

APPENDIX E

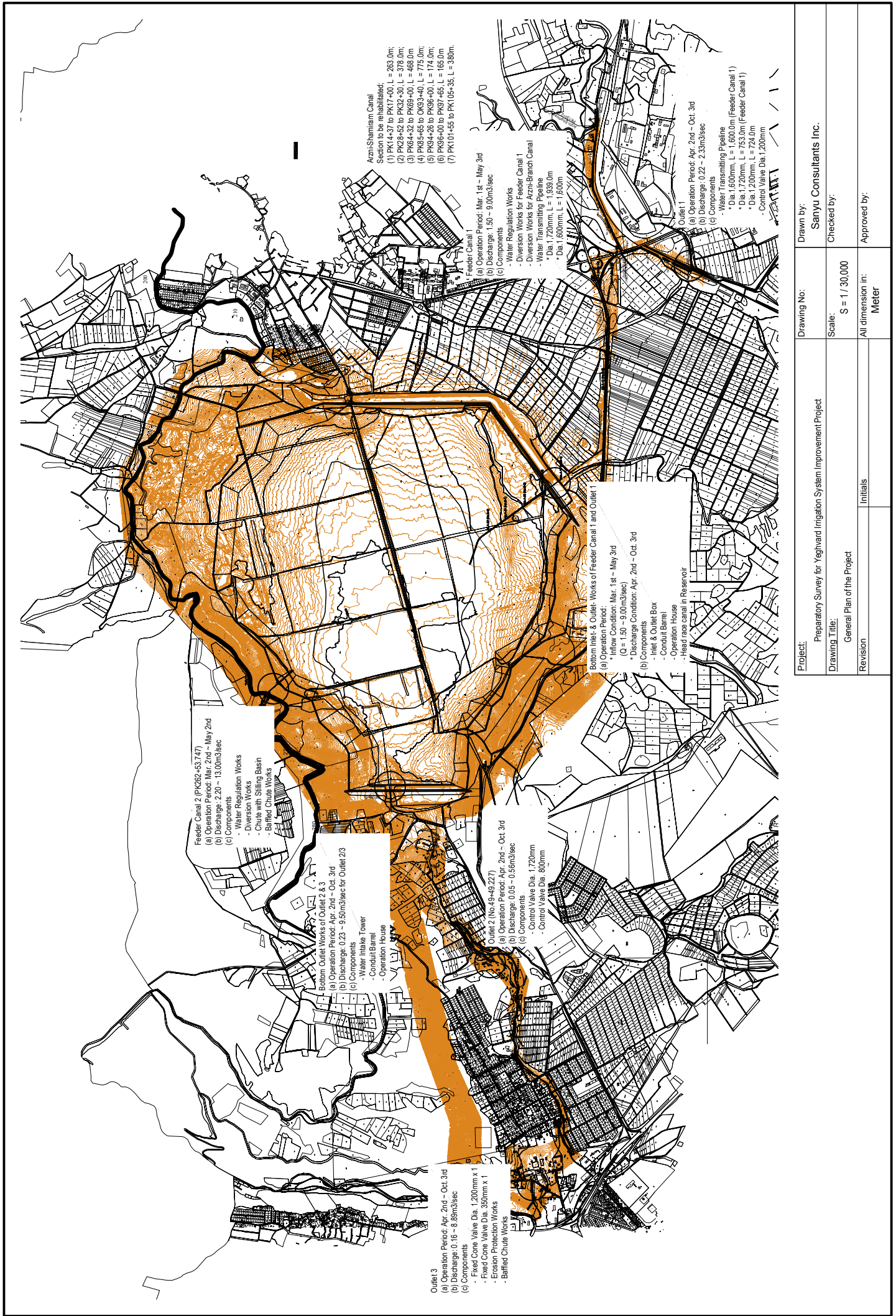
Irrigation Planning

Drawing list of related facilities for Yeghvard reservoir

DWG No.	Title of Drawings
01	General Plan of the Project
02	Main Canal, Rehabilitation Plan of the Arzni-Shamiram Irrigation Canal
04	Feeder Canal System 1, Layout of the Water Distribution System
05	Feeder Canal System 1, Longitudinal Profile of a Water Transmitting Pipeline of the Feeder Canal 1 and the Outlet 1 (1/2)
06	Feeder Canal System 1, Longitudinal Profile of a Water Transmitting Pipeline of the Feeder Canal 1 and the Outlet 1 (2/2)
07	Feeder Canal System 1, General Layout of Inlet Works
08	Feeder Canal System 1, Water Regulation Works
09	Feeder Canal System 1, Structural Drawing of the Water Regulation Works
10	Feeder Canal System 1, Water Diversion Works
11	Feeder Canal System 1, Structural Drawing of the Water Diversion Works
12	Feeder Canal System 1, Diversion Works for Arzni-Shamiram Branch Canal
13	Feeder Canal System 1, Structural Drawing of the Diversion Works for the Arzni-Shamiram Branch Canal
14	Feeder Canal System 1, Bottom Inlet- and Outlet- Works under the Dike No.2
15	Feeder Canal System 1, Structural Drawing of the Bottom Inlet- and Outlet- Works
16	Feeder Canal System 1, Structural Drawing of the Outlet 1
17	Feeder Canal System 2, General Layout of the Canal
18	Feeder Canal System 2, Structural Drawing of Water Regulation Works
19	Feeder Canal System 2, Structural Drawing of Diversion Works
20	Feeder Canal System 2, Structural Drawing of Chute with an Energy Dissipater
21	Feeder Canal System 2, Structural Drawing of the Baffled Chute
22	Outlet System, Layout of the No.1 Dike Water Distribution System of the Outlet 2 and Outlet 3
23	Outlet System, Longitudinal Profile of Water Transmitting Pipeline for Outlet 2 and Outlet 3
24	Outlet System, Structural Drawing of the Bottom Outlet Works for Outlet 2 and Outlet 3 (1/2)
25	Outlet System, Structural Drawing of the Bottom Outlet Works for Outlet 2 and Outlet 3 (2/2)
26	Outlet 2 & 3, Diversion Works for Outlet 2 for Ashtarak WUA
27	Outlet 2, Standard Drawing of the Outlet 2 for Ashtarak WUA
28	Outlet 3, Layout of the Outlet Facilities
29	Outlet 3, Fixed Cone Valve with an Energy Dissipation Chamber
30	Outlet 3, Longitudinal Profile of the Waterway from Outlet 3
31	Outlet 3, Structural Drawing of a Baffled Chute
32	Outlet 3, Structural Drawing of a Road Crossing Culvert

(2) Drawing list of rehabilitation plan of facilities for irrigation fields

1	General Plan
2	Rehabilitation for Arzni Branch canal
3	Rehabilitation for Tkahan canal
4	Rehabilitation for Shakhi-Aru canal
5	Rehabilitation for Upper Aknalich canal
6	Upgrade for Lower Hrazdan canal
7	Standard drawing of the diversion works
8	Standard drawing of the aqueduct bridge, the water measure facility and the outlet of pipe
9	Water transmitting pipeline for Upper and Inner Aknalich canal system



Arzhi-Shamirum Canal
 Section to be rehabilitated:
 (1) PK14+37 to PK17+00, L = 263.0m;
 (2) PK28+52 to PK32+30, L = 378.0m;
 (3) PK64+32 to PK69+00, L = 468.0m;
 (4) PK65+65 to PK93+40, L = 277.0m;
 (5) PK94+26 to PK98+00, L = 354.0m;
 (6) PK98+00 to PK97+65, L = 165.0m;
 (7) PK101+55 to PK105+35, L = 380.0m.

Feeder Canal 1
 (a) Operation Period: Mar. 1st - May 3rd
 (b) Discharge: 1.50 - 9.00m³/sec
 (c) Components
 - Water Regulation Works
 - Diversion Works for Feeder Canal 1
 - Diversion Works for Arzhi-Branch Canal
 - Water Transferring Pipeline
 *Dia. 1,720mm, L = 1,939.0m
 *Dia. 1,600mm, L = 1,600.0m

Outlet 1
 (a) Operation Period: Apr. 2nd - Oct. 3rd
 (b) Discharge: 0.22 - 2.33m³/sec
 (c) Components
 - Water Transferring Pipeline
 *Dia. 1,600mm, L = 1,600.0m (Feeder Canal 1)
 *Dia. 1,720mm, L = 753.0m (Feeder Canal 1)
 *Dia. 1,200mm, L = 724.0m
 - Control Valve Dia. 1,200mm

Bottom Inlet & Outlet - Works of Feeder Canal 1 and Outlet 1
 (a) Operation Period:
 *Inflow Condition: Mar. 1st - May 3rd
 (Q = 1.50 - 9.00m³/sec)
 *Discharge Condition: Apr. 2nd - Oct. 3rd
 (b) Components
 - Inlet & Outlet Box
 - Conduit Barrel
 - Operation House
 - Head race canal in Reservoir

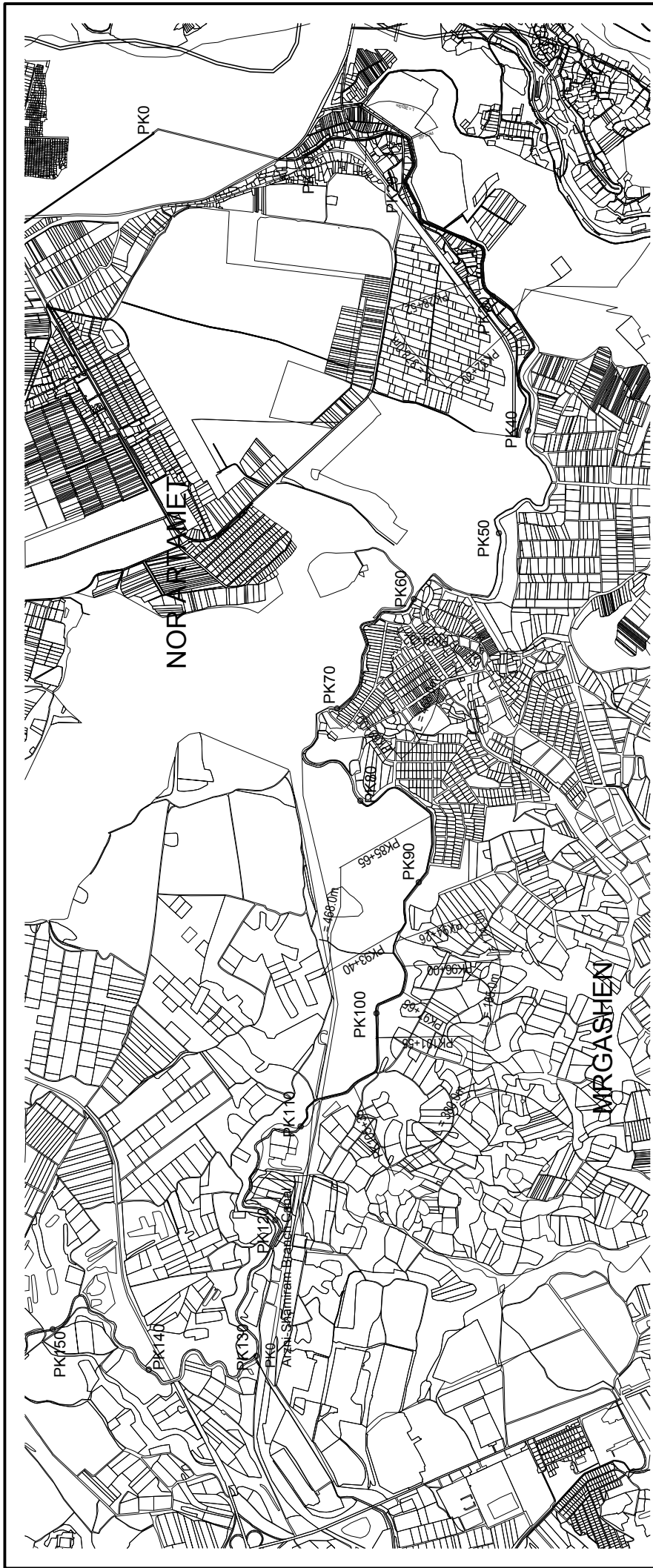
Feeder Canal 2 (PK262+53.747)
 (a) Operation Period: Mar. 2nd - May 2nd
 (b) Discharge: 2.20 - 13.00m³/sec
 (c) Components
 - Water Regulation Works
 - Diversion Works
 - Chute with Stilling Basin
 - Baffled Chute Works

Bottom Outlet Works of Outlet 2 & 3
 (a) Operation Period: Apr. 2nd - Oct. 3rd
 (b) Discharge: 0.23 - 9.50m³/sec for Outlet 2/3
 (c) Components
 - Water Intake Tower
 - Conduit Barrel
 - Operation House

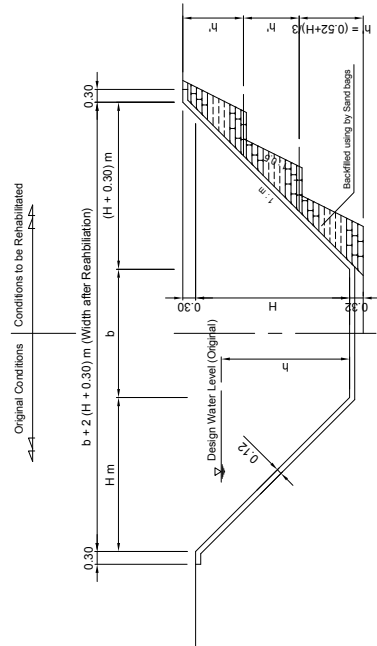
Outlet 2 (No.49+49.227)
 (a) Operation Period: Apr. 2nd - Oct. 3rd
 (b) Discharge: 0.05 - 0.56m³/sec
 (c) Components
 - Control Valve Dia. 1,720mm
 - Control Valve Dia. 800mm

Outlet 3
 (a) Operation Period: Apr. 2nd - Oct. 3rd
 (b) Discharge: 0.16 - 8.89m³/sec
 (c) Components
 - Fixed Cone Valve Dia. 1,200mm x 1
 - Fixed Cone Valve Dia. 350mm x 1
 - Erosion Protection Works
 - Baffled Chute Works

Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project	Drawing No.:		Drawn by:	Sanyu Consultants Inc.
Drawing Title:	General Plan of the Project	Scale:	S = 1 / 30,000	Checked by:	
Revision	Initials	All dimension in:	Meter	Approved by:	



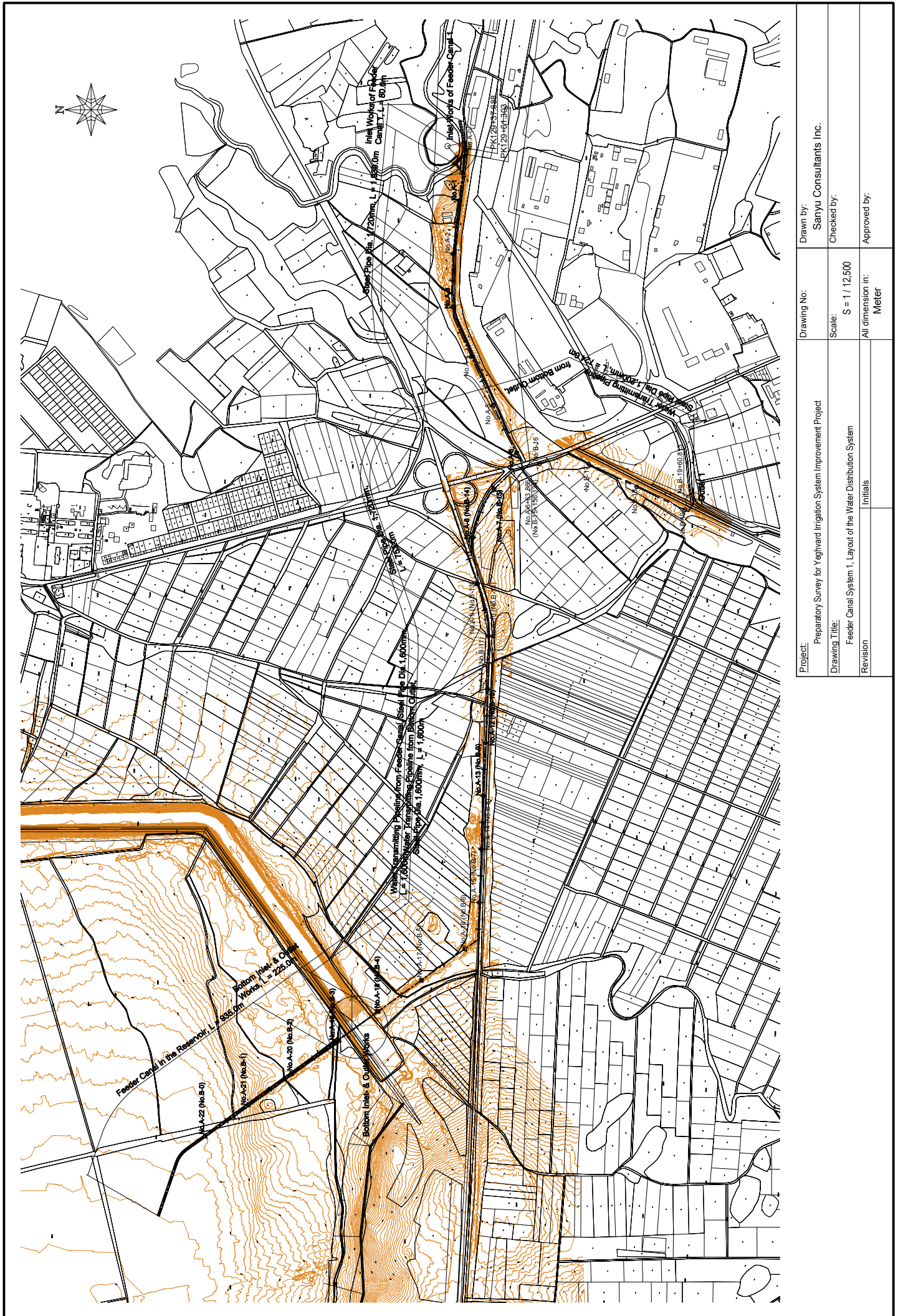
Station	Unit	PK14+37 ~ PK17+00	PK28+52 ~ PK32+30	PK64+32 ~ PK69+00	PK85+65 ~ PK93+40	PK94+26 ~ PK96+00	PK96+00 ~ PK97+65	PK101+55 ~ PK105+35
I. Dimensions								
Distance		263.0	378.0	468.0	775.0	174.0	165.0	380.0
I-1 Width	b (m)	3.00	2.50	2.50	2.50	2.00	3.00	2.00
I-2 Height	H (m)	3.60	3.20	3.50	3.50	3.50	3.50	3.50
I-3 Canal Slope	m -	1.0	1.1	1.0	1.0	1.0	1.0	1.0
II. Hydraulic Conditions								
II-1 Design Discharge	Q, m ³ /s	28.2	28.2	28.2	28.2	28.2	28.0	26.0
II-2 Incline of Canal	i -	0.0004	0.0005	0.0004	0.0005	0.001	0.001	0.0005
II-3 Roughness Coefficient (n)	n -	0.017	0.017	0.017	0.017	0.017	0.017	0.017
II-4 Depth of Water	D, m	3.00	2.90	3.20	3.20	2.80	2.80	3.10
II-5 Area of Water Flow	A, m ²	16.00	16.50	18.24	18.24	13.44	12.32	15.81
II-6 Hydraulic radius	R, m	1.57	1.48	1.58	1.58	1.36	1.33	1.46
II-7 Flow Velocity	v, m/s	1.58	1.70	1.54	1.37	2.33	1.70	1.70



Project: Preparatory Survey for Yeghward Irrigation System Improvement Project
 Drawing Title: Main Canal, Rehabilitation Plan of the Azizi-Shamiram Irrigation Canal
 Revision: Initials

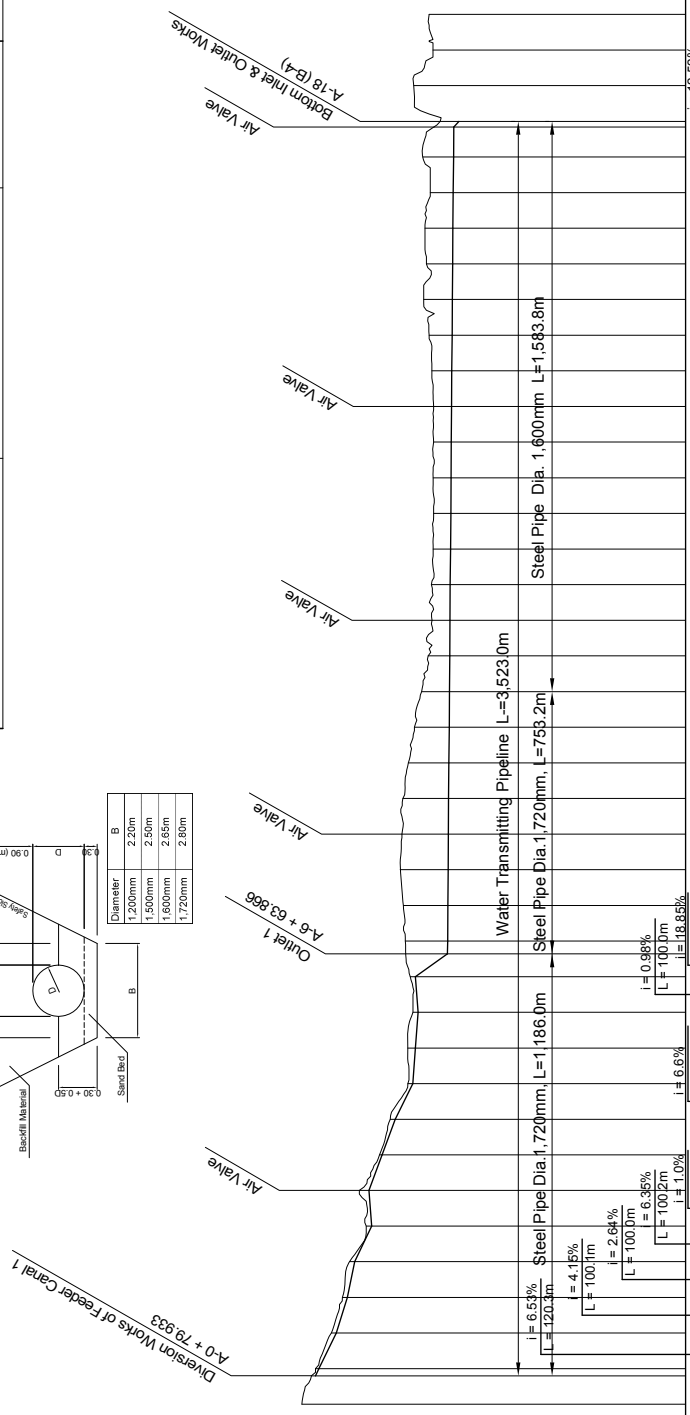
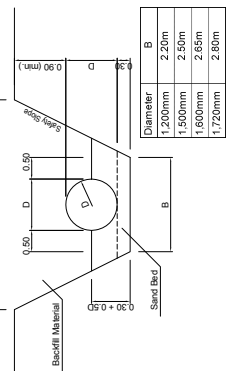
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 Scale: S = 1 : 25,000
 All dimension in: Meter

Drawn by: Saryu Consultants Inc.
 Checked by: _____
 Approved by: _____



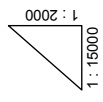
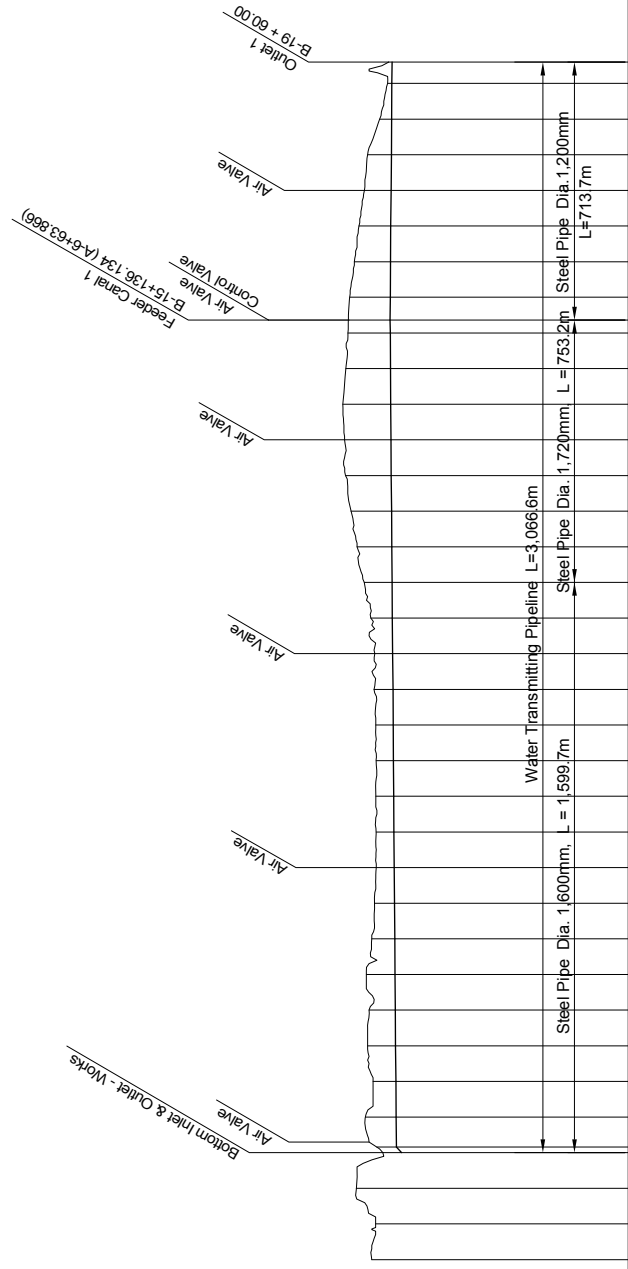
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Drawing Title:	Feeder Canal System 1. Layout of the Water Distribution System	Scale:	S = 1 / 12,500	Checked by:	
Revision:	Initials	All dimension in:	Meter	Approved by:	

Project: Preparatory Survey for Yeghvard Irrigation System Improvement Project
 Drawing Title: Longitudinal Profile of a Water Transmitting Pipeline of the Feeder Canal 1 and the Outlet 1 (1/2)
 Drawing No.: Sanyu Consultants Inc.
 Scale: Indicated
 Checked by:
 Revision: Initials
 All dimension in: Meter
 Approved by:



Station	Distance (m)	Accumulate Distance (m)	Ground Elevation	Elevation of Pipe Center	Earth Covering	Slope (%)
A-0	0.00	0.00	1343.50	1338.48	0.66	
A-1	100.00	100.00	1340.00	1337.17	0.47	
A-2	200.00	200.00	1328.35	1326.49	1.00	
A-3	300.00	300.00	1319.50	1317.50	1.14	
A-4	400.00	400.00	1314.50	1318.50	2.64	
A-5	500.00	500.00	1322.00	1318.50	2.64	
A-6	600.00	600.00	1315.50	1313.57	0.07	
A-7	700.00	700.00	1314.50	1308.64	1.00	
A-8	800.00	800.00	1310.50	1308.64	1.00	
A-9	900.00	900.00	1303.90	1302.04	1.00	
A-10	1000.00	1000.00	1304.00	1301.09	2.05	
A-11	1100.00	1100.00	1302.00	1300.14	1.00	
A-12	1200.00	1200.00	1302.98	1301.12	1.00	
A-13	1300.00	1300.00	1299.84	1299.09	14.78	
A-14	1400.00	1400.00	1304.73	1299.09	14.93	
A-15	1500.00	1500.00	1304.84	1299.09	14.93	
A-16	1600.00	1600.00	1306.15	1288.75	17.06	
A-17	1700.00	1700.00	1305.75	1288.75	16.24	
A-18	1800.00	1800.00	1303.78	1288.55	14.36	
A-19	1900.00	1900.00	1301.50	1288.45	12.19	
A-20	2000.00	2000.00	1298.78	1288.35	9.57	
A-21	2100.00	2100.00	1296.29	1288.25	7.17	
A-22	2200.00	2200.00	1294.83	1288.15	5.82	
A-23	2300.00	2300.00	1293.05	1288.05	6.24	
A-24	2400.00	2400.00	1294.46	1287.95	5.71	
A-25	2500.00	2500.00	1294.42	1287.75	5.87	
A-26	2600.00	2600.00	1294.31	1287.65	5.85	
A-27	2700.00	2700.00	1294.29	1287.55	5.94	
A-28	2800.00	2800.00	1294.95	1287.45	6.70	
A-29	2900.00	2900.00	1296.00	1287.35	7.85	
A-30	3000.00	3000.00	1298.00	1287.25	9.95	
A-31	3100.00	3100.00	1297.00	1287.15	9.05	
A-32	3200.00	3200.00	1297.50	1287.05	9.65	
A-33	3300.00	3300.00	1295.50	1286.95	7.75	
A-34	3400.00	3400.00	1298.31	1286.85	10.65	
A-35	3500.00	3500.00	1291.81	1286.77	6.55	
A-36	3600.00	3600.00	1291.81	1286.77	6.55	
A-37	3700.00	3700.00	1301.72	1284.80	6.21	
A-38	3800.00	3800.00	1294.50	1284.80	6.21	
A-39	3900.00	3900.00	1296.00	1284.80	6.21	

Project: Preparatory Survey for Yeghvard Irrigation System Improvement Project
 Drawing No.: Sanyu Consultants Inc.
 Drawing Title: Longitudinal Profile of a Water Transmitting Pipeline of the Feeder Canal 1 and the Outlet 1 (2/2)
 Scale: Indicated
 Revision: Initials
 All dimension in: Meter
 Approved by:

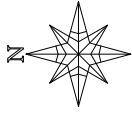


Diameter	B
1,200mm	2.20m
1,500mm	2.50m
1,600mm	2.65m
1,720mm	2.60m

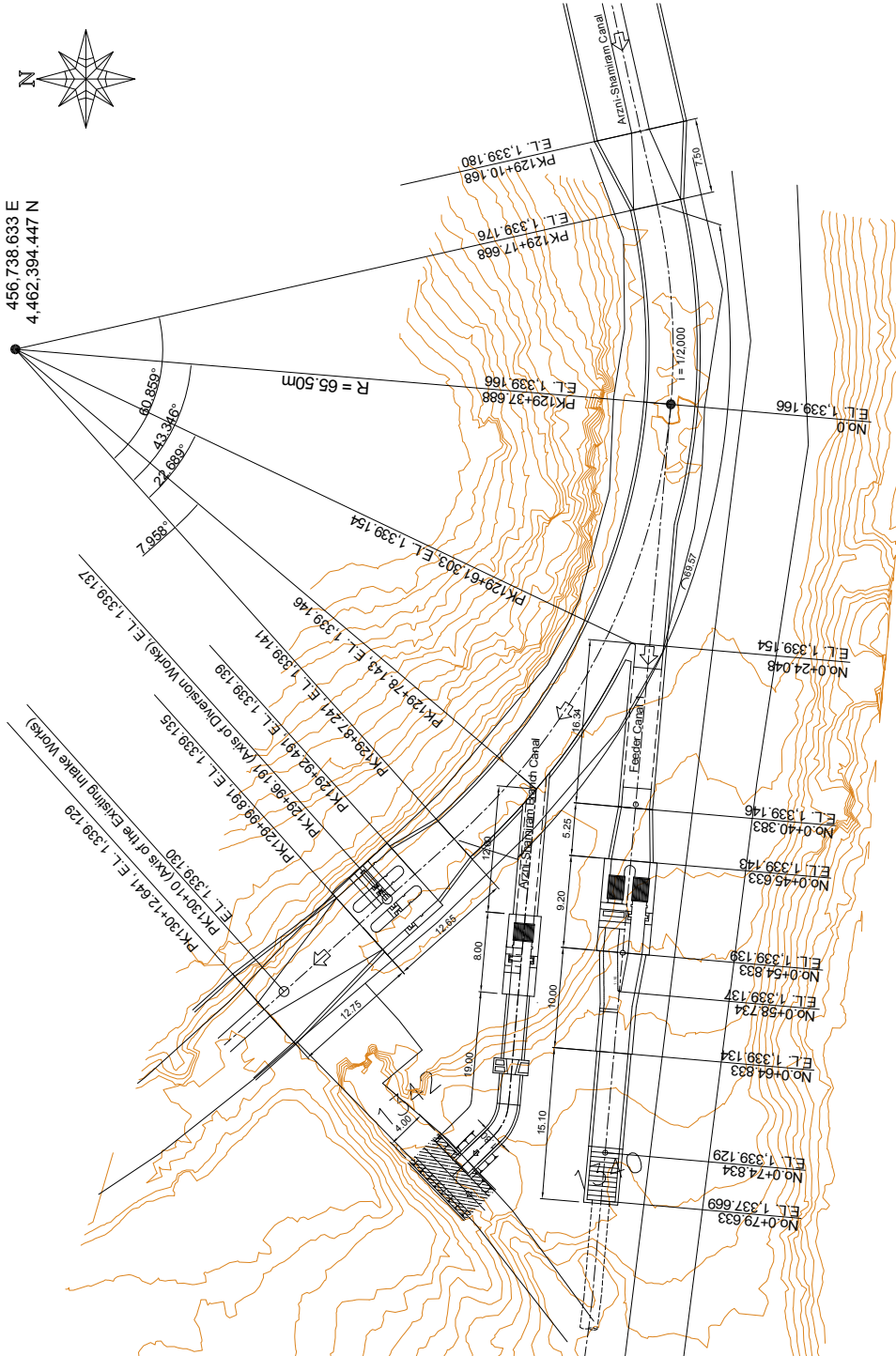
Slope (%)	Earth Covering	Elevation of Pipe Center	Ground Elevation	Accumulate Distance (m)	Distance (m)	Station
1284.87		1294.80	1294.80	0.00	100.00	B-3 (A-19)
1286.77		1291.81	1291.81	100.00	100.00	B-4 (A-18)
1288.36		1288.85	1288.85	200.00	100.00	B-5 (A-17)
		1286.95	1286.95	300.00	100.00	B-6 (A-16)
		1287.25	1287.25	400.00	100.00	B-7 (A-15)
		1287.35	1287.35	500.00	100.00	B-8 (A-14)
		1287.55	1287.55	600.00	100.00	B-9 (A-13)
		1287.75	1287.75	700.00	100.00	B-10 (A-12)
		1287.85	1287.85	800.00	100.00	B-11 (A-11)
		1287.95	1287.95	900.00	100.00	B-12 (A-10)
		1288.05	1288.05	1000.00	100.00	B-13 (A-9)
		1288.15	1288.15	1100.00	100.00	B-14 (A-8)
		1288.25	1288.25	1200.00	100.00	B-15 (A-7)
		1288.35	1288.35	1300.00	100.00	B-16
		1288.45	1288.45	1400.00	100.00	B-17
		1288.55	1288.55	1500.00	100.00	B-18
		1288.65	1288.65	1600.00	100.00	B-19
		1288.75	1288.75	1700.00	100.00	
		1288.85	1288.85	1800.00	100.00	
		1288.95	1288.95	1900.00	100.00	
		1289.05	1289.05	2000.00	100.00	
		1289.15	1289.15	2100.00	100.00	
		1289.25	1289.25	2200.00	100.00	
		1289.35	1289.35	2300.00	100.00	
		1289.45	1289.45	2400.00	100.00	
		1289.55	1289.55	2500.00	100.00	
		1289.65	1289.65	2600.00	100.00	
		1289.75	1289.75	2700.00	100.00	
		1289.85	1289.85	2800.00	100.00	
		1289.95	1289.95	2900.00	100.00	
		1290.05	1290.05	3000.00	100.00	
		1290.15	1290.15	3100.00	100.00	
		1290.25	1290.25	3200.00	100.00	
		1290.35	1290.35	3300.00	100.00	
		1290.45	1290.45	3400.00	100.00	
		1290.55	1290.55	3500.00	100.00	
		1290.65	1290.65	3600.00	100.00	

Water Distribution Plan for Feeder Canal 1 System

	A. S. Canal - PK130		Diversion Works Canal to A. Branch		Total Discharge (4) = (2) + (3)	A. S. Canal PK130 ~ (5) = (1) - (4)
	(1)	(2)	(3)	(4)		
Mar	1st	7.00	7.00	0.00	7.00	0.00
	2nd	15.50	9.00	0.00	9.00	6.50
	3rd	14.40	9.00	0.00	9.00	5.40
Apr	1st	22.00	9.00	0.00	9.00	13.00
	2nd	19.20	8.72	0.28	9.00	10.20
	3rd	11.20	7.84	1.16	9.00	2.20
May	1st	18.50	7.67	1.33	9.00	9.50
	2nd	15.40	8.00	1.00	9.00	6.40
	3rd	5.50	1.11	0.39	1.50	4.00

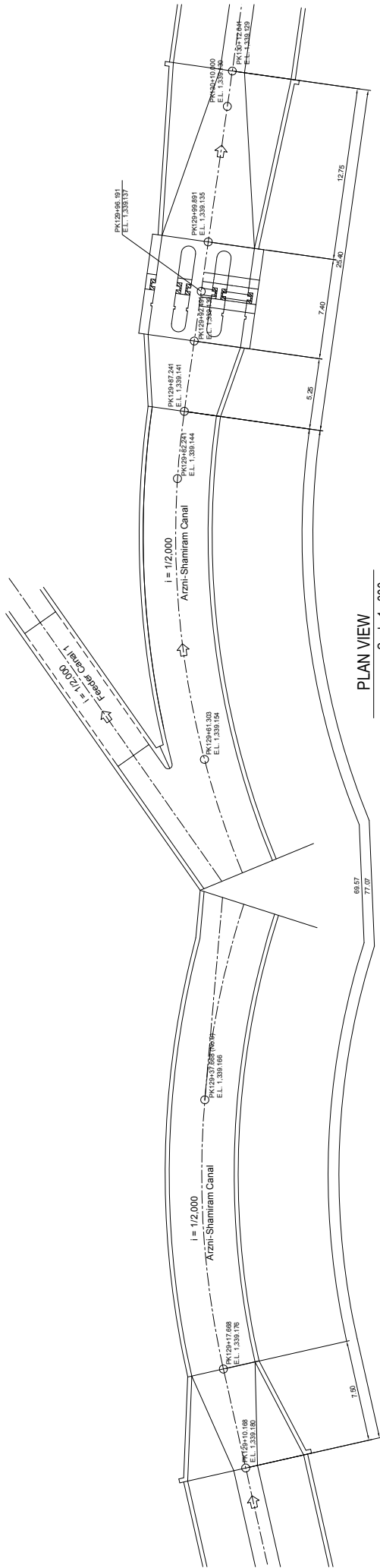


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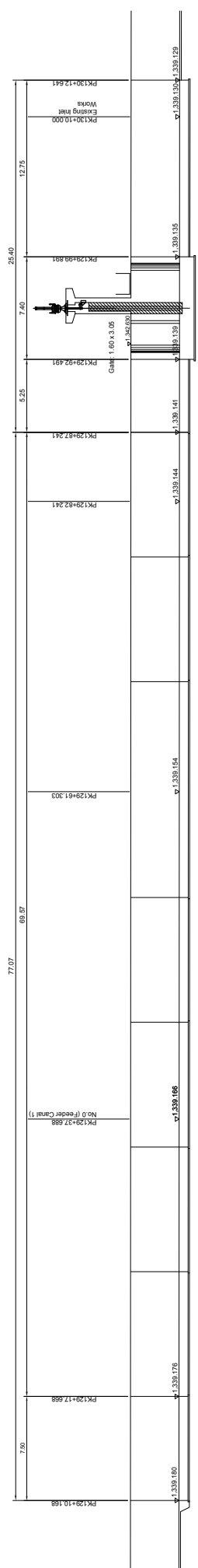


GENERAL LAYOUT OF INLET WORKS OF FEEDER CANAL 1 SYSTEM
Scale 1 : 500

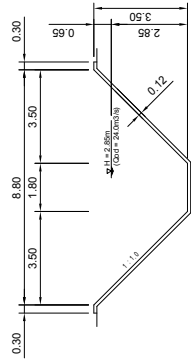
Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project	Drawing No:		Drawn by:	Sanyu Consultants Inc.
Drawing Title:	Feeder Canal System 1 - General Layout of Inlet Works	Scale:	Indicated	Checked by:	
Revision		All dimension in:	Meter	Approved by:	



PLAN VIEW
Scale 1 : 300

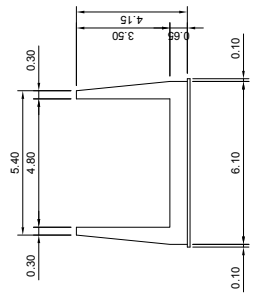


LONGITUDINAL SECTION
Scale 1 : 300



STANDARD CROSS SECTION OF ORIGINAL DESIGN
Scale 1 : 200

Design Parameter	Value
1 Design Discharge (m ³ /sec)	24.00
2 Roughness Coefficient	0.015
3 Slope of Canal	0.0005
4 Design Water Depth (m)	2.85
5 Area of Water Flow (m ²)	13.25
6 Hydraulic Radius	1.35
7 Velocity of Water Flow (m/sec)	1.81



DESIGN STANDARD CROSS SECTION OF ARZNI-SHAMIRAM CANAL
Scale 1 : 200

Design Parameter	Original	Mar 1st	2nd	3rd	Apr 1st	2nd	3rd	May 1st	2nd	3rd
1 Design Discharge (m ³ /sec)	24.00	7.00	15.50	14.40	22.00	19.20	11.20	16.50	15.40	5.50
2 Roughness Coefficient	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015
3 Slope of Canal	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
4 Design Water Depth (m)	D	2.85	1.157	2.031	1.923	2.634	2.391	1.609	2.322	2.019
5 Area of Water Flow (m ²)	A	13.25	5.56	9.75	9.23	12.64	11.43	7.72	11.14	9.69
6 Hydraulic Radius	R	1.35	0.78	1.10	1.07	1.26	1.20	0.96	1.18	1.10
7 Velocity of Water Flow (m/sec)	v	1.81	1.28	1.59	1.56	1.74	1.68	1.45	1.66	1.17

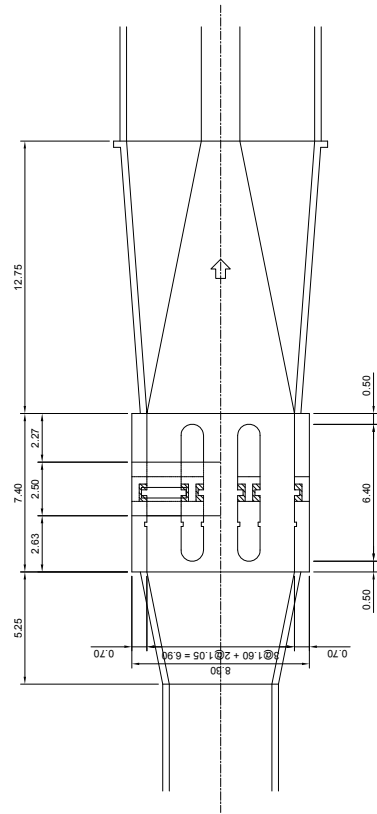
Project: Preparatory Survey for Yeghvard Irrigation System Improvement Project
 Drawing Title: Feeder Canal System 1, Water Regulation Works
 Revision: Initials

Scale: Indicated

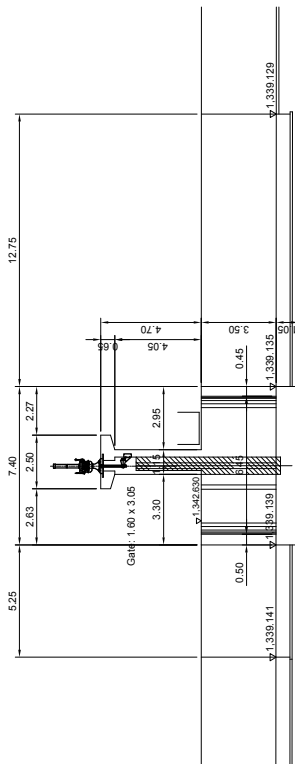
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Drawing No: _____
 Checked by: _____
 Approved by: _____

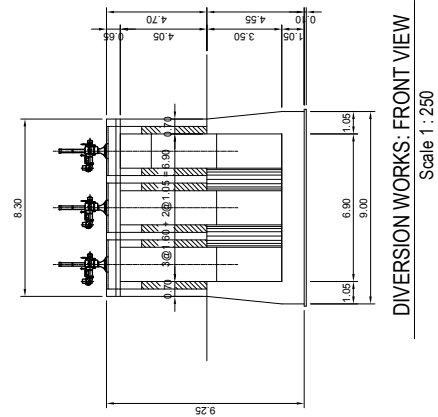
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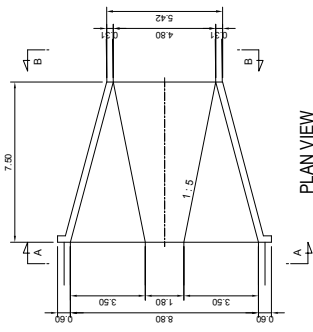
DIVERSION WORKS: PLAN VIEW
Scale 1 : 250



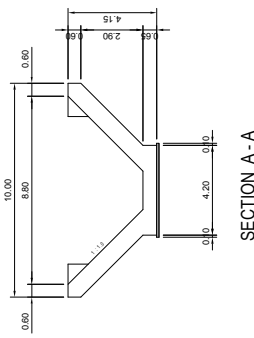
DIVERSION WORKS: LONGITUDINAL SECTION
Scale 1 : 250



DIVERSION WORKS: FRONT VIEW
Scale 1 : 250

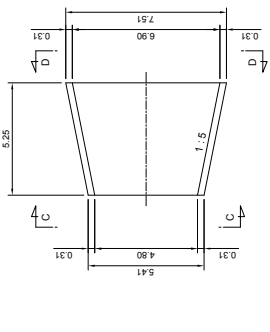


PLAN VIEW

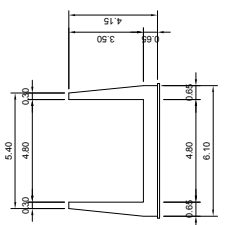


SECTION A - A

TRANSITION: PK129+10.168 ~ PK129+17.668
Scale 1 : 250

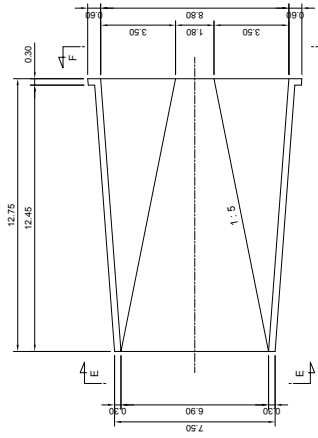


PLAN VIEW

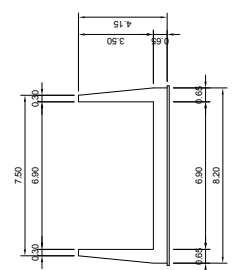


SECTION C - C

TRANSITION: PK129+87.241 ~ PK129+92.491
Scale 1 : 250



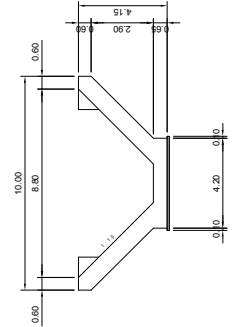
PLAN VIEW



SECTION E - E

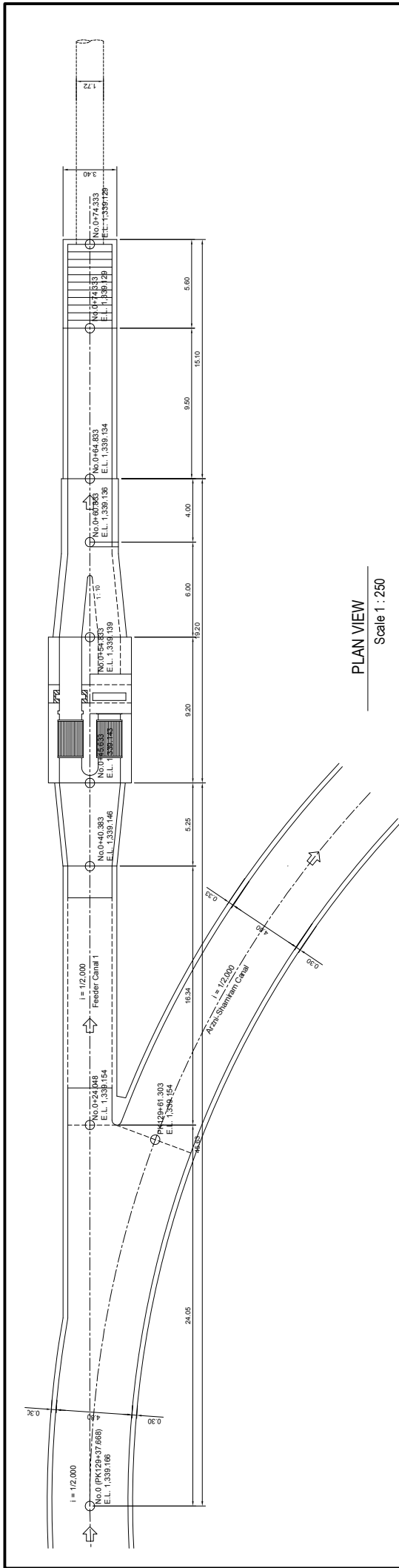
TRANSITION: PK129+99.891 ~ PK139+12.641
Scale 1 : 250

PLAN VIEW

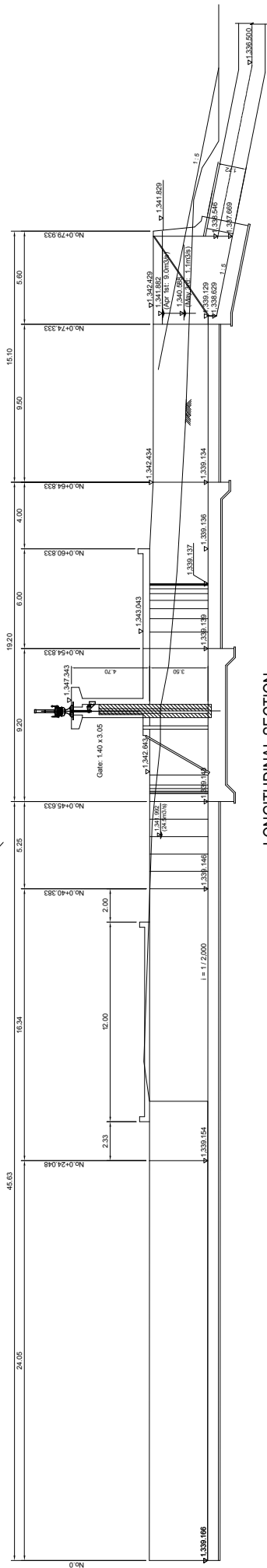


SECTION F - F

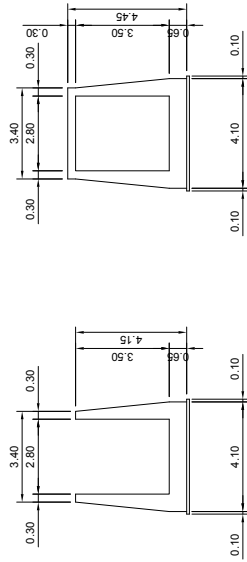
Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project	Drawing No:	Sanyu Consultants Inc.
Drawing Title:	Feeder Canal System 1, Structural Drawing of the Water Regulation Works	Scale:	Indicated
Revision:	Initials	All dimension in:	Meter
Checked by:		Approved by:	



PLAN VIEW
Scale 1 : 250



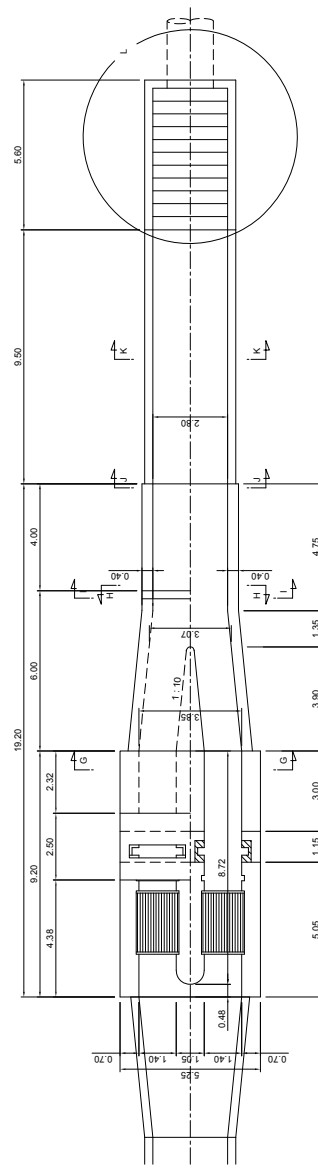
LONGITUDINAL SECTION
Scale 1 : 250



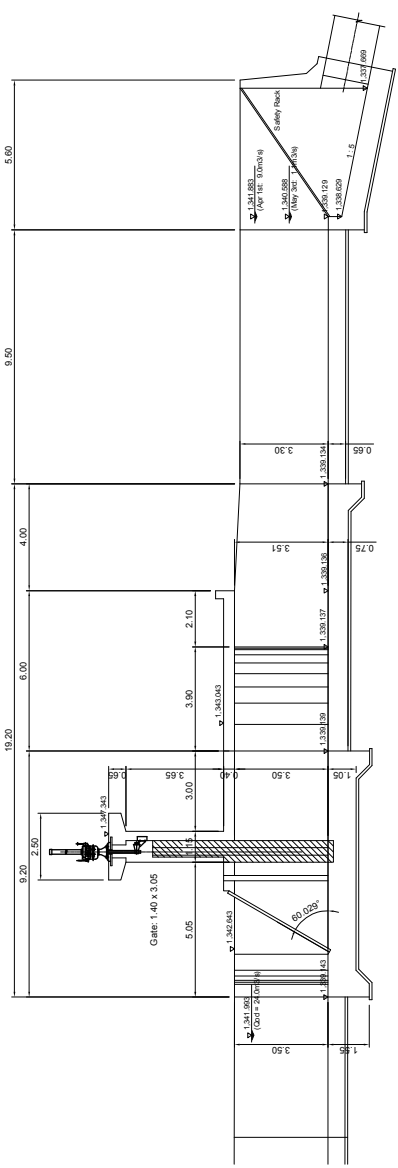
Design Parameter	Mar 1st	2nd	3rd	Apr 1st	2nd	3rd	May 1st	2nd	3rd
1 Design Discharge (m ³ /sec)	Qod	7.00	9.00	9.00	8.72	7.84	7.67	8.00	1.11
2 Roughness Coefficient	n	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015
3 Slope of Canal	i	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
4 Design Water Depth (m)	D	1.923	2.346	2.346	2.290	2.105	2.075	2.148	0.511
5 Area of Water Flow (m ²)	A	5.38	6.57	6.57	6.41	5.69	5.81	6.01	1.43
6 Hydraulic Radius	R	0.81	0.88	0.88	0.87	0.84	0.84	0.85	0.37
7 Velocity of Water Flow (m/sec)	V	1.3	1.37	1.37	1.36	1.33	1.32	1.33	0.77

DESIGN STANDARD CROSS SECTION OF FEEDER CANAL 1 WITHOUT GATE OPERATION OF DIVERSION WORKS
Scale 1 : 200

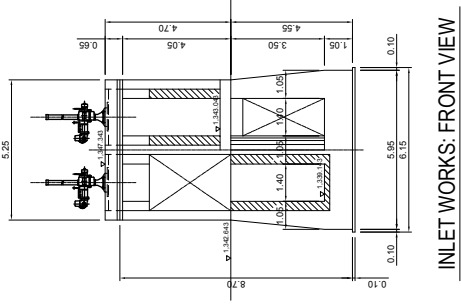
Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project	Drawing No:		Drawn by:	Saryu Consultants Inc.
Drawing Title:	Feeder Canal System 1, Water Diversion Works	Scale:	Indicated	Checked by:	
Revision:	Initials	All dimension in:	Meter	Approved by:	



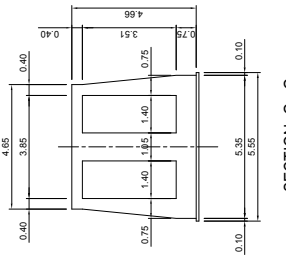
INLET WORKS: PLAN VIEW



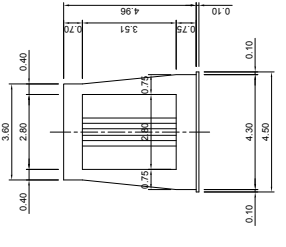
INLET WORKS: LONGITUDINAL SECTION



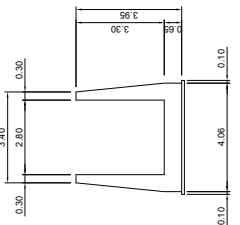
INLET WORKS: FRONT VIEW



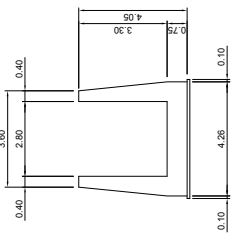
SECTION G - G



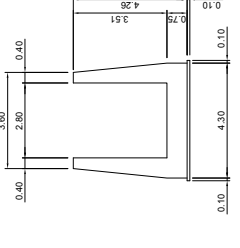
SECTION H - H



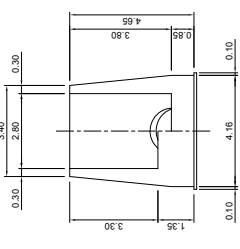
SECTION K - K



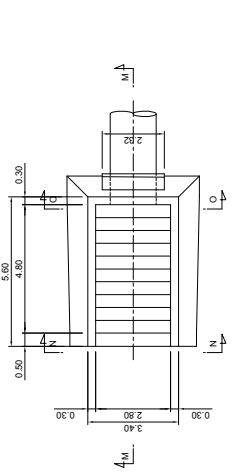
SECTION J - J



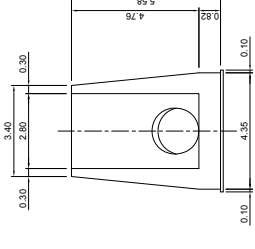
SECTION I - I



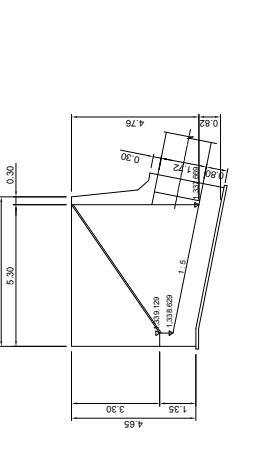
SECTION N - N



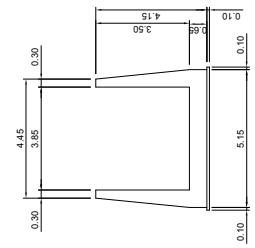
DETAIL L



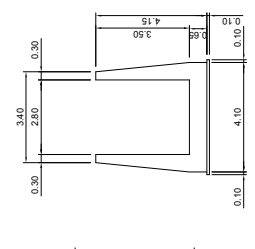
SECTION O - O



SECTION M - M



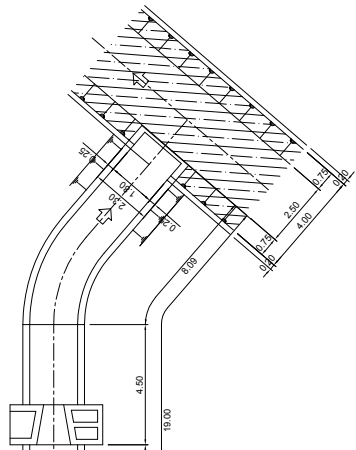
SECTION Q - Q



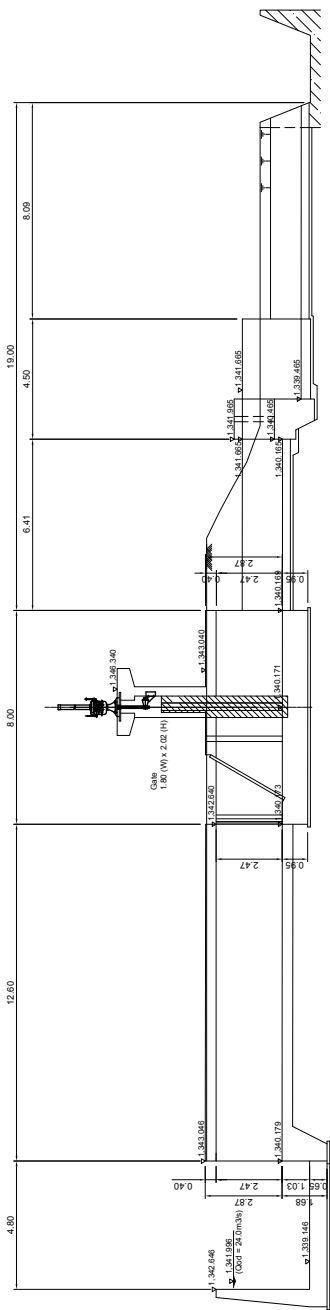
SECTION P - P

TRANSITION No.0-40.383 ~ No.0-45.633

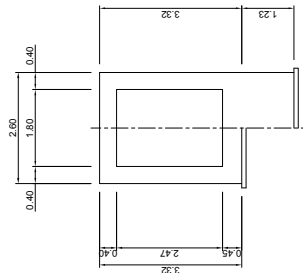
Project:	Preparatory Survey for Yeghvard Irrigation Improvement Project	Drawing No:	Drawn by:
Drawing Title:	Feeder Canal System 1, Structural Drawing of the Water Diversion Works	Scale:	1 : 200
Revision:	Initials	All dimension in:	Meter
			Checked by:
			Approved by:



PLAN VIEW
Scale 1 : 200



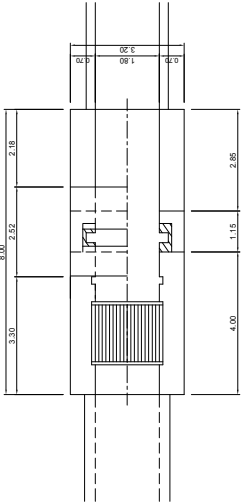
LONGITUDINAL SECTION
Scale 1 : 200



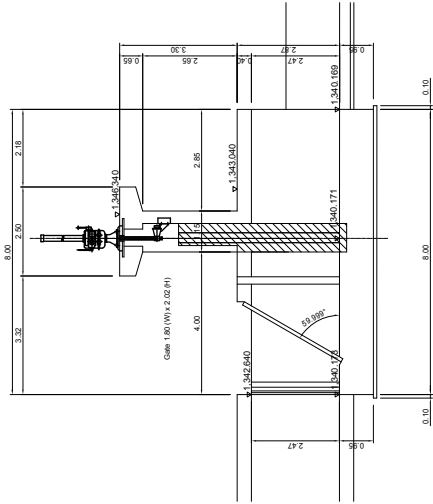
Design Parameter	Mar 1st	2nd	3rd	Apr 1st	2nd	3rd	May 1st	2nd	3rd
1 Design Discharge (m ³ /sec)	Qod	-	-	-	0.28	1.16	1.33	1.00	0.39
2 Roughness Coefficient	n	-	-	-	0.015	0.015	0.015	0.015	0.015
3 Slope of Canal	i	-	-	-	0.005	0.005	0.005	0.005	0.005
4 Design Water Depth (m)	D	-	-	-	0.289	0.776	0.859	0.695	0.361
5 Area of Water Flow (m ²)	A	-	-	-	0.52	1.40	1.55	1.25	0.65
6 Hydraulic Radius	R	-	-	-	0.22	0.42	0.44	0.39	0.28
7 Velocity of Water Flow (m/sec)	v	-	-	-	0.54	0.83	0.86	0.80	0.60

STANDARD CROSS SECTION OF FEEDER CANAL FOR ARZNI-SHAMIRAM BRANCH CANAL
Scale 1 : 125

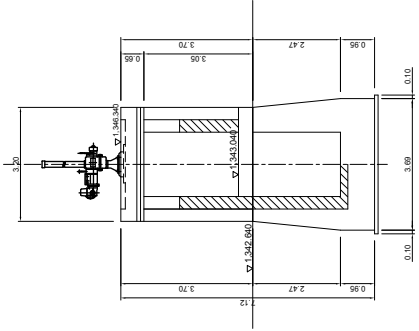
Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project	Drawing No:		Drawn by:	Saryu Consultants Inc.
Drawing Title:	Feeder Canal System 1, Diversion Works for Arzni-Shamiram Branch Canal	Scale:	Indicated	Checked by:	
Revision:	Initials	All dimension in:	Meter	Approved by:	



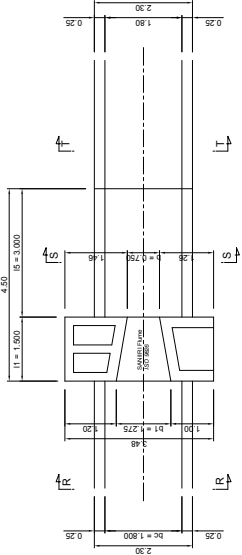
INLET WORKS FOR ARZNI-SHAMIRAM BRANCH CANAL
PLAN VIEW S = 1 : 150



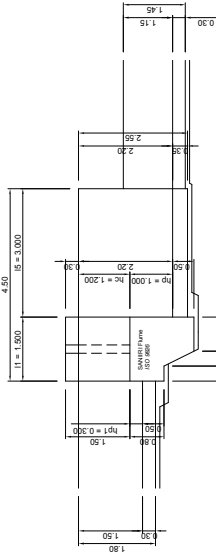
INLET WORKS FOR ARZNI-SHAMIRAM BRANCH CANAL
LONGITUDINAL SECTION S = 1 : 150



INLET WORKS: FRONT VIEW S = 1 : 150



WATER MEASUREMENT FACILITY: PLAN VIEW
S = 1 : 125

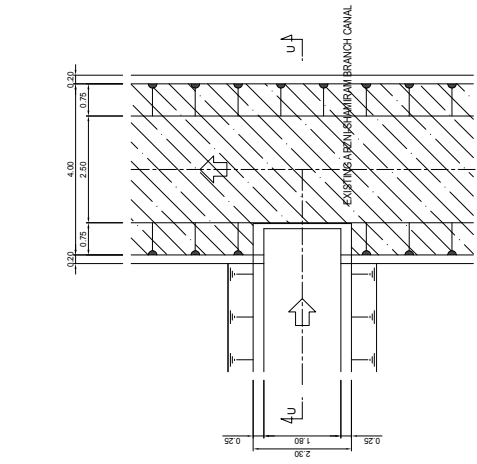


WATER MEASUREMENT FACILITY: LONGITUDINAL SECTION
S = 1 : 125

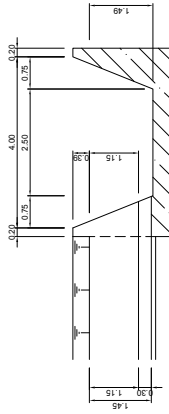
WATER MEASUREMENT FACILITY: DIMENSIONS

SANIRI Flume No.	b	lo = l ₁	b ₁	hp	hc	l ₂	Head range		Free-flow discharge Q	
							m	m	m	m
1	2	3	4	5	6	7	8	9	10	11
	0.30	0.60	0.510	0.40	0.70	1.80	0.14	0.55	0.03	0.25
2	0.40	0.80	0.680	0.50	0.80	1.80	0.14	0.60	0.04	0.40
3	0.50	1.00	0.850	0.65	0.90	2.00	0.15	0.70	0.06	0.63
4	0.60	1.20	1.020	0.80	1.00	2.50	0.20	0.85	0.10	1.00
5	0.75	1.50	1.275	1.00	1.20	3.00	0.22	1.00	0.16	1.60
6	1.00	2.00	1.700	1.20	1.30	3.00	0.24	1.10	0.25	2.50

SANIRI Flumes ISO 9826:1992(E)



OUTLET STRUCTURE: PLAN VIEW S = 1 : 125



OUTLET STRUCTURE: SECTION U-U S = 1 : 125

SECTION R-R
S = 1 : 125

SECTION S-S

SECTION T-T

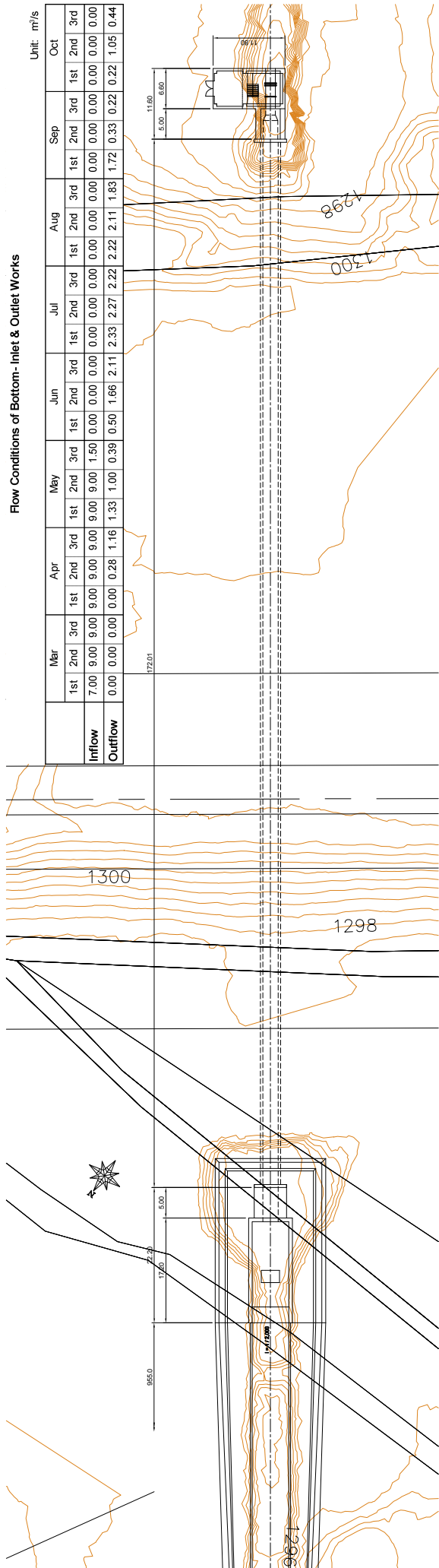
Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project
Drawing Title:	Feeder Canal System 1: Structural Drawing of the Diversion Works for the Arzni-Shamiram Branch Canal
Revision:	Initials

Drawing No:	Saryu Consultants Inc.
Scale:	Indicated
All dimension in:	Meter
Checked by:	
Approved by:	

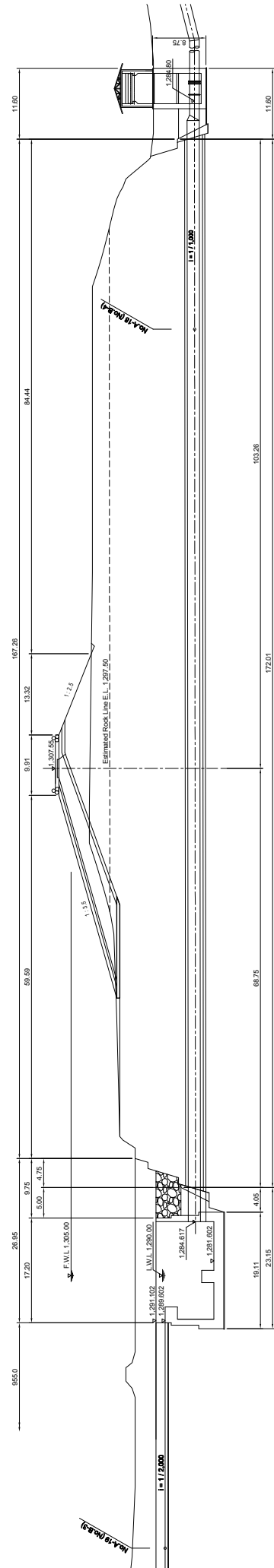
Flow Conditions of Bottom - Inlet & Outlet Works

Unit: m³/s

	Mar			Apr			May			Jun			Jul			Aug			Sep			Oct		
	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
Inflow	7.00	9.00	9.00	9.00	9.00	9.00	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Outflow	0.00	0.00	0.00	0.00	0.28	1.16	1.33	1.00	0.39	0.50	1.66	2.11	2.33	2.27	2.22	2.11	1.83	1.72	0.33	0.22	0.22	1.05	0.44	0.44

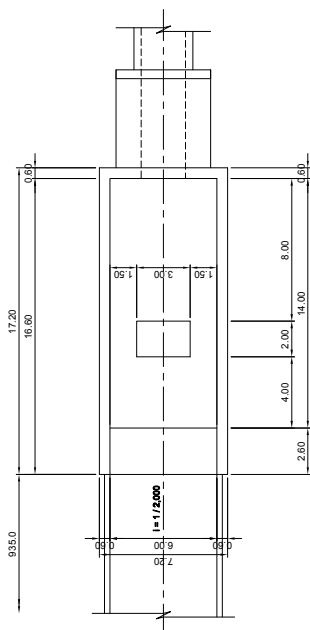


PLAN VIEW
Free Scale

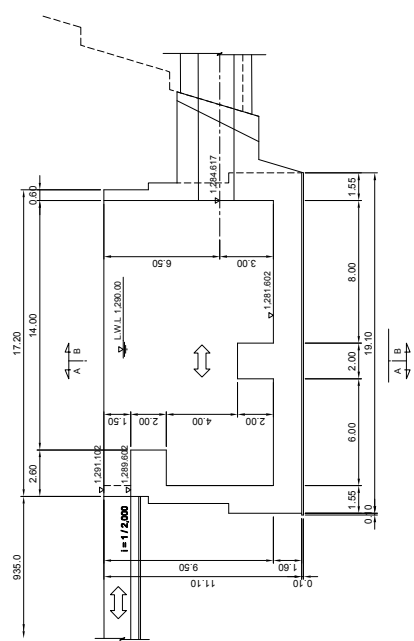


SECTION
Free Scale

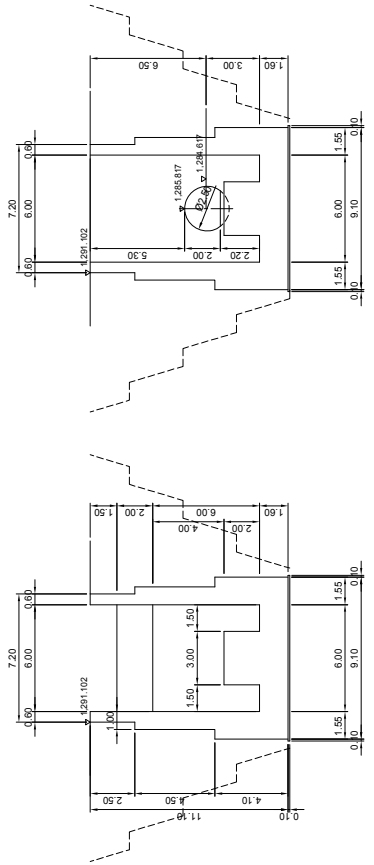
Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project	Drawing No:		Drawn by:	Sanyu Consultants Inc.
Drawing Title:	Feeder Canal System 1 - Bottom Inlet - and Outlet - Works under the Dike No.2	Scale:	Free Scale	Checked by:	
Revision	Initials	All dimension in:	Meter	Approved by:	



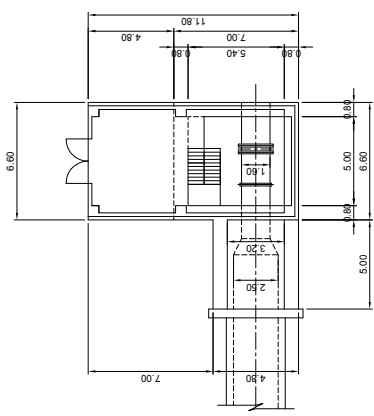
INLET & OUTLET WORKS OF FEEDER 1 CANAL SYSTEM
PLAN VIEW S = 1 : 300



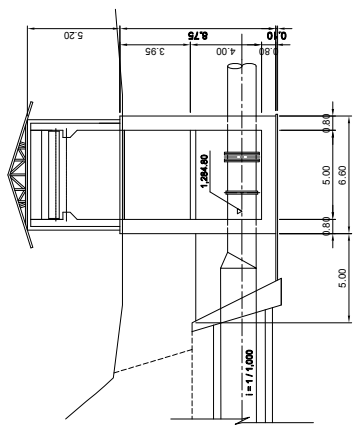
INLET & OUTLET WORKS OF FEEDER 1 CANAL SYSTEM
SECTION A - A
S = 1 : 300



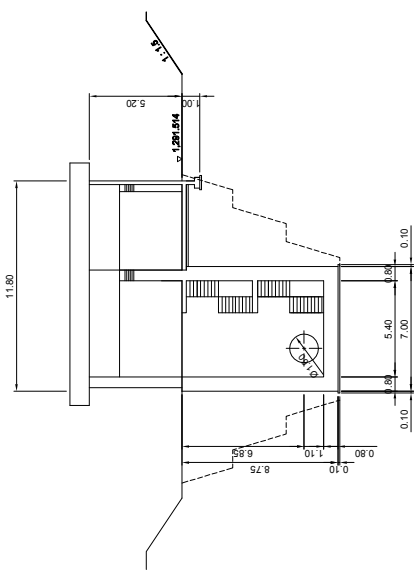
SECTION B - B
S = 1 : 300



OPERATION HOUSE: PLAN VIEW S = 1 : 300

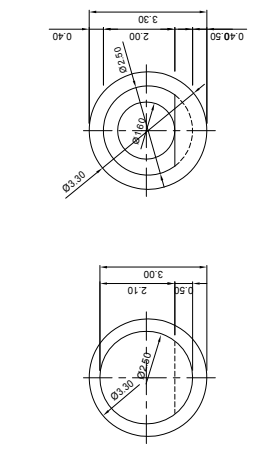


OPERATION HOUSE: SECTION VIEW S = 1 : 300

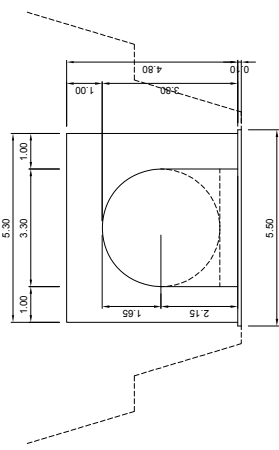


OPERATION HOUSE: FRONT VIEW S = 1 : 300

CANAL IN THE RESERVOIR: SECTION VIEW S = 1 : 200

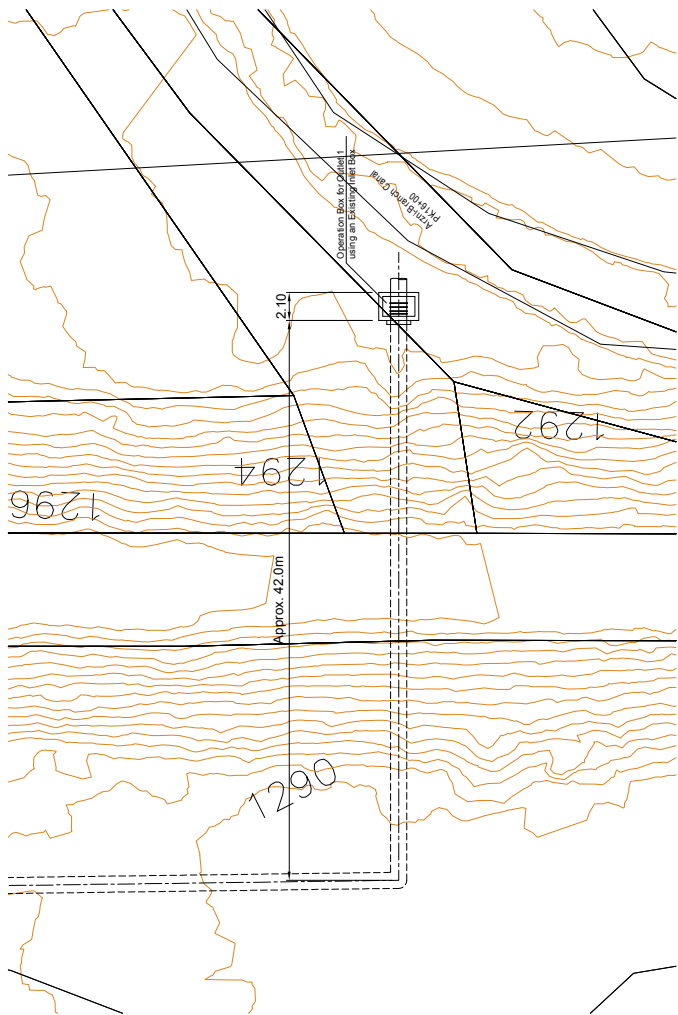


UNDERGROUND WORKS: TUNNEL MOUTH S = 1 : 150

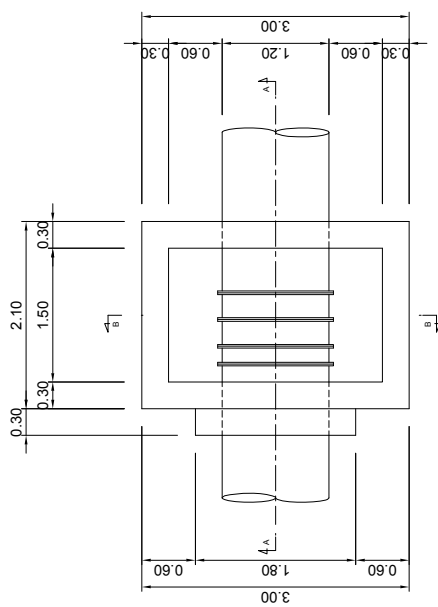


UNDERGROUND WORKS: TUNNEL MOUTH S = 1 : 150

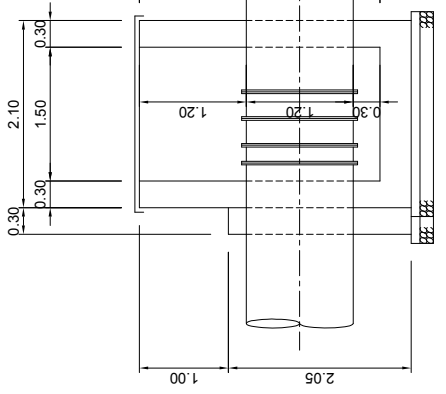
Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project	Drawing No:		Drawn by:	Saryu Consultants Inc.
Drawing Title:	Feeder Canal System 1, Structural Drawing of the Bottom Inlet and Outlet Works	Scale:	Indicated	Checked by:	
Revision	Initials	All dimension in:	Meter	Approved by:	



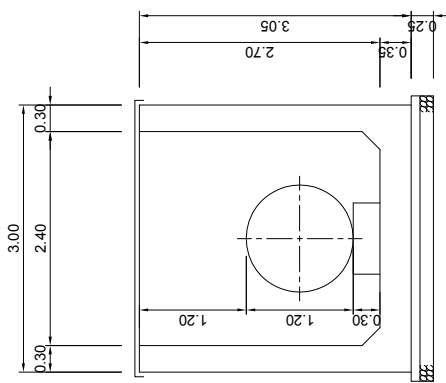
OUTLET 1 OF THE FEEDER CANAL 1 SYSTEM: PLAN VIEW
 PLAN VIEW S = 1 : 400



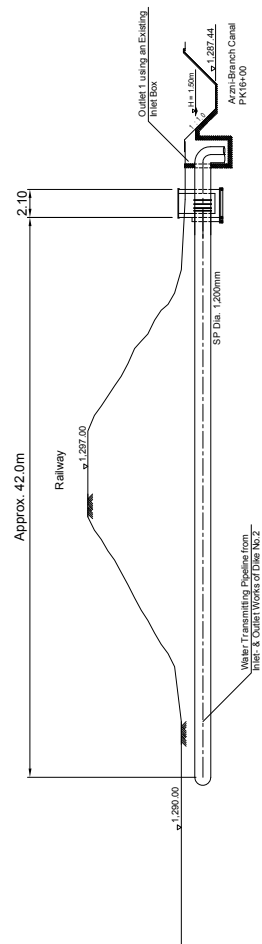
OPERATION BOX: PLAN VIEW S = 1 : 60



SECTION A - A S = 1 : 60

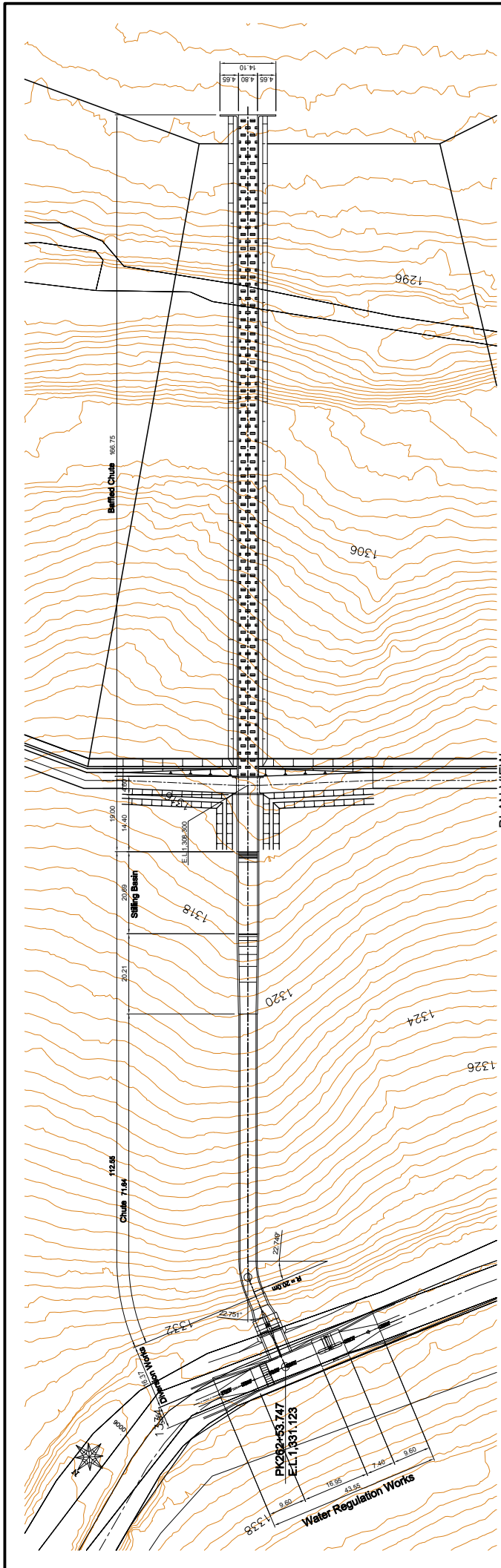


SECTION B - B S = 1 : 60

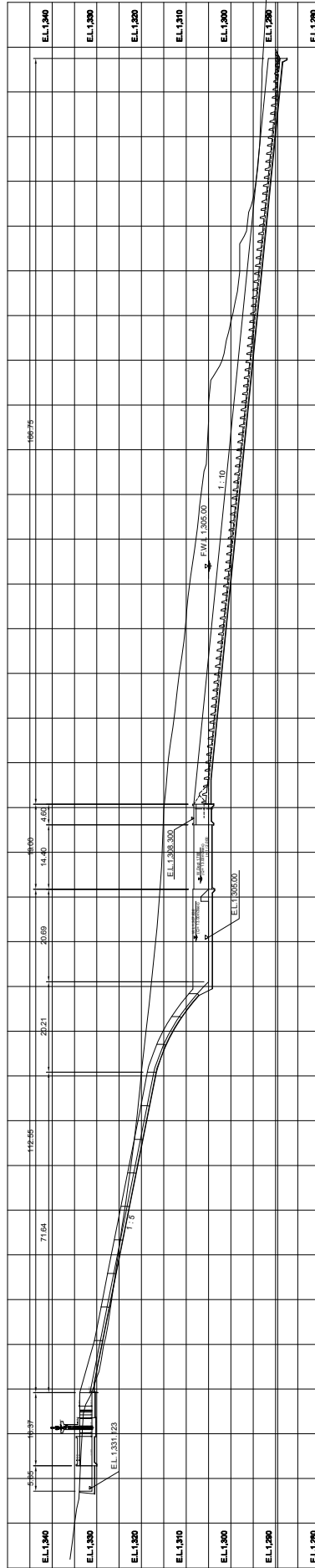


OUTLET 1 OF THE FEEDER CANAL 1 SYSTEM: SECTION
 SECTION VIEW S = 1 : 400

Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project	Drawing No:		Drawn by:	Saryu Consultants Inc.
Drawing Title:	Feeder Canal System 1, Structural Drawing of the Outlet 1	Scale:	Indicated	Checked by:	
Revision	Initials	All dimension in:	Meter	Approved by:	

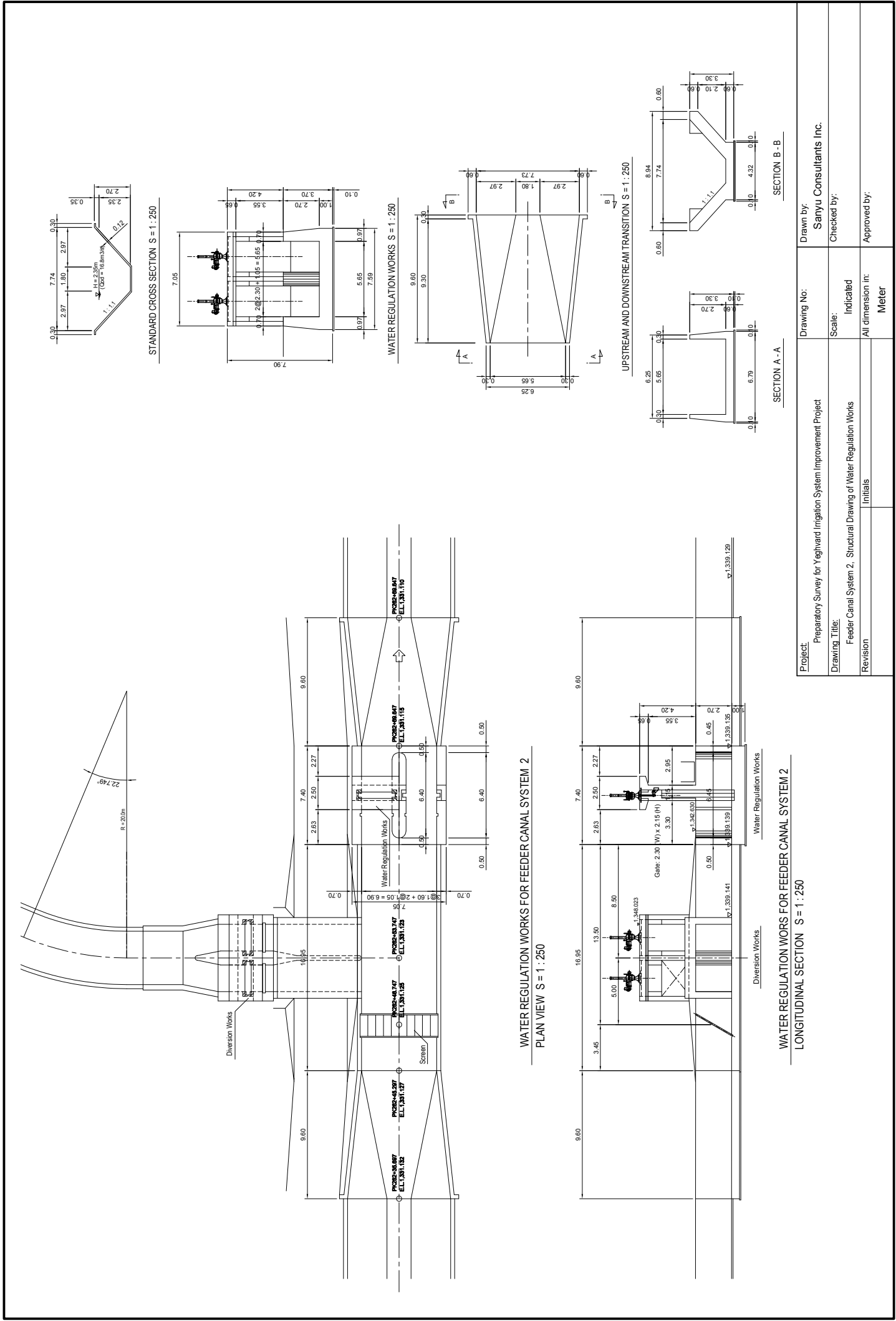


PLAN VIEW
S = 1 : 1,000



LONGITUDINAL SECTION
S = 1 : 1,000

Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project	Drawing No:		Drawn by:	Sanyu Consultants Inc.
Drawing Title:	Feeder Canal System 2. General Layout of the Canal	Scale:	Indicated	Checked by:	
Revision	Initials	All dimension in:	Meter	Approved by:	



Project:	Preparatory Survey for Yeghvard Irrigation System Improvement Project	Drawing No:		Drawn by:	Saryu Consultants Inc.
Drawing Title:	Feeder Canal System 2 - Structural Drawing of Water Regulation Works	Scale:	Indicated	Checked by:	
Revision:		All dimension in:	Meter	Approved by:	
		Initials			

