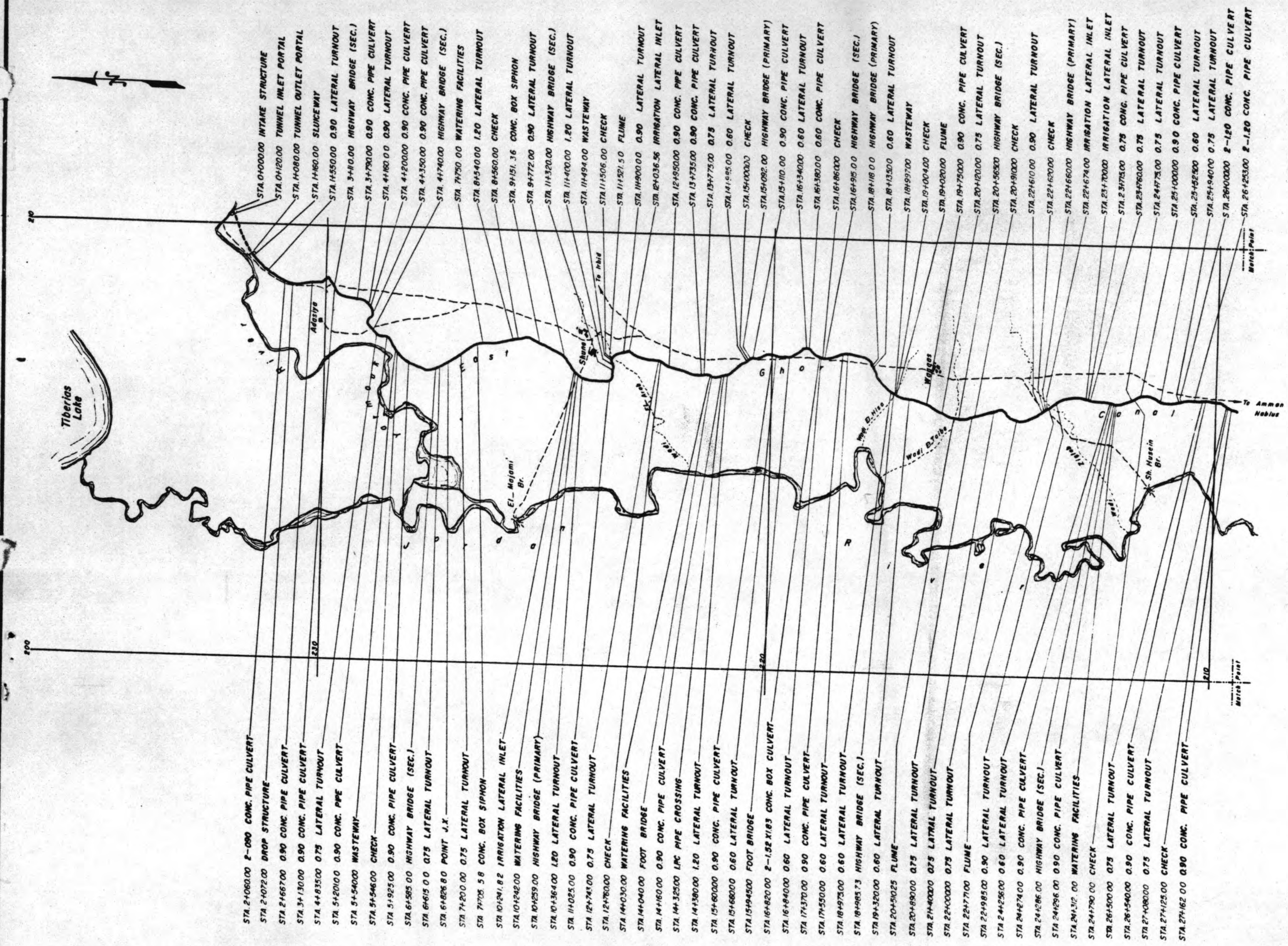
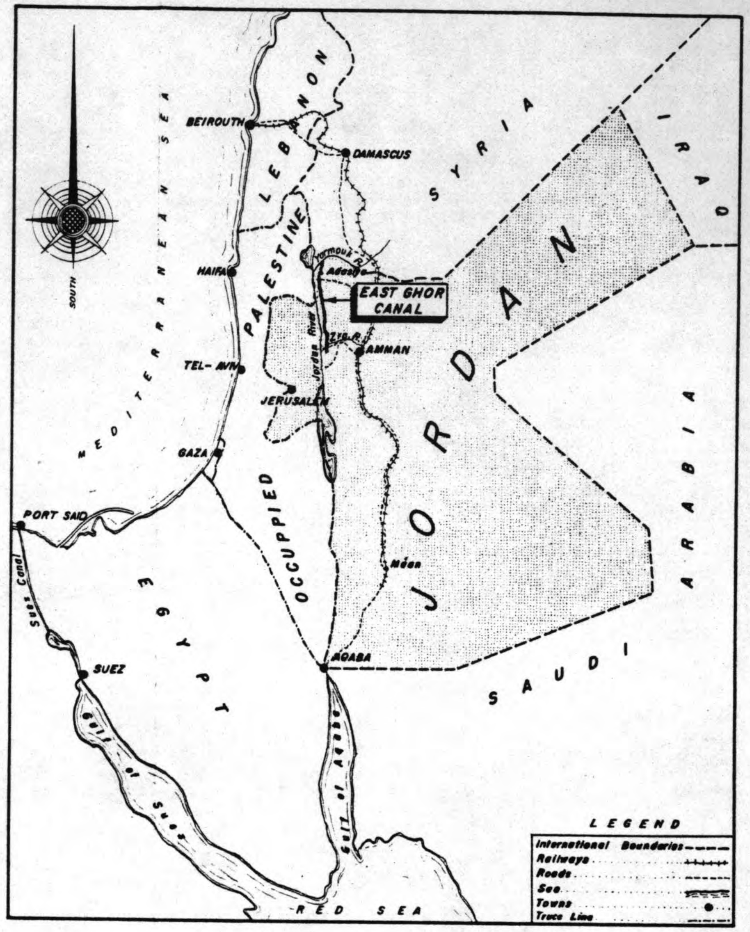




VICINITY MAP

0 1000 2000 3000 M.
Scale
Except as noted

	By	Date	Chkd	Date
Dsn.				
Drwn.	J.O.N.	21.8.58		7.8.58
Trac.				
Sub. [redacted]				

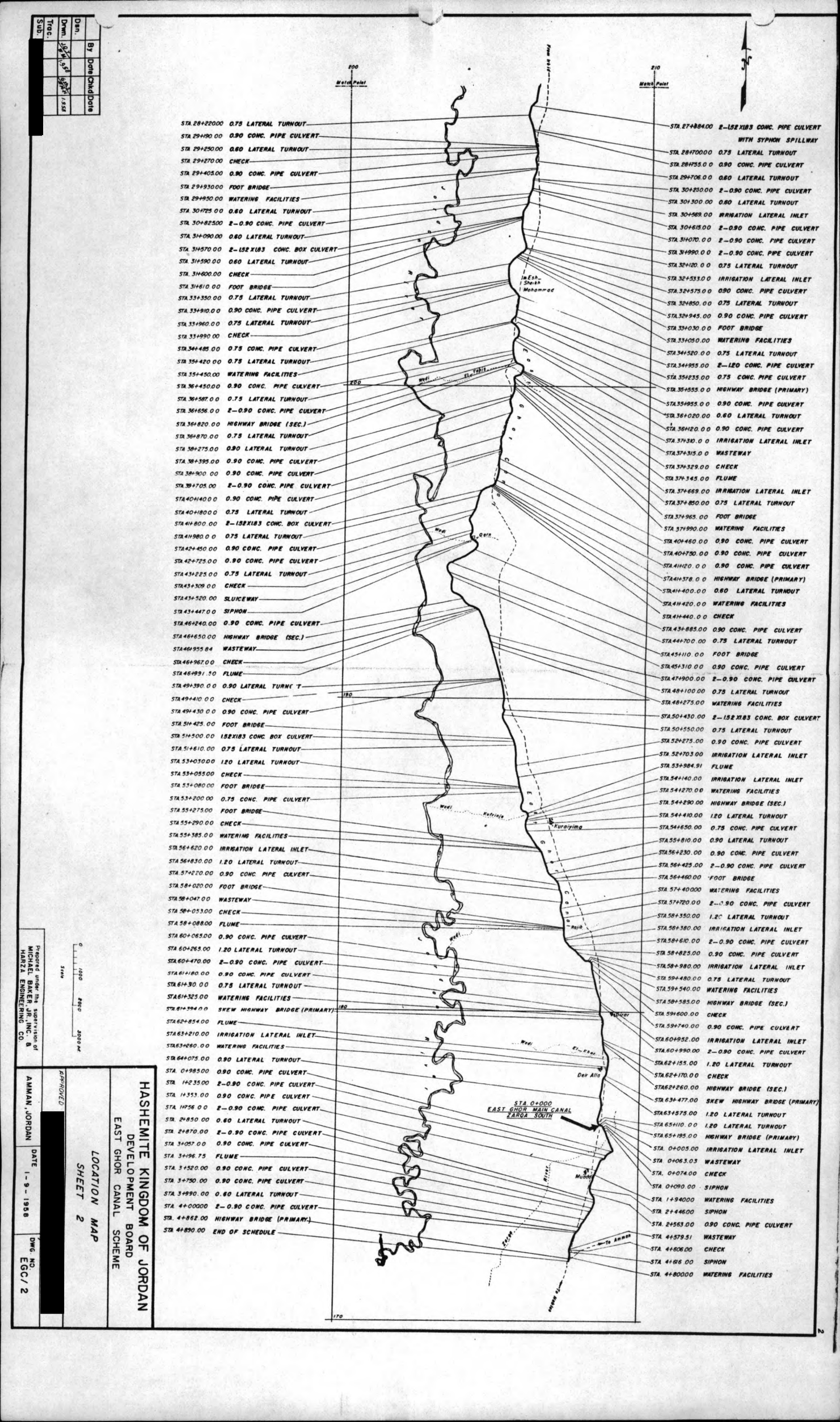
Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

LOCATION MAP
SHEET I

APPROVED: [redacted]

AMMAN, JORDAN | DATE. 1.9.1958. | DWG. NO. EGC/1



HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

LOCATION MAP
SHEET 2

Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

APPROVED [redacted]

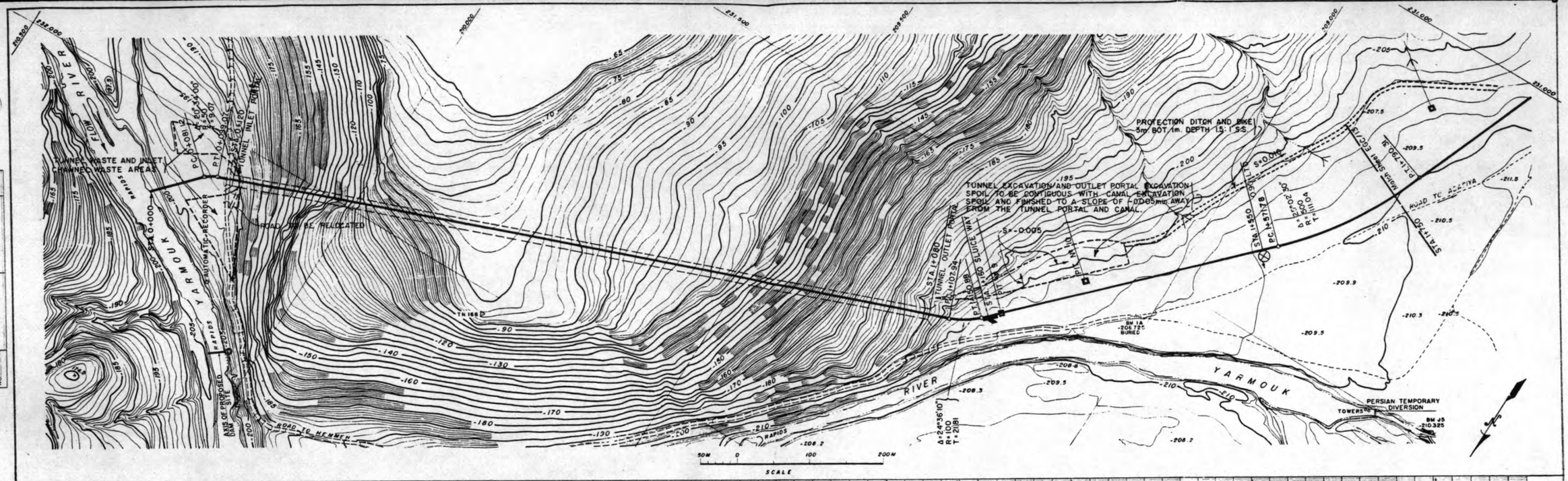
AMMAN, JORDAN

DATE 1-9-1958

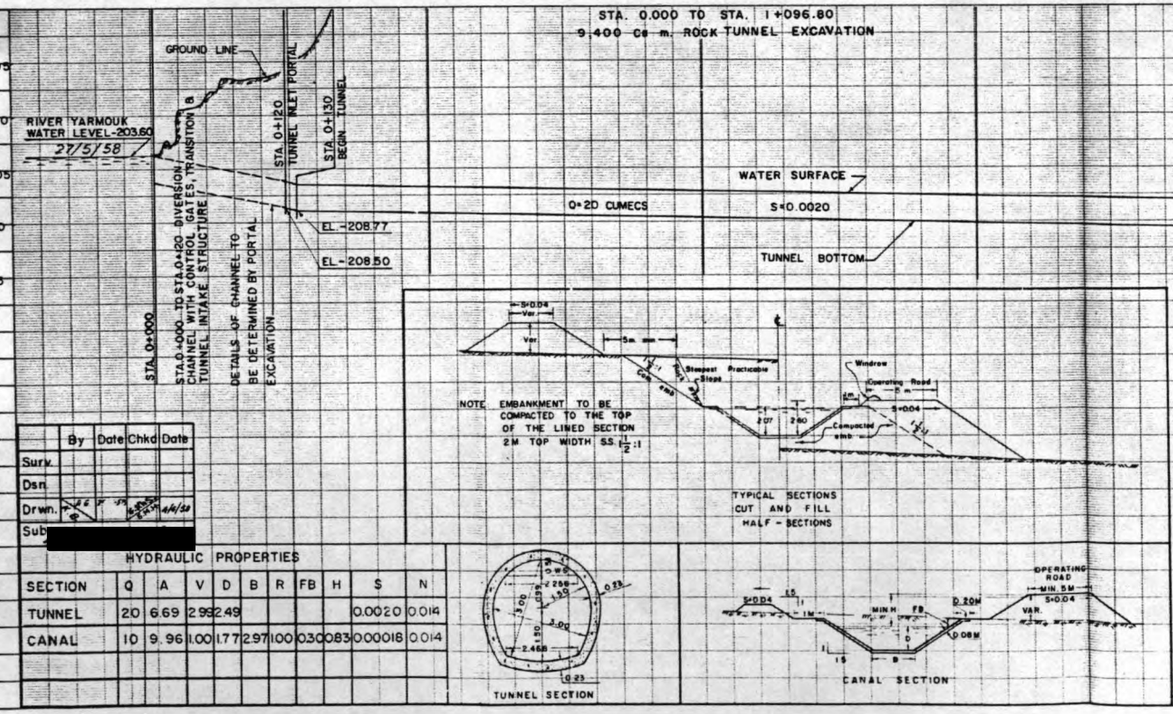
DWG. NO. EGC/2

SUB.					
Trac.					
Drwn.					
Dsn.					
	By	Date	Chkd	Date	

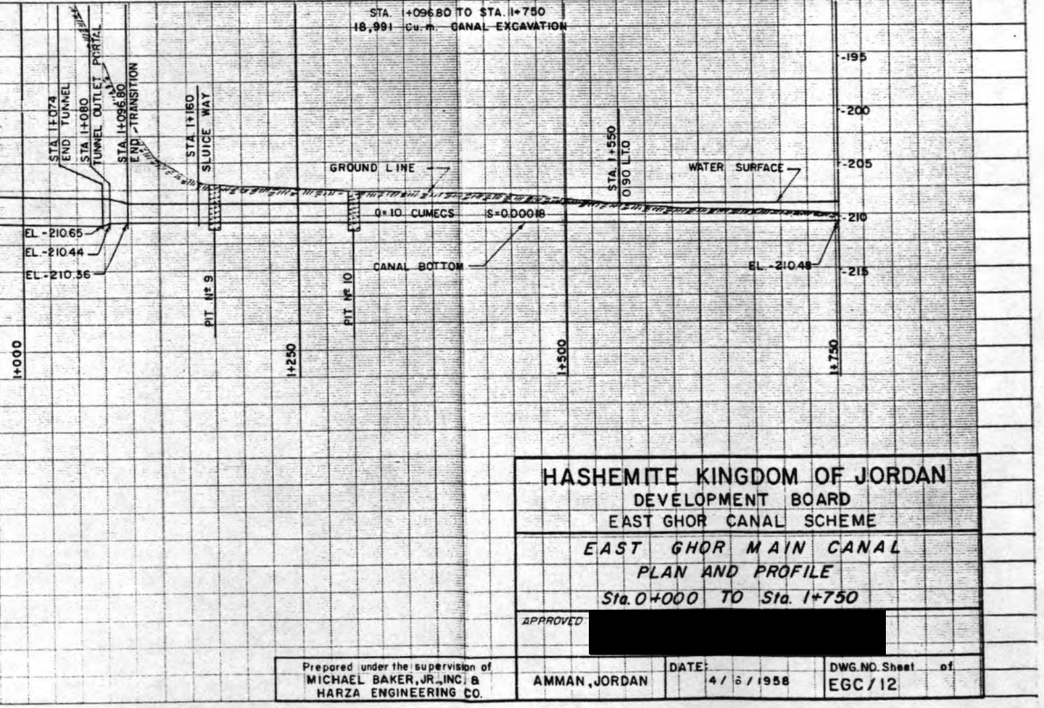
2



STA. 0.000 TO STA. 1+096.80
9,400 Cu. m. ROCK TUNNEL EXCAVATION



STA. 1+096.80 TO STA. 1+750
18,991 Cu. m. CANAL EXCAVATION



	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.				4/6/58
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
TUNNEL	20	6.69	2.99	2.49					0.0020	0.014
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014

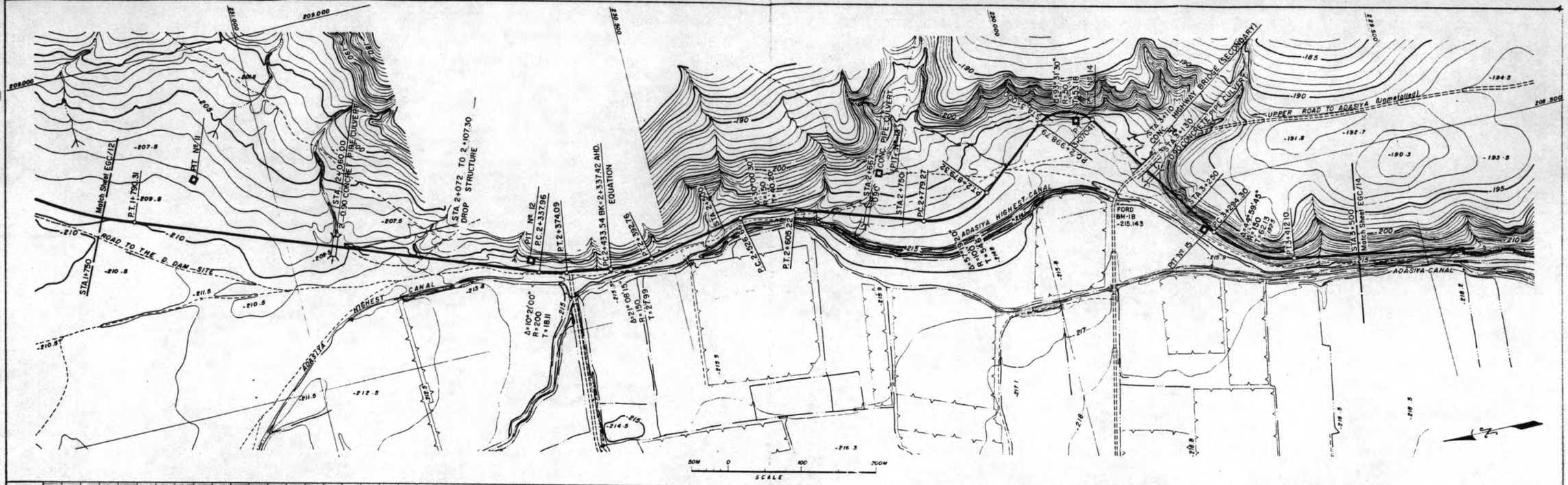
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

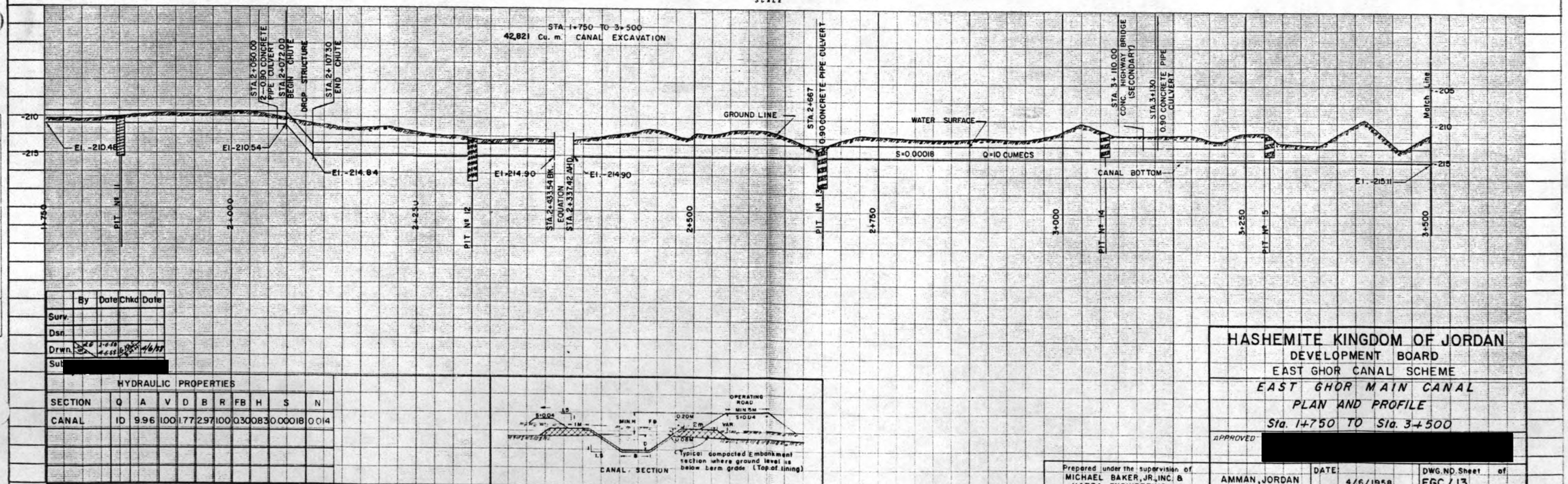
EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta. 0+000 TO Sta. 1+750

APPROVED [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE: 4/6/1958 | DWG. NO. Sheet of EGC/12





	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.				4/6/58
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	ID	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014

HASHEMITE KINGDOM OF JORDAN

DEVELOPMENT BOARD

EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL

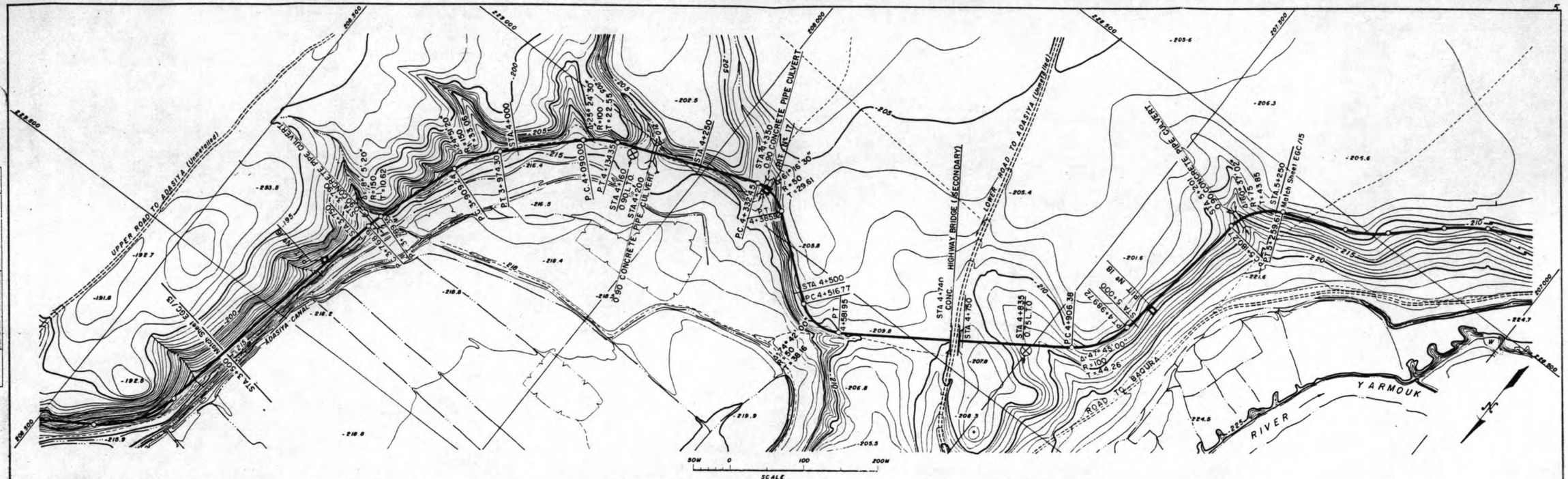
PLAN AND PROFILE

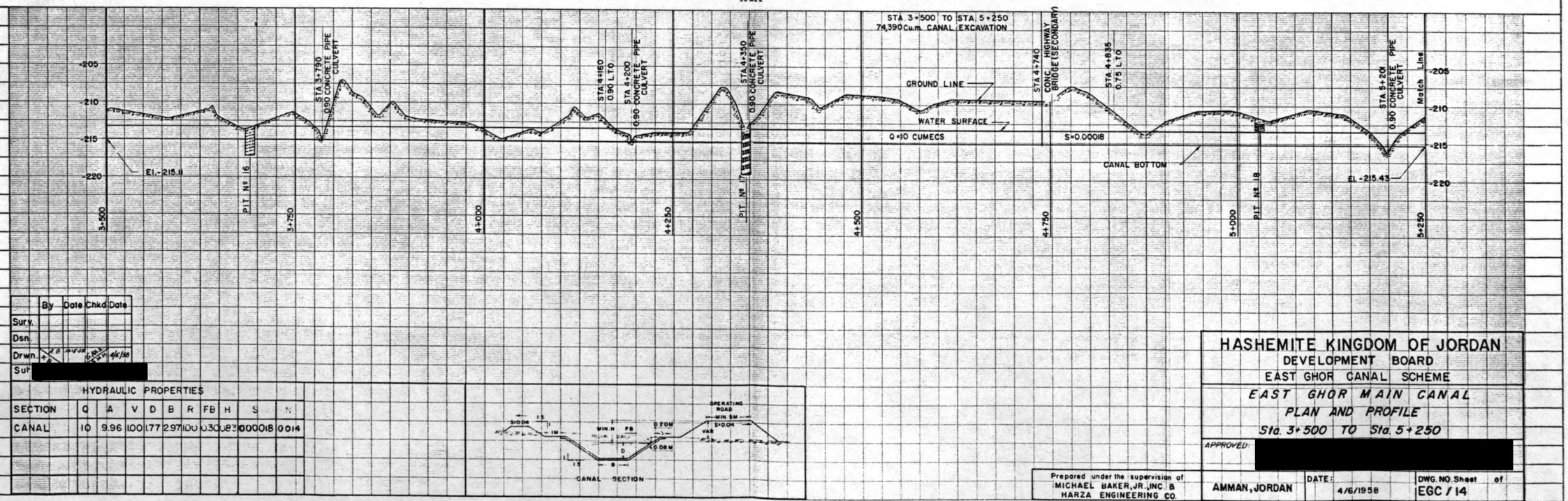
Sta. 1+750 TO Sta. 3+500

APPROVED [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE: 4/6/1958 | DWG. NO. Sheet of: EGC/13





	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.				
Sup	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014

HASHEMITE KINGDOM OF JORDAN

DEVELOPMENT BOARD

EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta. 3+500 TO Sta. 5+250

APPROVED: [redacted]

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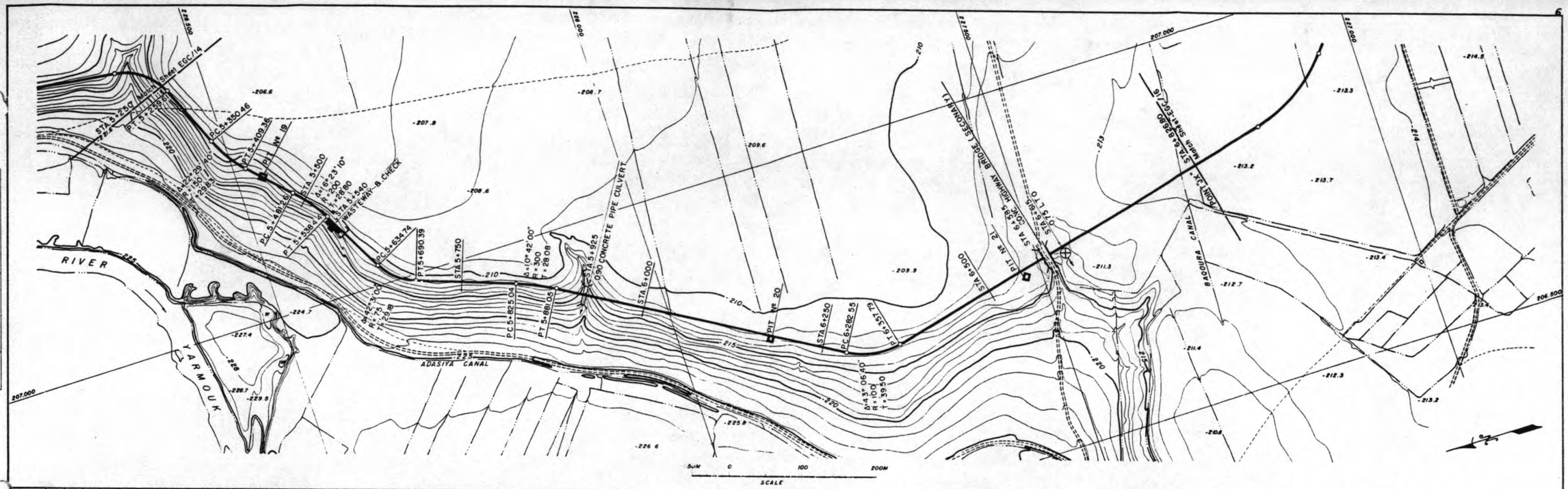
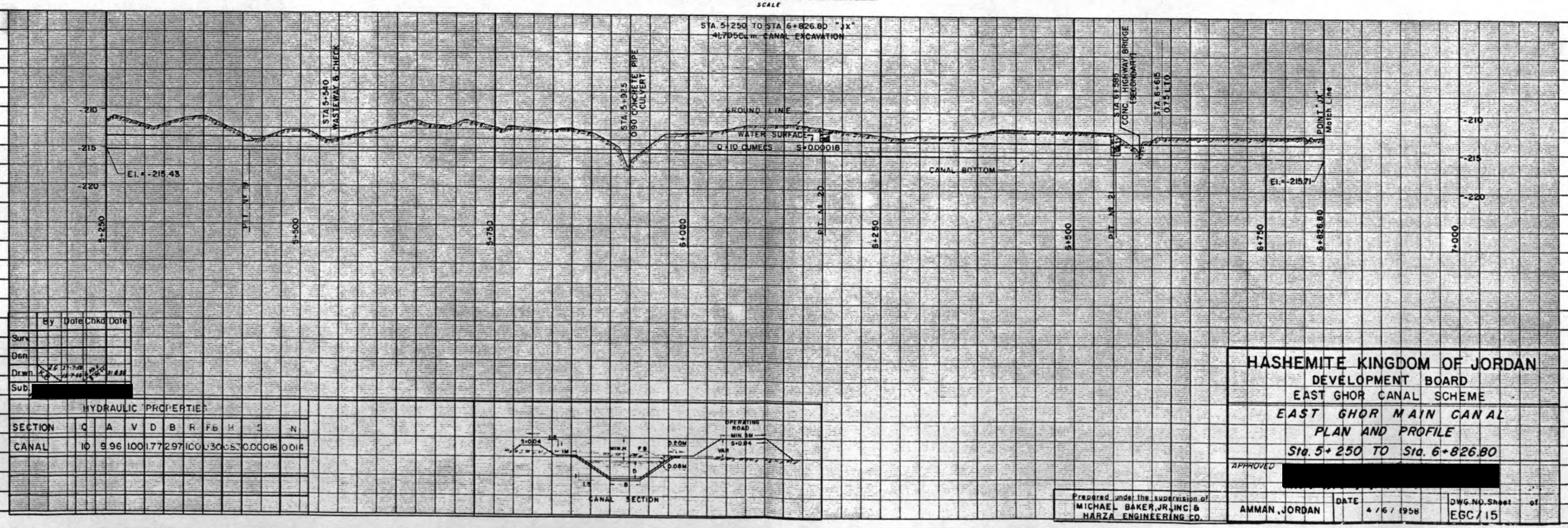
AMMAN, JORDAN

DATE: 4/6/1958

DWG. NO. Sheet of
EGC / 14





	By	Date	Chkd	Date
Surv.				
Des.				
Drawn				
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	5.96	1.00	1.77	2.97	1.00	0.30	0.85	0.00018	0.018

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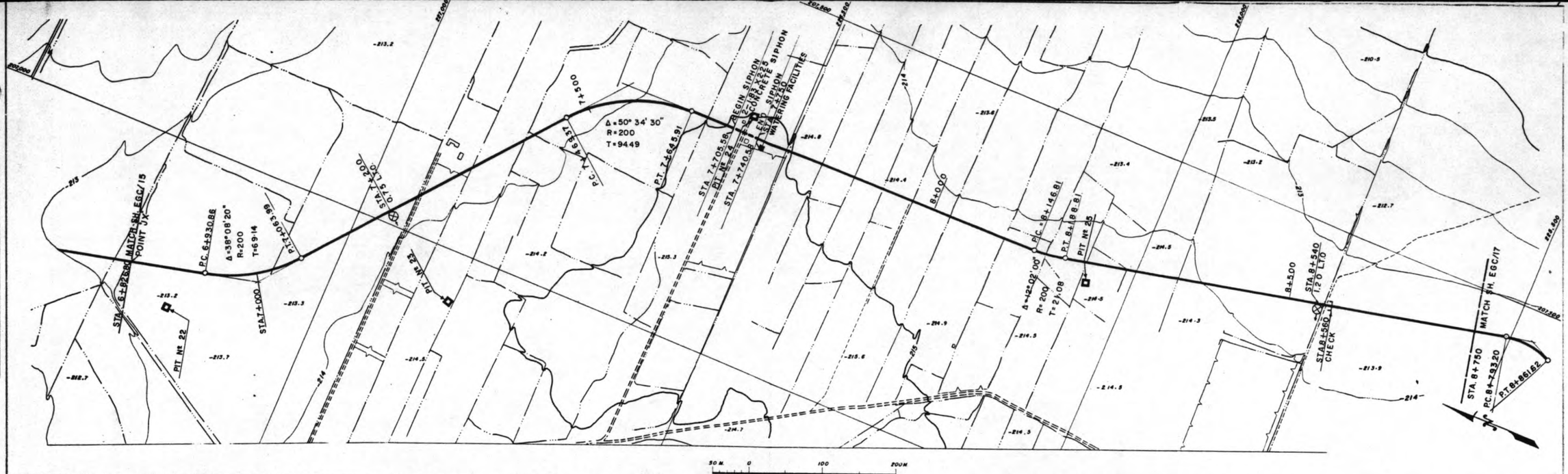
HARZA ENGINEERING CO.

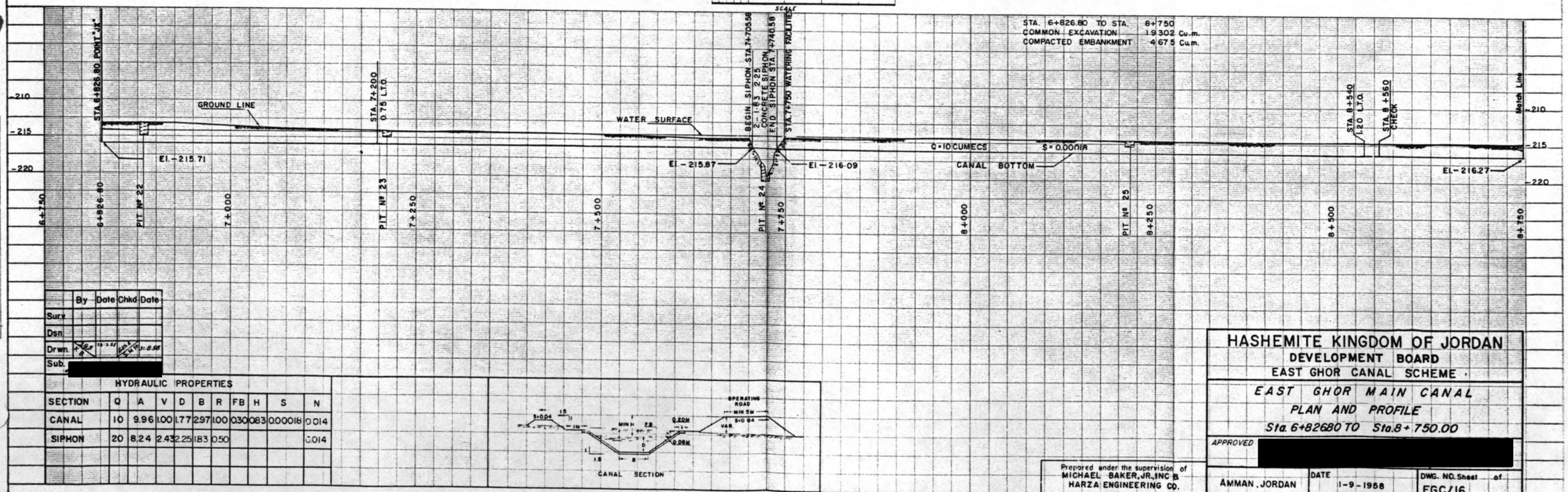
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta. 5+250 TO Sta. 6+826.80

APPROVED [redacted]

AMMAN, JORDAN | DATE 4/6/1958 | DWG. NO. Sheet EGC/15 of





	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.				
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014
SIPHON	20	8.24	2.43	2.25	1.83	0.50				0.014

HASHEMITE KINGDOM OF JORDAN

DEVELOPMENT BOARD

EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL

PLAN AND PROFILE

Sta. 6+826.80 TO Sta. 8+750.00

APPROVED [redacted]

Prepared under the supervision of
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HARZA ENGINEERING CO.

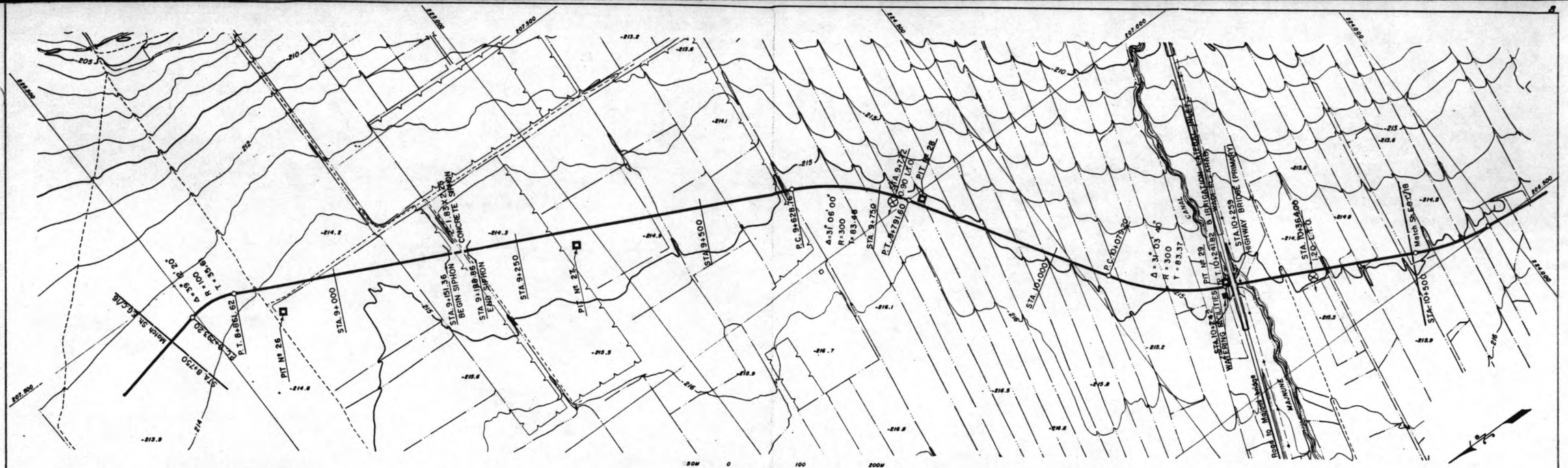
AMMAN, JORDAN

DATE 1-9-1958

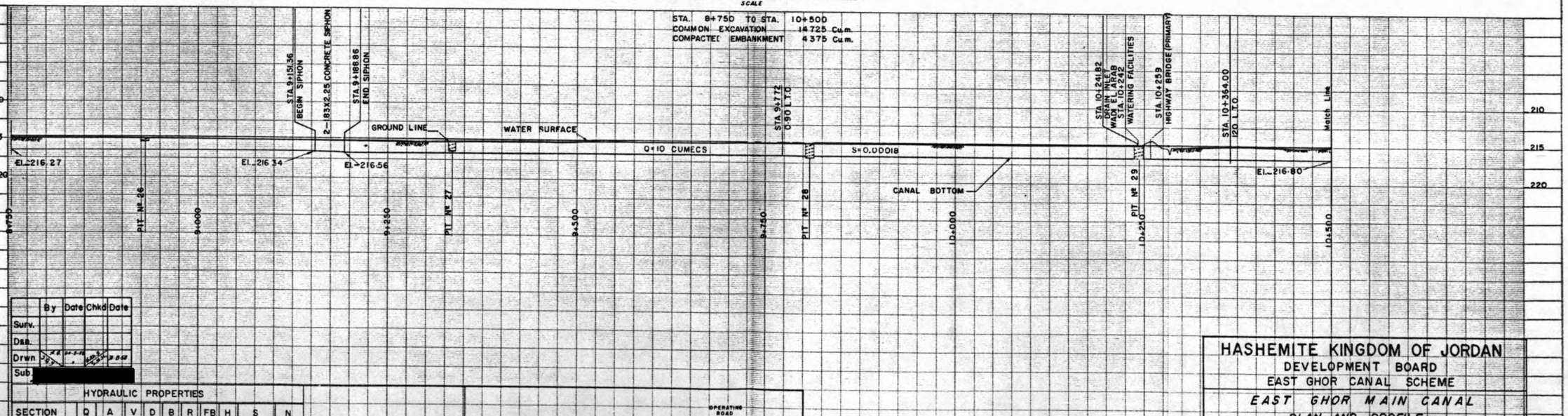
DWG. NO. Sheet of EGC/16

PLAN — SURVEYED, PLOTTED, ALIGNMENT CHECKED, R/T OF WAY CHECKED, NOTE BOOK, NO., DATE, BY

PROFILE — SURVEYED, PLOTTED, GRADES CHECKED, B.M.'s NOTED, STRUCTURE NOTATIONS CHKD, NOTE BOOK, NO., DATE, BY



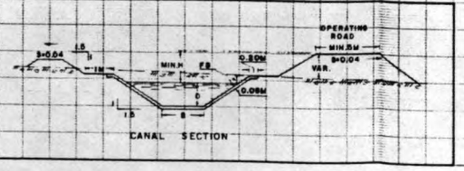
STA. 8+750 TO STA. 10+500
COMMON EXCAVATION 14725 Cum.
COMPACTED EMBANKMENT 4375 Cum.



	By	Date	Chkd	Date
Surv.				
Des.				
Drwn.				
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.300	0.83	0.00018	0.014
SIPHON	20	8.24	2.43	2.25	1.83	0.50				0.014



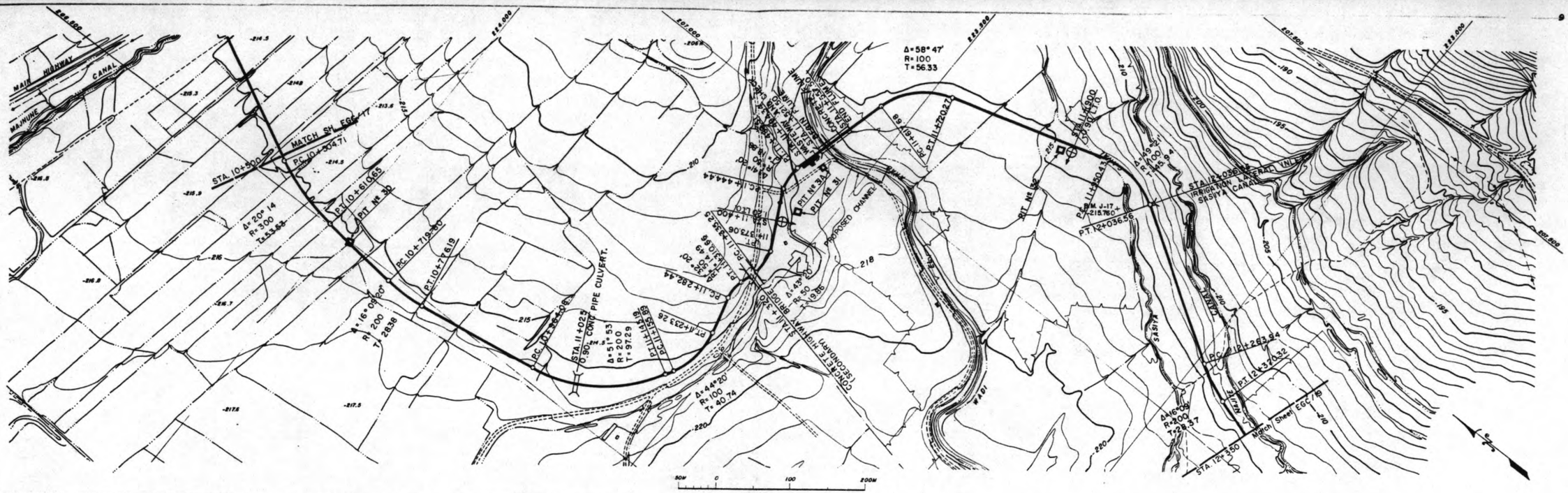
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

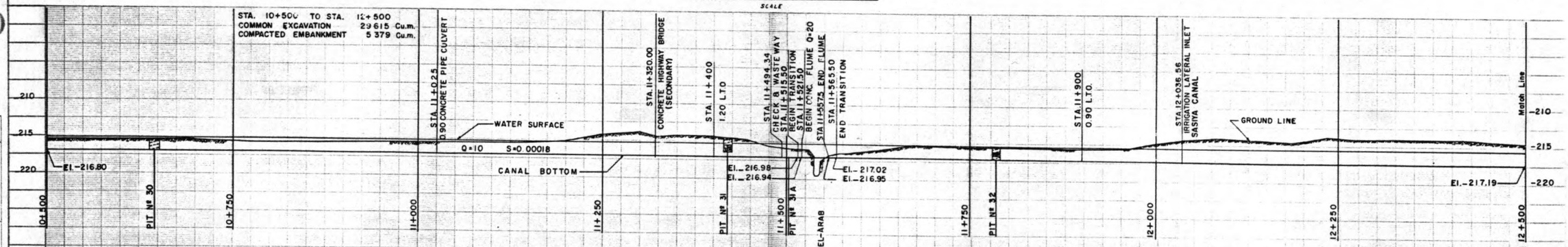
EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta. 8+750 TO Sta. 10+500

APPROVED [redacted]

Prepared under the supervision of
MICHAEL BAKER, JR. INC & HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE: 1-9-1958 | DWG NO Sheet of EGC / 17





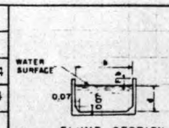
PLAN — SURVEYED, PLOTTED, NOTE BOOK, NO., ALIGNMENT CHECKED, SET OF WAY CHECKED, BY, DATE

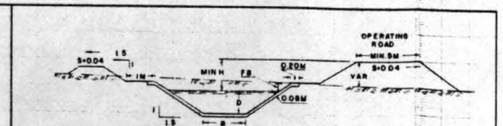
PROFILE — SURVEYED, PLOTTED, NOTE BOOK, NO., GRADES CHECKED, STA. 10+500 TO STA. 12+500, BY, DATE

	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.	[illegible]	[illegible]	[illegible]	[illegible]
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014
FLUME	20	12.50	1.60	2.43	5.18	1.25	0.50	—	0.00037	0.014





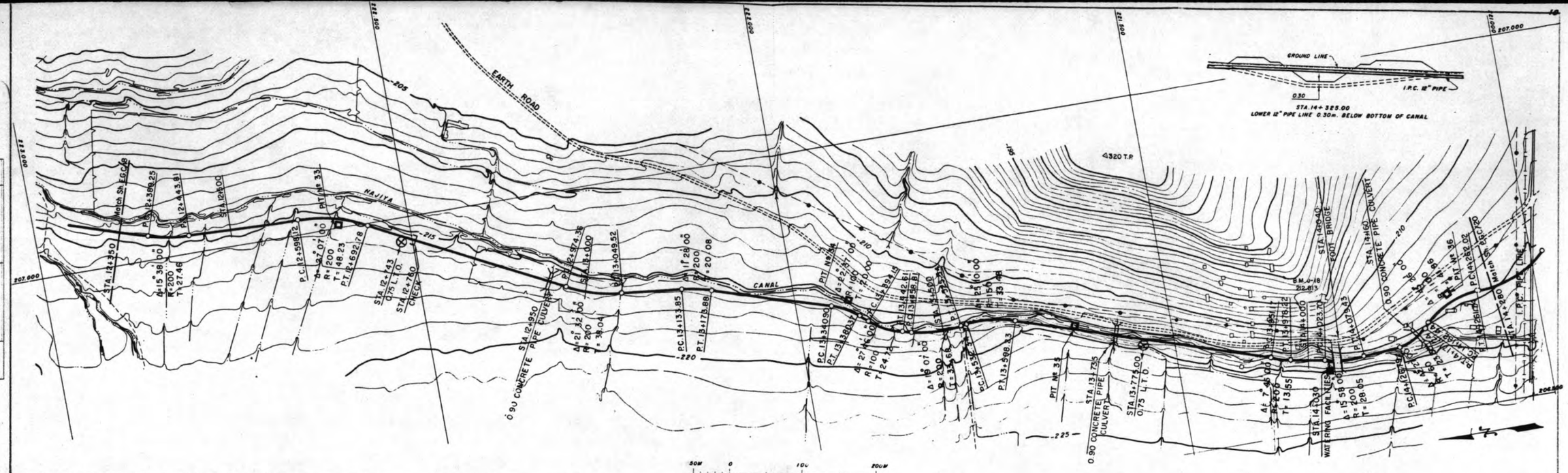
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta. 10+500 TO Sta. 12+500

APPROVED [redacted]

Prepared under the supervision of MICAEL BAKER, JR., INC & HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE: 1-9-1958 | DWG. NO. Sheet of EGC/18

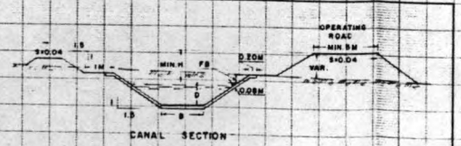


STA. 12+500 TO STA. 14+500
CUMMUN EXCAVATION 26 352 Cu.m.
COMPACTED EMBANKMENT 12 847 Cu.m.

	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.				
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014



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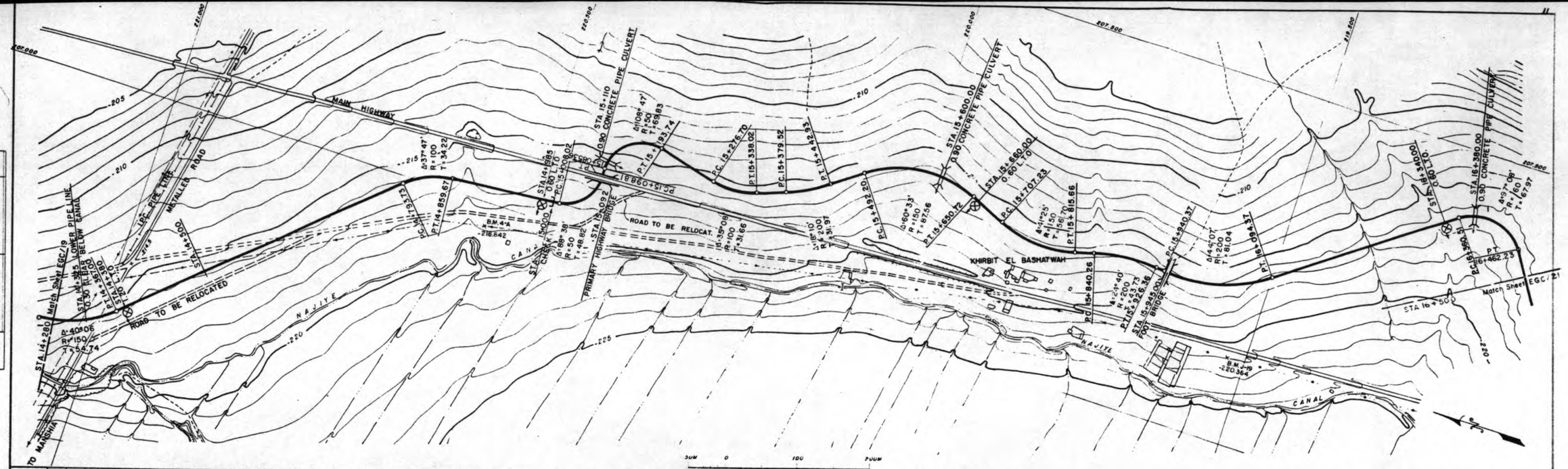
HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

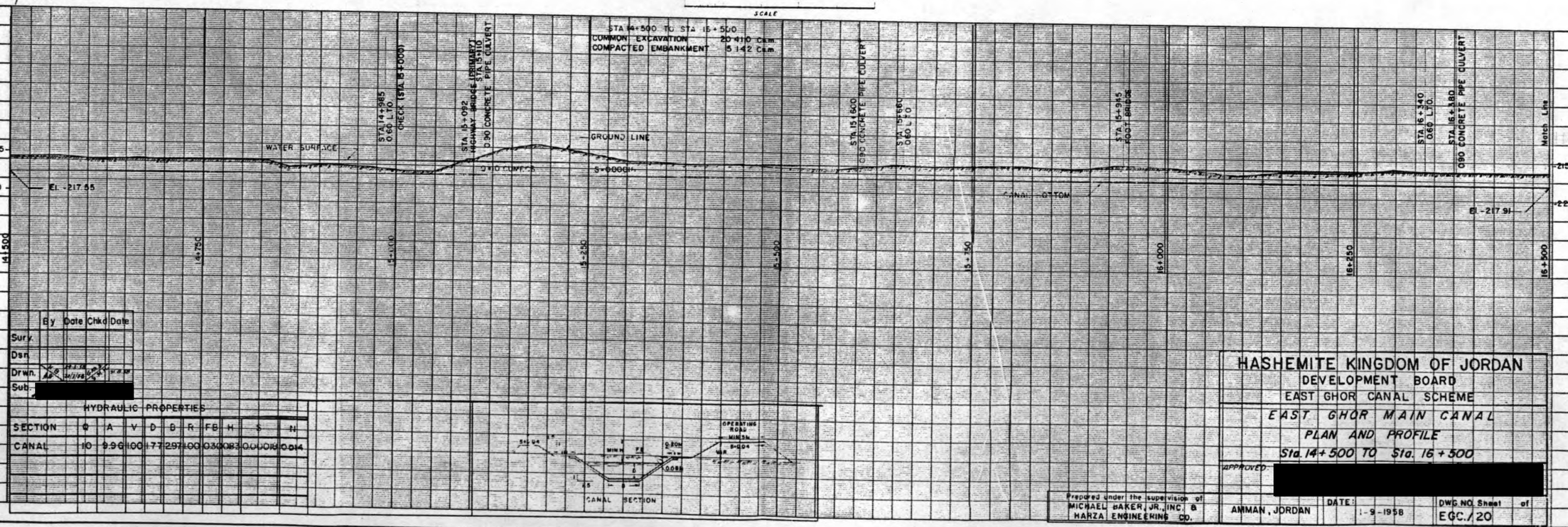
EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta. 12+500 TO Sta. 14+500

APPROVED [redacted]

AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO. Sheet of EGC /19



STA 14+500 TO STA 15+500
COMMON EXCAVATION 20 410 Cu.m.
COMPACTED EMBANKMENT 5 142 Cu.m.



	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.				
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	n
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	3.00	0.014

HASHEMITE KINGDOM OF JORDAN

DEVELOPMENT BOARD

EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL

PLAN AND PROFILE

Sta. 14+500 TO Sta. 16+500

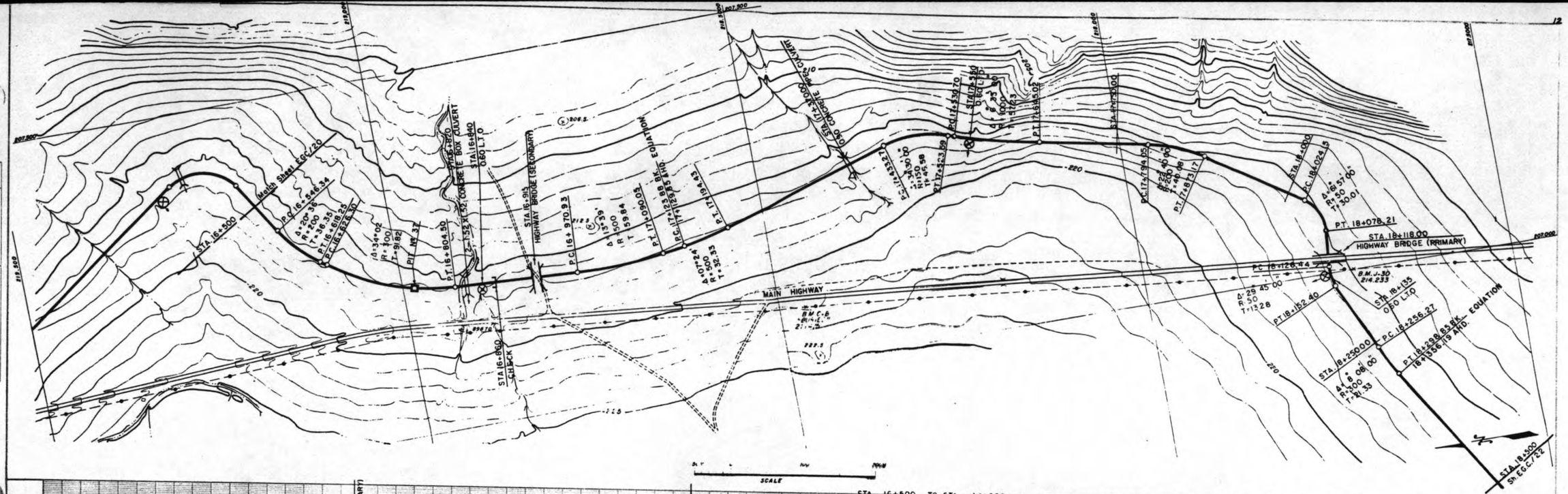
APPROVED [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

AMMAN, JORDAN

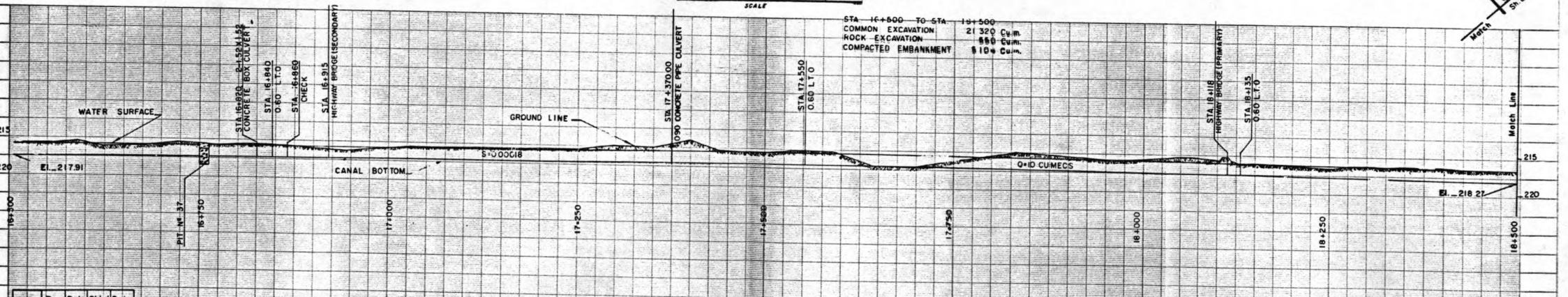
DATE: 1-9-1958

DWG. NO. Sheet of EGC./20



STA 16+500 TO STA 18+500

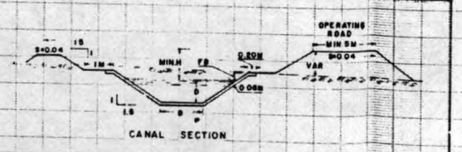
COMMON EXCAVATION	21 320 Cu.m
ROCK EXCAVATION	550 Cu.m.
COMPACTED EMBANKMENT	5 104 Cu.m.



	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.				
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014



HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta 16+500 TO Sta 18+500

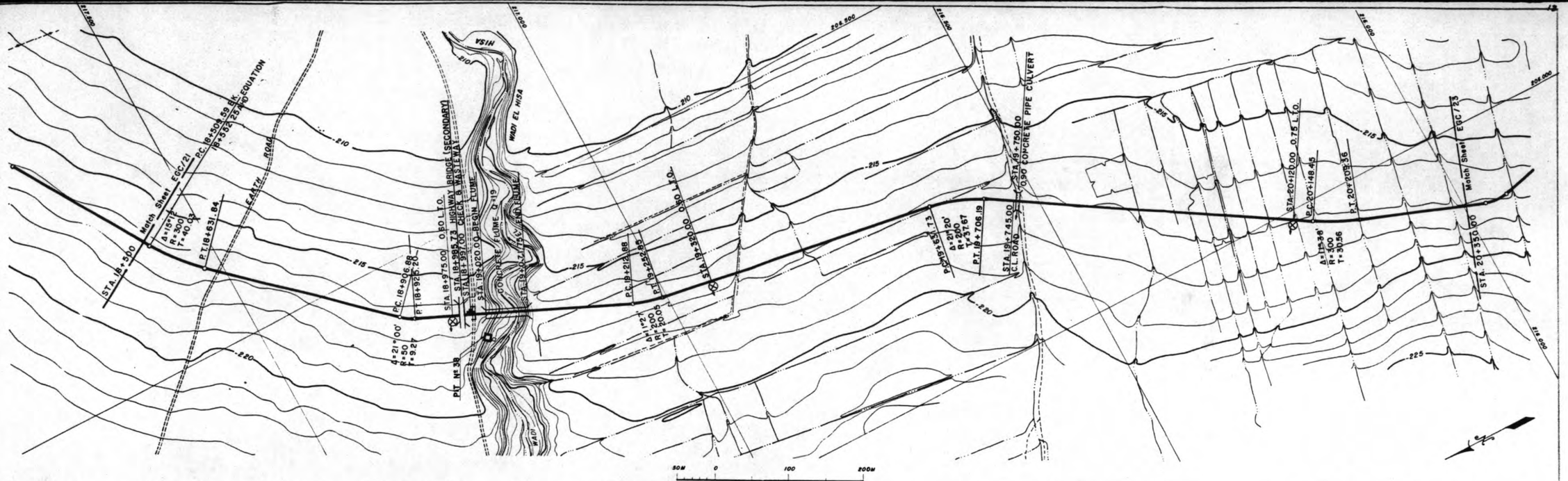
APPROVED [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

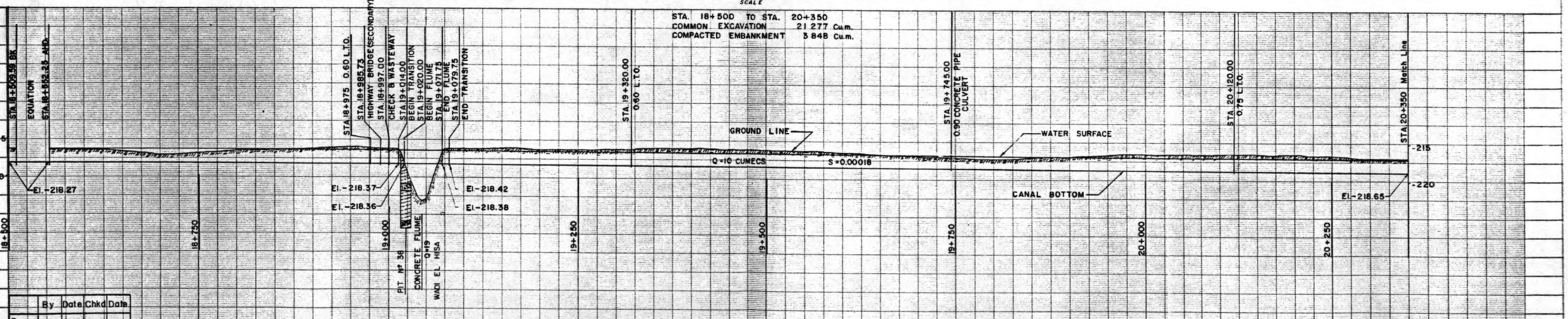
AMMAN, JORDAN | DATE: 1-9-1958 | DWG. NO. Sheet of EGC / 21

PLAN — SURVEYED, PLOTTED, NOTE BOOK, NO., ALIGNMENT CHECKED, R/W OR WAY CHECKED, BY, DATE

PROFILE — SURVEYED, PLOTTED, NOTE BOOK, NO., H & V SCALES CHECKED, STRUCTURE NOTATIONS CHECKED, BY, DATE



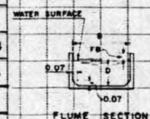
STA. 18+500 TO STA. 20+350
COMMON EXCAVATION 21 277 Cu.m.
COMPACTED EMBANKMENT 3 848 Cu.m.



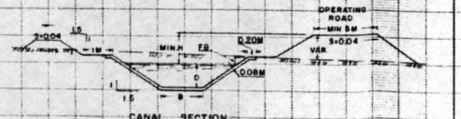
	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.				
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.083	0.00018	0.014
FLUME	19	11.88	1.60	2.40	4.99	1.22	0.50		0.00038	0.014



FLUME SECTION



CANAL SECTION

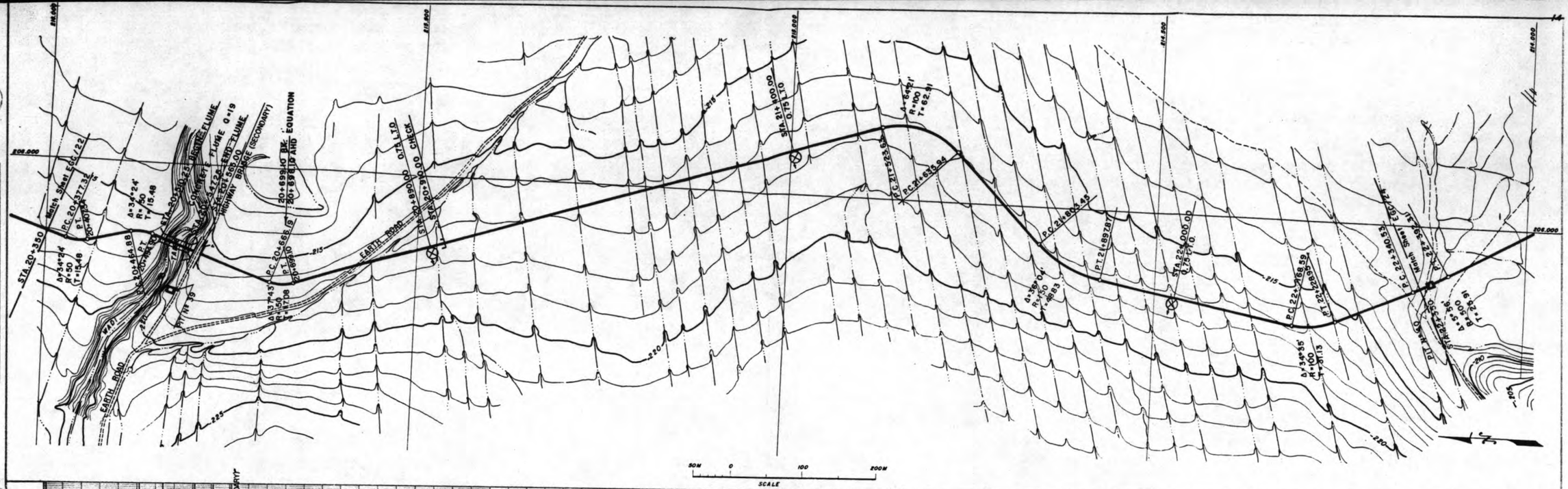
Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

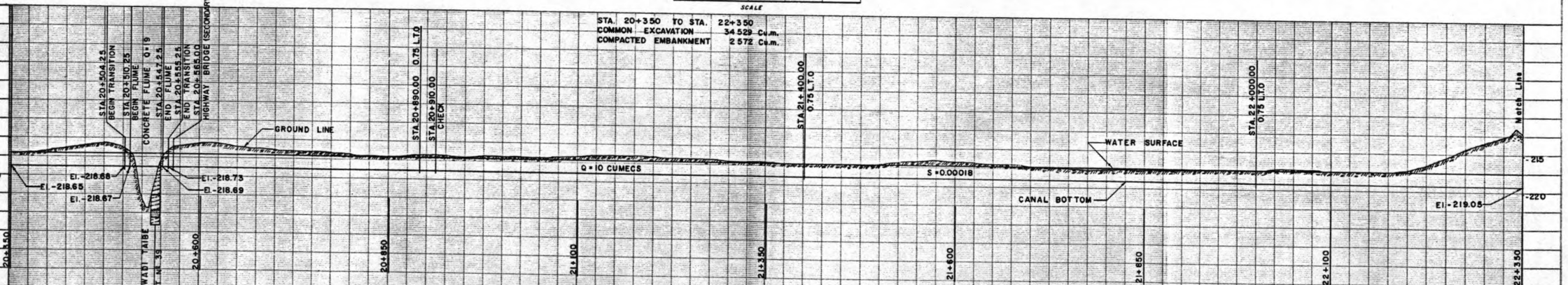
EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta. 18+500 TO Sta. 20+350

APPROVED [redacted]

AMMAN, JORDAN | DATE: 1-9-1958 | DWG. NO. Sheet of EGC/22



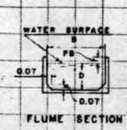
STA. 20+350 TO STA. 22+350
COMMON EXCAVATION 34 529 Cu.m.
COMPACTED EMBANKMENT 2 572 Cu.m.



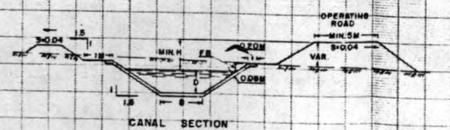
	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.				
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014
FLUME	19	11.88	1.60	2.40	4.99	1.22	0.50		0.00038	0.014



FLUME SECTION



CANAL SECTION

Prepared under the supervision of
MICAEL BAKER, JR., INC.&
HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

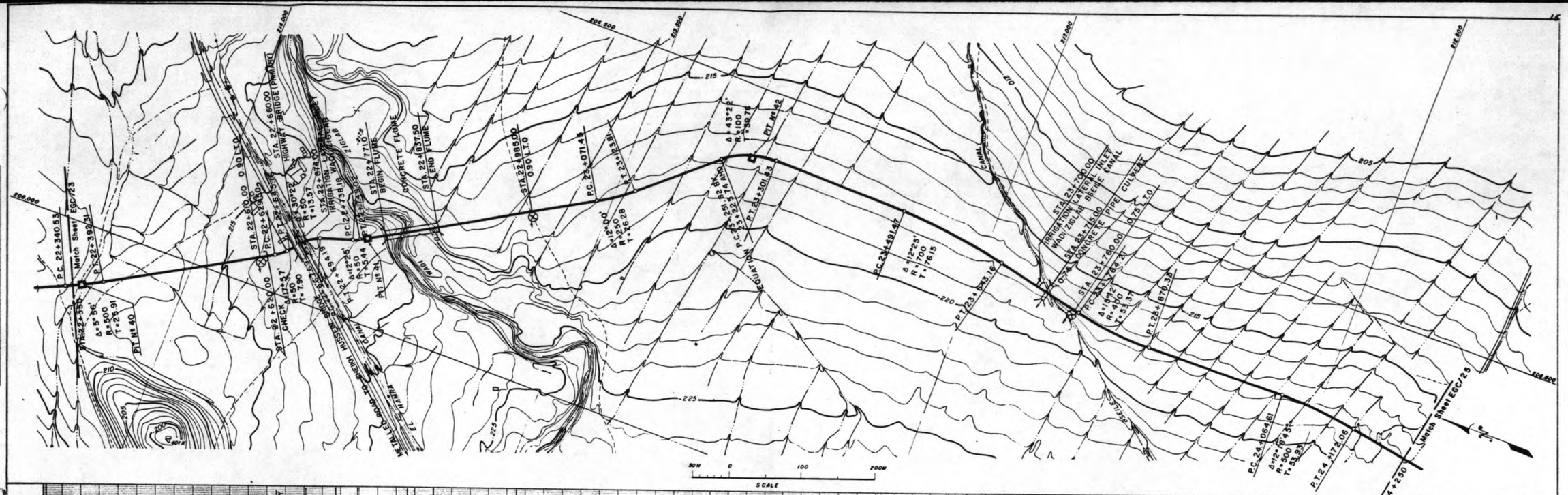
EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta. 20+350 TO Sta. 22+350

APPROVED [redacted]

AMMAN, JORDAN | DATE: 1-9-1958 | DWG.NO. Sheet of EGC/23

PLAN — SURVEYED, PLOTTED, NOTE BOOK, ALIGNMENT CHECKED, PAT. OF WAY CHECKED, NO., BY, DATE

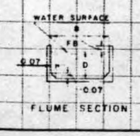
PROFILE — SURVEYED, PLOTTED, NOTE BOOK, GRADES CHECKED, NO., STRUCTURE NOTATIONS CHKD, BY, DATE



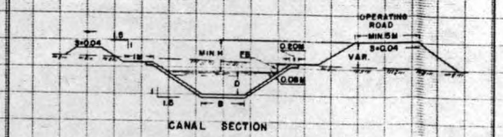
	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.				
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014
FLUME	18	11.25	1.60	2.35	4.83	1.18	0.50		0.00040	0.014



FLUME SECTION



CANAL SECTION

HASHEMITE KINGDOM OF JORDAN

DEVELOPMENT BOARD

EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL

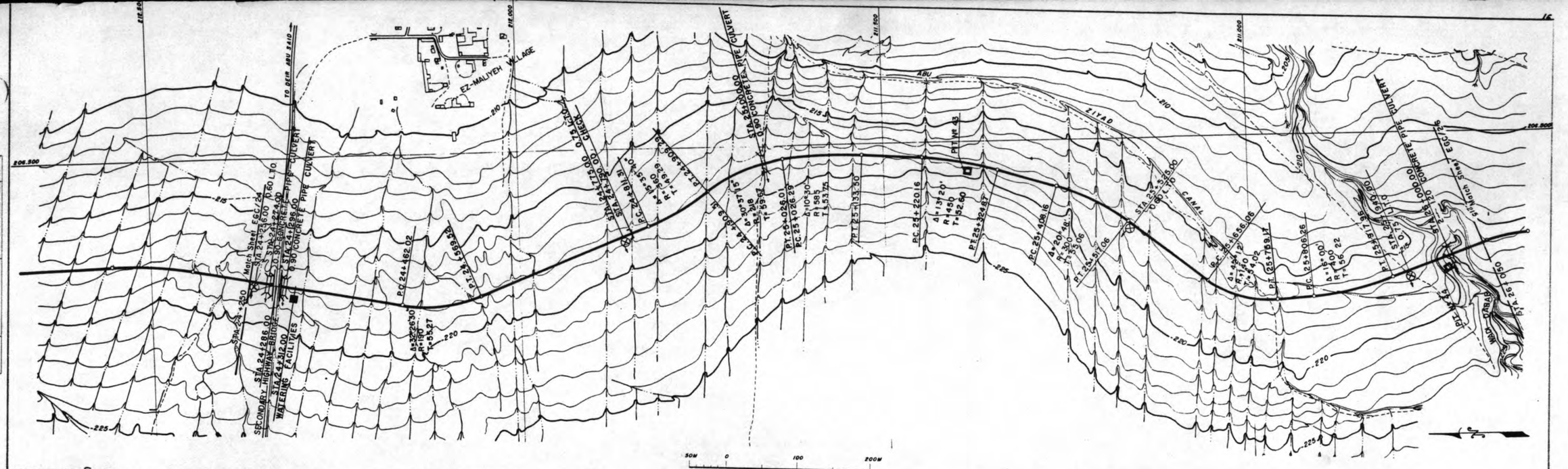
PLAN AND PROFILE

Sta. 22+350 TO Sta. 24+250

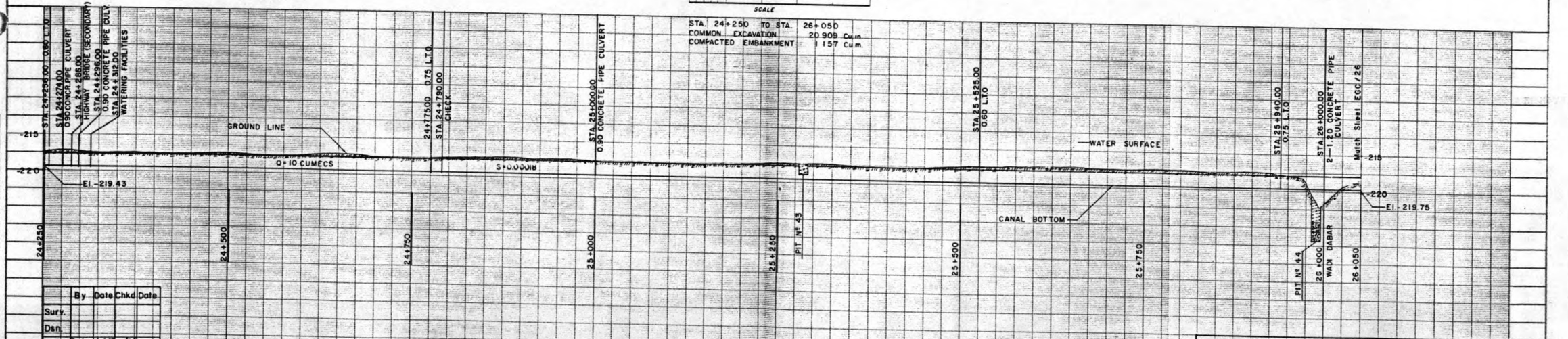
APPROVED: [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE: 1-9-1956 | DWG.NO. Sheet of EGC/24



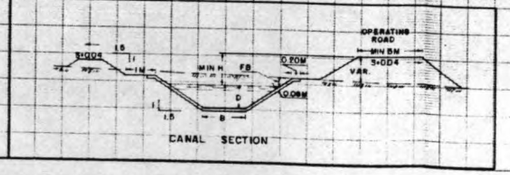
STA. 24+250 TO STA. 26+050
COMMON EXCAVATION 20 908 Cu.m.
COMPACTED EMBANKMENT 1 157 Cu.m.



	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.				
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014



CANAL SECTION

Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN

DEVELOPMENT BOARD

EAST GHOR CANAL SCHEME

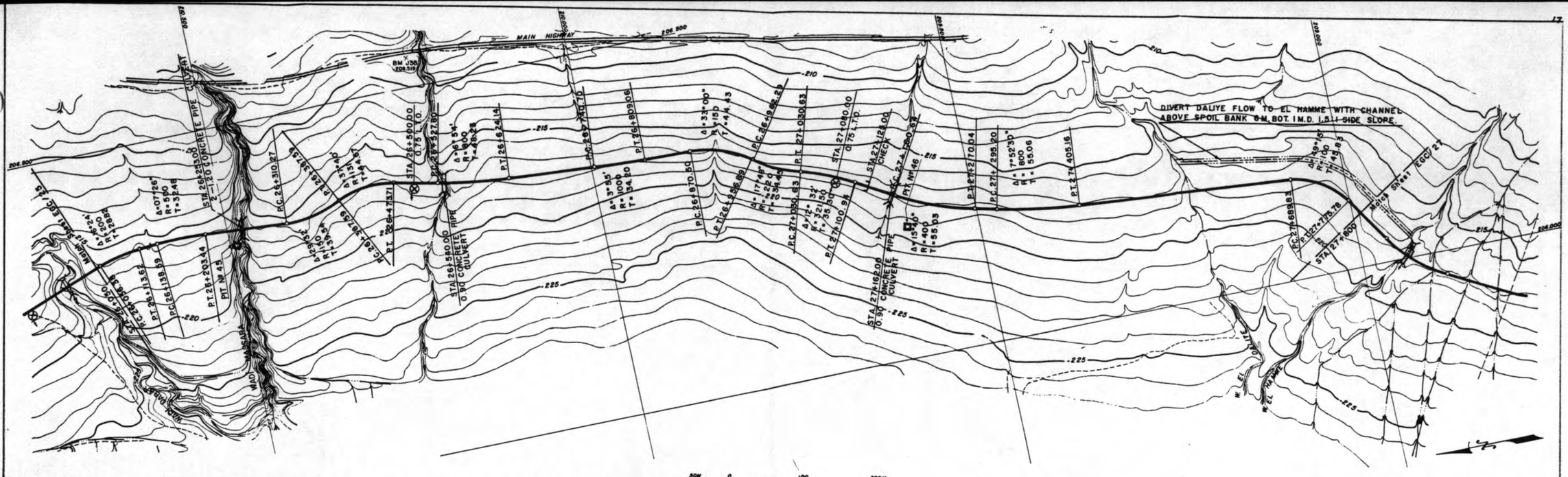
EAST GHOR MAIN CANAL

PLAN AND PROFILE

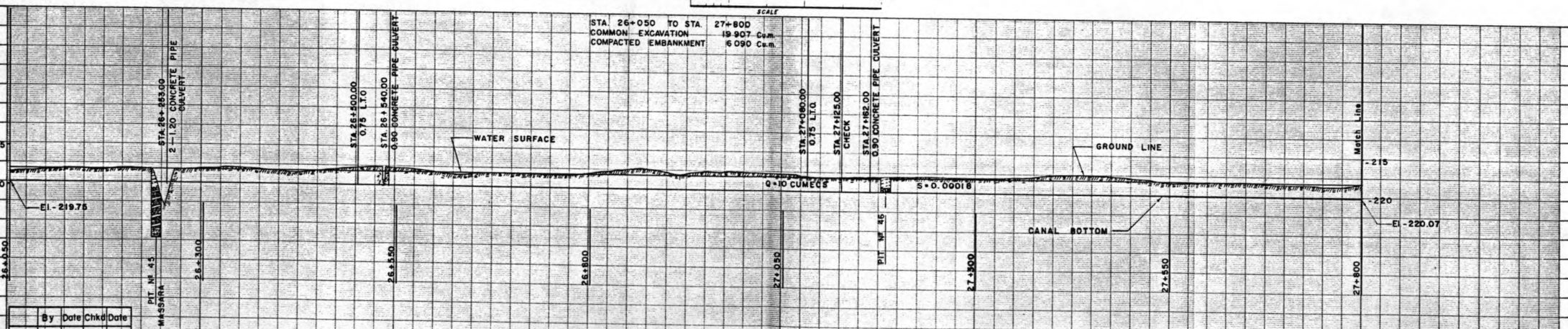
Sta. 24+250 TO Sta. 26+050

APPROVED [redacted]

AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO. Sheet of EGC/25



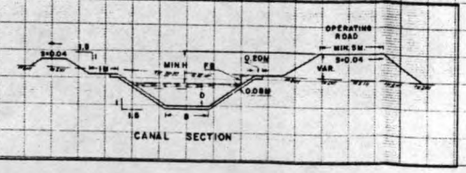
STA. 26+050 TO STA. 27+800
COMMON EXCAVATION 19 907 Cu.m.
COMPACTED EMBANKMENT 6 090 Cu.m.



	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.				
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014



HASHEMITE KINGDOM OF JORDAN

DEVELOPMENT BOARD

EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL

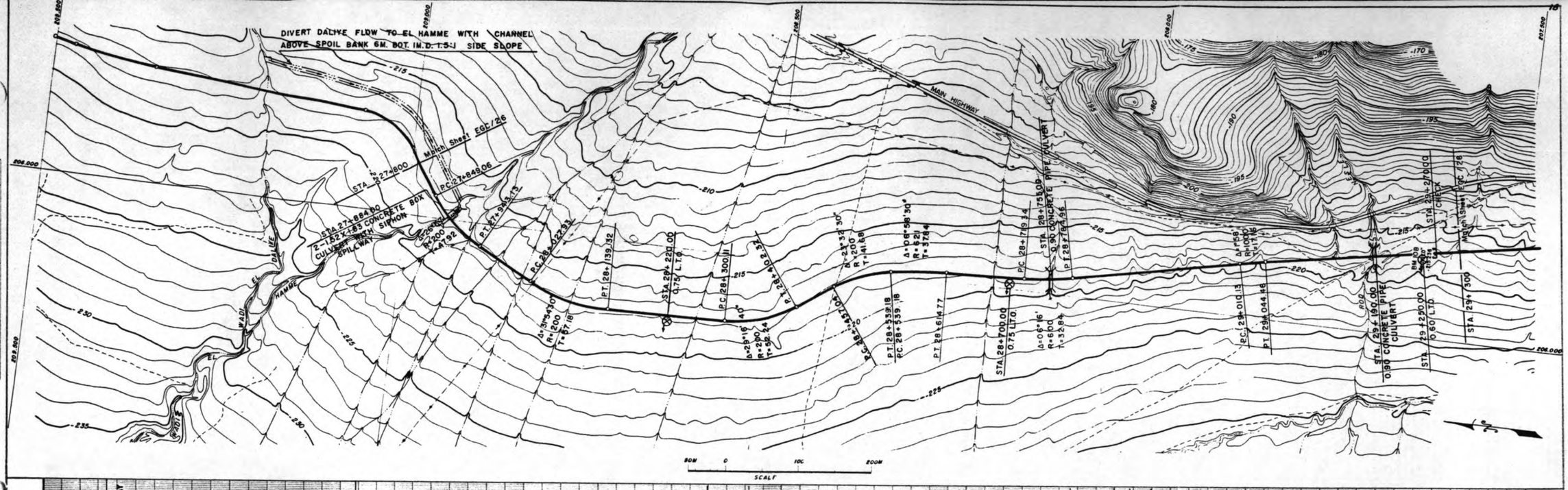
PLAN AND PROFILE

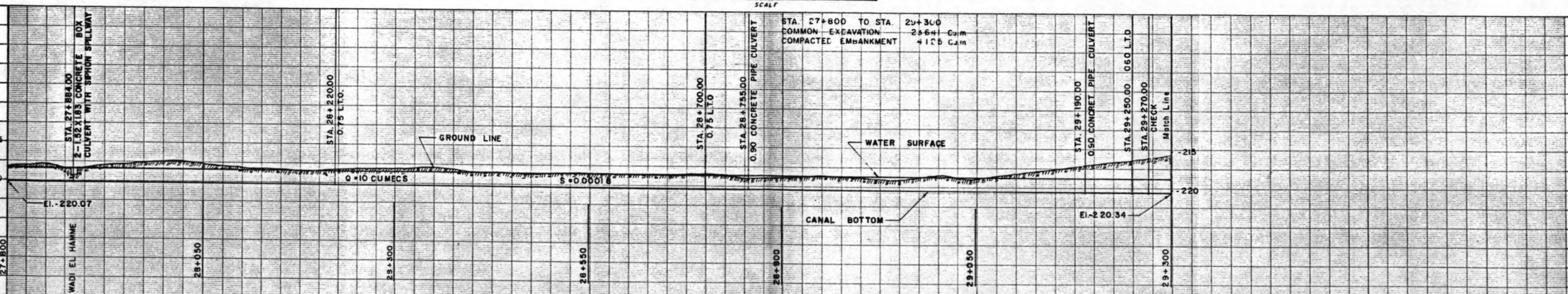
Sta. 26+050 TO Sta. 27+800

APPROVED: [redacted]

Prepared under the supervision of
MICHAEL BAKER, JR. INC & HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE: 1-9-1958 | DWG. NO. Sheet of EGC/26



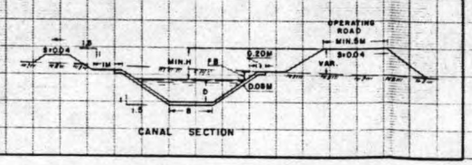


STA. 27+800 TO STA. 29+300
COMMON EXCAVATION 2564 Cum
COMPACTED EMBANKMENT 4105 Cum

	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.	[redacted]			
Sub.				

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014



HASHEMITE KINGDOM OF JORDAN

DEVELOPMENT BOARD

EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL

PLAN AND PROFILE

Sta. 27+800 TO Sta. 29+300

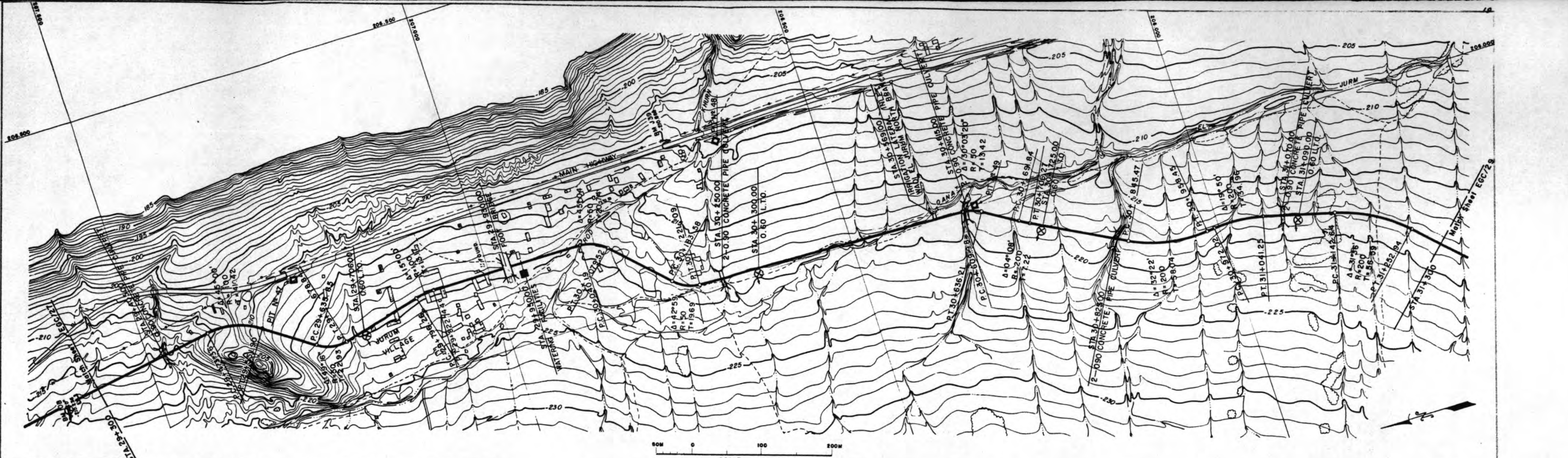
APPROVED [redacted]

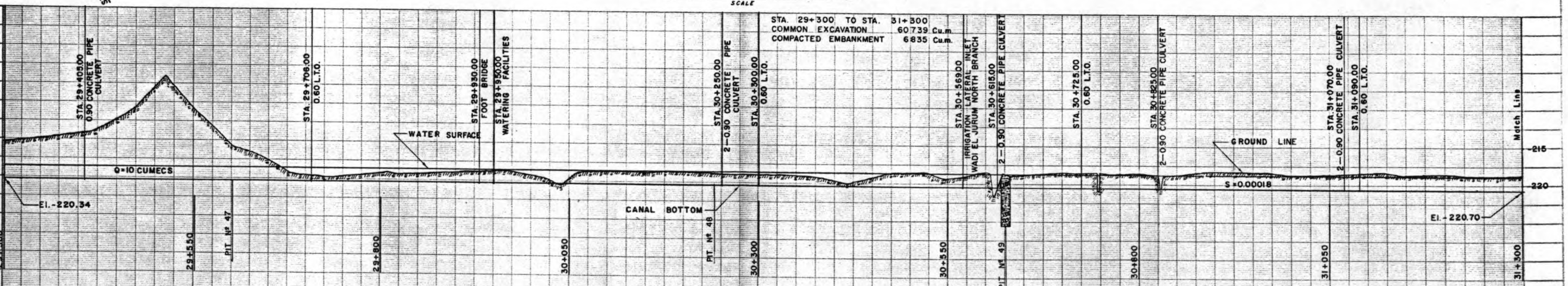
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

AMMAN, JORDAN

DATE 1-9-1958

DWG. NO. Sheet of EGC/27

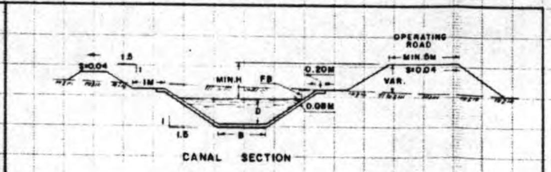




	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.				
Sub. [redacted]				

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014



HASHEMITE KINGDOM OF JORDAN

DEVELOPMENT BOARD

EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL

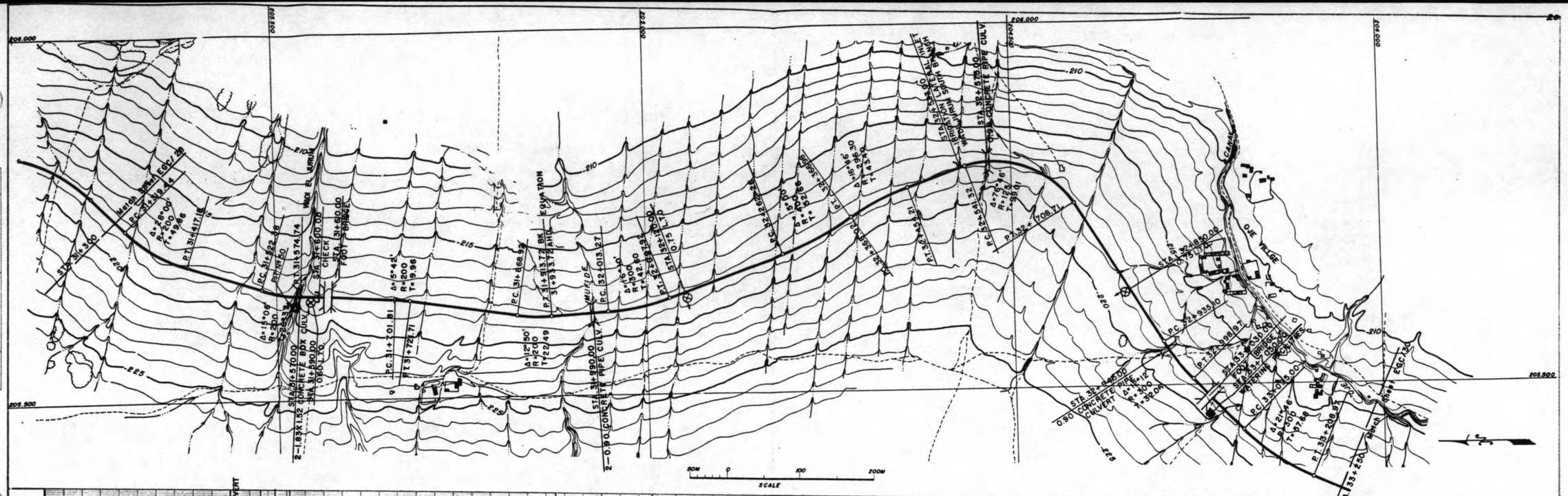
PLAN AND PROFILE

Sta. 29+300 TO Sta. 31+300

APPROVED: [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

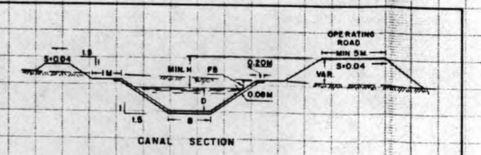
AMMAN, JORDAN	DATE: 1-9-1958	DWG. NO. Sheet of EGC/28



	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwg.				
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014



CANAL SECTION

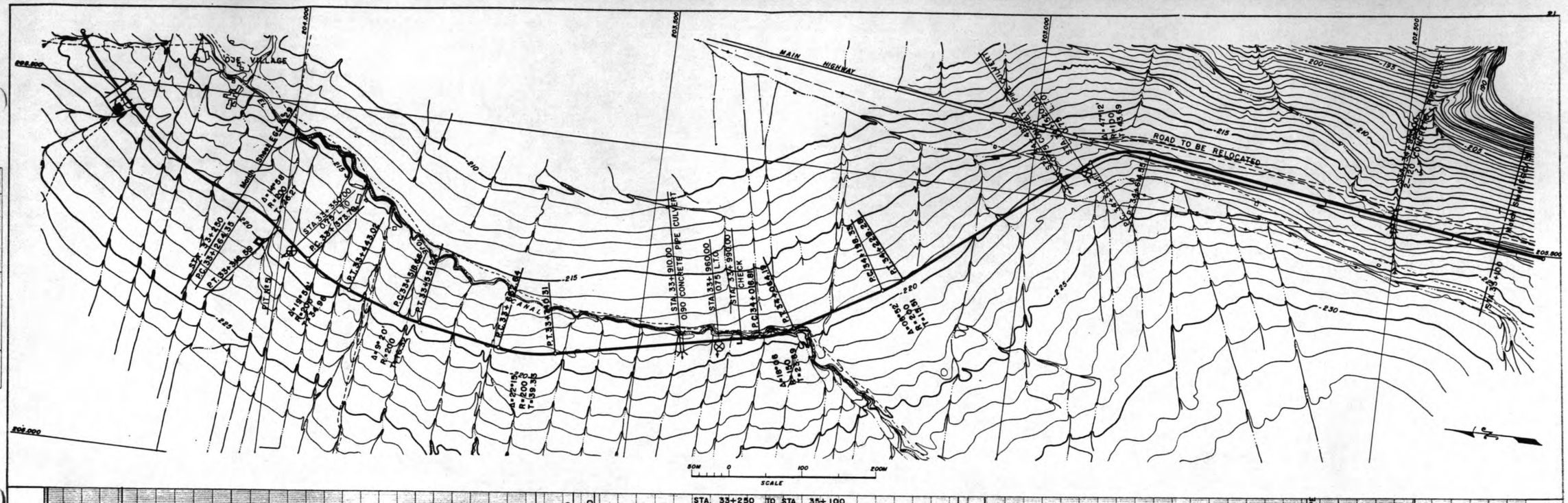
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

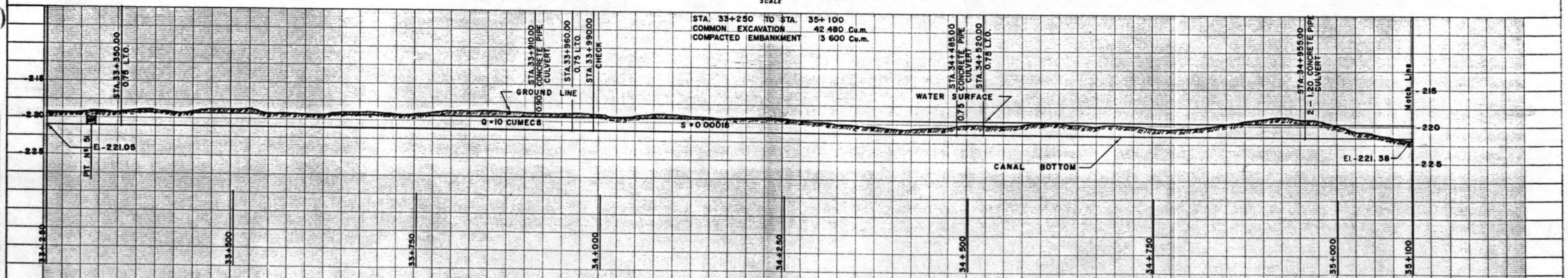
EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta. 31+300 TO Sta. 33+250

APPROVED: [redacted]

Prepared under the supervision of
MICHAEL BAKER, JR., INC.&
HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE: 1-9-1958 | DWG. NO. Sheet EGC/29 of



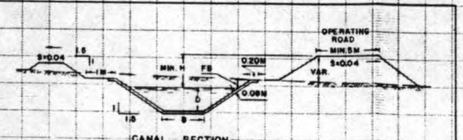


STA. 33+250 TO STA. 35+100
COMMON EXCAVATION 42 480 Cu.m.
COMPACTED EMBANKMENT 3 600 Cu.m.

	By	Date	Chkd	Date
Surv.				
Des.				
Drwn.				
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014



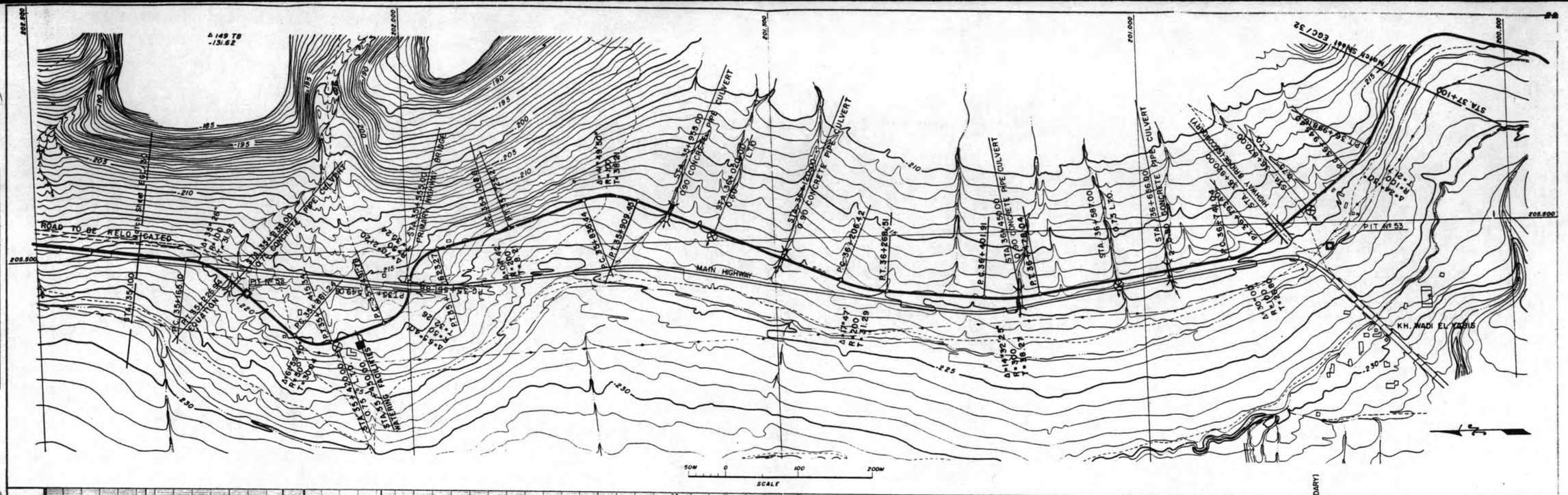
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

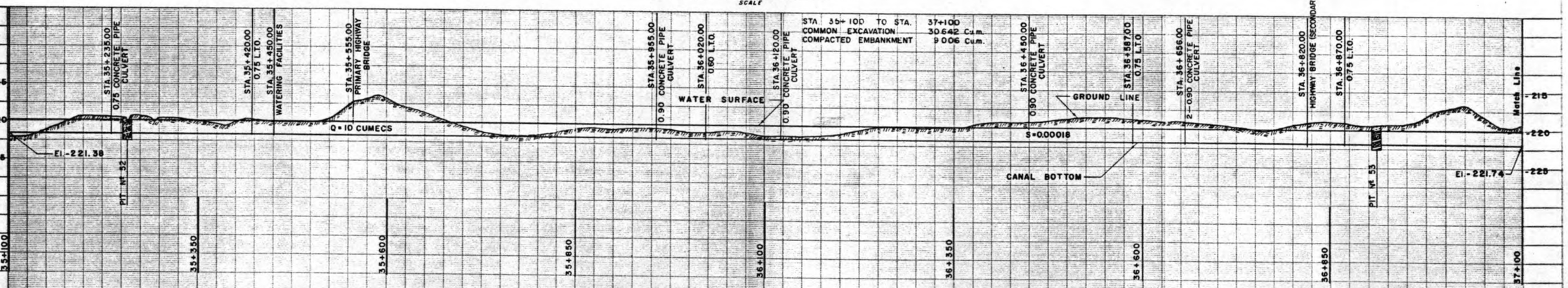
EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta. 33+250 TO Sta. 35+100

APPROVED [redacted]

Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE: 1-9-1958 | DWG. NO. Sheet of EGC/30

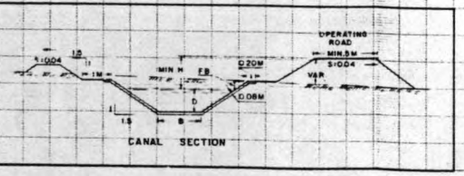




	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.				
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014



CANAL SECTION

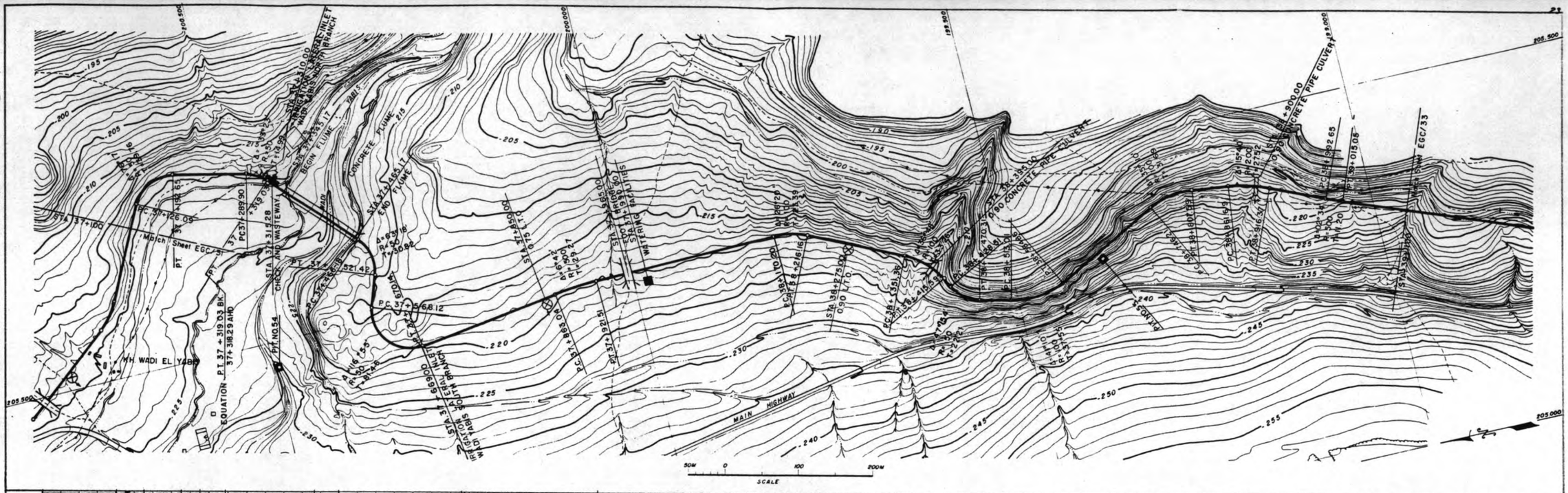
Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

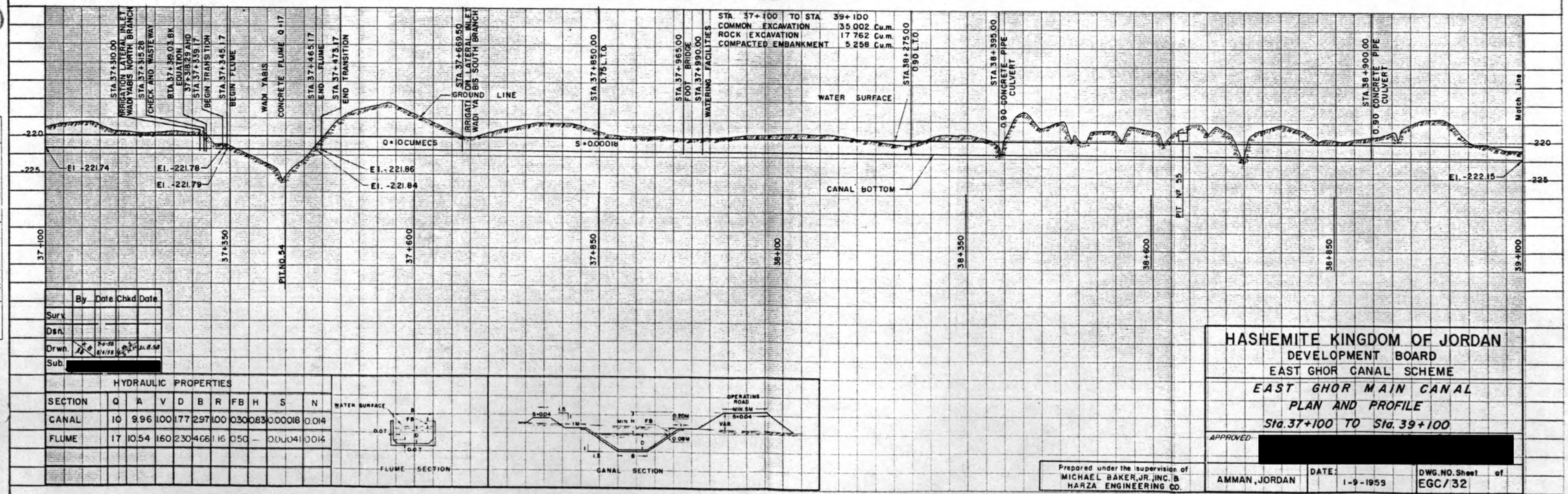
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta. 35+100 TO Sta. 37+100

APPROVED [redacted]

AMMAN, JORDAN | DATE: 1-9-1958 | DWG. NO. Sheet of EGC/31





	By	Date	Chkd.	Date
Surv.				
Dsn.				
Drwn.				
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014
FLUME	17	10.54	1.60	2.30	4.66	1.16	0.50	–	0.00041	0.014

Prepared under the supervision of
MICHAEL BAKER, JR. INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

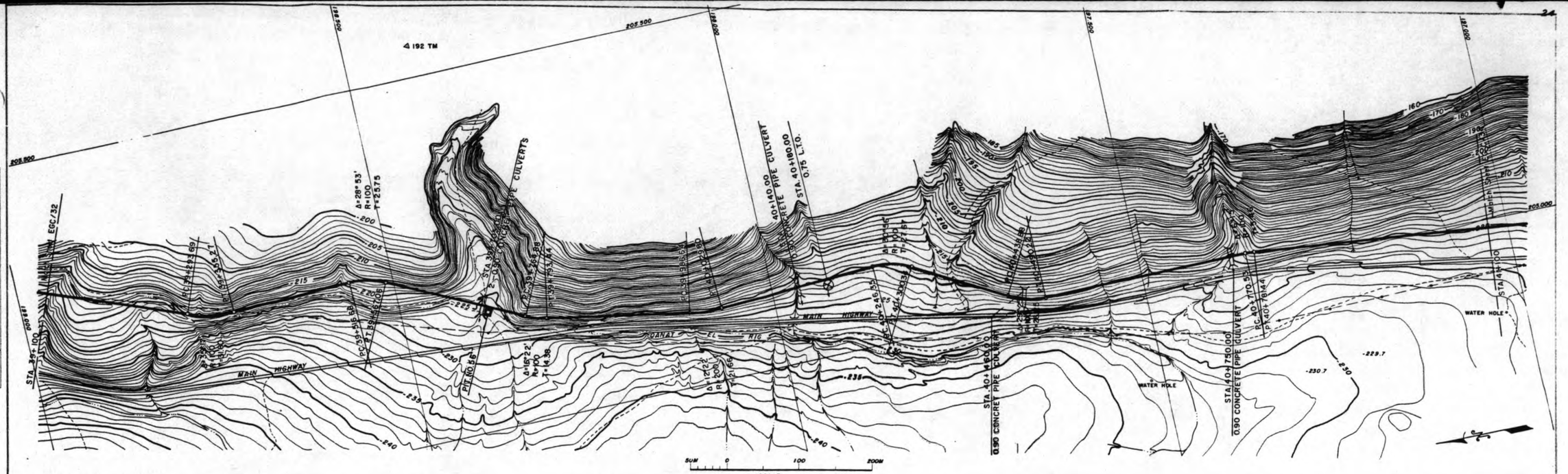
EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta. 37+100 TO Sta. 39+100

APPROVED: [redacted]

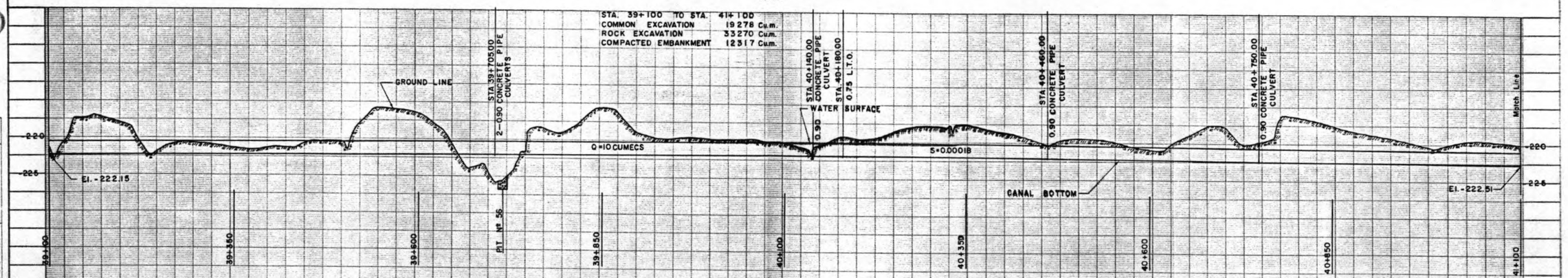
AMMAN, JORDAN | DATE: 1-9-1959 | DWG. NO. Sheet of EGC/32

PLAN — SURVEYED, TRACED, NOTE BOOK, NO, ALIGNMENT CHECKED, PT. OF WAY CHECKED, DATE, BY

PROFILE — SURVEYED, TRACED, NOTE BOOK, NO, GRADES CHECKED, R. W. NOTED, STRUCTURE NOTATIONS CHKD., DATE, BY

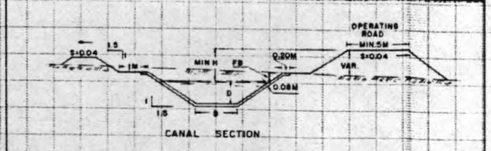


STA. 39+100 TO STA. 41+100	
COMMON EXCAVATION	19278 Cu.m.
ROCK EXCAVATION	33270 Cu.m.
COMPACTED EMBANKMENT	12317 Cu.m.



	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.	[redacted]	9-6-58	[redacted]	31.8.58

HYDRAULIC PROPERTIES										
SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014



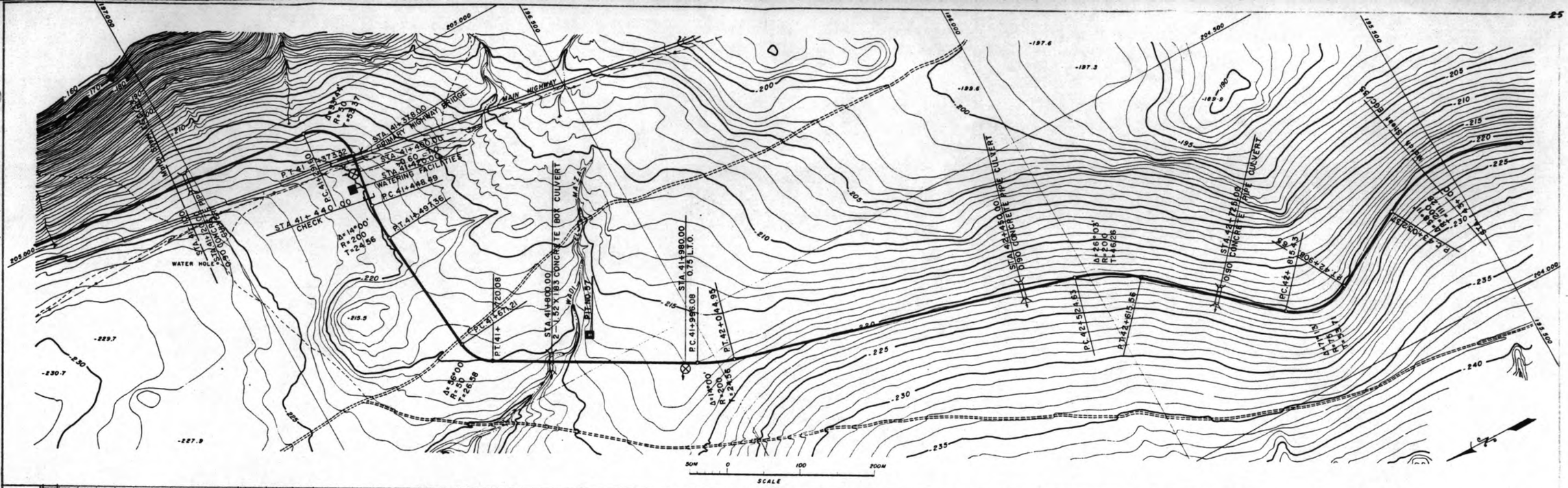
Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

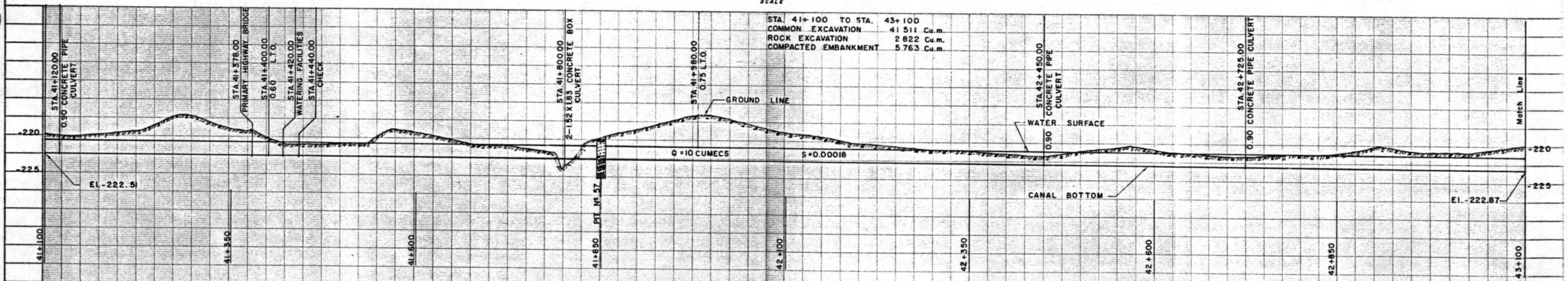
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta. 39+100 TO Sta. 41+100

APPROVED: [redacted]

AMMAN, JORDAN	DATE: 1-9-1953	DWG. NO. Sheet of EGC/33





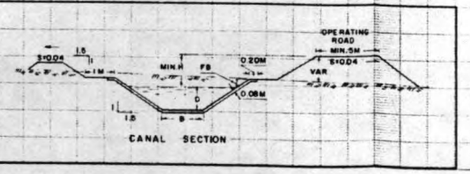
STA 41+100 TO STA. 43+100

COMMON EXCAVATION	41 511 Cu.m.
ROCK EXCAVATION	2 822 Cu.m.
COMPACTED EMBANKMENT	5 763 Cu.m.

	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.	[redacted]			
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014



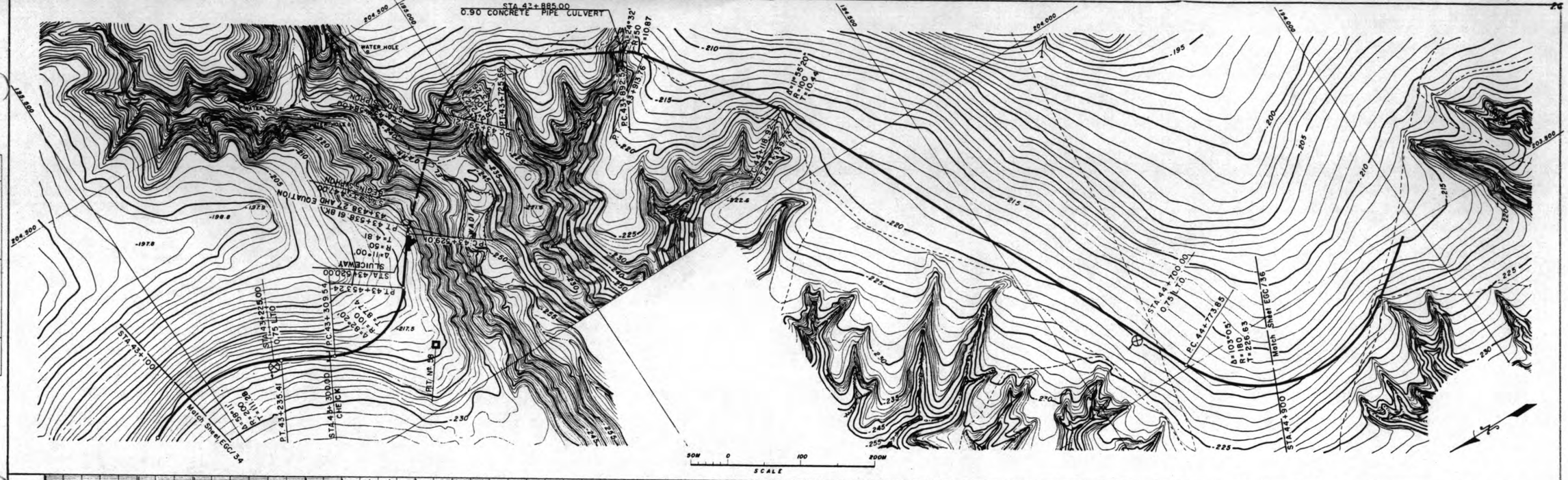
Prepared under the supervision of
MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta. 41+100 TO Sta. 43+100

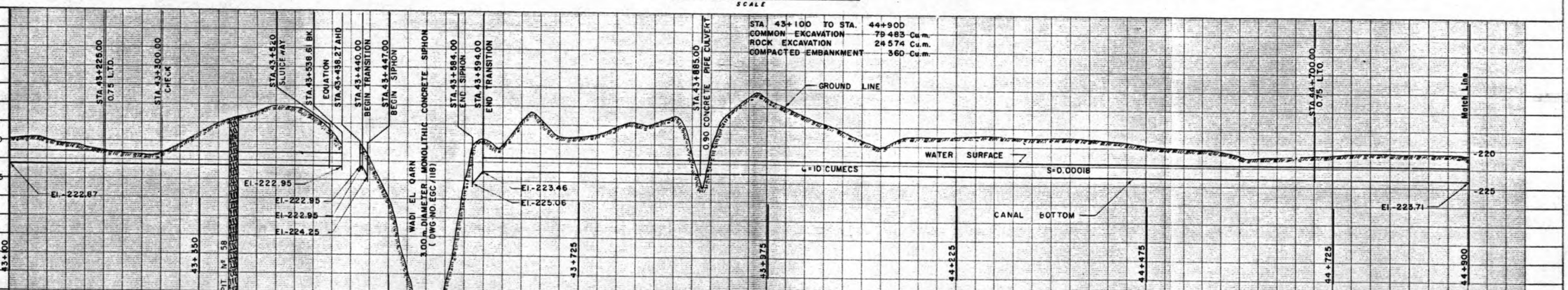
APPROVED: [redacted]

AMMAN, JORDAN | DATE: 1-9-1958 | DWG. NO. Sheet of EGC / 34



STA 43+100 TO STA. 44+900

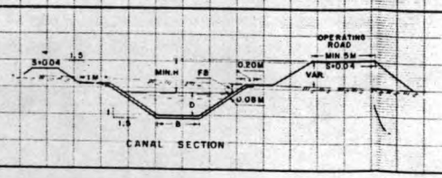
COMMON EXCAVATION	79 483 Cu.m.
ROCK EXCAVATION	24 574 Cu.m.
COMPACTED EMBANKMENT	360 Cu.m.



	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.				
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	K	Fb	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014
SIPHON	16	7.07	2.26	3.00		0.75				0.012



HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta. 43+100 TO Sta. 44+900

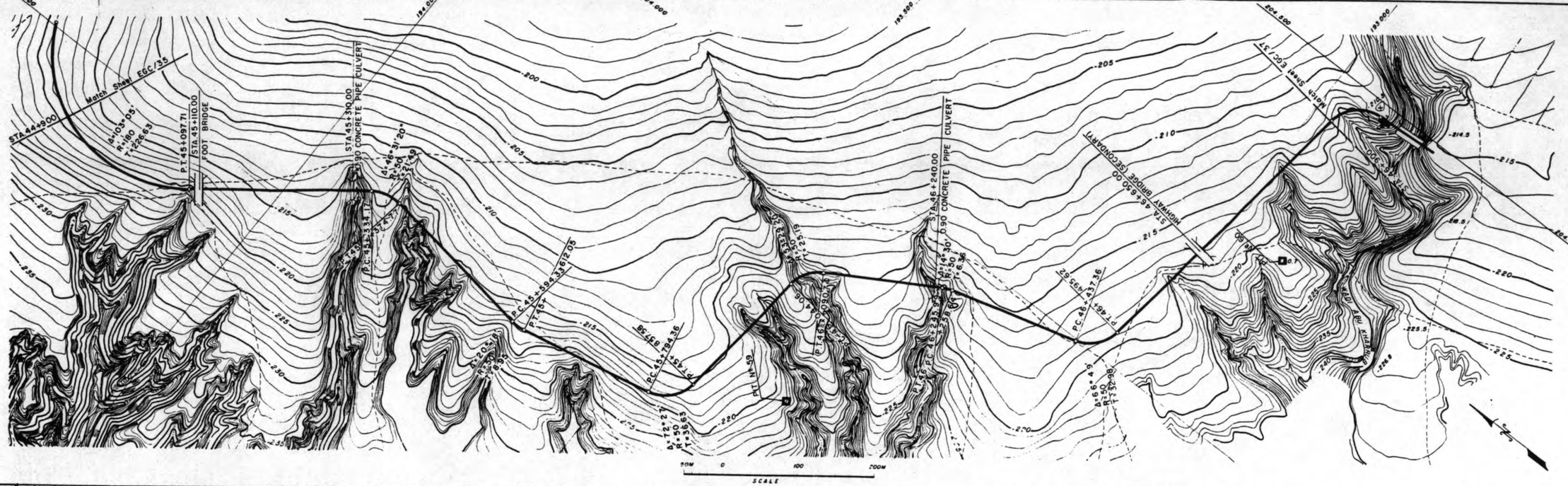
APPROVED [redacted]

Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

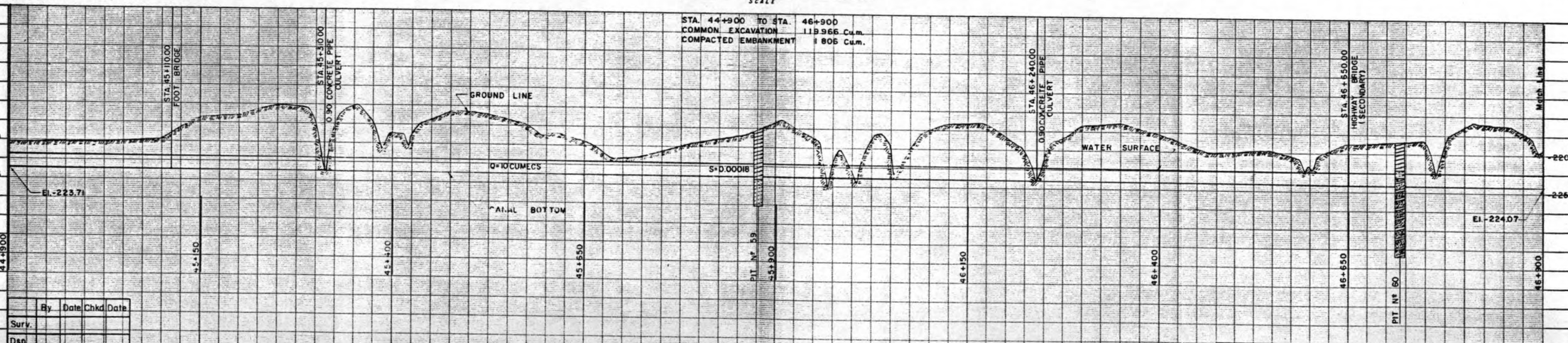
AMMAN, JORDAN

DATE 1-9-1959

DWG.NO.Sheet of EGC/35



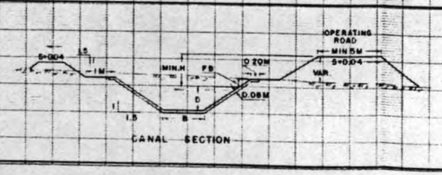
STA. 44+900 TO STA. 46+900
COMMON EXCAVATION 119966 Cum.
COMPACTED EMBANKMENT 1806 Cum.



	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.				
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	Fb	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.63	0.00016	0.014



HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME
EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta. 44+900 TO Sta. 46+900

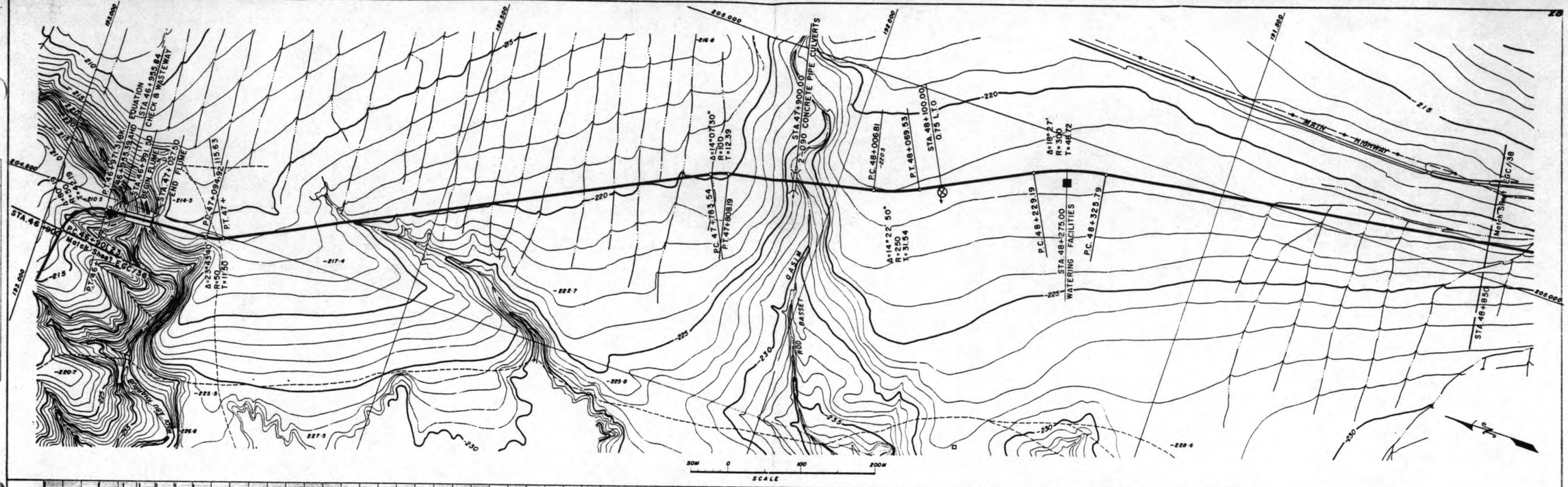
APPROVED [redacted]

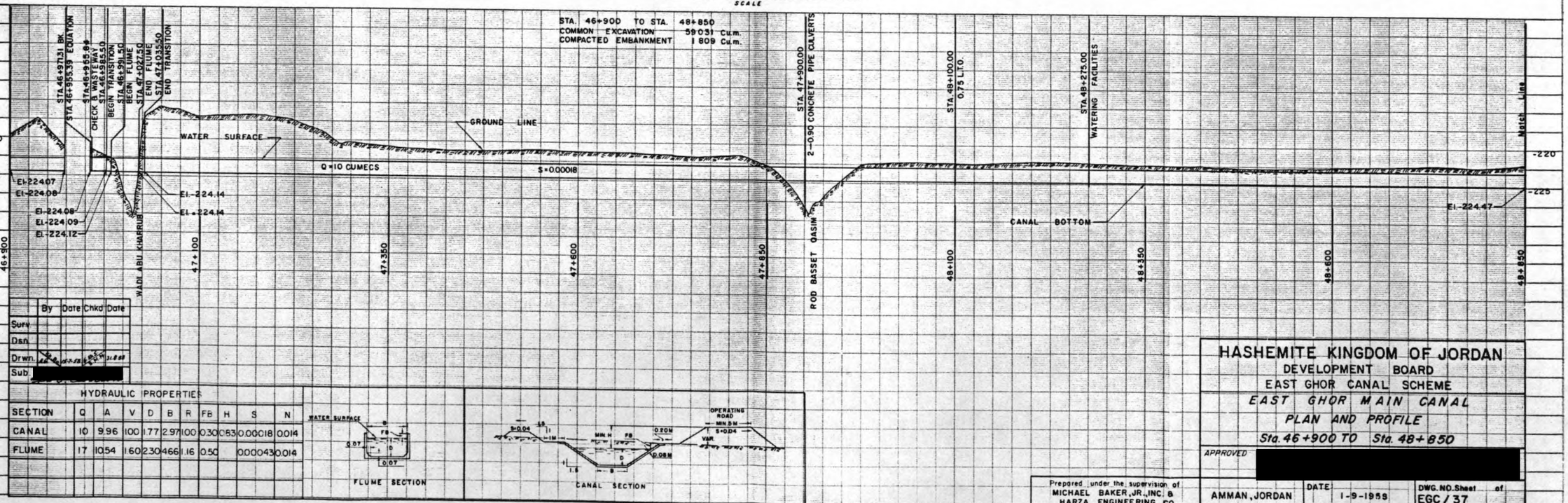
Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO. Sheet of EGC / 36

NOTE BOOK ALIGNMENT CHECKED. PT. OF WAY CHECKED. NO.

NOTE BOOK GRADES CHECKED ALL REMARKS AND STRUCTURE NOTATIONS CHKD NO.





	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.	[redacted]			
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014
FLUME	17	10.54	1.60	2.30	4.66	1.16	0.50		0.00043	0.014

Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN

DEVELOPMENT BOARD

EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL

PLAN AND PROFILE

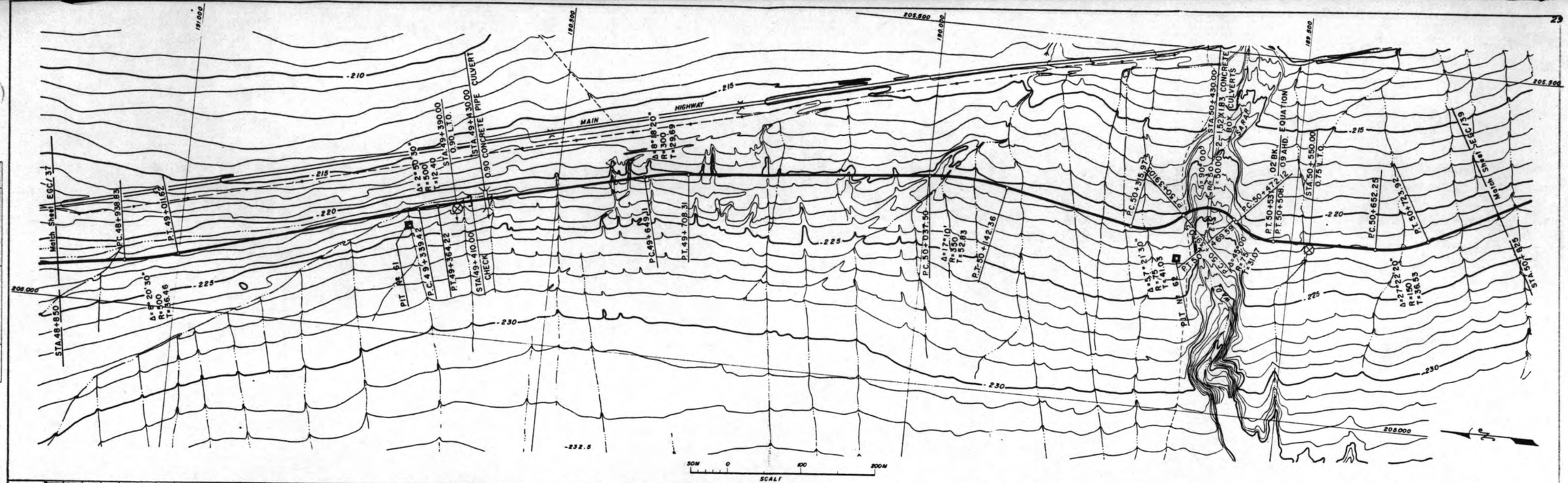
Sta. 46+900 TO Sta. 48+850

APPROVED [redacted]

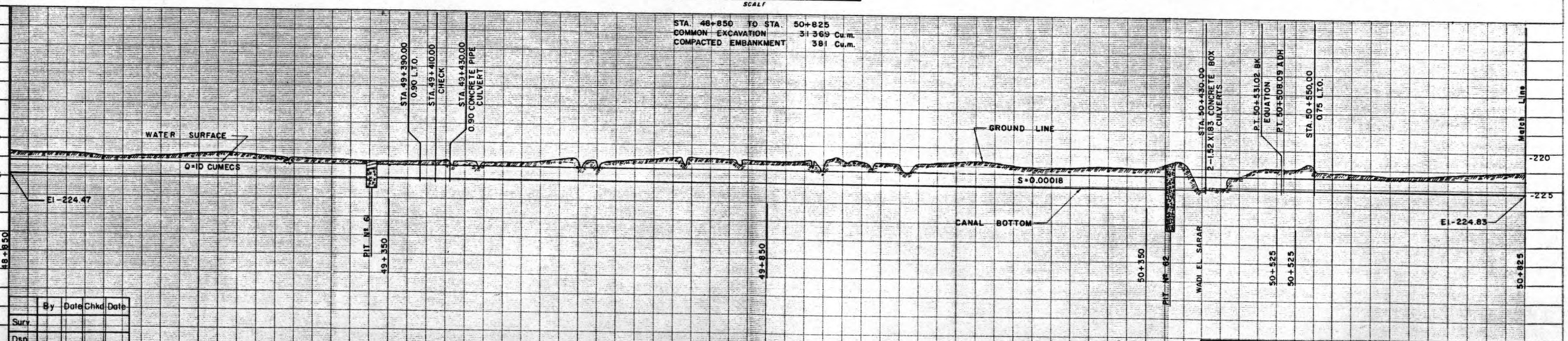
AMMAN, JORDAN | DATE 1-9-1959 | DWG. NO. Sheet EGC/37 of

PLAN — SURVEYED, PLOTTED, ALIGNMENT CHECKED, NOTE BOOK, AT OF BM CHECKED, NO.

PROFILE — SURVEYED, PLOTTED, LEVELS CHECKED, NOTE BOOK, STRUCTURE NOTAT NS CHKD, NO.



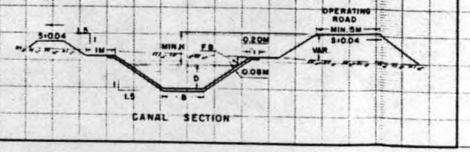
STA. 48+850 TO STA. 50+825
COMMON EXCAVATION 31 369 Cu.m.
COMPACTED EMBANKMENT 381 Cu.m.



	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.	[redacted]			
Sub.				

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	Fb	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.53	0.00018	0.014



HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta. 48+850 TO Sta. 50+825

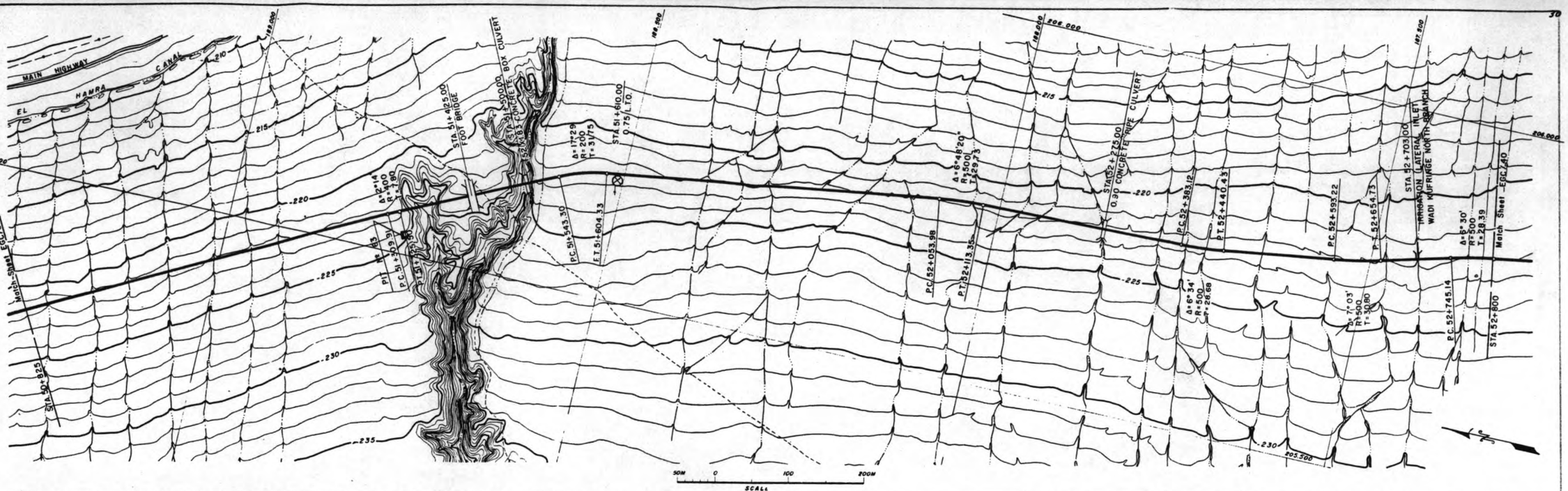
APPROVED [redacted]

Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

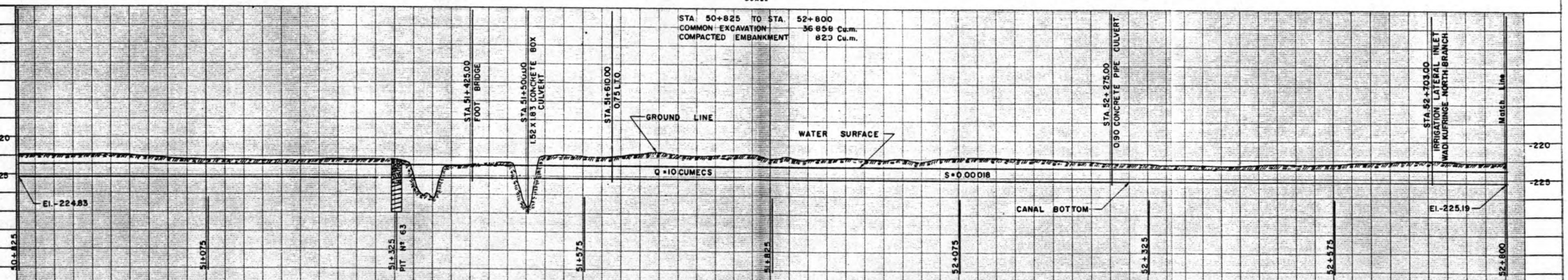
AMMAN, JORDAN | DATE: 1-9-1958 | DWG. NO. Sheet of EGC / 38

PLAN — SURVEYED, DRAWN, NOTE BOOK, ALIGNMENT CHECKED, RT. OF WAY CHECKED, NO., DATE, BY

PROFILE — SURVEYED, DRAWN, NOTE BOOK, GRADES CHECKED, STRUCTURE QUANTITIES CHKD, NO., DATE, BY



STA 50+825 TO STA 52+800
COMMON EXCAVATION 36858 Cu.m.
COMPACTED EMBANKMENT 820 Cu.m.

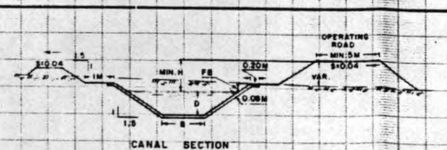


	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.				

[redacted]

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.63	0.00018	0.014



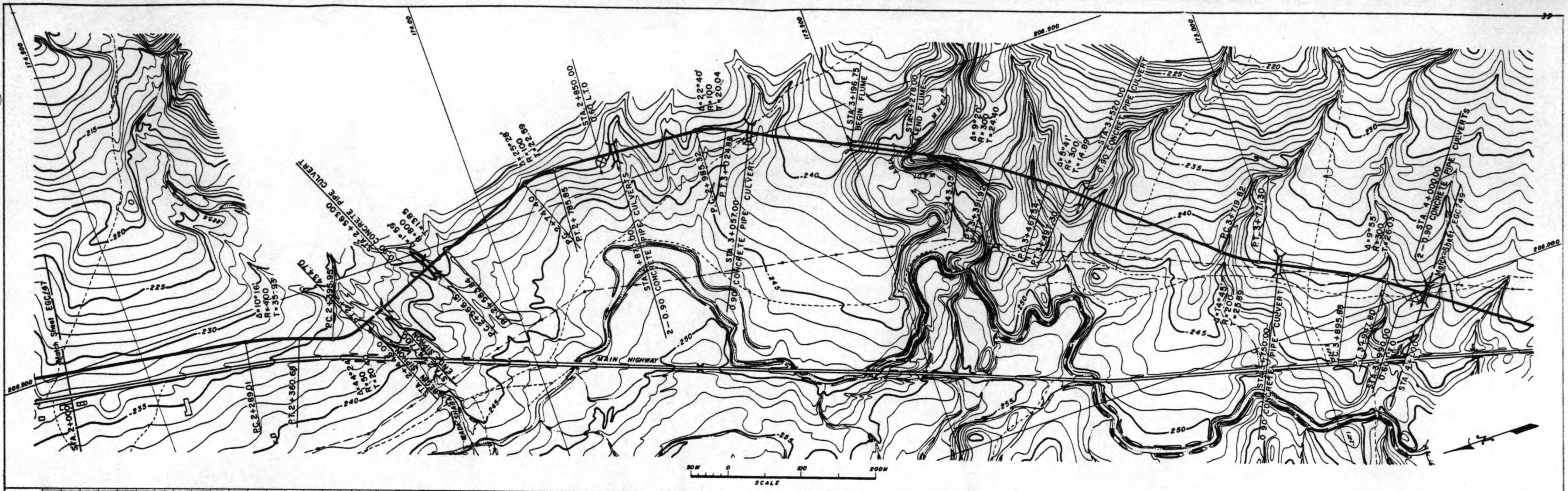
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

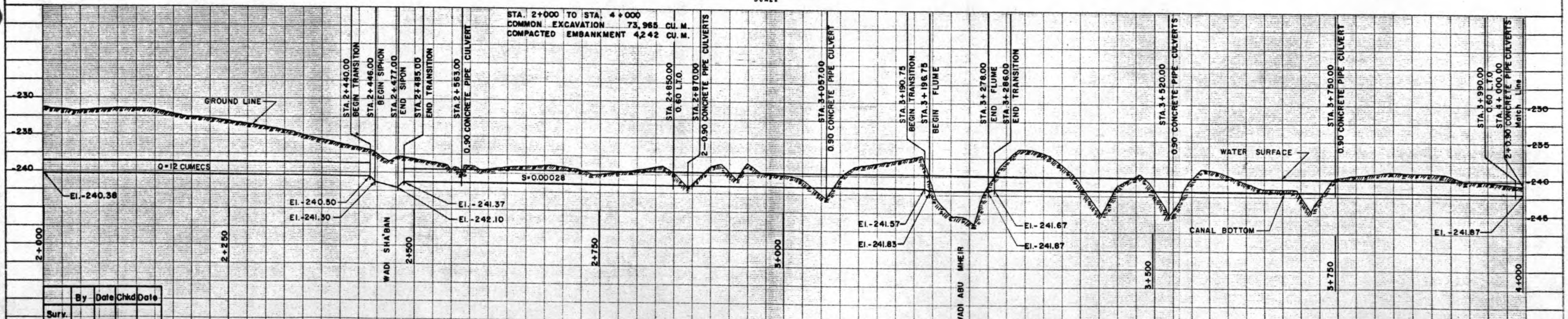
EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta. 50+825 TO Sta. 52+800

APPROVED [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE: 1-9-1958 | DWG. NO. Sheet of EGC/39

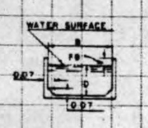




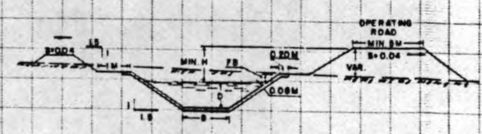
	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.				
Sub[redacted]				

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	12	9.96	1.21	1.77	2.97	1.00	0.30	0.83	0.00028	0.014
SIPHON	12	2.78	4.32	1.88		0.47				0.018
FLUME	12	8.16	1.47	2.06	3.96	1.01			0.00049	0.014



FLUME SECTION



CANAL SECTION

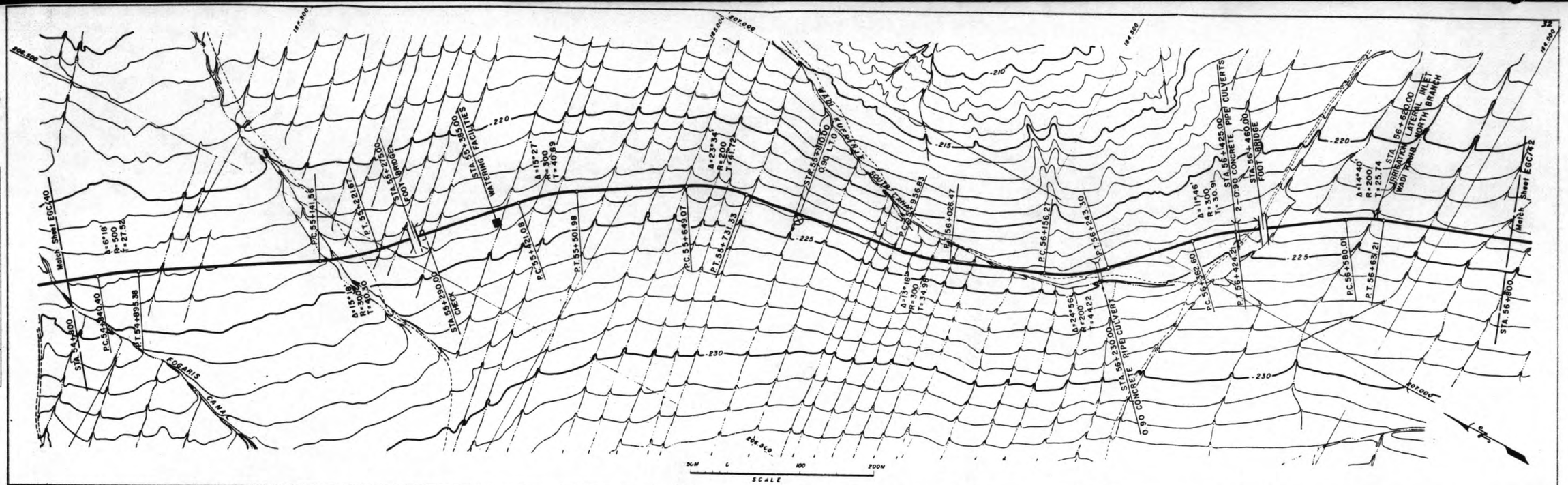
Prepared under the supervision of
MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

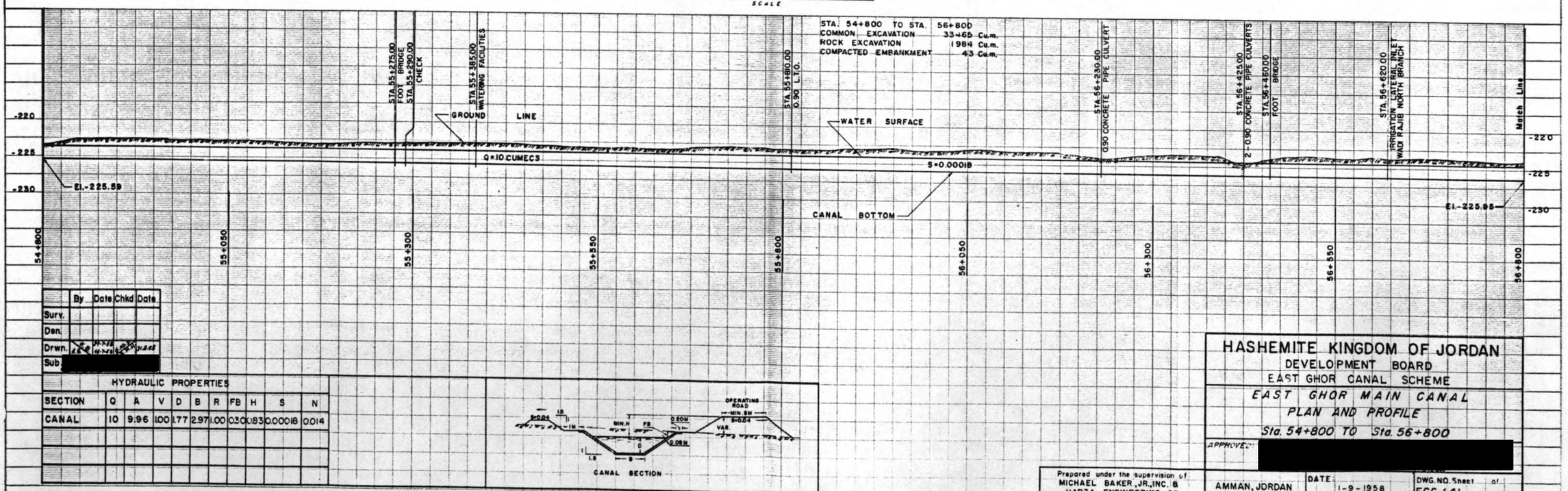
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL-SOUTH-
PLAN AND PROFILE
Sta. 2+000 TO Sta. 4+000

APPROVED: [redacted]

AMMAN, JORDAN | DATE: 1-9-1958 | DWG. NO. Sheet of EGC/ 48





	By	Date	Chkd	Date
Surv.				
Des.				
Drwn.				
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014

HASHEMITE KINGDOM OF JORDAN

DEVELOPMENT BOARD

EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL

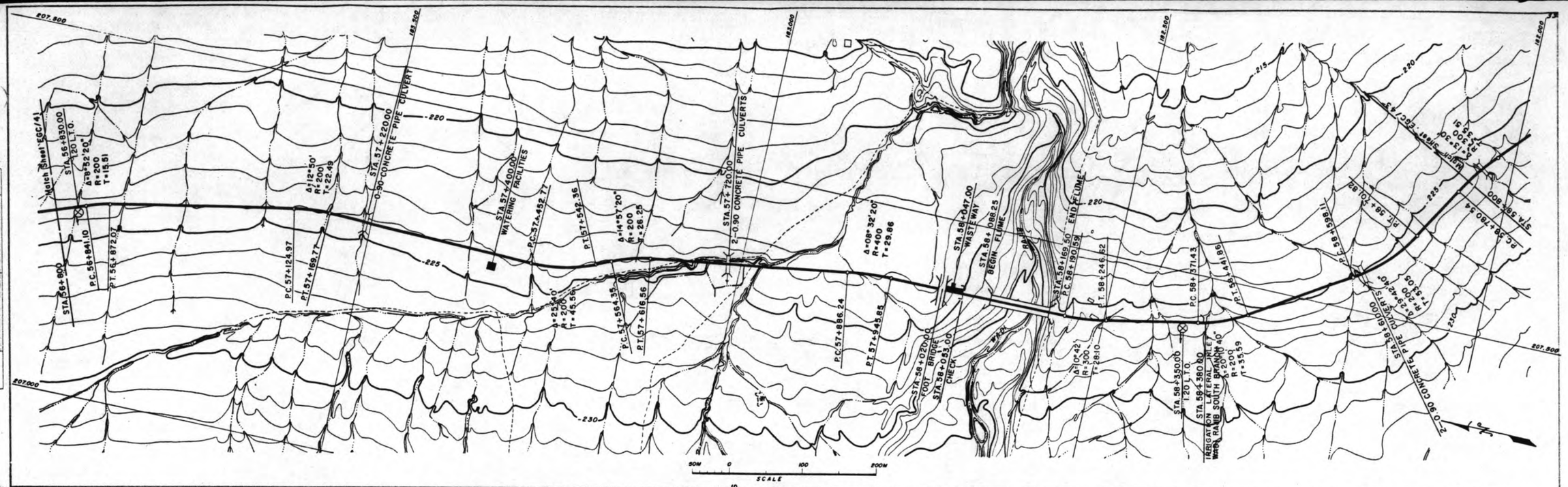
PLAN AND PROFILE

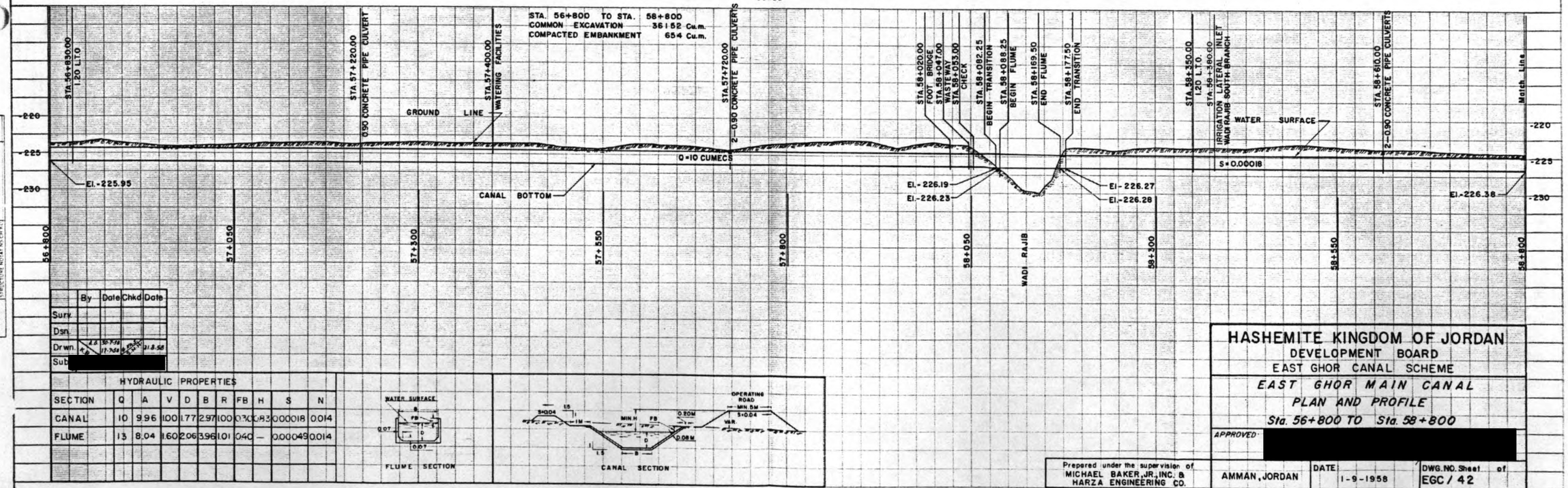
Sta. 54+800 TO Sta. 56+800

APPROVED: [redacted]

Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE: 1-9-1958 | DWG. NO. Sheet of EGC/41





	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.				
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014
FLUME	13	8.04	1.60	2.06	3.96	1.01	0.40	—	0.00049	0.014

FLUME SECTION

CANAL SECTION

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta. 56+800 TO Sta. 58+800

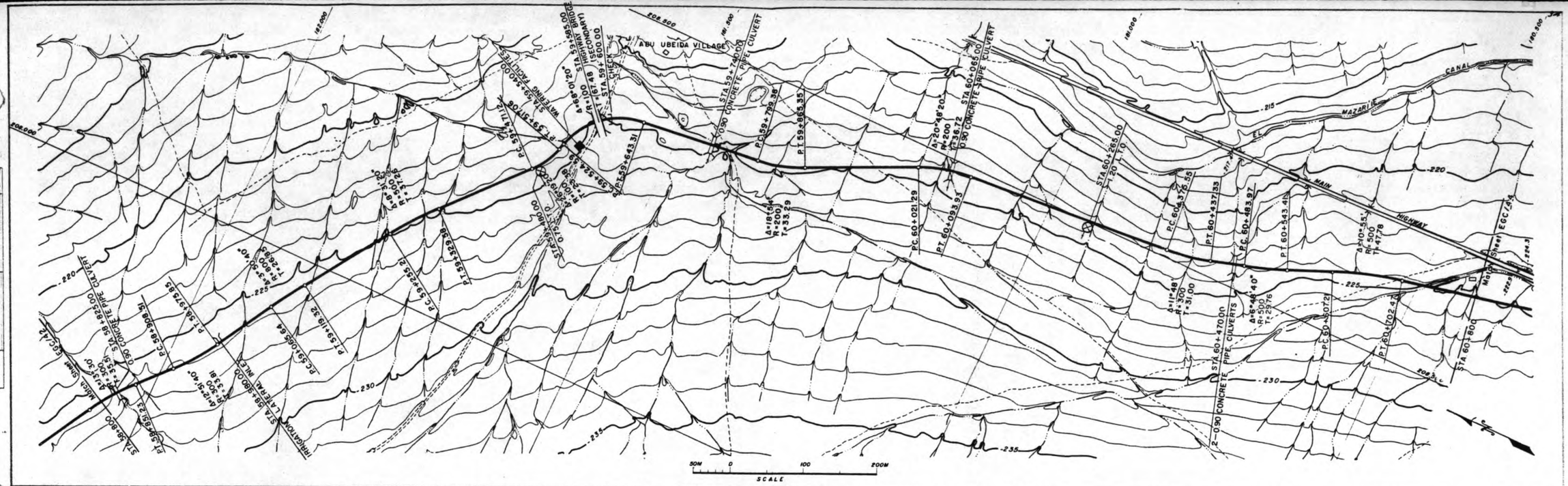
APPROVED: [redacted]

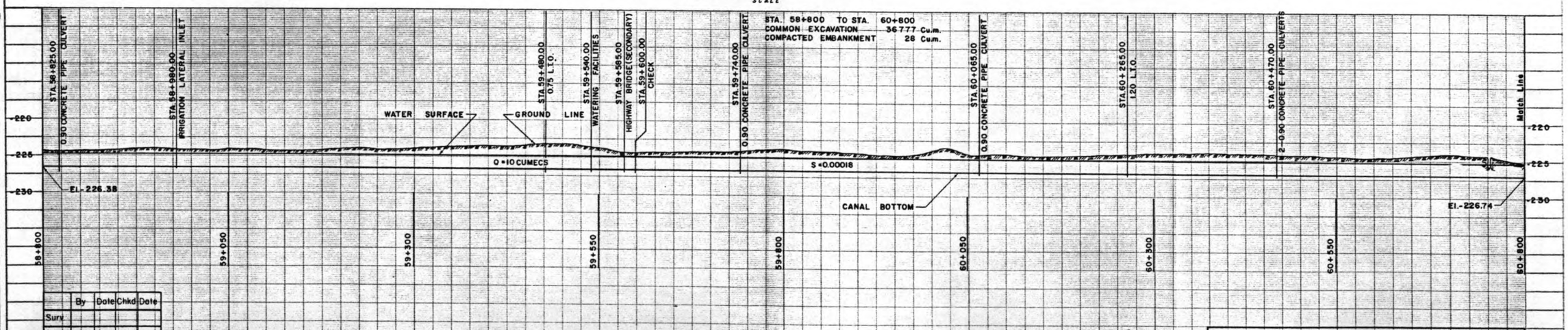
Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

AMMAN, JORDAN

DATE: 1-9-1958

DWG. NO. Sheet of
EGC / 42

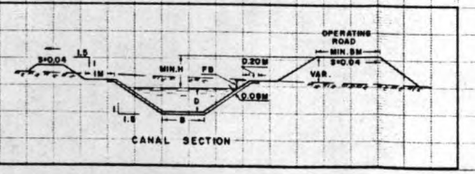




	By	Date	Chkd	Date
Surv				
Dsn				
Drwn				
Sub	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014



CANAL SECTION

HASHEMITE KINGDOM OF JORDAN

DEVELOPMENT BOARD

EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL

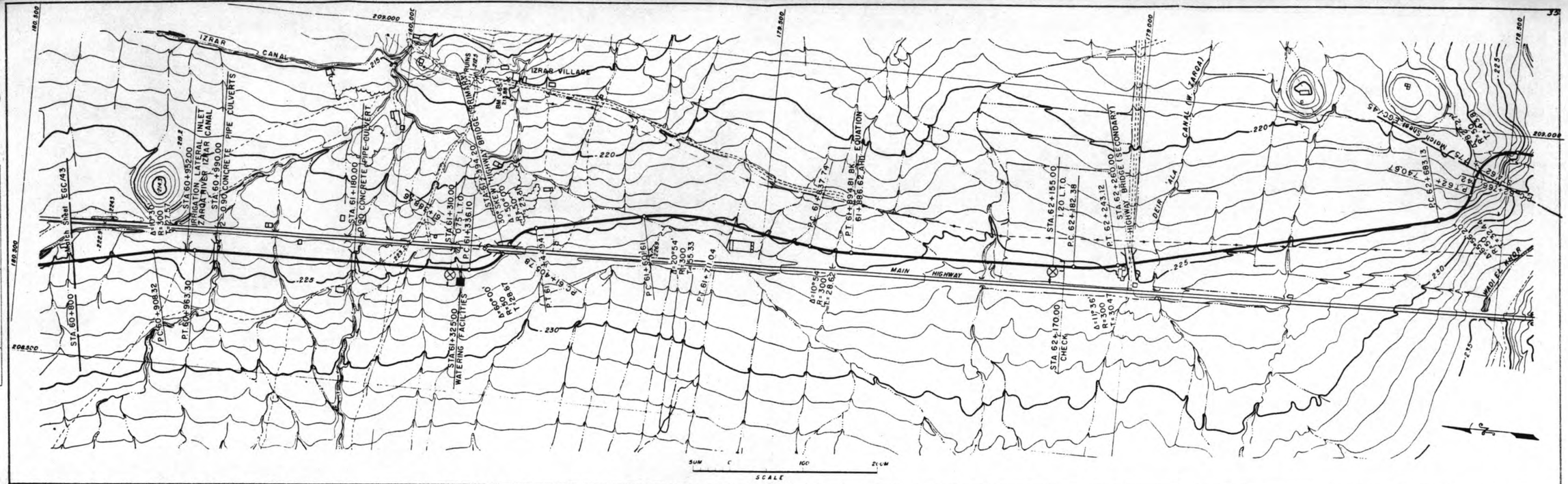
PLAN AND PROFILE

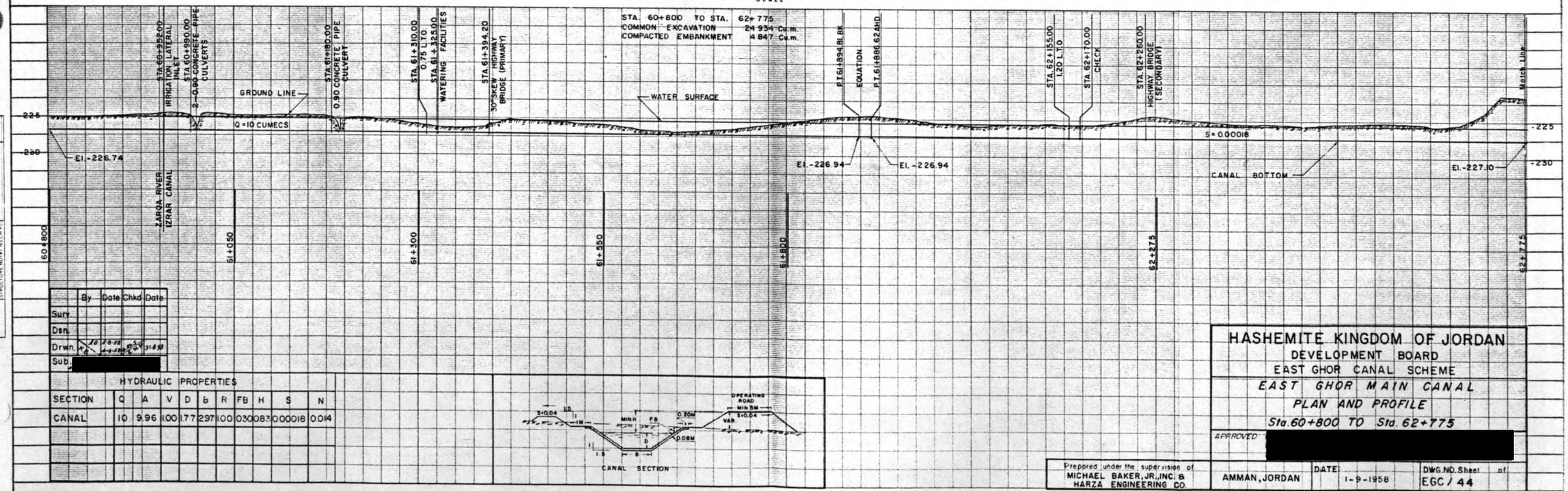
Sta. 58+800 TO Sta. 60+800

APPROVED: [redacted]

Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE: 1-9-1958 | DWG. NO. Sheet of EGC / 43





	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.	[redacted]			
Sub.	[redacted]			

HYDRAULIC PROPERTIES

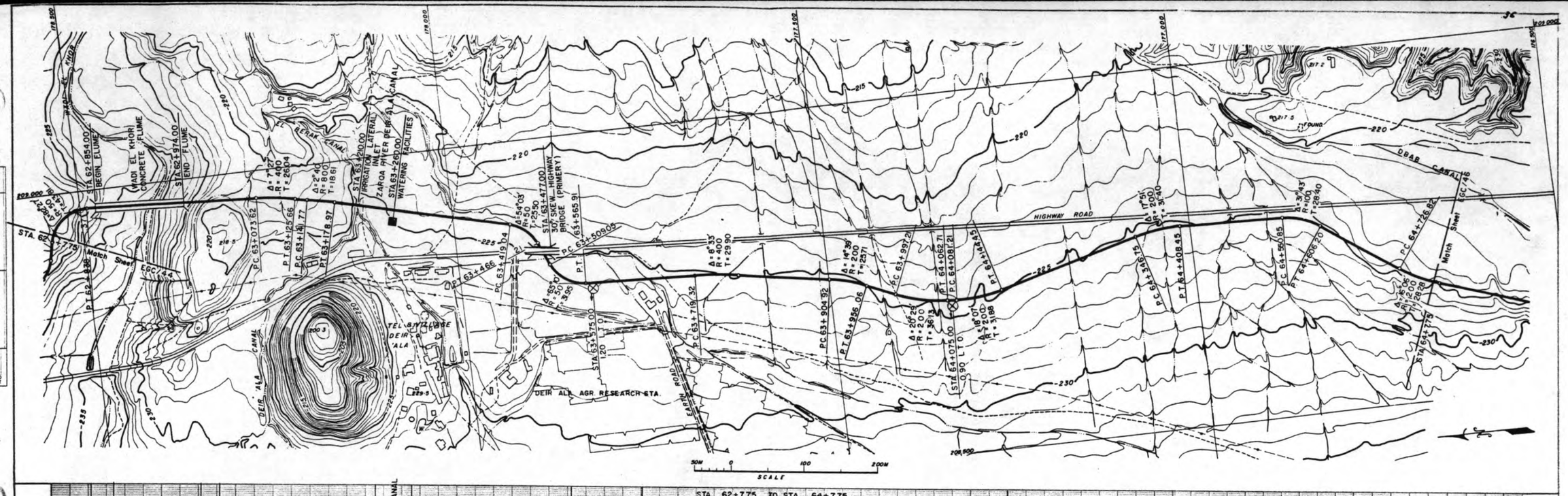
SECTION	Q	A	V	D	b	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014

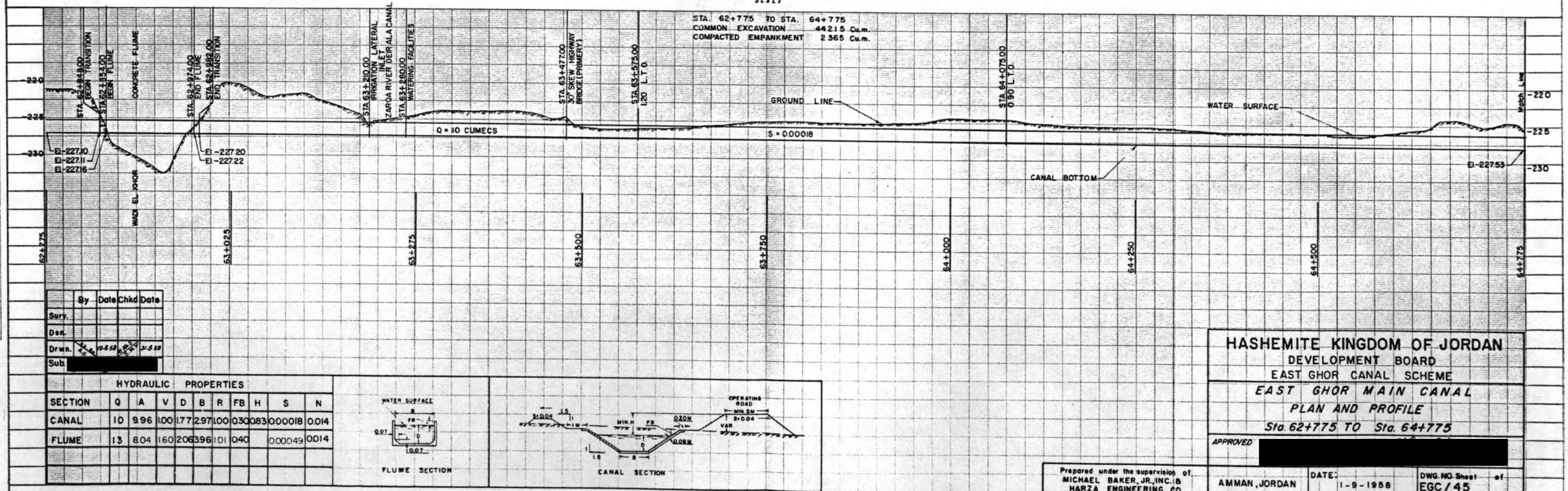
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME
EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta.60+800 TO Sta. 62+775

APPROVED [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE: 1-9-1958 | DWG. NO. Sheet of EGC / 44





	By	Date	Chkd	Date
Surv.				
Des.				
Drwn.		19.8.58		21.8.58
Sub	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014
FLUME	13	8.04	1.60	2.06	3.96	1.01	0.40		0.00049	0.014

FLUME SECTION

CANAL SECTION

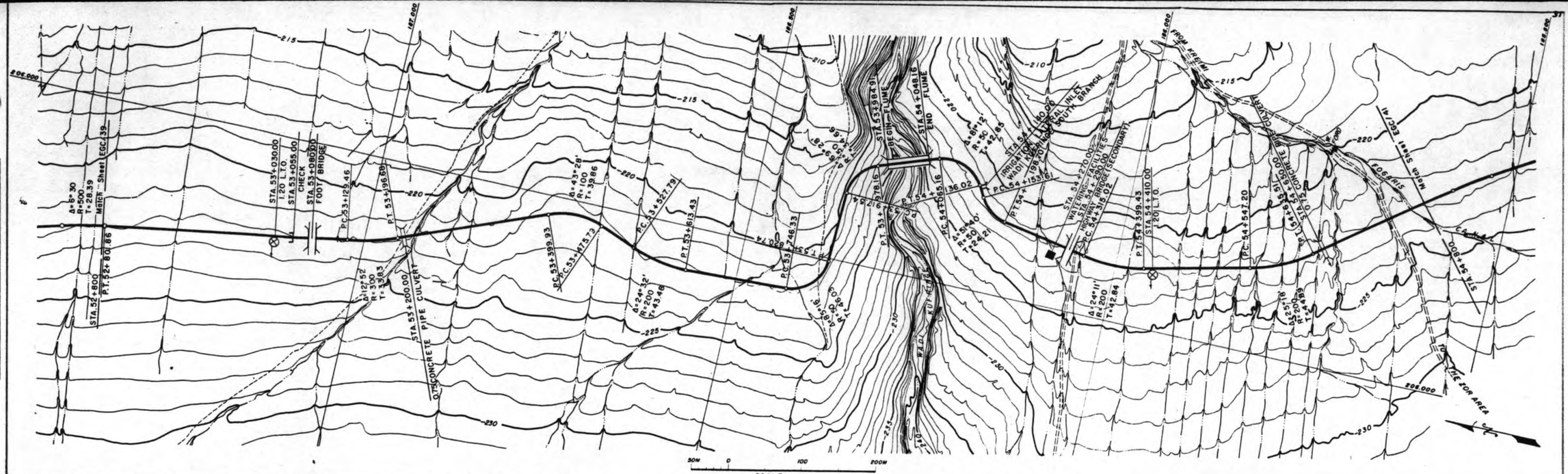
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta. 62+775 TO Sta. 64+775

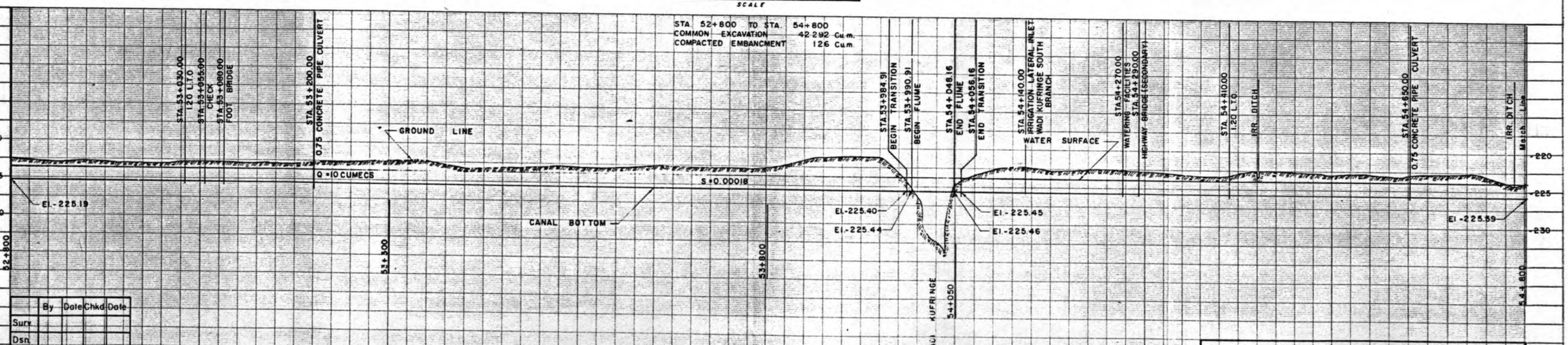
APPROVED [redacted]

Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE: 1-9-1958 | DWG. NO. Sheet of EGC/45



STA. 52+800 TO STA. 54+800
COMMON EXCAVATION 42292 Cu.m.
COMPACTED EMBANCMENT 126 Cu.m.

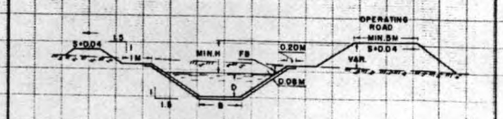


	By	Date	Chkd.	Date
Surv.				
Dsn.				
Drwn.				
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014
FLUME	15	9.29	1.60	2.19	4.33	1.09	0.50		0.00045	0.014

FLUME SECTION



CANAL SECTION

HASHEMITE KINGDOM OF JORDAN

DEVELOPMENT BOARD

EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL

PLAN AND PROFILE

Sta. 52+800 TO Sta. 54+800

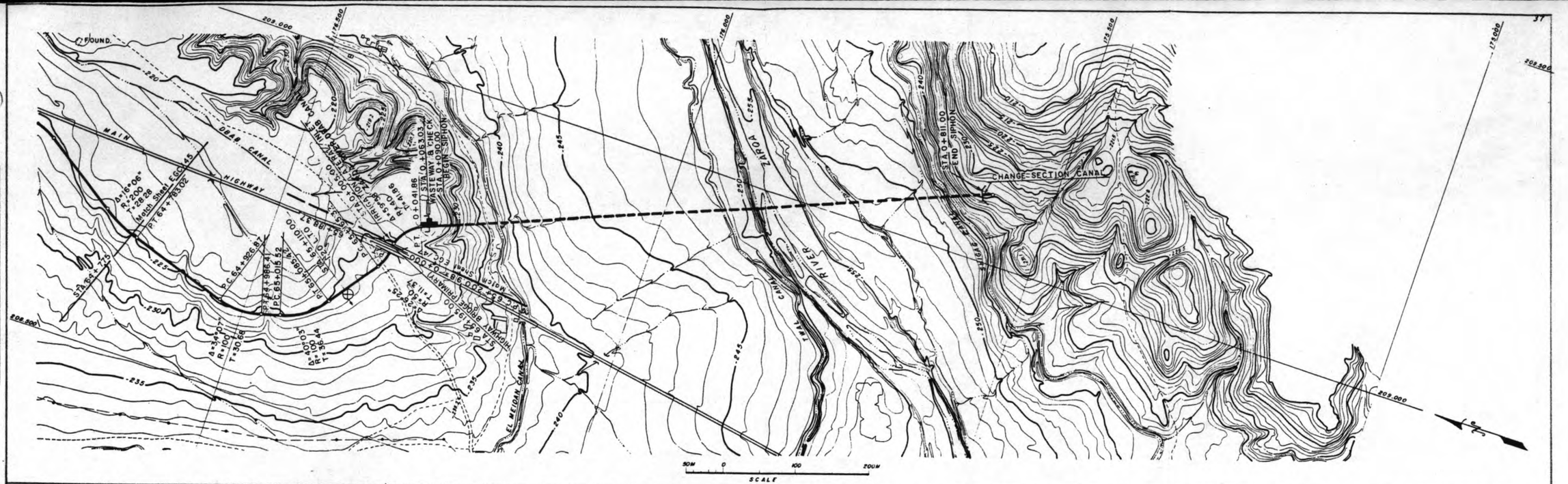
APPROVED [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

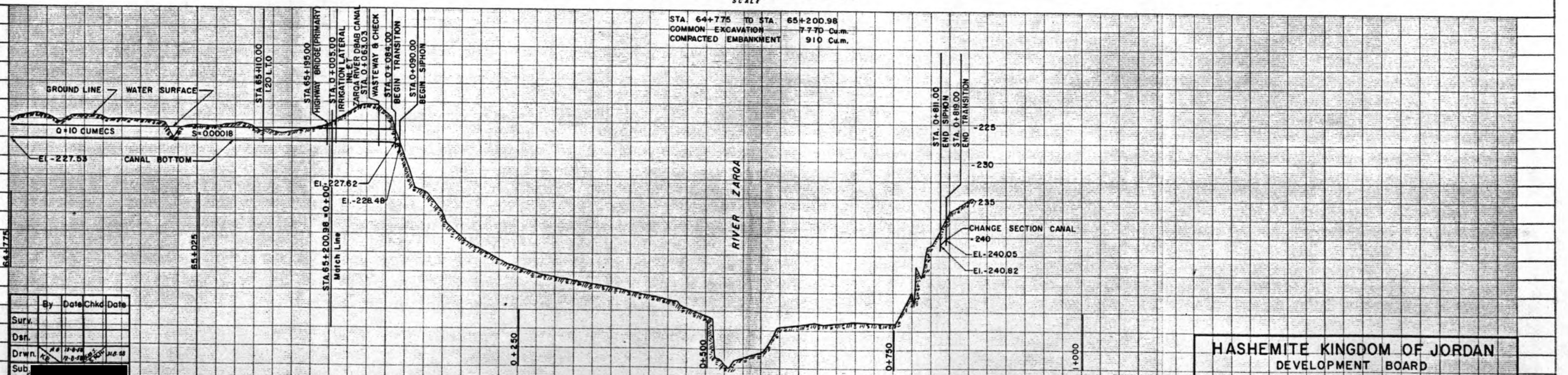
AMMAN, JORDAN

DATE: 1-9-1958

DWG. NO. Sheet of EGC / 40



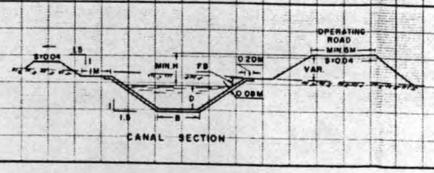
STA. 64+775 TO STA. 65+200.98
COMMON EXCAVATION 7770 Cu.m.
COMPACTED EMBANKMENT 910 Cu.m.



	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.	AS	11-8-58	MS	11-8-58
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.083	0.00018	0.014
SIPHON	12	2.78	4.32	1.88		.047				0018
CANAL	12	9.96	1.21	1.77	2.97	1.00	0.30	0.083	0.00028	0.014

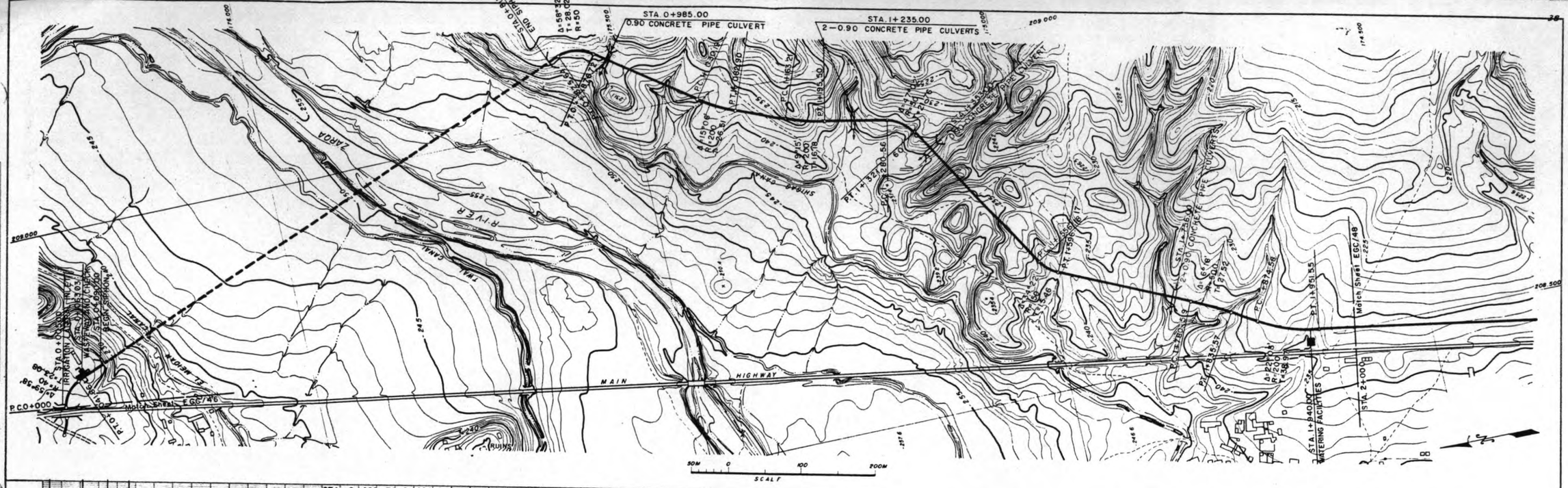


HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME
EAST GHOR MAIN CANAL
PLAN AND PROFILE
Sta. 64+775 TO Sta. 65+200.98 =0+000

APPROVED: [redacted]

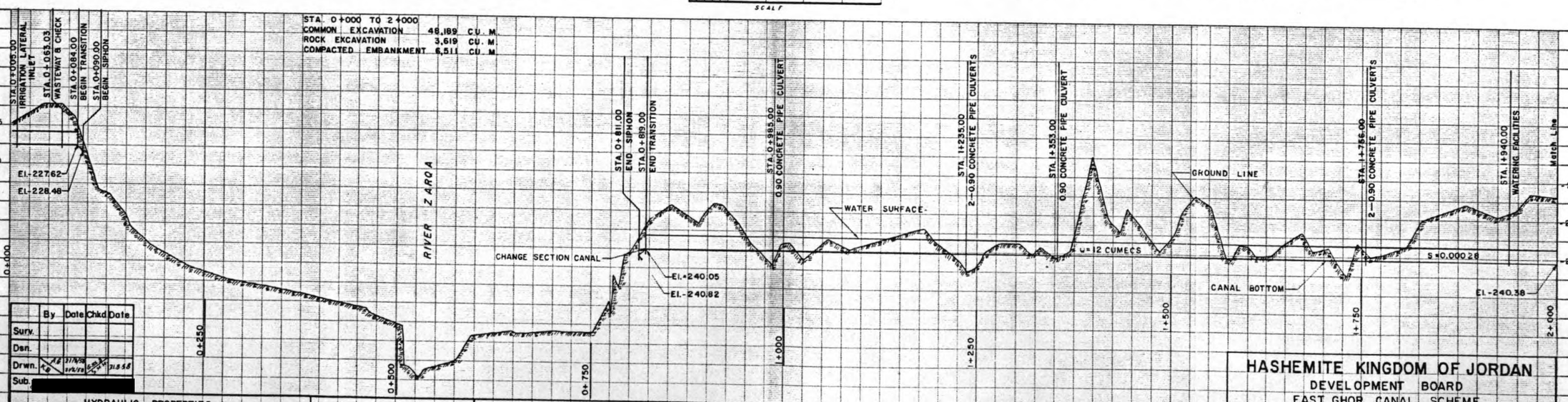
Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO. Sheet of EGC / 46



STA. 0+000 TO 2+000

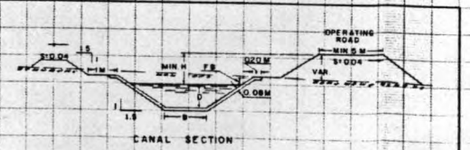
COMMON EXCAVATION	46,189 CU. M
ROCK EXCAVATION	3,619 CU. M
COMPACTED EMBANKMENT	6,511 CU. M



	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.	AB	31/8/58		
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	10	9.96	1.00	1.77	2.97	1.00	0.30	0.83	0.00018	0.014
SIPHON	12	2.78	4.32	1.88		0.47				0.018
CANAL	12	9.96	1.21	1.77	2.97	1.00	0.30	0.83	0.00028	0.014



HASHEMITE KINGDOM OF JORDAN

DEVELOPMENT BOARD

EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL-SOUTH-

PLAN AND PROFILE

Sta 0+000 TO Sta 2+000

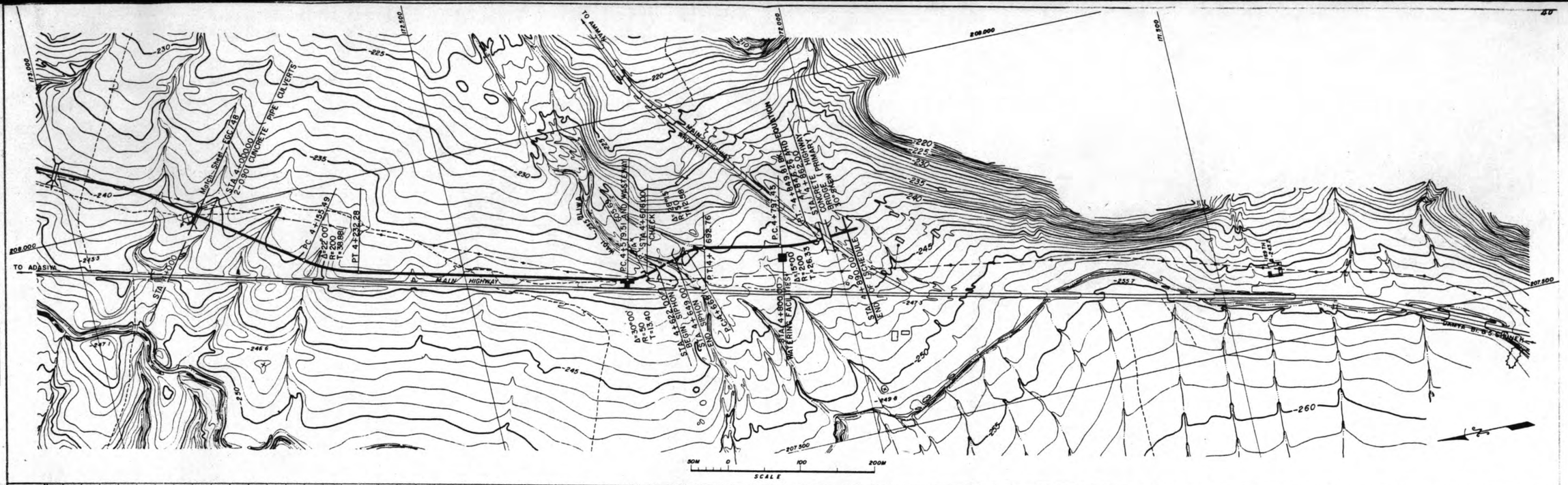
APPROVED [redacted]

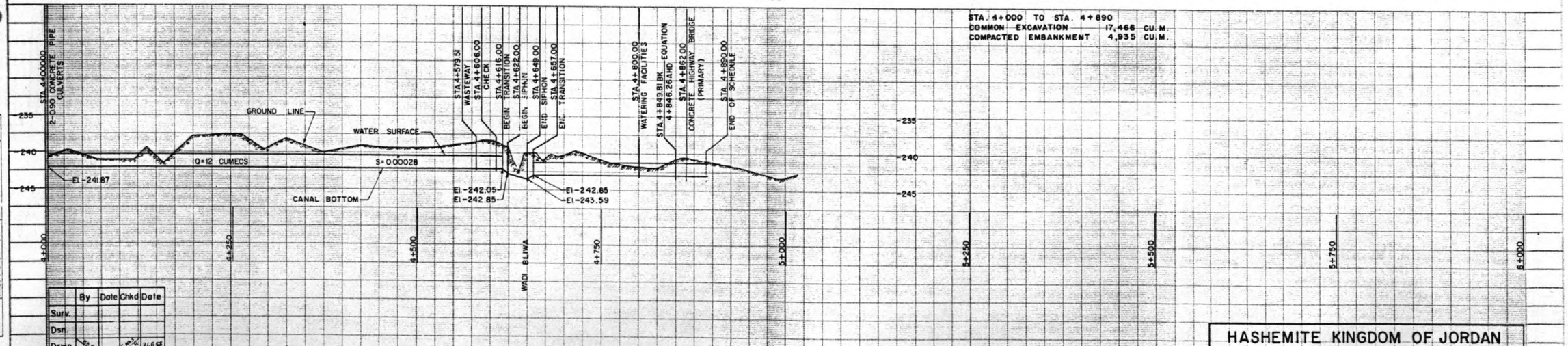
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

AMMAN, JORDAN

DATE 1-9-1958

DWG. NO. Sheet of EGC/47



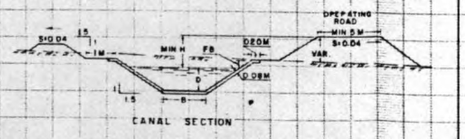


STA. 4+000 TO STA. 4+890
COMMON EXCAVATION 17,466 CU.M.
COMPACTED EMBANKMENT 4,935 CU.M.

	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.	[redacted]			
Sub.	[redacted]			

HYDRAULIC PROPERTIES

SECTION	Q	A	V	D	B	R	FB	H	S	N
CANAL	12	9.96	1.21	1.77	2.97	1.00	0.30	0.85	0.00028	0.014
SIPHON	12	2.76	4.32	1.88		.47				0.018



Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

EAST GHOR MAIN CANAL-SOUTH-
PLAN AND PROFILE
Sta. 4+000 TO Sta. 4+890

APPROVED: [redacted]

AMMAN, JORDAN | DATE: 1-9-1958 | DWG. NO. Sheet of EGC / 49

BENDING DETAILS

TYPE	DIAGRAM	Bar#	A
Std. 180° Hooks	A, d, 4d; 6d for bars #2 to #7; 8d for bars #8 to #11	2	0.10
		3	0.12
		4	0.15
		5	0.18
		6	0.20
		7	0.25
		8	0.33
		9	0.38
		10	0.43
		11	0.49
Stirrup & Column Tie 135° Hooks	A, 5d, H	Bar#	H	A
		2	0.05	0.09
		3	0.06	0.10
		4	0.06	0.11
		5	0.07	0.12

TYPE	DIAGRAM	Bar#	D
90° Bend	D; D=6d for bars #2 to #7; D=8d for bars #8 to #11	2	0.04
		3	0.06
		4	0.08
		5	0.09
		6	0.11
		7	0.13
		8	0.20
		9	0.23
		10	0.26
		11	0.29

TYPICAL: Standard size (minimum) pin used for bending

PIN DIA.	USE
6d 8d	Hooks and bends for main reinforcement
5d	Hooks on stirrups, hoops, ties, etc.
2d	Corner bends (other than hooks) in stirrups, hoops, ties, etc.

BAR DESIGNATION STANDARDS

Bar Sizes Old (Inches)	Bar Sizes New (Numerals)	Weight Kg. per meter	Diameter (Centimeter)
1/4 "ϕ	"2	.248	.635
3/8 "ϕ	"3	.559	.953
1/2 "ϕ	"4	.994	1.270
5/8 "ϕ	"5	1.551	1.588
3/4 "ϕ	"6	2.234	1.905
7/8 "ϕ	"7	3.040	2.223
1 "ϕ	"8	3.972	2.540
1 "□	"9	5.058	2.865
1 1/8 "□	"10	6.401	3.226
1 1/4 "□	"11	7.903	3.581

STANDARD ABBREVIATIONS

mi= middle layer	il= inside layer
ff= far face	nf= near face
tf= top face	bf= bottom face
el=each layer	ef=each face
oc=center to center	bl=bottom layer
tl=top layer	ol=outside layer

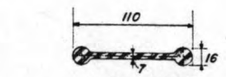
TYPICAL BAR BILLING

"6@ 0.20 oc, tf "6 f2@0.25oc, nf
10-"6 tf 8-"6 f2 nf

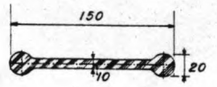
NOTES:
1. Bar spacing in meters.
2. Straight bars designated by size, bent bars generally by type ie, f2.

ABBREVIATIONS & SYMBOLS

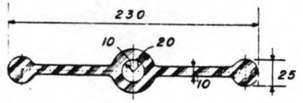
abt.	About	M.T.	Metric ton
C.J.	Construction joint	nts	Not to scale
℄	Center line	No.	Number
C.M.	Cubic meters	oc	on center
dia	Diameter	reinf.	Reinforcement
ϕ	Diameter	R	Radius
dn	Down	□	Square
dwg	Drawing	std.	Standard
ea	Each	Sta	Station
El.	Elevation	symm.	Symmetrical
H.P.	High point	typ.	Typical
H.W.	Head water	V.G.	V-groove
L.P.	Low point	W.L.	Working line
max.	Maximum	W.P.	Working point
min.	Minimum	W.S.	Waterstop
mm.	Millimeters	W.S.	Water surface



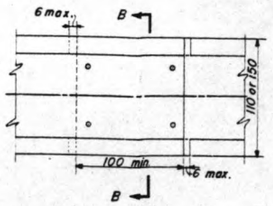
TWO BULB RUBBER WATERSTOP
TYPE "C"



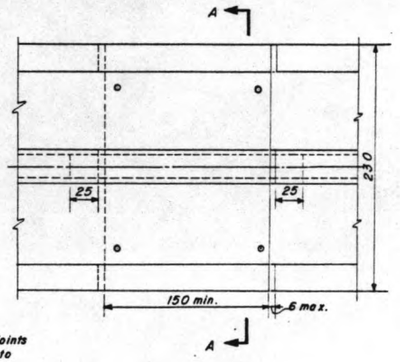
TWO BULB RUBBER WATERSTOP
TYPE "B"



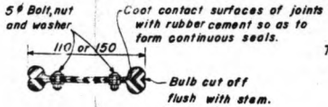
THREE BULB RUBBER WATERSTOP
TYPE "A"



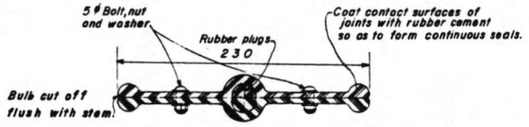
TYPICAL TWO BULB RUBBER
WATERSTOP SPLICE



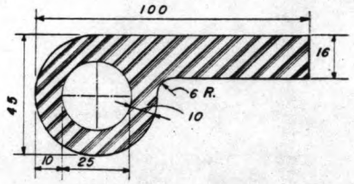
TYPICAL THREE BULB RUBBER
WATERSTOP SPLICE



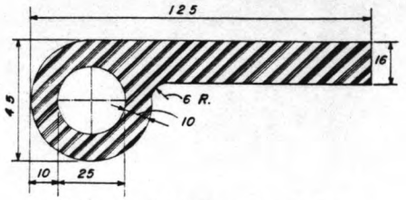
SECTION B-B



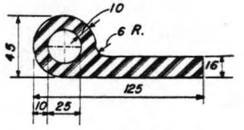
SECTION A-A



100 STEM RUBBER SEALING STRIP



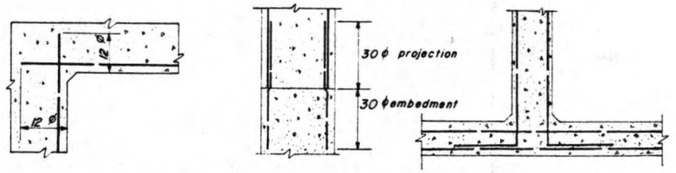
125 STEM RUBBER SEALING STRIP



CROSS SECTION
Not to scale

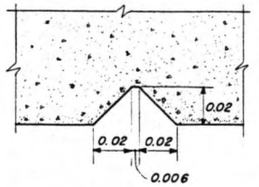
WATERSTOPS

(All dimensions in millimeters)

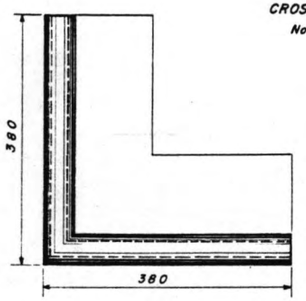


TYPICAL EMBEDMENT & PROJECTION DETAILS

(Unless otherwise noted on drawings)



TYPICAL V-GROOVE
(Dimensions in meters)



125 STEM RUBBER SEAL
CORNER STRIP

RUBBER SEALS
(Dimensions in millimeters)

Not to scale
Except as noted.

GENERAL NOTES FOR CONCRETE

Provide tooled edges for all construction and contraction joints on surfaces where wood float or steel trowel finish is required.
Concrete surfaces exposed to the flow of water must be smooth.
Unless otherwise noted, roughen surfaces of pours at construction joints.
Provide 0.02 chamfer for all exposed external corners.
Provide V-groove joints as detailed on this drawing.
Waterstops to be continuous.
Lifts in columns not to exceed 3 meters in height.

GENERAL NOTES FOR REINFORCEMENT

Laps to be 30 bar diameters minimum, except as noted.
Main reinforcement to have minimum cover as follows: (except as otherwise noted on drawings).

1. Bottom of foundation footings	0.07
2. Backfilled surfaces	0.05
3. Walls and slabs (not exposed to water)	0.04
4. Beams	0.05
5. Columns	0.08

6. Cover for secondary reinforcement (i.e. stirrups, col. ties), may be reduced by the diameter of such bars.
7. All reinforcement subject to A.C.I. building code, unless otherwise noted.

	By	Date	Chkd	Date
Dsn.				
Drwn.	[illegible]	[illegible]	[illegible]	[illegible]
Trac.				
Sub.	[redacted]			

Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

STANDARD DETAILS
SHEET 1

APPROVED [redacted]

AMMAN, JORDAN | DATE. 1-9-1958 | DWG. NO EGC/98

TYPE OF WELD

BEAD	FILLET	PLUG OR SLOT	GROOVE: SQUARE	GROOVE: V	GROOVE: BEVEL	GROOVE: U	GROOVE: J	FLUSH	WELD ALL AROUND	FIELD WELD
⌒	△	▽	I	V	∠	Y	∠	—	○	●

IN PLAN OR ELEVATION (WITH DIMENSIONS AS REQUIRED)

ARROW (OR NEAR) SIDE OF JOINT	OTHER (OR FAR) SIDE OF JOINT	BOTH SIDES
Weld all around; 8; Size; Side from which welded	Length of increment; 8; 100-150; Joint opening; 3; Field weld all around; Pitch of increments	8; 50-100; 3; C; Offset if staggered; Flush finish
Reinforced other side; Field weld	Root opening; 3; Included angle 40°; Reinforced arrow side	Bead finish; G; G; Depth of groove (size); 8; 8
Weld flush; 8; Depth of groove (size)	Root opening; 2; See detail When proportions are not standard	M; M; Finish flush
Diameter of root (plug); Pitch of plugs; 8; 8-150; 60°; Included angle of bevel; Built up surface	Length of slot; 0°; 8; 5-25; Minimum pad thickness; 6; Width of slot; Pitch of slots	Corner joint; See detail For special welds

EXTENT OF WELDS See note 4

8 — 2500 — 1000 — 8 — 8 — 150

WELDS IN SECTION OR END VIEW See notes 5 and 6

8 — 8

See note 7

FINISH MARKS	
C C	Chip
G G	Grind
M M	Machine

NOTES

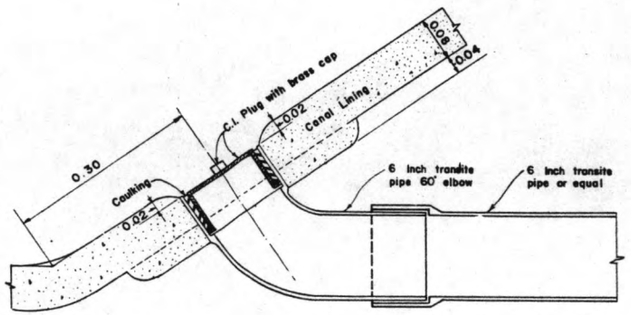
1. The side of the joint to which the arrow points is the arrow (or near) side.
2. All welds are continuous and of standard proportions unless otherwise shown. The root openings of all grooved welds will be fabricator's standard practice unless otherwise shown.
3. Welds on both sides are of the same size unless otherwise shown.
4. Symbols govern to break in continuity of structure or to extent of hatching or dimension lines.
5. On section or end views only, the side to which the arrow points is considered the near side when weld is not drawn.
6. When welds are drawn in section or end views, the size only need be given.
7. In joints in which one member only is to be grooved, the arrows point to that member.
8. All dimensions given in millimeters

FUSION WELDING SYMBOLS

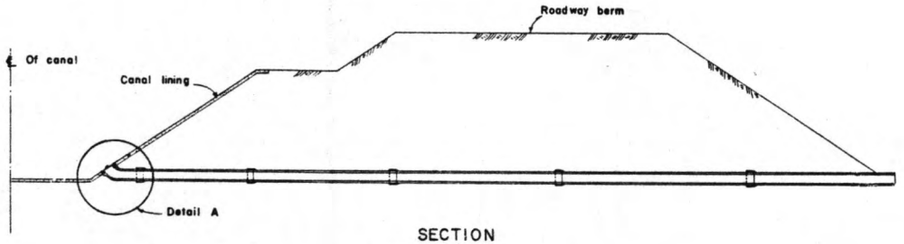
METAL SURFACE FINISH

Application	Surface roughness & symbol (RMS microinches) *	Metric Equivalent (micro millimeters)
Normal finish	500	12700
Average machine finish: gate guides, clearance surfaces, etc.	250	6350
Good machine finish: bearing surfaces of plates, castings, all-over finished of machined washers and nuts, chain sprockets, etc.	125	3175
Fine machine finish: boring, finish turning of pins, chain rollers, bearing surfaces of rockers.	63	1600

*) Root-mean-square. The RMS value is a weighted average that is affected to a greater extent by the highest and the lowest deviation from the nominal surface than by the minor deviations. It is somewhat larger than the arithmetical average.



DETAIL A
not to scale
Dimensions in Meters



SECTION
WATERING FACILITY
(Typical)
(For location see Plan & Profile Sheets)
not to scale

	By	Date	Chkd	Date
Dsn.				
Drawn.				
Trac.				
Sub.	[redacted]			

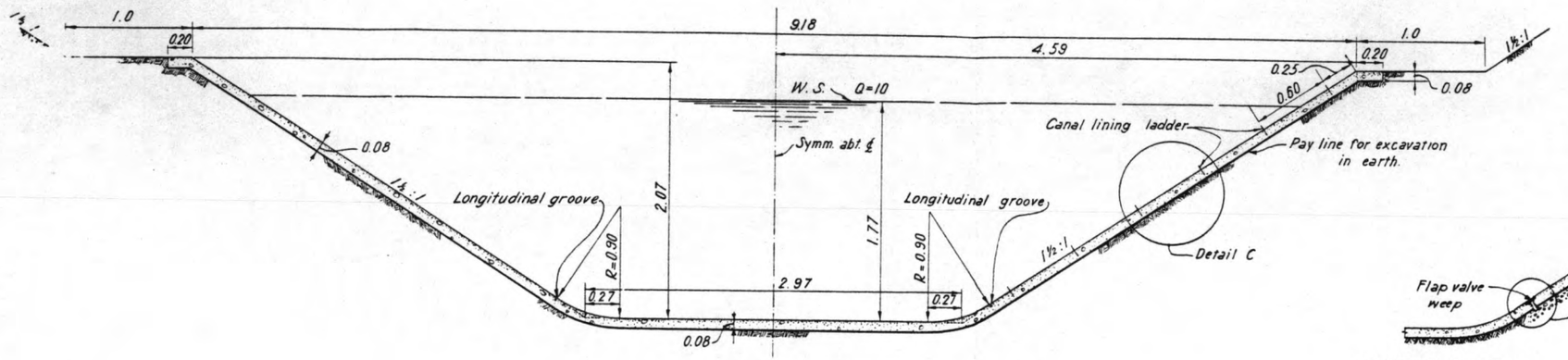
Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

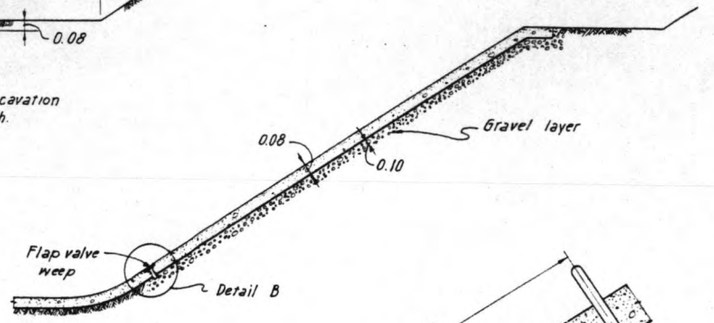
STANDARD DETAILS
SHEET 2

APPROVED: [redacted]

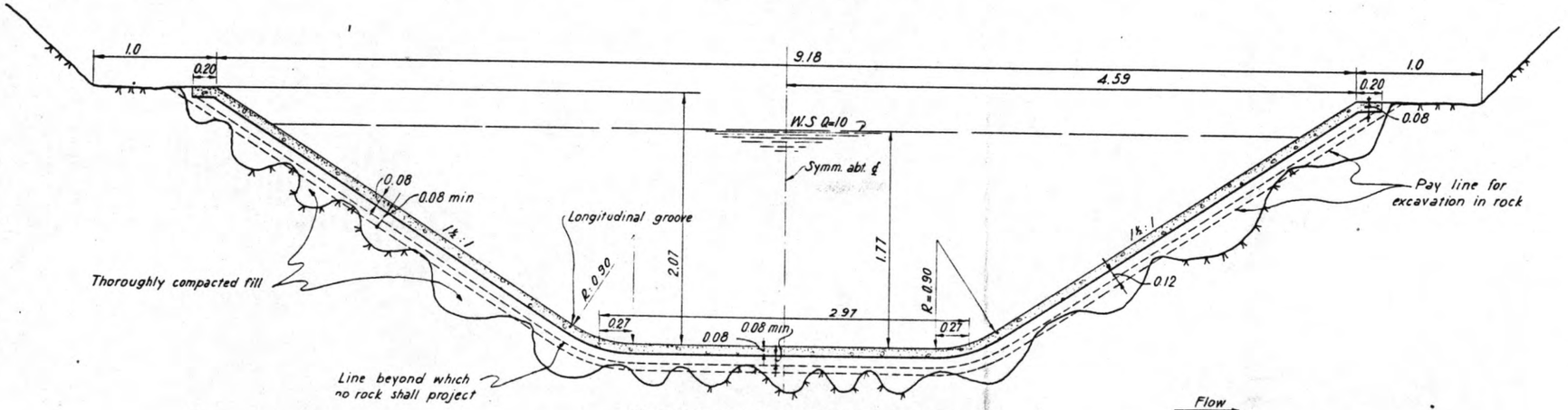
AMMAN, JORDAN | DATE 1-9-1958 | DWG.NO. EGC/99



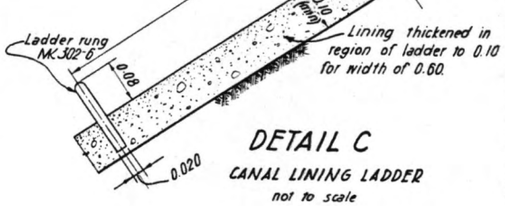
LINING DETAIL
EARTH EXCAVATION



LINING DETAIL
UNDER DRAINAGE



LINING DETAIL
ROCK EXCAVATION



DETAIL C
CANAL LINING LADDER
not to scale

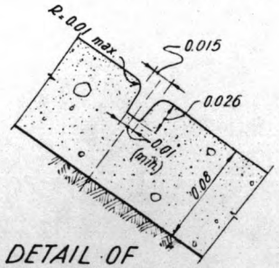
REFERENCE DRAWINGS

Standard Details EGC/98
Plan and Profile EGC/12 to EGC/19
Miscellaneous Metals EGC/303

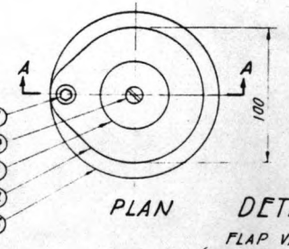
NOTES:

1. Canal lining ladder rungs to be placed during concrete lining operations, staggered each side of canal @ 300 meter intervals and upstream of structures as directed.
2. Canal R = 0.90 shown may be varied as approved, to meet requirments of lining equipment.
3. Flap valve weep with gravel layer to be provided where directed.
4. Concrete design based on a compressive strength of 210 Kg. per sq.cm.

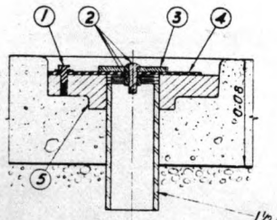
0 0.3 1.0 M.
Scale
Except as noted



DETAIL OF LINING GROOVE
Scale
0 0.05 0.10 M.



PLAN



DETAIL B
FLAP VALVE WEEPS
(Dimensions in millimeters)

SECTION A-A

	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.				
Sub.	[redacted]			

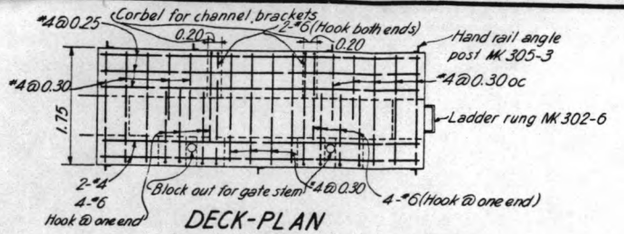
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

CONCRETE CANAL LINING SECTIONS

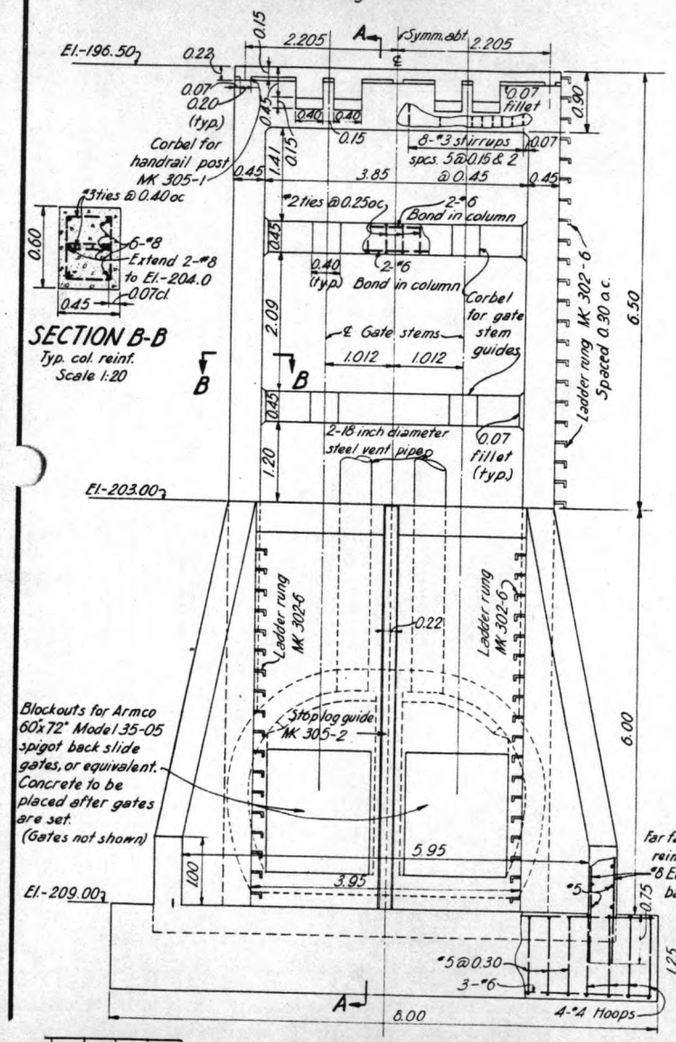
APPROVED: [redacted]

AMMAN, JORDAN | DATE. 1-9-1958 | DWG. NO. EGC/100



DECK-PLAN

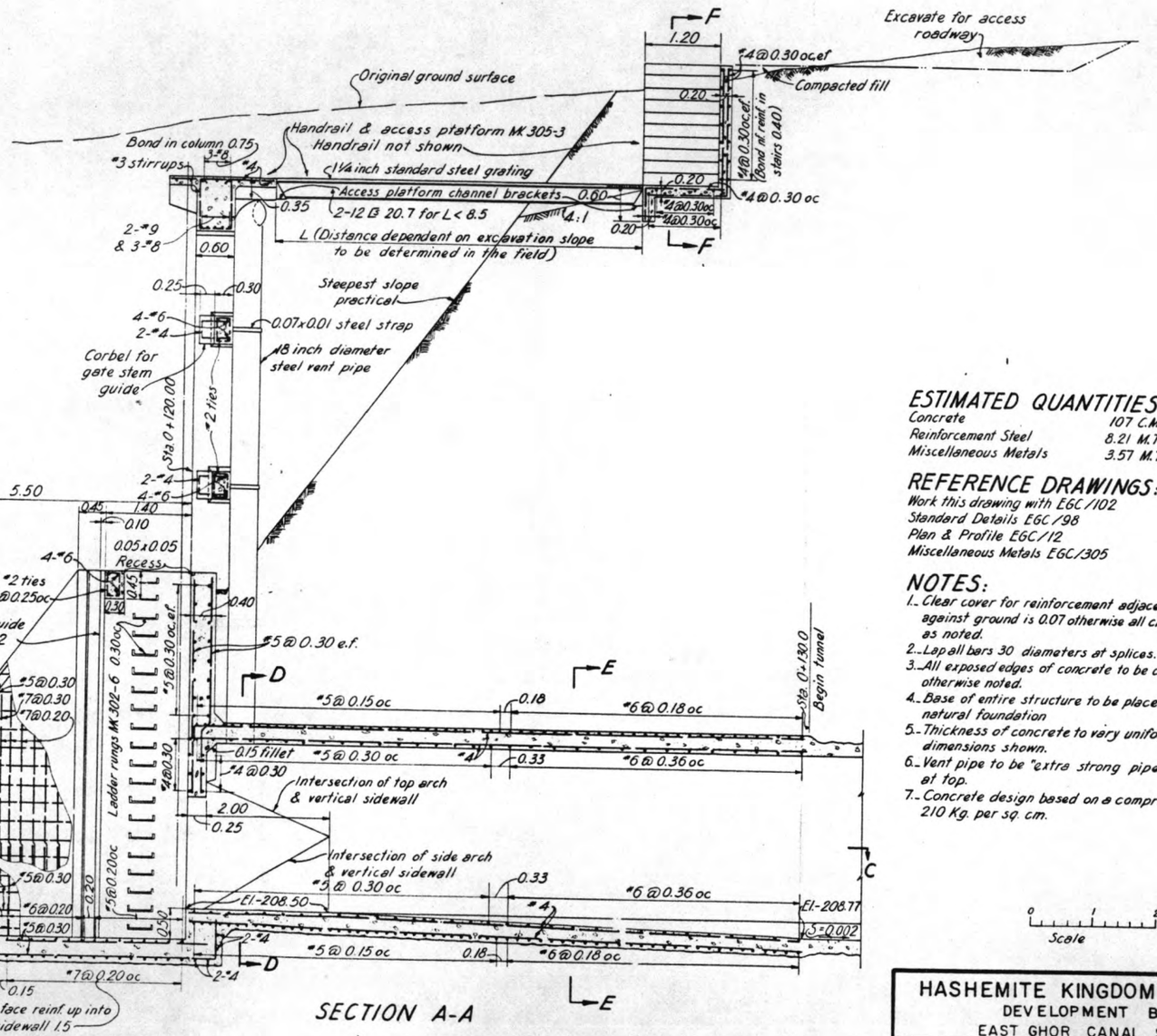
Showing t.f. slab reinf.



SECTION B-B

Typ. col. reint.
Scale 1:20

FRONT-ELEVATION



SECTION A-A

ESTIMATED QUANTITIES:

Concrete	107 C.M.
Reinforcement Steel	8.21 M.T.
Miscellaneous Metals	3.57 M.T

REFERENCE DRAWINGS:

Work this drawing with EGC/102
Standard Details EGC/98
Plan & Profile EGC/12
Miscellaneous Metals EGC/305

NOTES:

1. Clear cover for reinforcement adjacent to surface placed against ground is 0.07 otherwise all clear cover is 0.05 or as noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Base of entire structure to be placed on undisturbed natural foundation
5. Thickness of concrete to vary uniformly between dimensions shown.
6. Vent pipe to be "extra strong pipe" with a 90° bend at top.
7. Concrete design based on a compressive strength of 210 Kg. per sq. cm.

0 1 2 M.
Scale

	By	Date	Chkd	Date
Dsn.				
Drwn.				
Trac.				
Sub.	[redacted]			

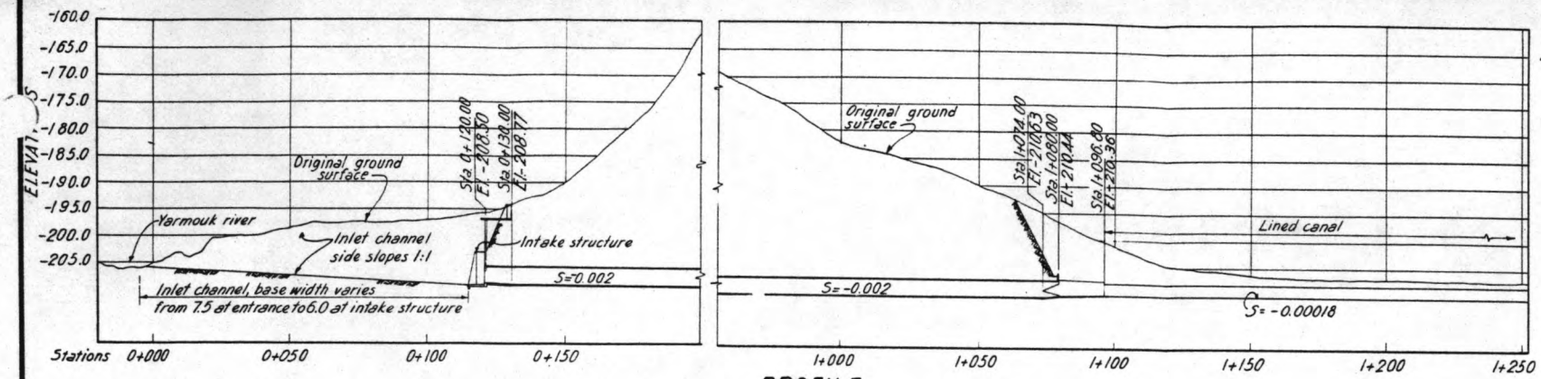
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

TUNNEL INTAKE STRUCTURE
SHEET 1

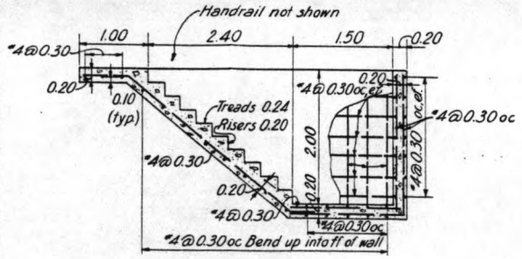
APPROVED [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

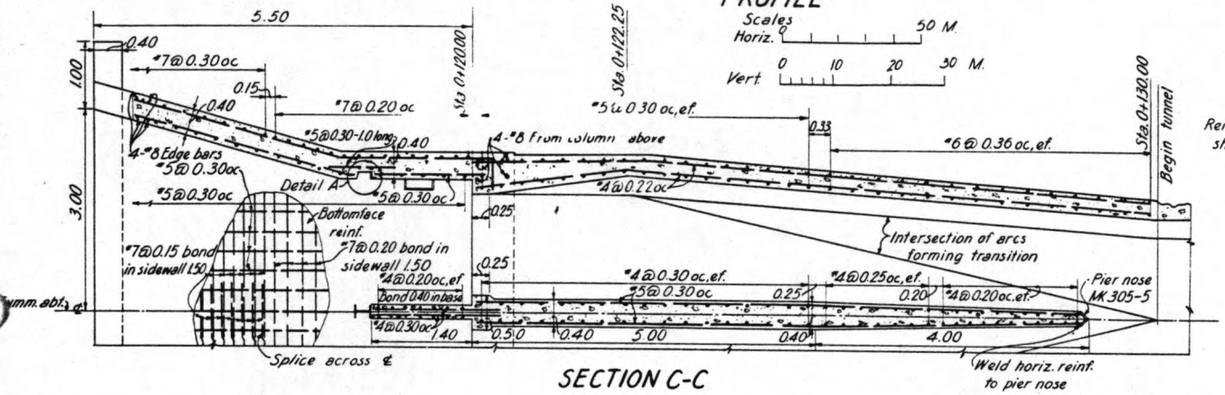
AMMAN, JORDAN | DATE. 1-9-1958 | DWG.NO. EGC/101



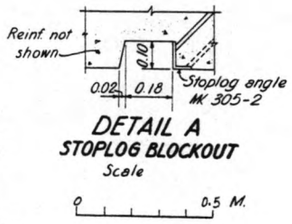
PROFILE



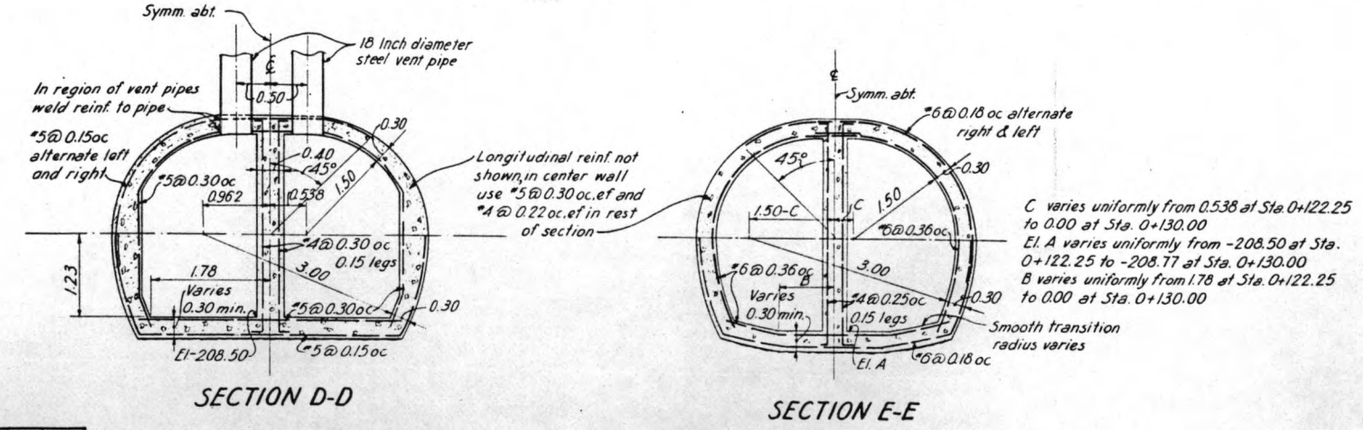
SECTION F-F



SECTION C-C



DETAIL A
STOPLOG BLOCKOUT
Scale



SECTION D-D

SECTION E-E

C varies uniformly from 0.538 at Sta. 0+122.25 to 0.00 at Sta. 0+130.00
El. A varies uniformly from -208.50 at Sta. 0+122.25 to -208.77 at Sta. 0+130.00
B varies uniformly from 1.78 at Sta. 0+122.25 to 0.00 at Sta. 0+130.00

NOTES:
Refer to drawing EGC/101.

0 1 2 M.
Scale
Except as noted

	By	Date	Chkd	Date
Dsn.	[redacted]			
Drwn.				
Trac.				
Sub.	[redacted]			

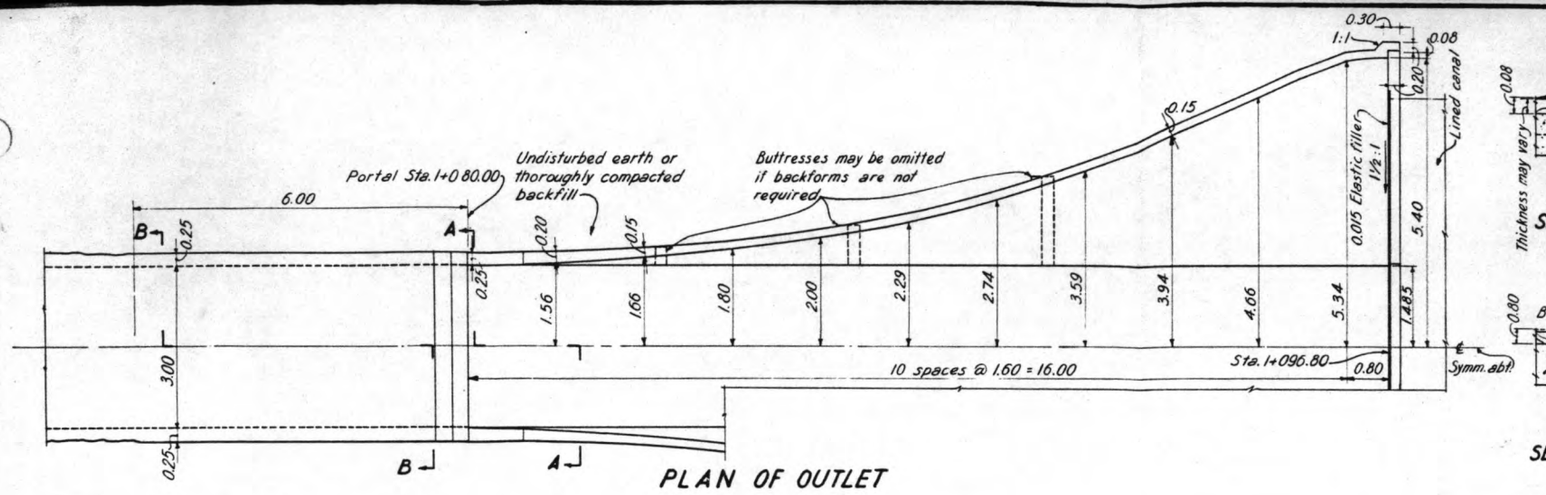
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

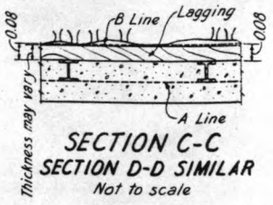
TUNNEL INTAKE STRUCTURE
SHEET 2

APPROVED: [redacted]

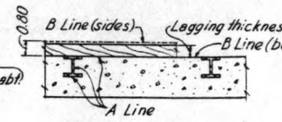
AMMAN, JORDAN | DATE. 1-9-1958 | DWG.NO. EGC/102



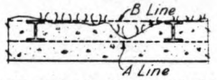
PLAN OF OUTLET



SECTION C-C
SECTION D-D SIMILAR
Not to scale

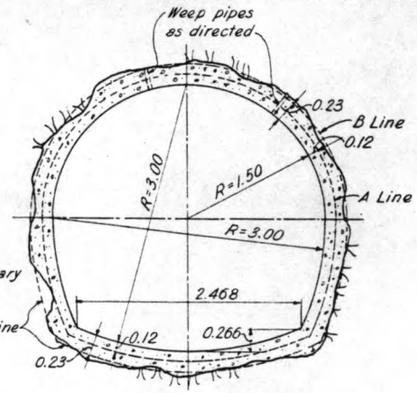


SECTION E-E
SECTION F-F SIMILAR
Not to scale

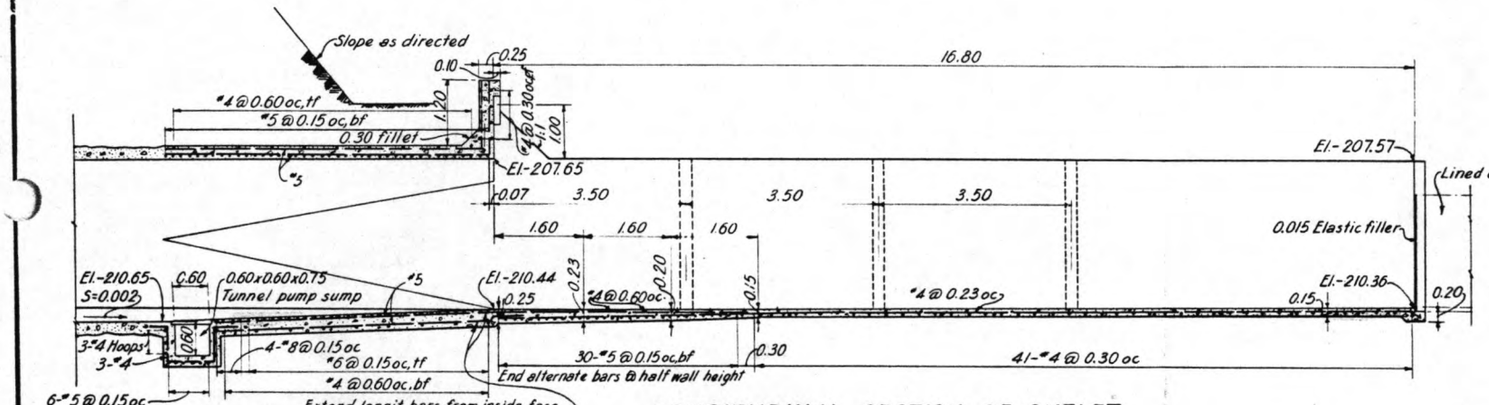


SECTION IN HARD MATERIAL

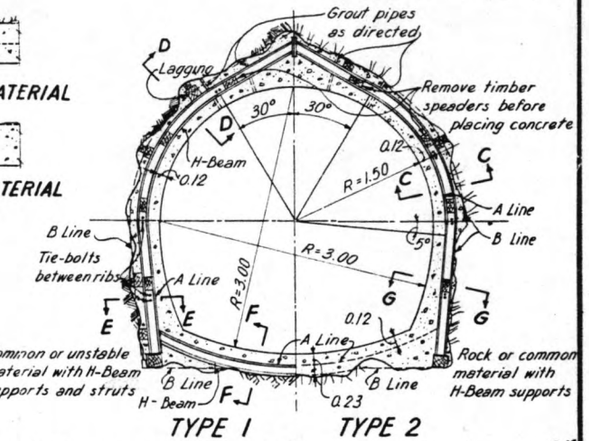
SECTION IN SOFT MATERIAL
SECTION G-G
Not to scale



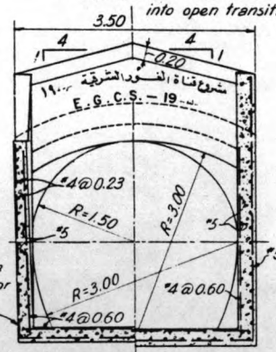
UNSUPPORTED
Scale 0 1 2 M.



LONGITUDINAL SECTION OF OUTLET

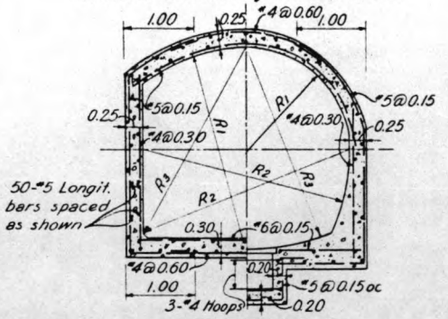


TUNNEL SECTIONS
Scale 0 1 2 M.

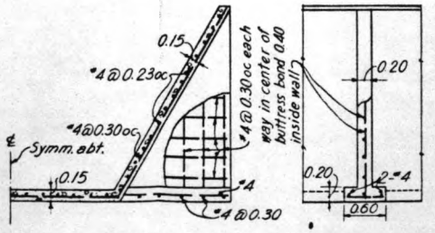


SECTION A-A
Scale 0 1 2 M.

R1 varies non-uniformly from 1.50 to 3.00
R2 varies non-uniformly from 3.00 to 3.265
R3 varies non-uniformly from 3.00 to 3.17



SECTION B-B
Scale 0 1 2M.



DETAIL OF BUTTRESS
Not to scale

REFERENCE DRAWINGS

Standard Details EGC/98
Plan & Profile EGC/12

NOTES:

1. Clear cover for reinforcement adjacent to surface placed against ground is 0.07 otherwise all clear cover is 0.05.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Thickness of concrete to vary uniformly between dimensions shown
5. Elastic joint filler to be securely fastened to one face of concrete.
6. Concrete design based on a compressive strength of 210 kg. per sq. cm.

ESTIMATED QUANTITIES

Concrete reinforced	46.6 C.M.
Concrete tunnel lining	2,340.0 C.M.
Reinforcement steel	3.59 M.T.

0 1 2 3 M.
Scale
Except as noted

	By	Date	Chkd	Date
Dsn.	[redacted]	[redacted]	[redacted]	[redacted]
Drwn.	[redacted]	[redacted]	[redacted]	[redacted]
Trac.				
Sub.	[redacted]			

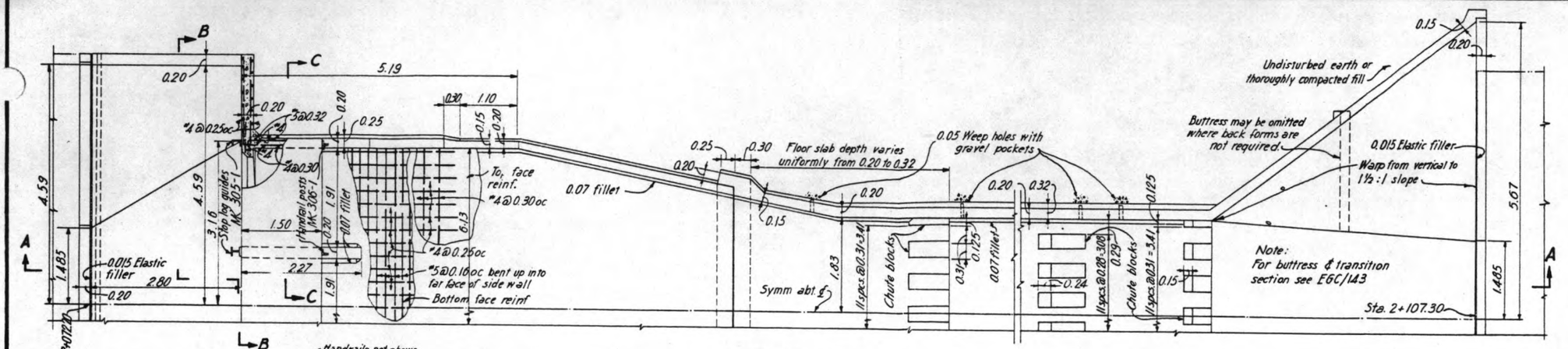
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

TUNNEL OUTLET & TUNNEL SECTIONS

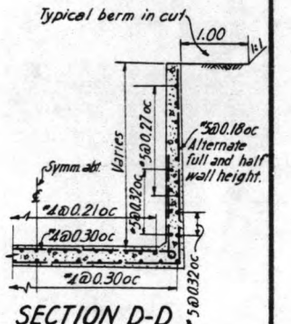
APPROVED [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

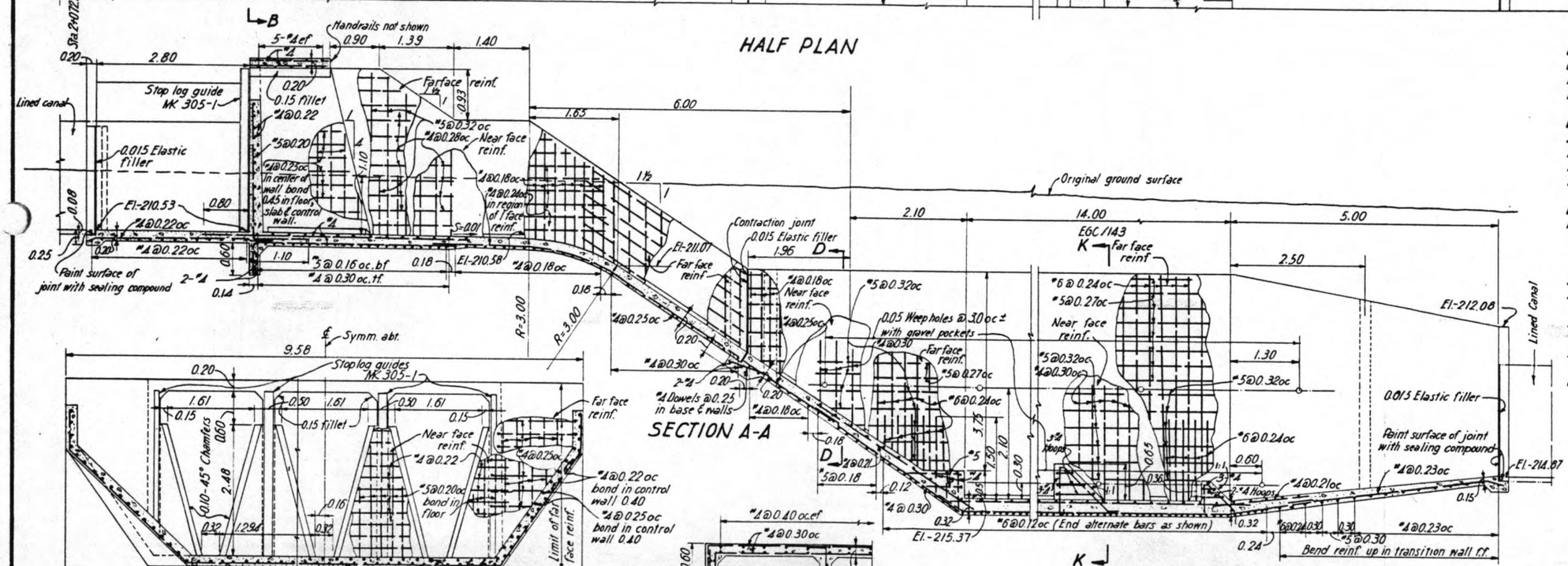
AMMAN, JORDAN | DATE 17-8-58 | DWG NO EGC/103



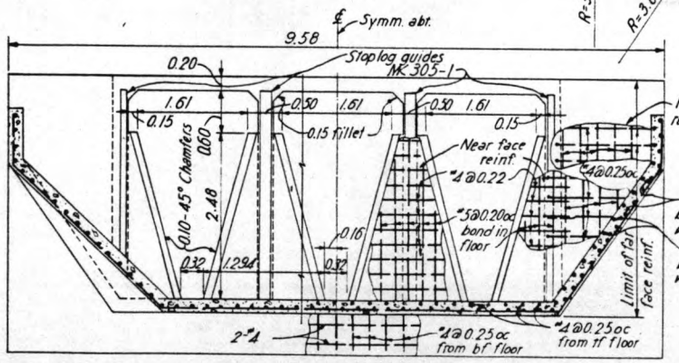
HALF PLAN



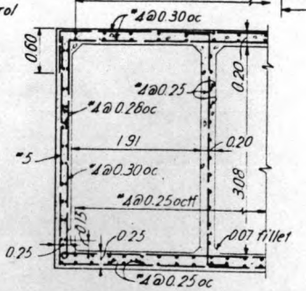
SECTION D-D



SECTION A-A



SECTION B-B



SECTION C-C

ESTIMATED QUANTITIES:

Concrete	121.0 C.M
Reinforcement steel	9.02 M.T.
Miscellaneous Metals	0.46 M.T.

REFERENCE DRAWINGS:

Standard Details EGC/98
Plan & Profile EGC/12
Miscellaneous Metals EGC/305 & 306
Yarmouk Westeway EGC/143

NOTES:

1. Clear cover for reinforcement is 0.05, except for reinforcement adjacent to surfaces placed against ground, clear cover shall be 0.07.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Elastic joint filler to be securely fastened to one face of concrete.
5. Elevations refer to invert unless otherwise noted.
6. Concrete design based on a compressive strength of 210 Kg. per sq.cm.

0 1 2 M.
Scale

	By	Date	Chkd	Date
Dsn.	[redacted]	27.58	[redacted]	2.8.58
Drwn.	[redacted]	2.8.58	[redacted]	20.8.58
Trac.				
Sub.	[redacted]			

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

CONTROL SECTION AND DROP

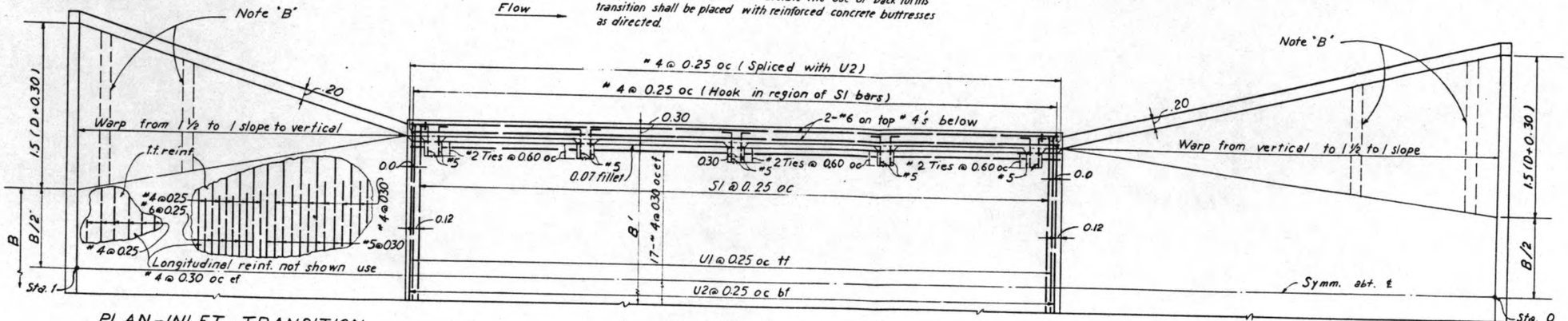
APPROVED: [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC & HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE. 1-9-1958 | DWG.NO. EGC/104

NOTE "B"

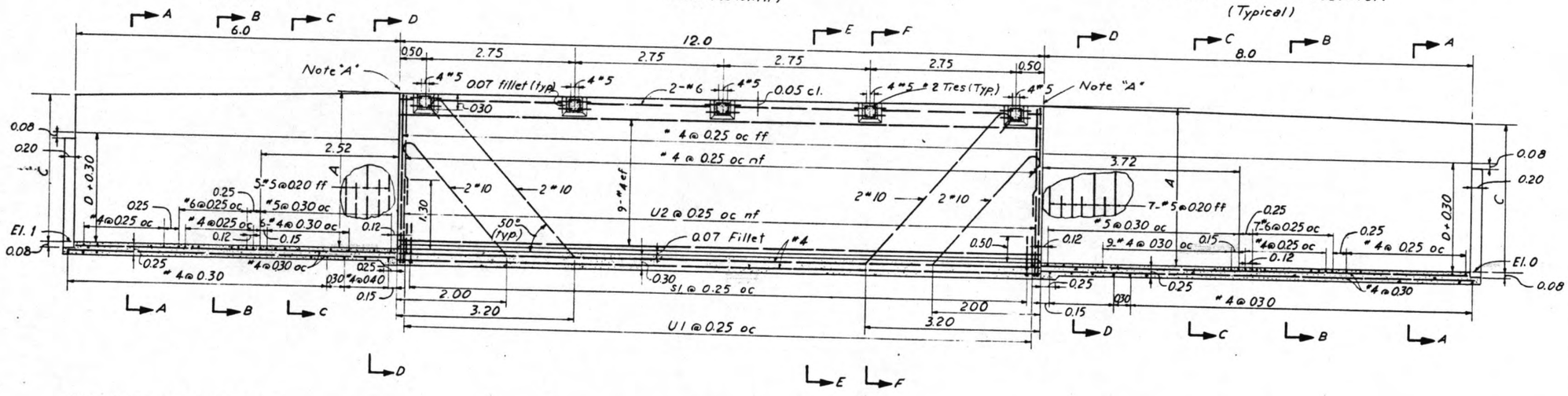
Transition design based on the use of no back forms for slopes less than 1:1. If field condition dictate the use of back forms transition shall be placed with reinforced concrete buttresses as directed.



PLAN-INLET TRANSITION (Typical)

PLAN FLUME (12.0 Monolith)

PLAN-OUTLET TRANSITION (Typical)



ELEVATION-INLET TRANSITION (Typical)

ELEVATION FLUME (12.0 Monolith)

ELEVATION OUTLET TRANSITION (Typical)

SCHEDULE

WADI	DWG. NO.	STA. 1	EL. 1	STA. 0	EL. 0	A	B	B'	C	D	Reinf. S1	Reinf. U1	Reinf. U2
Arab	EGC/108	11+515.50	-216.98	11+565.50	-217.02	2.93	2.97	5.18	2.79	1.77	#6	#6	#8
El Hisa	EGC/109	19+014.00	-218.37	19+079.75	-218.42	2.90	2.97	4.99	2.72	1.77	#6	#6	#8
Taibe	EGC/110	20+504.25	-218.68	20+555.25	-218.73	2.90	2.97	4.99	2.72	1.77	#6	#6	#8
Ziglab	EGC/111	22+765.00	-219.12	22+845.50	-219.18	2.85	2.97	4.83	2.65	1.77	#6	#6	#8

NOTE "A"

This drawing merely shows a typical flume & transition with no regard to construction sequence; for arrangement of these components see drawings listed in schedule.

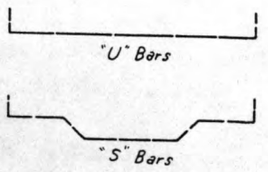
REFERENCE DRAWINGS

Work this drawing with EGC/106 & EGC/107.
Standard Details EGC/98
Plan & Profile EGC/18-24

NOTES:

1. Clear cover for reinf.is: surfaces subject to submersion 0.05; concrete surfaces on soil 0.07; other surfaces 0.04
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Fillet in flume invert to be chamfered at junction with transition.
5. Transition to be placed on undisturbed natural foundation or thoroughly compacted backfill
6. Concrete design based on a compressive strength of 210 kg. per sq.cm.
7. Quantities for flume and transitions are shown on wadi crossing drawings.

Scale 0 — 2 M.



BENT BAR KEY

	By	Date	Chkd.	Date
Des.	[redacted]	9-3-58	NTH	10/1958
Drwn.	H.F.J.	29-8-58	NTH / E.H.S.	22-9-58
Trac.				
Sub	[redacted]			

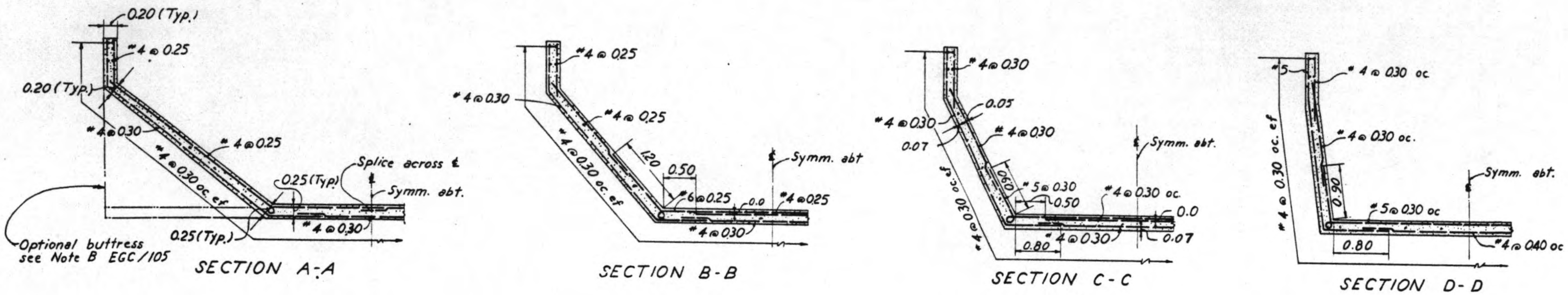
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

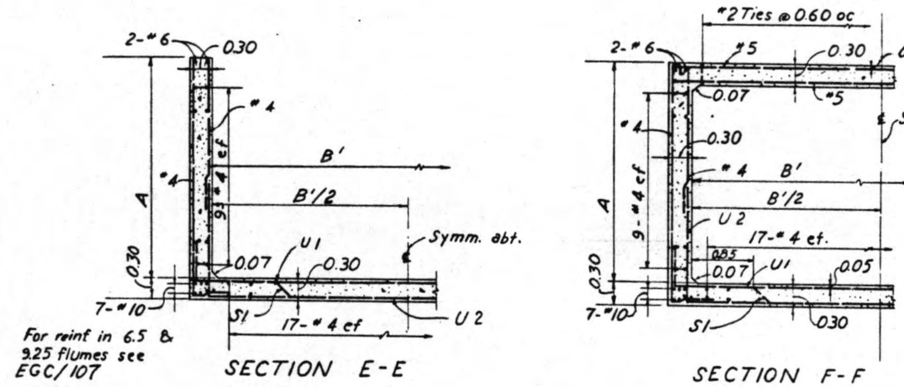
FLUME FOR 20-18 CUMECS CAPACITY & TYPICAL TRANSITION SHEET 1

APPROVED: [redacted]

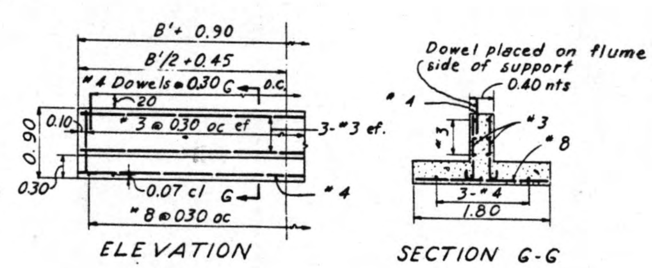
AMMAN, JORDAN | DATE 1-9-1958 | DWG. No. EGC/105



TYPICAL TRANSITION SECTIONS
(EGC /105)



FLUME SECTIONS
(EGC /105)



ABUTMENT
END FLUME SUPPORT

REFERENCE DRAWINGS:

Work this drawing with EGC/105 & EGC/107

NOTES:

1.– Refer to EGC/105

0 — 3 M.
Scale

	By	Date	Chkd.	Date
Dsn.	[illegible]	[illegible]	[illegible]	[illegible]
Drwn.	H.F.J.	[illegible]	[illegible]	[illegible]
Trac.				
Sub. [redacted]				

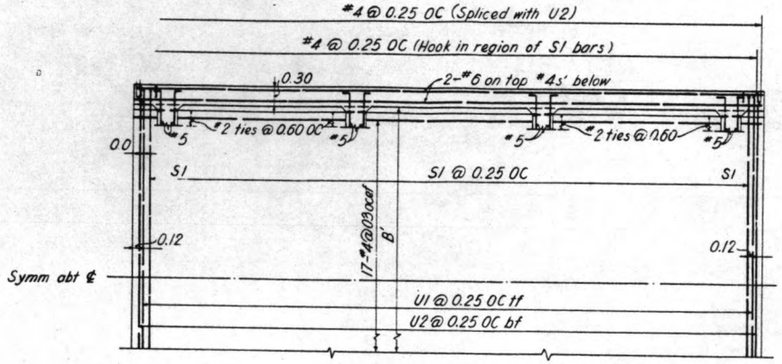
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

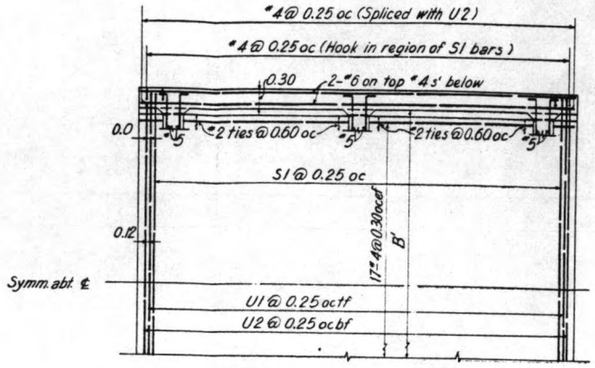
FLUME FOR 20 - 18 CUMECS CAPACITY & TYPICAL TRANSITION SHEET 2

APPROVED: [redacted]

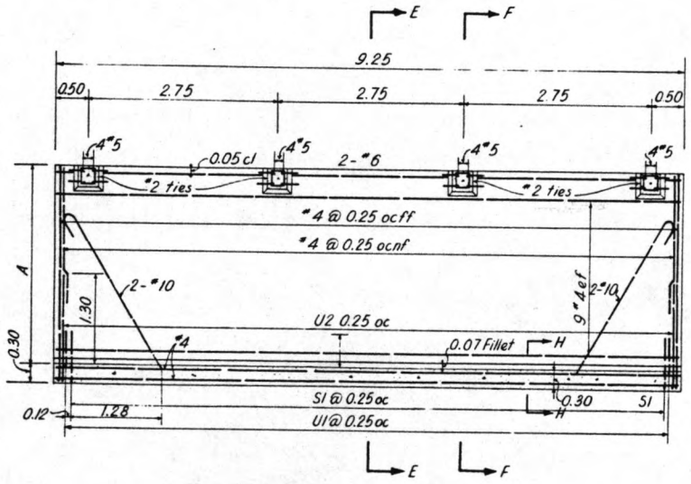
AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO. EGC/106



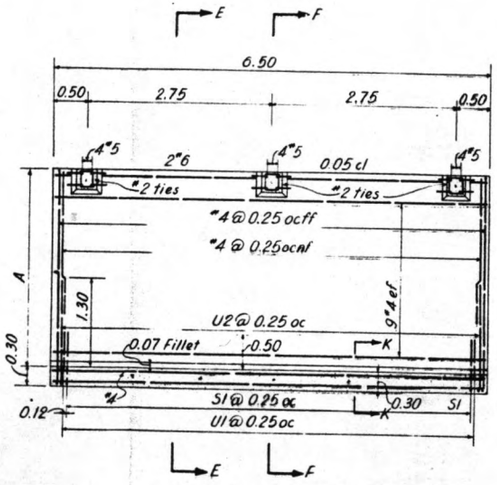
PLAN FLUME
(9.25 Monolith)



PLAN FLUME
(6.50 Monolith)



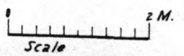
ELEVATION FLUME
(9.25 Monolith)

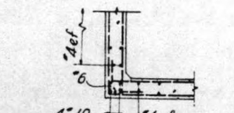


ELEVATION FLUME
(6.50 Monolith)

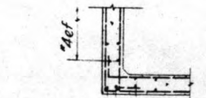
REFERENCE DRAWINGS
Work this drawing with EGC/105 & EGC/106

NOTES:
Refer to EGC/105





SECTION H-H



SECTION K-K

	By	Date	Chkd	Date
Dsn.	[redacted]	9.5.58	NH	10/5/58
Drwn.	Kh.Ba.	10.5.58	[redacted]	22.5.58
Trac.				
Sub.	[redacted]			

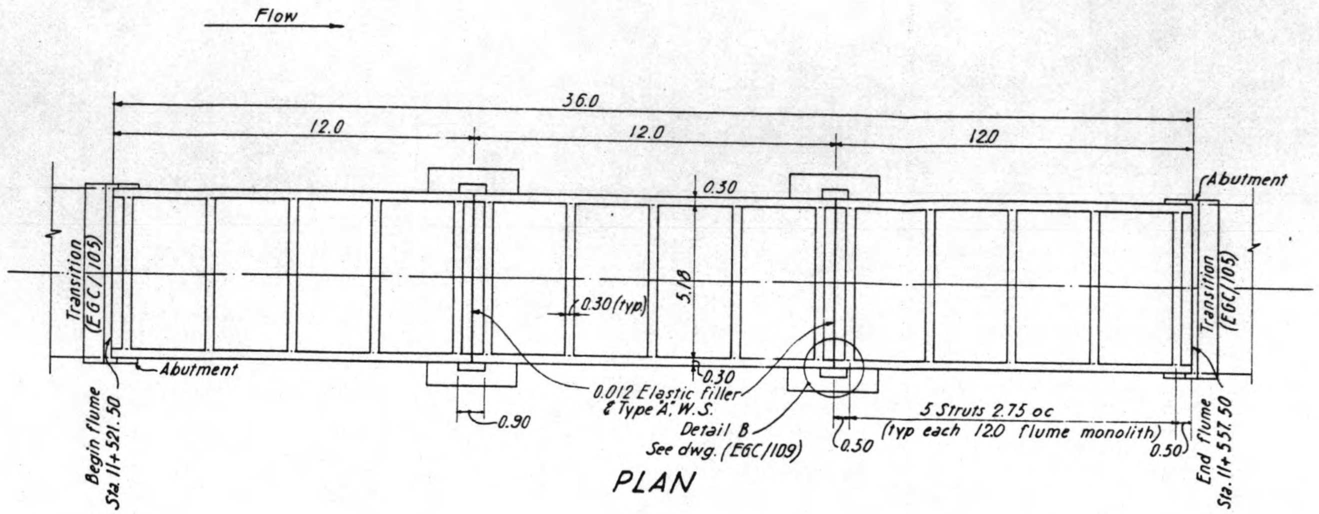
Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

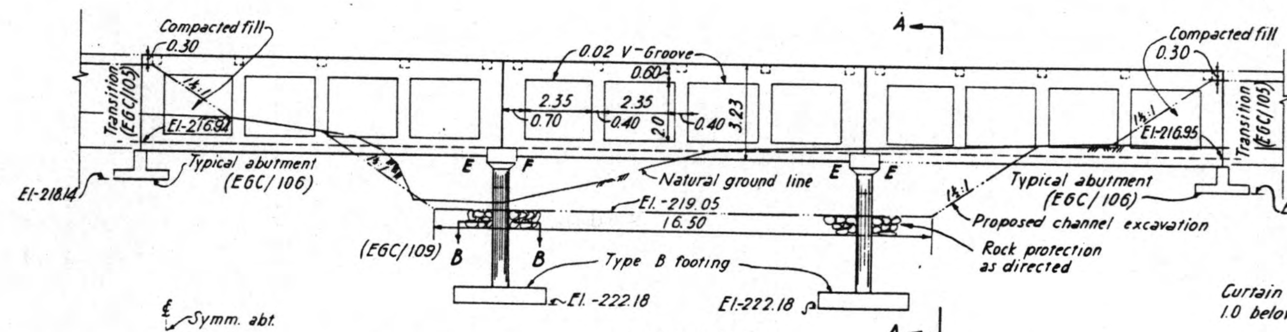
FLUME FOR 20-18 CUMECS CAPACITY SHEET 3

APPROVED [redacted]

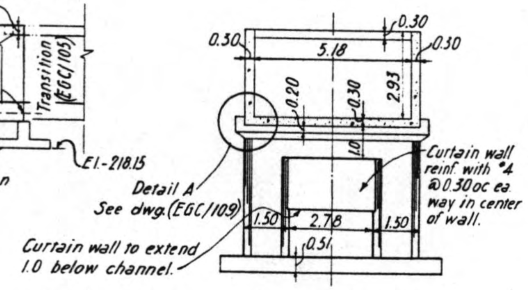
AMMAN, JORDAN | DATE 1-9-1958 | DWG. Nº EGC / 107



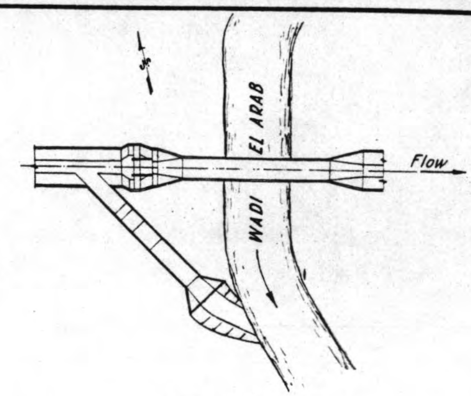
PLAN



ELEVATION



SECTION A-A



KEY PLAN

ESTIMATED QUANTITIES

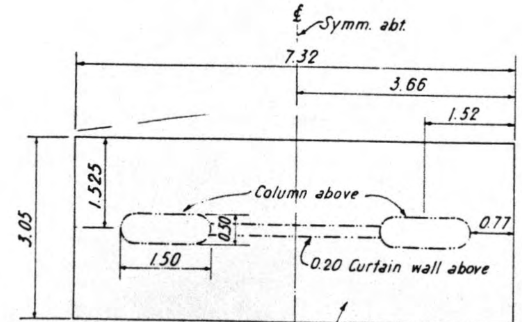
Concrete	222 C.M.
Reinforcement	26.27 M.T.

REFERENCE DRAWINGS

Work this drawing with EGC/105, EGC/106, & EGC/109
Standard Details EGC/98
Plan and Profile EGC/18

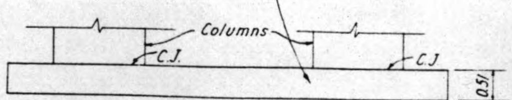
NOTES:

1. Clear cover for reinforcement is 0.05 unless otherwise noted.
2. Lap all bars 30 diameters at splices
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Elastic joint filler shall be securely fastened to one face of concrete.
5. "Estimated Quantities" are for 2 transitions, flume & substructure.
6. Concrete design based on a compressive strength of 210 Kg. per sq. cm.



PLAN

For reinf. type B footing (see EGC./109)



ELEVATION
TYPE B FOOTING
Scale 0 1 2 3 M.

Scale 0 5 M.
Except as noted

	By	Date	Chkd	Date
Dsn				
Drwn.		3.5.58		
Trac.				
Sub	[redacted]			

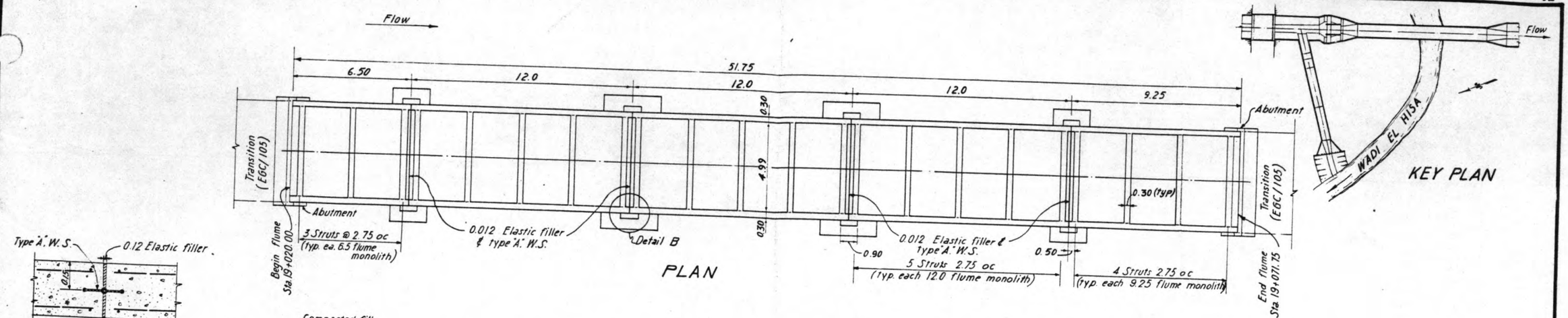
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

WADI EL-ARAB CROSSING

APPROVED. [redacted]

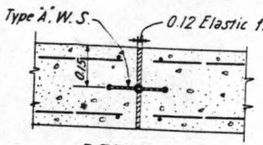
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE 1-9-1958 | DWG. No EGC/108



PLAN

KEY PLAN

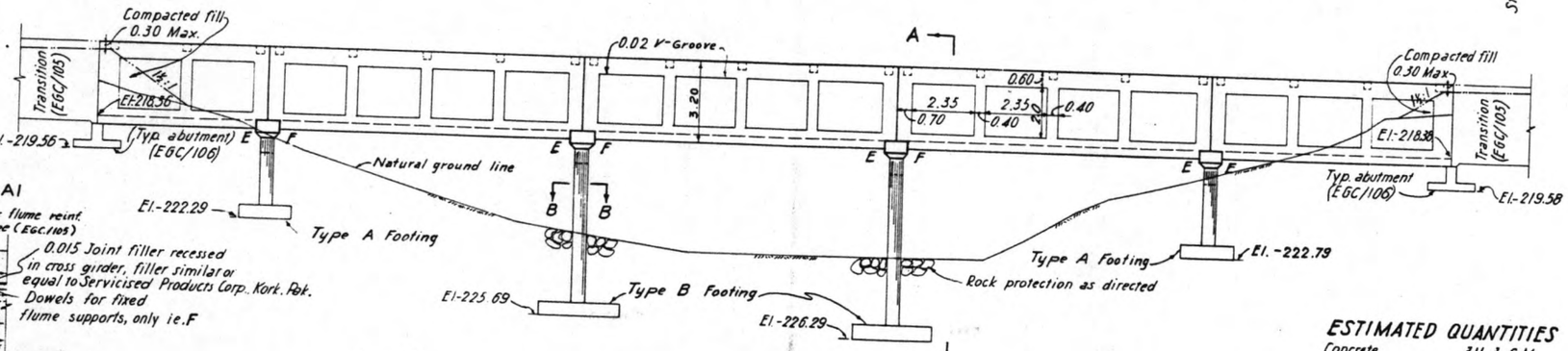


DETAIL B

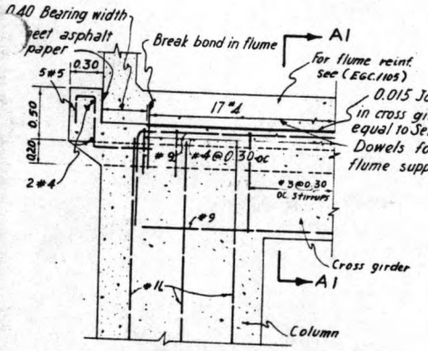
Typical, flume joints

Scale

0 0.5 M.



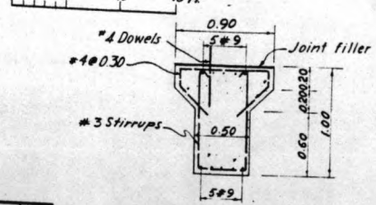
ELEVATION



DETAIL A

Scale

0 5 10 15 M.

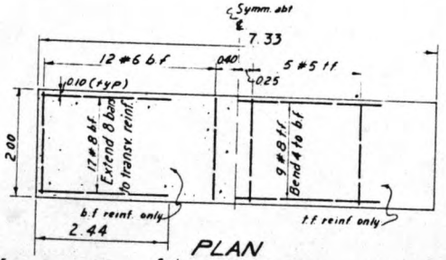


SECTION A1-A1

Flume not shown

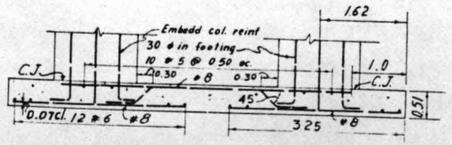
Scale

0 5 10 15 M.



PLAN

Column not shown

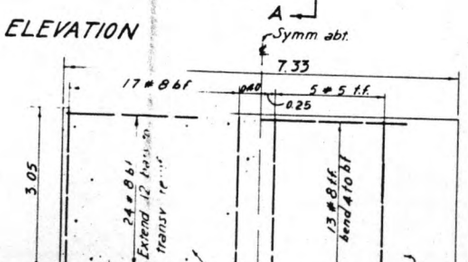


ELEVATION

Type A footing

Scale

0 1 2 3M.



PLAN

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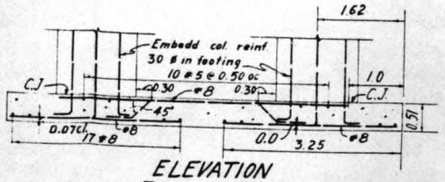
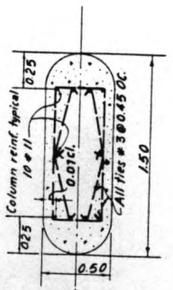


ELEVATION

Type B footing

Scale

0 1 2 3M.

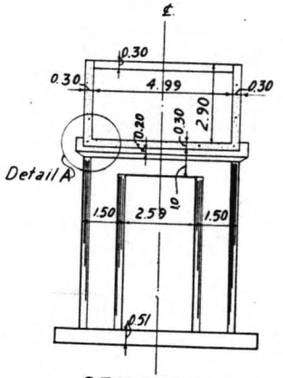


TYPICAL COLUMN

Section B-B

Scale

0 1 M.



Detail A

SECTION A-A

ESTIMATED QUANTITIES

Concrete	311.3 C.M
Reinforcement	35.66 M.T.

REFERENCE DRAWINGS

Work this drawing with EGC/105, EGC/106, EGC/107 EGC/108.
Standard Details EGC/98
Plan and Profile EGC/22

NOTES:

1.. Refer to EGC/108

0 5 M.

Scale Except as noted

	By	Date	Chk'd	Date
Des.	[redacted]	93.58	MH	4.58
Drwn.	Kh Ba	3.4.58	MH	30.4.58
Tre.				
Sub.	[redacted]			

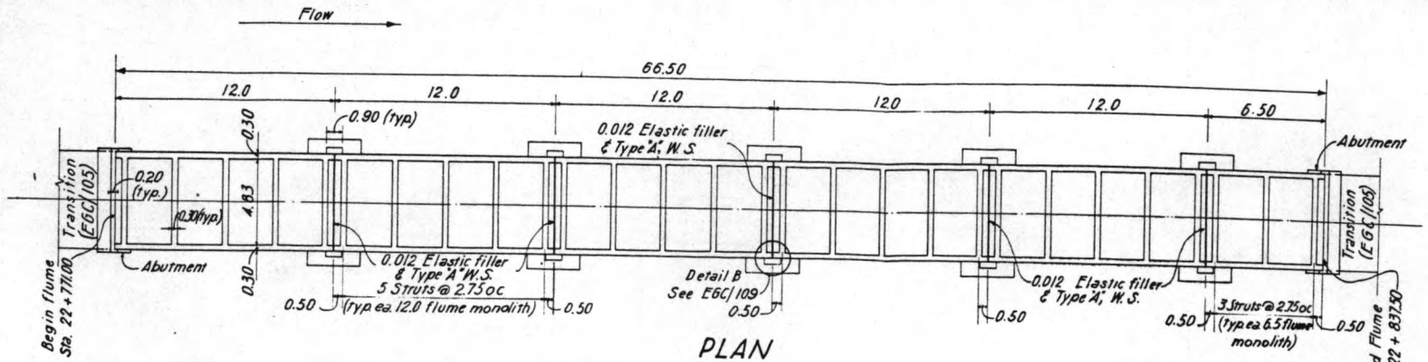
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

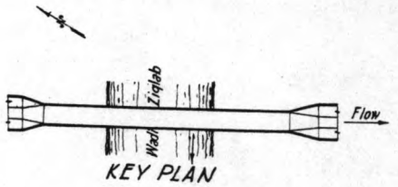
WADI EL-HISA CROSSING

APPROVED [redacted]

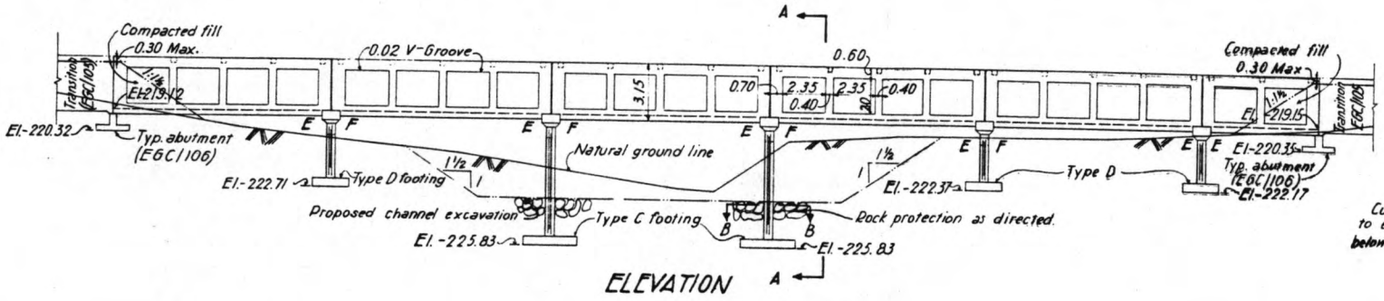
AMMAN, JORDAN | DATE 1/9/1958 | DWG. Nº EGC/109



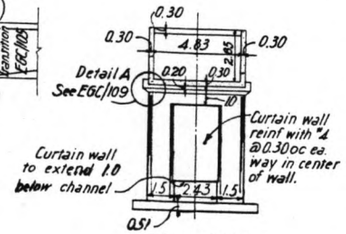
PLAN



KEY PLAN



ELEVATION



SECTION A-A

ESTIMATED QUANTITIES

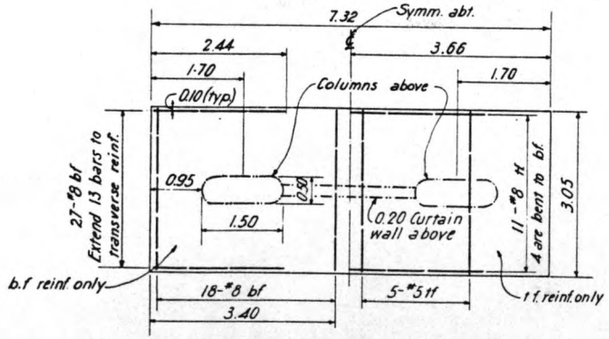
Concrete	372 C.M.
Reinforcement	46.39 M.T

REFERENCE DRAWINGS

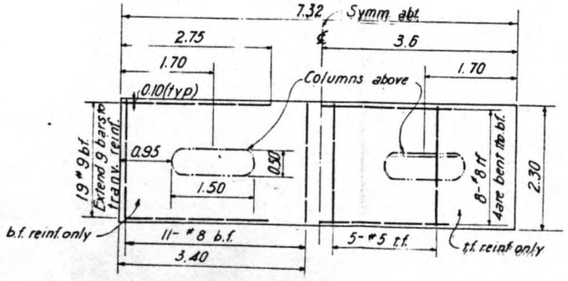
Work this drawing with E6C/105, E6C/106, E6C/107 & E6C/109.
Standard Details E6C/98
Plan and Profile E6C/24

NOTES:

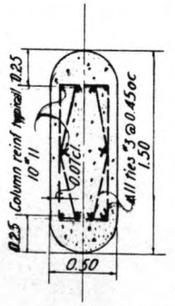
1: Clear cover for reinforcement is 0.05 unless otherwise noted.
2: Lap all bars 30 diameters at splices
3: All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4: Elastic joint filler shall be securely fastened to one face of concrete.
5: Estimated Quantities are for transitions flume & substructure.
6: Concrete design based on a compressive strength of 210 kg. per sq. cm.



PLAN

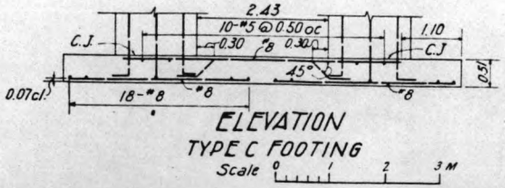


PLAN

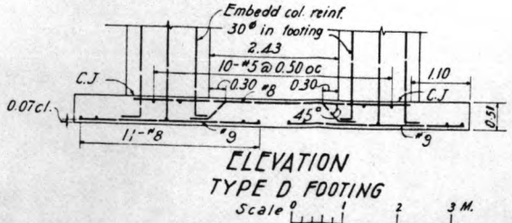


TYPICAL COLUMN SECTION B-B

Scale 0 1 M



ELEVATION
TYPE C FOOTING
Scale 0 1 2 3 M



ELEVATION
TYPE D FOOTING
Scale 0 1 2 3 M.

Scale 0 5 10 M.
Except as noted

	By	Date	Chkd	Date
Dsn.	[redacted]	17-4-58	MH	15/5/58
Drwn	[redacted]	22.5.58	MH	26-8-58
Trac.				
Sub.	[redacted]			

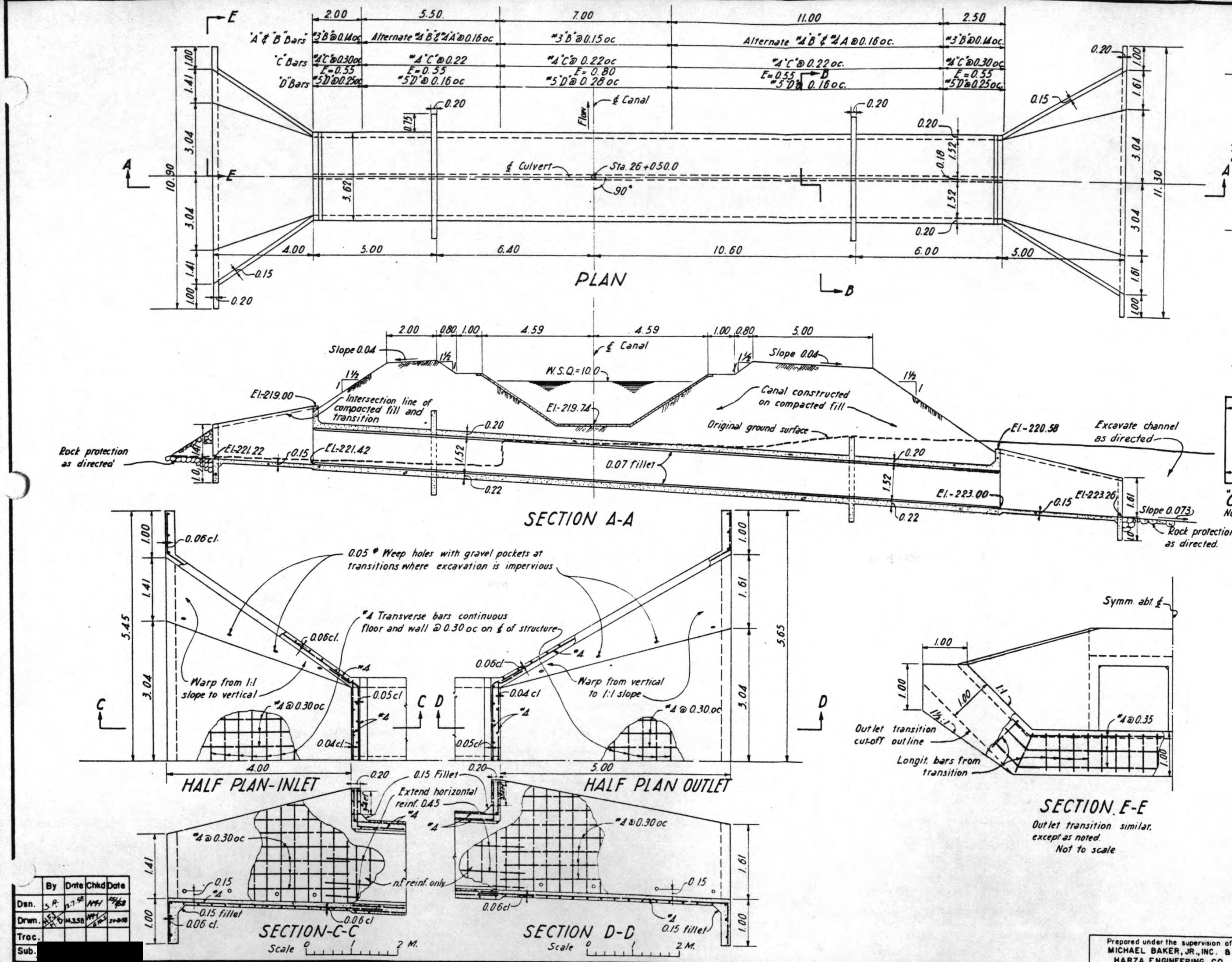
Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

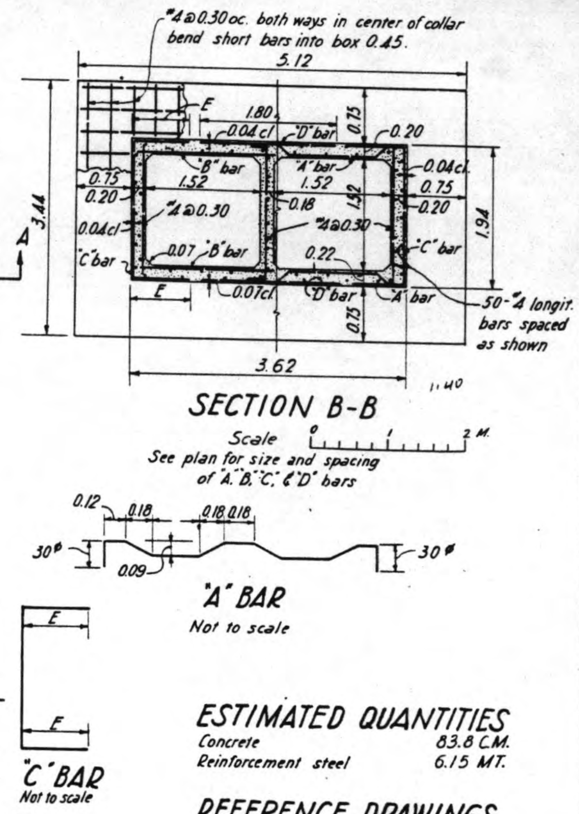
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

WADI ZIGLAB CROSSING

APPROVED [redacted]

AMMAN, JORDAN | DATE 1-9-1958 | DWG. Nº EGC/111





ESTIMATED QUANTITIES

Concrete	83.8 C.M.
Reinforcement steel	6.15 MT.

REFERENCE DRAWINGS

Standard Details EGC/98
Plan and profile EGC/25

NOTES:

1. Clear cover for reinforcement is 0.05 unless otherwise noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Concrete design based on a compressive strength of 210 kg. per sq. cm.

Scale 0 1 2 3 4 M.
Scale Except as noted

By	Date	Chkd	Date
Dsn.	S.P. 2.7.58		
Drwn.	14.3.58		
Trac.			
Sub. [redacted]			

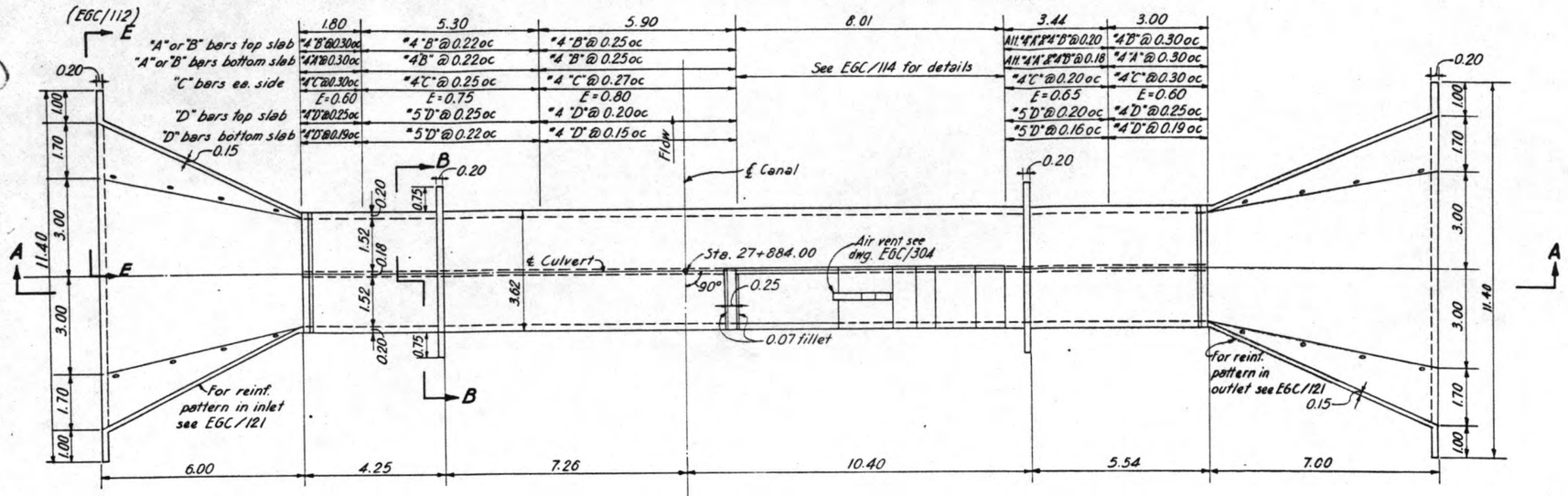
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

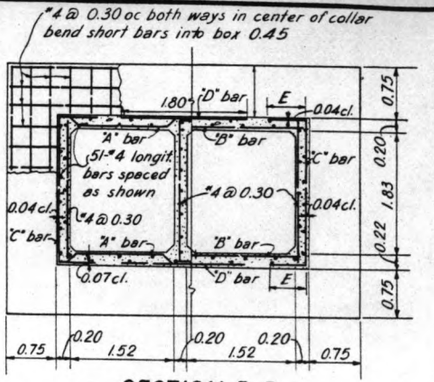
WADI DABAR CROSSING
DOUBLE BARREL CULVERT

APPROVED [redacted]

AMMAN, JORDAN — DATE 1-9-1958 — DWG. NO EGC/112



PLAN

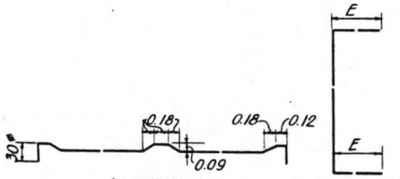


SECTION B-B

See plan for size & spacing of "A", "B", "C" & "D" bars

Scale

0 1 2 M.

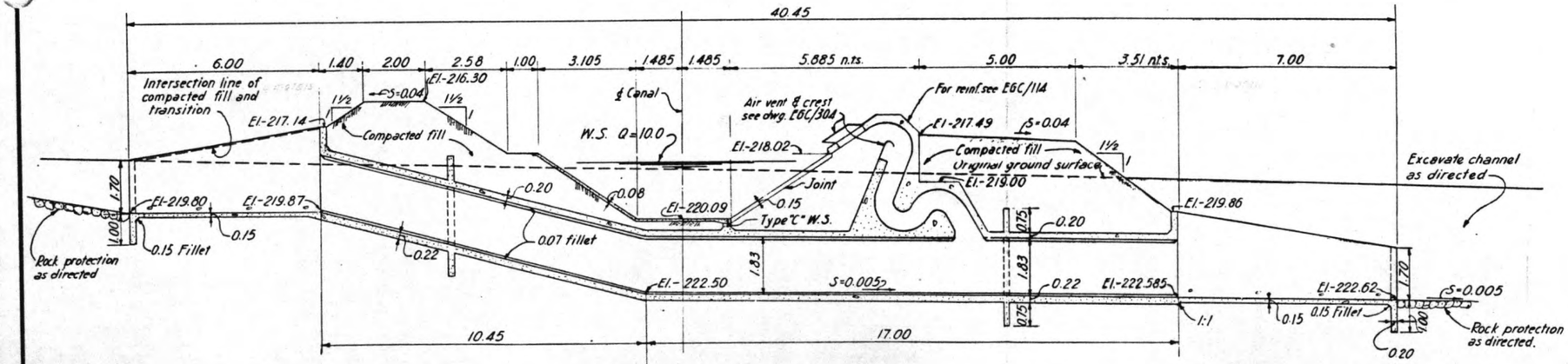


"A" BAR

Not to scale

"C" BAR

Not to scale



SECTION A-A

ESTIMATED QUANTITIES:

Concrete	113.3 C.M
Reinforcement steel	7.38 M.T.
Miscellaneous metals	0.41 M.T.

REFERENCE DRAWINGS:

Work this drawing with EGC/112, 114 & 121
Standard Details EGC/98
Plan & Profile EGC/27
Miscellaneous Metals EGC/304

NOTES:

1. Clear cover for reinforcement is 0.05 unless otherwise noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Concrete design based on a compressive strength of 210 kg. per sq. cm.

0 1 2 3 4 M.

Scale

Except as noted

	By	Date	Chkd	Date
Dsn.	M.T.	2-8-58	M.B.J.	2-9-58
Drwn.	M.B.J.	30-7-58	M.B.J.	2-8-58
Trac.				
Sub.	[redacted]			

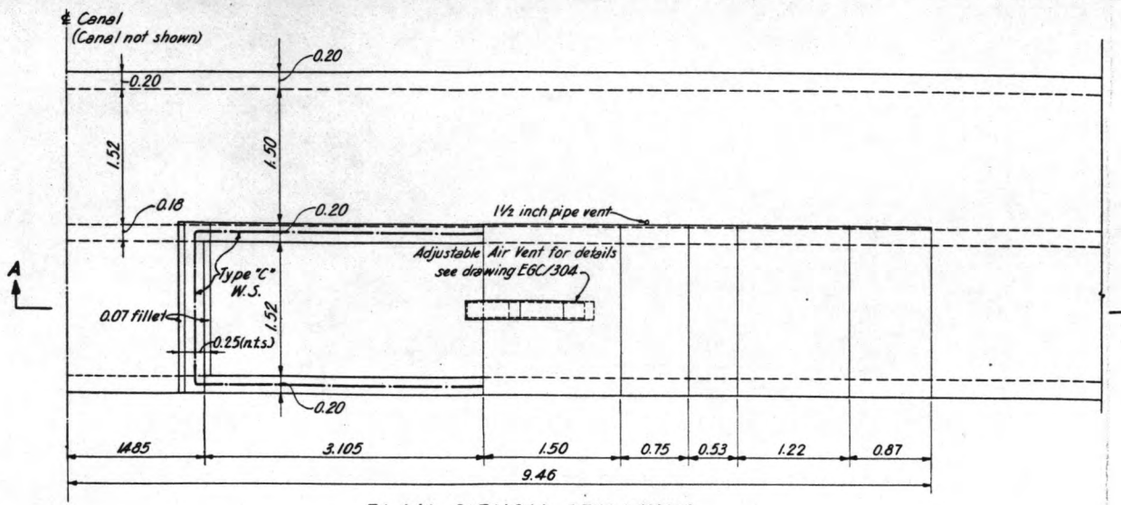
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

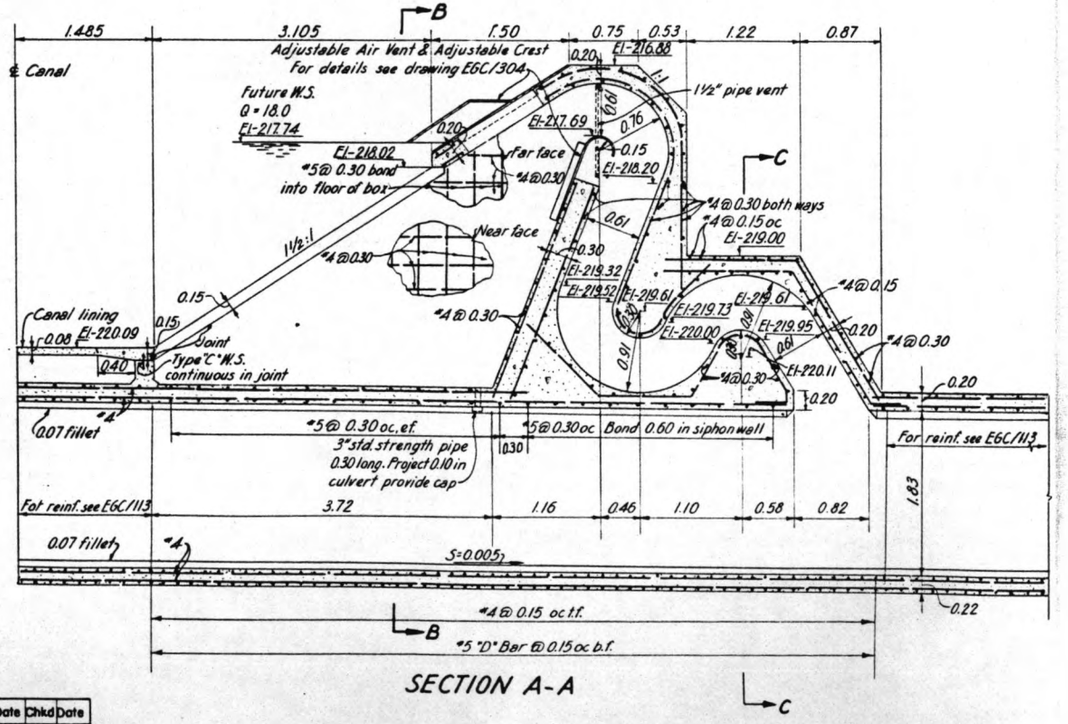
WADI EL-HAMME CROSSING
DOUBLE BARREL CULVERT
AND SIPHON SPILLWAY SHEET 1

APPROVED [redacted]

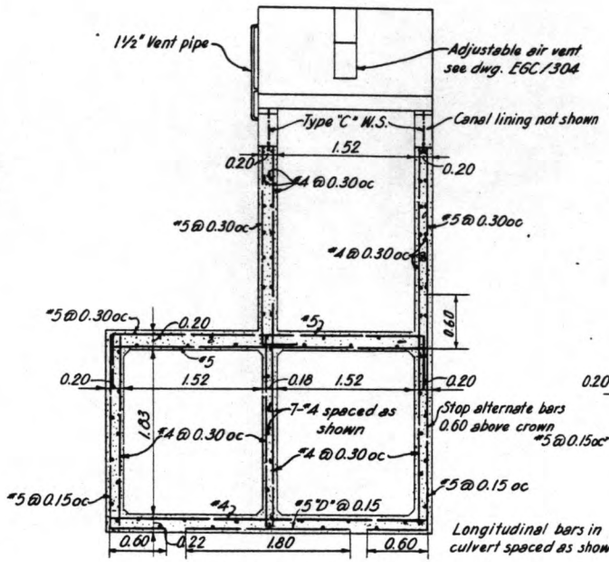
AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO EGC/113



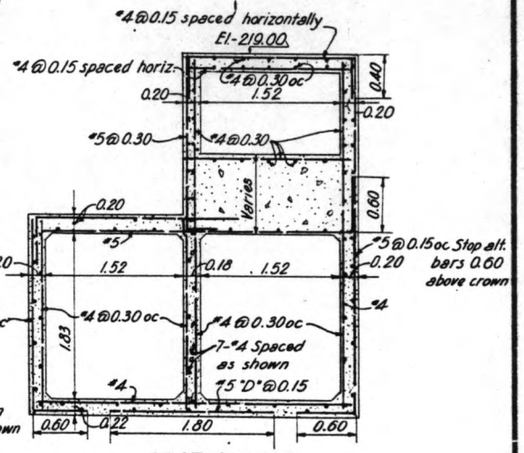
PLAN—SIPHON SPILLWAY



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

Refer to drawing E6C/113

Scale 0 1 2 M.

	By	Date	Chkd	Date
Dsn..	N.T.	2.8.58	M.E.S.	3.8.58
Drwn.	[illegible]	5.8.58	[illegible]	20.8.58
Trac.				
Sub.	[redacted]			

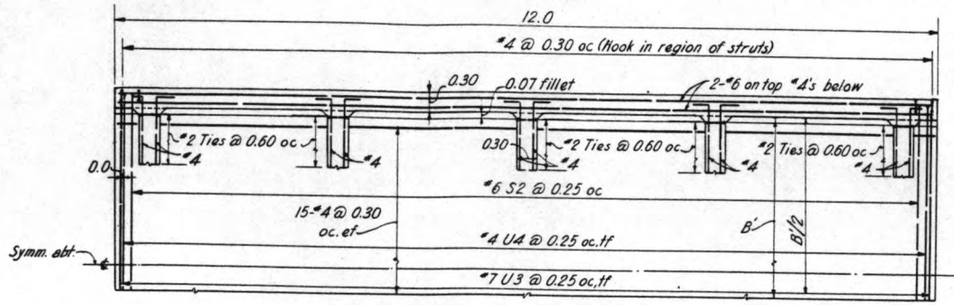
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

WADI EL-HAMME CROSSING
DOUBLE BARREL CULVERT
AND SIPHON SPILLWAY SHEET 2

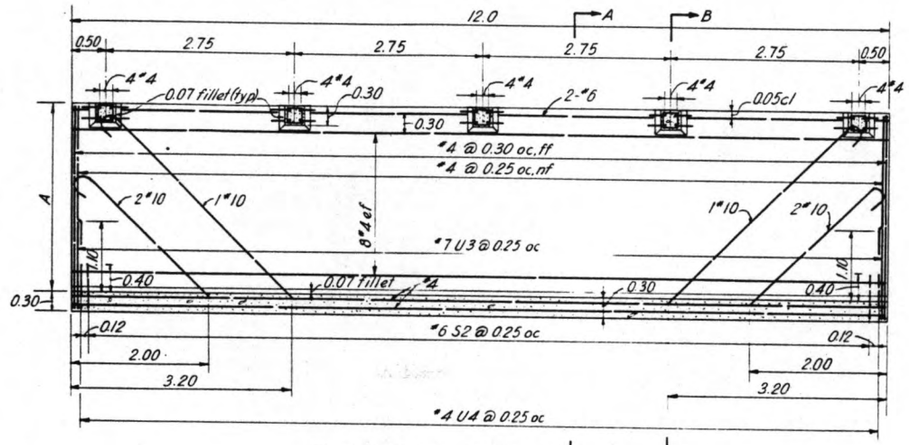
APPROVED: [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

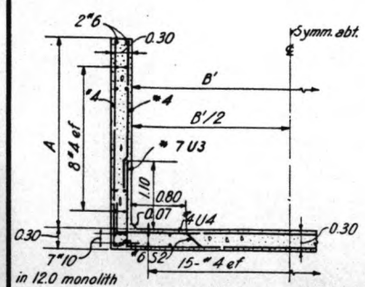
AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO EGC/114



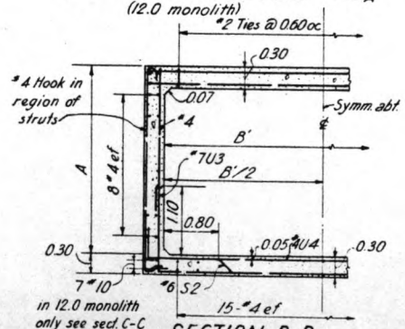
PLAN - FLUME
(12.0 monolith)



ELEVATION - FLUME
(12.0 monolith)



SECTION A-A



SECTION B-B

By	Date	Chkd	Date
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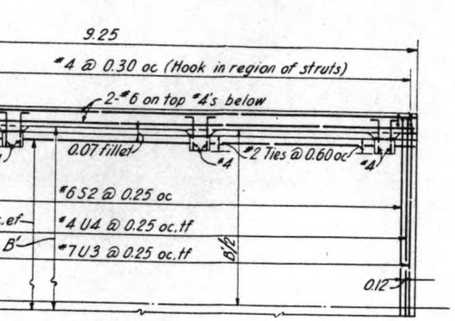
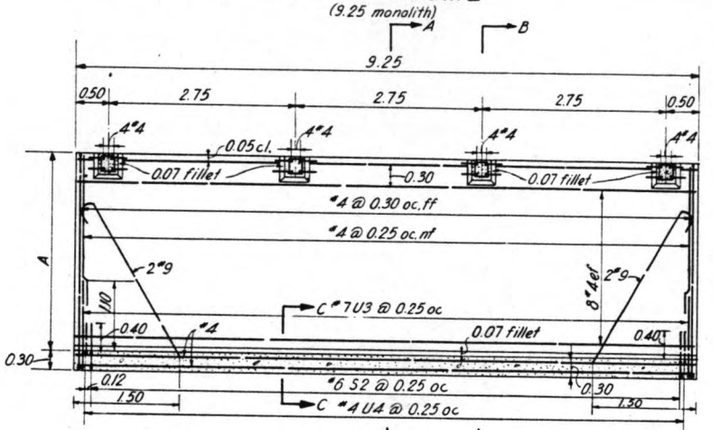
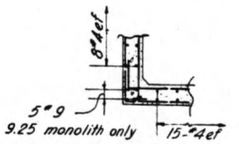
Drwn.	22.7.58		22.7.58
Trac.			
Sub.	[redacted]		



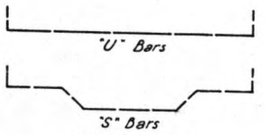
PLAN - FLUME
(9.25 monolith)



ELEVATION - FLUME
(9.25 monolith)



SECTION C-C



BENT BAR KEY

REFERENCE DRAWINGS:

Work this drawing with EGC/105 & 106
Standard Details EGC/98
Plan & Profile EGC/32-40

NOTE:

1. Clear cover for reinf. is:
   surfaces subject to submersion 0.05
   concrete surfaces on soil 0.07
   other surfaces 0.04
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Fillet in flume invert to be chamfered at junction with transition.
5. For transition and abutment drawings see EGC/105 and EGC/106, key dimensions given in schedule.
6. Transition to be placed on undisturbed natural foundation or thoroughly compacted backfill.
7. Concrete design based on a compressive strength of 210 Kg. per sq cm.
8. Quantities for flume & transitions are shown on wadi crossing drawings.

SCHEDULE

WADI	DWG. No.	STA. 1	EL. 1	STA 0	EL. 0	A	B	B'	C	D
El Yabis	EGC/117	37+339.17	-221.78	37+473.17	-221.86	2.80	2.97	4.66	2.59	1.77
Abu Kharrub	EGC/120	46+985.50	-224.09	47+035.50	-224.14	2.75	2.97	4.48	2.53	1.77
Kufringe	EGC/122	53+984.91	-225.40	54+056.16	-225.45	2.69	2.97	4.33	2.46	1.77

0 1 2 M.
Scale
Except as noted

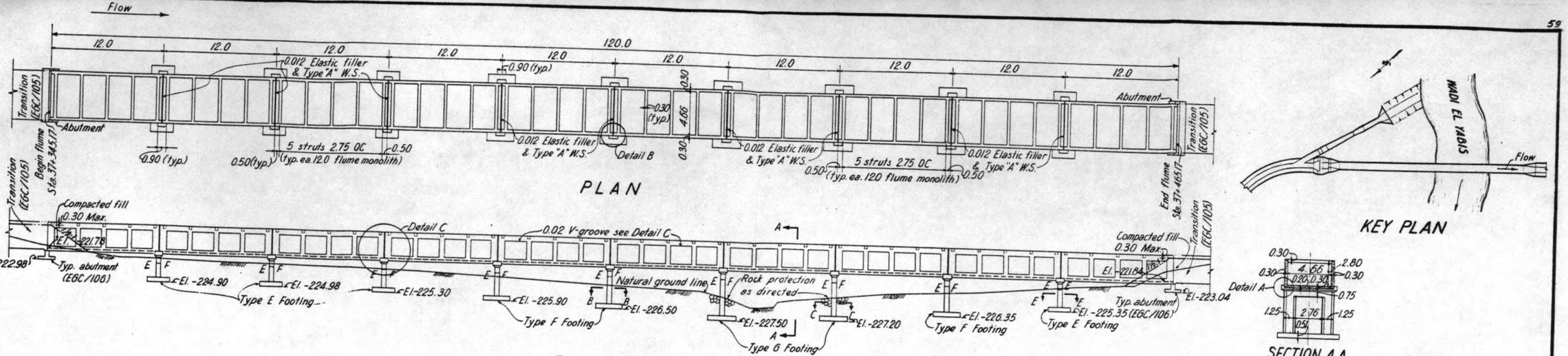
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

FLUME FOR 17-15 CUMECS CAPACITY

APPROVED. [redacted]

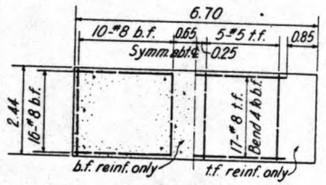
Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO. EGC/115

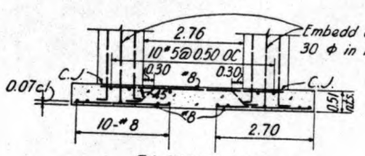


KEY PLAN

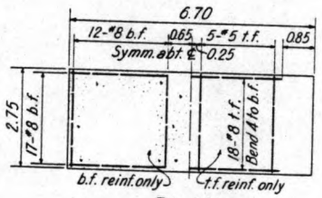
SECTION A-A



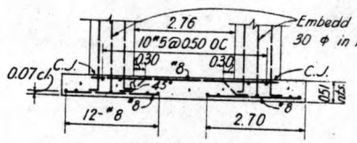
PLAN
Columns not shown



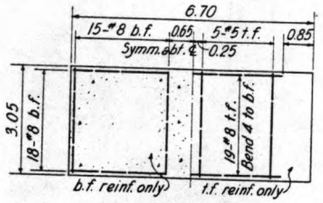
ELEVATION
TYPE E FOOTING
Scale
0 1 2 3 4 M.



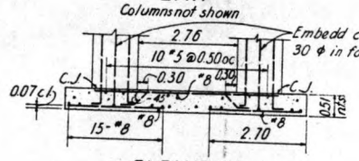
PLAN
Columns not shown



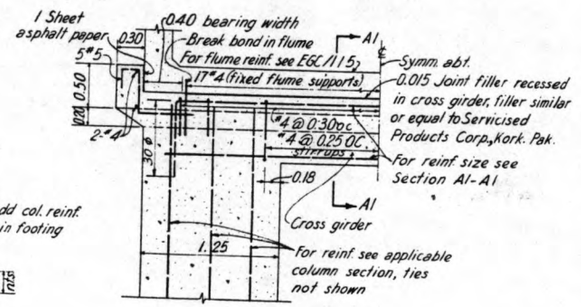
ELEVATION
TYPE F FOOTING
Scale
0 1 2 3 4 M.



PLAN
Columns not shown



ELEVATION
TYPE G FOOTING
Scale
0 1 2 3 4 M.



DETAIL A
Not to Scale

ESTIMATED QUANTITIES:

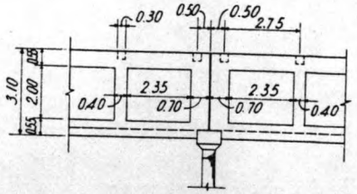
Concrete	588 C.M.
Reinforcement steel	74.55 MT.

REFERENCE DRAWINGS:

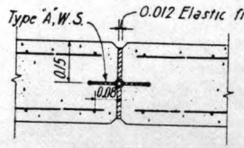
Work this drawing with EGC/105, 106 & 115
Standard Details EGC/98
Plan & Profile EGC/32

NOTES:

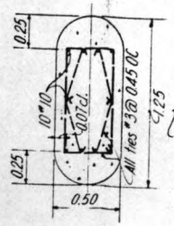
1. Clear cover for reinforcement is 0.05 unless otherwise noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Elastic joint filler shall be securely fastened to one face of concrete.
5. Estimated Quantities are for transitions flume & substructure.
6. Concrete design based on a compressive strength of 210 kg. per sq. cm.



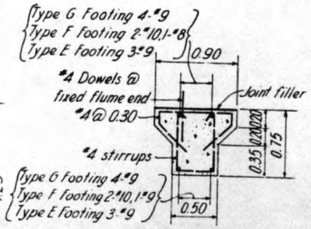
DETAIL C
V-groove pattern
Scale
0 5 M.



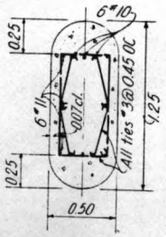
DETAIL B
Typical flume joints
Scale
0 0.5 M.



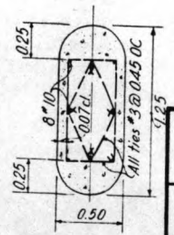
SECTION B-B
Typ. Column Type F Footing
Scale
0 1 M.



SECTION A1-A1
Flume not shown
(Typ. all cross girders)
Scale
0 1 2 M.



SECTION C-C
Typ. Column Type G Footing
Scale
0 1 M.



SECTION E-E
Typ. Column Type E Footing

0 5 10 M.
Scale
Except as noted

	By	Date	Chkd	Date
Dsn.	[redacted]	12-5-58	[redacted]	[redacted]
Drwn.	[redacted]	18-8-58	[redacted]	22-7-58
Trac.				
Sub.	[redacted]			

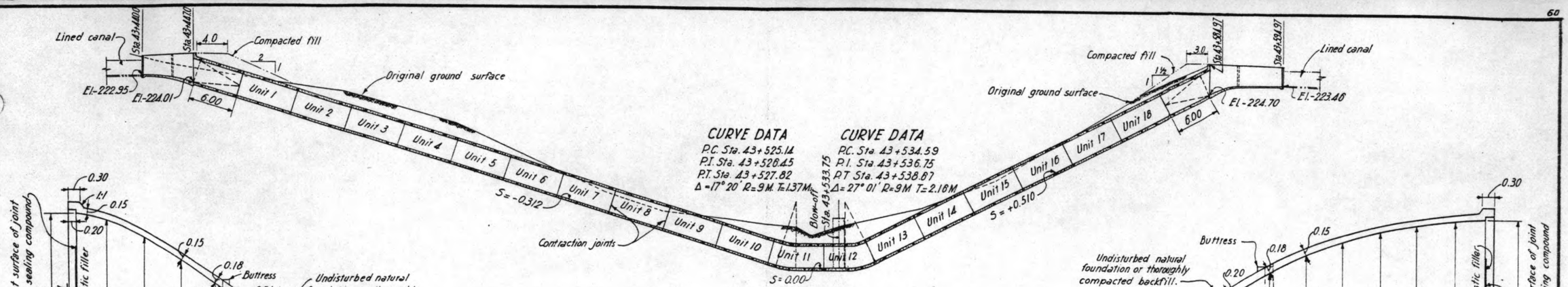
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

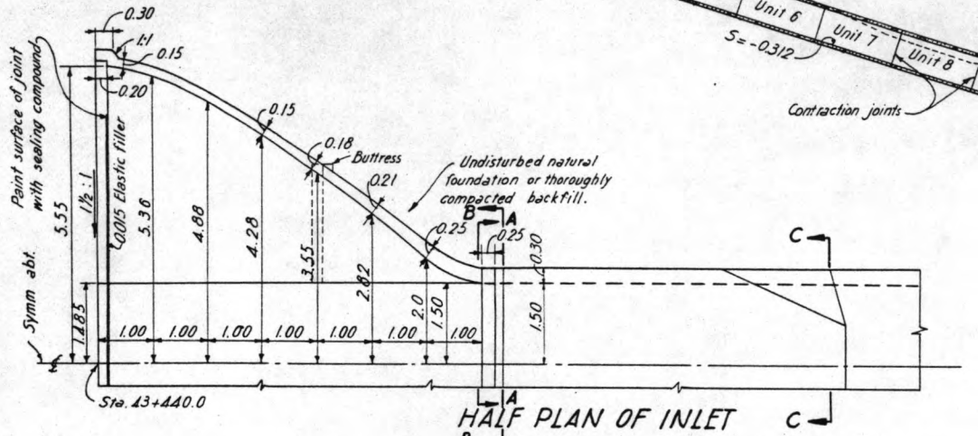
WADI EL—YABIS CROSSING

APPROVED [redacted]

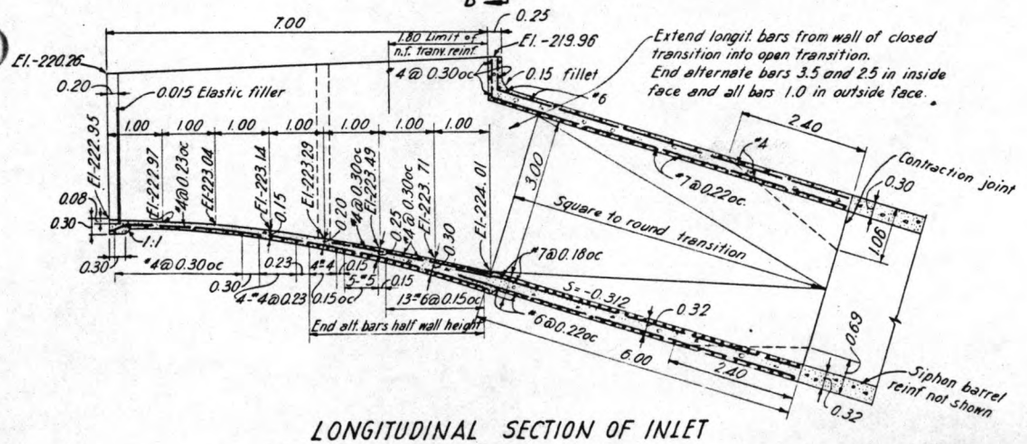
Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE. 1-9-1958 | DWG-NO. EGC/117

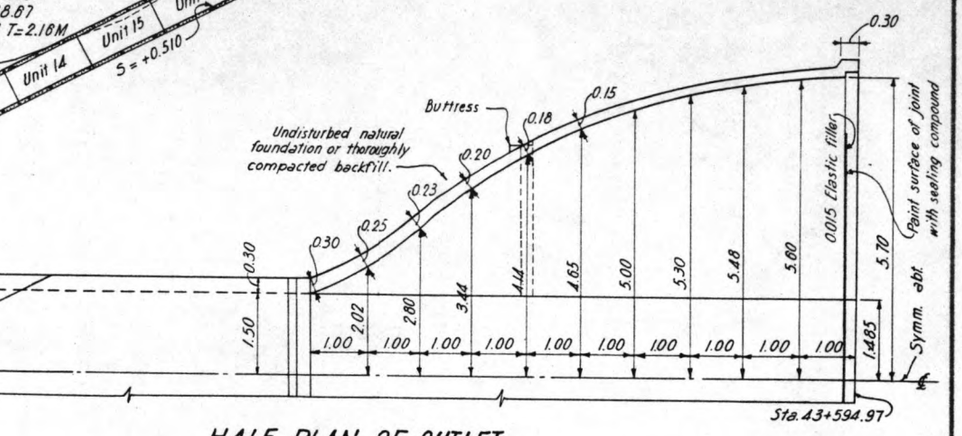




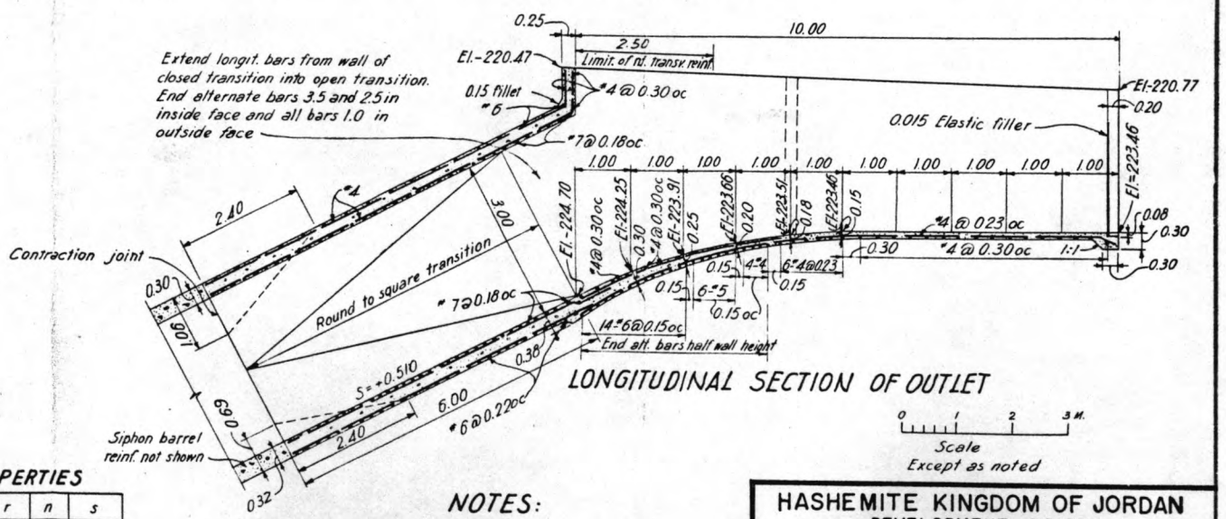
HALF PLAN OF INLET



LONGITUDINAL SECTION OF INLET



HALF PLAN OF OUTLET



LONGITUDINAL SECTION OF OUTLET

0 1 2 3 M.
Scale
Except as noted

HYDRAULIC PROPERTIES

SECTION	A	V	Q	r	n	s
Canal	9.96	1.00	10.0	1.00	0.014	0.00018
Siphon	7.06	1.42	10.0	0.75	0.014	0.000584
Siphon Future	7.06	2.27	16.0	0.75	0.014	0.001149

NOTES:
See EGC/119

	By	Date	Chkd	Date
Dsn.	[redacted]	24-7-58	[redacted]	1-9-58
Drwn.	H.H.B.	7/19/58	[redacted]	23-8-58
Trac.				
Sub	[redacted]			

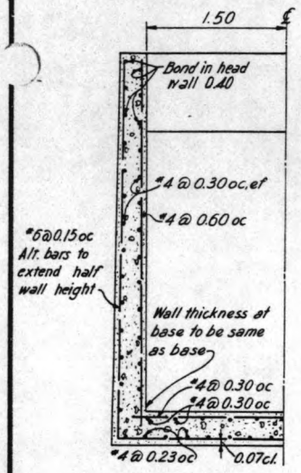
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

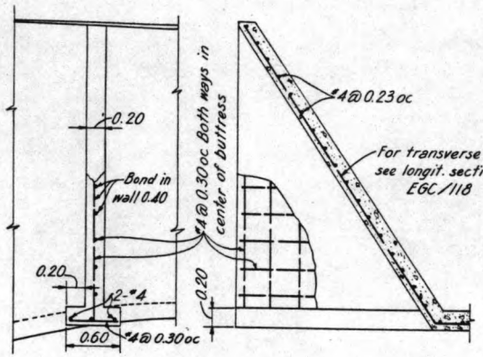
SIPHON
WADI EL-QARN CROSSING
SHEET 1

APPROVED: [redacted]

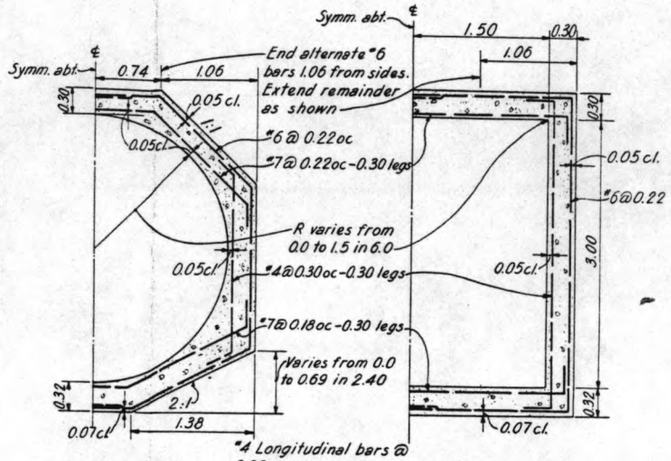
AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO. EGC/118



SECTION A-A
(Outlet similar)

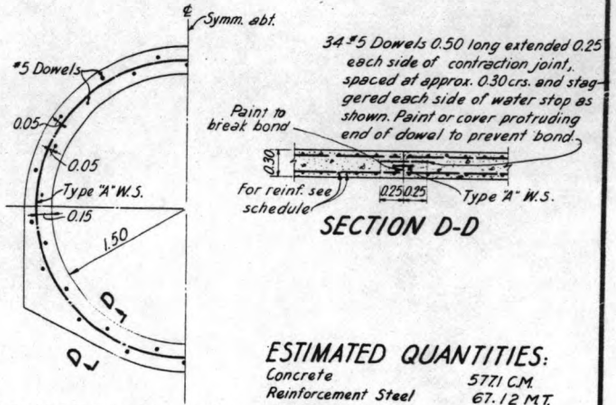


TYPICAL BUTTRESS DETAIL



SECTION C-C
(Normal)

SECTION B-B
(Normal)
(Outlet similar)



CONTRACTION JOINT
SIPHON BARREL

SECTION D-D

ESTIMATED QUANTITIES:

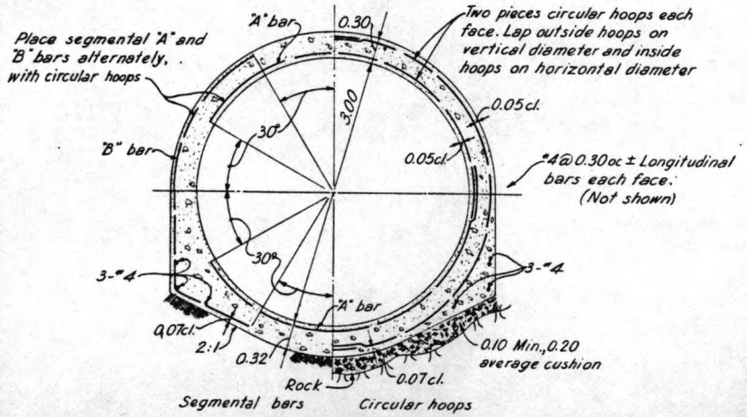
Concrete	577.1 C.M.
Reinforcement Steel	67.12 M.T.

REFERENCE DRAWINGS:

Standard Details EGC/98
Plan & Profile EGC/35
Miscellaneous Metals EGC/302

NOTES:

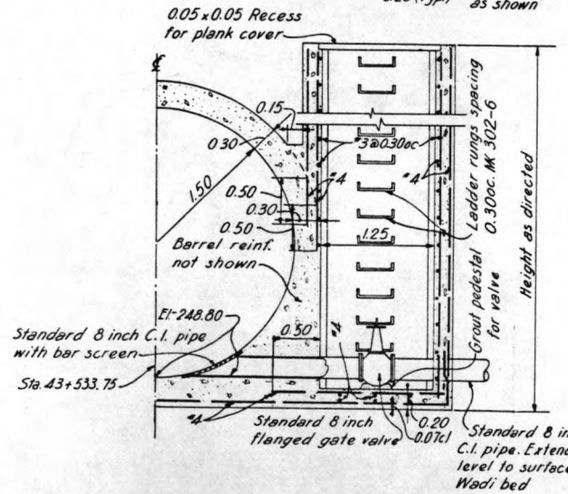
1. Clear cover for reinforcement adjacent to surface placed against ground is 0.07, otherwise all clear cover is 0.05.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Elastic joint filler to be securely fastened to one face of concrete.
5. Stations, elevations and radii shown on profile refer to invert, unless otherwise noted.
6. Space transverse reinforcement in barrel along inside longitudinal bars and on longer arc of vertical curves.
7. Backfill to natural ground surface or to a normal depth of 1.0 along siphon barrel as directed.
8. Base of entire structure to be placed on undisturbed natural foundation or thoroughly compacted fill.
9. Provide cushion (0.10 min., 0.20 average thickness) of compacted backfill of selected material as directed wherever rock foundation is encountered.
10. Thickness of concrete to vary uniformly between dimensions shown.
11. Concrete design based on a compressive strength of 210 Kg. per sq. cm.



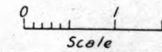
TYPICAL BARREL SECTION

SCHEDULE
BARREL REINFORCEMENT

UNIT NO.	Invert Length	Circular Hoops	"A" Bars Crown	"A" Bars Invert	"B" Bars
1	7.46	#5@0.30	#5@0.30	#6@0.30	#5@0.30
2	7.46	#5@0.28	#7@0.28	#8@0.28	#7@0.28
3	7.46	#5@0.28	#7@0.28	#8@0.28	#7@0.28
4	7.46	#5@0.26	#7@0.26	#8@0.26	#7@0.26
5	7.46	#5@0.26	#7@0.26	#8@0.26	#7@0.26
6	7.46	#6@0.26	#7@0.26	#7@0.26	#7@0.26
7	7.46	#6@0.26	#7@0.26	#7@0.26	#7@0.26
8	7.46	#7@0.25	#7@0.25	#8@0.25	#7@0.25
9	7.46	#7@0.25	#7@0.25	#8@0.25	#7@0.25
10	7.46	#8@0.23	#8@0.23	#9@0.23	#8@0.23
11	7.33	#8@0.23	#8@0.23	#9@0.23	#8@0.23
12	7.54	#8@0.23	#8@0.23	#9@0.23	#8@0.23
13	7.46	#8@0.23	#8@0.23	#9@0.23	#8@0.23
14	7.46	#7@0.25	#7@0.25	#8@0.25	#7@0.25
15	7.46	#6@0.26	#7@0.26	#7@0.26	#7@0.26
16	7.46	#5@0.26	#7@0.26	#8@0.26	#7@0.26
17	7.46	#5@0.26	#7@0.26	#8@0.26	#7@0.26
18	7.46	#5@0.28	#7@0.28	#8@0.28	#7@0.28



DETAIL OF BLOW OFF



	By	Date	Chkd	Date
Des.	[illegible]	27-7-58	[illegible]	1-8-58
Drwn.	[illegible]	23.8.58	[illegible]	27-8-58
Trac.				
Sub.	[redacted]			

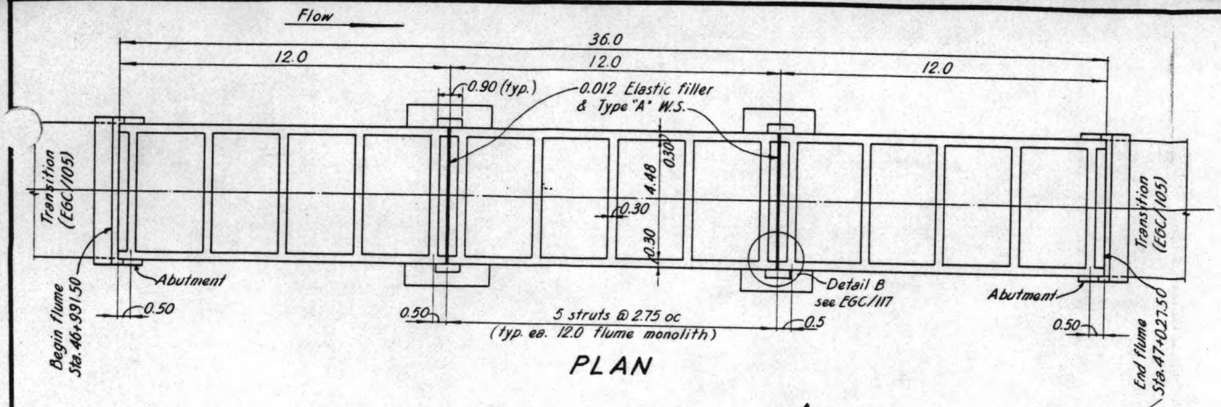
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

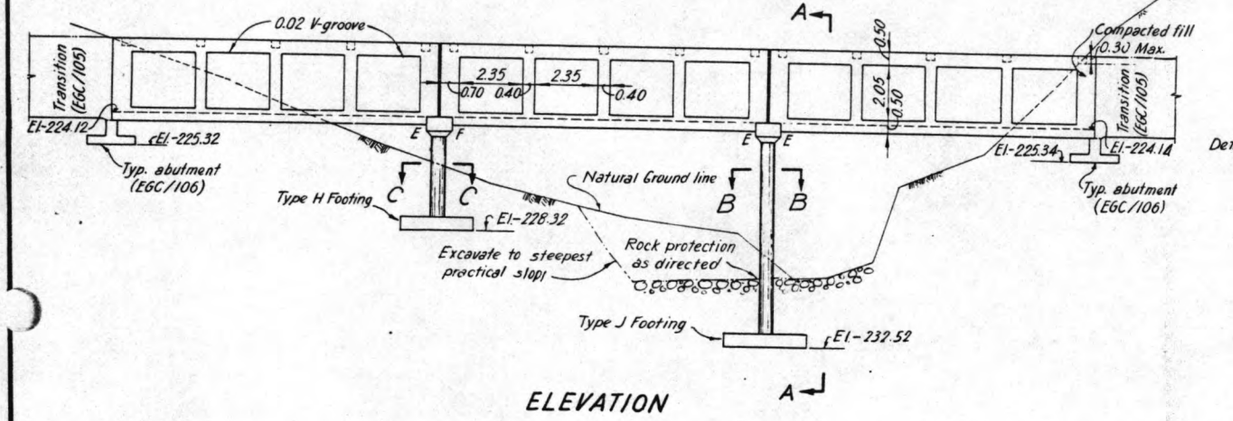
SIPHON
WADI EL-QARN CROSSING
SHEET 2

APPROVED [redacted]

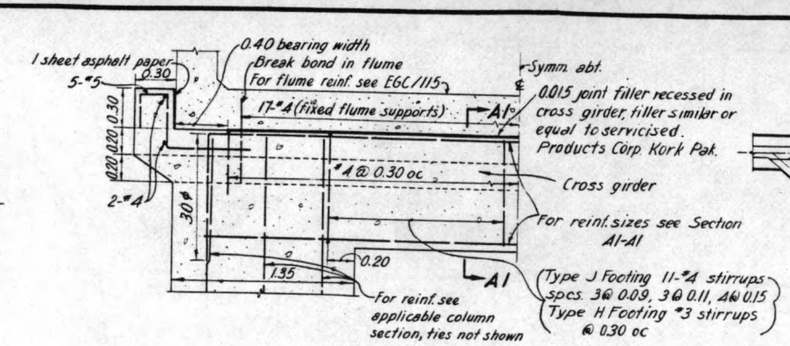
AMMAN, JORDAN | DATE. 1-9-1958 | DWG.NO. EGC/119



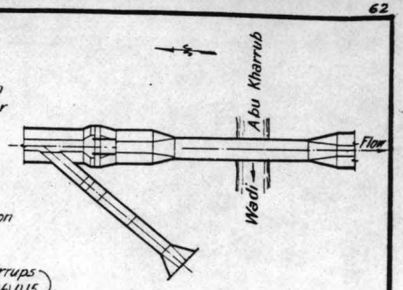
PLAN



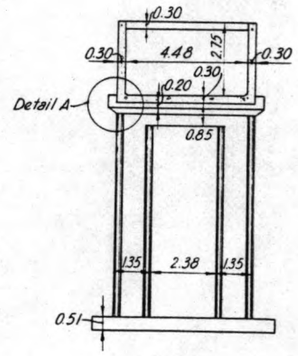
ELEVATION



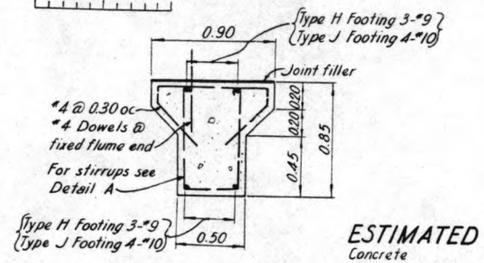
DETAIL A
Scale 0 0.5 1 M.



KEY PLAN



SECTION A-A



SECTION A1-A1
Flume not shown
(typ. all cross girders)
Scale 0 0.5 1 M.

ESTIMATED QUANTITIES:

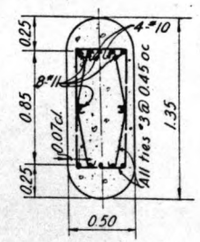
Concrete	159.4 C.M.
Reinforcement Steel	18.95 M.T.

REFERENCE DRAWINGS:

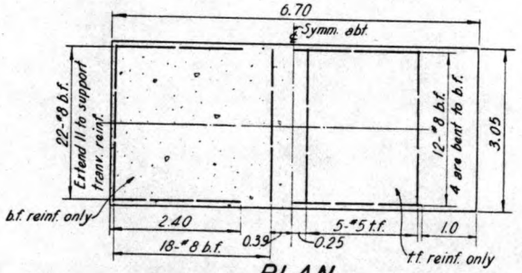
Work this drawing with EGC/105, 106 & 115
Standard Details EGC/98
Plan & Profile EGC/37

NOTES:

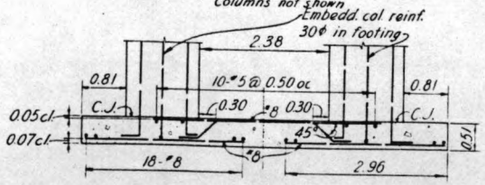
1. Clear cover for reinforcement is 0.05 unless otherwise noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Elastic joint filler shall be securely fastened to one face of concrete.
5. Estimated Quantities are for transitions, flume & substructure.
6. Concrete design based on a compressive strength of 210 Kg. per sq. cm.



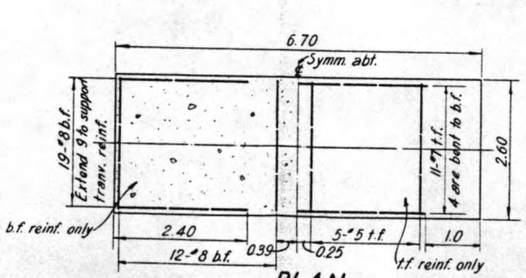
SECTION B-B
Typ. Column Type J Footing
Scale 0 0.5 1 M.



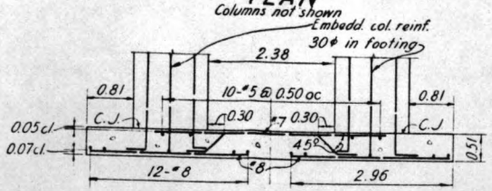
PLAN
Columns not shown



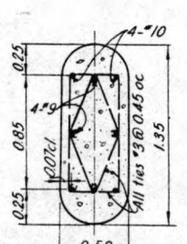
ELEVATION
TYPE J FOOTING
Scale 0 1 2 3 M.



PLAN
Columns not shown



ELEVATION
TYPE H FOOTING
Scale 0 1 2 3 M.



SECTION C-C
Typ. Column Type H Footing
Scale 0 0.5 1 M.

0 5 M.
Scale
Except as noted

	By	Date	Chkd	Date
Dsn.	MH	15-7-58	[redacted]	22-7-58
Drwn	[redacted]	18-8-58	[redacted]	14-8-58
Trac.				
Sub.	[redacted]			

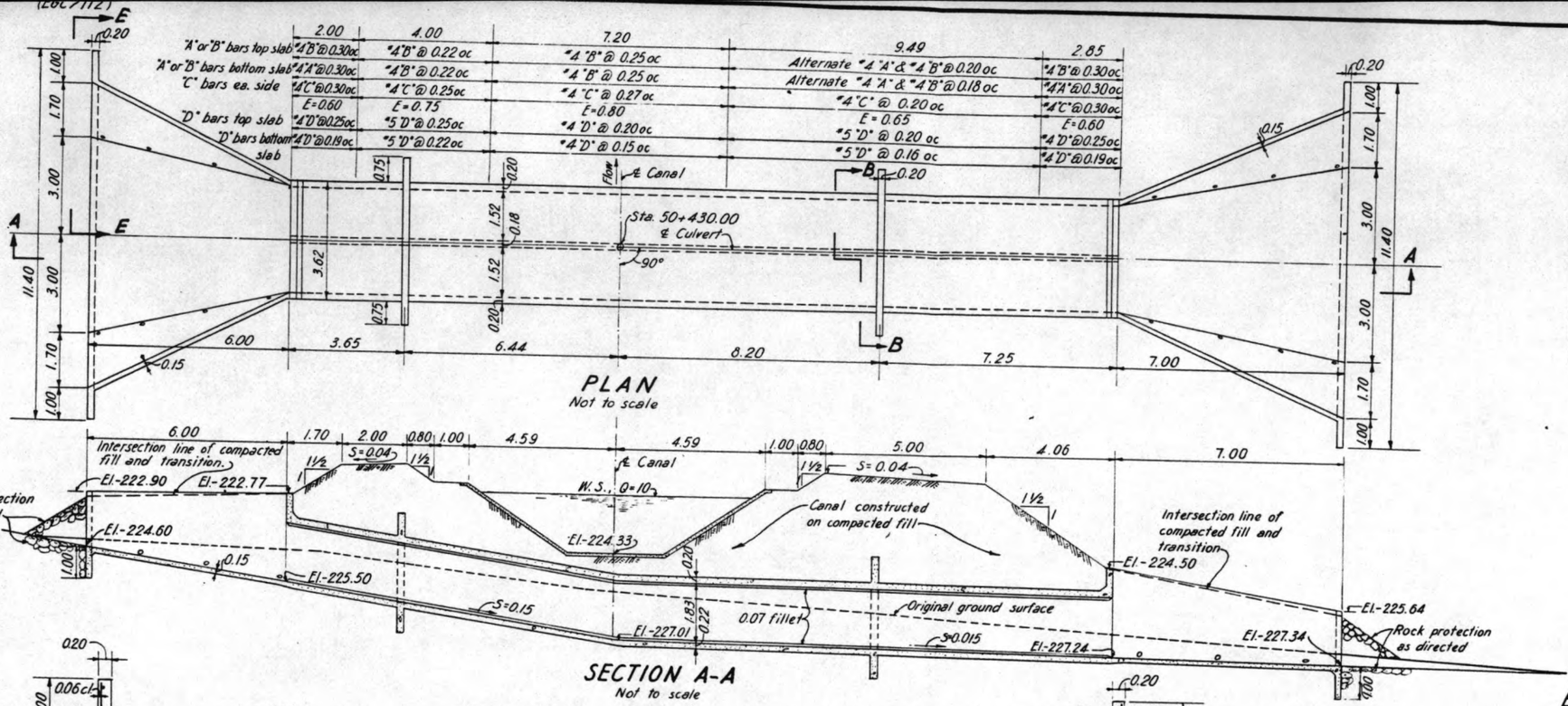
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

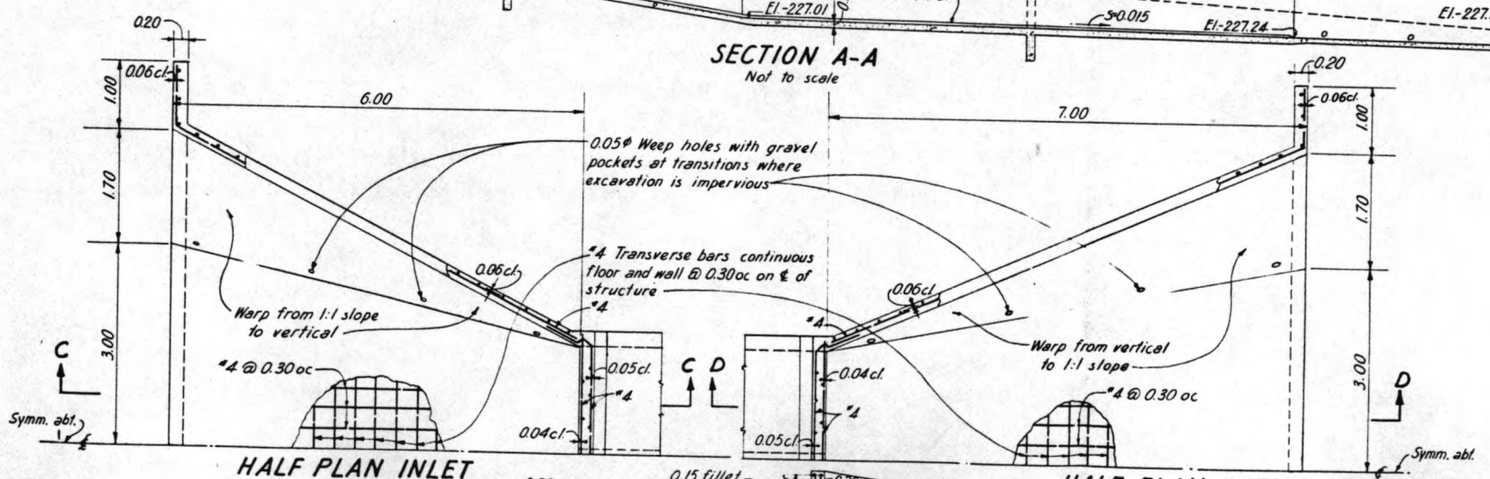
WADI ABU KHARRUB CROSSING

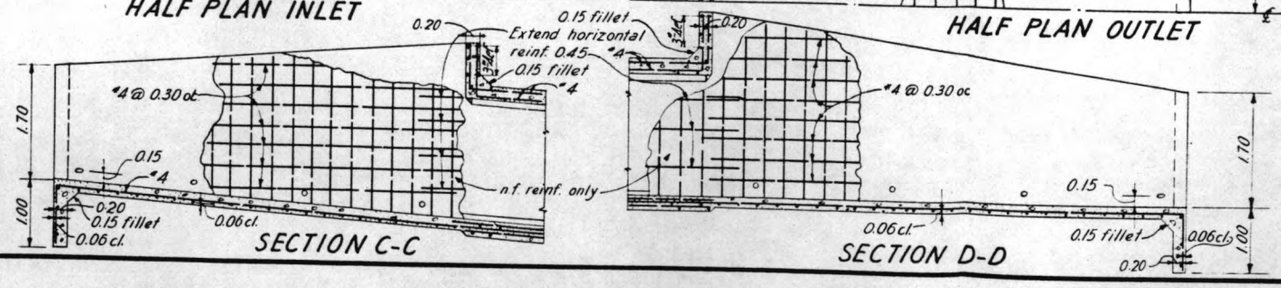
APPROVED [redacted]

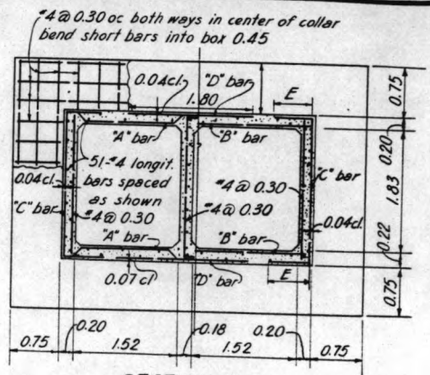
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

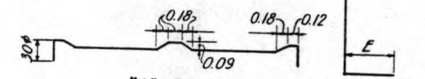
AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO EGC/120











ESTIMATED QUANTITIES:

Concrete	95.7 C.M.
Reinforcement steel	5.47 M.T.

REFERENCE DRAWINGS:

Work this drawing with EGC/112
Standard Details EGC/98
Plan & Profile EGC/38

NOTES:

1. Clear cover for reinforcement is 0.05 unless otherwise noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Concrete design based on a compressive strength of 210 Kg. per sq. cm.

Scale
Except as noted

	By	Date	Chkd	Date
Dsn	MCS	8-7-58	MH	10-7-58
Drwn.	MCS	1-8-58	MH	13-8-58
Trac.				
Sub	[redacted]			

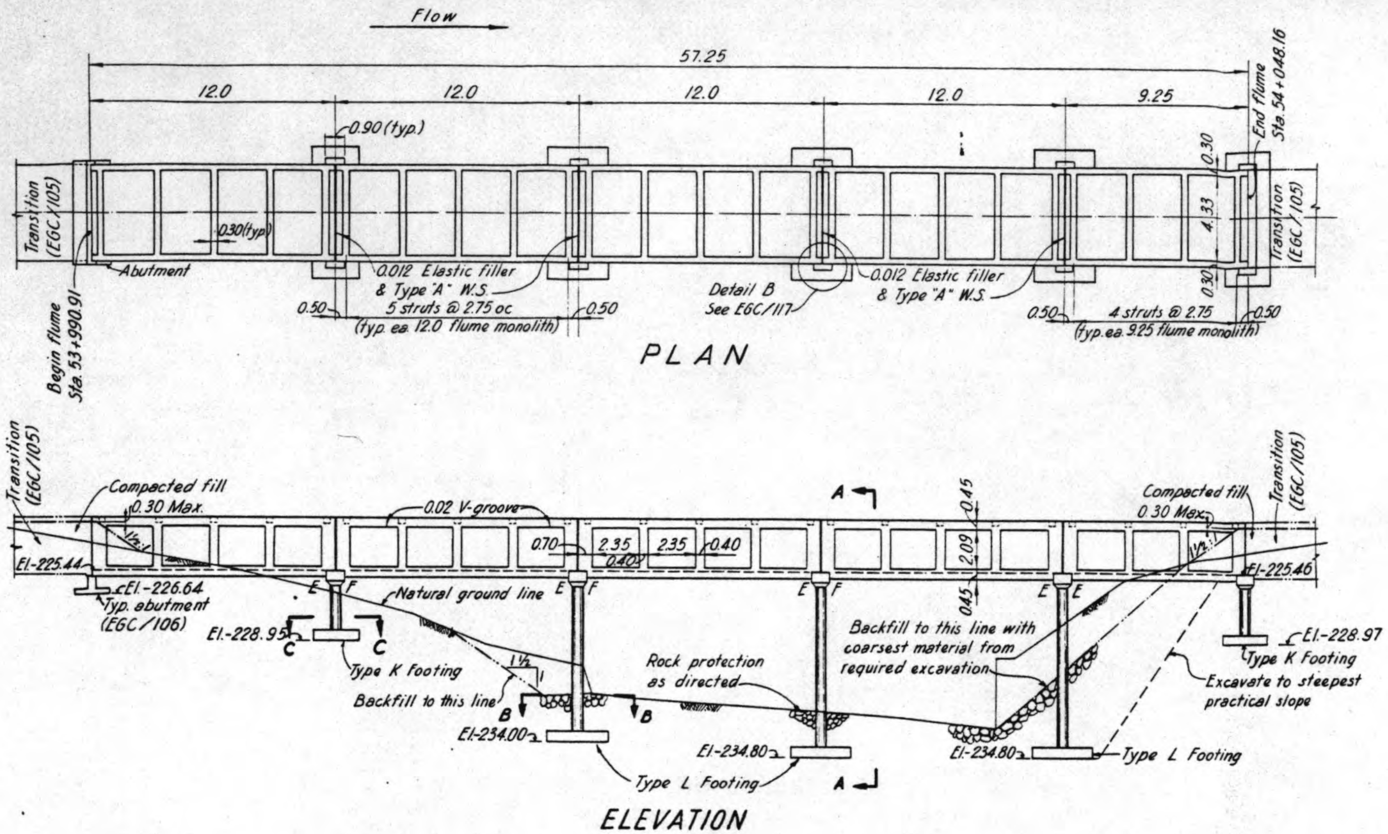
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

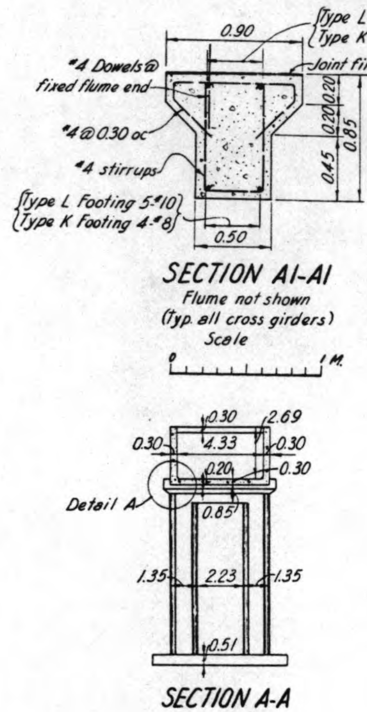
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

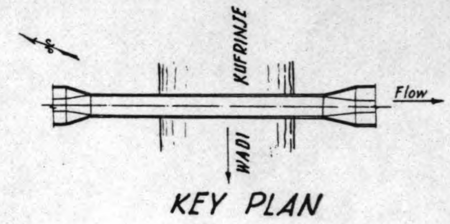
WADI ES-SARAR CROSSING
DOUBLE BARREL CULVERT

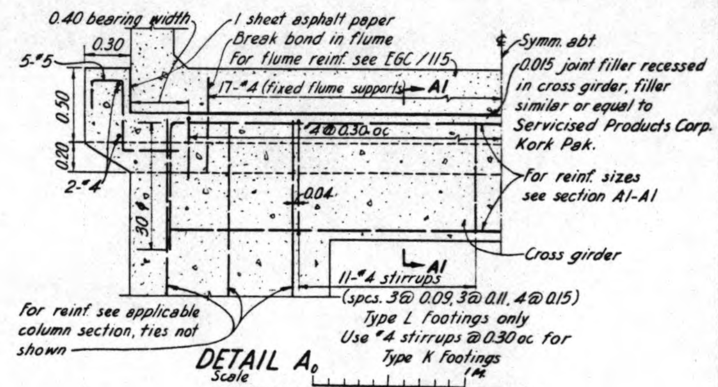
APPROVED [redacted]

AMMAN, JORDAN | DATE 1-9-1958 | DWG.NO EGC/121









ESTIMATED QUANTITIES

Concrete	234.8	C.M.
Reinforcement Steel	33.49	M.T.

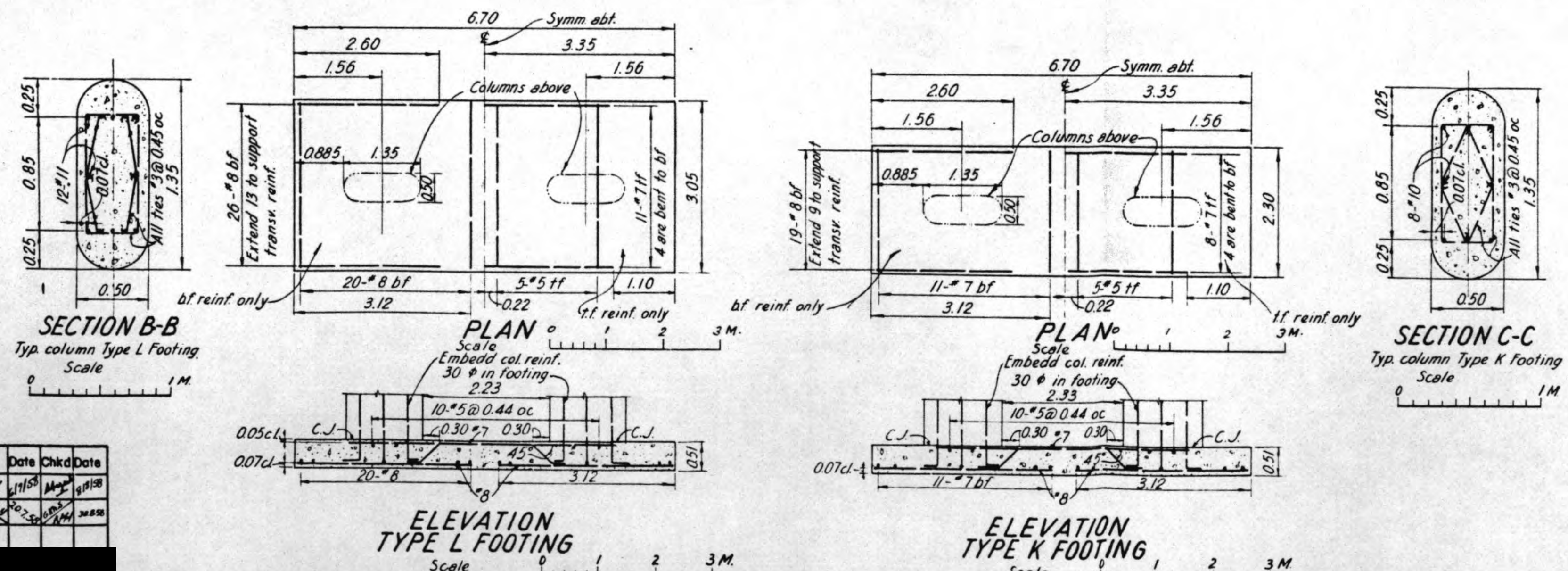
REFERENCE DRAWINGS

Work this drawing with EGC/105, 106 & 115
Standard Details EGC/98
Plan & Profile EGC/40

NOTES:

1. Clear cover for reinforcement is 0.05 unless otherwise noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be champhered 0.02 unless otherwise noted.
4. Elastic joint filler shall be securely fastened to one face of concrete.
5. Estimated Quantities are for transitions flume & substructure.
6. Concrete design based on a compressive strength of 210 Kg. per sq. cm.

Scale
Except as noted



	By	Date	Chkd	Date
Dsn.				
Drwn.				

Sub. [redacted]

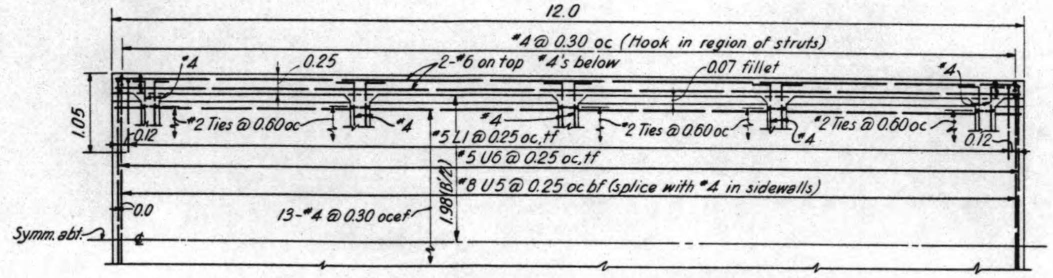
Prepared under the supervision of MICHAEL BAKER, JR. INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

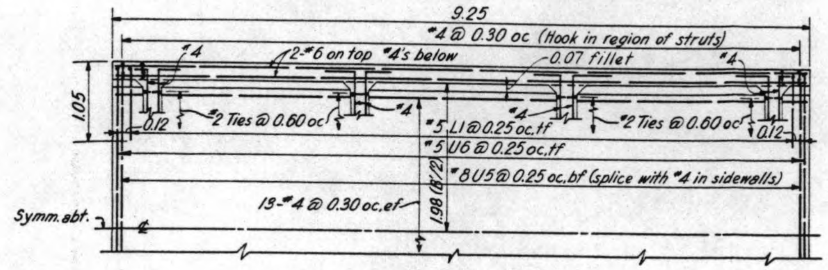
WADI KUFRINJE CROSSING

APPROVED [redacted]

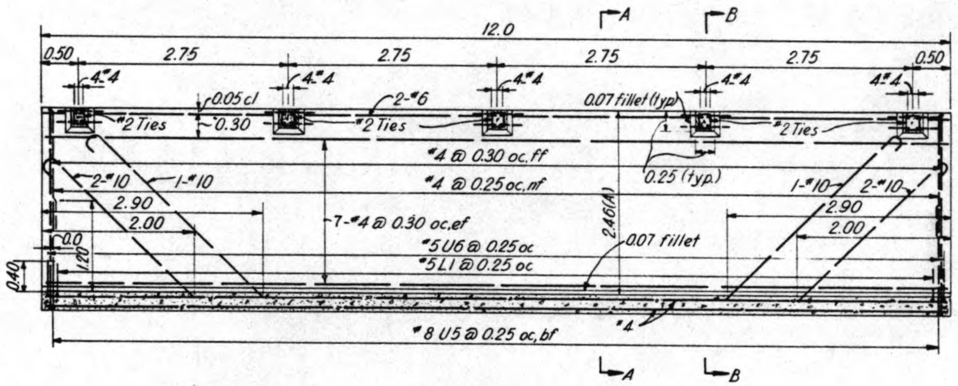
AMMAN, JORDAN | DATE. 1-9-1958 | DWG. NO. EGC/122



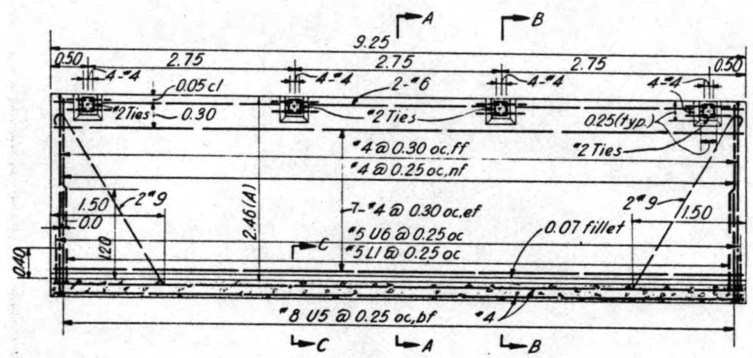
PLAN-FLUME
(12.0 monolith)



PLAN-FLUME
(9.25 monolith)



ELEVATION-FLUME
(12.0 monolith)



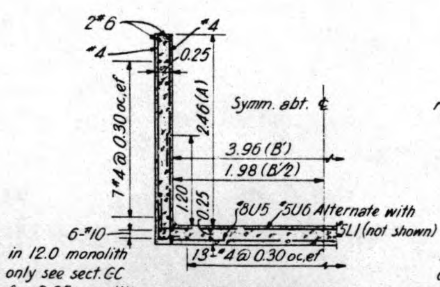
ELEVATION-FLUME
(9.25 monolith)

REFERENCE DRAWINGS:

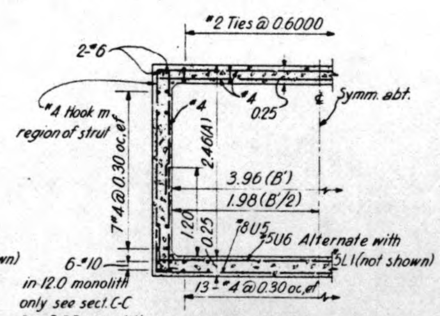
Work this drawing with EGC/105 & EGC/106.
Standard Details EGC/98
Plan & Profile EGC/42&45

NOTES:

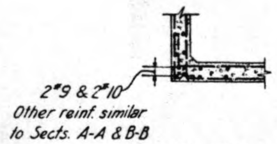
1. Clear cover for reinf. is:
   - surfaces subject to submersion 0.05
   - concrete surfaces on soil 0.07
   - other surfaces 0.04
2. Lap all bars 30-diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Fillet in flume invert to be chamfered at junction with transition.
5. For transition and abutment drawings see EGC/105 and EGC/106, key dimensions given in schedule.
6. Transition to be placed on undisturbed natural foundation or thoroughly compacted backfill.
7. Concrete design based on a compressive strength of 210 Kg. per sq. cm.
8. Quantities for flume and transitions are shown on wadi crossing drawings.



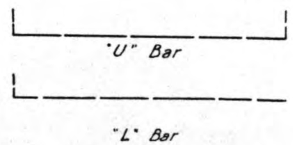
SECTION A-A



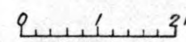
SECTION B-B



SECTION C-C



BENT BAR KEY
Not to scale



Scale
Except as noted

SCHEDULE

	WADI	DWG. No	STA. I	EL. I	STA 0	EL. 0	A	B	B'	C	D
	Wadi Rajib	EGC/128	58+082.25	-226.19	58+177.50	-226.27	2.46	2.97	3.96	2.33	1.77
	Wadi El Khor	EGC/129	62+848.00	-227.11	62+982.00	-227.20	2.46	2.97	3.96	2.33	1.77
†	Wadi Abu Mheireh	EGC/130	* 3+190.75	-241.57	* 3+286.00	-241.67	2.46	2.97	3.96	2.33	1.77

† Capacity to be 12 cumecs, but flume dimensions to correspond to 13 cumecs flume.
* East Ghor Main Canal-South-

	By	Date	Chkd	Date
Dsn.	[illegible]	3-3-58	N.H.	3/5/58
Drwn.	[illegible]	6-7-58	[illegible]	20-7-58
Trac.				
Sub. [redacted]				

Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

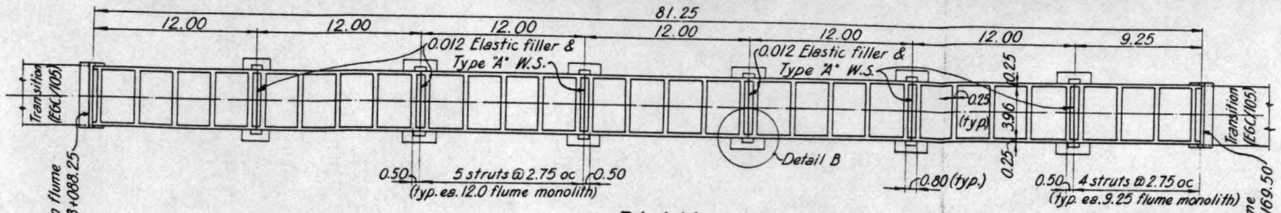
FLUME FOR 13 CUMECS CAPACITY

APPROVED: [redacted]

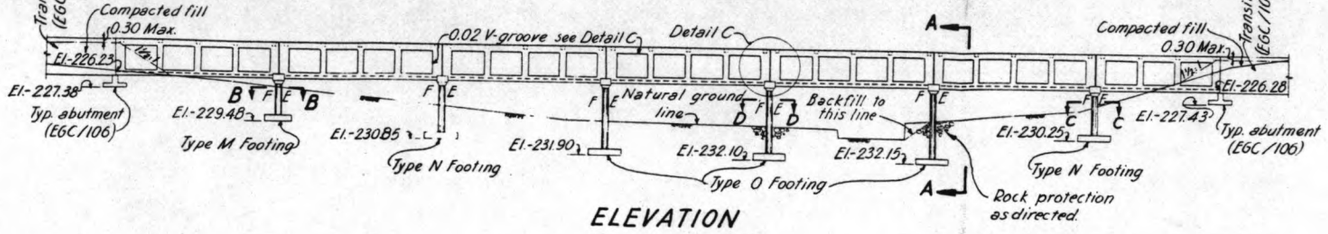
AMMAN, JORDAN

DATE: 1-9-1958

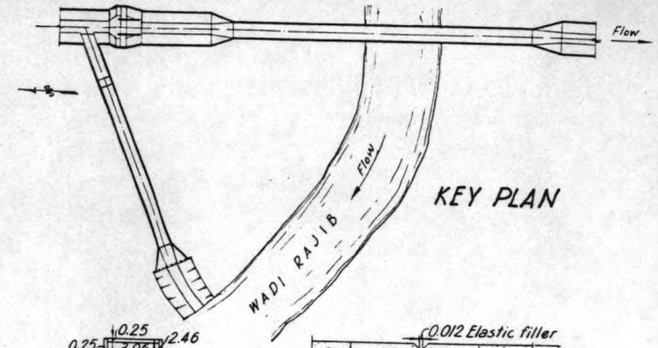
DWG. NO. EGC/125



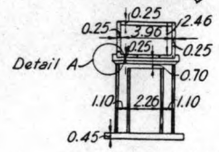
PLAN



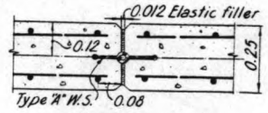
ELEVATION



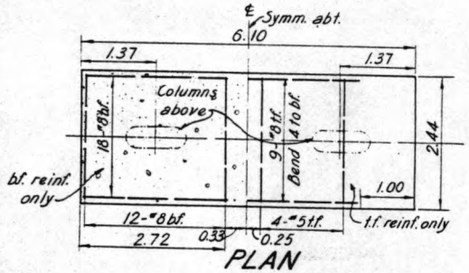
KEY PLAN



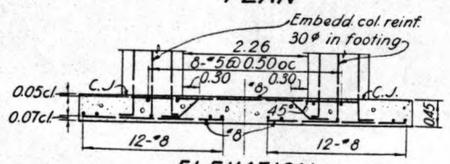
SECTION A-A



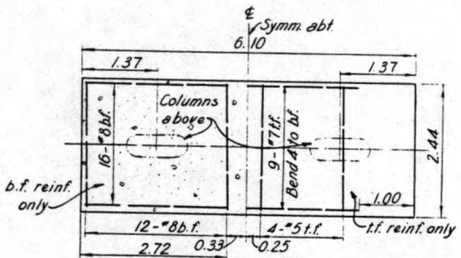
DETAIL B
Typical flume joints
Scale
0 .25M.



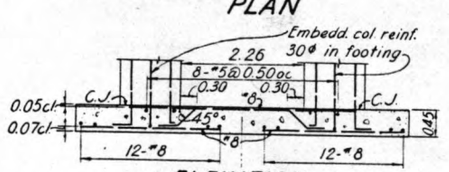
PLAN



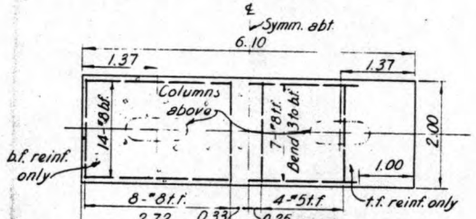
ELEVATION
TYPE O FOOTING
Scale
0 1 2 3M



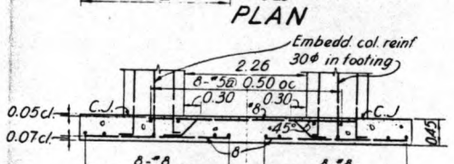
PLAN



ELEVATION
TYPE N FOOTING
Scale
0 2 3M



PLAN



ELEVATION
TYPE M FOOTING
Scale
0 2 3M.

ESTIMATED QUANTITIES:

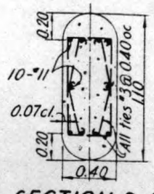
Concrete	2882 C. M.
Reinforcement Steel	377 9M.T.

REFERENCE DRAWINGS:

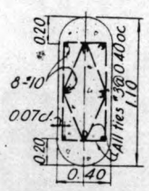
Work this drawing with E6C/105, 106 & 125
Standard Details E6C/98
Plan & Profile E6C/42

NOTES:

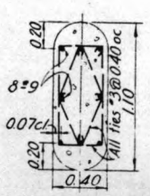
1. Clear cover for reinforcement is 0.05 unless otherwise noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Elastic joint filler shall be securely fastened to one face of concrete.
5. Estimated Quantities are for transitions, flume & substructure.
6. Concrete design based on a compressive strength of 210 Kg. per sq. cm.



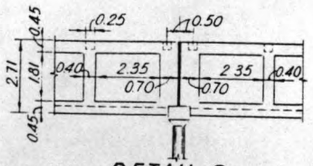
SECTION D-D
Typ. Column Type O Footing.
Scale
0 1M.



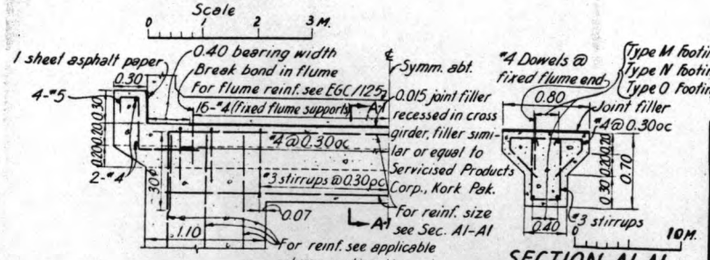
SECTION C-C
Typ. Column Type N Footing.
Scale
0 0.40 1M.



SECTION B-B
Typ. Column Type M Footing.
Scale
0 1M.



DETAIL C
V-groove pattern
Not to scale



DETAIL A
Scale
0 5 10 15M

SECTION A1-A1
Flume not shown
(Typ. all cross girders)

0 5 10 M.
Scale
Except as noted

	By	Date	Chkd	Date
Dsn.	EFL	30-5-58	MH	10-10-58
Drwn.	[redacted]	24-8-58	[redacted]	30-8-58
Trac.				
Sub.	[redacted]			

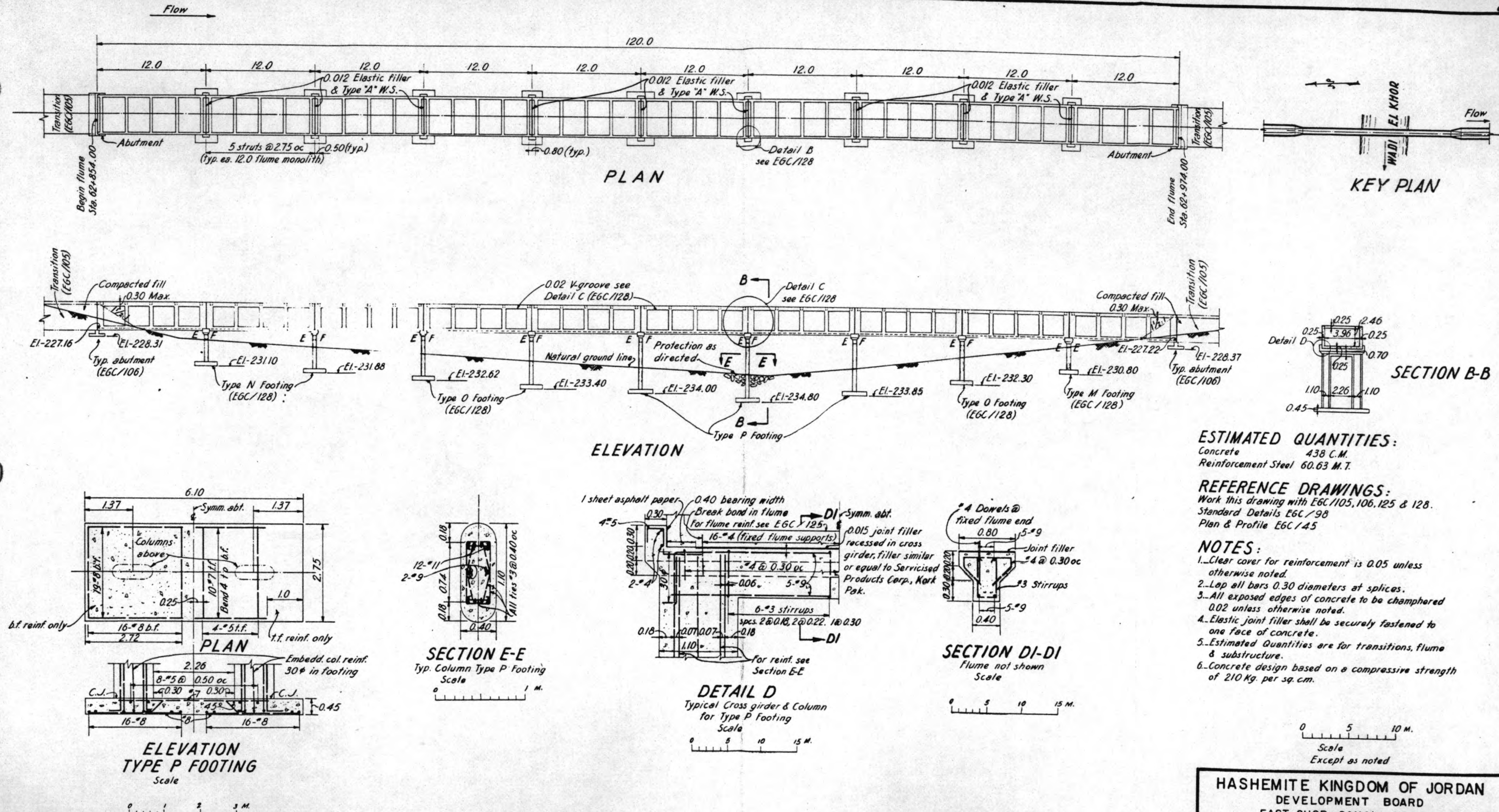
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

WADI RAJIB CROSSING

APPROVED [redacted]

AMMAN, JORDAN | DATE. 1-9-1958 | DWG.NO. EGC/128



ESTIMATED QUANTITIES:

Concrete 438 C.M.
Reinforcement Steel 60.63 M.T.

REFERENCE DRAWINGS:

Work this drawing with EGC/105, 106, 125 & 128.
Standard Details EGC/98
Plan & Profile EGC/45

NOTES:

1. Clear cover for reinforcement is 0.05 unless otherwise noted.
2. Lap all bars 0.30 diameters at splices.
3. All exposed edges of concrete to be champhered 0.02 unless otherwise noted.
4. Elastic joint filler shall be securely fastened to one face of concrete.
5. Estimated Quantities are for transitions, flume & substructure.
6. Concrete design based on a compressive strength of 210 Kg. per sq. cm.

Scale Except as noted

	By	Date	Chkd	Date
Dsn.				
Drwn.				
Trac.				
Sub. [redacted]				

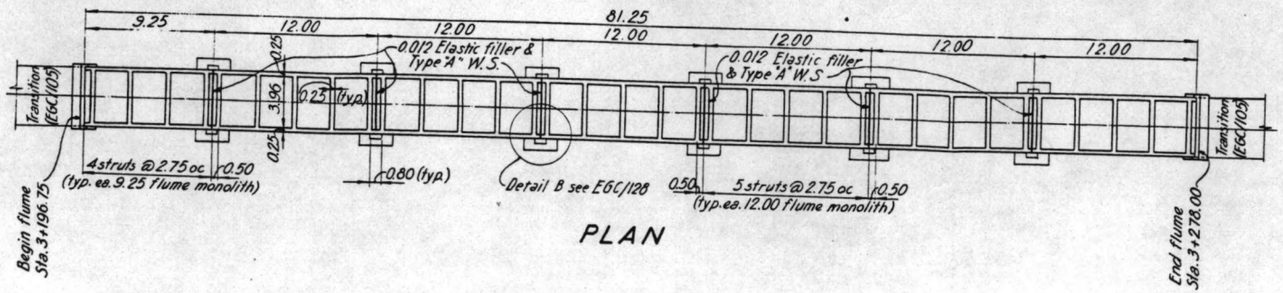
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

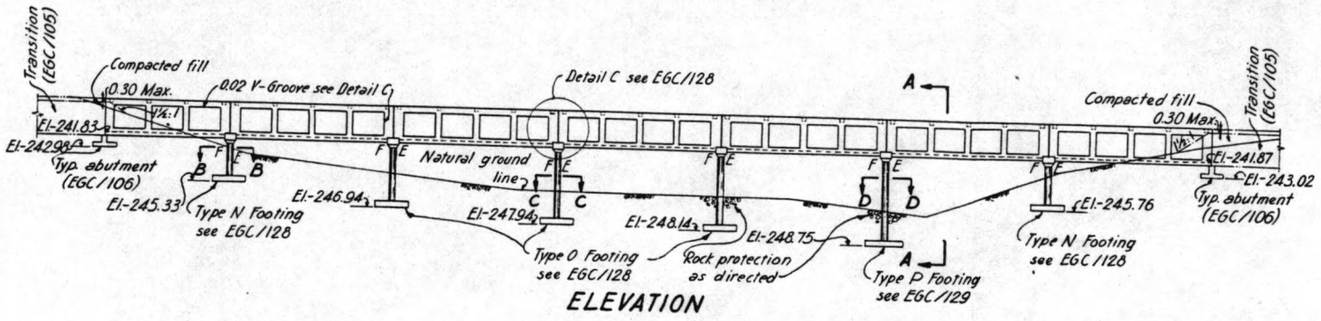
WADI EL-KHOR CROSSING

APPROVED: [redacted]

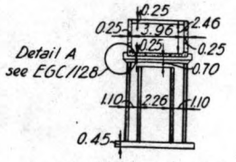
AMMAN, JORDAN | DATE: 1-9-1958 | DWG. NO. EGC/129



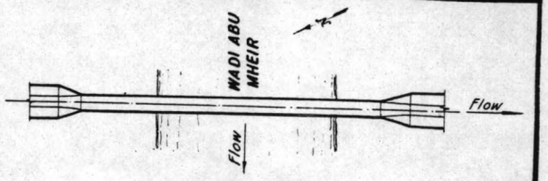
PLAN



ELEVATION



SECTION A-A



KEY PLAN

ESTIMATED QUANTITIES:

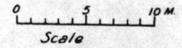
Concrete	312.3 C.M.
Reinforcement Steel	41.15 M.T.

REFERENCE DRAWINGS:

Work this drawing with EGC/105, 106, 125, 128 & 129.
Standard Details EGC/98.
Plan & Profile EGC/48.

NOTES:

1. Clear cover for reinforcement is 0.05 unless otherwise noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Elastic joint filler shall be securely fastened to one face of concrete.
5. Estimated Quantities are for transitions, flume & substructure.
6. Concrete design based on a compressive strength of 210 Kg. per sq. cm.



	By	Date	Chkd	Date
Dsn.	[redacted]	1.9.58	[redacted]	1.9.58
Drwn.	[redacted]	1.9.58	[redacted]	1.9.58
Trac.				
Sub.	[redacted]			

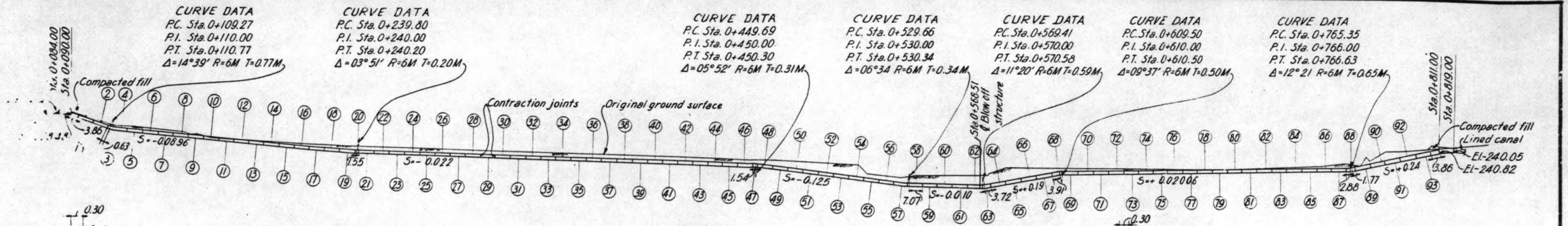
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

WADI ABU MHEIR CROSSING

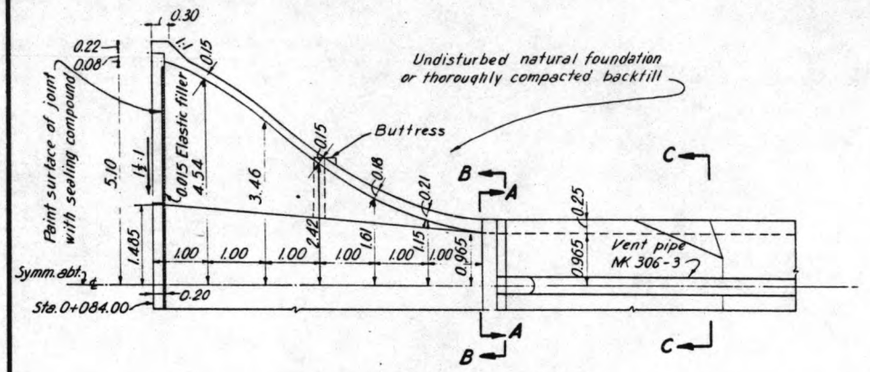
APPROVED: [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

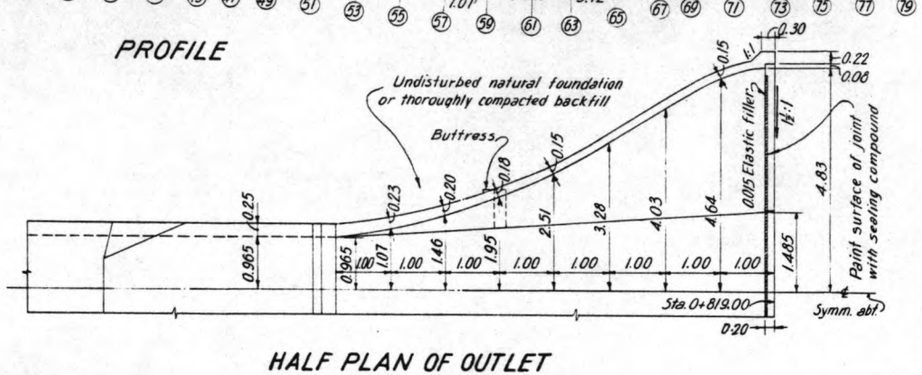
AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO. E.G.C./130



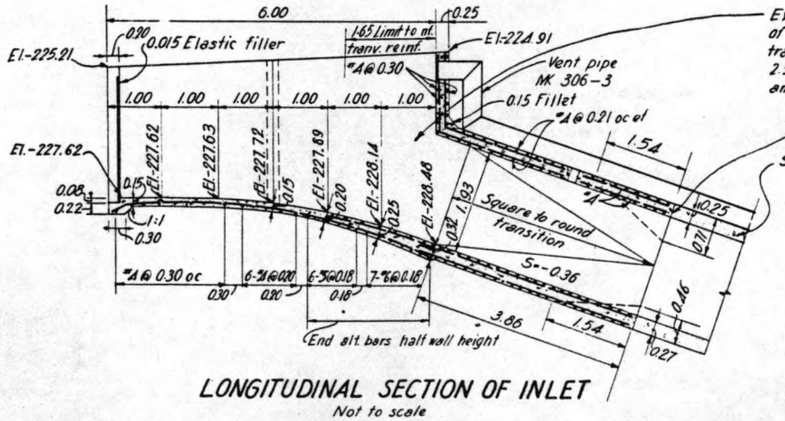
PROFILE



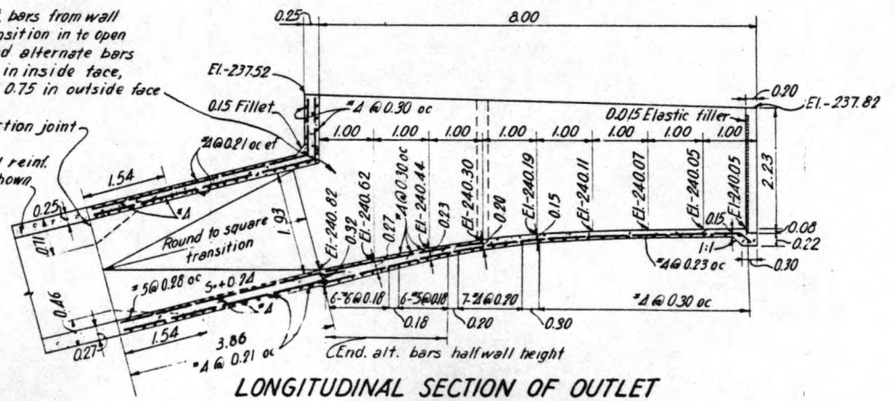
HALF PLAN OF INLET
Not to scale



HALF PLAN OF OUTLET
Not to scale



LONGITUDINAL SECTION OF INLET
Not to scale



LONGITUDINAL SECTION OF OUTLET
Not to scale

ESTIMATED QUANTITIES:

Concrete	1456 C.M.
Reinforcement Steel	1020 M.T.
Miscellaneous Metals	5 M.T.

REFERENCE DRAWINGS:

Standard Details EGC/98
Plan & Profile EGC/47
Miscellaneous Metals EGC/302, 306.

NOTES:

1. Clear cover for reinforcement adjacent to surface placed against ground is 0.07 otherwise all clear cover is 0.05 or as noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Elastic joint filler to be securely fastened to one face of concrete.
5. Stations, elevations and radii shown on profile refer to invert, unless otherwise noted.
6. Space transverse reinforcement in barrel along inside longitudinal bars and on longer arc of vertical curves.
7. Backfill to natural ground surface or to a normal depth of 1.0 along siphon barrel as directed.
8. Base of entire structure to be placed on undisturbed natural foundation or thoroughly compacted fill.
9. Provide cushion (0.10 min., 0.20 average thickness) of compacted backfill of selected material as directed wherever rock foundation is encountered.
10. Thickness of concrete to vary uniformly between dimensions shown.
11. Concrete design based on a compressive strength of 210 Kg. per sq. cm.

0 10 20 30 40 50 M.
Scale
Except as noted

HYDRAULIC PROPERTIES

SECTION	A	V	Q	r	n	S
Canal	9.96	1.00	10.0	1.0	0.014	0.00018
Siphon	2.78	3.60	10.0	0.46	0.014	0.011152
Siphon Future	2.78	4.32	12.0	0.46	0.014	0.016656

All dimensions in Meters

	BY	Date	Chkd	Date
Dsn.	[illegible]	[illegible]	[illegible]	1-9-58
Drwn.	[illegible]	[illegible]	[illegible]	1-9-58
Trac.				
Sub.	[redacted]			

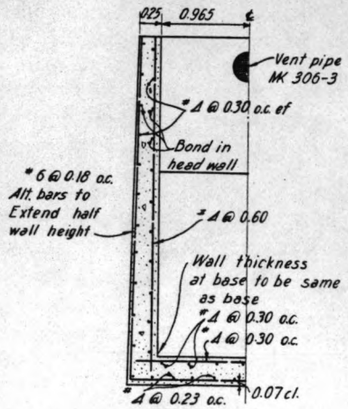
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

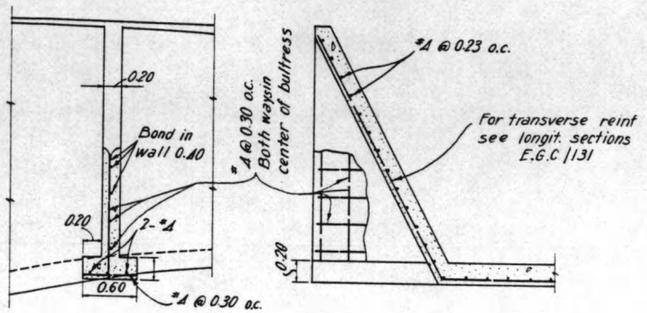
SIPHON
ZARQA RIVER CROSSING
SHEET 1

APPROVED [redacted]

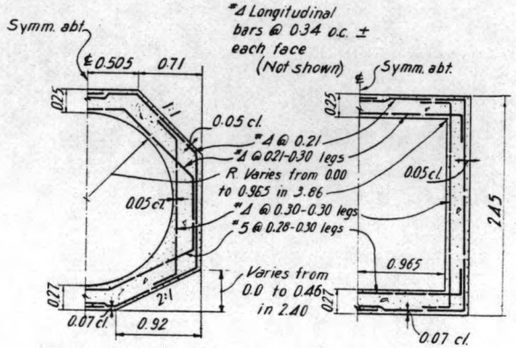
AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO. EGC/131



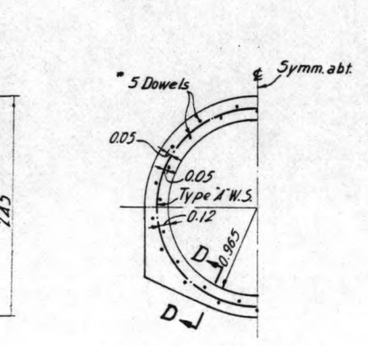
SECTION A-A
(Outlet similar)
(exclusive of vent pipe)



TYPICAL BUTTRESS DETAIL

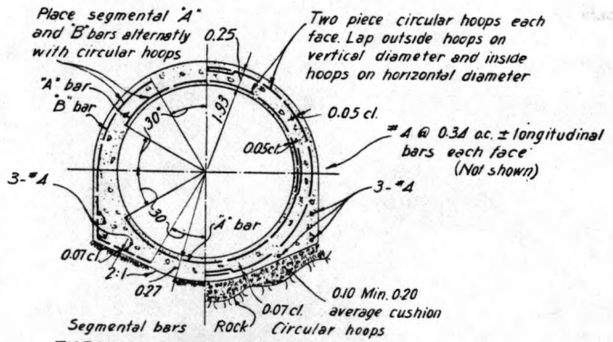


SECTION C-C
(Normal)



SECTION B-B
(Normal)

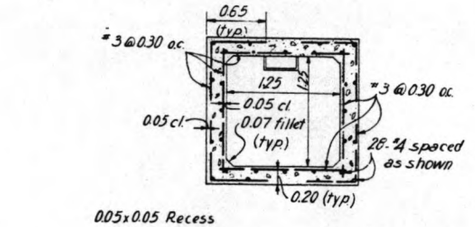
CONTRACTION JOINT
SIPHON BARREL

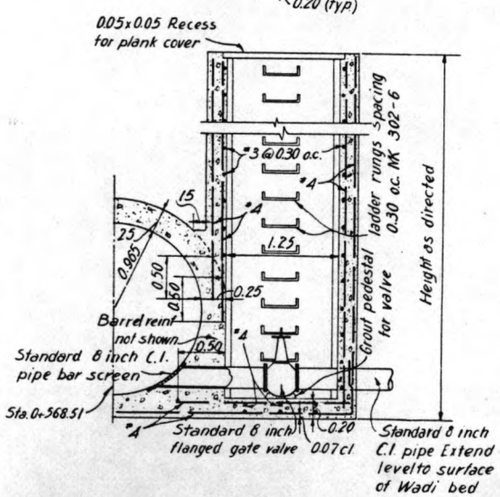


TYPICAL BARREL SECTION

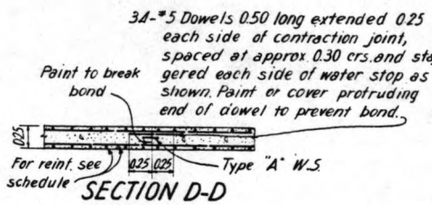
SCHEDULE
BARREL REINFORCEMENT

Unit No.	Invert Length	Circular Hoops	"A" Bars Crown	"A" Bars Invert	"B" Bars
1-2	8.00	"5@0.30	"5@0.30	"6@0.30	"5@0.30
3	2.17	"5@0.30	"5@0.30	"6@0.30	"5@0.30
5-6	8.00	"5@0.30	"5@0.30	"6@0.30	"5@0.30
7-13	8.00	"5@0.28	"5@0.28	"6@0.28	"5@0.28
14-18	8.00	"5@0.27	"5@0.27	"6@0.27	"5@0.27
19	8.00	"5@0.24	"5@0.24	"6@0.24	"5@0.24
20	1.95	"5@0.24	"5@0.24	"6@0.24	"5@0.24
21-46	8.00	"5@0.24	"5@0.24	"6@0.24	"5@0.24
47	2.15	"5@0.24	"5@0.24	"6@0.24	"5@0.24
48-53	8.00	"7@0.27	"7@0.27	"8@0.27	"7@0.27
54-56	8.00	"7@0.23	"7@0.23	"8@0.23	"7@0.23
57	7.97	"7@0.23	"7@0.23	"8@0.23	"7@0.23
58	7.76	"7@0.23	"7@0.23	"8@0.23	"7@0.23
59-62	8.00	"7@0.23	"7@0.23	"8@0.23	"7@0.23
63	4.91	"7@0.23	"7@0.23	"8@0.23	"7@0.23
64-65	8.00	"7@0.23	"7@0.23	"8@0.23	"7@0.23
66-67	8.00	"7@0.27	"7@0.27	"8@0.27	"7@0.27
68	4.92	"7@0.27	"7@0.27	"8@0.27	"7@0.27
69-74	8.00	"5@0.24	"5@0.24	"6@0.24	"5@0.24
75-83	8.00	"5@0.27	"5@0.27	"6@0.27	"5@0.27
84-87	8.00	"5@0.28	"5@0.28	"6@0.28	"5@0.28
88	5.94	"5@0.28	"5@0.28	"6@0.28	"5@0.28
89	8.00	"5@0.28	"5@0.28	"6@0.28	"5@0.28
90-93	8.00	"5@0.30	"5@0.30	"6@0.30	"5@0.30



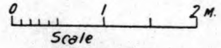


DETAIL OF BLOW OFF



SECTION D-D

NOTES:
Refer to EGC/131



	By	Date	Chkd	Date
Dsn.	[redacted]			
Drwn.				
Trac.				
Sub.	[redacted]			

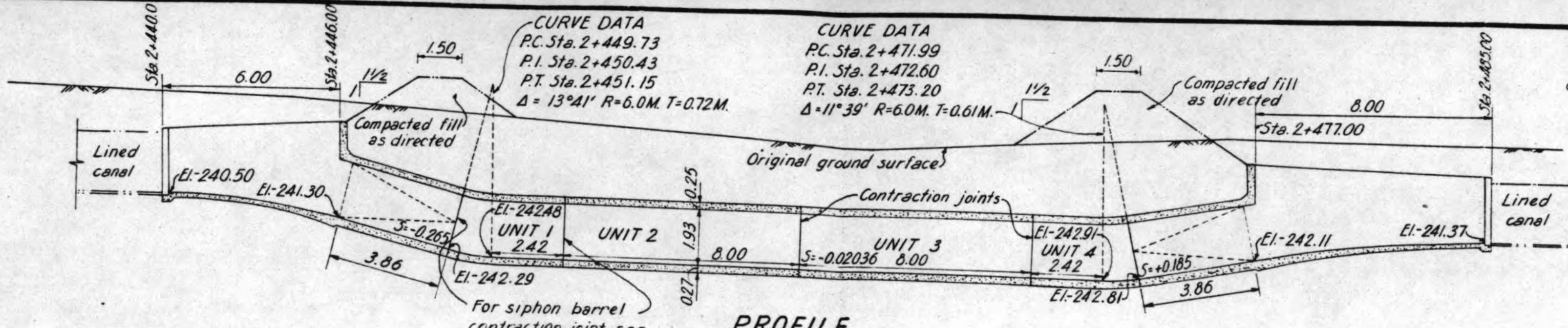
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

SIPHON
ZARQA RIVER CROSSING
SHEET 2

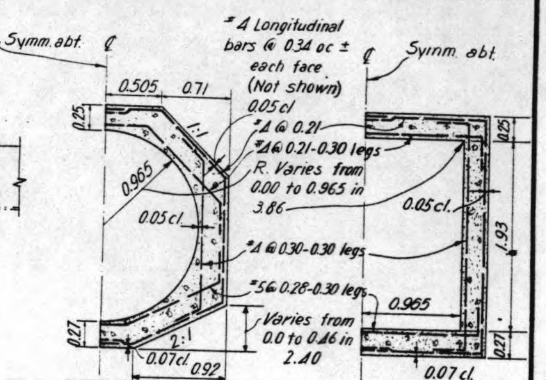
APPROVED: [redacted]

Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO. EGC/132



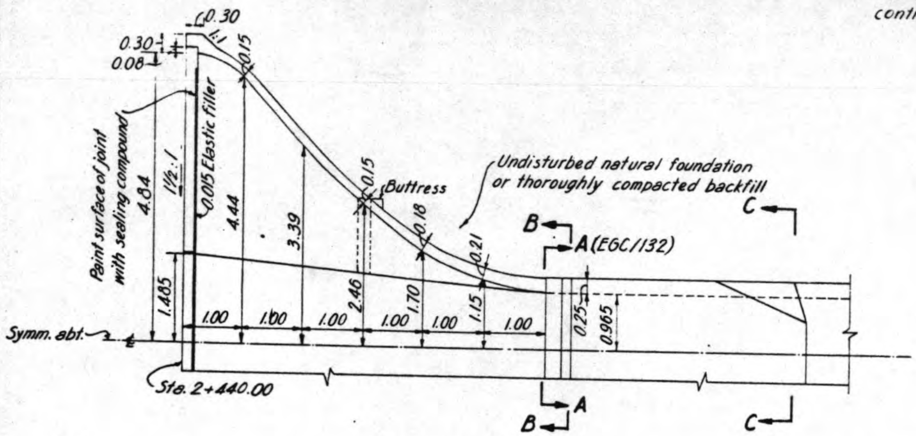
PROFILE



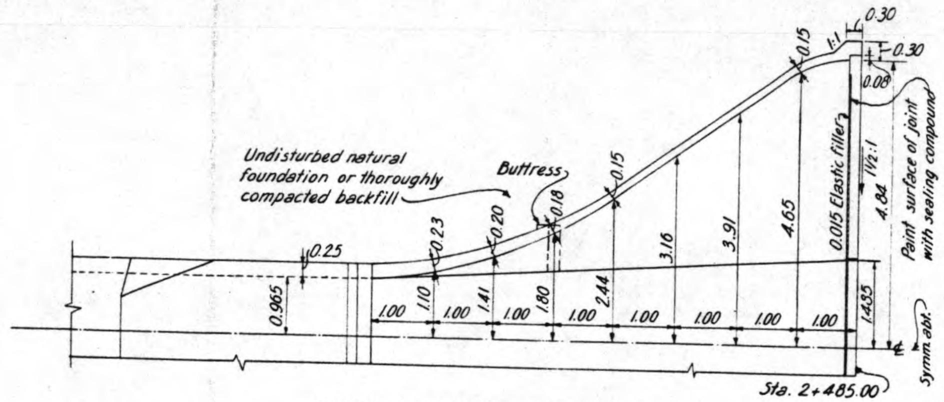
SECTION C-C (Normal) Scale

SECTION B-B (Normal) Scale

(Outlet Similar)



HALF PLAN OF INLET
Scale



HALF PLAN OF OUTLET
Scale

ESTIMATED QUANTITIES:

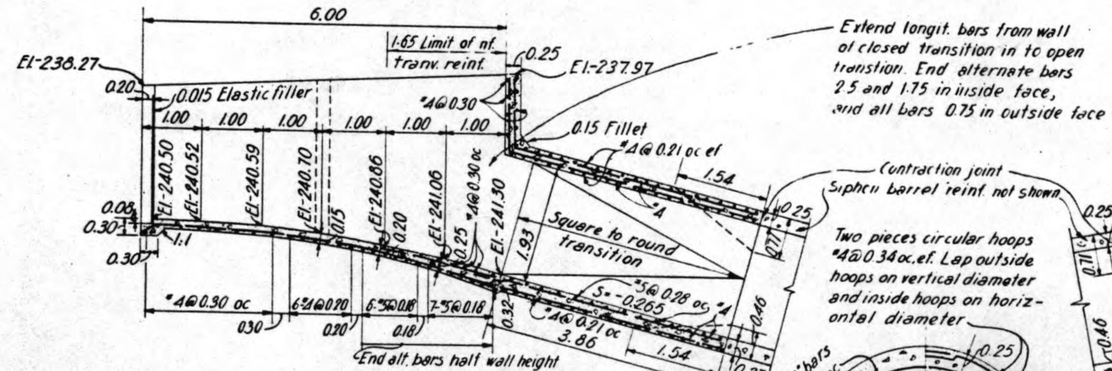
Concrete	81 C.M.
Reinforcement Steel	6 M.T.

REFERENCE DRAWINGS:

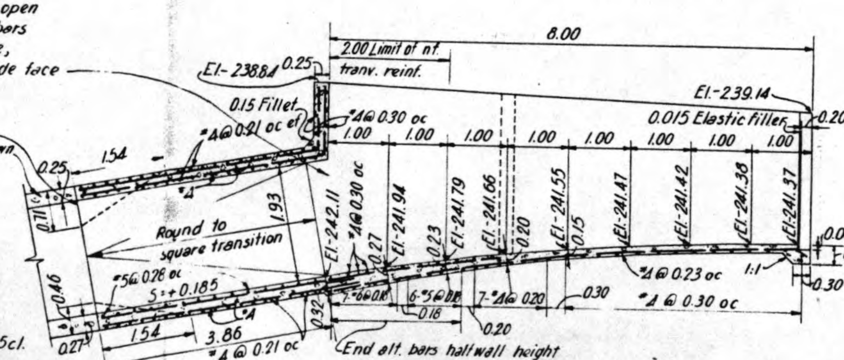
Standard Details EGC/98
Plan & Profile EGC/48
Work this drawing with EGC/131 and 132

NOTES:

1. Clear cover for reinforcement adjacent to surface placed against ground is 0.07 otherwise all clear cover is 0.05 or as noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Elastic joint filler to be securely fastened to one face of concrete.
5. Stations, elevations and radii shown on profile refer to invert, unless otherwise noted.
6. Space transverse reinforcement in barrel along inside longitudinal bars and on longer arc of vertical curves.
7. Backfill to natural ground surface or to a normal depth of 1.0 along siphon barrel as directed.
8. Base of entire structure to be placed on undisturbed natural foundation or thoroughly compacted fill.
9. Provide cushion (0.10 min., 0.20 average thickness) of compacted backfill of selected material as directed wherever rock foundation is encountered.
10. Thickness of concrete to vary uniformly between dimensions shown.
11. Concrete design based on a compressive strength of 210 Kg. per sq. cm.

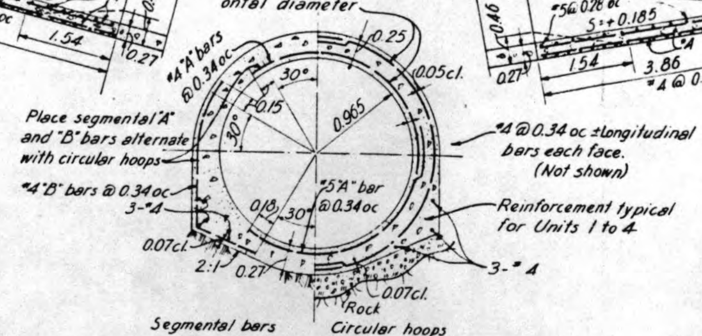


LONGITUDINAL SECTION OF INLET
Scale



LONGITUDINAL SECTION OF OUTLET
Scale

Scale
Except as noted



TYPICAL BARREL SECTION
Scale

HYDRAULIC PROPERTIES

SECTION	A	V	Q	r	n	S
Canal	9.96	1.00	10.0	1.00	0.014	.000028
Siphon	2.78	3.60	10.0	0.48	0.014	.001152
Siphon Future	2.78	4.32	12.0	0.48	0.014	.001656

	By	Date	Chkd	Date
Dsn.	MES / EFL	25.8.58	[illegible] / EFL	29/8/58
Drwn.	J.Q.S / W.M.	29.8.58	G.A.S. / [illegible]	29.8.58
Trac.				
Sub.	[redacted]			

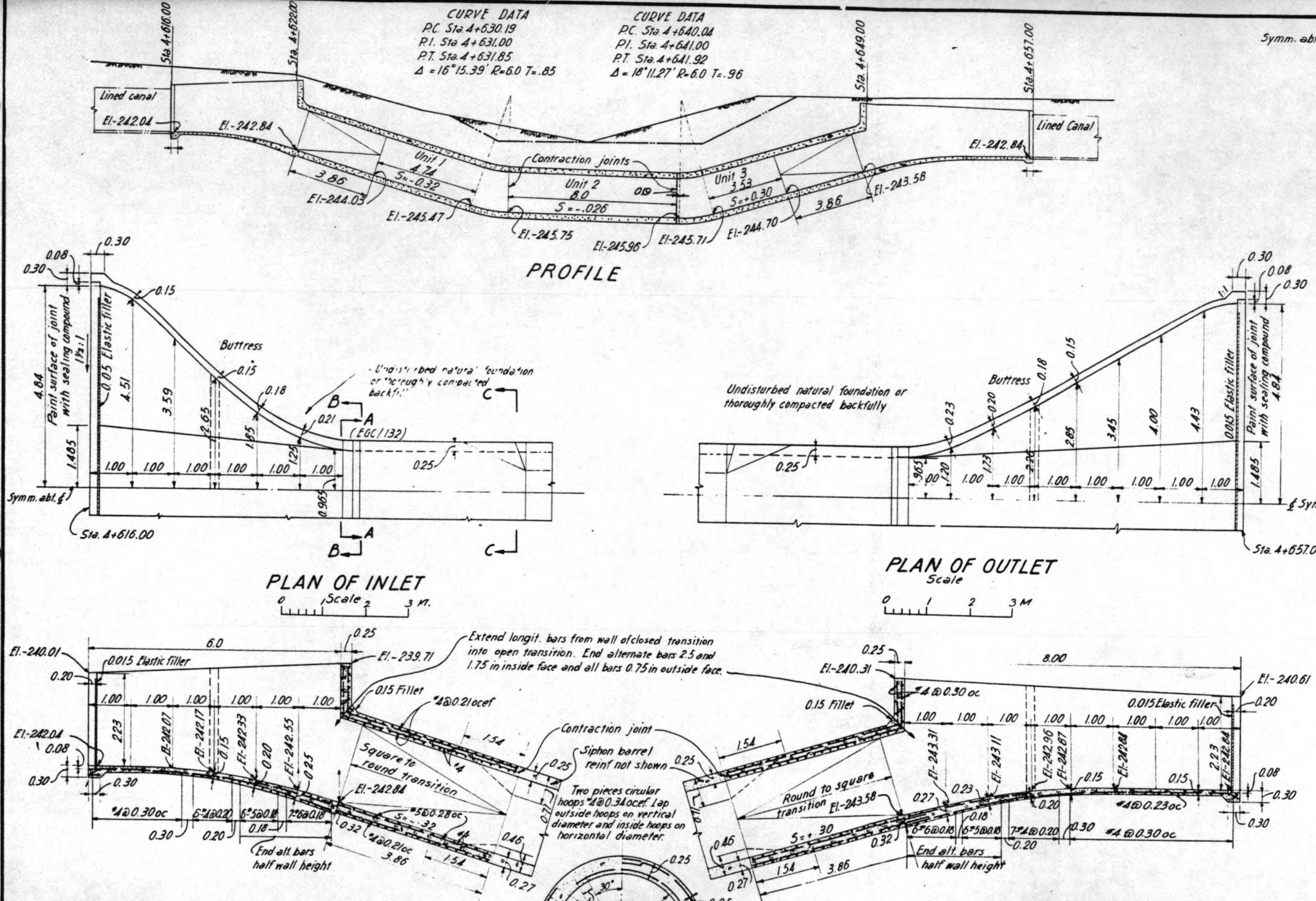
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

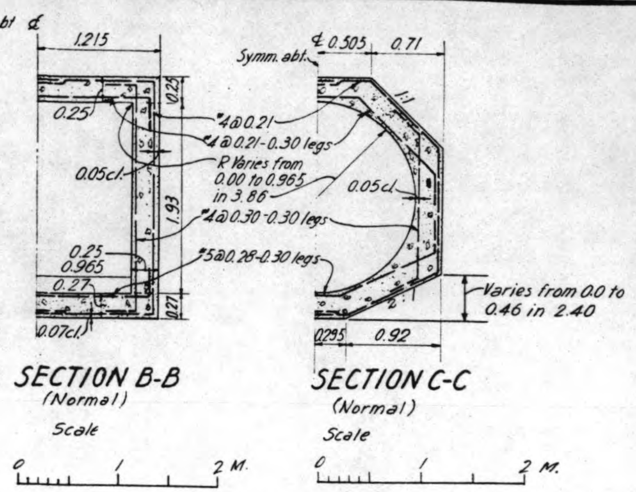
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

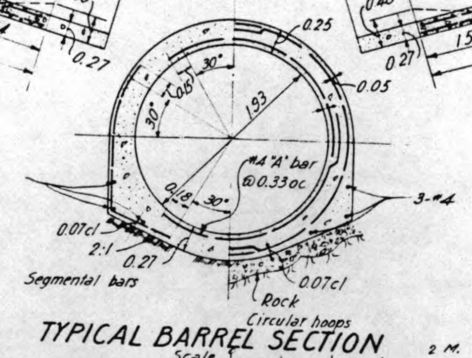
SIPHON
WADI SHA'BAN CROSSING

APPROVED [redacted]

AMMAN, JORDAN | DATE. 1-9-1958 | DWG. NO. EGC/133







ESTIMATED QUANTITIES:

Concrete 73 C.M.
Reinforcement Steel 5 M.T.

REFERENCE DRAWINGS:

Work this drawing with EGC/132
Standard Details EGC/98
Plan & Profile EGC/49

NOTES:

1. Clear cover for reinforcement adjacent to surface placed against ground is 0.07 otherwise all clear cover is 0.05 or as noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Elastic joint filler to be securely fastened to one face of concrete.
5. Stations, elevations and radii shown on profile refer to invert, unless otherwise noted.
6. Space transverse reinforcement in barrel along inside longitudinal bars and on longer arc of vertical curves.
7. Backfill to natural ground surface or to a normal depth of 1.0 along siphon barrel as directed.
8. Base of entire structure to be placed on undisturbed natural foundation or thoroughly compacted fill.
9. Provide cushion (0.10 min, 0.20 average thickness) of compacted backfill of selected material as directed wherever rock foundation is encountered.
10. Thickness of concrete to vary uniformly between dimensions shown.
11. Concrete design based on a compressive strength of 210 Kg. per sq. cm.

Scale Except as noted

HYDRAULIC PROPERTIES

SECTION	A	V	Q	r	n	s
Canal	9.96	1.00	10.0	1.00	0.014	0.00028
Siphon	2.78	3.60	10.0	0.48	0.014	0.01152
Siphon Future	2.78	4.32	12.0	0.48	0.014	0.01656

	By	Date	Chkd	Date
Dsn.	[illegible]	[illegible]	[illegible]	[illegible]
Drwn.	[illegible]	[illegible]	[illegible]	[illegible]
Trac.				
Sub.	[redacted]			

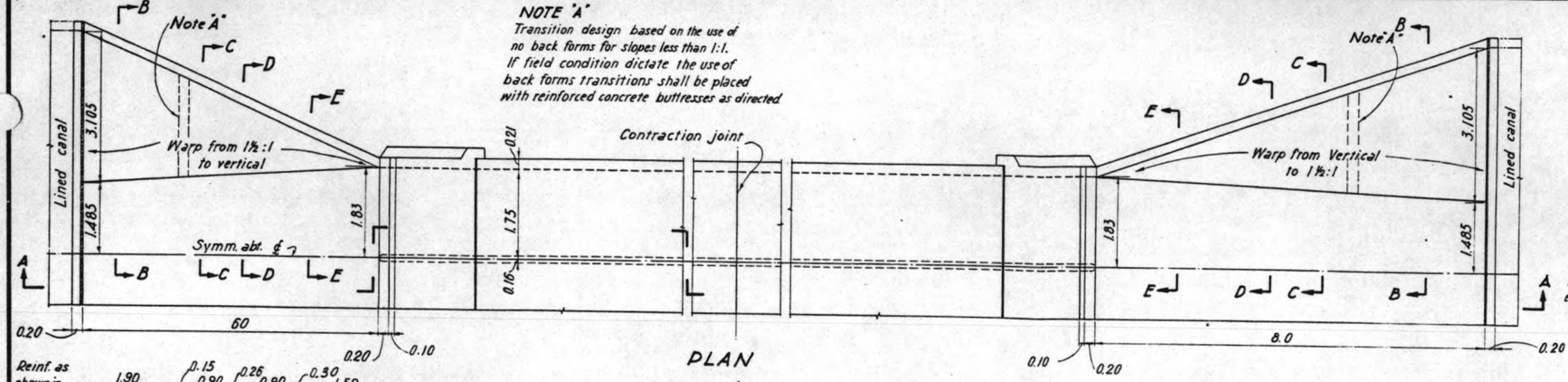
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

SIPHON
WADI BLIWA CROSSING

APPROVED [redacted]

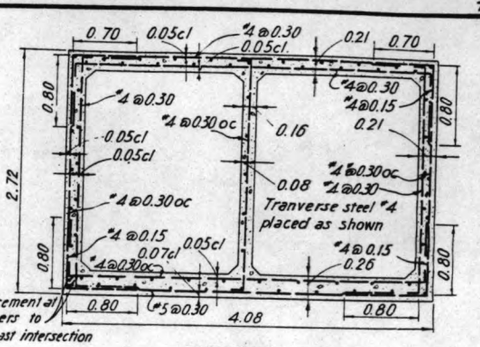
AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO. EGC. 134



PLAN

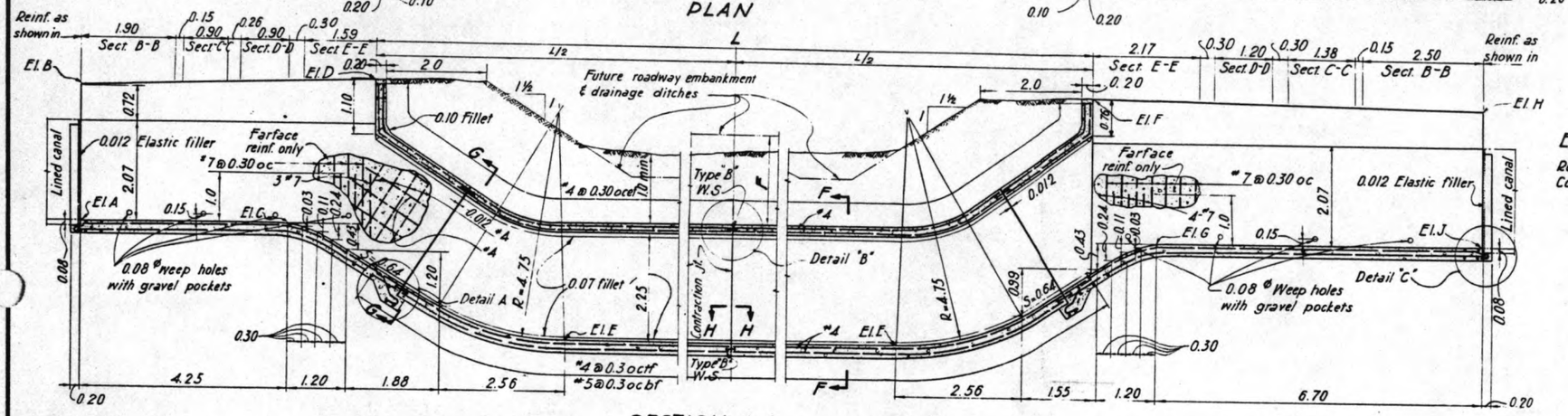
NOTE "A"

Transition design based on the use of no back forms for slopes less than 1:1. If field condition dictate the use of back forms transitions shall be placed with reinforced concrete buttresses as directed

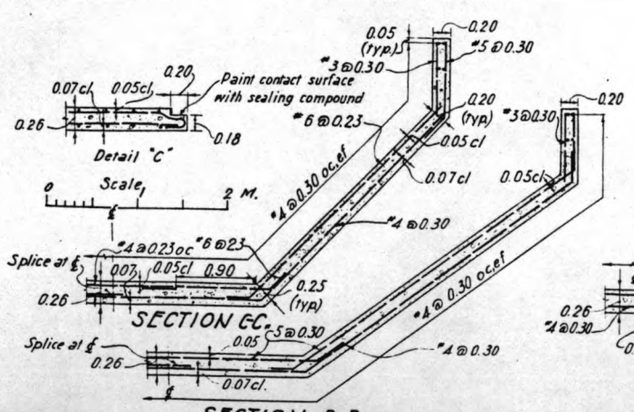


SECTION F-F

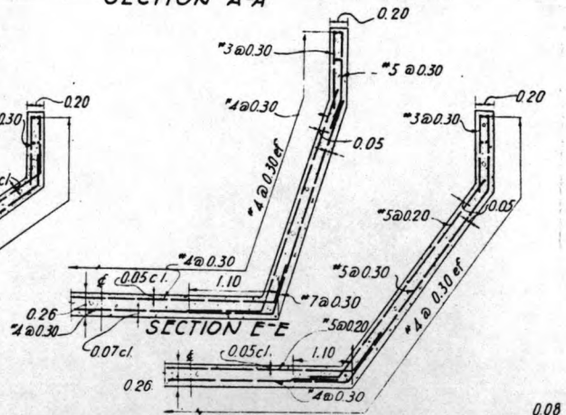
Scale 0 1 2 M.



SECTION A-A



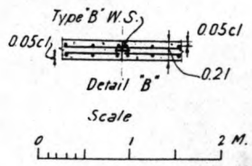
SECTION B-B

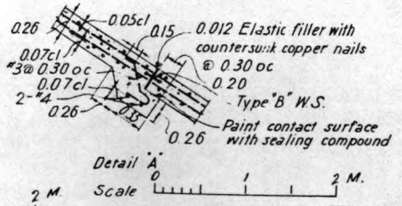


SECTION E-E

SECTION D-D

SECTION H-H



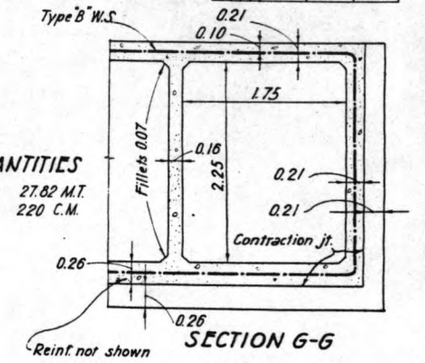


HYDRAULIC PROPERTIES

Section	A	V	Q	r	n	S
Canal	9.96	1.0	10.0	1.00	0.014	0.00018
Siphon	8.24	1.21	10.0	0.505	0.014	0.000715
Siphon Future	8.24	2.42	20.0	0.505	0.014	0.00286

ESTIMATED QUANTITIES

Reinforcement steel	27.82 M.T.
Concrete	220 C.M.



SECTION G-G

Scale 1 2M

REFERENCE DRAWINGS

Standard Details EGC/98
Plan and Profile EGC/16 & 17

NOTES:

1. Clear cover for reinf. is 0.05 unless otherwise noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Elastic joint filler to be fastened to concrete with 0.08 long copper nails.
5. Transverse bars on curves to be placed radially and spacing to be maintained on outer arc of curve.
6. Concrete design based on a compressive strength of 210 kg. per sq. cm.

0 1 2 3 M.
Scale
Except as noted

Station to Station	Elev. A	Elev. B	Elev. C	Elev. D	Elev. E	Elev. F	Elev. G	Elev. H	Elev. J	F	L
1+705.58 to 1+740.58	-215.87	-213.06	-215.68	-212.93	-218.26	-213.15	-216.10	-213.30	-216.09	1.4	21.0
9+151.36 to 9+188.86	-216.34	-213.55	-216.35	-213.40	-218.73	-213.62	-216.57	-213.77	-216.56	1.6	23.50

	By	Date	Chkd	Date
Dsn.	[redacted]	[illegible]	[illegible]	[illegible]
Drwn.	[illegible]	[illegible]	[illegible]	[illegible]
Sub.	[redacted]			

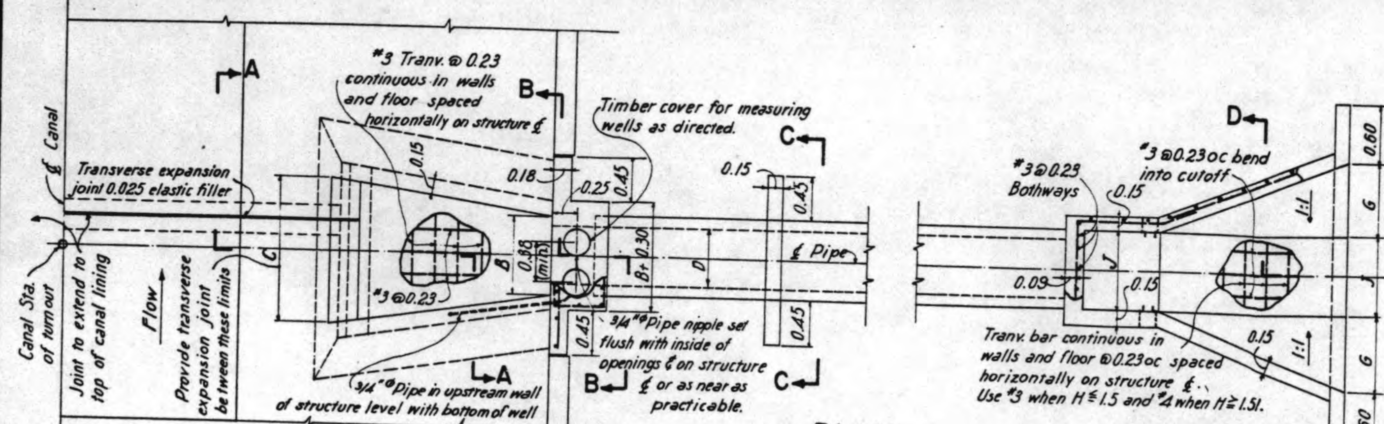
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

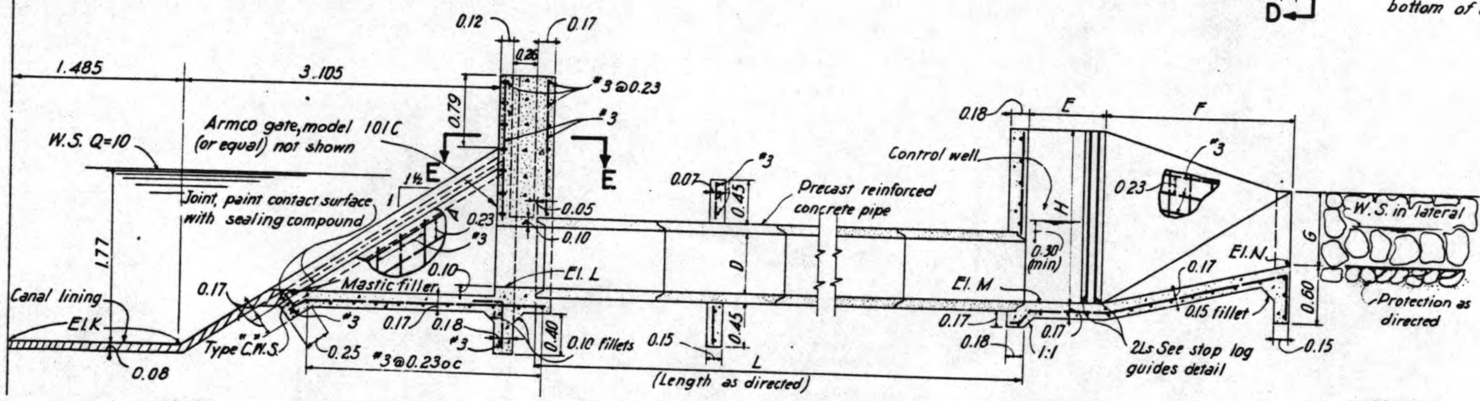
SIPHONS
FROM STA. 7+705.58 TO STA. 7+740.58
FROM STA. 9+151.36 TO STA. 9+188.86

APPROVED [redacted]

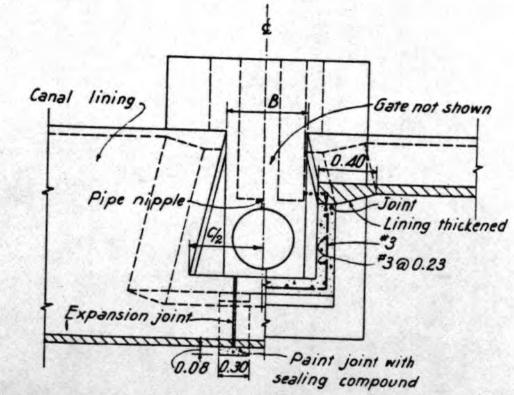
AMMAN, JORDAN | DATE 1-9-1958 | DWG NO EGC/135



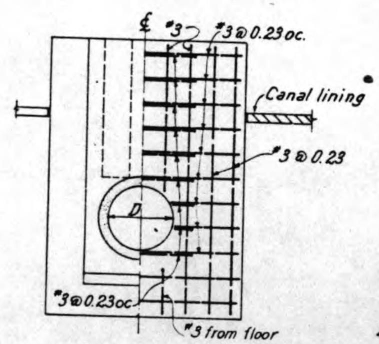
PLAN



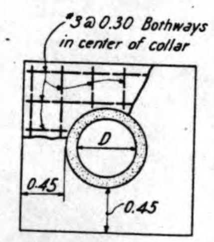
LONGITUDINAL SECTION



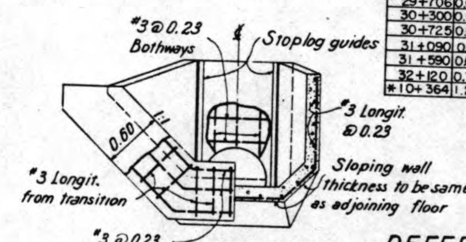
SECTION A-A



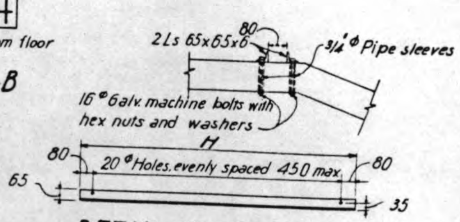
SECTION B-B



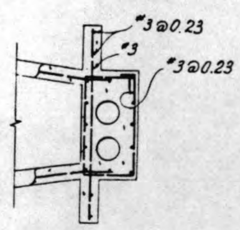
SECTION C-C



SECTION D-D



DETAIL OF STOP LOG GUIDES
(Dimensions pertaining to angles in millimeters) not to scale



SECTION E-E
(Canal not shown)

TYPICAL DATA

PIPE DIA.	DIMENSIONS								ESTIMATED QUANTITIES		
	Q	B	C	E	F	G	H	J	CONCRETE	REINF. STEEL	GATE & HOIST
0.60	0.125	0.80	1.80	0.75	1.90	0.75	1.75	0.75	7.0 M³	210 Kg.	100 Kg.
0.75	0.250	0.97	1.93	0.92	2.28	1.00	1.96	0.94	7.7 "	231 "	175 "
0.90	0.500	1.13	2.10	1.17	2.67	1.15	2.15	1.12	8.5 "	255 "	230 "
1.20	VARIES	1.46	2.42	1.37	3.43	1.50	2.53	1.47	10.5 "	315 "	380 "

TURNOUT DATA

One L.T.O. omitted, see bottom of column →

STA.	DIMENSIONS			ELEVATIONS				STA.	DIMENSIONS			ELEVATIONS			
	D	Q	A	K	L	M	N		D	Q	A	K	L	M	N
1+550	0.90	0.500	2.22	-210.58	-210.01	-210.16	-209.45	32+850	0.75	0.25	2.07	-220.98	-220.26	-220.41	-219.70
4+160	0.90	0.500	2.22	-215.23	-214.66	-214.81	-214.10	33+350	0.75	0.25	2.07	-221.07	-220.35	-220.50	-219.79
4+835	0.75	0.250	2.07	-215.35	-214.63	-214.78	-214.07	33+960	0.75	0.375	2.07	-221.18	-220.46	-220.61	-219.90
6+615	0.75	0.250	2.07	-215.67	-214.95	-215.10	-214.39	34+520	0.75	0.25	2.07	-221.28	-220.56	-220.71	-220.00
7+200	0.75	0.250	2.07	-215.78	-215.06	-215.21	-214.50	35+420	0.75	0.25	2.07	-221.44	-220.72	-220.87	-220.16
8+540	1.20	1.000	2.52	-216.23	-215.96	-216.11	-215.13	36+020	0.60	0.125	1.92	-221.55	-220.68	-220.83	-220.14
9+772	0.90	0.500	2.22	-216.67	-216.10	-216.25	-215.54	36+587	0.75	0.375	2.07	-221.65	-220.93	-221.08	-220.37
11+400	1.20	1.000	2.52	-216.96	-216.69	-216.84	-215.86	36+870	0.75	0.25	2.07	-221.70	-220.98	-220.13	-220.42
11+900	0.90	0.500	2.22	-217.08	-216.51	-216.66	-215.95	37+850	0.75	0.25	2.07	-221.93	-221.21	-221.36	-220.65
12+743	0.75	0.250	2.07	-217.23	-216.51	-216.66	-215.95	38+275	0.90	0.50	2.22	-222.00	-221.43	-221.58	-220.87
13+775	0.75	0.250	2.07	-217.42	-216.70	-216.85	-216.14	40+180	0.90	0.50	2.22	-222.34	-221.77	-221.92	-221.21
14+380	1.20	1.000	2.52	-217.53	-217.26	-217.41	-217.43	41+400	0.60	0.125	1.92	-222.56	-221.69	-221.84	-221.15
14+985	0.60	0.125	1.92	-217.64	-216.77	-216.92	-216.23	41+980	0.75	0.375	2.07	-222.67	-221.95	-222.10	-221.39
15+660	0.60	0.125	1.92	-217.76	-216.89	-217.04	-216.35	43+225	0.75	0.25	2.07	-222.89	-222.17	-222.32	-221.61
16+340	0.60	0.125	1.92	-217.88	-217.01	-217.16	-216.47	44+700	0.75	0.375	2.07	-223.67	-222.95	-223.10	-222.39
16+840	0.60	0.125	1.92	-217.97	-217.10	-217.25	-216.56	48+100	0.75	0.375	2.07	-224.34	-223.62	-223.77	-223.06
17+550	0.60	0.125	1.92	-218.10	-217.23	-217.38	-216.69	49+390	0.90	0.50	2.22	-224.57	-224.00	-224.15	-223.44
18+135	0.60	0.125	1.92	-218.20	-217.33	-217.48	-216.79	50+550	0.75	0.375	2.07	-224.78	-224.06	-224.21	-223.50
18+975	0.60	0.125	1.92	-218.36	-217.49	-217.64	-216.95	51+610	0.75	0.375	2.07	-224.97	-224.25	-224.40	-223.69
19+320	0.60	0.125	1.92	-218.46	-217.59	-217.74	-217.05	53+030	1.20	0.75	2.52	-225.23	-224.96	-225.11	-224.13
20+120	0.75	0.25	2.07	-218.61	-217.89	-218.04	-217.33	54+410	1.20	0.75	2.52	-225.52	-225.25	-225.40	-224.42
20+890	0.75	0.375	2.07	-218.79	-218.07	-218.22	-217.51	55+810	0.90	0.50	2.22	-225.77	-225.20	-225.35	-224.64
21+400	0.75	0.375	2.07	-218.88	-218.16	-218.31	-217.60	56+830	1.20	0.75	2.52	-225.96	-225.69	-225.84	-224.86
22+000	0.75	0.375	2.07	-218.99	-218.27	-218.42	-217.71	58+350	1.20	0.75	2.52	-226.30	-226.03	-226.18	-225.20
22+610	0.90	0.50	2.22	-219.10	-218.53	-218.68	-217.97	59+480	0.75	0.375	2.07	-226.50	-225.78	-225.93	-225.22
22+985	0.90	0.50	2.22	-219.20	-218.63	-218.78	-218.07	60+265	1.20	0.75	2.52	-226.64	-226.37	-226.52	-225.54
23+760	0.75	0.375	2.07	-219.34	-218.62	-218.77	-218.06	61+310	0.75	0.375	2.07	-226.83	-226.11	-226.26	-225.55
24+256	0.60	0.125	1.92	-219.43	-218.56	-218.71	-218.02	62+155	1.20	1.000	2.52	-226.99	-226.72	-226.87	-225.89
24+775	0.75	0.375	2.07	-219.52	-218.80	-218.95	-218.24	63+575	1.20	0.75	2.52	-227.32	-227.05	-227.20	-226.22
25+525	0.60	0.125	1.92	-219.66	-218.79	-218.94	-218.25	64+075	0.90	0.50	2.22	-227.40	-226.83	-226.98	-226.27
25+940	0.75	0.25	2.07	-219.73	-219.01	-219.16	-218.45	65+110	1.20	1.000	2.52	-227.65	-227.38	-227.53	-226.55
26+500	0.75	0.375	2.07	-219.83	-219.11	-219.26	-218.55	✢2+850	0.60	0.125	1.92	-241.47	-240.60	-240.75	-240.05
27+080	0.75	0.25	2.07	-219.94	-219.22	-219.37	-218.66	✢3+990	0.60	0.125	1.92	-241.87	-241.00	-241.15	-240.46
28+220	0.75	0.25	2.07	-220.15	-219.43	-219.58	-218.87								
28+700	0.75	0.25	2.07	-220.23	-219.51	-219.66	-218.95								
29+2[illegible]0	0.60	0.125	1.92	-220.33	-219.64	-219.61	-218.92								
29+706	0.60	0.125	1.92	-220.41	-219.54	-219.69	-219.00								
30+300	0.60	0.125	1.92	-220.52	-219.65	-219.80	-219.11								
30+725	0.60	0.25	1.92	-220.60	-219.73	-219.88	-219.19								
31+090	0.60	0.125	1.92	-220.66	-219.79	-219.94	-219.25								
31+590	0.60	0.125	1.92	-220.75	-219.88	-220.03	-219.34								
32+120	0.75	0.25	2.07	-220.85	-220.13	-220.28	-219.57								
*10+364	1.20	1.000	2.52	-216.56	-216.29	-216.44	-215.46								

✢ East Ghor Main Canal - South -

REFERENCE DRAWINGS

Standard Details EGC/98
Plan and Profile EGC/12 to EGC/49
Concrete Pipe Culvert EGC/141

NOTES:

1. Clear cover for reinforcement in concrete placed on foundation to be 0.07, other wise clear cover to be 0.05
2. Lap all bars 30 diameters at splices
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted
4. Elastic joint filler shall be securely fastened to one face of concrete 0.08 copper nails.
5. Base of structure to be placed on undisturbed natural foundation or thoroughly compacted fill
6. Monolithic concrete design based on a compressive strength of 210 Kg. per sq. cm.

Scale 0 – 1 – 2 M.
Except as noted

	By	Date	Chkd	Date
Surv.				
Dsn.				
Drwn.				
Sub[redacted]				

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

TYPICAL CALIBRATED TURNOUTS

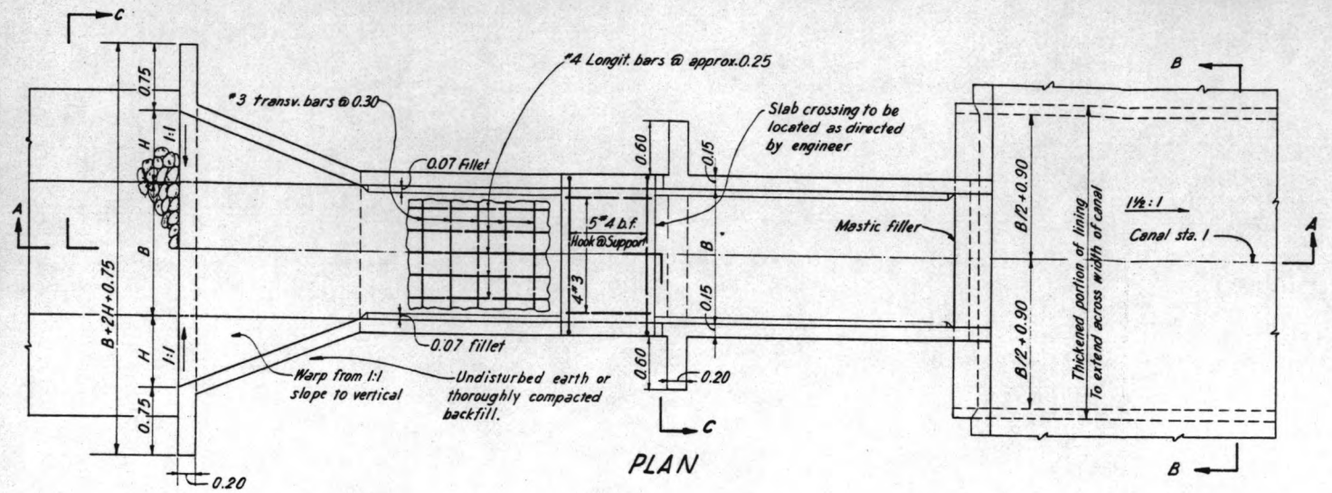
APPROVED [redacted]

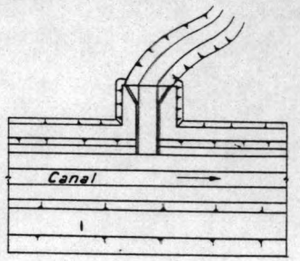
Prepared under the supervision of MICHAEL BAKER, JR., INC & HARZA ENGINEERING CO

AMMAN, JORDAN

DATE. 1-9-1958

DWG. NO. EGC/136

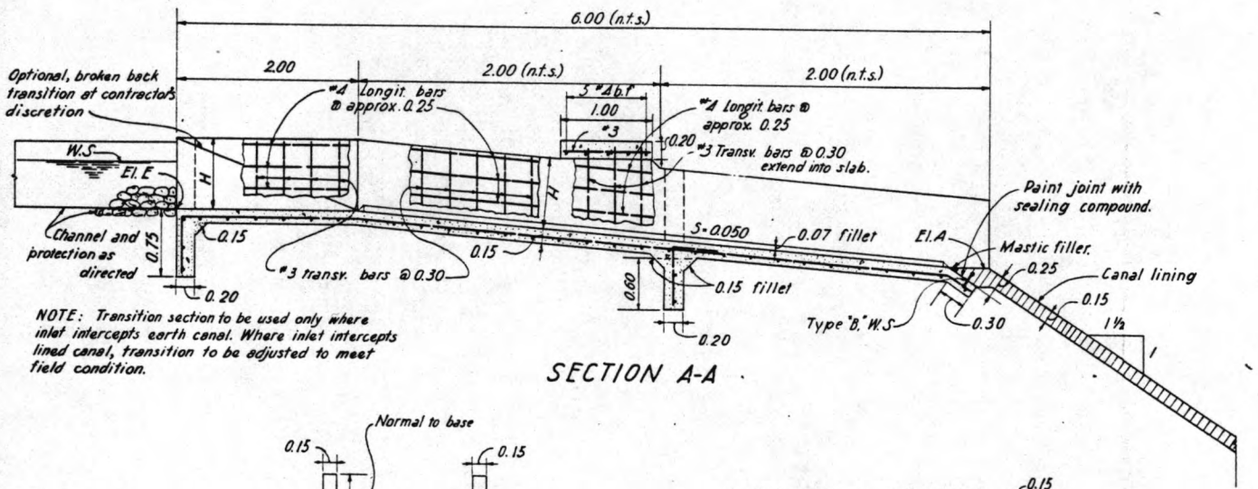


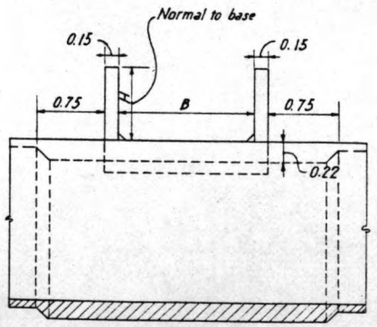


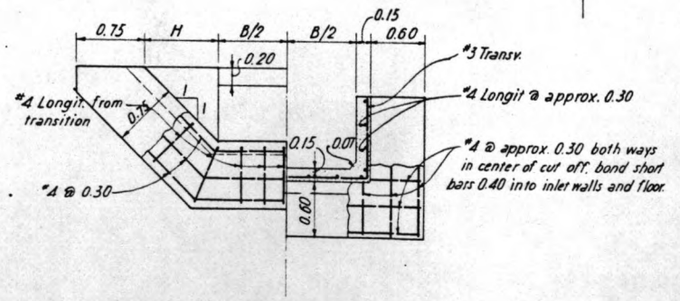
SCHEDULE

Canal Sta.	El. A	El. E	B	H	Q
10+241.82	-214.68	-214.48	1.22	0.72	0.50
12+036.56	-215.04	-214.84	1.22	0.72	0.50
22+674	-217.04	-216.84	1.22	0.72	0.50
23+700	-217.26	-217.06	0.96	0.66	0.25
30+569	-218.50	-218.30	0.96	0.66	0.25
32+533	-218.85	-218.65	0.96	0.66	0.25
37+310	-219.71	-219.51	0.96	0.66	0.25
37+669.50	-219.82	-219.62	0.96	0.66	0.25
52+703	-223.10	-222.90	0.96	0.66	0.25
54+140	-223.39	-223.19	0.96	0.66	0.25
56+620	-223.85	-223.65	0.96	0.66	0.25
58+380	-224.24	-224.04	0.96	0.66	0.25
58+980	-224.34	-224.14	0.96	0.66	0.25
60+952	-224.70	-224.50	0.96	0.66	0.25
*00+005	-225.54	-225.34	1.22	0.72	0.50

* East Ghor Canal - South -







ESTIMATED QUANTITIES: (one structure)

Concrete	4.6 M³
Reinforcement	270 M.T.

REFERENCE DRAWINGS:

Standard Details EGC/98
Plan and Profile EGC/12 to EGC/49

NOTES:

1. Clear cover for reinforcement in concrete placed on foundation to be 0.07, otherwise clear cover to be 0.05.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Base of structure to be placed on undisturbed natural foundation or thoroughly compacted fill.
5. Concrete design based on a compressive strength of 210 Kg. per sq. cm.

0 1 2 M.
Scale
Except as noted

	By	Date	Chkd	Date
Dsn.				
Drwn.	H.F.J.	7.6.58		
Trac.				
Sub.	[redacted]			

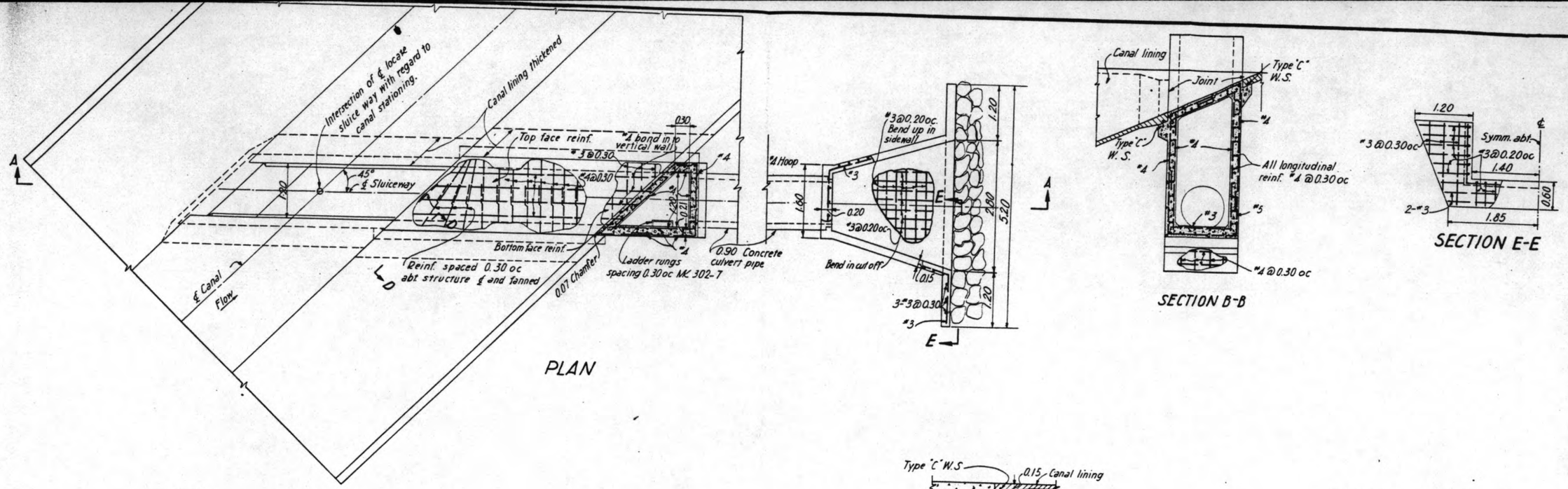
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

IRRIGATION LATERAL INLET

APPROVED [redacted]

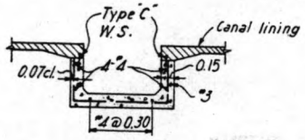
AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO. EGC/137



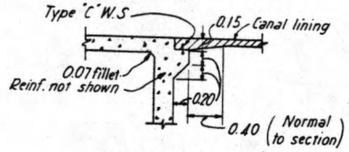
PLAN

SECTION B-B

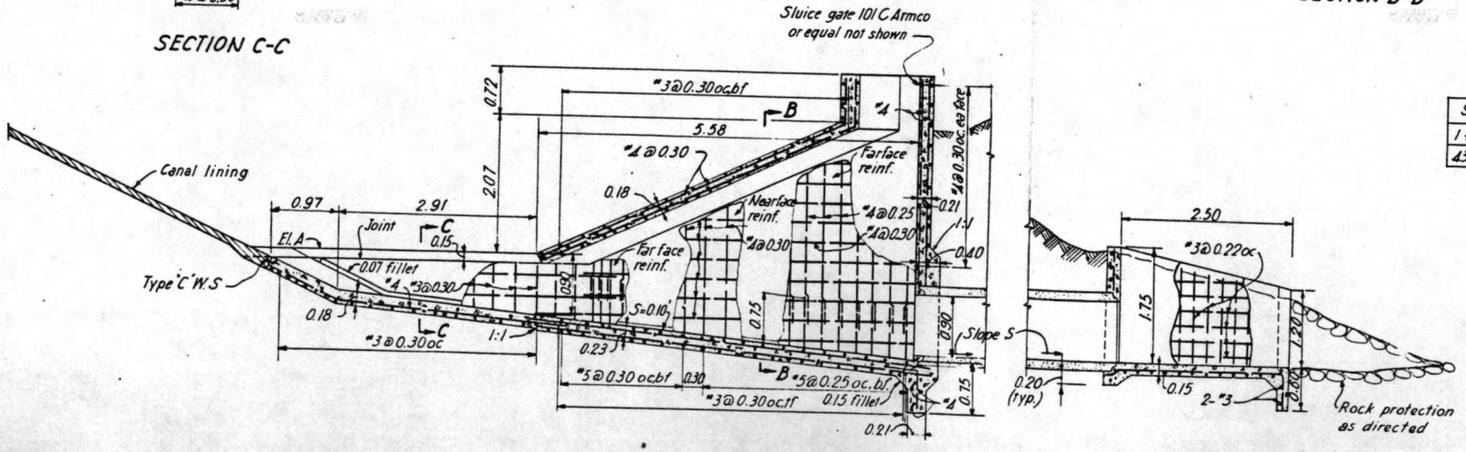
SECTION E-E



SECTION C-C



SECTION D-D



SECTION A-A

SCHEDULE

Sta.	El. A	S
1+160.00	-210.37	0.0151
43+520.00	-222.95	As directed

ESTIMATED QUANTITIES

Concrete	15.5 C.M. each
Reinforcement steel	1.32 MT. each
Miscelaneous metalwork (gate)	0.23 MT. each

REFERENCE DRAWINGS

Standard Details EGC/98
Plan and Profile EGC/12 & 35
Miscellaneous Metals EGC/302

NOTES:

1. Clear cover for reinf. 0.05 unless otherwise noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Structure to be placed on undisturbed or thoroughly compacted foundation.
5. Concrete design based on a compressive strength of 210 Kg. per sq. cm.

0 1 2 M.
Scale

	By	Date	Chkd	Date
Dsn.				
Drwn.				
Trac.				
Sub.	[redacted]			

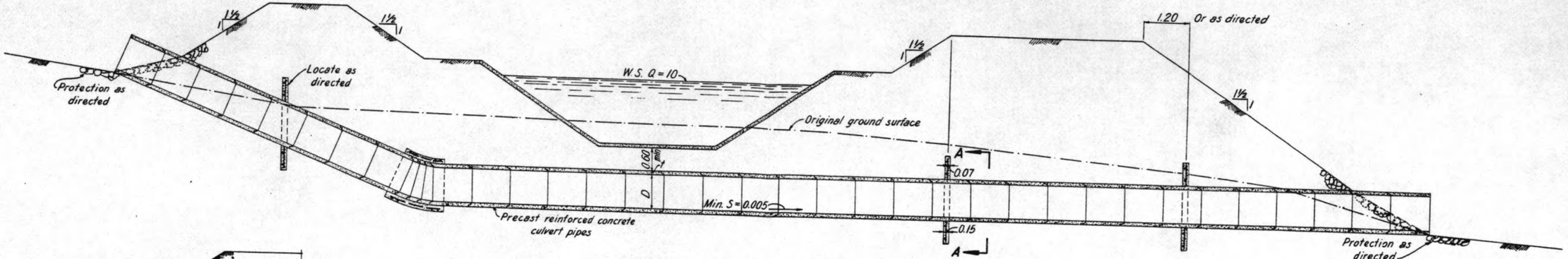
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

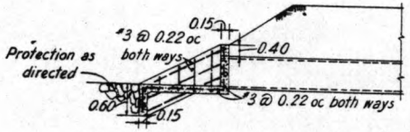
TYPICAL SLUICEWAY

APPROVED: [redacted]

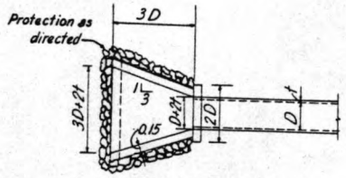
AMMAN, JORDAN | DATE: 1-9-1958 | DWG. NO. EGC/138



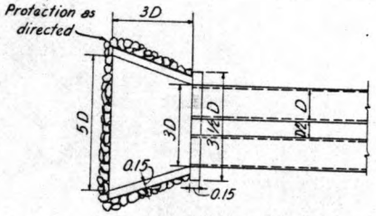
LONGITUDINAL SECTION



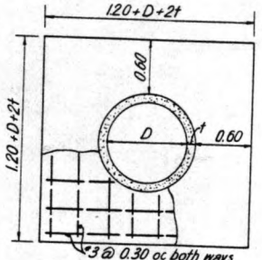
SECTION OPTIONAL TRANSITION



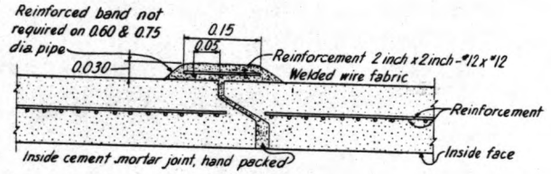
OPTIONAL PIPE TRANSITION
SINGLE BARREL



OPTIONAL PIPE TRANSITION
DOUBLE BARREL



SECTION A-A
Typical Collar



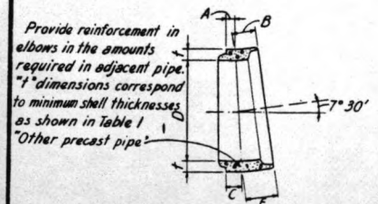
TONGUE & GROOVE JOINT

REFERENCE DRAWINGS:

Standard Details EGC/198
Plan & Profile EGC/12 to EGC/49

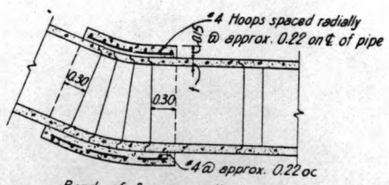
NOTE:

1. Monolithic concrete design based upon a compressive strength of 210 Kg. per sq. cm.
2. Lap all bars 30 diameters at splices.
3. Cover for reinforcement in monolithic concrete placed against ground shall be 0.07 clear.
4. Precast pipe as used in lateral turnouts shall be precast culvert pipe and conform to drawings and tables as shown herein.



TYPICAL 7½° CULVERT
PIPE ELBOW

CULVERT PIPE ELBOWS DIMENSIONS - Meters				
D	A	B	C	E
0.60	0.05	0.14	0.10	0.19
0.75	0.05	0.14	0.11	0.20
0.90	0.06	0.16	0.14	0.24
1.20	0.11	0.20	0.20	0.29



Bends of 3 or more elbows to be encased as shown

BEND DETAIL

TABLE I

Standard-strength Reinforced-Concrete Culvert Pipe

Internal diameter of pipe (in mtrs)	Concrete 246 Kg. per sq. cm.				Concrete 316 Kg. per sq. cm.				Strength test requirements Kg. per linear meter of pipe 3-edge bearing method. load to produce a 0.025 cm crack
	Minimum shell thickness (in cms.)		Min. reinforcement sq. cm. per lin. mtr. of pipe barrel		Minimum shell thickness (in cms.)		Min. reinforcement sq. cm per lin. mtr. of pipe barrel		
	Centrifugal precast pipe	Other precast pipe	Circular reinforcement in circular pipe	Elliptical reinforcement in circular pipe	Centrifugal precast pipe	Other precast pipe	Circular reinforcement in circular pipe	Elliptical reinforcement in circular pipe	
0.60	6.4	7.6	1 line 3.60	1 line 2.75	6.4	6.4	1 line 4.23	1 line 3.60	4463
0.75	7.0	8.9	1 line 4.65	1 line 3.60	7.0	7.6	1 line 5.92	1 line 4.44	5020
0.90	7.9	10.2	2 lines ea 3.81	1 line 3.81	7.9	8.6	2 lines ea 4.65	1 line 4.65	5503
1.20	10.5	12.7	2 lines ea 5.29	1 line 5.29	10.5	10.8	2 lines ea 6.56	1 line 6.56	8033

All dimensions in Millimeters

Not to scale

	By	Date	Chkd	Date
Dsn.				
Drwn.	J.H.S.	2-7-58	[redacted]	2-8-58
Trac.				
Sub.	[redacted]			

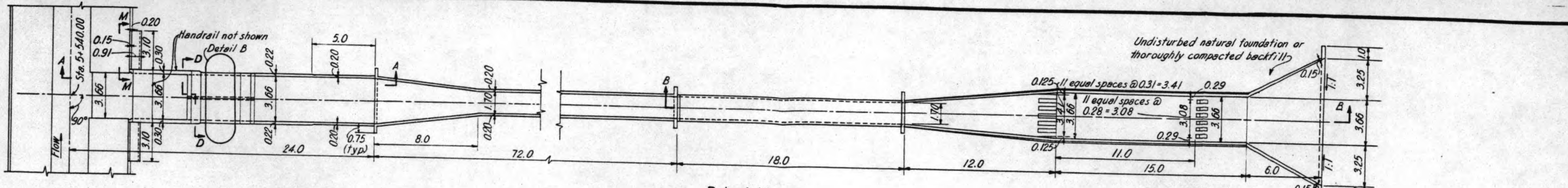
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

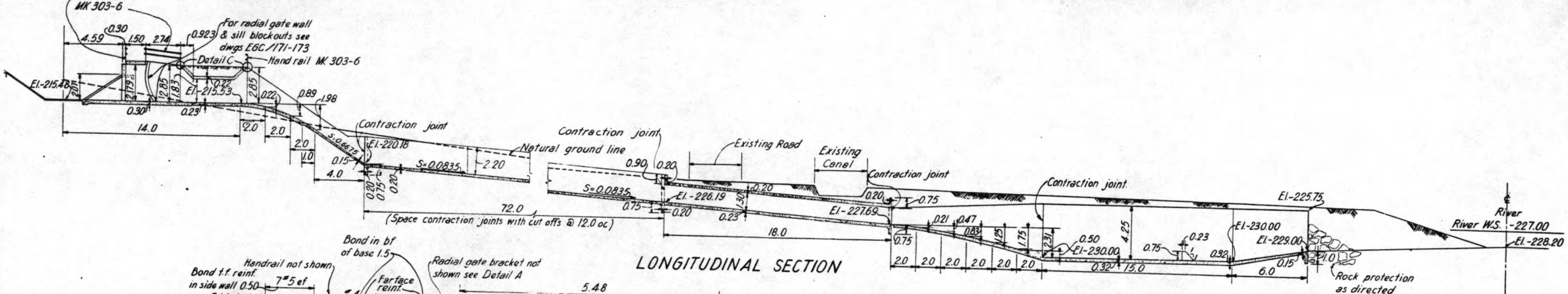
CONCRETE PIPE CULVERT

APPROVED: [redacted]

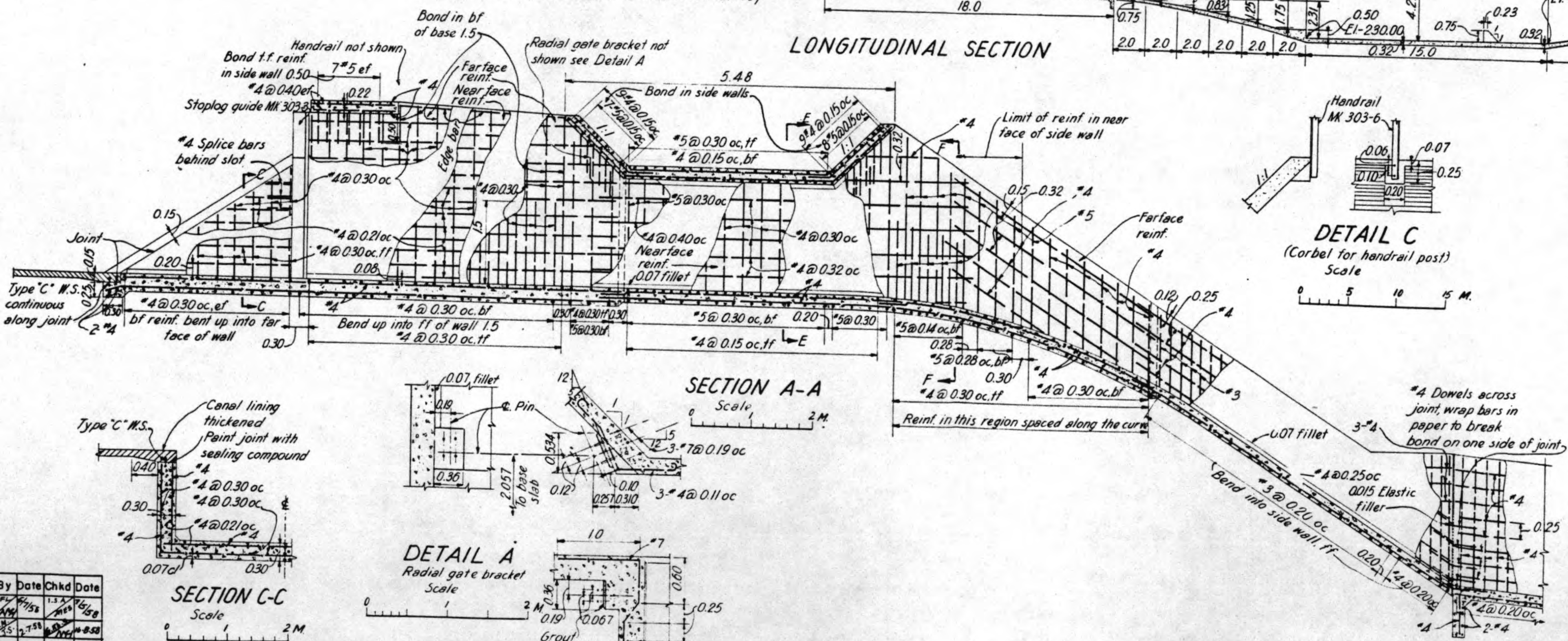
AMMAN JORDAN | DATE 1-9-1958 | DWG. NO. EGC/141



PLAN



LONGITUDINAL SECTION



SECTION A-A
Scale

SECTION C-C
Scale

DETAIL A
Radial gate bracket
Scale

DETAIL C
(Corbel for handrail post)
Scale

ESTIMATED QUANTITIES:

Concrete	273.9 C.M
Reinforcement Steel	20.28 M.T
Miscellaneous Metals	0.22 M.T.

REFERENCE DRAWINGS:

Standard Details EGC/98
Plan & Profile EGC/15
Miscellaneous Metals EGC/303

NOTES:

1. Clear cover for reinforcement is 0.05 unless otherwise noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Elastic joint filler shall be securely fastened to one face of concrete.
5. Elevations refer to invert unless otherwise noted.
6. Concrete design based on a compressive strength of 210 Kg. per sq. cm.

Scale
Except as noted

	By	Date	Chkd	Date
Dsn.				
Drwn.		2-7-58		4-8-58
Trac.				
Sub.	[redacted]			

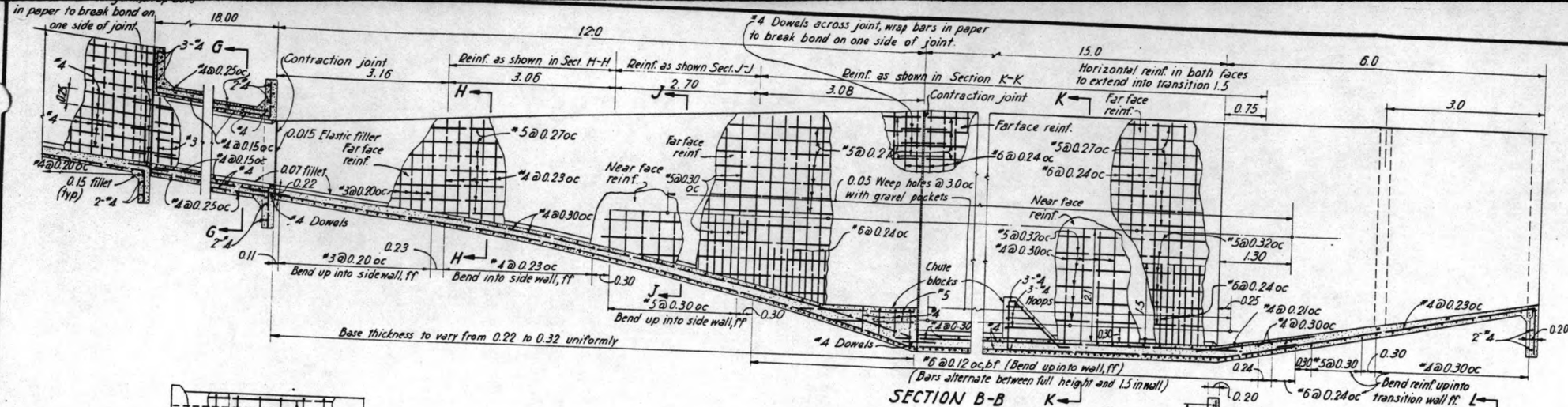
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

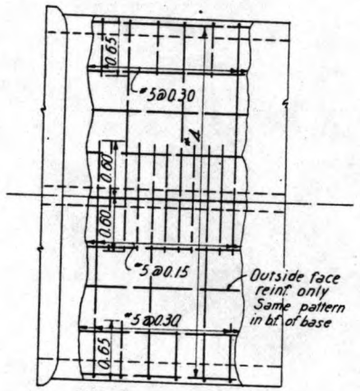
YARMOUK RIVER WASTEWAY
SHEET 1

APPROVED [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO

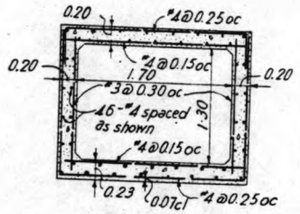
AMMAN, JORDAN | DATE. 1-9-1958 | DWG. NO. EGC/142





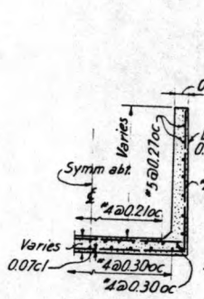
DETAIL B

Scale 0 1 2 M.

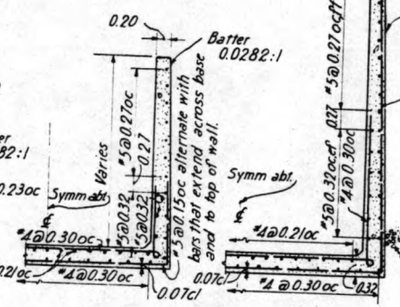


SECTION G-G

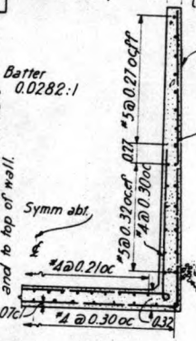
All dimensions are normal to surface



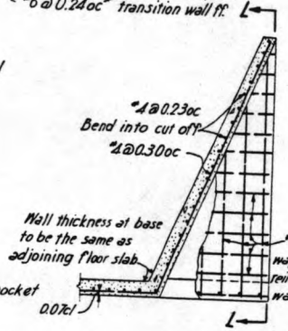
SECTION H-H



SECTION J-J

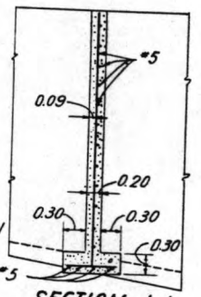


SECTION K-K



SECTION OF TRANSITION

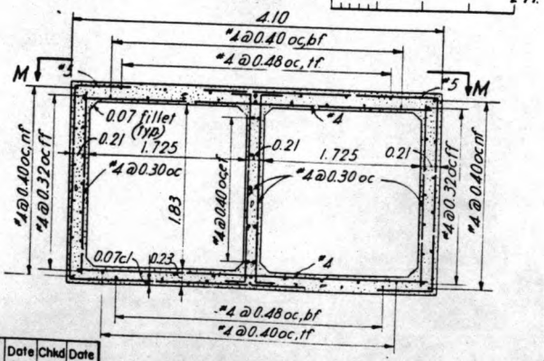
(Showing buttress)



SECTION L-L

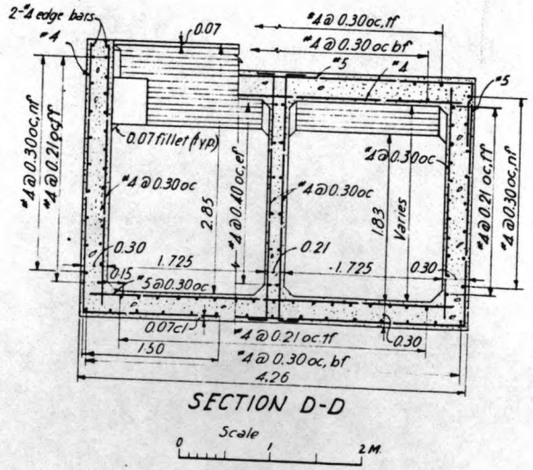
NOTES:

See EGC/142



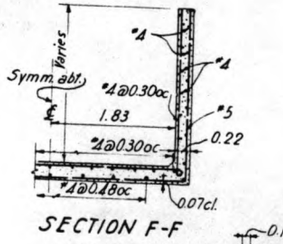
SECTION E-E

Scale 0 1 2 M.

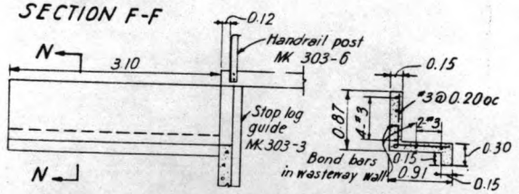


SECTION D-D

Scale 0 1 2 M.



SECTION F-F



SECTION M-M

Canal lining not shown

SECTION N-N

Wasteway wing wall

Scale 0 1 2 M.

Except as noted

	By	Date	Chkd	Date
Dsn.	[redacted]	11-58	[redacted]	11-1958
Drwn.	[redacted]	15.7.58	[redacted]	17.9.58
Trac.				
Sub:	[redacted]			

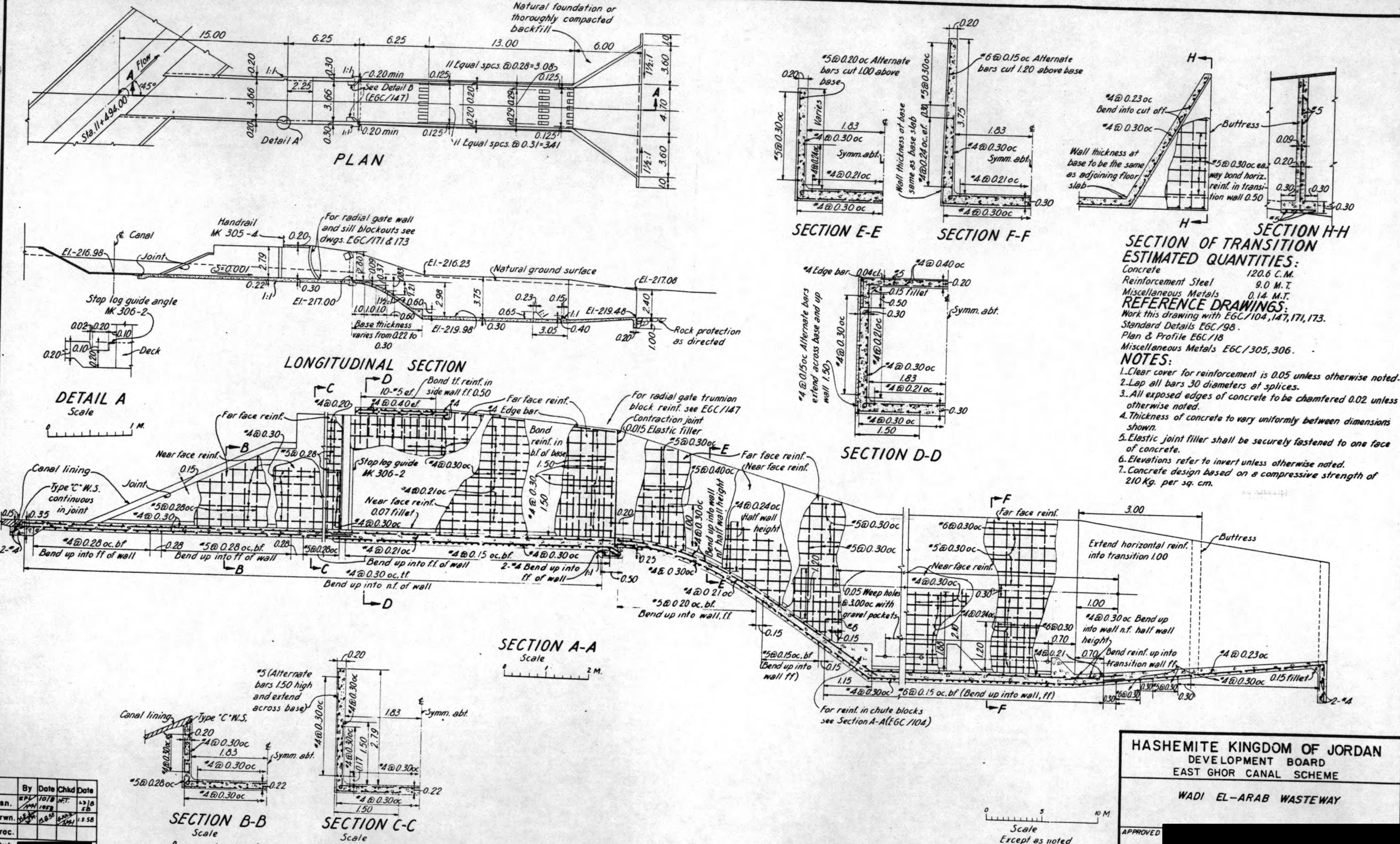
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

YARMOUK RIVER WASTEWAY
SHEET 2

APPROVED [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO

AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO. EGC/143



ESTIMATED QUANTITIES:

Concrete	120.6 C.M.
Reinforcement Steel	9.0 M.T.
Miscellaneous Metals	0.14 M.T.

REFERENCE DRAWINGS:

Work this drawing with EGC/104, 147, 171, 173.
Standard Details EGC/98.
Plan & Profile EGC/18
Miscellaneous Metals EGC/305, 306.

NOTES:

1. Clear cover for reinforcement is 0.05 unless otherwise noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Thickness of concrete to vary uniformly between dimensions shown.
5. Elastic joint filler shall be securely fastened to one face of concrete.
6. Elevations refer to invert unless otherwise noted.
7. Concrete design based on a compressive strength of 210 Kg. per sq. cm.

	By	Date	Chkd	Date
Dsn.	EPL / MH	10/8 1958	W.T.	12/8 58
Drwn.	[illegible]	12.8.58	[illegible]	13.8.58
Trac.				
Sub.	[redacted]			

Scale Except as noted

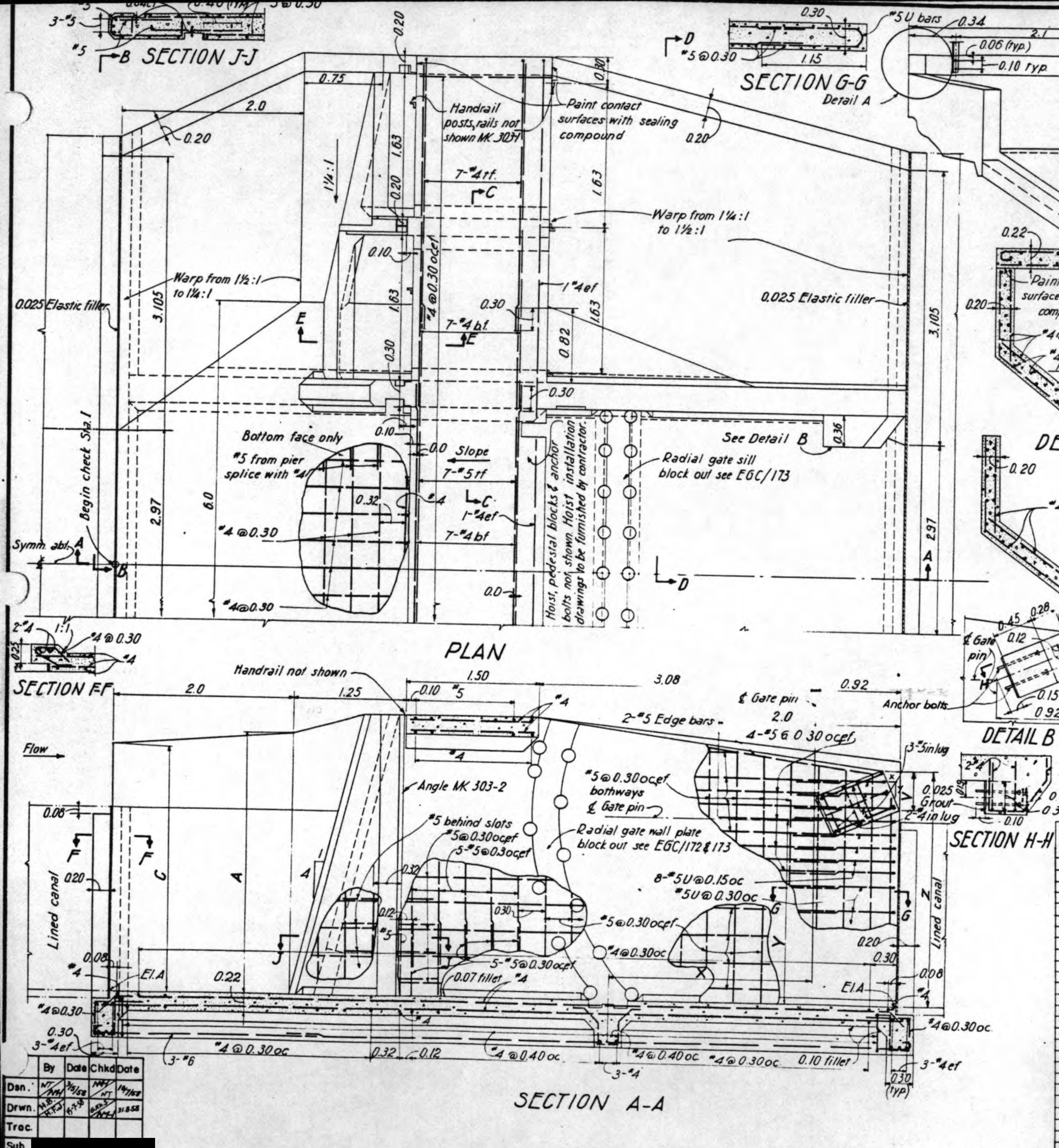
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

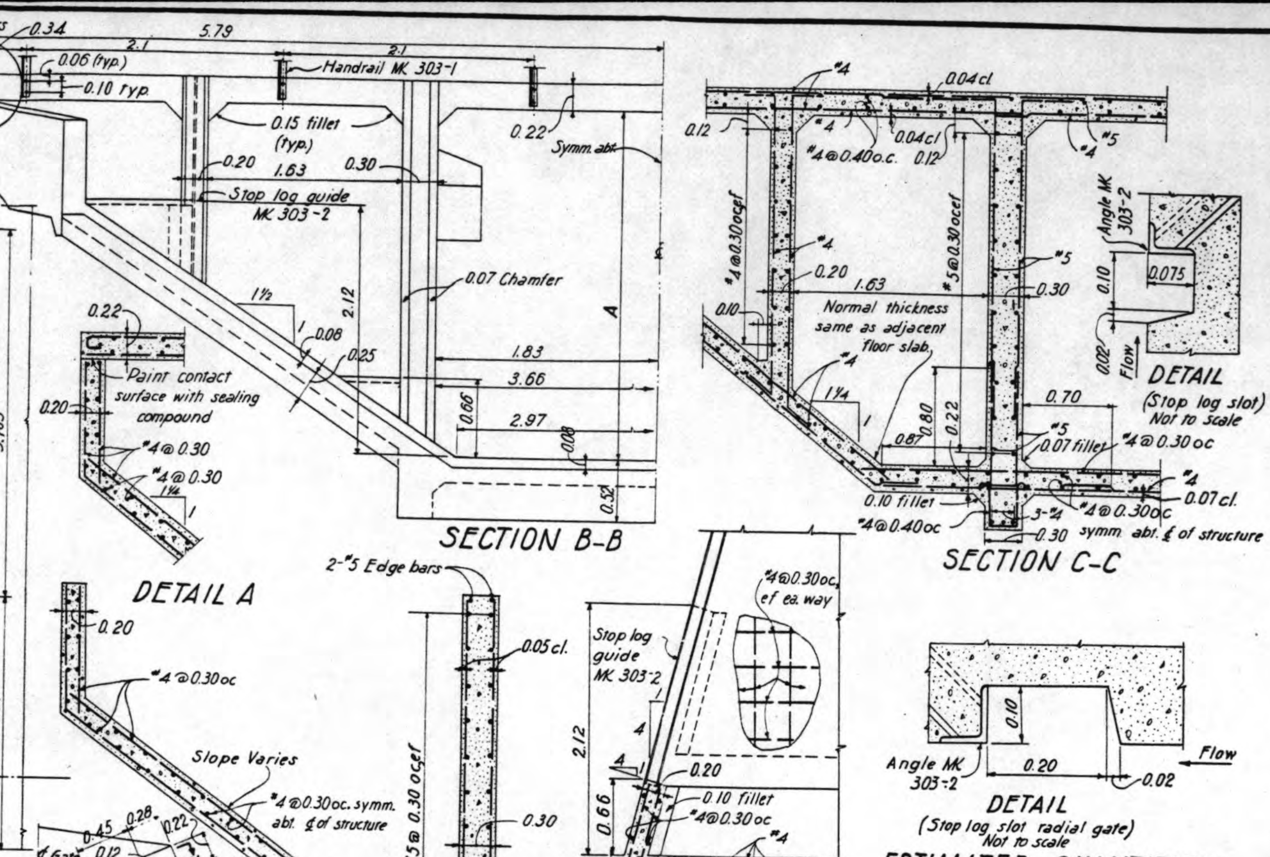
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

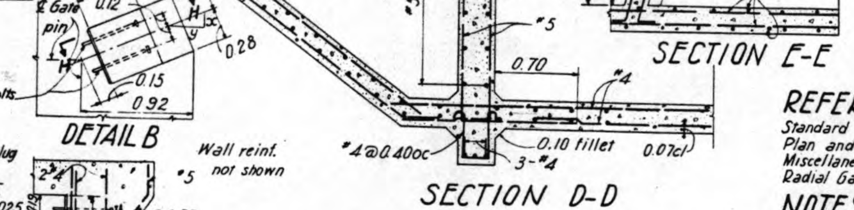
WADI EL-ARAB WASTEWAY

APPROVED [redacted]

AMMAN, JORDAN — DATE. 1-9-1958 — DWG. NO. EGC/144







SCHEDULE

Sta. I	El. A	Q	C	A	Quantity Estimate Concrete C. M	Quantity Estimate Reinf. Steel M.T	Quantity Estimate Misc. Metals M.T
5+546	-215.48	20	2.79	2.95	50	4.2	0.45
8+560	-216.24	20	2.79	2.95	50	4.2	0.45
11+506	-216.98	20	2.79	2.95	50	4.2	0.45
12+760	-217.24	20	2.79	2.95	50	4.2	0.45
15+000	-217.64	19	2.72	2.92	49	4.1	0.44
16+860	-217.97	19	2.72	2.92	49	4.1	0.44
19+004	-218.37	19	2.72	2.92	49	4.1	0.44
20+910	-218.79	19	2.72	2.92	49	4.1	0.44
22+620	-219.10	18	2.65	2.85	49	4.1	0.44
24+790	-219.33	18	2.65	2.85	49	4.1	0.43
27+125	-219.94	18	2.65	2.85	49	4.1	0.43
29+270	-220.33	18	2.65	2.85	49	4.1	0.43
31+600	-220.75	18	2.65	2.85	49	4.1	0.43
33+990	-221.18	17	2.59	2.79	47	4.0	0.43
37+329	-221.78	17	2.59	2.79	47	4.0	0.43
41+440	-222.57	16	2.53	2.73	47	4.0	0.42
43+300	-222.91	16	2.53	2.73	47	4.0	0.42
46+967	-224.08	16	2.53	2.73	47	4.0	0.42
49+410	-224.59	16	2.53	2.73	47	4.0	0.42
53+055	-225.24	16	2.53	2.73	47	3.9	0.42
55+290	-225.68	15	2.46	2.66	46	3.9	0.42
58+053	-226.19	14	2.40	2.60	46	3.9	0.41
59+600	-226.52	13	2.33	2.53	46	3.9	0.40
62+170	-226.99	13	2.33	2.53	46	3.9	0.40
x 0+0740	-227.62	12 •	2.33	2.53	46	3.9	0.40
x 4+6220	-242.05	12 •	2.33	2.53	46	3.9	0.40

• Check dimension same as for Q of 13
x East Ghor Main Canal _ South _

ESTIMATED QUANTITIES

Concrete
Reinforcement Steel
Miscellaneous metals
} See schedule

REFERENCE DRAWINGS

Standard Details EGC/98
Plan and Profile EGC/12 to EGC/49
Miscellaneous Metals EGC/303
Radial Gate EGC/171 to 173

NOTES:

1._ Clear cover for reinf. adjacent to surfaces placed on ground is 0.07. all other surfaces clear cover is 0.05 unless otherwise noted.
2._ Lap all bars 30 diameters at splices.
3._ All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4._ Concrete design based on compressive strength of 210 Kg. per sq. cm
5._ For check capacities:
Q = 18-20 incl. Y = 2.057, X = 2.250 x/y = 5/12 Z = 2.599 V = 0.462
Q = 13-17 incl. Y = 1.757, X = 2.490 x/y = 4/12 Z = 2.243 V = 0.474

0 0.5 1 2 M.
Scale
Except as noted

	By	Date	Chkd	Date
Dsn.	HT/NH	1/5/58	NH/HT	1/1/58
Drwn.	H.B./H.T.I	1-7-58		31.8.58
Trac.				
Sub.	[redacted]			

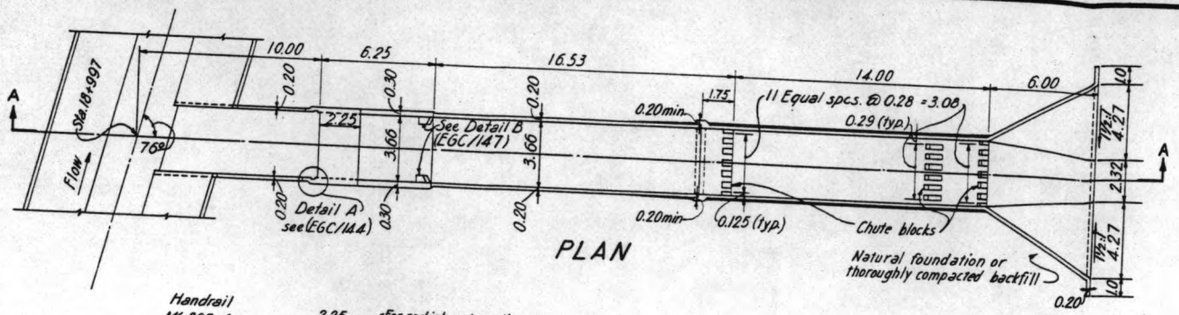
Prepared under the supervision of
MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

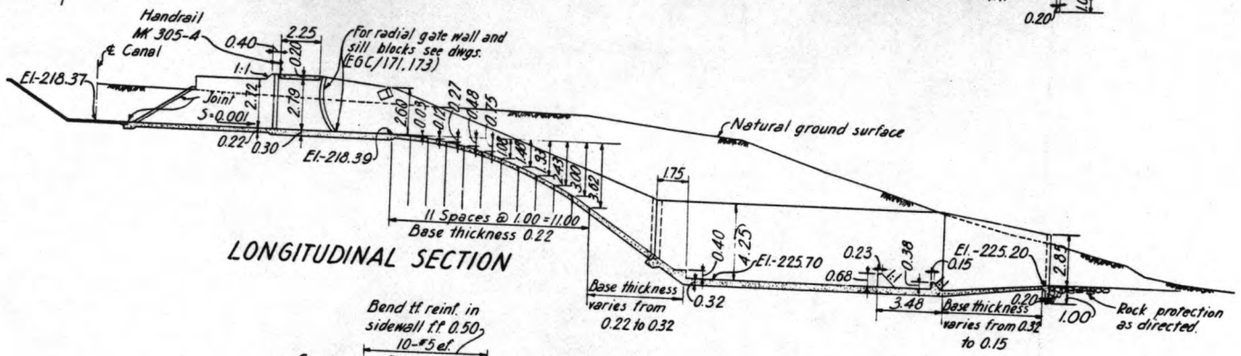
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

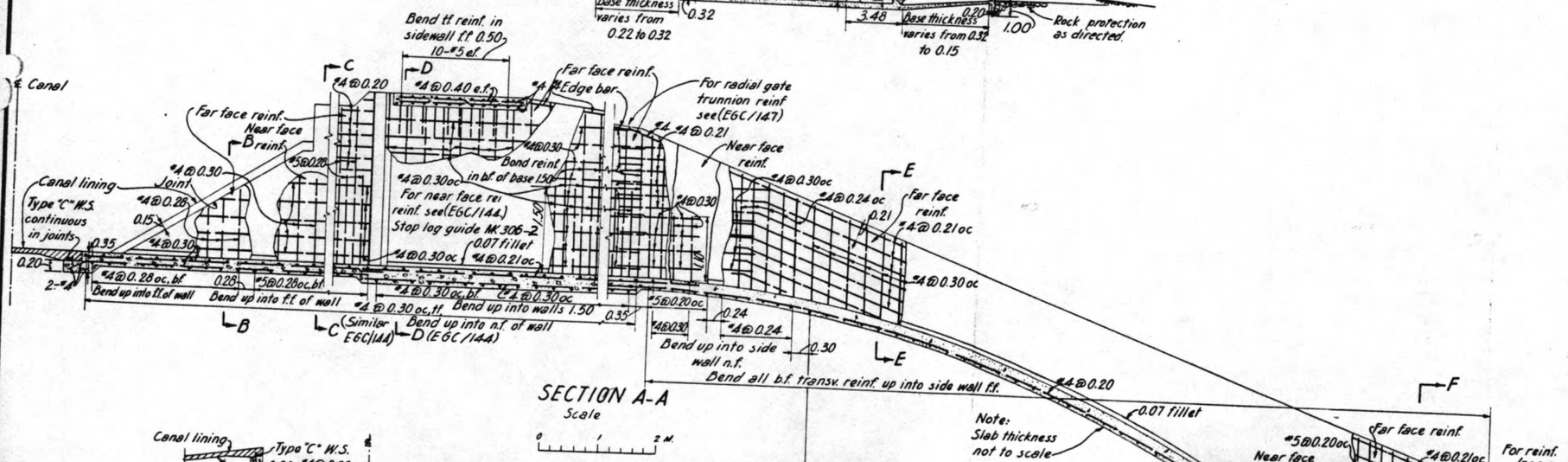
TYPICAL RADIAL GATE CHECK

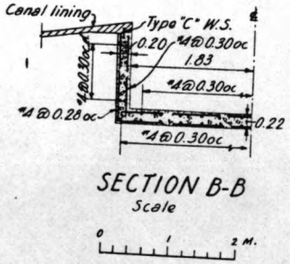
APPROVED: [redacted]

AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO. EGC/147









0 5 10 M.
Scale
Except as noted

ESTIMATED QUANTITIES:

Concrete	133.00 C.M.
Reinforcement Steel	10.20 M.T.
Miscellaneous Metals	0.14 M.T.

REFERENCE DRAWINGS:

Work this drawing with EGC/104, 144, 147, 171, 173
Standard Details EGC/98
Plan & Profile EGC/122
Miscellaneous Metals EGC/305 and 306

NOTES:

1. Clear cover for reinforcement is 0.05 unless otherwise noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Thickness of concrete to vary uniformly between dimensions shown.
5. Elastic joint filler shall be securely fastened to one face of concrete.
6. Elevations refer to invert unless otherwise noted.
7. Concrete design based on a compressive strength of 210 Kg. per sq. cm.

	By	Date	Chk'd	Date
Dsn.	[redacted]	23-8-58	M.T.	28-8-58
Drwn.	[redacted]	6-9-58	[redacted]	1-9-58
Trac.				
Sub.	[redacted]			

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

WADI EL-HISA WASTEWAY
SHEET 1

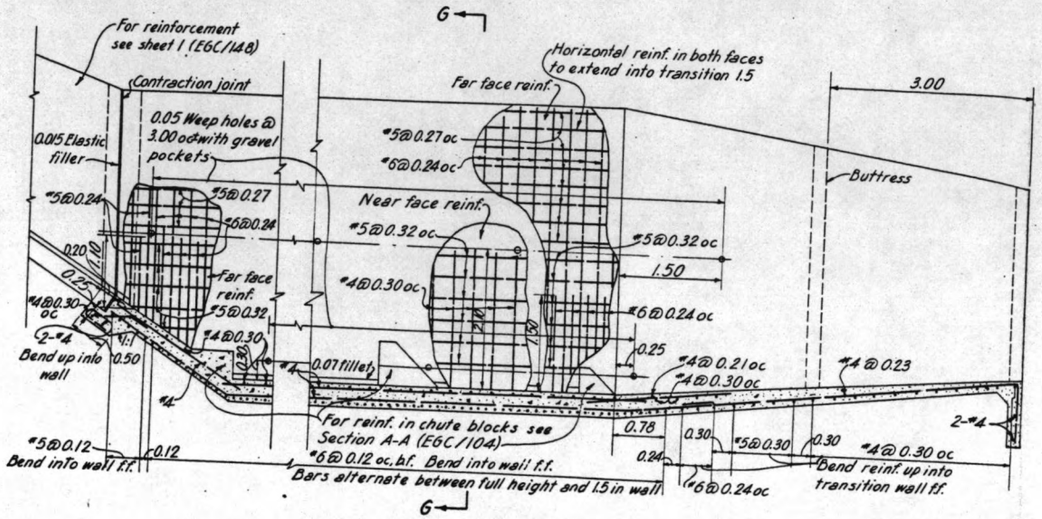
APPROVED [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

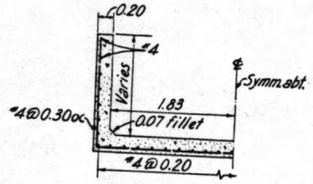
AMMAN, JORDAN

DATE. 1-9-1958

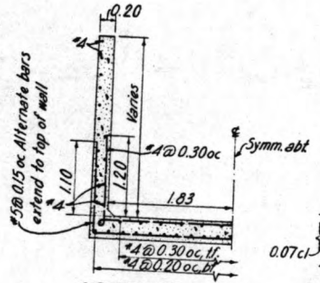
DWG.NO. EGC/148



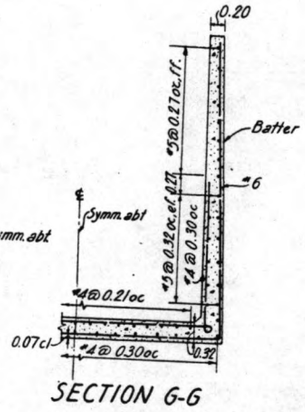
SECTION A-A



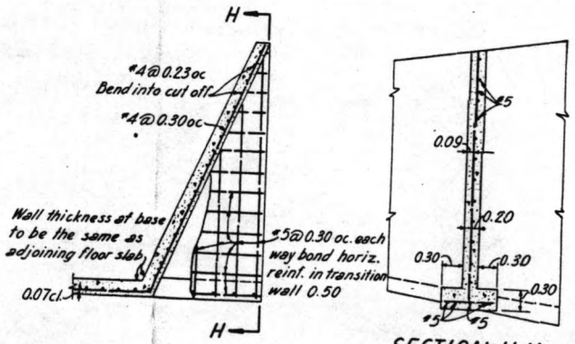
SECTION E-E



SECTION F-F



SECTION G-G



SECTION OF TRANSITION
(Showing Buttress)
Not to scale

SECTION H-H

NOTES:
Refer to (EGC/148)

Scale
Except as noted

	By	Date	Chkd	Date
Dsn		22/8 58		24/8 58
Drwn.		24.8.58		1.9.58
Trac.				
Sub.				

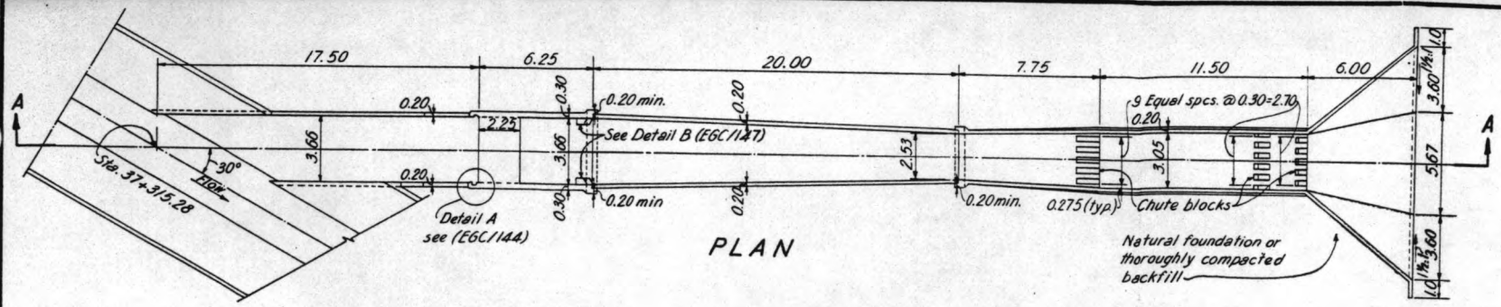
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO

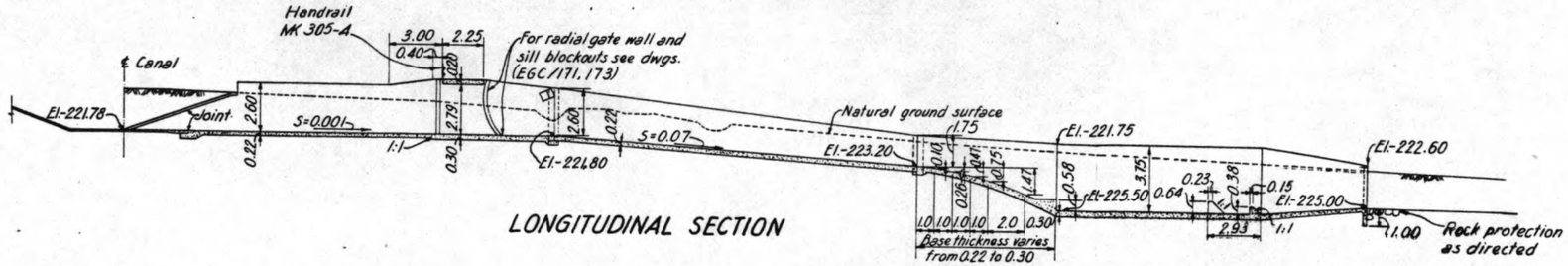
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

WADI EL-HISA WASTEWAY
SHEET 2

APPROVED [redacted]

AMMAN, JORDAN | DATE. 1-9-1958 | DWG. NO. EGC/149





ESTIMATED QUANTITIES:

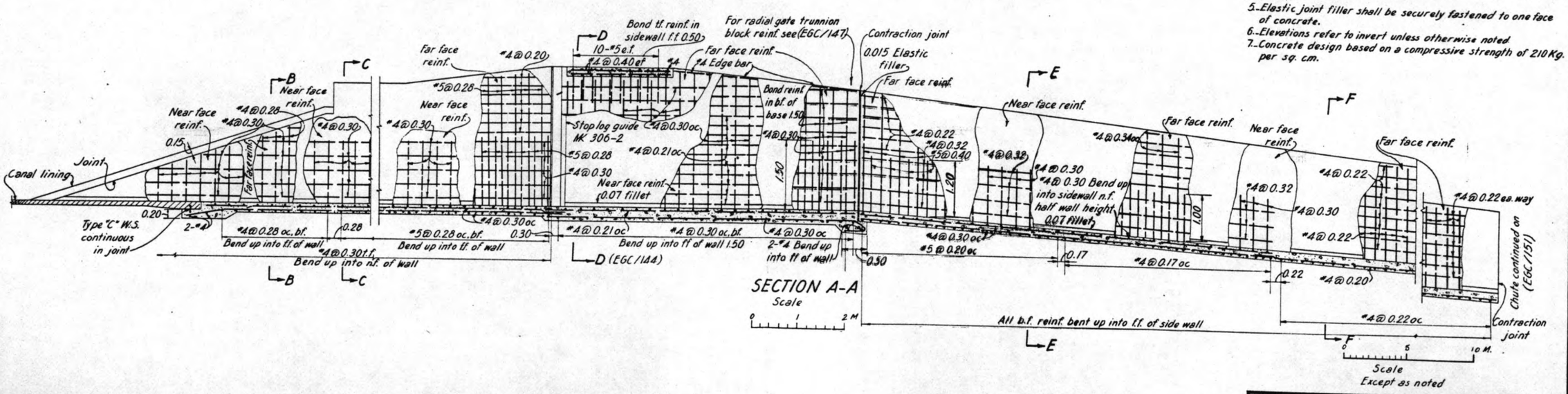
Concrete	154.20 C.M.
Reinforcement Steel	11.40 M.T.
Miscellaneous Metals	0.14 M.T.

REFERENCE DRAWINGS:

Work this drawing with EGC/104, 144, 147, 171, 173
Standard Details EGC/98
Plan & Profile EGC/32
Miscellaneous Metals EGC/305, 306

NOTES:

1. Clear cover for reinforcement is 0.05 unless otherwise noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Thickness of concrete to vary uniformly between dimensions shown.
5. Elastic joint filler shall be securely fastened to one face of concrete.
6. Elevations refer to invert unless otherwise noted.
7. Concrete design based on a compressive strength of 210 Kg. per sq. cm.



	By	Date	Chkd	Date
Dsn.	[redacted]			
Drwn.	[redacted]			
Trac.				
Sub.	[redacted]			

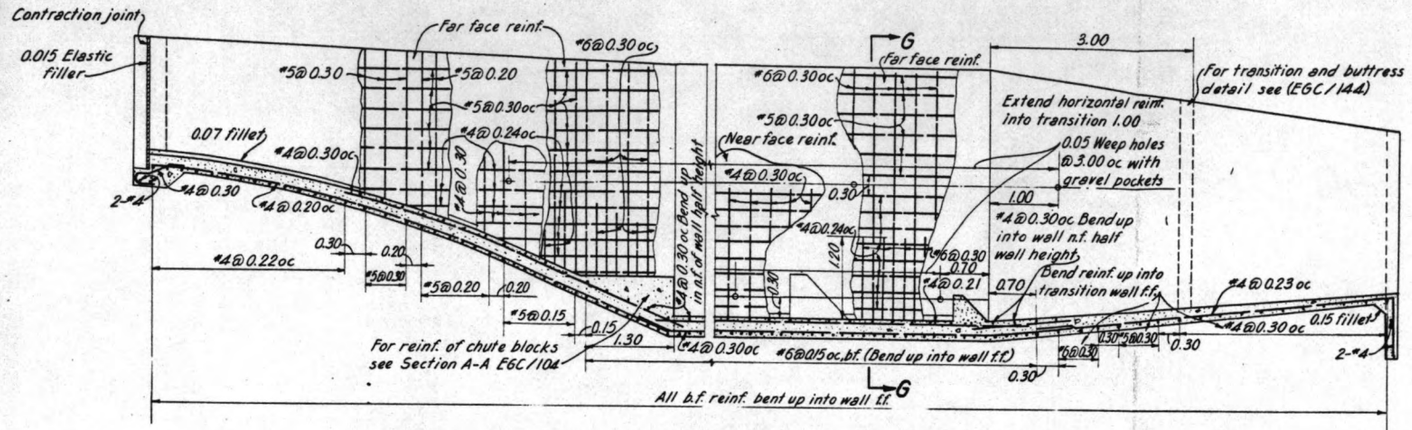
Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

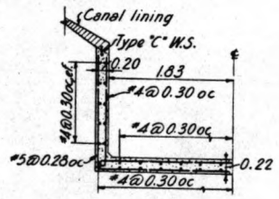
WADI EL-YABIS WASTEWAY
SHEET 1

APPROVED: [redacted]

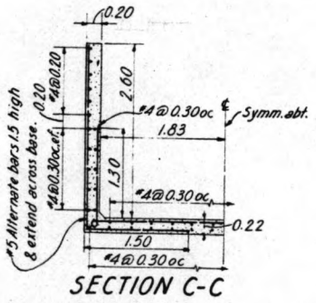
AMMAN, JORDAN | DATE. 1-9-1958 | DWG.NO. EGC/150



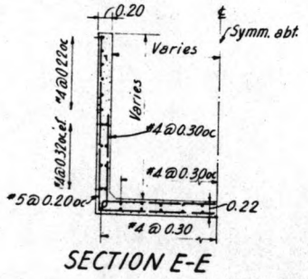
SECTION A-A



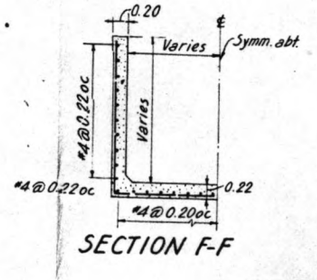
SECTION B-B



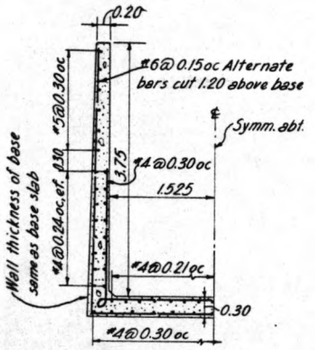
SECTION C-C



SECTION E-E



SECTION F-F



SECTION G-G

NOTES:
Refer to(EGC/150)

Scale 0 1 2 M.

	By	Date	Chkd	Date
Dsn.	[redacted]	22/8 -58	MT	1-9 58
Drwn.	[redacted]	8-58	MT	1-9 58
Trac.				
Sub.	[redacted]			

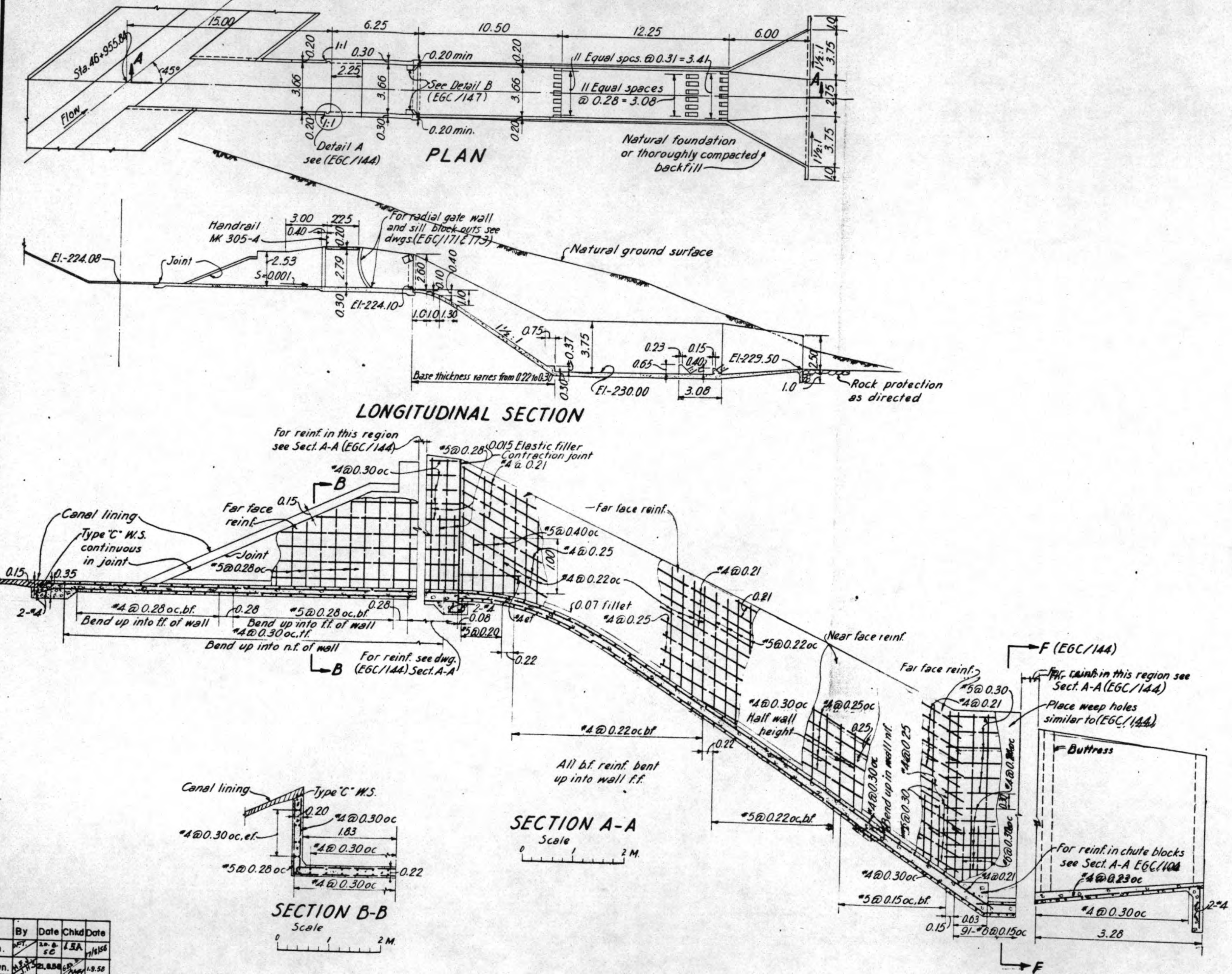
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

WADI EL-YABIS · WASTEWAY
SHEET 2

APPROVED: [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE. 1-9-1958 | DWG.NO. EGC/151



ESTIMATED QUANTITIES:

Concrete	130.50 C.M.
Reinforcement Steel	9.70 M.T.
Miscellaneous Metals	0.14 M.T.

REFERENCE DRAWINGS:

Work this drawing with EGC/144, 104, 147, 171, 173
Standard Details EGC/98
Plan & Profile EGC/37
Miscellaneous Metals EGC/305, 306

NOTES:

1. Clear cover for reinforcement is 0.05 unless otherwise noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Thickness of concrete to vary uniformly between dimensions shown.
5. Elastic joint filler shall be securely fastened to one face of concrete.
6. Elevations refer to invert unless otherwise noted.
7. Concrete design based on a compressive strength of 210 Kg. per sq. cm.

Scale 0 5 10 M.
Scale Except as noted

	By	Date	Chkd	Date
Dsn.	[illegible]	[illegible]	I.S.A.	[illegible]
Drwn.	[illegible]	21.8.58	[illegible]	1.9.58
Trac.				
Sub.	[redacted]			

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

WADI ABU KHARRUB WASTEWAY

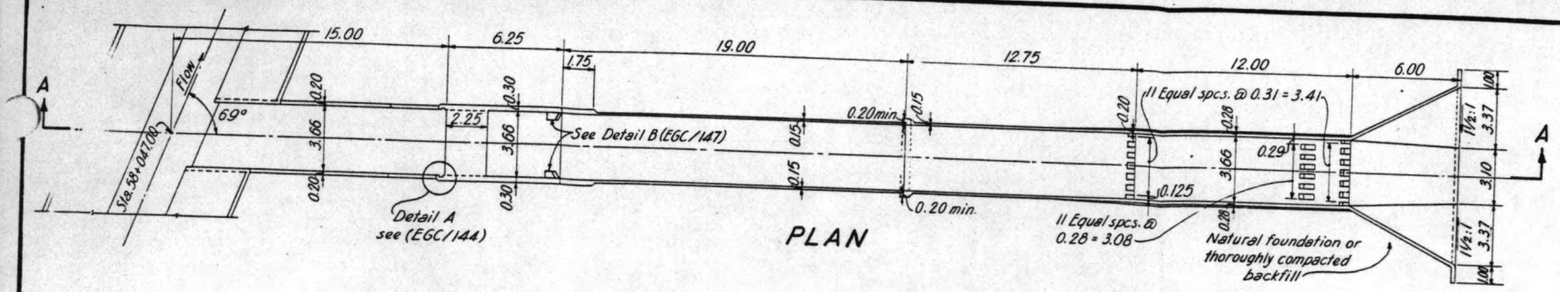
APPROVED [redacted]

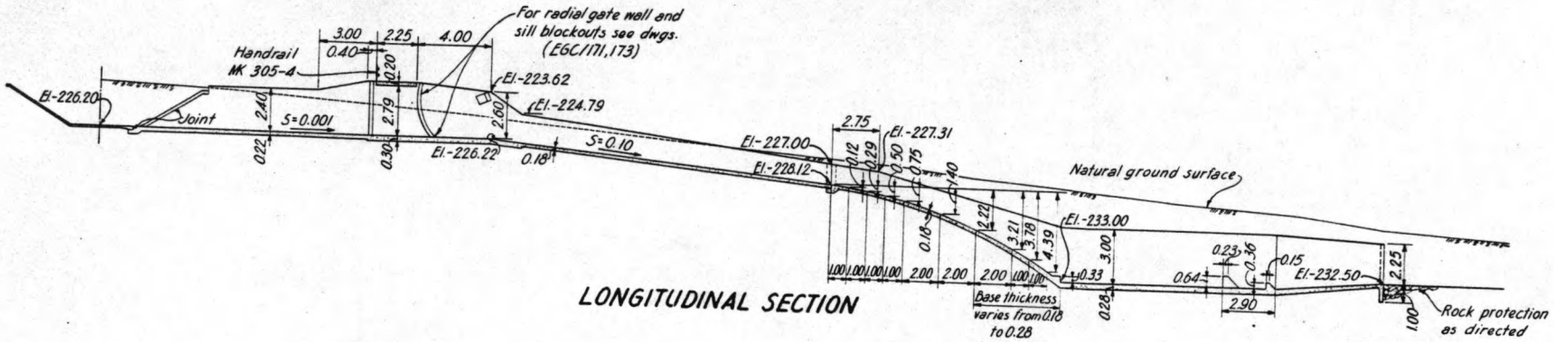
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

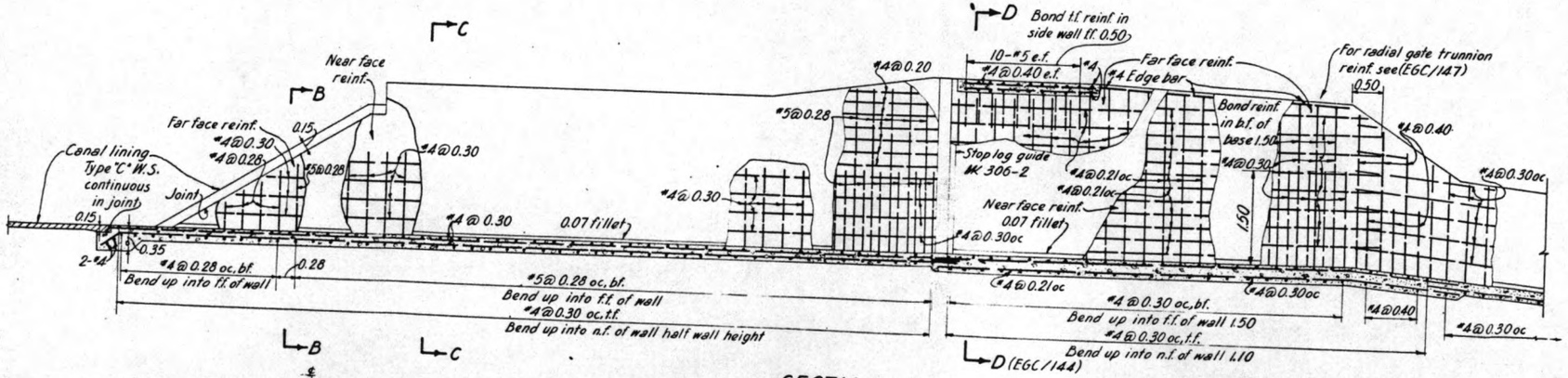
AMMAN, JORDAN

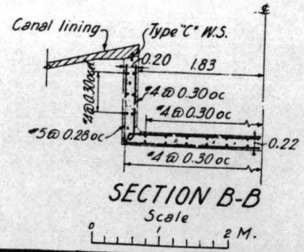
DATE 1-9-1958

DWG. NO. EGC/153









ESTIMATED QUANTITIES:

Concrete	160.00 C.M.
Reinforcement Steel	12.50 M.T.
Miscellaneous Metals	0.14 M.T.

REFERENCE DRAWINGS:

Work this drawing with EGC/104, 144, 147, 171, 172
Standard Details EGC/98
Plan & Profile EGC/42
Miscellaneous Metals EGC/305, 306

NOTES:

1. Clear cover for reinforcement is 0.05 unless otherwise noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Thickness of concrete to vary uniformly between dimensions shown.
5. Elastic joint filler shall be securely fastened to one face of concrete.
6. Elevations refer to invert unless otherwise noted.
7. Concrete design based on a compressive strength of 210 Kg per sq. cm.

0 5 10 M.
Scale
Except as noted

	By	Date	Chkd	Date
Dsn.	[redacted]	4.2.58 FB	N.T.	5.2.58 FB
Drwn	[redacted]	1.9.58	[redacted]	1.9.58
Trac.				
Sub.	[redacted]			

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

WADI RAJIB WASTEWAY
SHEET 1

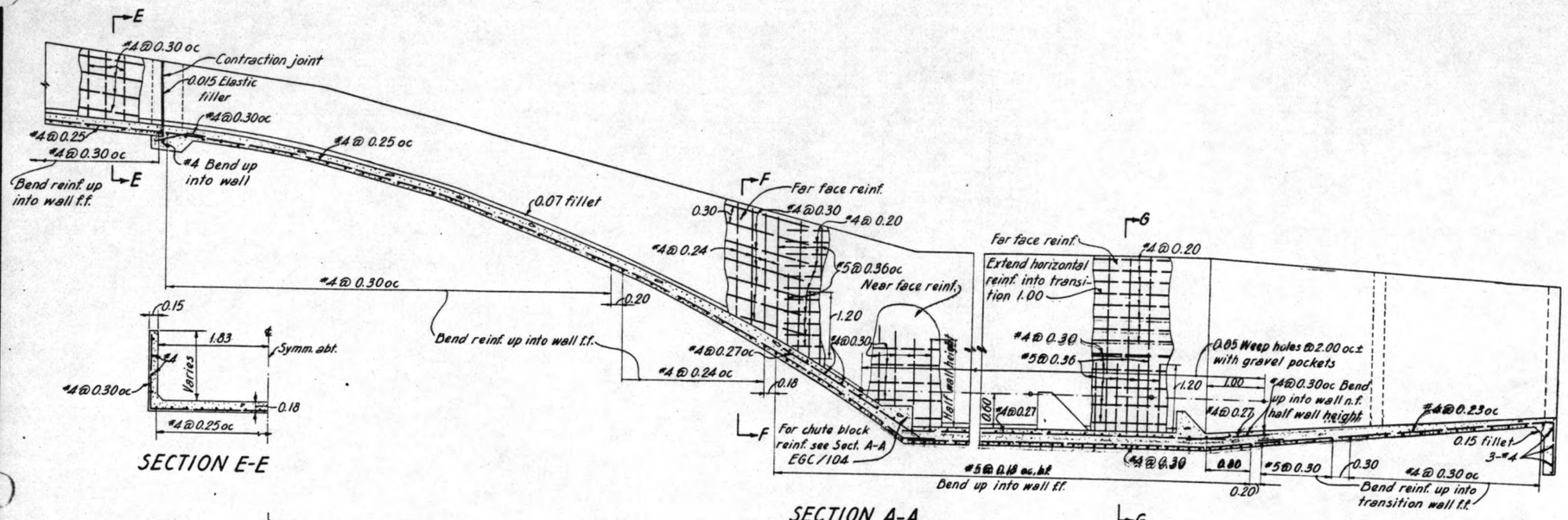
APPROVED [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

AMMAN, JORDAN

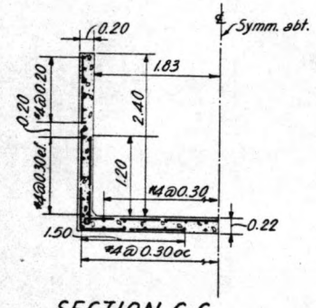
DATE 1-9-1958

DWG. NO. EGC/155

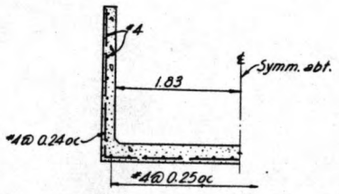


SECTION A-A

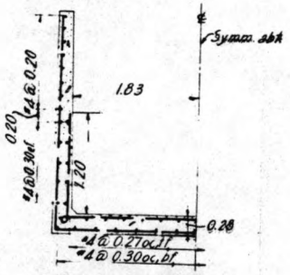
SECTION E-E



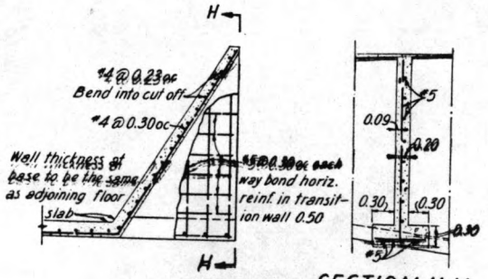
SECTION C-C



SECTION F-F



SECTION G-G



SECTION H-H

SECTION OF TRANSITION
(Showing Buttress)

NOTES:
Refer to EGC/155

Scale 0 1 2 M.

	By	Date	Chkd	Date
Dsn.	[redacted]	22-8-58	MT.	24.8.58
Drwn.	[redacted]	1.9.58	[redacted]	1.9.58
Trac.				
Sub.	[redacted]			

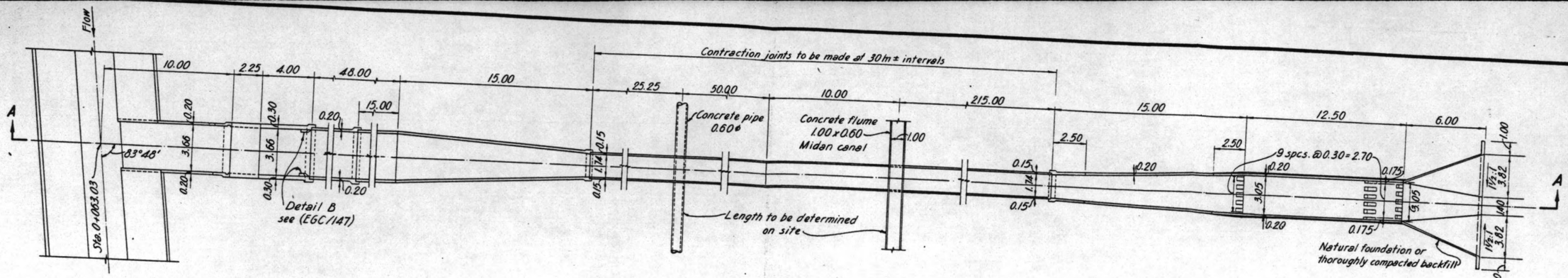
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

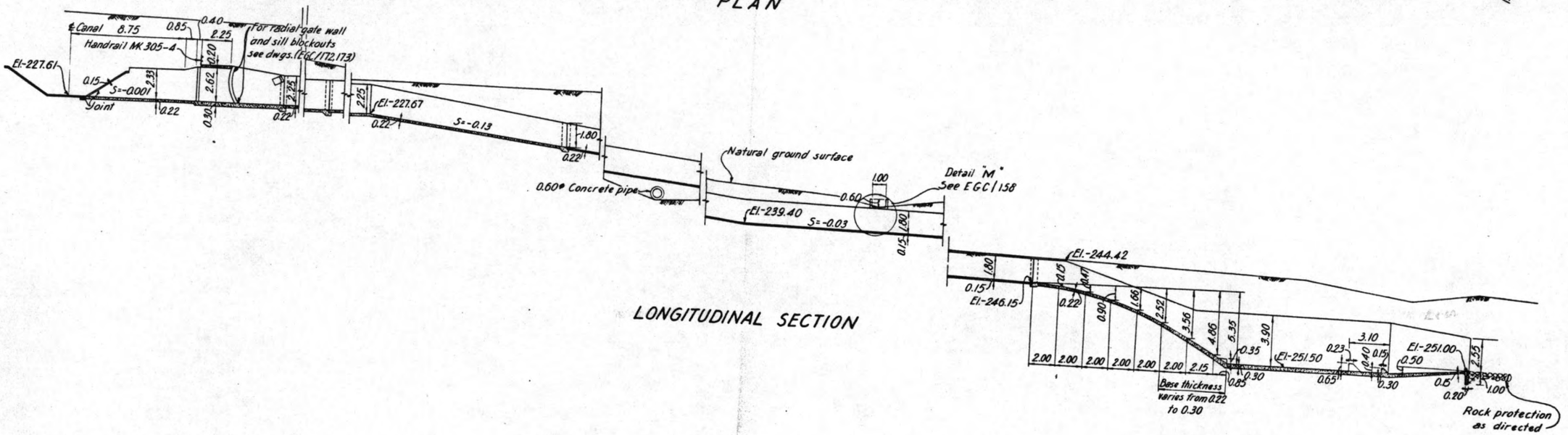
WADI RAJIB WASTEWAY
SHEET 2

APPROVED: [redacted]

AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO. EGC 115



PLAN



LONGITUDINAL SECTION

NOTES:
Refer to dwg. (EGC/158)

Scale 0 5 10 M.

	By	Date	Chkd	Date
Design.	[redacted]	14.8.58	NFT	20.8.58
Drawn.	[redacted]	15.8.58	NFT	19.8.58
Trac.				
Sub.	[redacted]			

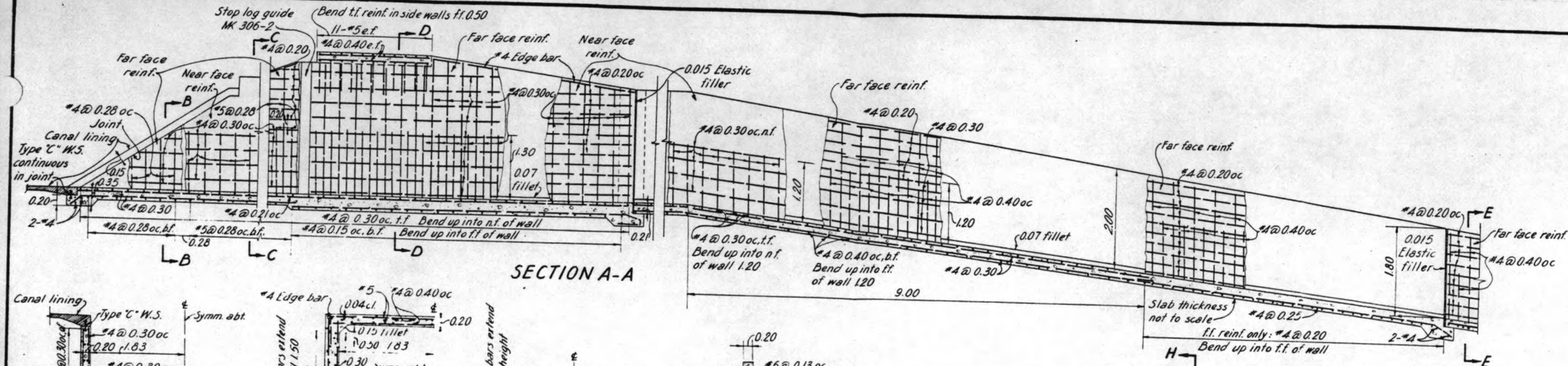
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

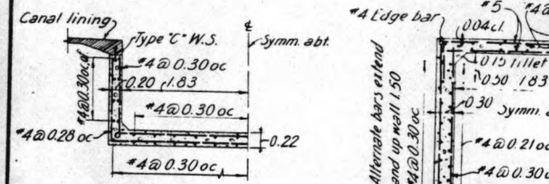
ZARQA RIVER WASTEWAY
SHEET 1

APPROVED [redacted]

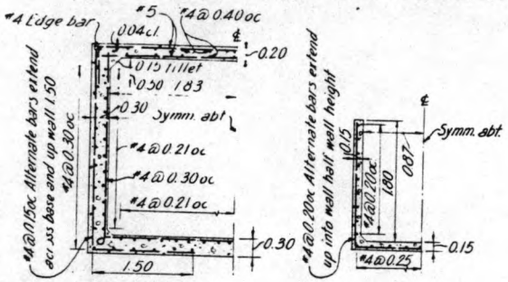
AMMAN, JORDAN | DATE 1-8-1958 | DWG. NO.



SECTION A-A

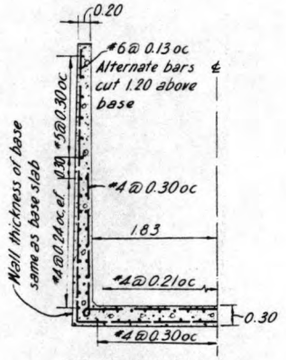


SECTION B-B

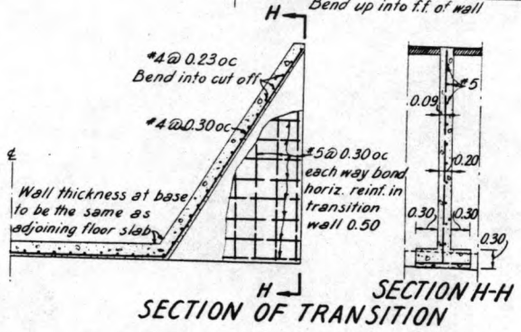


SECTION D-D

SECTION E-E



SECTION F-F



SECTION OF TRANSITION

SECTION H-H

ESTIMATED QUANTITIES:

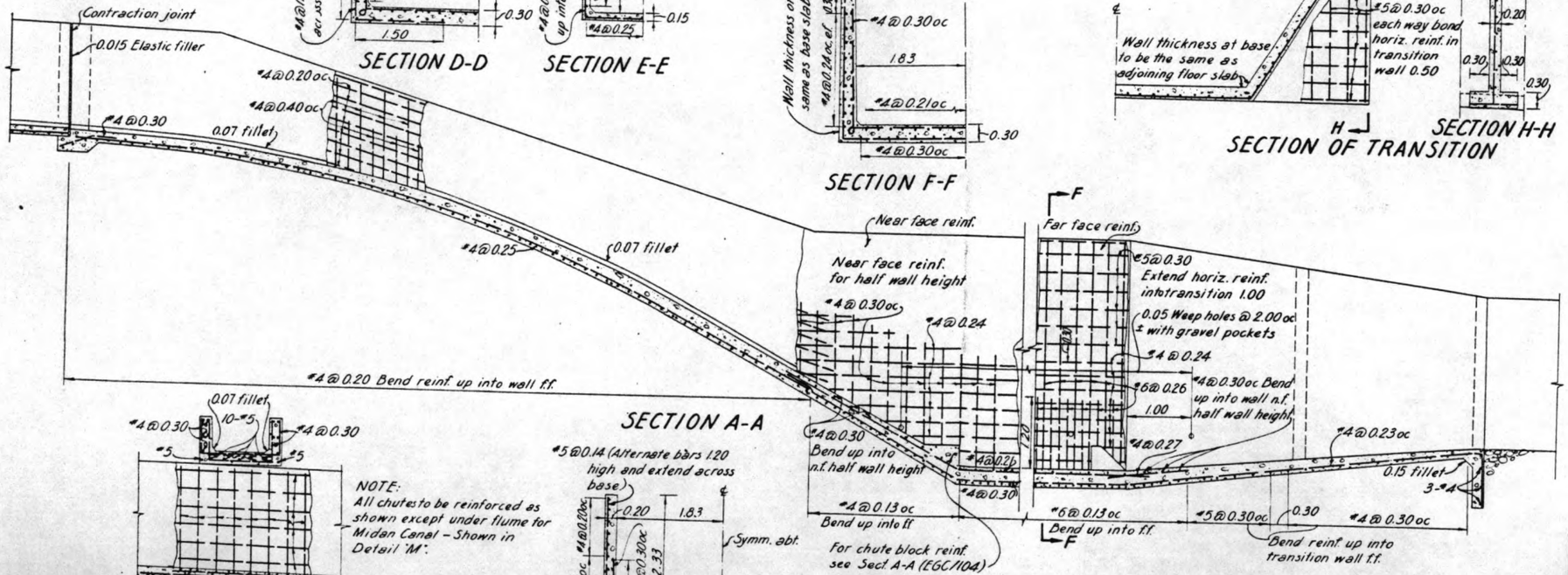
Concrete	510 C.M.
Reinforcement Steel	40 M.T.
Miscellaneous Metals	0.14 M.T.

REFERENCE DRAWINGS:

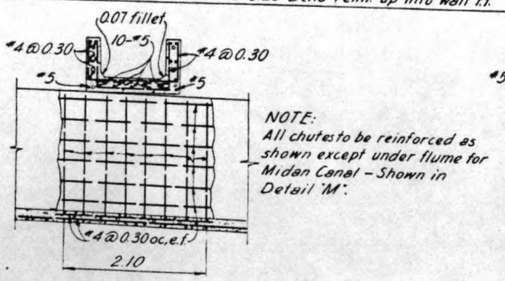
Work this drawing with EGC/144, 104, 147, 172, 173.
Standard Details EGC/98.
Plan & Profile EGC/47
Miscellaneous Metals EGC/305, 306.

NOTES:

1. Clear cover for reinforcement is 0.05 unless otherwise noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Thickness of concrete to vary uniformly between dimensions shown.
5. Elastic joint filler shall be securely fastened to one face of concrete.
6. Elevations refer to invert unless otherwise noted.
7. Concrete design based on a compressive strength of 210 Kg. per sq. cm.

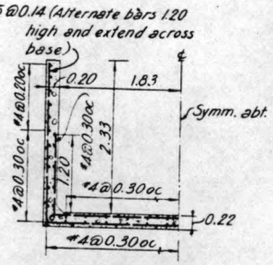


SECTION A-A



DETAIL M
See (EGC/157)

NOTE:
All chutes to be reinforced as shown except under flume for Midan Canal – Shown in Detail "M".



SECTION C-C

0 1 2 M.
Scale

	By	Date	Chkd	Date
Dsn.	E.S.L.	25-8-58	MT	26-8-58
Drwn.	[redacted]			
Trac.				
Sub.	[redacted]			

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

AMMAN, JORDAN

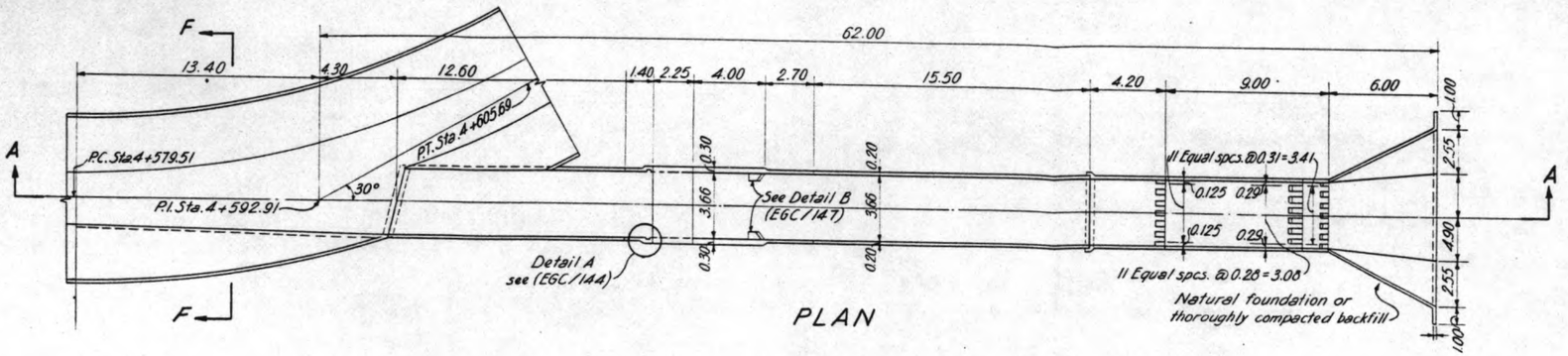
DATE 1-9-1958

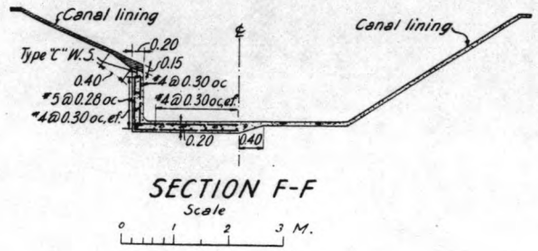
DWG. NO.

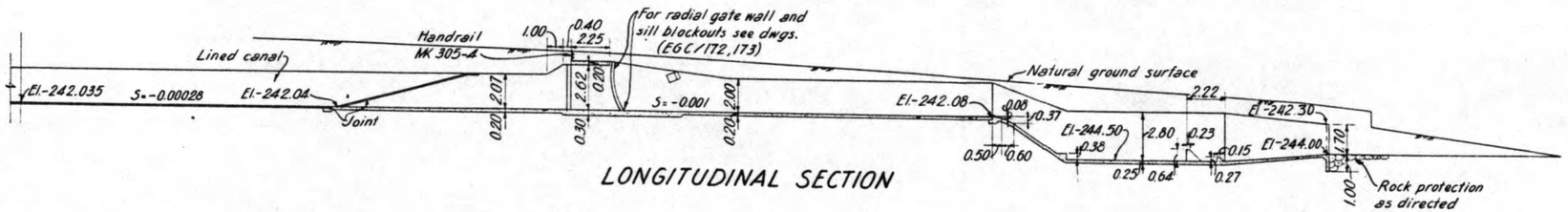
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

ZARQA RIVER WASTEWAY
SHEET 2

APPROVED [redacted]







ESTIMATED QUANTITIES:

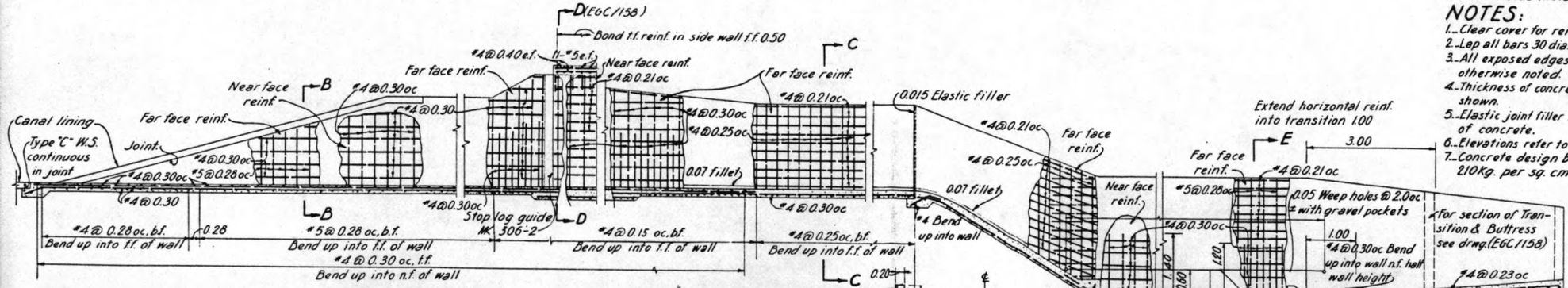
Concrete	150 C.M.
Reinforcement Steel	11 M.T.
Miscellaneous Metals	0.14 M.T.

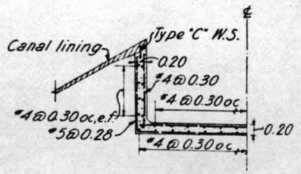
REFERENCE DRAWINGS:

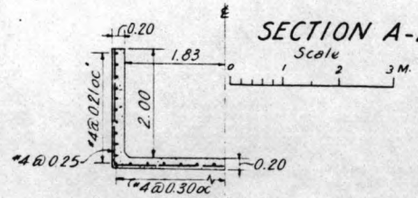
Work this drawing with EGC/104, 144, 147, 172, 173.
Standard Details EGC/98.
Plan & Profile EGC/49
Miscellaneous Metals EGC/305, 306

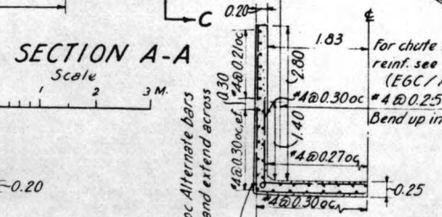
NOTES:

1. Clear cover for reinforcement is 0.05 unless otherwise noted.
2. Lap all bars 30 diameters at splices.
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Thickness of concrete to vary uniformly between dimensions shown.
5. Elastic joint filler shall be securely fastened to one face of concrete.
6. Elevations refer to invert unless otherwise noted.
7. Concrete design based on a compressive strength of 210kg. per sq. cm.









	By	Date	Chkd	Date
Dsn.	N.T.	1-8-58	N.T.	4-8-58
Drwn.	[redacted]	18-8-58	[redacted]	1-9-58
Trac.				
Sub.	[redacted]			

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

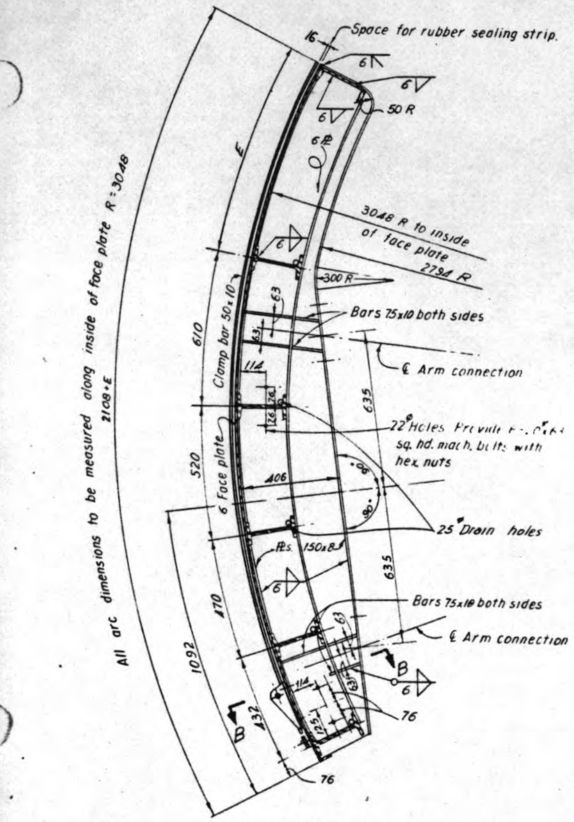
HASHEMITE KINGDOM OF JORDAN

DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

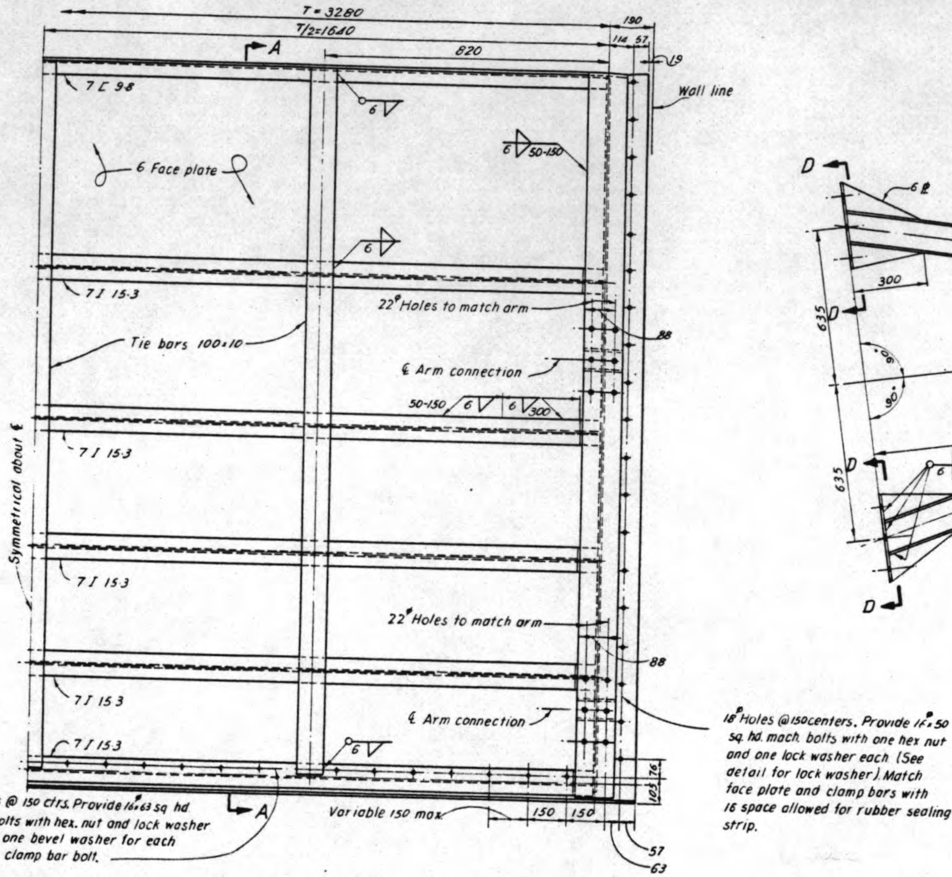
WADI BLIWA WASTEWAY

APPROVED [redacted]

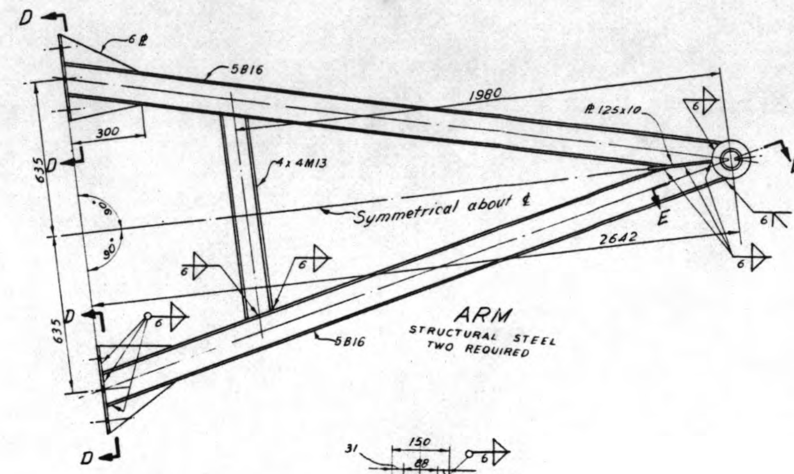
AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO. EGC/159



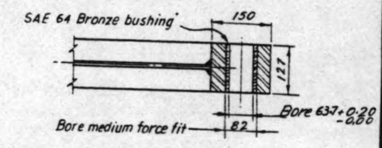
SECTION A-A



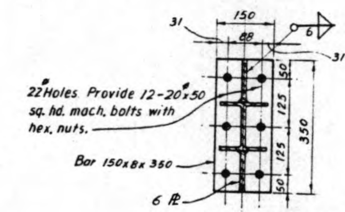
DOWNSTREAM ELEVATION
(DEVELOPED)



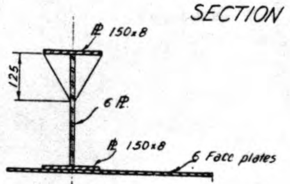
ARM
STRUCTURAL STEEL
TWO REQUIRED



SECTION E-E



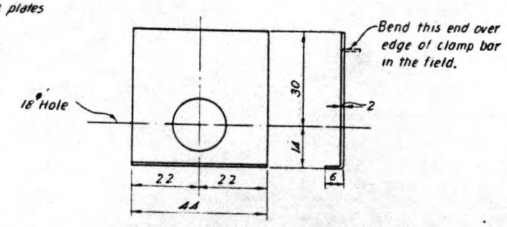
SECTION D-D



SECTION B-B

SHOP BUTT WELD

Note: Face plate may be made of more than one section (min width 800) with vertical joints butt welded as shown



LOCK WASHER
BRASS

TYPE I RADIAL GATE

STRUCTURE	STRUCTURE LOCATION STA.	DIMENSION E	DIMENSION H	WEIGHT OF GATE
Wasteway	5+540.00	702	2.6	1862.6 Kg.
Check	5+546.00	601	2.5	1833.9 Kg.
Check	8+560.00	601	2.5	1833.9 Kg.
Wasteway	11+494.34	702	2.6	1862.6 Kg.
Check	11+506.00	601	2.5	1833.9 Kg.
Check	12+760.00	601	2.5	1833.9 Kg.
Check	15+000.00	601	2.5	1833.9 Kg.
Check	16+860.00	601	2.5	1833.9 Kg.
Wasteway	18+997.00	702	2.6	1862.6 Kg.
Check	19+004.00	601	2.5	1833.9 Kg.
Check	20+910.00	601	2.5	1833.9 Kg.
Check	22+620.00	500	2.4	1807.8 Kg.
Check	24+790.00	500	2.4	1807.8 Kg.
Check	27+125.00	500	2.4	1807.8 Kg.
Check	29+270.00	500	2.4	1807.8 Kg.
Check	31+600.00	500	2.4	1807.8 Kg.
Wasteway	37+315.28	500	2.4	1807.8 Kg.
Wasteway	46+955.84	500	2.4	1807.8 Kg.

TYPE I RADIAL GATE LIST OF EQUIPMENT
(Per gate)

DESCRIPTION	NOTES	NO. REQ'D	DRAWING NUMBER
	RADIAL GATE		
3660x2600max. Radial Gate	T=3280 E & H vary Y=2057	1	EGC/171
Pin bearing		2	EGC/173
125 Dia. roller		4	EGC/173
250 Wall plate	R=2985 Length = 3015	1R-1L	EGC/173
200 Gate sill	L=3660	1	EGC/173
Wire rope & details	See details		EGC/172
Pin bearing grease piping	Length varies	1 Lot	EGC/173
	RADIAL GATE HOIST		
Radial Gate Hoist	Capacity 2,275 MT. T=3280, See specs.		Contractors dwn.
	RUBBER SEALS AND ANCHOR BOLTS		
Seals — Sides	100 Stem length varies	2	EGC/5
Bottom	125 Stem length=2870	1	EGC/5
Corner	125 Stem	2	EGC/5
Bolts — Pin bearing *	25 ϕ 500 sq. hd. mach. bolt. hex. nut	8	No detail
Pin bearing ┼	25 ϕ 400 sq. hd. mach. bolt. hex. nut	8	No detail
Wall plate	16 ϕ 200 sq. hd. mach. bolt, 2 hex. nuts	24	No detail
Sill plate	16 ϕ 200 sq. hd. mach. bolt, 2 hex. nuts	16	No detail
Hoist	To suit hoist		Contractors dwn.

*For Check Structures.
┼For Wasteways.

All dimensions in Millimeters

Not to scale

	By	Date	Chkd	Date
n.	HT	24-4-58	NH	
n.		5-6-58	NH	30-6-58
c.				
b. [redacted]				

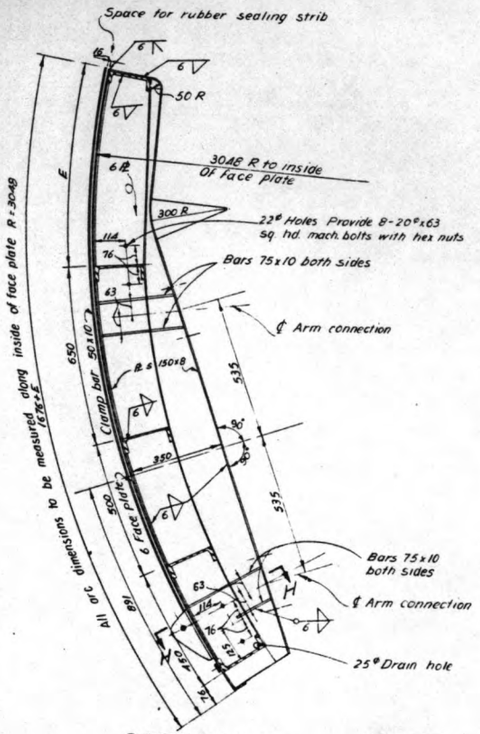
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

RADIAL GATE TYPE I

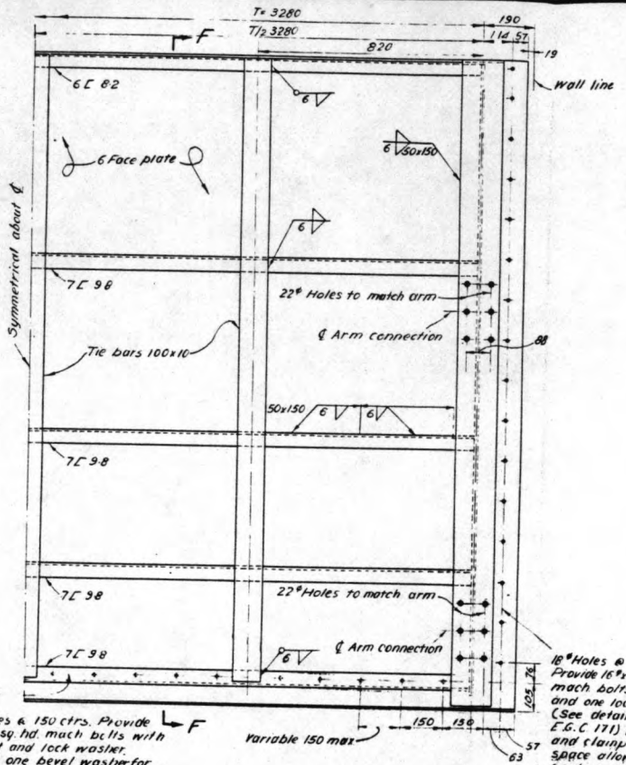
APPROVED [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

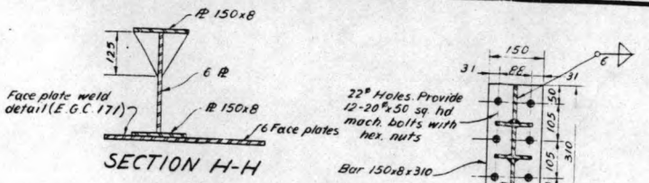
AMMAN, JORDAN | DATE | DWG. NO.



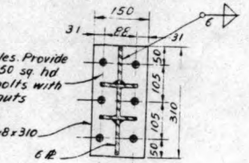
SECTION F-F



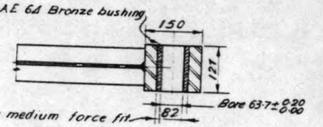
DOWNSTREAM ELEVATION
(DEVELOPED)



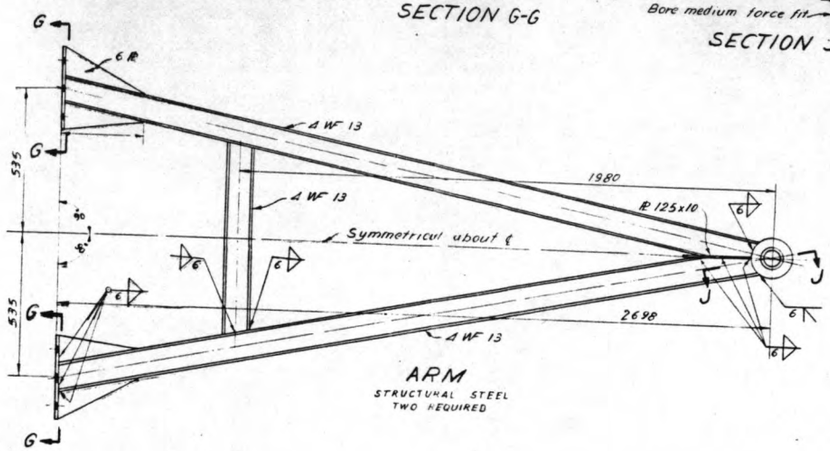
SECTION H-H



SECTION G-G

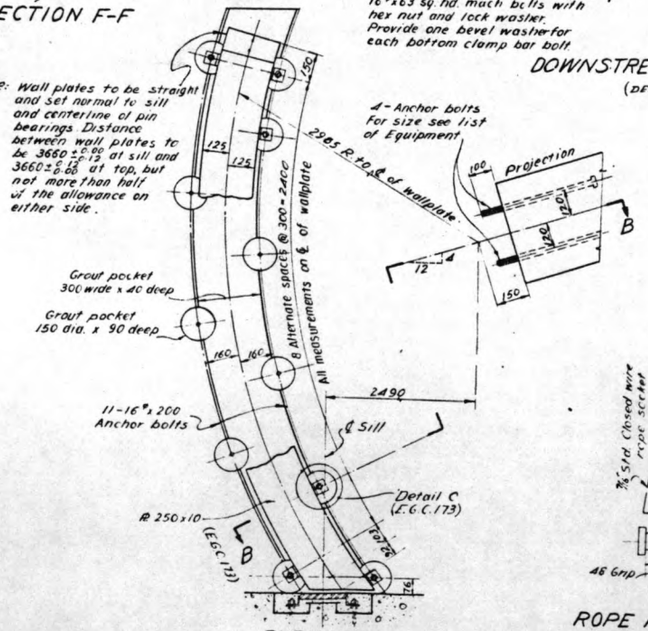


SECTION J-J

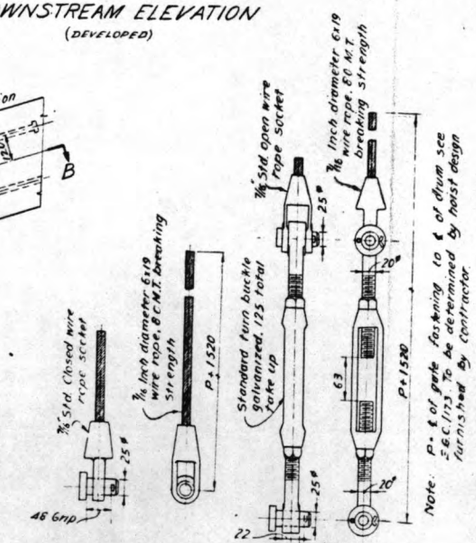


ARM
STRUCTURAL STEEL
TWO REQUIRED

Note: Wall plates to be straight and set normal to sill and centerline of pin bearings. Distance between wall plates to be 3660 ± 6.25 at sill and 3660 ± 6.25 at top, but not more than half of the allowance on either side.



ELEVATION
WALL PLATE AND ANCHOR BOLTS



ROPE AND SOCKET
STEEL - PER GATE

ROPE SOCKET AND TURNBUCKLE
STEEL - PER GATE

Note: P = ℄ of gate fastenings to ℄ of drum see E.G.C. 173. To be determined by horst design furnished by contractor.

TYPE II RADIAL GATE
LIST OF EQUIPMENT
(Per gate)

DESCRIPTION	NOTES	NO. REQD.	DRAWING NUMBER
RADIAL GATE			
3660x2300mm. Radial Gate	T=3280 E & H vary Y=1757	1	EGC/172
Pinbearing		2	EGC/173
125 Dia. roller		4	EGC/173
250 Wall plate	R=2985 Length=2745	4	EGC/173
200 Gate sill	L=3660	1R-1L	EGC/172
Wire rope & details	See details	1	EGC/173
Pin bearing grease piping	Length varies		EGC/172
		1 Lot	EGC/173
RADIAL GATE HOIST			
Radial Gate Hoist	Capacity 2.275 M.T. T=3280 See specs.	1	Contractors des.
RUBBER SEALS AND ANCHOR BOLTS			
Seals - Sides	100 Stem length varies	2	EGC/15
Bottom	125 Stem length = 2670	1	EGC/15
Corner	185 Stem	2	EGC/5
Bolts - Pin bearing *	25ϕ 500 sq. hd. mach. bolt, hex. nut	8	No detail
Pin bearing †	25ϕ 400 sq. hd. mach. bolt, hex. nut	8	No detail
Wall plate	16ϕ 200 sq. hd. mach. bolt, 2 hex. nuts	22	No detail
Sill plate	16ϕ 200 sq. hd. mach. bolt, 2 hex. nuts	16	No detail
Hoist	To suit hoist		Contractors des.

* For Check Structures.
† For Wasteways.

TYPE II RADIAL GATE

STRUCTURE	STRUCTURE LOCATION STA.	DIMENSION E	DIMENSION H	WEIGHT OF GATE
Check	33+990	7.43	2.3	1529.4 Kg.
Check	37+329	7.43	2.3	1529.4 Kg.
Check	41+440	7.43	2.3	1529.4 Kg.
Check	43+300	7.43	2.3	1529.4 Kg.
Check	46+967	7.43	2.3	1529.4 Kg.
Check	49+410	7.43	2.3	1529.4 Kg.
Check	53+055	7.43	2.3	1529.4 Kg.
Check	55+290	6.43	2.2	1503.3 Kg.
Wasteway	58+047	6.43	2.2	1503.3 Kg.
Check	58+053	6.43	2.2	1503.3 Kg.
Check	59+600	6.43	2.2	1503.3 Kg.
Check	62+170	6.43	2.2	1503.3 Kg.
Wasteway	* 0+083.03	6.43	2.2	1503.3 Kg.
Check	* 0+074.00	6.43	2.2	1503.3 kg.
Wasteway	* 4+579.51	6.43	2.2	1503.3 kg.
Check	* 4+606.00	6.43	2.2	1503.3 kg.

* East Ghor Main Canal - South

All dimensions in Millimeters

Not to scale

	By	Date	Chkd	Date
Dsn.	WH	7/16	NT	10-6-58
Drwn	TG.Y	10-7-58	WH	
Trac.				
Sub.	[redacted]			

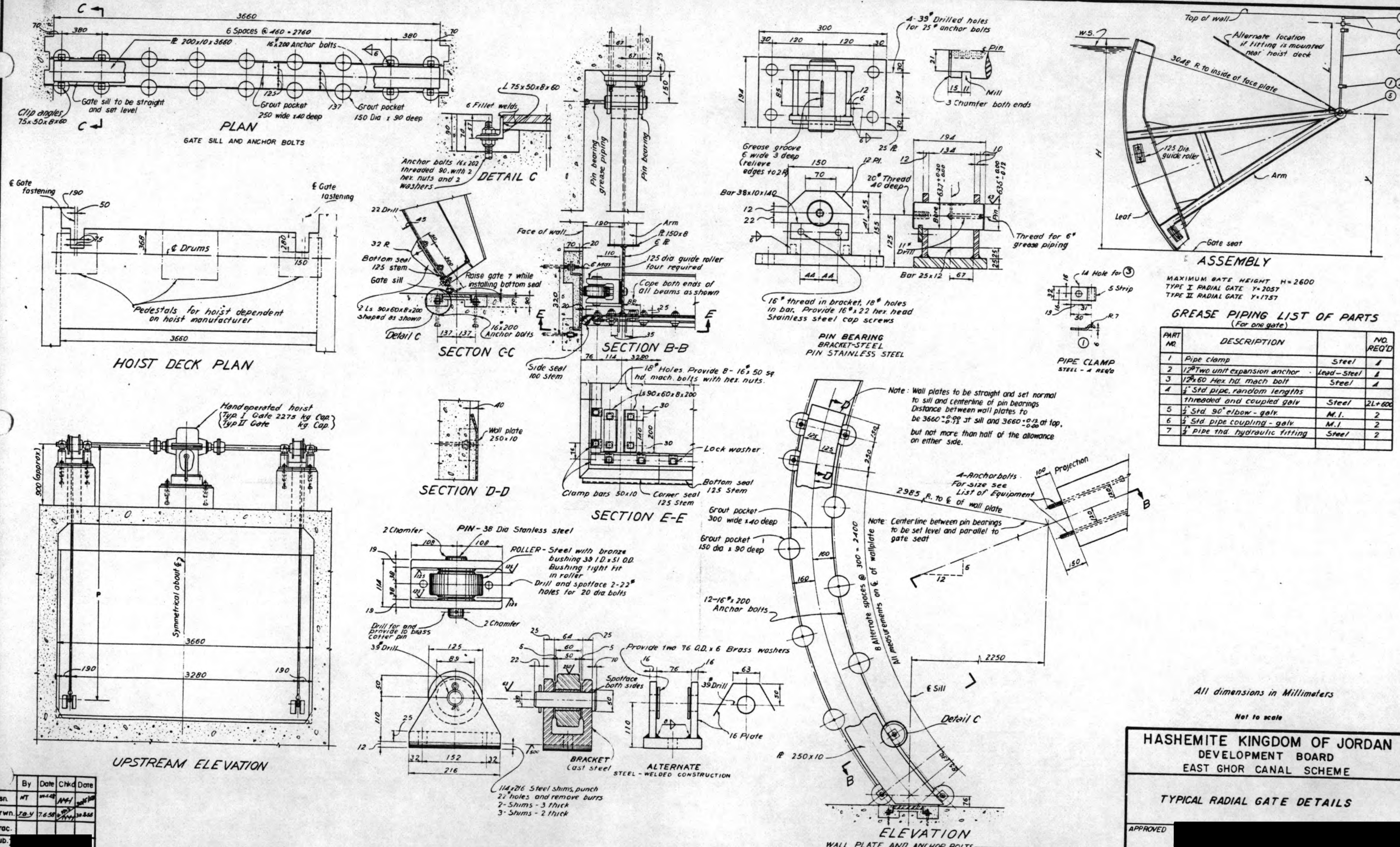
Prepared under the supervision of MICHAEL BAKER, JR. INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

RADIAL GATE TYPE II
AND HOIST ROPE DETAIL

APPROVED: [redacted]

AMMAN, JORDAN | DATE: 1-9-1958 | DWG. NO.



GREASE PIPING LIST OF PARTS
(For one gate)

PART NO.	DESCRIPTION		NO. REQ'D
1	Pipe clamp	Steel	4
2	12" Two unit expansion anchor	Lead-Steel	4
3	12"x60 Hex hd. mach bolt	Steel	4
4	½" Std pipe, random lengths threaded and coupled galv	Steel	2L+600
5	½" Std. 90° elbow - galv.	M.I.	2
6	½" Std pipe coupling - galv.	M.I.	2
7	½" pipe thd. hydraulic fitting	Steel	2

All dimensions in Millimeters

Not to scale

	By	Date	Chkd	Date
Dsn.	NT			
Drwn.		7.6.58		
Trac.				
Sub.	[redacted]			

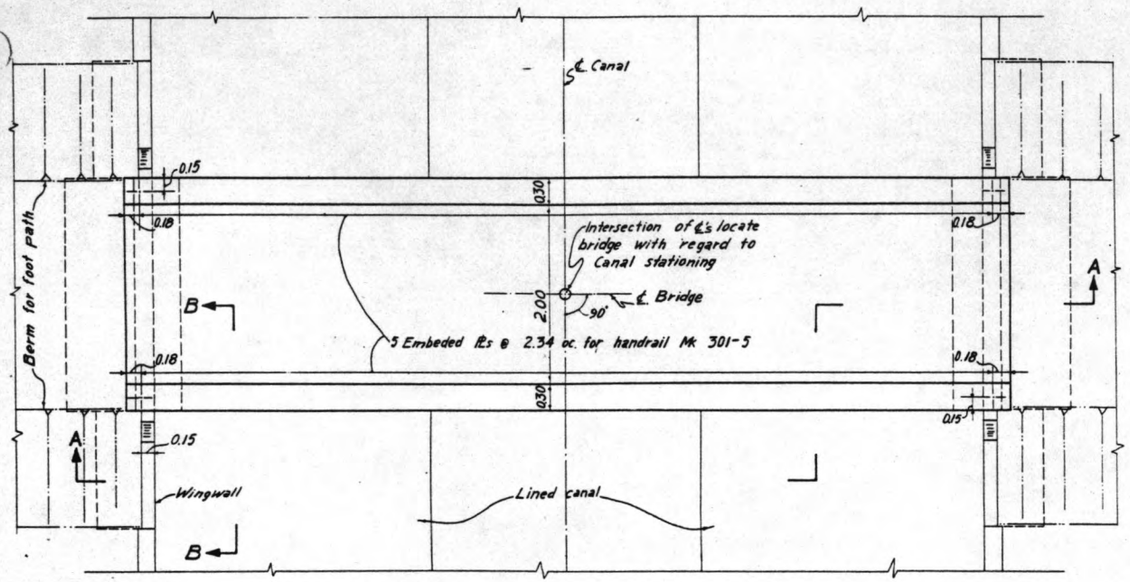
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

TYPICAL RADIAL GATE DETAILS

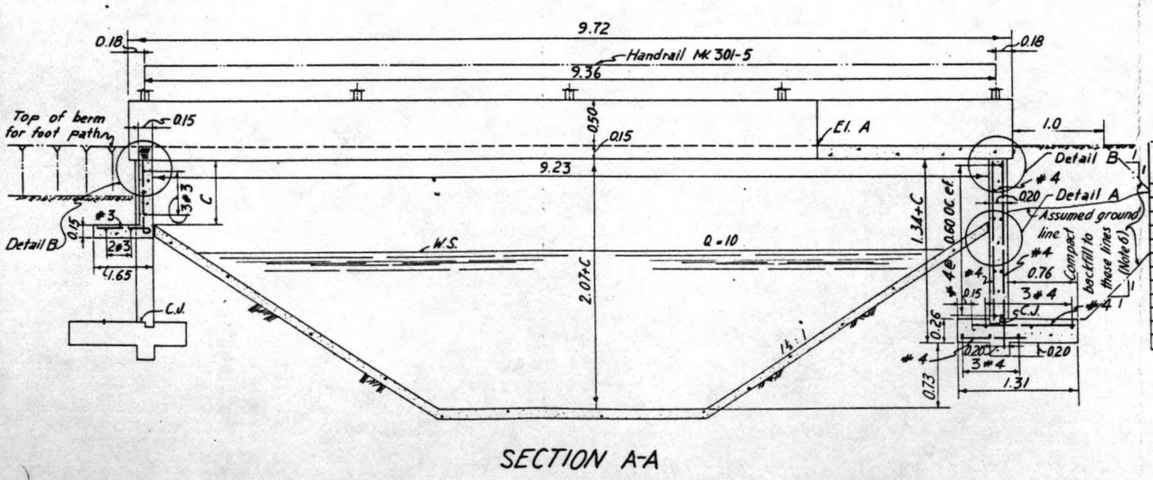
APPROVED [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

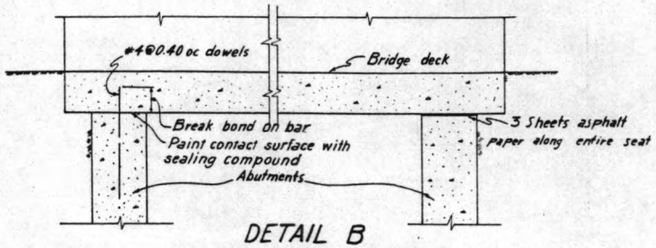
AMMAN, JORDAN — DATE 1-9-1958 — DWG. NO. EGC/173



PLAN



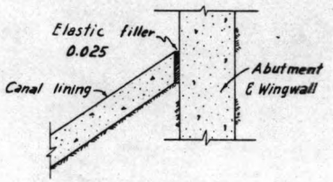
SECTION A-A



DETAIL B

Section thru abutment
Reinf not shown

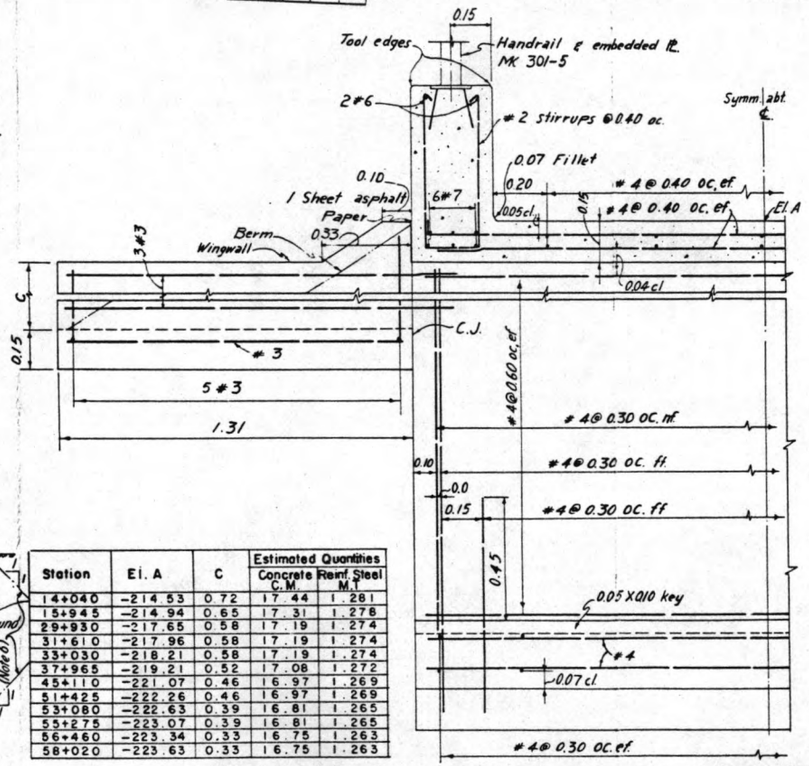
Scale 0 0.5 M.



DETAIL A

Reinf not shown

Scale 0 0.5 M.



SECTION B-B

Scale 0 0.5 M.

Station	El. A	C	Estimated Quantities	
			Concrete C.M.	Reinf. Steel M.T
14+040	-214.53	0.72	17.44	1.281
15+945	-214.94	0.65	17.31	1.278
29+930	-217.65	0.58	17.19	1.274
31+610	-217.96	0.58	17.19	1.274
33+030	-218.21	0.58	17.19	1.274
37+965	-219.21	0.52	17.08	1.272
45+110	-221.07	0.46	16.97	1.269
51+425	-222.26	0.46	16.97	1.269
53+080	-222.63	0.39	16.81	1.265
55+275	-223.07	0.39	16.81	1.265
56+460	-223.34	0.33	16.75	1.263
58+020	-223.63	0.33	16.75	1.263

ESTIMATED QUANTITIES

Concrete, Reinforcement } See schedule

REFERENCE DRAWINGS

Standard Details EGC/98
Plan and Profile EGC/12 to 49
Miscellaneous metals EGC/301

NOTES:

1. Clear cover for reinforcement is 0.05 unless otherwise noted.
2. Lap all bars 30 diameters at splices
3. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
4. Footings of abutments to be placed on undisturbed firm foundation or thoroughly compacted backfill.
5. Concrete design based on a compressive strength of 210 Kg. per sq. cm.
6. Backfill shall be to the original ground surface, and to a top width of 1 meter from the edge of the floor on a 1:1 slope to the original ground line; or, where the original ground line is above floor level, backfill to floor level only. All backfill to be compacted. See Section A-A.

Scale 0 1 2 M.
Except as noted

	By	Date	Chkd	Date
Dsn.	[redacted]	3/31/58	[redacted]	4/1/58
Drwn	Kh. Ba.	12.5.58	[redacted]	11/1/58
Trac.				
Sub.	[redacted]			

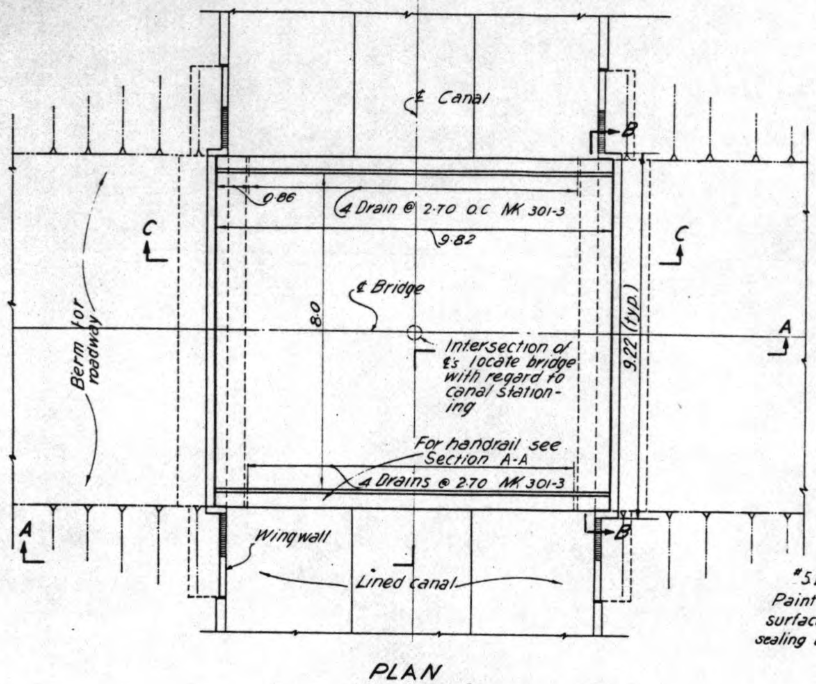
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

TYPICAL FOOT BRIDGE

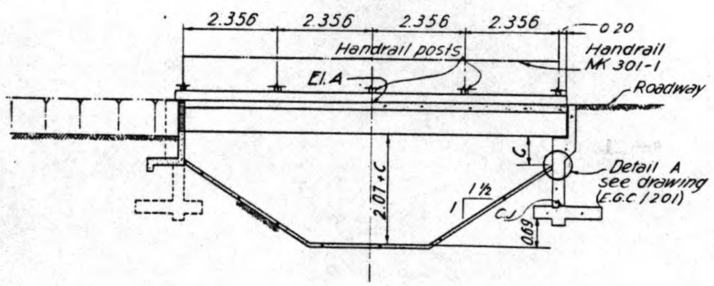
APPROVED: [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

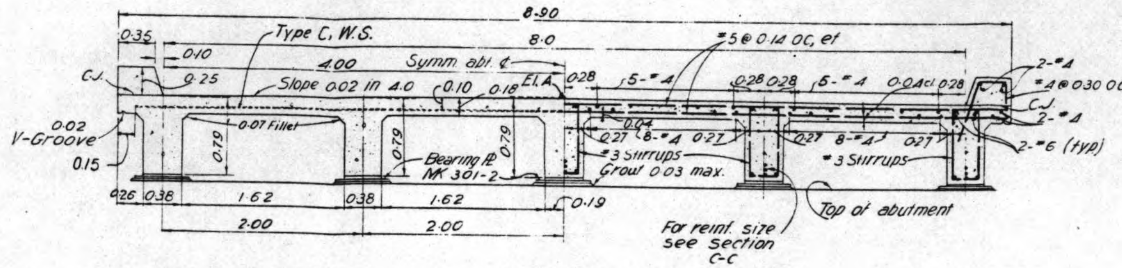
AMMAN, JORDAN | DATE 1-9-1958 | DWG. Nº EGC/201



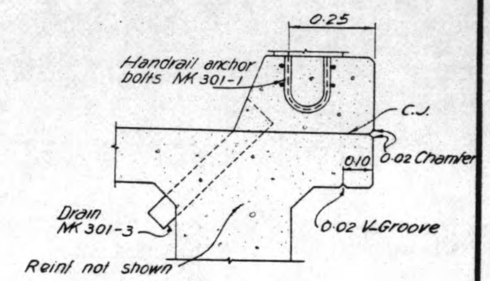
PLAN



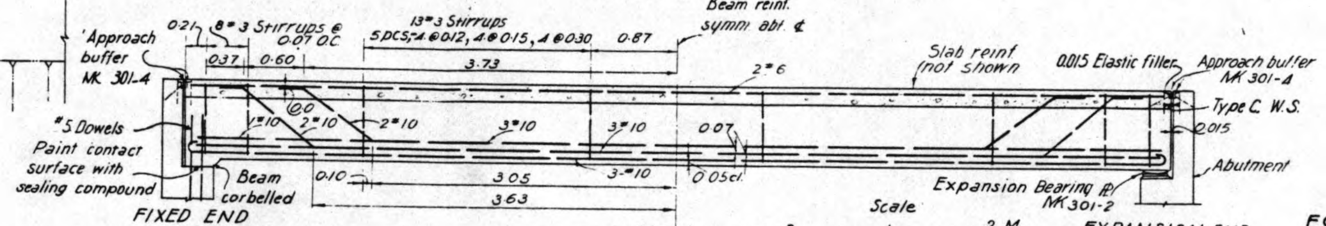
SECTION A-A



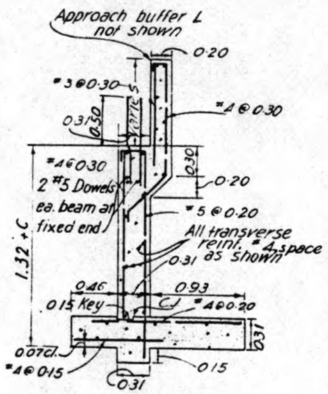
SECTION B-B
(Expansion End)
Scale, 0 – 2 M.



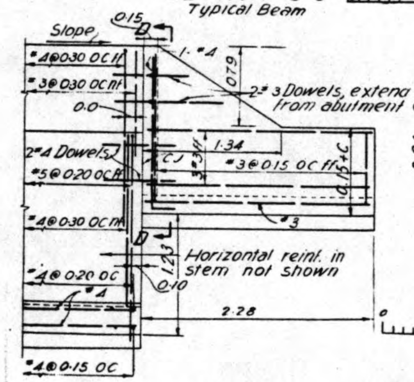
CURB DETAIL
Not to scale



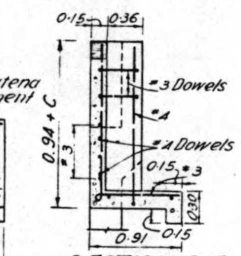
SECTION C-C
Typical Beam
Scale 0 – 2 M.



BRIDGE ABUTMENT
Scale 0 – 2 M.



ELEVATION
ABUTMENT – WING WALL
Scale 0 – 2 M.



SECTION D-D
Scale 0 – 2M

SCHEDULE

Station	El. A	C	Estimated Quantities Concrete C.M.	Reinf. Steel M.T.
10+259	-213.16	0.72	57.51	6.067
15+092	-214.13	0.65	57.01	6.050
18+118	-214.67	0.65	57.01	6.050
22+660	-215.58	0.65	57.01	6.050
35+555	-218.06	0.52	56.09	6.020
41+378	-218.16	0.52	56.09	6.020
65+195	-224.47	0.26	54.23	5.958

ESTIMATED QUANTITIES

Concrete
Reinforcement steel } See schedule

REFERENCE DRAWINGS

Standard Details EGC/98
Plan and Profile EGC/12 to 49
Miscellaneous Metals EGC/301

NOTES:

1: Bridge designed for 2 lanes of H20-S16-44 loading in accordance with "Standard Specifications for Highway Bridges" The American Association of State Highway Officials 1953 Edition.
2: Clear cover for reinf. is 0.05 unless otherwise noted.
3: Lap all bars 30 diameters at splices
4: All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
5: Footings of abutments to be placed on undisturbed firm foundation.
6: For structure backfill see note 6 on dwg. EGC/201
7. Concrete design based on a compressive strength of 210 Kg. per sq. cm.

0 1 2 3 4 M.
Scale
Except as noted

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

PRIMARY ROAD
SQUARE HIGHWAY BRIDGE

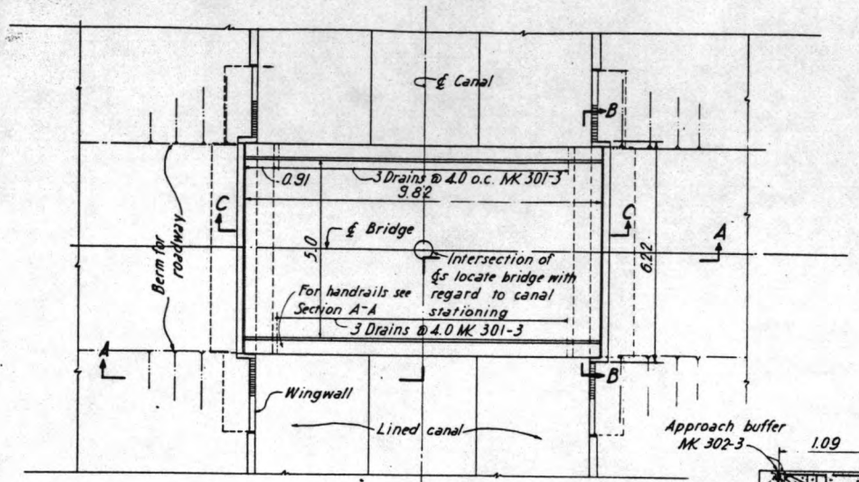
APPROVED [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

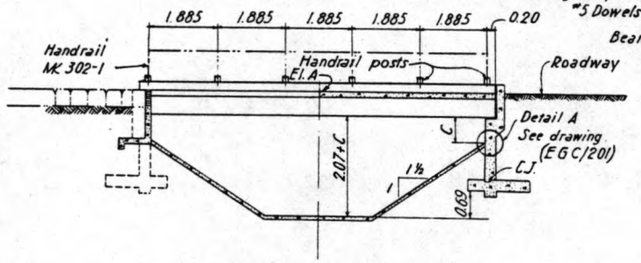
AMMAN JORDAN | DATE 1-9-1958 | DWG. NO. EGC/202

	By	Date	Chkd	Date
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[redacted]



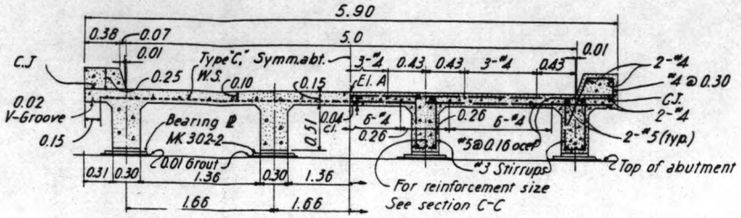
PLAN



SECTION A-A

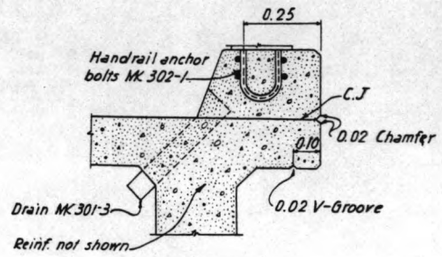
SCHEDULE

Station	El. A	C	Estimated Quantities Concrete C.M.	Reinf. Steel M.T.
3+110	-211.59	0.72	35.24	4.030
4+740	-211.89	0.72	35.24	4.030
6+585	-212.22	0.72	35.24	4.030
11+320	-213.50	0.72	35.24	4.030
16+915	-214.60	0.65	34.88	4.018
18+990	-214.99	0.65	34.88	4.018
20+565	-215.35	0.65	34.88	4.018
24+286	-216.13	0.58	34.52	4.008
36+820	-218.44	0.52	34.20	3.997
46+650	-220.84	0.46	33.91	3.987
54+290	-222.38	0.39	33.55	3.976
59+585	-223.53	0.26	32.89	3.954
62+260	-224.02	0.26	32.89	3.954



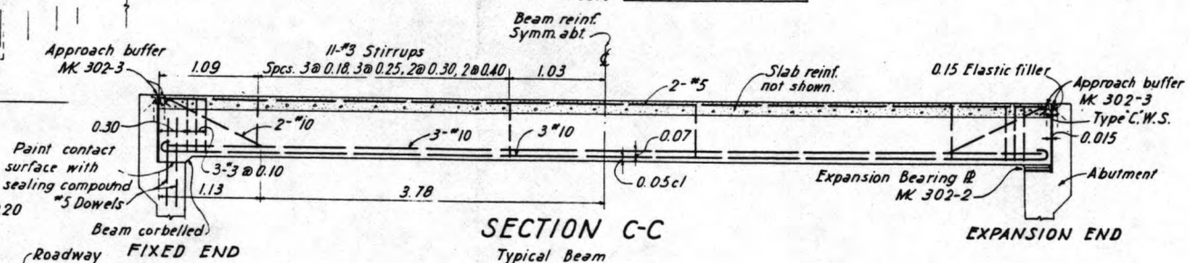
SECTION B-B

Expansion end
Scale 0 1 2 M.



CURB DETAIL

not to Scale



SECTION C-C

Typical Beam
Scale 0 1 2 M.

ESTIMATED QUANTITIES

Concrete
Reinforcement } See schedule

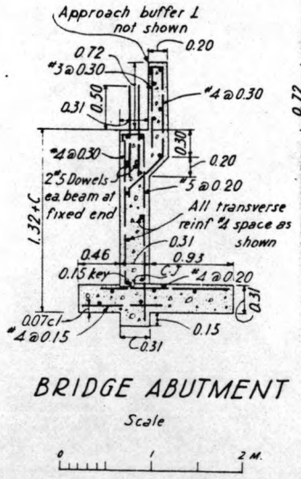
REFERENCE DRAWINGS

Standard Details EGC/98
Plan and Profile EGC/12 to 49
Miscellaneous Metals EGC/301 & 302

NOTES:

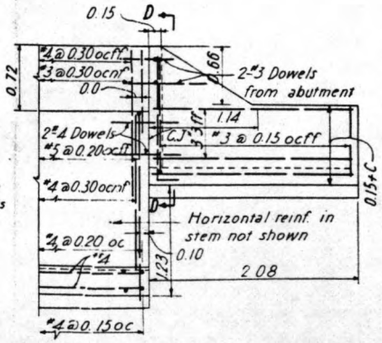
1. Bridge designed for 1 lane of H15-44 loading in accordance with "Standard Specifications" for Highway Bridge the American Association of State Highway officials 1953 edition.
2. Clear cover for reinf. is 0.05 unless otherwise noted.
3. Lap all bars 30 diameters at splices.
4. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
5. Footing of abutments to be placed on undisturbed firm foundation.
6. Concrete design based on a compressive strength of 210 Kg. per sq. cm.
7. For structure backfill see note 6 on dwg. EGC/201

0 1 2 3 4 M.
Scale
Except as noted



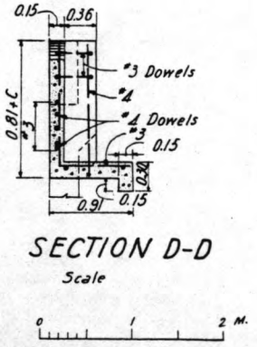
BRIDGE ABUTMENT

Scale 0 1 2 M.



ELEVATION
ABUTMENT-WINGWALL

Scale 0 1 2 M.



SECTION D-D

Scale 0 1 2 M.

	By	Date	Chkd	Date
Dsn.	[redacted]	[redacted]	NH	[redacted]
Drwn.	[redacted]	[redacted]	[redacted]	3/8/58
Trac.				
Sub	[redacted]			

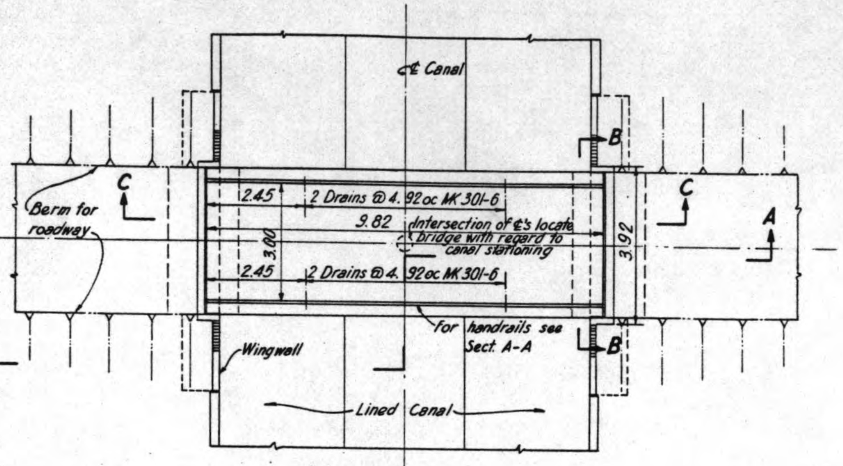
Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

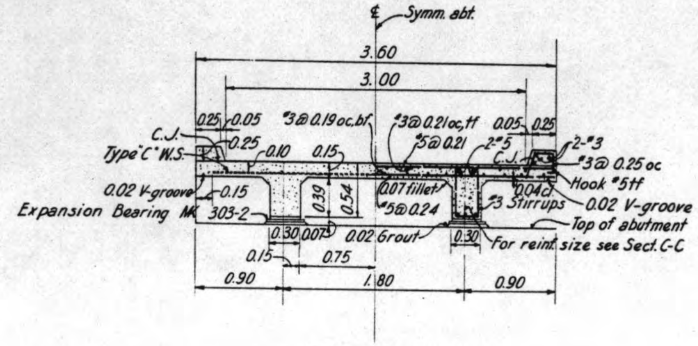
SECONDARY ROAD
SQUARE HIGHWAY BRIDGE

APPROVED [redacted]

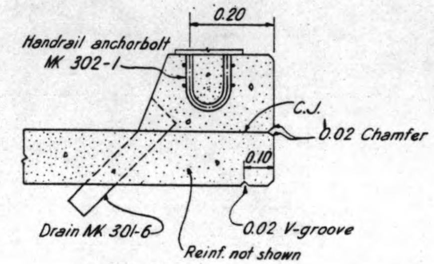
AMMAN JORDAN | DATE 1-9-1958 | DWG. NO. EGC/203



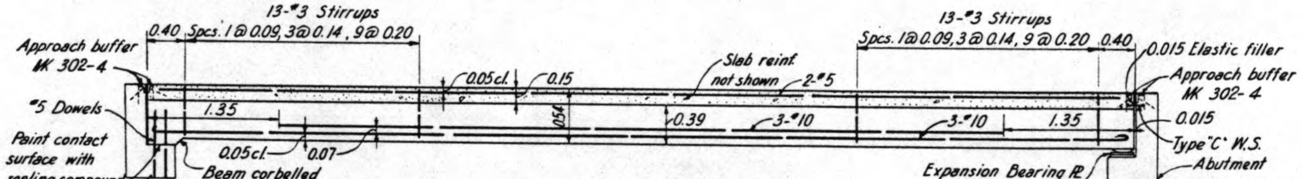
PLAN



SECTION B-B
(Expansion End)
Scale 0 1 2 M



CURB DETAIL
Not to scale



SECTION C-C
Typical Beam
Scale 0 1 2 M.

ESTIMATED QUANTITIES:

Concrete	19.9 C.M. per bridge
Reinforcement	2.01 M.T. per bridge

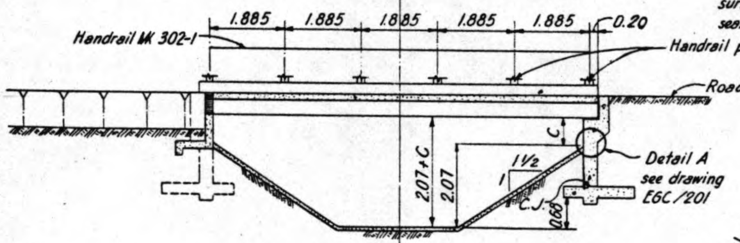
REFERENCE DRAWINGS:

Standard Details EGC/98
Plan & Profile EGC/12 to 49
Miscellaneous Metals EGC/301, 302

NOTES:

1. Bridge designed for 1 lane of H10 loading in accordance with "Standard Specifications for Highway Bridges" The American Association of State Highway Officials 1953 Edition.
2. Clear cover for reinf. is 0.05 unless otherwise noted.
3. Lap all bars 30 diameters at splices.
4. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
5. Footings of abutments to be placed on undisturbed firm foundation.
6. For structure backfill see note 6 on dwg. EGC/201
7. Concrete design based on a compressive strength of 210 Kg. per sq. cm.

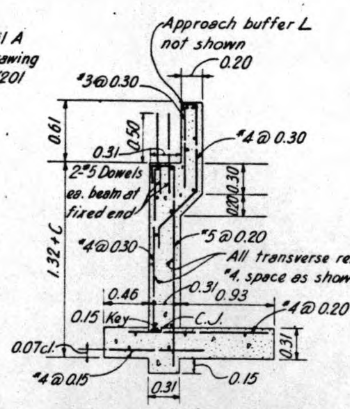
Scale 0 1 2 3 4 M.
Except as noted



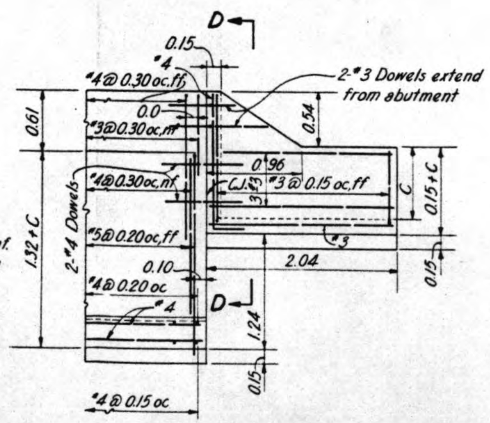
SECTION A-A

FINAL
CANAL CAPACITY & C

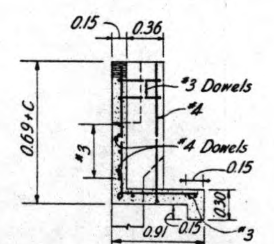
Q	C	Q	C
20	72	16	46
19	65	15	39
18	58	14	33
17	52	13	26



BRIDGE ABUTMENT
Scale 0 1 2 M.



ELEVATION
ABUTMENT-WINGWALL
Scale 0 1 2 M.



SECTION D-D
Scale 0 1 2 M.

	By	Date	Chkd	Date
Dsn.	NT	4-6-58		4-6-58
Drwn.		12.7.58		
Trac.				
Sub. [redacted]				

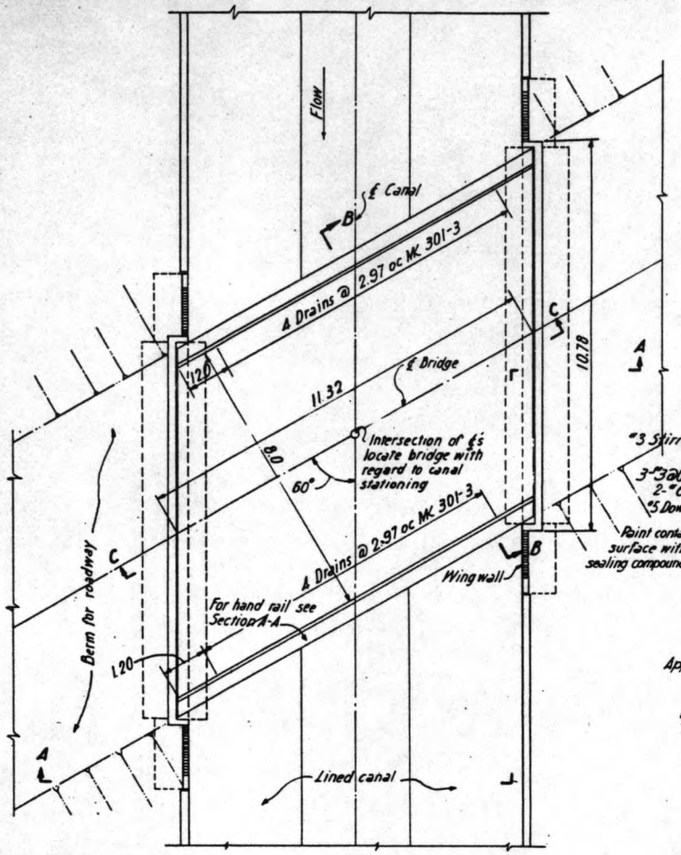
Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

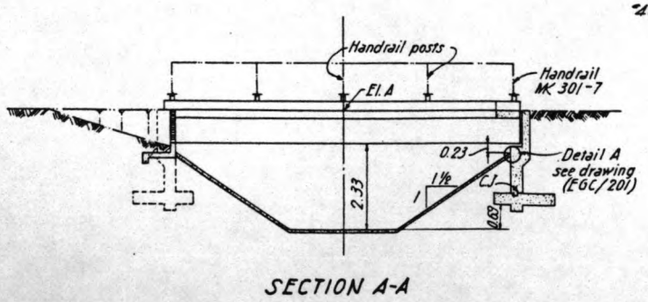
SQUARE FARM BRIDGE

APPROVED: [redacted]

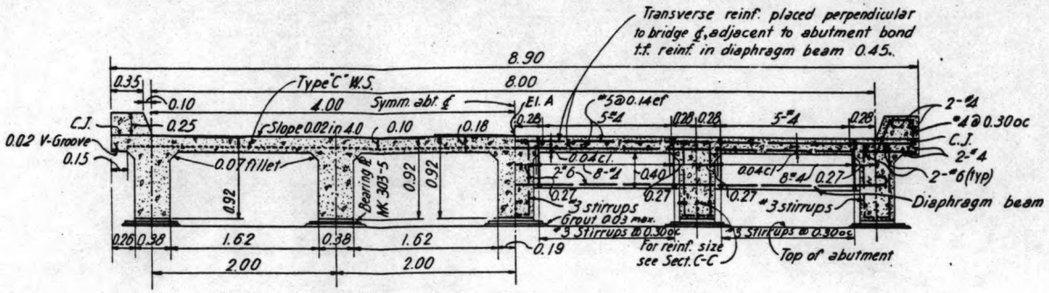
AMMAN, JORDAN | DATE. 1-9-1958 | DWG. NO. EGC/204



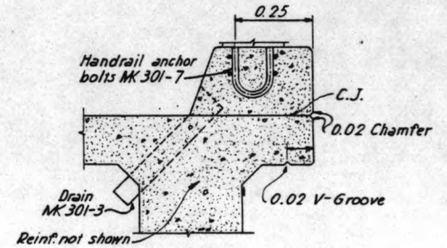
PLAN



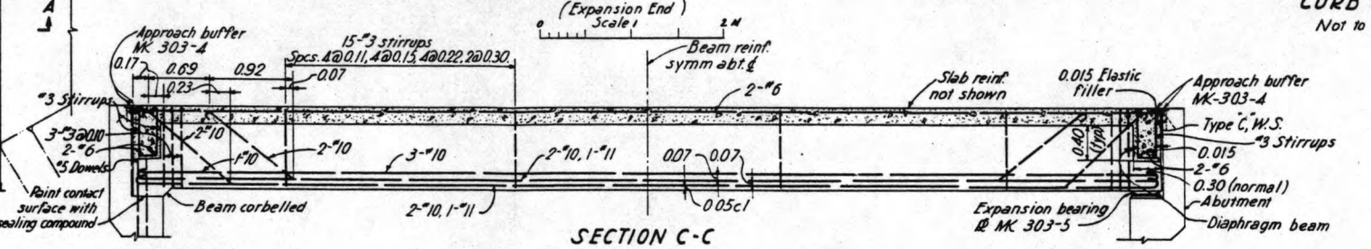
SECTION A-A



SECTION B-B
(Expansion End)

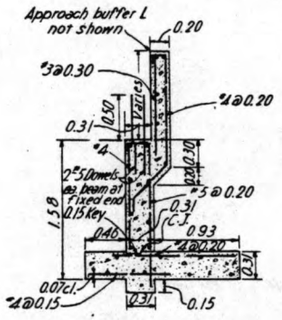


CURB DETAIL
Not to scale

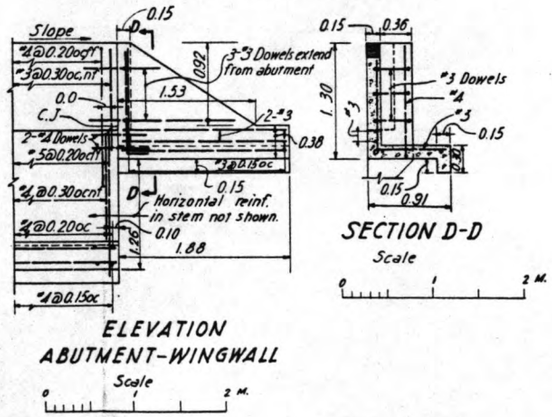


FIXED END

SECTION C-C
Typical Beam
Scale
0 1 2 M.



BRIDGE ABUTMENT
Scale
0 1 2 M



ELEVATION
ABUTMENT-WINGWALL
Scale
0 1 2 M.

SECTION D-D
Scale
0 1 2 M.

ESTIMATED QUANTITIES:

Concrete	67.76 C.M. per bridge
Reinforcement steel	8.90 M.T. per bridge

REFERENCE DRAWINGS:

Standard Details EGC/98
Plan and Profile EGC/44 & 45
Miscellaneous Metals EGC/301 ℄ 303

NOTES:

1. Bridge designed for 2 lanes of H20-S16-44 loading in accordance with "Standard Specifications for Highway Bridges" The American Association of State Highway officials 1953 Edition.
2. Clear cover for reinf. is 0.05 unless other. noted.
3. Lap all bars 30 diameters at splices.
4. All exposed edges of concrete to be chamfered 0.02 unless otherwise noted.
5. Footings of abutments to be placed on undisturbed firm foundation.
6. For structura backfill see note 6 on dwg. EGC/201
7. Concrete design based on a compressive strength of 210 Kg. per sq. cm.

0 1 2 3 4 M.
Scale
Except as noted

SCHEDULE

Station	El. A
61+394.20	-223.58
63+477.00	-223.96

	By	Date	Chk'd	Date
Dsn.	MH	9/1/58	NT	9-1-57
Drwn.	[redacted]	[redacted]	[redacted]	[redacted]
Trac.				
Sub.	[redacted]			

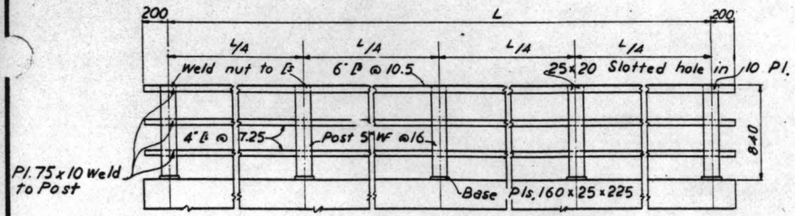
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

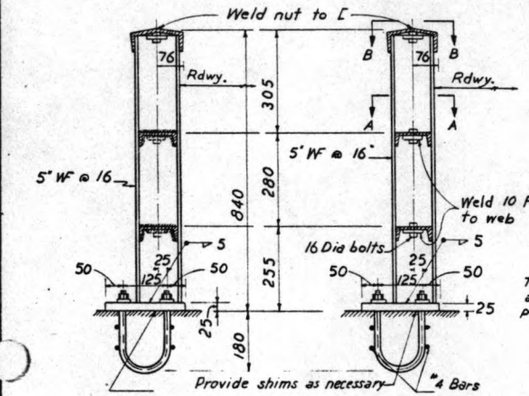
PRIMARY ROAD
SKEW HIGHWAY BRIDGE

APPROVED: [redacted]

AMMAN JORDAN | DATE. 1-9-1958 | DWG. NO. EGC/205

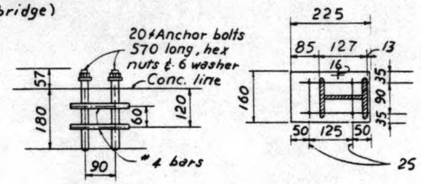


ELEVATION HAND RAIL
(2 Per bridge)

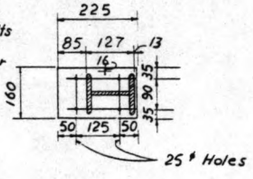


END POST
(4 reqd.)

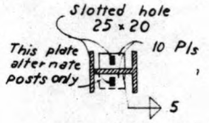
INTERMEDIATE POST
(6 reqd.)



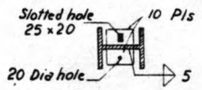
ANCHOR BOLTS
(10 reqd.)



BASE PLATE
(10 reqd.)



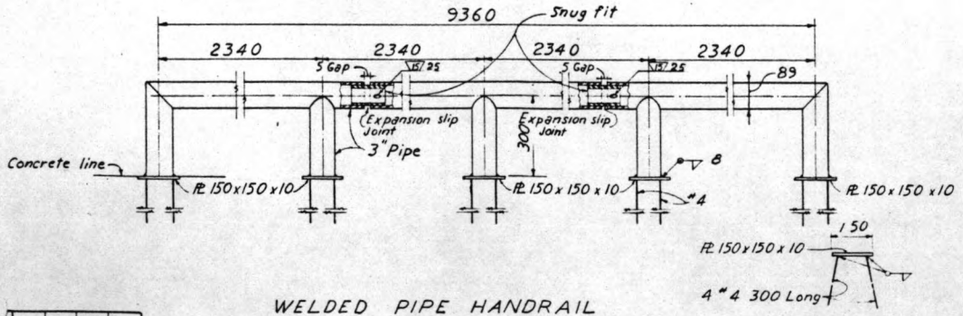
SECTION B-B
(Channel removed)



SECTION A-A

HAND RAIL DETAILS

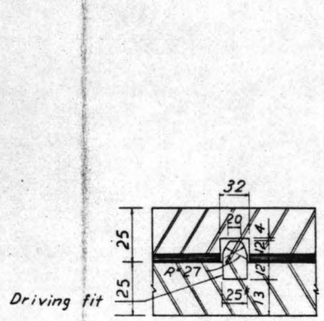
MK. 301 - 1 Square Highway Bridge (EGC/202) L=9420, 2 reqd.
MK 301 -7 Skew Highway Bridge (EGC/205) L=10920 2 reqd.



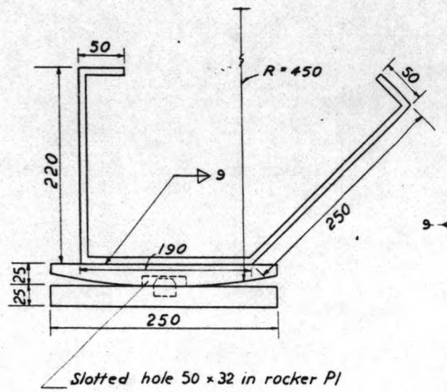
WELDED PIPE HANDRAIL

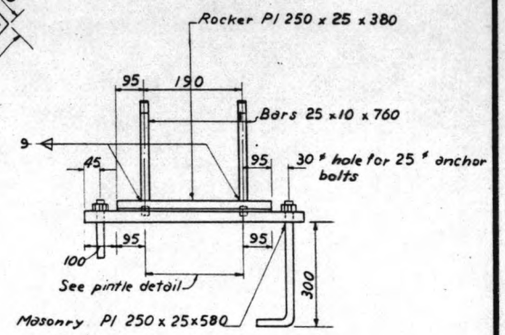
MK. 301 - 5 Foot Bridge (EGC/201) 2 reqd.

PL DETAIL



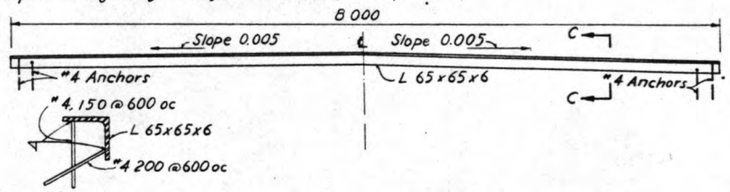
PINTLE DETAIL





EXPANSION BEARING

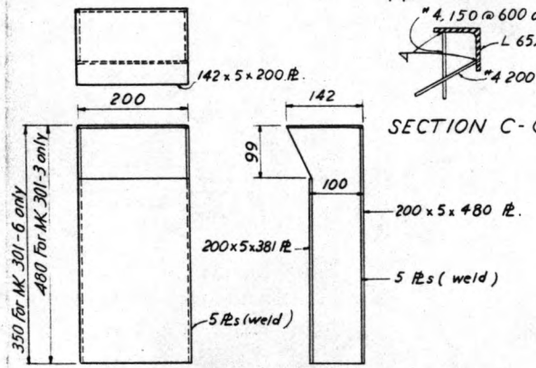
MK. 301 - 2 Square Highway Bridge (EGC/202) 5 reqd.



SECTION C-C

BRIDGE APPROACH BUFFER

MK.301-4 Square Highway Bridge (EGC/202) 4 reqd.



DRAIN DETAIL

MK. 301 -3 Highway Bridge (EGC/202) 8 reqd.
MK 301 -3 Highway Bridge (EGC/203) 6 reqd.
MK 301 -3 Highway Bridge (EGC/203) 8 reqd.
MK 301 -6 Farm Bridge (EGC/20) 4 reqd.

NOTES:

1. For key to welding symbols see EGC/98
2. All structural steel shapes other than plates and angles are designated in the inch system according to the "Steel Construction Manual of the American Institute of Steel Construction."
3. All pipes to be standard weight black, of size specified.
4. Corners and edges of all plates and bars to be dressed smooth.
5. All dimensions are given in millimeters.
6. Material to be structural steel except as noted, see specifications.
7. For painting see specifications.

Not to scale

	By	Date	Chkd	Date
Dsn.				
Drwn.	H.F.J.	3.4.58	[illegible]	20.5.58
Trac.				
Sub [illegible]				

Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

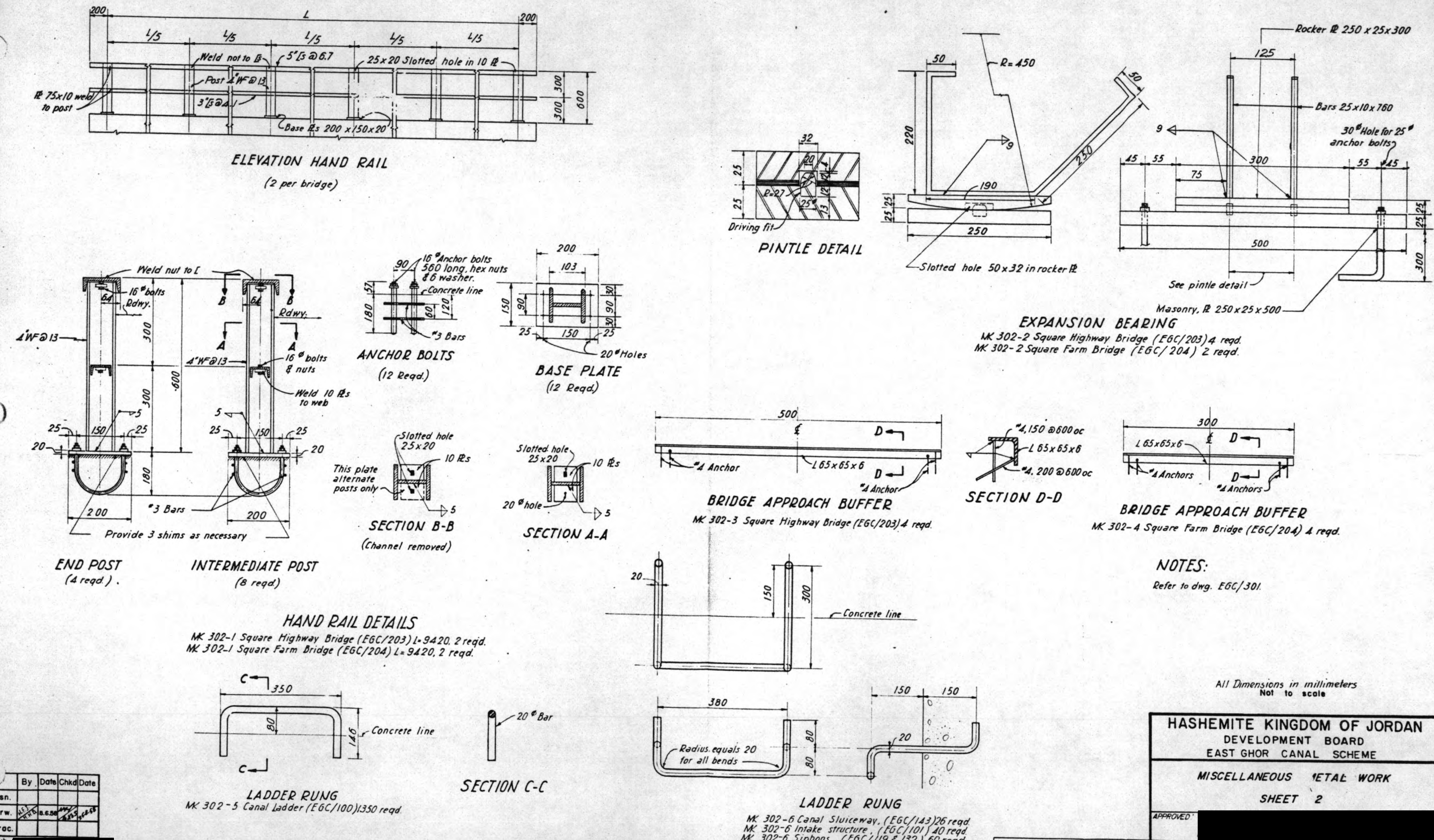
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

MISCELLANEOUS METAL WORK

SHEET 1

APPROVED : [redacted]

AMMAN, JORDAN	DATE 1-9-1958	DWG. NO. EGC/301


ELEVATION HAND RAIL
(2 per bridge)
Weld not to ℄
5" [s @ 6.7
25 x 20 Slotted hole in 10 ℙ
Post 4" WF @ 13
3" [s @ 4.1
℘ 75x10 weld to post
Base ℙs 200 x 150 x 20
PINTLE DETAIL
Driving fit
EXPANSION BEARING
MK 302-2 Square Highway Bridge (EGC/203) 4 reqd.
MK 302-2 Square Farm Bridge (EGC/204) 2 reqd.
Rocker ℙ 250 x 25 x 300
Bars 25 x 10 x 760
30ᶲ Hole for 25ᶲ anchor bolts
Slotted hole 50 x 32 in rocker ℙ
See pintle detail
Masonry ℙ 250 x 25 x 500
R = 450
END POST
(4 reqd.)
INTERMEDIATE POST
(8 reqd)
Weld nut to [
16ᶲ bolts
Rdwy.
4" WF @ 13
16ᶲ bolts & nuts
Weld 10 ℙs to web
#3 Bars
Provide 3 shims as necessary
ANCHOR BOLTS
(12 Reqd.)
16ᶲ Anchor bolts 560 long, hex nuts & 6 washer.
Concrete line
#3 Bars
BASE PLATE
(12 Reqd.)
20ᶲ Holes
SECTION B-B
(Channel removed)
Slotted hole 25x20
10 ℙs
This plate alternate posts only
SECTION A-A
Slotted hole 25x20
10 ℙs
20ᶲ hole
HAND RAIL DETAILS
MK 302-1 Square Highway Bridge (EGC/203) L = 9420, 2 reqd.
MK 302-1 Square Farm Bridge (EGC/204) L = 9420, 2 reqd.
BRIDGE APPROACH BUFFER
MK 302-3 Square Highway Bridge (EGC/203) 4 reqd.
#4 Anchor
L 65x65x6
SECTION D-D
#4, 150 @ 600 oc
L 65x65x6
#4, 200 @ 600 oc
BRIDGE APPROACH BUFFER
MK 302-4 Square Farm Bridge (EGC/204) 4 reqd.
#4 Anchors
LADDER RUNG
MK 302-5 Canal Ladder (EGC/100) 1350 reqd.
Concrete line
SECTION C-C
20ᶲ Bar
LADDER RUNG
MK 302-6 Canal Sluiceway, (EGC/143) 26 reqd.
MK 302-6 Intake structure, (EGC/101) 40 reqd.
MK 302-6 Siphons (EGC/119 & 132) 60 reqd.
Radius equals 20 for all bends

NOTES:

Refer to dwg. EGC/301.

All Dimensions in millimeters
Not to scale

	By	Date	Chkd	Date
Dsn.				
Drw.		6.6.58		
Trac.				
Sub. [redacted]				

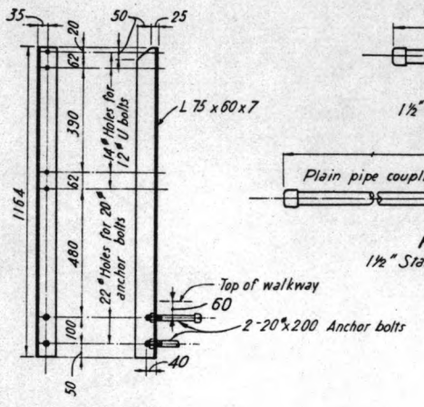
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

MISCELLANEOUS METAL WORK
SHEET 2

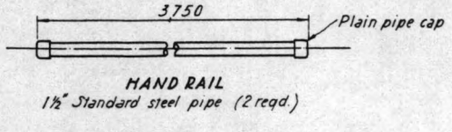
APPROVED: [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

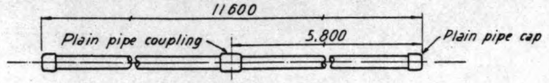
AMMAN, JORDAN	DATE 1-9-1958	DWG. NO. EGC/302



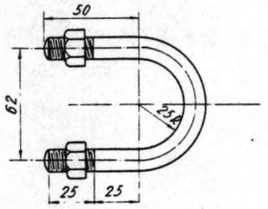
RAILING POST
(12 reqd)



HAND RAIL
1½" Standard steel pipe (2 reqd.)

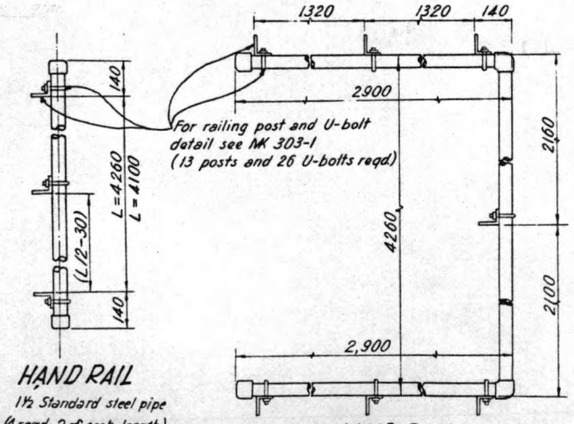


HAND RAIL
1½" Standard steel pipe (1 reqd)



U-BOLT
12 DIA BOLT STEEL (24 reqd.)
& STD. HEX. NUTS

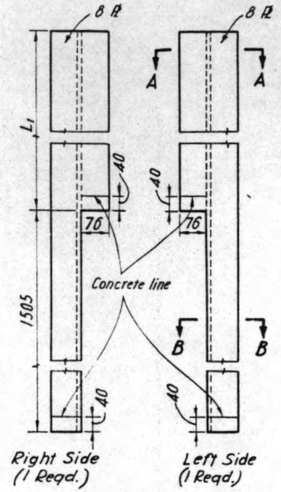
PIPE AND ANGLE RAILING
MK 303-1 Radial Gate Check (EGC/147)



HAND RAIL
1½ Standard steel pipe
(4 reqd., 2 of each length)

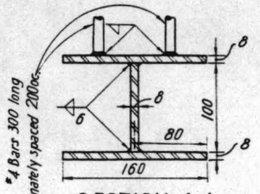
HAND RAIL
1½" Standard steel pipe (2 reqd.)

PIPE AND ANGLE RAILING
MK 303 - 6 Yarmouk Wasteway (EGC/141)

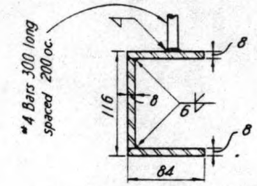


Right Side
(1 Reqd.)

Left Side
(1 Reqd.)



SECTION A-A

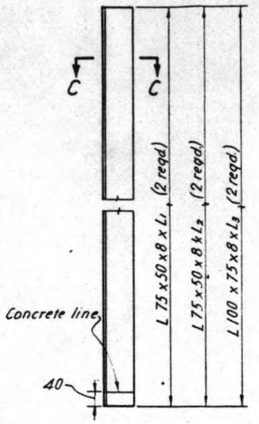


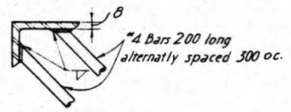
SECTION B-B

STOP LOG GUIDES
MK 303-2 Radial Gate check (EGC/147)

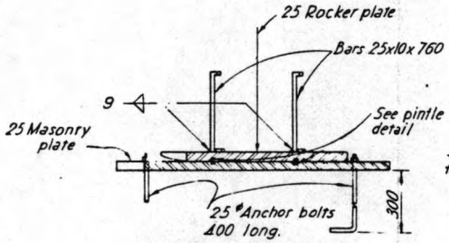
DIMENSION SCHEDULE

Q	L_1	L_2	L_3
20	1122	2627	3210
19	1091	2596	3180
18	1019	2524	3110
17	957	2462	3050
16	896	2401	2990
15	823	2328	2920
14	762	2267	2860
13	689	2194	2790

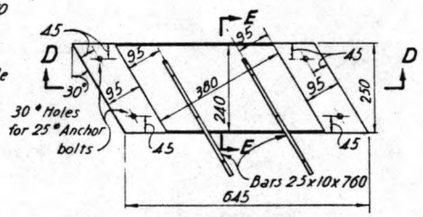




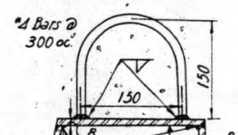
SECTION C-C



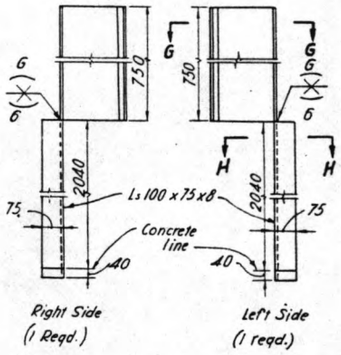
SECTION D-D



PLAN

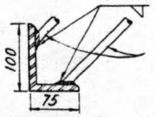


SECTION G-G



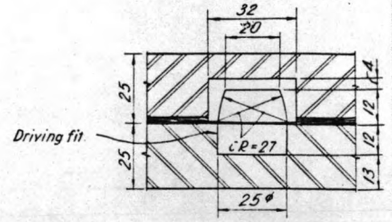
Right Side
(1 Reqd.)

Left Side
(1 reqd.)

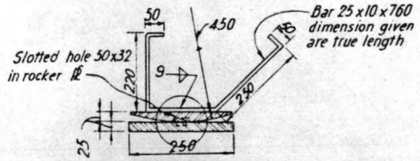


SECTION H-H

STOP LOG GUIDES
MK 303-3 Yarmouk Wasteway (EGC/141)

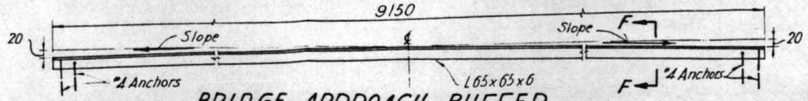


PINTLE DETAIL

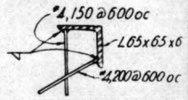


SECTION E-E

EXPANSION BEARING
MK 303-5 Skew Highway Bridge (EGC/205) 5 reqd.



BRIDGE APPROACH BUFFER
MK 303-45 skew Highway Bridge (EGC/205) 4 reqd



SECTION F-F

NOTES:
Refer to drawing EGC/301.

All dimensions in millimeters
Not to scale

	By	Date	Chkd	Date
Dsn.				
Drwn.	J.E.V	2.7.58	[redacted]	[redacted]
Sub.	[redacted]			

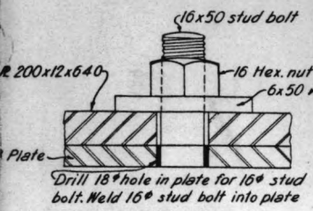
HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

MISCELLANEOUS METAL WORK
SHEET 3

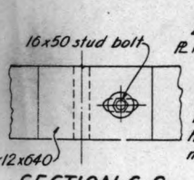
APPROVED [redacted]

prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

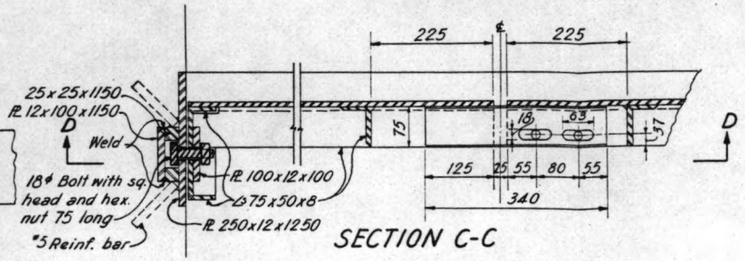
AMMAN, JORDAN | DATE. 1-9-1958 | DWG.NO. EGC/303



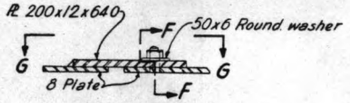
SECTION F-F



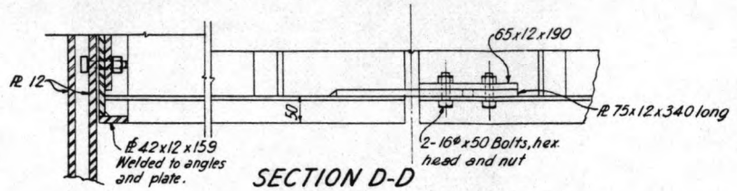
SECTION G-G



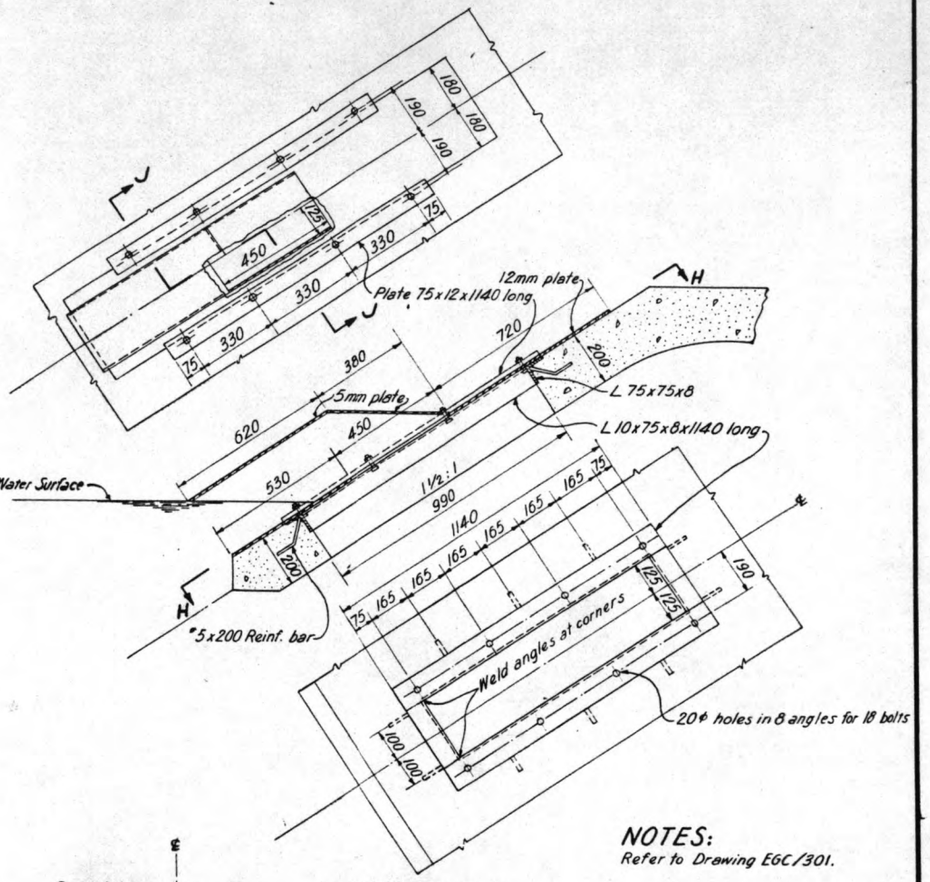
SECTION C-C



SECTION E-E

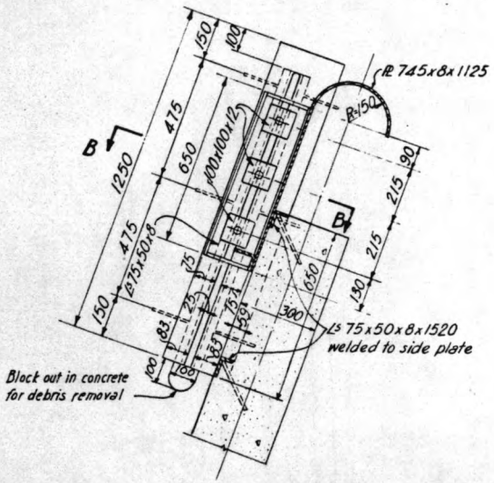


SECTION D-D

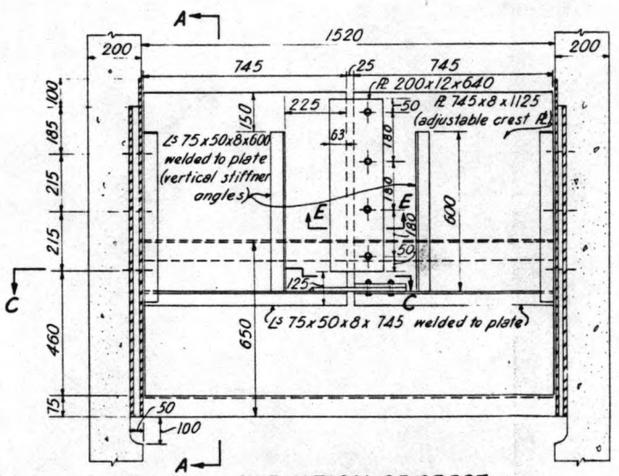


SECTION H-H

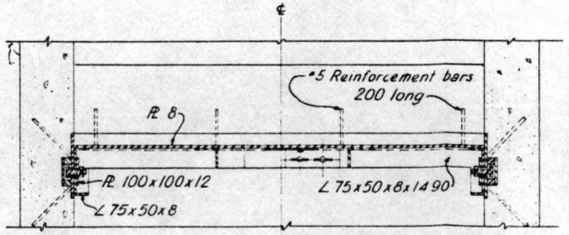
NOTES:
Refer to Drawing EGC/301.



SECTION A-A

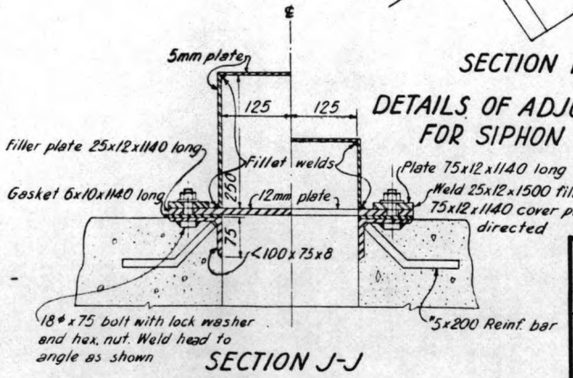


ELEVATION OF CREST



SECTION B-B

DETAILS OF ADJUSTABLE CREST FOR SIPHON WASTE WAY



SECTION J-J

DETAILS OF ADJUSTABLE AIR VENT FOR SIPHON WASTE WAY

All dimensions in millimeters
Not to scale

	By	Date	Chkd	Date
Dsn.	NT	6/12/58	NH	25/12/58
Drw.	NT	15.8.58	NH	25/12/58
Trac.				
Sub.	[redacted]			

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

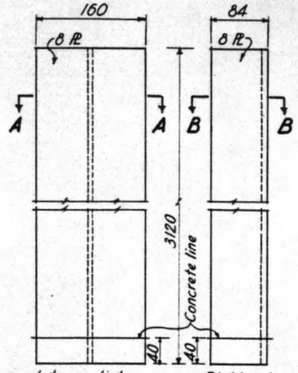
MISCELLANEOUS METAL WORK

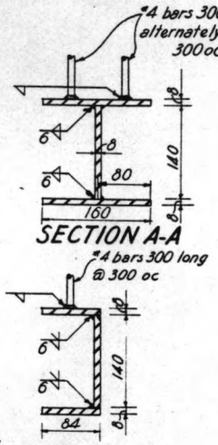
SHEET 4

APPROVED: [redacted]

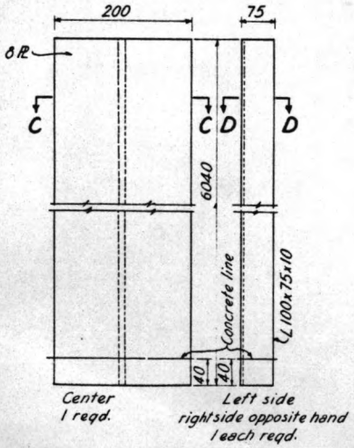
Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

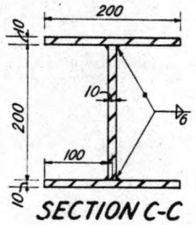
AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO. EGC/304

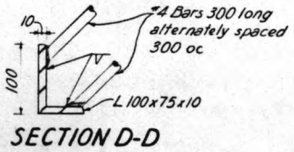




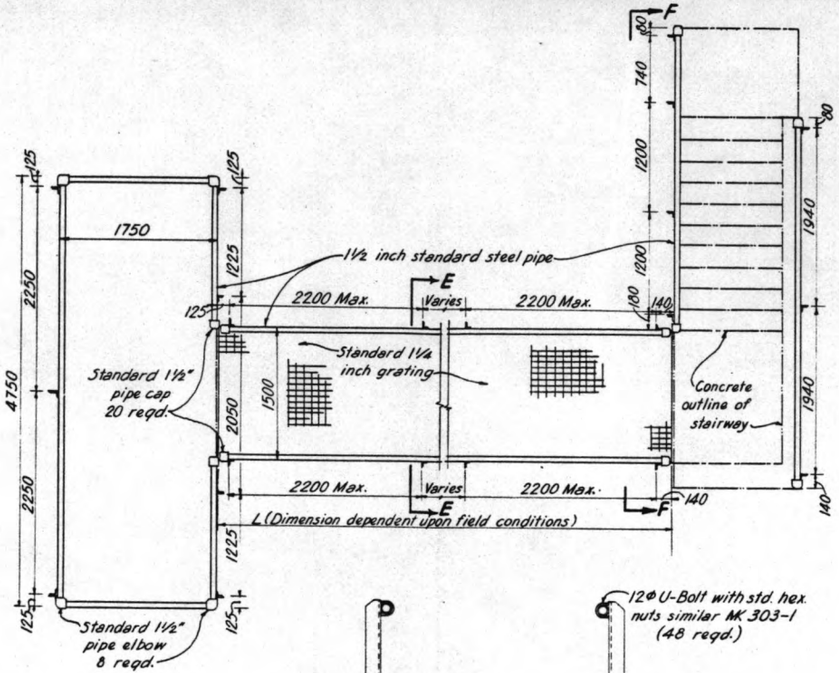
STOP LOG GUIDES
MK 305-1 Control Section & Drop (EGC/104)

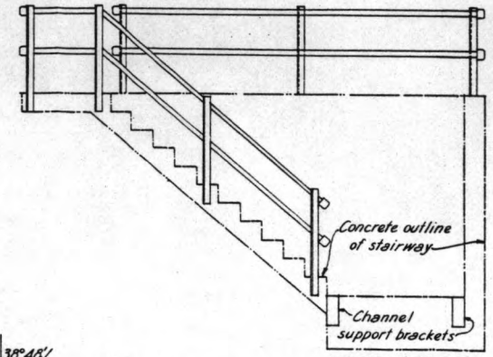




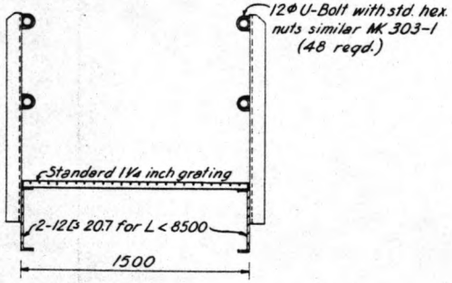


STOP LOG GUIDES
MK 305-2 Intake Structure (EGC/101)

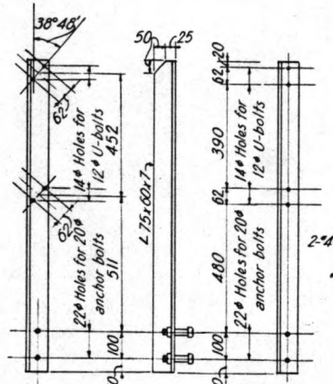




SECTION F-F

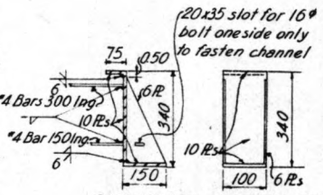


SECTION E-E



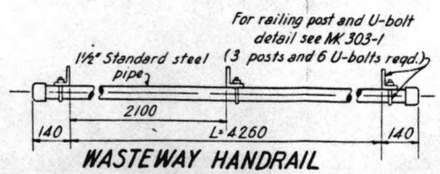
RAILING POST
(Stairway 3 reqd.)

RAILING POST
(21 reqd.)



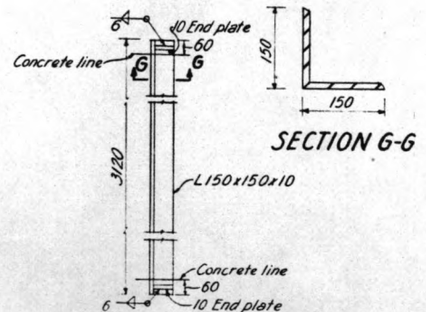
CHANNEL SUPPORT
BRACKET
(4 reqd.)

INTAKE STRUCTURE HANDRAILS AND ACCESS PLATFORM
MK 305-3 Intake Structure (EGC/101)



WASTEWAY HANDRAIL

MK	305-4	Wadi El Arab Wasteway	EGC/144
MK	305-4	Wadi El Hisa Wasteway	EGC/148
MK	305-4	Wadi El Yabis Wasteway	EGC/150
MK	305-4	Wadi Abu Kharrub Wasteway	EGC/153
MK	305-4	Wadi Rajib Wasteway	EGC/155
MK	305-4	Zarqa River Wasteway	EGC/157
MK	305-4	Wadi Bliwa Wasteway	EGC/159



SECTION G-G

INTAKE STRUCTURE PIER NOSE
MK 305-5 Intake Structure (EGC/102)

NOTES:
Refer to drawing EGC/301

All dimensions in millimeters
Not to Scale

	By	Date	Chkd	Date
Dsn.				
Drwn.	[redacted]	1-9-58	[redacted]	1958
Trac.				
Sub	[redacted]			

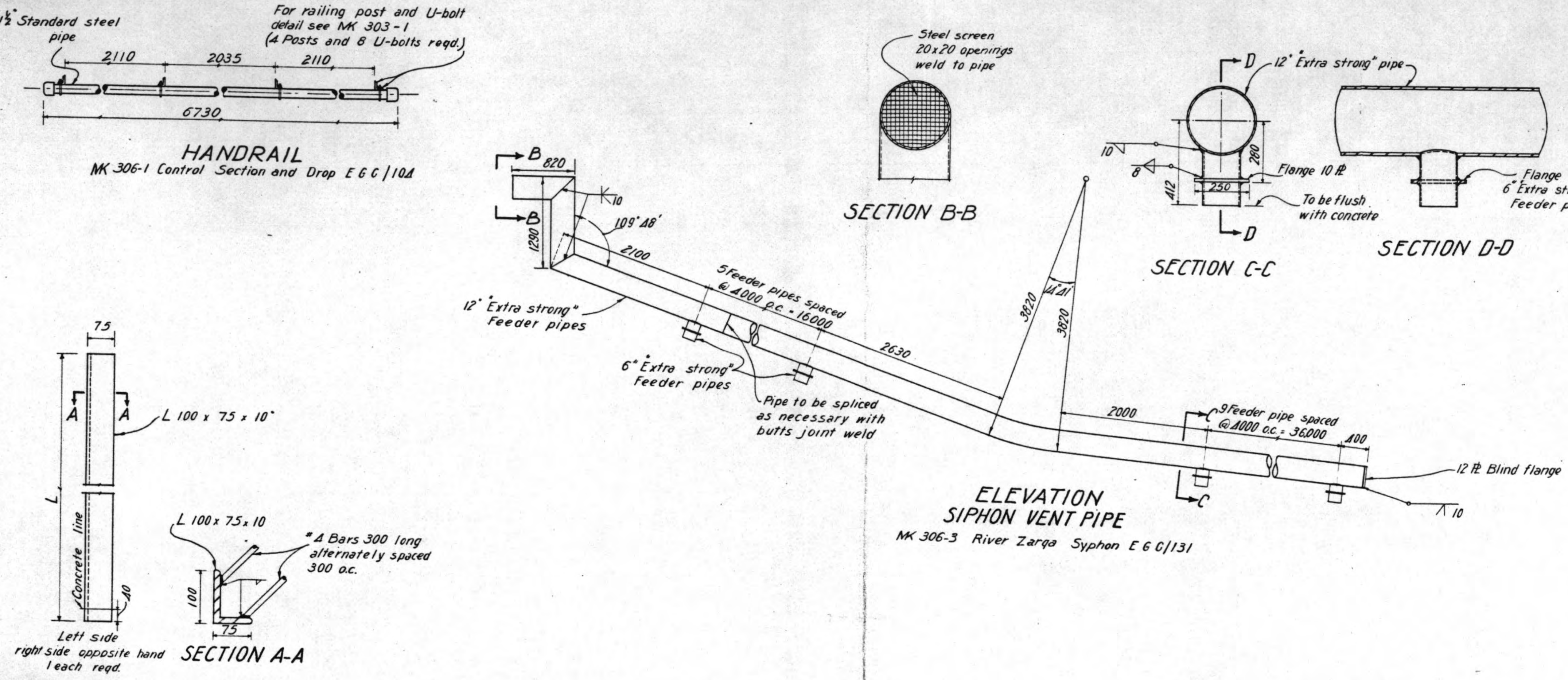
Prepared under the supervision of
MICHAEL BAKER, JR., INC. &
HARZA ENGINEERING CO.

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

MISCELLANEOUS METAL WORK
SHEET 5

APPROVED [redacted]

AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO. EGC/305



WASTEWAY STOP LOG GUIDES

MK 306-2	Wadi El-Arab Wasteway	(E G C/144)	L. 2830
MK 306-2	Wadi El-Hisa Wasteway	(E G C/148)	L. 3030
MK 306-2	Wadi El-Yabis Wasteway	(E G C/150)	L. 3030
MK 306-2	Wadi Abu-Kharrub Wasteway	(E G C/153)	L. 3030
MK 306-2	Wadi Rajib Wasteway	(E G C/155)	L. 3030
MK 306-2	Zarqa River Wasteway	(E G C/157)	L. 2860
MK 306-2	Wadi Bliwa Wasteway	(E G C/158)	L. 2860

NOTES:

Refer to drawing E G C/301

All dimensions in millimeters
Not to Scale

	By	Date	Chkd	Date
Dsn.				
Drwn.				20-858
Trac.				
Sub.	[redacted]			

HASHEMITE KINGDOM OF JORDAN
DEVELOPMENT BOARD
EAST GHOR CANAL SCHEME

MISCELLANEOUS METAL WORK
SHEET 6

APPROVED [redacted]

Prepared under the supervision of MICHAEL BAKER, JR., INC. & HARZA ENGINEERING CO.

AMMAN, JORDAN | DATE 1-9-1958 | DWG. NO. EGC/306