPROVED *PMB*
DIRECTOR
DATE *Aug 28/74*

BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA — BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE
ENTRY CULVERT REINFORCING

DESIGNED *GCW*
DRAWN *DEL*
CHECKED *AAW*
SCALE *As shown*
DWG. NO. *4795-4-51*
SURVEYED
DATE
FILE NO. *0281550-CIO-4*
DATE *Aug. 1974*
SHEET OF SHEETS

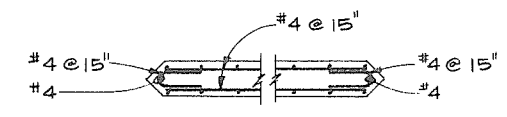
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266 104



NOTES

• For Notes see 4795-4-35

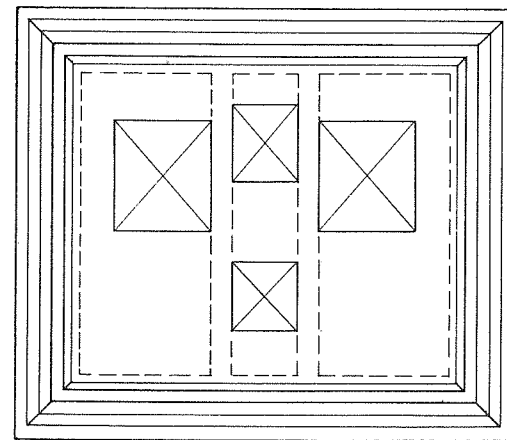


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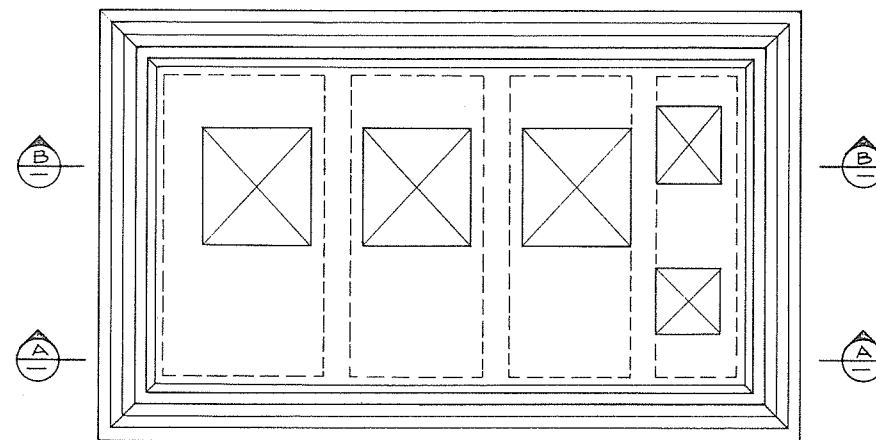
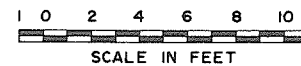


CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

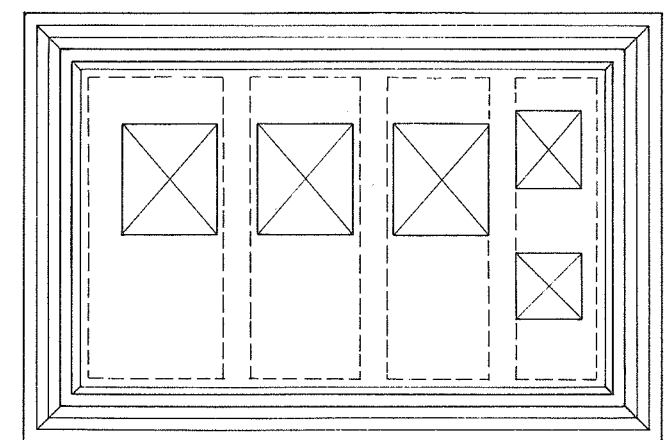
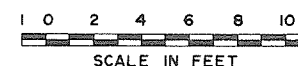
RECOMMENDED <i>John Fuller</i> CHIEF, PROJECTS DIV.	DESIGNED <i>G.C.W.</i>	SURVEYED
DATE <i>Aug 21/74</i>	DRAWN <i>DEL</i>	DATE
APPROVED <i>Ph. Brady</i> DIRECTOR	CHECKED <i>AAW</i>	FILE NO. <i>0281550-C10-4</i>
DATE <i>Aug 22/74</i>	SCALE <i>As shown</i>	DATE <i>Aug. 1974</i>
	DWG. NO. <i>4795-4-53</i>	SHEET <i>266106</i> OF <i>266106</i> SHEETS



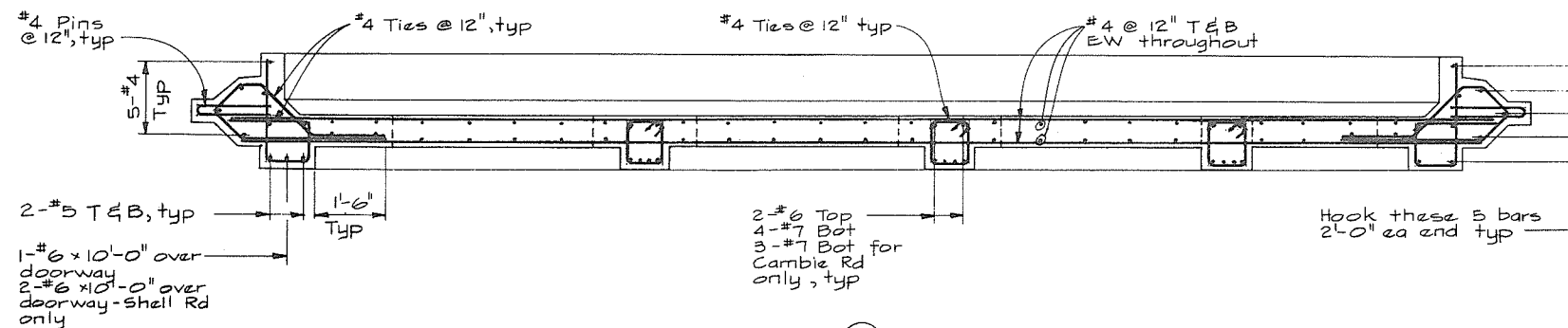
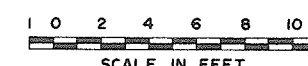
PLAN - CAMBIE RD W



PLAN - NUMBER 4 RD N

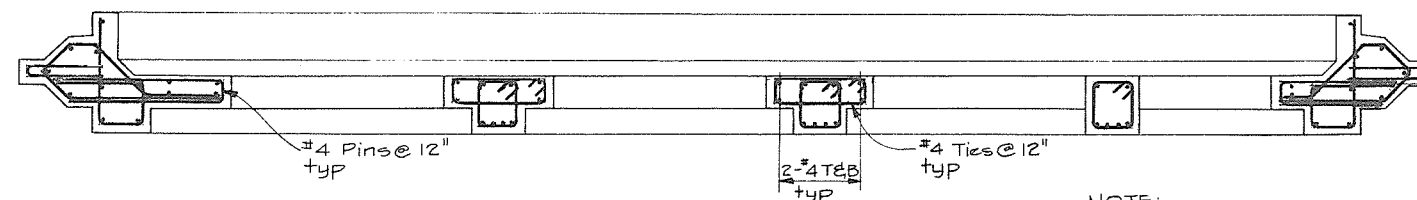


PLAN - SHELL RD N



SECTION A-A NO. 4 RD N SHOWN
CAMBIE RD W AND
SHELL RD N SIMILAR

SCALE IN FEET



SECTION B-B SIMILAR TO SECTION A
EXCEPT AS SHOWN

SCALE IN FEET

NOTE:
Cut bars as req'd
to suit openings

NOTES
• For General Notes see 4795-4-33



No print required.

266 107



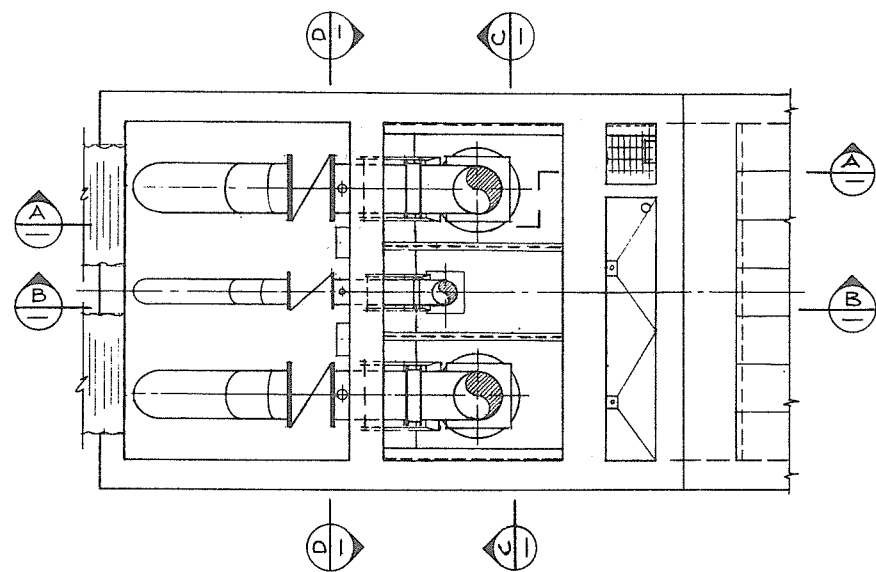
CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO.	BY	REVISIONS	DATE
A			

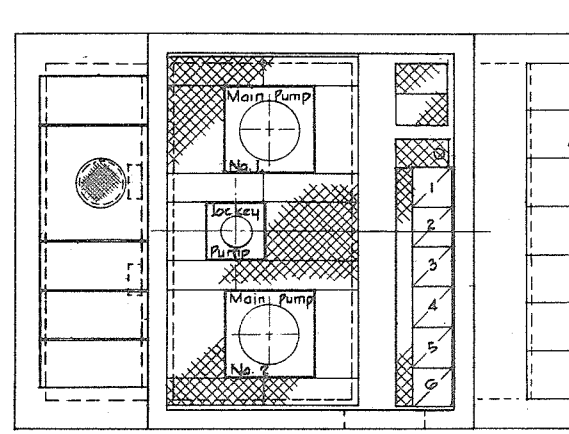
RECOMMENDED <i>[Signature]</i> CHIEF, PROJECTS DIV.	DATE <i>Aug 27/74</i>
APPROVED <i>[Signature]</i> DIRECTOR	DATE <i>Aug 27/74</i>

BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
DRAINAGE DISCHARGE STRUCTURES
ROOF REINFORCING

DESIGNED G.C.W.	SURVEYED
DRAWN <i>[Signature]</i>	DATE
CHECKED A.A.W.	FILE NO. 0281550-CIO-4
SCALE As shown	DATE Aug. 10/74
DWG. NO. 4795-4-54	SHEET OF SHEETS



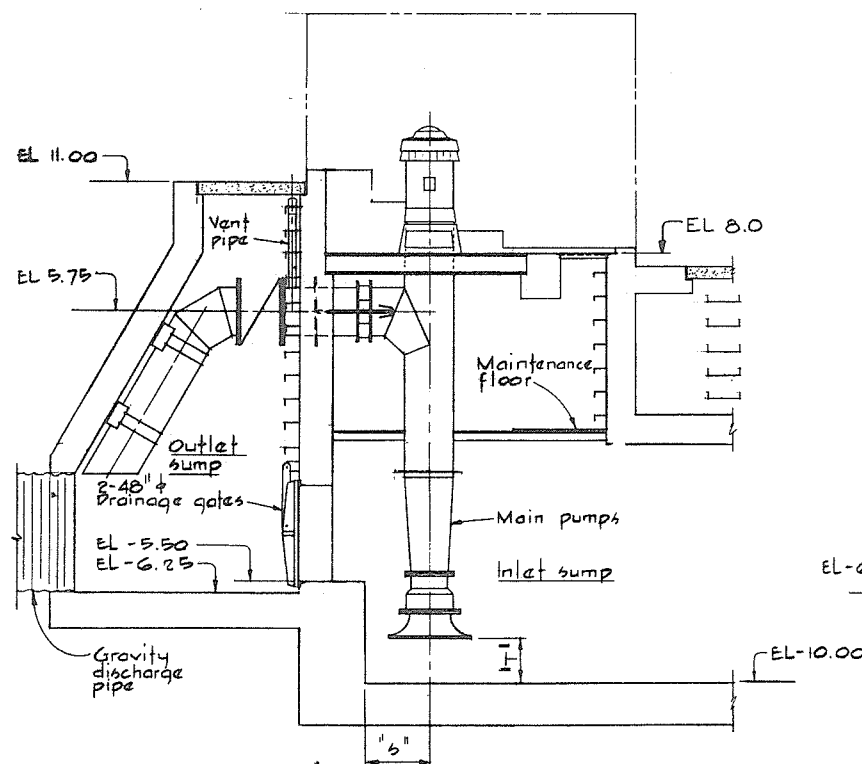
PLAN @ EL 70



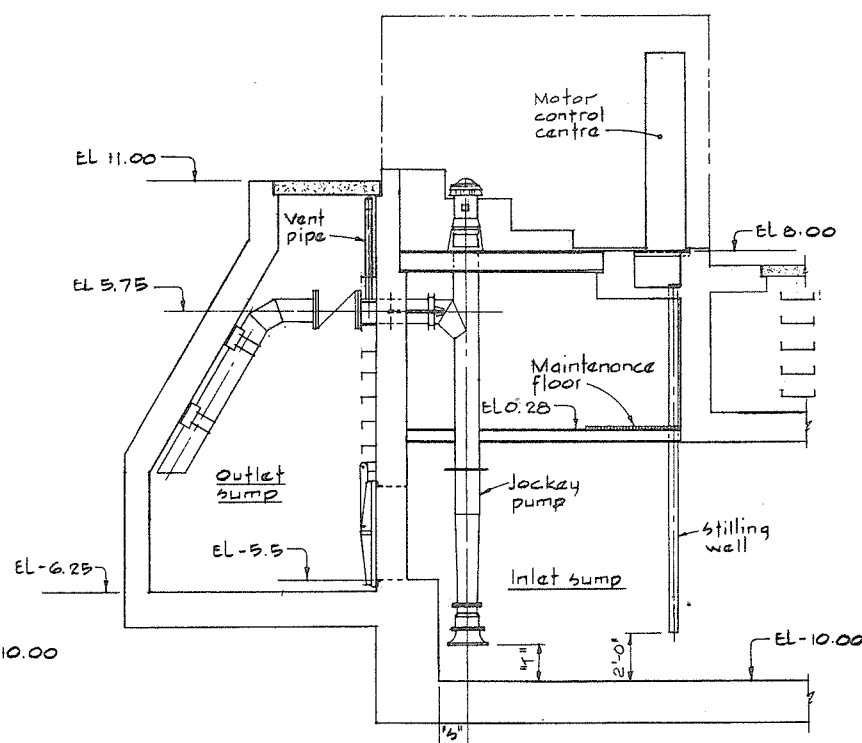
PLAN @ EL 18.0

GENERAL NOTES - MECHANICAL

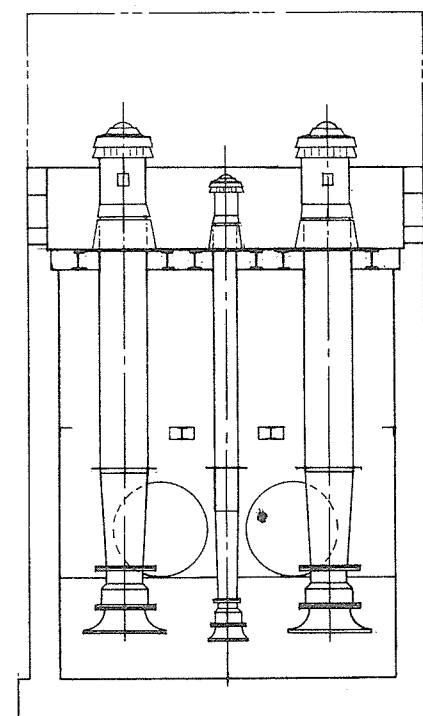
- Roof hatches are designed to allow withdrawal of pump columns and elbows with approx. 1' minimum clearance all around.
- Dimensions "S" & "T" will be supplied by others for each particular pump.
- "S" will determine location of each pump centreline.
- "T" will determine required pump column lengths.
- The drainage pump support plates sized by others will determine dimensions of support frames.
- Clearances to be verified by Contractor on receipt of drainage pump external dimensions.
- For additional notes see 4795-4-65.



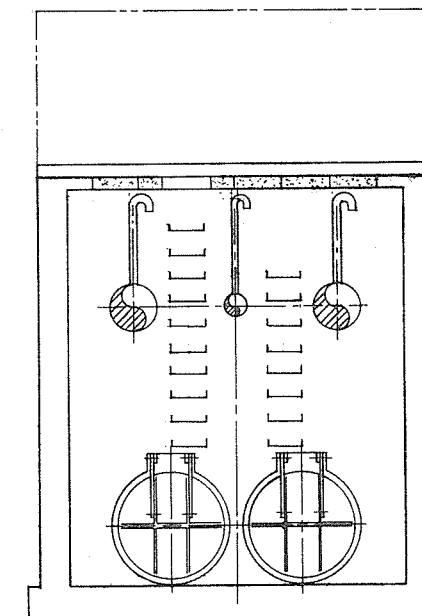
SECTION A



SECTION B



SECTION C



SECTION D

1 0 2 4 6 8 10
SCALE IN FEET



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO. BY

REVISIONS

DATE

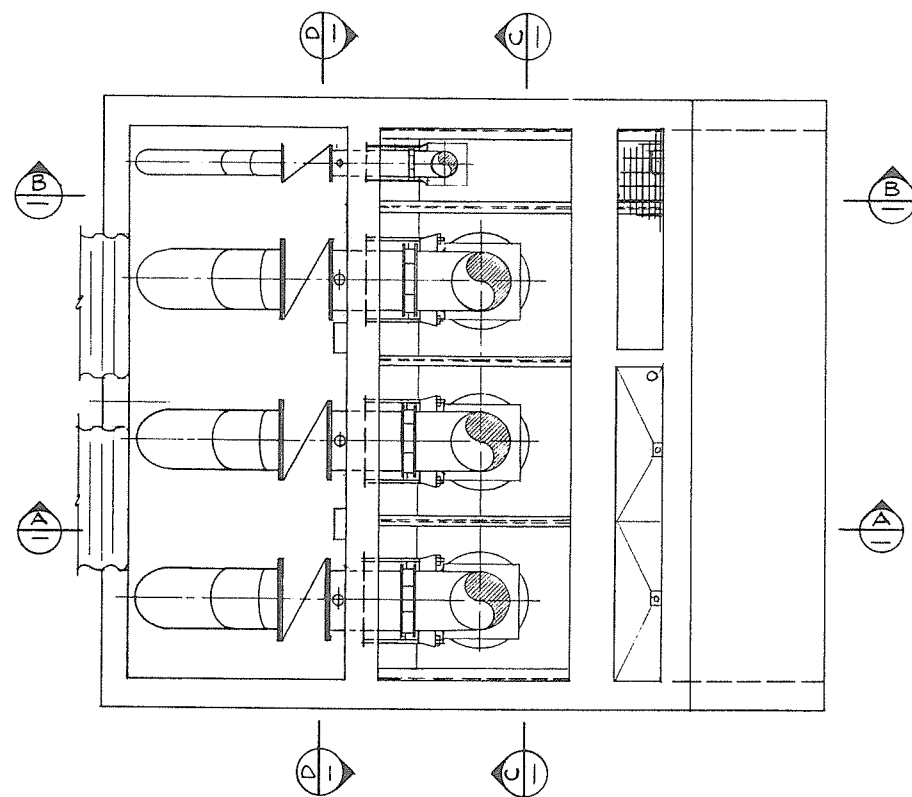
RECOMMENDED *John Fuller*
CHIEF, PROJECTS DIV.
DATE *Aug 27/74*
APPROVED *Patrick*
DIRECTOR
DATE *Aug 28/74*

BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE
ARRANGEMENT OF MECHANICAL AND ELECTRICAL EQUIPMENT

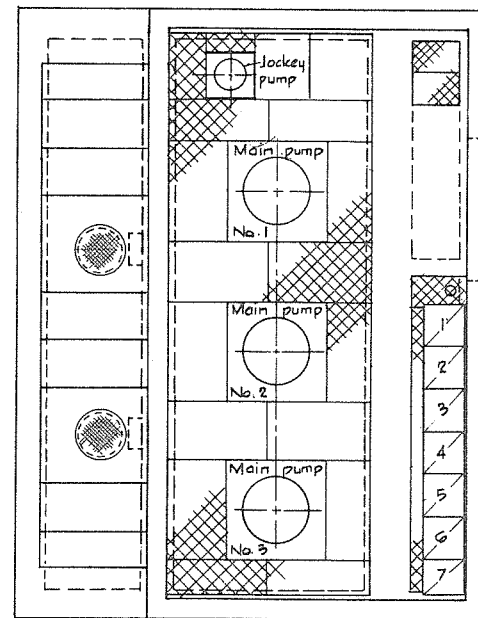
DESIGNED GA
DRAWN H.W.
CHECKED H.S.
SCALE As shown
DWG. NO. 4795-4-55
SURVEYED
DATE
FILE NO. 0281550-C10-4
DATE Aug. 1974
SHEET OF SHEETS

No print replica

266 108



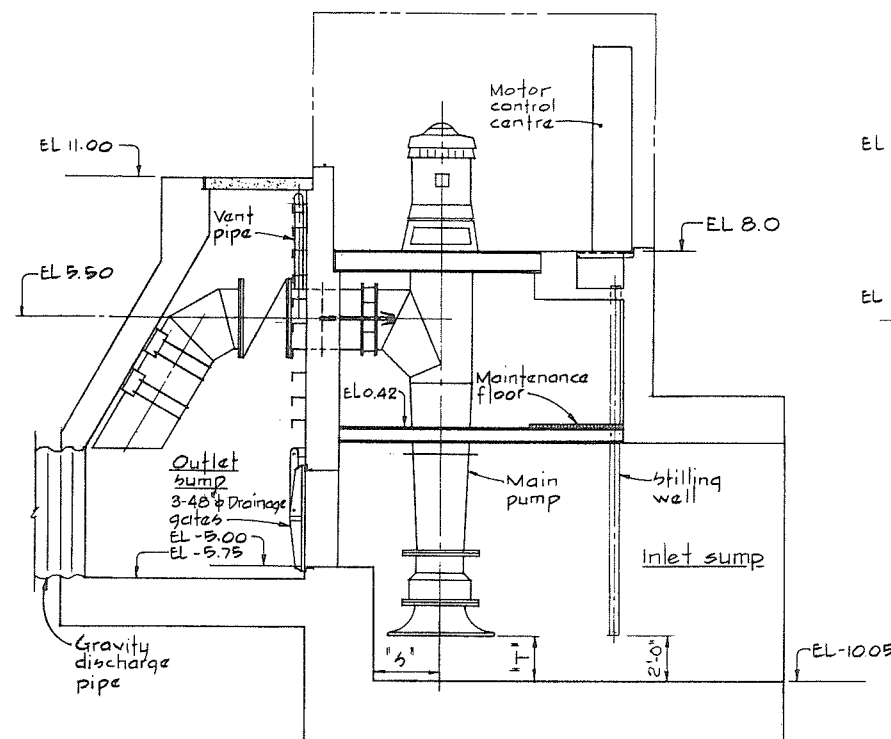
PLAN @ EL 7.0



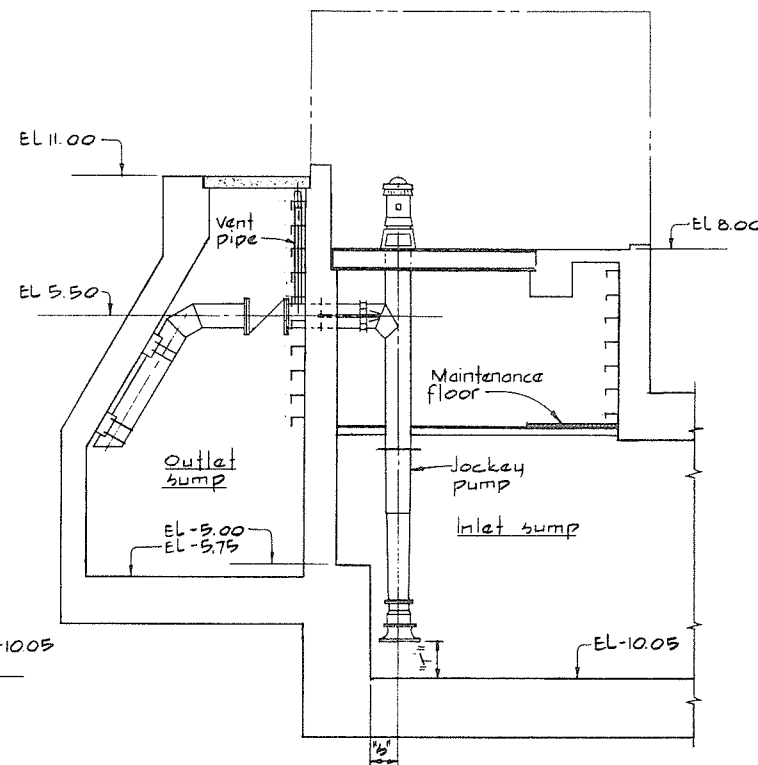
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GENERAL NOTES - MECHANICAL

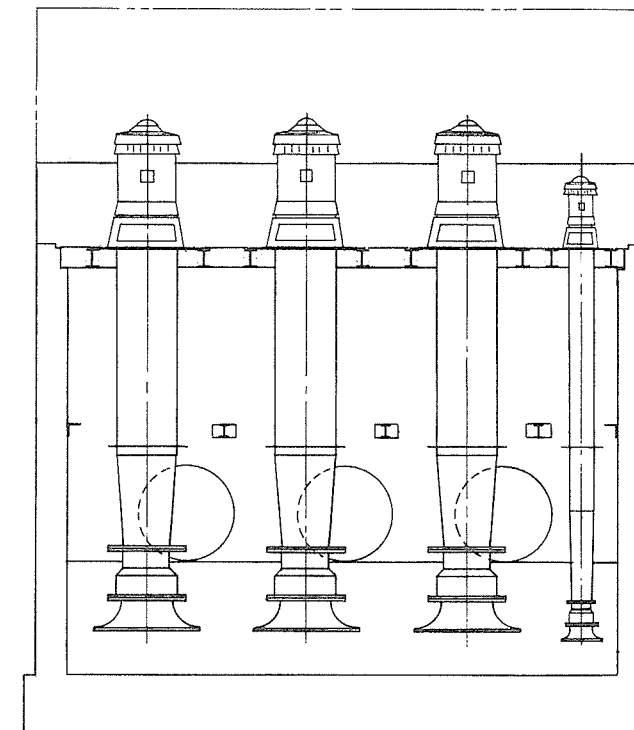
- Roof hatches are designed to allow withdrawal of pump columns and elbows with approx. 1" minimum clearance all around.
- Dimensions "S" & "T" will be supplied by others for each particular pump.
- "S" will determine location of each pump centerline.
- "T" will determine required pump column lengths.
- The drainage pump support plates sized by others will determine dimensions of support frames.
- Clearances to be verified by Contractor on receipt of drainage pump external dimensions.
- For additional notes see 4795-4-65.



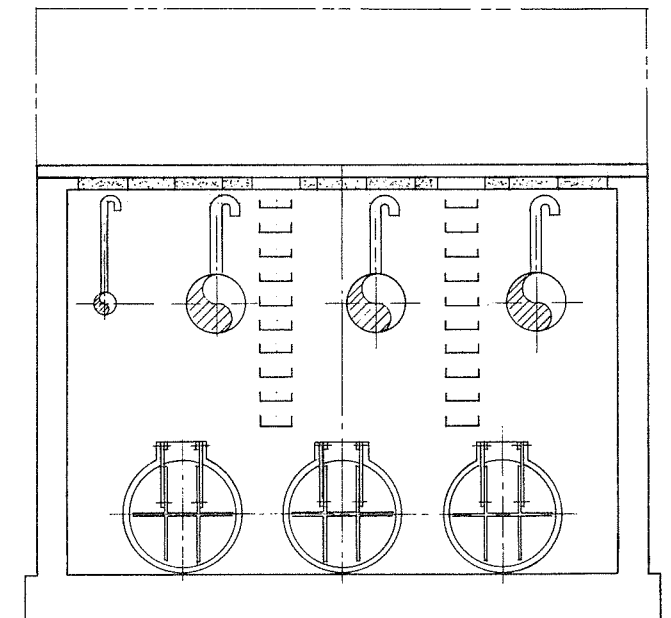
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

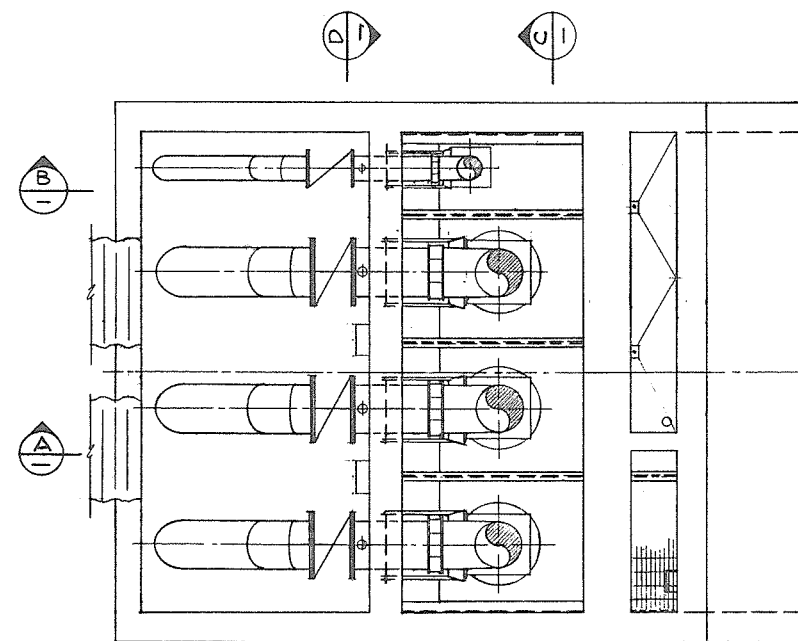


CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

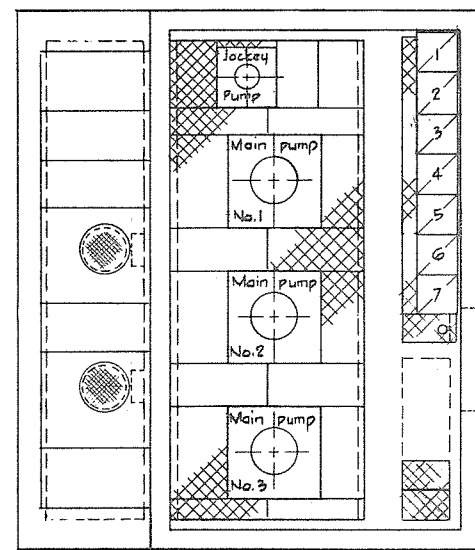
NO. BY	REVISIONS	DATE	RECOMMENDED <i>W. Fuller</i> CHIEF, PROJECTS DIV. DATE <i>Aug 27/74</i> APPROVED <i>P. Manniche</i> DIRECTOR DATE <i>Aug 28/74</i>	BRITISH COLUMBIA DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND CONTRACT NO. 4 NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ARRANGEMENT OF MECHANICAL AND ELECTRICAL EQUIPMENT	DESIGNED <i>GA</i> DRAWN <i>H.W.</i> CHECKED <i>HS</i> SCALE <i>As shown</i> DWG. NO. 4795-4-56	SURVEYED DATE FILE NO. 0281550-C10-4 DATE Aug. 1974 SHEET OF SHEETS
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No print repair 266 109

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SCALE IN FEET



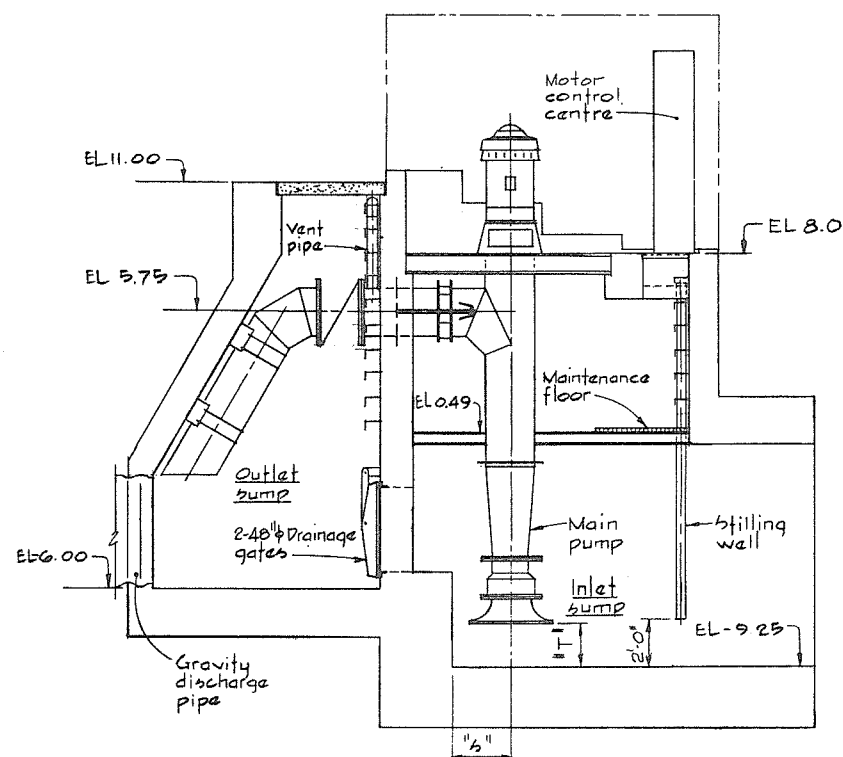
PLAN AT EL 7.0



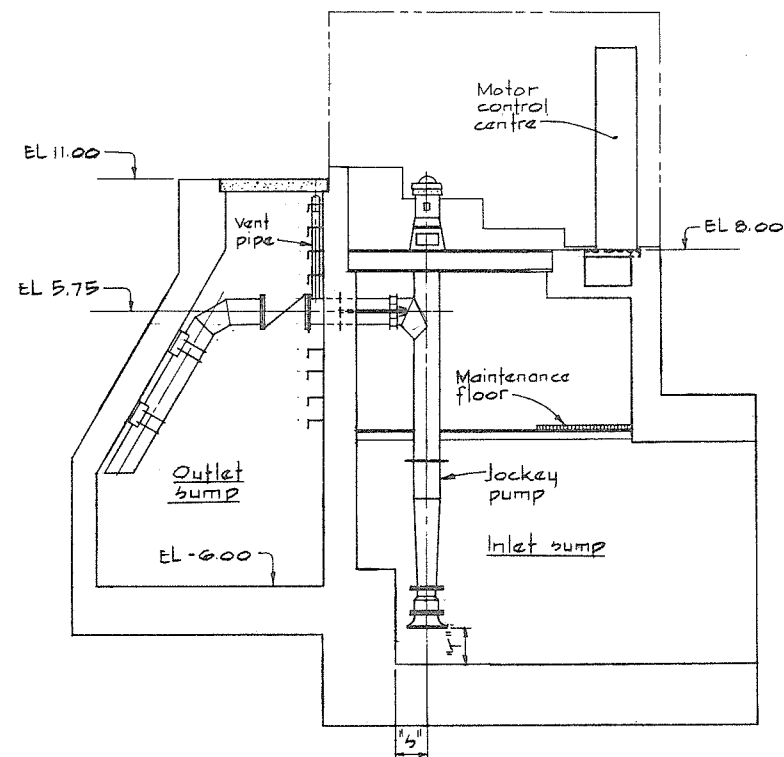
PLAN AT EL 18.0

GENERAL NOTES-MECHANICAL

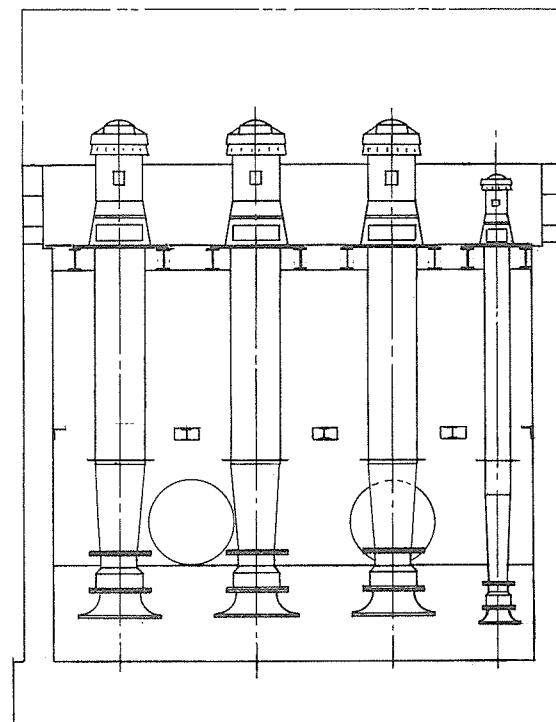
- Roof hatches are designed to allow withdrawal of pump columns and elbows with approx. 1" minimum clearance all around.
- Dimensions "b" & "t" will be supplied by others for each particular pump.
- "b" will determine location of each pump centerline.
- "t" will determine required pump column lengths.
- The drainage pump support plates sized by others will determine dimensions of support frames.
- Clearances to be verified by Contractor on receipt of drainage pump external dimensions.
- For additional notes see 4795-4-65



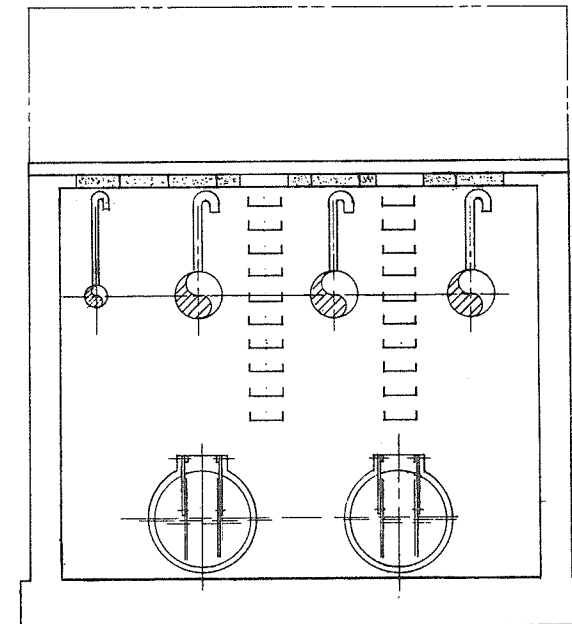
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

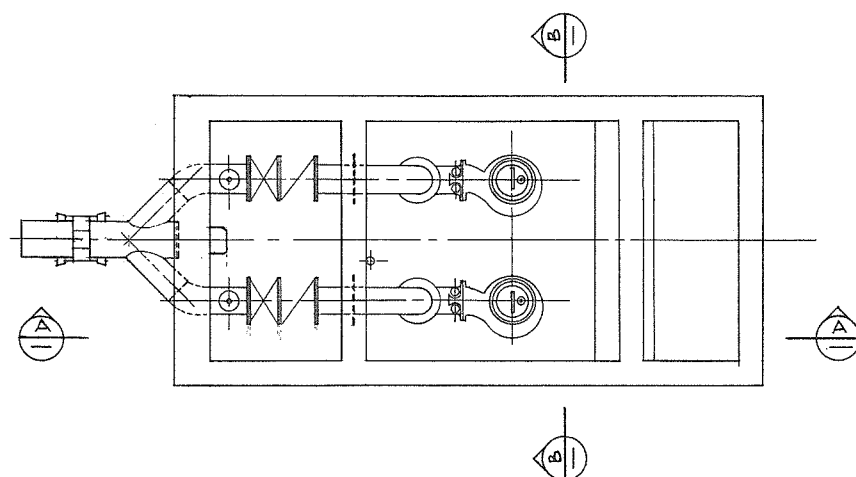
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SCALE IN FEET

No print required 266 110

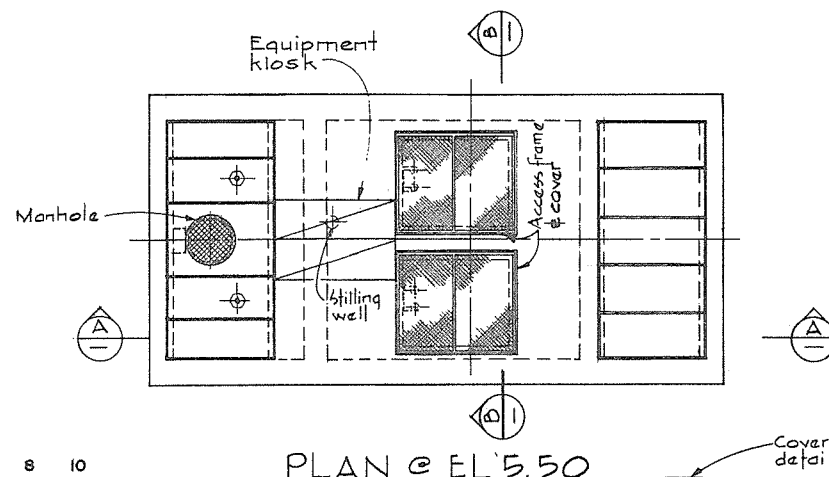


CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

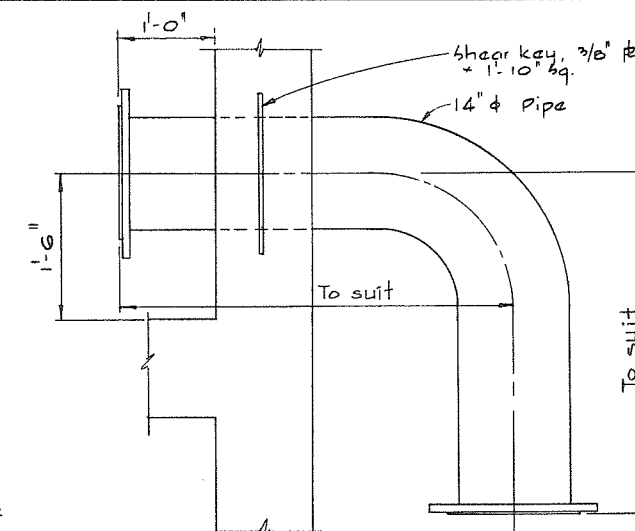
T A				RECOMMENDED <i>W. J. Fuller</i> CHIEF, PROJECTS DIV.	BRITISH COLUMBIA DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA — BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT NO. 3 — THE TOWNSHIP OF RICHMOND	DESIGNED <i>GA</i>	SURVEYED
				DATE <i>Aug 27/74</i>		DRAWN <i>H.W.</i>	DATE
				APPROVED <i>Phan</i> DIRECTOR	CONTRACT NO. 4 SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ARRANGEMENT OF MECHANICAL & ELECTRICAL EQUIPMENT	CHECKED <i>HS</i>	FILE NO. <i>0281550-C10-4</i>
				DATE <i>Aug 28/74</i>		SCALE <i>As shown</i>	DATE <i>Aug. 1974</i>
NO.	BY	REVISIONS	DATE			DWG. NO. <i>4795-4-57</i>	SHEET _____ OF _____ SHEETS



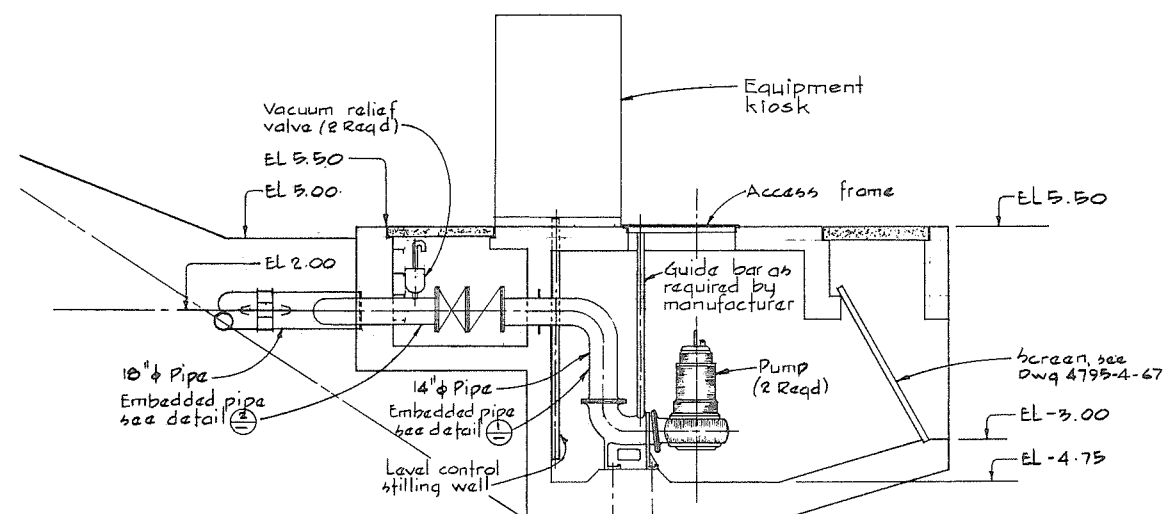
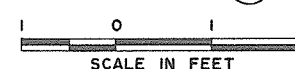
INLET & PUMP
PLAN @ EL 4.00



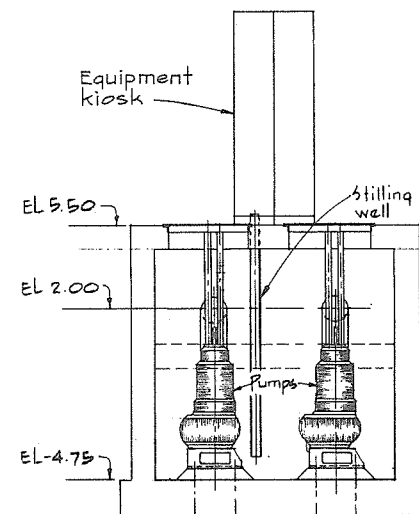
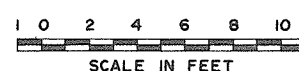
PLAN @ EL 5.50



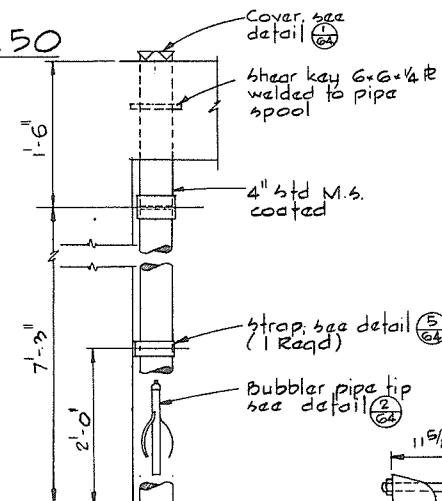
DETAIL 1



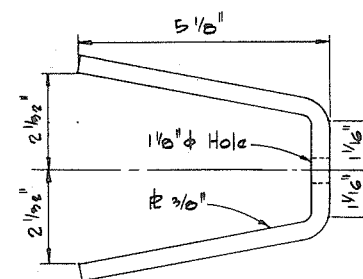
SECTION A



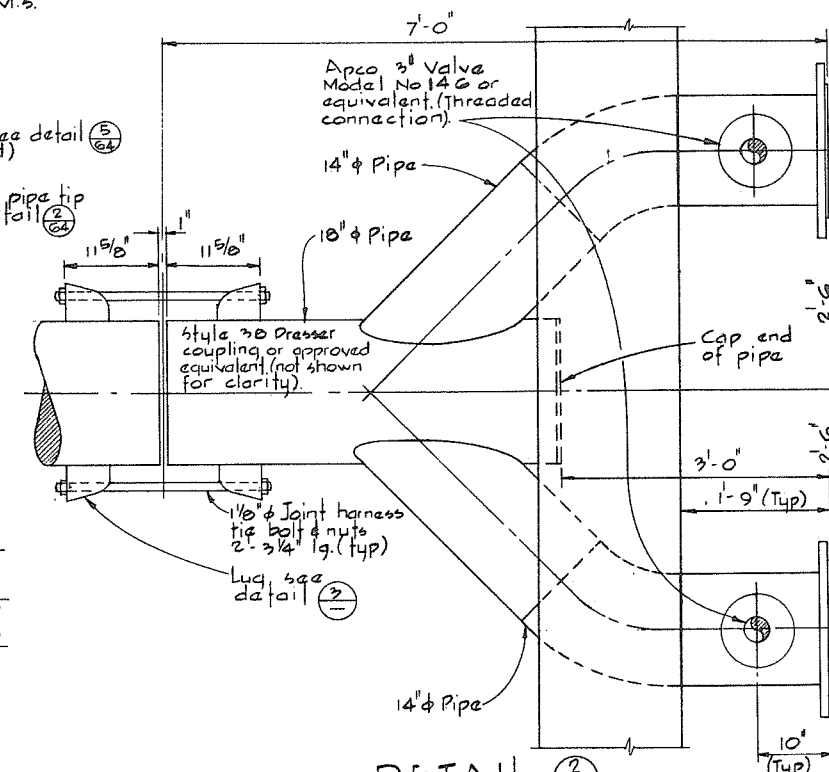
SECTION B



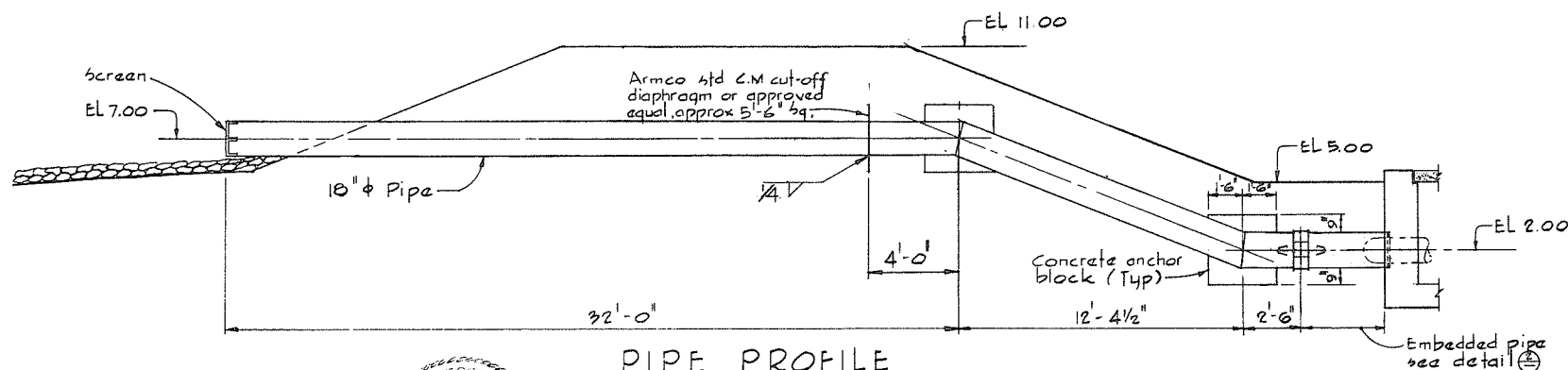
DETAIL 4
STILLING WELL
Not to scale



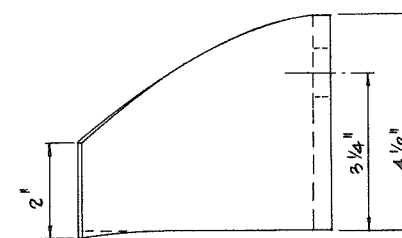
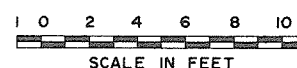
PLAN



DETAIL 2
Not to scale



PIPE PROFILE



ELEVATION
DETAIL 2

SCALE IN FEET

No print repair

NOTES

For General Notes see 4795-4-57
Discharge piping shall have a wall thickness of 1/4".



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

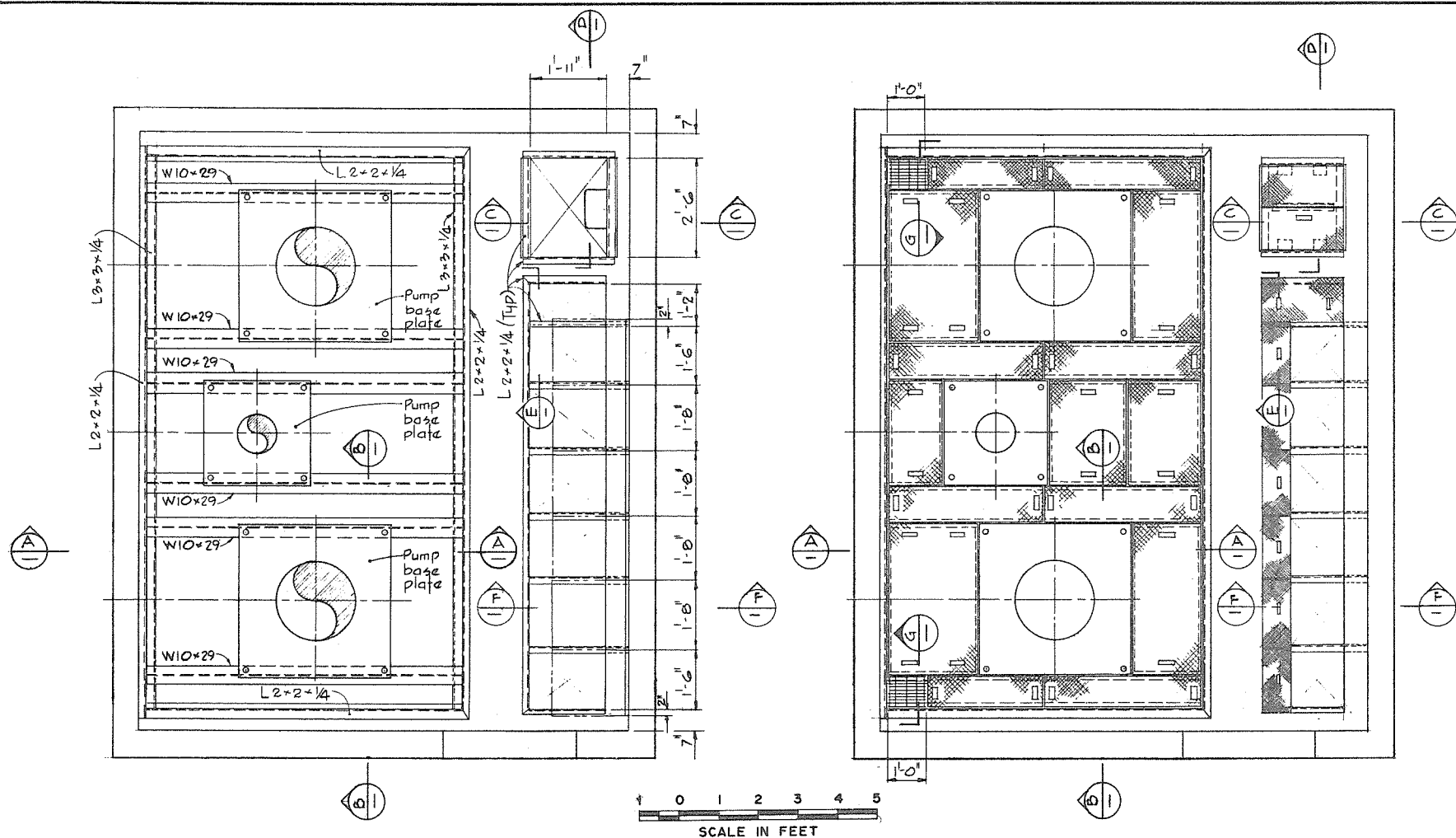
NO.	BY	REVISIONS	DATE
1	MB	REVISION	Aug 27/74

RECOMMENDED	MB
DATE	Aug 27/74
APPROVED	MB
DATE	Aug 27/74

BRITISH COLUMBIA DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND CONTRACT NO. 4 DUCK ISLAND DRAINAGE DISCHARGE STRUCTURES ARRANGEMENT OF MECHANICAL & ELECTRICAL EQUIPMENT

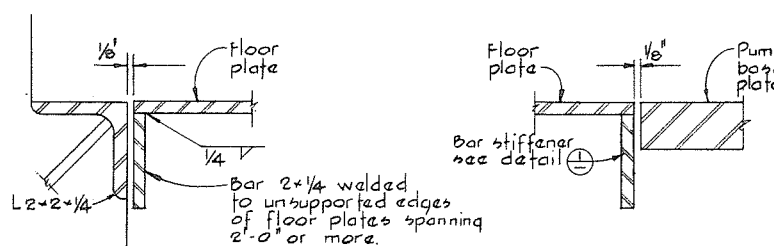
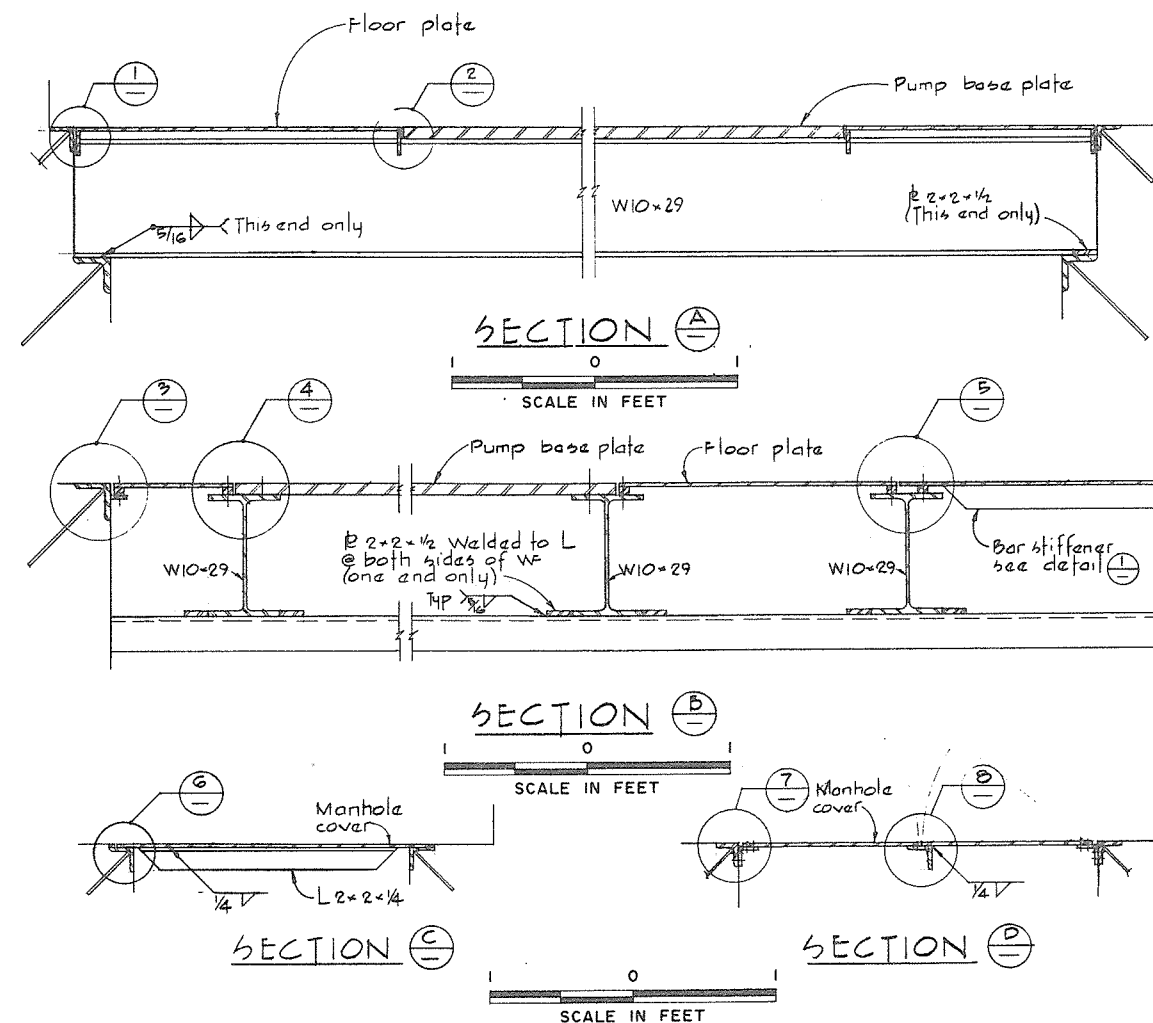
DESIGNED HS	SURVEYED
DRAWN H.W.	DATE
CHECKED CA	FILE NO. 0281550-C10-4
SCALE As shown	DATE Aug. 1974
DWG. NO. 4795-4-58	SHEET OF SHEETS

266 111

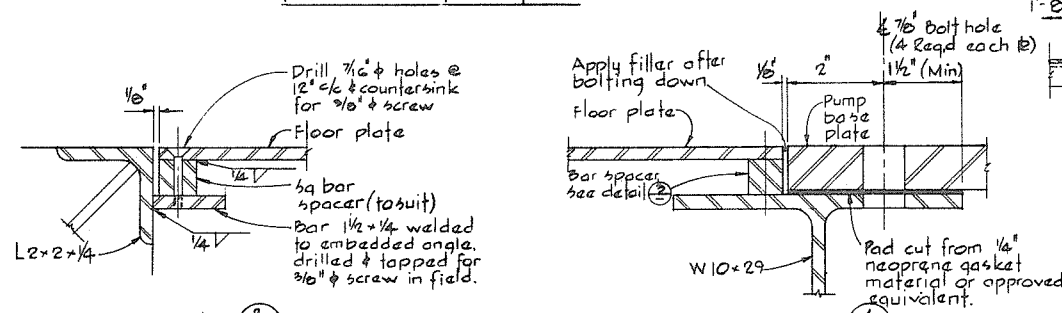


PLAN
MAIN SUPPORT FRAME

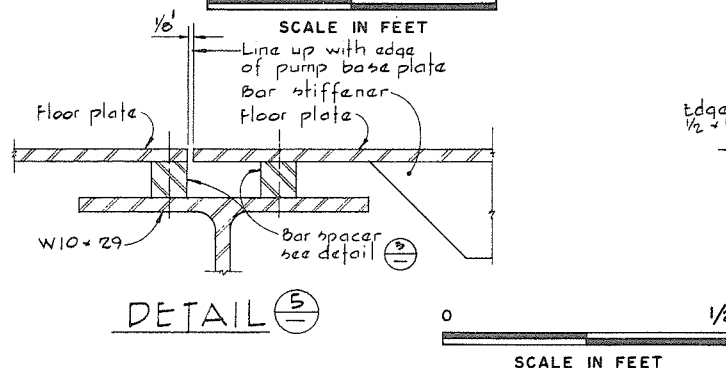
PLAN
FLOOR PLATES



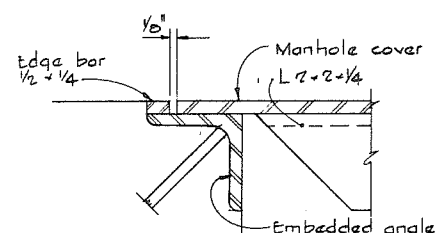
DETAIL 1
DETAIL 2



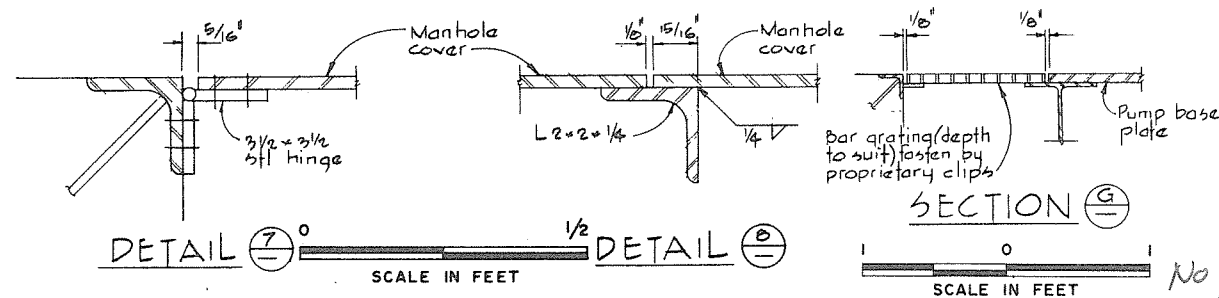
DETAIL 3
TYPICAL FLOOR
PLATE FIXING
DETAIL 4



DETAIL 5



DETAIL 6



DETAIL 7
DETAIL 8

NOTES

For General Notes see 4795-4-55
Pump motors and pump base plates
will be supplied by others, the Contractor
shall locate the pump support structure
and floor plates to suit.

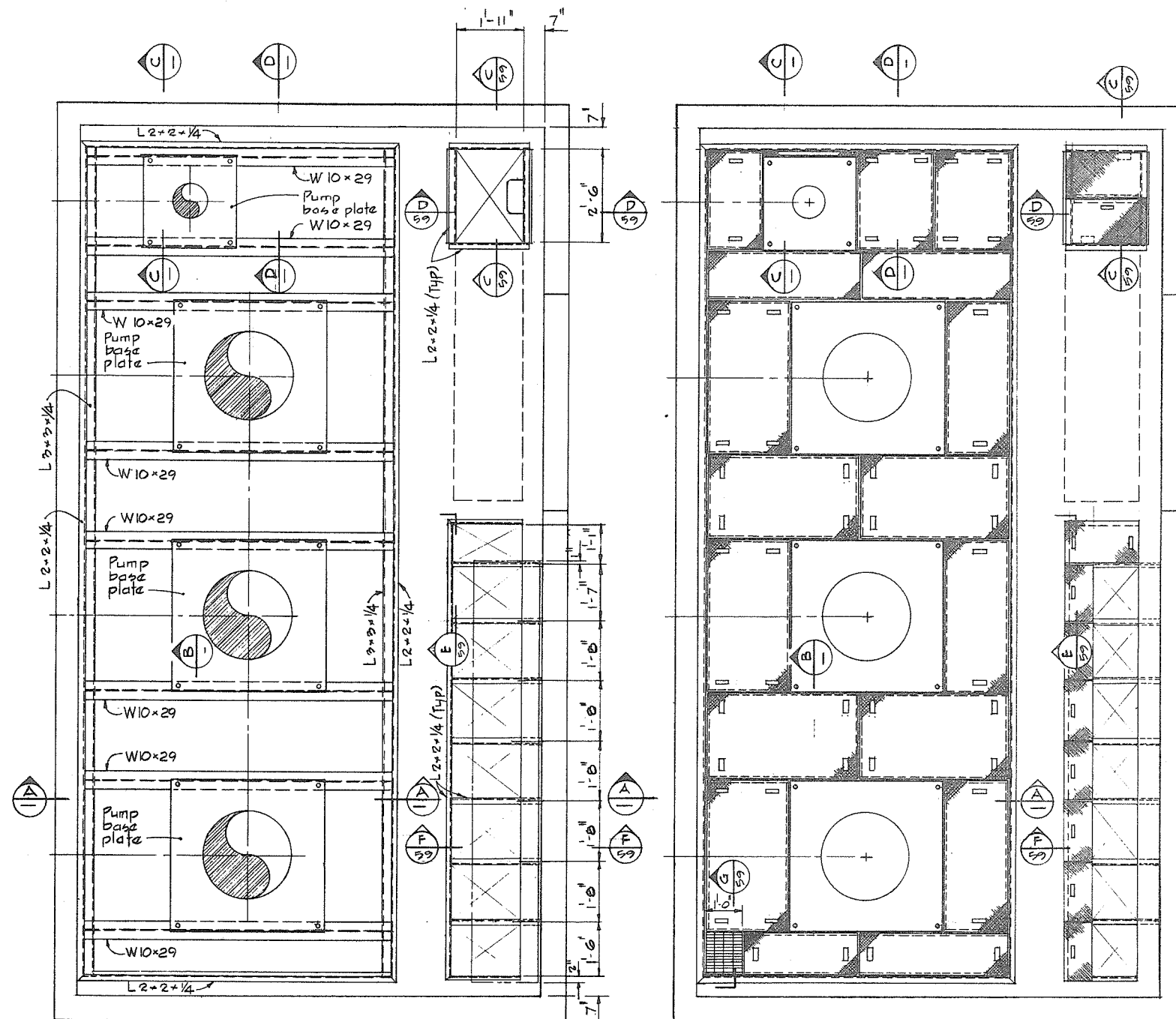


CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

DESIGNED C.A.	SURVEYED
DRAWN H.W.	DATE
CHECKED L.S.	FILE NO. 0281550-C10-4
SCALE As shown	DATE Aug 1974
DWG. NO. 4795-4-59	SHEET OF SHEETS

No print repair

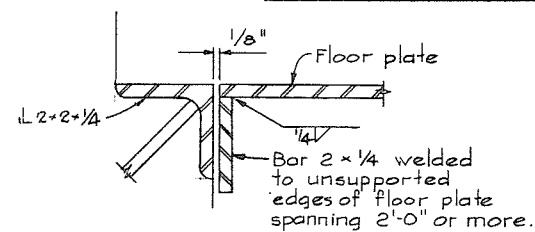
266 112



PLAN
MAIN SUPPORT FRAME

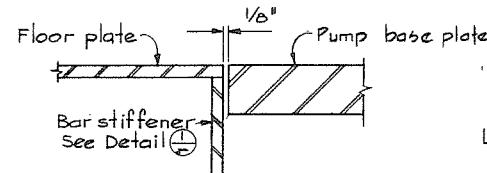
SCALE IN FEET

PLAN
FLOOR PLATES



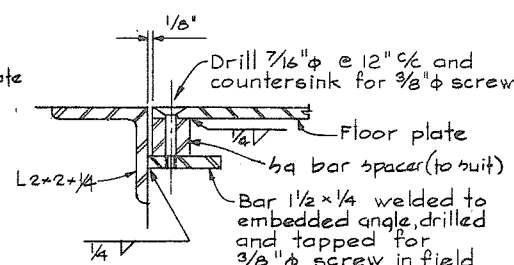
DETAIL 1

SCALE IN FEET



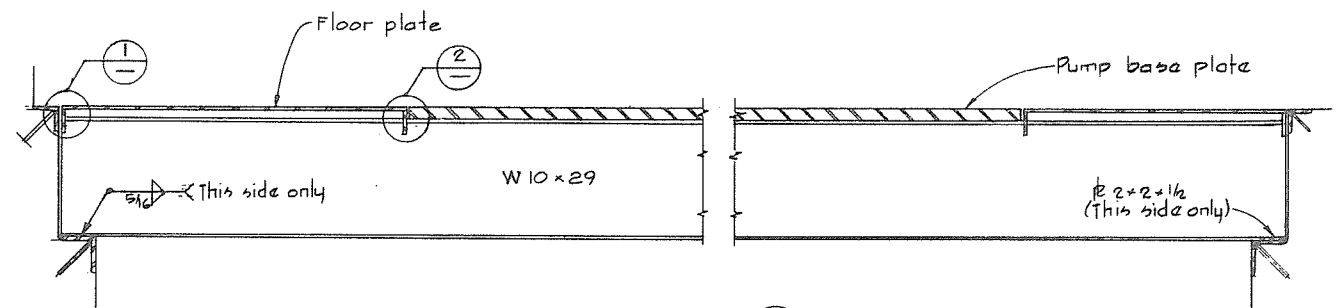
DETAIL 2

SCALE IN FEET



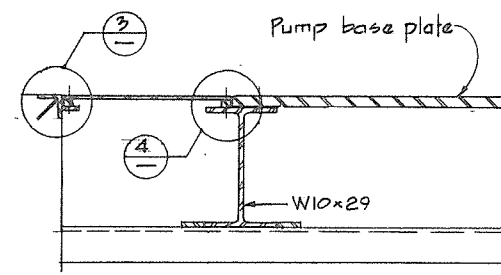
DETAIL 3
TYPICAL FLOOR PLATE FIXING

SCALE IN FEET



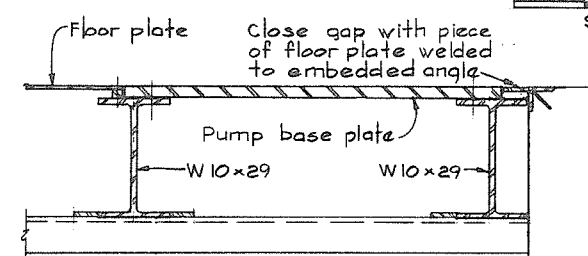
SECTION A

SCALE IN FEET



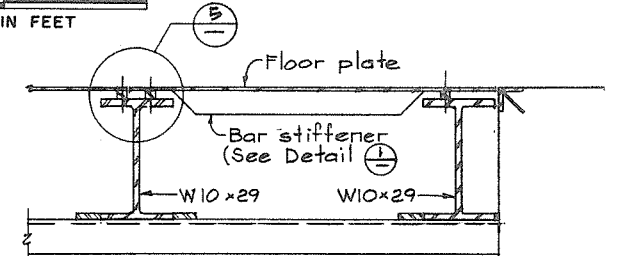
SECTION B

SCALE IN FEET

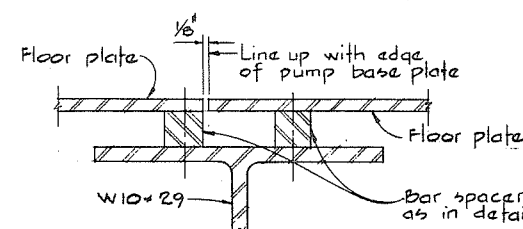


SECTION C

SCALE IN FEET

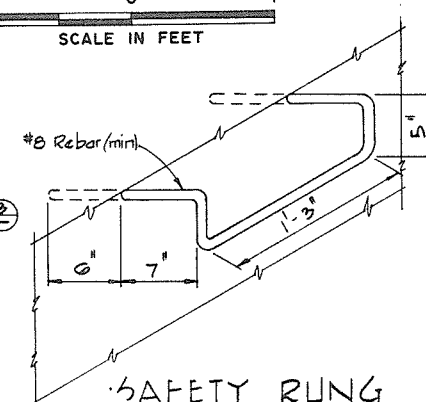


SECTION D

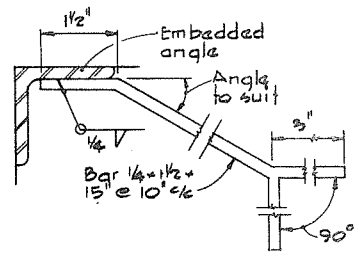


DETAIL 4

SCALE IN FEET



SAFETY RUNG
(TYPICAL)



EMBEDDED ANGLE
(TYPICAL)

NOTES

For General Notes see 4795-4-56
For additional notes see 4795-4-57 & 60

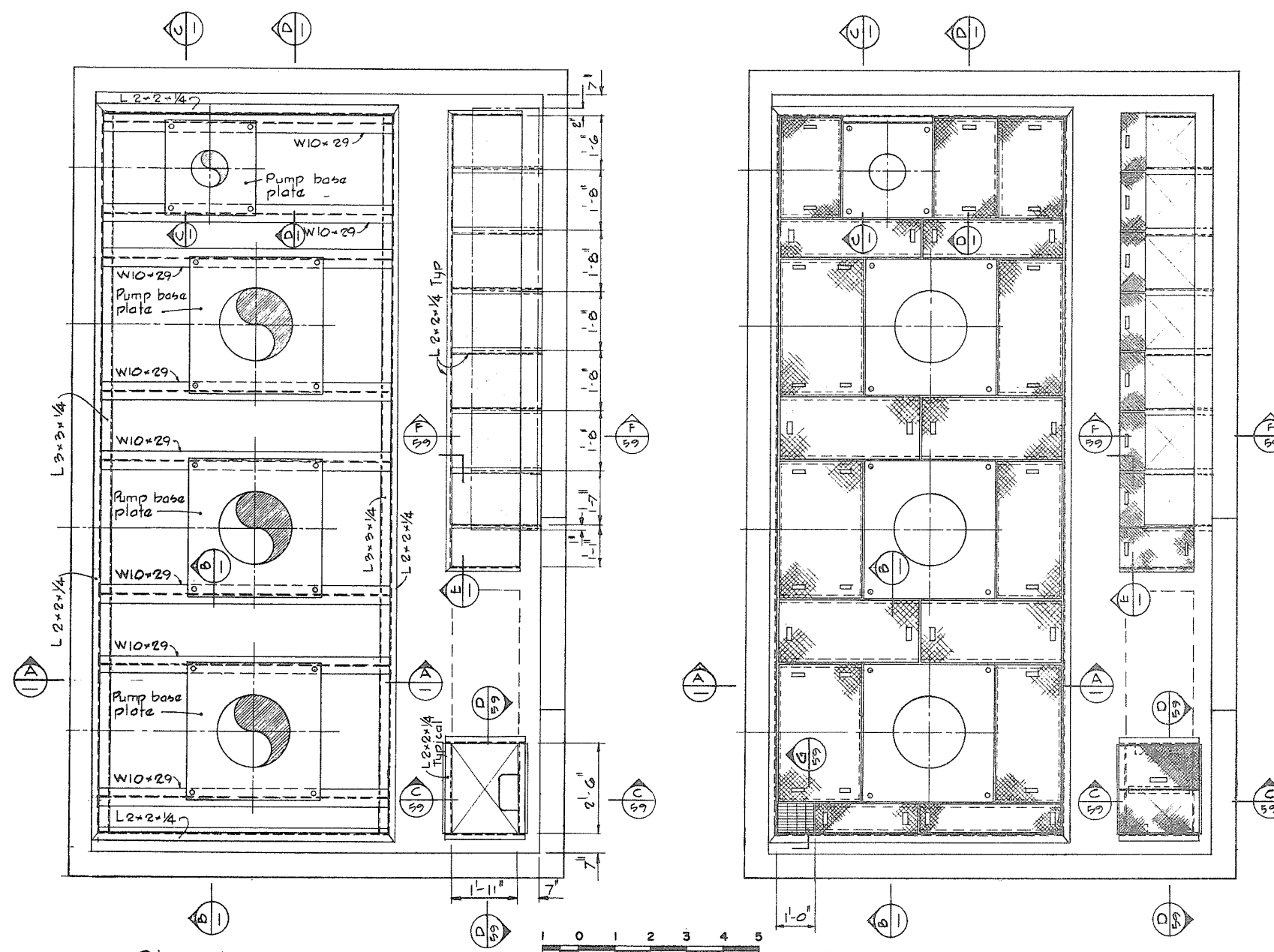


CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

RECOMMENDED <i>W. J. Sullivan</i> CHIEF, PROJECTS DIV.	DESIGNED <i>C. A.</i>	SURVEYED
DATE <i>Aug 27/74</i>	DRAWN <i>H. S.</i>	DATE
APPROVED <i>P. Smith</i> DIRECTOR	CHECKED <i>H. S.</i>	FILE NO. 0281550-C10-4
DATE <i>Aug 27/74</i>	SCALE <i>As shown</i>	DATE <i>Aug 1974</i>
	DWG. NO. 4795-4-60	SHEET OF SHEETS

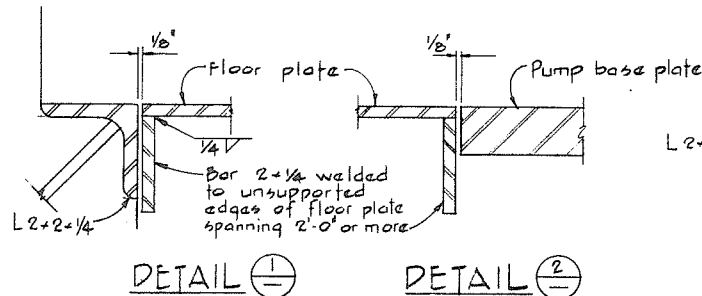
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266113



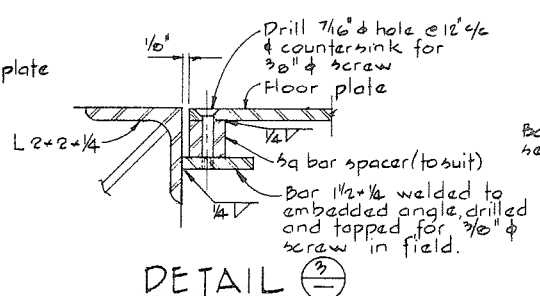
PLAN
MAIN SUPPORT FRAME

PLAN
FLOOR PLATES



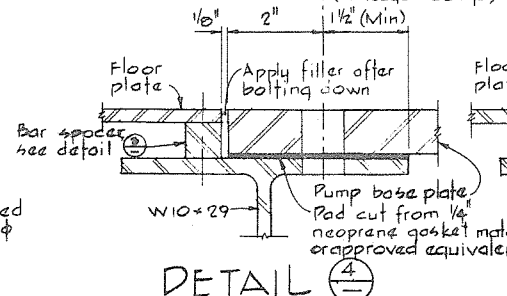
DETAIL 1

SCALE IN FEET



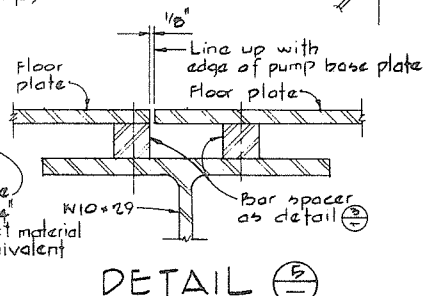
DETAIL 2

TYPICAL FLOOR PLATE FIXING
SCALE IN FEET



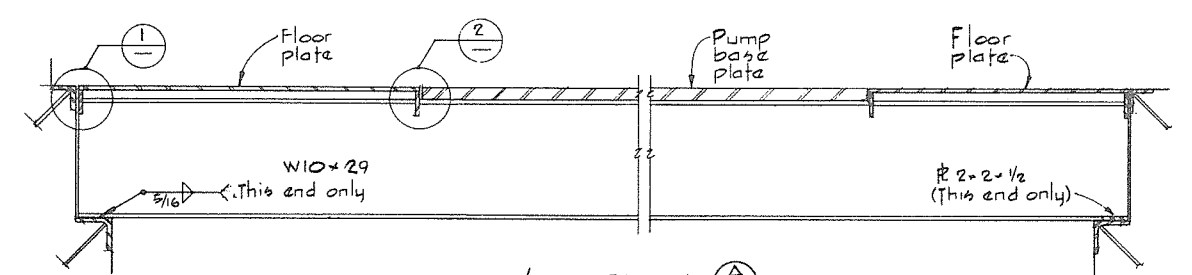
DETAIL 3

SCALE IN FEET



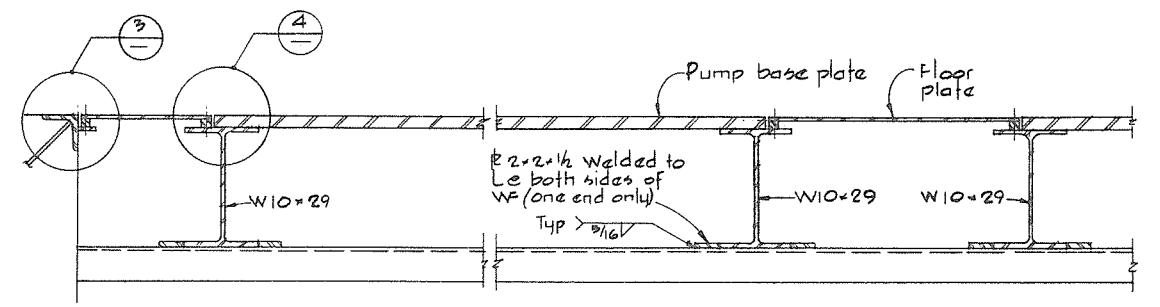
DETAIL 4

SCALE IN FEET



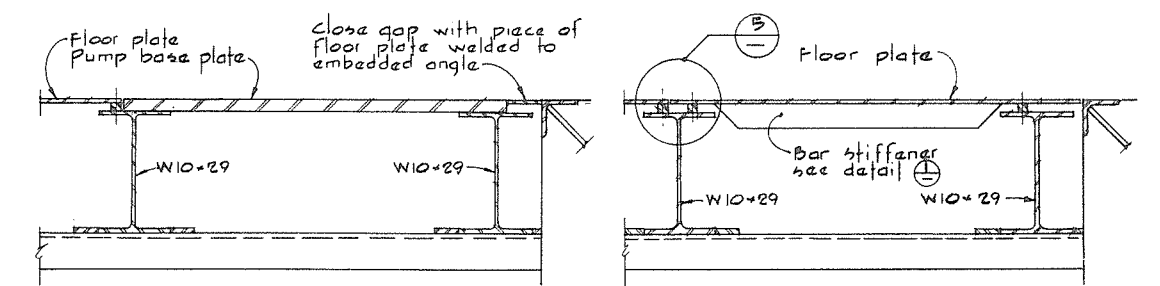
SECTION A

SCALE IN FEET



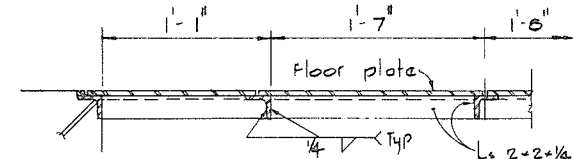
SECTION B

SCALE IN FEET



SECTION C

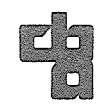
SCALE IN FEET



SECTION D

SCALE IN FEET

NOTES
For General Notes see 4795-4-57
For additional notes see 4795-4-59 & 63



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO.	BY	REVISIONS	DATE
1	BA		

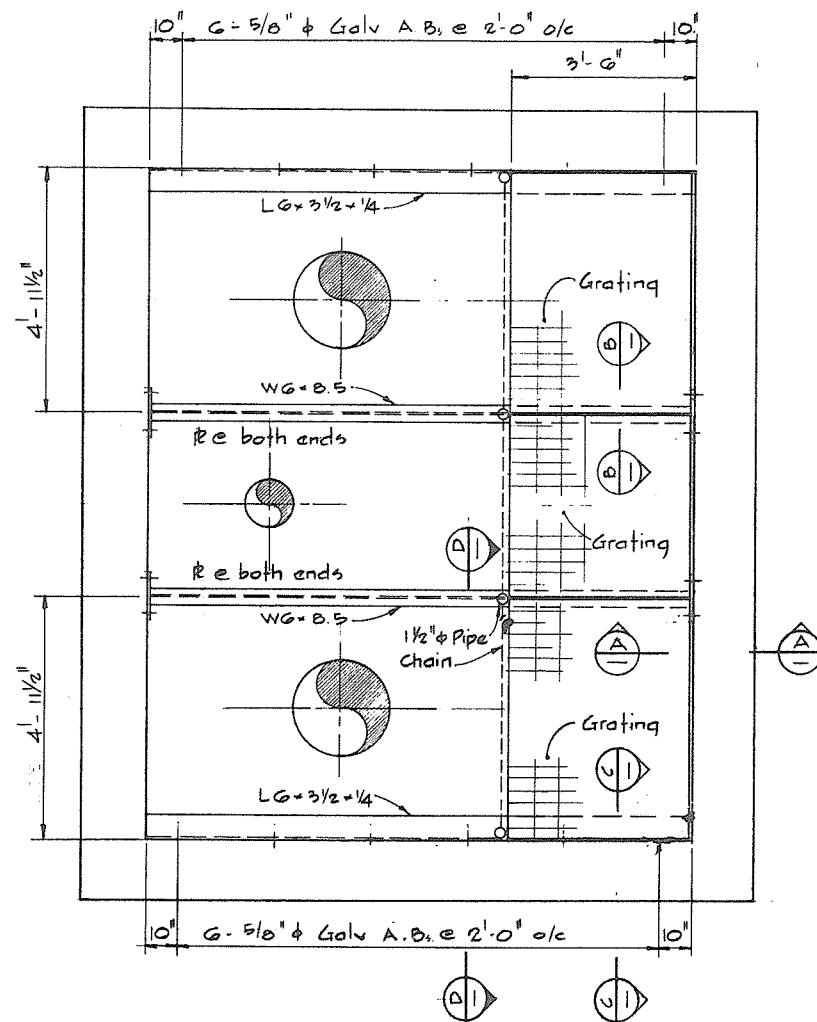
RECOMMENDED *John Fuller*
CHIEF, PROJECTS DIV.
DATE *Aug 27/76*
APPROVED *Director*
DIRECTOR
DATE *Aug 28/76*

BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO 4
SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE
PUMP SUPPORT FRAME AND FLOOR PLATING

DESIGNED <i>GA</i>	SURVEYED
DRAWN <i>HW</i>	DATE
CHECKED <i>HS</i>	FILE NO. 028155Q-C10-4
SCALE <i>As shown</i>	DATE <i>Aug. 1974</i>
DWG. NO. 4795-4-61	SHEET OF SHEETS

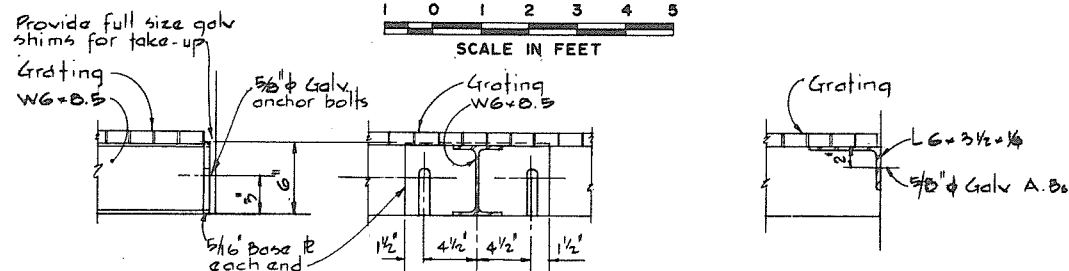
No print rep'd.

266114



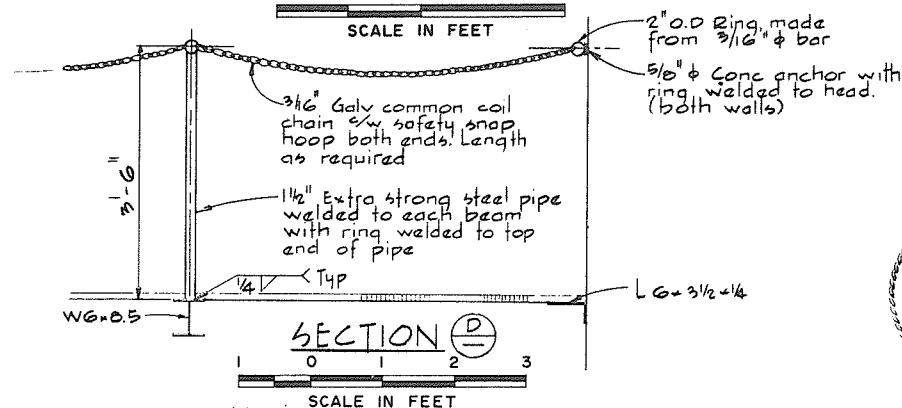
PLAN
MAINTENANCE FLOOR
CAMBIE ROAD - WEST

SCALE IN FEET



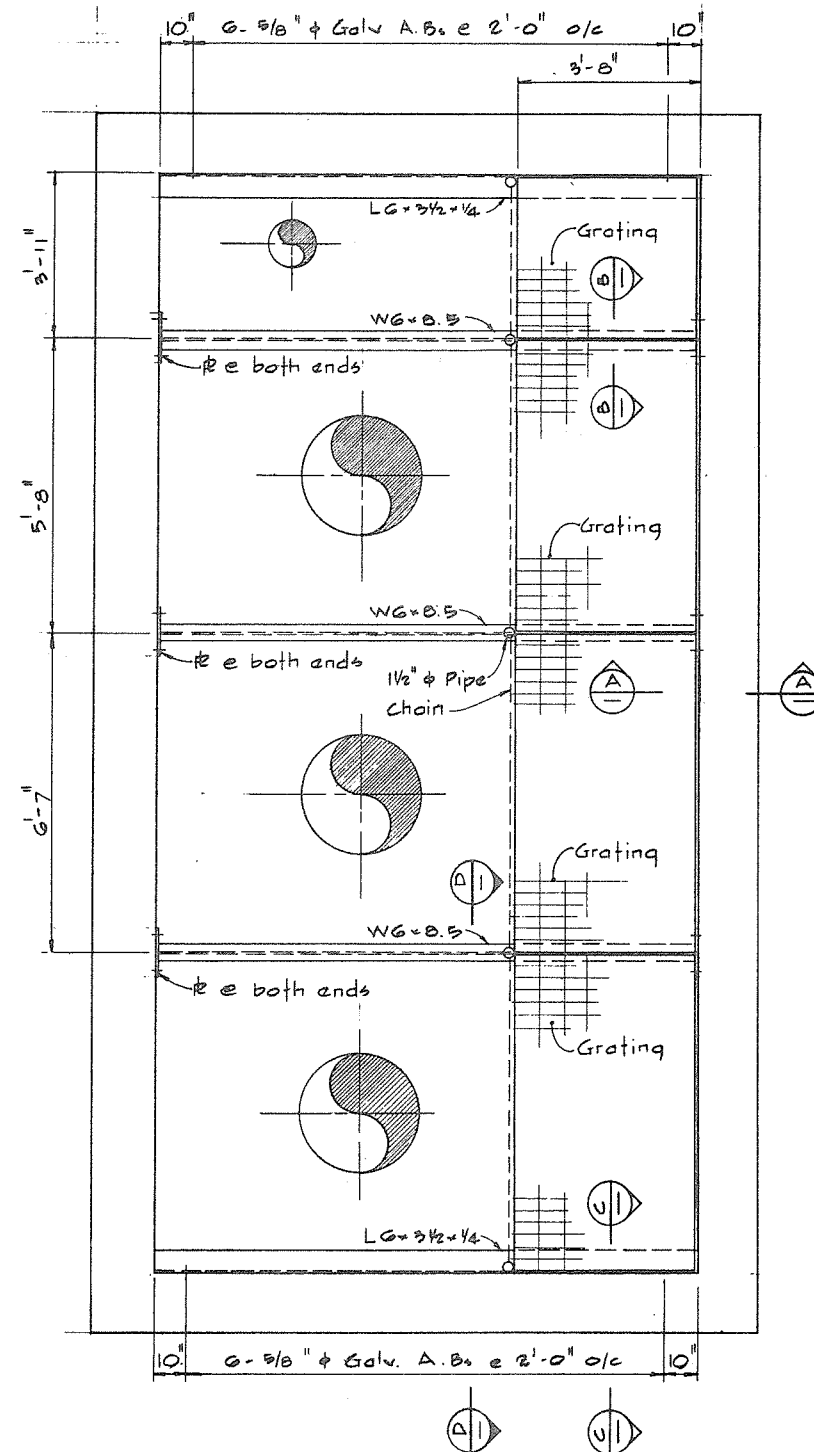
SECTION A SECTION B SECTION C

SCALE IN FEET



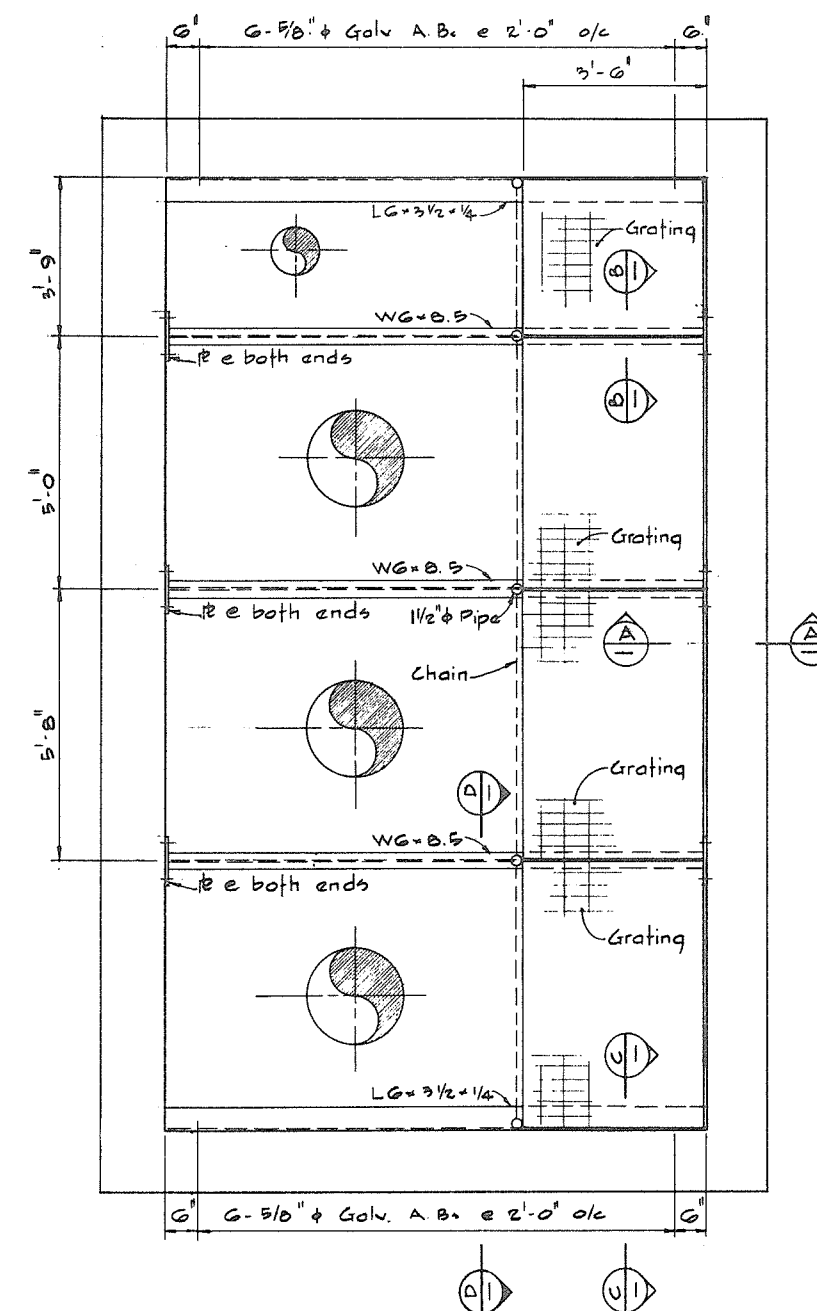
SECTION D

SCALE IN FEET



PLAN
MAINTENANCE FLOOR
NO. 4 ROAD - NORTH

SCALE IN FEET



PLAN
MAINTENANCE FLOOR
SHELL ROAD - NORTH

SCALE IN FEET

NOTES

For General Notes see 4795-4-55
For additional notes see 4795-4-65

No print required

266 115



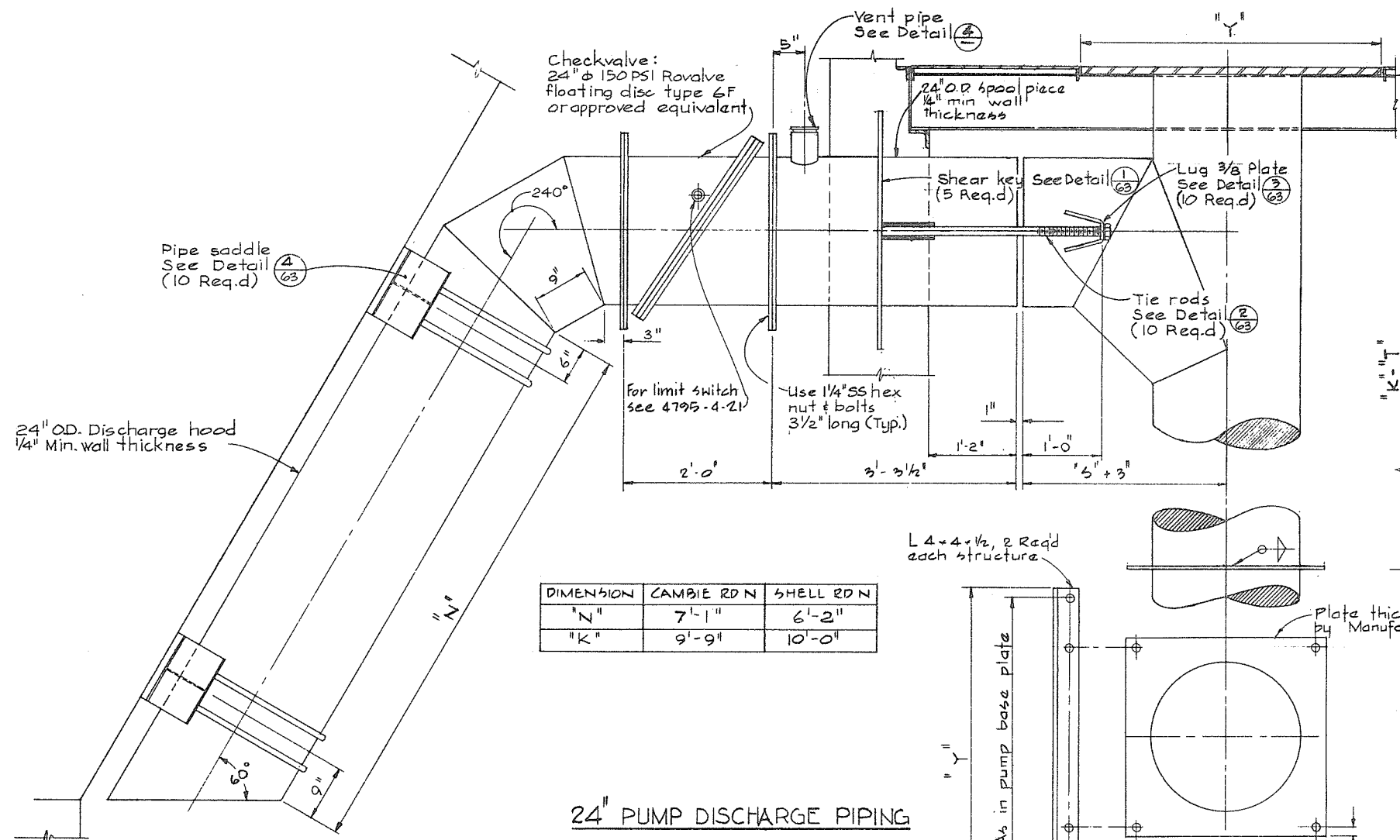
CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO. BY REVISIONS DATE

RECOMMENDED *McGill*
CHIEF, PROJECTS DIV.
DATE *Aug 27/74*
APPROVED *P. D. Dwyer*
DIRECTOR
DATE *Aug 28/74*

BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
DRAINAGE DISCHARGE STRUCTURES MAINTENANCE FLOOR
SUPPORT FRAMES AND GRATING

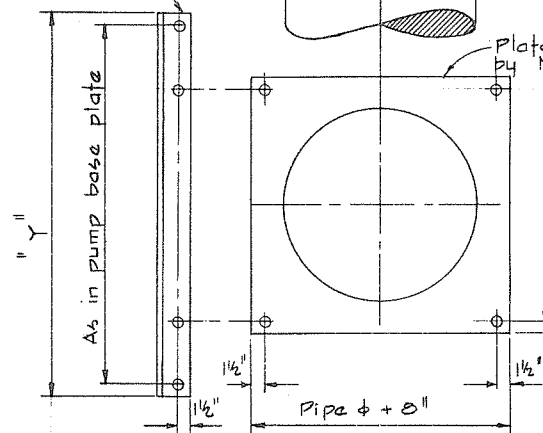
DESIGNED GA
DRAWN H.W.
CHECKED H.S.
SCALE As shown
DWG. NO. 4795-4-62
SURVEYED
DATE
FILE NO. 0281550-C10-4
DATE Aug 1974
SHEET OF SHEETS



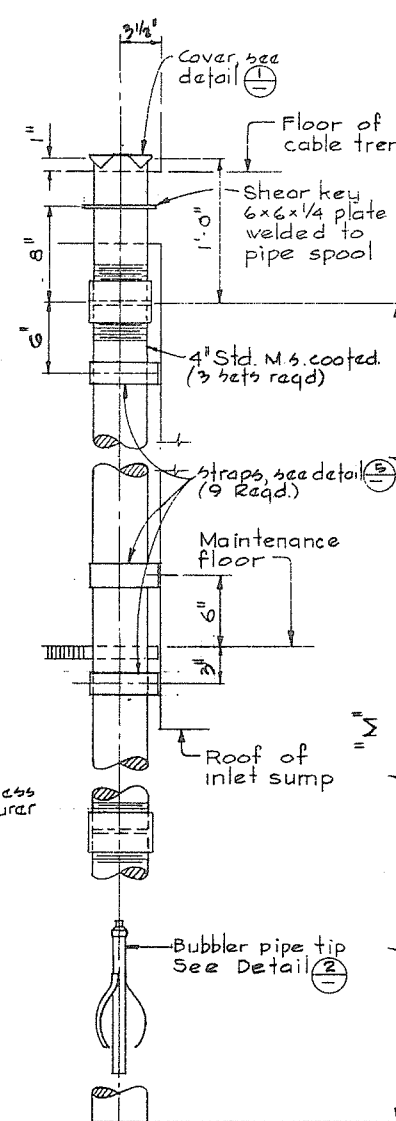
24" PUMP DISCHARGE PIPING



L 4 x 4 x 1/2, 2 Req'd each structure



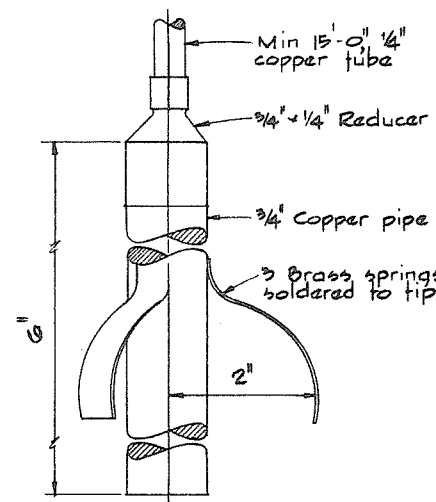
PLAN



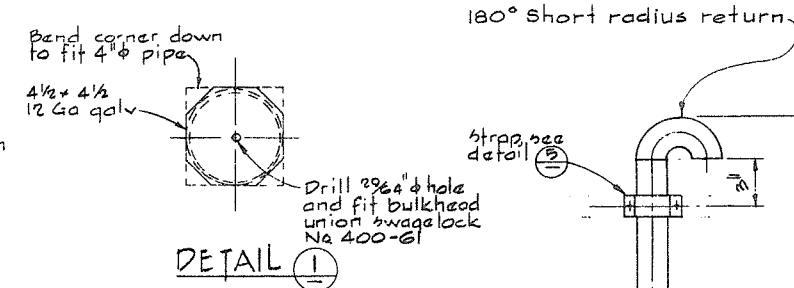
STILLING WELL

DETAIL 2

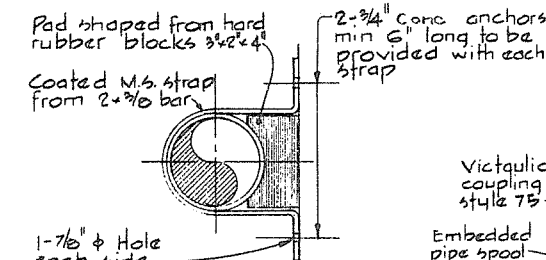
NTS



DETAIL 2



DETAIL 1



DETAIL 2

STILLING WELL & VENT PIPE LENGTHS				
Structure name	"H"	No. Req'd	"M" *	
Cambie Rd. West	5'-0 1/2"	2-4'-1-2"	13'-8"	
No. 4 Road. North	4'-9 1/2"	3-4'-1-2"	13'-7 1/2"	
Shell Road. West	5'-0 1/2"	3-4'-1-2"	13'-1"	

* Dimension approximate. Bottom of stilling well shall be 2'-0" above inlet sump floor.

VENT PIPE
DETAIL 4

NOTES

For General Notes see 4795-4-55
For additional notes see 4795-4-65



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO. BY

REVISIONS

DATE

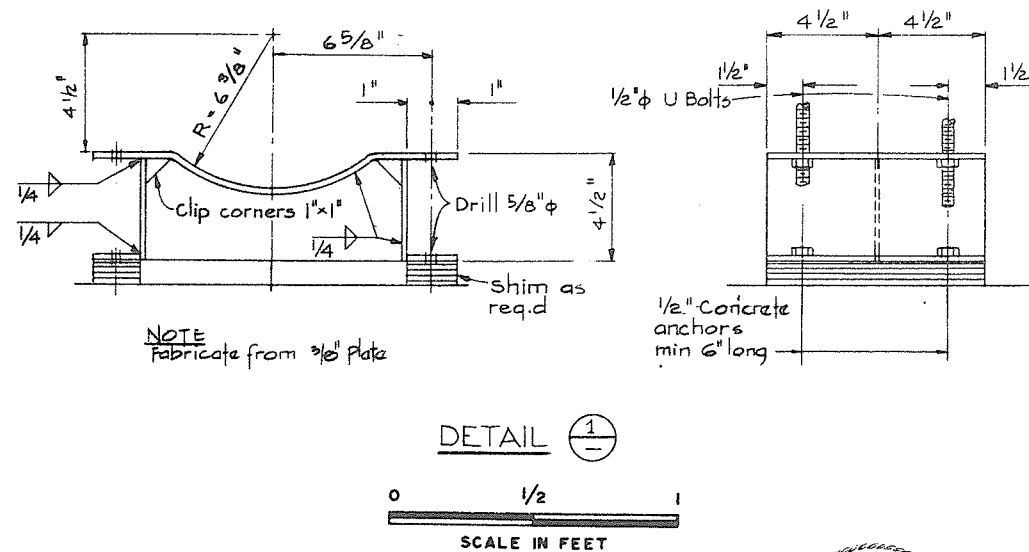
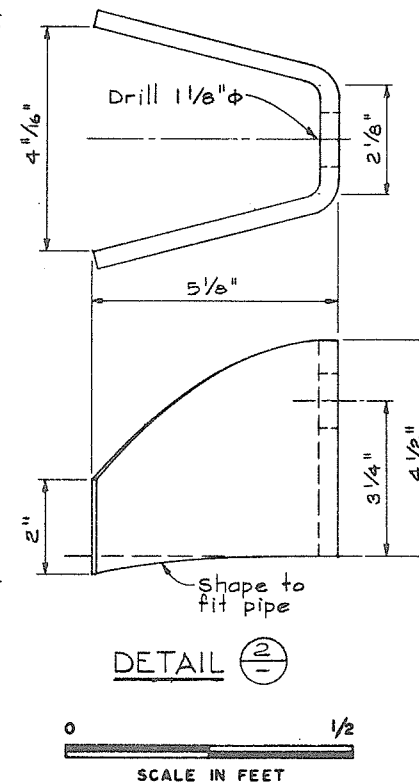
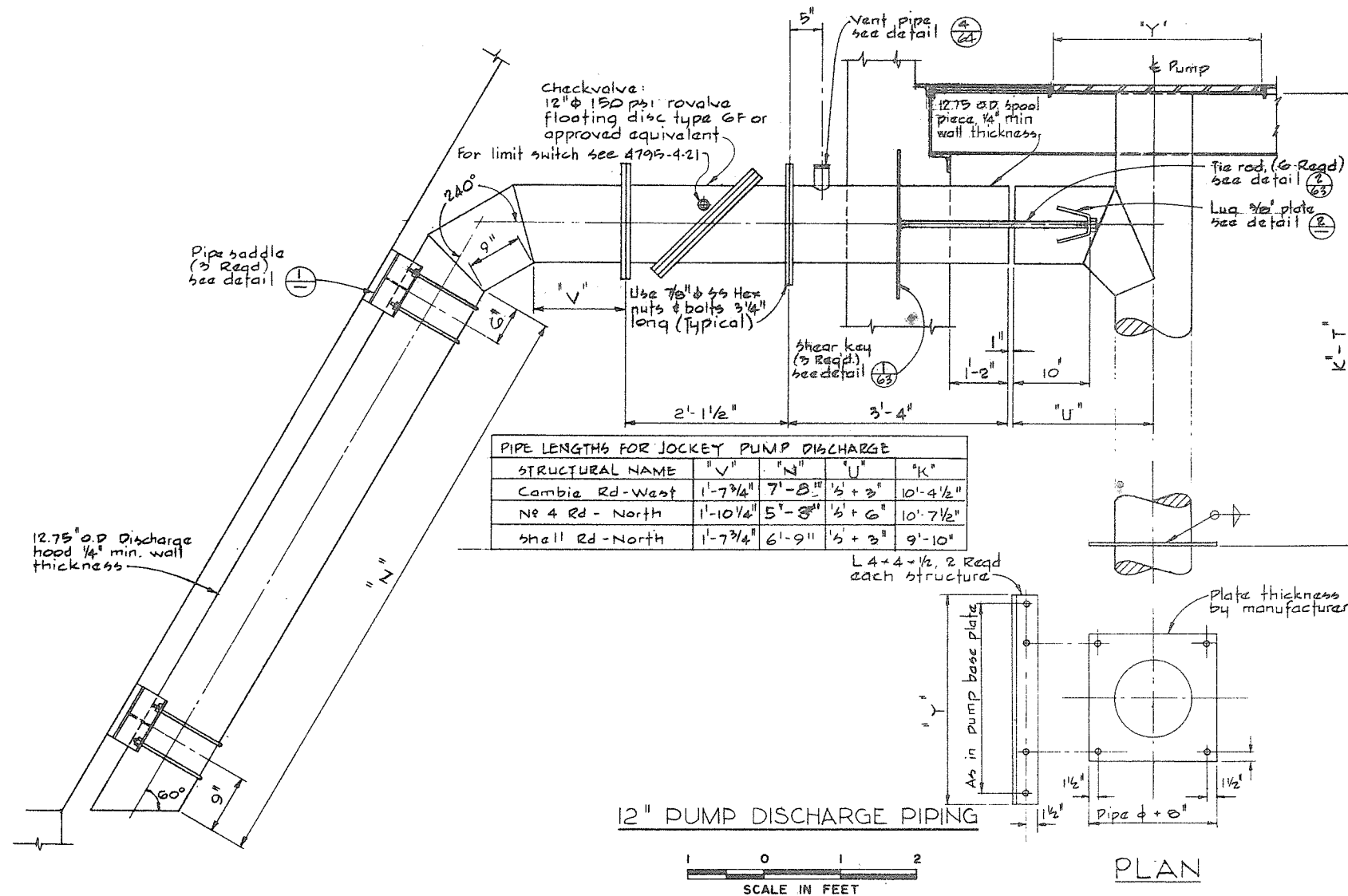
RECOMMENDED *J.B. Briller*
CHIEF, PROJECTS DIV.
DATE *Aug 27/74*
APPROVED *P.B. Briller*
DIRECTOR
DATE *Aug 28/74*

BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
CAMBIE ROAD, WEST AND SHELL ROAD NORTH
DETAILS OF 24 INCH DIAMETER DISCHARGE PIPEWORK

DESIGNED *H.S.*
DRAWN *H.S.*
CHECKED *G.A.*
SCALE *As shown*
DWG. NO. *4795-4-64*
SHEET *1* OF *1* SHEETS

No print req'd.

266 117



NOTES

- For General Notes see 4795-4-55
- Arrange bolt holes in flanges so that bolts do not interfere with vent piping.
- Coupling between pump discharge elbow and embedded spool piece omitted for clarity.
- Couplings shall be Smith-Blair Type 411 or approved equivalent.
- For dimensions of couplings, pipe flanges and saddles, shear keys and tie rods see 4795-4-
- see specifications wherever terms "coated" or "coating" appear for metal or other parts.
- Vent piping to be fabricated from 4" std M.S. coated pipe for connection to 24" and 30" pipe spools and from 2" std M.S. coated pipe for connection to 12" pipe spools.

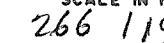


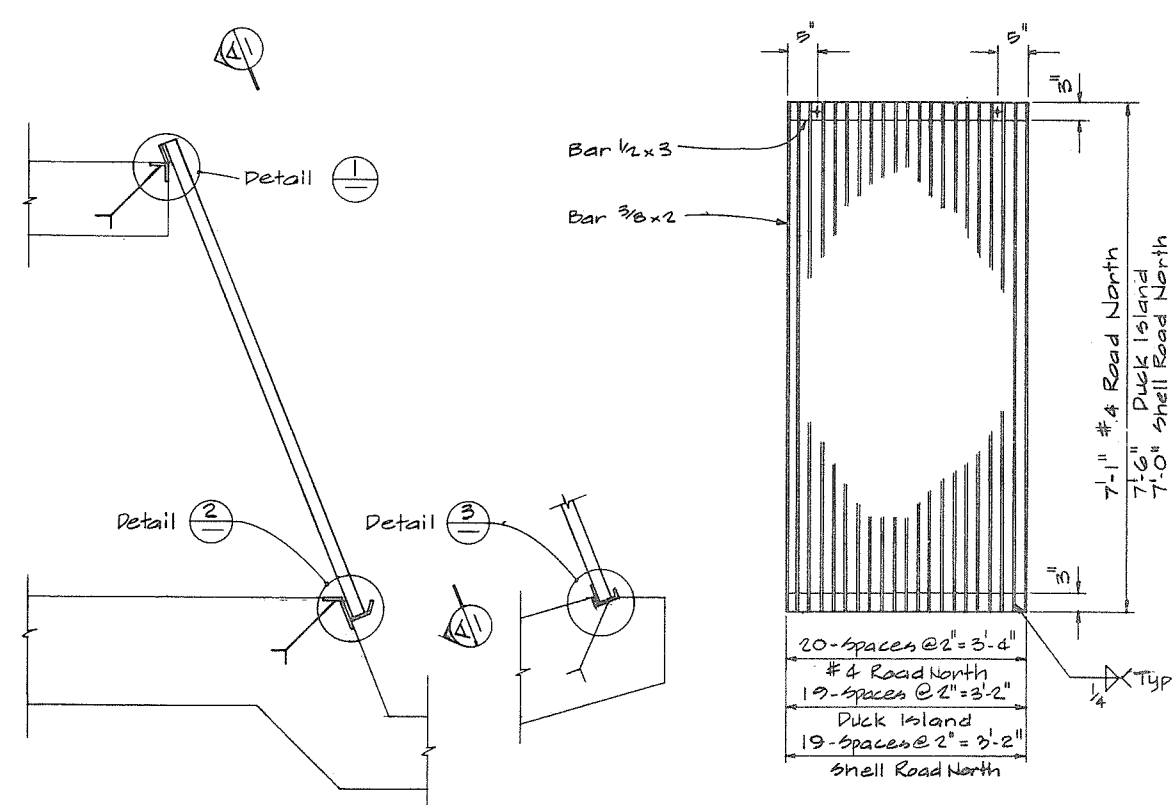
CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

RECOMMENDED <i>Rob Fuller</i> CHIEF, PROJECTS DIV.		BRITISH COLUMBIA DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND		DESIGNED <i>HS</i>	SURVEYED
DATE <i>Aug 27/74</i>				DRAWN <i>H.W.</i>	DATE
APPROVED <i>P. Manniche</i> DIRECTOR				CHECKED <i>GA.</i>	FILE NO. <i>0281550-C10-4</i>
DATE <i>Aug 27/74</i>				SCALE <i>As shown</i>	DATE <i>Aug. 1974</i>
		CONTRACT NO. 4 DRAINAGE DISCHARGE STRUCTURES DETAILS OF 12 INCH DIAMETER DISCHARGE PIPEWORK		DWG. NO. <i>4795-4-65</i>	SHEET <i>1</i> OF <i>1</i> SHEETS

No print rep'd

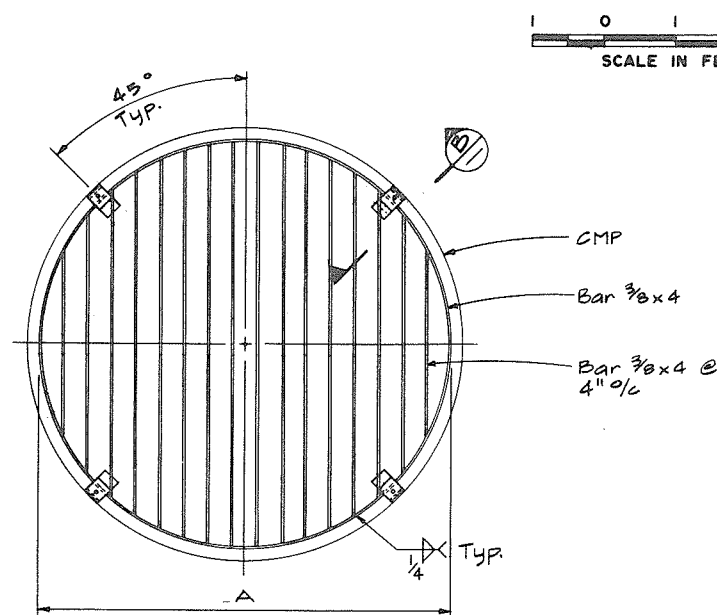
266 118





ENTRY SCREEN
#4 ROAD NORTH ENTRY CULVERT
DUCK ISLAND ENTRY CULVERT
SHELL ROAD NORTH DISCHARGE STRUCTURE

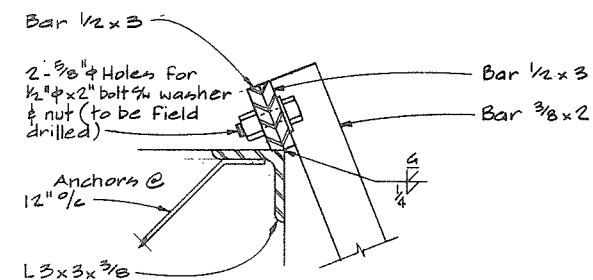
VIEW A
B-REQD. @ #4 ROAD NORTH
3-REQD. @ DUCK ISLAND
3-REQD. @ SHELL ROAD NORTH



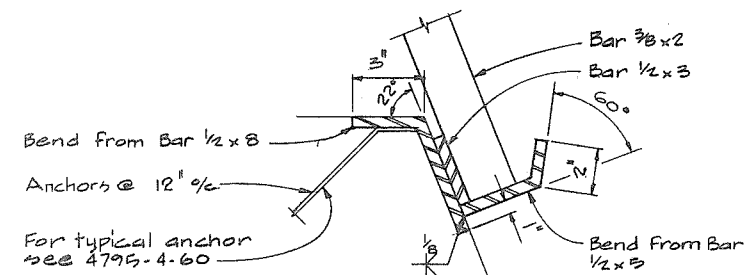
OUTLET SCREEN



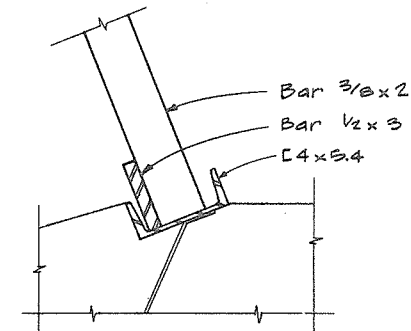
OUTLET SCREENS			
LOCATION	CMP Ø	A	NO. SCREENS REQD.
Shell Road North	60"	4'-8"	2
Cambie Road West	54"	4'-2"	2
#4 Road North	72"	5'-8"	2



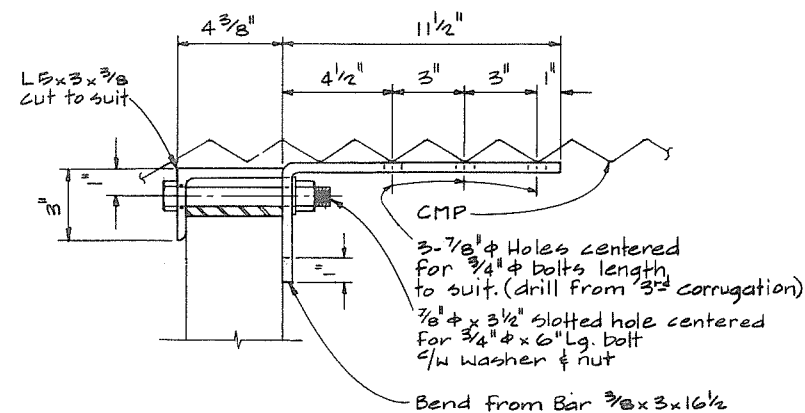
DETAIL 1



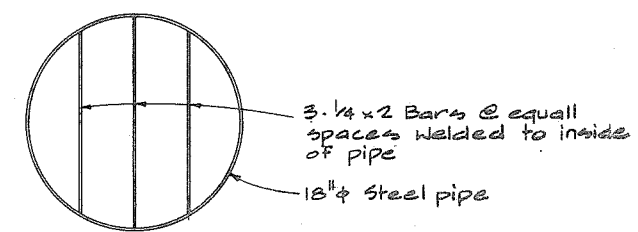
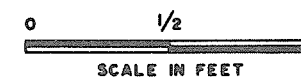
DETAIL 2
#4 ROAD NORTH
SHELL ROAD NORTH



DETAIL 3
DUCK ISLAND



SECTION B
4 REQD PER SCREEN



OUTLET SCREEN
1-REQD. @ DUCK ISLAND



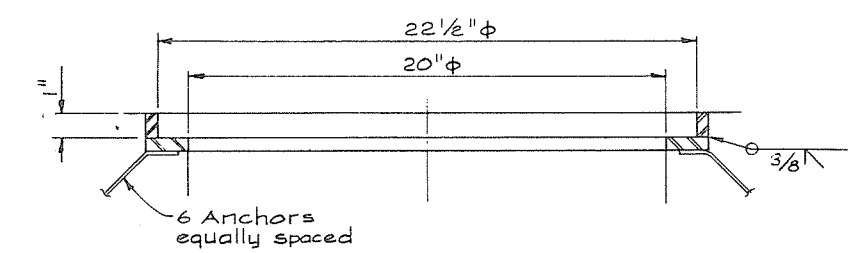
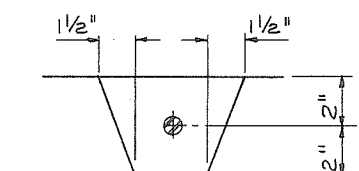
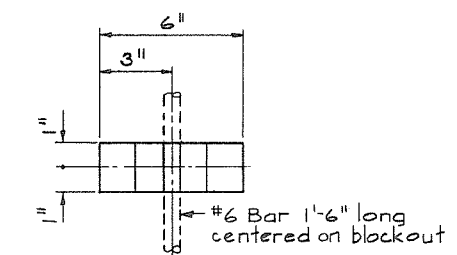
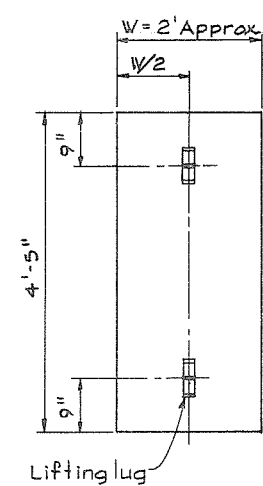
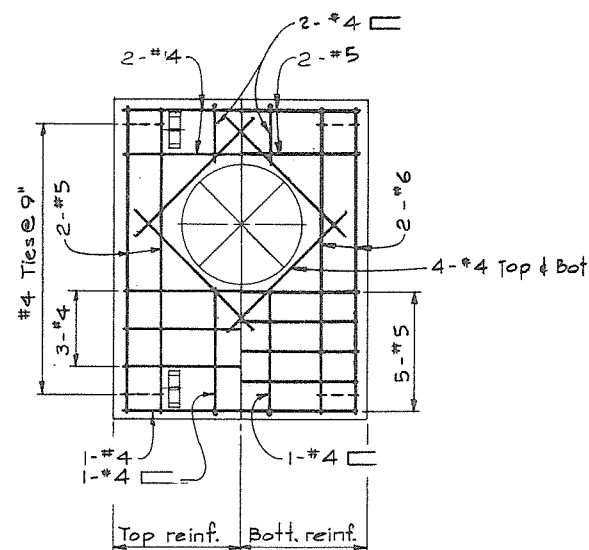
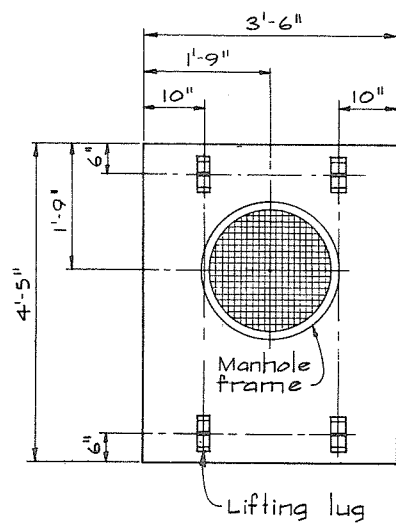
CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

No print req'd.

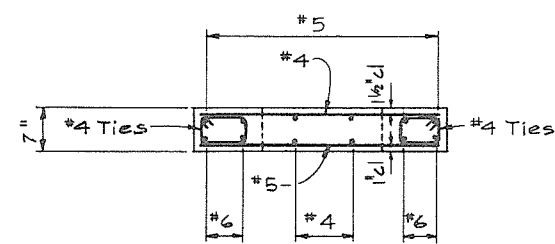
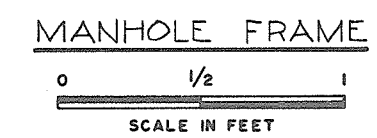
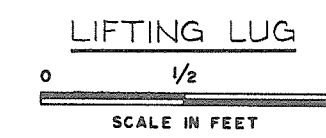
266 120

RECOMMENDED <i>W. G. Guller</i> CHIEF, PROJECTS DIV.	DESIGNED HS/AR	SURVEYED
DATE <i>Aug 27/74</i>	DRAWN AR	DATE
APPROVED <i>W. G. Guller</i> DIRECTOR	CHECKED HS	FILE NO. 0281550-C10-4
DATE <i>Aug 28/74</i>	SCALE As shown	DATE Aug 1974
	DWG. NO. 4795-4-67	SHEET OF SHEETS

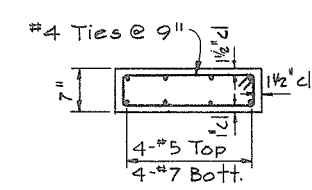
BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1965 AGREEMENT
PROJECT NO. 3- THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
DRAINAGE DISCHARGE STRUCTURES
MISCELLANEOUS SCREENS



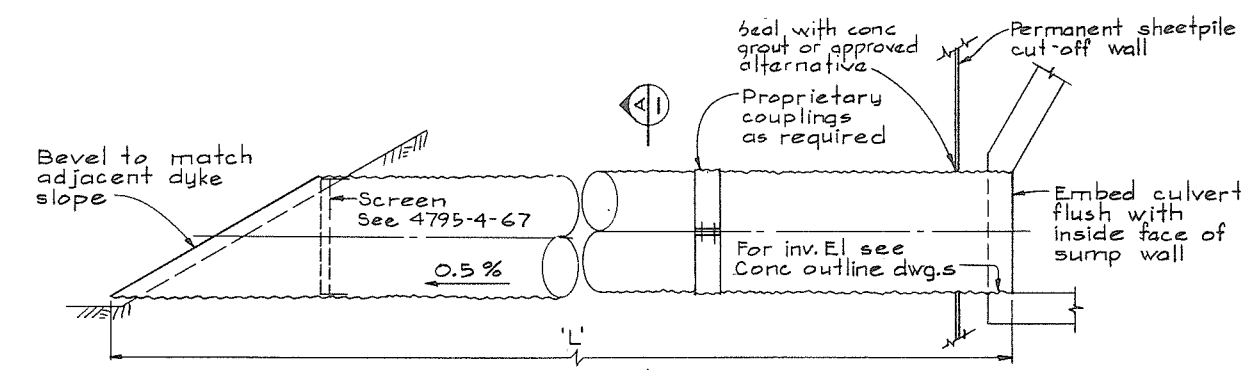
Frame fabricated from 1/2" M.S. plate.
For cover use Mainland Foundry,
or equal Pattern No. 3R-12A with
"RICHMOND STORM SEWER" cast
on cover in raised letters.



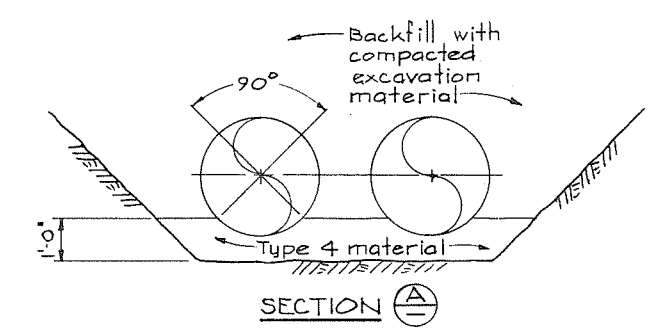
PRECAST COVER W/MANHOLE



PRECAST COVER

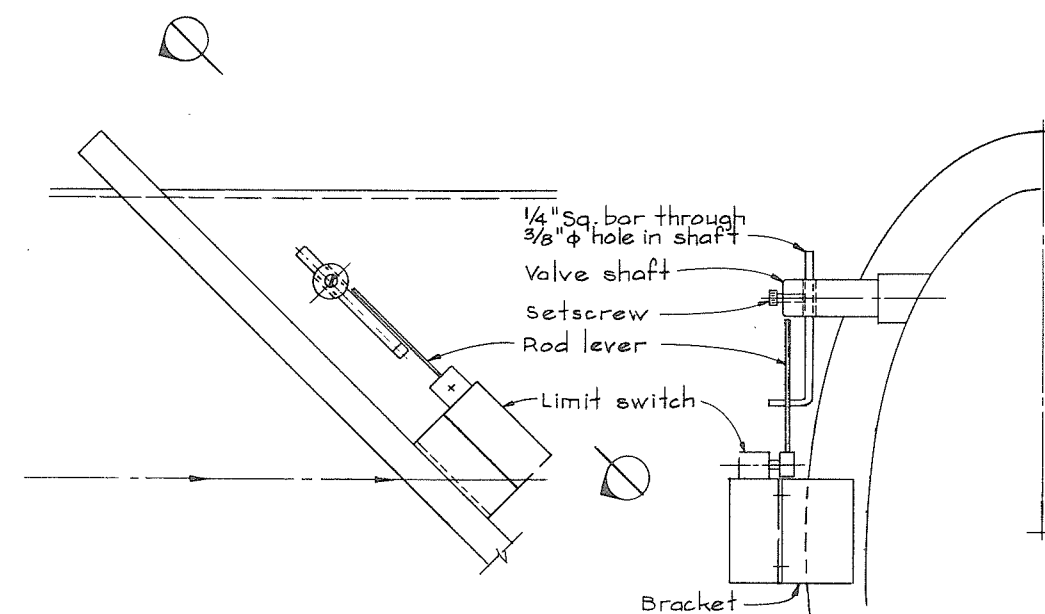


LOCATON	NO. REQ'D & DIA.	US GA	LENGTH 'L'
Cambie Rd. W	2-54"	10	46'
No. 4 Rd. N	2-72"	10	50'
Shell Rd. N	2-60"	10	70'



GRAVITY DISCHARGE PIPES

Not to scale

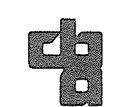


CHECK VALVE LIMIT SWITCH - GEN. ARR.

NTS

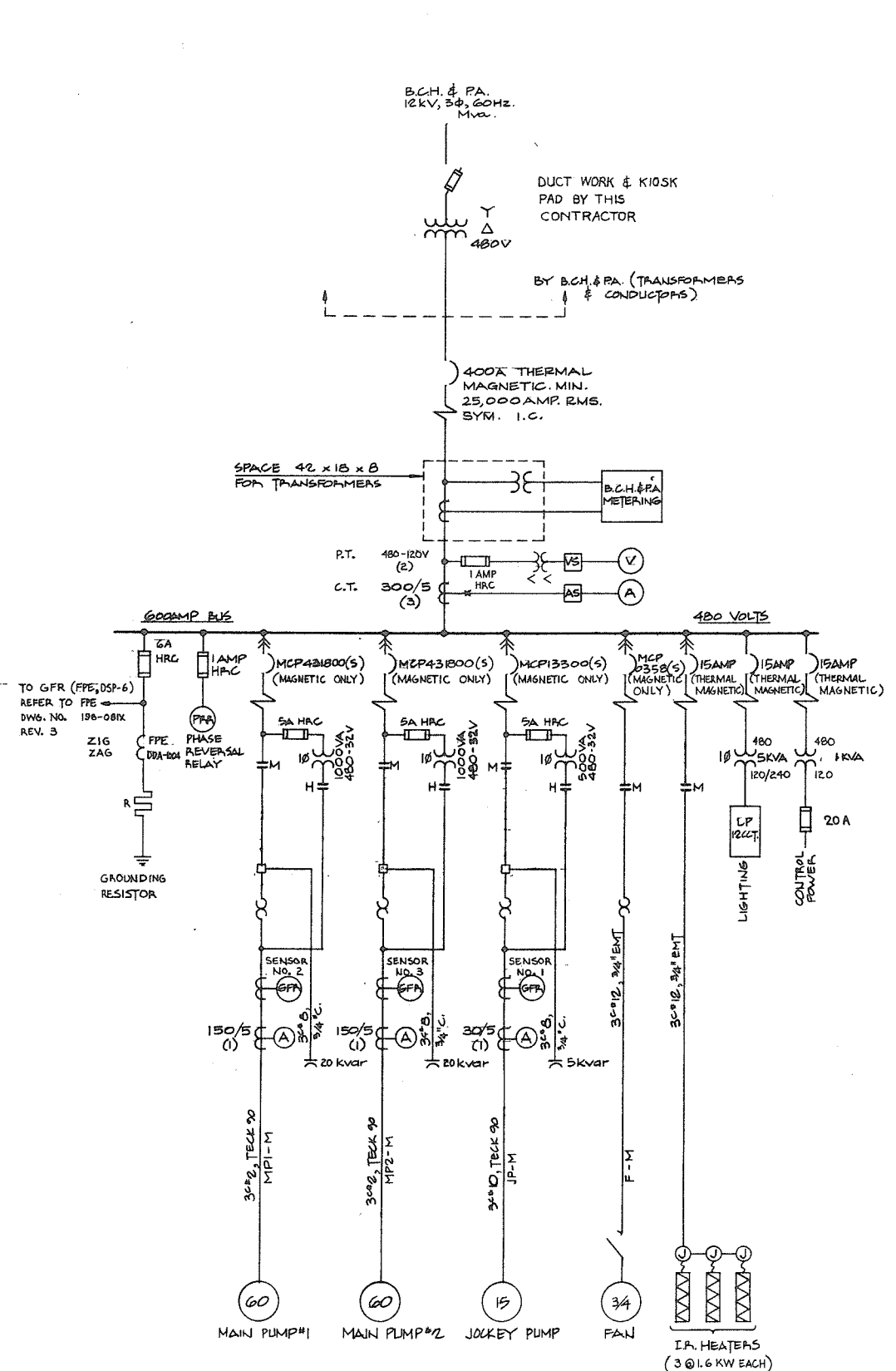
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NOTES 266 121
• For General Notes see 4795-4-33

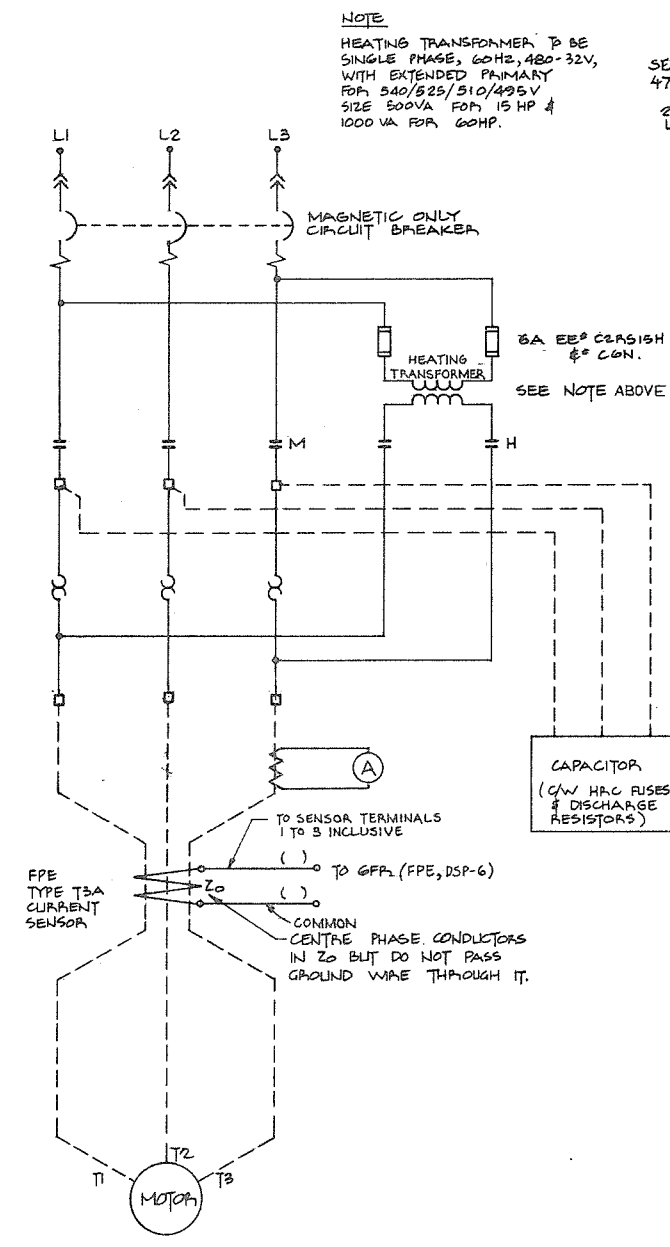


CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

A				IF RECOMMENDED <u><i>P.H. Fuller</i></u> CHIEF, PROJECTS DIV. DATE <u><i>Aug 27/74</i></u>	BRITISH COLUMBIA DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA - BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT PROJECT NO.3 - THE TOWNSHIP OF RICHMOND	DESIGNED <u><i>HS</i></u> DRAWN <u><i>H.S</i></u> CHECKED <u><i>GA</i></u> SCALE <u><i>As shown</i></u> DWG. NO. <u><i>4795-4-68</i></u>	SURVEYED DATE FILE NO. <u><i>0281550-C10-4</i></u> DATE <u><i>Aug 1974</i></u> SHEET _____ OF _____ SHEETS
				APPROVED <u><i>P.H. Beady</i></u> DIRECTOR CONTRACT NO. 4 DRAINAGE DISCHARGE STRUCTURES MISCELLANEOUS DETAILS DATE <u><i>Aug 27/74</i></u>			
NO.	BY	REVISIONS	DATE				

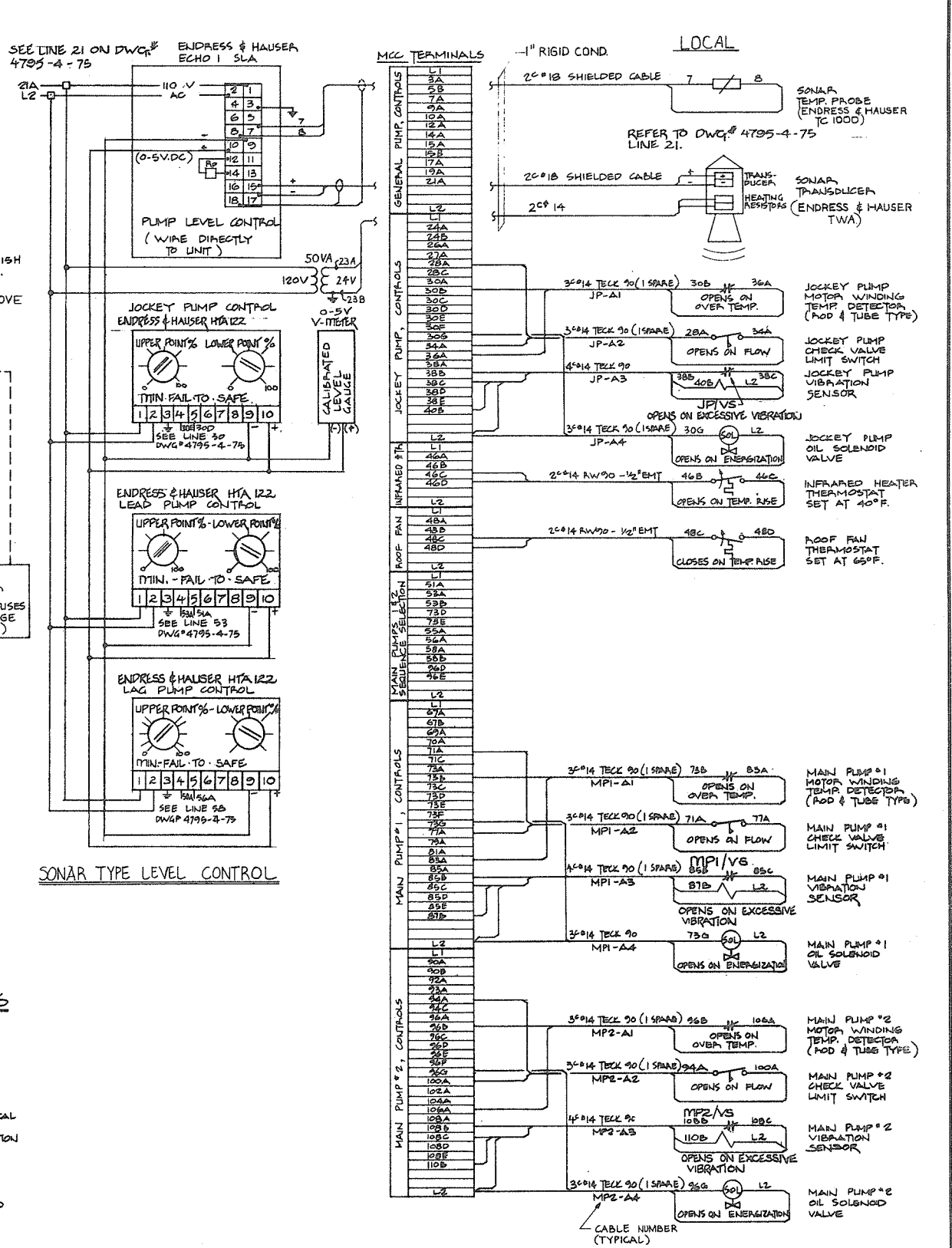


ONE LINE DIAGRAM



GENERAL NOTES

- THE ENTIRE ELECTRICAL INSTALLATION SHALL COMPLY WITH THE CANADIAN ELECTRICAL CODE (11TH EDITION) AND/OR THE ELECTRICAL ENERGY INSPECTION ACT OF BRITISH COLUMBIA AS ENFORCED BY THE DEPARTMENT OF PUBLIC WORKS, ELECTRICAL ENERGY INSPECTION BRANCH AND ALL REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION.
- ALL ELECTRICAL EQUIPMENT AND MATERIAL SHALL BE NEW AND CSA APPROVED WHERE STANDARDS HAVE BEEN ESTABLISHED BY THE AGENCY.
- THE ENTIRE INSTALLATION SHALL COMPLY WITH THE SPECIFICATION FOR PROJECT 3 CONTRACT 4. THE CONTRACTOR SHALL REFER TO THIS SPECIFICATION FOR DETAILED INSTALLATION INSTRUCTIONS AND MATERIAL SUPPLY.
- FOR LEGEND REFER TO DWG. NO. 4795-4-76, 78 OR 80
- LOCATION OF BLOCKOUTS IN CONCRETE AND PLACING OF EMBEDDED CONDUIT AND SLEEVES SHALL BE CO-ORDINATED WITH THE OTHER TRADES
- FOR STRUCTURAL DETAILS REFER TO ARCHITECTURAL DWGS. 4795-4-84 TO 90



CONTROL WIRING

No print required

266 122



PREPARED BY:
M.A. THOMAS & ASSOCIATES LTD.
CONSULTING ENGINEERS
VANCOUVER, B.C. CANADA

REFERENCE: 1035



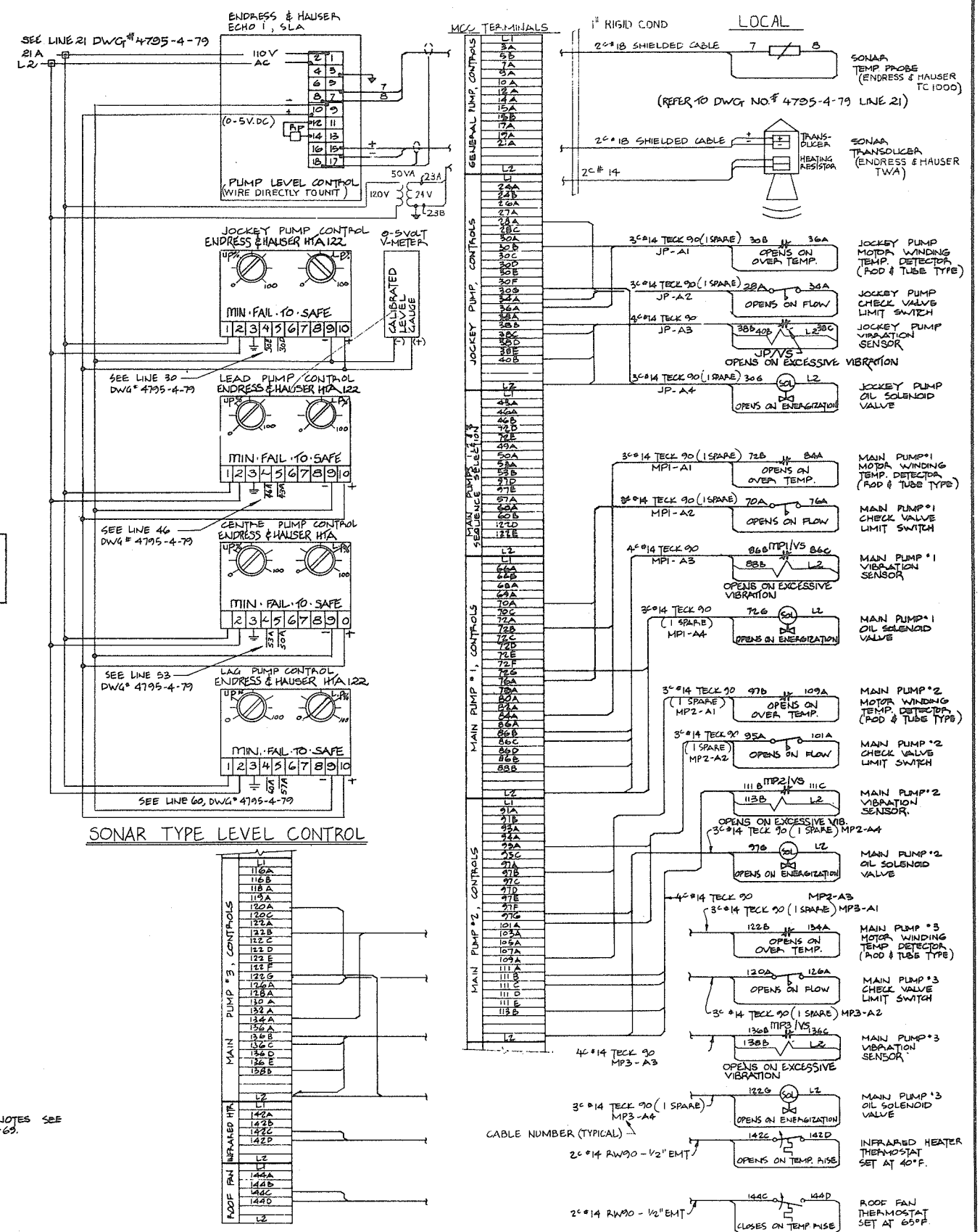
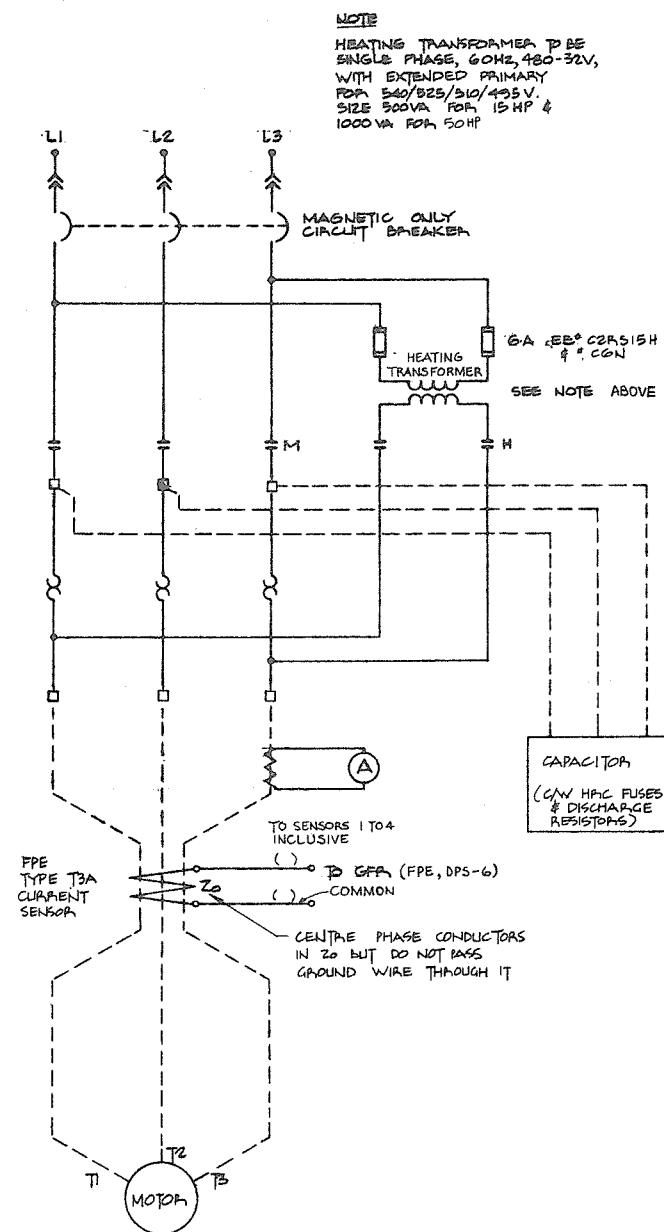
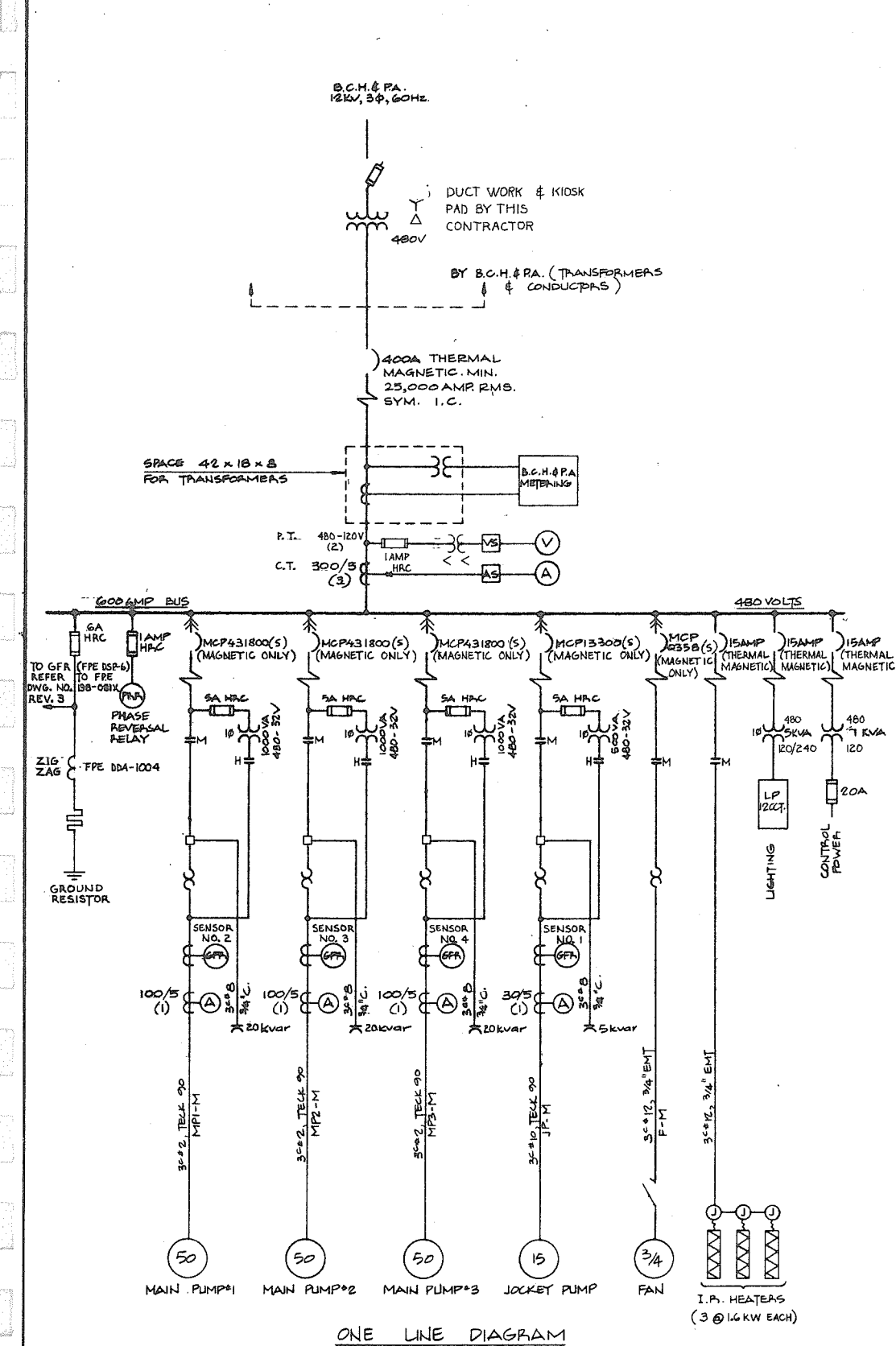
GBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO.	BY	REVISIONS	DATE

RECOMMENDED *John Fuller*
CHIEF, PROJECTS DIV.
DATE *Aug 27/94*
APPROVED *Pat Smith*
DIRECTOR
DATE *Aug 27/94*

BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO.3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO.4
CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE
ONE LINE ELECTRICAL DIAGRAM

DESIGNED	NE/MNB	SURVEYED	
DRAWN	PE/MJ	DATE	
CHECKED	MNB	FILE NO.	0281550-C10-4
SCALE	NONE	DATE	Aug. 1974
DWG. NO.	4795-4-69	SHEET	OF SHEETS



No print required

266 124



PREPARED BY:
M.A. THOMAS & ASSOCIATES LTD.
CONSULTING ENGINEERS
VANCOUVER, B.C. ——— CANADA.



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO.	BY	REVISIONS	DA
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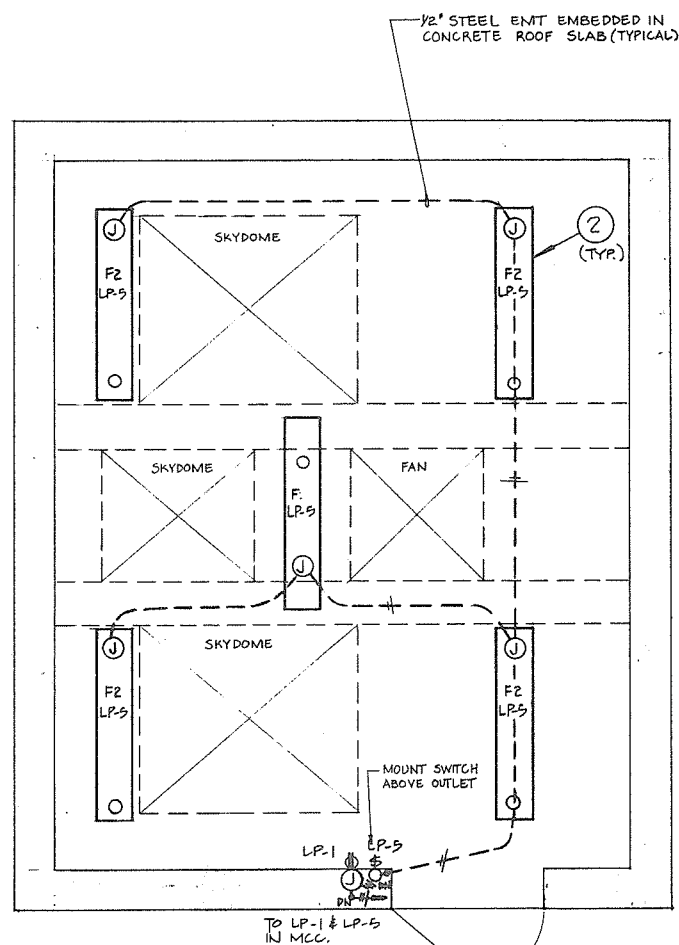
RECOMMENDED *J. H. Fuller*
CHIEF, PROJECTS DIV.
DATE *Aug 27/74*

APPROVED *P. McNulty*
DIRECTOR
DATE *Aug 28/74*

BRITISH COLUMBIA DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA — BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT	
PROJECT NO 3 - THE TOWNSHIP OF RICHMOND	
CONTRACT NO. 4	
SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE	
ONE LINE ELECTRICAL DIAGRAM	

DESIGNED NB/MNB	SURVEYED
DRAWN PB/MJ	DATE
CHECKED MNB	FILE NO. 0281550-C10-4
SCALE NONE	DATE Aug 1974
DWG. NO. 4795 - 4 - 71	SHEET OF SHEETS

SURVEYED
 DATE
 FILE NO.
 0281550-CIQ-4
 DATE
 Aug. 1974



THOMAS & BETTS LIQUID TIGHT, INSULATED MALLEABLE IRON, FLEXIBLE CONDUIT STRAIGHT CONNECTOR, C/W SEALING "O" RING

CEMA & WATER TIGHT STAINLESS STEEL JUNCTION BOX, 6" x 6" x 4" HAMMOND CAT# 1414 N4E-S OR APPROVED EQUAL

THOMAS & BETTS TIGHT, INSULATED MALLEABLE IRON INSULATED WATER-TIGHT "BULLET HUB CONNECTOR"

1" COND. TO MCC (EMBED IN CONCRETE)

BURNDY FLEXIBAR WASHER, BOLT & SPRING NUT, FASTEN TO CONCRETE WITH PHILLIPS "RED-HEAD" CONCRETE ANCHORS (TYP.)

BURNDY FLEXIBAR HOT DIP GALVANIZED H4H CHANNEL

BURNDY FLEXIBAR BRACKET # 53B-32

BURNDY FLEXIBAR BOLT & SPRING-NUT (TYP.)

FLANGE MOUNT ENDRESS & HAUSER TWA SENSOR AND TC 1000 TEMP PROBE CUT & DRILL PLATE TO SUIT

1/4" STEEL PLATE HOT DIP GALVANIZE AFTER FABRICATION

CONCRETE BEAM

1/2" SEALTIGHT FLEXIBLE COND. SUPPORT AS REQUIRED

TWA

TC 1000

2'-0"

0'-0"

0'-1"

INSULATED THROAT
GROUNDING BUSHING,
BOND TO MCC GROUND
BUS WITH #2/0 AWG
COPPER GROUND WIRE

SPACERS -
HOT DIP GALVANIZED
BURNY FLEXIBAR
CHANNELS

STAINLESS STEEL
PIPE CLAMP (TYP.)

PULL
BOX FOR
B.C.H. & P.A.

PULL BOX FOR
B.C. TEL.

EMBED

4 1/2" PVC JACKETED
RIGID GALVANIZED
STEEL CONDUIT

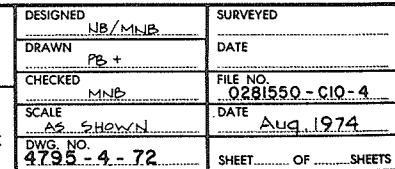
BUSHING &
LOCKNUT (TYP.)

3" PVC TEL
CONDUIT

SINGLE PHASE, 3 WIRE, S.N., 120/240 VOLT								
LOAD (WATTS)	DESCRIPTION	CCT. No.	S.N.		CCT. No.	DESCRIPTION	LOAD (WATTS)	
500	RECEPTACLE AT DOOR	1	15A		15A	2	LIGHTING IN SUMP	400
150	OUTDOOR LIGHTING	3	15A		15A	4	RECEPTACLE ON NORTH WALL	500
750	FLUORESCENT LIGHTING	5	15A		15A	6		
		7	15A		15A	8		
		9	15A		15A	10		
		11	15A		15A	12		

	START	STOP	LOW LEVEL LOCKOUT	HIGH LEVEL ALARM
JOCKEY PUMP	-2.0'	-3.25'	-3.75'	-0.25'
LEAD PUMP	-1.25'	-2.0'	-2.5'	
LAG PUMP	-0.80'	-1.80'		

266 125



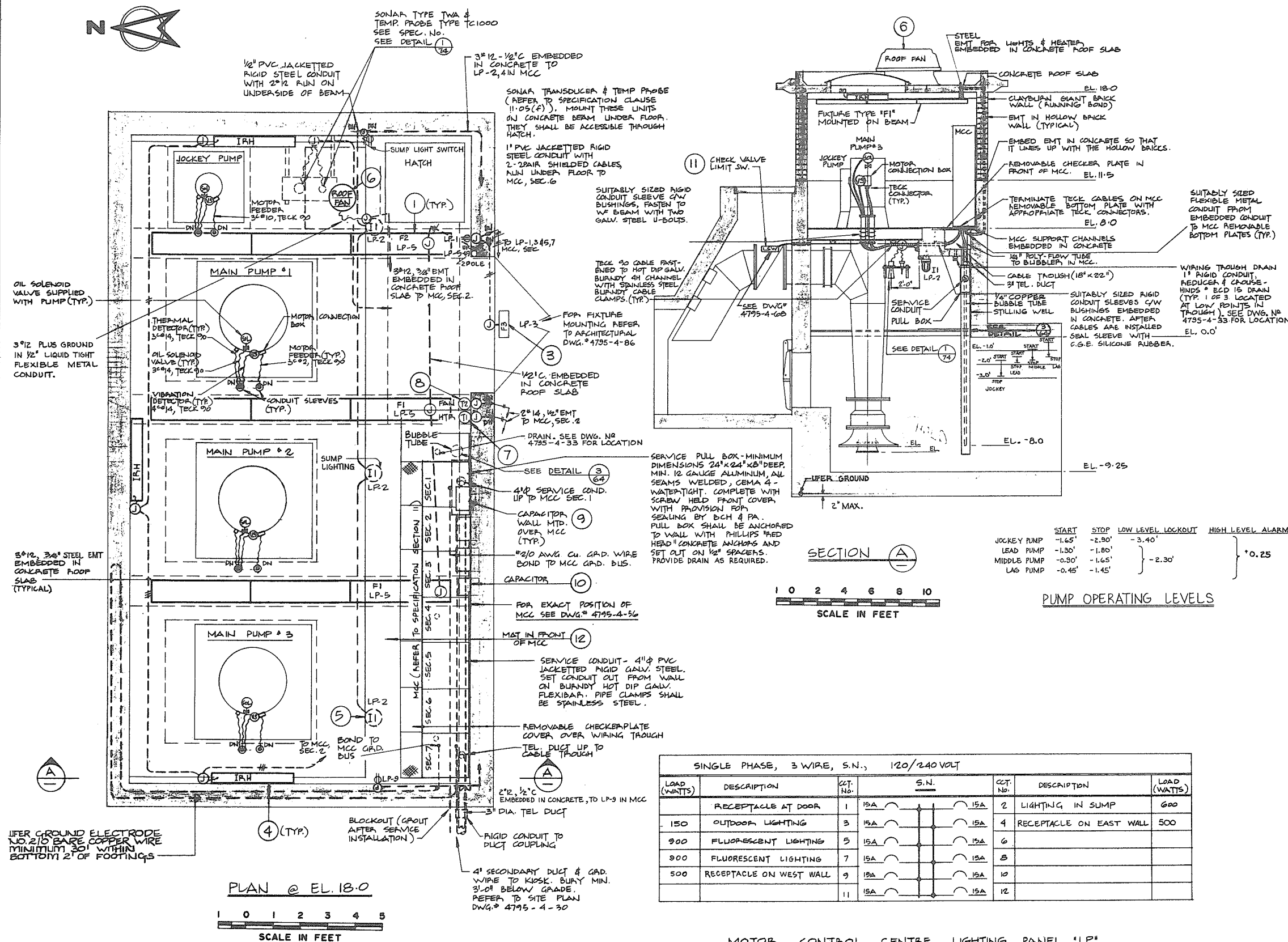
- NOTE: (1) THE NUMBER OF EACH ITEM REQUIRED IS AS SHOWN ON THE DRAWINGS.
(2) THIS IS NOT A COMPLETE MATERIAL LIST, REFER TO DRAWINGS AND SPECIFICATIONS.

SYMBOL	ITEM	DESCRIPTION
F1	1	FLUORESCENT LIGHTING FIXTURES HAVING 2-4' T12, 60 WATT, HIGH OUTPUT, COOL WHITE, LOW TEMPERATURE LAMPS AND BALLAST, FOR 120 VOLT OPERATION. THE FIXTURE SHALL BE SEALED IN ACCORDANCE WITH CSA "ENCLOSED AND GASKETTED" REQUIREMENTS AND SHALL HAVE A BAKED ENAMEL FINISH AND ACRYLIC LENS.
F2	2	FLUORESCENT FIXTURE SAME AS ITEM 1A ABOVE EXCEPT PENDANT MOUNTING.
F3	3	WEATHERPROOF WALL MOUNTED LIGHT FOR INSTALLATION OVER PUMPHOUSE DOORS. APPROX. 36" LONG, 5" HIGH AND 4 TO 6" DEEP TOTALLY ENCLOSED AND GASKETTED FABRICATE OF 0.04" ALUMINUM - COLOUR DURACRON FINISH, WHITE POLYCARBONATE LENS 2 X 30 W FLUORESCENT, RAPID START, COOL WHITE, 0P HPF BALLAST WITH INTEGRAL PHOTOCCELL (HIDDEN WITHIN HOUSING) PACIFIC PHOTON PRODUCTS, PORT COQUITLAM, B. C. SERIES J - 10228 OR APPROVED EQUIVALENT.
IRH	4	INFRARED QUARTZ LAMP ELECTRIC RADIANT HEATERS, HAVING 45° ENERGY SPREAD, 2.5 KW, 480 VOLTS, COMPLETE WITH ADJUSTABLE MOUNTING BRACKETS, LAMP, AND ALL NECESSARY ACCESSORIES. CANADIAN GENERAL ELECTRIC "COMFORT RAY" OKH SERIES, CAT. # OKH-34L4. C/W 600 VOLT LAMPS (FOR APPROX. 1.6 KW OUTPUT @ 480 VOLTS.)
I1	5	VAPOUR TIGHT ENCLOSED AND GASKETTED INCANDESCENT LIGHTING FIXTURE COMPLETE WITH GUARD, GLOBE, SOCKET AND OUTLET BOX (4" HUBS) CROUSE-HINDS CAT. # VXBFI2GP, OR APPROVED EQUIVALENT C/W 200 WATT LAMP.
I2	6	ROOF MOUNTED AIR SUPPLY FAN TO DELIVER APPROXIMATELY 3000 CFM AT 1/2" S.P. UNIT SHALL BE LOW PROFILE DESIGN, COLOURED GREY COMPLETE WITH LOWER FAN GUARD, INSECT SCREEN, MOTOR DISCONNECT SWITCH, 3/4 H.P., 3 PHASE, 460 VOLT, TOTALLY ENCLOSED, STANDARD CEMA FRAME, SEALED BALL BEARING MOTOR.
T1	7	THERMOSTAT, RANGE 35 TO 100°F, 2°F FIXED DIFFERENTIAL, SPDT CONTACTS, HONEYWELL "AIRSWITCH CONTROLLER" CAT. # T631C1053 OR APPROVED EQUIVALENT.
T2	8	AS PER ITEM 7 ABOVE.
9	9	POWER FACTOR CORRECTION CAPACITOR, 20 KVAR, 480 VOLTS, 3 PHASE ASKAREL FILLED FOR THE USE ON AN UNGROUNDED DELTA SYSTEM. UNIT SHALL BE COMPLETE WITH, INDICATING TYPE HRC FUSES, DISCHARGE RESISTORS, TERMINAL CLAMPS, MOUNTING FRAME AND BRACKET AND SHALL BE COMPLETELY ENCLOSED (WEATHERPROOF). UNIT SHALL BE PAINTED GINGER BROWN TO MATCH THE MCC.
10	10	AS PER ITEM 9 ABOVE EXCEPT 5 KVAR.
LSW	11	LIMIT SWITCH COMPLETE WITH OPERATING ARM AND MOUNTING BRACKET (FOR PUMP CHECK VALVES). LIMIT SWITCH SHALL BE CEMA TYPE 4 "WATERTIGHT", SPRING RETURN TO CENTRE LEVER OPERATED, SUITABLE FOR CLOCKWISE OR COUNTER-CLOCKWISE OPERATION.
12	12	ALLEN-BRADLEY "BULLETIN 802X" CAT. # 802X-A4, OR APPROVED EQUIVALENT, COMPLETE WITH SUITABLE LENGTH, ADJUSTABLE, HEAVY DUTY ROLLER TYPE OPERATING LEVER.
		INSULATING MAT FOR PLACEMENT IN FRONT OF THE MCC. THE MAT SHALL BE 2 FT. WIDE BY 14 FT. LONG. IT SHALL BE COLOURED GREY. THE MAT SHALL BE "HERON RID VINYL DUCTBOARD" (E. B. PEERLESS LTD.), OR APPROVED EQUIVALENT.

NOTES

- FOR GENERAL NOTES SEE DWG. # 4795-4-69
- FOR SERVICE DETAILS REFER TO SITE PLAN DWG # 4795-4-30
- PUMP MOTORS AND VIBRATION SENSORS SUPPLIED BY OTHERS
- ALL CABLES AND CONDUITS TO MOTOR CONTROL CENTRE SHALL BE BOTTOM ENTRY.
- ALL WIRING SHALL BE CONCEALED AND ALL BOXES SET FLUSH EXCEPT IN PUMP HOUSE SUMP.

266 126



MOTOR CONTROL CENTRE LIGHTING PANEL 'LP'



PREPARED BY:
M.A. THOMAS & ASSOCIATES LTD.
CONSULTING ENGINEERS
VANCOUVER, B.C. - CANADA.

REFERENCE: 1035



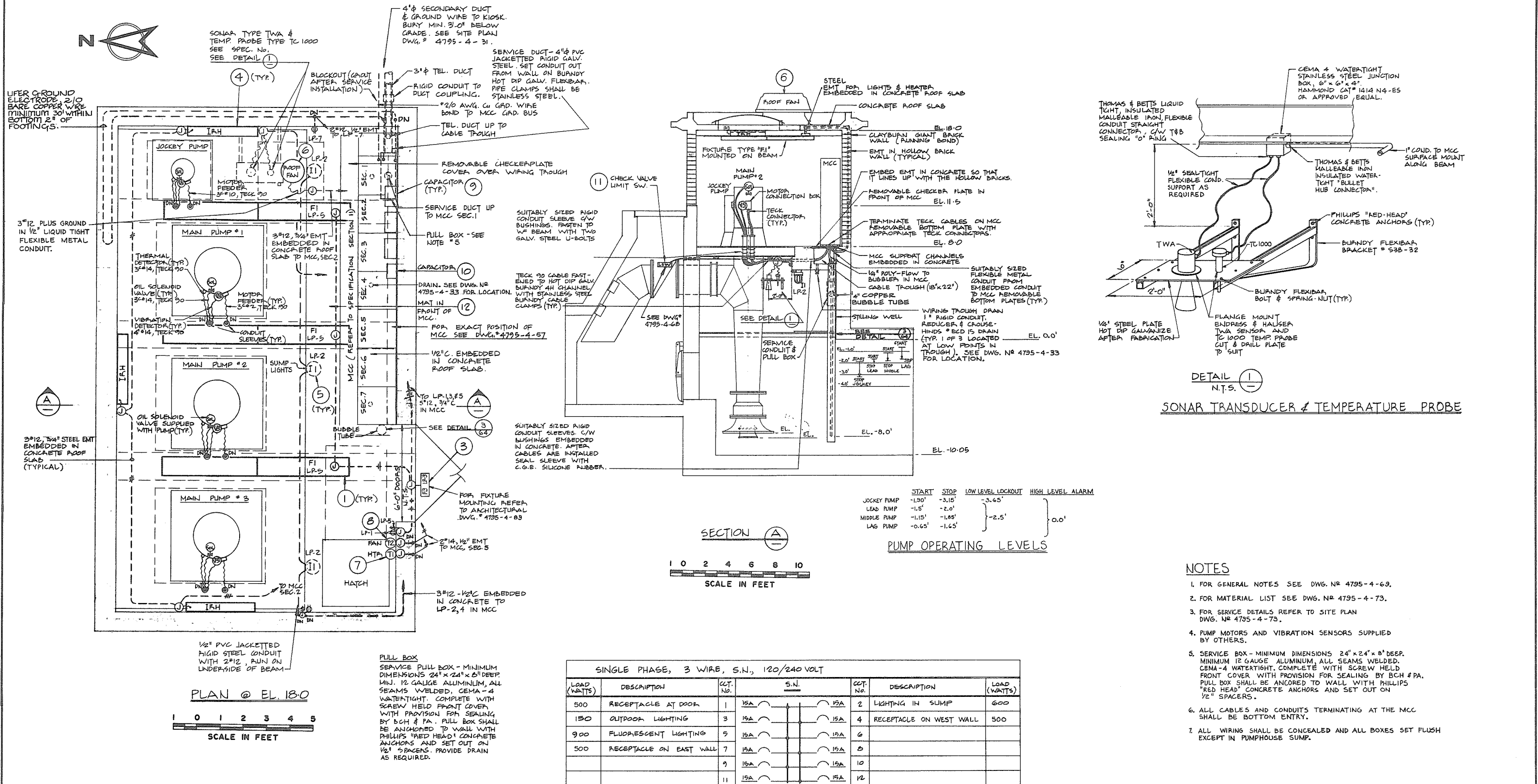
CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO. BY REVISIONS DATE

RECOMMENDED *Fuller*
CHIEF, PROJECTS DIV.
DATE *Aug 27/74*
APPROVED *Fuller*
DIRECTOR
DATE *Aug 27/74*

BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO.3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE
ELECTRICAL LAYOUT

DESIGNED *NB/MNB*
DRAWN *PB+*
CHECKED *MNB*
SCALE *AS SHOWN*
DWG. NO. *4795-4-73*
SHEET *OF* SHEETS



- NOTES**
- FOR GENERAL NOTES SEE DWG. NO. 4795-4-63.
 - FOR MATERIAL LIST SEE DWG. NO. 4795-4-73.
 - FOR SERVICE DETAILS REFER TO SITE PLAN DWG. NO. 4795-4-73.
 - PUMP MOTORS AND VIBRATION SENSORS SUPPLIED BY OTHERS.
 - SERVICE BOX - MINIMUM DIMENSIONS 24" x 24" x 8" DEEP. MINIMUM 12 GAUGE ALUMINUM, ALL SEAMS WELDED. CEMA-4 WATER TIGHT. COMPLETE WITH SCREW HELD FRONT COVER WITH PROVISION FOR SEALING BY BCH #PA. PULL BOX SHALL BE ANCHORED TO WALL WITH PHILLIPS "RED HEAD" CONCRETE ANCHORS AND SET OUT ON 1/2" SPACERS.
 - ALL CABLES AND CONDUITS TERMINATING AT THE MCC SHALL BE BOTTOM ENTRY.
 - ALL WIRING SHALL BE CONCEALED AND ALL BOXES SET FLUSH EXCEPT IN PUMPHOUSE SUMP.

MOTOR CONTROL CENTRE LIGHTING PANEL "LP"



PREPARED BY:
M. A. THOMAS & ASSOCIATES LTD.
CONSULTING ENGINEERS
VANCOUVER, B.C. CANADA



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

REFERENCE 1035

NO. BY

REVISIONS

DATE

RECOMMENDED: *M. A. Thomas*
CHIEF, PROJECTS DIV.
DATE: *Aug 27/74*
APPROVED: *M. A. Thomas*
DIRECTOR
DATE: *Aug 27/74*

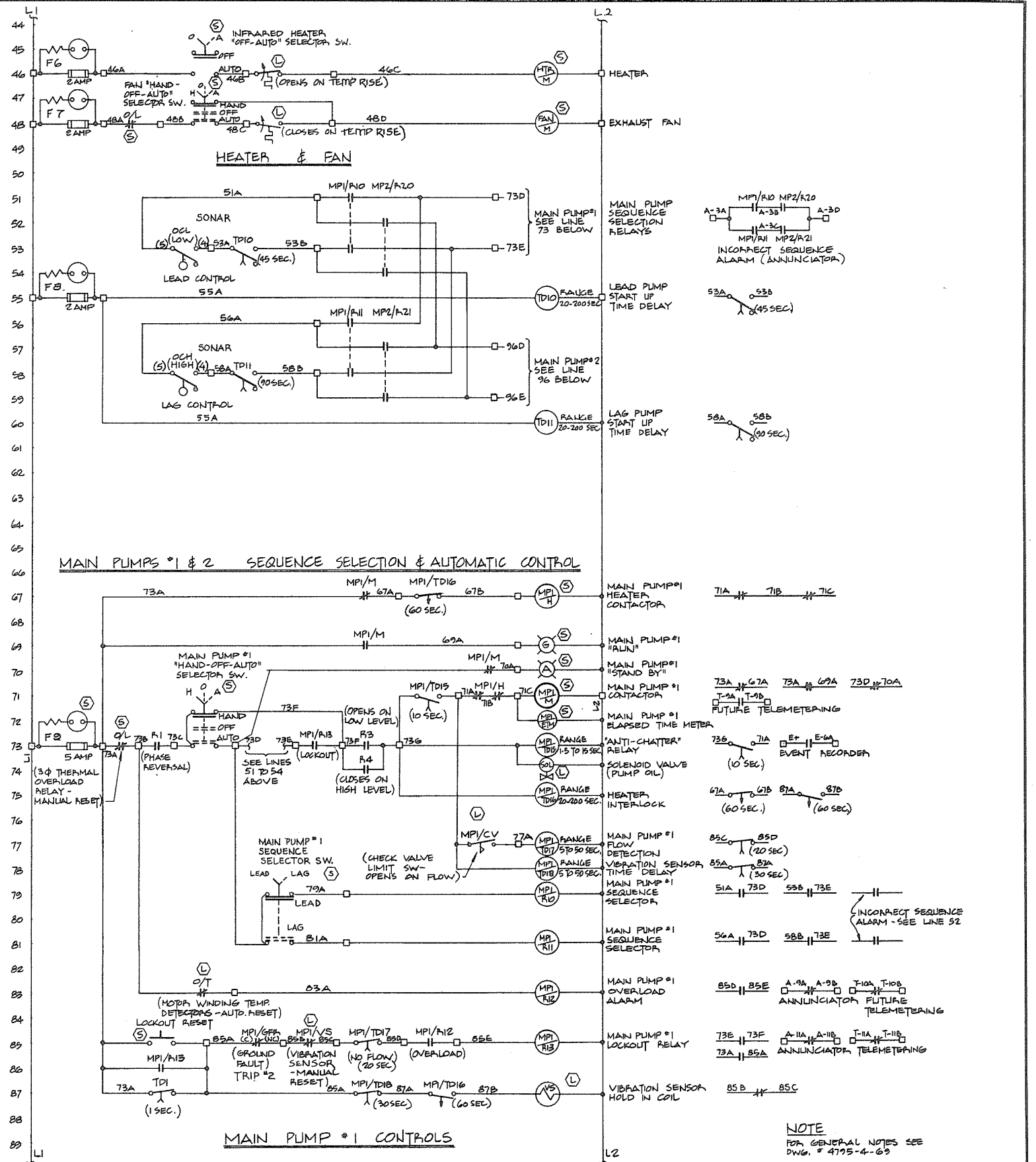
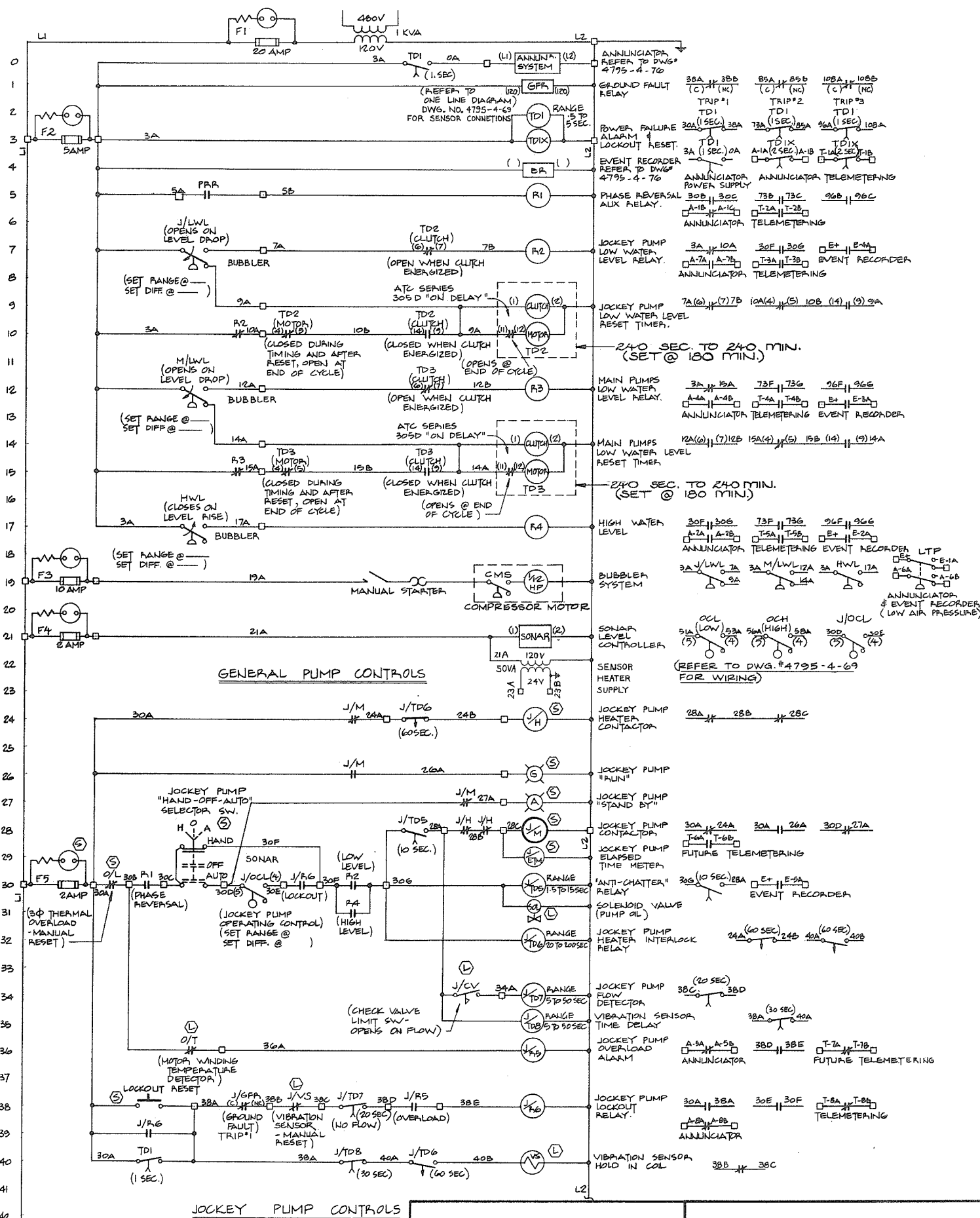
BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO.3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE
ELECTRICAL LAYOUT

DESIGNED: *NB/MNB*
DRAWN: *PS+*
CHECKED: *MNB*
SCALE: *AS SHOWN*
DWG. NO.: **4795-4-74
SHEET: *OF* SHEETS**

SURVEYED: *DATE*
FILE NO.: **0281550-C10-4**
DATE: **Aug. 1974**

No print requ'd

266 127



No print required

266128

JOCKEY PUMP CONTROLS



PREPARED BY:
M. A. THOMAS & ASSOCIATES LTD.
CONSULTING ENGINEERS
VANCOUVER B.C. CANADA

REFERENCE 1035



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO. BY

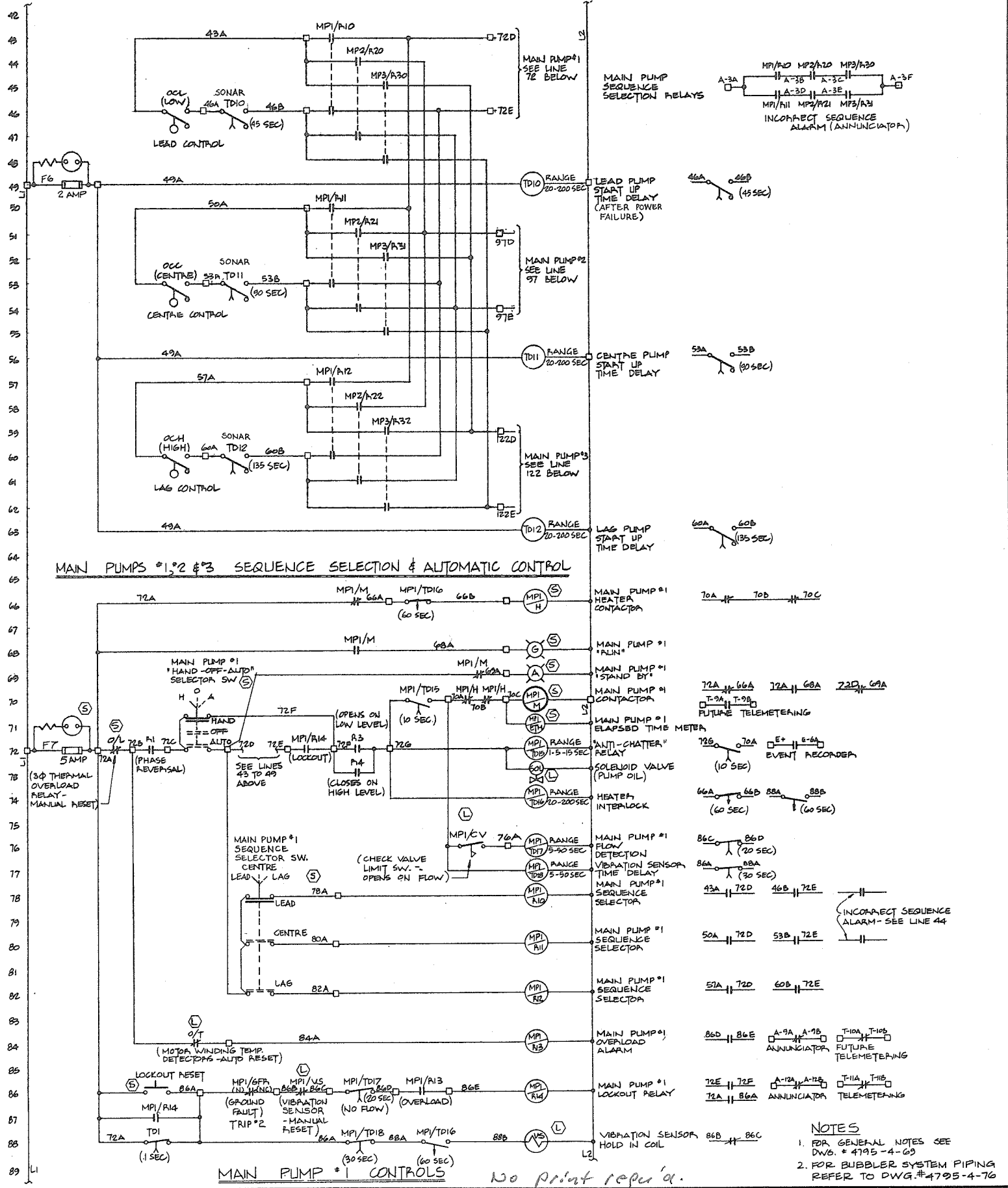
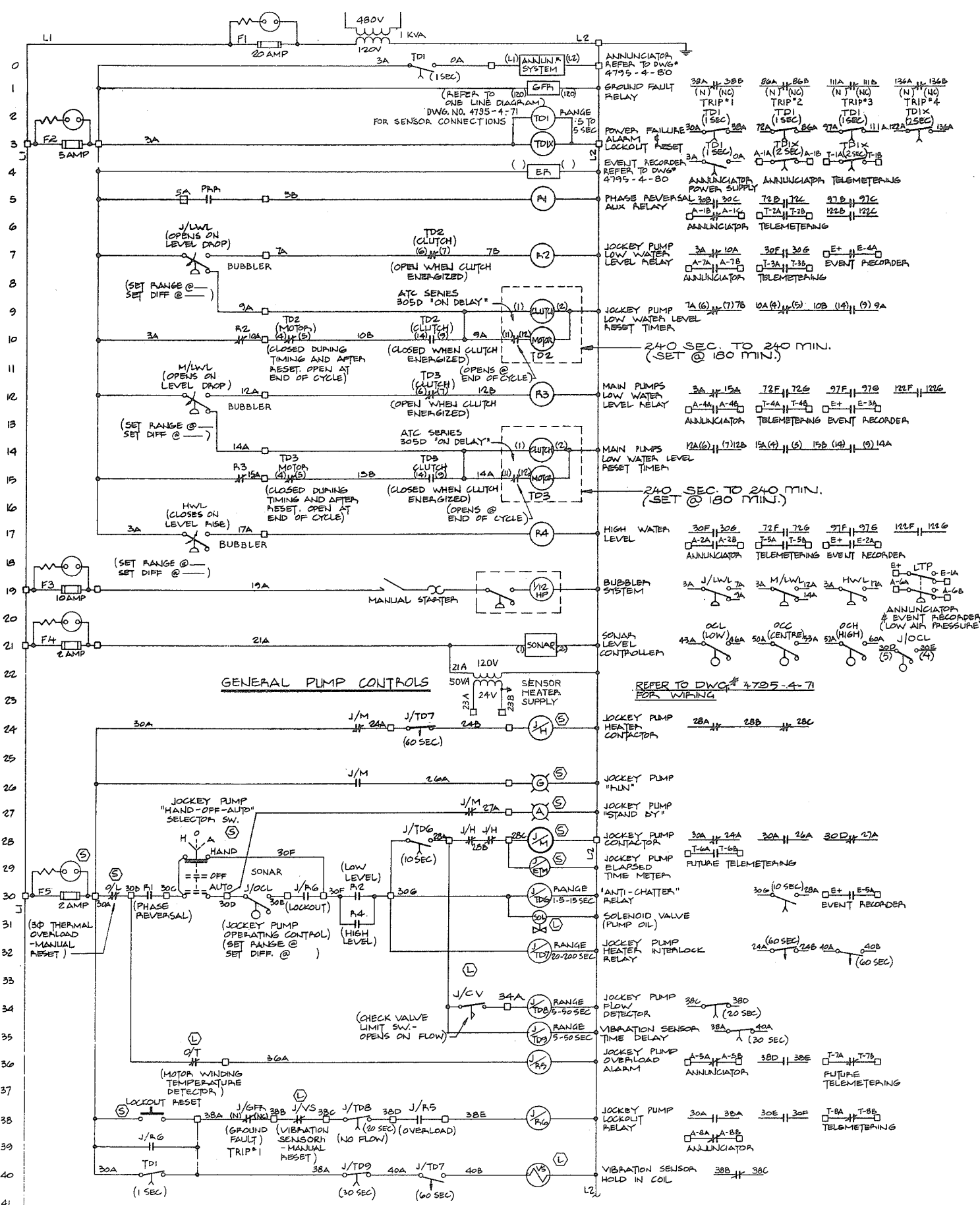
REVISIONS

DATE

RECOMMENDED *John Fella*
CHIEF, PROJECTS DIV.
DATE *Aug 27/74*
APPROVED *John Fella*
DIRECTOR
DATE *Aug 27/74*

BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO.3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO.4
CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE
ELECTRICAL SCHEMATIC DIAGRAM

DESIGNED *NB/MNB*
DRAWN *PD*
CHECKED *MNB*
SCALE *NONE*
DWS. NO. *4795-4-75A*
SHEET *1* OF *2* SHEETS



JOCKEY PUMP CONTROLS



PREPARED BY:
M.A. THOMAS & ASSOCIATES LTD.
CONSULTING ENGINEERS
VANCOUVER, B.C. - CANADA.

REFERENCE: 1035



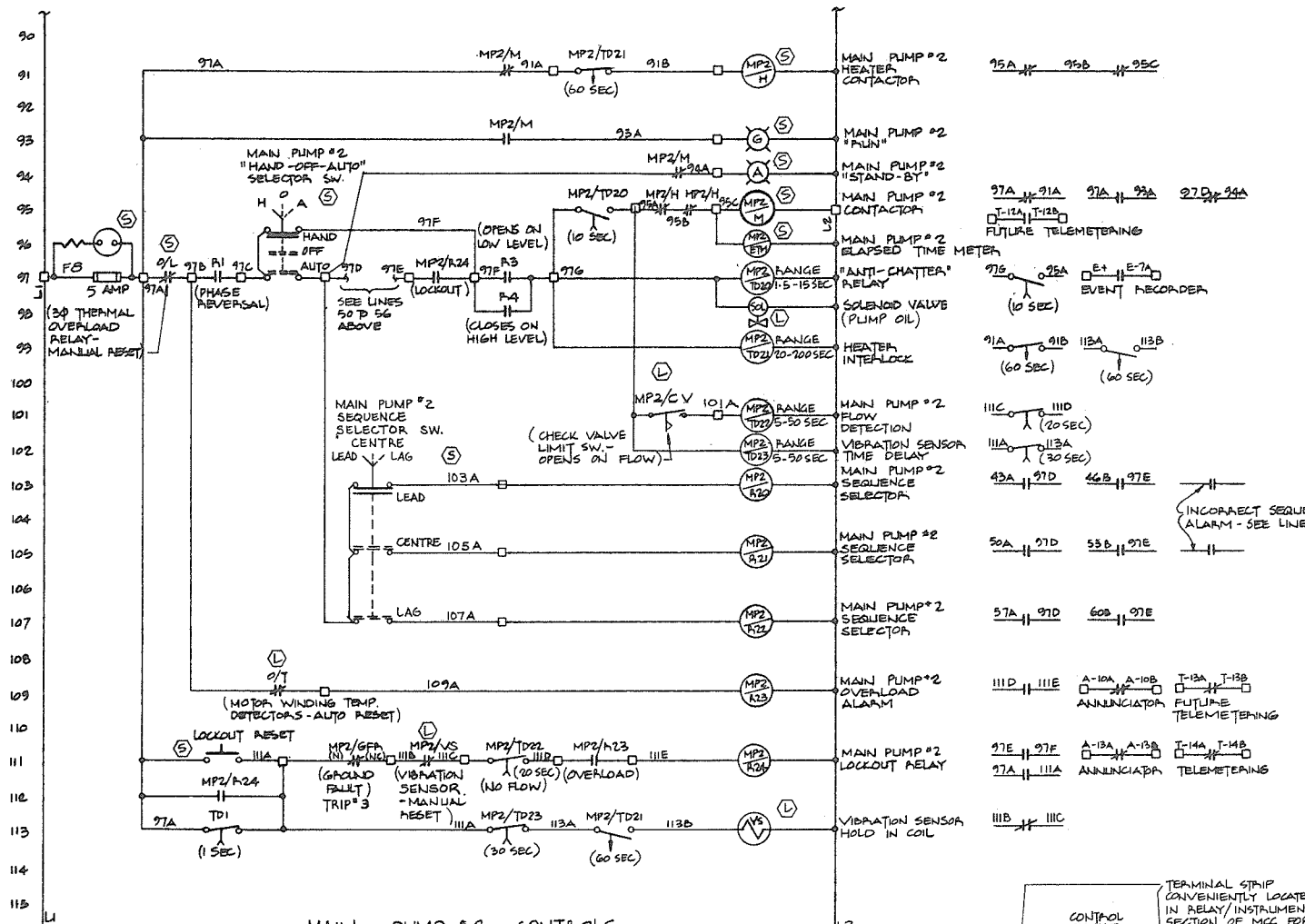
CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

RECOMMENDED: *John Fuller*
DATE: *Aug 27/74*
APPROVED: *Phyllis*
DATE: *Aug 28/74*

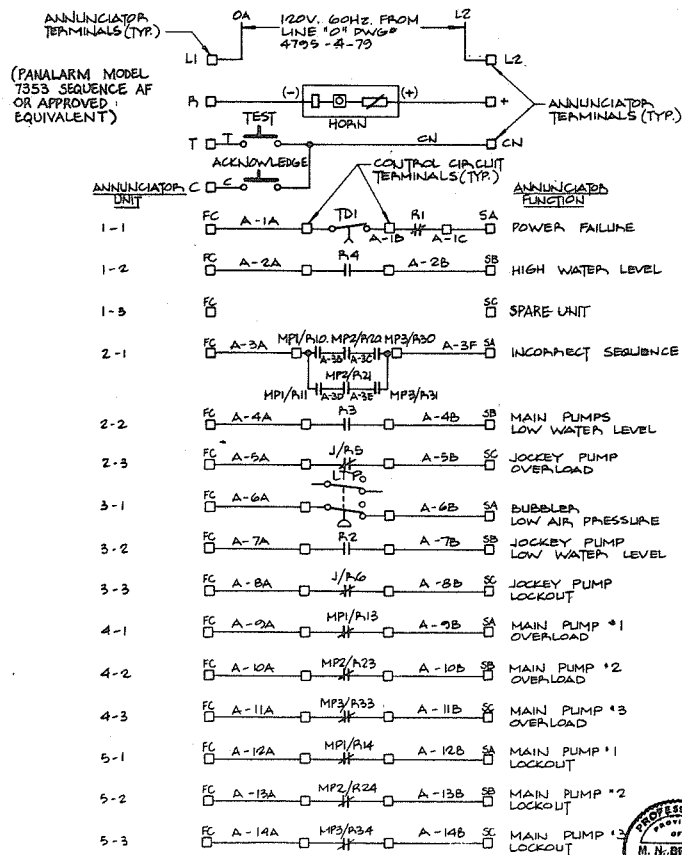
BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO.3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO.4
SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE
ELECTRICAL SCHEMATIC DIAGRAM

DESIGNED	NB/MNB	SURVEYED	
DRAWN	PB	DATE	
CHECKED	MNB	FILE NO.	0281550-C10-4
SCALE	NONE	DATE	Aug. 1974
DWG. NO.	4795-4-79	SHEET	1 OF 2 SHEETS

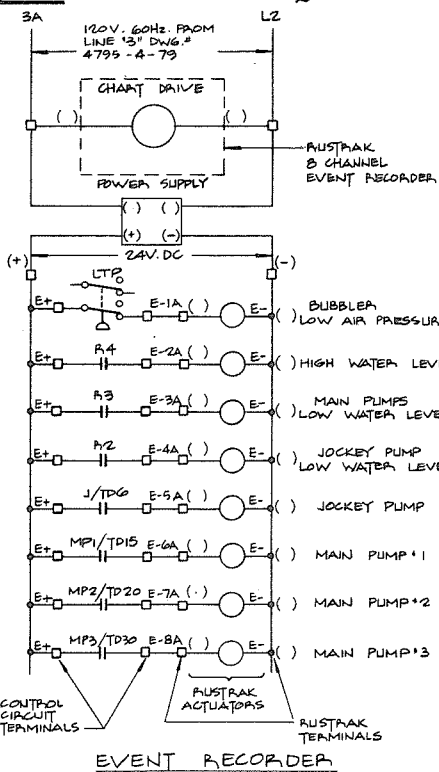
266132



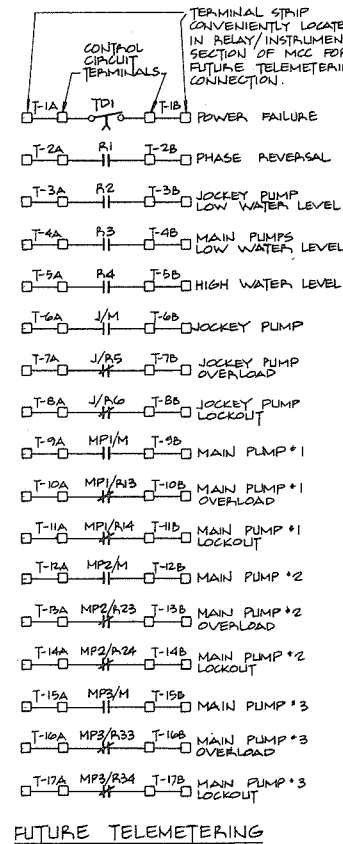
MAIN PUMP #2 CONTROLS



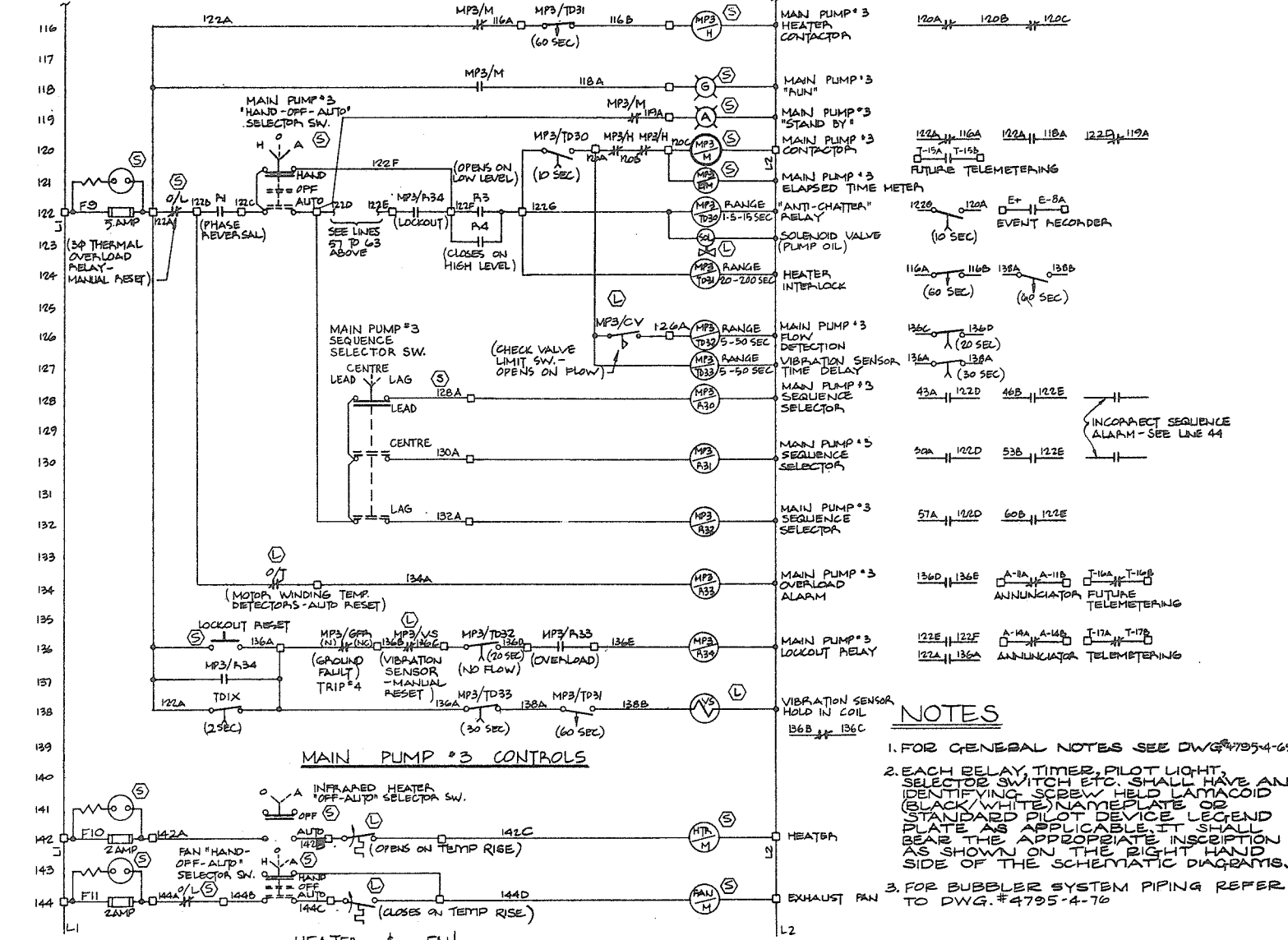
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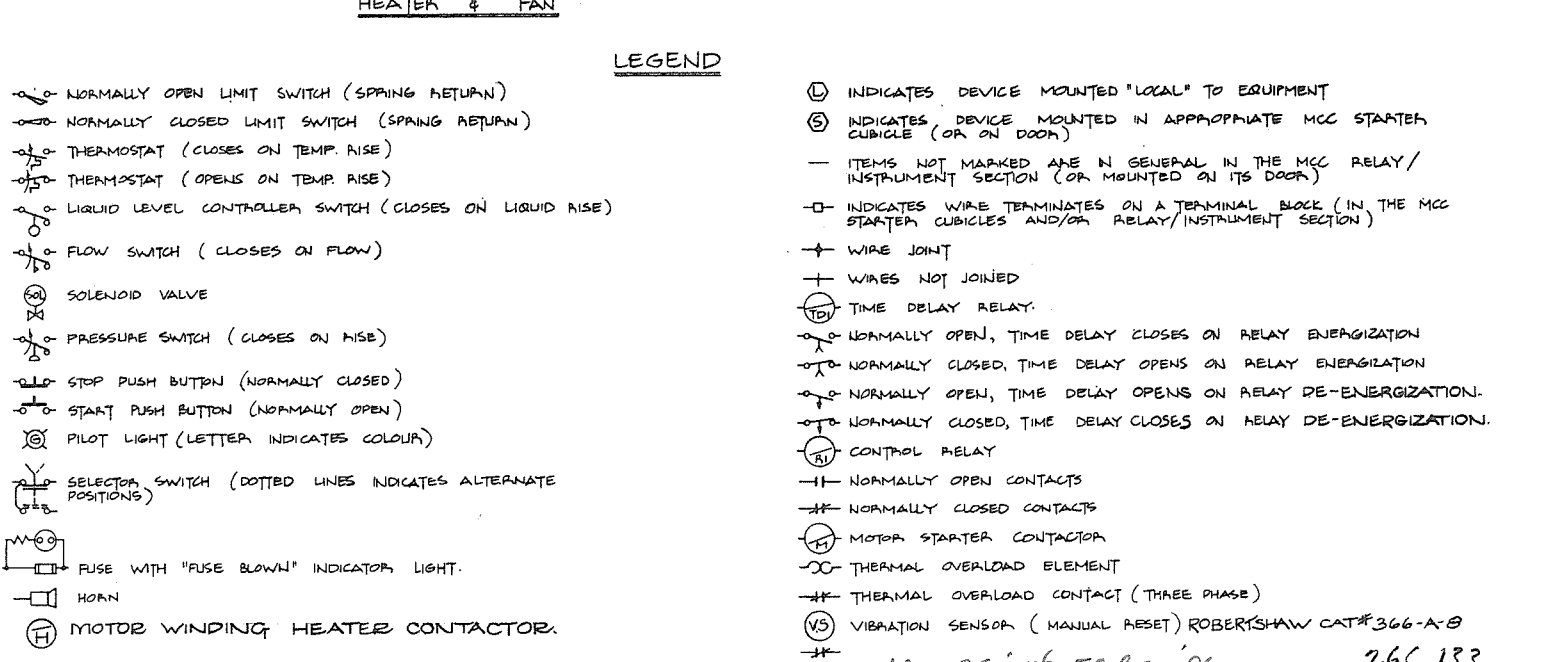
EVENT RECORDER



FUTURE TELEMETERING



MAIN PUMP #3 CONTROLS



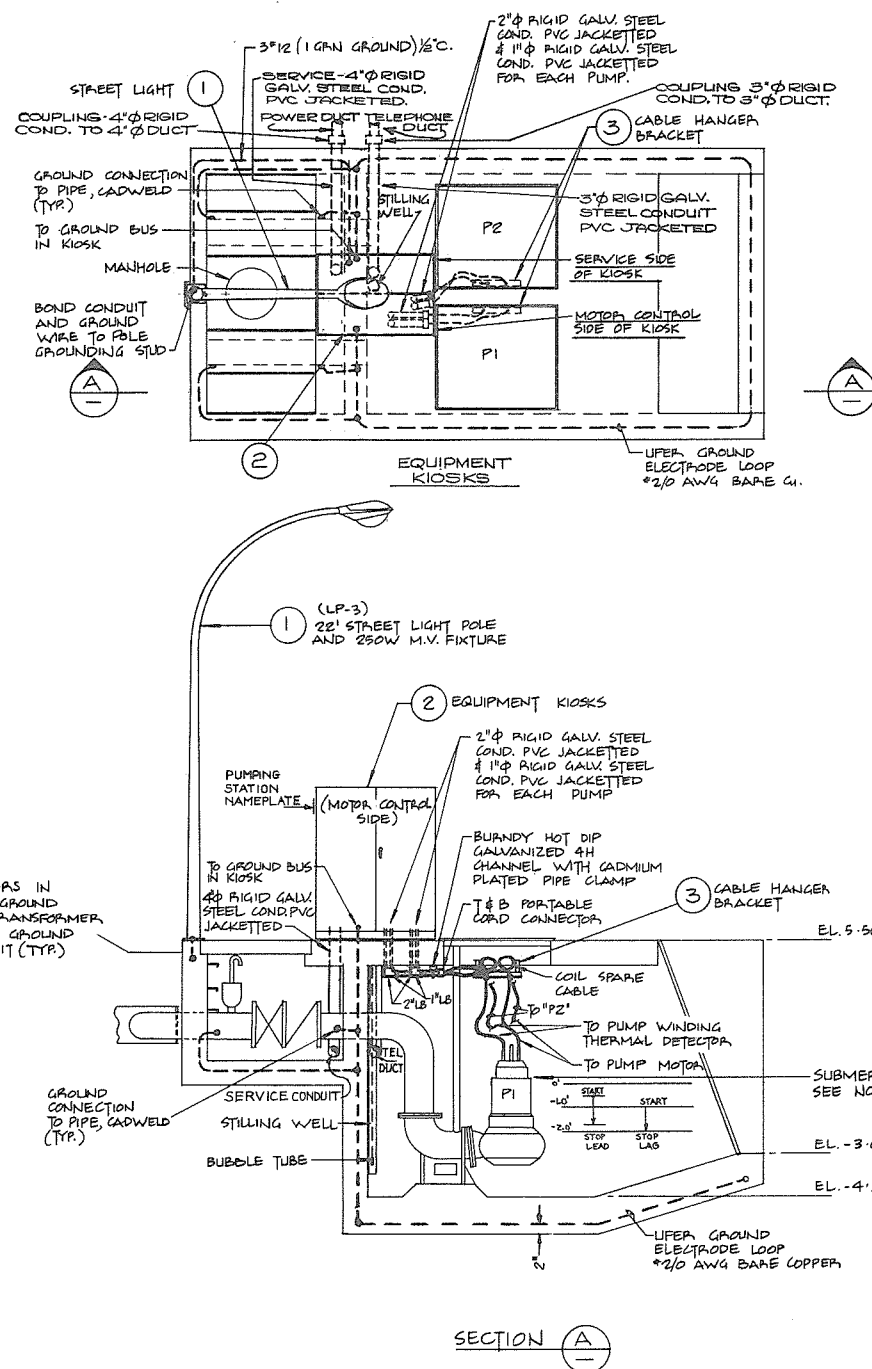
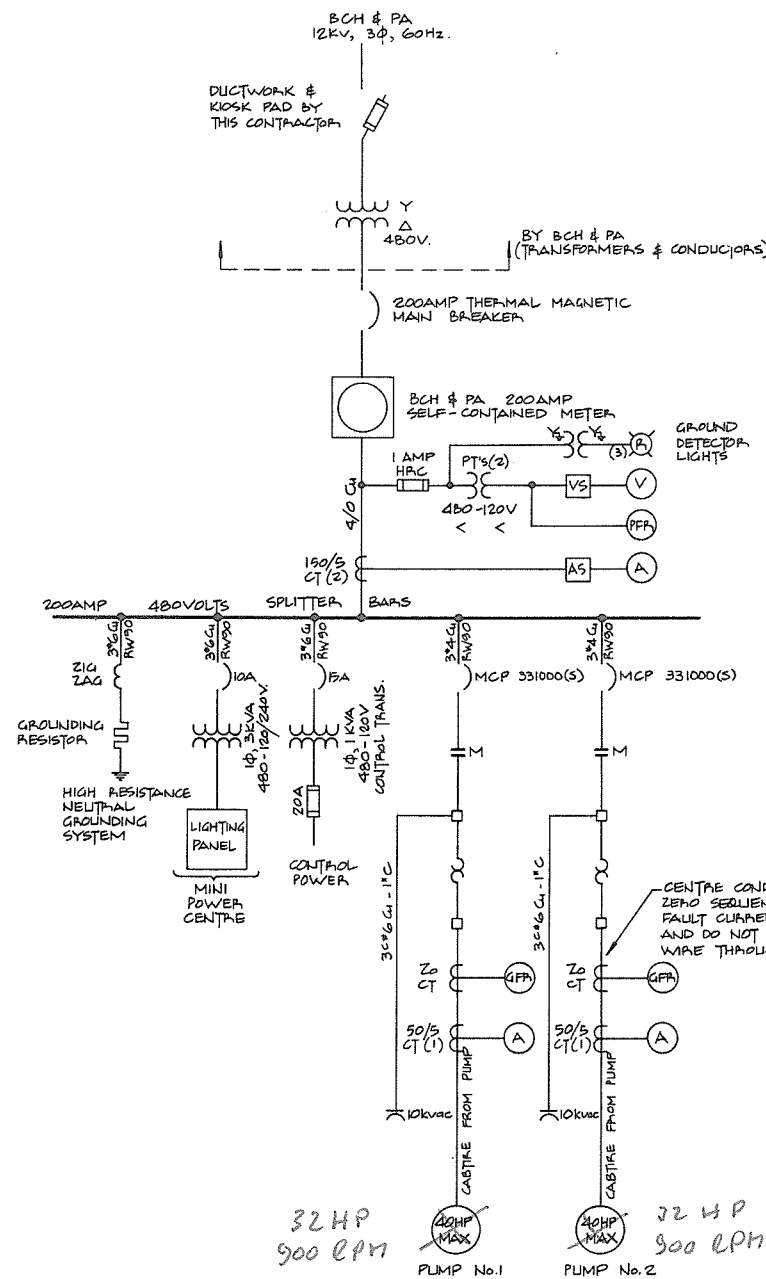
LEGEND

- NORMALLY OPEN LIMIT SWITCH (SPRING RETURN)
- NORMALLY CLOSED LIMIT SWITCH (SPRING RETURN)
- ⊗ THERMOSTAT (CLOSES ON TEMP. RISE)
- ⊕ THERMOSTAT (OPENS ON TEMP. RISE)
- ⊘ LIQUID LEVEL CONTROLLER SWITCH (CLOSES ON LIQUID RISE)
- ⊙ FLOW SWITCH (CLOSES ON FLOW)
- ⊚ SOLENOID VALVE
- ⊙ PRESSURE SWITCH (CLOSES ON RISE)
- ⊕ STOP PUSH BUTTON (NORMALLY CLOSED)
- ⊙ START PUSH BUTTON (NORMALLY OPEN)
- ⊙ PILOT LIGHT (LETTER INDICATES COLOUR)
- ⊙ SELECTOR SWITCH (DOTTED LINES INDICATES ALTERNATE POSITIONS)
- ⊙ FUSE WITH "FUSE BLOWN" INDICATOR LIGHT.
- ⊙ HORN
- ⊙ MOTOR WINDING HEATER CONTACTOR.
- ⊙ INDICATES DEVICE MOUNTED "LOCAL" TO EQUIPMENT
- ⊙ INDICATES DEVICE MOUNTED IN APPROPRIATE MCC STARTER CUBICLE (OR ON DOOR)
- ITEMS NOT MARKED ARE IN GENERAL IN THE MCC RELAY/INSTRUMENT SECTION (OR MOUNTED ON ITS DOOR)
- ⊙ INDICATES WIRE TERMINATES ON A TERMINAL BLOCK (IN THE MCC STARTER CUBICLES AND/OR RELAY/INSTRUMENT SECTION)
- ⊙ WIRE JOINT
- ⊙ WIRES NOT JOINED
- ⊙ TIME DELAY RELAY.
- ⊙ NORMALLY OPEN, TIME DELAY CLOSES ON RELAY ENERGIZATION
- ⊙ NORMALLY CLOSED, TIME DELAY OPENS ON RELAY ENERGIZATION
- ⊙ NORMALLY OPEN, TIME DELAY OPENS ON RELAY DE-ENERGIZATION.
- ⊙ NORMALLY CLOSED, TIME DELAY CLOSES ON RELAY DE-ENERGIZATION.
- ⊙ CONTROL RELAY
- ⊙ NORMALLY OPEN CONTACTS
- ⊙ NORMALLY CLOSED CONTACTS
- ⊙ MOTOR STARTER CONTACTOR
- ⊙ THERMAL OVERLOAD ELEMENT
- ⊙ THERMAL OVERLOAD CONTACT (THREE PHASE)
- ⊙ VIBRATION SENSOR (MANUAL RESET) ROBERTSHAW CAT#366-A-B

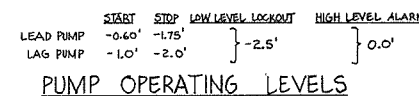
NOTES

- FOR GENERAL NOTES SEE DWG#4795-4-69
- EACH RELAY, TIMER, PILOT LIGHT, SELECTOR SWITCH ETC. SHALL HAVE AN IDENTIFYING SCREW HELED LAMACOID (BLACK/WHITE) NAMEPLATE OR STANDARD PILOT DEVICE LEGEND PLATE APPLICABLE. IT SHALL BEAR THE APPROPRIATE INSCRIPTION AS SHOWN ON THE RIGHT HAND SIDE OF THE SCHEMATIC DIAGRAMS.
- FOR BUBBLER SYSTEM PIPING REFER TO DWG.#4795-4-76

PREPARED BY: M.A. THOMAS & ASSOCIATES LTD. CONSULTING ENGINEERS VANCOUVER, B.C. — CANADA.		CBA ENGINEERING LTD. CONSULTING ENGINEERS - VANCOUVER - CANADA		RECOMMENDED <i>John Giller</i> CHIEF, PROJECTS DIV.		DESIGNED <i>NB/MNB</i> DRAWN <i>PB</i> CHECKED <i>MNB</i> SCALE <i>NONE</i> DWG. NO. 4795-4-80		SURVEYED DATE FILE NO. 0281550-C10-4 DATE Aug 1974 SHEET 2 OF 2 SHEETS	
REFERENCE: 1035				NO. BY REVISIONS DATE		DATE Aug 27/74 APPROVED <i>Phan</i> DIRECTOR		PROJECT NO.3 - THE TOWNSHIP OF RICHMOND CONTRACT NO.4 SHELL ROAD NORTH DRAINAGE DISCHARGE STRUCTURE ELECTRICAL SCHEMATIC DIAGRAM	



PLAN @ EL. 5.50



SINGLE PHASE, 3 WIRE, S.N., 120/240 VOLTS						
LOAD (WATTS)	DESCRIPTION	CT	S.N.	CT	DESCRIPTION	LOAD (WATTS)
100	FLUORESCENT LIGHTS	1	15A	2	SPARE	
250	STREET LIGHT	3	15A	4	"	
	DUPLEX RECEPTACLES	5	15A	6	"	
250	KIOSK HEATER	7	15A	8	"	

MINI POWER CENTRE LIGHTING PANEL

NOTES

- FOR GENERAL NOTES REFER TO DWG. 4795-4-69
- FOR UTILITY SERVICE DETAILS REFER TO SITE PLAN - DWG. 4795-4-32
- PUMP MOTORS SUPPLIED BY OTHERS.

KEY TO MATERIAL

- | ITEM # | DESCRIPTION |
|--------|---|
| 1 | (a) STREET LIGHTING POLE, 22FT. NOMINAL MOUNTING HEIGHT, HOT DIP GALVANIZED STEEL WITH 8FT. DAVIT SPAN, WITH HAND HOLE AND ANCHOR BOLTS, 5° ANGLE OF TILT, FOR UNDERGROUND WIRING, FOR USE WITH LUMINAIRE SPECIFIED BELOW, TENON TO SUIT. BARBER MACHINERY CO. (C.G.E.) "CASCADE" SERIES CAT. # 522D6SAB, OR APPROVED EQUIVALENT. |
| | (b) STREET LIGHT LUMINAIRE, 250WATT MERCURY VAPOR, INTEGRAL 120/240VOLT BALLAST, C.G.E. TYPE M250A, CAT. # 57830CIG COMPLETE WITH PHOTO-ELECTRIC CONTROL AND 250WATT CLEAR MERCURY VAPOR LAMP. ADJUST BULB SOCKET TO POSITION #2 FOR IES DISTRIBUTION M-S-II |
| 2 | EQUIPMENT KIOSK CONSTRUCTED AS SHOWN ON DWG. 4795-4-62 "DUCK ISLAND - EQUIPMENT KIOSK" AND AS SPECIFIED IN CONTRACT 4 SUBSECTION 120B |
| 3 | CABLE HANGER BRACKET, FLYGT CANADA LTD. CAT. # 002-00-06 OR APPROVED EQUIVALENT COMPLETE WITH PORTABLE CORD CONNECTORS TO SUIT PUMP MOTOR CABLES. |

LEGEND

- (TYP) TYPICAL
- THERMOSTAT (CLOSES ON TEMP. RISE)
 - THERMOSTAT (OPENS ON TEMP. RISE)
 - (S)— SOLENOID VALVE
 - (P)— PRESSURE SWITCH (CLOSES ON RISE)
 - (P)— PRESSURE SWITCH (OPENS ON DROP)
 - (C)— STOP PUSH BUTTON (NORMALLY CLOSED)
 - (O)— START PUSH BUTTON (NORMALLY OPEN)
 - (L)— PILOT LIGHT (LETTER INDICATES COLOUR)
 - (S)— SELECTOR SWITCH (DOTTED LINES INDICATE ALTERNATIVE POSITIONS)
 - (F)— FUSE WITH "FUSE BLOWN" INDICATOR LIGHT
 - (H)— HORN
 - (L)— INDICATES DEVICE MOUNTED "LOCAL" TO EQUIPMENT.
 - (S)— INDICATES DEVICE MOUNTED IN APPROPRIATE MCC STARTER CUBICLE (IN KIOSK).
 - (R)— INDICATES DEVICE MOUNTED IN RELAY PANEL SECTION OF KIOSK.
 - (B)— INDICATES DEVICE MOUNTED IN BUBBLER SYSTEM PANEL (IN KIOSK).
 - (T)— INDICATES WIRE TERMINATES ON A TERMINAL BLOCK (IN THE MCC STARTER CUBICLES AND/OR RELAY SECTION).
 - (J)— WIRE JOINT
 - (N)— WIRES NOT JOINED
 - (TD)— TIME DELAY RELAY
 - (O)— NORMALLY OPEN, TIME DELAY CLOSING ON RELAY ENERGIZATION.
 - (C)— NORMALLY CLOSED, TIME DELAY OPENING ON RELAY ENERGIZATION.
 - (O)— NORMALLY OPEN, INSTANTANEOUS CLOSING, TIME DELAY OPENING ON RELAY DE-ENERGIZATION.
 - (C)— NORMALLY CLOSED, INSTANTANEOUS OPENING, TIME DELAY CLOSING ON RELAY DE-ENERGIZATION.
 - (R)— CONTROL RELAY
 - (O)— NORMALLY OPEN CONTACTS
 - (C)— NORMALLY CLOSED CONTACTS
 - (M)— MOTOR STARTER CONTACTS
 - (O)— THERMAL OVERLOAD ELEMENT
 - (C)— THERMAL OVERLOAD CONTACT (THREE PHASE)
 - (R)— SOLID STATE GROUND FAULT RELAY (ZERO SEQUENCE TYPE)



PREPARED BY:
M.A. THOMAS & ASSOCIATES LTD.
CONSULTING ENGINEERS
VANCOUVER, B.C. - CANADA

REFERENCE: 1035



CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

NO.

BY

REVISIONS

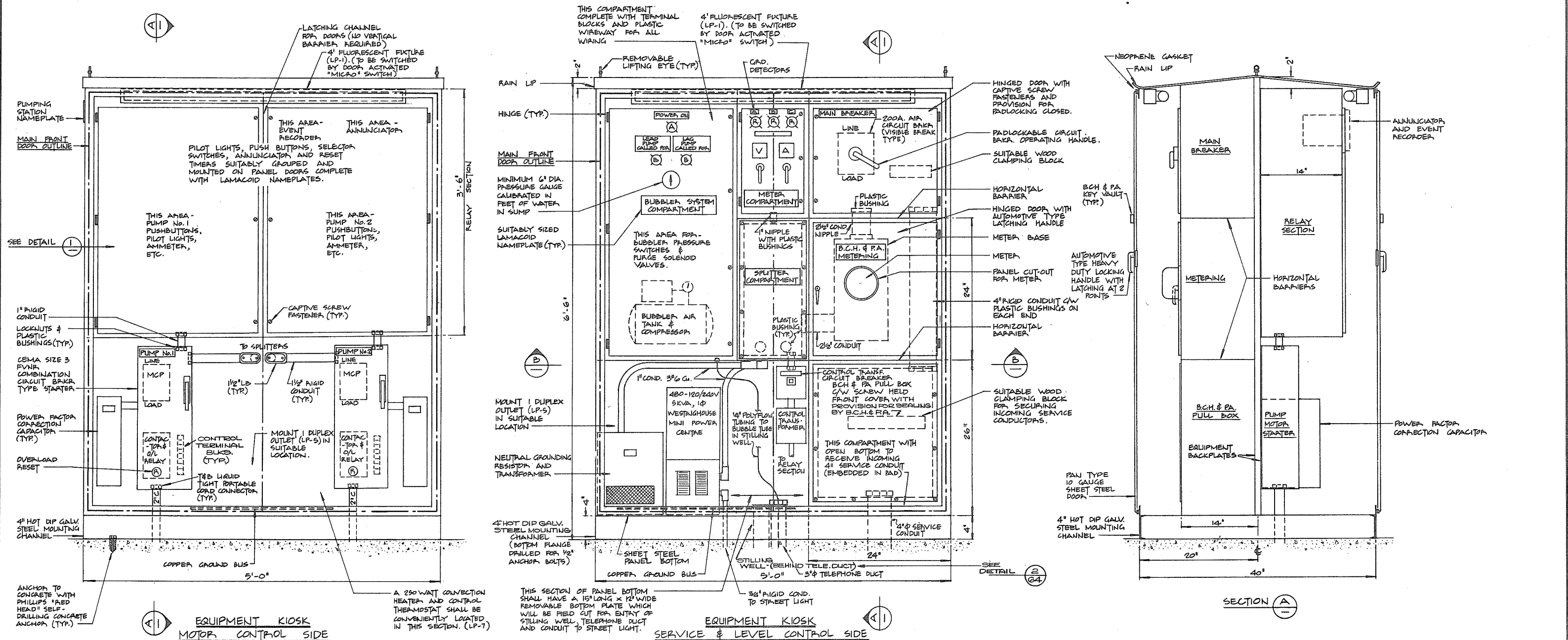
DATE

RECOMMENDED *W. G. Fuller*
CHIEF, PROJECTS DIV.
DATE *Aug 27/74*
APPROVED *W. G. Fuller*
DIRECTOR
DATE *Aug 28/74*

BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
DUCK ISLAND DRAINAGE DISCHARGE STRUCTURE
ONE LINE DIAGRAM AND ELECTRICAL LAYOUT

DESIGNED	NB	SURVEYED	
DRAWN	PB	DATE	
CHECKED	MNB	FILE NO.	0281550-C10-4
SCALE	1/4"=1'-0"	DATE	Aug 1974
DWG. NO.	4795-4-81 A	SHEET	OF SHEETS

No print
266 134



NOTES

- FOR GENERAL NOTES SEE DWG. 4795-4-69
- THE EQUIPMENT KIOSK SHALL BE CONSTRUCTED AND WIRING AS PER CONTRACT 4 SUBSECTION 10.05 ALL INCLUDED EQUIPMENT SHALL BE NEW, CSA APPROVED AND AS SPECIFIED IN THE ABOVE CONTRACT. THE KIOSK SHALL BEAR A CSA APPROVALS LABEL.
- THE OUTER SURFACES OF THE KIOSK SHALL BE CONSTRUCTED OF MINIMUM 10 GAUGE SHEET STEEL.
- THE KIOSK SHALL BE CONSTRUCTED TO CEMA 4 "WATERTIGHT" SPECIFICATIONS.
- THE KIOSK SHALL BE PROTECTED AGAINST THE WEATHER AND CORROSION BY APPLICATION OF A SPECIAL CORROSION RESISTANT FINISH. REFER TO SPECIFICATION SUBSECTION 10.05 (2).
- ALL WIRES SHALL BE IDENTIFIED AT EACH END WITH THE APPROPRIATE DESIGNATIONS AS SHOWN ON THE SCHEMATIC DIAGRAM. WIRE MARKERS SHALL BE OF THE TUBULAR PLASTIC TYPE.
- TERMINAL BLOCKS SHALL BE INSTALLED AS SHOWN ON THE DRAWINGS AND AS REQUIRED TO ENSURE ALL WIRING FROM ONE COMPARTMENT TO ANOTHER IS FROM TERMINAL BLOCK TO TERMINAL BLOCK. ALL TERMINAL BLOCKS SHALL BE IDENTIFIED WITH THE APPROPRIATE WIRE NUMBER.
- ALL COMPARTMENTS, PILOT DEVICES, RELAYS AND SIMILAR SHALL HAVE STANDARD ENGRAVED METAL LEGEND PLATES OR SCREW HELD LAMACOID NAMEPLATES.
- CONNECTIONS FOR INTERIOR LIGHTS, CONVENIENCE OUTLETS AND SPACE HEATER NOT SHOWN. REFER TO SPECIFICATION SUBSECTION 10.05 (F).

2 0 4 8 12 16 20
SCALE IN INCHES

266125

PREPARED BY:
M.A. THOMAS & ASSOCIATES LTD.
CONSULTING ENGINEERS
VANCOUVER, B.C. CANADA.



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CONSULTING ENGINEERS - VANCOUVER - CANADA

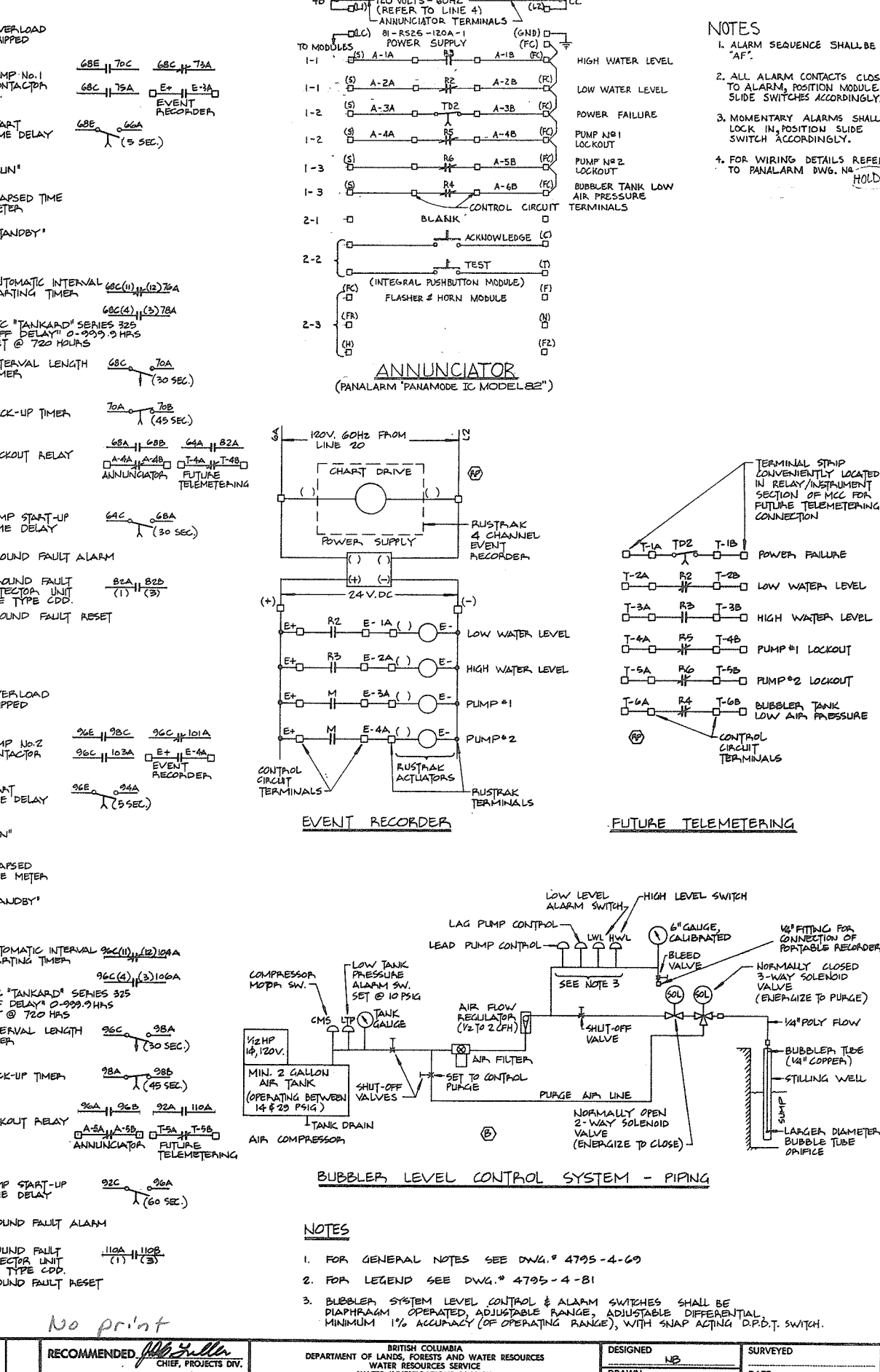
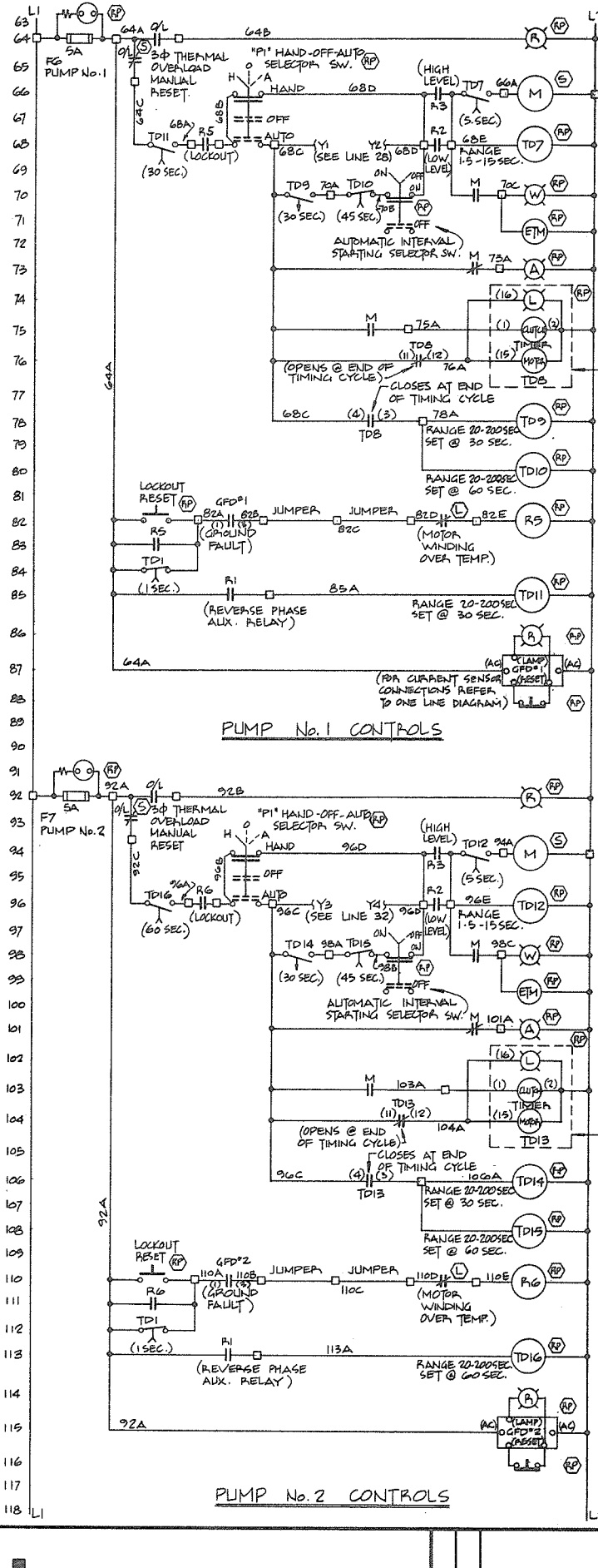
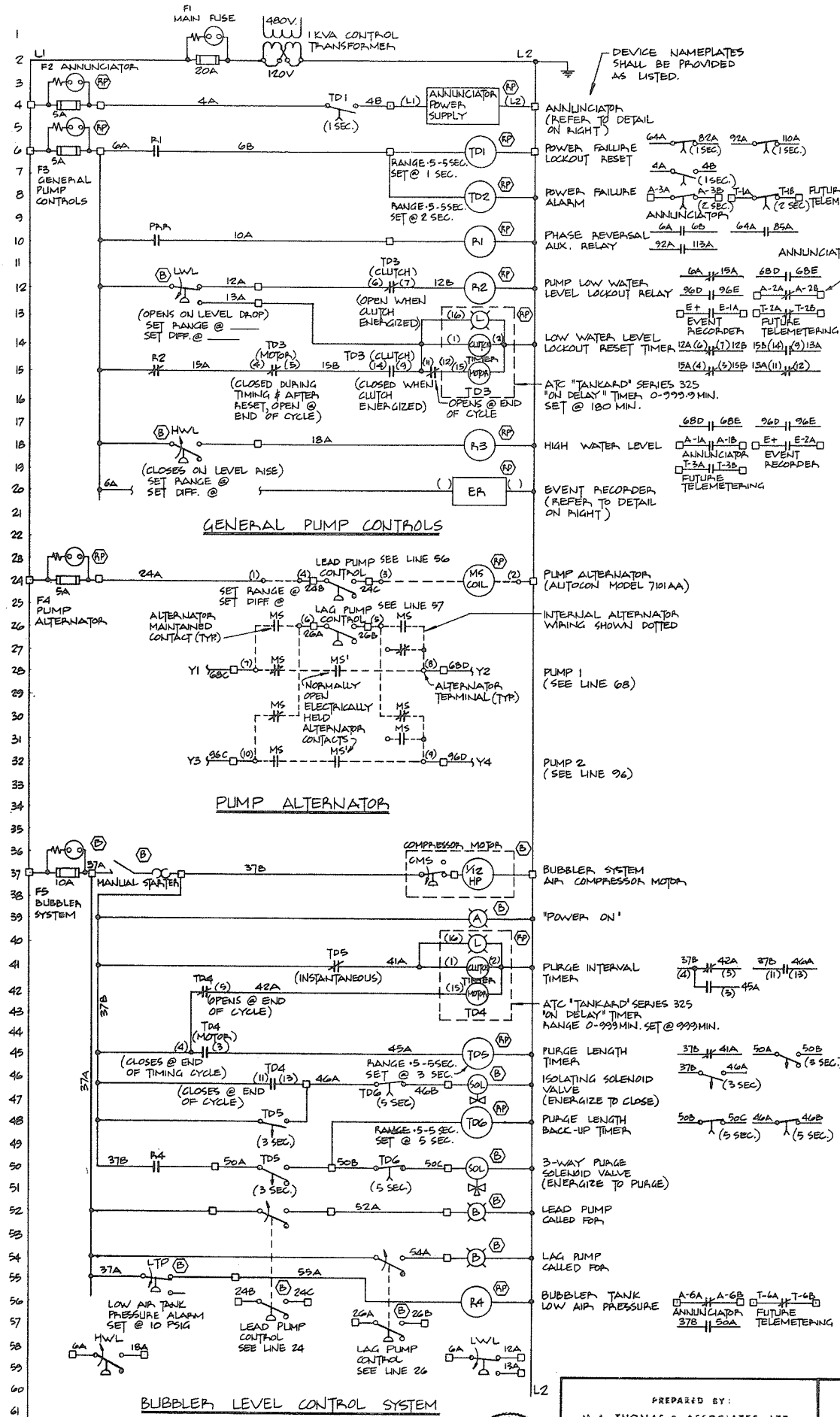
REFERENCE: 1035

NO. BY REVISIONS DATE

RECOMMENDED *John Fuller*
CHIEF, PROJECTS DIV.
DATE *Aug 27/74*
APPROVED *John Fuller*
DIRECTOR
DATE *Aug 27/74*

BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
DUCK ISLAND DRAINAGE DISCHARGE STRUCTURE
EQUIPMENT KIOSK

DESIGNED <i>JB</i>	SURVEYED
DRAWN <i>PB</i>	DATE
CHECKED <i>MNB</i>	FILE NO. <i>0281550 - C10 - 4</i>
SCALE <i>1/8" = 1"</i>	DATE <i>Aug 1974</i>
DWG. NO. <i>4795-4-82</i>	SHEET <i>OF</i> SHEETS



- NOTES**
1. ALARM SEQUENCE SHALL BE "AF".
 2. ALL ALARM CONTACTS CLOSE TO ALARM, POSITION MODULE, SLIDE SWITCHES ACCORDINGLY.
 3. MOMENTARY ALARMS SHALL LOCK IN, POSITION SLIDE SWITCH ACCORDINGLY.
 4. FOR WIRING DETAILS REFER TO PANALARM DWG. NO. 4795-4-81.

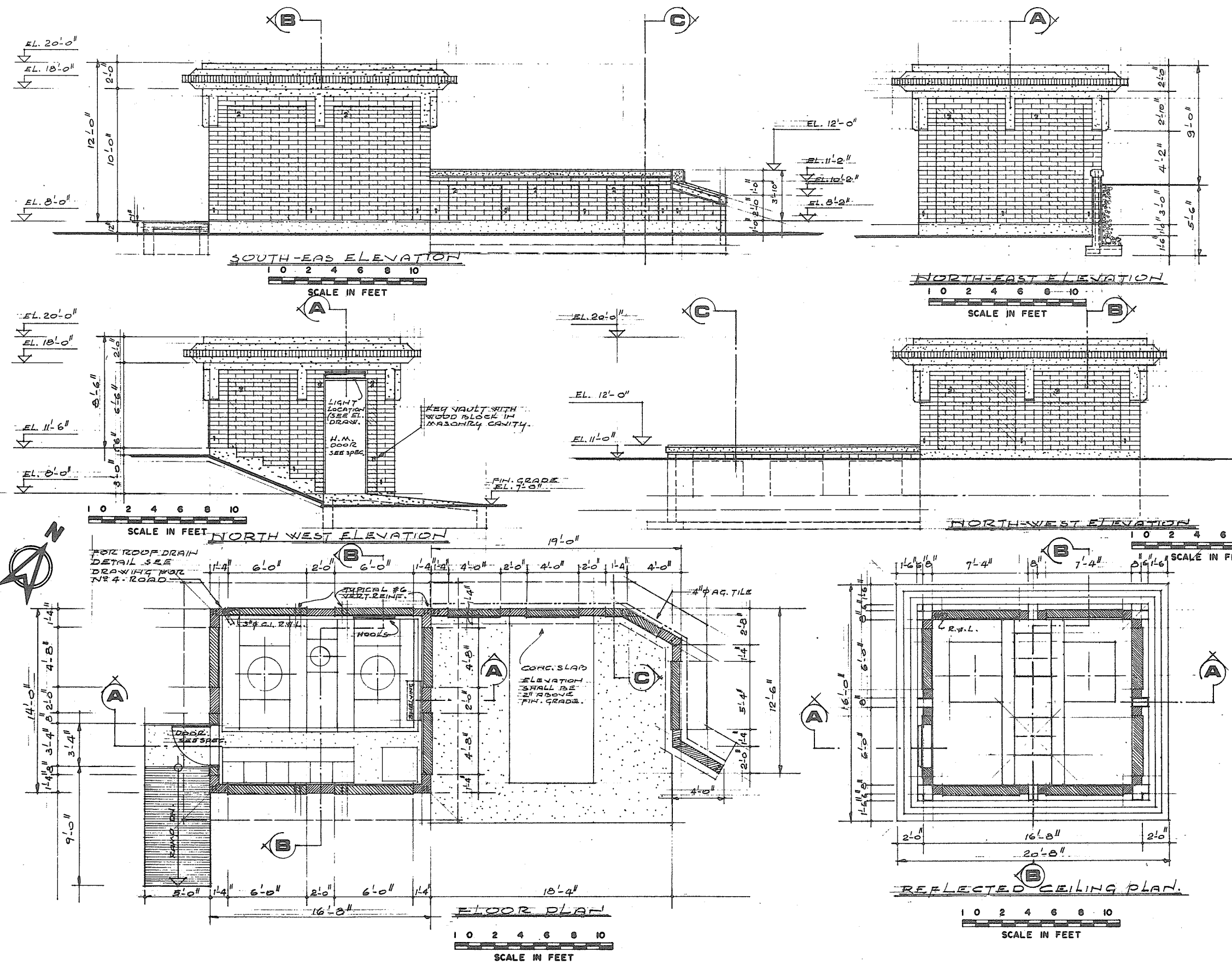
PREPARED BY:
M.A. THOMAS & ASSOCIATES LTD.
CONSULTING ENGINEERS
VANCOUVER, B.C. CANADA

CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

RECOMMENDED *Phil Shiller*
DATE *Aug 27/74*
APPROVED *Phil Shiller*
DATE *Aug 27/74*

BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
DUCK ISLAND DRAINAGE DISCHARGE STRUCTURE
ELECTRICAL SCHEMATIC DIAGRAM

DESIGNED	NS	SURVEYED	
DRAWN	PD	DATE	
CHECKED	MNS	FILE NO.	0281550 - C10-4
SCALE	N.T.S.	DATE	Aug 1974
DWG. NO.	4795-4-83	SHEET	OF SHEETS

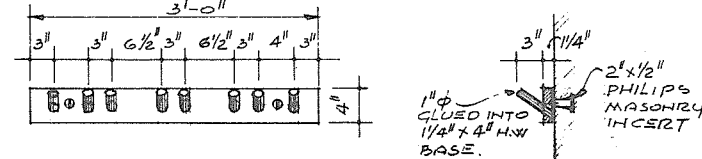


LEGEND

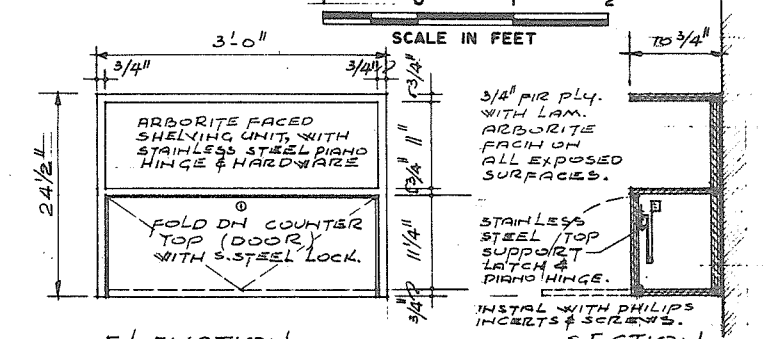
- GIANT BRICK "WESTERN BUTT" COLOR.
- GIANT BRICK "CHESTNUT" COLOR.

NOTE

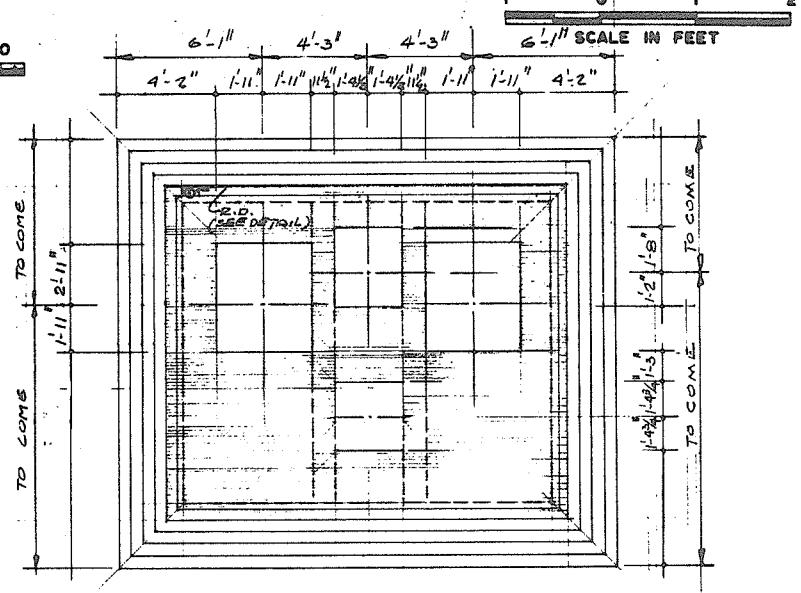
ALL BRICK MATERIAL SHALL BE GIANT CLAY TYPE, MANUFACTURED BY CANADIAN REFRACTORIES DIVISION - DRESSER INDUSTRIES LTD. OR EQUAL.



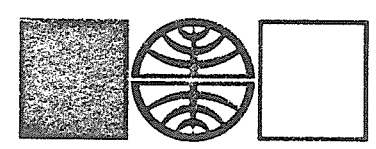
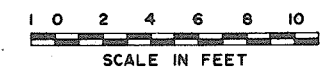
ELEVATION (MAPLEWOOD) COAT & TOOL HOOKS.



ELEVATION ONE REQUIRED (ARBORITE H2 822) SHELVING DETAILS



ROOF PLAN



prepared by
TATTERSFIELD/KOVACS/GIBBON ASSOCIATES LTD.
LAND DESIGN

201 - 1008 HOMER STREET
VANCOUVER 3, B.C.
(604) 685-6484



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CONSULTING ENGINEERS - VANCOUVER - CANADA

NO.	BY	REVISIONS	DATE
1	A		

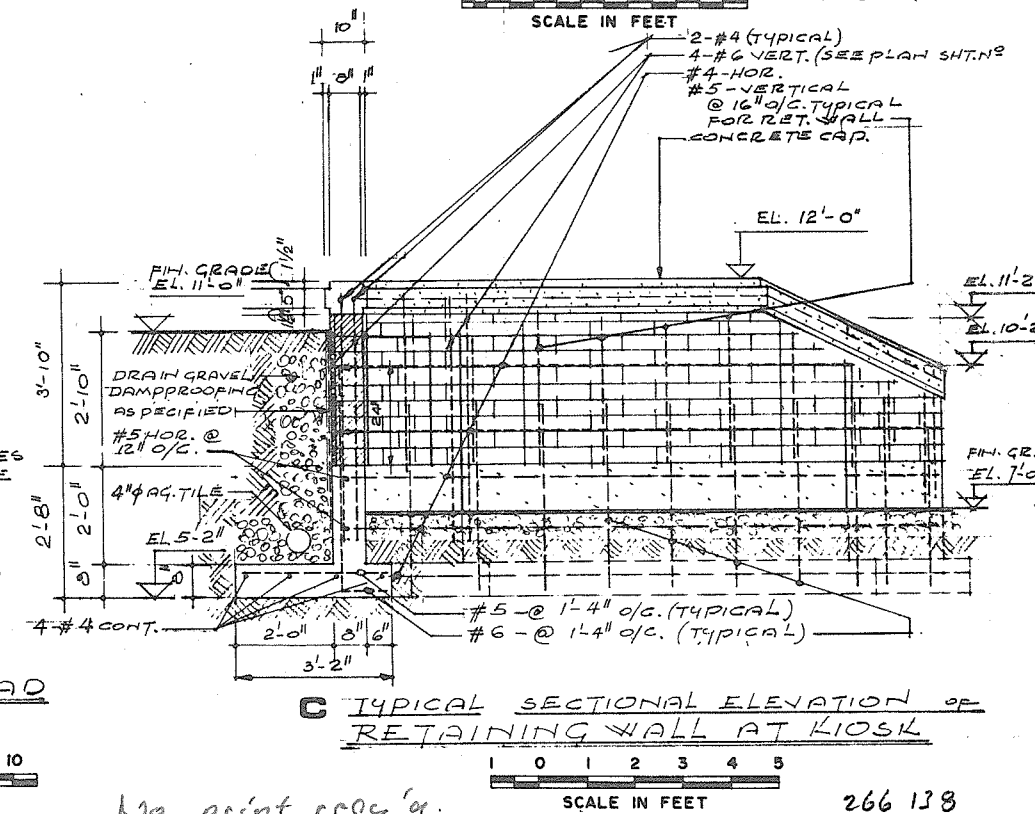
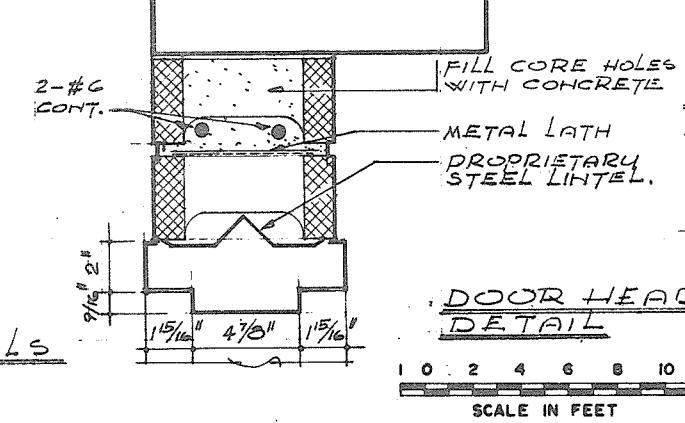
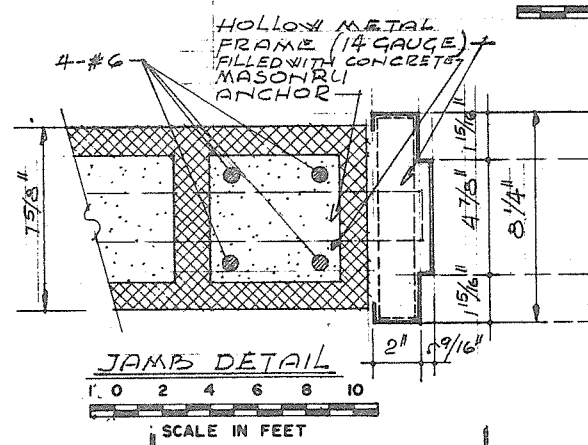
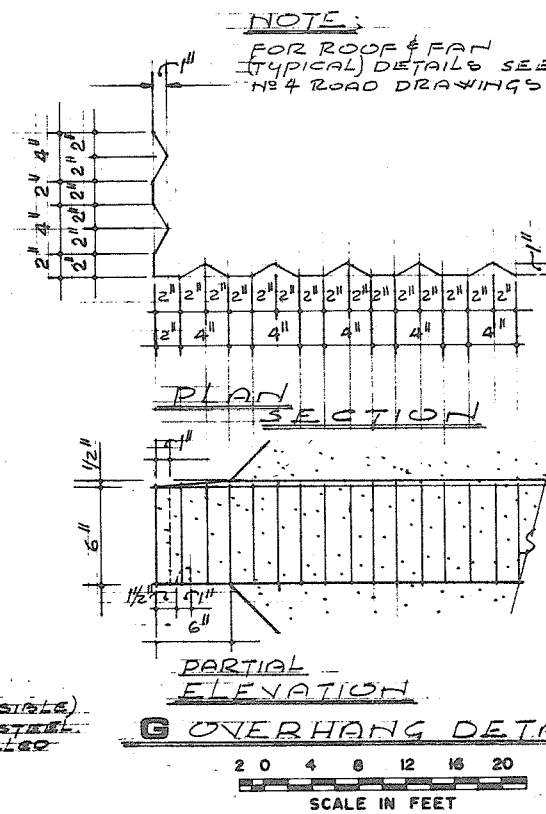
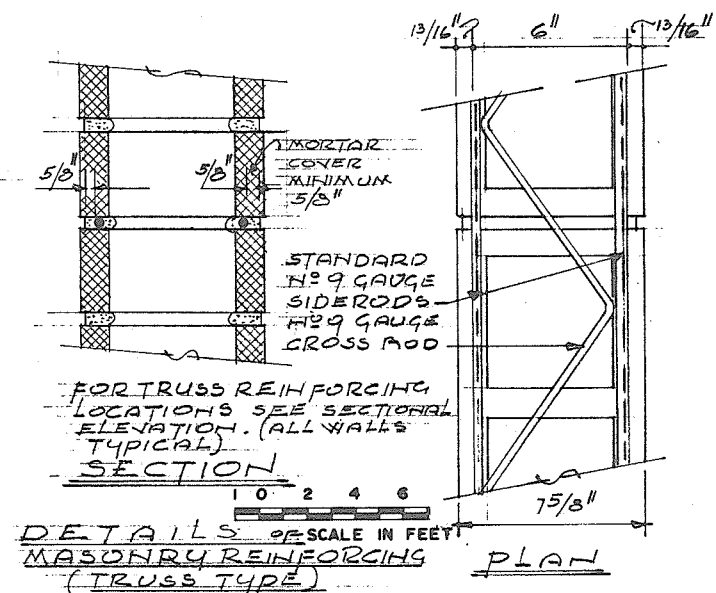
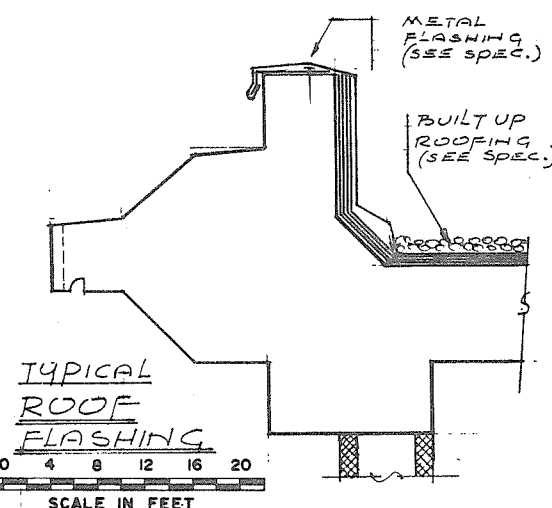
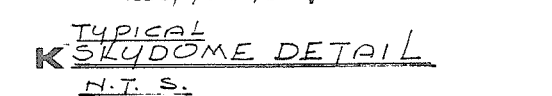
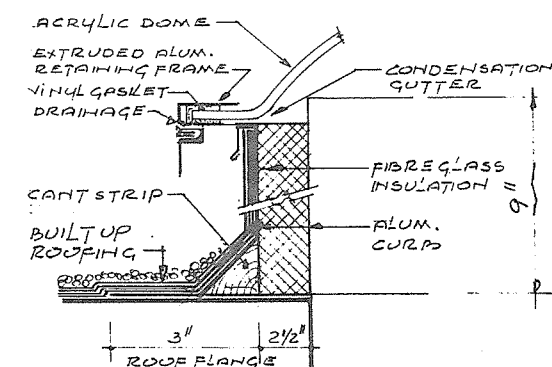
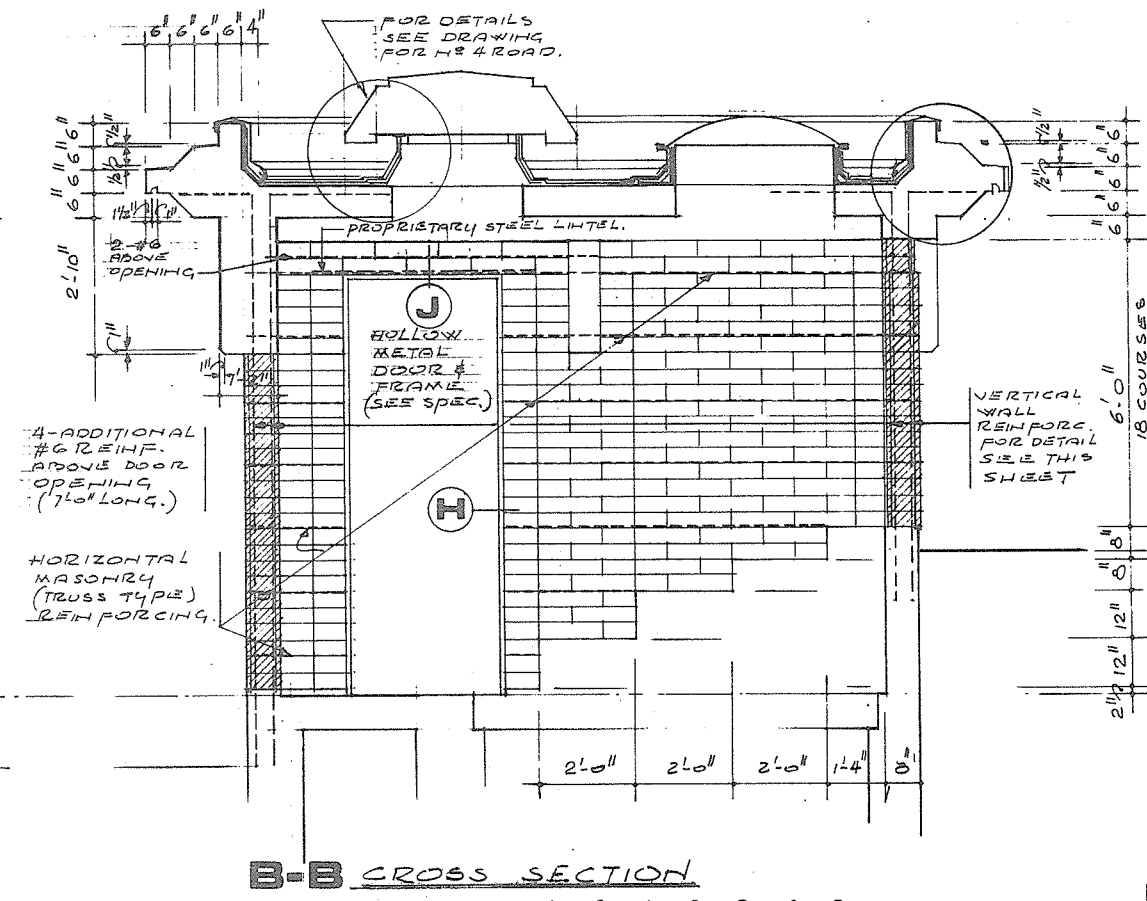
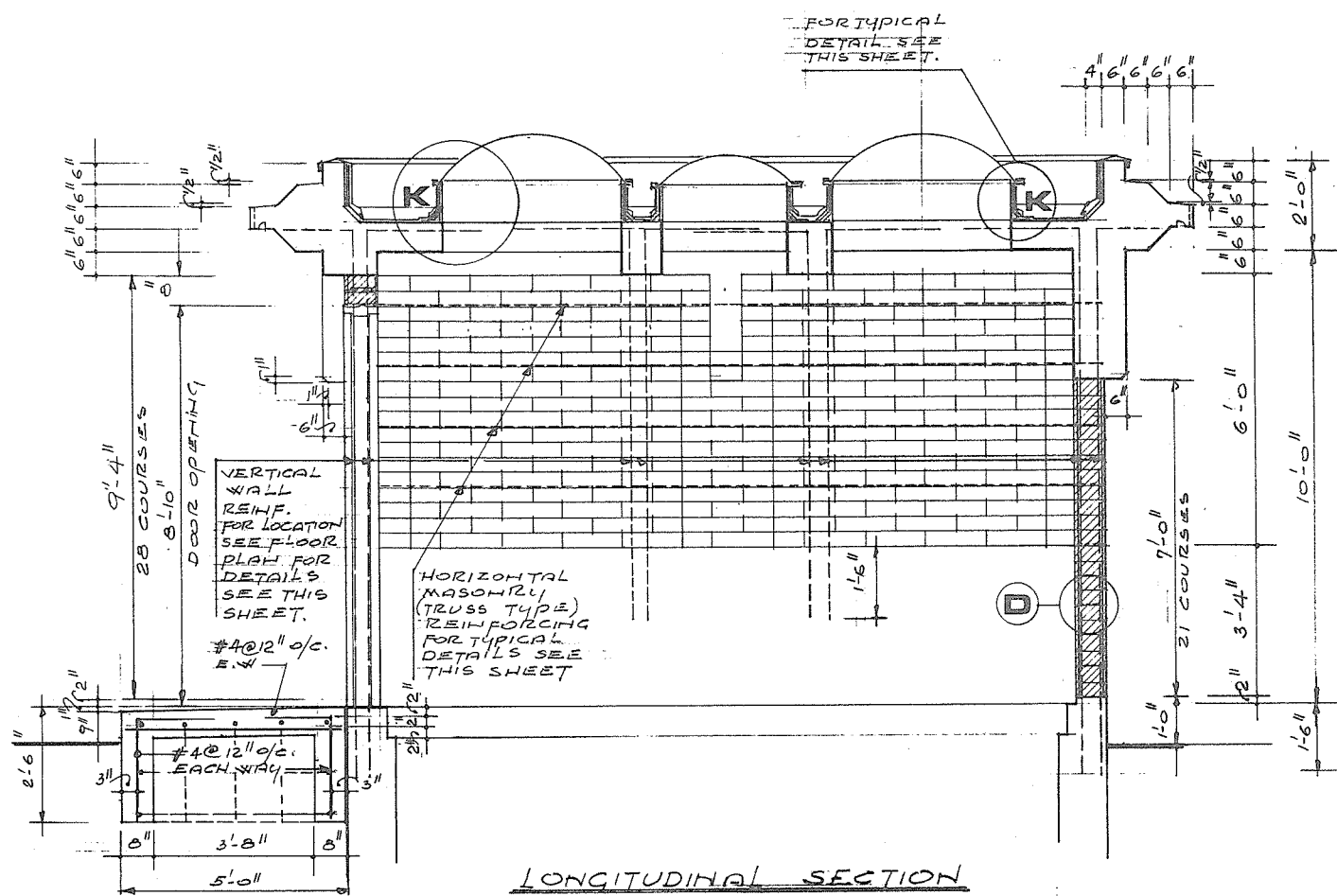
RECOMMENDED *John Miller*
CHIEF, PROJECTS DIV.
DATE *Aug 27/74*
APPROVED *John Miller*
DIRECTOR
DATE *Aug 28/74*

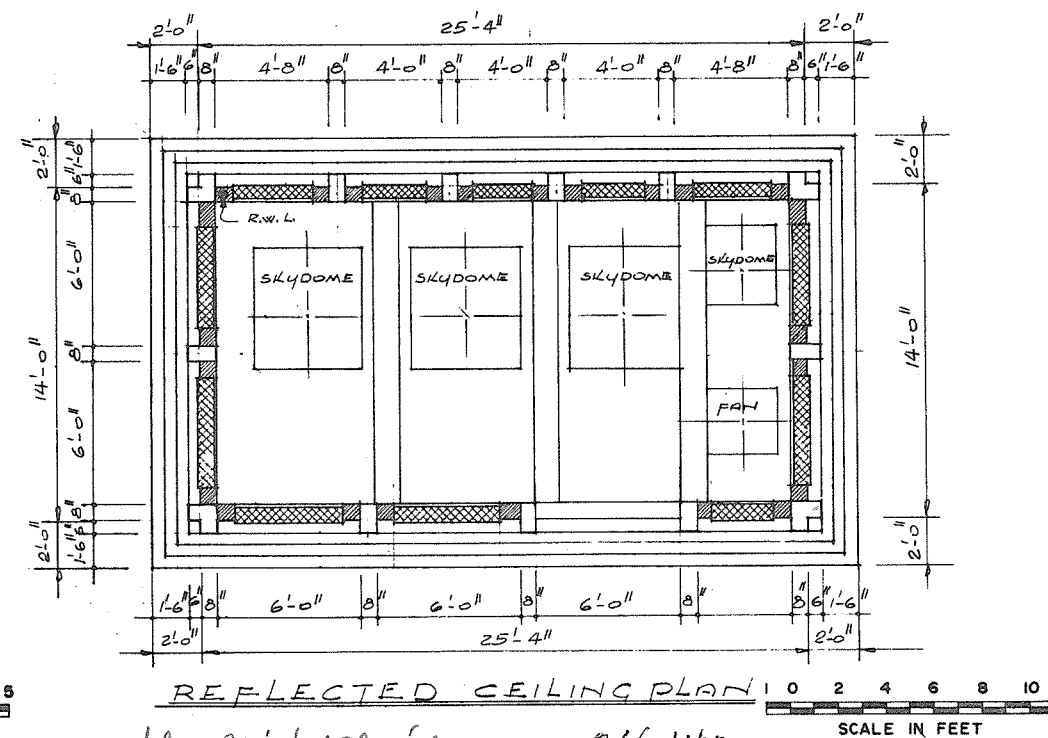
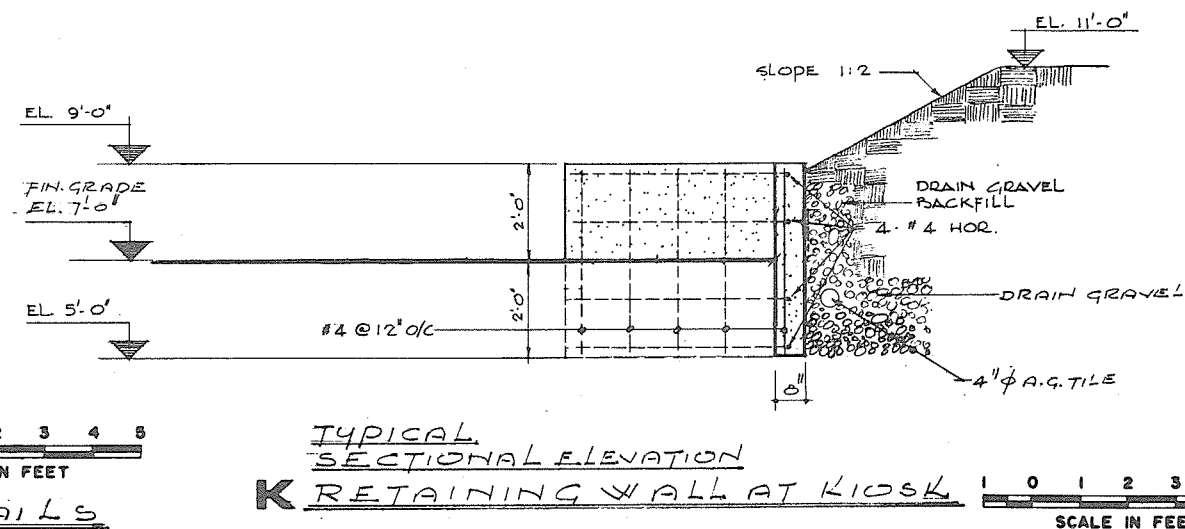
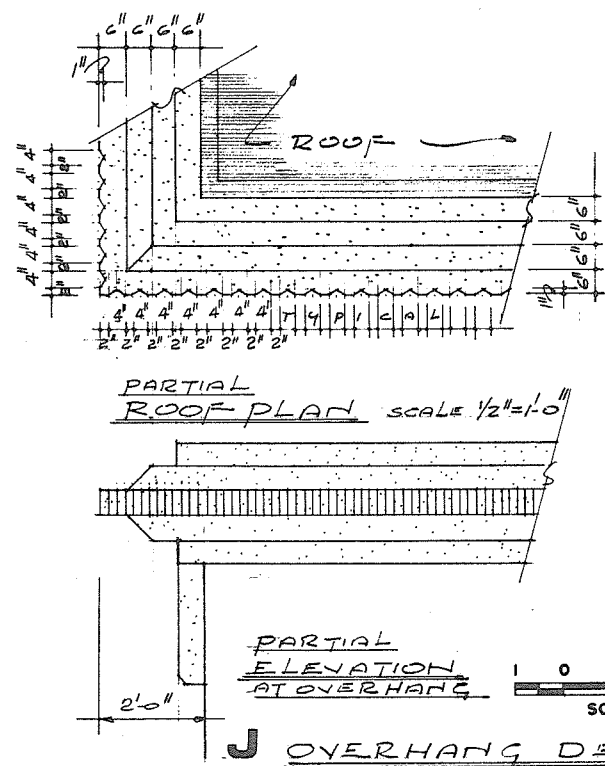
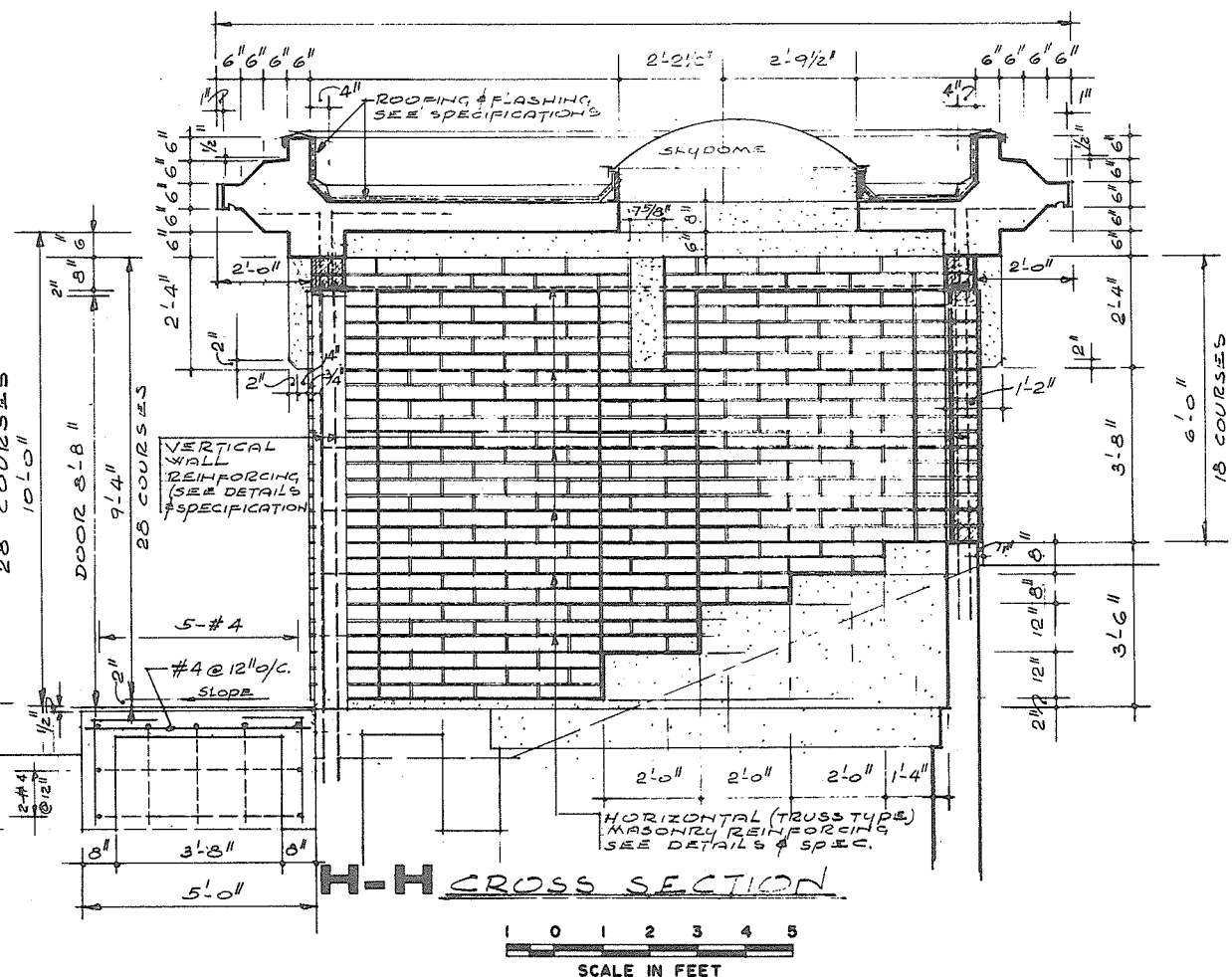
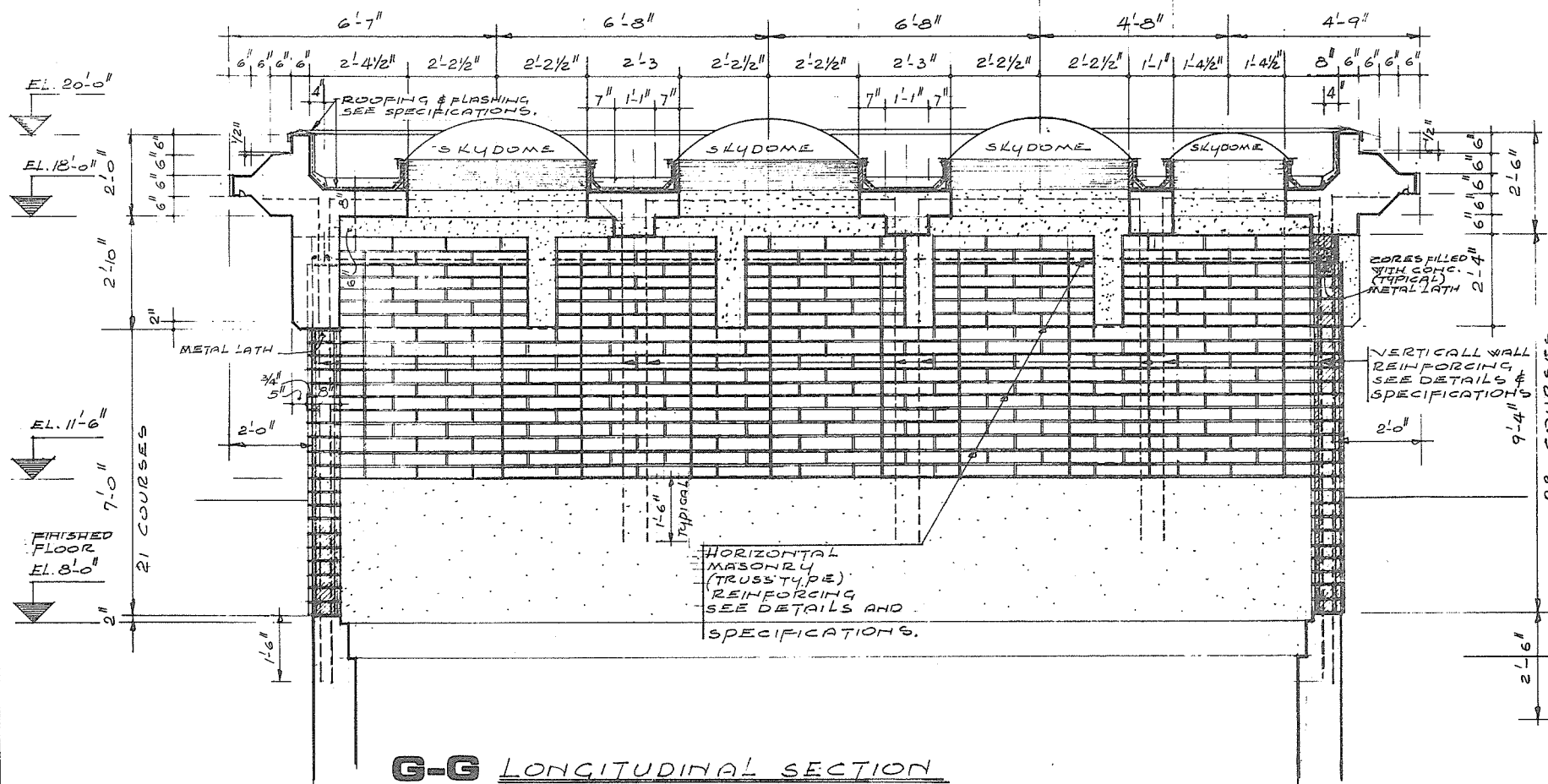
BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
CAMBIE ROAD WEST DRAINAGE DISCHARGE STRUCTURE
ARCHITECTURAL DETAILS

DESIGNED <i>John Miller</i>	SURVEYED
DRAWN <i>John Miller</i>	DATE
CHECKED <i>John Miller</i>	FILE NO. 0281550-CIO-4
SCALE <i>As shown</i>	DATE <i>Aug 1974</i>
DWG. NO. 4795-4-84	SHEET 1 OF 2 SHEETS

No print requ'd

266 137





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ASSOCIATES LTD.
LAND DESIGN

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VANCOUVER 3, B.C.
(604) 685-6484



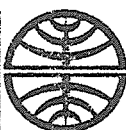
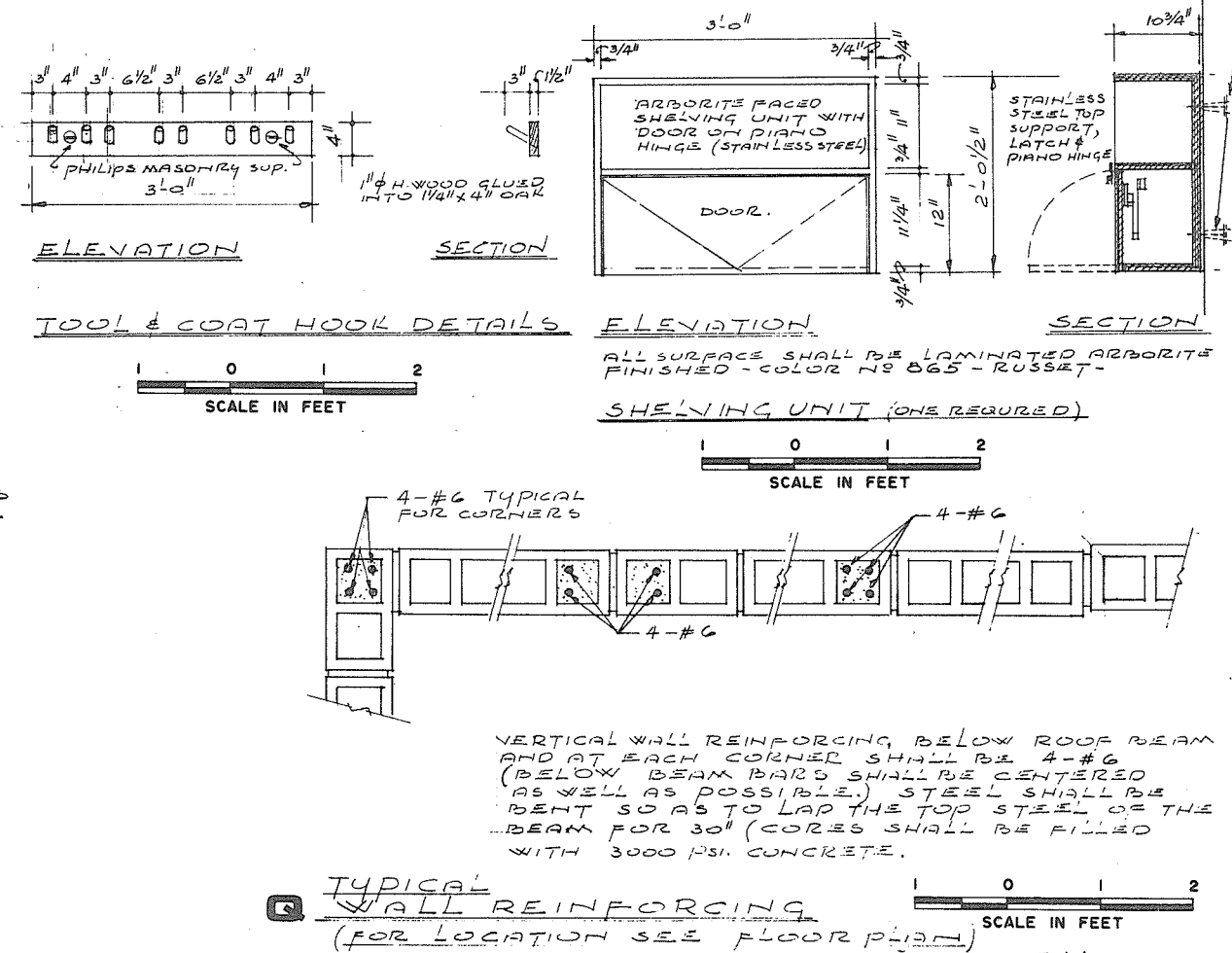
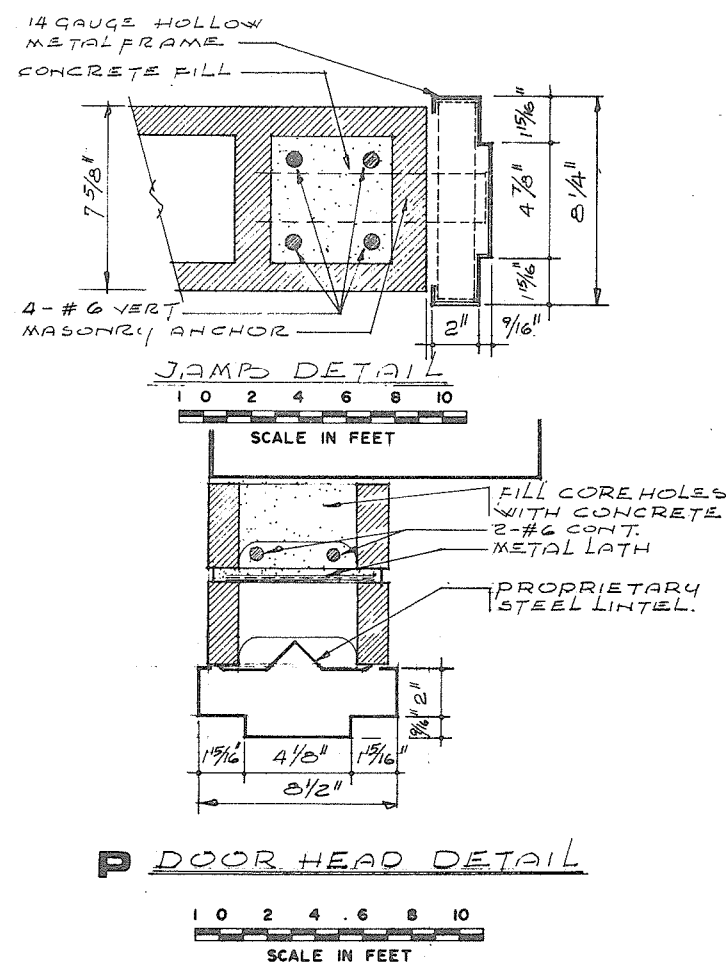
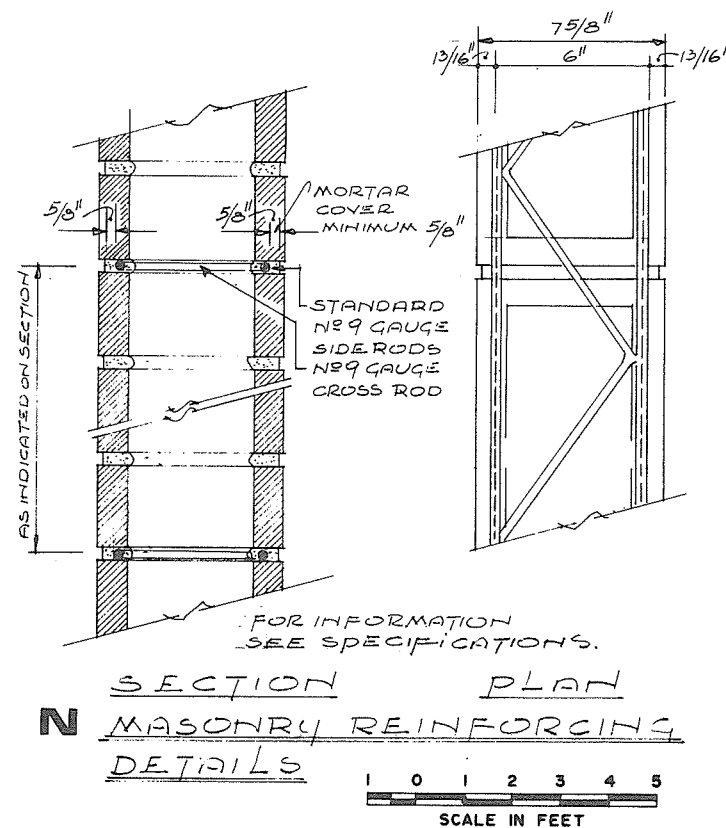
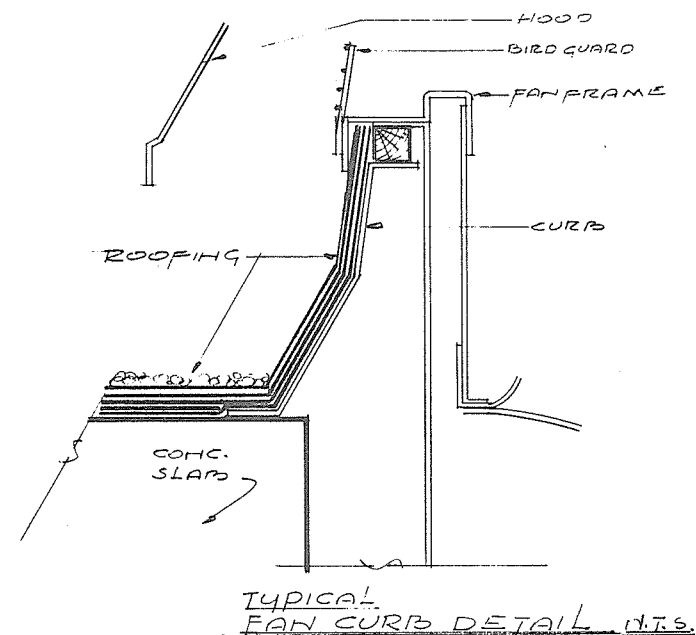
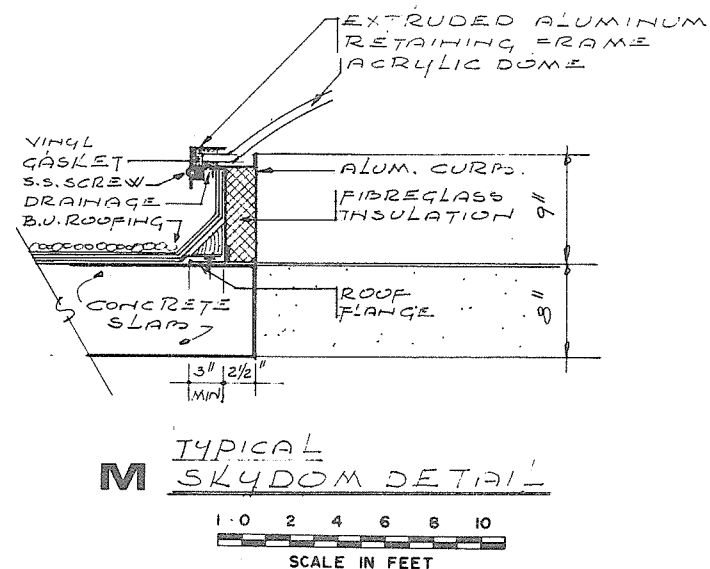
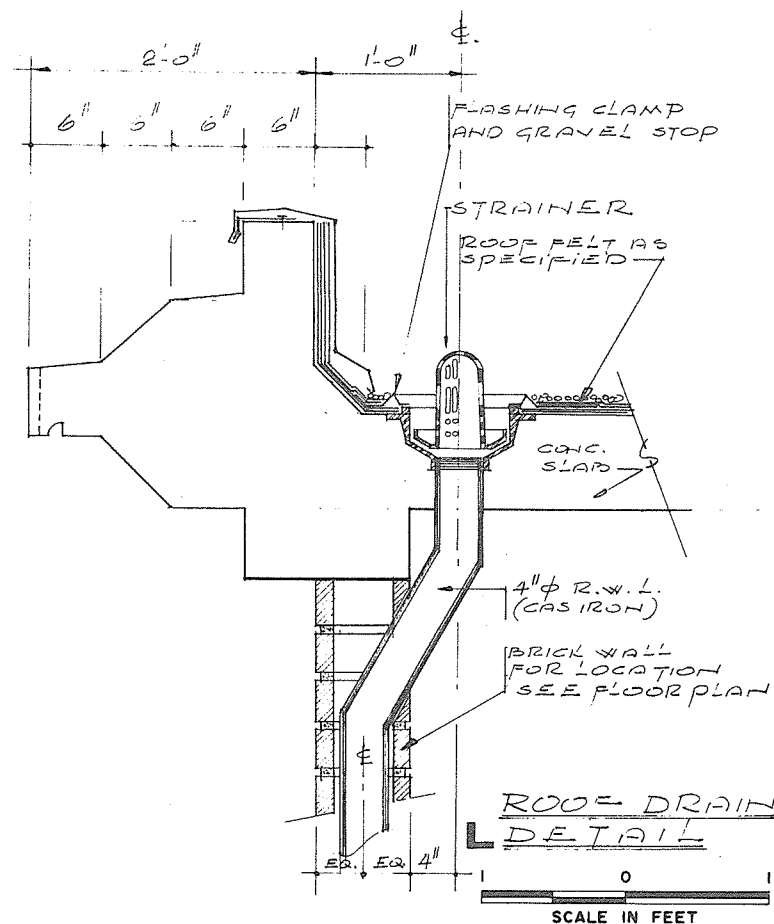
CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

RECOMMENDED *John Miller*
CHIEF, PROJECTS DIV.
DATE *Aug 27/74*
APPROVED *[Signature]*
DIRECTOR
DATE *Aug 28/74*

DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES
WATER RESOURCES SERVICE
WATER INVESTIGATIONS BRANCH
CANADA - BRITISH COLUMBIA
FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
PROJECT NO. 3 - THE TOWNSHIP OF RICHMOND
CONTRACT NO. 4
NO. 4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE
ARCHITECTURAL DETAILS

DESIGNED *[Signature]*
DRAWN *[Signature]*
CHECKED *[Signature]*
SCALE *As shown*
DWG. NO. 4795-4-87
SHEET 2 OF 3 SHEETS

No print req'd. 266 140



prepared by
TATTERSFIELD/KOVACS/GIBBON
ASSOCIATES LTD.
LAND DESIGN

201 - 1008 HOMER STREET
VANCOUVER 3 B.C.
(604) 685 6484



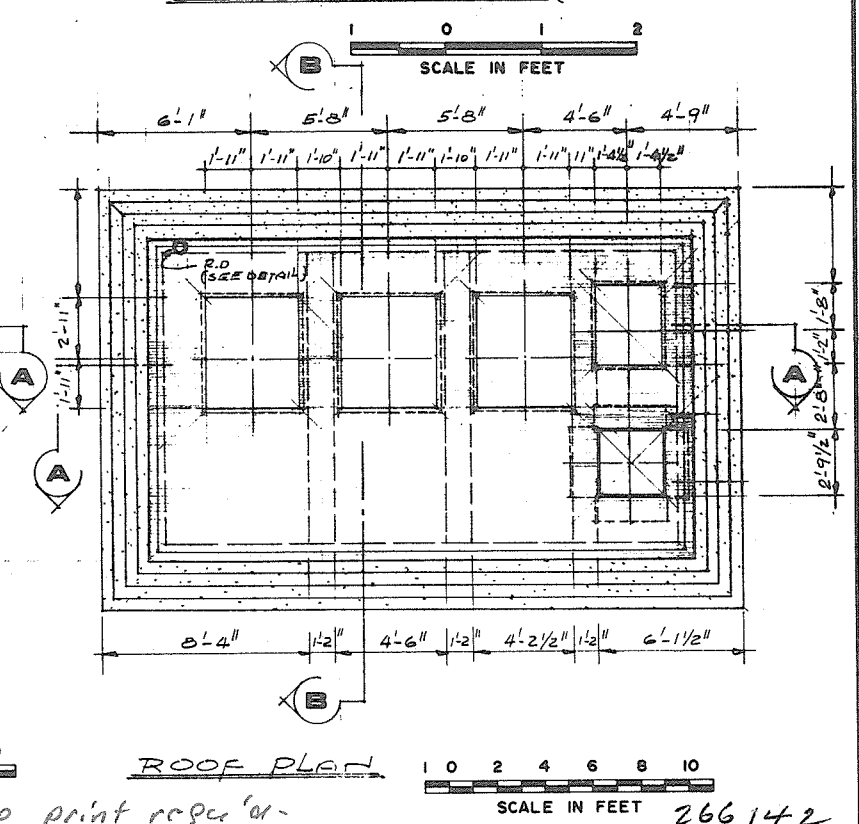
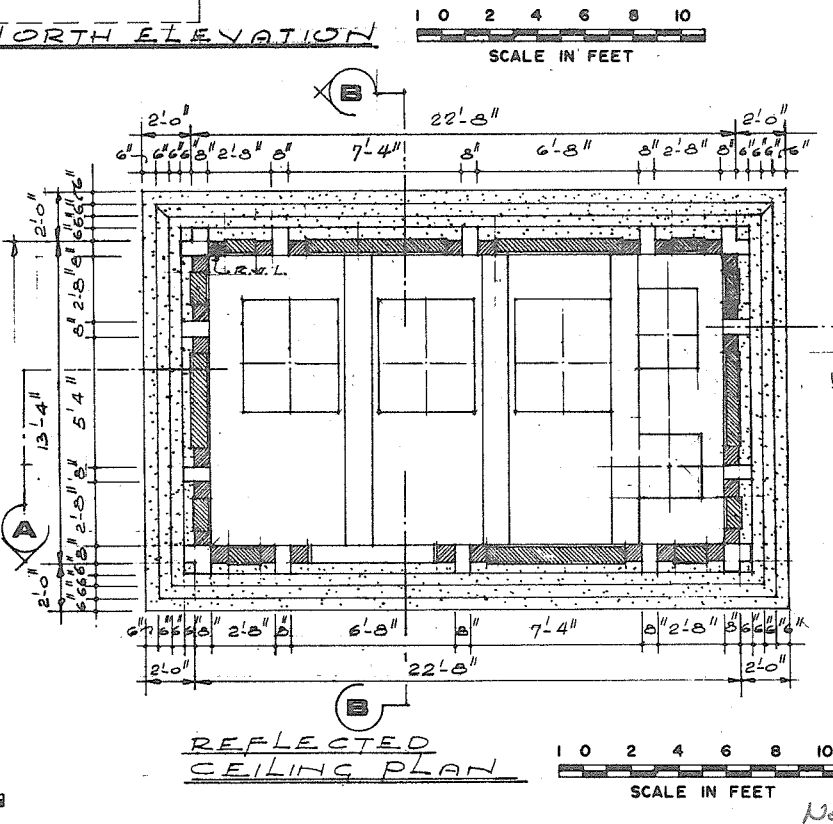
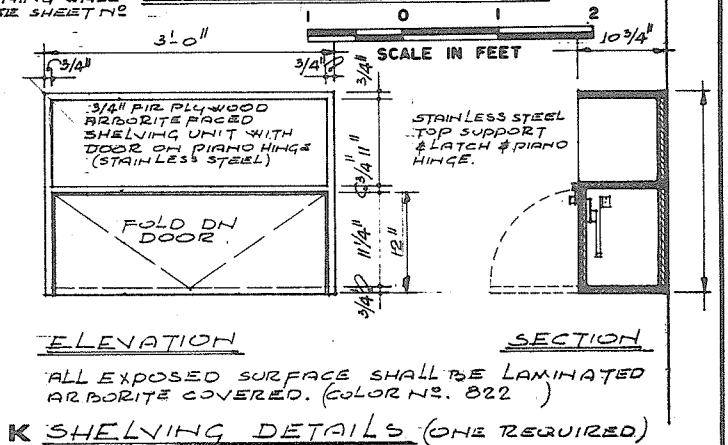
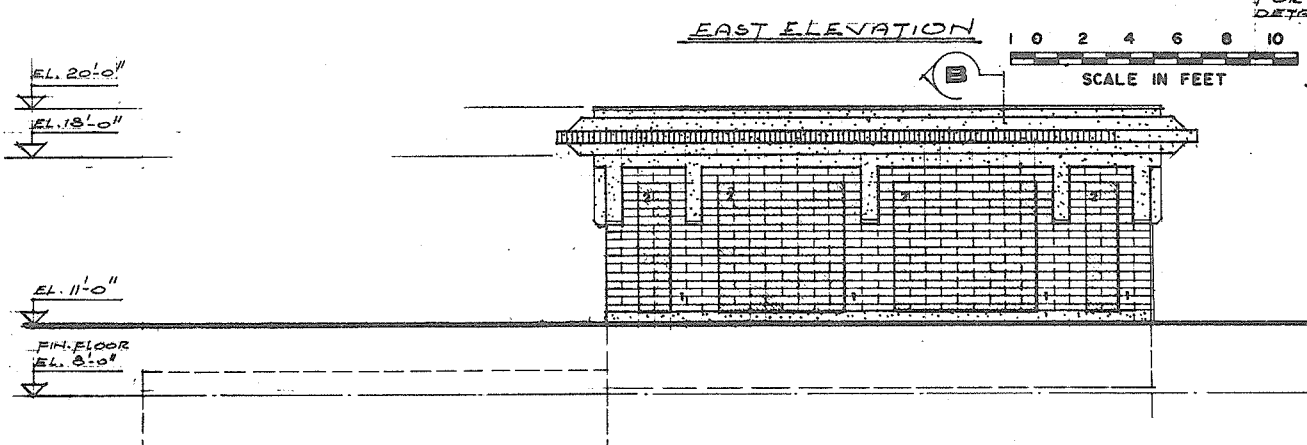
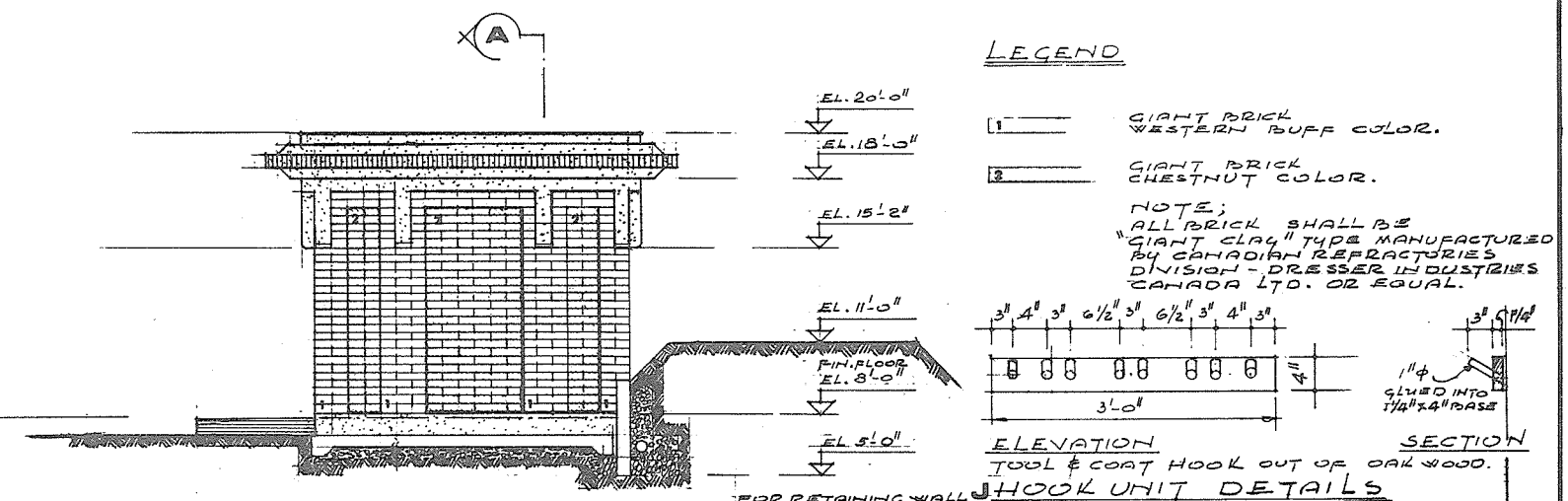
CBA ENGINEERING LTD.
CONSULTING ENGINEERS - VANCOUVER - CANADA

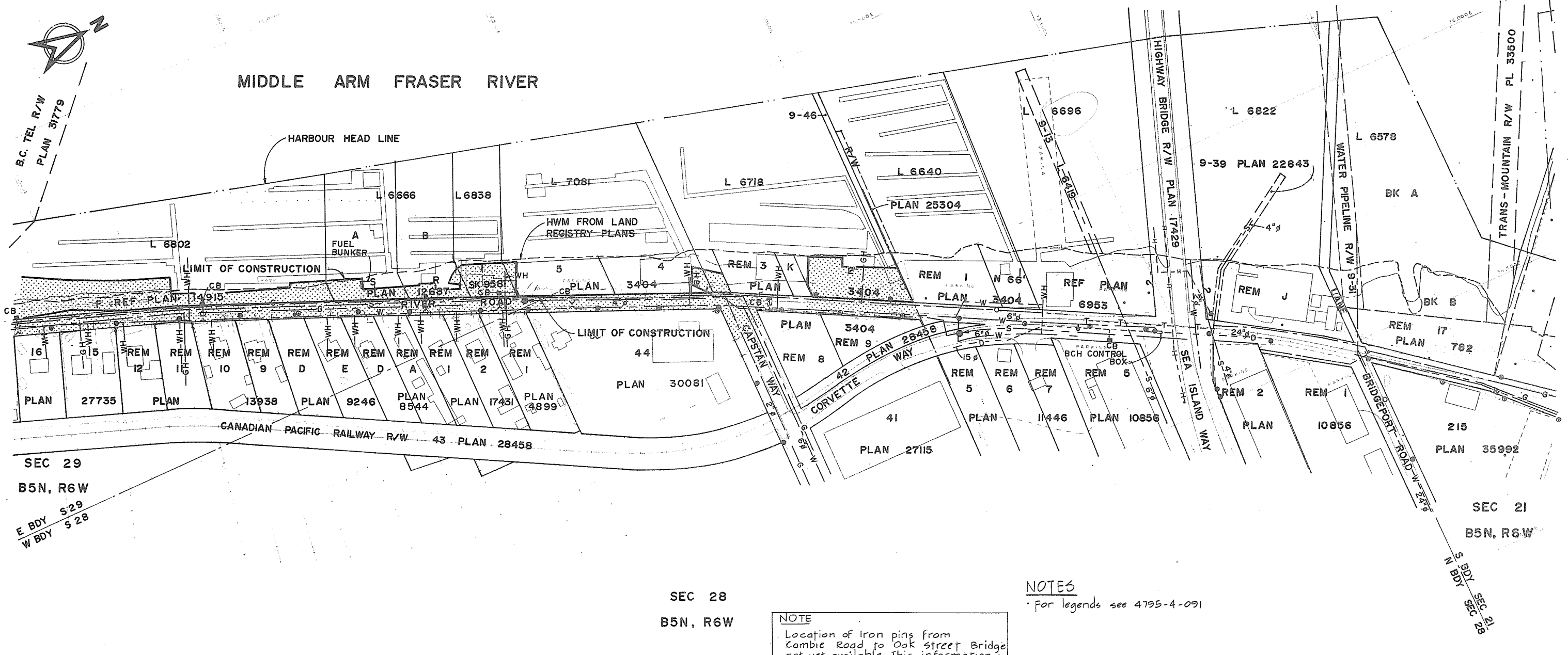
RECOMMENDED *W.B. Fuller*
CHIEF, PROJECTS DIV.
DATE *Aug 27/74*

APPROVED *PM ready*
DIRECTOR
DATE *Aug 28/74*

F.	BRITISH COLUMBIA DEPARTMENT OF LANDS, FORESTS AND WATER RESOURCES WATER RESOURCES SERVICE WATER INVESTIGATIONS BRANCH CANADA — BRITISH COLUMBIA FRASER RIVER FLOOD CONTROL 1968 AGREEMENT
	PROJECT NO.3 — THE TOWNSHIP OF RICHMOND
	CONTRACT NO. 4
	NO.4 ROAD NORTH DRAINAGE DISCHARGE STRUCTURE
	ARCHITECTURAL DETAILS

DESIGNED	SURVEYED
DRAWN	DATE
CHECKED	FILE NO.
SCALE	Q281550-C10-4
AS SHOWN	DATE
DWG. NO.	Aug. 1974
4795-4-88	SHEET 3 OF 3 SHEETS





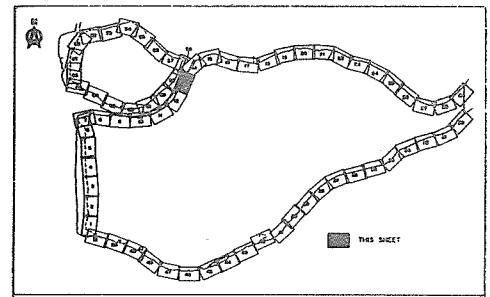
SEC 29
B5N, R6W
E BDY S29
W BDY S28

SEC 28
B5N, R6W

SEC 21
B5N, R6W
S BDY SEC 28

NOTE
Location of iron pins from
Cambie Road to Oak Street Bridge
not yet available. This information
will be provided prior to start of
construction.

NOTES
For legends see 4795-4-091



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 266 145

325-D-1000
Sheet Index
North Fraser Harbour Commission
Harbour Head Line Plan - Sh 3 & 19
Municipality of Richmond 1" = 200'
Section Property Maps
- Section 21 B5N R6W
- Section 28 B5N R6W
- Section 29 B5N R6W

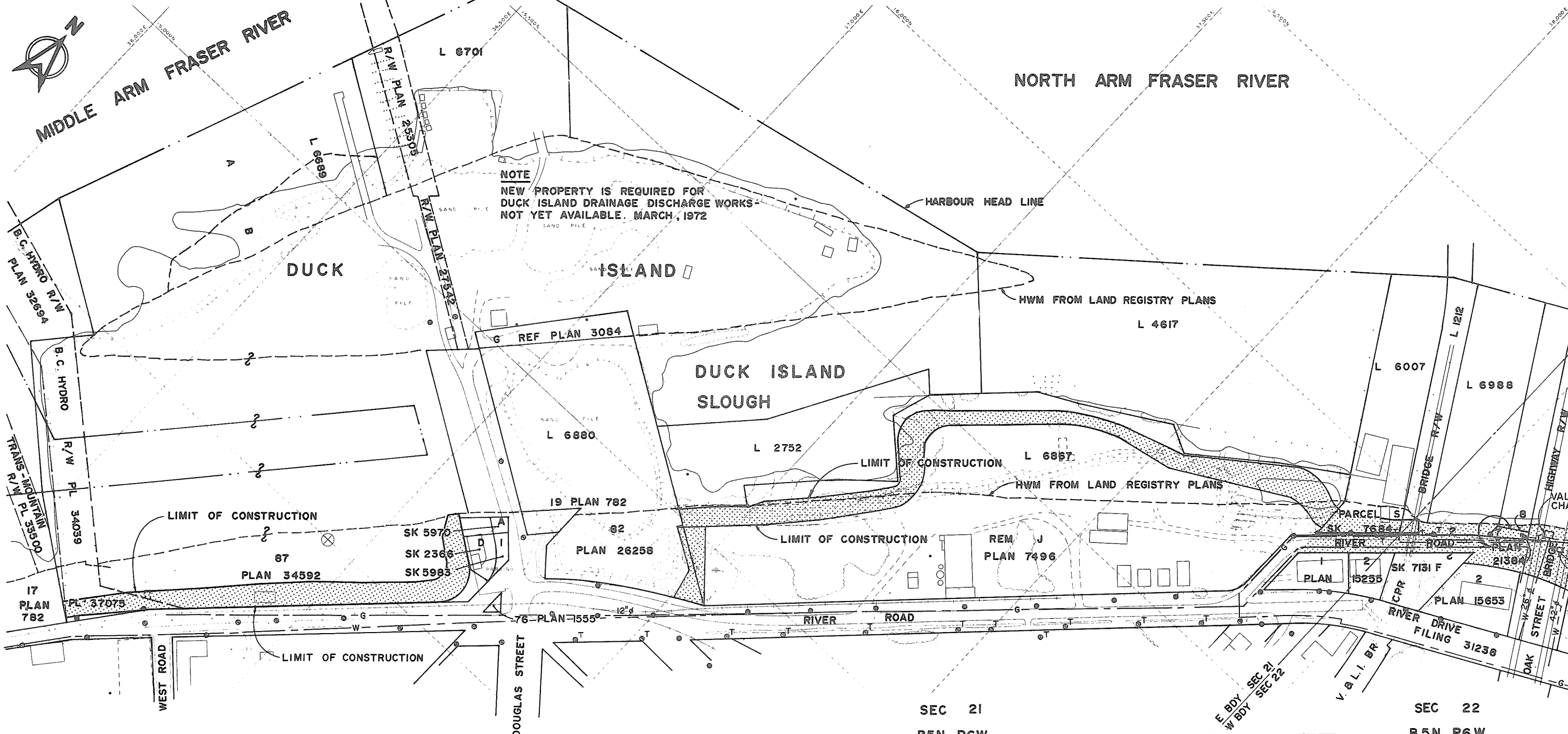
DWG NO.	TITLE
325-D-1000	Section Property Maps

NO.	DESCRIPTION	BY	CH	APPD	ISSUED

C. B. A. ENGINEERING LTD.
CONSULTING ENGINEERS VANCOUVER, B.C., CANADA
RECOMMENDED *[Signature]*
DATE *Aug 29/74*
APPROVED *[Signature]*
DATE *Aug 29/74*

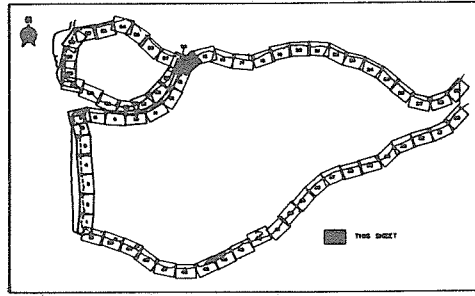
ELEC	HYD
MECH	SOILS
STR	
DES	DR
SCALE	As shown
QTRG ISSUE	Aug, 1974

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 4 PLAN SHOWING LOCATION OF EXISTING SURVEY MARKERS & UTILITIES SHEET 2 OF 6
DWG NO. 4795-4-92	REV



NOTE
Location of iron pins from Cambie Road to Oak Street Bridge not yet available. This information will be provided prior to start of construction

NOTES
For legends see 4793-4-91



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.

325-D-1000
Sheet index
North Fraser Harbour Commission
Harbour Head Line Plan - Sh 9
Municipality of Richmond 1st 2001
Section property maps
- Section 21 B5N R6W
- Section 22 B5N R6W

DWG NO. TITLE REFERENCES

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

Full size print

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 4
PLAN SHOWING LOCATION OF
EXISTING SURVEY MARKERS & UTILITIES
SHEET 3 OF 6

DATE Aug 27/74

APPROVED Philly DIRECTOR

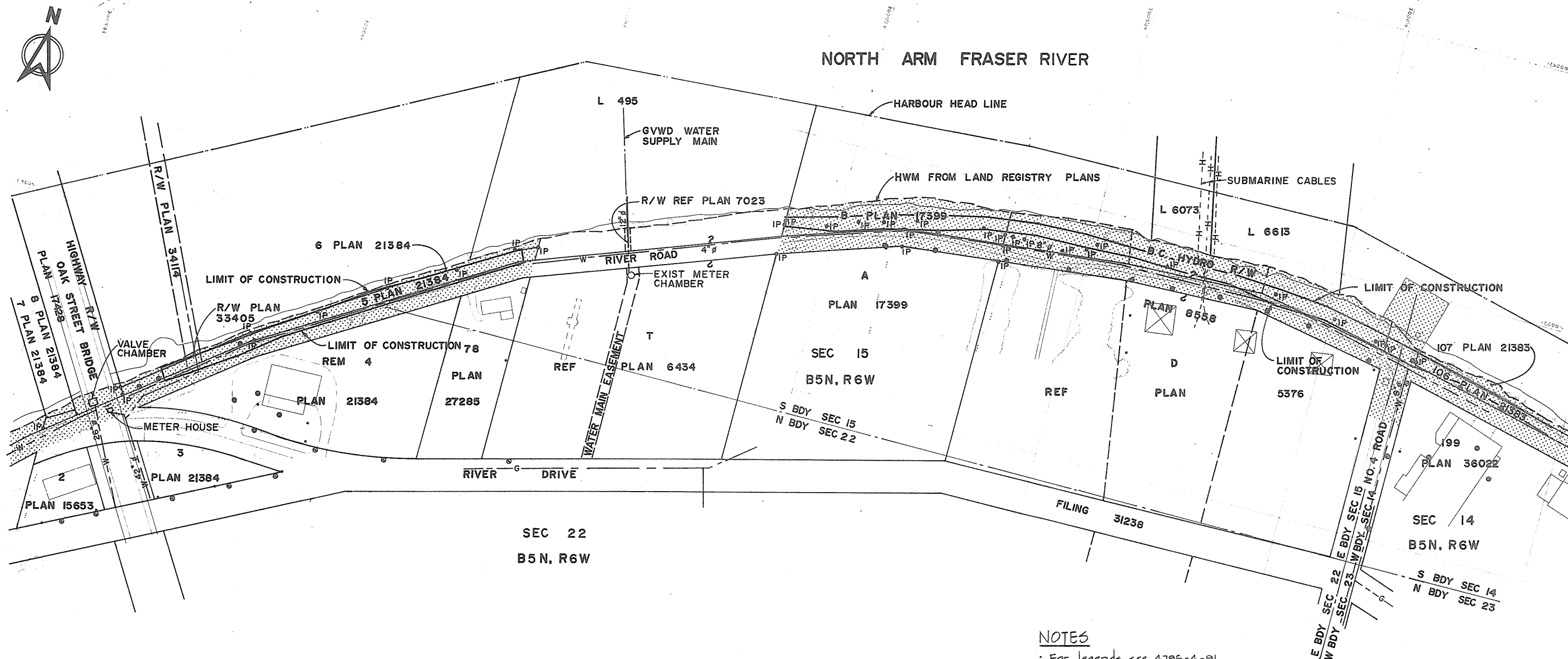
DATE Aug 28/74

SCALE As shown

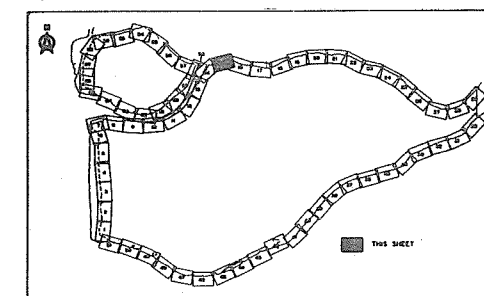
ORIG ISSUE Aug, 1974

DWG NO. 4795-4-93

REV



• For legends see 4795-4-91



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.

100 50 0 100 200
SCALE IN FEET
FULL SIZE PRINT

DATA COMPILED IN 1970 266 147

325-D-1000

- Sheet index.
- North Fraser Harbour Commission
- Harbour Head Line Plan - Sh 9 & 10
- Municipality of Richmond 1st. 200'

Section Property Maps

- Section 14 BSN RGW
- Section 15 BSN RGW
- Section 22 BSN RGW

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 4
PLAN SHOWING LOCATION OF
EXISTING SURVEY MARKERS & UTILITIES
SHEET 4 OF 6

RECOMMENDED *[Signature]*
CHIEF, PROJECTS DIV.

DATE Aug 27 1944

APPROVED *P. M. Gandy*
DIRECTOR.

DATE Aug. 1974 ORIG ISSUE Aug. 1974

ELEC	HYD
MECH	SOILS

STR	
-----	--

WN	DLC
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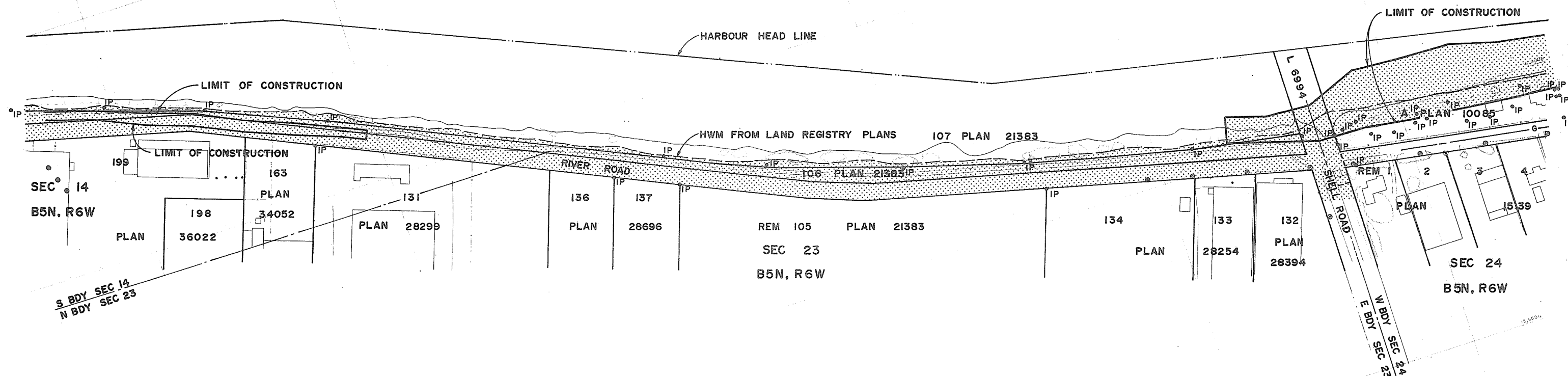
ORIG ISSUE Aug. 1974

DWG NO. 4795-4-94

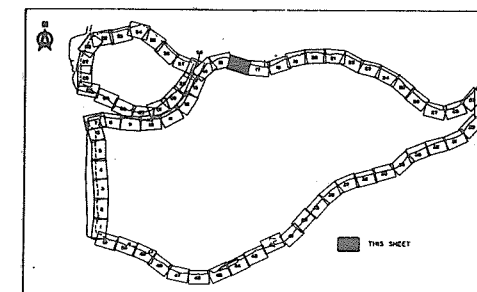
REV



WHARF
HODDER TUGBOAT CO. LTD.
1171 RIVER RD.



• For legends see 4795-4-91



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.

100 50 0 100 200

SCALE IN FEET

ET Full size print

DATA COMPILED IN 1970 266 148

325-D-1000

- sheet index
- North Fraser Harbour Commission
- Harbour Head Line Plan - Sheet 10
- Municipality of Richmond 1", 200'

Section Property Maps

- Section 14 B5N 2GW
- Section 23 B5N 2GW
- Section 24 B5N 2GW

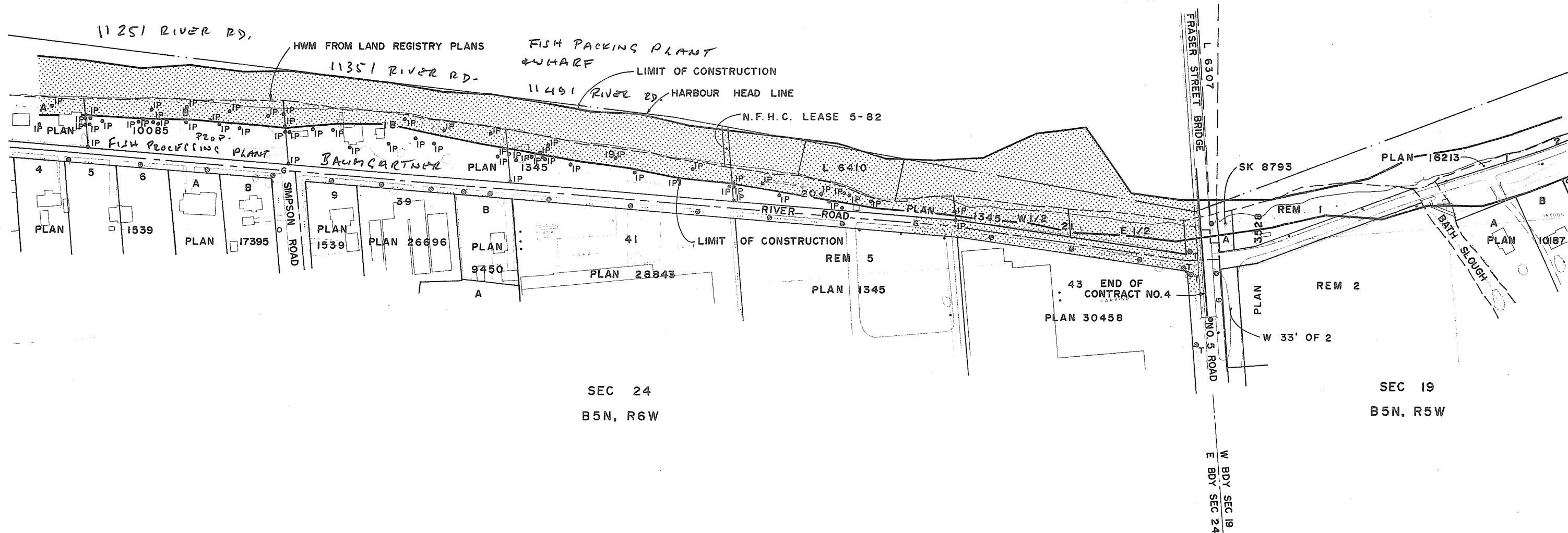
DWG NO.	TITLE
REFERENCES	

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>[Signature]</i> CHIEF, PROJECTS		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	
DATE <i>Sept 23 1974</i>		MECH		SOILS			
		STR					
APPROVED <i>[Signature]</i> DIRECTOR		DES		DR		CH	
		SCALE		As shown		CONTRACT 4 PLAN SHOWING LOCATION OF EXISTING SURVEY MARKERS & UTILITIES SHEET 5 OF 6	
DATE <i>September 23 1974</i>		ORIG ISSUE		Aug 1974		DWG No. 4795-4-95 REV	

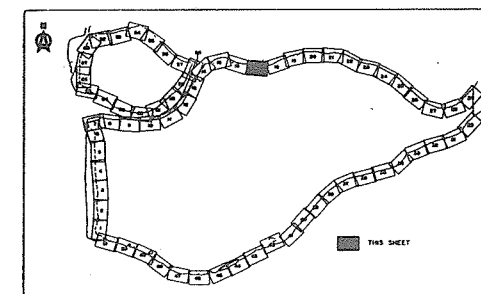


NORTH ARM FRASER RIVER



NOTES

For legends see 4795-4-91



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 266149

100 50 0 100 200
SCALE IN FEET

Full size print

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RECOMMENDED
CHIEF, PROJECTS DIV.

ELEC
MECH
STR

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

DATE

DES
DR
CH

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

APPROVED

SCALE
As shown

CONTRACT 4
PLAN SHOWING LOCATION OF
EXISTING SURVEY MARKERS & UTILITIES
SHEET 6 OF 6

DATE

ORIG ISSUE
Aug, 1974

DWG NO. 4795-4-96

REV

325-D-1000
Sheet index.
North Fraser Harbour Commission
Harbour Head Line Plan - Sh 11
Municipality of Richmond 1" = 200'
Section Property Maps
-Section 24 B5N R6W
-Section 19 B5N R5W

DWG NO. REFERENCES

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

REVISIONS

REVISIONS