

PROVINCE OF BRITISH COLUMBIA
MINISTRY OF ENVIRONMENT, LANDS AND PARKS

WATER MANAGEMENT DIVISION
PUBLIC SAFETY BRANCH

FLOOD CONTROL & RESPONSE AND
INSPECTOR OF DIKES SECTION

DISTRICT OF SQUAMISH

FLOOD MITIGATION WORKS
OPERATION AND MAINTENANCE MANUAL

VOLUME 2
"AS-CONSTRUCTED" DRAWINGS

MARCH 1999
File: FPAF 98-02-31

**DISTRICT OF SQUAMISH
FLOOD MITIGATION WORKS
OPERATION AND MAINTENANCE MANUAL**

TABLE OF AMENDMENTS

Four copies of this manual were distributed as follows:

Copy No. 1 (master copy)	Inspector of Dikes, Ministry of Environment, Lands and Parks, Victoria, B.C.
Copy No. 2	Deputy Inspector of Dikes, Ministry of Environment, Lands and Parks, Surrey, B.C.
Copies Nos. 3 and 4	District of Squamish

Amendments to the manual should be inserted in all copies of the manual, and noted in the table below.

DATE	BY	REMARKS
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
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95-9-4 *	Plan and Profile - Chainage 2+700 to 3+600
95-9-5 *	Plan and Profile - Chainage 3+600 to 4+500
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95-9-9 *	Plan and Profile - Chainage 7+200 to 8+100
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LIST OF DRAWINGS continued

Drawing No.	Description
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88-52-1*	Stawamus River at Valleycliffe Subdivision, plan and profile

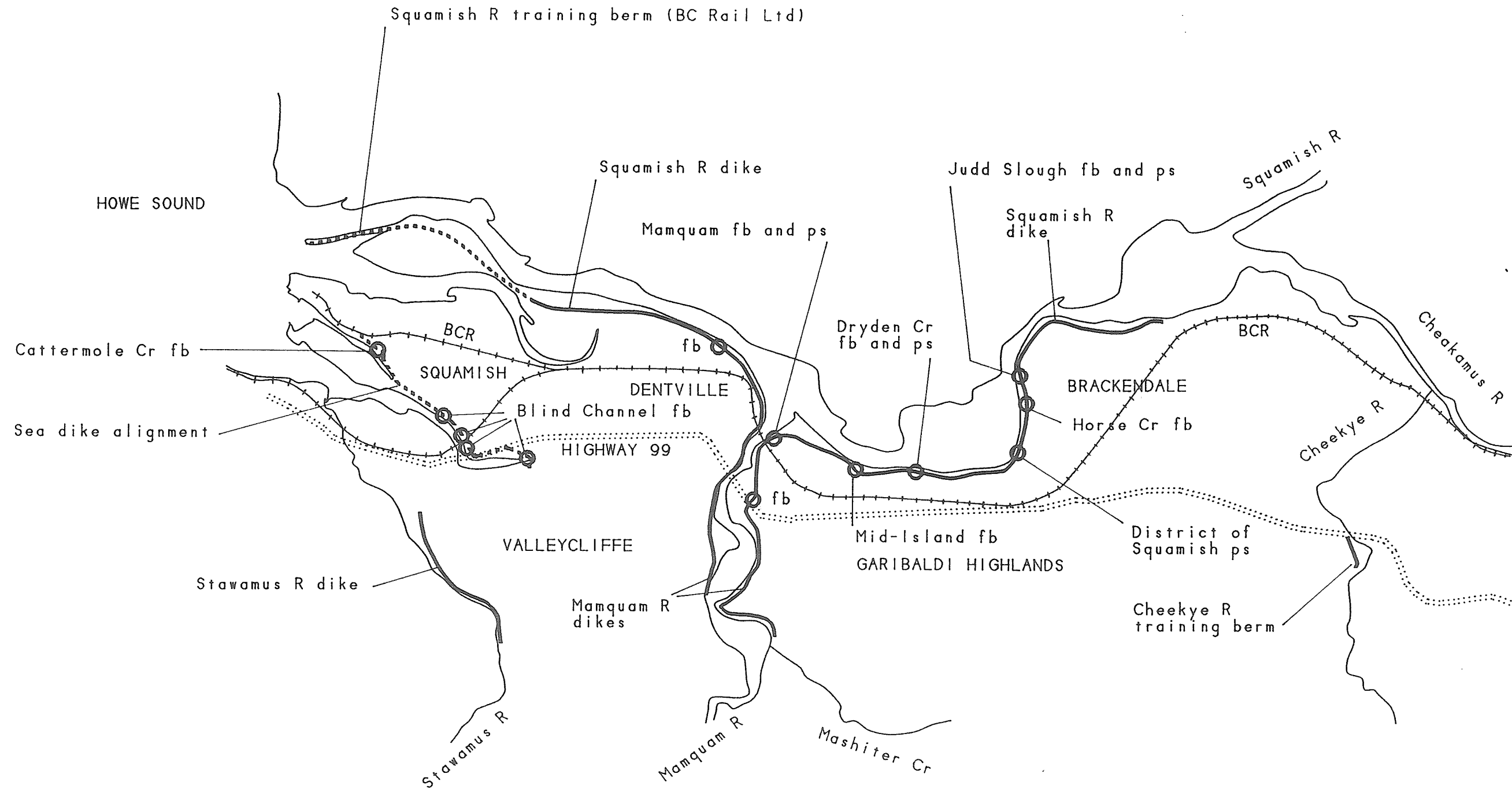
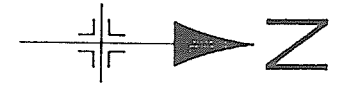
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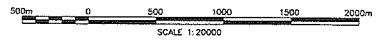
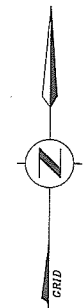
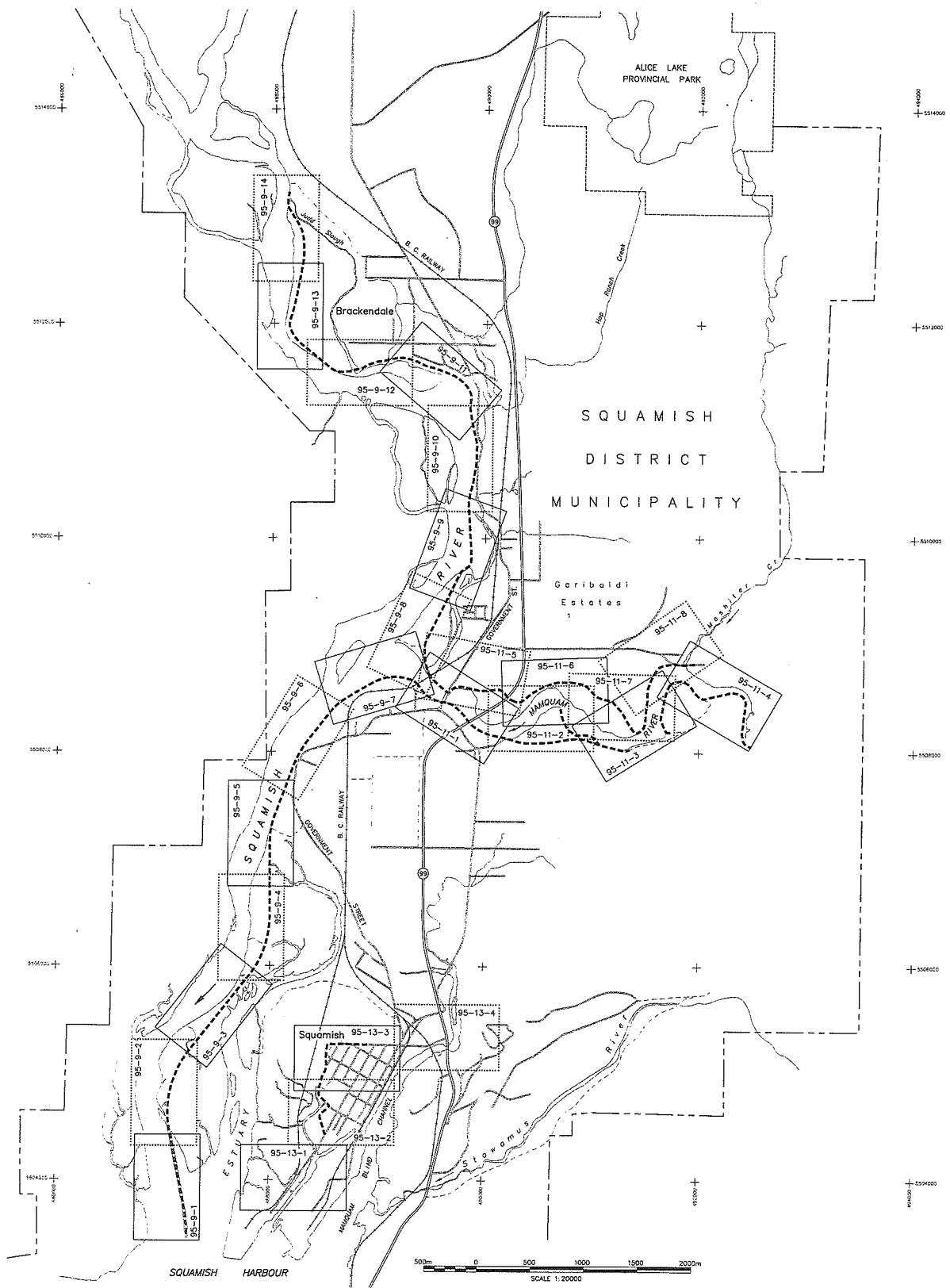
Drawing No.	Description
9. Cheekye River Training Berm	
1.050.040	Cheekye River L/B U/S Highway 99, new berm
07852-0405 R1 Sh 1	Cheekye River River Flood Control Construction (1991), (OIC 1298), plan
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* 60% reductions of these drawings included in Volume 3.

LEGEND

- Floodbox fb
- Pumpstation ps





NOTES

LEGEND

----- DYKE

STORAGE LICENCES

LICENCE	PROBITY DATE	AUTHORIZED AGE-FEET	DEVELOPER AGE-FEET	DWG. No.

REFERENCES

DESCRIPTION	DATE	No.

REVISIONS

DESCRIPTION	DATE

SURVEYED	T. DIGNAN
DATE	JUNE 1993
COMPILED	R. EDWARD
CHECKED	<i>Handwritten signature</i>
DATE	9/2/94
DRAWN	B. WOODS
APPROVED	<i>Handwritten signature</i>
DATE	NOV. 1995
ENGINEER	<i>Handwritten signature</i>

Province of British Columbia Ministry of Environment, Lands and Parks
WATER MANAGEMENT DIVISION

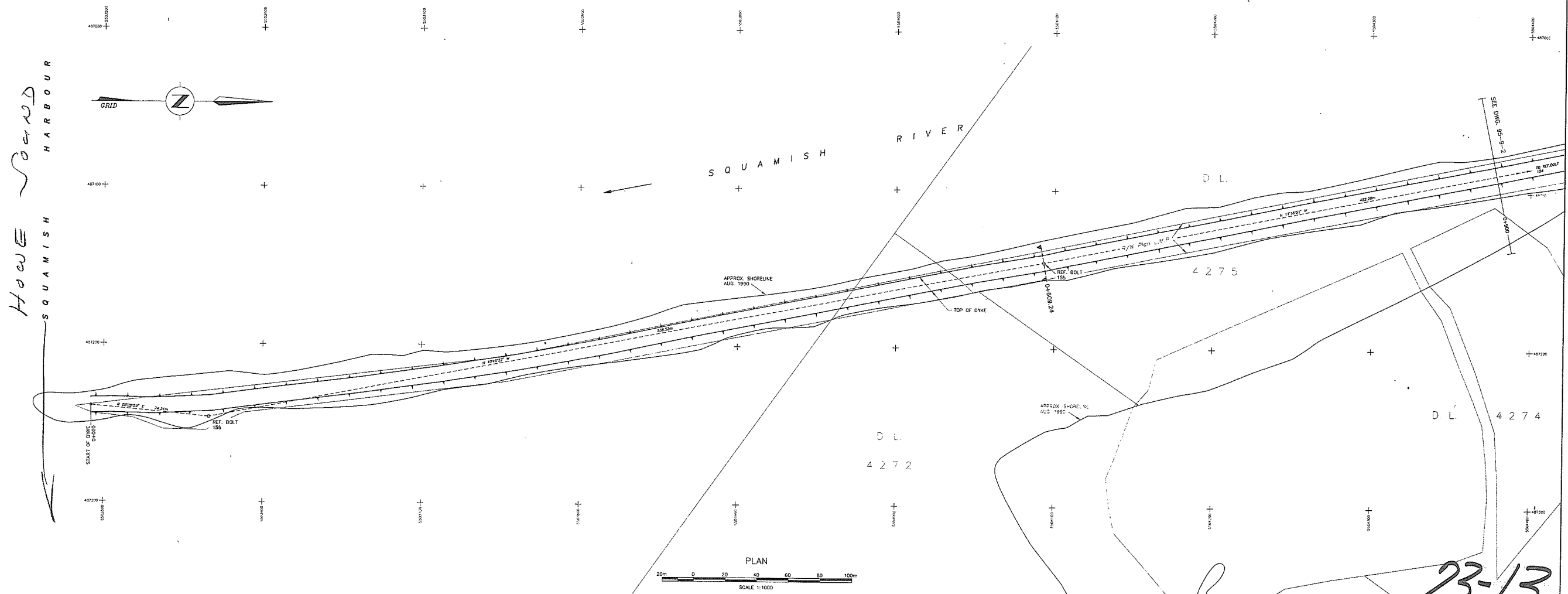
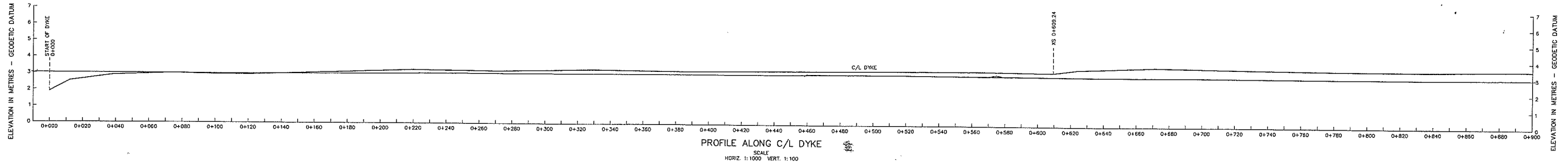
**SQUAMISH AREA DYKING
KEY MAP**

SHOWING LOCATION OF DRAWINGS FOR
SQUAMISH RIVER DYKING, MAMQUAM RIVER DYKING
AND SQUAMISH TOWNSITE DYKING

APPROVED *Handwritten signature* DATE *Handwritten date*

FILE No.	
SURVEY PROJECT No.	93 14 R 010
WTS Map No.	825/11.14
Map Scale	1:50,000
SCALE	1:20,000
DRAWING No.	95-9-17
TOTAL No. OF DWGS.	17

2. SQUAMISH RIVER DIKING



NOTES

- This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.
- SURVEY DATA:**
 - Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division.
 - Horizontal and vertical control established by reciprocal height traversing using a total station theodolite.
 - Cross section and topographic data obtained using a total station theodolite.
- DATUM:**
 - Horizontal and vertical control based on British Columbia Central Survey Posts 77H4434 and 77H4435 established by Surveys and Resource Mapping Branch, Lands Services Division as obtained from Data Bank listing dated January 1994.
 - Co-ordinates are Universal Transverse Mercator, Zone 10, NAD87.
- Elevations are in metres and referred to Canadian Geodetic Datum, CVD28.
- Shorelines obtained from uncontrolled mosaic Drawing No. 92-29, prepared by Technical Surveys Section from air photographs, flights RC93103 & RC90053 flown August 1990.
- Chainage of cross sections are referred to the centre line of dyke.
- CADASTRAL:**
 - Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions.
 - Lot boundaries as shown are digitized from District of Squamish cadastral composite plans.
- FIELD BOOKS:**
 - Survey data are recorded on Disc labelled 26270 and Field Book 2527-1,1.
- REFERENCE POINTS:**

Water Management Branch			
	Northing	Easting	Elevation
REF. BOLT 155	5 504 093.148	487 145.592	3.351
REF. BOLT 156	5 503 566.158	487 246.338	3.034

Distance between reference points as shown is Grid or Projection distance.

LEGEND	
⊙	REFERENCE POINT
⊙	TEMPORARY REFERENCE POINT
⊙	CADASTRAL MARKER (e.g. Old Iron Pin)
⊙	UTILITY POLE
⊙	RIPRAP
⊙	SWAMP

STORAGE LICENCES			
LICENCE	PRIORITY	AUTHORIZED	DEVELOPED
	DATE	ADVICE-FEET	ADVICE-FEET

REFERENCES		
DWG. No.	DESCRIPTION	DATE

REVISIONS		
No.	DESCRIPTION	DATE

SURVEYED	T. DIGNAM
DATE	NOV. 1994
COMPILED	R. EDWARD
CHECKED	<i>[Signature]</i>
DATE	05/24/95
DRAWN	B. WOODS
APPROVED	
DATE	NOV. 1995
ENGINEER	

Province of British Columbia
 Ministry of Environment, Lands and Parks
 WATER MANAGEMENT DIVISION

SQUAMISH RIVER DYKING
 PLAN AND PROFILE
 CHAINAGE 0+000 TO 0+900

FILE No. 94-18-D-010
 SURVEY PROJECT No. 94-18-D-010
 NTS Map No. 920/21
 Map Scale 1:50,000
 SCALE AS NOTED
 NEGATIVE No.
 DRAWING No. 95-9-1
 TOTAL No. OF DWGS. 17

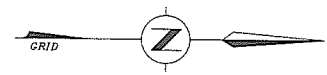
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ELEVATION IN METRES - GEODETIC DATUM

ELEVATION IN METRES - GEODETIC DATUM

PROFILE ALONG C/L DYKE
SCALE
HORIZ. 1:1000 VERT. 1:100

SQUAMISH RIVER



PLAN
SCALE 1:1000

- 1) This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.
- 2) SURVEY DATA:
a) Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division.
b) Horizontal and vertical control established by regional height traversing using a total station theodolite.
c) Cross section and topographic data obtained using a total station theodolite.
- 3) DATUM:
a) Horizontal and Vertical control based on British Columbia Control Survey Posts 7714434 and 7714435 established by Surveys and Resource Mapping Branch, Lands Services Division as obtained from Data Book listing dated January 1994.
b) Co-ordinates are Universal Transverse Mercator, Zone 10, NAD27.

- 4) Elevations are in metres and referred to Canadian Geodetic Datum, CGD82.
5) Shorelines obtained from uncontrolled mosaic Drawing No. 72-28, prepared by Technical Surveys Section from air photographs, flight 820103 & 820503 from August 1990.
6) Challenge of cross sections are referred to the centre line of dyke.
7) CADASTRAL:
a) Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions.
b) Lot boundaries as shown are digitized from District of Squamish cadastral composite plans.
8) FIELD BOOKS:
Survey data are recorded on disc labelled 26270 and Field Book 2627-11.
9) REFERENCE POINTS:

Water Management Branch			
Northings	Eastings	Elevation	
REF. BOLT 152	5 500 130.357	487 194.041	4.163
REF. BOLT 153	5 504 863.339	487 276.045	3.772
REF. BOLT 154	5 504 586.031	487 051.586	3.280

Distance between reference points as shown is Grid or Projection distance.

- LEGEND
- REFERENCE POINT
 - ⊙ TEMPORARY REFERENCE POINT
 - ⊙ CADASTRAL MARKER (e.g. Old Iron Pin)
 - ⊙ UTILITY POLE
 - ⊙ RIPRAP
 - ⊙ SHARP

STORAGE LICENCES			
LICENCE	PRIORITY DATE	AUTHORIZED ACRE-FEET	REVOLVED ACRE-FEET

REFERENCES		
DWG. No.	DESCRIPTION	DATE

REVISIONS		
No.	DESCRIPTION	DATE

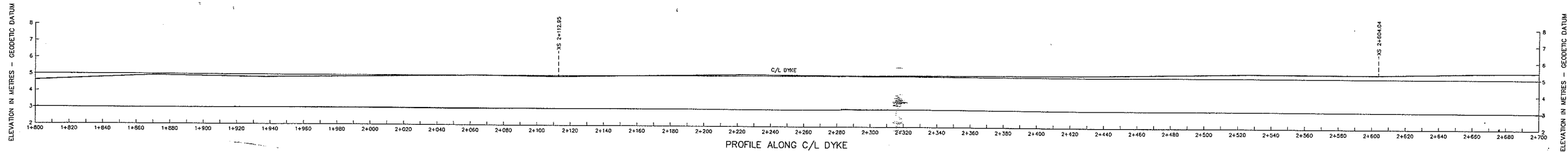
SURVEYED	T. DIGNAN
DATE	NOV. 1994
COMPILED	R. EDWARD
CHECKED	
DATE	95/11/11
DRAWN	B. WOODS
APPROVED	
DATE	NOV. 1995
ENGINEER	

Province of British Columbia
Ministry of Environment, Lands and Parks
WATER MANAGEMENT DIVISION

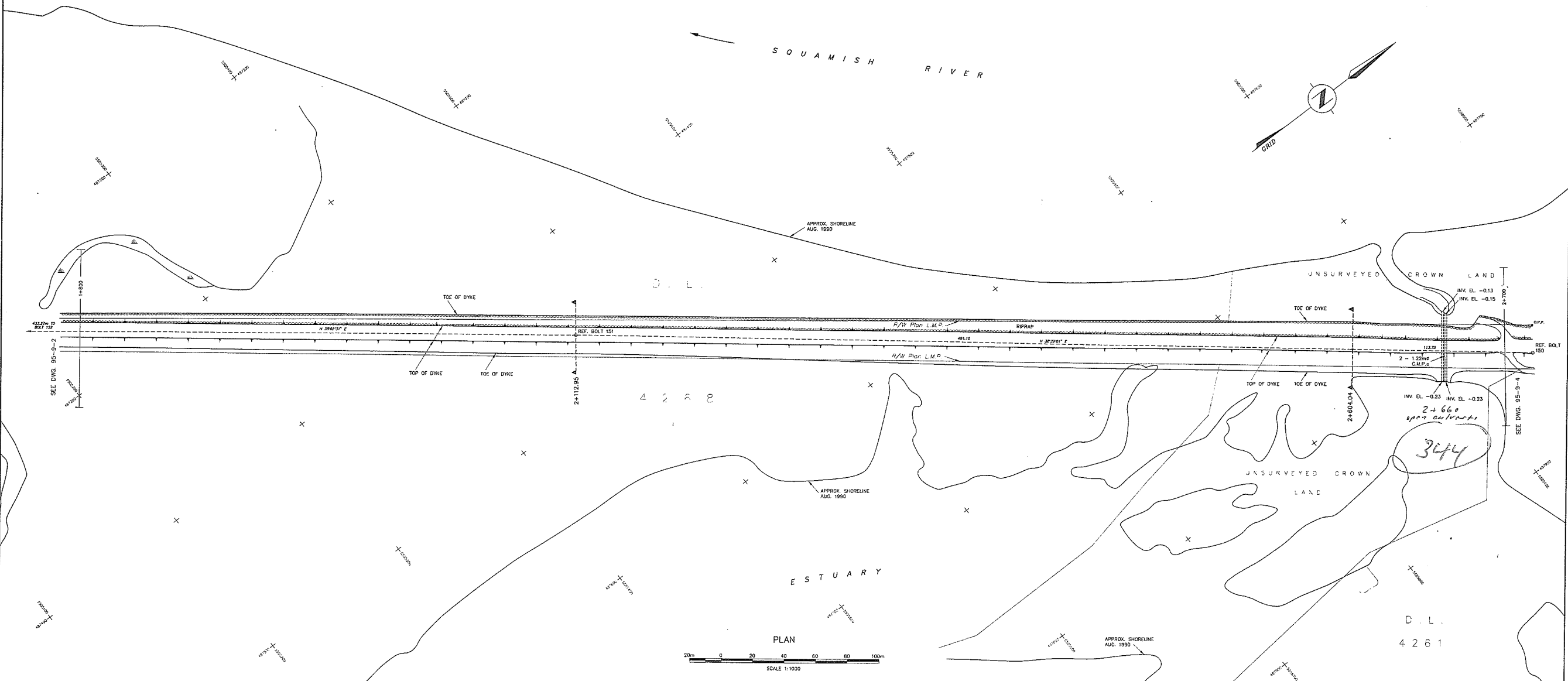
SQUAMISH RIVER DYKING
PLAN AND PROFILE
CHAINAGE 0+900 TO 1+800

APPROVED *Joan E. Sheehy* DATE *11/11/95*

FILE No.	
SURVEY PROJECT No.	94 18 D 010
HTS	835/11
Map No.	3-501-000
SCALE	AS NOTED
NEGATIVE No.	
DRAWING No.	95-9-2
TOTAL No. of SHEETS	17



PROFILE ALONG C/L DYKE
SCALE
HORIZ. 1:1000 VERT. 1:100



PLAN
SCALE 1:1000

NOTES

- This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.
- SURVEY DATA:**
 - Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division.
 - Horizontal and vertical control established by reciprocal height traversing using a total station theodolite.
 - Cross section and topographic data obtained using a total station theodolite.
- DATUM:**
 - Horizontal and vertical control based on British Columbia Control Survey Posts 77H4434 and 77H4435 established by Survey and Resource Mapping Branch, Lands Services Division as obtained from Data Book, listing dated January 1994.
 - Coordinates are Universal Transverse Mercator, Zone 10, NAD83.
- Elevations are in metres and referred to Canadian Geodetic Datum, CGD28.
- Shorelines obtained from uncontrolled mosaic Drawing No. 82-28, prepared by Technical Surveys Section from air photographs, flight 820103 & 8206033 from August 1990.
- Change of cross sections are referred to the centre line of dyke.
- CADASTRAL:**
 - Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions.
 - Lot boundaries as shown are digitized from District of Squamish cadastral composite plans.
- FIELD BOOKS:**
 - Survey data are recorded on Disc labelled 2627D and Field Book 2627-1.
- REFERENCE POINTS:**

Water Management Branch			
Northings	Eastings	Elevation	
REF. BOLT 150 5 505 943.948	487 838.803	5.300	
REF. BOLT 151 5 505 471.580	487 461.037	5.045	

Distance between reference points as shown in Grid or Projection distance.

LEGEND

- ⊙ REFERENCE POINT
- TEMPORARY REFERENCE POINT
- ⊕ CADASTRAL MARKER (e.g. Old Iron Pin)
- ⊕ UTILITY POLE
- ⊕ R/RAP
- ⊕ SWAMP

STORAGE LICENCES			
LICENCE	PROBITY DATE	AUTHORIZED AREA-FEET	DEVELOPED AREA-FEET

REFERENCES		
DWG. No.	DESCRIPTION	DATE

REVISIONS		
No.	DESCRIPTION	DATE

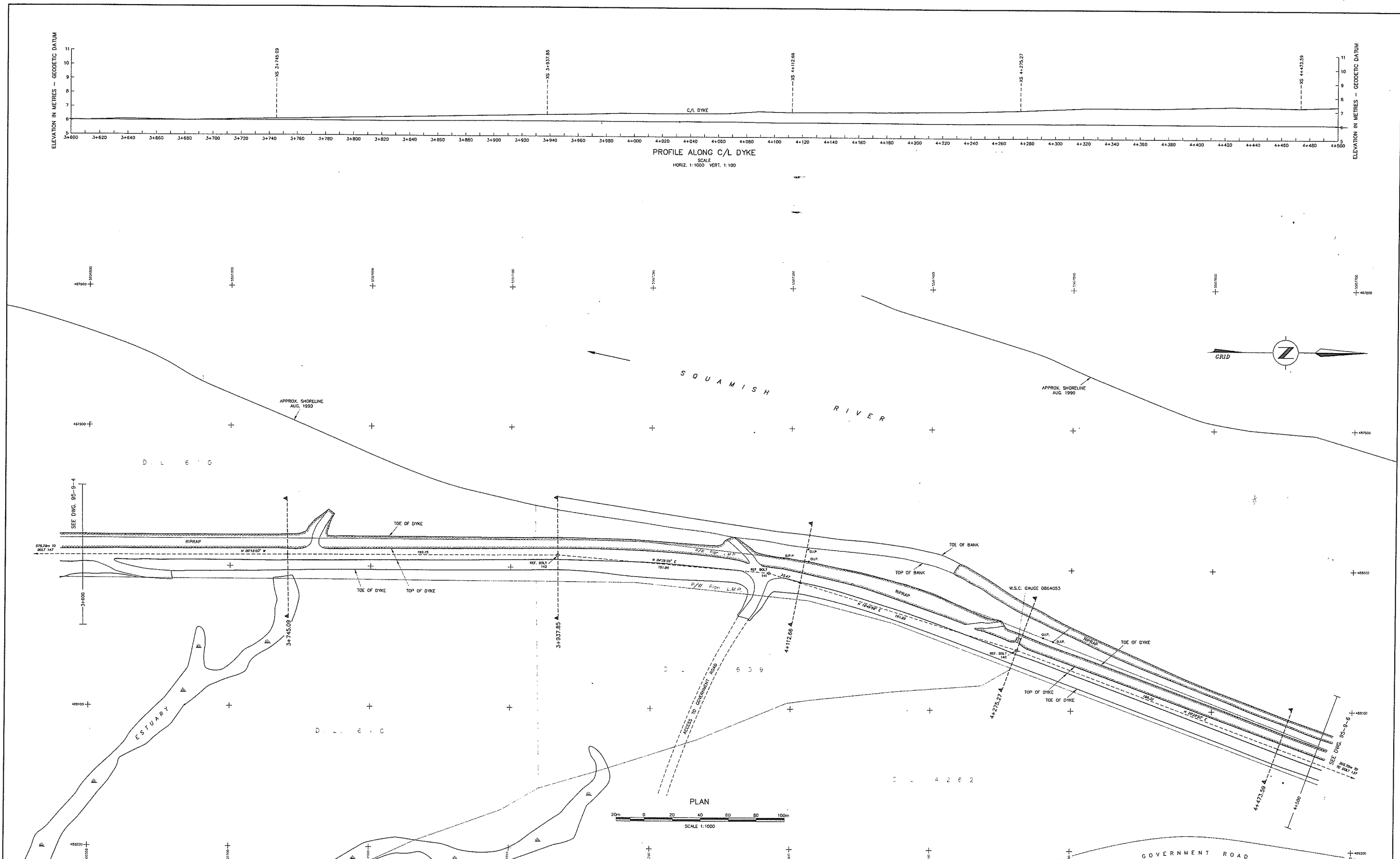
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DATE	NOV. 1994
CHECKED	R. EDWARD
DATE	19/11/94
DRAWN	B. WOODS
APPROVED	
DATE	NOV. 1995
ENGINEER	

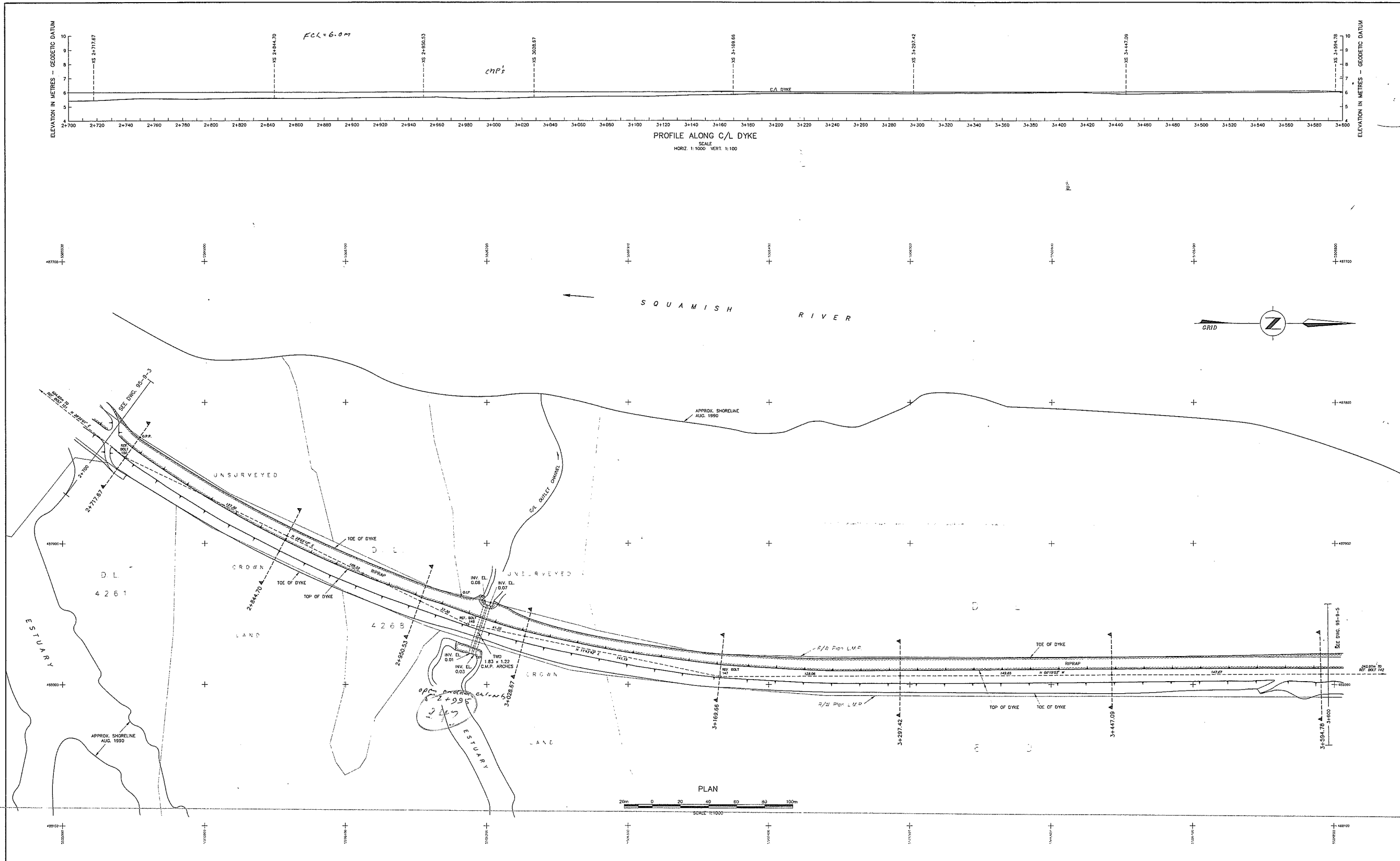
Province of British Columbia
Ministry of Environment, Lands and Parks
WATER MANAGEMENT DIVISION

SQUAMISH RIVER DYKING
PLAN AND PROFILE
CHAINAGE 1+800 TO 2+700

APPROVED: *Janet R. Schaefer*
DATE: *12/11/95*

FILE No.	
SURVEY PROJECT No.	94 18 0 010
NTS Map No.	920/11
Map Scale	1:50,000
SCALE	AS NOTED
NEGATIVE NO.	
DRAWING No.	95-9-3
TOTAL No. OF SHEETS	17



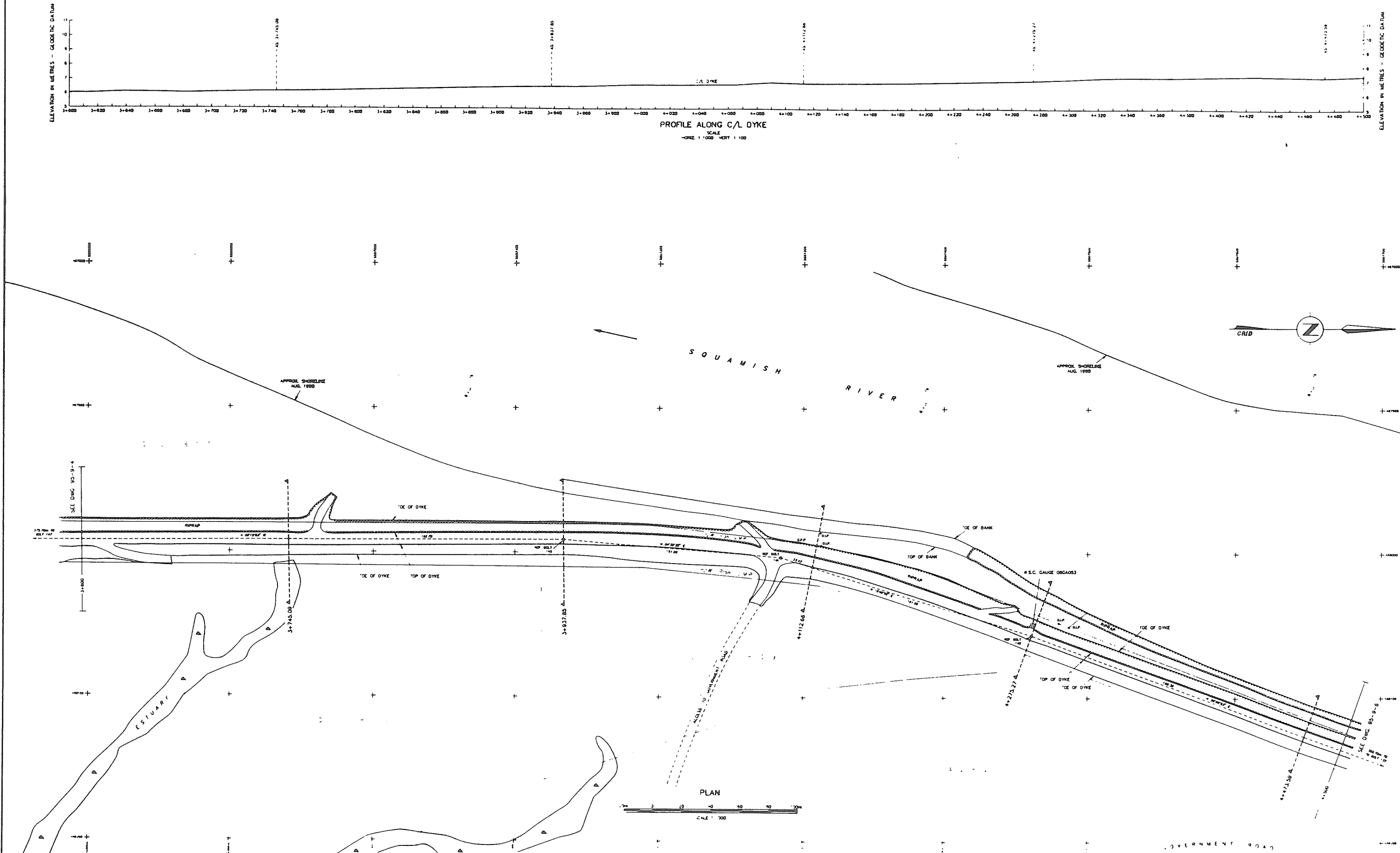


NOTES		LEGEND		STORAGE LICENCES				REFERENCES		REVISIONS		SURVEYED		Province of British Columbia Ministry of Environment, Lands and Parks WATER MANAGEMENT DIVISION	
1) This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.	e) Elevations are in metres and referred to Canadian Geodetic Datum, CVD2011.	⊙ REFERENCE POINT		LICENCE	PRIORITY DATE	APPROVED	DEVELOPED	DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE	FILE No.	
2) SURVEY DATA: a) Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division. b) Horizontal and vertical control established by reciprocal height traversing using a total station theodolite. c) Cross section and topographic data obtained using a total station theodolite.	d) Shorelines obtained from uncontrolled mosaic Drawing No. 92-28, prepared by Technical Surveys Section from air photographs, flights BC20113 & BC20253 from August 1990. e) Change of cross sections are referred to the centre line of dyke.	○ TEMPORARY REFERENCE POINT												94 18 D 010	
3) DATUM: a) Horizontal and vertical control based on British Columbia Control Survey Points 77144.34 and 77144.35 established by Surveys and Resource Mapping Branch, Lands Services Division as obtained from Data Base listing dated January 1994. b) Co-ordinates are Universal Transverse Mercator, Zone 10, NAD27.	f) Let boundaries as shown are for reference only and are NOT to be accepted as legal ground positions. g) Let boundaries as shown are digitized from District of Squamish cadastral composite plans. h) FIELD BOOKS: Survey data are recorded on Dac labelled 2627D and Field Book 2627-L. i) REFERENCE POINTS:	⊙ CADASTRAL												95-9-4	
		⊙ UTILITY POLE												95-9-4	
		⊙ RIPRAP												95-9-4	
		⊙ SWAMP												95-9-4	

ELEVATION IN METRES - GEODETIC DATUM

ELEVATION IN METRES - GEODETIC DATUM

PROFILE ALONG C/L DYKE
SCALE
HORIZ 1:1000 VERT 1:100



NOTES

1) This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.

2) SURVEY DATA:
 a) Field surveys carried out by the Technical Surveys Section, Ministry of Environment, Lands and Parks, Province of British Columbia.
 b) Horizontal and vertical control established by the British Columbia Survey Department.
 c) 1:2500 section and topographic data obtained using a total station theodolite.

3) DATUM:
 a) Horizontal and vertical control based on British Columbia Survey Point 7/14436 and 7/14438 established by the British Columbia Survey Department.
 b) Survey data are referred to the datum 1927.
 c) All elevations are referred to the datum 1927.

4) ELEVATIONS AND DISTANCES:
 a) Elevations and distances are referred to Canadian Geodetic Datum 1927.
 b) Distances between reference points are shown in feet or metres as indicated.

5) FIELD NOTES:
 a) Survey data are referred to the datum 1927 and field data 1927.

6) REFERENCE POINTS:
 a) Reference points are shown as follows:
 - REFERENCE POINT: circle with a dot
 - TEMPORARY REFERENCE POINT: circle with a cross
 - ADASTRAL MARKER: circle with a cross and a dot
 - BENCH MARK: circle with a cross and a dot
 - TOE OF DYKE: line with a cross
 - TOP OF DYKE: line with a cross
 - TOE OF BANK: line with a cross
 - RAMP: triangle

Point No.	Northing	Easting	Elevation
REF POINT 140	5 507 461 530	146 356 848	4.480
REF POINT 141	5 507 584 821	146 203 740	4.420
REF POINT 142	5 507 111 504	147 981 040	4.340

Storage Licence No.	Area (Acres)	Volume (cu ft)	Capacity (cu ft)	Location
SL 10000	1.0	10000	10000	Government Road

Reference No.	Description	Date
REF 1	Technical Surveys Section, Ministry of Environment, Lands and Parks, Province of British Columbia.	1989

Revision No.	Description	Date
REV 1	Initial design and profile.	1989

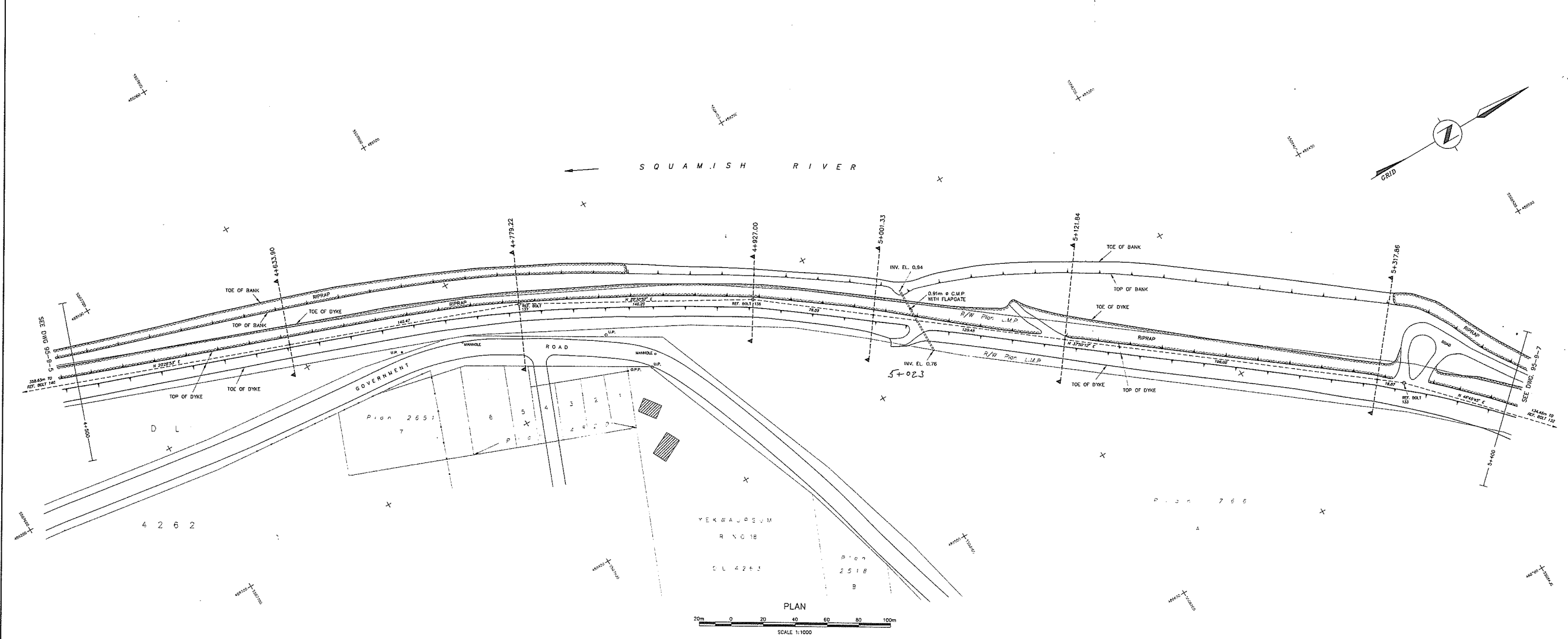
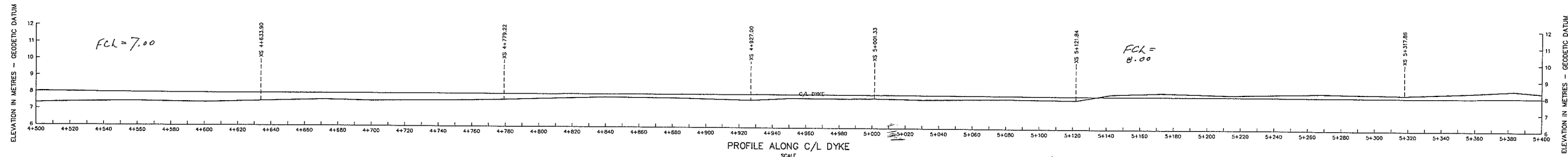
Checked By	Checked Date	Approved By	Approved Date
J. [Signature]	1989	J. [Signature]	1989

Province of British Columbia
 Ministry of Environment, Lands and Parks
 WATER MANAGEMENT DIVISION

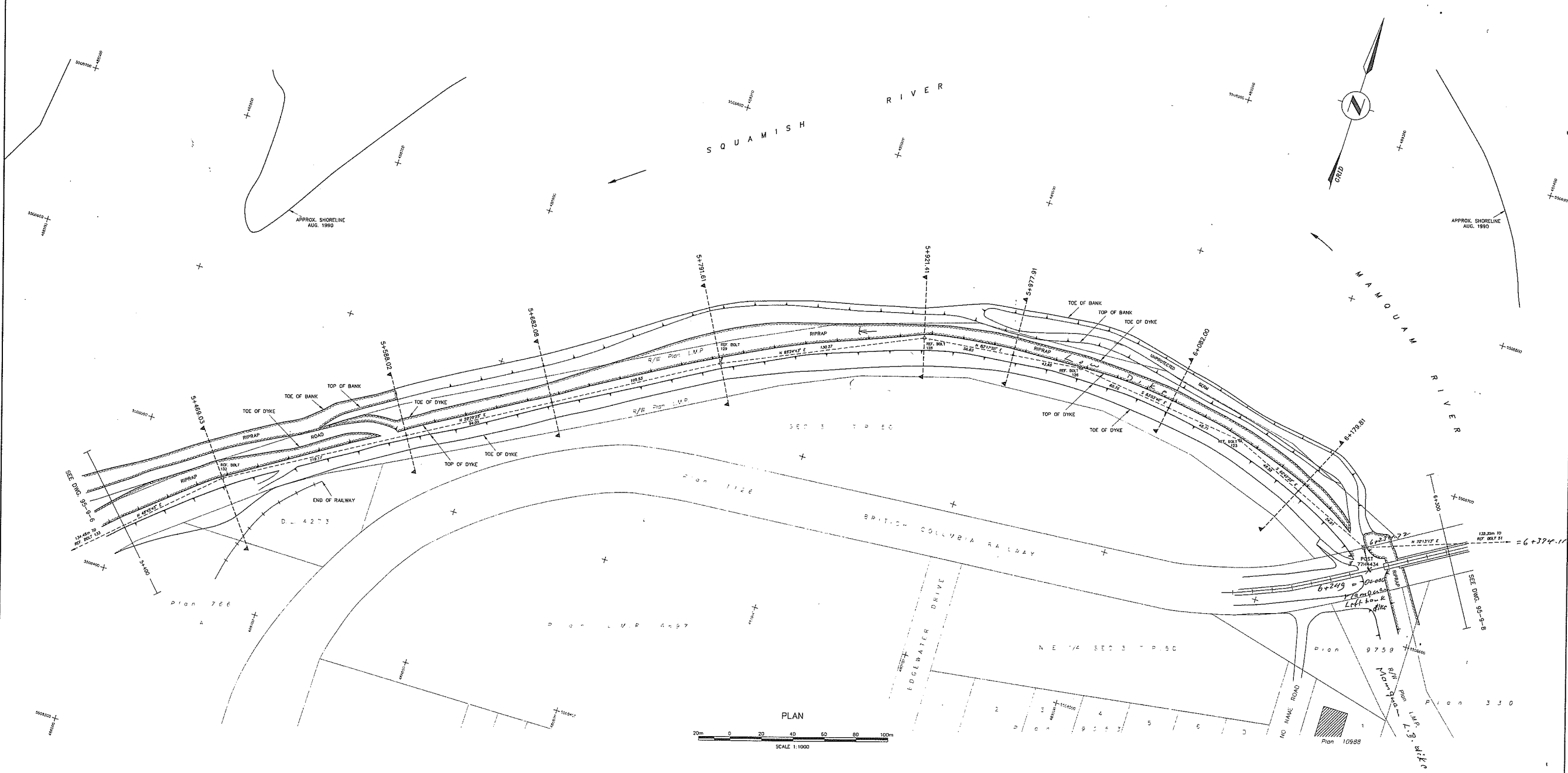
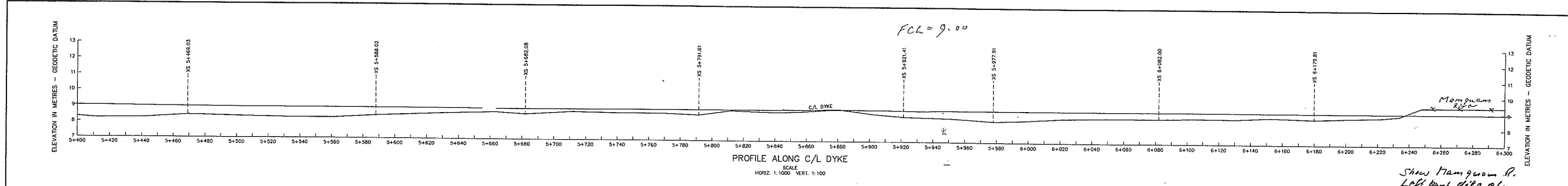
SQUAMISH RIVER DYKING
 PLAN AND PROFILE
 CHAINAGE 3+600 TO 4+500

PROJECT NO. 85-9-5
 DRAWING NO. 85-9-5
 DATE: 1989

Author: J. [Signature]
 Date: 1989



NOTES		LEGEND		STORAGE LICENCES		REFERENCES		REVISIONS		APPROVALS	
1) This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.	a) Elevations are in metres and referred to Canadian Geoidetic Datum, CGD28.	○ REFERENCE POINT	LICENCE	PROPERTY DATE	AUTHORIZED ADJ.-FEET	REVISED ADJ.-FEET	DATE	NO.	DESCRIPTION	DATE	SURVEYED T. DIGNAN
2) SURVEY DATA: a) Field surveys carried out by the Technical Survey Section, Hydrology Branch, Water Management Division. b) Horizontal and vertical control established by reciprocal height traversing using a total station theodolite. c) Cross section and topographic data obtained using a total station theodolite.	d) Shorelines obtained from uncontrolled mosaic Drawing No. 92-28, prepared by Technical Survey Section from air photographs, flight 8520103 & 8520203 from August 1990. e) Change of cross sections are referred to the centre line of dyke.	○ TEMPORARY REFERENCE POINT									DATE NOV 1994
3) DATUM: a) Horizontal and vertical control based on British Columbia Control Survey Posts 7744434 and 7744436 established by Survey and Resource Mapping Branch, Lands Services Division as obtained from Data Bank listing dated January 1994. b) Co-ordinates are Universal Transverse Mercator, Zone 10, NAD27.	f) Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions. g) Lot boundaries as shown are digitized from District of Squamish cadastral composite plans.	○ CADASTRAL MARKER (P.S. Old Iron Peg)									CHECKED R. EDWARD
	4) FIELD BOOKS: Survey data are recorded on Disc labelled 2627D and Field Book 2627-L1.	○ UTILITY POLE									DATE 25/12/11
	5) REFERENCE POINTS: Distance between reference points as shown in Grid or Projection distance.	○ RIPRAP									DRAWN B. WOODS
		○ SWAMP									APPROVED
											DATE NOV 1995
											ENGINEER
											APPROVED <i>Janet R. ...</i>
											DATE <i>...</i>
											FILE No. <i>...</i>
											SURVEY PROJECT No. <i>...</i>
											Map No. <i>...</i>
											Map Scale <i>...</i>
											SCALE <i>...</i>
											AS NOTED
											NEGATIVE No. <i>...</i>
											DRAWING No. <i>...</i>
											95-9-6
											TOTAL No. OF DWGS. 17



NOTES

- This plan prepared by the Ministry of Environment, Lands and Forests, Province of British Columbia.
- SURVEY DATA:**
 - Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division.
 - Horizontal and vertical control established by reciprocal height traversing using a total station theodolite.
 - Cross sections and topographic data obtained using a total station theodolite.
- DATUM:**
 - Horizontal and vertical control based on British Columbia Control Survey Points 774434 and 774435 established by Surveys and Resource Mapping Branch, Lands Services Division as obtained from Data Bank listing dated January 1994.
 - Co-ordinates are Universal Transverse Mercator, Zone 10, NAD27.
- Elevations are in metres and referred to Canadian Geodetic Datum, CGVD28.
- Shorelines obtained from uncontrolled mosaic Drawing No. 92-28, prepared by Technical Surveys Section from air photographs, flight BC50103 & BC50053 from August 1990.
- Change of cross sections are referred to the centre line of dyke.
- CADASTRAL:**
 - Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions.
 - Lot boundaries as shown are digitized from District of Squamish cadastral composite plans.
- FIELD BOOKS:**
 - Survey data are recorded on Disc labelled 26270 and Field Book 2627-1-1.
- REFERENCE POINTS:**
 - B.C. Control Survey

PROJ. No.	PRIORITY	AUTHORIZED AGR-FEET	DEVELOPED AGR-FEET	ENG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE
POST 774434	S	508 652.234							
		489 255.439							
REF. BOLT 123	S	508 693.067							
REF. BOLT 126	S	508 705.414							
REF. BOLT 128	S	508 654.676							
REF. BOLT 129	S	508 640.472							
REF. BOLT 132	S	508 476.535							

PROJ. No.	PRIORITY	AUTHORIZED AGR-FEET	DEVELOPED AGR-FEET	ENG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE
REF. BOLT 123	S	508 693.067							
REF. BOLT 126	S	508 705.414							
REF. BOLT 128	S	508 654.676							
REF. BOLT 129	S	508 640.472							
REF. BOLT 132	S	508 476.535							

PROJ. No.	PRIORITY	AUTHORIZED AGR-FEET	DEVELOPED AGR-FEET	ENG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE
REF. BOLT 123	S	508 693.067							
REF. BOLT 126	S	508 705.414							
REF. BOLT 128	S	508 654.676							
REF. BOLT 129	S	508 640.472							
REF. BOLT 132	S	508 476.535							

PROJ. No.	PRIORITY	AUTHORIZED AGR-FEET	DEVELOPED AGR-FEET	ENG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE
REF. BOLT 123	S	508 693.067							
REF. BOLT 126	S	508 705.414							
REF. BOLT 128	S	508 654.676							
REF. BOLT 129	S	508 640.472							
REF. BOLT 132	S	508 476.535							

PROJ. No.	PRIORITY	AUTHORIZED AGR-FEET	DEVELOPED AGR-FEET	ENG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE
REF. BOLT 123	S	508 693.067							
REF. BOLT 126	S	508 705.414							
REF. BOLT 128	S	508 654.676							
REF. BOLT 129	S	508 640.472							
REF. BOLT 132	S	508 476.535							

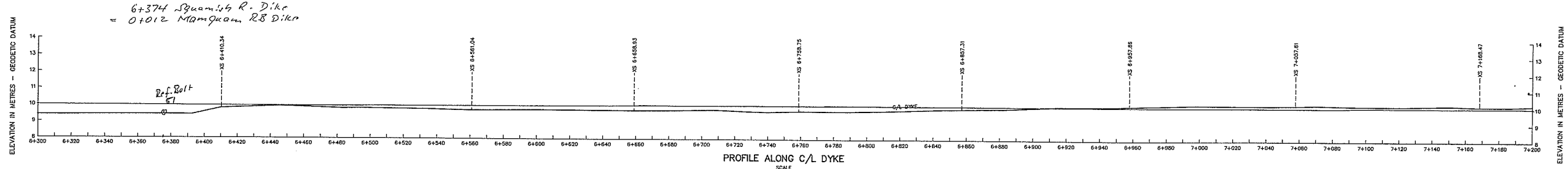
PROJ. No.	PRIORITY	AUTHORIZED AGR-FEET	DEVELOPED AGR-FEET	ENG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE
REF. BOLT 123	S	508 693.067							
REF. BOLT 126	S	508 705.414							
REF. BOLT 128	S	508 654.676							
REF. BOLT 129	S	508 640.472							
REF. BOLT 132	S	508 476.535							

SURVEYED T. DIGNAN		DATE NOV. 1994	
COMPILED R. EDWARD		DATE 05/12/11	
CHECKED [Signature]		DATE 05/12/11	
DRAWN E. WOODS		DATE NOV. 1995	
APPROVED [Signature]		DATE 05/12/11	
ENGINEER		APPROVED [Signature]	

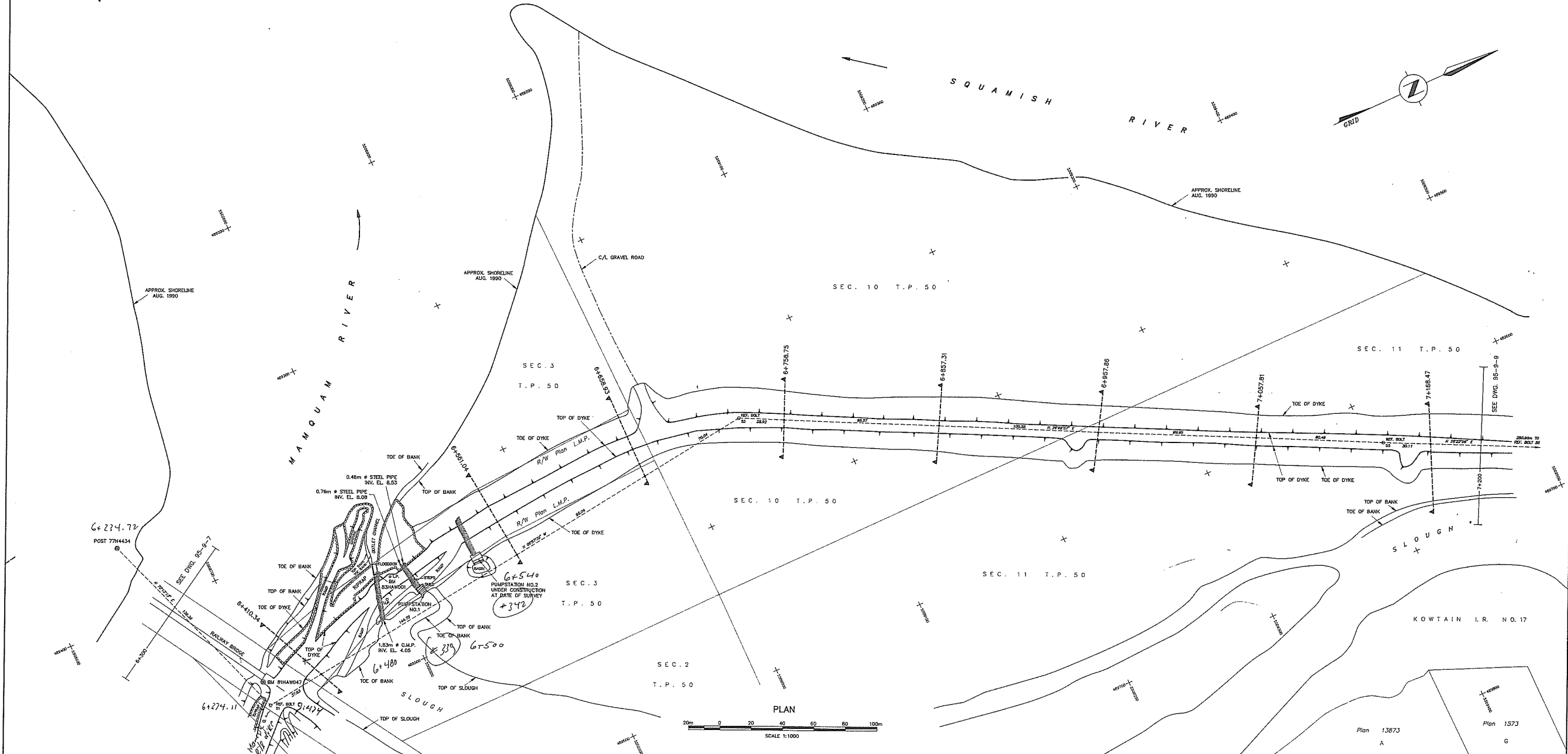
Province of British Columbia
 Ministry of Environment, Lands and Forests
 WATER MANAGEMENT DIVISION

SQUAMISH RIVER DYKING
 PLAN AND PROFILE
 CHAINAGE 5+400 TO 6+300

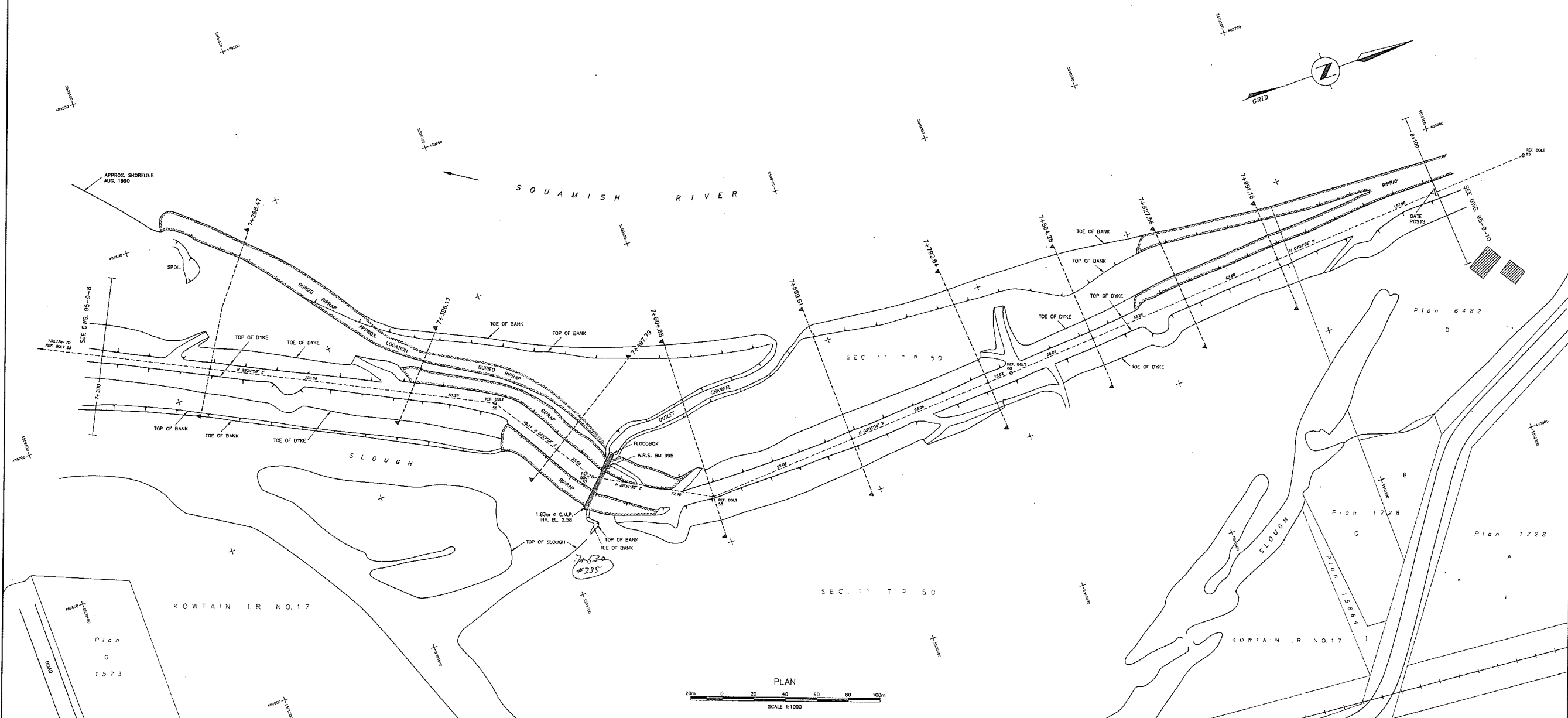
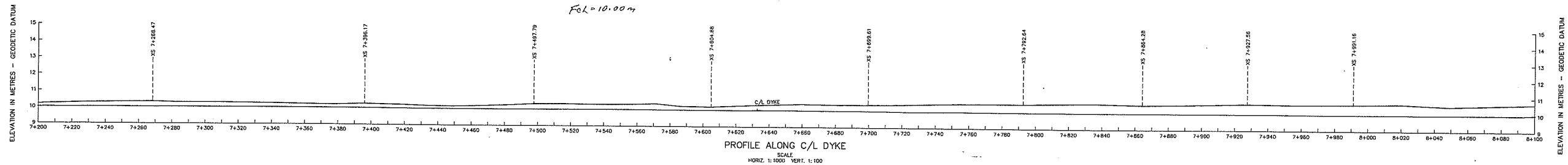
FILE No. 94-18-D-010
 SURVEY PROJECT No. 94-18-D-010
 NTS Map No. 920/71
 Map Scale 1:50,000
 SCALE AS NOTED
 NEGATIVE NO.
 DRAWING No. 95-8-7
 TOTAL No. OF PGS. 17



show Mamquam R.
Right bank dike cl.



NOTES		LEGEND		STORAGE LICENCES		REFERENCES		REVISIONS		PROVINCE OF BRITISH COLUMBIA	
1) This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.	2) SURVEY DATA: a) Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division. b) Horizontal and vertical control established by reciprocal height traversing using a total station theodolite. c) Cross section and topographic data obtained using a total station theodolite.	3) DATUM: a) Horizontal and Vertical control based on British Columbia Control Survey Posts 7714434 and 7714435 established by Survey and Resource Mapping Branch, Lands Services Division as obtained from Data Bank listing dated January 1994. b) Co-ordinates are Universal Transverse Mercator, Zone 10, NAD27.	4) ELEVATIONS are in metres and referred to Canadian Geodetic Datum, CVD28. 5) Shorelines obtained from uncontrolled mosaic Drawing No. 92-06, prepared by Technical Surveys Section from air photographs, flights BC30103 & BC50053 flown August 1990. 6) Changes of cross sections are referred to the centre line of dyke. 7) Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions. 8) Lot boundaries as shown are digitized from District of Squamish cadastral composite plans. 9) FIELD BOOKS: Survey data are recorded on Disc labelled 26270 and Field Book 2627-11. 10) REFERENCE POINTS:	1) Water Management Branch BM 8184W047 BM 8184W001 REF. BOLT 51 REF. BOLT 52 REF. BOLT 55	Nothing S 508 852.234 Easting 489 355.439 Elevation 9.832 489 456.629 489 444.501 489 428.894 10.101	① REFERENCE POINT ○ TEMPORARY REFERENCE POINT ⊕ CADASTRAL MARKER (e.g. Old Iron Pins) ⊕ UTILITY POLE ⊕ RIPRAP ⊕ SWAMP					
<p>APPROVED: <i>Janet R. Stoddard</i> DATE: <i>12/11/95</i></p>											



NOTES

- This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.
- SURVEY DATA:**
 - Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division.
 - Horizontal and vertical control established by reciprocal height traversing using a total station theodolite.
 - Cross section and topographic data obtained using a total station theodolite.
- DATUM:**
 - Horizontal and Vertical control based on British Columbia Central Survey Plans 7744434 and 7714435 established by Survey and Resource Mapping Branch, Lands Services Division as obtained from Data Bank listing dated January 1994.
 - Co-ordinates are Universal Transverse Mercator, Zone 10, NAD83.
- Elevations are in metres and referred to Canadian Geodetic Datum, CGD28.
- Shorelines obtained from uncontrolled mosaic Drawing No. 82-28, prepared by Technical Surveys Section from air photographs, flight 820103 & 8201033 from August 1990.
- Chinings of cross sections are referred to the centre line of dyke.
- CADASTRAL:**
 - Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions.
 - Lot boundaries as shown are digitized from District of Squamish cadastral composite plans.
- FIELD BOOKS:**
 - Survey data are recorded on Disc labelled 2627D and Field Book 2627-1-1.
- REFERENCE POINTS:**

Water Management Branch			
	Northing	Easting	Elevation
WRS BM 995			2.976
REF. BOLT 56	5 509 687.466	489 767.117	10.056
REF. BOLT 58	5 509 795.537	489 868.445	10.039
REF. BOLT 60	5 510 001.952	489 858.273	10.391
REF. BOLT 65	5 510 352.131	489 826.142	10.535

Distance between reference points as shown is Grid or Projection distance.

LEGEND

- REFERENCE POINT
- TEMPORARY REFERENCE POINT
- CADASTRAL MARKER (e.g. Old Iron Peg)
- ⊕ UTILITY POLE
- ⊕ RIPRAP
- ⊕ SWAMP

STORAGE LICENCES			
LICENCE	PROPERTY DATE	AUTHORIZED ACRE-FEET	DEVELOPED ACRE-FEET

REFERENCES		
DWG. No.	DESCRIPTION	DATE

REVISIONS		
No.	DESCRIPTION	DATE

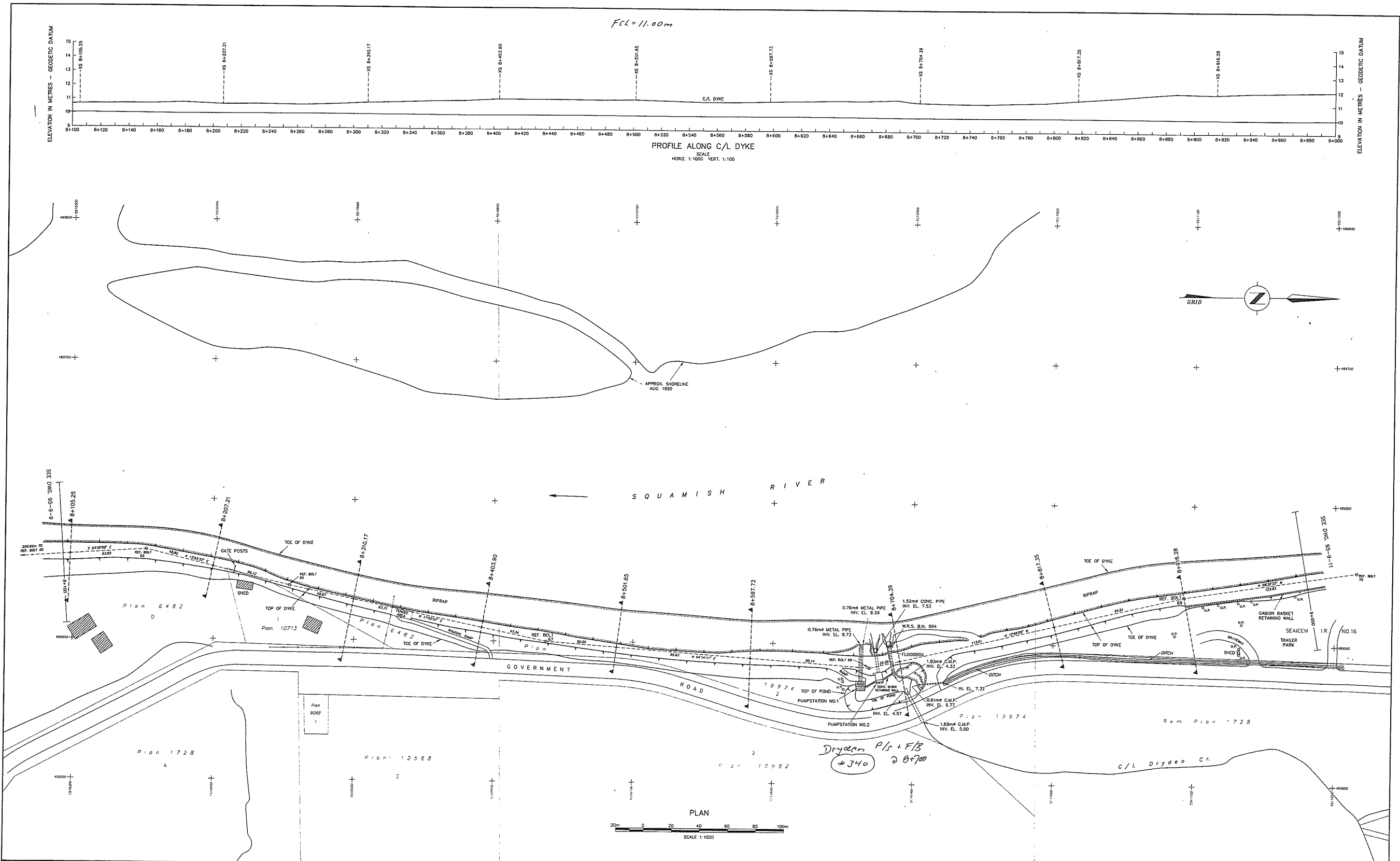
SURVEYED	T. DIGNAN
DATE	JUNE 1993
COMPILED	R. EDWARD
CHECKED	<i>[Signature]</i>
DATE	10/12/93
DRAWN	B. WOODS
APPROVED	<i>[Signature]</i>
DATE	NOV. 1995
ENGINEER	

Province of British Columbia
 Ministry of Environment, Lands and Parks
 WATER MANAGEMENT DIVISION

SQUAMISH RIVER DYKING
 PLAN AND PROFILE
 CHAINAGE 7+200 TO 8+100

APPROVED *[Signature]* DATE *[Signature]*

FILE No.	
SURVEY PROJECT No.	93 14 R 010
Map No.	995/71
Map Scale	1:50,000
SCALE	AS NOTED
NEGATIVE No.	
DRAWING No.	95-9-9
TOTAL No. of DWGS.	17



NOTES

- This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.
- SURVEY DATA:**
 - Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division.
 - Horizontal and vertical control established by regional height traversing using a total station theodolite.
 - Cross section and topographic data obtained using a total station theodolite.
- DATUM:**
 - Horizontal and Vertical control based on British Columbia Control Survey Points 77H4434 and 77H4435 established by Surveys and Resource Mapping Branch, Lands Services Division as obtained from Data Bank listing dated January 1984.
 - Co-ordinates are Universal Transverse Mercator, Zone 10, NAD83.
- Elevations are in metres and referred to Canadian Geodetic Datum, CGD28.
- Shorelines obtained from uncontrolled mosaic Drawing No. 82-28, prepared by Technical Surveys Section from air photographs, flights BC29103 & BC29053 from August 1990.
- Change of cross sections are referred to the centre line of dyke.
- CADASTRAL:**
 - Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions.
 - Lot boundaries as shown are digitized from District of Squamish cadastral composite plans.
- FIELD BOOKS:**
 - Survey data are recorded on Disc labelled 2627D and Field Book 2627-L.
- REFERENCE POINTS:**

Water Management Branch			
WRS BM 994	Northing	Easting	Elevation
REF. BOLT 65	5 510 352.131	489 836.142	10.535
REF. BOLT 66	5 510 454.051	489 851.351	10.657
REF. BOLT 67	5 510 637.737	489 900.057	11.027
REF. BOLT 68	5 510 868.770	489 917.120	11.105
REF. BOLT 69	5 511 093.155	489 855.472	11.776
REF. BOLT 70	5 511 215.816	489 847.083	12.140

Distance between reference points as shown is Grid or Projection distance.

LEGEND	
⊙	REFERENCE POINT
○	TEMPORARY REFERENCE POINT
⊕	CADASTRAL MARKER (e.g. Old Iron Pin)
U.P.	UTILITY POLE
—	RIPRAP
△	SWAMP

STORAGE LICENCES			
LICENCE	PROPERTY DATE	AUTHORIZED AREA-FEET	DEVELOPER ADGE-FT/ET

REFERENCES		
DWG. No.	DESCRIPTION	DATE

REVISIONS	
NO.	DESCRIPTION

SURVEYED	T. DIGLIAN
DATE	JUNE 1993
CHECKED	R. EDWARD
DATE	28/12/93
DRAWN	B. WOODS
APPROVED	
DATE	NOV. 1995
ENGINEER	

Province of British Columbia Ministry of Environment, Lands and Parks WATER MANAGEMENT DIVISION

SQUAMISH RIVER DYKING
PLAN AND PROFILE
CHAINAGE 8+100 TO 9+000

SCALE: AS NOTED

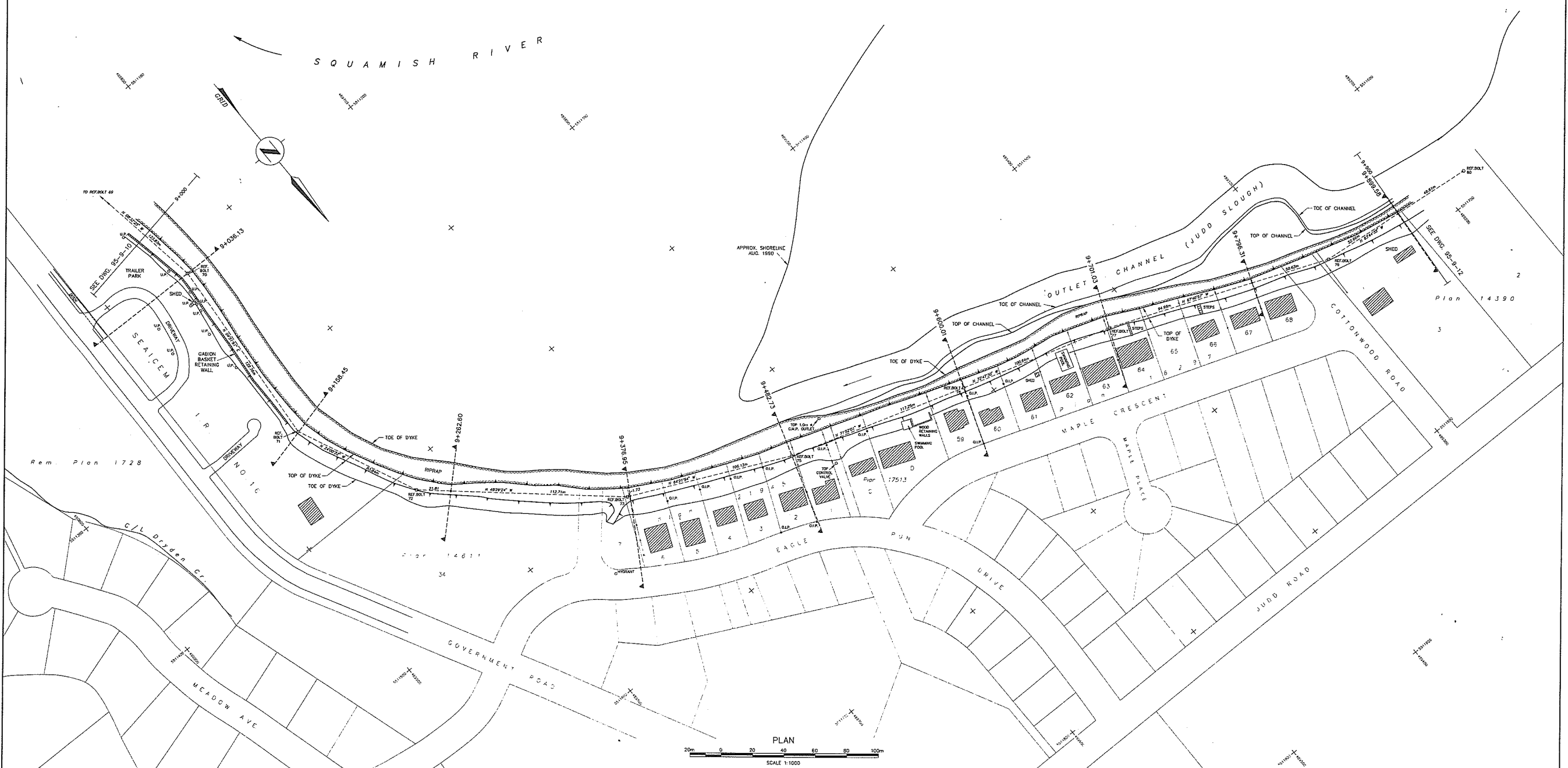
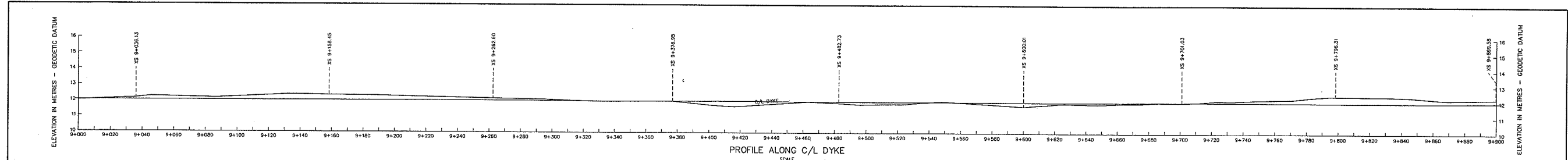
NEGATIVE NO.

DRAWING No. 95-9-10

TOTAL No. OF DWGS 22

APPROVED: *[Signature]* DATE: *[Signature]*

FILE No.	
SURVEY PROJECT No.	93 14 R 010
NTS	1:50,000
Map Scale	1:50,000
SCALE	AS NOTED
NEGATIVE NO.	
DRAWING No.	95-9-10
TOTAL No. OF DWGS	22



NOTES

- This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.
- SURVEY DATA:**
 - Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division.
 - Horizontal and vertical control established by reciprocal height traversing using a total station theodolite.
 - Cross section and topographic data obtained using a total station theodolite.
- DATUM:**
 - Horizontal and vertical control based on British Columbia Central Survey Points 774434 and 774435 established by Surveys and Resource Mapping Branch, Lands Services Division as obtained from Data Bank listing dated January 1984.
 - Coordinates are Universal Transverse Mercator, Zone 10, NAD27.
- Elevations are in metres and referred to Canadian Geodetic Datum, CGD28.
- Spot heights obtained from uncontrolled mosaic Drawing No. 92-28, prepared by Technical Surveys Section from air photographs, flight BC90103 & BC90053 flown August 1990.
- Horizontal and vertical control established by reciprocal height traversing using a total station theodolite.
- Chainage of cross sections are referred to the centre line of dyke.
- CADASTRAL:**
 - Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions.
 - Lot boundaries as shown are digitized from District of Squamish cadastral composite plans.
- FIELD BOOKS:**
 - Survey data are recorded on Dac labelled 26270 and Field Book 2627-1.1.
- REFERENCE POINTS:**

Water Management Branch			
	Northing	Easting	Elevation
REF. BOLT 70	5 511 215.616	489 847.083	12.140
REF. BOLT 71	5 511 337.053	489 857.453	12.243
REF. BOLT 72	5 511 414.544	489 823.383	12.070
REF. BOLT 73	5 511 525.594	489 723.852	11.763
REF. BOLT 75	5 511 550.359	489 625.407	11.931
REF. BOLT 76	5 511 586.851	489 513.880	11.707
REF. BOLT 77	5 511 616.625	489 417.846	11.841
REF. BOLT 78	5 511 671.917	489 283.147	12.205
REF. BOLT 80	5 511 683.053	489 181.485	12.407

Distance between reference points as shown is Grid or Projection distance.

LEGEND

- ⊙ REFERENCE POINT
- TEMPORARY REFERENCE POINT
- ⊕ CADASTRAL MARKER (e.g. O.M. from P.O.)
- ⊙ UTILITY POLE
- ⊙ RIPRAP
- ⊙ SWAMP

STORAGE LICENCES

LICENCE	PRIORITY DATE	AUTHORIZED AGE-FEET	DEVELOPED AGE-FEET	DWG. No.	DESCRIPTION	DATE

REFERENCES

DWG. No.	DESCRIPTION	DATE

REVISIONS

No.	DESCRIPTION	DATE

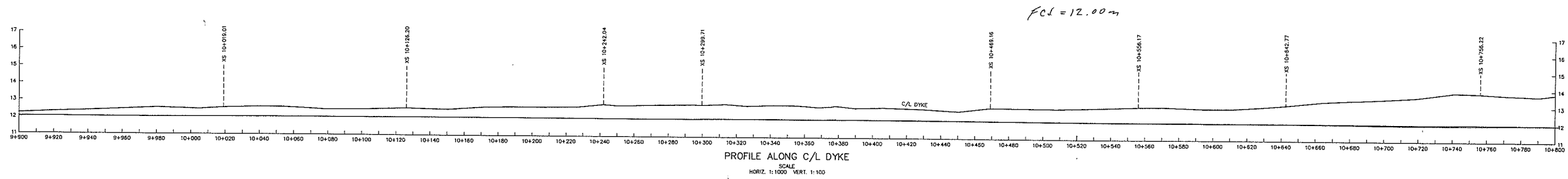
SURVEYED: T. DIGNAN
DATE: JUNE 1993
CHECKED: R. EDWARD
DATE: 95/12/10
DRAWN: B. WOODS
APPROVED: [Signature]
DATE: NOV. 1995
ENGINEER: [Signature]

Province of British Columbia
Ministry of Environment, Lands and Parks
WATER MANAGEMENT DIVISION

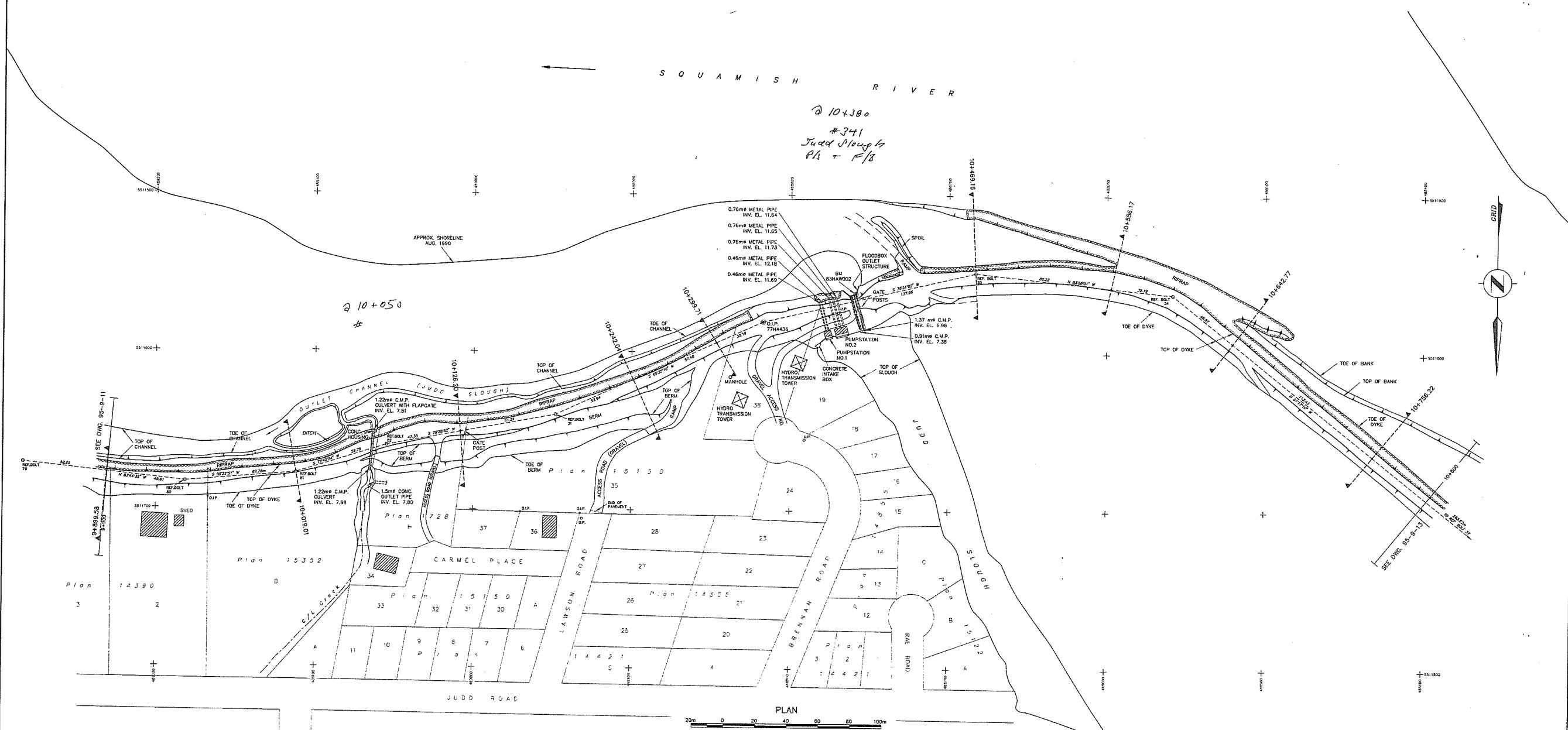
SQUAMISH RIVER DYKING
PLAN AND PROFILE
CHAINAGE 9+000 TO 9+900

FILE No. 93 14 R 010
SURVEY PROJECT No. 93 14 R 010
Map No. 820/14
Map Scale 1:50,000
SCALE AS NOTED
NEGATIVE NO.
DRAWING No. 95-9-11
TOTAL No. OF DWGS. 17

APPROVED: [Signature] DATE: 9/16/95



PROFILE ALONG C/L DYKE
SCALE
HORIZ. 1:1000 VERT. 1:100



PLAN
SCALE 1:1000

NOTES

- This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.
- SURVEY DATA:**
 - Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division.
 - Horizontal and vertical control established by reciprocal height traversing using a total station theodolite.
 - Cross section and topographic data obtained using a total station theodolite.
- DATUM:**
 - Horizontal and Vertical control based on British Columbia Control Survey Pests 77H4434 and 77H4436 established by Surveys and Resource Mapping Branch, Lands Services Division as obtained from Data Book listing dated January 1994.
 - Co-ordinates are Universal Transverse Mercator, Zone 10, NAD27.
- Elevations are in metres and referred to Canadian Geodetic Datum, CGD28.
- Shorelines obtained from uncontrolled mosaic Drawing No. 92-26, prepared by Technical Surveys Section from air photographs, flight 829103 & 829053 flown August 1990.
- Change of cross sections are referred to the centre line of dyke.
- CADASTRAL:**
 - Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions.
 - Lot boundaries as shown are digitized from District of Squamish cadastral composite plans.
- FIELD BOOKS:**
 - Survey data are recorded on Data Book labelled 26270 and Field Book 2627-1.
- REFERENCE POINTS:**
 - Distance between reference points as shown is Grid or Projection distance.

a) B.C. Control Survey			
Point	Northing	Easting	Elevation
OIP 77H4436	5 511 550.537	488 817.403	12.858
b) Water Management Branch			
EM 83H4002	5 511 639.855	488 948.098	12.812
REF. BOLT 31	5 511 549.174	488 683.181	12.897
REF. BOLT 33	5 511 522.325	488 558.445	12.740
REF. BOLT 34	5 511 671.917	489 283.147	12.205
REF. BOLT 79	5 511 683.063	489 181.489	12.407
REF. BOLT 81	5 511 677.445	489 111.952	12.348
REF. BOLT 82	5 511 659.581	489 054.669	12.350

LEGEND

- REFERENCE POINT
- TEMPORARY REFERENCE POINT
- P.C. CADASTRAL MARKER (e.g. Old Iron Peg)
- UTILITY POLE
- RIPRAP
- STRAP

STORAGE LICENCES

LICENCE	PRIORITY DATE	AUTHORIZED ACRE-FEET	DEVELOPED ACRE-FEET	DWG. No.	DESCRIPTION	DATE

REFERENCES

DWG. No.	DESCRIPTION	DATE

REVISIONS

No.	DESCRIPTION	DATE

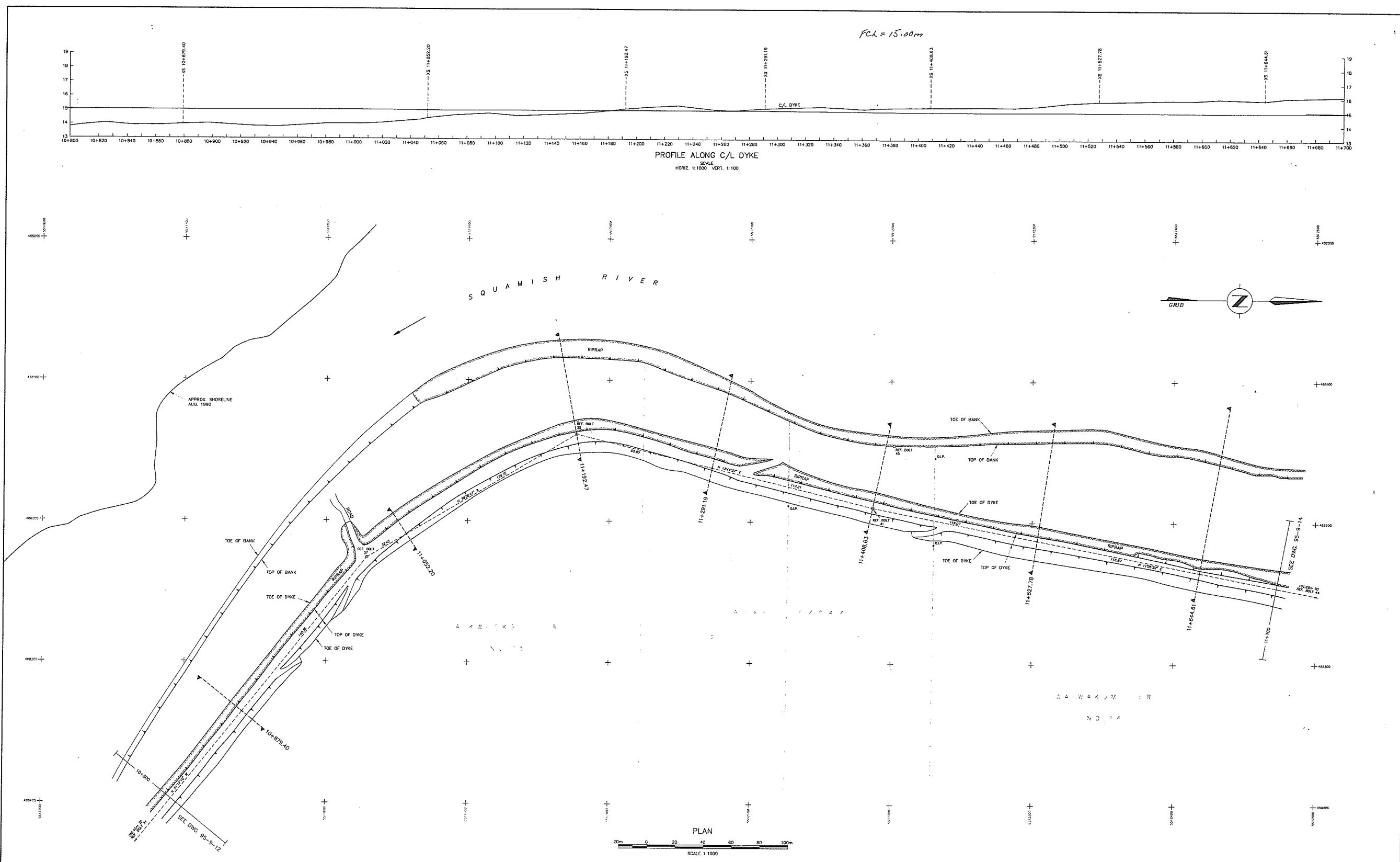
SURVEYED T. DIGNAN
DATE JUNE 1993
COMPILED R. EDWARD
CHECKED *[Signature]*
DATE 05/12/94
DRAWN B. WOODS
APPROVED *[Signature]*
DATE NOV 1995
ENGINEER *[Signature]*

Province of British Columbia Ministry of Environment, Lands and Parks WATER MANAGEMENT DIVISION

SQUAMISH RIVER DYKING
PLAN AND PROFILE
CHAINAGE 9+900 TO 10+800

FILE No. _____
SURVEY PROJECT No. 93.14.R.010
Map No. 93G/14
Map Scale 1:50,000
SCALE AS NOTED
NEGATIVE No. _____
DRAWING No. 95-9-12
TOTAL No. OF DWGS. 17

APPROVED *[Signature]* DATE *[Signature]*



NOTES

- This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.
- SURVEY DATA:**
 - Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division.
 - Horizontal and vertical control established by reciprocal sight traversing using a total station theodolite.
 - Cross section and topographic data obtained using a total station theodolite.
- DATUM:**
 - Horizontal and Vertical control based on British Columbia Control Survey Posts 77H4434 and 77H4436 established by Surveys and Resource Mapping Branch, Lands Services Division as obtained from Data Bank listing dated January 1994.
 - Co-ordinates are Universal Transverse Mercator, Zone 10, NAD27.
- Elevations are in metres and referred to Canadian Geodetic Datum, CV228.
- Shorelines obtained from uncontrolled mosaic Drawing No. 92-28, prepared by Technical Surveys Section from air photographs, flights 8296113 & 8296133 flown August 1990.
- Change of cross sections are referred to the centre line of dyke.
- CADASTRAL:**
 - Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions.
 - Lot boundaries as shown are digitized from District of Squamish cadastral composite plans.
- FIELD BOOKS:**
 - Survey data are recorded on Disc labelled 2627D and Field Book 2627-L1.
- REFERENCE POINTS:**

Water Management Branch			
REF. BOLT	Northing	Easting	Elevation
REF. BOLT 37	5 511 820.673	488 226.193	14.098
REF. BOLT 38	5 511 876.783	488 138.432	15.283
REF. BOLT 39	5 511 965.912	488 085.819	12.033
REF. BOLT 41	5 512 186.818	488 189.880	15.313

Distance between reference points as shown is Grid or Projection distance.

LEGEND

- ⊙ REFERENCE POINT
- TEMPORARY REFERENCE POINT
- ⊕ CADASTRAL MARKER (e.g. Old Iron Peg)
- ⊕ UTILITY POLE
- ▬ RIPRAP
- ⊠ SWAMP

STORAGE LICENCES				REFERENCES		REVISIONS	
LICENCE	PRIORITY DATE	AUTHORIZED ACRE-FEET	DEVELOPED ACRE-FEET	DWG. No.	DESCRIPTION	DATE	NO.

SURVEYED	T. DIGNAN
DATE	JUNE 1993
CHECKED	R. EDWARD
DATE	95/12/11
DRAWN	B. WOODS
APPROVED	
DATE	NOV. 1995
ENGINEER	

Province of British Columbia Ministry of Environment, Lands and Parks
WATER MANAGEMENT DIVISION

SQUAMISH RIVER DYKING
PLAN AND PROFILE
CHAINAGE 10+800 TO 11+700

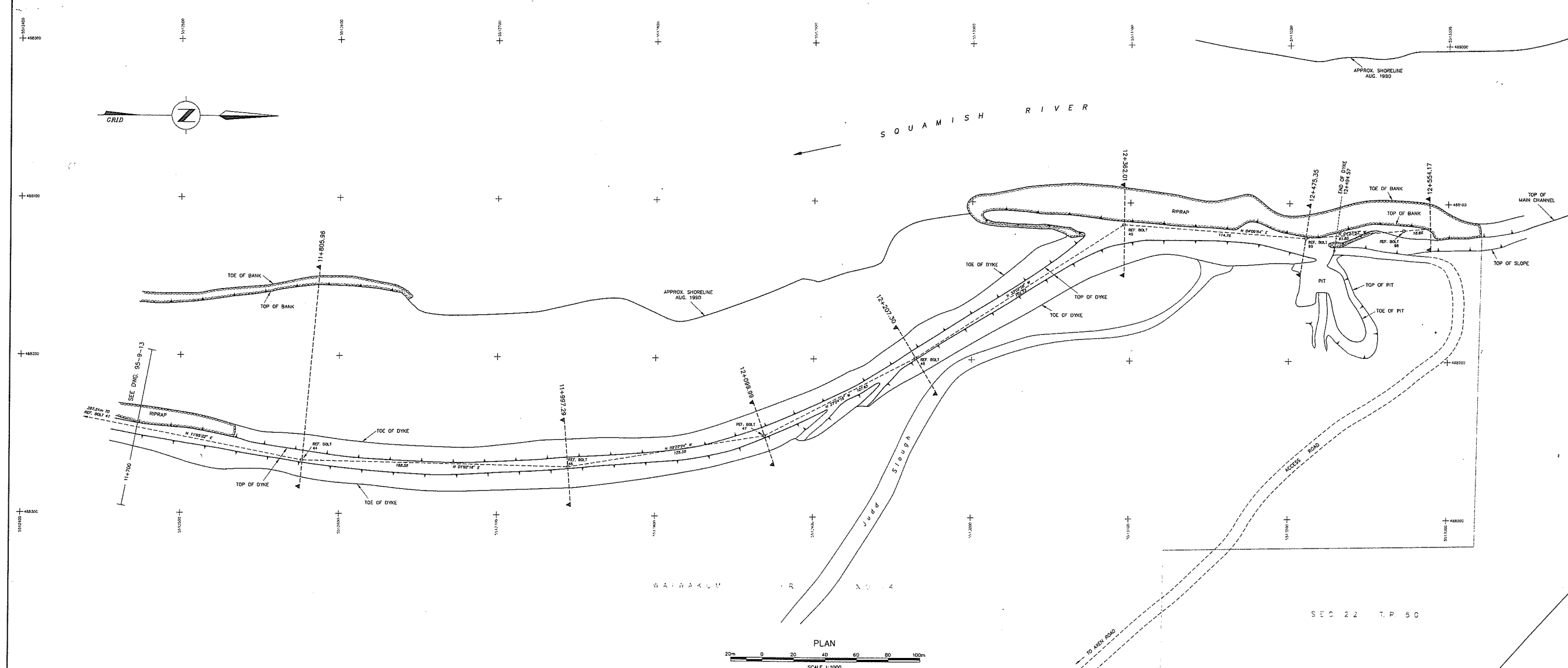
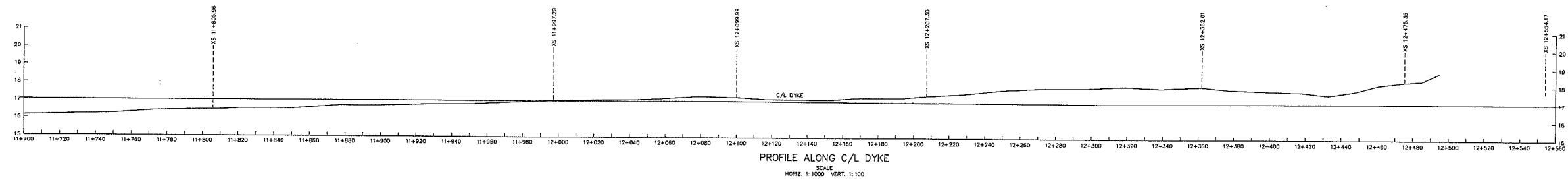
FILE No. _____
Branch _____

SURVEY PROJECT No. 95-14-R-010
Map No. 852/14
Map Scale 1:50,000
SCALE AS NOTED
NEGATIVE NO. _____

DRAWING No. 95-9-13
TOTAL No. OF DWGS. 17

APPROVED *Janet R. ...* DATE *11/11*

FCL-17.00m



NOTES

- This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.
- SURVEY DATA:**
 - Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division.
 - Horizontal and vertical control established by regional height traversing using a total station theodolite.
 - Chain section and topographic data obtained using a total station theodolite.
- DATUM:**
 - Horizontal and Vertical control based on British Columbia Control Survey Posts 7744434 and 7744435 established by Surveys and Resources Mapping Branch, Lands Services Division as obtained from Data Book listing dated January 1994.
 - Coordinates are Universal Transverse Mercator, Zone 10, NAD83.
- Elevations are in metres and referred to Canadian Geodetic Datum, CY88.
- Shorelines obtained from uncontrolled mosaic Drawing No. 82-28, prepared by Technical Surveys Section from air photographs, flights BC30103 & BC26023 flown August 1990.
- Change of cross sections are referred to the centre line of dyke.
- CADASTRAL:**
 - Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions.
 - Lot boundaries as shown are digitized from District of Squamish cadastral composite plans.
- FIELD BOOKS:**
 - Survey data are recorded on Disc labelled 26270 and Field Book 2627-1.
- REFERENCE POINTS:**

Water Management Branch		Northings	Eastings	Elevation
REF. BOLT 44	S 512 576.612	488 266.201	16.291	
REF. BOLT 45	S 512 201.869	488 145.892	12.205	
REF. BOLT 46	S 512 745.168	488 269.254	16.797	
REF. BOLT 47	S 512 868.978	488 248.534	17.160	
REF. BOLT 48	S 512 894.446	488 192.284	17.290	
REF. BOLT 49	S 513 095.819	488 113.809	17.844	
REF. BOLT 98	S 513 271.997	488 116.563	17.646	
REF. BOLT 99	S 513 210.273	488 122.144	18.295	

Distance between reference points as shown in Grid or Projection distance.

LEGEND

- REFERENCE POINT
- TEMPORARY REFERENCE POINT
- CADASTRAL MARKER (e.g. Old Iron Pin)
- UTILITY POLE
- ▬ RIPRAP
- ▬ SWAMP

STORAGE LICENCES

LICENCE	PRIORITY DATE	AUTHORIZED ACRE-FEET	DEVELOPER ACRE-FEET	DWG. No.

REFERENCES

DWG. No.	DESCRIPTION	DATE

REVISIONS

No.	DESCRIPTION	DATE

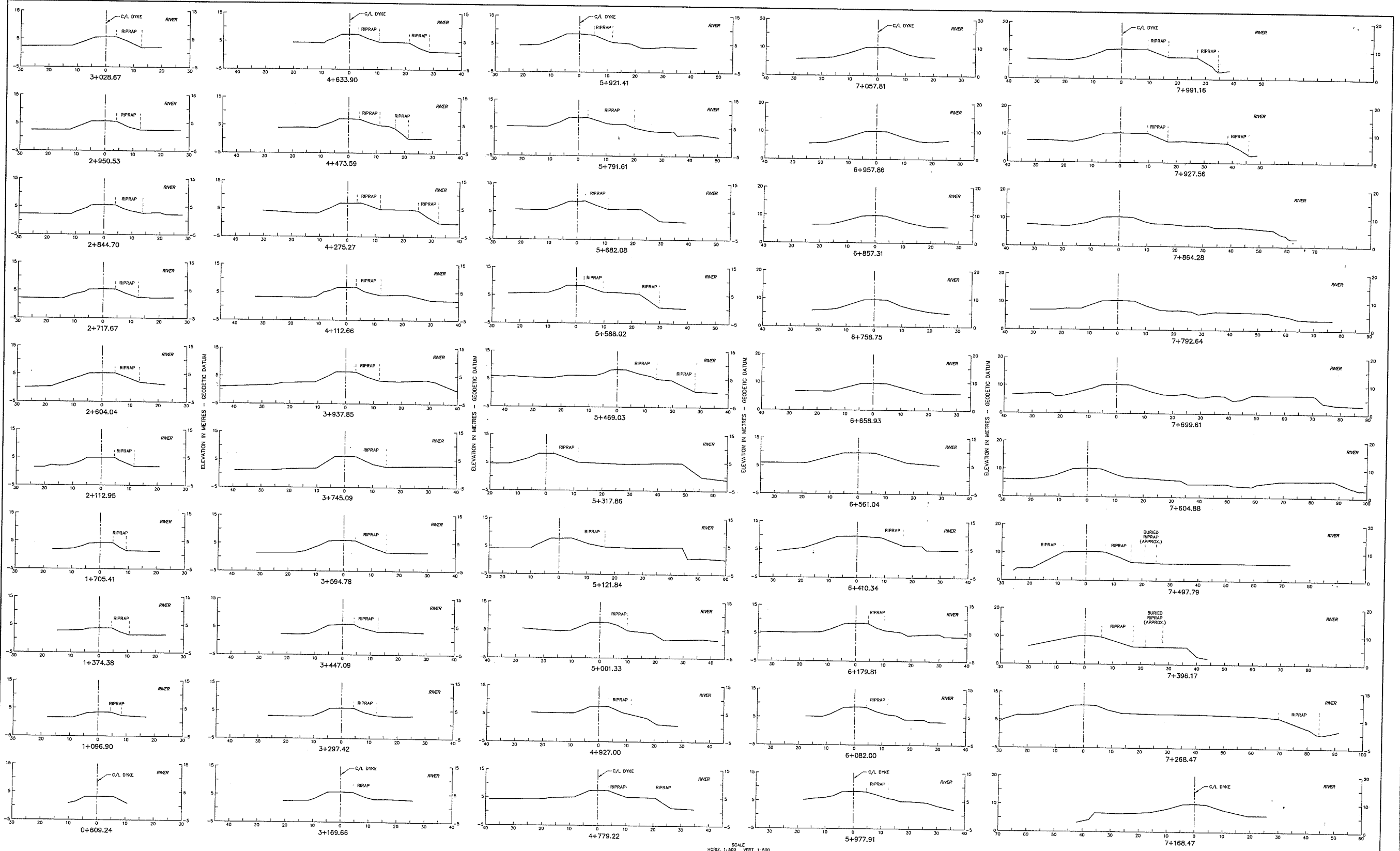
SURVEYED T. DIGNAN
DATE JUNE 1993
COMPLETED R. EDWARD
CHECKED [Signature]
DATE 05/12/93
DRAWN B. WOODS
APPROVED [Signature]
DATE NOV. 1995
ENGINEER [Signature]

Province of British Columbia
Ministry of Environment, Lands and Parks
WATER MANAGEMENT DIVISION

SQUAMISH RIVER DYKING
PLAN AND PROFILE
CHAINAGE 11700 TO 12560

APPROVED [Signature]
DATE 05/12/93

FILE No. _____
SURVEY PROJECT No. 93 14 R 010
PLOT No. 926/14
Map Scale 1:50,000
SCALE AS NOTED
NEGATIVE NO. _____
DRAWING No. 95-9-14
TOTAL No. of DWGS. 17



SCALE
HORIZ. 1:500 VERT. 1:500

NOTES

LEGEND

STORAGE LICENCES

REFERENCES

REVISIONS

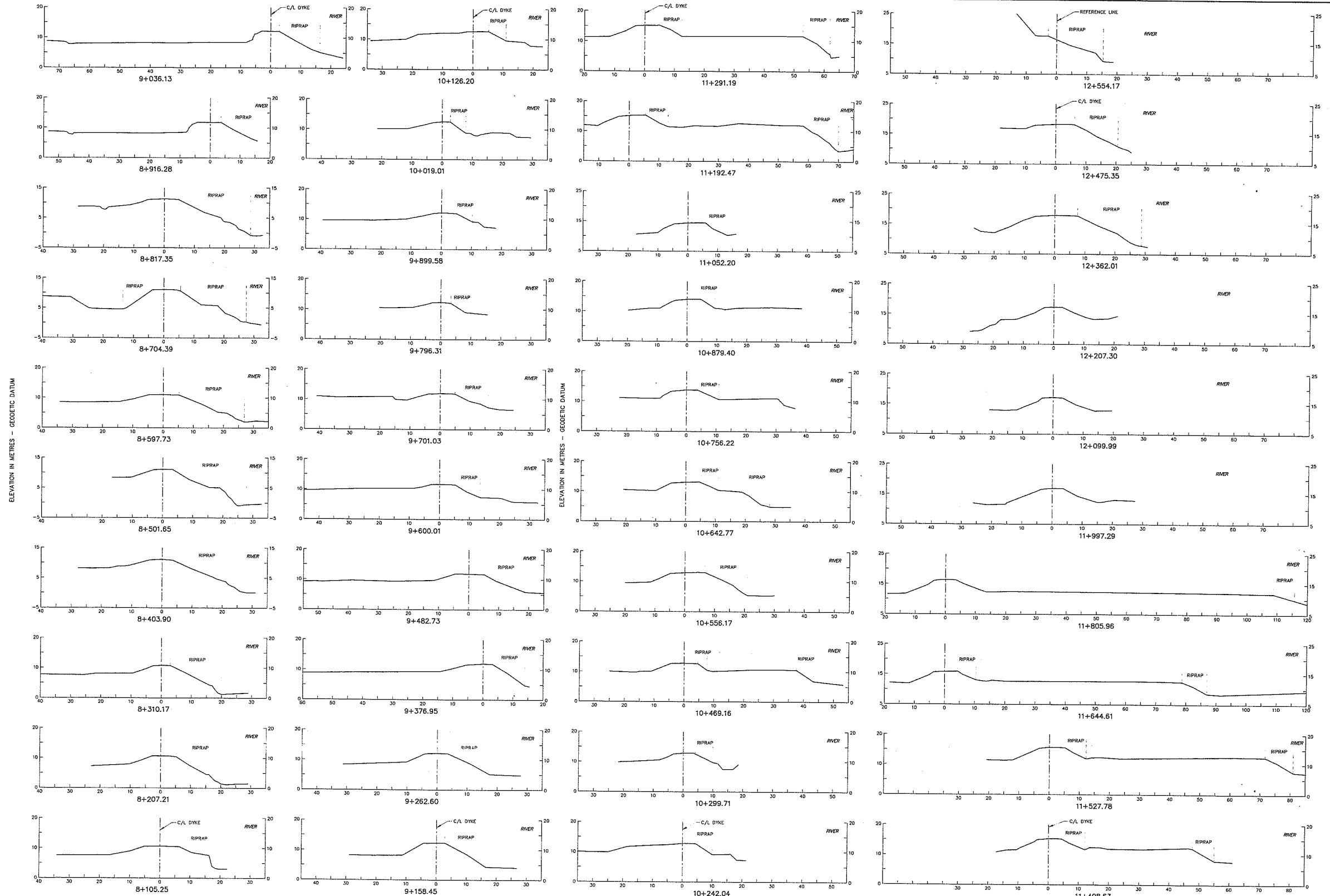
SURVEYED	T. DIGNAN
DATE	NOV. 1994
COMPILED	
DATE	12/12/94
DRAWN	B. WOODS
APPROVED	
DATE	NOV. 1995
ENGINEER	

Province of British Columbia
Ministry of Environment, Lands and Parks
WATER MANAGEMENT DIVISION

SQUAMISH RIVER DYKING
CROSS SECTIONS
0+609.24 TO 7+991.16

FILE No.	
SURVEY PROJECT No.	S4-18-D-010
WTS	
Map No.	920/11
Map Scale	1:50,000
SCALE	1:500
NEGATIVE NO.	
DRAWING No.	95-9-15
TOTAL No. OF DWGS.	17

APPROVED *Janet P. Chubb* DATE *12/12/94*



ELEVATION IN METRES - GEOIDIC DATUM

ELEVATION IN METRES - GEOIDIC DATUM

SCALE
HORIZ: 1:500 VERT: 1:500

NOTES

LEGEND

STORAGE LICENCES

REFERENCES

REVISIONS

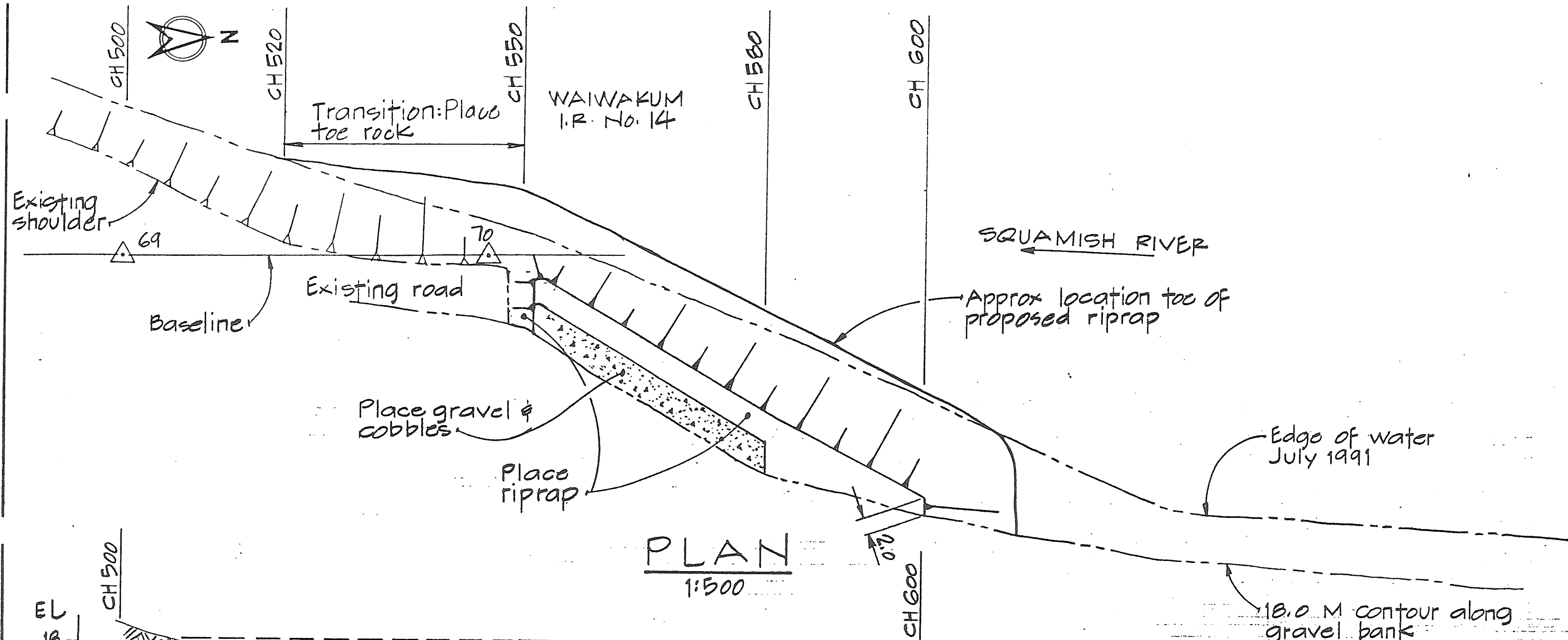
SURVEYED	T. DICMAN
DATE	JUNE 1993
COMPILED	R. EDWARD
CHECKED	<i>[Signature]</i>
DATE	95/12/11
DRAWN	B. WOODS
APPROVED	
DATE	NOV. 1995
ENGINEER	

Province of British Columbia
Ministry of Environment, Lands and Parks
WATER MANAGEMENT DIVISION

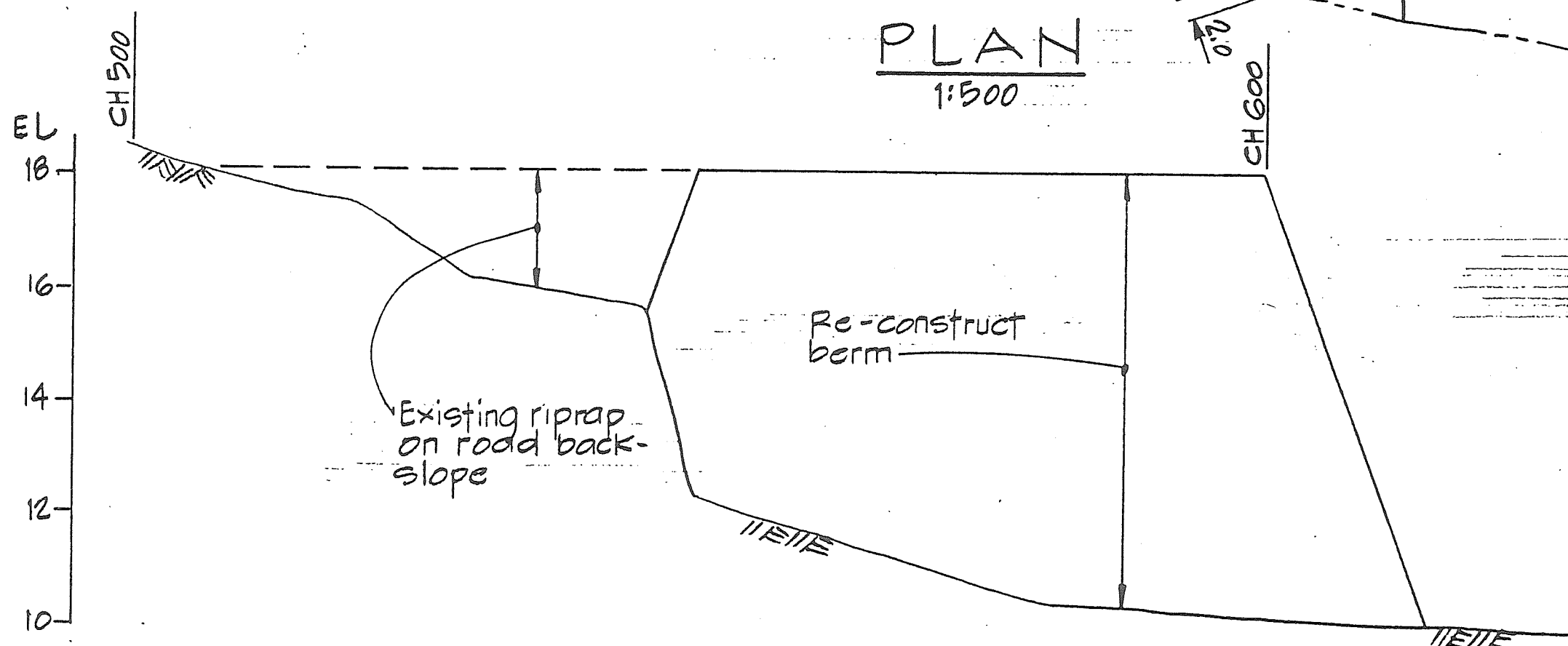
SQUAMISH RIVER DYKING
CROSS SECTIONS
8+105.25 TO 12+554.17

APPROVED *[Signature]* DATE 95-9-16
ENGINEER *[Signature]*

FILE No.	
SURVEY PROJECT No.	93 14 R 010
NTS Map No.	925/11
Map Scale	1:50,000
SCALE	1:500
NEGATIVE NO.	
DRAWING No.	1
DATE	95-9-16
TOTAL No. OF SHEETS	17




PLAN
1:500

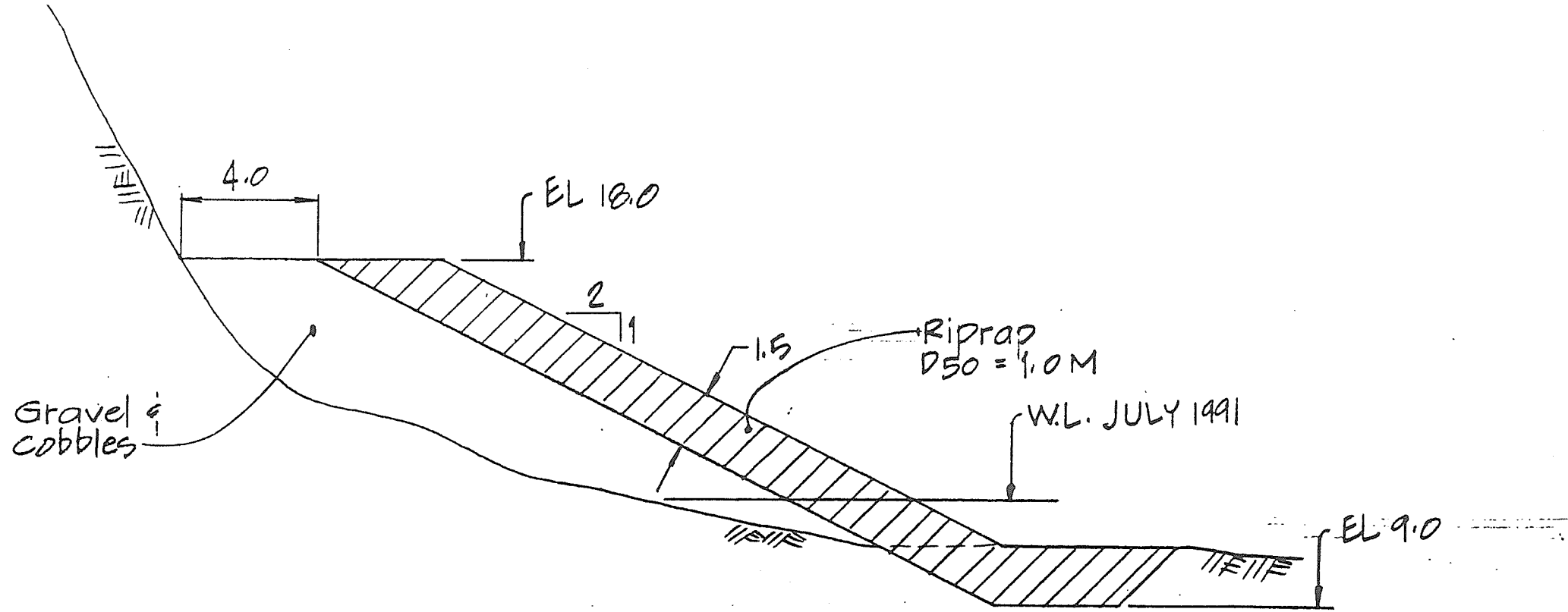


BASELINE PROFILE
Horiz 1:500 / Vert 1:100

NOTE:
For Notes & Sections see sh 2 of 2

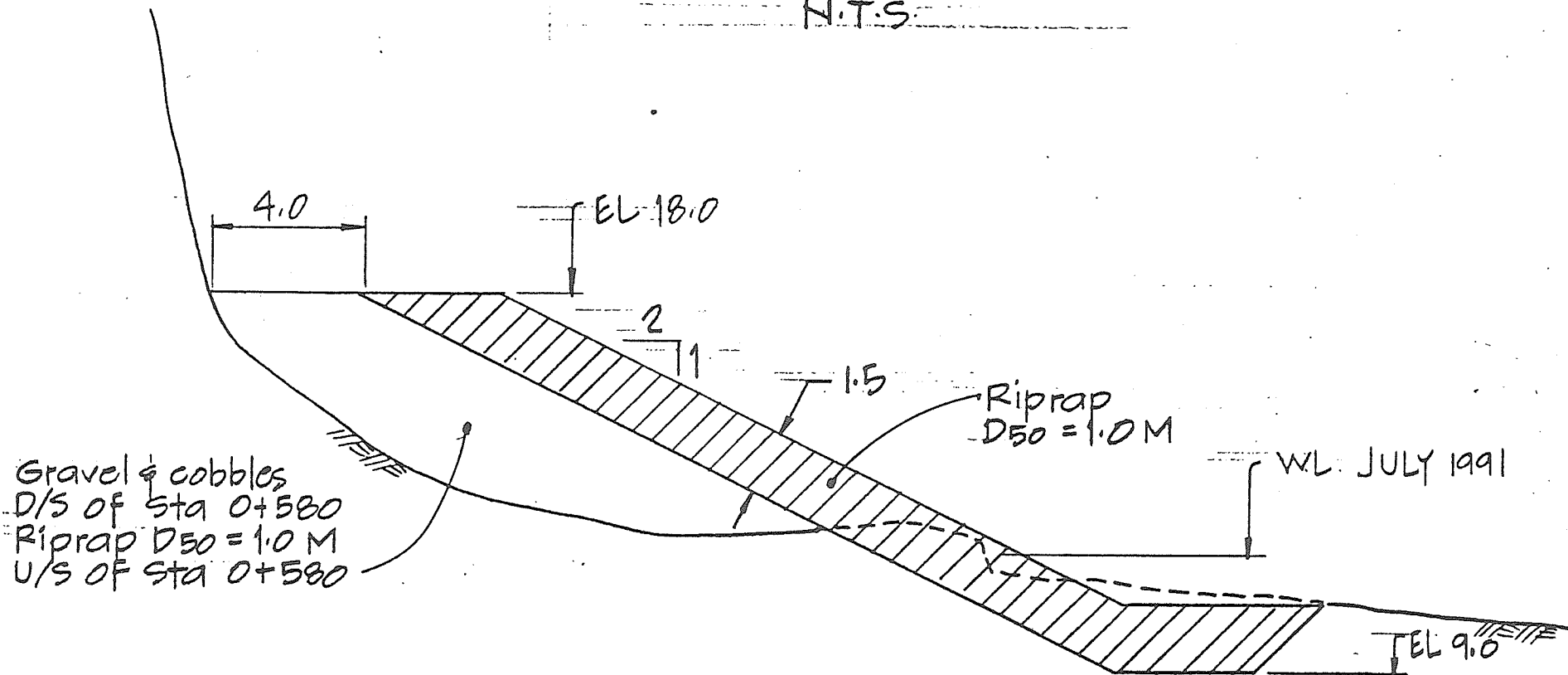
AS BUILT

 CBA ENGINEERING LTD. CONSULTING ENGINEERS VANCOUVER - CANADA			
B.C. ENVIRONMENT			
DES	M.H.	RESTORATION WORKS FOR 1990 FLOODING	
DR	W.N.	SQUAMISH RIVER	
OR	D.L.C.	BANK PROTECTION	
APP		U/S JUDD SLOUGH - SH 1 OF 2	
SCALE	DATE	DWG NO.	REV
AS SHOWN	JULY 1991	2.380.010	PLATE



SECTION STA 0+550

N.T.S.




SECTION STA 0+580

N.T.S.

NOTE:

- Place coarse gravel and cobble fill against existing gravel bank from end of existing road at Stn. 0+546 to Stn. 0+580. Continue with rock only to bank tie-in at Stn. 0+600. At U/S end place rock along the toe and on the lower part of the slope back to Stn. 0+520, providing a smooth transition to the steeper existing slope at that point.
- Riprap size: $D_{50} = 1.0m$ $D_{20} = 0.5m$
 $D_{100} =$ Typically 1.5m, but up to 2.0m from Stn. 0+580 to 0+600
- Estimated riprap quantity = 1600m³
- Estimated gravel quantity = 800m³

AS BUILT

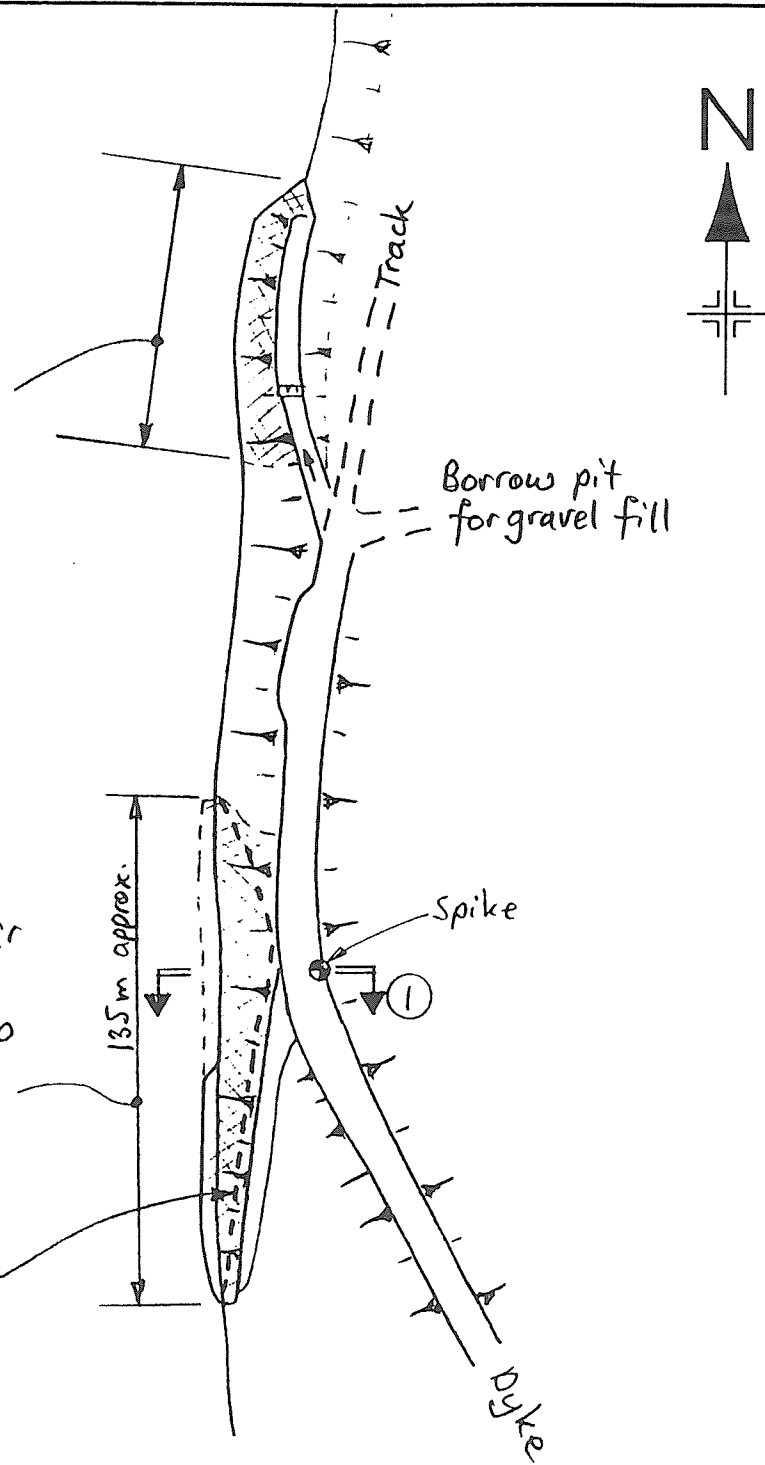
 CBA ENGINEERING LTD. CONSULTING ENGINEERS VANCOUVER - CANADA	
B.C. ENVIRONMENT	
DES	M.H. RESTORATION WORKS FOR 1990 FLOODING
DR	W.N. SQUAMISH RIVER
CI	DLC BANK PROTECTION
APPD	U/S JUDD SLOUGH - SH. 2 OF 2
SCALE	AS SHOWN
DATE	JULY 1991
DWG NO.	2.380.010
PLATE	PLATE
REV	

Riprap repair
 OIC 1819 site
 2.380.010,
 Aug-Sept 1991

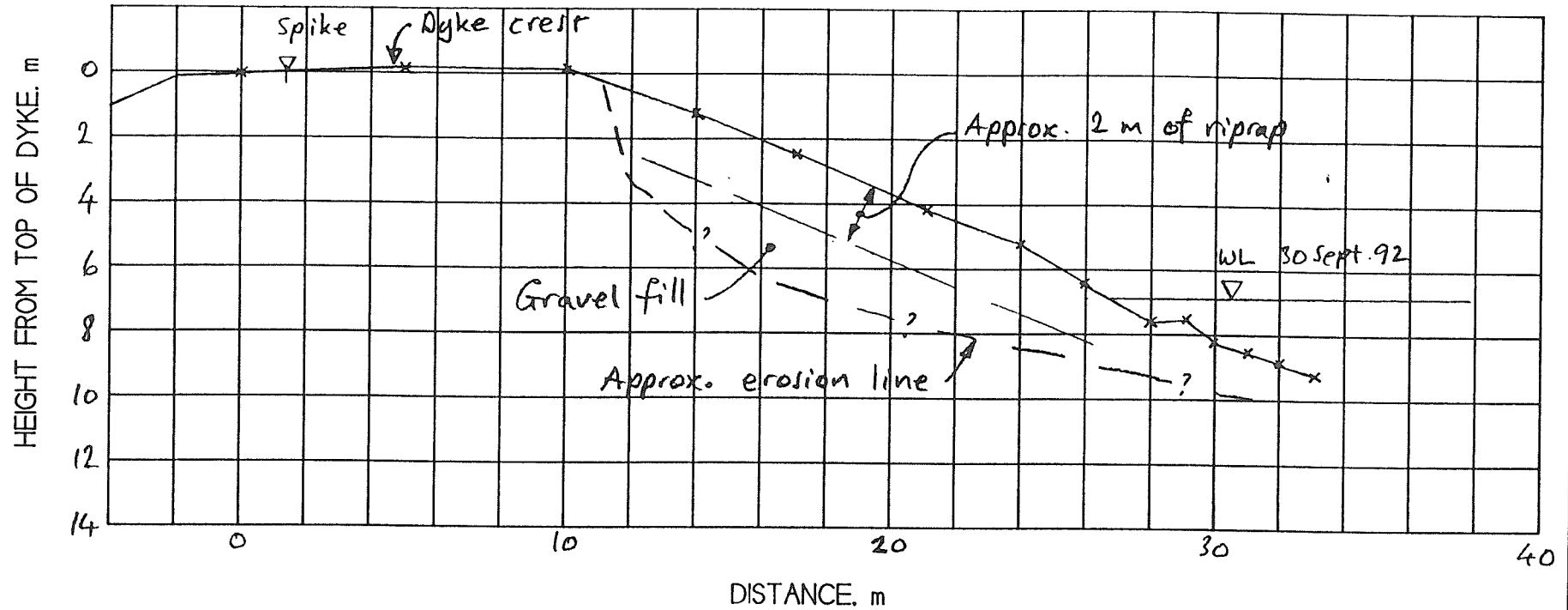
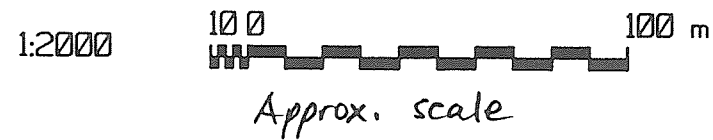
SQUAMISH
 RIVER

Riprap repair
 OIC 1298
 Site 1.150.020
 October 1991

Approximate line
 of eroded bank



SKETCH PLAN



SECTION I

Design by Water Management. September 1991.
 Constructed October 1991.
 Surveyed September 1992.
 As-constructed information from D. Bello.

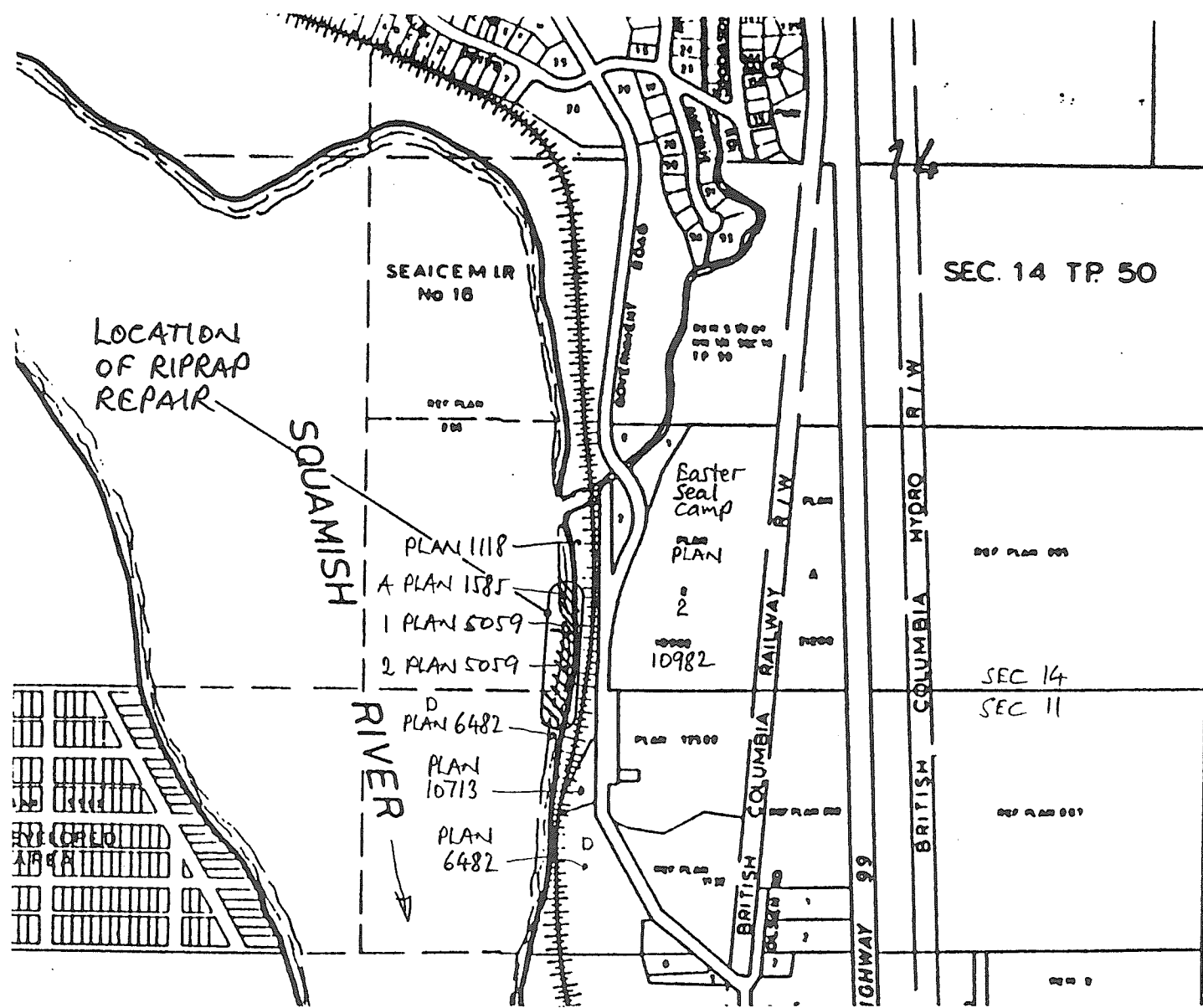
AS CONSTRUCTED

DATE: 30 September 1992
 C. Robert Bland, P. Eng., consulting engineer

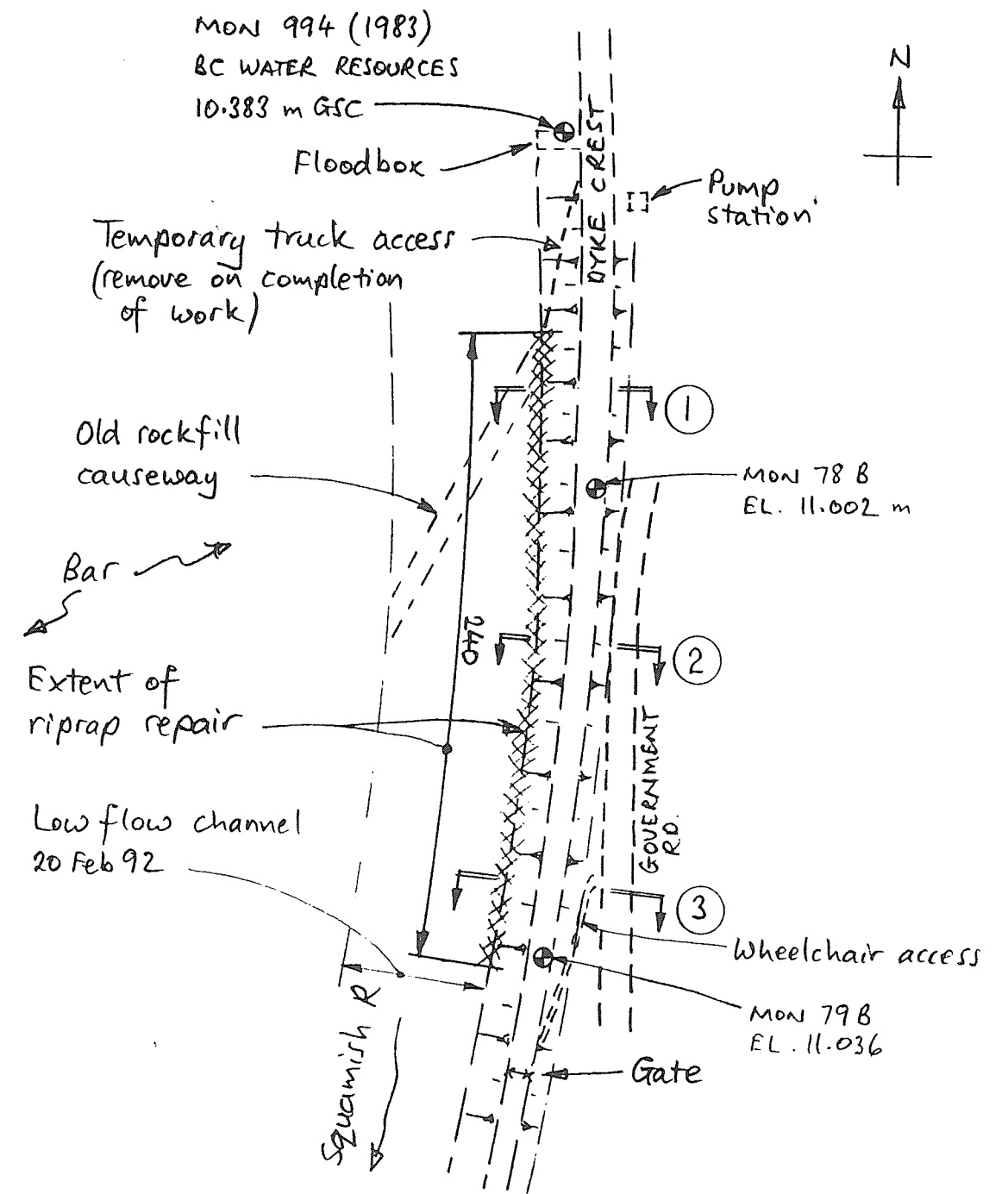
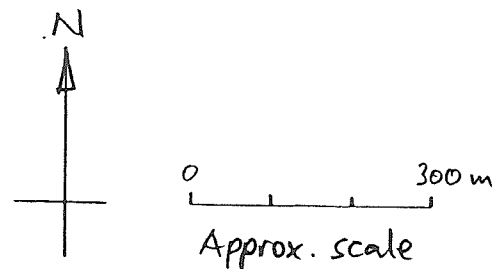
WATER MANAGEMENT DIVISION
 OIC 1298. AUGUST 1991 FLOOD

SQUAMISH RIVER L/B U/S OF JUDD SLOUGH
 RIPRAP REPAIR

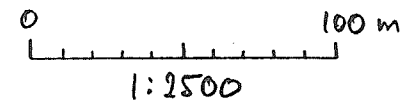
SITE: 1.150.020
 SHEET 1 OF 1



CADASTRAL PLAN



SKETCH PLAN



R1 5 Oct 1992 As constructed.

AS CONSTRUCTED

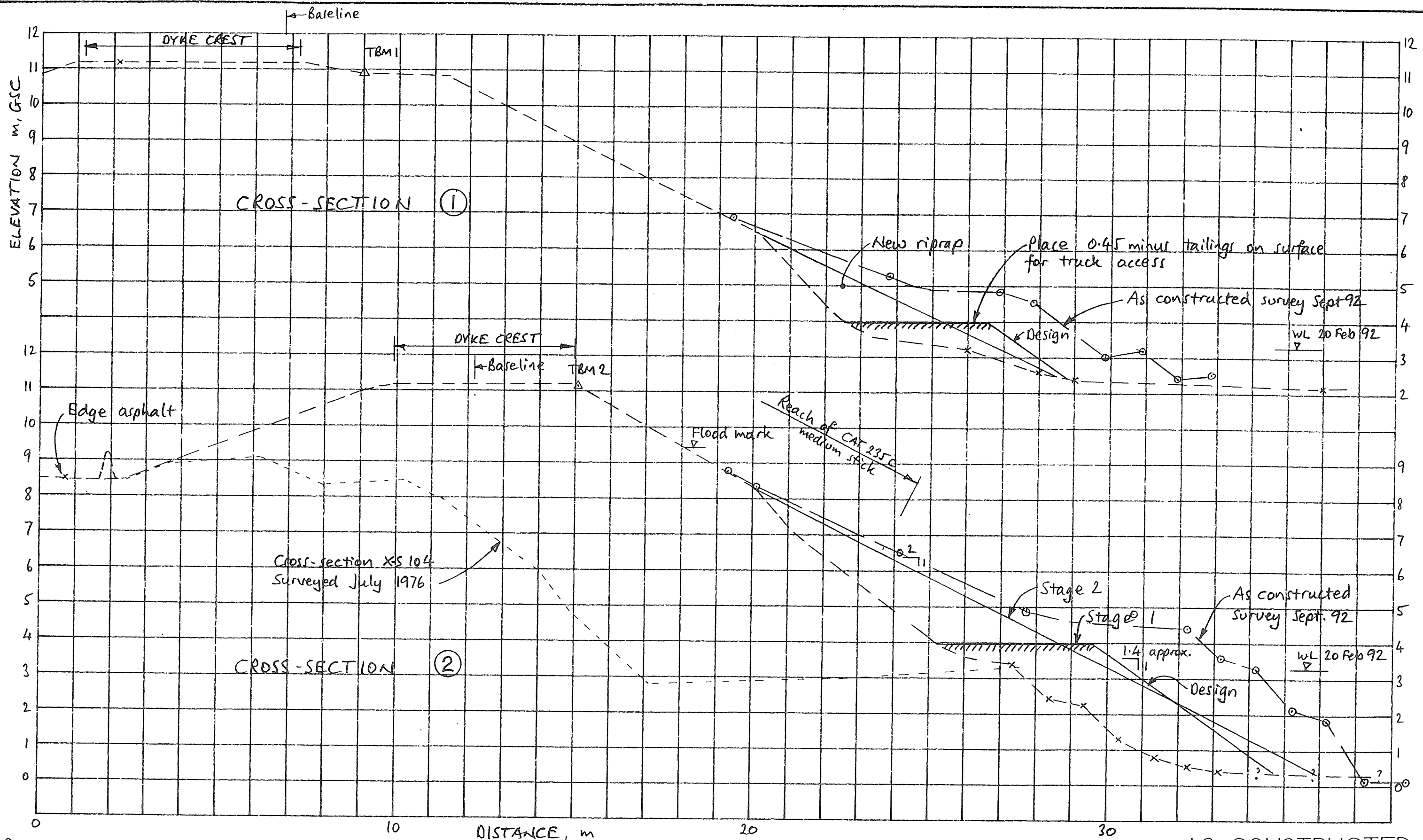
DATE: 25 February 1992

WATER MANAGEMENT DIVISION
OIC 1298. AUGUST 1991 FLOOD

SQUAMISH RIVER L/B D/S OF DRYDEN CREEK
RIPRAP REPAIR

C. Robert Bland, P. Eng., consulting engineer

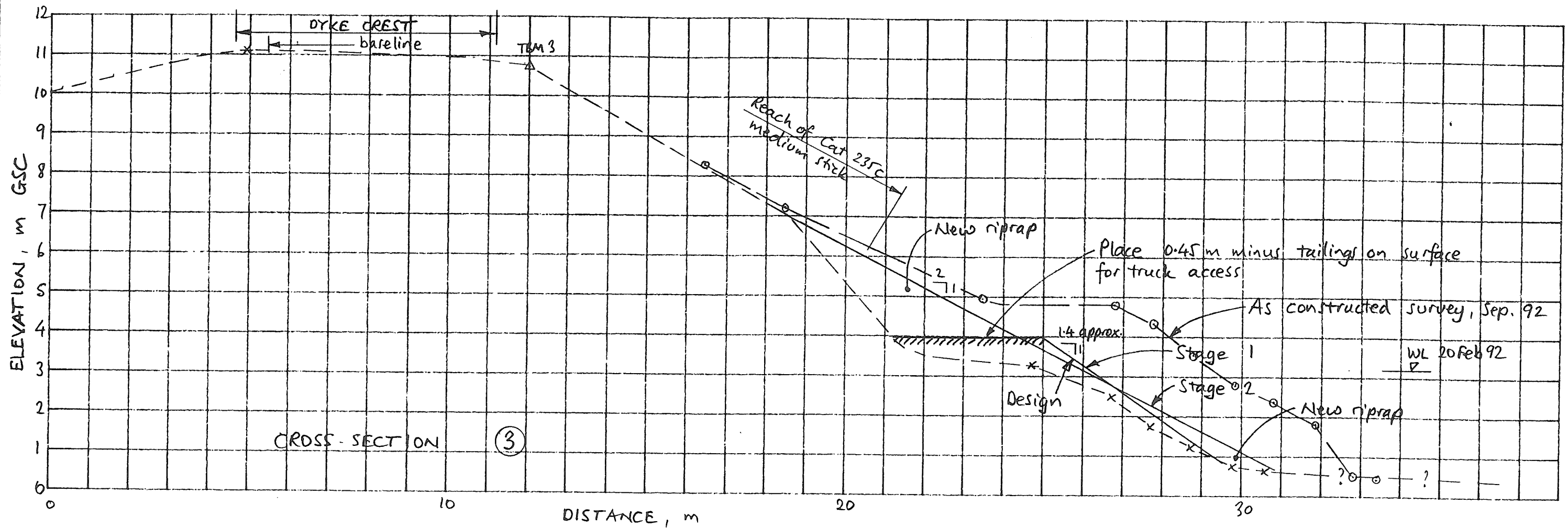
SITE: 1.150.010
SHEET 1 OF 3 RI



R1 5 Oct 92 As constructed

AS CONSTRUCTED

DATE: 25 February 1992 C. Robert Bland, P. Eng., consulting engineer	WATER MANAGEMENT DIVISION OIC I298. AUGUST 1991 FLOOD	SQUAMISH RIVER L/B D/S OF DRYDEN CREEK RIPRAP REPAIR	SITE: 1.150.010 SHEET 2 OF 3 R1
---	--	---	------------------------------------



RIPRAP

All riprap Type C except 200 m³ Type A toe rocks at Section 2.

% by weight finer	Equivalent spherical diameter, m	
	Type A	Type C
100	1.2	0.8
50	0.8	0.5
20	0.4	0.3

Approximate quantity required 200 m³ Type A, 4100 m³ Type C.

R2 5 Oct 1992 As constructed.

R1 2 July 1992

AS CONSTRUCTED

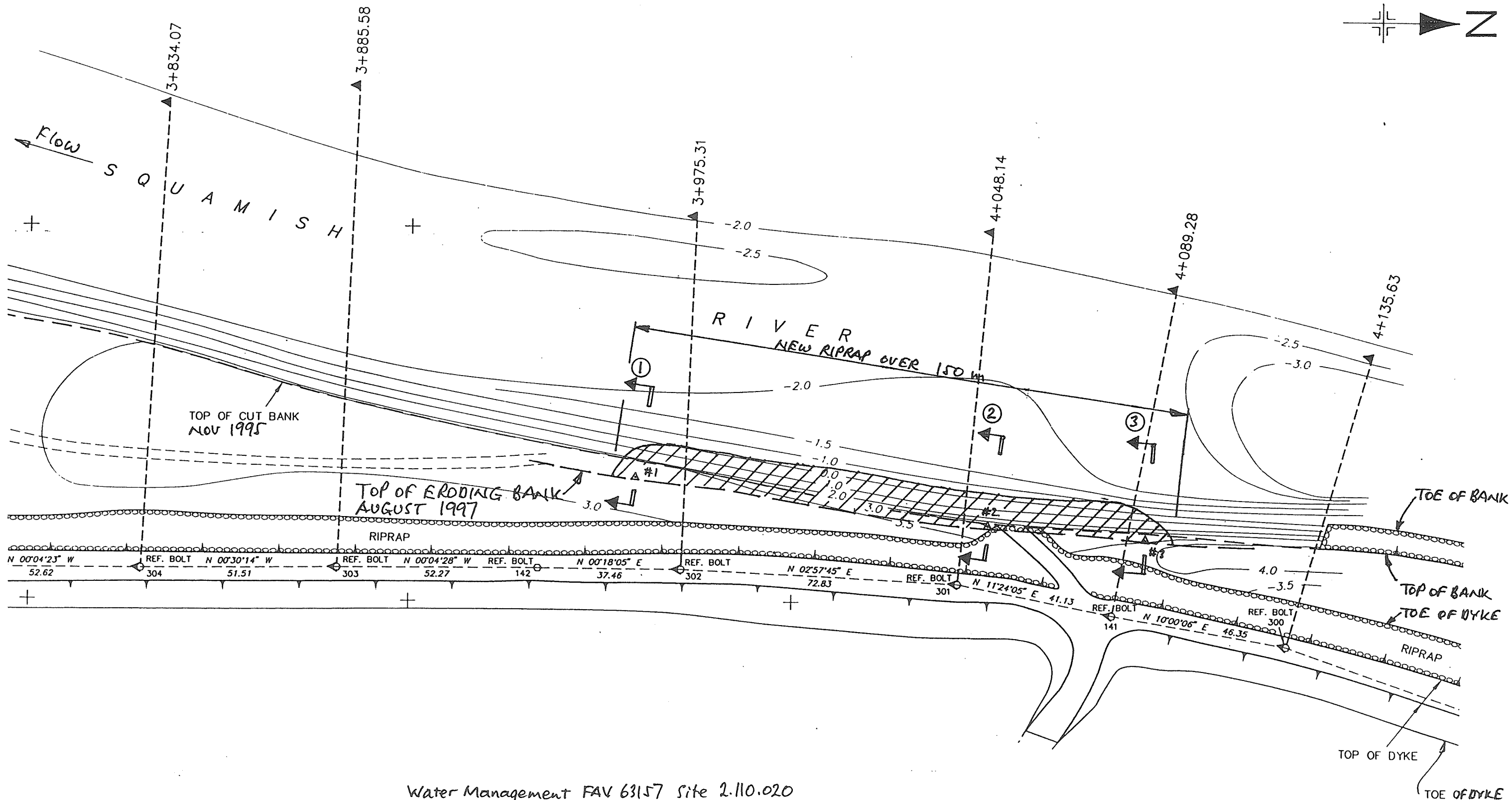
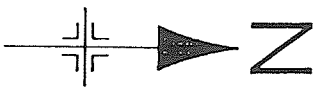
DATE: 25 February 1992

C. Robert Bland, P. Eng. consulting engineer

WATER MANAGEMENT DIVISION
OIC 1298. AUGUST 1991 FLOOD

SQUAMISH RIVER L/B D/S OF DRYDEN CREEK
RIPRAP REPAIR

SITE: 1.150.010
SHEET 3 OF 3 R2



Water Management FAV 63157 Site 2.110.020



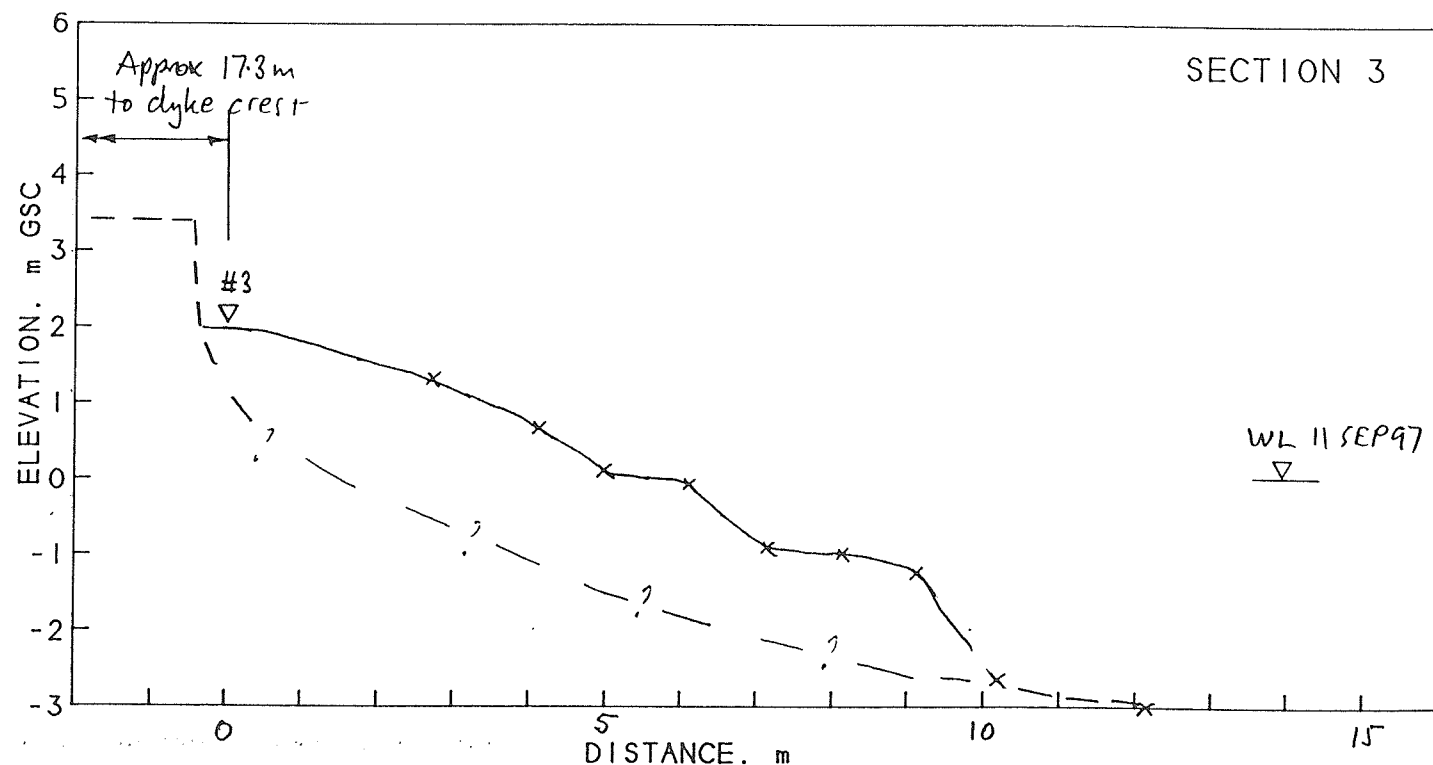
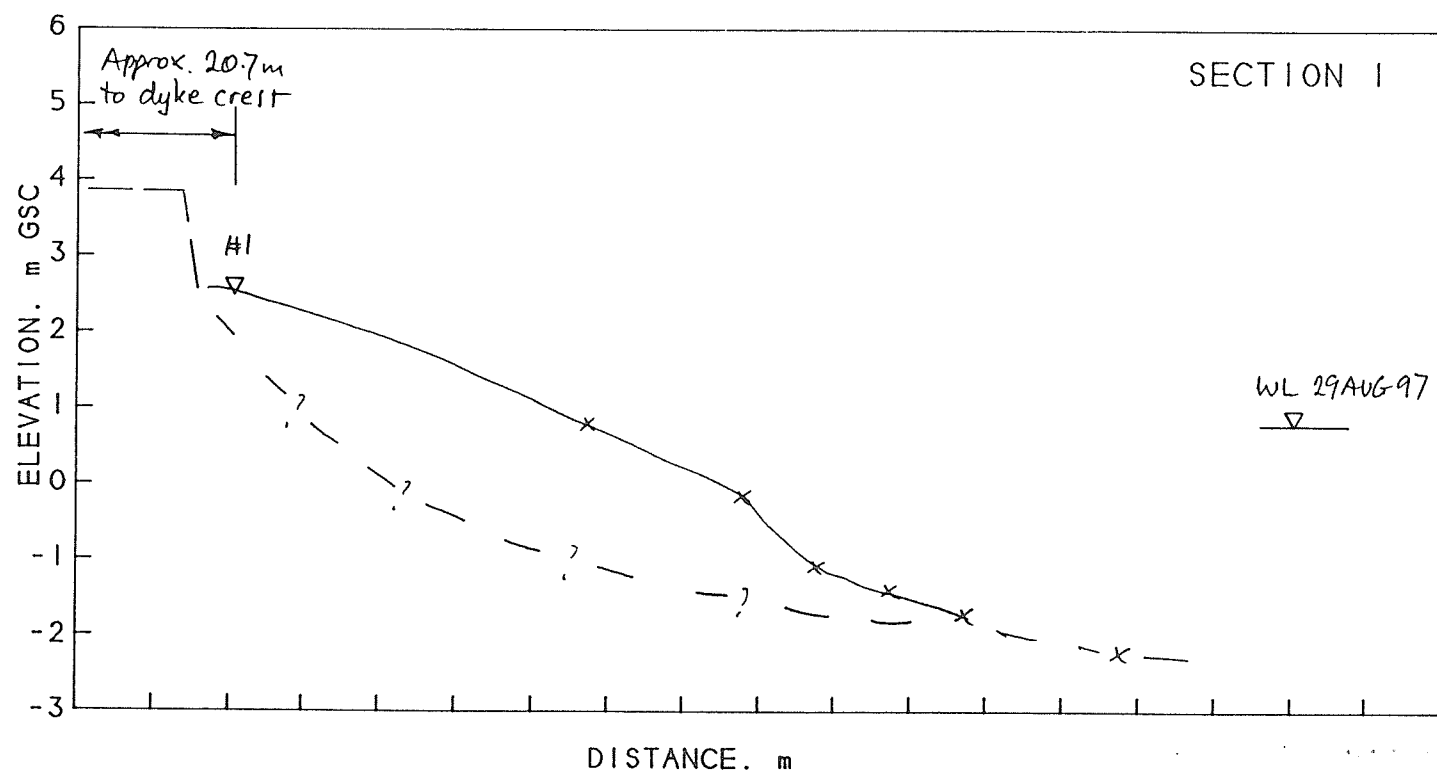
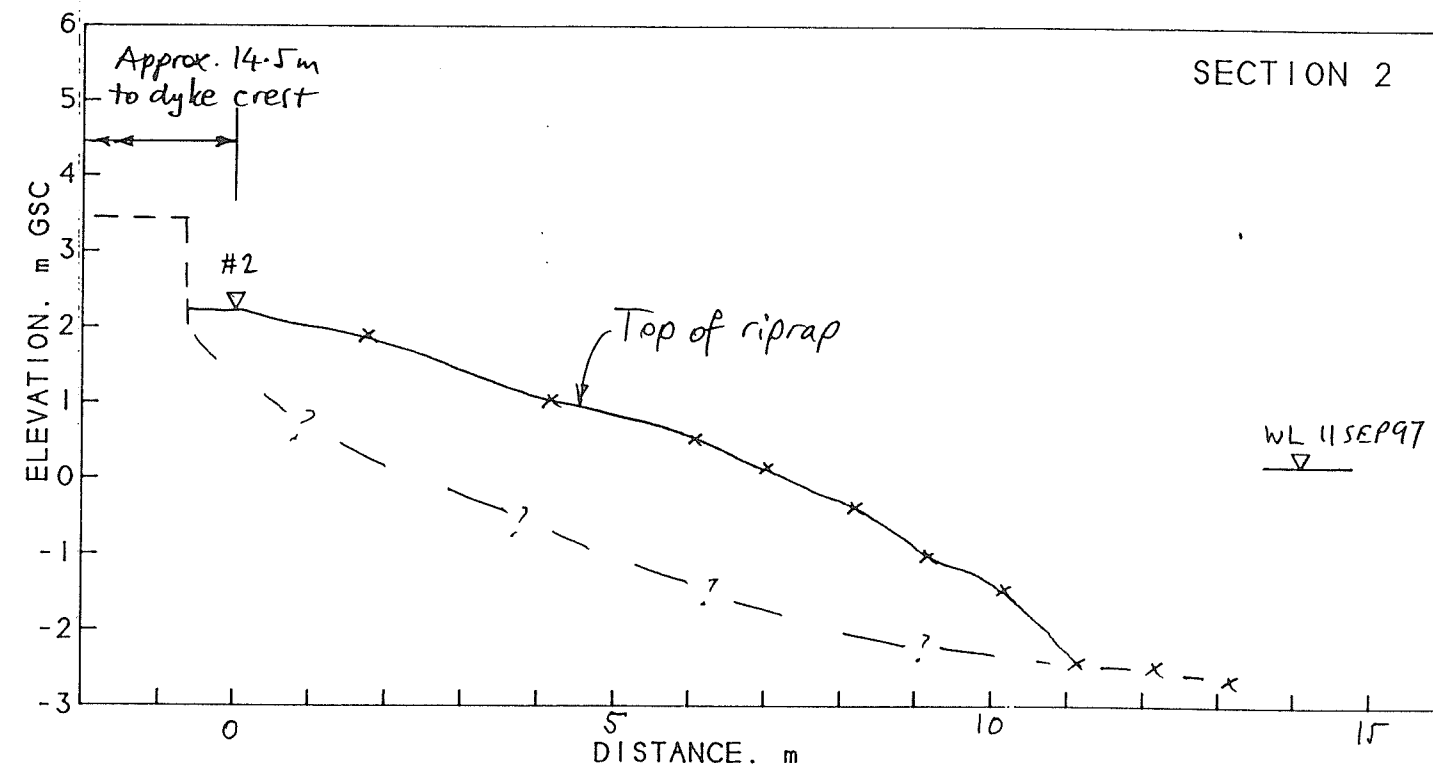
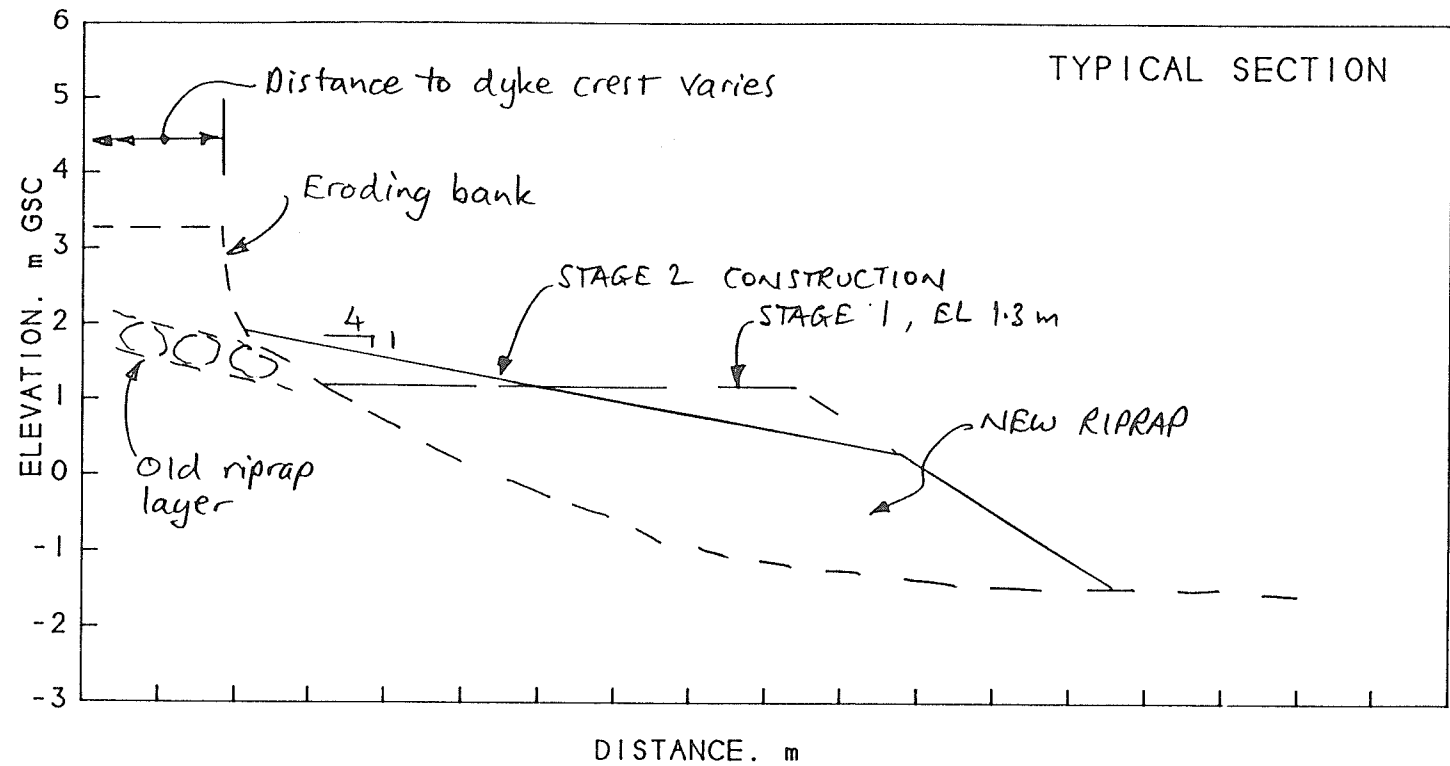
Base plan from Water Management Division drawing 95-15-2 surveyed 8 November 1995.

Rev. 1 AS CONSTRUCTED. 12 September 1997

342SQ
BLAND ENGINEERING LTD.

SQUAMISH RIVER AT STA. 4+100
REPAIR OF LEFT BANK EROSION

Rev 1 **FIG. 1**



Elevation datum: bolt #141. 6.828m GSC.

RIPRAP GRADATION!

% FINER BY WEIGHT

- 100
- 50
- 20

EQUIVALENT SPHERICAL DIA, m

- 1.0
- 0.6
- 0.35

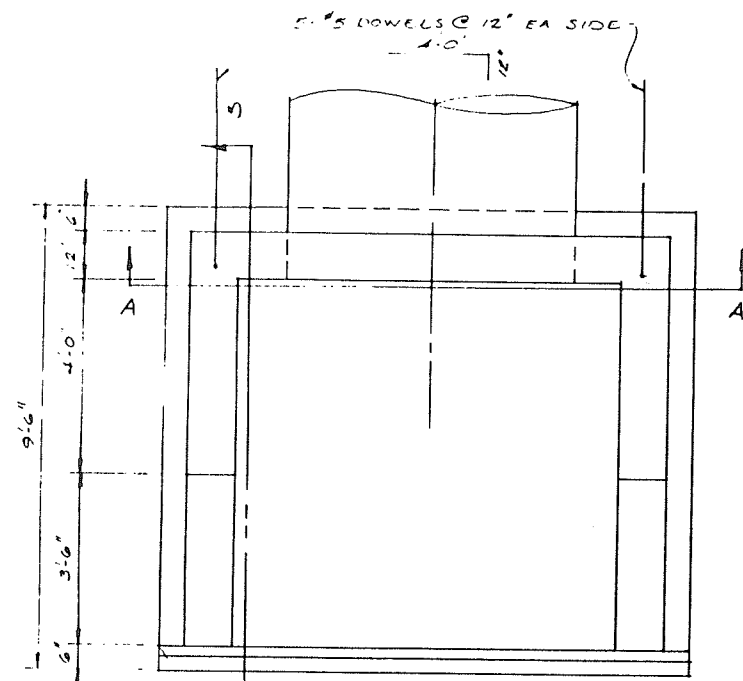
AS CONSTRUCTED. 12 September 1997

342SQ

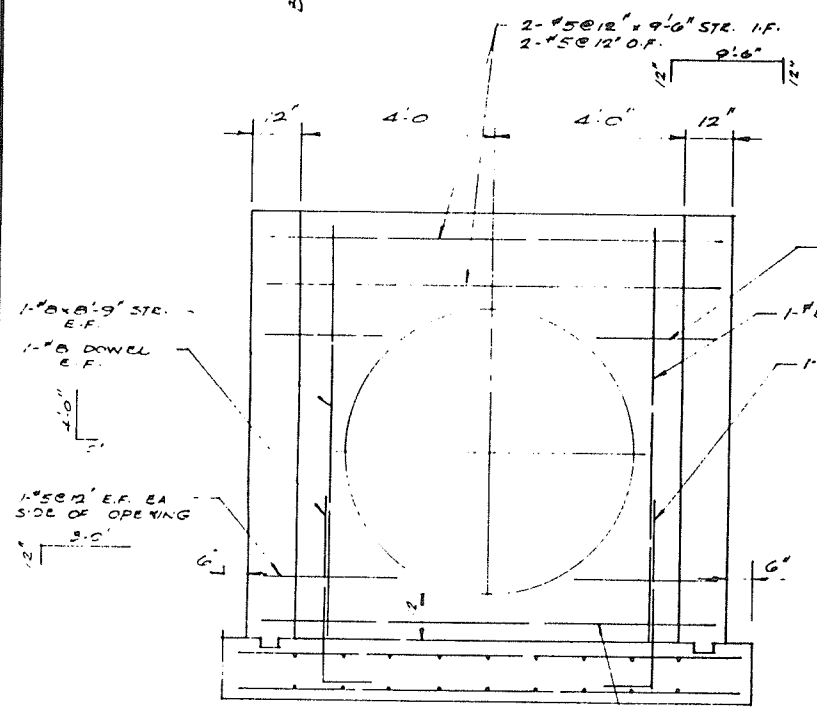
BLAND ENGINEERING LTD.

SQUAMISH RIVER AT STA. 4+100
REPAIR OF LEFT BANK EROSION

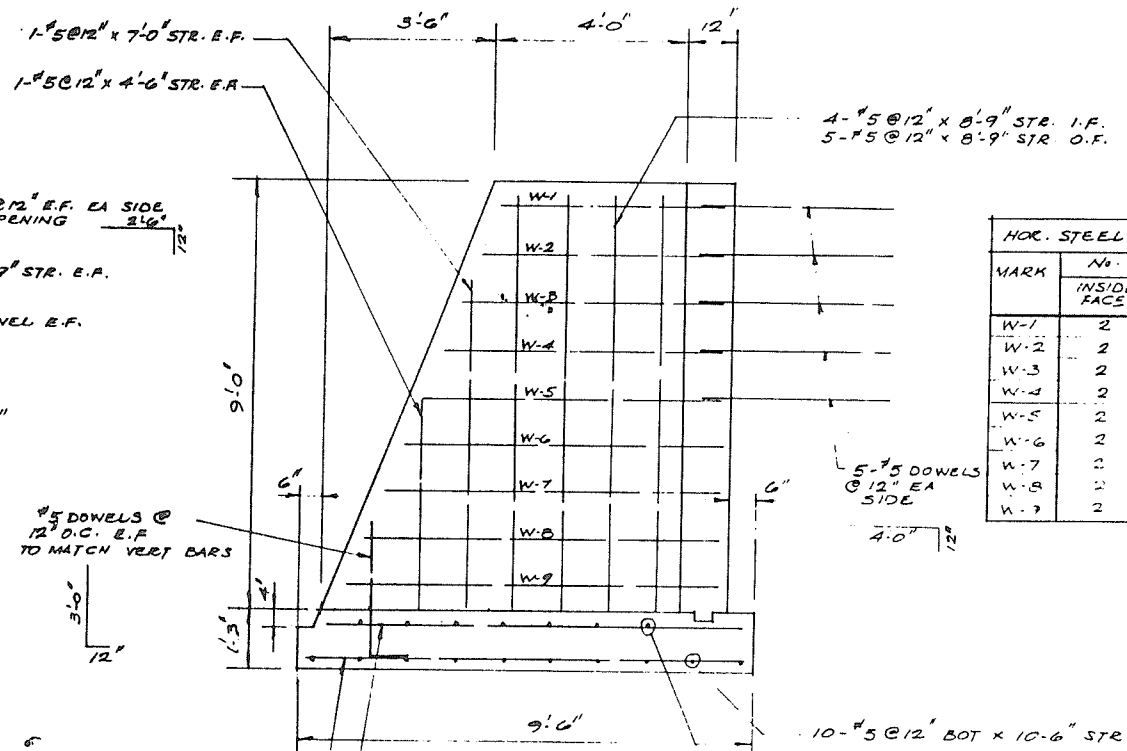
FIG.
2



PLAN
SCALE: 1/2" = 1'-0"

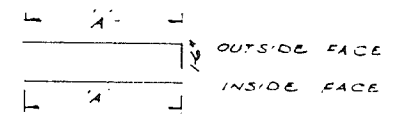


SECTION 'A-A'
SCALE: 1/2" = 1'-0"

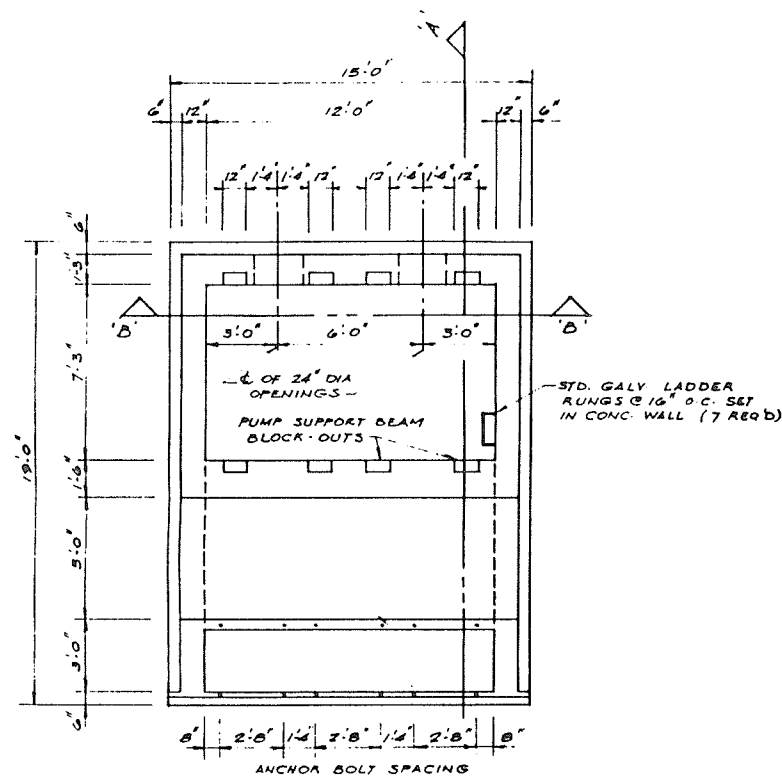


SECTION 'B-B'
SCALE: 1/2" = 1'-0"

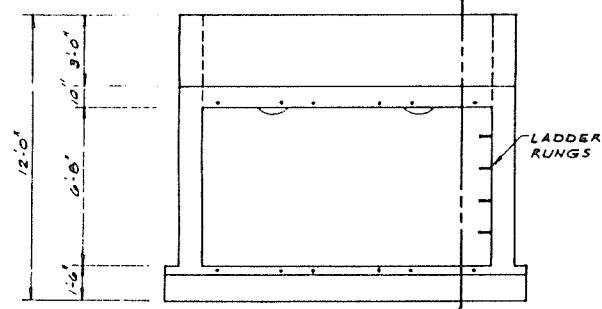
HOR. STEEL IN WING WALLS			
MARK	No. REQUIRED		DIMENSION 'A'
	INSIDE FACE	OUTSIDE FACE	
W-1	2	2	4'-8"
W-2	2	2	5'-1"
W-3	2	2	5'-6"
W-4	2	2	5'-10"
W-5	2	2	6'-3"
W-6	2	2	6'-7"
W-7	2	2	7'-0"
W-8	2	2	7'-5"
W-9	2	2	7'-10"



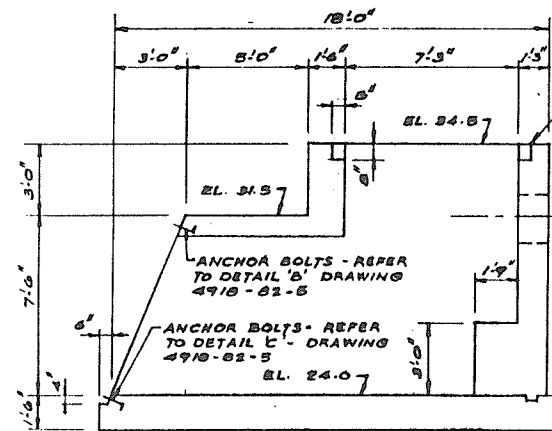
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DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE	DATE		INVENTORY AND ENGINEERING BRANCH				P 71-28
						DESIGNED	R. CAMERON	SQUAMISH DYKING		ENG. PROJECT NO.		
						CHECKED		HORSE CREEK DIVERSION OUTLET STRUCTURE		NTS MAP NO.		
						DATE	AUG 1982	PLAN, SECTIONS, REINFORCING DETAILS		SCALE AS SHOWN		
						DRAWN	R. CAMERON	DRAWING NO.		4913-82-10		
						CHECKED		SHEET		10 OF 10		
						DATE	AUG. 1982	ENGINEER		DATE		
						RECOMMENDED		APPROVED		DIRECTOR		
						DATE		DATE		DATE		



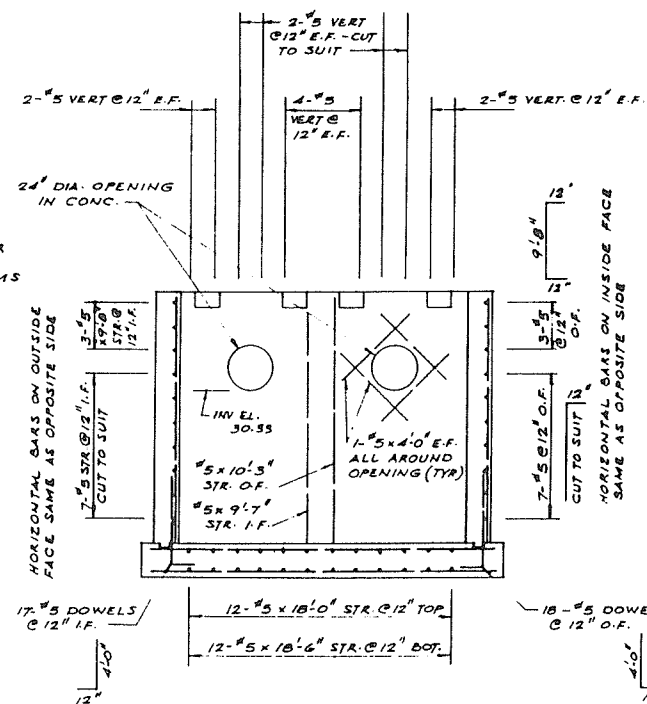
PLAN



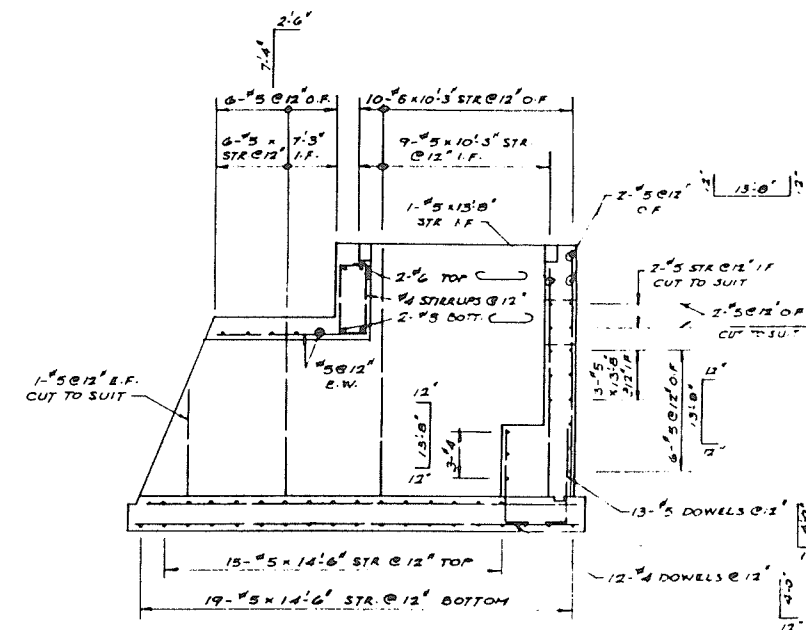
FRONT ELEVATION



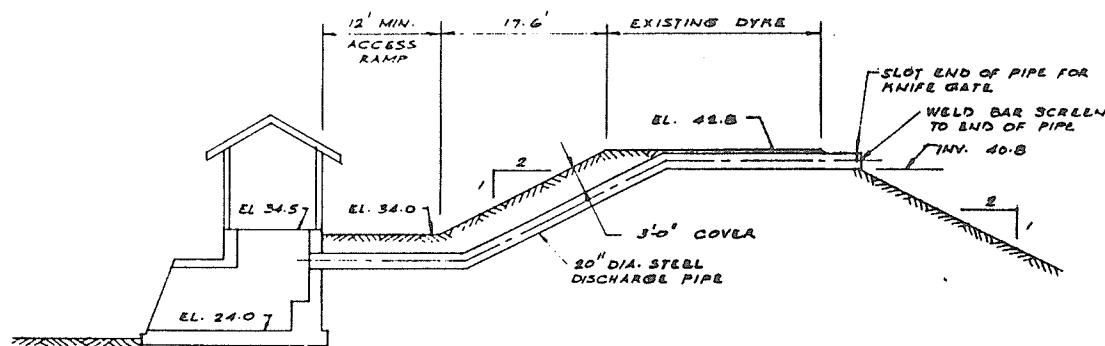
SECTION A-A



SECTION B-B
(SHOWING CONCRETE REINFORCING)



SECTION A-A
(SHOWING CONCRETE REINFORCING)

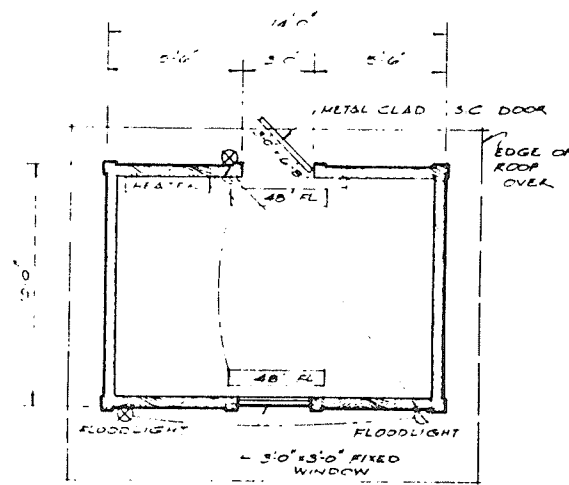


SECTION THROUGH DYKE
SCALE: 1" = 10'

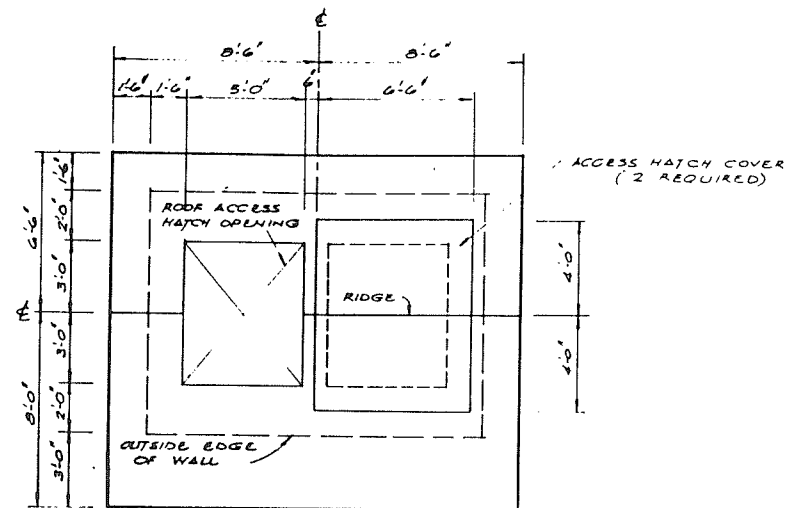
NOTES

REFER TO DRAWING 4918-82-5 FOR GENERAL NOTES

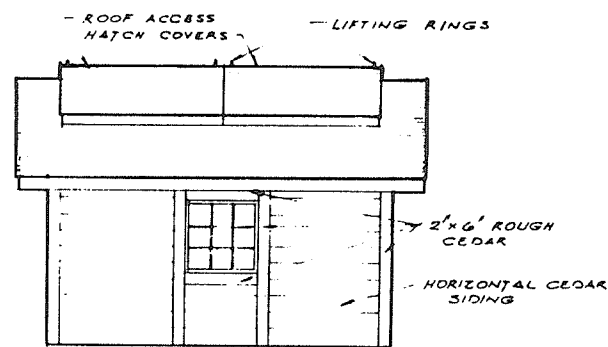
REFERENCES			REVISIONS			SURVEYED DATE	DESIGNED R. CAMERON	CHECKED	DATE SEPT 7/82	DRAWN R. CAMERON	CHECKED	DATE SEPT 7/82	Province of British Columbia Ministry of Environment INVENTORY AND ENGINEERING BRANCH	FILE NO P 71-28	
DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE										
													SQUAMISH DYKING JUDD SLOUGH PUMPSTATION No. 1		
													PLAN, FRONT ELEVATION, SECTIONS REINFORCING DETAILS		
													DRAWING NO. 4918-82-7R		
													SHEET 7 OF 10		
						ENGINEER <i>R. Cameron</i> SEPT 7/82 DATE	RECOMMENDED <i>[Signature]</i> DATE	APPROVED <i>[Signature]</i> DATE							



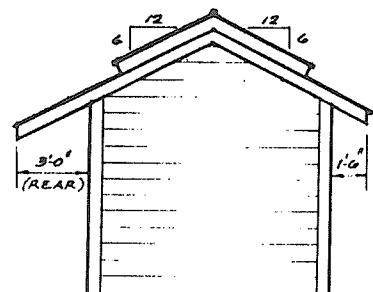
• FLOOR PLAN •



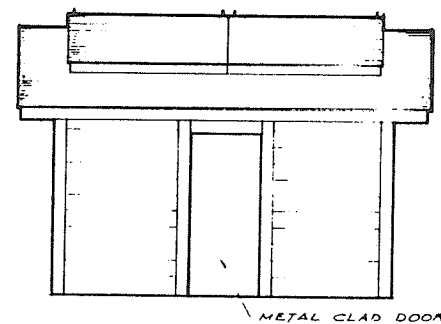
• ROOF PLAN •



• REAR ELEVATION •



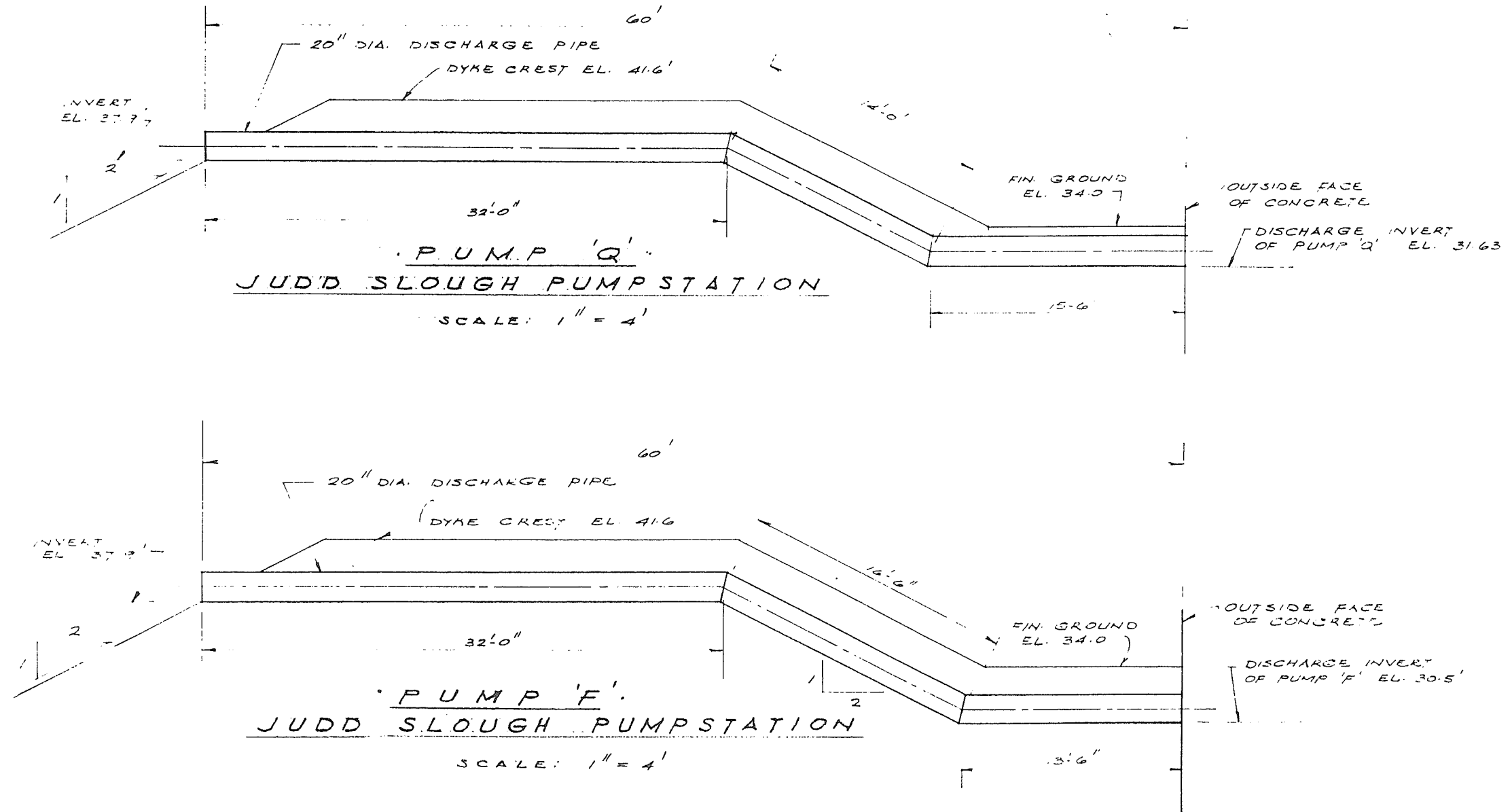
• SIDE ELEVATION •



• FRONT ELEVATION •

NOTE:
REFER TO DRAWING 4918-B2-B FOR TYPICAL SECTION AND NOTES

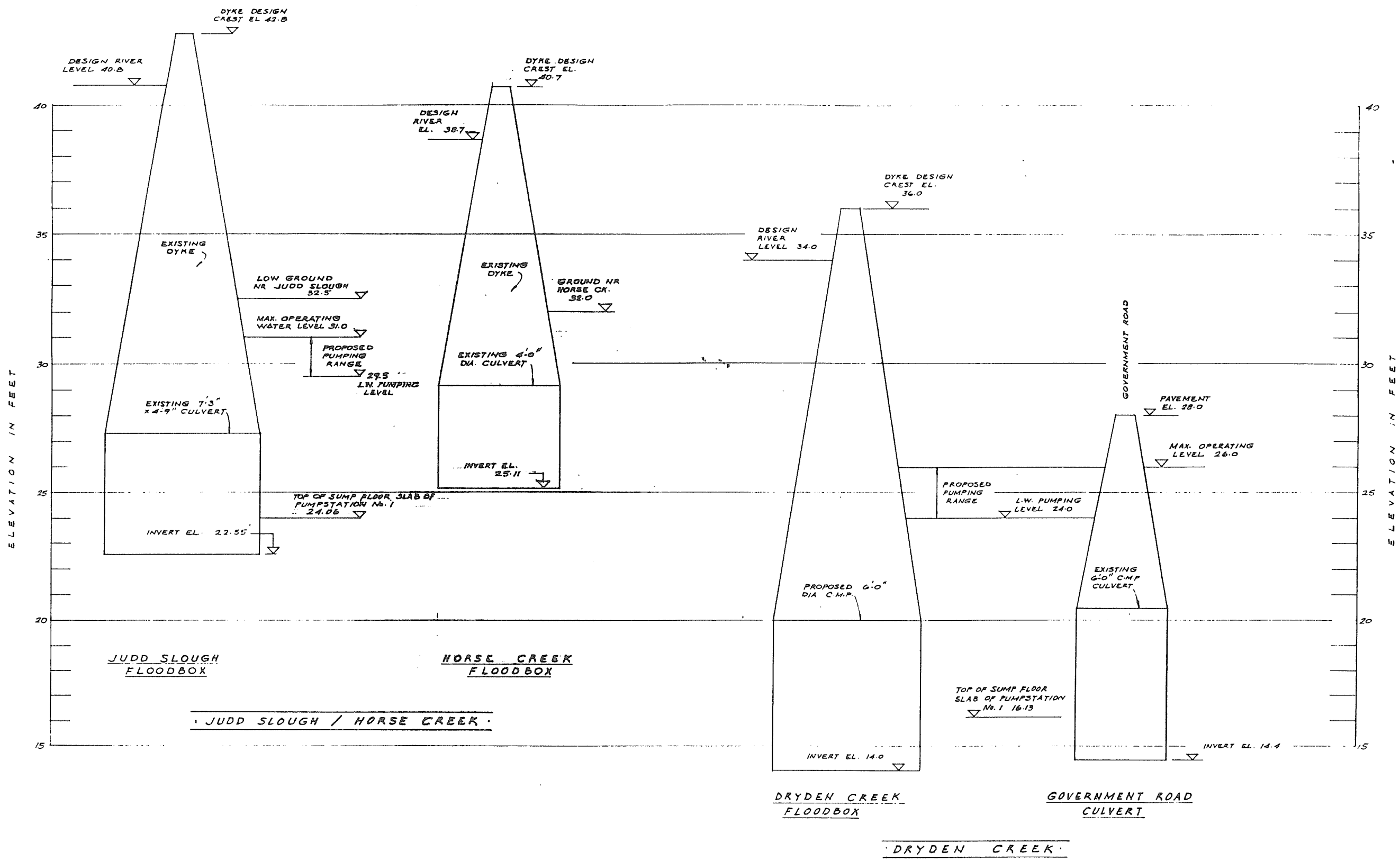
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DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE	DATE		SQUAMISH DYKING		P 71-28
						DESIGNED R. CAMERON		JUDD SLOUGH PUMPSTATION No. 1 AND MAMQUAM PUMPSTATION No. 1 SUPERSTRUCTURE		ENG. PROJECT NO
						CHECKED				NTS MAP NO
						DATE SEPT 8/82				SCALE 1/4" = 1'-0"
						DRAWN R. CAMERON				DRAWING NO
						CHECKED				4918-B2-9R
						DATE SEPT 8/82				SHEET 9 OF 10
						R. H. Cameron				
						ENGINEER SEPT 9/82		RECOMMENDED	DATE	APPROVED DIRECTOR DATE



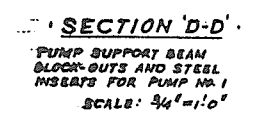
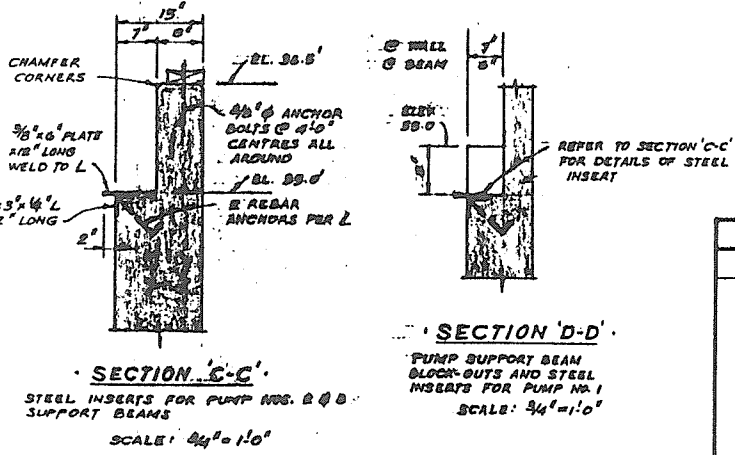
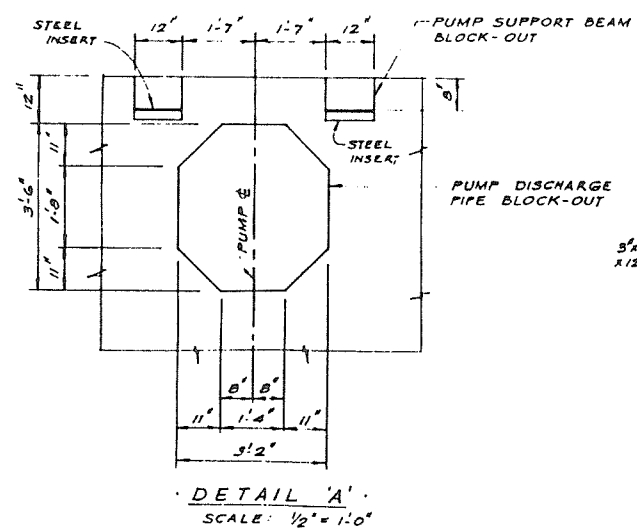
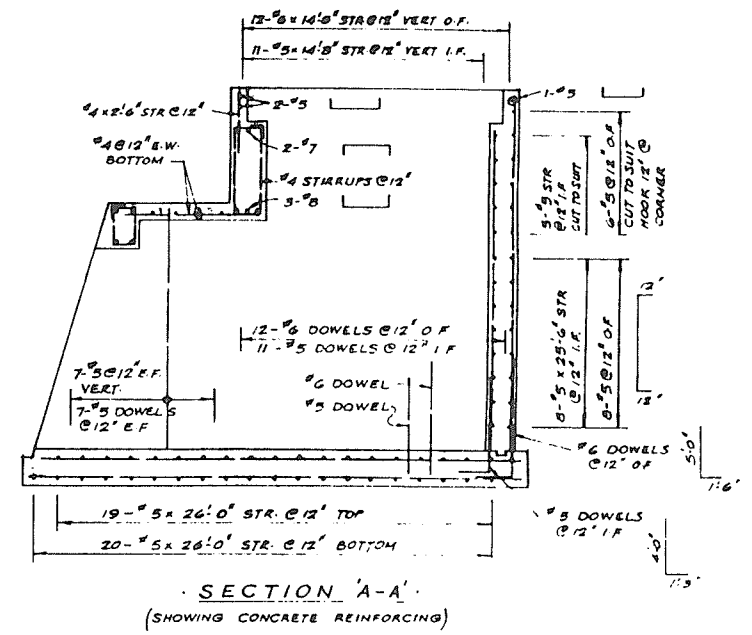
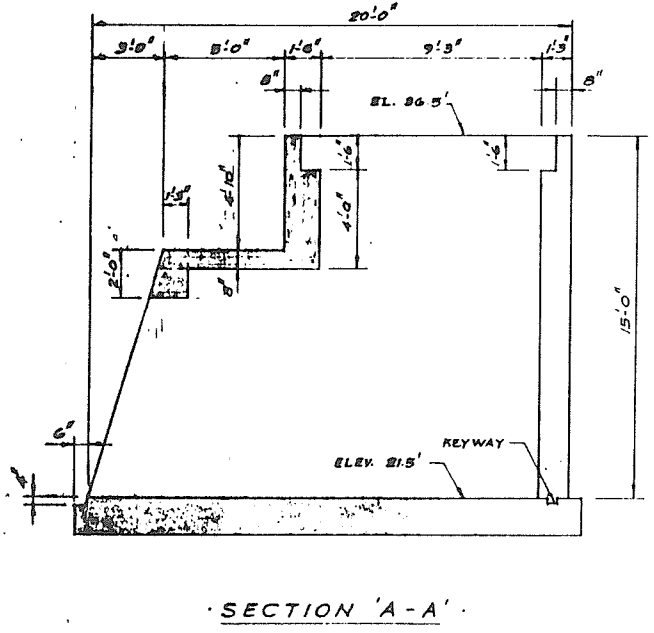
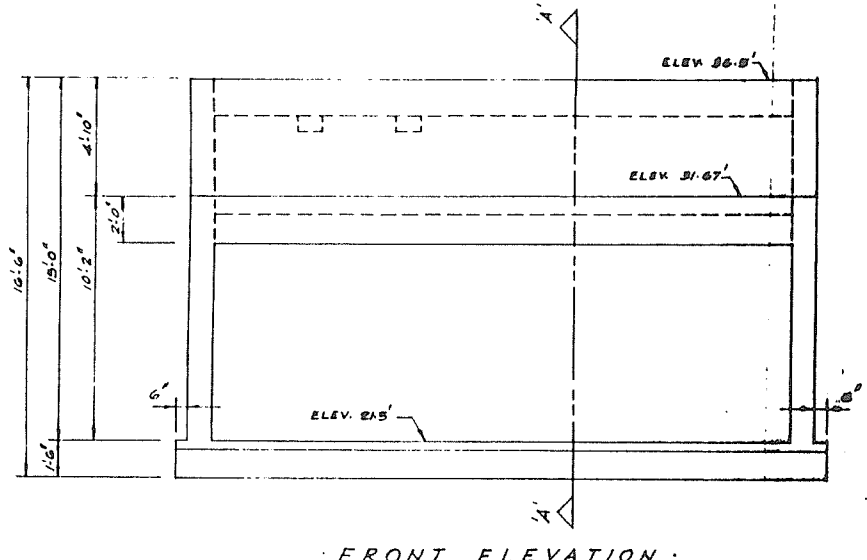
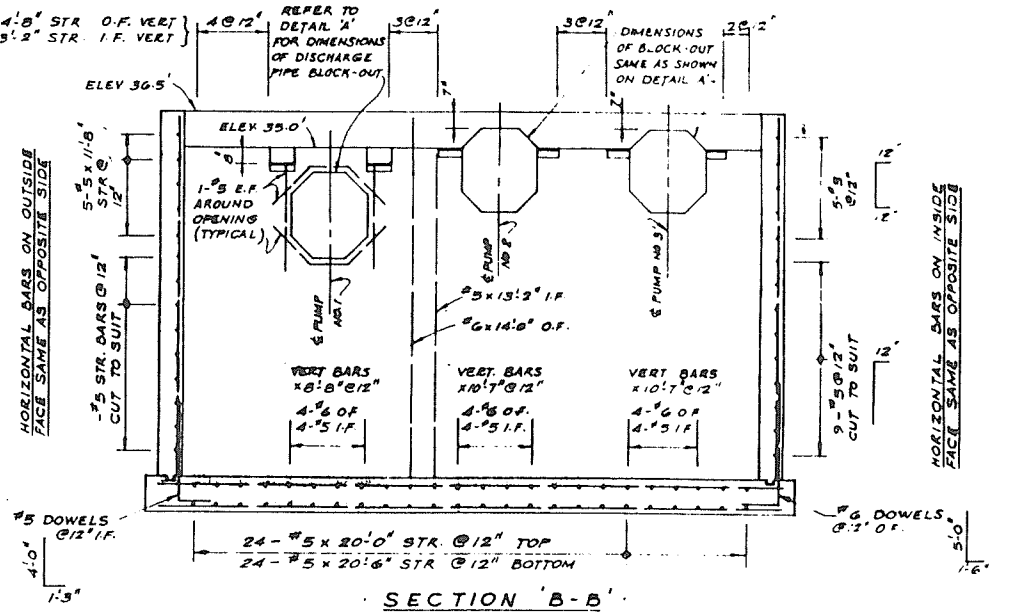
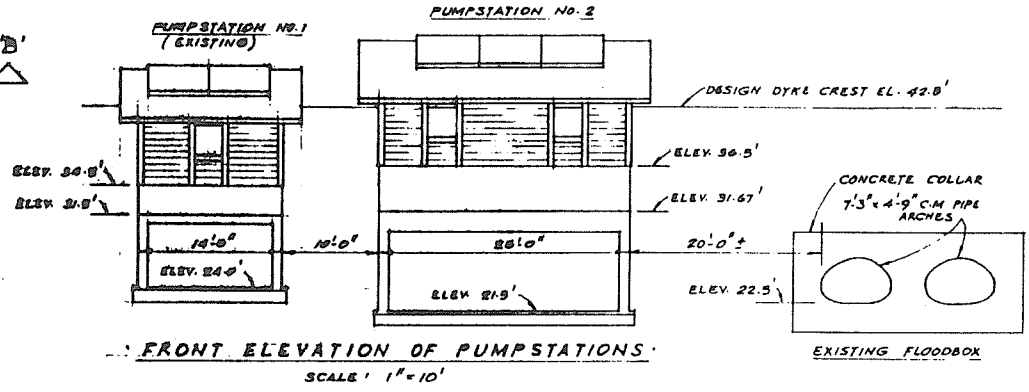
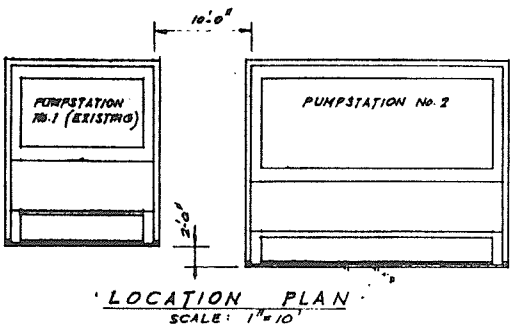
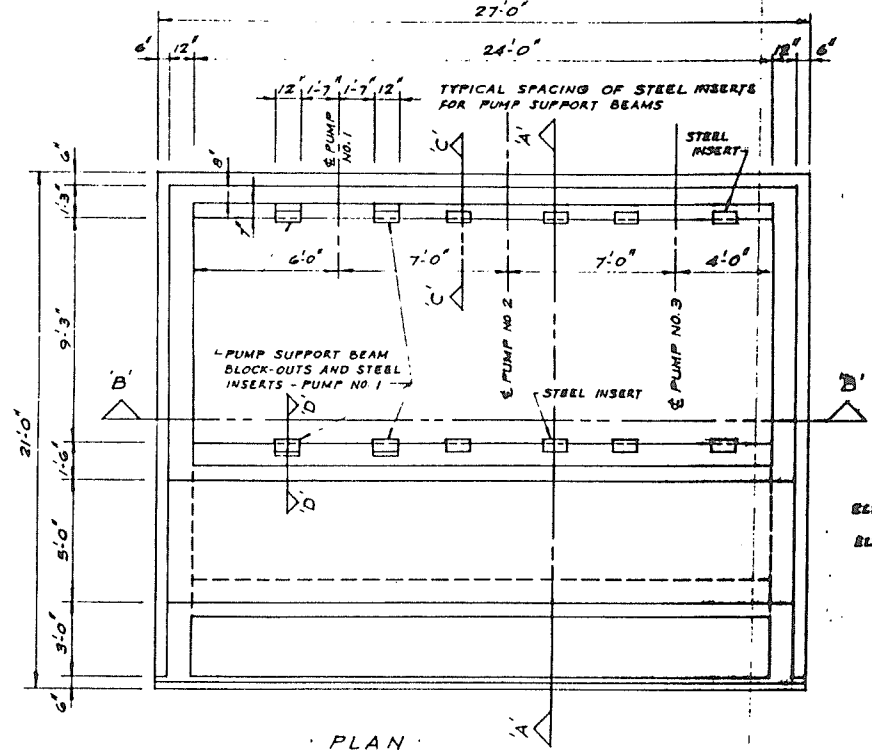
R. CAMERON OCT 4 / 82

REFERENCES			REVISIONS			SURVEYED DATE	DESIGNED R. CAMERON	CHECKED	DATE OCT. 4 1982	DRAWN R. CAMERON	CHECKED	DATE OCT. 4 1982	Province of British Columbia Ministry of Environment INVENTORY AND ENGINEERING BRANCH			FILE NO				
DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE								ENG. PROJECT NO							
													SQUAMISH DYKING			NTS MAP NO				
													JUDD SLOUGH PUMPSTATION No. 1			SCALE 1" = 4'-0"				
													20" DIA. DISCHARGE PIPES			DRAWING NO 4918-82-104				
													ENGINEER	DATE	RECOMMENDED	DATE	APPROVED	DIRECTOR	DATE	SHEET 5 OF 5

MAY 1982



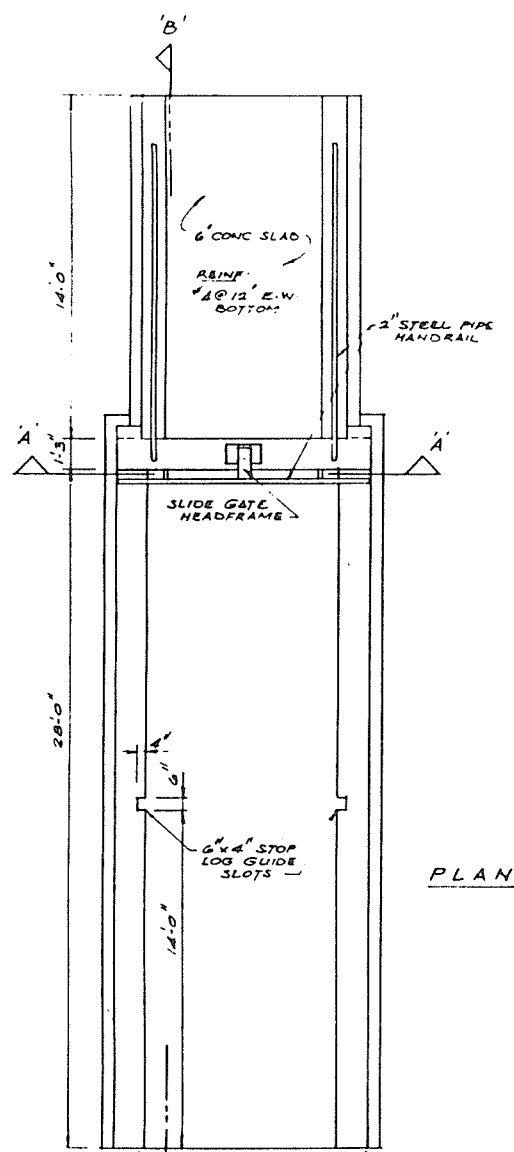
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DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE	DATE	DESIGNED	INVENTORY AND ENGINEERING BRANCH		SQUAMISH DYKING		P 71-28
							R. CAMERON			JUDD SLOUGH PUMPSTATION No. 1		ENG. PROJECT NO.
										DRYDEN CREEK PUMPSTATION No. 1		HTS MAP NO.
										PROPOSED PUMPING RANGES		SCALE
												1" = 2' VERTICAL
										DRAWING NO.		4918-82-100
										ENGINEER		SHEET 1 OF 5
								DATE	RECOMMENDED	DATE	APPROVED	DIRECTOR



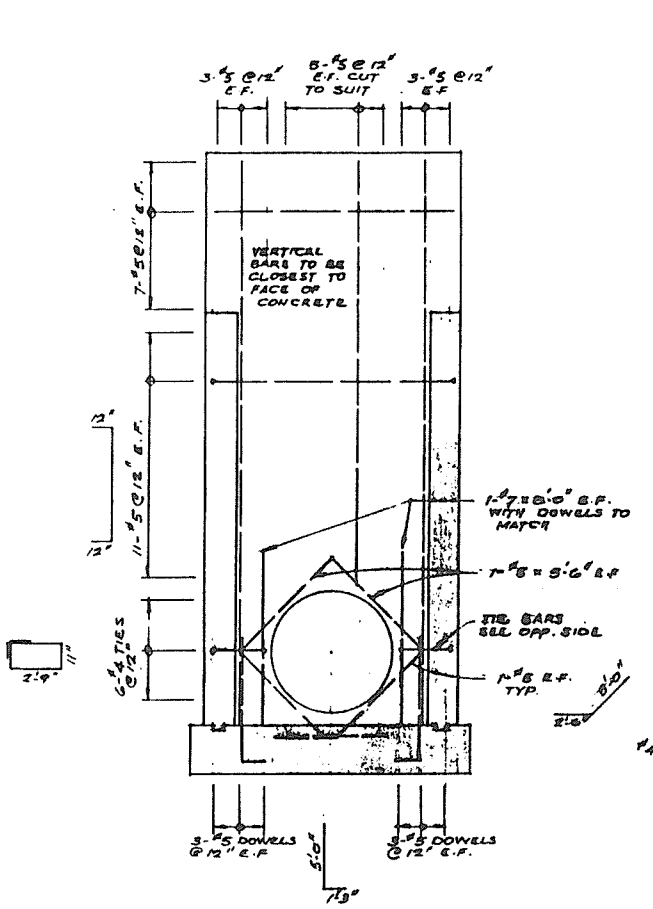
NOTES

- 1 REINFORCING STEEL SHALL BE INTERMEDIATE GRADE DEFORMED BARS WITH A MIN. YIELD STRENGTH OF 40,000 P.S.I.
 - 2 MIN. CONCRETE COVER ON REINFORCING STEEL SHALL BE 2" AGAINST FORMED SURFACES AND 3" AGAINST GROUND.
 - 3 WELDING OF REINFORCING NOT PERMITTED. SPLICED BARS SHALL LAP 40 BAR DIAMETERS.
 - 4 CONCRETE STRENGTH SHALL BE 4,000 P.S.I. AT 28 DAYS. NOMINAL SIZE OF COARSE AGGREGATE SHALL NOT EXCEED 1 1/2 INCHES. WATER CEMENT RATIO SHALL NOT EXCEED 0.50. SLUMP SHALL NOT EXCEED 4 INCHES. A WATER REDUCING ADMIXTURE SHALL BE USED. ENTRAINED AIR SHALL BE MAINTAINED BETWEEN 3 AND 6 PERCENT.
- PUMP NO. 1 - RELOCATE PUMP 'A' PRESENTLY IN DRYDEN CREEK PUMPSTATION. SUPPORT BEAMS SHALL BE 8 INCH INCHES DEEP
PUMP NO. 2 - SURPLUS PUMP FROM NO. 3 ROAD SOUTH PUMPSTATION IN RICHMOND. SUPPORT BEAMS SHALL BE 10 INCHES DEEP
PUMP NO. 3 - SURPLUS PUMP FROM NO. 7 ROAD NORTH PUMPSTATION IN RICHMOND. SUPPORT BEAMS SHALL BE 16 INCHES TOTAL DEPTH

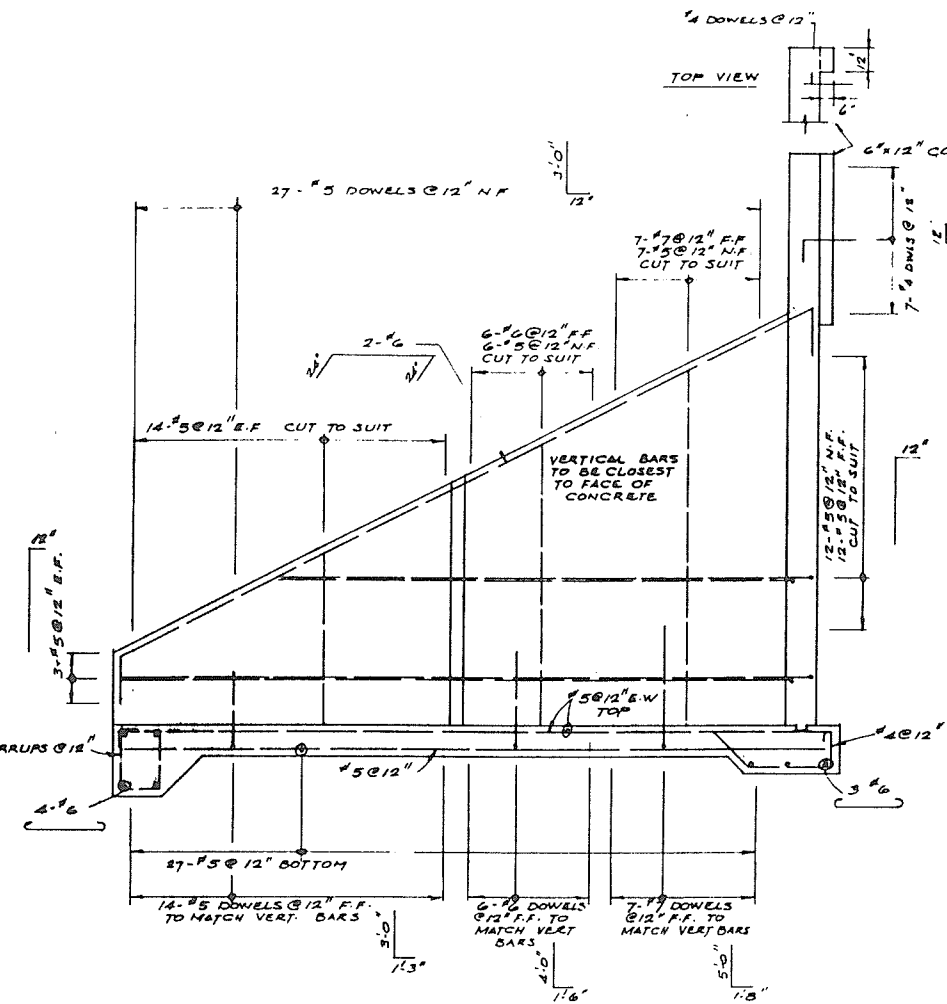
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DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE	DATE		P 71-28
						DESIGNED R. CAMERON	SQUAMISH DYKING	
						CHECKED	J.U.D.D. S.L.O.U.G.H. P.U.M.P.S.T.A.T.I.O.N. N.O. 2	
						DATE AUG 10/83	SCALE 1/4"=1.0' EXCEPT AS NOTED	
						DRAWN R. CAMERON	DRAWING NO. 4918-83-1	
						CHECKED	REV. NO.	
						DATE AUG 10/83	4918-83-1	
ENGINEER		DATE	RECOMMENDED	DATE	APPROVED	DIRECTOR	DATE	SHEET 1 OF 1



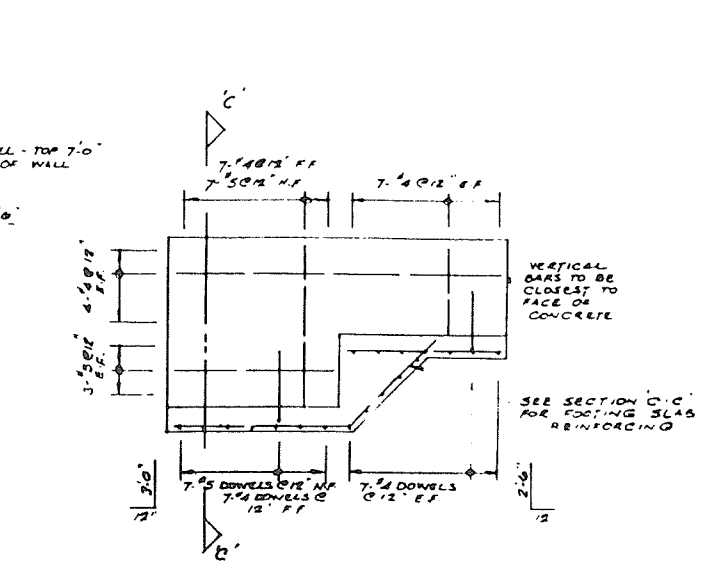
PLAN



SECTION A-A
(SHOWING HEADWALL REINFORCING)

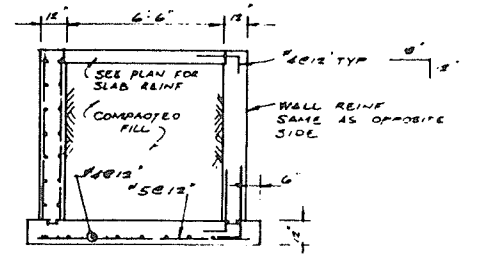


SECTION B-B
(SHOWING SIDE WALL AND SLAB REINFORCING)

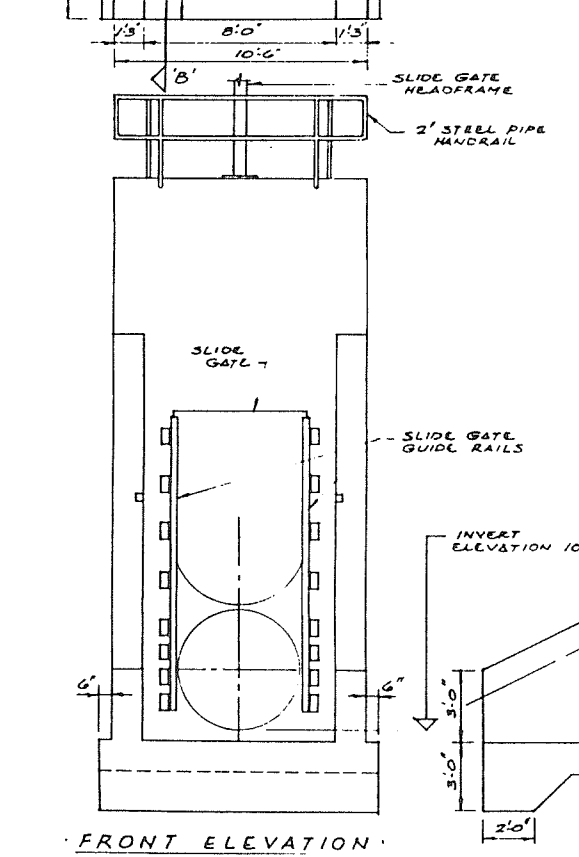


ELEVATION A
(SHOWING BACK WALL REINFORCING)

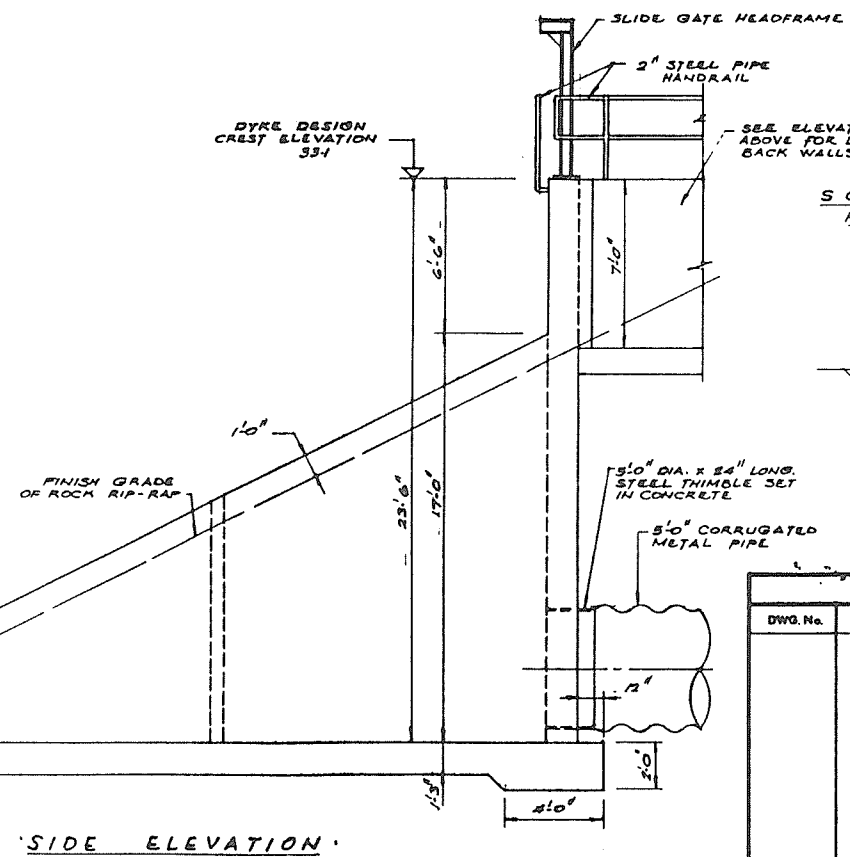
NOTES
REFER TO DRAWING NO. 4918-82-1 SHEET 1 FOR GENERAL NOTES



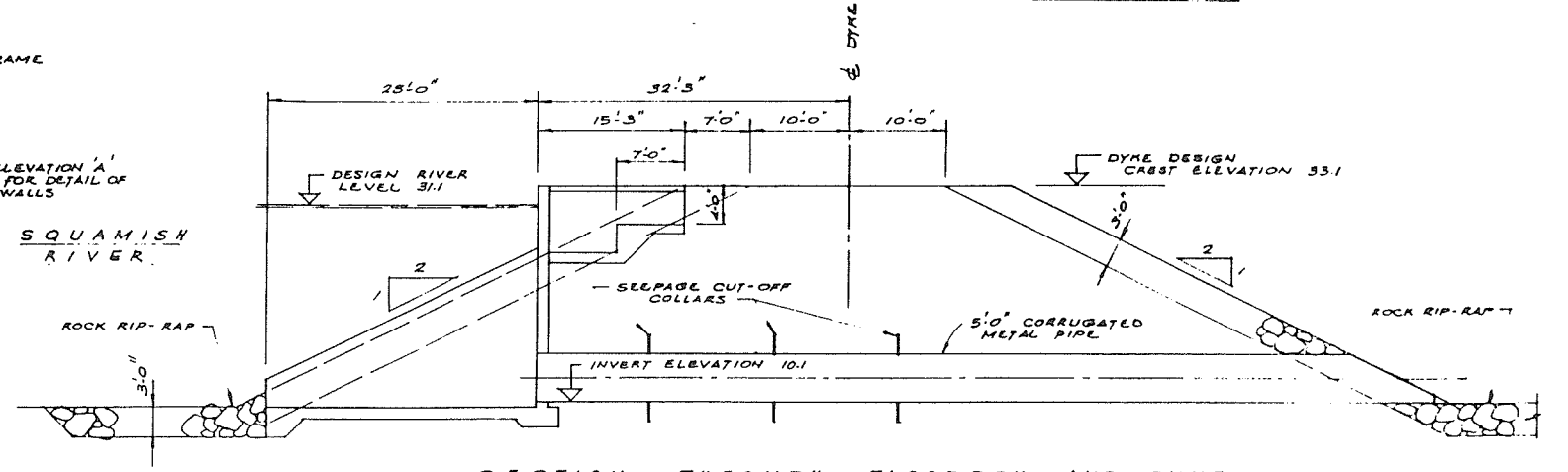
SECTION C-C



FRONT ELEVATION

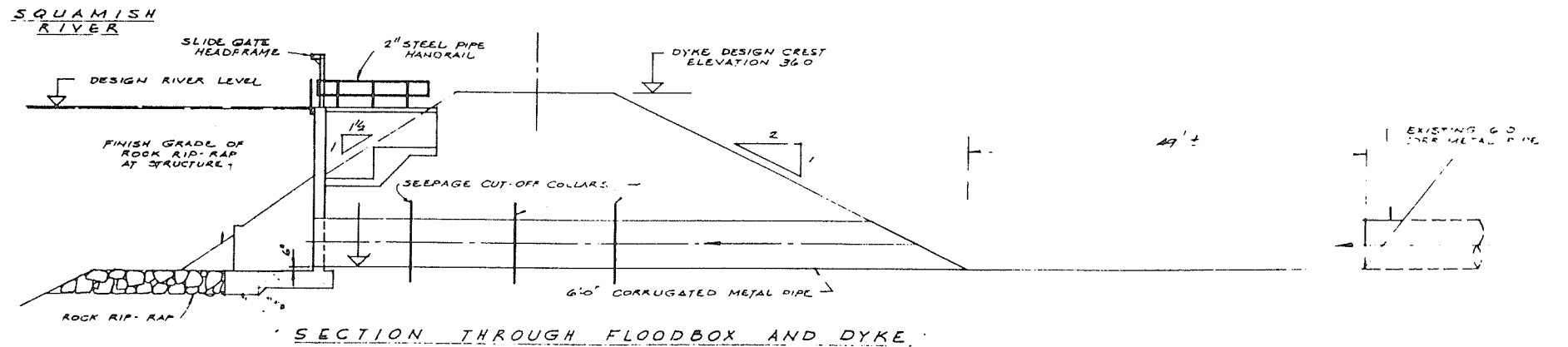
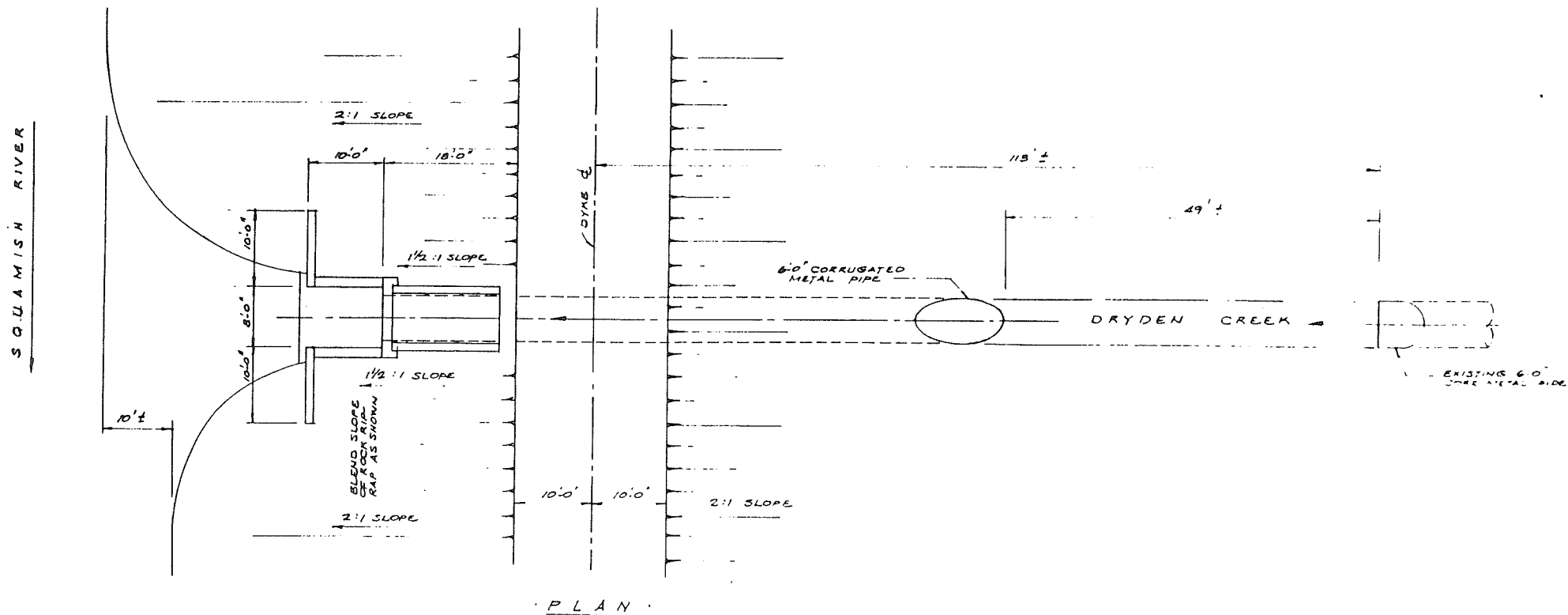
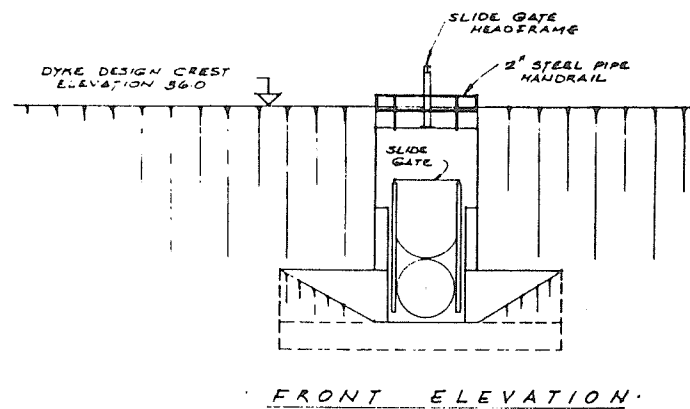


SIDE ELEVATION

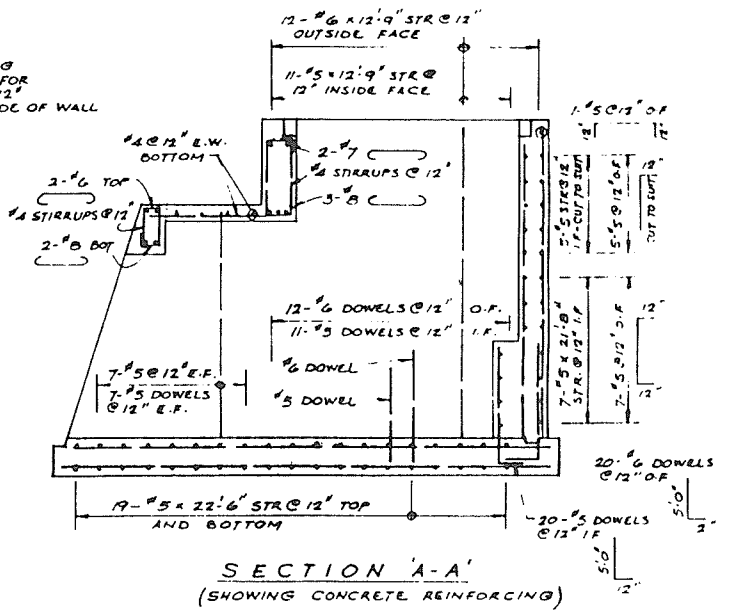
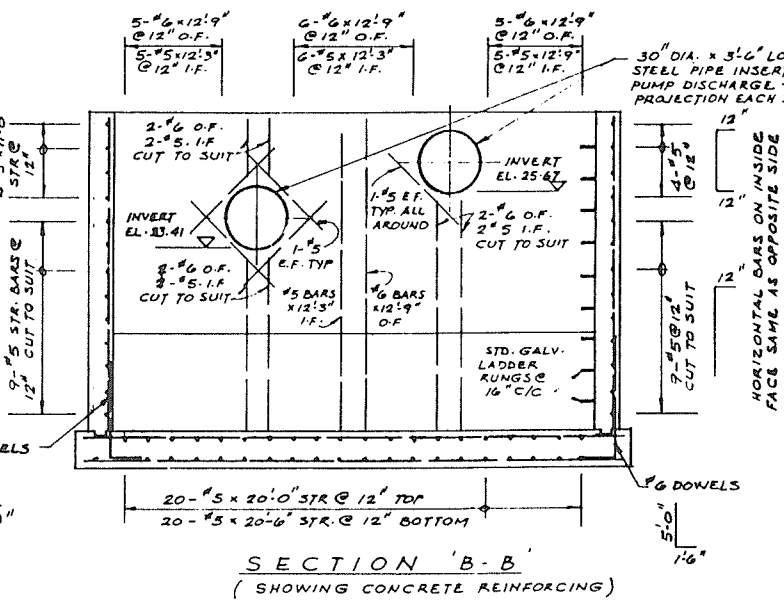
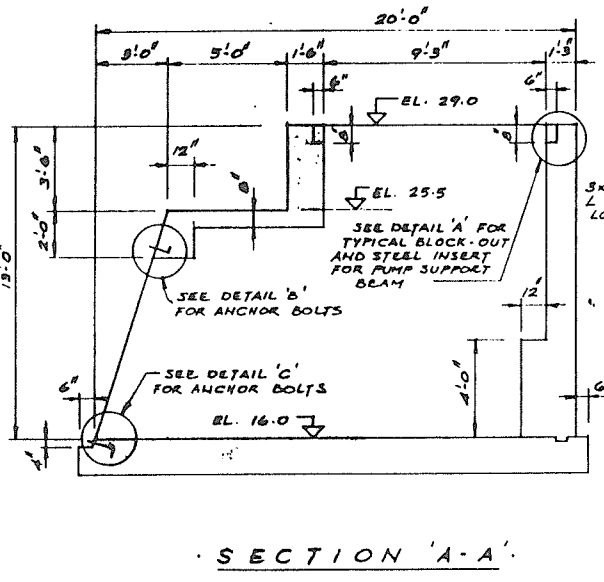
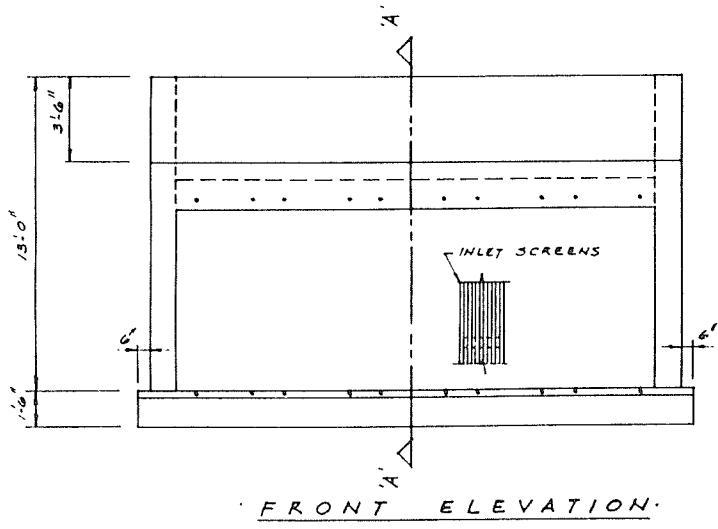
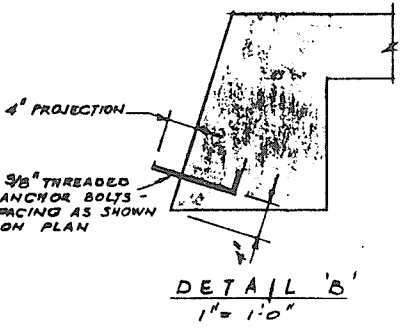
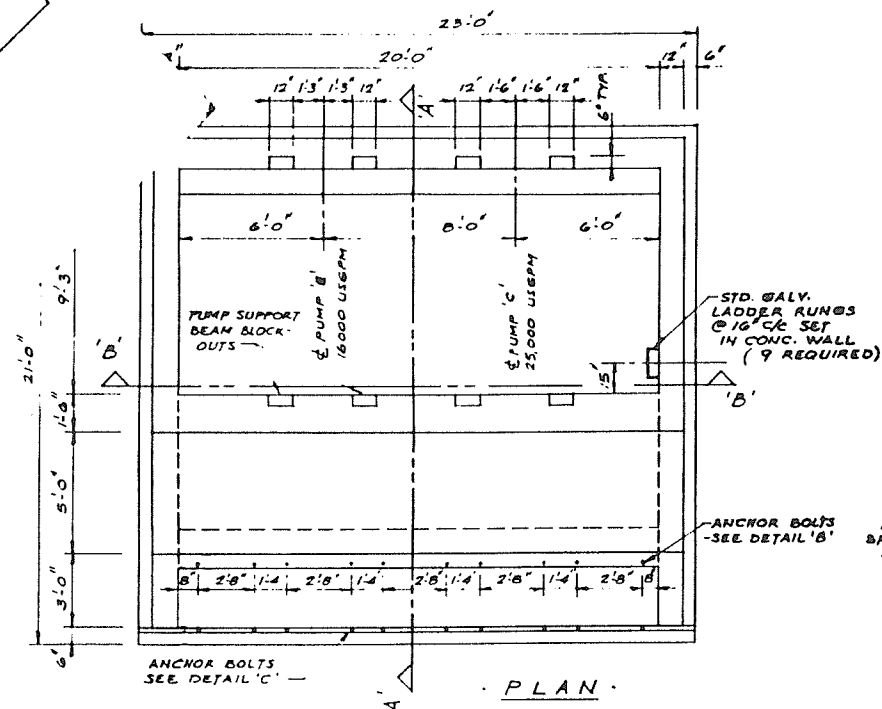


SECTION THROUGH FLOODBOX AND DYKE
SCALE: 1" = 10'

REFERENCES			REVISIONS			SURVEYED DATE	DESIGNED R. CAMERON	CHECKED	DATE JUNE 1982	DRAWN R. CAMERON	CHECKED	DATE JUNE 1982	Province of British Columbia Ministry of Environment INVENTORY AND ENGINEERING BRANCH	FILE NO. P 71-28
DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE									
													SQUAMISH DYKING MID-ISLAND FLOODBOX PLAN, FRONT ELEVATION SECTIONS REINFORCING DETAILS	ENG. PROJECT NO.
														PITS MAP NO.
													SCALE 1/4" = 10' EXCEPT AS NOTED	DRAWING NO.
													4918-82-2	SHEET 2 OF 10
													ENGINEER	DATE
													RECOMMENDED	DATE
													APPROVED	DATE
													DIRECTOR	DATE

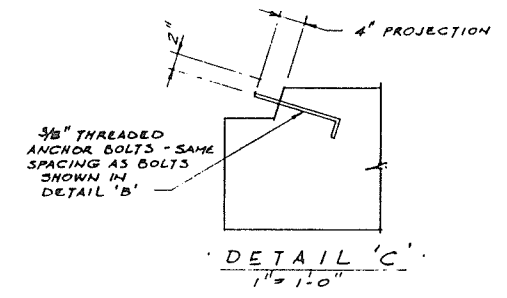
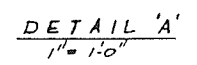


REFERENCES			REVISIONS			SURVEYED DATE	DESIGNED A. CAMERON	CHECKED	DATE JUNE 1982	DRAWN R. CAMERON	CHECKED	DATE JUNE 1982	Province of British Columbia Ministry of Environment INVENTORY AND ENGINEERING BRANCH	FILE NO.
DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE									P 71-28
														ENG. PROJECT NO.
														NTS MAP NO.
														SCALE 1" = 10'
														DRAWING NO. 4918-82-3
														SHEET 3 OF 10

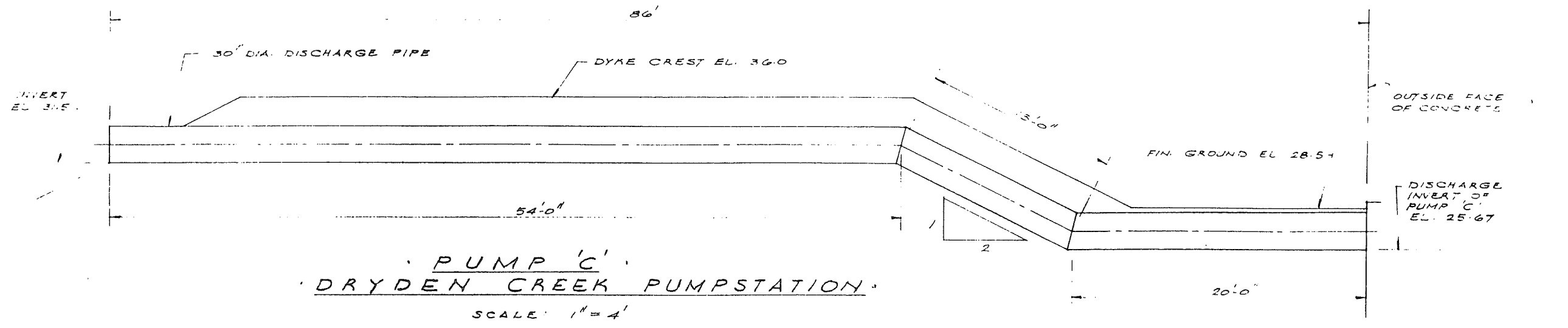


NOTES

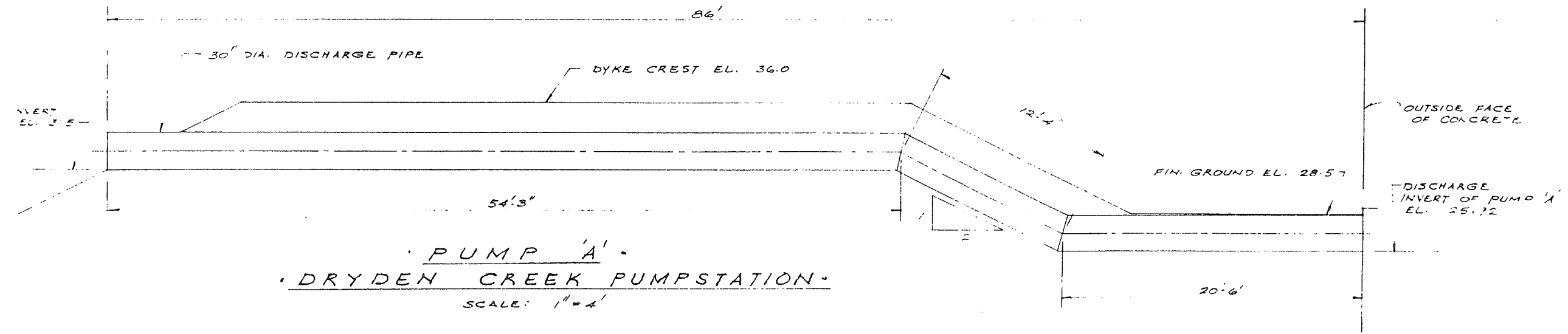
- 1 REINFORCING STEEL SHALL BE INTERMEDIATE GRADE DEFORMED BARS WITH A MINIMUM YIELD STRENGTH OF 40,000 P.S.I.
- 2 MINIMUM CONCRETE COVER ON REINFORCING STEEL SHALL BE 2" AGAINST FORMED SURFACES AND 3" AGAINST GROUND
- 3 THE LOCATIONS AND DETAILS OF CONSTRUCTION JOINTS NOT INDICATED ON THE DRAWINGS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER
- 4 WELDING OF REINFORCEMENT WILL NOT BE PERMITTED
- 5 CONCRETE STRENGTH SHALL BE 4,000 P.S.I. AT 28 DAYS. NOMINAL SIZE OF COARSE AGGREGATES SHALL NOT EXCEED 1 1/2 INCHES. SLUMP SHALL NOT EXCEED 3 INCHES. WATER/CEMENT RATIO SHALL NOT EXCEED 0.50. A WATER REDUCING ADMIXTURE SHALL BE USED. ENTRAINED AIR SHALL BE MAINTAINED BETWEEN 3 AND 6 PERCENT.
- 6 ALL ANCHOR BOLTS AND MISC. STEEL INSERTS SHALL BE CHECKED PRIOR TO POURING
- 7 SPLICED BARS SHALL LAP BY 40 BAR DIAMETERS



REFERENCES			REVISIONS			SURVEYED		Province of British Columbia Ministry of Environment INVENTORY AND ENGINEERING BRANCH		FILE NO
DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE	DATE		SQUAMISH DYKING		P 71-28
						DESIGNED R. CAMERON		DRYDEN CREEK PUMPSTATION No.1		ENG. PROJECT NO.
						CHECKED		PLAN, FRONT ELEVATION, SECTIONS REINFORCING DETAILS		NTS MAP NO.
						DATE AUG 10/82		SCALE 1/4" = 1'-0" EXCEPT AS NOTED		DRAWING NO.
						DRAWN R. CAMERON		4918-02-5		4918-02-5
						CHECKED		SHEET 5 OF 10		
						DATE AUG 10/82				
						ENGINEER	DATE	RECOMMENDED	DATE	APPROVED P. DIRECTOR

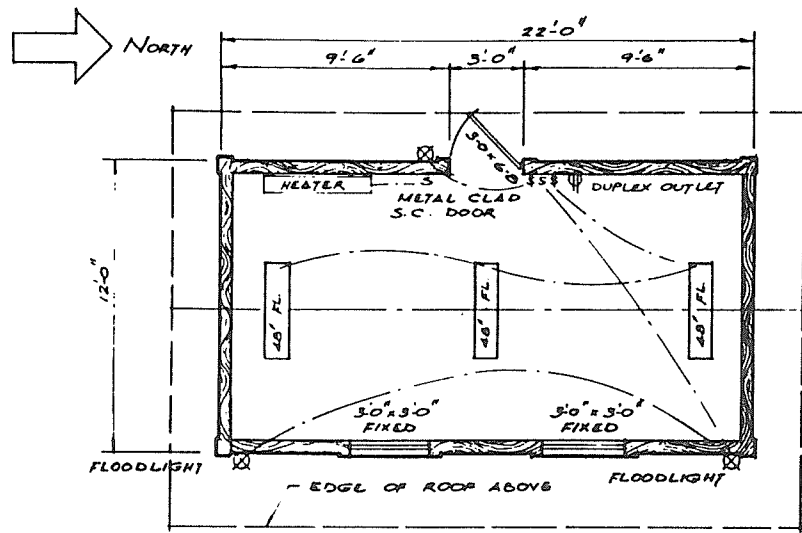


PUMP 'C'
DRYDEN CREEK PUMPSTATION
 SCALE: 1" = 4'

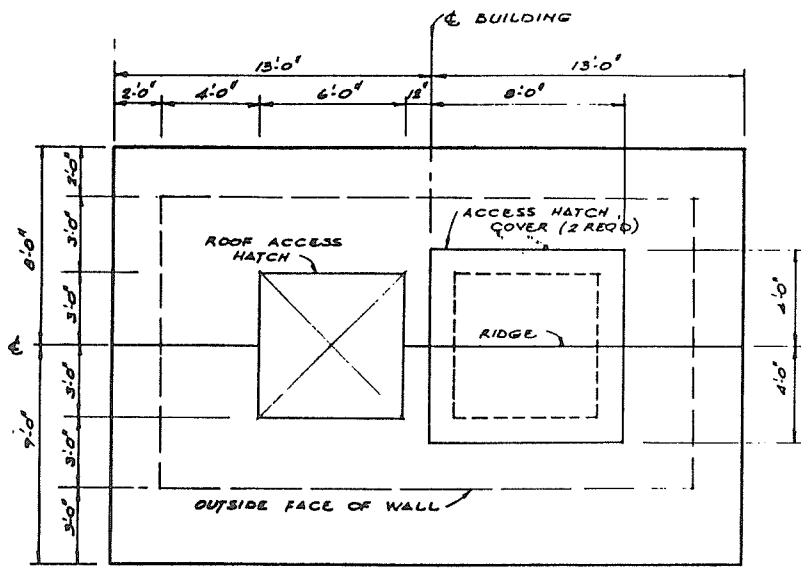


PUMP 'A'
DRYDEN CREEK PUMPSTATION
 SCALE: 1" = 4'

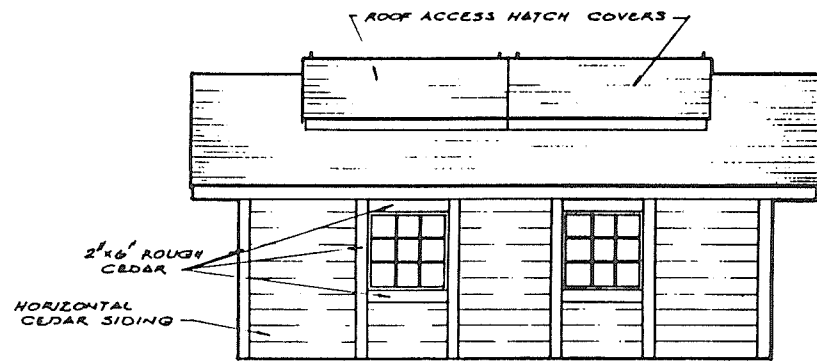
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DWG No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE	DATE	DATE		
						DESIGNED	R. CAMERON	SQUAMISH DYKING DRYDEN CREEK PUMPSTATION No. 1 30" DIA. DISCHARGE PIPES	ENGINEERING
						CHECKED			NO. MAP NO.
						DATE	AUG. 1982		CALL
						DRAWN	R. CAMERON	1" = 4'-0"	
						CHECKED		4918-82-102	
						DATE	AUG. 1982		
						ENGINEER			SHEET 3 OF 5
						DATE		RECOMMENDED	
						DATE		APPROVED	



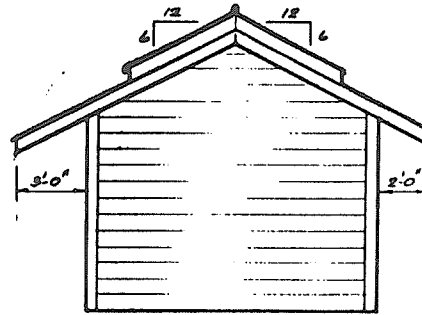
FLOOR PLAN



ROOF PLAN

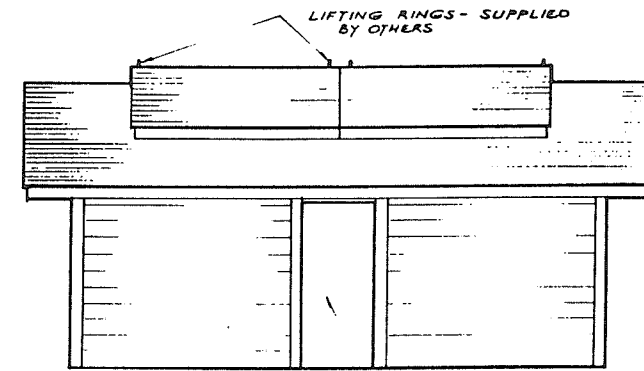


EAST ELEVATION

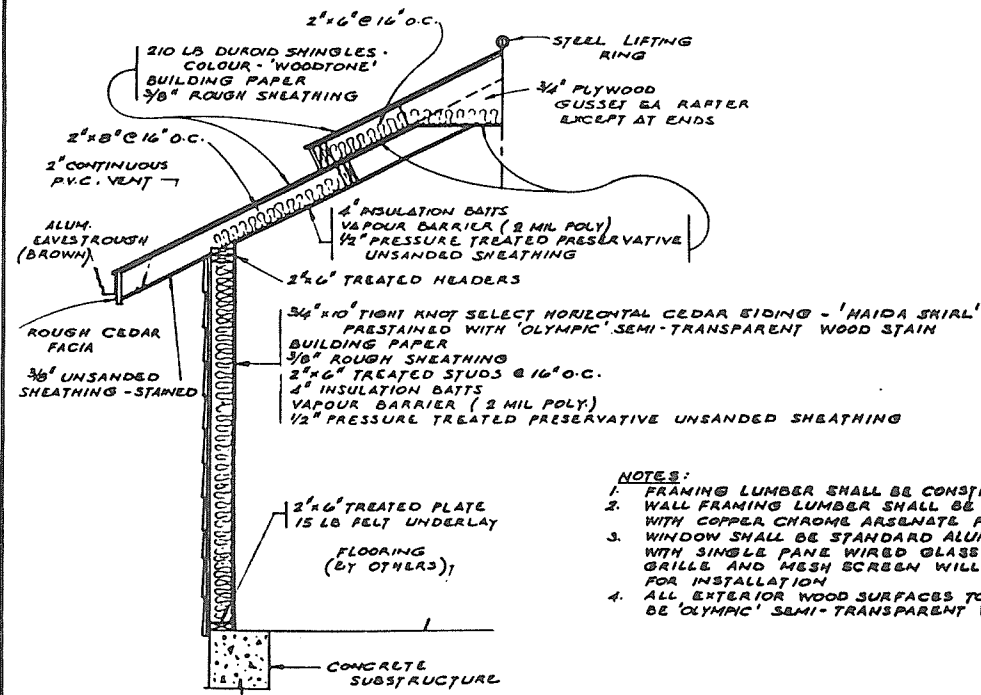


NORTH ELEVATION

(SOUTH ELEVATION REVERSE)



WEST ELEVATION

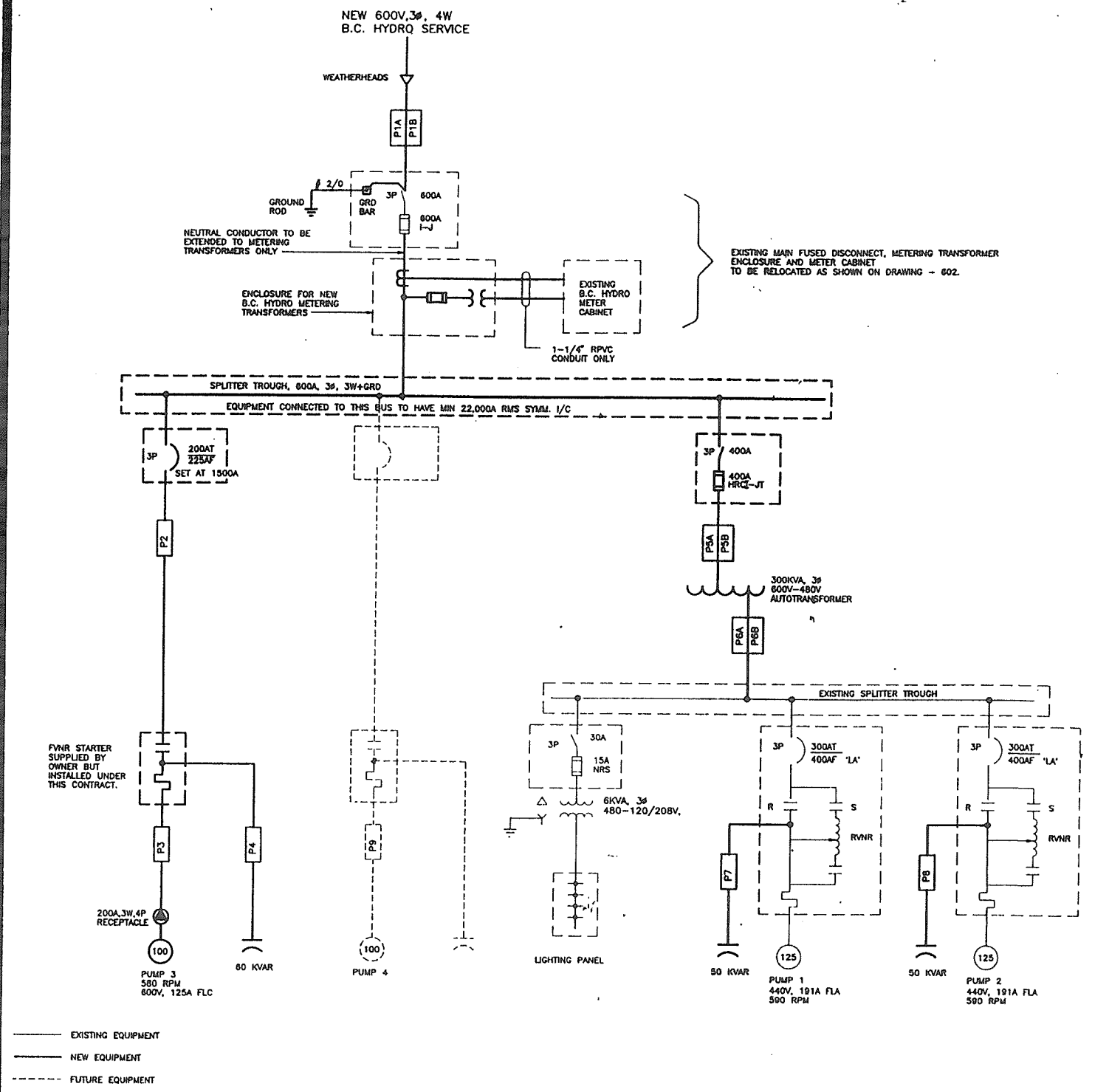


SECTION
SCALE: 1/2" = 1'-0"

- NOTES:**
- FRAMING LUMBER SHALL BE CONSTRUCTION GRADE FIR
 - WALL FRAMING LUMBER SHALL BE PRESSURE TREATED WITH COPPER CHROME ARSENATE PRESERVATIVE (C.C.A.)
 - WINDOW SHALL BE STANDARD ALUMINUM FRAME UNIT WITH SINGLE PANE WIRE GLASS. A PROTECTIVE BAR GRILLE AND MESH SCREEN WILL BE SUPPLIED BY OTHERS FOR INSTALLATION
 - ALL EXTERIOR WOOD SURFACES TO BE STAINED. STAIN TO BE 'OLYMPIC' SEMI-TRANSPARENT WOOD STAIN.

REFERENCES			REVISIONS		
DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE

SURVEYED _____ DATE _____ DESIGNED R. CAMERON CHECKED _____ DATE SEPT 6/82 DRAWN R. CAMERON CHECKED _____ DATE SEPT 8/82 R. H. Cameron ENGINEER SAPT 9/82 DATE _____	 SQUAMISH DYKING DRYDEN CREEK PUMPSTATION No. 1 - SUPERSTRUCTURE	FILE NO. P 71-28 DES. PROJECT NO. NTS MAP NO. SCALE 1/4" = 1'-0" EXCEPT AS NOTED DRAWING NO. 4918-82-8A SHEET 9 OF 10
RECOMMENDED _____ DATE _____ APPROVED _____ DIRECTOR _____ DATE _____		



SINGLE LINE DIAGRAM

SPECIFICATION NOTES:

- THE FOLLOWING IS A GENERAL DESCRIPTION OF ELECTRICAL WORK:
 - CONTRACTOR TO PROVIDE ELECTRICAL WORKS FOR NEW PUMP 3 AND NEW 600V, 3 ϕ SERVICE.
 - B.C. HYDRO WILL PROVIDE A NEW 600KVA PLATFORM SUBSTATION, 3 ϕ , 4 WIRE 347/600V, OVERHEAD DROP SERVICE AND WILL MAKE CONNECTIONS TO CONTRACTOR'S SERVICE CABLES AT THE WEATHERHEADS.
 - B.C. HYDRO WILL SUPPLY NEW METERING TRANSFORMERS TO CONTRACTOR FOR MOUNTING IN EXISTING RELOCATED ENCLOSURE.
 - B.C. HYDRO WILL SUPPLY AND INSTALL METER BASE(S) AND METER(S) AND THE TEST BLOCK IN EXISTING RELOCATED CABINET.
- COMPLETE ELECTRICAL INSTALLATION IN ACCORDANCE WITH CSA C22.1 AND AS AMENDED FOR USE IN THE PROVINCE OF BRITISH COLUMBIA.
- EQUIPMENT AND MATERIALS TO BE CSA CERTIFIED, WHERE THERE IS NO ALTERNATIVE TO SUPPLYING EQUIPMENT WHICH IS CSA CERTIFIED, OBTAIN SPECIAL APPROVAL FROM INSPECTION DEPARTMENT.
- VISIT THE SITE BEFORE PREPARING THE BID AND EXAMINE ALL EXISTING CONDITIONS. NO EXTRA COST WILL BE CONSIDERED FOR ANY MISUNDERSTANDING OF THE WORK TO BE DONE RESULTING FROM FAILURE TO VISIT THE SITE.
- AFTER COMPLETION OF WORK, FURNISH CERTIFICATES OF ACCEPTANCE FROM ELECTRICAL INSPECTION DEPARTMENT TO THE OWNER. OWNER WILL PROVIDE DRAWINGS REQUIRED BY ELECTRICAL INSPECTION DEPARTMENT.
- ON COMPLETION OF PROJECT, PROVIDE ONE SET OF NEAT AND ACCURATE "AS BUILT" DRAWINGS TO THE OWNER.
- IDENTIFY ELECTRICAL EQUIPMENT WITH NAMEPLATES ATTACHED WITH SELF TAPPING SCREWS, WORDING AND SIZE OF NAMEPLATES TO BE CONFIRMED WITH OWNER PRIOR TO CONSTRUCTION.
- IDENTIFY WIRING WITH T & B SHUR-CODE TUBULAR MARKERS OR EQUIVALENT. IDENTIFICATION TO BE ON BOTH ENDS OF PHASE CONDUCTORS, BRANCH CIRCUITS, AND CONTROL WIRING.
- CONDUITS SHALL BE RIGID PVC TO CSA C22.2 No. 211.2 UNLESS OTHERWISE SPECIFIED.
- CONDUCTORS SHALL BE 1000V STRANDED COPPER XLPE RW90. USE COPPER CONDUCTORS TECK 90 XLPE AS SHOWN COMPLETE WITH GROUND CONDUCTOR. CONNECTIONS FOR TECK CABLE SHALL BE WATER-TIGHT. DRY TYPE WILL NOT BE ACCEPTED. MINIMUM SIZE FOR CONDUCTORS SHALL BE 12 AWG FOR POWER AND 14 AWG FOR CONTROL.
- INDOOR VENTILATED AUTOTRANSFORMER WITH KVA, VOLTAGE AND PHASE AS INDICATED. INSULATION TO BE CLASS H WITH A 150°C RISE. MOUNT TRANSFORMER ON FLOOR AS INDICATED. AVAILABLE FROM STOCK FROM BEAVER ELECTR. MACHINERY, BURBURY.
- THERMAL MAGNETIC AND MOTOR CIRCUIT PROTECTOR (MCP) BREAKERS AS SHOWN. PROVIDE BREAKERS IN AN EMIAC 12 ENCLOSURE COMPLETE WITH DOOR HANDLE MECHANISM. MINIMUM INTERRUPTING CAPACITY TO BE 22 KA. MOUNT BREAKERS ON WALL AS INDICATED.
- INDOOR, DRY-TYPE CAPACITORS WITH KVAR, VOLTAGE AND PHASES AS INDICATED. CAPACITOR TO BE IN A DUST-TIGHT ENCLOSURE COMPLETE WITH INTERNALLY PROTECTED FUSES AND BLOWN-FUSE INDICATING LIGHTS. FUSES TO HAVE AN INTERRUPTING CAPACITY OF 200KA.
- SUPPLY 3 SPARE FUSES OF BOTH SIZES i.e. 400A AND 600A.

WIRING SCHEDULE

ITEM	CONDUIT		CONDUCTORS
	SIZE	TYPE	
P1A	3"	RA	4- 300 KCM } NOTE 2
P1B	3"	RA	
P2	-	-	3 - # 2/0 TECK
P3	2"	RPVC	3 - # 2/0 & # 6 GRD
P4	-	-	3 - # 4 TECK, NOTE 3
P5A	2"	RPVC	3- 2/0 KCM + # 6 GRD } NOTE 2
P5B	2"	RPVC	
P6A	-	-	3- 4/0 KCM TECK } NOTE 2
P6B	-	-	
P7	-	-	3 - # 4 TECK, NOTE 3
P8	-	-	3 - # 4 TECK, NOTE 3
P9	2"	RPVC	CONDUIT ONLY FOR FUTURE PUMP POWER
C1	1-1/4"	RPVC	12 - # 14 & # 14 GRD, NOTE 1
C2	1-1/4"	RPVC	CONDUIT ONLY FOR FUTURE PUMP CONTROL

NOTES : 1. CONFIRM REQUIRED NUMBER OF CONDUCTORS BEFORE INSTALLATION.
 2. INSTALL AS PARALLEL FEEDER.
 3. USE OF LT- CONDUIT + WIRE ACCEPTABLE.

RPVC = RIGID PVC
 RA = RIGID ALUMINUM
 LT = LIQUID TIGHT CONDUIT

0	02/08/31			ISSUED FOR TENDER
NO	DATE	ENG	BY	SUBJECT
REVISIONS				
PROJECT NO.	VW17			
SCALE	N.T.S.			
DRAWN	D.J.			
DESIGNED	K.H. / J.T.			
CHECKED	G.F. / J.T.			
APPROVED				
APPROVED				
DATE	SEPTEMBER 1992			

ASSOCIATED ENGINEERING

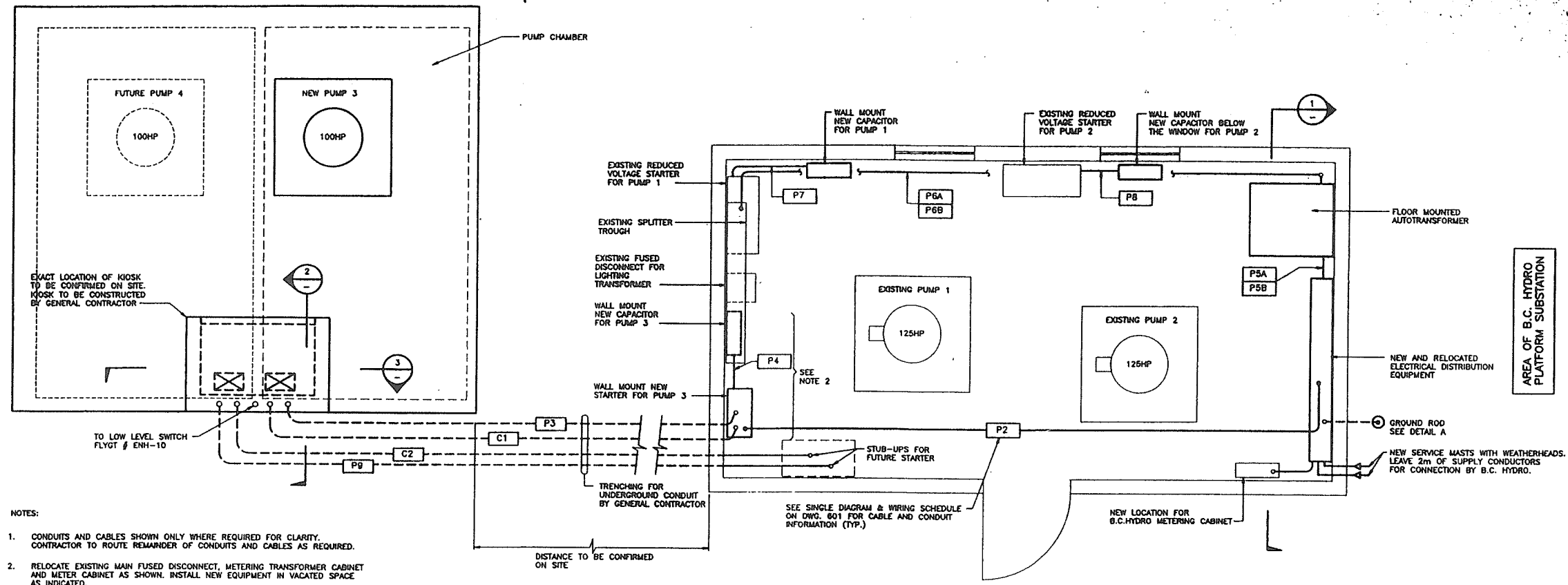


DISTRICT OF SQUAMISH

DRYDEN CREEK PUMP STATION

SINGLE LINE DIAGRAM AND SPECIFICATION NOTES

DRAWING NUMBER
 VW17-1-801

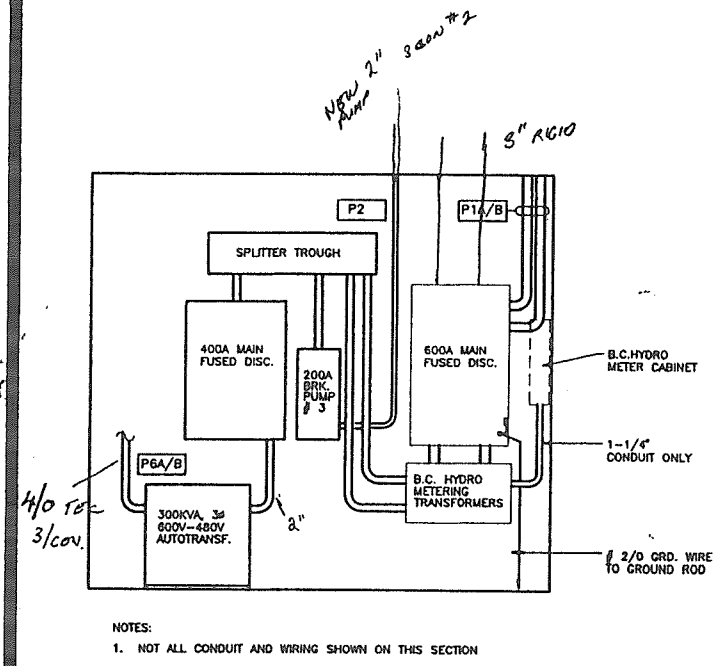


NOTES:

- CONDUITS AND CABLES SHOWN ONLY WHERE REQUIRED FOR CLARITY. CONTRACTOR TO ROUTE REMAINDER OF CONDUITS AND CABLES AS REQUIRED.
- RELOCATE EXISTING MAIN FUSED DISCONNECT, METERING TRANSFORMER CABINET AND METER CABINET AS SHOWN. INSTALL NEW EQUIPMENT IN VACATED SPACE AS INDICATED.

NEW PUMP STATION
SCALE N.T.S.

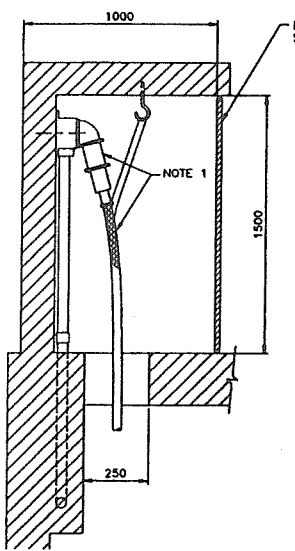
EXISTING PUMPSTATION PLAN
SCALE 1:25



NOTES:

- NOT ALL CONDUIT AND WIRING SHOWN ON THIS SECTION

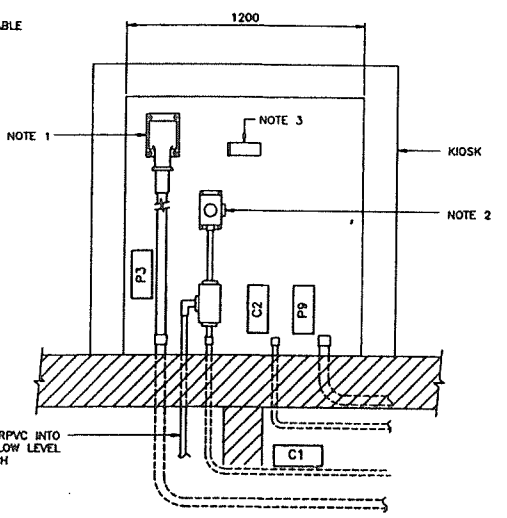
SECTION 1
SCALE 1:25



NOTES:

- PUMPS COMPLETE WITH FLEX CABLES WILL BE SUPPLIED AND INSTALLED BY OTHERS. CONTRACTOR SHALL PROVIDE PLUGS AND STAINLESS STEEL CABLE GRIPS AS INDICATED.

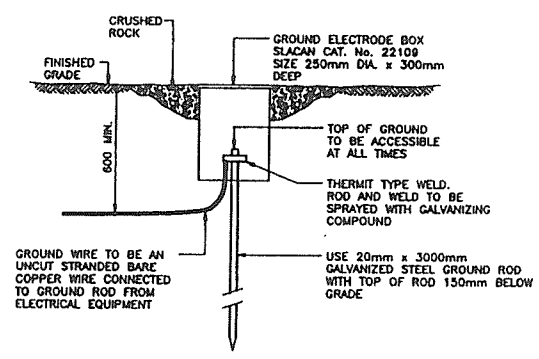
SECTION 2
N.T.S.



NOTES:

- 200A 600VAC POWER RECEPTACLE TO BE GROUSE HINDS MODEL # AREA STYLE 2 WITH BACK BOX #AJ AND ANGLE ADAPTER. PROVIDE MATCHING PLUG # APJ.
- 12 WIRE, 12 POLE COMBINATION RECEPTACLE AND PLUG WITH BACK BOX AND ANGLE ADAPTER. CONFIRM FLEXIBLE CABLE DIAMETER AND NUMBER OF PINS REQUIRED BEFORE ORDERING EQUIPMENT.
- PROVIDE A RED LAMINATED WARNING PLATE WITH MIN. 10mm LETTERING ABOVE THE RECEPTABLES. TEXT TO READ "DO NOT UNPLUG WHILE PUMP IS RUNNING"

SECTION 3
N.T.S.



GROUND ROD DETAIL
N.T.S.

AREA OF B.C. HYDRO PLATFORM SUBSTATION

NO	DATE	ENG	BY	SUBJECT
0	02/08/31			ISSUED FOR TENDER
REVISIONS				
PROJECT NO.	VW17			
SCALE	AS SHOWN			
DRAWN	D.J.			
DESIGNED	K.H. / J.T. / J.M. / J.L.			
CHECKED	6-7-92			
APPROVED				
DATE	SEPTEMBER 1992			

ASSOCIATED ENGINEERING

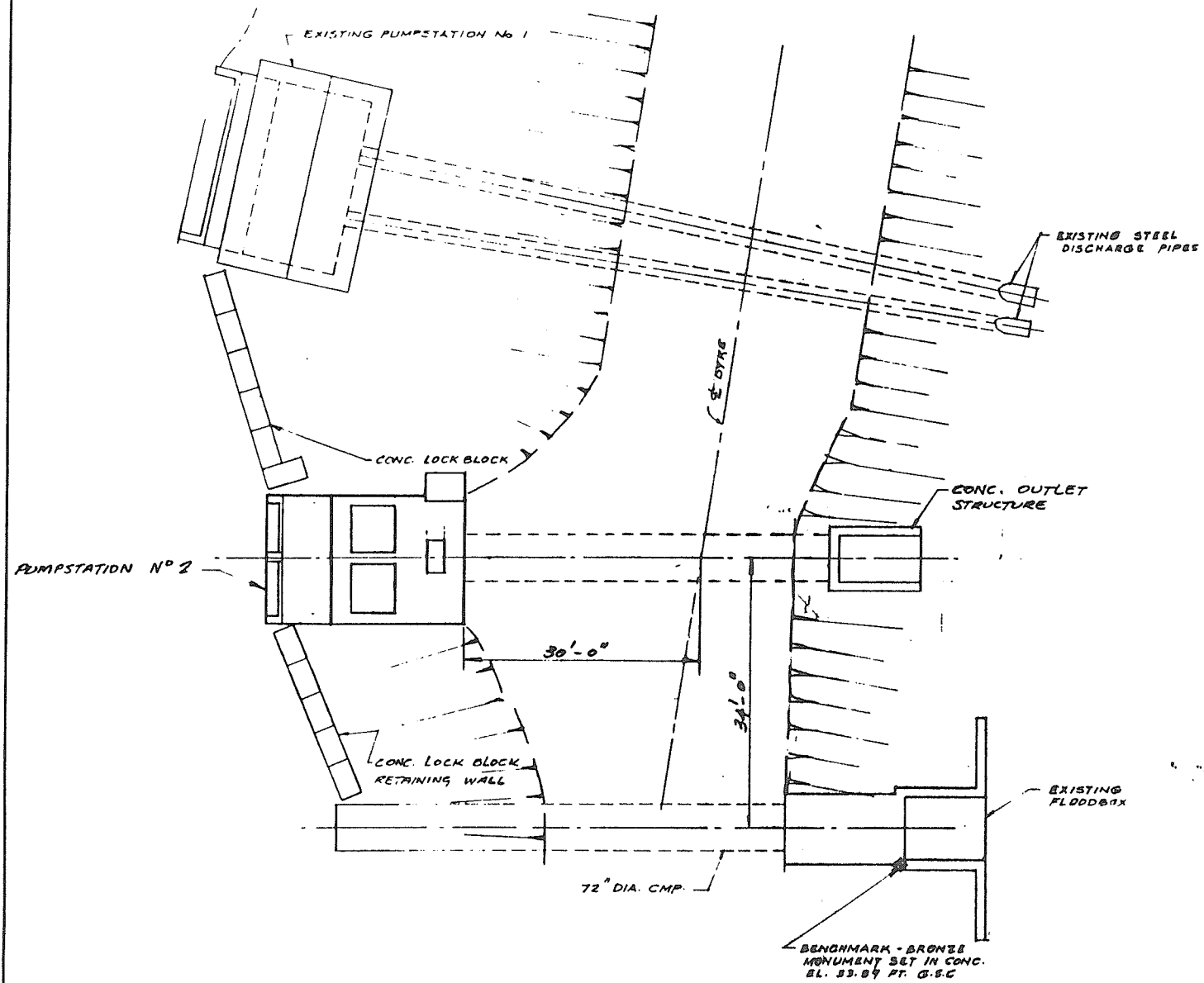


DISTRICT OF SQUAMISH

DRYDEN CREEK PUMP STATION

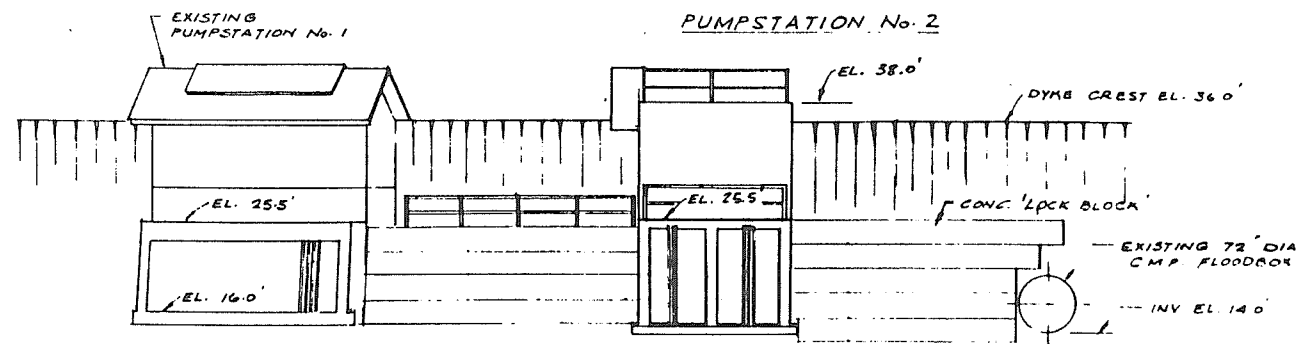
ELECTRICAL LAYOUT AND DETAILS

DRAWING NUMBER	REVISED	SHEET
VW17-1-602	0	1

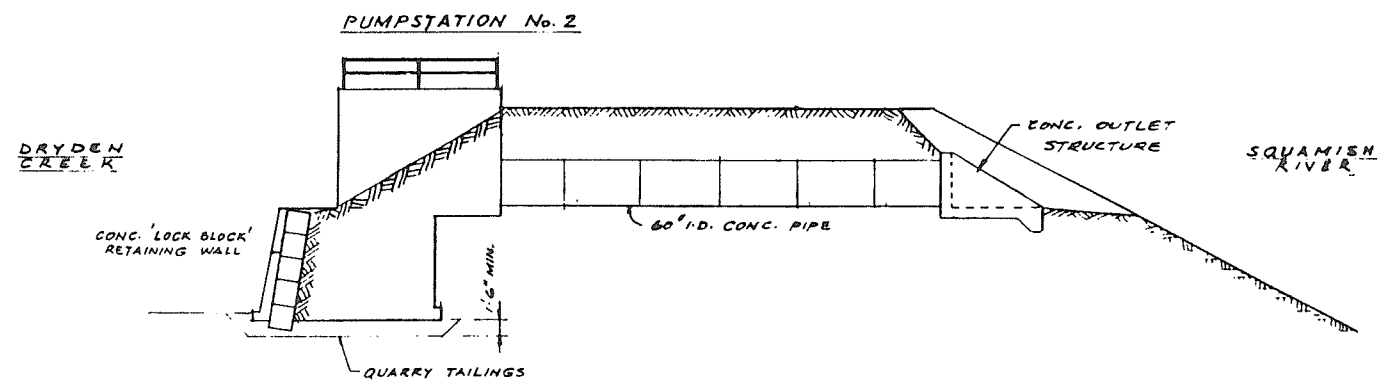


SITE PLAN
SCALE: 1" = 10'

SQUAMISH RIVER

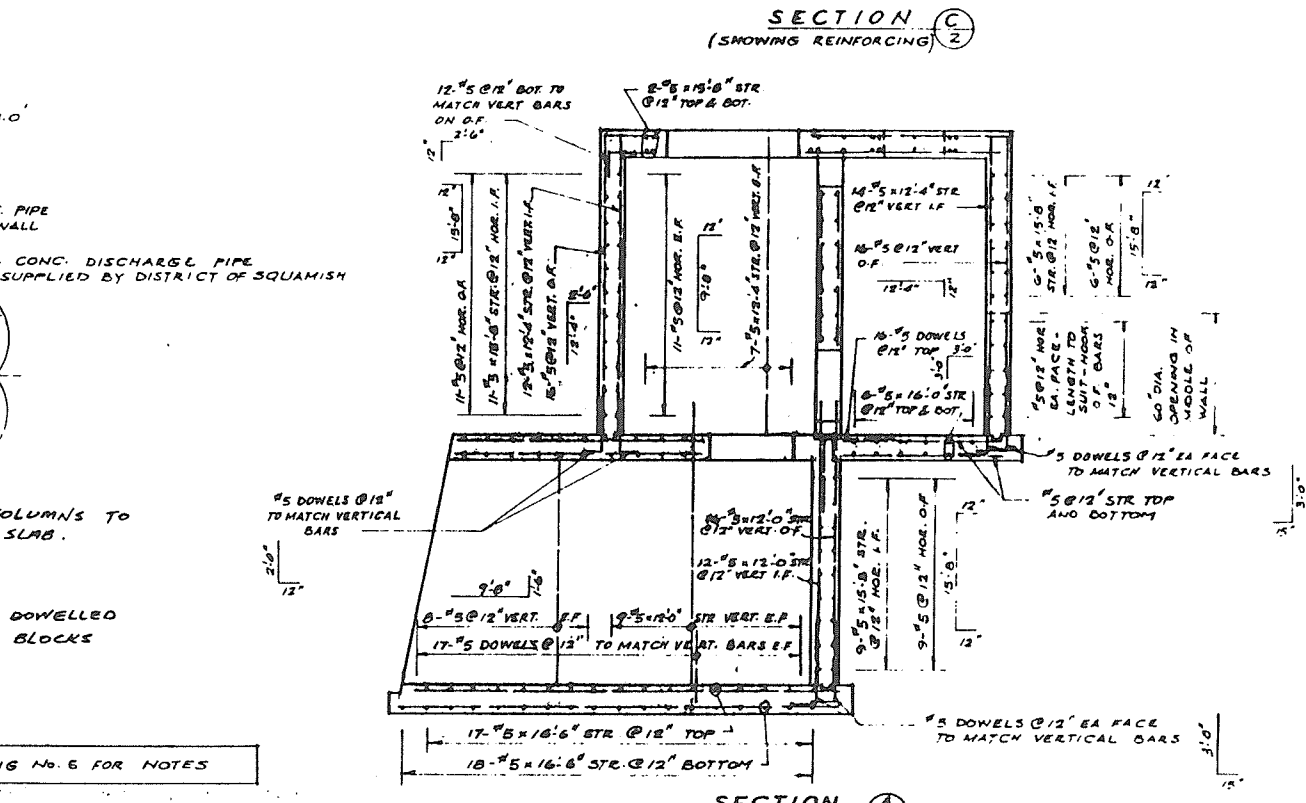
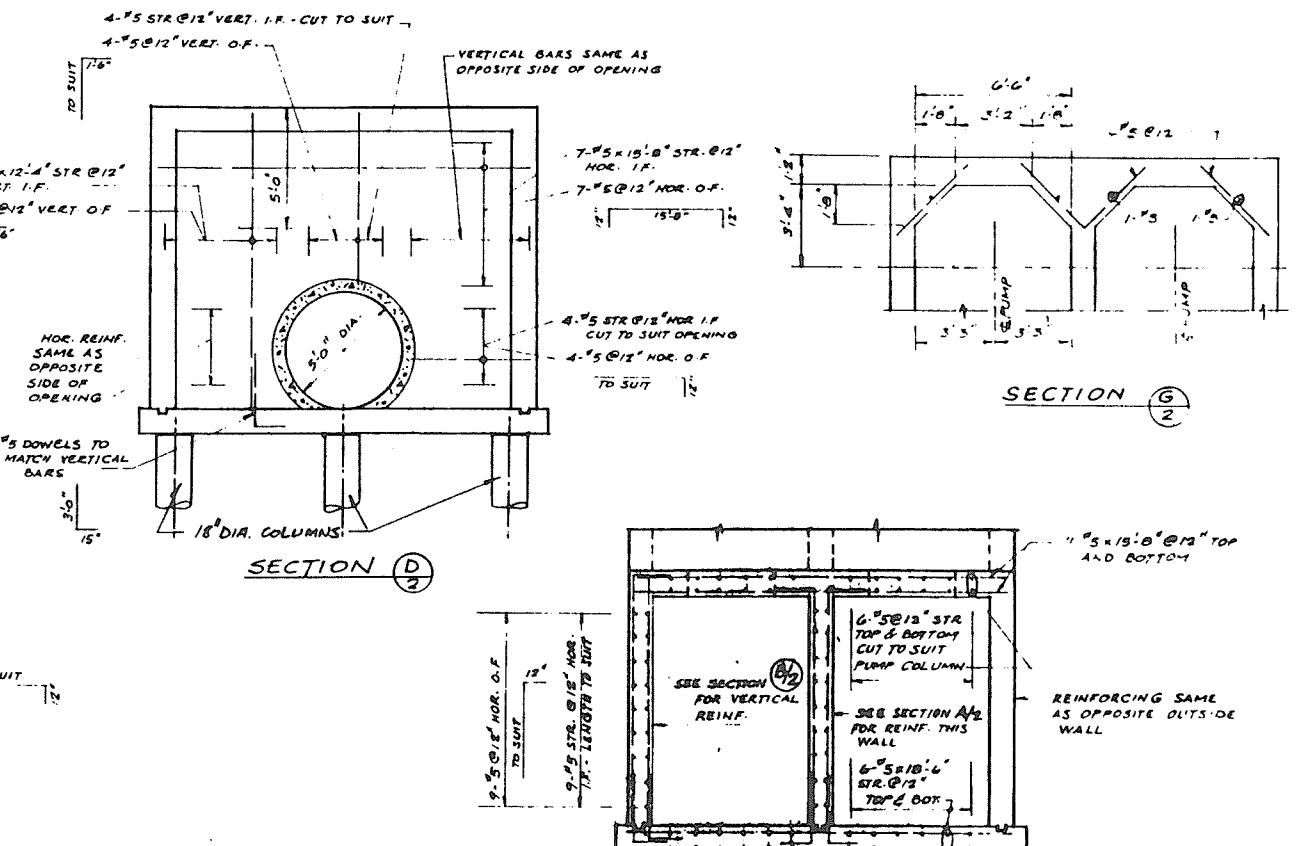
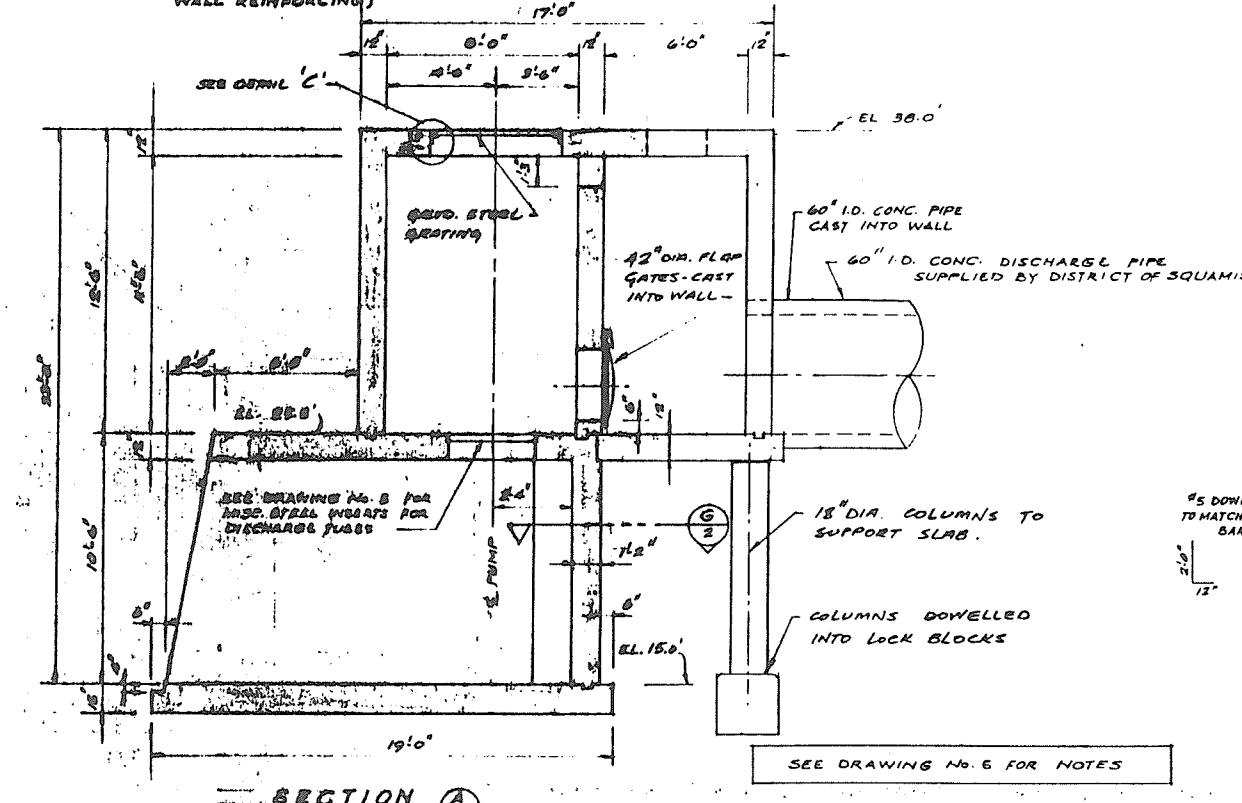
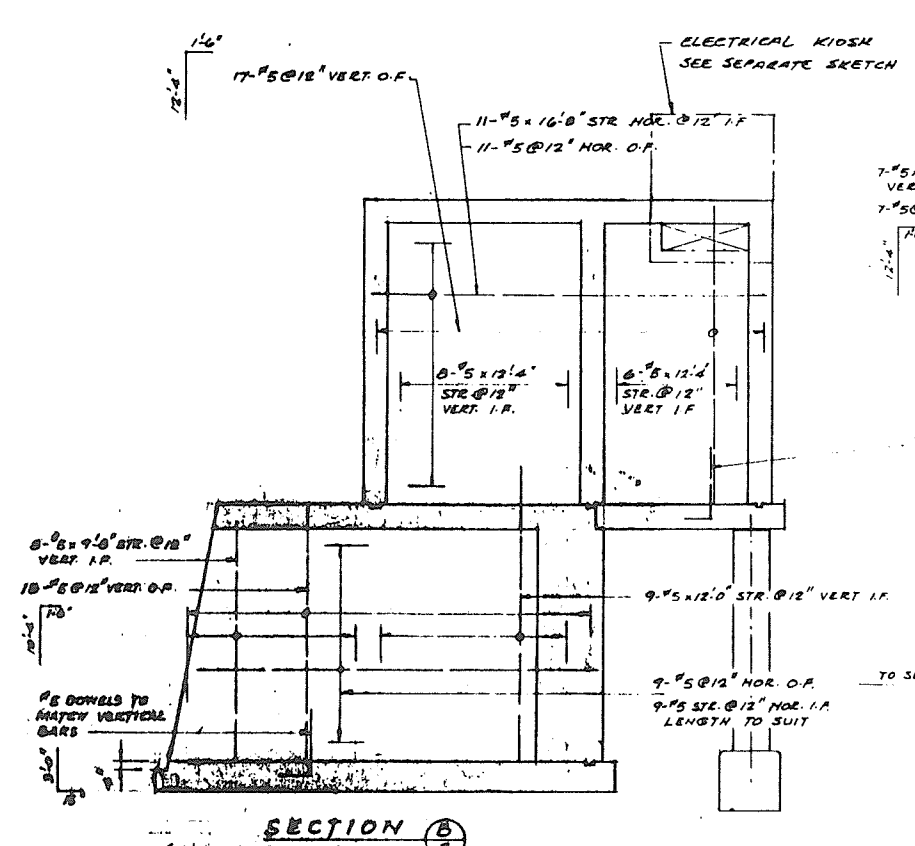
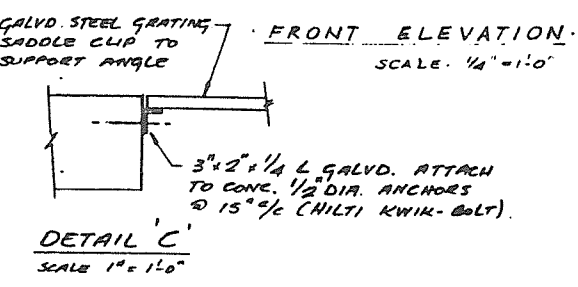
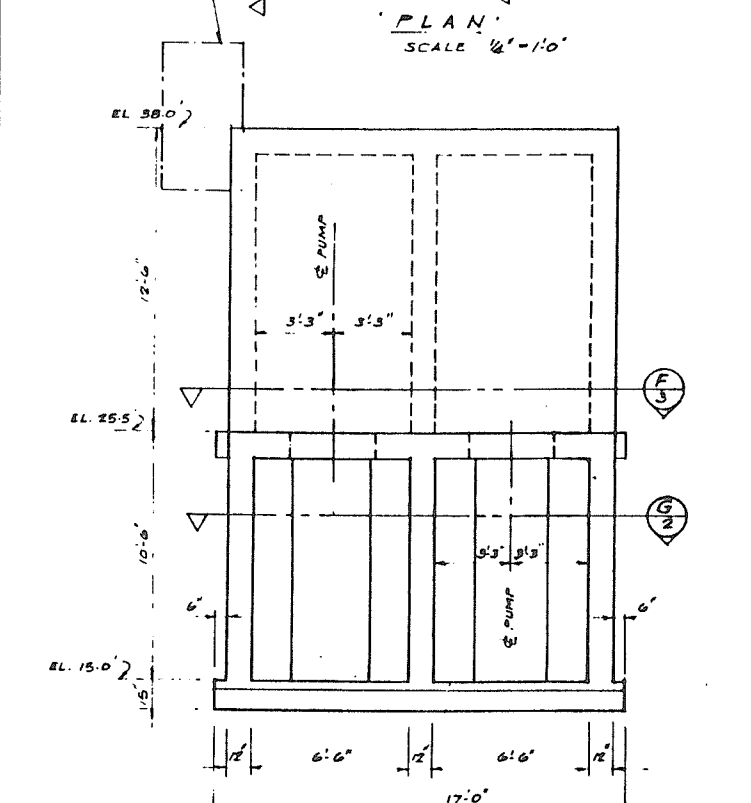
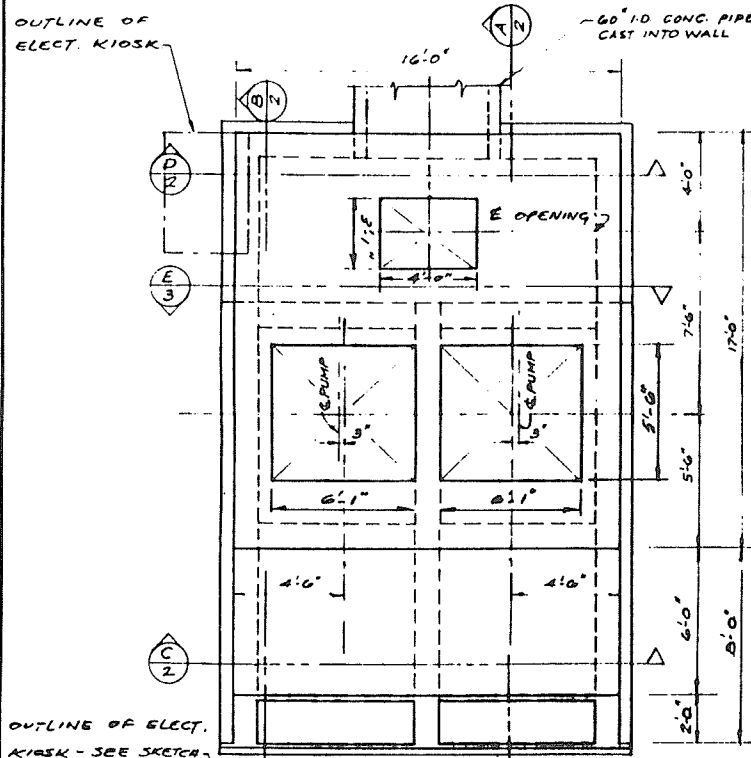


ELEVATION FROM FOREBAY
SCALE: 1" = 10'

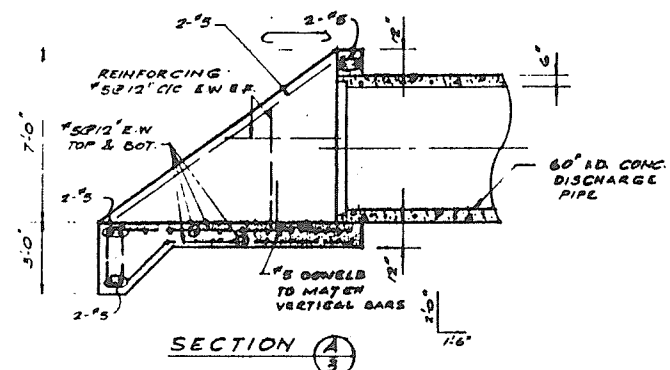
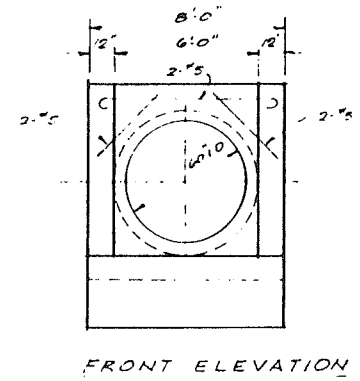
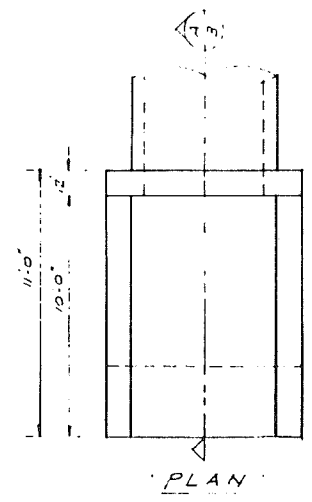


LONGITUDINAL ELEVATION OF PUMPSTATION No. 2
SCALE: 1" = 10'

REFERENCES			REVISIONS		SURVEYED DATE	DESIGNED <i>R. CAMERON</i>	CHECKED	DATE <i>JULY 1991</i>	DRAWN <i>R. CAMERON</i>	APPROVED	HEAD DRAFTING SECTION DATE	Province of British Columbia Ministry of Environment and Parks WATER MANAGEMENT BRANCH	FILE NO
DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION									DATE
			1	AS CONSTRUCTED	25-04-22							SQUAMISH DYKING DRYDEN CREEK - PUMPSTATION No. 2 - SITE PLAN - ELEVATIONS	ENG. PROJECT NO.
													MIS. MAP NO.
													SCALE 1" = 10'
													NEGATIVE NO.
						<i>R. H. Cameron</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	DRAWING NO. 91-24-1	REV. 1
						ENGINEER	DATE	RECOMMENDED	DATE	APPROVED	DATE	SHEET	1 OF 4



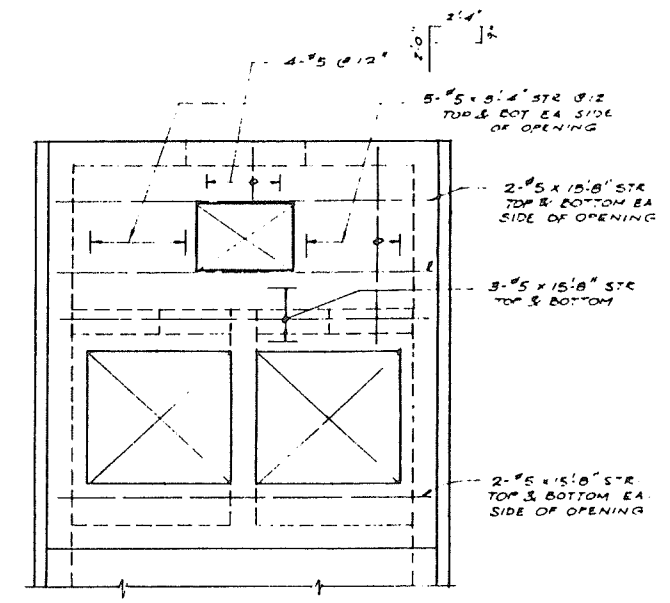
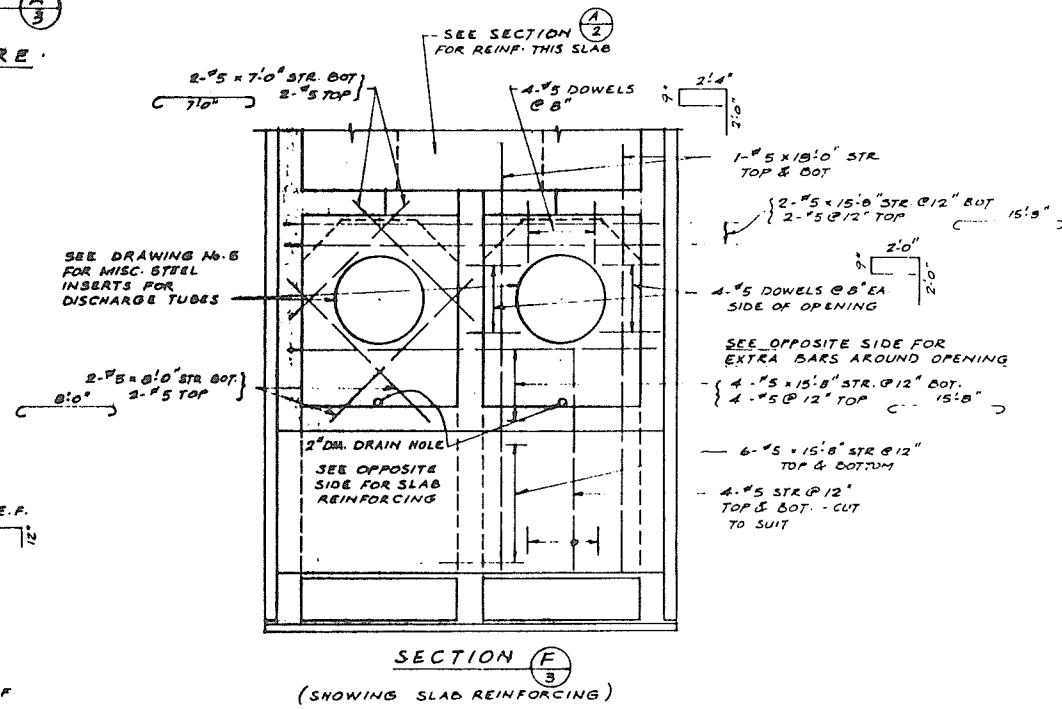
REFERENCES			REVISIONS			SURVEYED		Province of British Columbia Ministry of Environment and Parks WATER MANAGEMENT BRANCH		FILE NO
DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE	DATE	DESIGNED	DATE	P71-20	
			1	OPENINGS FOR GRATING, FLAP GATES, DET. C	27-07-07	JULY 1971	E. CAMERON		ENG PROJECT NO	
			2	AS CONSTRUCTED	23-04-23				MIS MAP NO	
							APPROVED		SCALE 1/4" = 1'-0" EXCEPT AS NOTED	
							DATE		NEGATIVE NO	
							DATE		DRAWING NO	
							DATE		91-24-2	
							DATE		REV. 2	
							DATE		SHEET 2 OF 4	



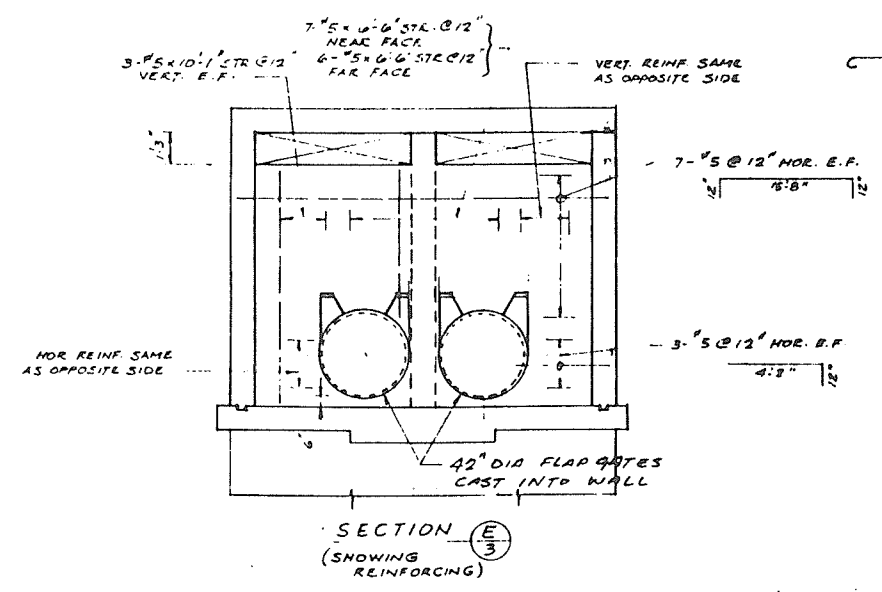
DISCHARGE PIPE OUTLET STRUCTURE

NOTES:

1. REINFORCING STEEL SHALL BE INTERMEDIATE GRADE DEFORMED BARS WITH A MINIMUM YIELD STRENGTH OF 40,000 P.S.I.
2. MINIMUM CONCRETE COVER ON REINFORCING STEEL SHALL BE 1 1/2" AGAINST FORMED SURFACES AND 3" AGAINST GROUND.
3. THE LOCATION AND DETAILS OF CONSTRUCTION JOINTS NOT INDICATED ON THE DRAWINGS SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER.
4. WELDING OF REINFORCEMENT WILL NOT BE PERMITTED.
5. CONCRETE STRENGTH SHALL BE 3,500 P.S.I. AT 28 DAYS. NOMINAL SIZE OF COARSE AGGREGATE SHALL NOT EXCEED 1 1/2 INCHES. SLUMP SHALL NOT EXCEED 3 INCHES. WATER/CEMENT RATIO SHALL NOT EXCEED 0.50. A WATER REDUCING ADMIXTURE SHALL BE USED. ENTRAINED AIR SHALL BE MAINTAINED BETWEEN 3 AND 6 PERCENT.
6. ALL ANCHOR BOLTS AND MISC. STEEL INSERTS SHALL BE CHECKED PRIOR TO POURING CONCRETE
7. SPLICED BARS SHALL LAP BY 40 BAR DIAMETERS.
8. CHAMFER OUTSIDE CORNERS.

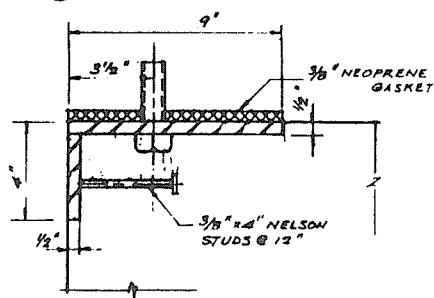
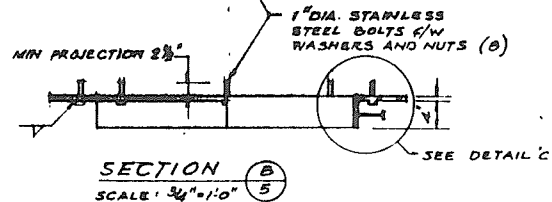
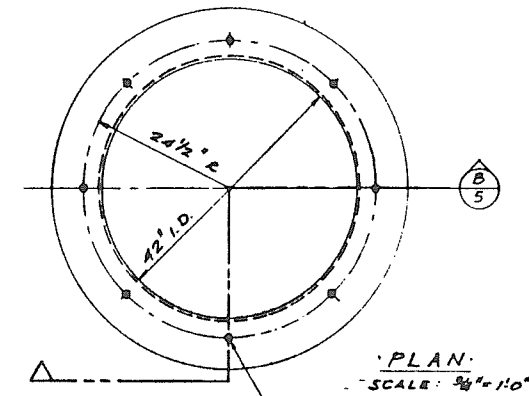
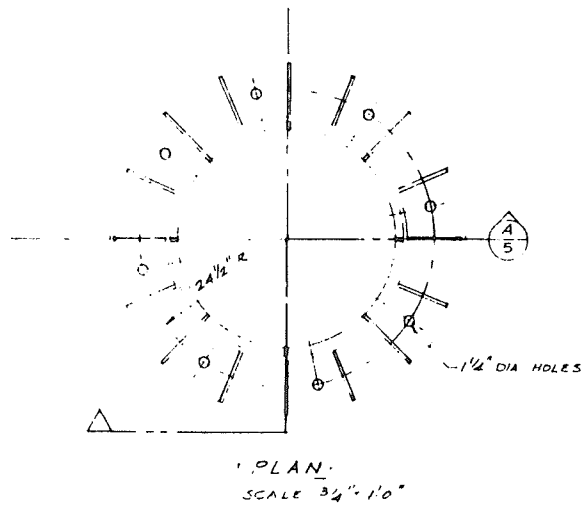


PLAN @ EL 38.0 (SHOWING SLAB REINFORCING)

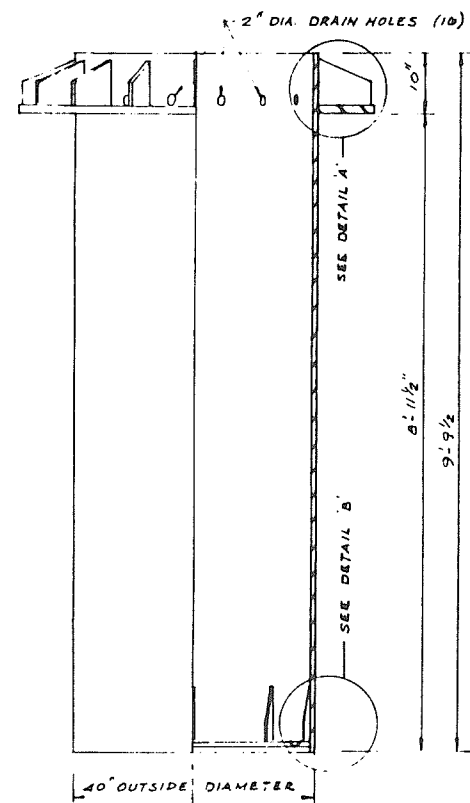


SECTION E-E (SHOWING REINFORCING)

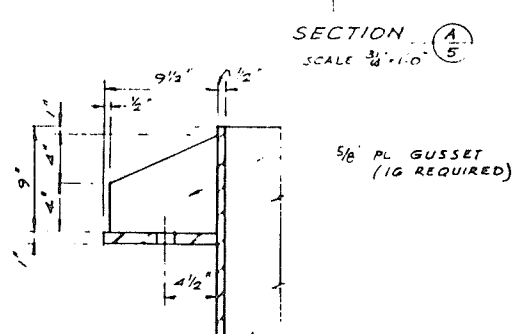
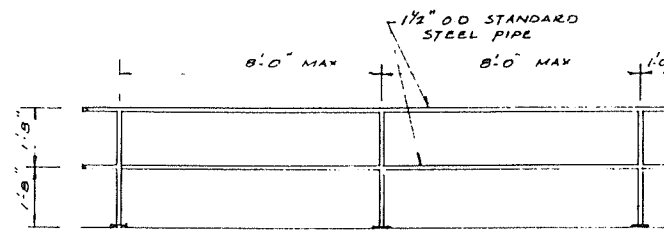
REFERENCES			REVISIONS		SURVEYED		Province of British Columbia Ministry of Environment and Parks WATER MANAGEMENT BRANCH		FILE NO
DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE	DATE	DESIGNED	DRYDEN CREEK - PUMPSTATION No. 2	P 71-28
			1	FLAP GATES CHG	27-07-07	DESIGNED	R. CAMERON	ENG PROJECT NO	
			2	AS CONSTRUCTED	23-04-26	CHECKED		NTS MAP NO	
						DATE	JULY 1991	SCALE	1/4" = 1'-0"
						DRAWN	R. CAMERON	NEGATIVE NO.	
						APPROVED		DRAWING NO.	91-24-3
						HEAD DRAFTING SECTION		REV.	2
						DATE		SHEET	3 OF 4
						ENGINEER	R.H. Cameron July 9/91	RECOMMENDED	91-07-30 DATE
						DATE		APPROVED	DIRECTOR DATE



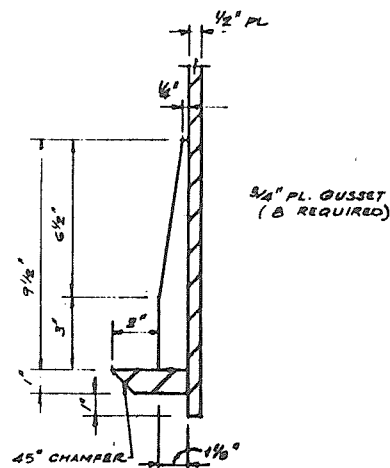
BOLTING RING FOR DISCHARGE TUBE
(2 REQUIRED)



SECTION (A)
SCALE: 3/4" = 1'-0"



DETAIL 'A'
SCALE: 1 1/2" = 1'-0"

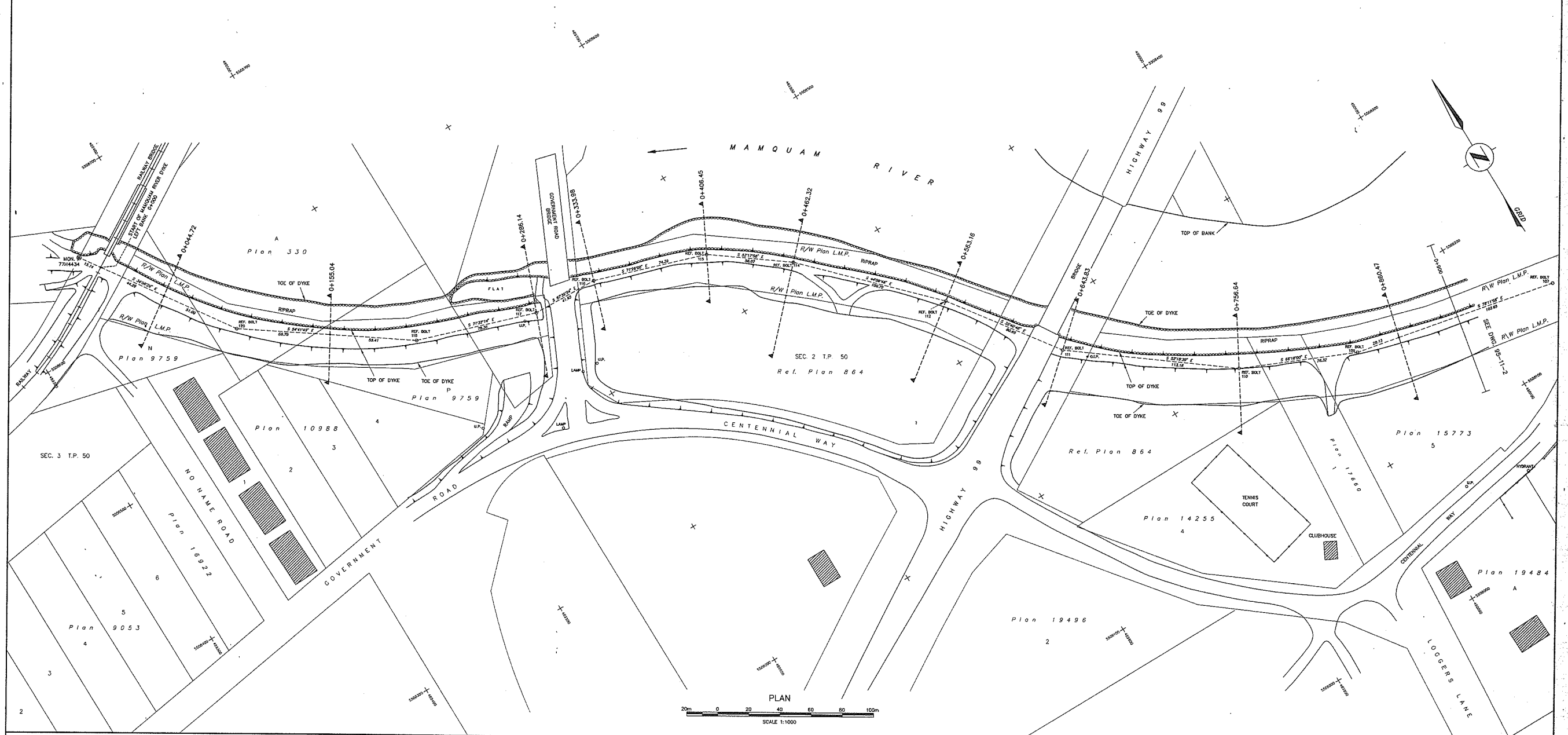
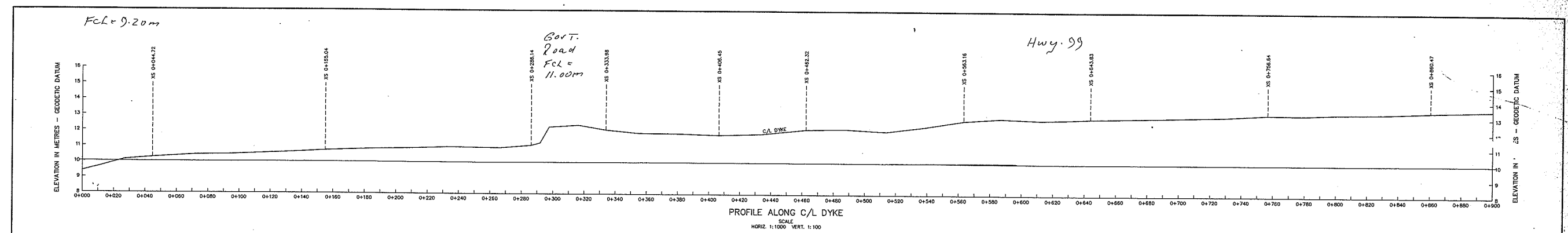


DETAIL 'B'
SCALE: 3" = 1'-0"

DISCHARGE TUBE
(1 REQUIRED)

REFERENCES			REVISIONS			DESIGNED		Province of British Columbia Ministry of Environment and Parks WATER MANAGEMENT BRANCH		FILE NO
DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE	DATE	DESIGNED	SQUAMISH DYKING DRYDEN CREEK PUMPSTATION No. 2		P 71-28
			1	AS CONSTRUCTED	93-04-20	JULY 1991	R. CAMERON	DISCHARGE TUBE AND BOLTING RING STEEL PIPE HANDRAILING		END PROJECT NO
										MTS MAP NO
										SCALE AS NOTED
										NEGATIVE NO
										DRAWING NO. 91-24-5
										REV. 1
										SHEET 4 OF 4

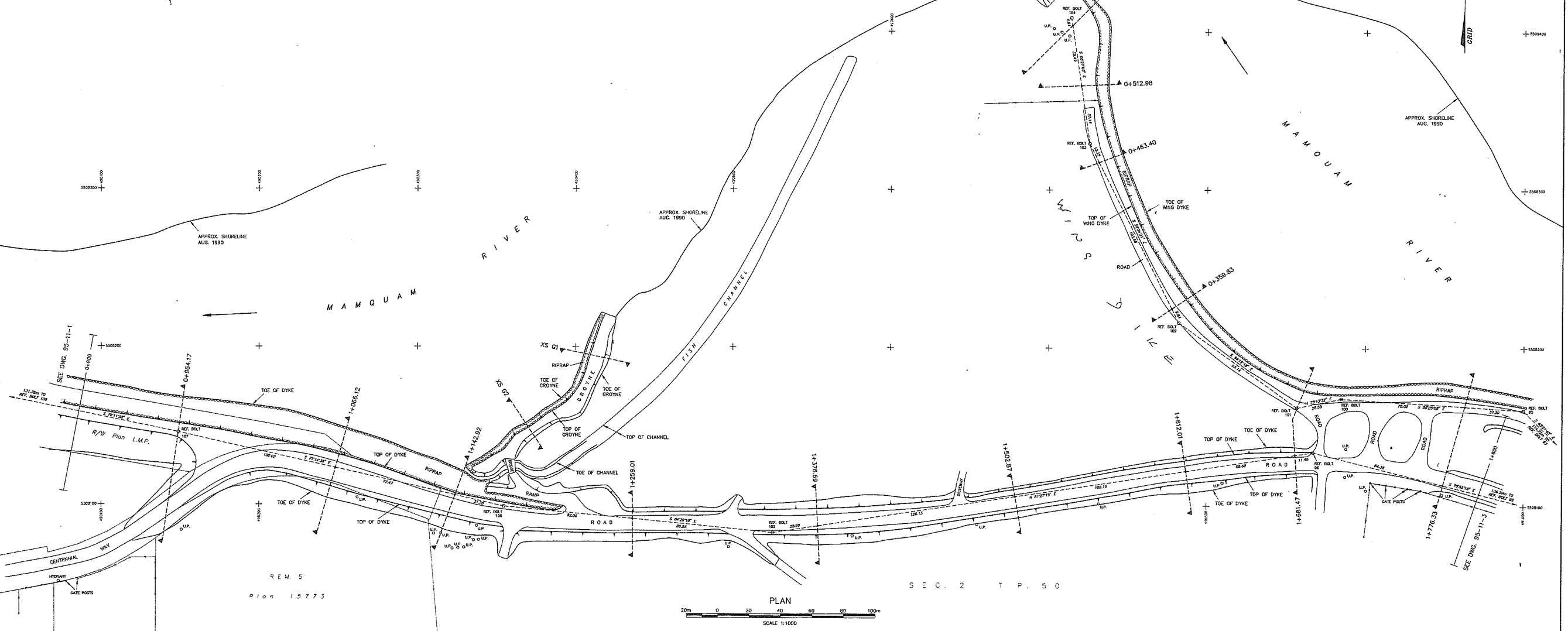
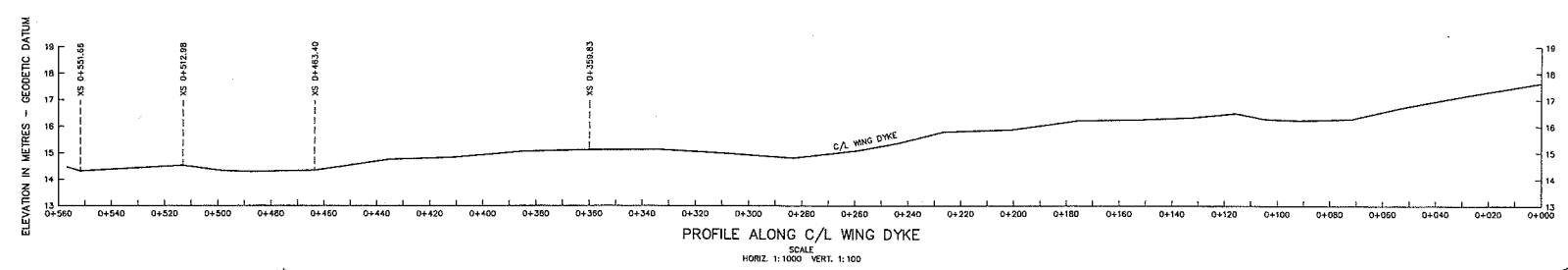
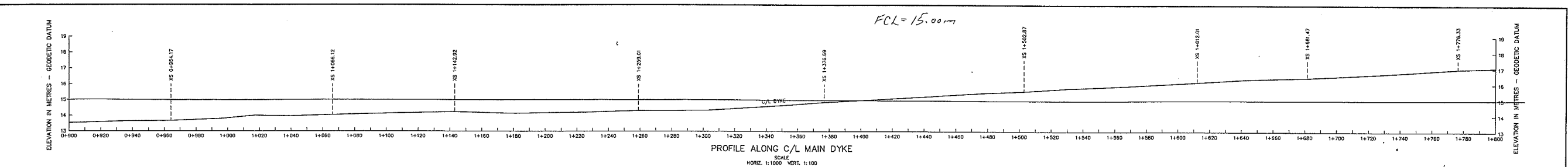
4. MAMQUAM RIVER DIKING



NOTES		LEGEND		STORAGE LICENCES		REFERENCES		REVISIONS		SURVEYED		Province of British Columbia Ministry of Environment, Lands and Parks WATER MANAGEMENT DIVISION	
1) This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.	a) Elevations are in metres and referred to Canadian Geodetic Datum, CGD28.	● REFERENCE POINT	LICENCE	PROPERTY DATE	AUTHORIZED ADJ-757	DESCRIPTRN	DATE	NO.	DESCRIPTION	DATE	DATE	FILE No.	BRANCH
2) SURVEY DATA: a) Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division. b) Horizontal and vertical control established by regional height traversing using a total station theodolite. c) Cross section and topographic data obtained using a total station theodolite.	d) Shorelines obtained from uncontrolled mosaic Drawing No. 92-28, prepared by Technical Surveys Section from air photographs, flights BC50103 & BC50053 from August 1990. e) Change of cross sections are referred to the centre line of dyke.	○ TEMPORARY REFERENCE POINT (e.g. Old Iron Pin)									DATE JUNE 1993	SURVEY PROJECT No. 93 14 R 010	
3) DATUM: a) Horizontal and Vertical control based on British Columbia Control Survey Posts 77H4434 and 77H4435 established by Surveys and Resource Mapping Branch, Lands Services Division as obtained from Data Bank listing dated January 1994. b) Coordinates are Universal Transverse Mercator, Zone 10, NAD27.	4) CADASTRAL: a) Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions. b) Lot boundaries as shown are digitized from District of Squamish cadastral composite plans.	□ UTILITY POLE									DATE 25/12/11	Map No. 826/11 Map Scale 1:50,000	SCALE AS NOTED
	5) FIELD BOOKS: Survey data are recorded on Disc labelled 2627D and Field Book 2627-L1. 6) REFERENCE POINTS: a) S.C. Central Survey	△ SWAMP									APPROVED B. WOODS	DRAWING No. 95-11-1	
											DATE NOV. 1995	NEGATIVE NO.	
											ENGINEER	DRAWING No. 95-11-1	
											APPROVED <i>Jan R. Johnston</i>	TOTAL No. OF SHEETS 10	

23-14

FCL = 15.00m



NOTES

- This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.
- SURVEY DATA:**
 - Field surveys carried out by the Technical Survey Section, Hydrology Branch, Water Management Division.
 - Horizontal and vertical control established by regional height traversing within a total station theodolite.
 - Cross section and topographic data obtained using a total station theodolite.
- DATUM:**
 - Horizontal and vertical control based on British Columbia Control Survey Posts 77H4434 and 77H4435 established by Survey and Resource Mapping Branch, Lands Service Division as obtained from Data Bank listing dated January 1994.
 - Coordinates are Universal Transverse Mercator, Zone 10, NAD27.
- Elevations are in metres and referred to Canadian Geoid Datum, DVD28.
- Shorelines obtained from uncontrolled mosaic Drawing No. 87-28, prepared by Technical Survey Section from air photographs, flights BC9103 & BC9003 flown August 1990.
- Chainage of cross sections are referred to the centre line of dyke.
- CADASTRAL:**
 - Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions.
 - Lot boundaries as shown are digitized from District of Squamish cadastral composite plans.
- FIELD BOOKS:**
 - Survey data are recorded on Disc labelled 2627D and Field Book 2627-L1.
 - REFERENCE POINTS:

Water Management Branch

REF. BOLT	NORTHING	EASTING	ELEVATION
REF. BOLT 95	5 508 160.854	490 999.919	16.430
REF. BOLT 96	5 508 133.995	490 867.240	16.248
REF. BOLT 100	5 508 165.055	490 854.839	15.450
REF. BOLT 101	5 508 162.231	490 858.894	14.945
REF. BOLT 102	5 508 215.970	490 782.947	14.860
REF. BOLT 103	5 508 329.425	490 725.293	14.130
REF. BOLT 104	5 508 409.090	490 713.457	14.457
REF. BOLT 105	5 508 082.668	490 525.621	14.295
REF. BOLT 106	5 508 098.152	490 354.798	13.885
REF. BOLT 107	5 508 145.792	490 148.765	13.652

Distance between reference points as shown is Grid or Projection distance.

LEGEND

- ⊙ REFERENCE POINT
- TEMPORARY REFERENCE POINT
- ⊕ CADASTRAL MARKER (e.g. Old Iron Pin)
- ⊕ UTILITY POLE
- ▬ RIPRAP
- ▬ SWAMP

STORAGE LICENCES

LICENCE	PRIORITY DATE	AUTHORIZED ASH-FEET	DEVELOPED ASH-FEET	DWG. No.	DESCRIPTION	DATE	No.

REFERENCES

DWG. No.	DESCRIPTION	DATE	No.

REVISIONS

DATE	DESCRIPTION	DATE

Province of British Columbia Ministry of Environment, Lands and Parks WATER MANAGEMENT DIVISION

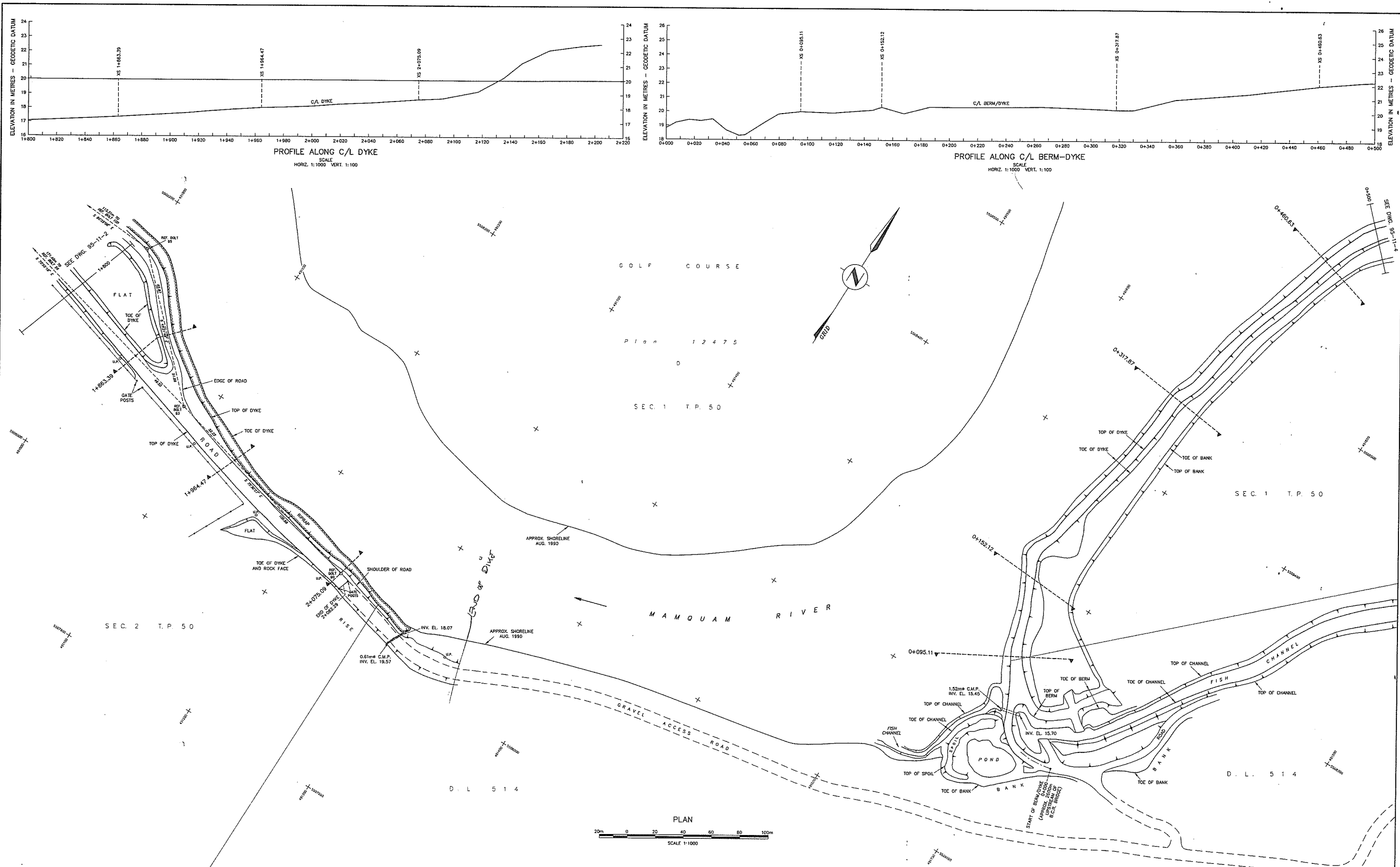
MAMQUAM RIVER DYKING LEFT BANK

PLAN AND PROFILE OF MAIN DYKE CHAINAGE 0+900 TO 1+800 AND PLAN AND PROFILE OF WING DYKE

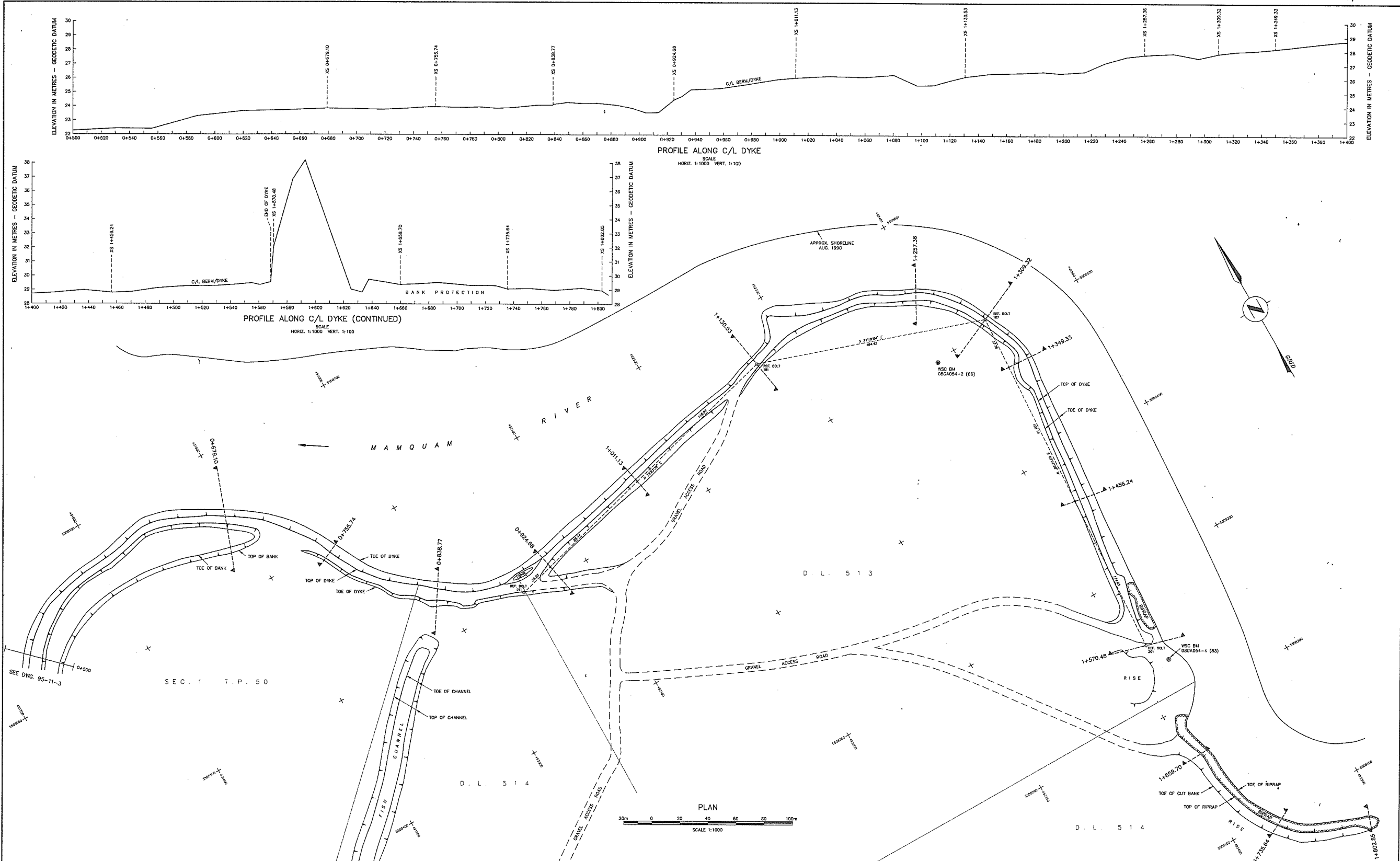
DATE NOV. 1995

APPROVED *[Signature]*

FILE No.	
SURVEY PROJECT No.	93 14 R 010
Map No.	929/11
Map Scale	1:50,000
SCALE	AS NOTED
NEGATIVE NO.	
DRAWING No.	95-11-2
TOTAL No. OF DWGS.	33



NOTES		LEGEND		STORAGE LICENCES		REFERENCES		REVISIONS		SURVEYED		Province of British Columbia Ministry of Environment, Lands and Parks WATER MANAGEMENT DIVISION										
1) This plan prepared by the Ministry of Environment, Lands and Parks Province of British Columbia.	2) SURVEY DATA: a) Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division. b) Horizontal and vertical control established by reciprocal height traversing using a total station theodolite. c) Cross section and topographic data obtained using a total station theodolite.	3) DATUM: a) Horizontal and Vertical control based on British Columbia Control Survey Posts 77H4434 and 77H4435 established by Surveys and Resource Mapping Branch, Lands Services Division as obtained from Data Bank listing dated January 1994. b) Coordinates are Universal Transverse Mercator, Zone 10, NAD27.	c) Elevations are in metres and referred to Canadian Geodetic Datum, CGD25. d) Shorelines obtained from uncontrolled mosaic Drawing No. 92-28, prepared by Technical Surveys Section from air photographs, flights BC80103 & BC80253 from August 1990. e) Change of cross sections are referred to the centre line of dyke. 4) CADASTRAL: a) Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions. b) Lot boundaries as shown are digitized from District of Squamish cadastral composite plans. 5) FIELD BOOKS: Survey data are recorded on Disc labelled 2627D and Field Book 2627-L1. 6) REFERENCE POINTS:	Water Management Branch	REF. BOLT 90 REF. BOLT 93 REF. BOLT 95	Northings 5 508 039.686 5 508 680.248 5 508 160.854	Eastings 491 238.481 491 581.555 490 999.919	Elevation 18.460 17.263 16.430	Distance between reference points as shown is Grid or Projection distance.	<ul style="list-style-type: none"> ⊙ REFERENCE POINT ⊙ TEMPORARY REFERENCE POINT ⊙ CADASTRAL MARKER (4-5. Old Iron Peg) ⊙ UTILITY POLE ⊙ RR/RAIL ⊙ SWAMP 	LICENCE	PRIORITY DATE	AUTHORIZED APP-102	DEVELOPED APP-102	DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE	T. DIGIAN JUNE 1993 R. EDWARD HAYD 95/12/11 B. WOODS NOV. 1995	FILE No. Branch SURVEY PROJECT No. 93 14 R 010 THIS Map No. 926/11 Map Scale 1:50,000 SCALE AS NOTED NEGATIVE NO. DRAWING No. 95-11-3 TOTAL No. OF DWGS. 30



NOTES

- This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.
- SURVEY DATA:**
 - Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division.
 - Horizontal and vertical control established by reciprocal height traversing using a total station theodolite.
 - Cross section and topographic data obtained using a total station theodolite.
- DATUM:**
 - Horizontal and Vertical control based on British Columbia Control Survey, Posts 77H4434 and 77H4436 established by Surveys and Resource Mapping Branch, Lands Services Division as obtained from Data Bank, dated January 1984.
 - Co-ordinates are Universal Transverse Mercator, Zone 10, NAD27.
- Elevations are in metres and referred to Canadian Geodetic Datum, CGD28.
- Shorelines obtained from uncontrolled mosaic Drawing No. 92-28, prepared by Technical Surveys Section from air photography, flights 8230103 & 8030053 from August 1990.
- Horizontal and vertical control established by reciprocal height traversing using a total station theodolite.
- Change of cross sections are referred to the centre line of dyke.
- CADASTRAL:**
 - Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions.
 - Lot boundaries as shown are digitized from District of Squamish cadastral composite plans.
- FIELD BOOKS:**
 - Survey data are recorded on Disc labelled 2627D and Field Book 2627-11.
- REFERENCE POINTS:**

a) Water Survey of Canada			
Northing	Easting	Elevation	
BM 08GAD54-2(66)		25.847	
BM 08GAD54-4(63)		26.795	
b) Water Management Branch			
REF. BOLT 181	5 508 560.561	492 274.238	26.067
REF. BOLT 187	5 508 507.854	492 429.595	27.625
REF. BOLT 201	5 508 250.404	492 414.513	32.057
REF. BOLT 211	5 508 502.135	492 050.047	23.587

Distance between reference points as shown is Grid or Projection distance.

LEGEND

- ⊙ REFERENCE POINT
- TEMPORARY REFERENCE POINT
- CADASTRAL MARKER (E.g. Old Iron Pin)
- ⊕ UTILITY POLE
- ▬ RIPRAP
- △ SWAMP

STORAGE LICENCES

LICENCE	PRIORITY	APPROVED	DEVELOPED	DWG. No.	DATE

REFERENCES

DWG. No.	DESCRIPTION	DATE

REVISIONS

No.	DESCRIPTION	DATE

APPROVALS

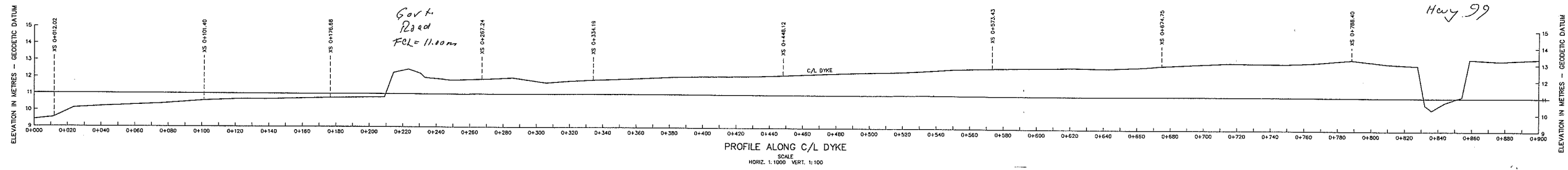
SURVEYED	M. PRONK
DATE	AUG 1995
CHECKED	R. EDWARD
DATE	
DRAWN	B. WOODS
APPROVED	
DATE	NOV. 1995
ENGINEER	

Province of British Columbia Ministry of Environment, Lands and Parks
WATER MANAGEMENT DIVISION

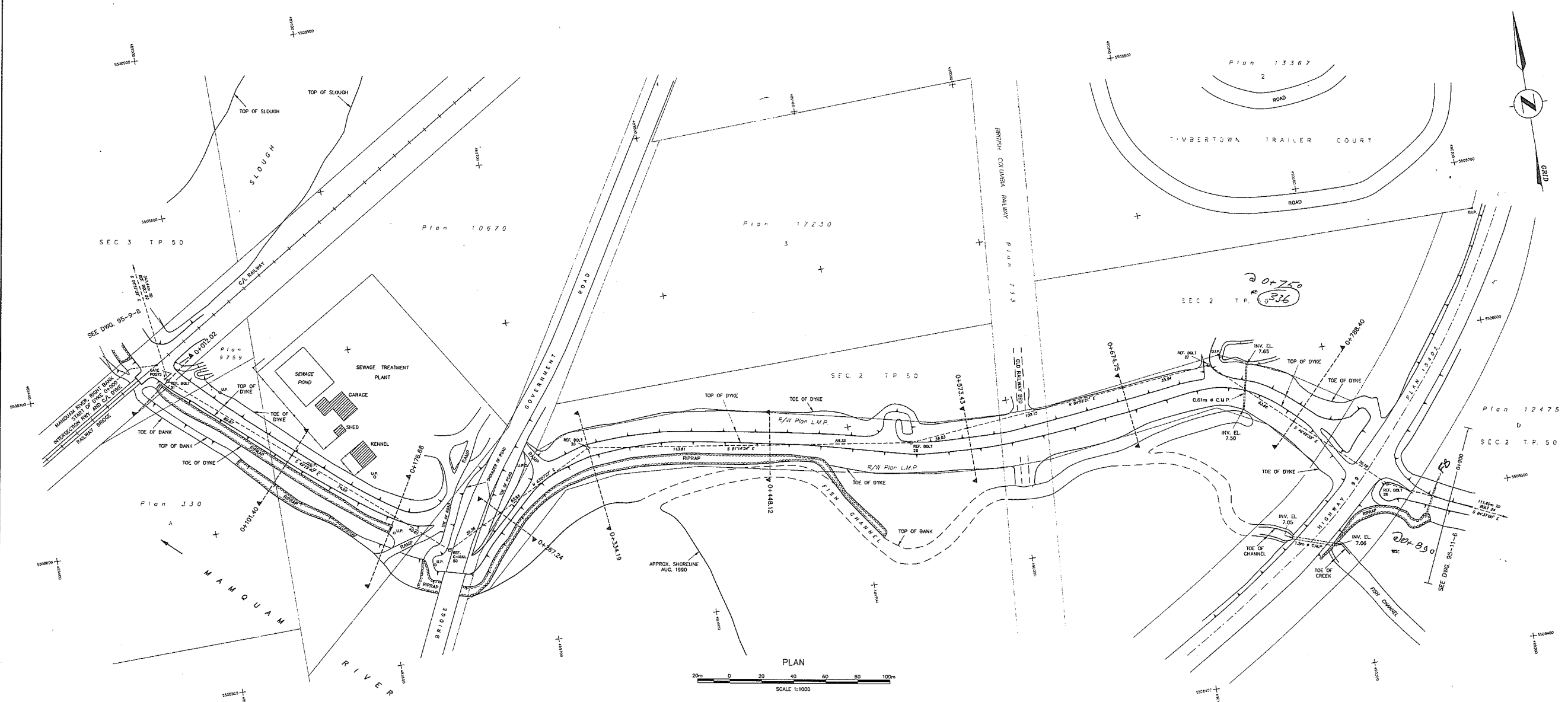
**MAMQUAM RIVER DYKING
LEFT BANK
PLAN AND PROFILE OF BERM/DYKE
CHAINAGE 0+500 TO END OF DYKE**

FILE No. _____
SURVEY PROJECT No. 95-09-P-010
Map No. 325/11
Map Scale 1:50,000
SCALE AS NOTED
NEGATIVE No. _____
DRAWING No. 95-11-4
TOTAL No. OF ENCS. 12

APPROVED *John R. ...* DATE *11/19/95*



PROFILE ALONG C/L DYKE
SCALE
HORIZ. 1:1000 VERT. 1:100



PLAN
SCALE 1:1000

NOTES

- 1) This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.
- 2) SURVEY DATA:
 - a) Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division.
 - b) Horizontal and vertical control established by reciprocal height traversing using a total station theodolite.
 - c) Cross section and topographic data obtained using a total station theodolite.
- 3) DATUM:
 - a) Horizontal and vertical control based on British Columbia Control Survey Feats 7714434 and 7714435 established by Survey and Resource Mapping Branch, Lands Services Division as obtained from Data Bank listing dated January 1994.
 - b) Co-ordinates are Universal Transverse Mercator, Zone 10, NAD27.
- 4) ELEVATIONS:
 - a) Elevations are in metres and referred to Canadian Geodetic Datum, CGVD28.
 - b) Shorelines obtained from uncontrolled mosaic Drawing No 92-28, prepared by Technical Surveys Section from air photographs, flight SC90103 & SC90053 from August 1990.
 - c) Change of cross sections are referred to the centre line of dyke.
- 5) CADASTRAL:
 - a) Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions.
 - b) Lot boundaries as shown are digitized from District of Squamish cadastral composite plans.
- 6) FIELD BOOKS:
 - a) Survey data are recorded on Dac labelled 26270 and Field Book 2627-L.
- 7) REFERENCE POINTS:

Water Management Branch			
REF. BOLT	Northing	Easting	Elevation
REF. BOLT 26	5 508 508.817	490 226.114	13.279
REF. BOLT 27	5 508 500.368	490 126.500	12.297
REF. BOLT 28	5 508 583.652	489 937.512	12.429
REF. BOLT 30	5 508 514.428	489 737.709	11.831
REF. C-NAL 50	5 508 565.907	489 641.586	12.659
REF. BOLT 51	5 508 699.406	489 486.609	9.474

Distance between reference points as shown in Grid or Projection distance.

LEGEND	
○	REFERENCE POINT
⊙	TEMPORARY REFERENCE POINT
⊕	CADASTRAL MARKER (e.g. Old Iron Pin)
⊙	UTILITY POLE
⊕	R/RAP
⊕	SWAMP

STORAGE LICENCES			
LICENCE	PRIORITY DATE	AUTHORIZED ACRE-FEET	DEVELOPED ACRE-FEET

REFERENCES		
DWG. No.	DESCRIPTION	DATE

REVISIONS	
No.	DESCRIPTION

SURVEYED	T. DIGNAN
DATE	JUNE 1993
CHECKED	R. EDWARD
DATE	26/10/11
DRAWN	B. WOODS
APPROVED	
DATE	NOV. 1995
ENGINEER	

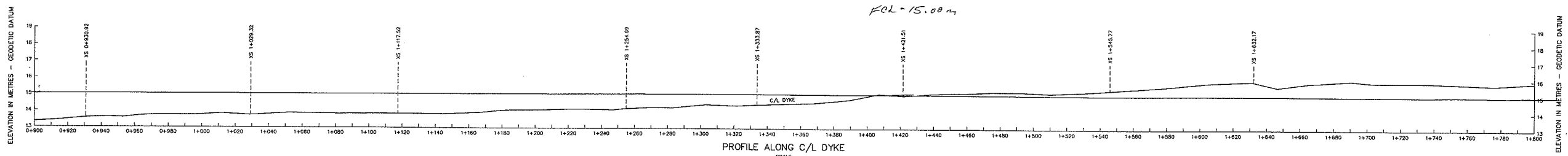
Province of British Columbia
Ministry of Environment, Lands and Parks
WATER MANAGEMENT DIVISION

MAMQUAM RIVER DYKING
RIGHT BANK
PLAN AND PROFILE
CHAINAGE 0+000 TO 0+900

APPROVED: *Janet R. [Signature]* DATE: *26/10/11*

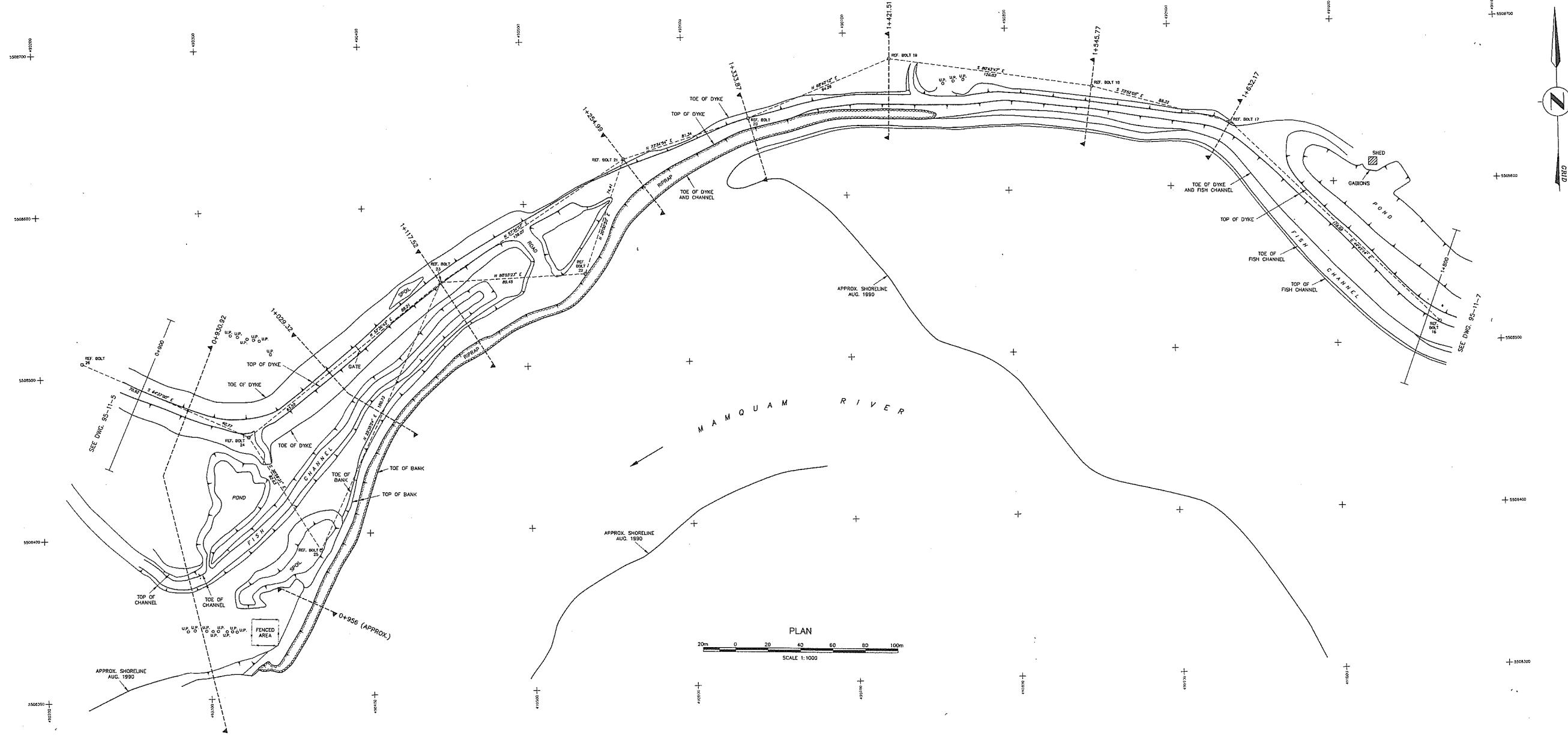
FILE No.	
SURVEY PROJECT No.	93 14 R 010
WTS	925/11
Map Scale	1:50,000
SCALE	AS NOTED
NEGATIVE No.	
DRAWING No.	95-11-5
TOTAL No. OF DWGS.	10

FOL-15.00 m



PROFILE ALONG C/L DYKE
SCALE
HORIZ. 1:1000 VERT. 1:100

SECTION 2 T.P. 50
Plan 1 2 4 7 5 0
G.O.F. COURSE



PLAN
SCALE 1:1000

NOTES

- 1) This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.
- 2) SURVEY DATA:
 - a) Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division.
 - b) Horizontal and vertical control established by regional height traversing using a total station theodolite.
 - c) Cross section and topographic data obtained using a total station theodolite.
- 3) DATUM:
 - a) Horizontal and Vertical control based on British Columbia Central Survey Posts 77H4434 and 77H4436 established by Surveys and Mapping Branch, Lands Service Division as obtained from Data Bank listing dated January 1994.
 - b) Coordinates are Universal Transverse Mercator, Zone 10, NAD83.
- 4) ELEVATIONS are in metres and referred to Canadian Geodetic Datum, CGD88.
 - d) Shorelines obtained from uncontrolled mosaic Drawing No. 82-26, prepared by Technical Surveys Section from air photographs, flights BC00103 & BC00053 from August 1980.
 - e) Change of cross sections are referred to the centre line of dyke.
- 5) CADASTRAL:
 - a) Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions.
 - b) Lot boundaries as shown are digitized from District of Squamish cadastral composite plans.
- 6) FIELD BOOKS:
 - a) Survey data are recorded on Disc labelled 2627D and Field Book 2627-L.
- 7) REFERENCE POINTS:

Water Management Branch	Northing	Easting	Elevation
REF. BOLT 16	5 508 512.034	481 082.923	15.988
REF. BOLT 17	5 508 638.493	490 937.545	15.723
REF. BOLT 18	5 508 663.033	490 852.899	14.244
REF. BOLT 19	5 508 663.335	480 728.917	14.310
REF. BOLT 21	5 508 828.061	490 862.485	13.757
REF. BOLT 22	5 508 856.148	490 537.030	13.064
REF. BOLT 23	5 508 553.114	490 447.828	13.842
REF. BOLT 24	5 508 460.940	490 327.818	13.236
REF. BOLT 25	5 508 393.110	490 368.565	15.260
REF. BOLT 26	5 508 508.817	490 226.114	13.279

Distance between reference points as shown is Grid or Projection distance.

LEGEND	
⊙	REFERENCE POINT
○	TEMPORARY REFERENCE POINT
⊕	CADASTRAL MARKER (e.g. ONE IRON PIN)
⊙	UTILITY POLE
⊕	RIPRAP
⊕	SWAMP

STORAGE LICENCES			
LICENCE	PRIORITY DATE	AUTHORIZED AGR-1127	DEVELOPED AGR-1127

REFERENCES			
DWG. No.	DESCRIPTION	DATE	No.

REVISIONS			
No.	DESCRIPTION	DATE	

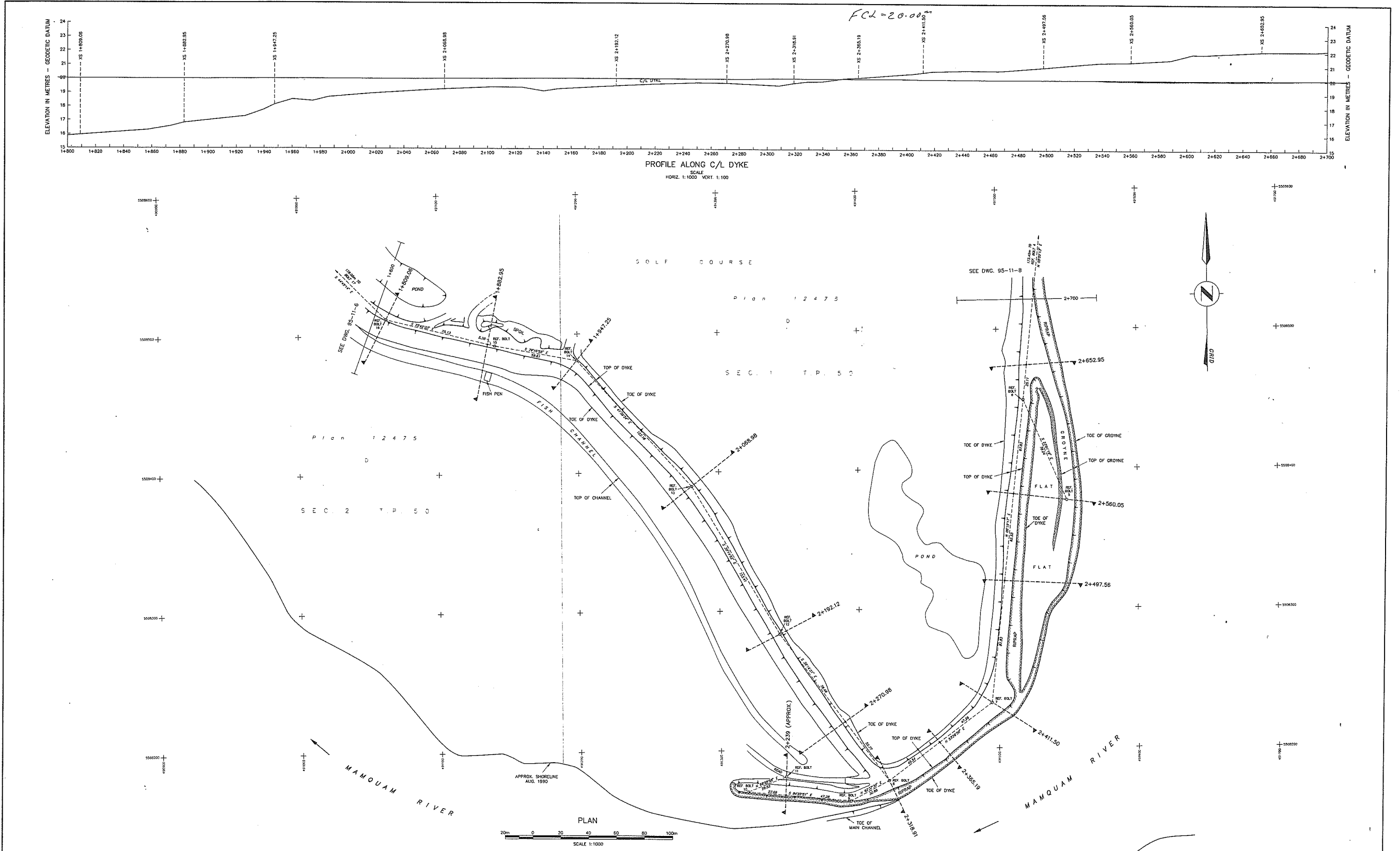
SURVEYED	T. DIGNAN
DATE	JUNE 1993
CHECKED	R. EDWARD
DATE	95/12/11
DRAWN	B. WOODS
APPROVED	
DATE	NOV. 1995
ENGINEER	

Province of British Columbia Ministry of Environment, Lands and Parks
WATER MANAGEMENT DIVISION

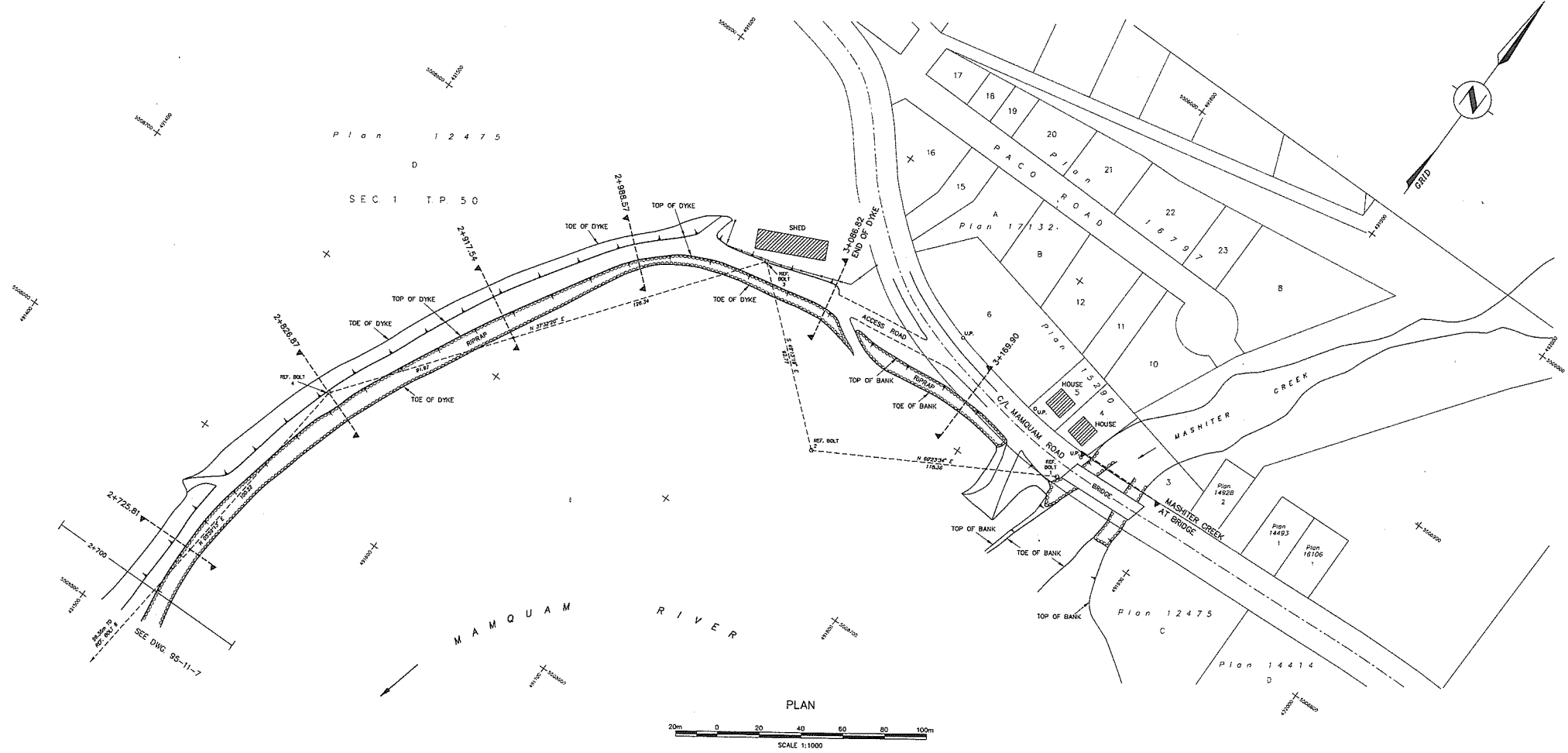
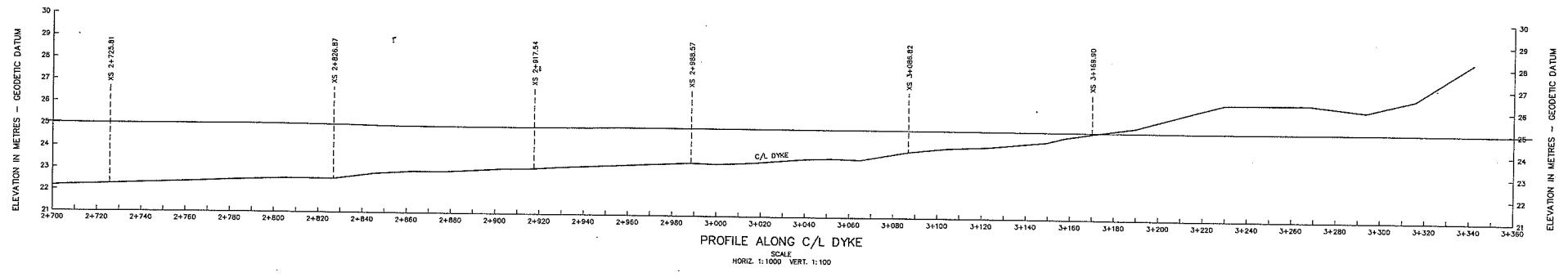
MAMQUAM RIVER DYKING
RIGHT BANK
PLAN AND PROFILE
CHAINAGE 0+900 TO 1+800

APPROVED *Janet P. [Signature]* DATE *11/16/95*

FILE No.	
SURVEY PROJECT No.	93 14 R 010
Map No.	92C/11
Map Scale	1:50,000
SCALE	AS NOTED
NEGATIVE No.	
DRAWING No.	95-11-6
TOTAL No. OF DWGS.	10



NOTES		LEGEND		STORAGE LICENCES		REFERENCES		REVISIONS		MAMQUAM RIVER DYKING	
1) This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.	a) Elevations are in metres and referred to Canadian Geodetic Datum, CGD08.	○ REFERENCE POINT	LICENCE	PRIORITY	DATE	NO.	DESCRIPTION	DATE	DESCRIPTION	DATE	Province of British Columbia Ministry of Environment, Lands and Parks WATER MANAGEMENT DIVISION
2) SURVEY DATA: a) Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division. b) Horizontal and vertical control established by resection height traversing using a total station theodolite. c) Cross section and topographic data obtained using a total station theodolite.	d) Shorelines obtained from uncontrolled mosaic Drawing No. 92-26, prepared by Technical Surveys Section from air photographs, flights BC91163 & BC91023 flown August 1990. e) Chainage of cross sections are referred to the centre line of dyke. f) CADASTRAL: a) Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions. b) Lot boundaries as shown are digitized from District of Squamish cadastral composite plans. g) FIELD BOOKS: Survey data are recorded on Dac labelled 26270 and Field Book as obtained from Data Bank, listing dated January 1994. h) Co-ordinates are Universal Transverse Mercator, Zone 10, MAD27.	○ TEMPORARY REFERENCE POINT CLP CADASTRAL MARKER (e.g. Old Iron Pin) UTILITY POLE RIPRAP SWAMP	AUTHORIZED ACRE-FT	DEVELOPED ACRE-FT	DWG. No.	DATE	NO.	DESCRIPTION	DATE	FILE No. Branch	
3) DATUM: a) Horizontal and vertical control based on British Columbia Control Survey Posts 7714434 and 7714436 established by Surveys and Resource Mapping Branch, Lands Services Division as obtained from Data Bank, listing dated January 1994. b) Co-ordinates are Universal Transverse Mercator, Zone 10, MAD27.	5) FIELD BOOKS: Survey data are recorded on Dac labelled 26270 and Field Book as obtained from Data Bank, listing dated January 1994. 6) REFERENCE POINTS: Water Management Branch Northing Easting Elevation REF. BOLT 5 5 508 377.334 491 349.837 19.030 REF. BOLT 6 5 508 445.341 491 319.039 21.969 REF. BOLT 7 5 508 332.482 491 495.016 20.429 REF. BOLT 8 5 508 177.214 491 420.469 19.787 REF. BOLT 9 5 508 163.016 491 393.051 19.324 REF. BOLT 11 5 508 189.897 491 345.596 15.191 REF. BOLT 12 5 508 283.080 491 342.868 19.447 REF. BOLT 13 5 508 389.698 491 200.700 18.171 REF. BOLT 14 5 508 480.971 491 199.494 18.139 REF. BOLT 16 5 508 512.034 491 062.923 15.998	Distance between reference points as shown is Grid or Projection distance.								SURVEYED T. DIGNAN DATE JUNE 1993 COMPILED R. EDWARD CHECKED [Signature] DATE 25/11/94 DRAWN B. WOODS APPROVED [Signature] DATE NOV. 1995 ENGINEER [Signature]	93-14-R-010 Map No. 920/71 Map Scale 1:50,000 SCALE AS NOTED NEGATIVE NO. DRAWING No. 95-11-7 TOTAL No. OF DWGS. 10



NOTES

- This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.
- SURVEY DATA:**
 - Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division.
 - Horizontal and vertical control established by reciprocal height traversing using a total station theodolite.
 - Cross section and topographic data obtained using a total station theodolite.
- DATUM:**
 - Horizontal and Vertical control based on British Columbia Control Survey Posts 7714434 and 7714436 established by Survey and Resource Mapping Branch, Lands Services Division as obtained from Data Bank listing dated January 1994.
 - Co-ordinates are Universal Transverse Mercator, Zone 10, NAD27.
- Elevations are in metres and referred to Canadian Geodetic Datum, CGD28.
- Shorelines obtained from uncontrolled mosaic Drawing No. 92-28, prepared by Technical Surveys Section from air photographs, flights 829163 & 8070033 from August 1990.
- Horizontal and vertical control established by reciprocal height traversing using a total station theodolite.
- Chainage of cross sections are referred to the centre line of dyke.
- CADASTRAL:**
 - Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions.
 - Lot boundaries as shown are digitized from District of Squamish cadastral composite plans.
- FIELD BOOKS:** Survey data are recorded on Data labelled 2627D and Field Book 2627-L1.
- REFERENCE POINTS:**

Water Management Branch			
REF. BOLT	Northing	Easting	Elevation
REF. BOLT 1	5 508 817.845	491 845.921	26.110
REF. BOLT 2	5 508 755.374	491 743.018	23.102
REF. BOLT 3	5 508 819.955	491 672.787	23.633
REF. BOLT 4	5 508 846.864	491 539.755	22.375

Distance between reference points as shown to Grid or Projection distance.

LEGEND

- REFERENCE POINT
- ⊙ TEMPORARY REFERENCE POINT
- ⊕ CADASTRAL MARKER (e.g. Old Iron Pin)
- ⊕ UTILITY POLE
- ⊕ RIPRAP
- ⊕ SWAMP

STORAGE LICENCES

LICENCE	PROPERTY DATE	APPROVED AGE-FEET	REQUIRE ADH-FEET

REFERENCES

DWG. No.	DESCRIPTION	DATE

REVISIONS

No.	DESCRIPTION	DATE

APPROVALS

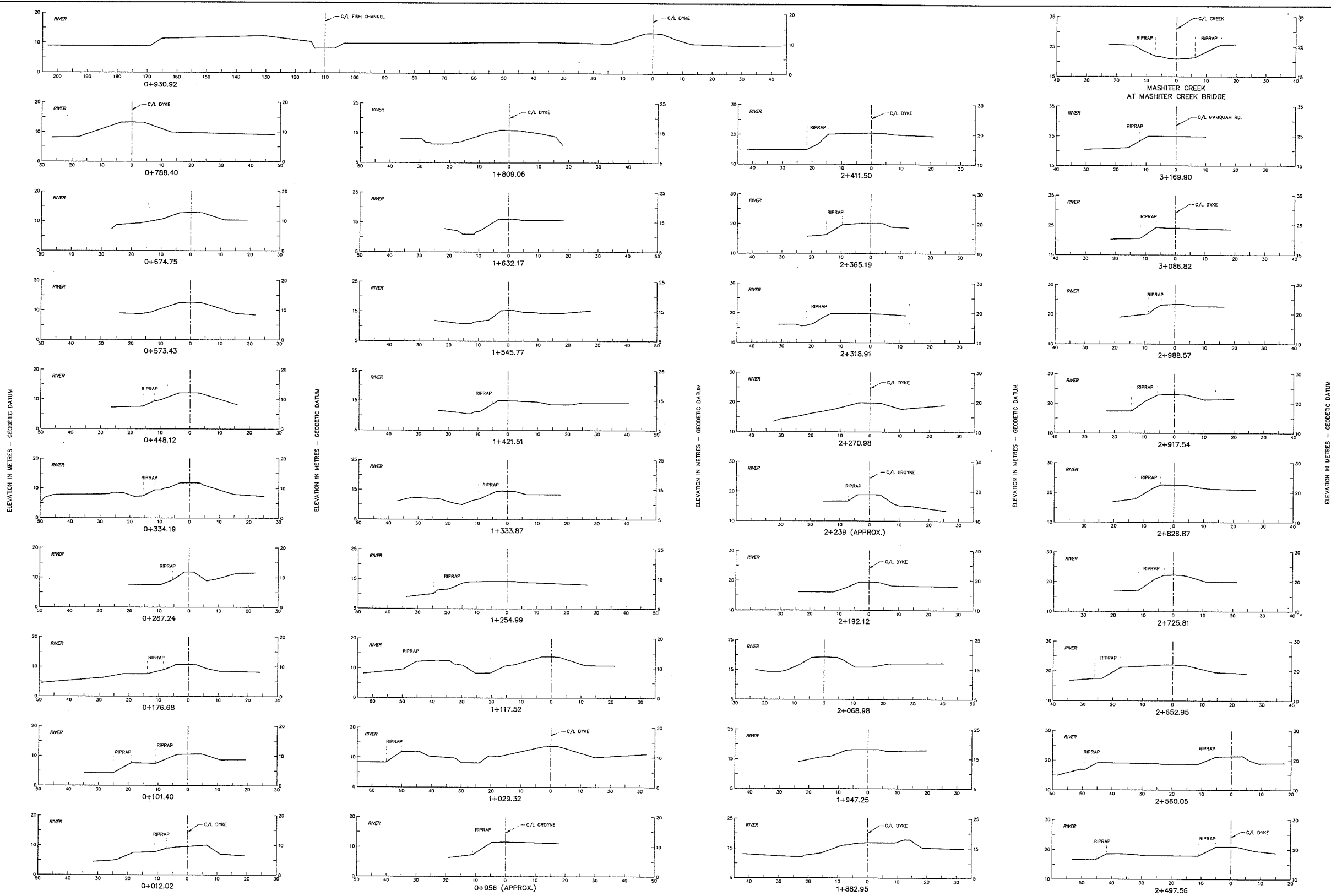
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DATE	JUNE 1993
COMPILED	R. EDWARD
CHECKED	<i>[Signature]</i>
DATE	7/5/95
DRAWN	B. WOODS
APPROVED	<i>[Signature]</i>
DATE	NOV. 1995
ENGINEER	<i>[Signature]</i>

Province of British Columbia
Ministry of Environment, Lands and Parks
WATER MANAGEMENT DIVISION

**MAMQUAM RIVER DYKING
RIGHT BANK
PLAN AND PROFILE
CHAINAGE 2+700 TO END OF DYKE**

FILE No. 93-14-R-010
SURVEY PROJECT No. 93-14-R-010
DATE 9/2/95
Map Scale 1:50,000
SCALE AS NOTED
NEGATIVE NO.
DRAWING No. 95-11-81
TOTAL NO. OF DWGS. 10

APPROVED *[Signature]* DATE 9/16/95



SCALE
HORIZ. 1:500 VERT. 1:500

NOTES

LEGEND

STORAGE LICENCES

REFERENCES

REVISIONS

SURVEYED T. DIGNAN
DATE JUNE 1993
COMPLETED R. EDWARD
CHECKED [Signature]
DATE 08/12/91
DRAWN B. WOODS
APPROVED [Signature]
DATE NOV. 1995
ENGINEER [Signature]

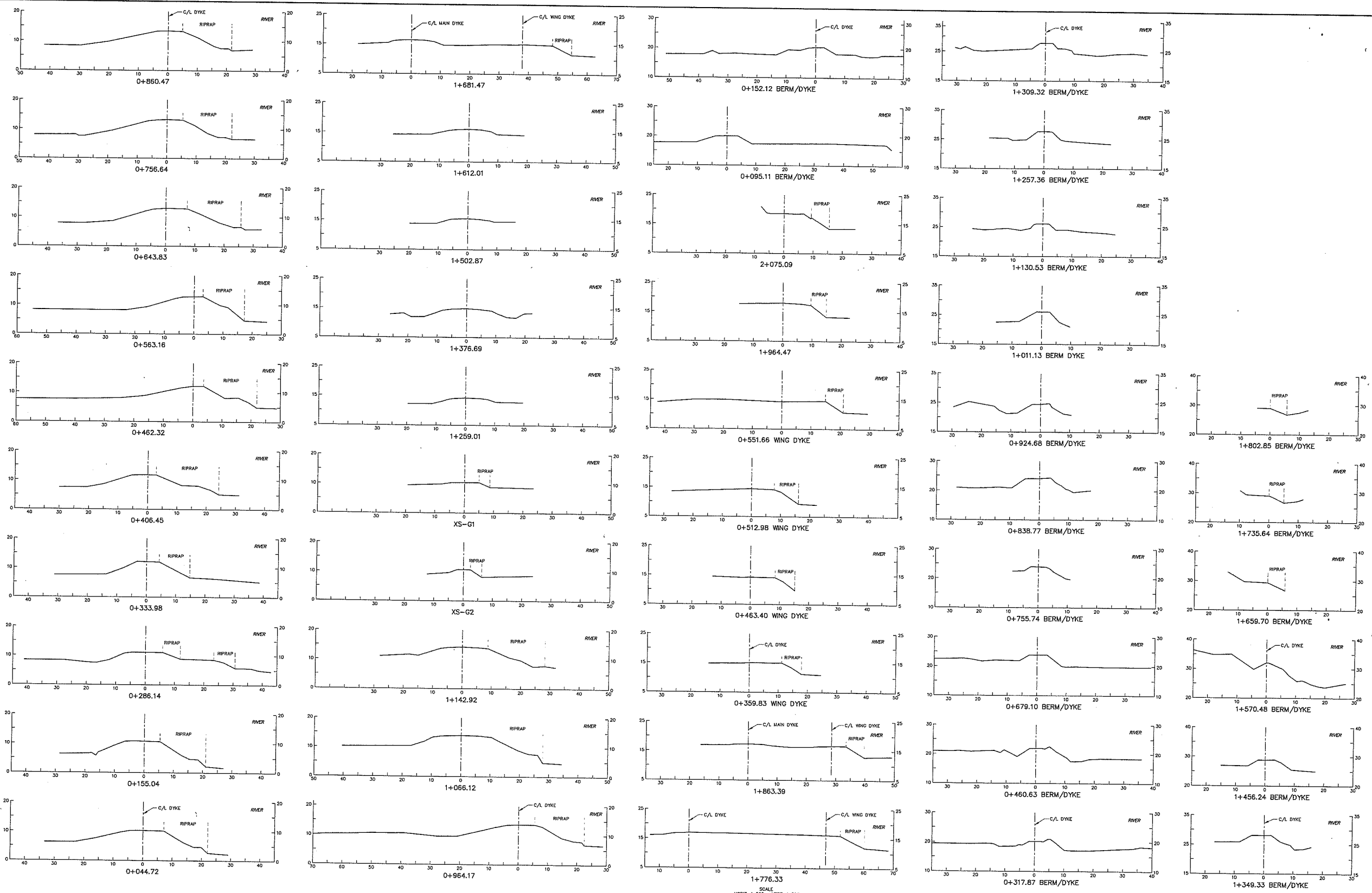
Province of British Columbia
Ministry of Environment, Lands and Parks
WATER MANAGEMENT DIVISION

FILE No. _____
Branch _____

MAMQUAM RIVER DYKING
CROSS SECTIONS OF RIGHT BANK

SURVEY PROJECT No. 93-14-R-010
Map No. 926/11
Map Scale 1:50,000
SCALE 1:500
NEGATIVE No. _____
DRAWING No. 95-11-9
TOTAL No. OF DWGS. 10

APPROVED [Signature] DATE 11/11/95



SCALE
HORIZ. 1:500 VERT. 1:500

NOTES

LEGEND

STORAGE LICENCES

REFERENCES

REVISIONS

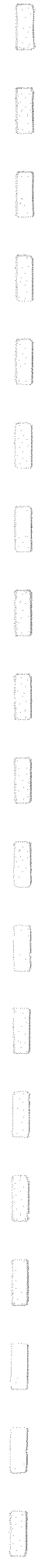
SURVEYED	I. DIGNAN
DATE	JUNE 1993
COMPILED	R. EDWARD
CHECKED	<i>[Signature]</i>
DATE	7/5/93
DRAWN	B. WOODS
APPROVED	<i>[Signature]</i>
DATE	NOV. 1995
ENGINEER	

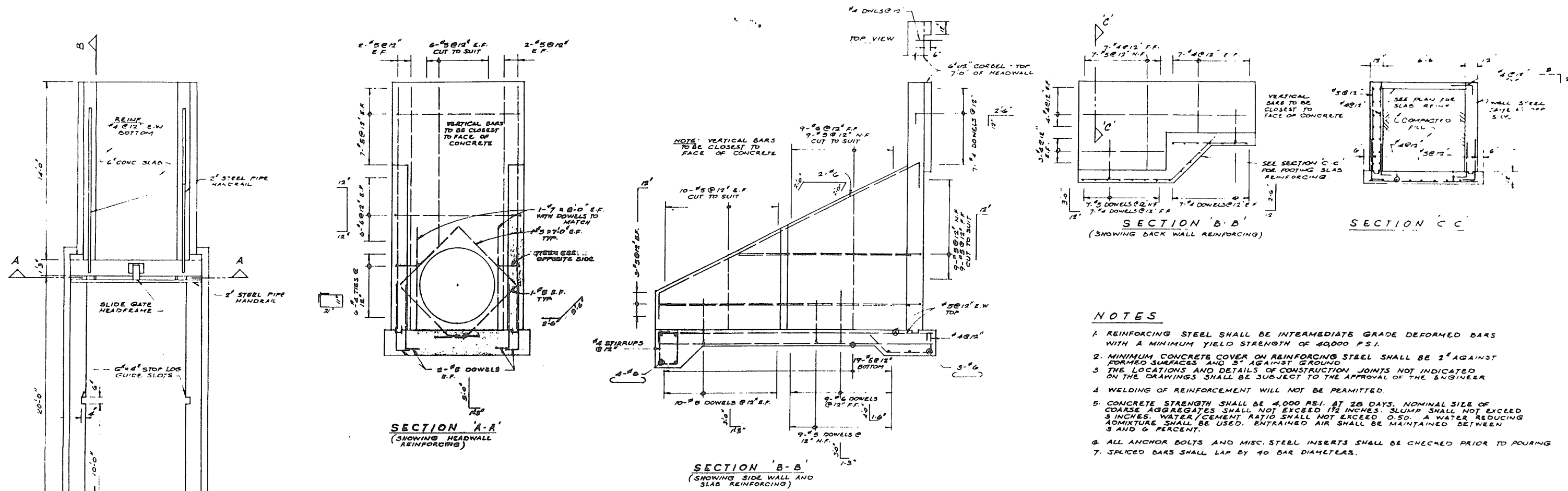
Province of British Columbia
Ministry of Environment, Lands and Parks
WATER MANAGEMENT DIVISION

MAMQUAM RIVER DYKING
CROSS SECTIONS OF LEFT BANK

FILE No.	
SURVEY PROJECT No.	93-14-B-010
NTS	
Map No.	925/11
Map Scale	1:50,000
SCALE	1:500
NEGATIVE No.	
DRAWING No.	95-11-10
TOTAL No. OF DWGS.	10

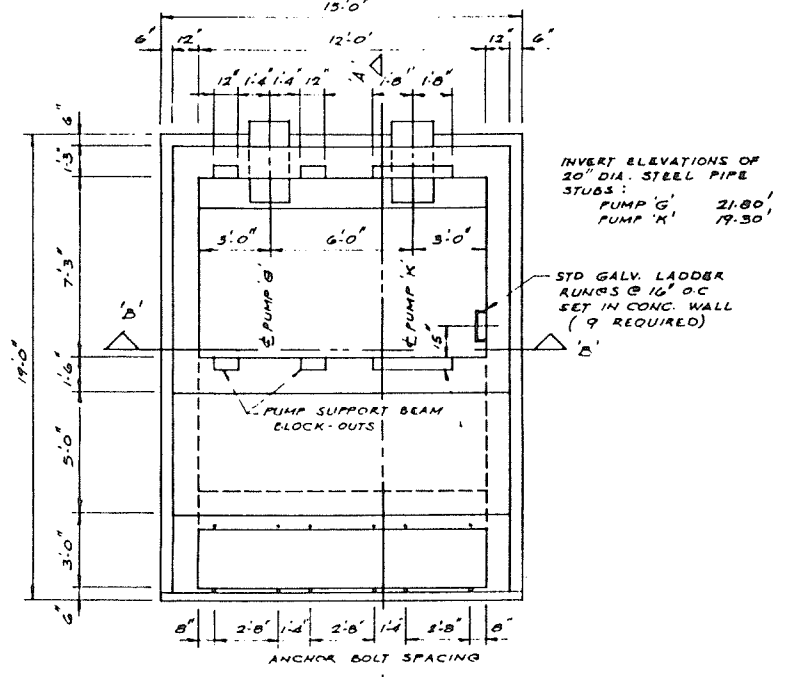
APPROVED *[Signature]* DATE 8/16/95



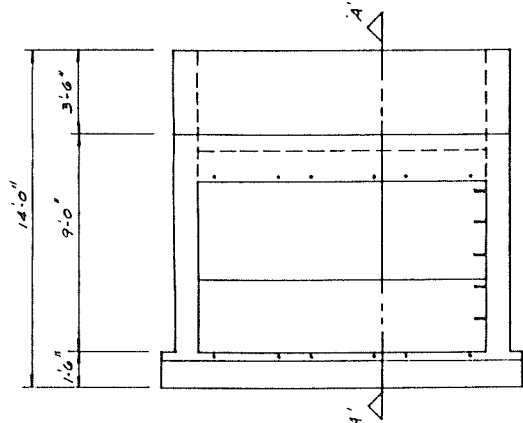


- NOTES**
1. REINFORCING STEEL SHALL BE INTERMEDIATE GRADE DEFORMED BARS WITH A MINIMUM YIELD STRENGTH OF 40000 P.S.I.
 2. MINIMUM CONCRETE COVER ON REINFORCING STEEL SHALL BE 2" AGAINST FORMED SURFACES AND 3" AGAINST GROUND.
 3. THE LOCATIONS AND DETAILS OF CONSTRUCTION JOINTS NOT INDICATED ON THE DRAWINGS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
 4. WELDING OF REINFORCEMENT WILL NOT BE PERMITTED.
 5. CONCRETE STRENGTH SHALL BE 4000 P.S.I. AT 28 DAYS. NOMINAL SIZE OF COARSE AGGREGATES SHALL NOT EXCEED 1 1/2 INCHES. SLUMP SHALL NOT EXCEED 3 INCHES. WATER/CEMENT RATIO SHALL NOT EXCEED 0.50. A WATER REDUCING ADMIXTURE SHALL BE USED. ENTRAINED AIR SHALL BE MAINTAINED BETWEEN 3 AND 6 PERCENT.
 6. ALL ANCHOR BOLTS AND MISC. STEEL INSERTS SHALL BE CHECKED PRIOR TO POURING.
 7. SPICED BARS SHALL LAP BY 40 BAR DIAMETERS.

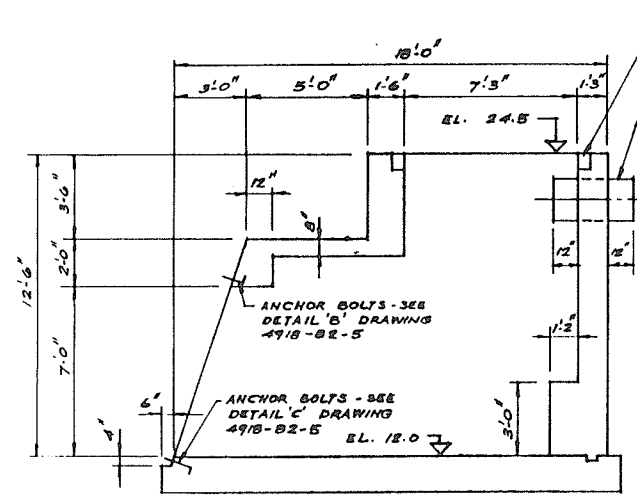
REFERENCES			REVISIONS			SURVEYED		Province of British Columbia	Ministry of Environment INVENTORY AND ENGINEERING BRANCH	FILE NO.
DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE	DATE	DESIGNED			R. CAMERON
							CHECKED			ENG. PROJECT NO.
							DATE	JUNE 1982		MIS. MAP NO.
							DRAWN	R. CAMERON		SCALE 1/8" = 1'-0"
							CHECKED			EXCEPT AS NOTED
							DATE	JUNE 1982		DRAWING NO.
							ENGINEER	R. Cameron		4918-82-1
							DATE			SHEET 1 OF 10
							RECOMMENDED			
							APPROVED			
							DATE			



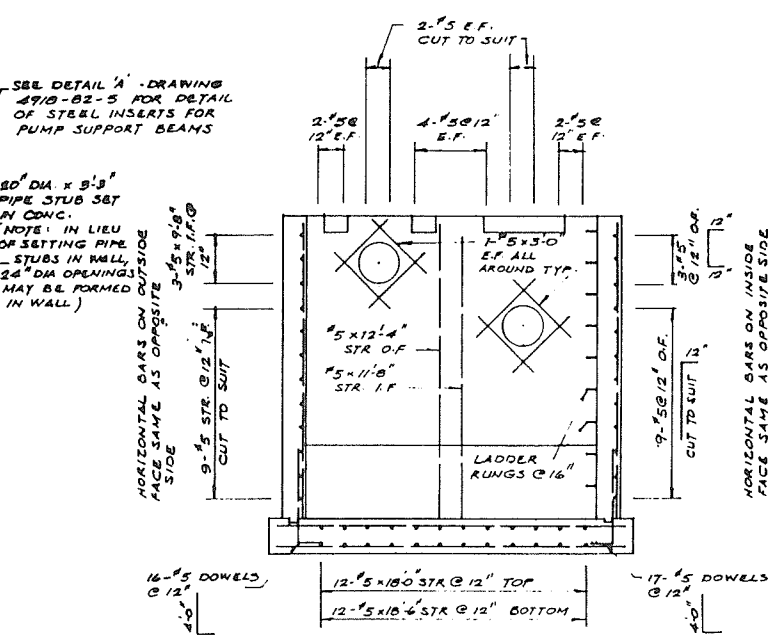
PLAN



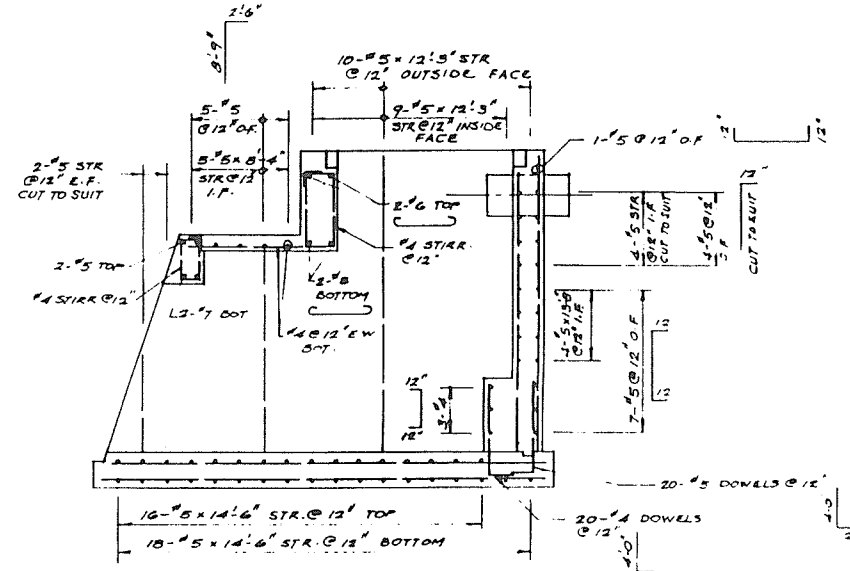
FRONT ELEVATION



SECTION 'A-A'

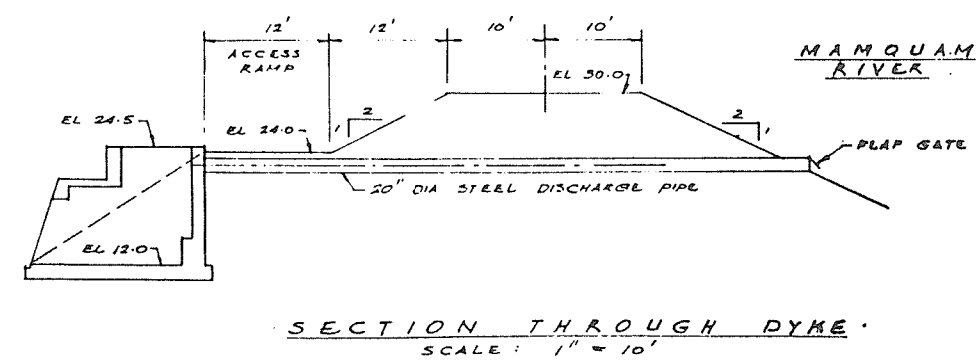


SECTION 'B-B' (SHOWING CONCRETE REINFORCING)

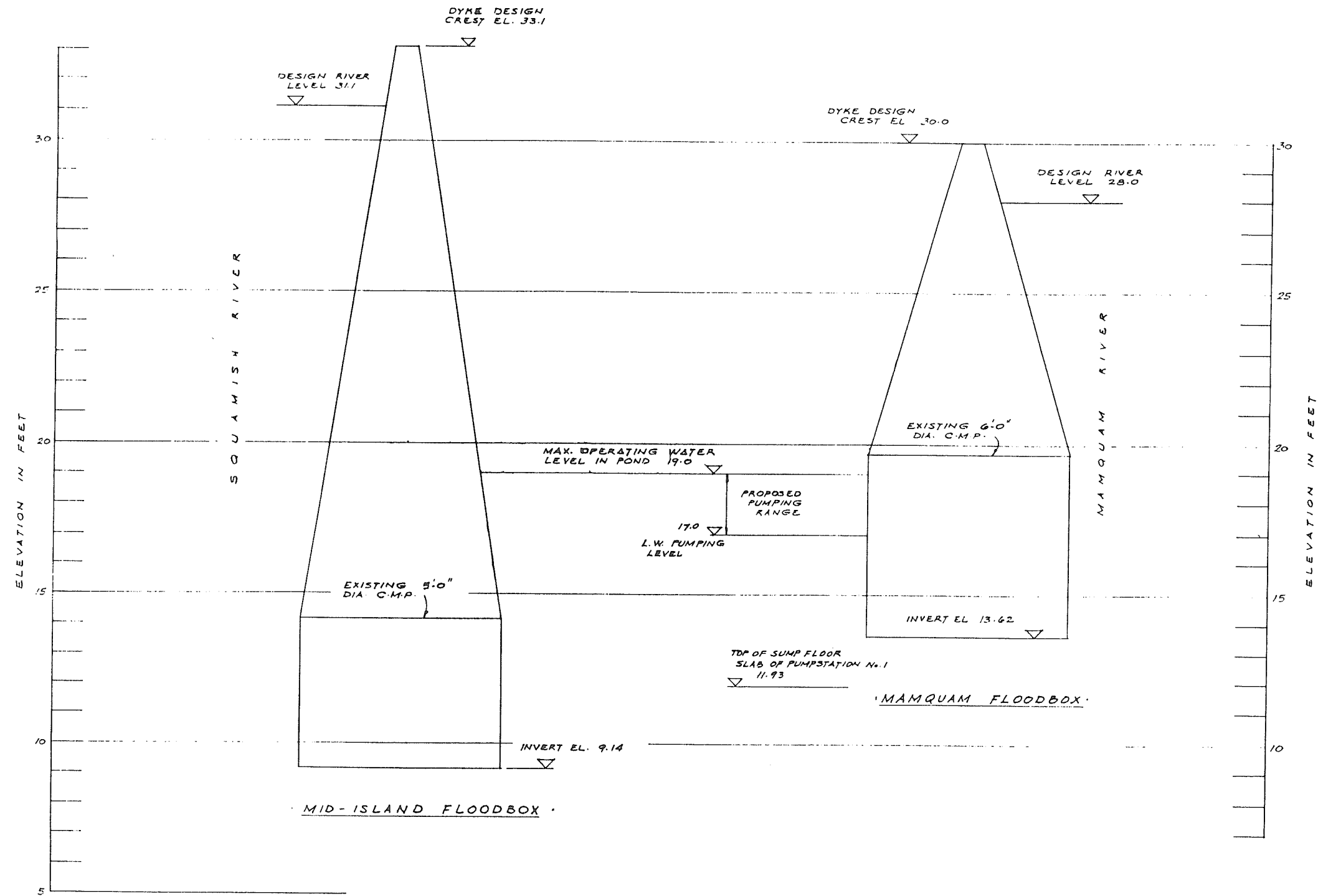


SECTION 'A-A' (SHOWING CONCRETE REINFORCING)

NOTES
 REFER TO DRAWING 4918-B2-5 FOR GENERAL NOTES

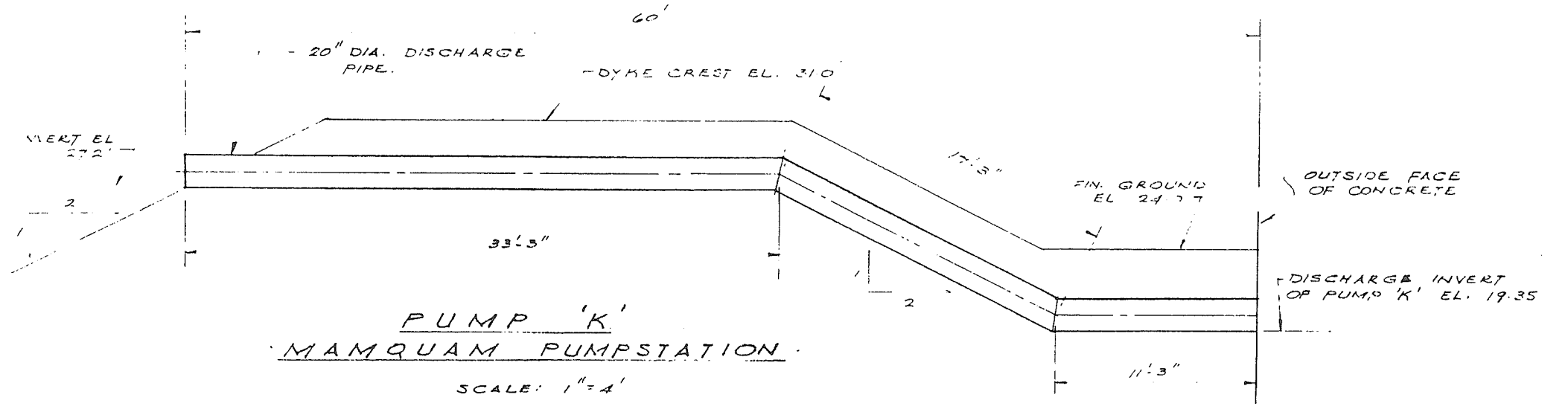
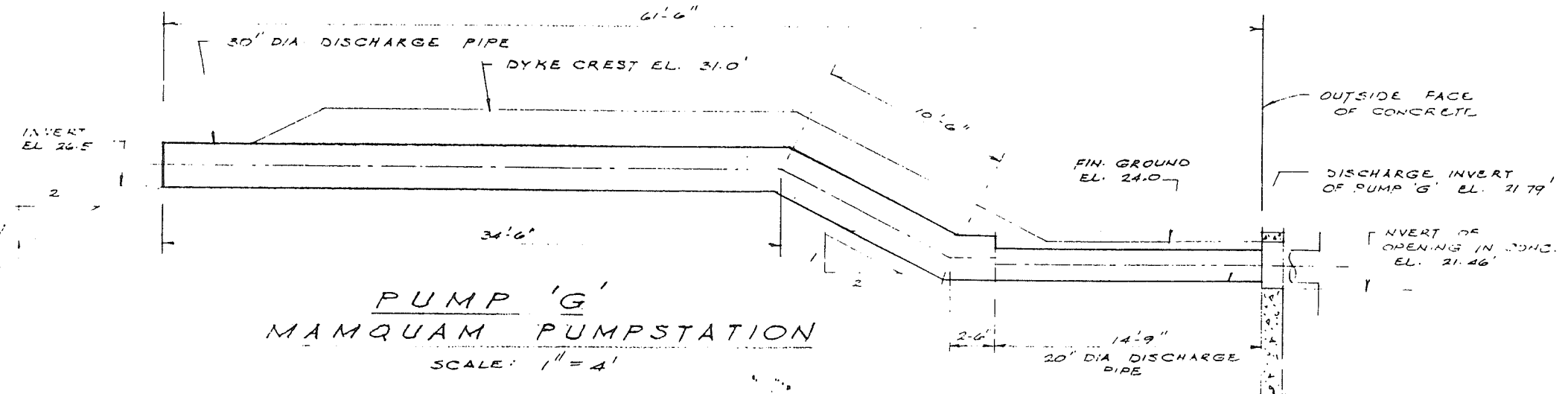


REFERENCES			REVISIONS			SURVEYED DATE		Province of British Columbia Ministry of Environment INVENTORY AND ENGINEERING BRANCH		FILE NO
DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE	DATE	DESIGNED	CHECKED	SQUAMISH DYKING	P 71-28
						AUG. 27/82	R. CAMERON		MAMQUAM PUMPSTATION No. 1	
						AUG. 27/82	R. CAMERON		PLAN, FRONT ELEVATION, SECTIONS REINFORCING DETAILS SECTION THROUGH DYKE	SCALE 1/4" = 1'-0" EXCEPT AS NOTED
						AUG. 27/82				DRAWING NO. 4918-B2-6
										SHEET 6 OF 10



REFERENCES			REVISIONS			SURVEYED		Province of British Columbia Ministry of Environment		FILE NO
DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE	DATE		INVENTORY AND ENGINEERING BRANCH	D 71-28	
						DESIGNED	R. CAMERON		SQUAMISH DYKING	ENG PROJECT NO
						CHECKED			MAMQUAM PUMPSTATION No. 1	NTS MAP NO
						DATE	AUG. 5 / 82		PROPOSED PUMPING RANGE	SCALE
						DRAWN	R. CAMERON			1" = 2' VERTICAL
						CHECKED				DRAWING NO
						DATE	AUG. 5 / 82			4918-82-101
						ENGINEER		RECOMMENDED		SHEET 2 OF 5
						DATE		DATE	APPROVED	DIRECTOR
									DATE	

VANCOUVER 1982



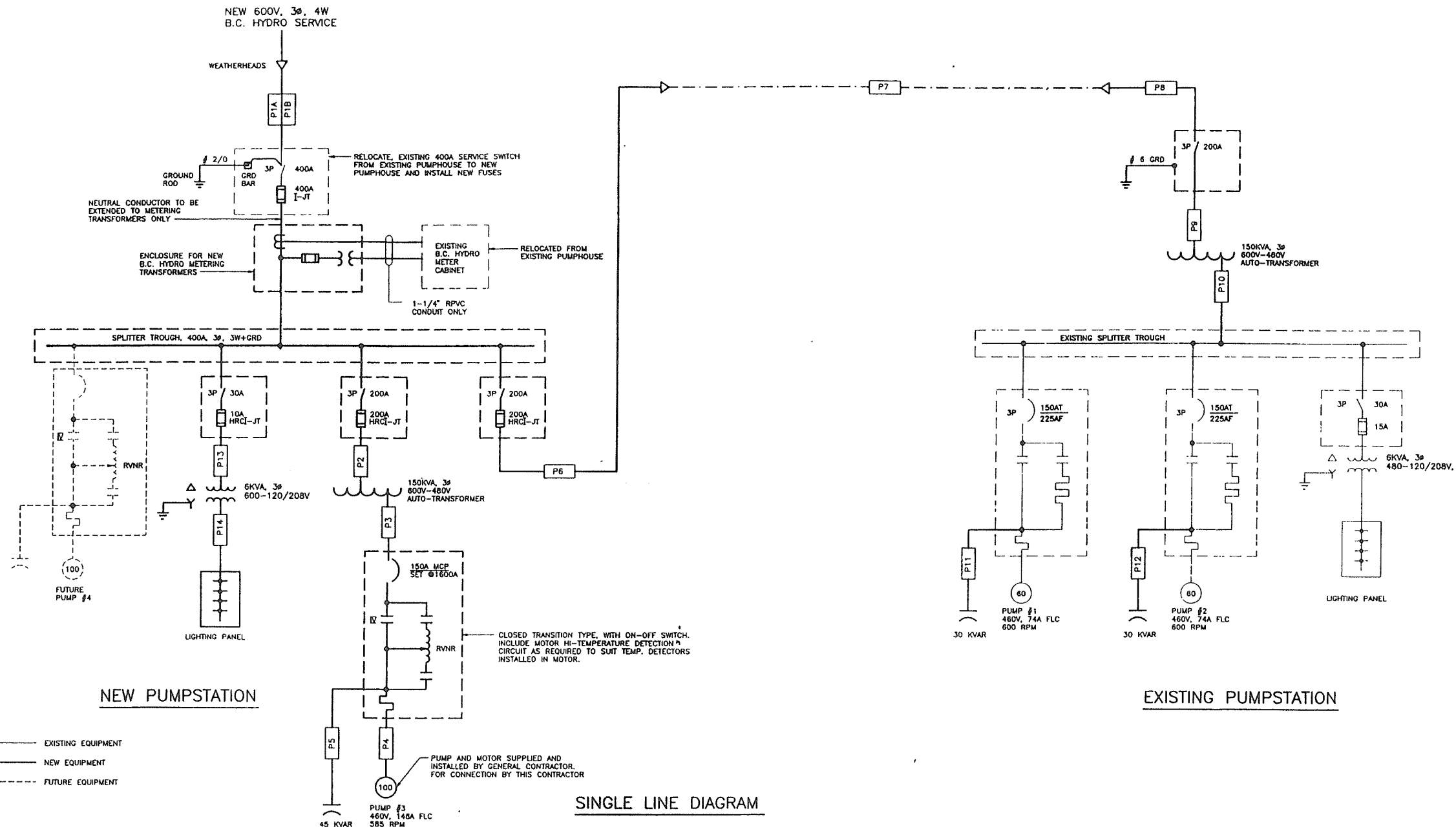
R. CAMERON OCT 5 / 82

REFERENCES			REVISIONS			SURVEYED DATE _____	DESIGNED R. CAMERON	CHECKED _____	DATE OCT. 5. 1982	DRAWN R. CAMERON	CHECKED _____	DATE OCT. 5. 1982	ENGINEER _____	DATE _____	RECOMMENDED _____	DATE _____	APPROVED DIRECTOR _____	DATE _____	
DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE														

Province of British Columbia
Ministry of Environment
INVENTORY AND ENGINEERING BRANCH

SQUAMISH DYKING
MAMQUAM PUMPSTATION No 1
 20" DIA. DISCHARGE PIPES

FILE NO _____
 ENG. PROJECT NO _____
 NTS MAP NO _____
 SCALE 1" = 4'-0"
 DRAWING NO 4918-92-103
 SHEET 4 OF 5



SINGLE LINE DIAGRAM

NO	DATE	ENG	BY	SUBJECT
0	92/08/31			ISSUED FOR TENDER
REVISIONS				
PROJECT NO.	VW17			
SCALE	N.T.S			
DRAWN	D.J			
DESIGNED	J.T			
CHECKED	G.F. Farnell			
APPROVED				
DATE	SEPTEMBER 1992			

ASSOCIATED ENGINEERING **AE**

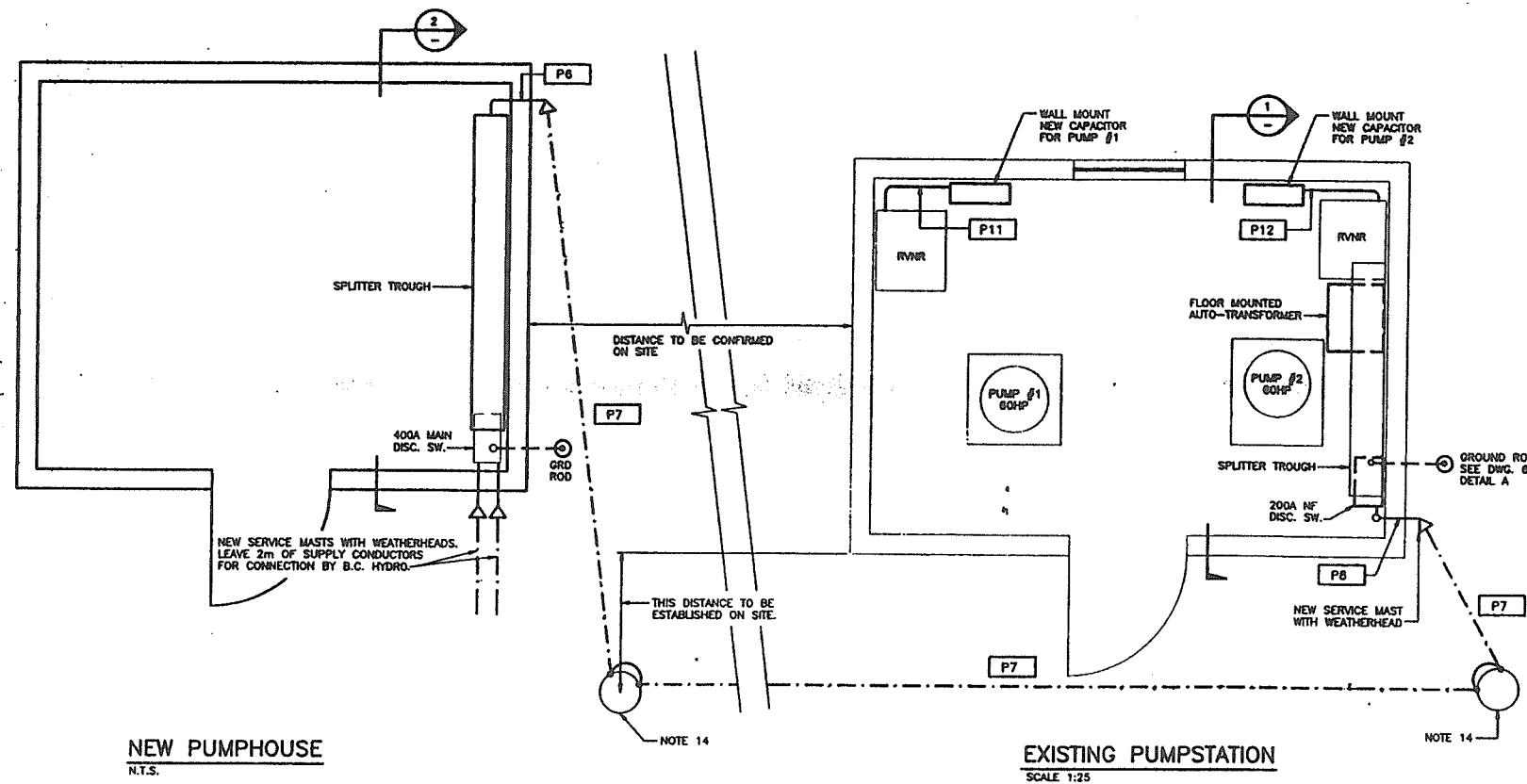


DISTRICT OF SQUAMISH

MAMQUAM RIVER PUMP STATION

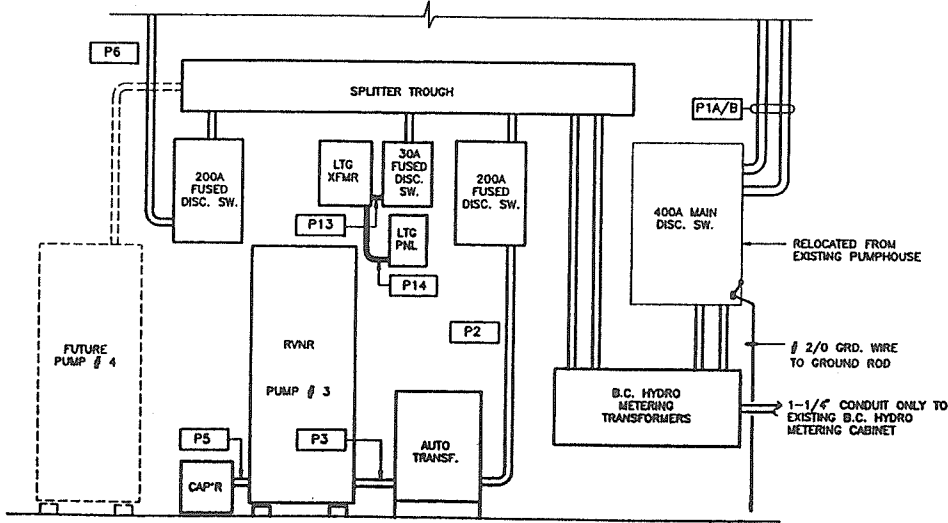
SINGLE LINE DIAGRAM

DRAWING NUMBER	REV NO.	SHEET
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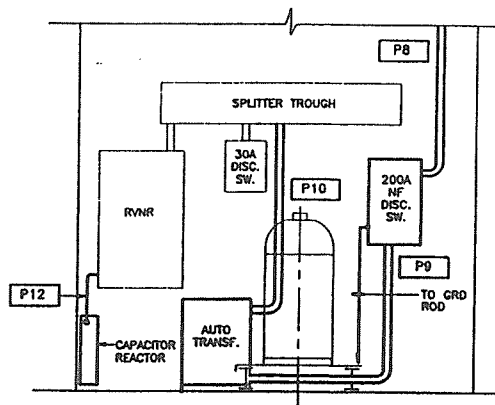


NEW PUMPHOUSE
N.T.S.

EXISTING PUMPSTATION
SCALE 1:25



SUGGESTED LAYOUT FOR NEW PUMPHOUSE
N.T.S.



SECTION 1
N.T.S.

SPECIFICATION NOTES:

- THE FOLLOWING IS A GENERAL DESCRIPTION OF ELECTRICAL WORK:
 - CONTRACTOR TO PROVIDE ELECTRICAL WORKS FOR NEW 600V, 3Ø ELECTRICAL SERVICE TO A NEW PUMPHOUSE WITH A SUBFEED TO THE EXISTING PUMPHOUSE.
 - B.C. HYDRO WILL EXTEND THE OVERHEAD PRIMARY LINE TO THE NEW PUMPHOUSE AND WILL PROVIDE A NEW 300KVA, CLUSTER-MOUNTED TRANSFORMER BANK, 3Ø, 4 WIRE 347/600V OVERHEAD DROP SERVICE, AND WILL MAKE CONNECTIONS TO CONTRACTOR'S SERVICE CABLES AT THE WEATHERHEADS.
 - B.C. HYDRO WILL SUPPLY NEW METERING TRANSFORMERS TO CONTRACTOR FOR MOUNTING IN NEW ENCLOSURE.
 - B.C. HYDRO WILL SUPPLY AND INSTALL METER BASE(S) AND METER(S) AND THE TEST BLOCK IN EXISTING RELOCATED CABINET.
- COMPLETE ELECTRICAL INSTALLATION IN ACCORDANCE WITH CSA C22.1 AND AS AMENDED FOR USE IN THE PROVINCE OF BRITISH COLUMBIA.
- EQUIPMENT AND MATERIALS TO BE CSA CERTIFIED. WHERE THERE IS NO ALTERNATIVE TO SUPPLYING EQUIPMENT WHICH IS CSA CERTIFIED, OBTAIN SPECIAL APPROVAL FROM INSPECTION DEPARTMENT.
- VISIT THE SITE BEFORE PREPARING THE BID AND EXAMINE ALL EXISTING CONDITIONS. NO EXTRA COST WILL BE CONSIDERED FOR ANY MISUNDERSTANDING OF THE WORK TO BE DONE RESULTING FROM FAILURE TO VISIT THE SITE.
- AFTER COMPLETION OF WORK, FURNISH CERTIFICATES OF ACCEPTANCE FROM ELECTRICAL INSPECTION DEPARTMENT TO THE OWNER. OWNER WILL PROVIDE DRAWINGS REQUIRED BY ELECTRICAL INSPECTION DEPARTMENT.
- ON COMPLETION OF PROJECT, PROVIDE ONE SET OF NEAT AND ACCURATE 'AS BUILT' DRAWINGS TO THE OWNER.
- IDENTIFY ELECTRICAL EQUIPMENT WITH NAMEPLATES ATTACHED WITH SELF TAPPING SCREWS. WORDING AND SIZE OF NAMEPLATES TO BE CONFIRMED WITH OWNER PRIOR TO CONSTRUCTION.
- IDENTIFY WIRING WITH T & B SHUR-CODE TUBULAR MARKERS OR EQUIVALENT. IDENTIFICATION TO BE ON BOTH ENDS OF PHASE CONDUCTORS, BRANCH CIRCUITS, AND CONTROL WIRING.
- CONDUITS SHALL BE RIGID PVC TO CSA C22.2 No. 211.2 UNLESS OTHERWISE SPECIFIED.
- CONDUCTORS SHALL BE 1000V STRANDED COPPER XLPE RW90. USE COPPER CONDUCTORS TECK 90 XLPE AS SHOWN COMPLETE WITH GROUND CONDUCTOR. CONNECTIONS FOR TECK CABLE SHALL BE WATER-TIGHT. DRY TYPE WILL NOT BE ACCEPTED. MINIMUM SIZE FOR CONDUCTORS SHALL BE 12 AWG FOR POWER AND 14 AWG FOR CONTROL.
- INDOOR VENTILATED AUTOTRANSFORMER WITH KVA, VOLTAGE AND PHASE AS INDICATED. INSULATION TO BE CLASS H WITH A 150°C RISE. MOUNT TRANSFORMER ON FLOOR AS INDICATED AVAILABLE FROM STOCK FROM BEAVER ELECTR. MACHINERY BURNABY.
- THERMAL MAGNETIC AND MOTOR CIRCUIT PROTECTOR (MCP) BREAKERS AS SHOWN. PROVIDE BREAKERS IN AN EEMAC 12 ENCLOSURE COMPLETE WITH DOOR HANDLE MECHANISM. MINIMUM INTERRUPTING CAPACITY TO BE 22 KA. MOUNT BREAKERS ON WALL AS INDICATED.
- INDOOR, DRY-TYPE CAPACITORS WITH KVAR, VOLTAGE AND PHASES AS INDICATED. CAPACITOR TO BE IN A DUST-TIGHT ENCLOSURE COMPLETE WITH INTERNALLY PROTECTED FUSES AND BLOWN-FUSE INDICATING LIGHTS. FUSES TO HAVE AN INTERRUPTING CAPACITY OF 200KA.
- PROVIDE (2) CLASS 3, TREATED WOOD POLES FOR NEW SECONDARY LINE BETWEEN PUMPHOUSES, PROVIDE ALL NECESSARY HARDWARE AND GUYING. POLE LENGTH AS REQUIRED TO MAINTAIN OVERHEAD CLEARANCE REQUIREMENTS.
- SUPPLY THE FOLLOWING SPARE FUSES:
 - 3 - 400A
 - 3 - 200A
 - 3 - 10A

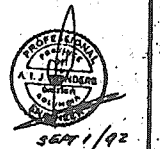
WIRING SCHEDULE

ITEM	CONDUIT		CONDUCTORS
	SIZE	TYPE	
P1A	2"	RA	4 - Ø 3/0
P1B	2"	RA	4 - Ø 3/0
P2	2"	RPVC	3 - Ø 2/0 + Ø 6 GRD
P3	2"	RPVC	3 - Ø 4/0 + Ø 4 GRD
P4	-	-	3 - Ø 2/0 TECK
P5	-	-	3 - Ø 6 TECK, NOTE 3
P6	2"	RA	3 - Ø 3/0 + Ø 2 GRD
P7	-	-	3 - Ø 4/0 + GRD NSF-2
P8	2"	RA	3 - Ø 3/0 + Ø 2 GRD
P9	2"	RPVC	3 - Ø 3/0 + Ø 6 GRD
P10	2"	RPVC	3 - Ø 4/0 + Ø 4 GRD
P11	-	-	3 - Ø 8 TECK, NOTE 3
P12	-	-	3 - Ø 8 TECK, NOTE 3
P13	3/4"	RPVC	3 - Ø 12 + Ø 8 GRD
P14	3/4"	RPVC	4 - Ø 10 + Ø 10 GRD

- NOTES: 1. CONFIRM REQUIRED NUMBER OF CONDUCTORS BEFORE INSTALLATION.
2. INSTALL AS PARALLEL FEEDER.
3. USE OF LT- CONDUIT + WIRE ACCEPTABLE.

RPVC = RIGID PVC
RA = RIGID ALUMINUM
LT = LIQUID TIGHT CONDUIT

ASSOCIATED ENGINEERING

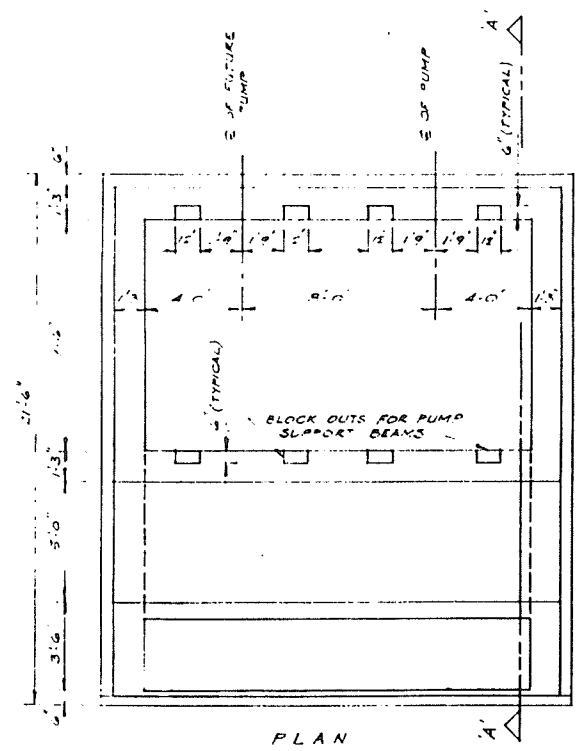


DISTRICT OF SQUAMISH

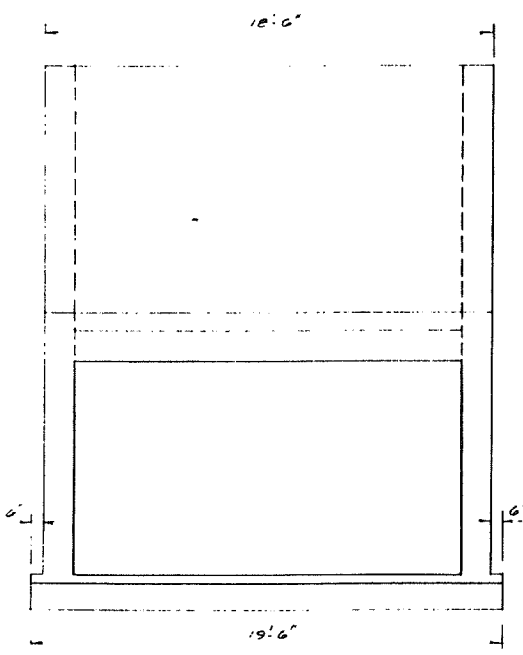
MAMQUAM RIVER PUMP STATION

ELECTRICAL LAYOUT AND DETAILS

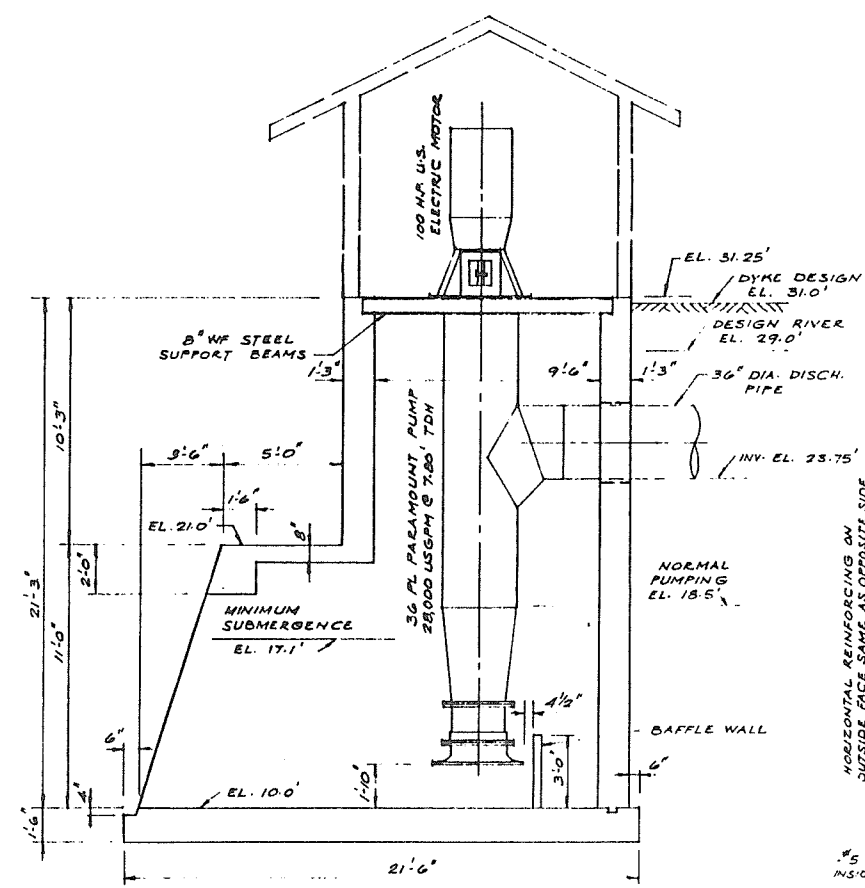
DRAWING NUMBER	REVISED	DATE
VW17-1-604	0	SEP 1992



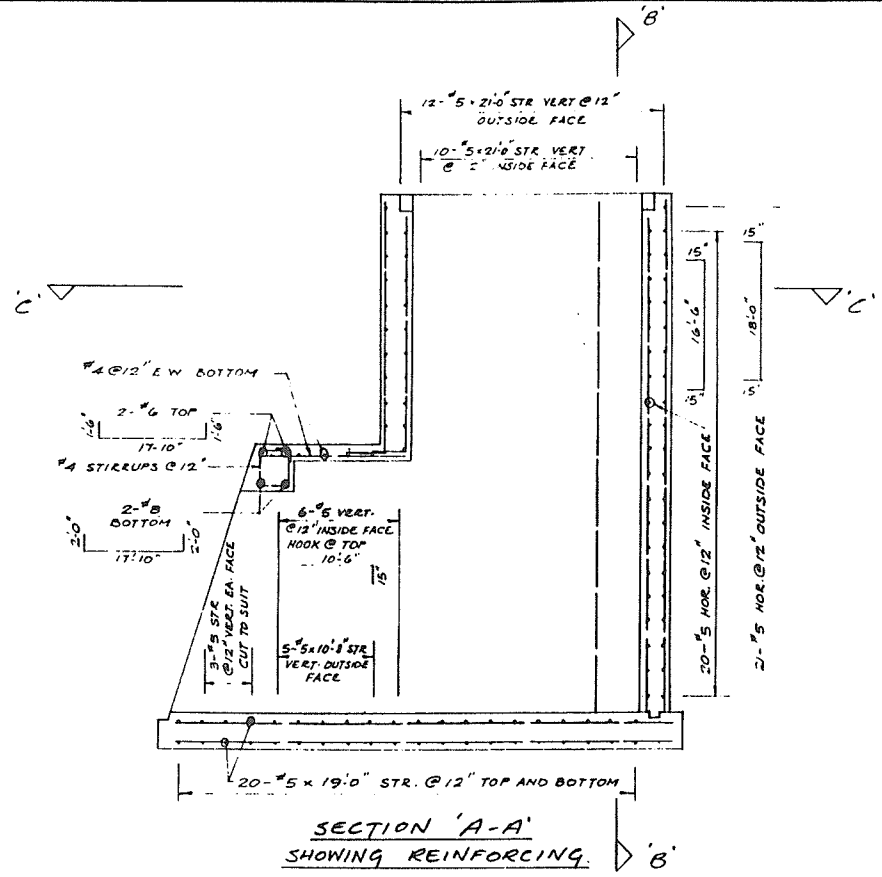
PLAN



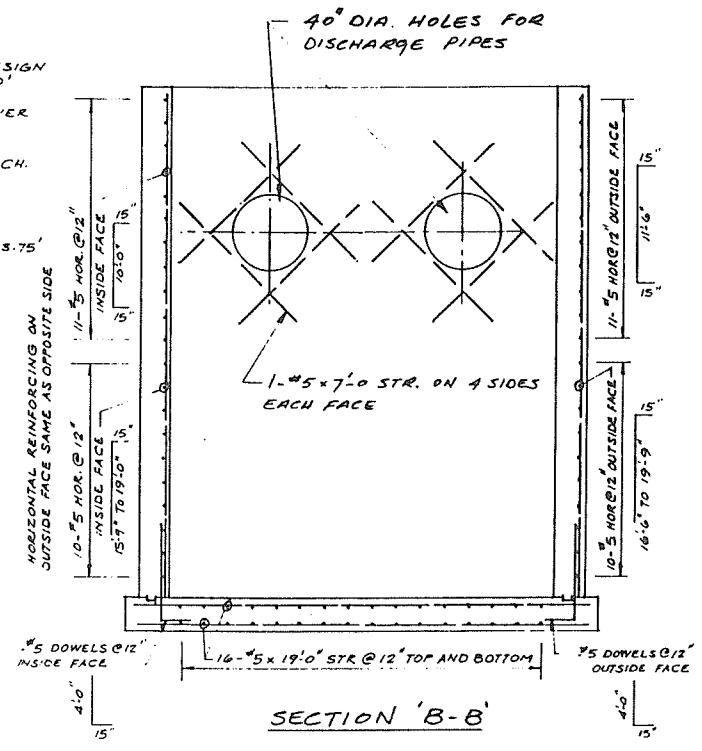
FRONT ELEVATION



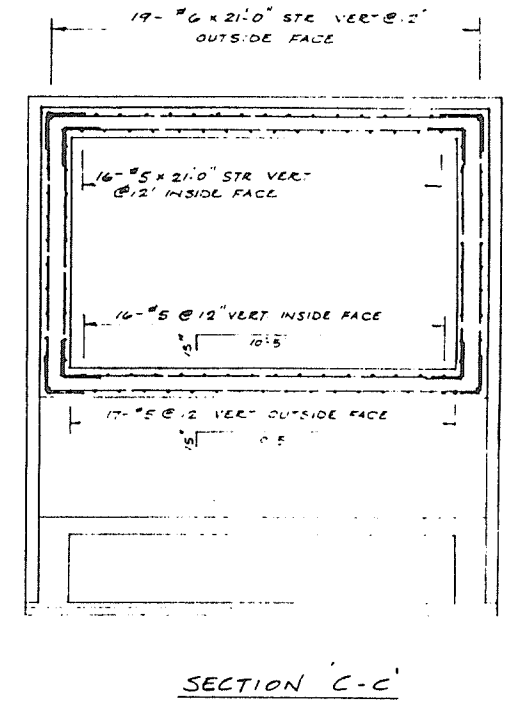
SECTION 'A-A'



SECTION 'A-A' SHOWING REINFORCING

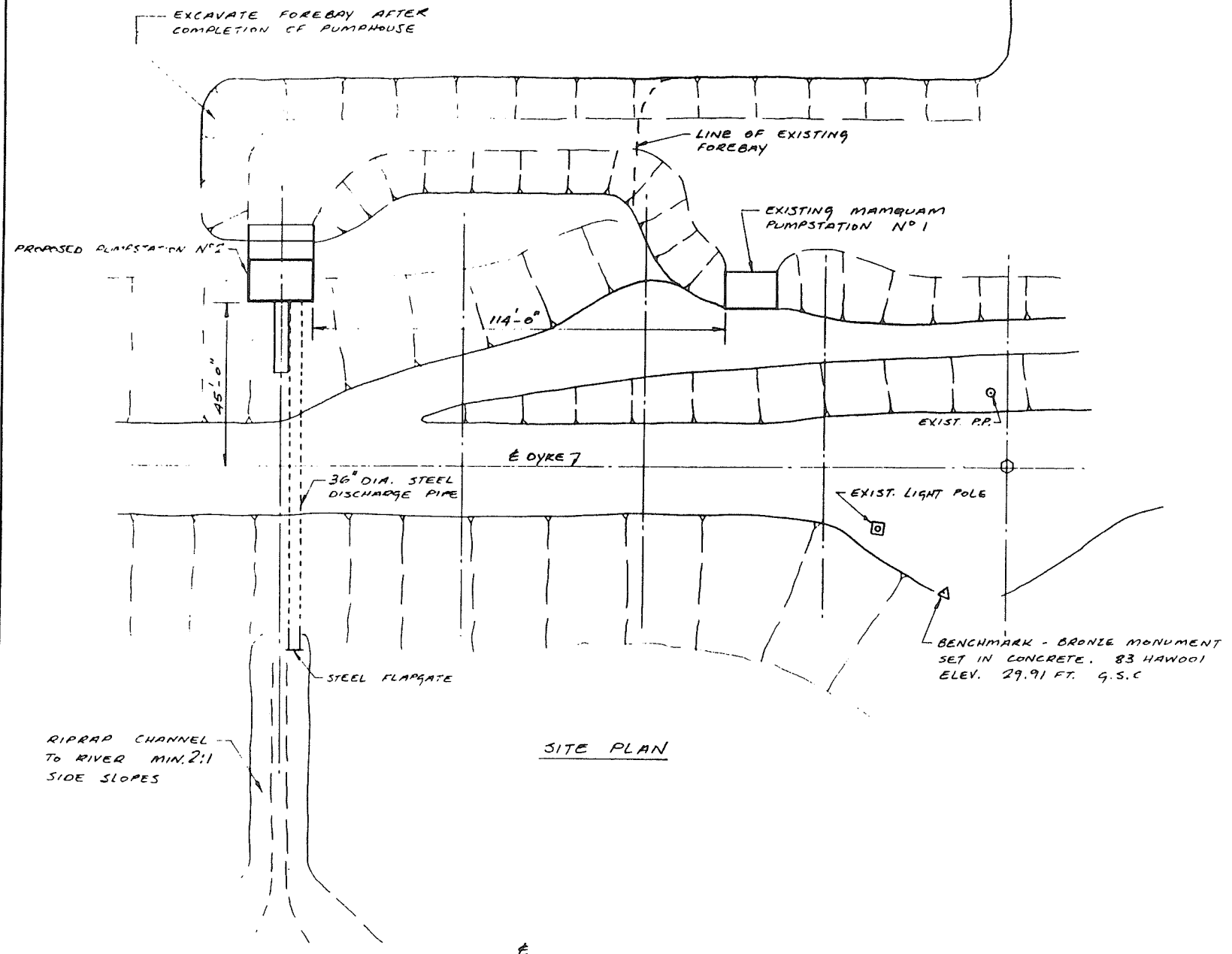


SECTION 'B-B'

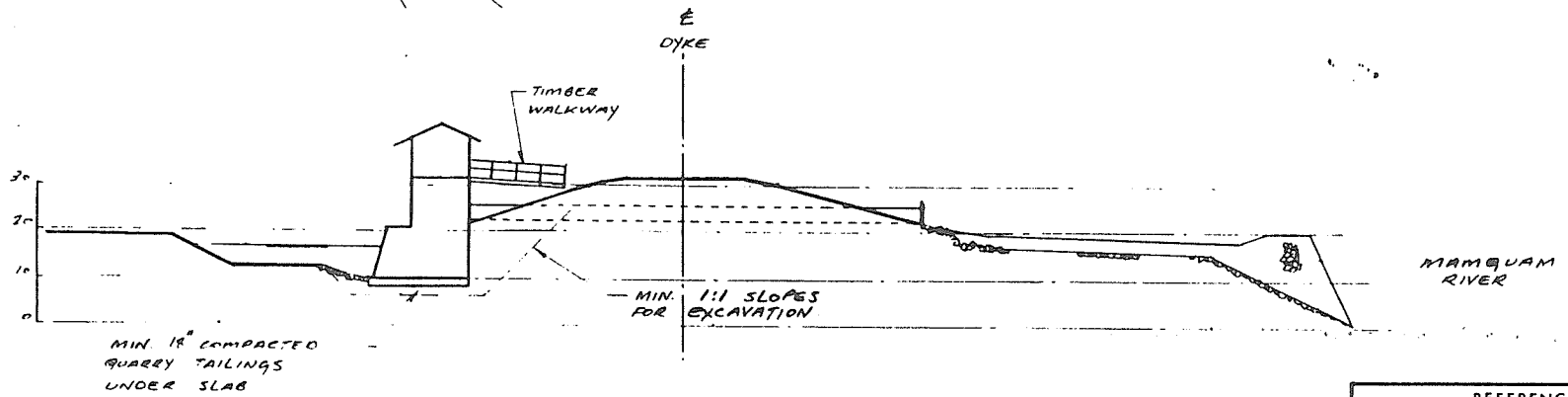


SECTION 'C-C'

REFERENCES			REVISIONS			SURVEYED		Province of British Columbia		FILE NO
DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE	DATE	DATE	Ministry of Environment and Parks	EMO PROJECT NO	
						DESIGNED R. CAMERON		WATER MANAGEMENT BRANCH <td></td>		
						CHECKED		SQUAMISH DYKING	NTS MAP NO	
						DATE		MAMQUAM R. - PUMPSTATION NO 2	SCALE 1/8" = 1 FOOT	
						DRAWN R. CAMERON		REINFORCED CONCRETE STRUCTURE	NEGATIVE NO.	
						APPROVED			DRAWING NO. 92-22-1	
						HEAD DRAFTING SECTION			REV.	
						DATE			SHEET 1 OF 4	
						R. Cameron Aug 21/92				
						ENGINEER				
						DATE				
						RECOMMENDED 92-07-24 DATE				
						APPROVED				
						DATE				

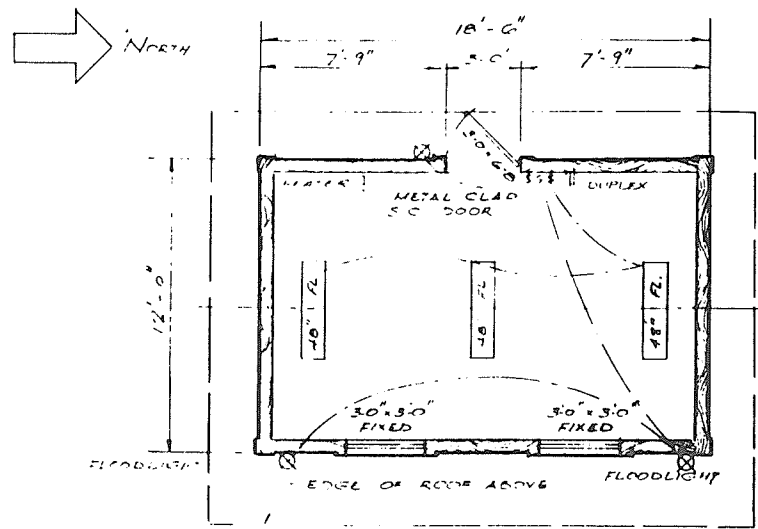


SITE PLAN

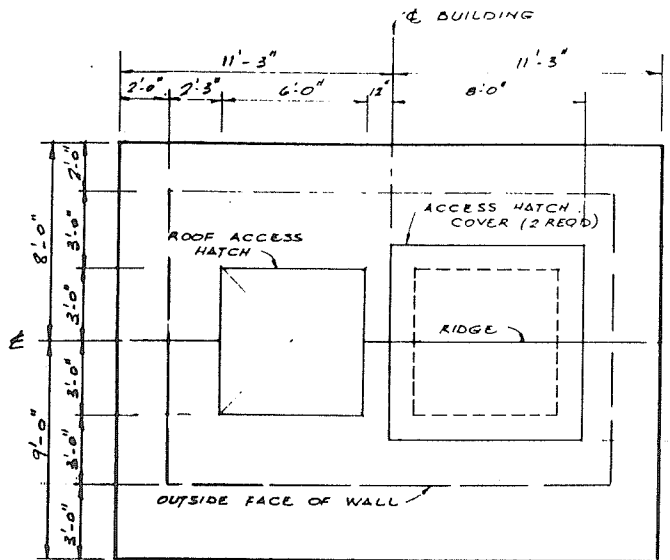


LONGITUDINAL ELEVATION

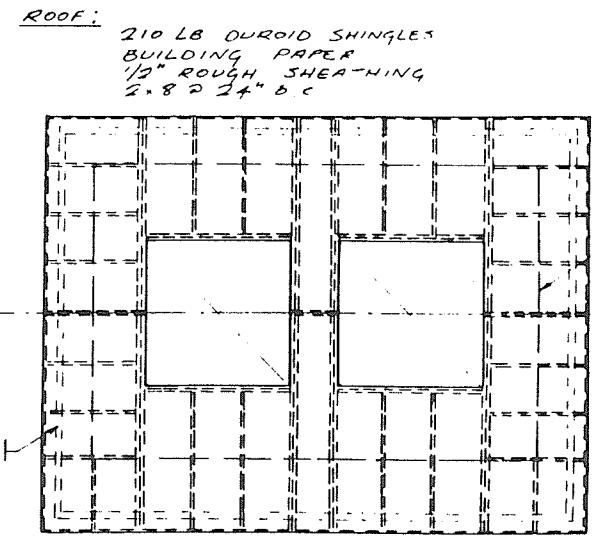
REFERENCES			REVISIONS			SURVEYED		Province of British Columbia Ministry of Environment and Parks WATER MANAGEMENT BRANCH	FILE NO.
DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE	DATE	DESIGNED		ENG. PROJECT NO.
							R. CAMERON		
							CHECKED		
							DATE AUG 1992		
							DRAWN J.A. FULTON		
							APPROVED		
							HEAD DRAFTING SECTION		
							DATE		
							R. Cameron Sept. 1/92		
							DATE		
							RECOMMENDED		
							DATE		
							APPROVED		
							DATE		
							ENGINEER		
							DATE		
							APPROVED		
							DATE		
							DIRECTOR		
							DATE		
							DRAWING NO.		
							92-22-2		
							REV.		
							2		
							SHEET		
							OF		
							3		



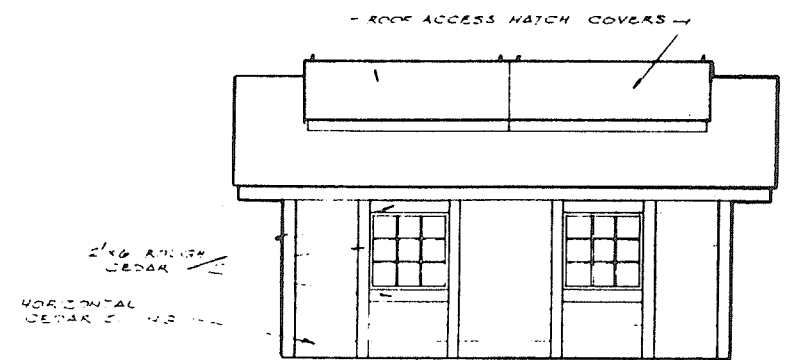
FLOOR PLAN



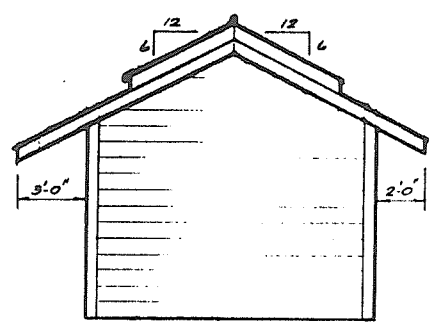
ROOF PLAN



ROOF FRAMING PLAN

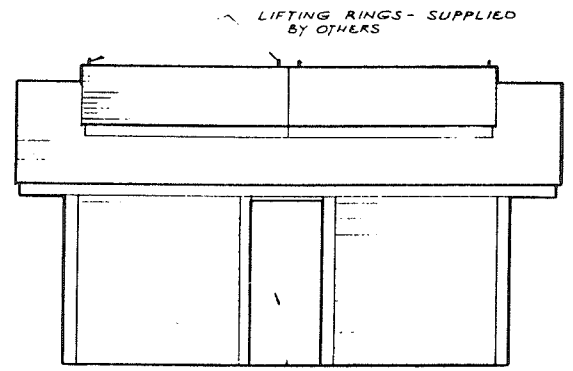


EAST ELEVATION

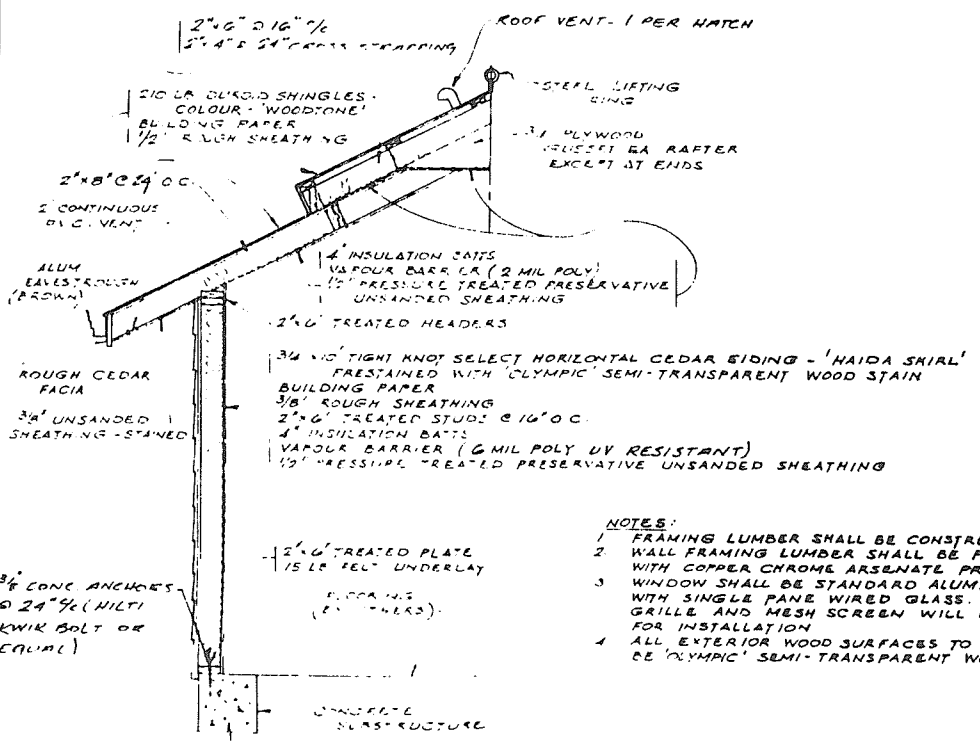


NORTH ELEVATION

(SOUTH ELEVATION REVERSE)



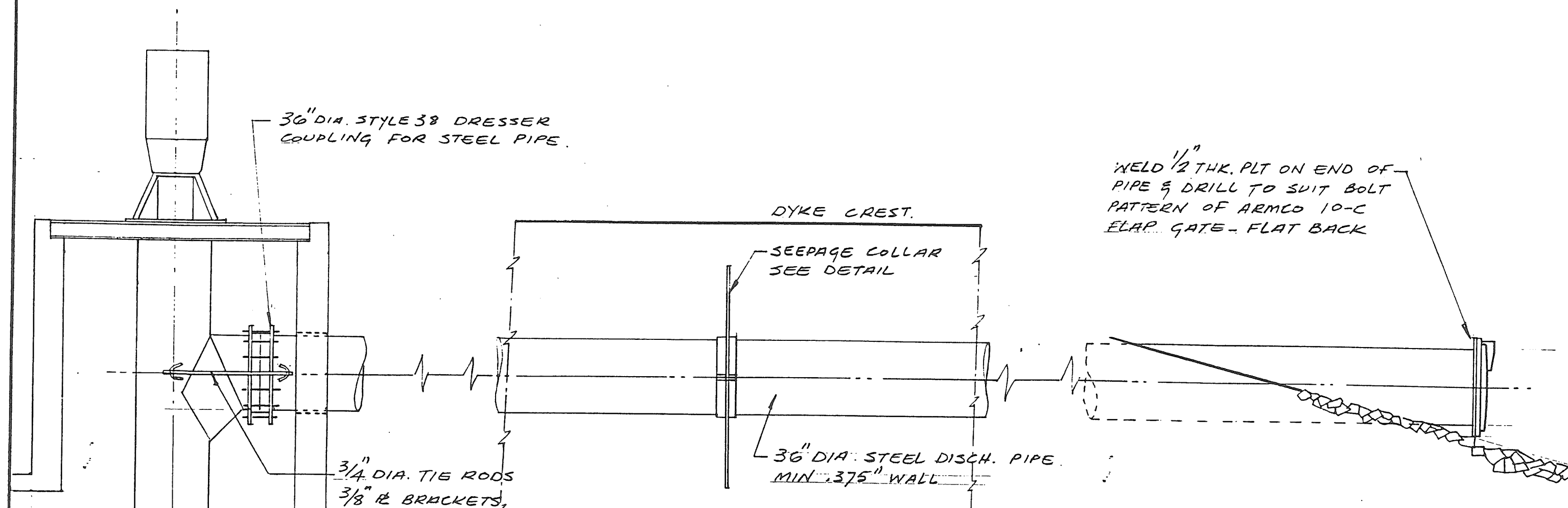
WEST ELEVATION



SECTION

- NOTES:
- FRAMING LUMBER SHALL BE CONSTRUCTION GRADE FIR
 - WALL FRAMING LUMBER SHALL BE PRESSURE TREATED WITH COPPER CHROME ARSENATE PRESERVATIVE (C.C.A.)
 - WINDOW SHALL BE STANDARD ALUMINUM FRAME UNIT WITH SINGLE PANE WIRED GLASS. A PROTECTIVE BAR GRILLE AND MESH SCREEN WILL BE SUPPLIED BY OTHERS FOR INSTALLATION
 - ALL EXTERIOR WOOD SURFACES TO BE STAINED. STAIN TO BE 'OLYMPIC' SEMI-TRANSPARENT WOOD STAIN.

REFERENCES			REVISIONS		SURVEYED		Province of British Columbia Ministry of Environment INVENTORY AND ENGINEERING BRANCH		FILE NO
DWG. No.	DESCRIPTION	DATE	No.	DESCRIPTION	DATE	DATE	DESIGNED	SQUAMISH DYKING	P 71-28
			1	ROOF FRAMING, SILL ANCHORS, VENTING	93-06-24	SEPT '92	R. CAMERON	ALHMQUANI NO 2 PUMPSTATION SUPERSTRUCTURE	
						SEPT '92	A. FULTON		
							R. Cameron		DRAWING NO. REV 1
							ENGINEER		02-22-3
							RECOMMENDED		SHEET 3 OF 4
							APPROVED		



36" DIA. STYLE 38 DRESSER COUPLING FOR STEEL PIPE.

WELD 1/2" THK. PLT ON END OF PIPE & DRILL TO SUIT BOLT PATTERN OF ARMC0 10-C ELAP. GATE - FLAT BACK

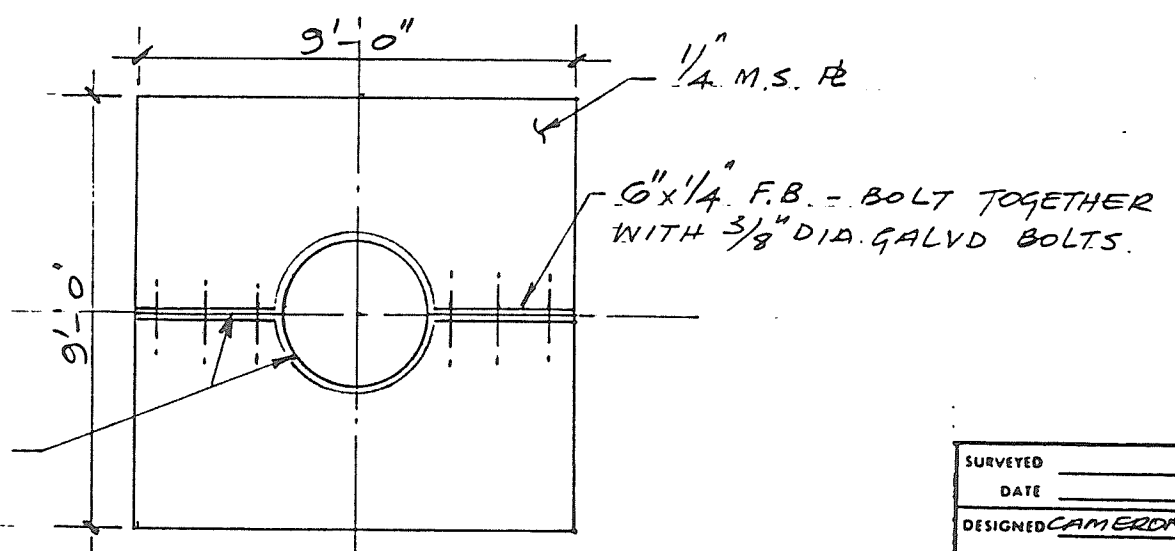
DYKE CREST.

SEEPAGE COLLAR SEE DETAIL

36" DIA. STEEL DISCH. PIPE MIN. .375" WALL


3/4" DIA. TIE RODS
3/8" TH BRACKETS

SECTION AT DISCHARGE PIPE

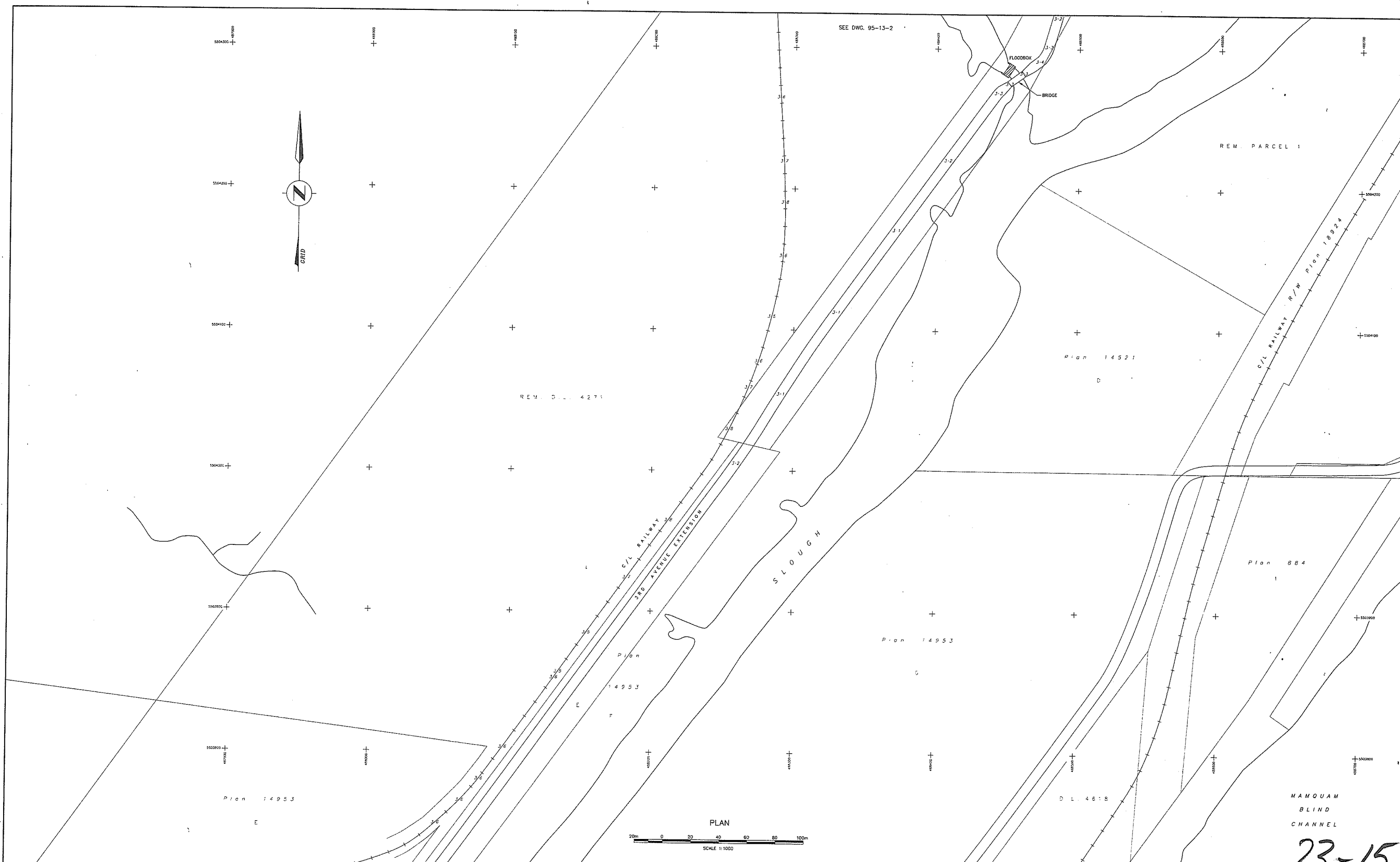


CAULK FOR WATERTIGHT.

SEEPAGE COLLAR.

SURVEYED _____ DATE _____	 Province of British Columbia Ministry of Environment and Parks WATER MANAGEMENT BRANCH	FILE NO. _____
DESIGNED <u>CAMERON</u> CHECKED _____ DATE _____		<u>SQUAMISH DYKING</u> <u>MAMQUAM R. PUMPSTATION N°2</u>
DRAWN <u>FULTON</u> APPROVED _____ HAD DRAFTING SECTION DATE _____	<u>DISCHARGE PIPE</u>	SCALE <u>1/4" = 1 FOOT</u> NEGATIVE NO. _____
ENGINEER _____ DATE _____	RECOMMENDED _____ DATE _____	APPROVED _____ DIRECTOR _____ DATE _____
		DRAWING NO. <u>92-22-4</u> REV. _____ SHEET <u>4</u> OF <u>4</u>





NOTES

- This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.
- SURVEY DATA:**
 - Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division.
 - Horizontal and vertical control established by reciprocal height leveling using a total station theodolite.
 - Cross section and topographic data obtained using a total station theodolite.
- DATUM:**
 - Horizontal and Vertical control based on British Columbia Control Survey Posts 77H434 and 77H430 established by Surveys and Resource Mapping Branch, Lands Services Division as obtained from Data Book listing dated January 1994.
 - Co-ordinates are Universal Transverse Mercator, Zone 10, NAD27.
- Elevations are in metres and referred to Canadian Geodetic Datum, CD228.
- Shorelines obtained from uncontrolled mosaic Drawing No. 92-26, prepared by Technical Surveys Section from air photography, flights BC991(D) & BC990(S) flown August 1990.
- Horizontal and vertical control established by reciprocal height leveling using a total station theodolite.
- Change of cross sections are referred to the centre line of dikes.
- CADASTRAL:**
 - Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions.
 - Lot boundaries as shown are digitized from District of Squamish cadastral composite plans.
- FIELD BOOKS:**
 - Survey data are recorded on Disc labelled 2627D and Field Book 2627-L1.

LEGEND

- ⊙ REFERENCE POINT
- TEMPORARY REFERENCE POINT
- ⊕ CADASTRAL MARKER (e.g. 100 Iron Pin)
- ⊕ UTILITY POLE
- ⊕ RIPRAP
- ⊕ SWAMP

STORAGE LICENCES

LICENCE	PRIORITY	DATE	APPROVED	ADDED-FEET	DELETED	ADDED-FEET

REFERENCES

DWG. No.	DESCRIPTION	DATE

REVISIONS

No.	DESCRIPTION	DATE

SURVEYED	I. DIGNAN
DATE	NOV. 1994
CHECKED	R. EDWARD
DATE	95/12/11
DRAWN	B. WOODS
APPROVED	
DATE	NOV. 1995
ENGINEER	

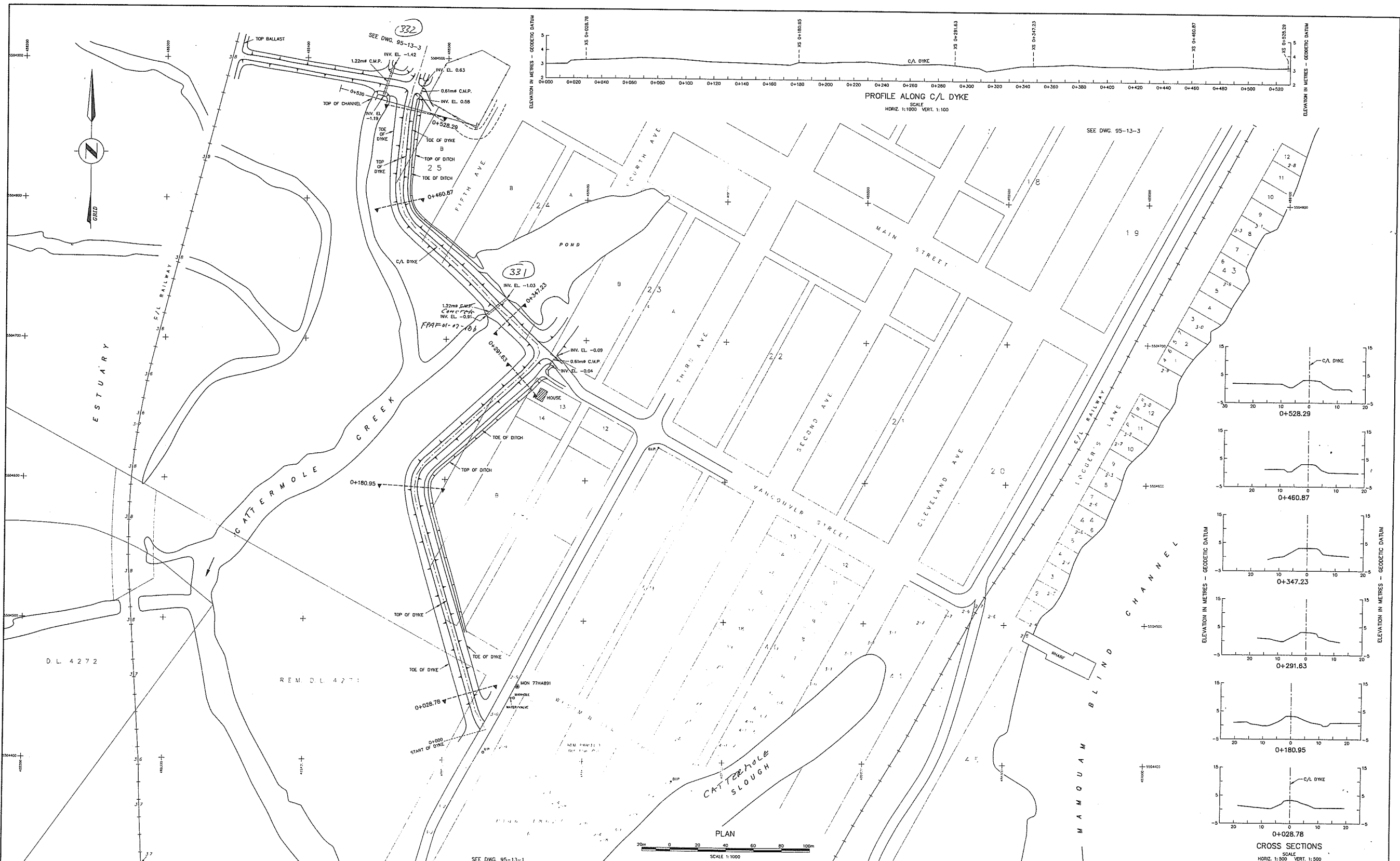
Province of British Columbia
 Ministry of Environment, Lands and Parks
 WATER MANAGEMENT DIVISION

SQUAMISH DYKING
 PLAN
 SHOWING C/L RAILWAYS
 NEAR SQUAMISH

APPROVED *Judith R. Schaefer* DATE *11/11/95*

FILE No.	
SURVEY PROJECT No.	94 18 D 010
NTS	925/11
Map Scale	1:50,000
SCALE	AS NOTED
NEGATIVE No.	
DRAWING No.	95-13-1
TOTAL No. OF DWGS.	4

23-15



NOTES

- This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.
- SURVEY DATA:**
 - Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division.
 - Horizontal and vertical control established by reciprocal height traversing using a total station theodolite.
 - Cross sections and topographic data obtained using a total station theodolite.
- DATUM:**
 - Horizontal and Vertical control based on British Columbia Control Survey Posts 77H4434 and 77H4438 established by Surveys and Resource Mapping Branch, Lands Services Division as obtained from Data Bank listing dated January 1994.
 - Co-ordinates are Universal Transverse Mercator, Zone 10, NAD27.
- Elevations are in metres and referred to Canadian Geoidic Datum, CHG28.
- Shorelines obtained from uncontrolled mosaic Drawing No. 92-28, prepared by Technical Surveys Section from air photographs, flights BC9103 & BC9105, from August 1990.
- Change of cross sections are referred to the centre line of dyke.
- CADASTRAL:**
 - Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions.
 - Lot boundaries as shown are digitized from District of Squamish cadastral composite plans.
- FIELD BOOKS:**
 - Survey data are recorded on Disc labelled 26270 and Field Book 2627-1.
- REFERENCE POINTS:**
 - TEMPORARY REFERENCE POINT
 - CADASTRAL MARKER (e.g. Old Iron Pin)
 - UTILITY POLE
 - RIPRAP
 - SWAMP

B.C. Control Survey	
BM 77H4891	Elevation 3.171

LEGEND	
⊙	REFERENCE POINT
○	TEMPORARY REFERENCE POINT
⊙	CADASTRAL MARKER (e.g. Old Iron Pin)
⊕	UTILITY POLE
⊖	RIPRAP
⊗	SWAMP

STORAGE LICENCES			
LICENCE	PRIORITY DATE	AUTHORIZED ADIC-RELT	DEVELOPED ADIC-RELT

REFERENCES		
DWG. No.	DESCRIPTION	DATE

REVISIONS	
No.	DESCRIPTION

SURVEYED	T. DIGHAN
DATE	NOV. 1994
COMPILED	R. EDWARDS
CHECKED	<i>[Signature]</i>
DATE	25/12/11
DRAWN	B. WOODS
DATE	NOV. 1995
ENGINEER	

Province of British Columbia
Ministry of Environment, Lands and Parks
WATER MANAGEMENT DIVISION

Town Dyke
SQUAMISH DYKING
PLAN, PROFILE AND CROSS SECTIONS
CHAINAGE 0+000 TO 0+530

APPROVED: *[Signature]*
DATE: *[Signature]*

FILE No.:
SURVEY PROJECT No.: 94 18 D 010
MIS Map No.: 826/11
Map Scale: 1:50,000
SCALE: AS NOTED
NEGATIVE NO.:
DRAWING No.: 95-13-2
TOTAL No. of DWGS.: 4



NOTES

- This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.
- SURVEY DATA:**
 - Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division.
 - Horizontal and vertical control established by regional height traversing using a total station theodolite.
 - Cross section and topographic data obtained using a total station theodolite.
- CADASTRAL:**
 - Horizontal and vertical control based on British Columbia Control Survey Points 77H4434 and 77H4436 established by Surveys and Resource Mapping Branch, Lands Services Division as published from Data Bank listing dated January 1994.
 - Coordinates are Universal Transverse Mercator, Zone 10, NAD87.
- ELEVATIONS:**
 - Elevations are in metres and referred to Canadian Geodetic Datum, CGD28.
 - Shorelines obtained from uncontrolled mosaic Drawing No. 92-28, prepared by Technical Surveys Section from air-photographs, Rights BC80103 & BC80053 from August 1990.
 - Change of cross sections are referred to the centre line of dyke.
 - Let boundaries as shown are for reference only and are NOT to be accepted as legal ground positions.
 - Let boundaries as shown are digitized from District of Squamish cadastral composite plans.
- FIELD BOOKS:**
 - Survey data are recorded on Disc labelled 2627D and Field Book 2627-L1.

LEGEND

- ⊙ REFERENCE POINT
- TEMPORARY REFERENCE POINT
- ⊕ CADASTRAL MARKER (4.5" O.D. IRON PIPE)
- ⊕ UTILITY POLE
- ▨ RIPRAP
- ▧ SWAMP

STORAGE LICENCES

LICENCE	PRIORITY	PROFIT	DATE	AUTHORIZED	DEVELOPED	DWC No.	DESCRIPTION	DATE	No.

REFERENCES

DWC No.	DESCRIPTION	DATE	No.

REVISIONS

NO.	DESCRIPTION	DATE

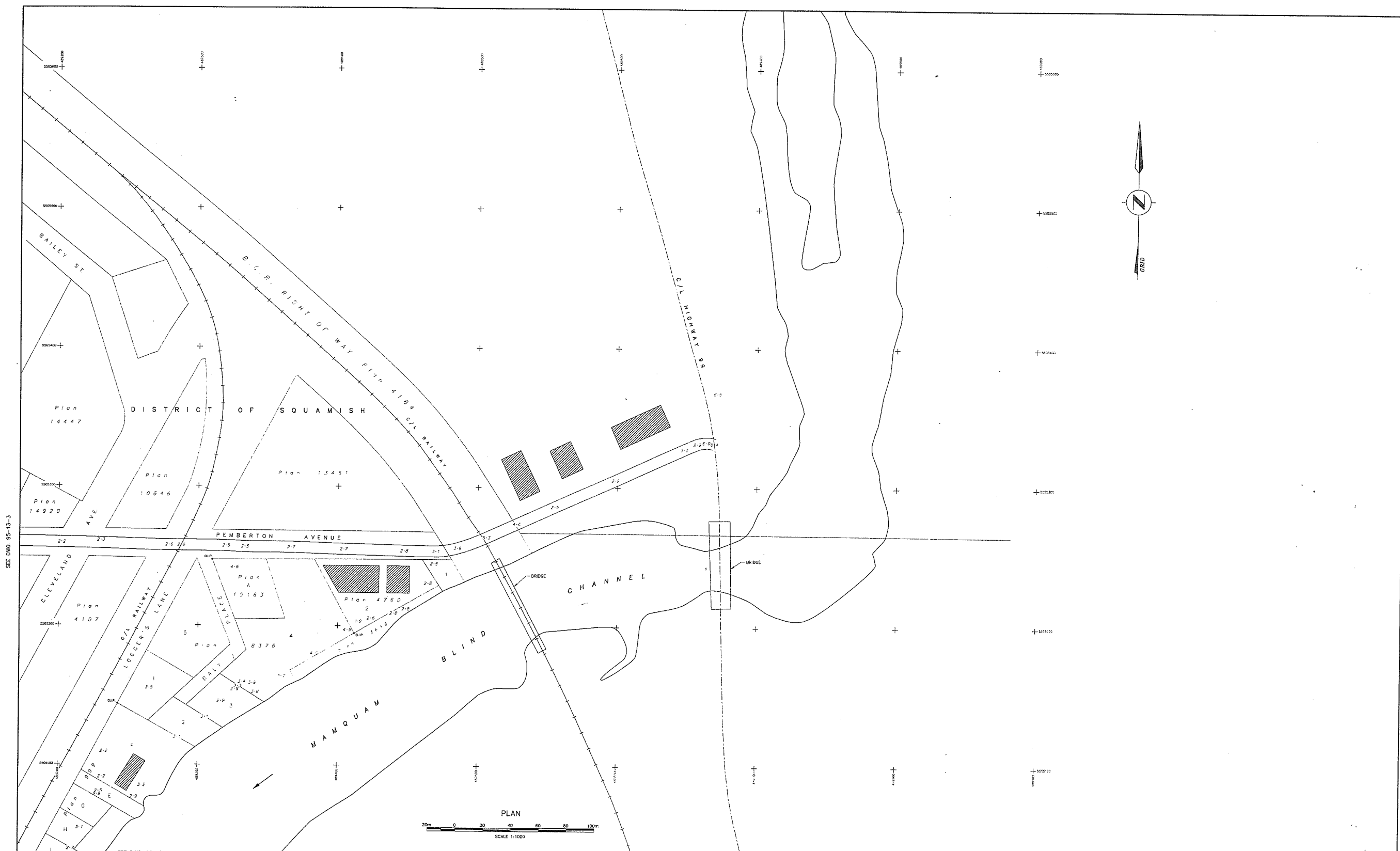
PROVINCE OF BRITISH COLUMBIA Ministry of Environment, Lands and Parks
WATER MANAGEMENT DIVISION

SQUAMISH DYKING
PLAN, PROFILE AND CROSS SECTIONS
CHAINAGE 0+530 TO END OF DYKE

APPROVED: *[Signature]* DATE: *12/11/95*

FILE No. _____
BRANCH _____
SURVEY PROJECT No. 94-18-D-010
ATS Map No. 920/11
Map Scale 1:50,000
SCALE AS NOTED
DRAWING No. 95-13-3
TOTAL No. OF DWGS. 4

SEE DWG. 95-13-4



SEE DWG. 95-13-3

SEE DWG. 95-13-3

NOTES

- 1) This plan prepared by the Ministry of Environment, Lands and Parks, Province of British Columbia.
- 2) SURVEY DATA:
 - a) Field surveys carried out by the Technical Surveys Section, Hydrology Branch, Water Management Division.
 - b) Horizontal and vertical control established by reciprocal height traversing using a total station theodolite.
 - c) Cross section and topographic data obtained using a total station theodolite.
- 3) DATUM:
 - a) Horizontal and vertical control based on British Columbia Control Survey Posts 77H4434 and 77H4435 established by Survey and Resource Mapping Branch, Lands Services Division as obtained from Data Bank listing dated January 1994.
 - b) Coordinates are Universal Transverse Mercator, Zone 10, NAD27.
 - c) Elevations are in metres and referred to Canadian Geodetic Datum, CVD28.
 - d) Shorelines obtained from uncontrolled mosaic Drawing No. 92-26, prepared by Technical Surveys Section from air photographs, flight B230103 & B2302033 from August 1990.
 - e) Changes of cross sections are referred to the centre line of dike.
- 4) CADASTRAL:
 - a) Lot boundaries as shown are for reference only and are NOT to be accepted as legal ground positions.
 - b) Lot boundaries as shown are digitized from District of Squamish cadastral composite plans.
- 5) FIELD BOOKS:
 - a) Survey data are recorded on Disc labelled 2627D and Field Book 2627-11.

LEGEND

- REFERENCE POINT
- TEMPORARY REFERENCE POINT
- CADASTRAL MARKER (e.g. Old Iron Pin)
- UTILITY POLE
- RIPRAP
- SWAMP

STORAGE LICENCES

LICENCE	PROJECT	AUTHORIZED	DEVELOPED
	DATY	ADRE-FEET	ADRE-FEET

REFERENCES

DWG. No.	DESCRIPTION	DATE

REVISIONS

No.	DESCRIPTION	DATE

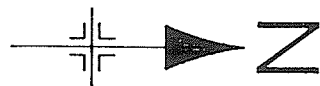
SURVEYED	T. DIGNAN
DATE	NOV. 1994
COMPILED	R. EDWARD
CHECKED	<i>[Signature]</i>
DATE	95/12/0
DRAWN	G. WOODS
APPROVED	<i>[Signature]</i>
DATE	NOV. 1995
ENGINEER	<i>[Signature]</i>

Province of British Columbia
 Ministry of Environment, Lands and Parks
 WATER MANAGEMENT DIVISION

SQUAMISH DYKING
PLAN SHOWING SPOT HEIGHTS ON
PEMBERTON AVENUE
AND
WEST SIDE, MAMQUAM BLIND CHANNEL

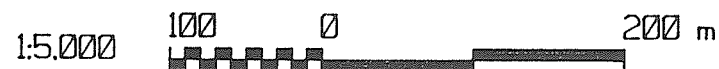
APPROVED *[Signature]* DATE 95/12/0
 MANAGER, TECHNICAL SERVICES SECTION

FILE No.	
SURVEY PROJECT No.	94 18 D 010
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SCALE	Map Scale 1:50,000
NEGATIVE No.	
DRAWING No.	95-13-4
TOTAL No. OF SHEETS	4



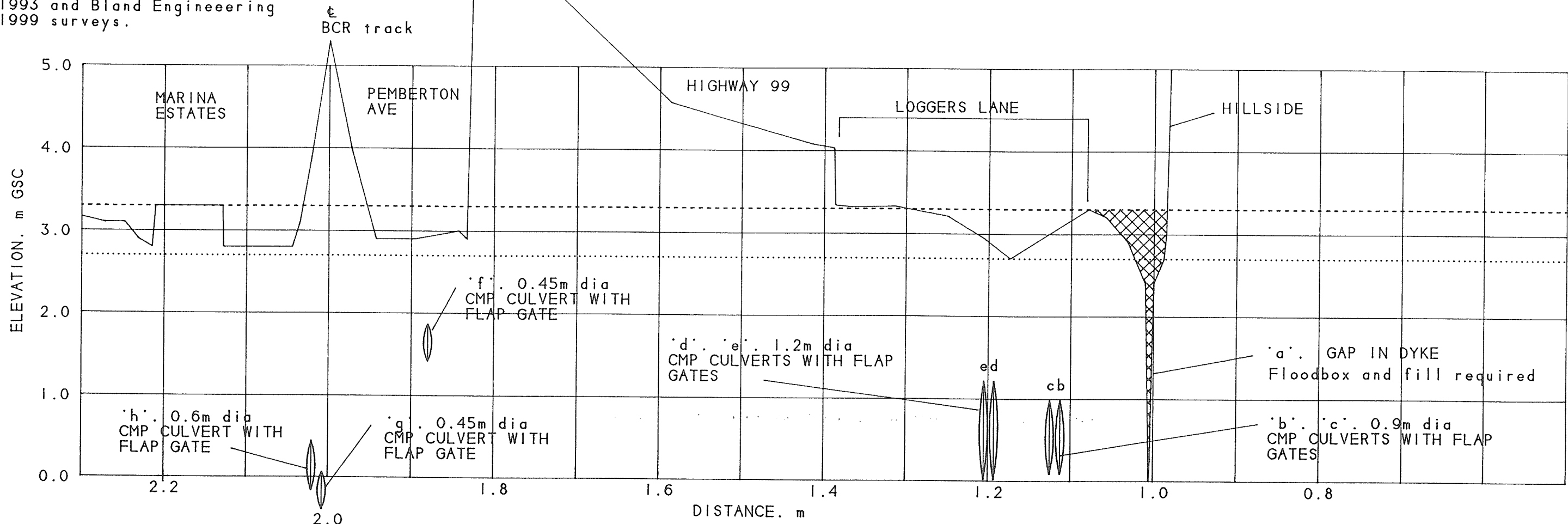
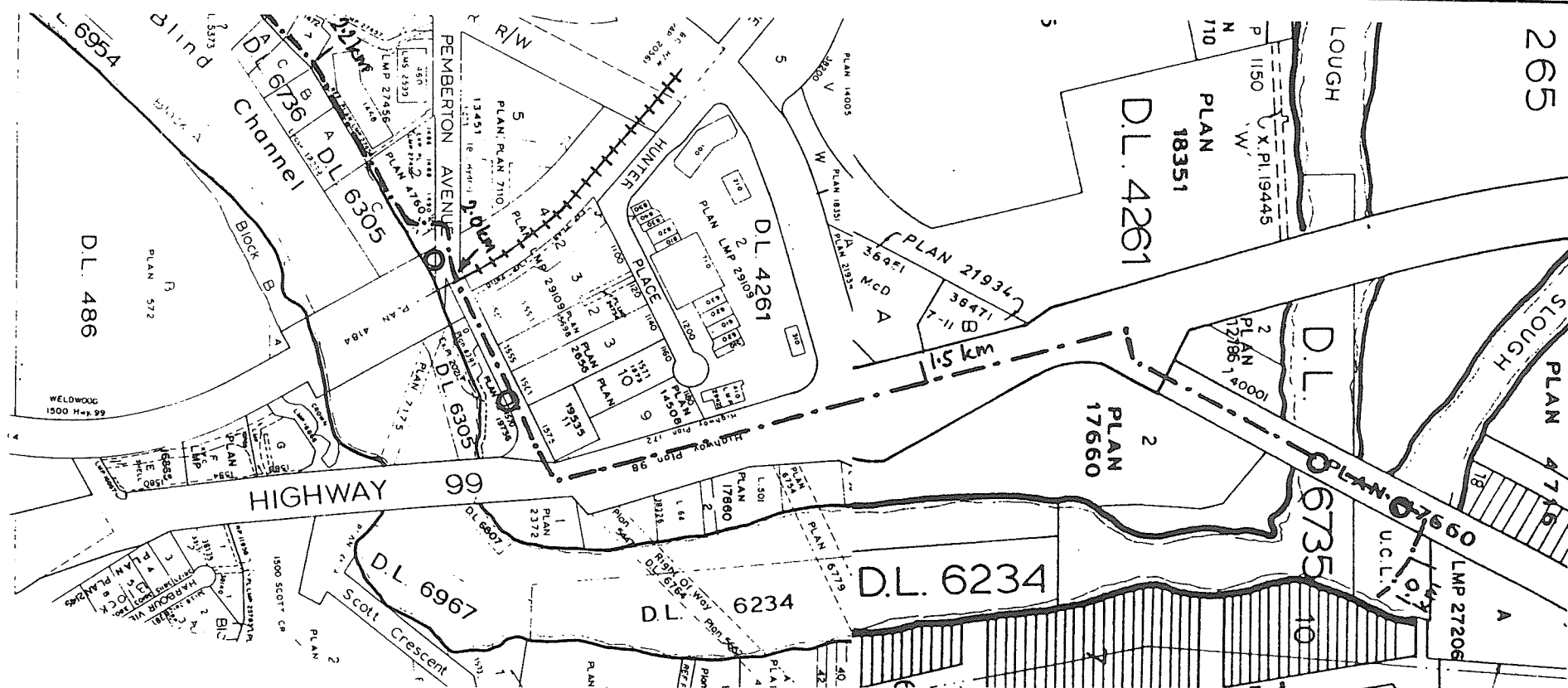
LEGEND

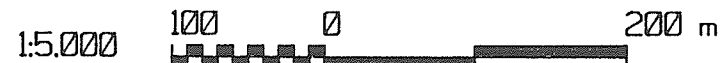
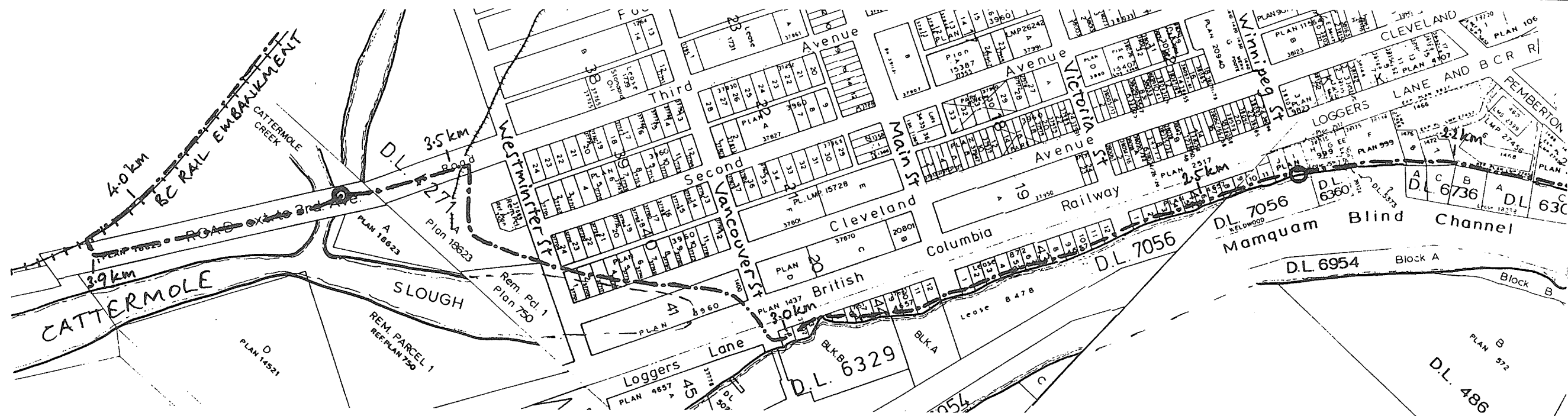
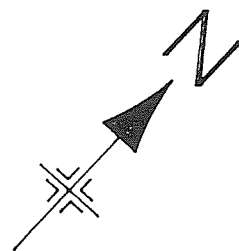
- Ground elevation ———
- Design dyke El. 3.3m GSC - - - - -
- Temporary protection El. 2.7m ·····
- Dyke alignment - · - · - ·
- Drainage structure ○



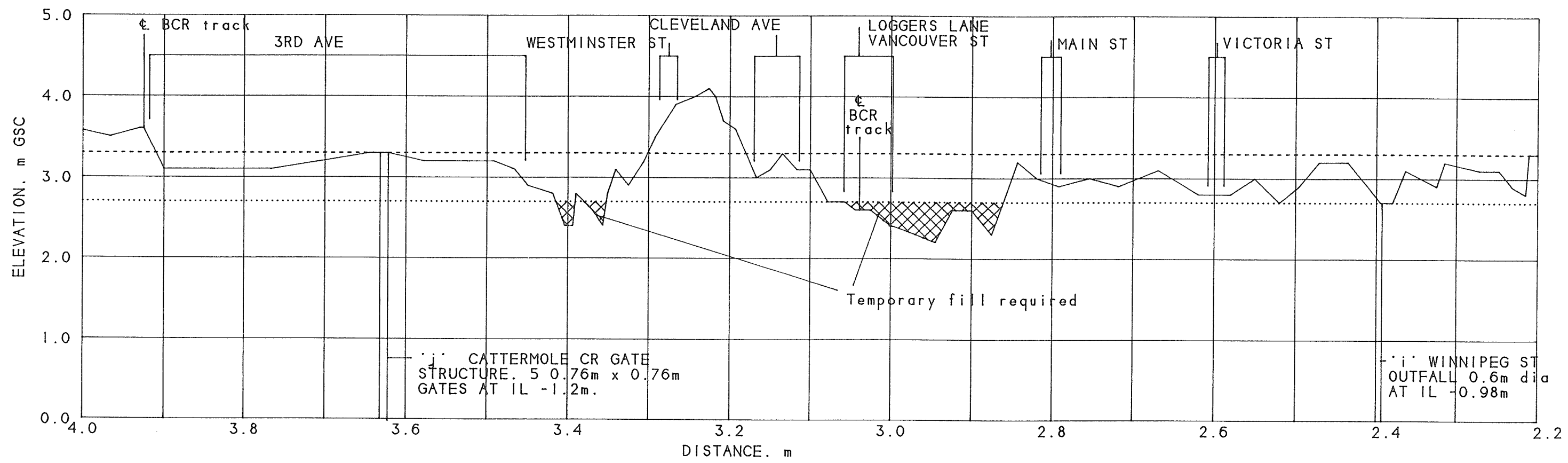
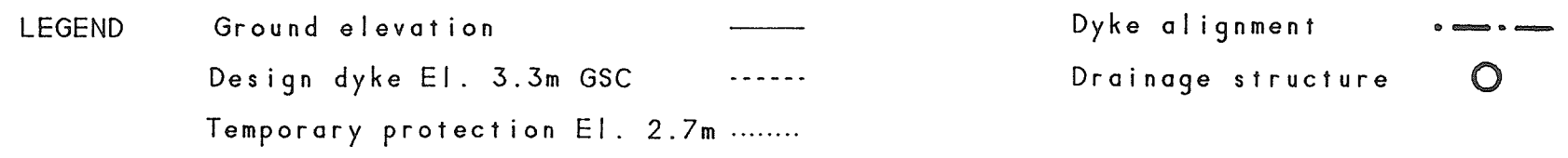
Distance from BC Rail track at Mamquam Blind Channel bridge, 2.0km.
Base map from District of Squamish composite plan.

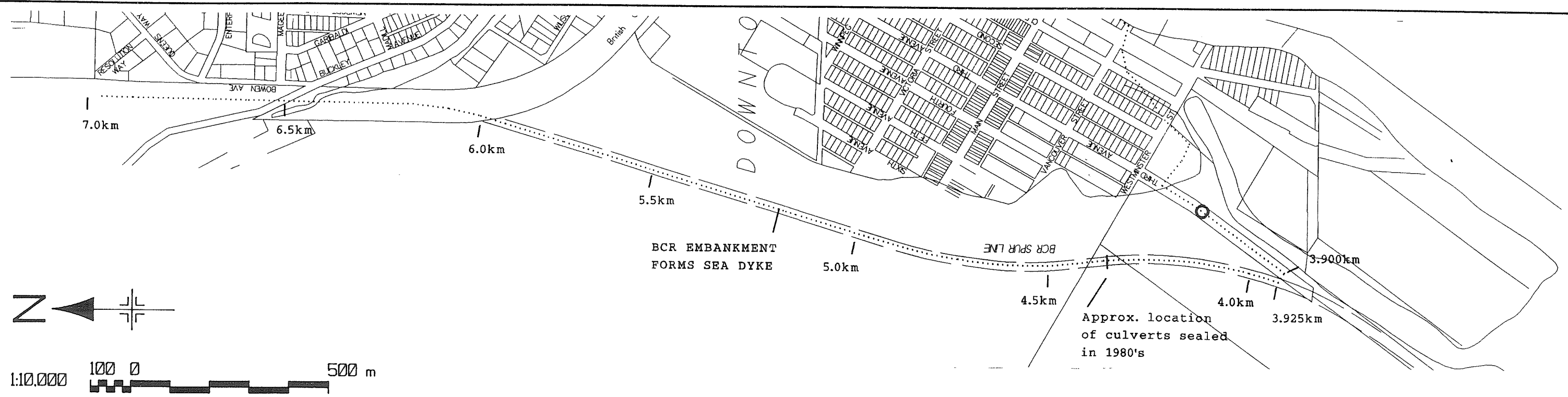
Ground elevations from MELP 1993 and Bland Engineering 1999 surveys.





Distance from BC Rail track at Mamquam Blind Channel bridge, 2.000km.
 Base map from District of Squamish composite plan.
 Ground level from MELP 1993 survey.

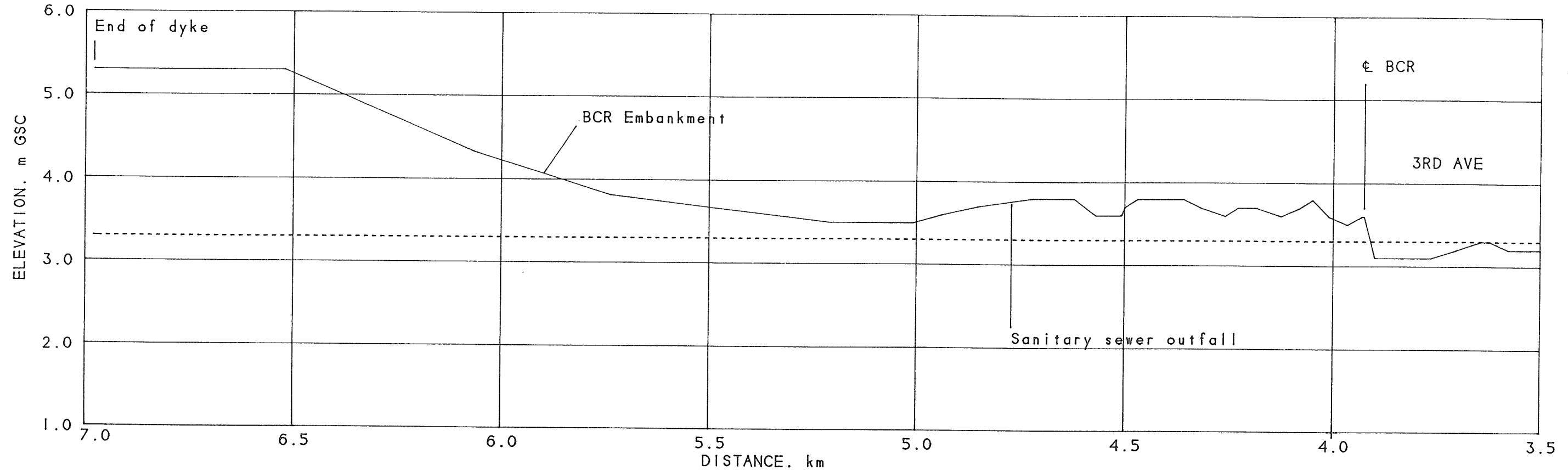


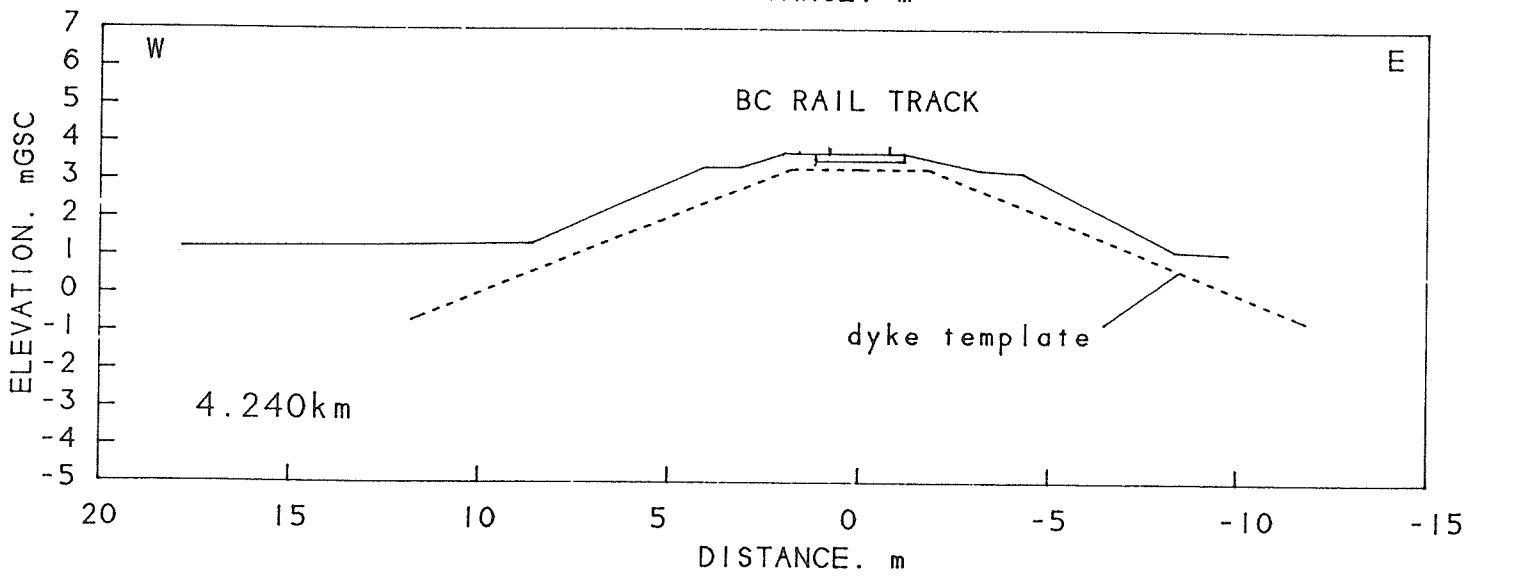
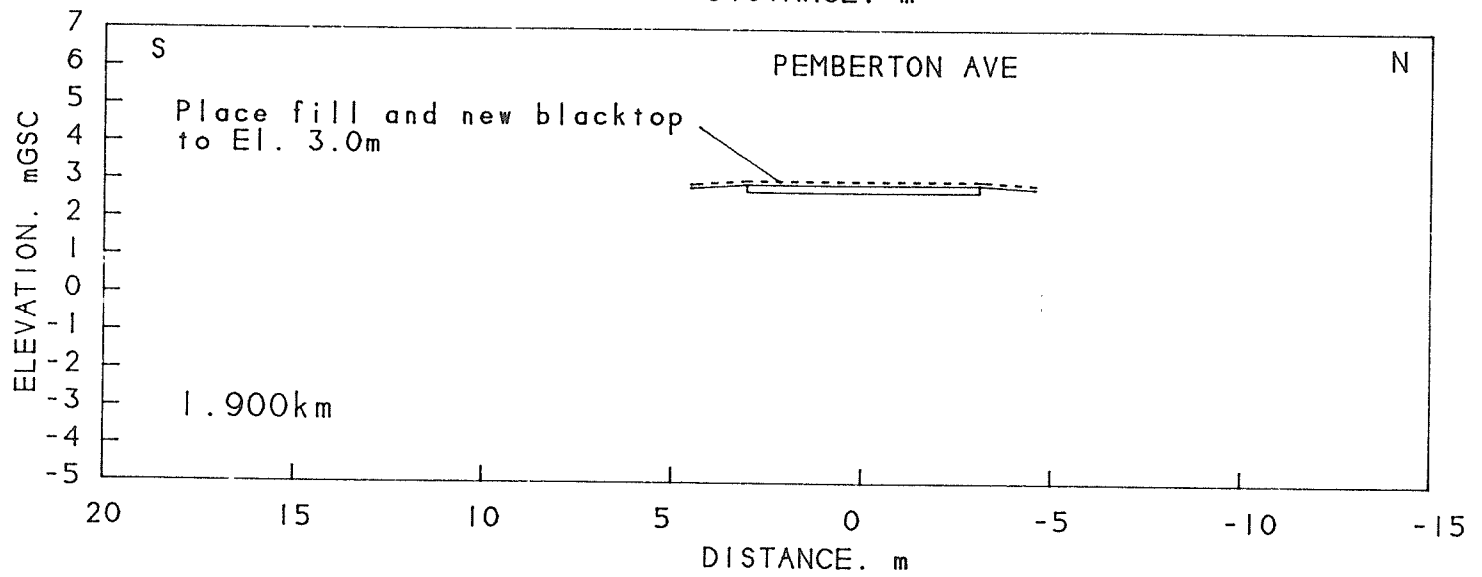
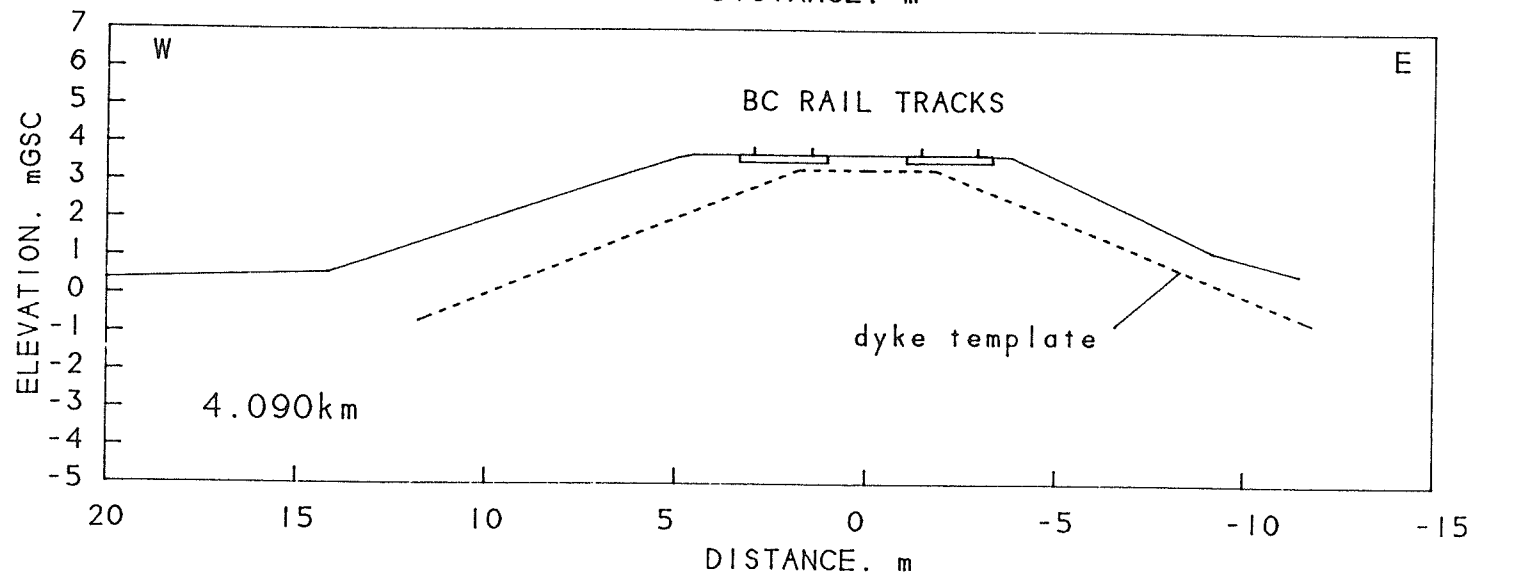
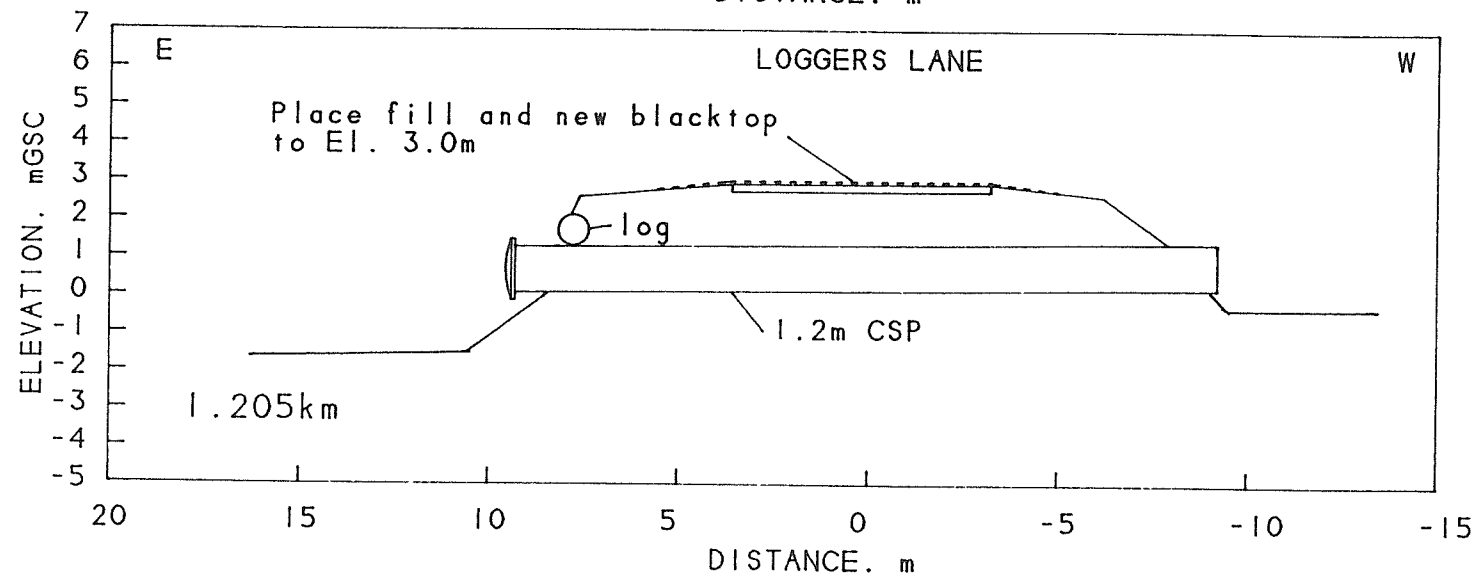
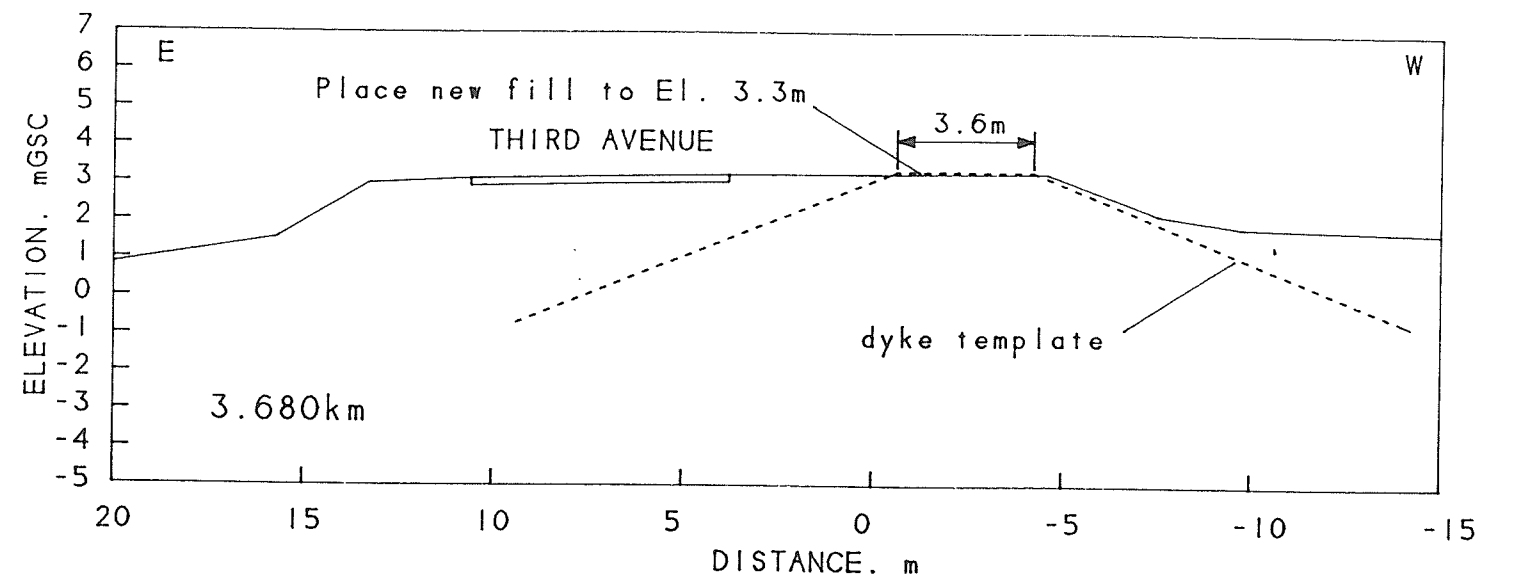
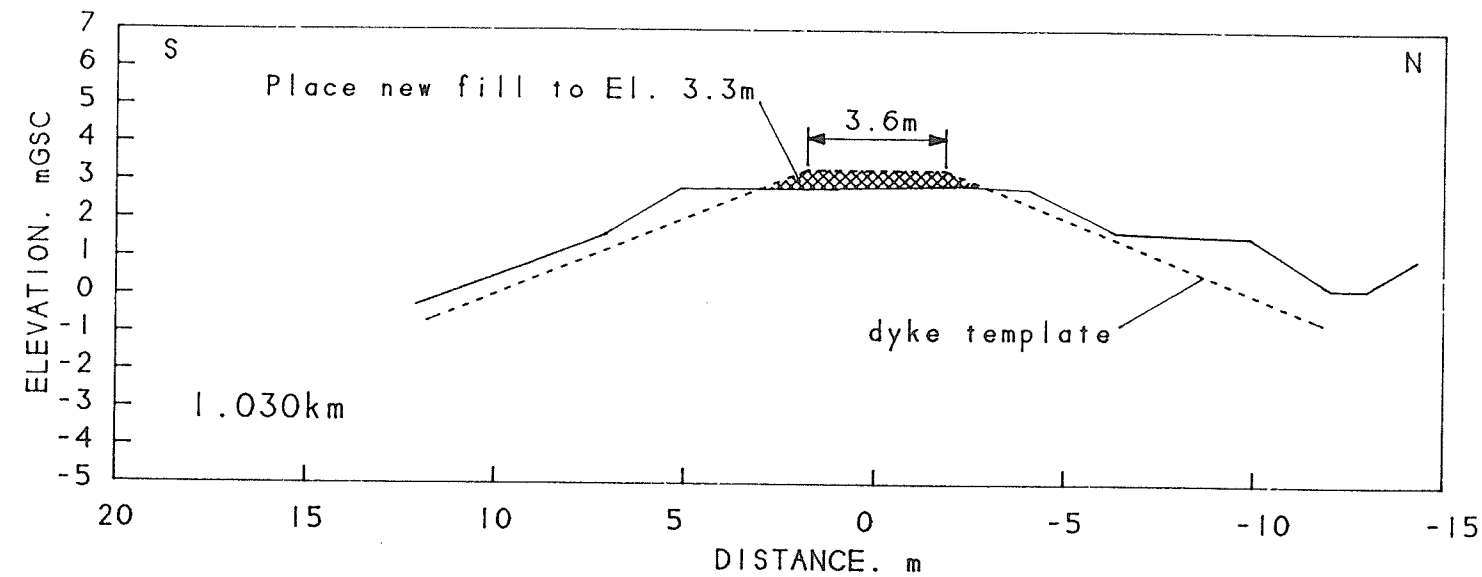


Distance from BC Rail track at Mamquam Blind Channel bridge. 2.000km.
 Base map from composite plan by Insite Planning Services.
 Surveys by MELP 1993. and Bland Engineering 1999.

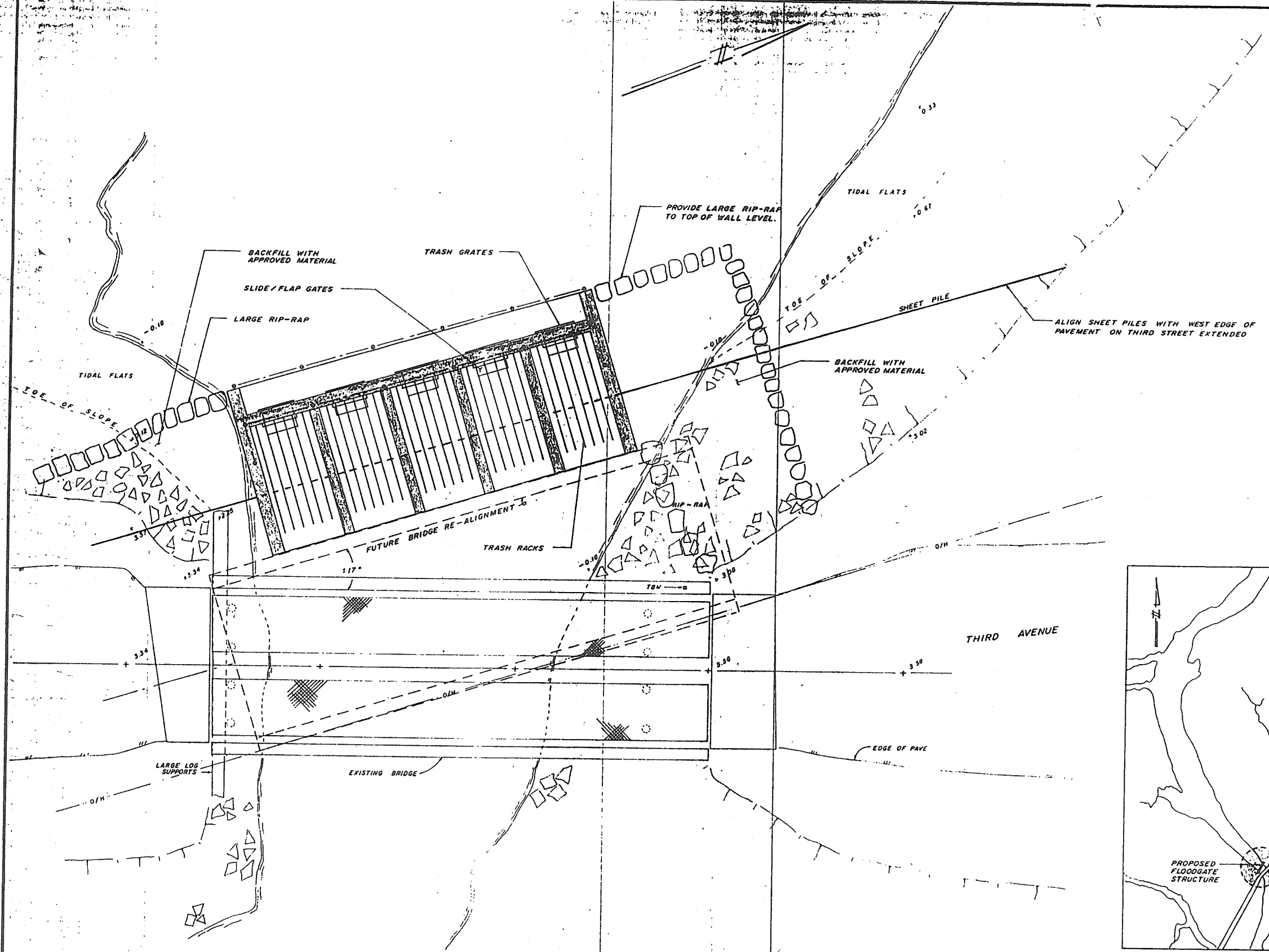
LEGEND

Ground elevation	—	Dyke alignment
Design dyke El. 3.3m GSC	- - - -	Drainage structure	○

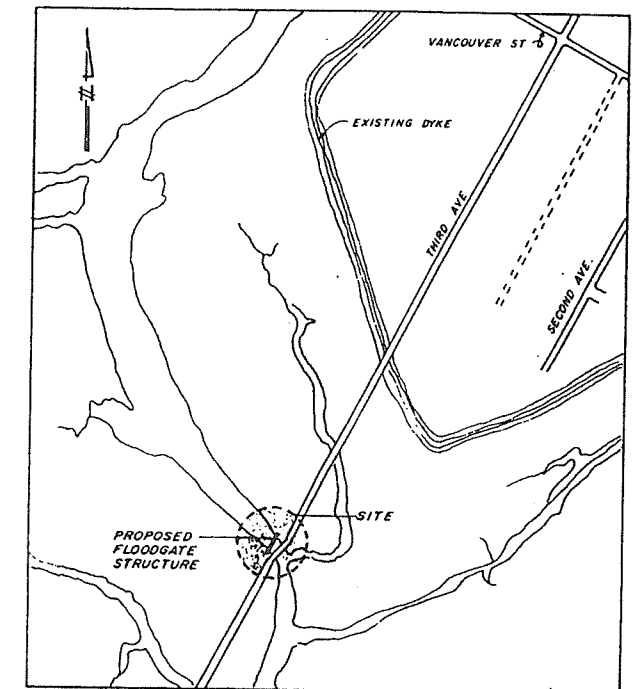




7. SQUAMISH SEA DIKE FLOODBOXES



SITE PLAN
SCALE 1"=50'



KEY PLAN
SCALE 1"=200'

NO.	REFERENCE DRAWINGS

NOTES: TBM - END BOLT THROUGH 12" X 12"
NW CORNER OF BRIDGE
GEOD. METRIC EL. 3.641 m

NO.	REVISIONS	BY	DATE	APPR-SEAL

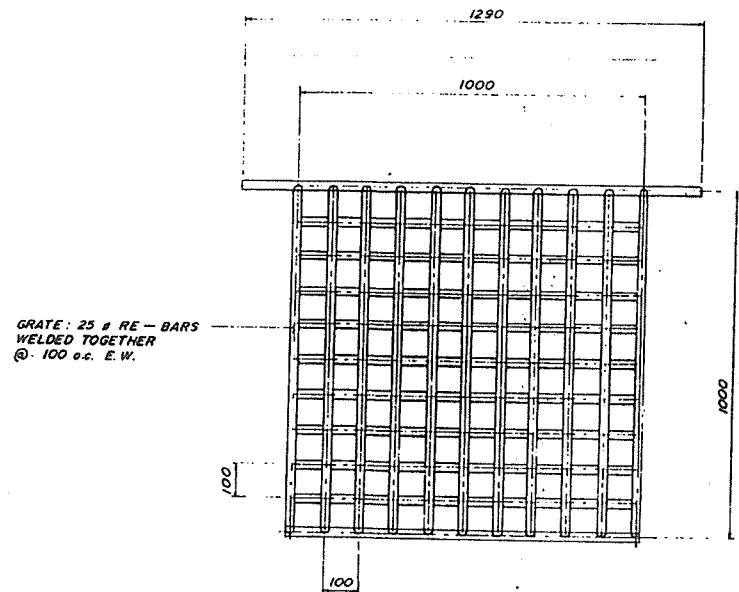
NO.	REVISIONS	BY	DATE	APPR-SEAL

WEB ENGINEERING LTD.
consulting civil engineers
STE 101-1661 WELCH STREET
North Vancouver, B.C.

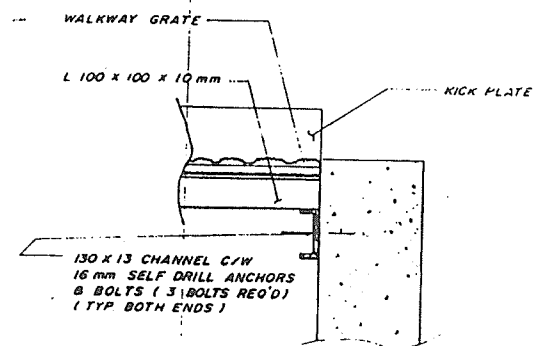
DRWN: BKS
DSGN: EDW
CHKD:
DATE: MAY/84

DISTRICT OF SQUAMISH
CHATTERMOLE CREEK
FLOODGATE STRUCTURE

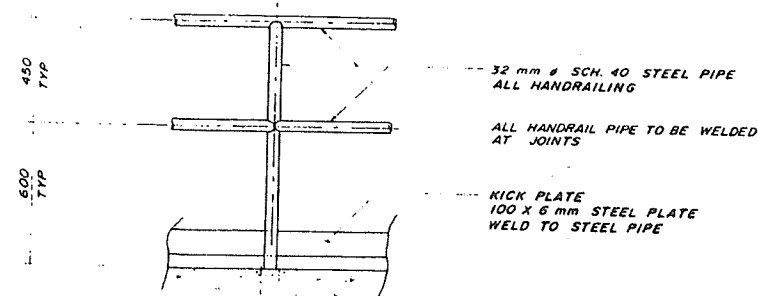
SCALE: 1"=50'
SHEET 1 OF 3
DRAWING NO. 360
REV. NO.



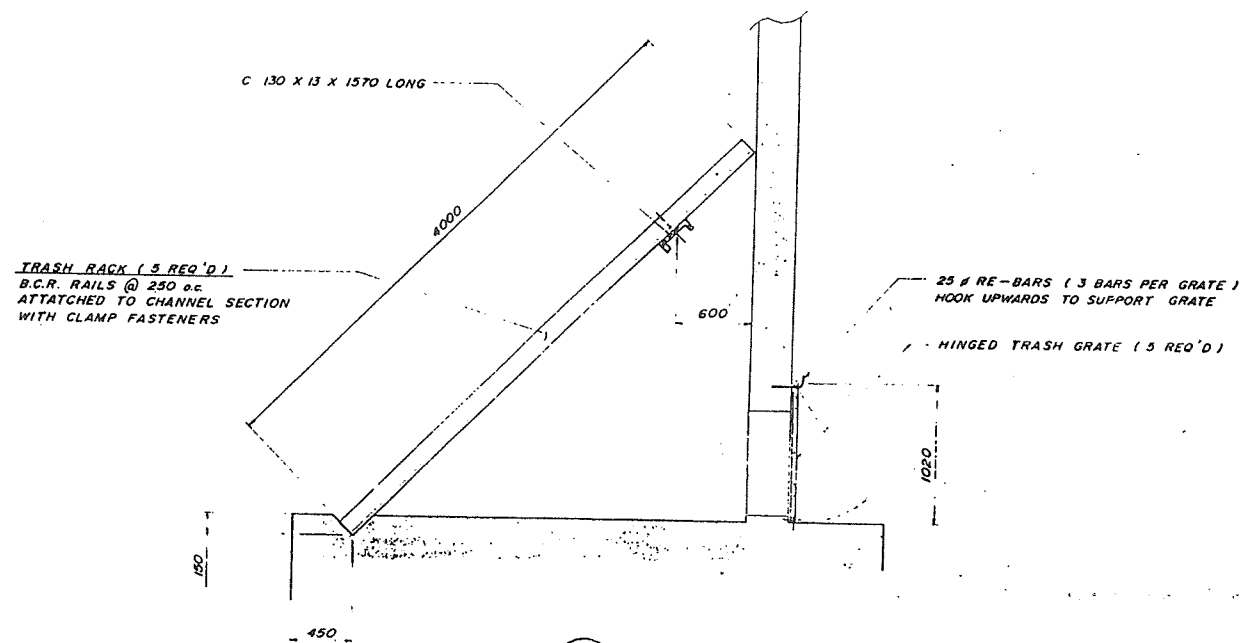
TRASH GRATE DETAIL
SCALE 1/10



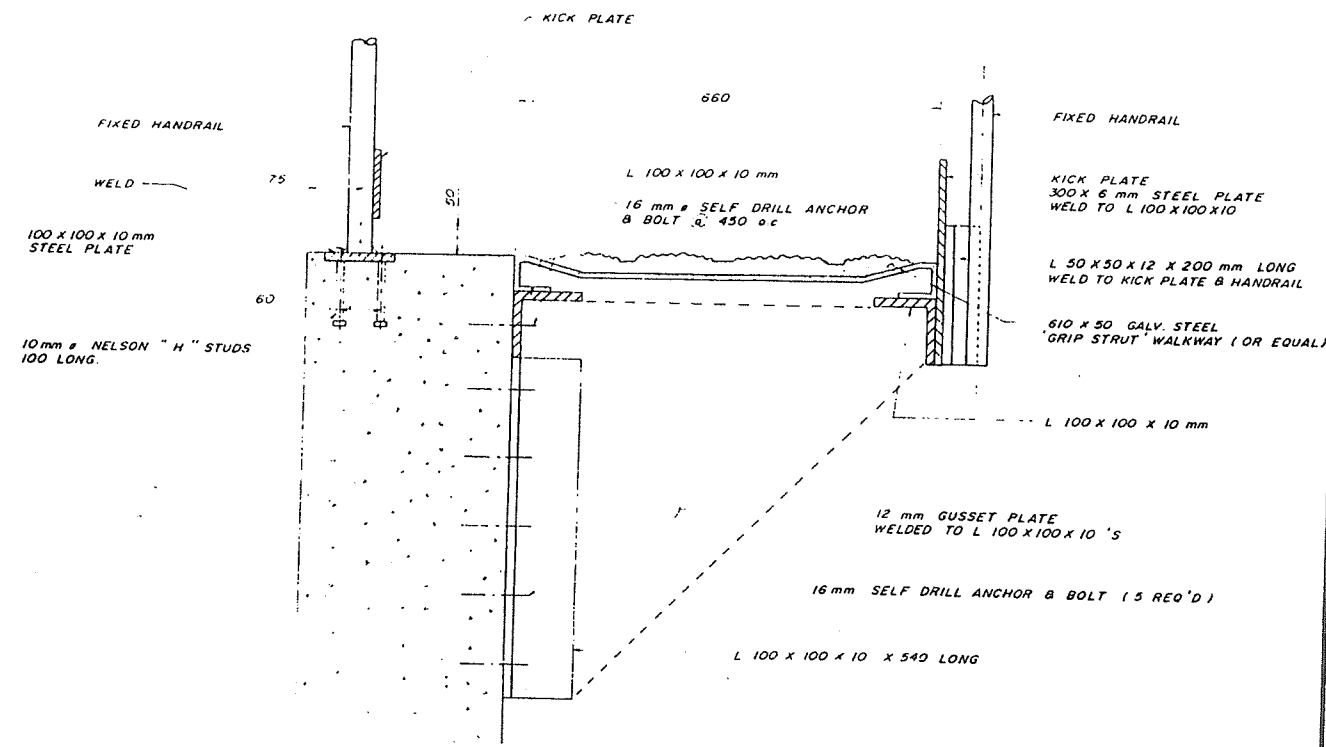
SECTION 5
SCALE 1/10



DETAIL 'F'
SCALE 1/15



SECTION 6
SCALE 1/25

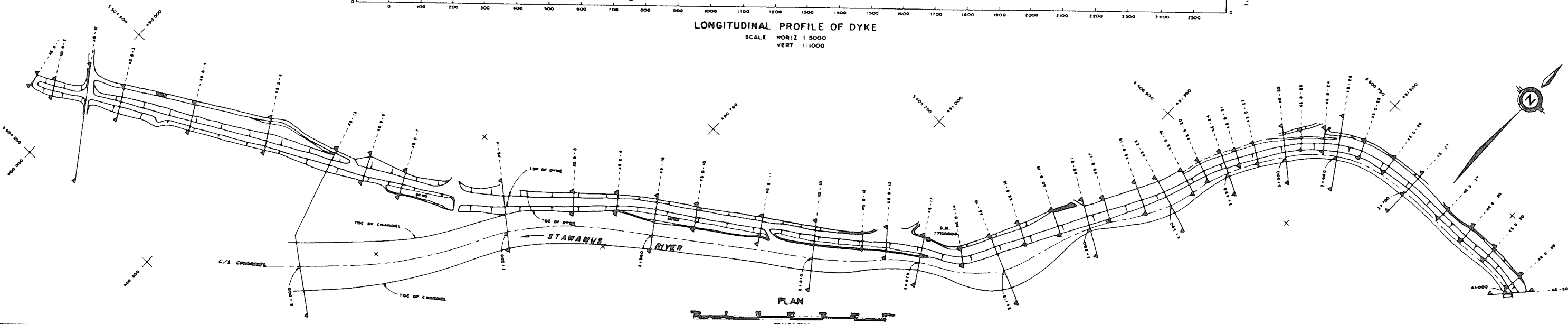
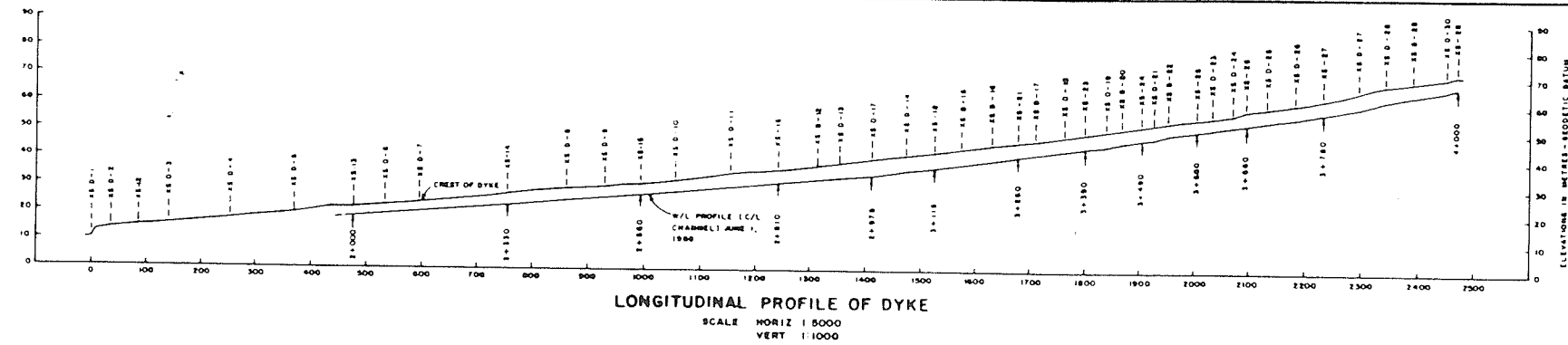
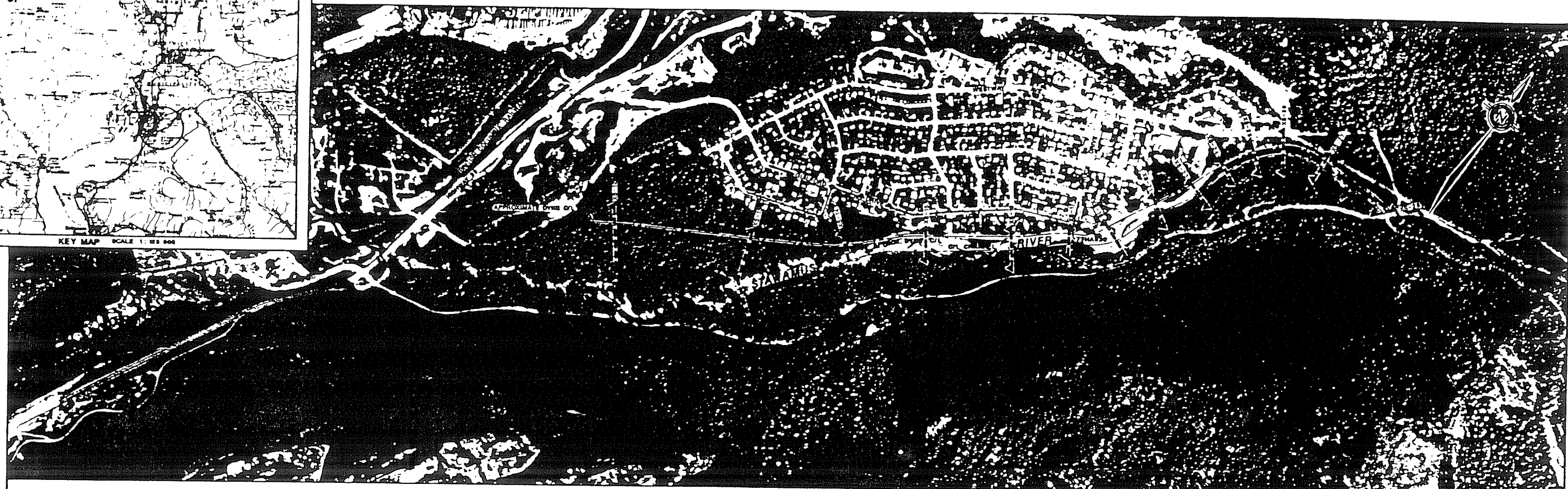
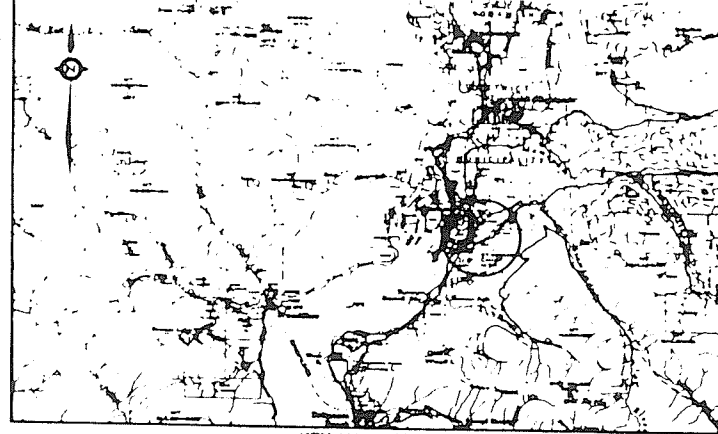


SECTION 4
SCALE 1/5

NO.	REFERENCE DRAWINGS	NOTES	LEGEND	REVISIONS	BY	DATE	APPR-SEAL	WEB ENGINEERING LTD.	DRAW BKS	DISTRICT OF SQUAMISH	SCALE AS NOTED
	CHATTERMOLE CREEK FLOODGATE STRUCTURE							USUN EDW	SHEET OF		
								DATE MAY/84		DRAWING NO	REV NO
										360-	



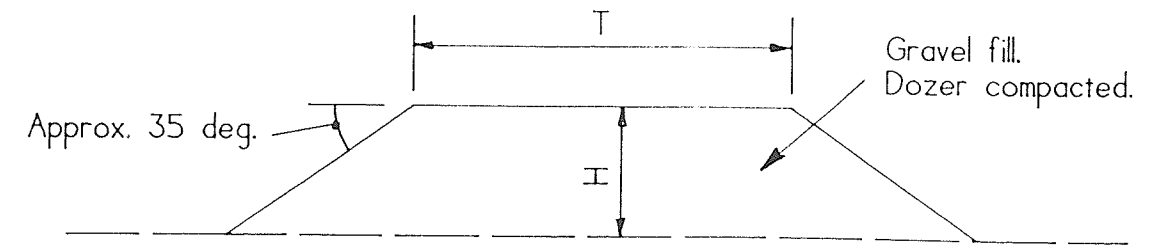
8. STAWAMUS RIVER DIKING



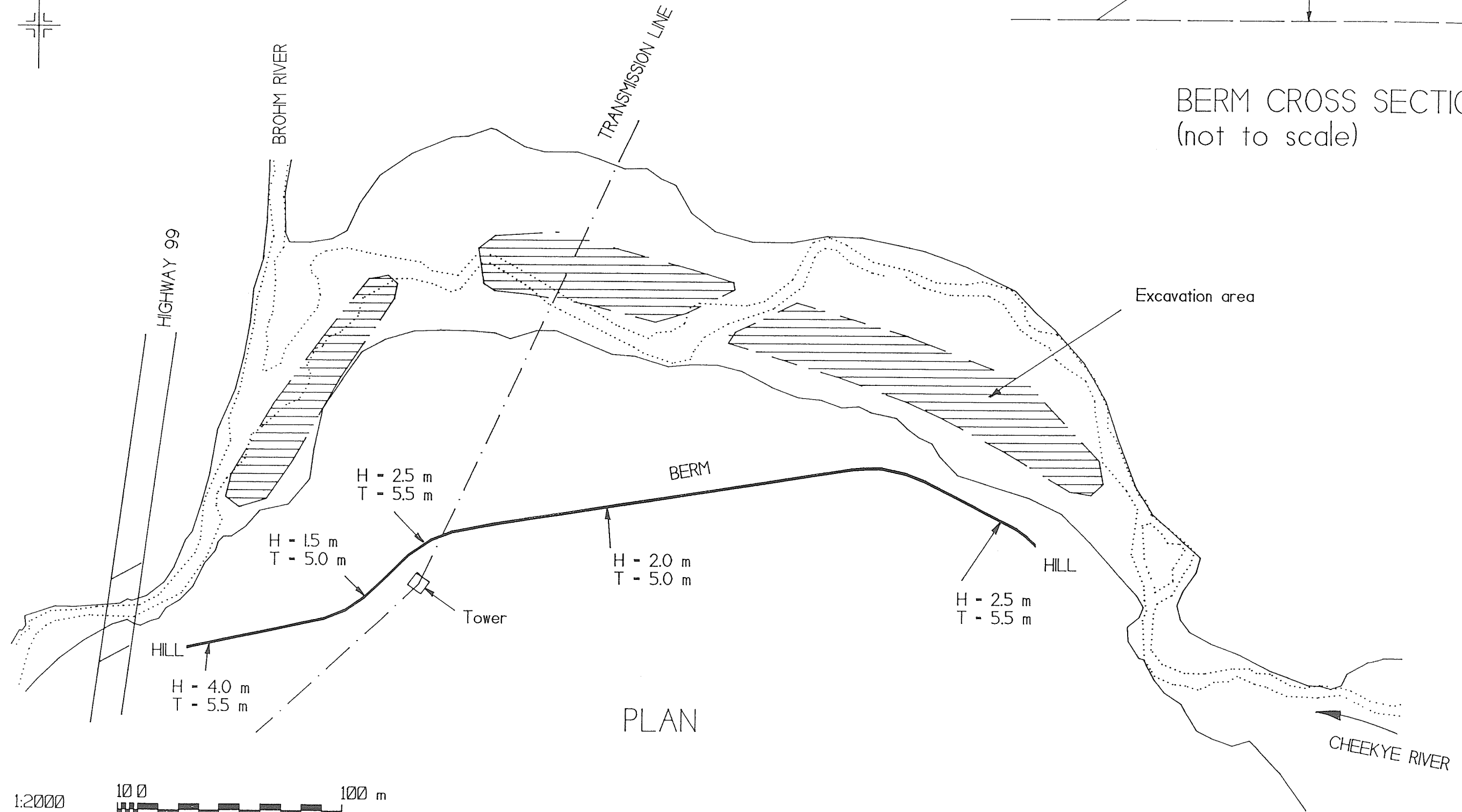
NOTES		LEGEND		STORAGE LICENCES		REFERENCES		REVISIONS		APPROVALS					
<p>1. This plan was prepared by the Ministry of Environment and Heritage of British Columbia.</p> <p>2. The construction of this dike is subject to the approval of the Ministry of Environment and Heritage of British Columbia.</p> <p>3. The dike shall be constructed in accordance with the specifications set out in this plan.</p> <p>4. The dike shall be maintained in good order at all times.</p> <p>5. The dike shall be subject to the provisions of the Water Act and the Water (Diversion) Regulations.</p>		<p>△ TRANSIT STATION</p> <p>○ REFERENCE MONUMENT (IF CON. BY ROCK)</p> <p>□ 30 METER CONTROL POINT</p> <p>○ 40 METER CONTROL POINT</p> <p>--- TEMPORARY BENCH MARK</p> <p>○ TEMPORARY REFERENCE POINT</p> <p>----- ROAD</p> <p>----- TRAIL</p> <p>----- CREEK</p> <p>----- CREEK INTERMITTENT</p> <p>----- BARRIAGE</p> <p>----- GAS BARRIAGE</p> <p>○ ALL POINTS CONTROL</p>		<p>LICENCE</p> <p>PERMIT</p> <p>APPROVED</p> <p>APPROVED</p> <p>DATE</p> <p>DATE</p>		<p>DESCRIPTION</p> <p>DATE</p> <p>DATE</p>		<p>DESCRIPTION</p> <p>DATE</p>		<p>SUPPLIED BY: [Signature]</p> <p>DATE: MAY 1999</p> <p>CHECKED BY: [Signature]</p> <p>DATE: MAY 1999</p> <p>APPROVED BY: [Signature]</p> <p>DATE: MAY 1999</p> <p>APPROVED BY: [Signature]</p> <p>DATE: MAY 1999</p>		<p>Province of British Columbia</p> <p>Ministry of Environment</p> <p>WATER MANAGEMENT BRANCH</p> <p>STAWAMUS RIVER</p> <p>AT VALLEYCLIFF SUBDIVISION</p> <p>PLAN AND PROFILE</p> <p>APPROVED: [Signature]</p>		<p>PROJECT NO. 88-52-1</p> <p>DATE: MAY 1999</p> <p>SCALE: 1:5000</p>	



9. CHEEKYE RIVER TRAINING BERM



BERM CROSS SECTION
(not to scale)



PLAN

AS CONSTRUCTED

DATE: 17 September 1992
C. Robert Bland, P. Eng., consulting engineer

WATER MANAGEMENT DIVISION
OIC 1298. AUGUST 1991 FLOOD

CHEEKYE RIVER L/B U/S HIGHWAY 99
NEW BERM

SITE: 1.050.040
SHEET 1 OF 1

UNSURVEYED CROWN LAND

HIGHWAY R/W PLAN 1 5 1

CHEEKYE RIVER

Approx. 9 Km. to Squamish

B.C. HYDRO R/W

REF. PLAN 6 5 8

UNSURVEYED CROWN LAND

ALICE LAKE PROVINCIAL PARK

HIGHWAY No. 99 R/W

D.L. PLAN 1 2 4 4 8 7 2 1 9

SCALE 0 1:1000 50

Rev	Date	Description	Drawn	Checked	Date

REVISIONS

Province of British Columbia
 MINISTRY OF TRANSPORTATION AND HIGHWAYS
 SOUTH COAST REGION

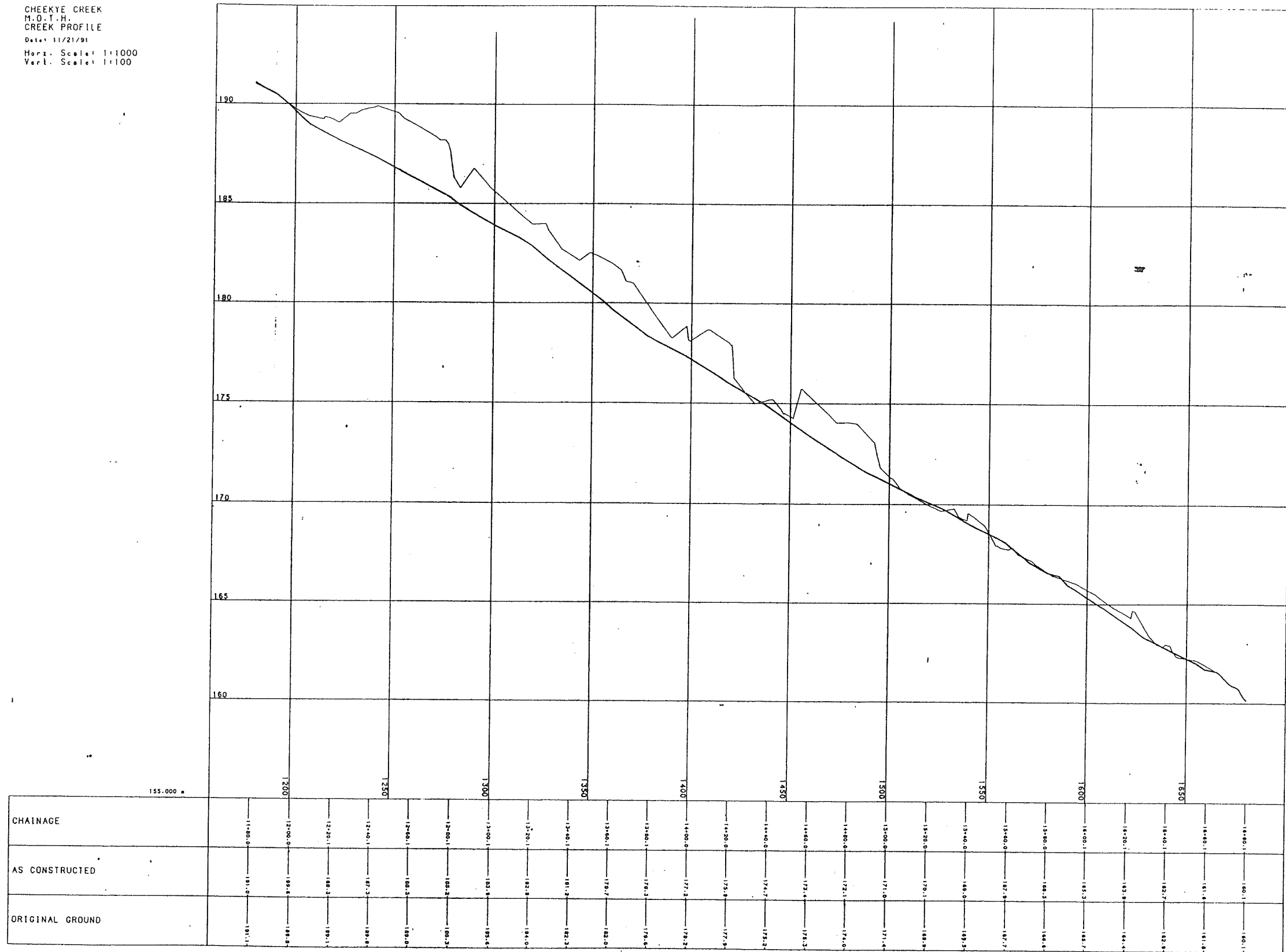
CHEEKYE RIVER
 As-Built Plan for River Flood Control
 Construction (1991)

COMMENCED: OCTOBER 26, 1991 PROJECT SUPERVISOR: MIKE W. SKANDS
 COMPLETED: NOVEMBER 9, 1991 HIGHWAY ENGINEERING (SURVEY)

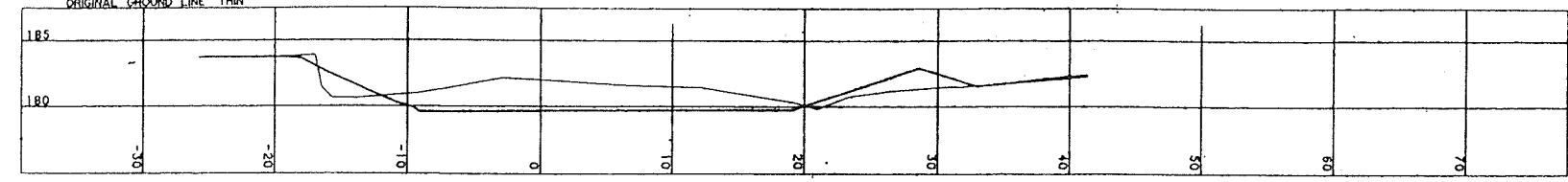
FILE No. PROJECT No. 07852-0405 REV. 1 DRAWING No. 1 of 7

CANCEL PRINTS BEARING PREVIOUS LETTER

CHEEKYE CREEK
 M.O.T.H.
 CREEK PROFILE
 Date: 11/21/91
 Horiz. Scale: 1:1000
 Vert. Scale: 1:100

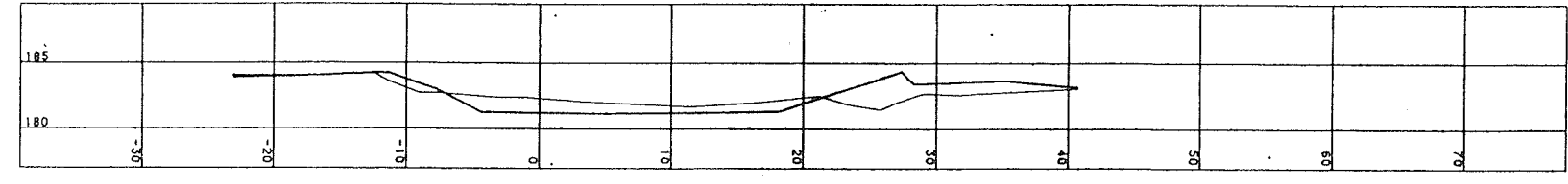


CHEEKYE CREEK
 O.G. & CONSTRUCTED
 Date: 11/21/81
 Horiz. Scale: 1:250
 Vert. Scale: 1:250
 Bearing: 293°59'56"
 Station: 13+60.000



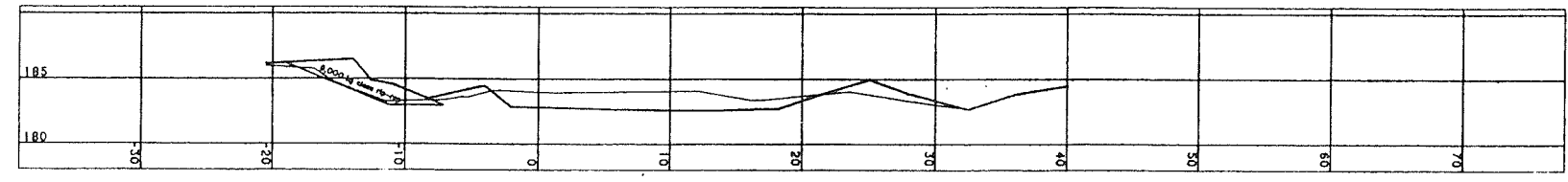
175.000

CHEEKYE CREEK
 O.G. & CONSTRUCTED
 Date: 11/21/81
 Horiz. Scale: 1:250
 Vert. Scale: 1:250
 Bearing: 293°59'56"
 Station: 13+40.000



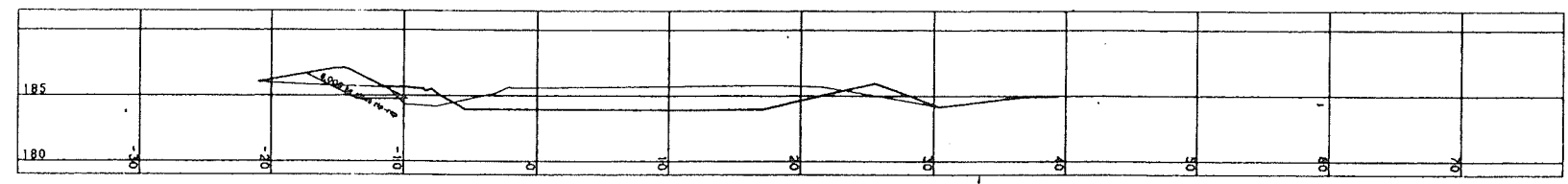
177.000

CHEEKYE CREEK
 O.G. & CONSTRUCTED
 Date: 11/21/81
 Horiz. Scale: 1:250
 Vert. Scale: 1:250
 Bearing: 293°59'56"
 Station: 13+20.000



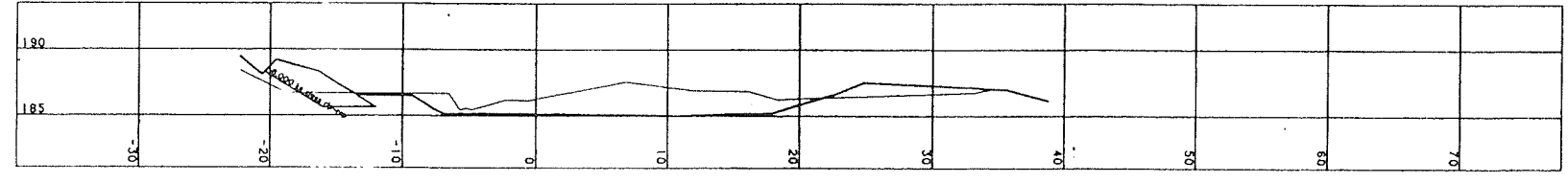
178.000

CHEEKYE CREEK
 O.G. & CONSTRUCTED
 Date: 11/21/81
 Horiz. Scale: 1:250
 Vert. Scale: 1:250
 Bearing: 293°59'56"
 Station: 13+00.000



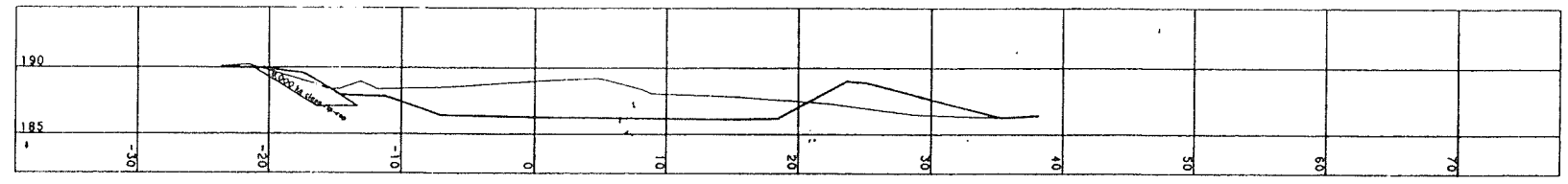
179.000

CHEEKYE CREEK
 O.G. & CONSTRUCTED
 Date: 11/21/81
 Horiz. Scale: 1:250
 Vert. Scale: 1:250
 Bearing: 293°59'56"
 Station: 12+80.000



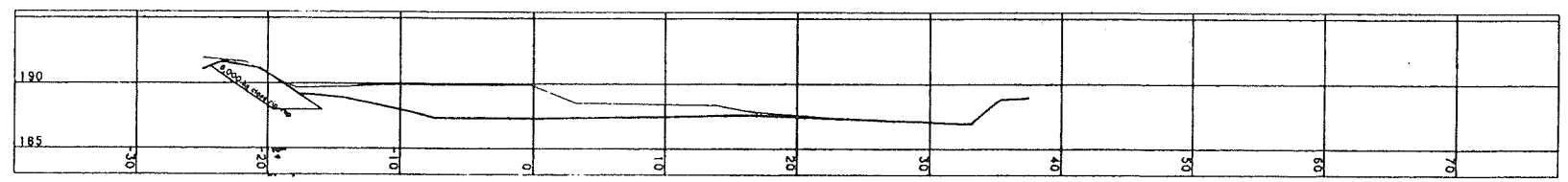
181.000

CHEEKYE CREEK
 O.G. & CONSTRUCTED
 Date: 11/21/81
 Horiz. Scale: 1:250
 Vert. Scale: 1:250
 Bearing: 293°59'56"
 Station: 12+60.000



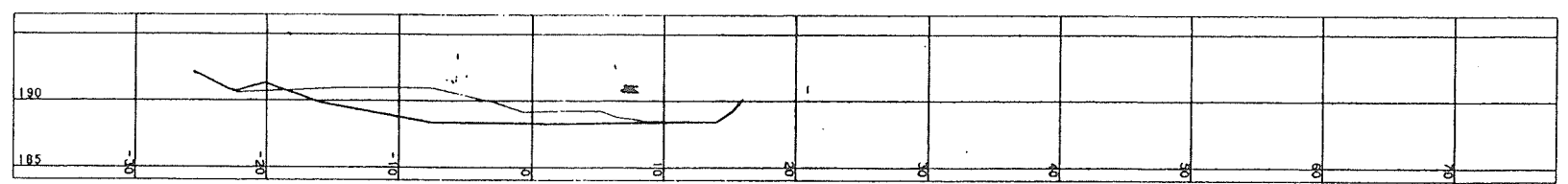
182.000

CHEEKYE CREEK
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 Horiz. Scale: 1:250
 Vert. Scale: 1:250
 Bearing: 293°59'56"
 Station: 12+40.000



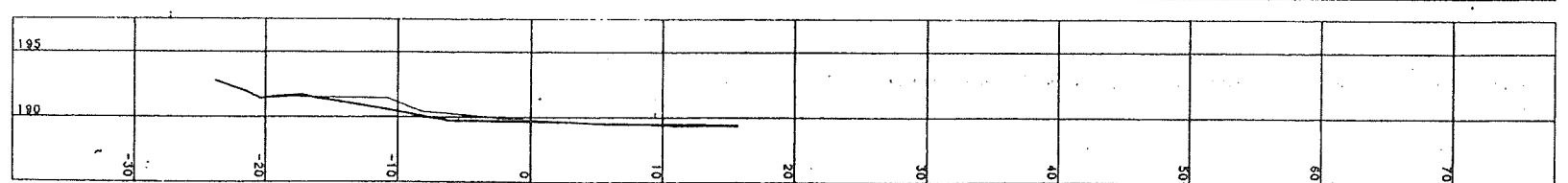
183.000

CHEEKYE CREEK
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 Vert. Scale: 1:250
 Bearing: 314°55'13"
 Station: 12+20.000



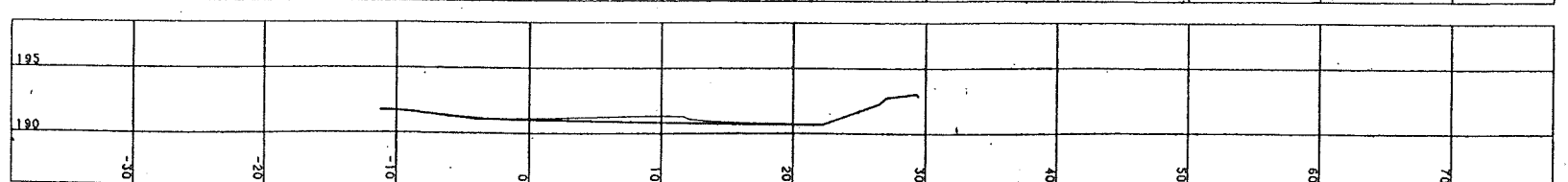
184.000

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 Vert. Scale: 1:250
 Bearing: 337°50'19"
 Station: 12+00.000



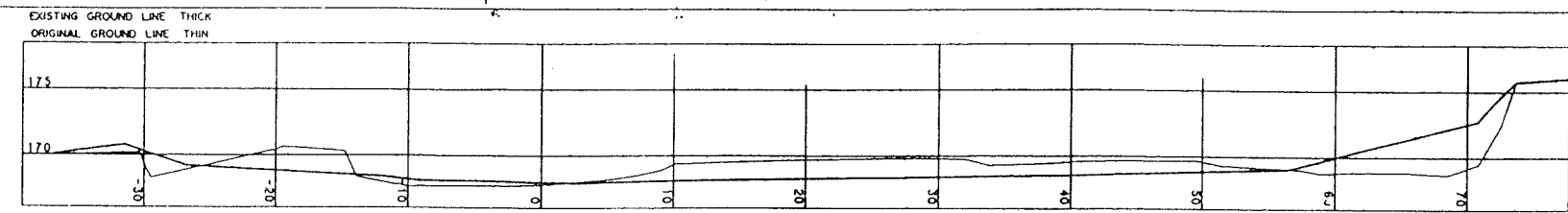
185.000

CHEEKYE CREEK
 O.G. & CONSTRUCTED
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 Horiz. Scale: 1:250
 Vert. Scale: 1:250
 Bearing: 343°29'01"
 Station: 11+80.000

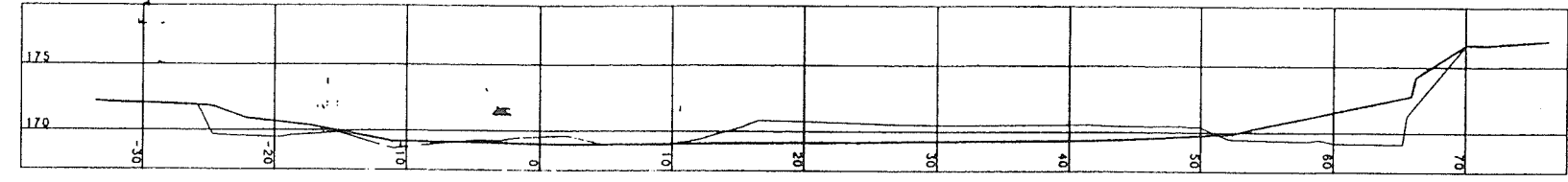


186.000

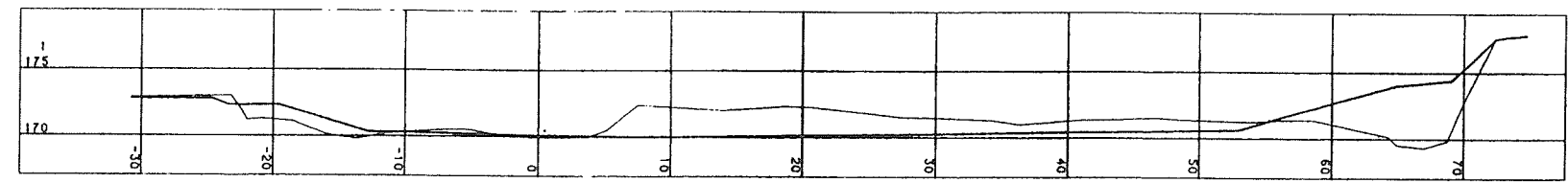
CHEEKYE CREEK
 O.C. & CONSTRUCTED
 Date: 11/21/81
 Horiz. Scale: 1:250
 Vert. Scale: 1:250
 Bearing: 283°08'27"
 Station: 15+60.000



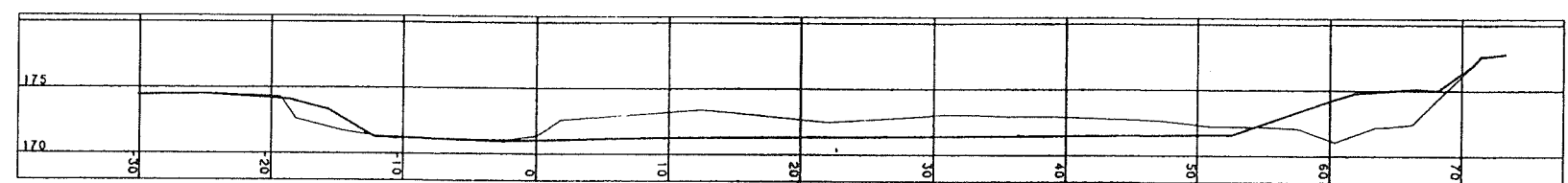
CHEEKYE CREEK
 O.C. & CONSTRUCTED
 Date: 11/21/81
 Horiz. Scale: 1:250
 Vert. Scale: 1:250
 Bearing: 283°08'27"
 Station: 15+40.000



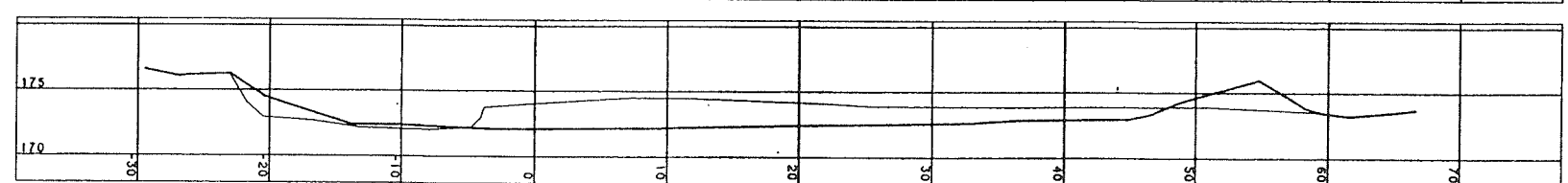
CHEEKYE CREEK
 O.C. & CONSTRUCTED
 Date: 11/21/81
 Horiz. Scale: 1:250
 Vert. Scale: 1:250
 Bearing: 283°08'27"
 Station: 15+20.000



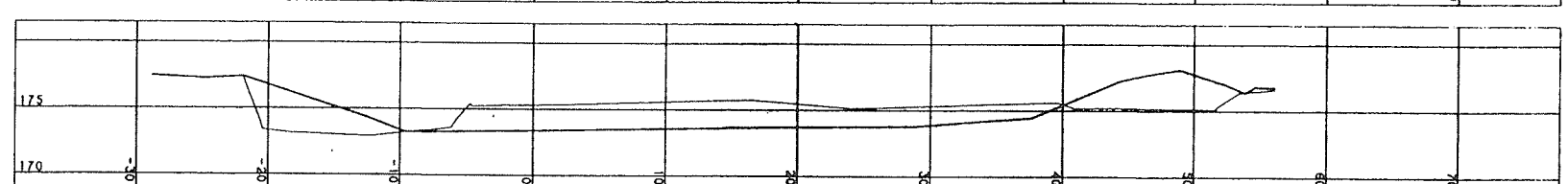
CHEEKYE CREEK
 O.C. & CONSTRUCTED
 Date: 11/21/81
 Horiz. Scale: 1:250
 Vert. Scale: 1:250
 Bearing: 283°08'27"
 Station: 15+00.000



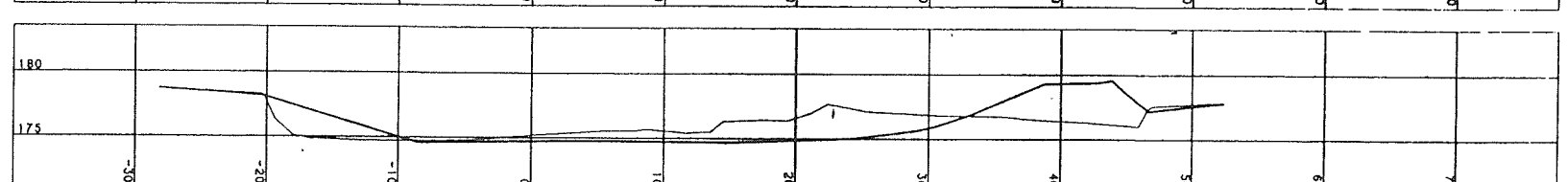
CHEEKYE CREEK
 O.C. & CONSTRUCTED
 Date: 11/21/81
 Horiz. Scale: 1:250
 Vert. Scale: 1:250
 Bearing: 283°08'27"
 Station: 14+80.000



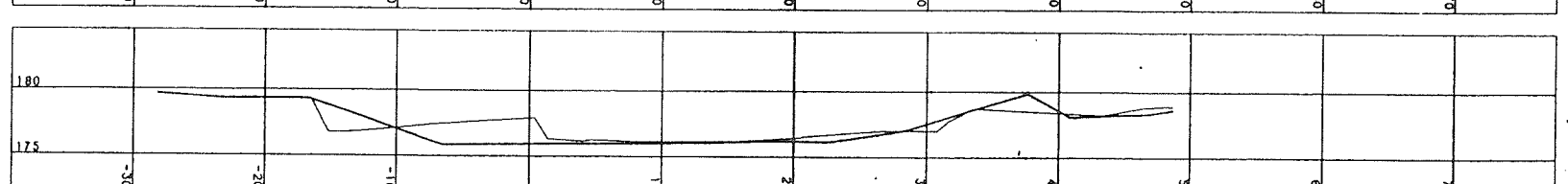
CHEEKYE CREEK
 O.C. & CONSTRUCTED
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 Horiz. Scale: 1:250
 Vert. Scale: 1:250
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 Station: 14+60.000



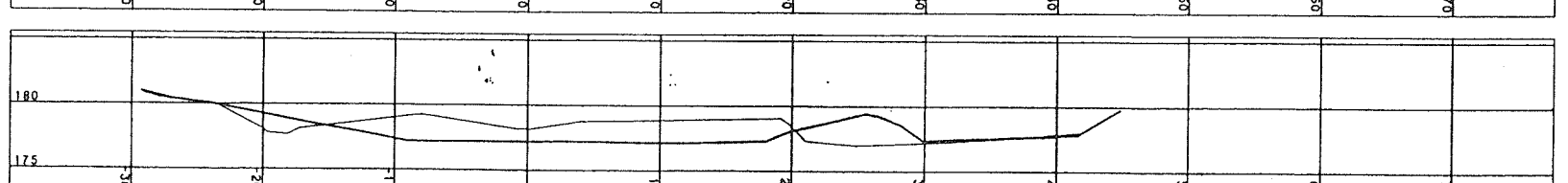
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 O.C. & CONSTRUCTED
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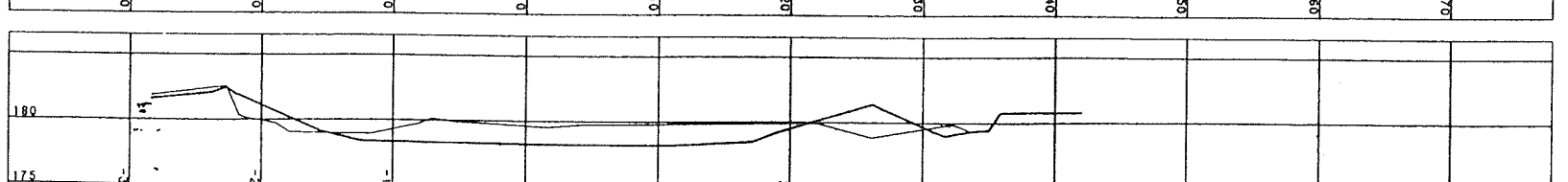
CHEEKYE CREEK
 O.C. & CONSTRUCTED
 Date: 11/21/81
 Horiz. Scale: 1:250
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 Station: 14+20.000

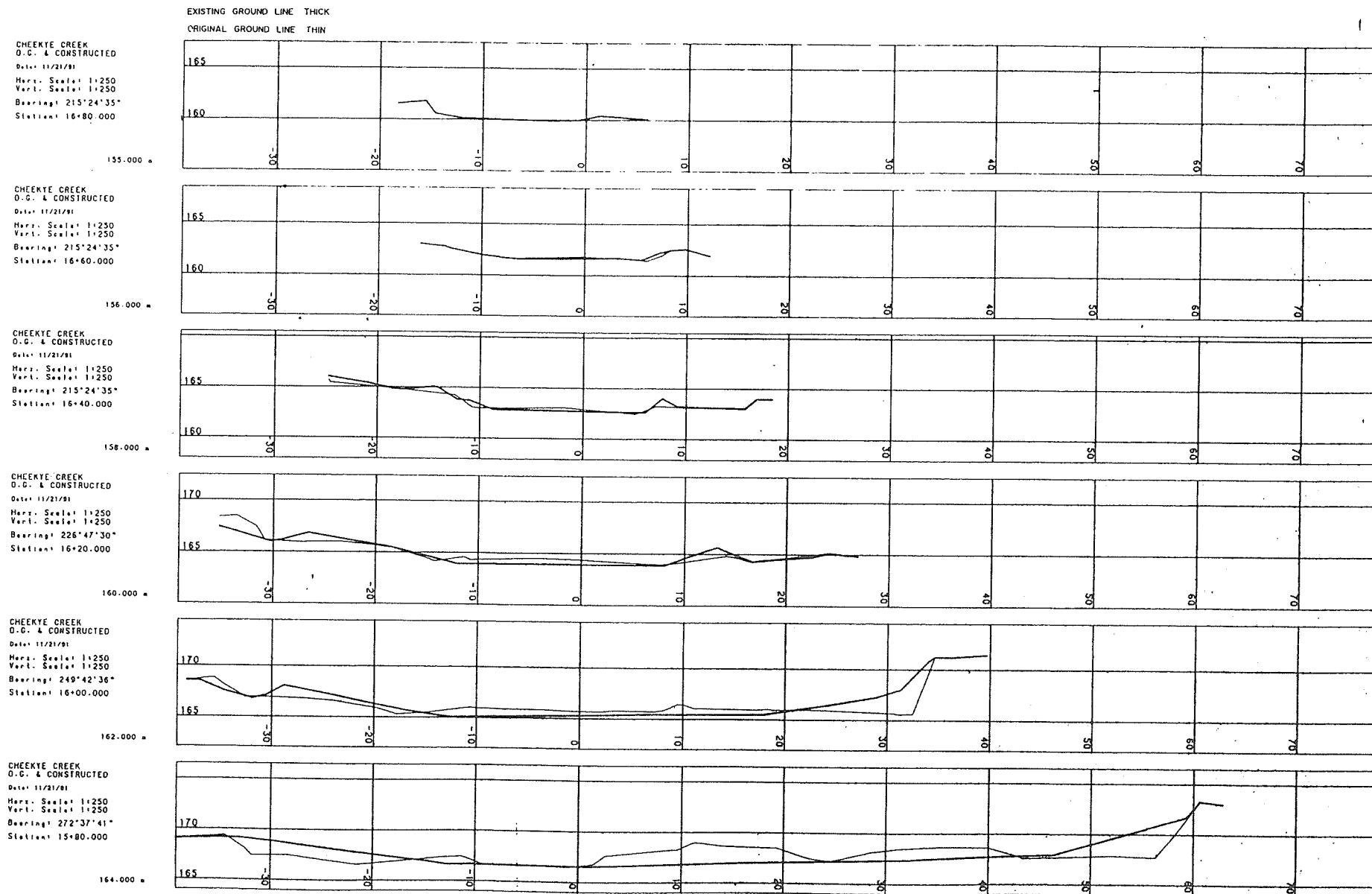


CHEEKYE CREEK
 O.C. & CONSTRUCTED
 Date: 11/21/81
 Horiz. Scale: 1:250
 Vert. Scale: 1:250
 Bearing: 284°03'43"
 Station: 14+00.000

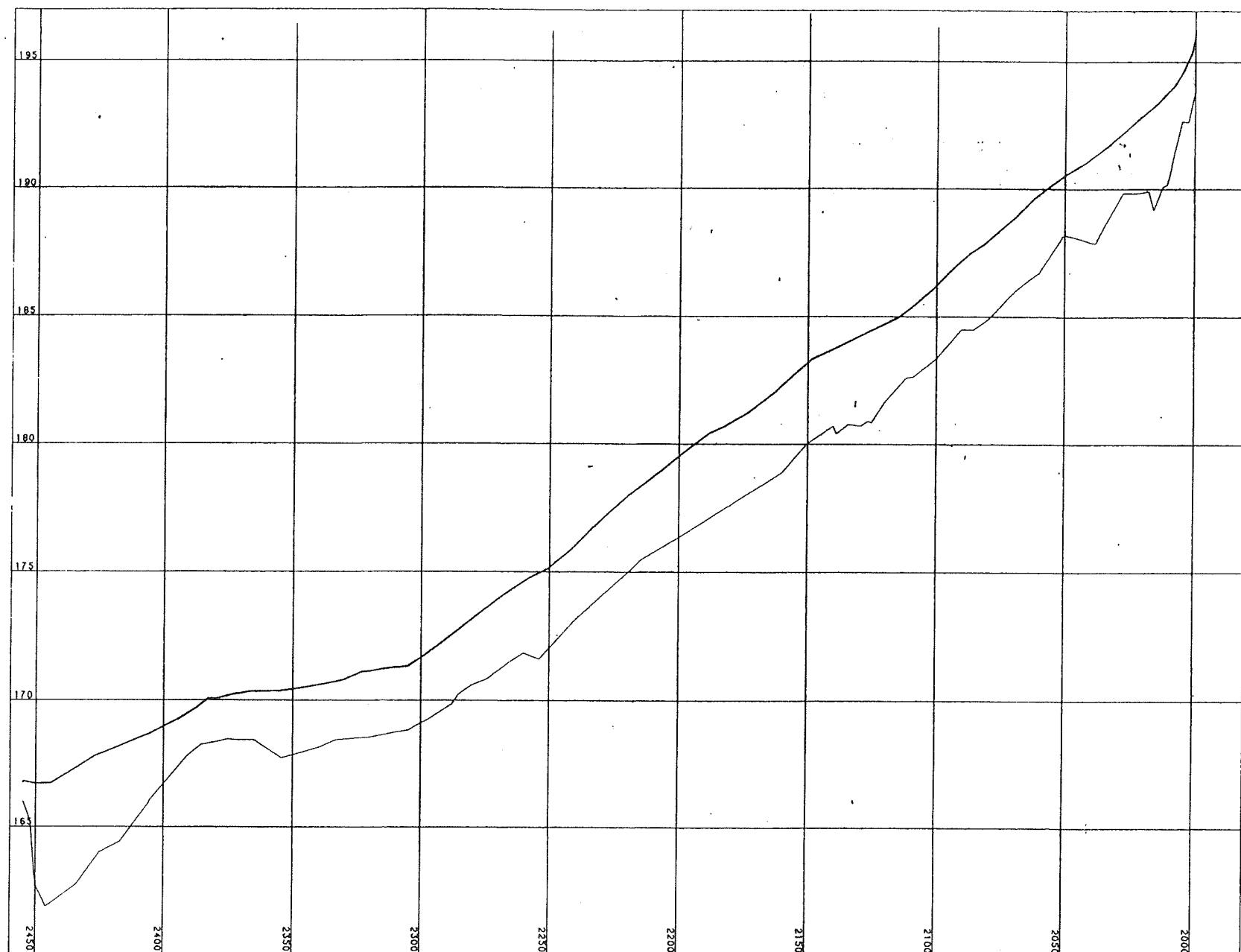


CHEEKYE CREEK
 O.C. & CONSTRUCTED
 Date: 11/21/81
 Horiz. Scale: 1:250
 Vert. Scale: 1:250
 Bearing: 293°59'56"
 Station: 13+80.000



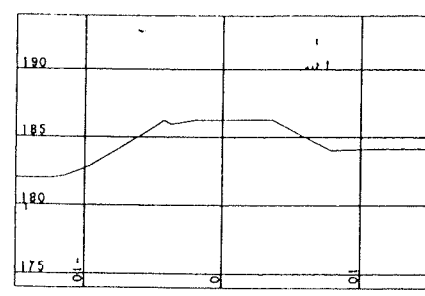


CHEEKYE CREEK
 M.O.T.H.
 BERM PROFILE
 Date: 11/21/91
 Horiz. Scale: 1:1000
 Vert. Scale: 1:100

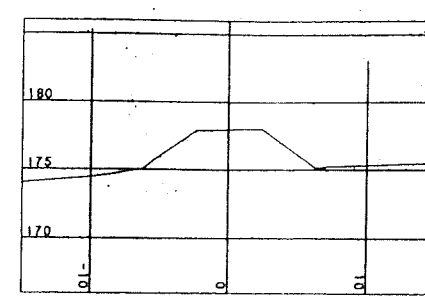


CHAINAGE	AS CONSTRUCTED	ORIGINAL GROUND
2150	166.8	166.0
2155	167.0	162.3
2160	168.1	164.3
2165	169.2	169.4
2170	170.1	169.4
2175	170.3	170.3
2180	171.1	168.3
2185	171.0	168.3
2190	170.8	168.1
2195	171.9	168.2
2200	172.3	170.8
2205	174.6	171.8
2210	176.0	173.1
2215	178.0	175.0
2220	180.0	177.6
2225	182.3	178.9
2230	182.7	180.7
2235	183.3	182.4
2240	185.5	182.7
2245	186.7	181.7
2250	188.0	184.4
2255	189.8	186.7
2260	190.5	188.3
2265	191.2	189.4
2270	192.9	190.1
2275	193.6	190.1
2280	194.0	192.8
2285	194.0	192.8
2290	194.0	192.8
2295	194.0	192.8
2300	194.0	192.8

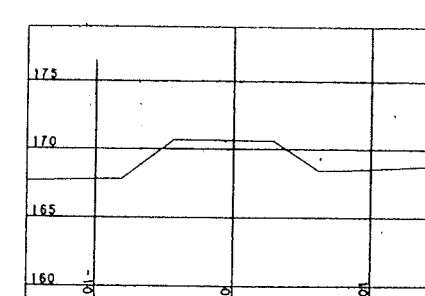
CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 267°10'03"
Station: 21+00.000



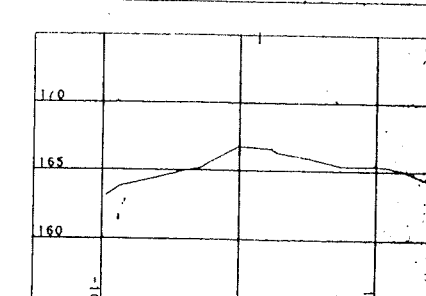
CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 260°49'40"
Station: 22+00.000



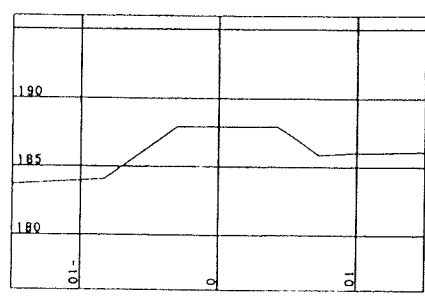
CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 230°12'36"
Station: 23+40.000



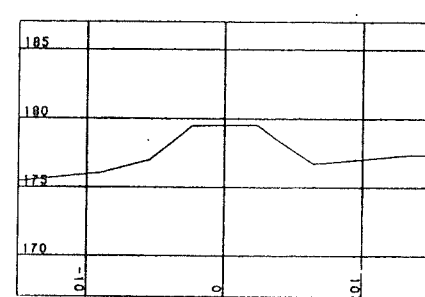
CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 258°41'59"
Station: 24+55.000



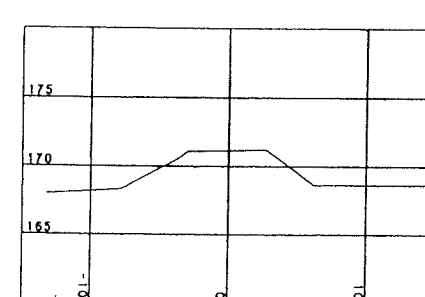
CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 282°14'43"
Station: 20+80.000



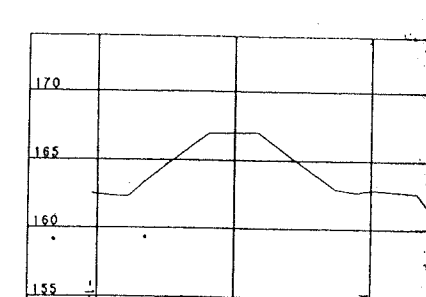
CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 260°49'40"
Station: 22+00.000



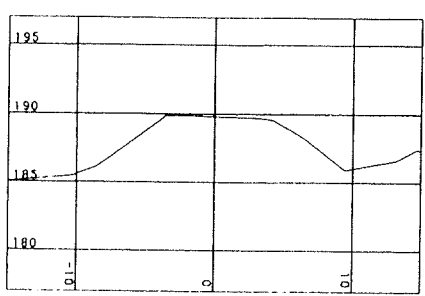
CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 236°27'27"
Station: 23+20.000



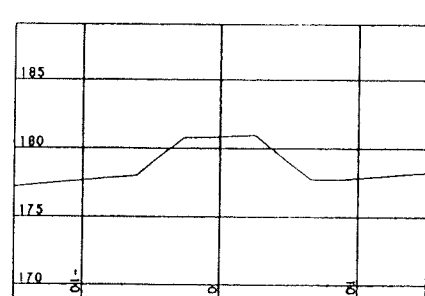
CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 258°41'59"
Station: 24+40.000



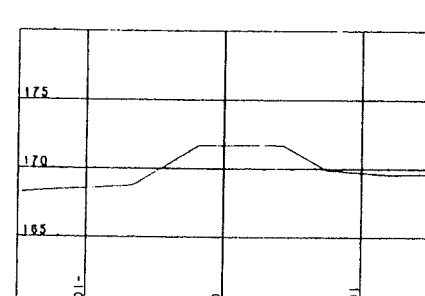
CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 294°41'12"
Station: 20+80.000



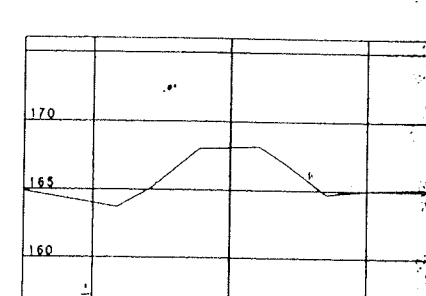
CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 260°49'40"
Station: 21+80.000



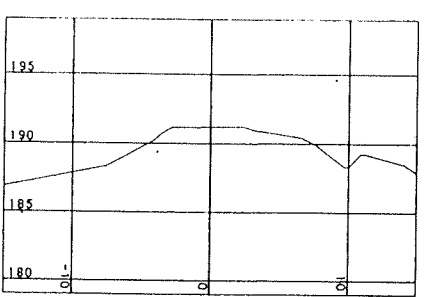
CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 259°22'33"
Station: 23+00.000



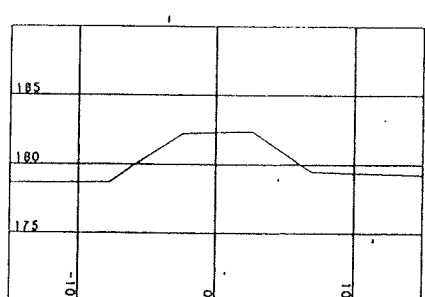
CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 258°41'59"
Station: 24+20.000



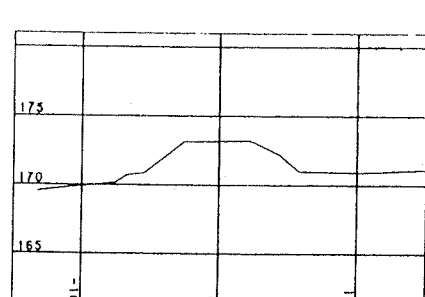
CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 294°41'12"
Station: 20+40.000



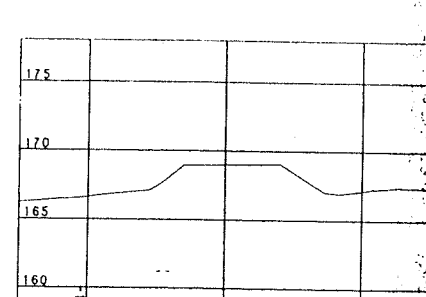
CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 260°49'40"
Station: 21+60.000



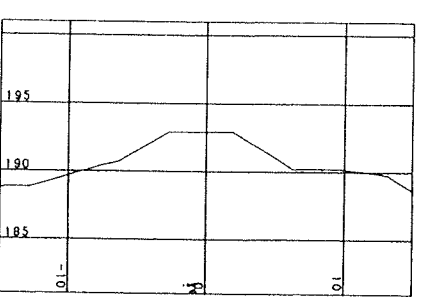
CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 260°49'40"
Station: 22+80.000



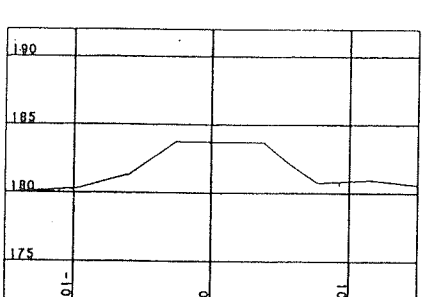
CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 258°41'59"
Station: 24+00.000



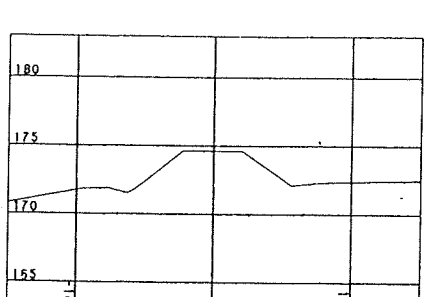
CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 294°41'12"
Station: 20+20.000



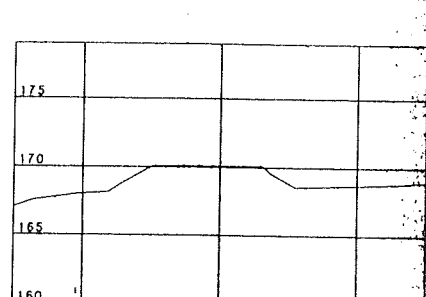
CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 260°49'40"
Station: 21+40.000



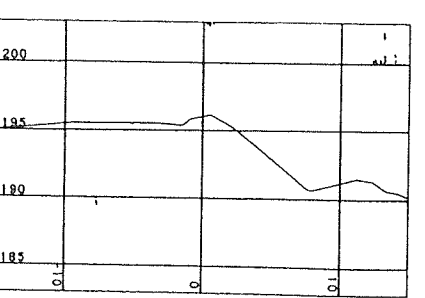
CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 260°49'40"
Station: 22+60.000



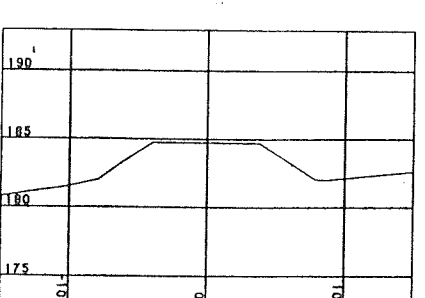
CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 245°28'57"
Station: 23+80.000



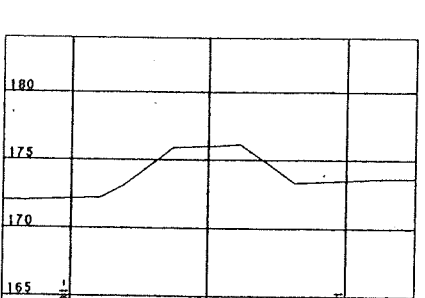
CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 311°20'14"
Station: 20+00.000



CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 260°49'40"
Station: 21+20.000



CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 280°49'40"
Station: 22+40.000



CHEEKY CREEK
BERM AS CONSTRUCTED
Date: 11/20/91
Hori. Scale: 1:250
Vert. Scale: 1:250
Bearing: 230°12'36"
Station: 23+60.000

