



# GOVERNMENT OF ISLAMIC REPUBLIC OF AFGHANISTAN



**SWIM** STRENGTHENING WATERSHED  
AND IRRIGATION MANAGEMENT

Strengthening Watershed and  
Irrigation Management (SWIM)

**AECOM**

*Issued for construction*

*Thirugan*

02 JUL 2019



Project Name: Mohammad Salabeg Secondary Canal Rehabilitation  
Province: Baghlan  
District: Puli Hisar

Afghanistan, Baghlan.  
Date: 24-June-2019

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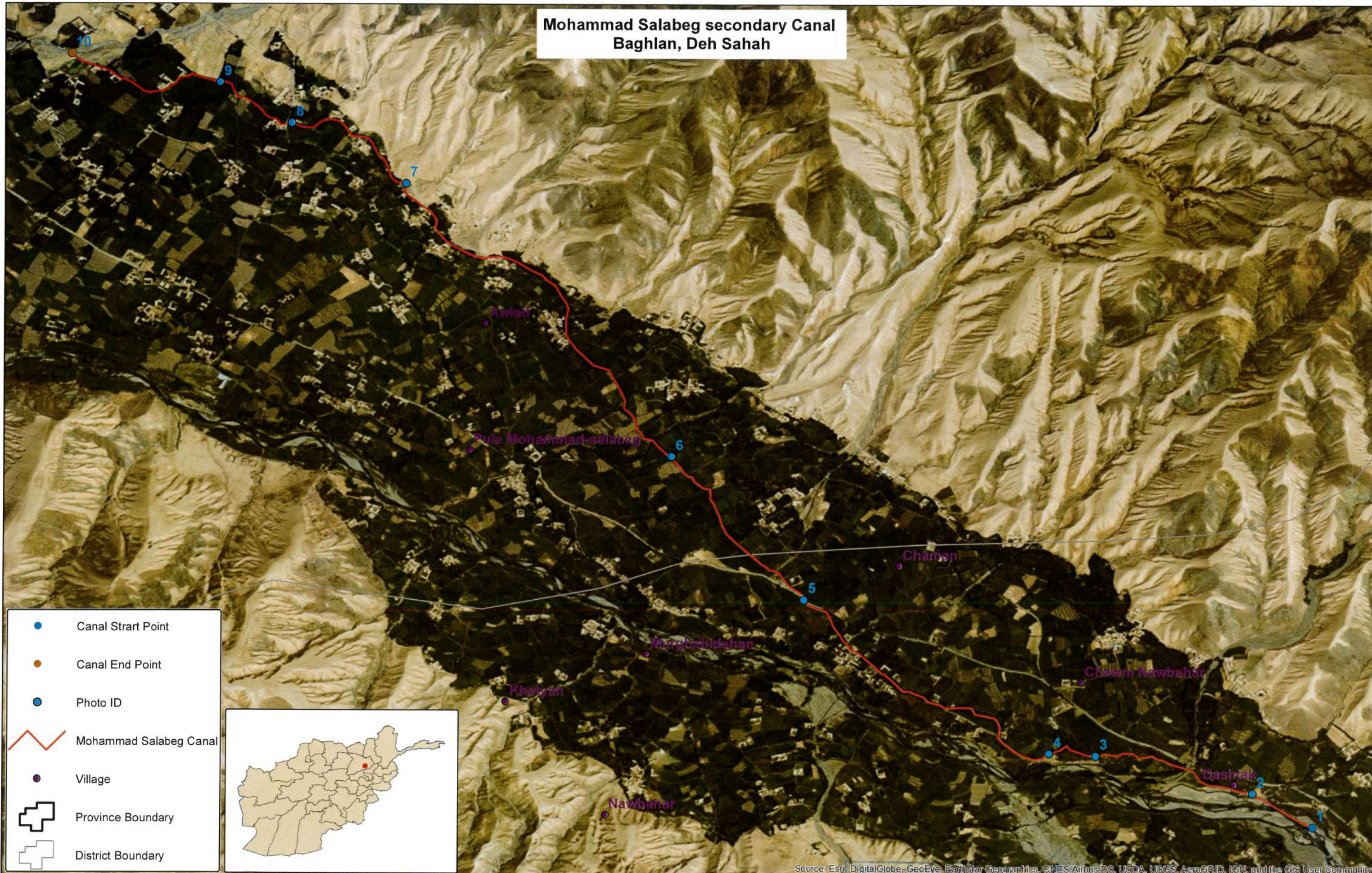
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02 JUL 2019





# Mohammad Salabeg secondary Canal Baghlan, Deh Sahah



**MAP INFORMATION**  
 Map Produced : Septmber 2017  
 Cartographer: Abdul Razaq  
 Projection : World Mercator  
 Datum : WGS 1984

**Data Source**  
 Base layer information including boundaries and place names courtesy of the Afghan Geodesy and Cartography Head Office (AGCHO).

**Data Disclaimer**  
 All boundaries and map features are approximate and should not be considered authoritative. While every effort is made to use the best available data, accuracy of features or other information cannot be guaranteed. Map prepared by the SWIM Project GIS Department.





#### GENERAL:

1. SAMPLE OF ALL MATERIALS (STONE, PCC, STEEL GATES, RCC, GRAVEL, SAND, DRY STONE, PVC PIPE, GUARD RILL, WATER STOPPER, ETC.) SHALL BE APPROVED BY SWIM ENGINEER BEFORE THE CONTRACTOR USE FOR THE PROJECT, OTHERWISE SWIM ENGINEERS ARE AUTHORIZED TO REJECT THE USED MATERIALS.
2. ALL CONSTRUCTION WORKS SHALL BE CARRIED OUT WITH CLOSE COORDINATION AND PRIOR APPROVAL OF SWIM ENGINEERS. OTHERWISE SWIM ENGINEERS ARE AUTHORIZED TO REJECT THE EXECUTED WORKS AND CONTRACTOR HAS TO RE-DO IT.
3. ALL QUALITY CONTROL TESTS SHOULD BE CARRIED OUT BY THE CONTRACTOR IN A RECOGNIZED LABORATORY by AECOM SWIMM.
4. TO AVOID DELAY IN IRRIGATION, ALL DIVERSION WILL BE MADE WITH CONSULTATION OF COMMUNITY, EITHER THE DIVERSION SHALL BE MADE LEFT SIDE OR RIGHT SIDE OF THE CANAL

#### GABION:

1. THE STONE SIZE RANGES FROM 150 MM TO 250 MM. SMALL STONES SHOULD BE AVOIDED. THE STONES USED SHOULD HAVE A MINIMUM SIZE OF NOT LESS THAN "D" (MESH WIDTH) AND NOT GREATER THAN 3.5 TIMES "D", WHERE D IS THE SPECIFIED MESH WIDTH. LARGER STONES CAN BE USED PROVIDED THAT THEIR TOTAL VOLUME DOES NOT EXCEED 5% OF THE CELL VOLUME.

#### STONE MASONRY:

1. ALL STONE MASONRY WALLS SHALL BE WITH RATIO OF 1:4 CEMENT SAND MORTAR WITH CONSIDERING TO 35% OF MASONRY VOLUME.
2. ALL STONES SHALL BE FREE FROM DEFECTS LIKE CAVITIES, CRACKS, SAND HOLES, FLAWS, INJURIOUS VEINS, PATCHES OF LOOSE OR SOFT MATERIALS, ETC. ALSO, THE PERCENTAGE OF WATER ABSORPTION SHALL GENERALLY NOT EXCEED 5%, CERTIFICATION REQUIRED
3. STONES USED SHALL BE SMALL ENOUGH TO BE LIFTED AND PLACED BY HAND, LENGTH OF THE STONES SHALL NOT EXCEED THREE TIMES THEIR HEIGHTS, AND THE BREADTH OF THE BASE SHALL NOT BE GREATER THAN THREE-FOURTHS OR THE THICKNESS OF WALL OR LESS THAN 150MM. THE HEIGHT OF STONES FOR RUBBLE MASONRY MAY BE UP TO 300MM
4. STONES WITH ROUND FACES SHALL NOT BE USED AND NEVER EVER ACCEPTABLE.
5. ALL EXPOSED SURFACES OF MORTARED STONE MASONRY SHALL BE POINTED WITH THE CEMENT SAND MORTAR 1:3
6. FOR FACES OF THE STONEMASONRY THAT WILL BE BACKFILLED, CONTRACTOR IS TO MAKES SURE ALL GAPS BETWEEN STONES ARE FILLED WITH MORTAR.

#### CONCRETE:

1. CONCRETE DESIGN SHOULD BE BASED ON 28 DAYS A COMPRESSIVE STRENGTH OF 25MPa FOR RCC AND 20MPa FOR PCC AS SPECIFIED ON THE DRAWINGS.
2. REINFORCEMENT YIELD STRESS "FY" SHALL NOT BE LESS THAN 60000 PSI
3. A MAXIMUM OF 25% STONE WITH A MAXIMUM STONE SIZE OF (25 to 40) CM TO BE USED IN BOULDER CONCRETE. THE CONCRETE MARK SHALL BE 15MPa AS SPECIFIED IN DESIGN AND DRAWINGS.
4. SAND OR FINE AGGREGATE SHALL FREE FROM SALT, ALKALI, CALCIUM SULPHATE OR VEGETATION AND IT SHALL NOT CONTAIN MORE THAN 0.5 PERCENT BY WEIGHT CLAY.
5. AGGREGATE: - COARSE AGGREGATE SHALL CONSIST OF CRUSHED GRAVEL WITH THE MAX SIZE OF 20MM.
6. WATER USED FOR ALL CONCRETE MIXTURE AND CONCRETE CURING SHALL BE FROM A SOURCE APPROVED BY THE SWIM ENGINEER AND AT THE TIME OF USE SHALL BE FREE FROM CONTAMINANTS.
7. THE MAXIMUM SLUMP FOR CONCRETE SHOULD BE BETWEEN (5-7.5) CM.
8. CONCRETE COMPACTION SHOULD BE DONE BY USING CONCRETE VIBRATOR AT THE TIME OF POURING IN SUCH A WAY TO FORM A SOLID COMPACT CONCRETE.
9. ALL CONCRETE AND MASONRY WORKS CURING SHOULD BE CONTINUED FOR 14 DAYS.
10. DURING COLD WEATHER ALL CONCRETING AND MASONRY WORKS SHOULD BE STOPPED, OR THE CONTRACTOR HAS TO CONSIDER COLD WEATHER CONCRETING PROCEDURE AS ACCEPTED BY THE SWIM ENGINEER.
11. CONCRETE SHUTTERING/Framework SHOULD BE DONE WITH HIGH STABILITY AND PROPER BRACING.
12. FOR ALL CONCRETE WORKS (RCC, PCC, BOULDER CONCRETE, MORTAR AND GROUT) SHALL BE MIXED BY CONCRETE MIXER. HAND MIXING IS NOT PERMISSIBLE UNLESS THE VOLUME OF CONCRETE IS LESS THAN 1M<sup>3</sup> AND SHALL BE VERIFIED BY SWIM ENGINEERS AS WELL.
13. THE CONTRACTOR SHALL HAVE AN EXPERIENCED SITE ENGINEER FULL TIME ON THE PROJECT SITE FOR FOLLOW UP THE DESIGN, DRAWINGS AND QUALITY CONTROL PURPOSES. EXECUTION OF WORKS WITHOUT PRESENCE OF SITE ENGINEER IS NOT ACCEPTABLE AND PAYABLE BY SWIM.
14. TWO-COAT PORTLAND CEMENT-BASED PLASTER SHALL BE APPLIED IN ACCORDANCE WITH ASTM C 926 OR EQUIVALENT. THE FINAL COAT SHALL BE FINISHED TO A TRUE AND EVEN SURFACE FREE FROM ROUGH AREAS, CHECKS, OR BLEMISHES. NOMINAL PLASTER FINISH THICKNESS SHALL BE 20MM OR MORE AS DIRECT BY QC IN ENGINEER IN THE SITE).
15. INSTALLATION OF PVC OR HDPE WATER STOPPERS MUST BE SECURELY POSITIONED IN THE FORMS TO PREVENT DEFLECTION OR MISALIGNMENT DURING CONCRETE PLACEMENT. TYPE OF WATER STOPPER SHALL BE CONFORM WITH ASTM D412 AND ASTM D2240.

#### BACKFILLING:

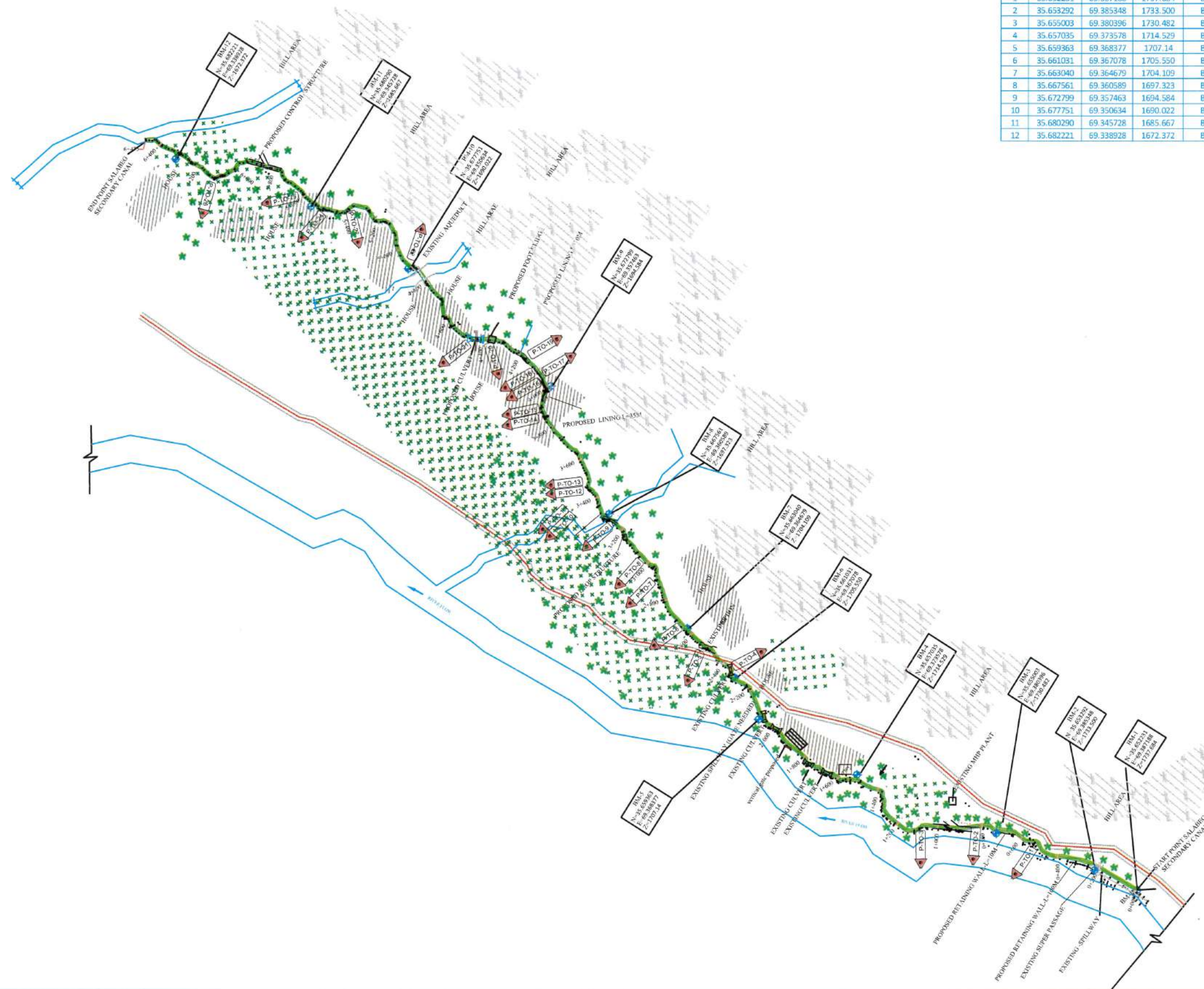
1. BACKFILLING MATERIAL SHOULD BE PROPERLY TESTED AND SELECTED TO BE SUITABLE AS PER APPROVAL OF SWIM ENGINEER AND STANDARD PRACTICE.
2. FOR BACKFILLING MAXIMUM THICKNESS OF EACH LOOSE SOIL LAYER SHOULD NOT MORE THAN 15CM.
3. STANDARD COMPACTION TESTS SHOULD BE CARRIED OUT FOR THE BACKFILLING LAYERS BY LAYERS.
4. THE PERCENTAGE OF COMPACTION SHOULD BE NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS STATED IN DESIGN AND DRAWINGS.



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SALABEG SECONDARY CANAL BENCH MARKS LIST				
P/N	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	35.652231	69.387188	1737.684	BM01
2	35.653292	69.385348	1733.500	BM02
3	35.655003	69.380396	1730.482	BM03
4	35.657035	69.373578	1714.529	BM04
5	35.659363	69.368377	1707.14	BM05
6	35.661031	69.367078	1705.550	BM06
7	35.663040	69.364679	1704.109	BM07
8	35.667561	69.360589	1697.323	BM08
9	35.672799	69.357463	1694.584	BM09
10	35.677751	69.350634	1690.022	BM10
11	35.680290	69.345728	1685.667	BM11
12	35.682221	69.338928	1672.372	BM12

LEGEND:-	
Agriculture Area	
Orchard (Garden)	
Bench Mark	
Parental Canal	
Main Canal	
Branch Canal	
P-Turn Out	
Residential Area	
Road	
Existing Stone Masonry	
Proposed Stone Masonry	
Existing Culvert	
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Masjid Sharif	
Electric Pole	
Cemetery	
Hand Water Pump	
Tree	
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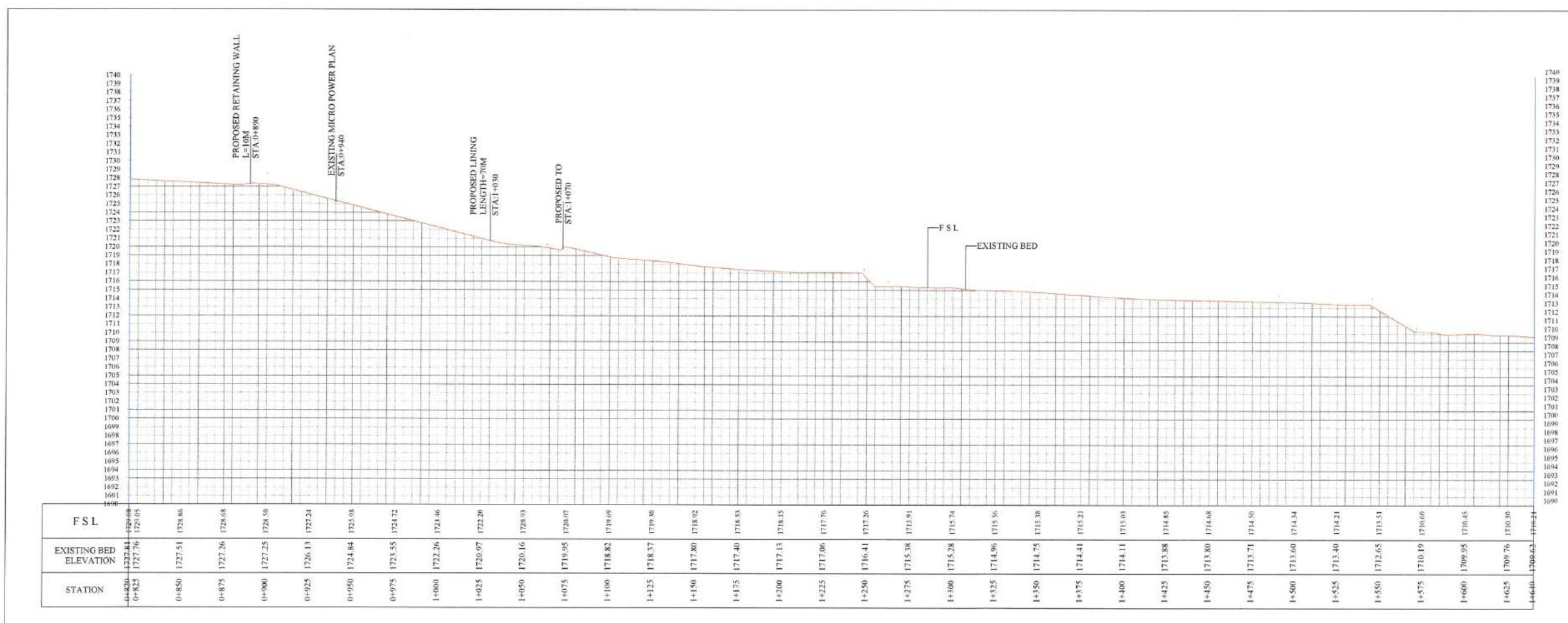









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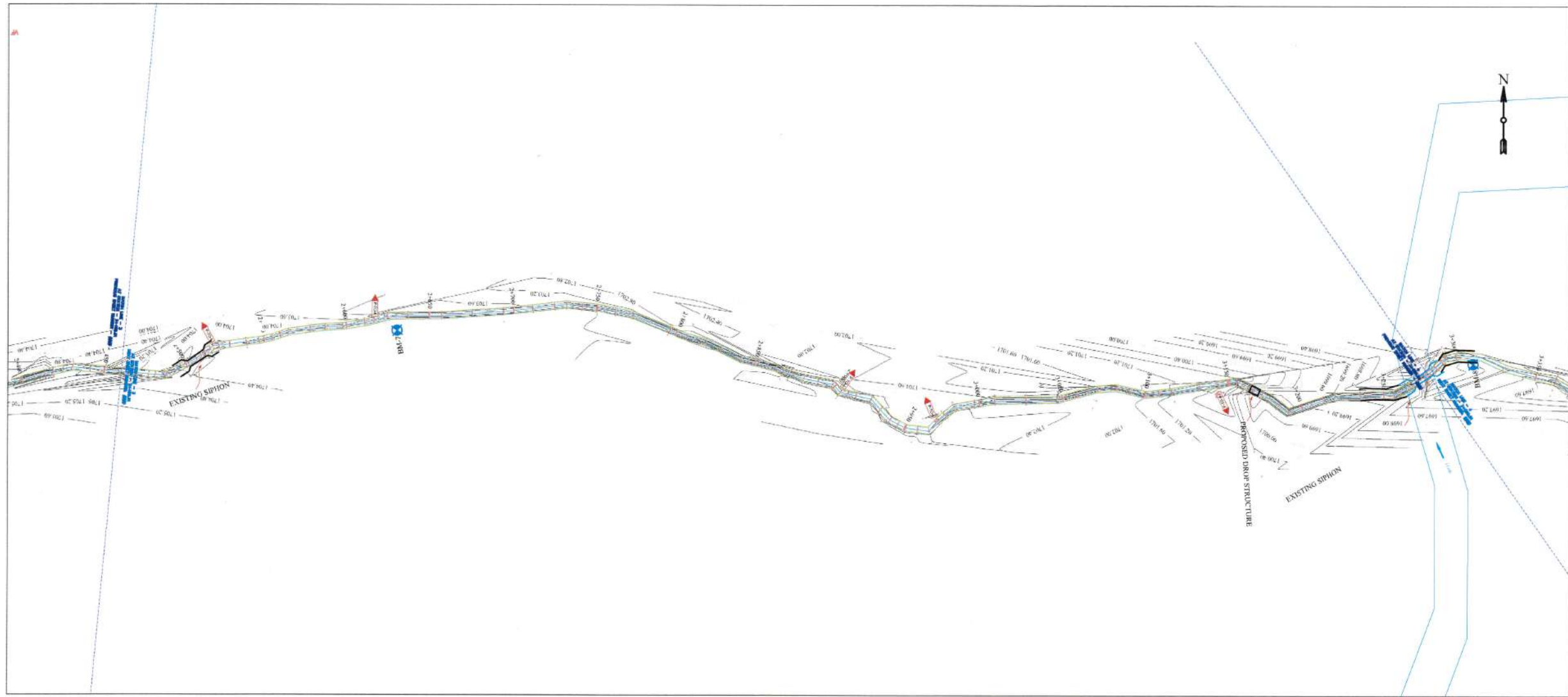


 <div><b>USAID</b> FROM THE AMERICAN PEOPLE</div>	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL APPROVAL	SHEET NO. 3 /25
	<b>SWIM</b>	MOHAMMAD SALABEG SECONDARY CANAL	DISTRICT: PULI HISAR PROVINCE: BAGHLAN	<u>PLAN AND PROFILE</u>	SWIM	RAFTULLAH RAHMANI ENGINEER HYDRAULIC SPECIALIST	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. AHMAD HASEEB PAYAB ACTING CHIEF OF PARTY		
						DATE: 24 JUN 2019	DATE: 24 JUN 2019	DATE: 24 JUN 2019	DATE: 24 JUN 2019	

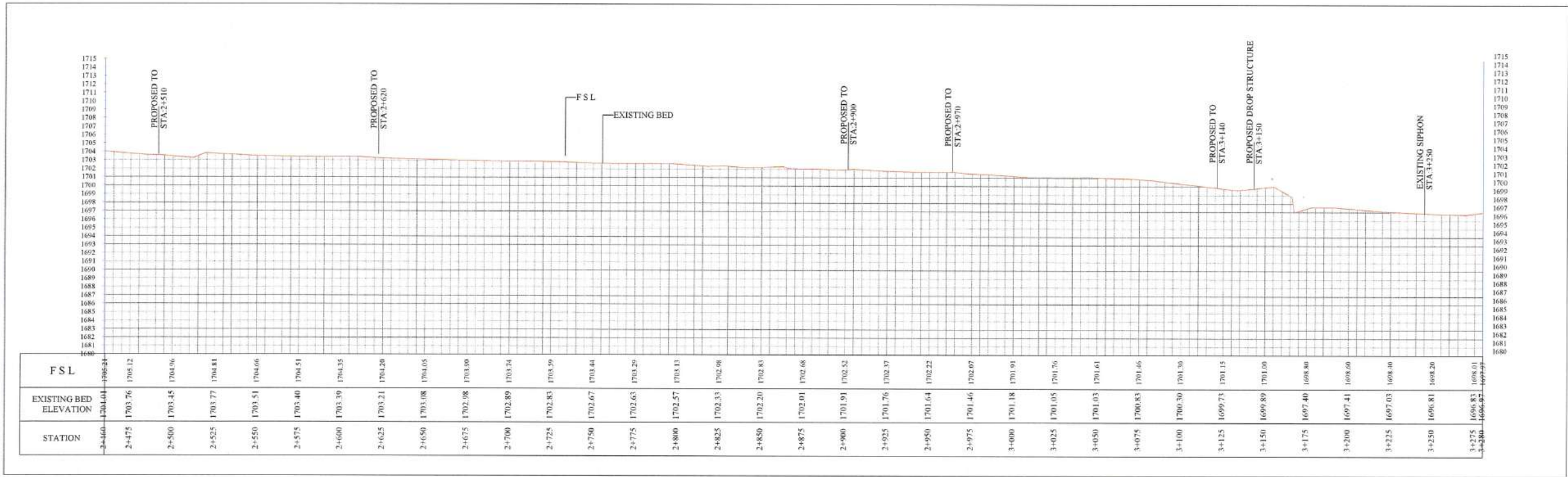








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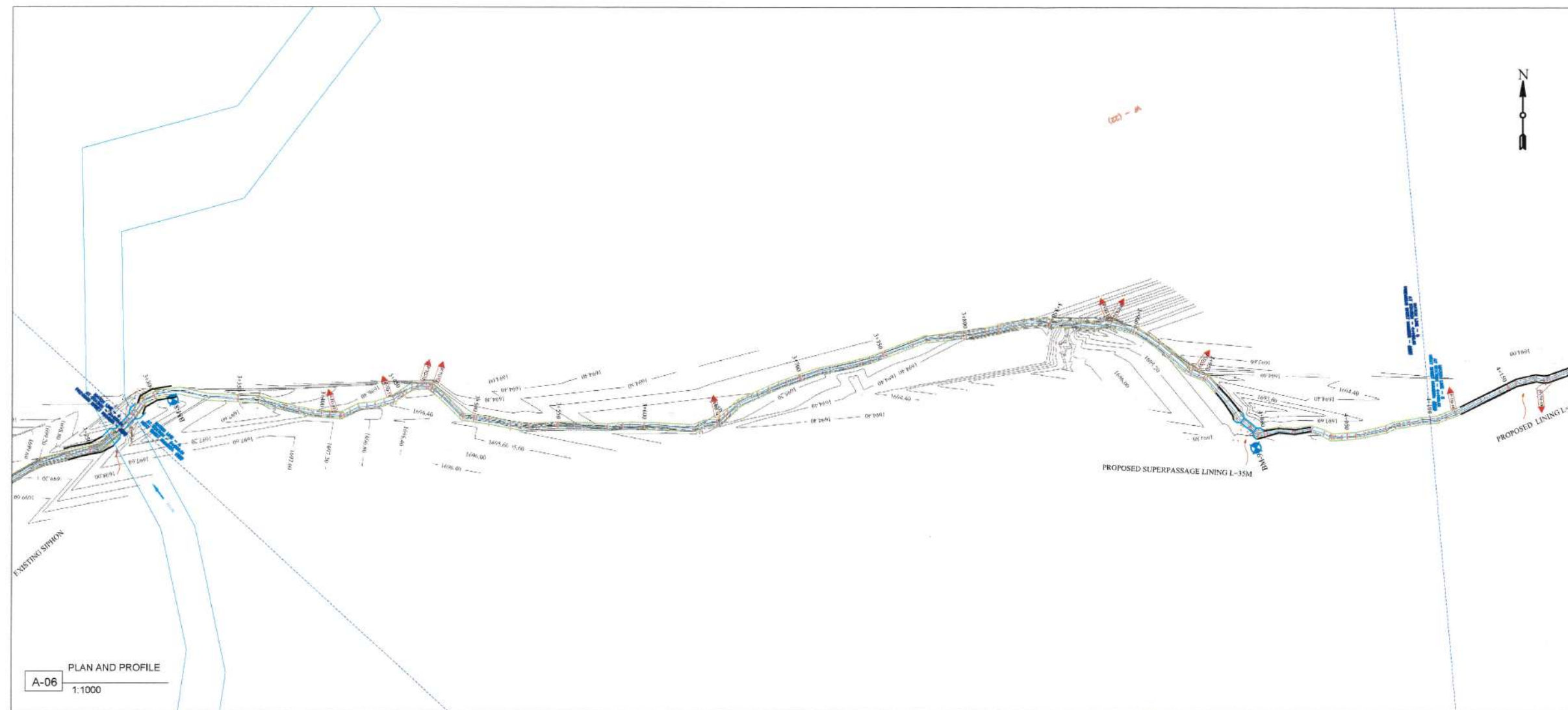


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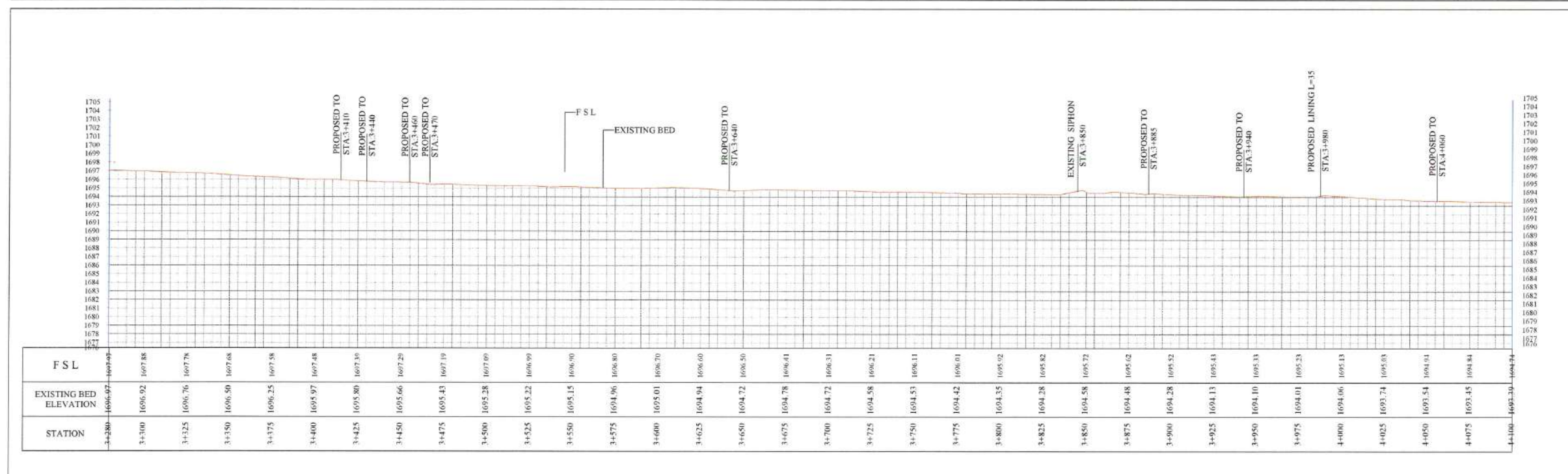


	<b>USAID</b> FROM THE AMERICAN PEOPLE	<b>STRENGTHENING WATERSHED &amp; IRRIGATION MANAGEMENT</b> <b>SWIM</b>	<b>CANAL NAME</b> MOHAMMAD SALABEG SECONDARY CANAL	<b>LOCATION</b> DISTRICT: PULI HISAR PROVINCE: BAGHLAN	<b>DRAWING TITLE</b> PLAN AND PROFILE	<b>SURVEYED BY</b> SWIM	<b>DRAWING AND DESIGN BY</b> RAFIULLAH RAHMANI ENGINEER HYDRAULIC SPECIALIST	<b>REVIEWED AND CHECKED BY</b> ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	<b>SWIM APPROVAL</b> DR. AHMAD HASEEB PAYAB ACTING CHIEF OF PARTY	<b>MAIL/DAIL, APPROVAL</b> 	<b>SHEET NO.</b> 5 / 25
							DATE:	DATE:	DATE:	DATE:	





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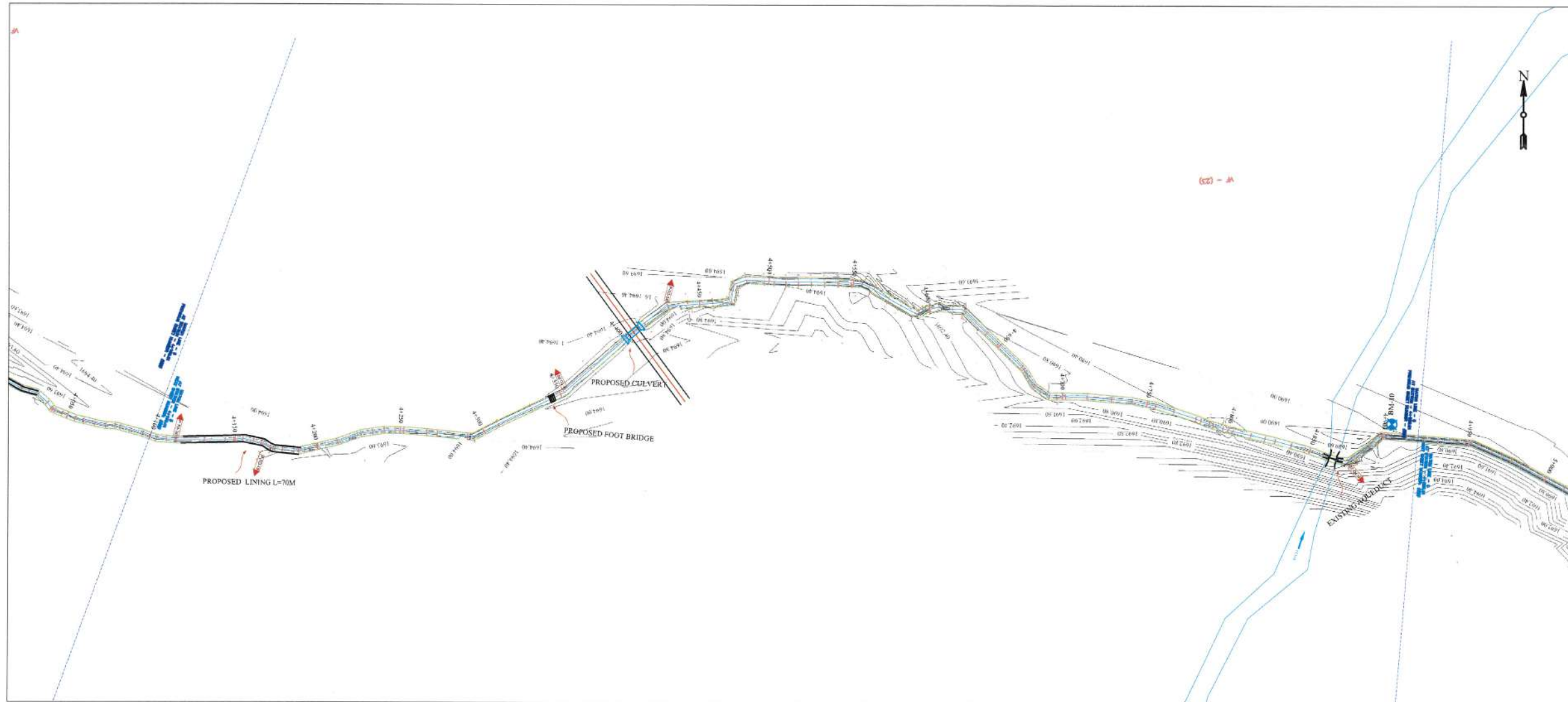


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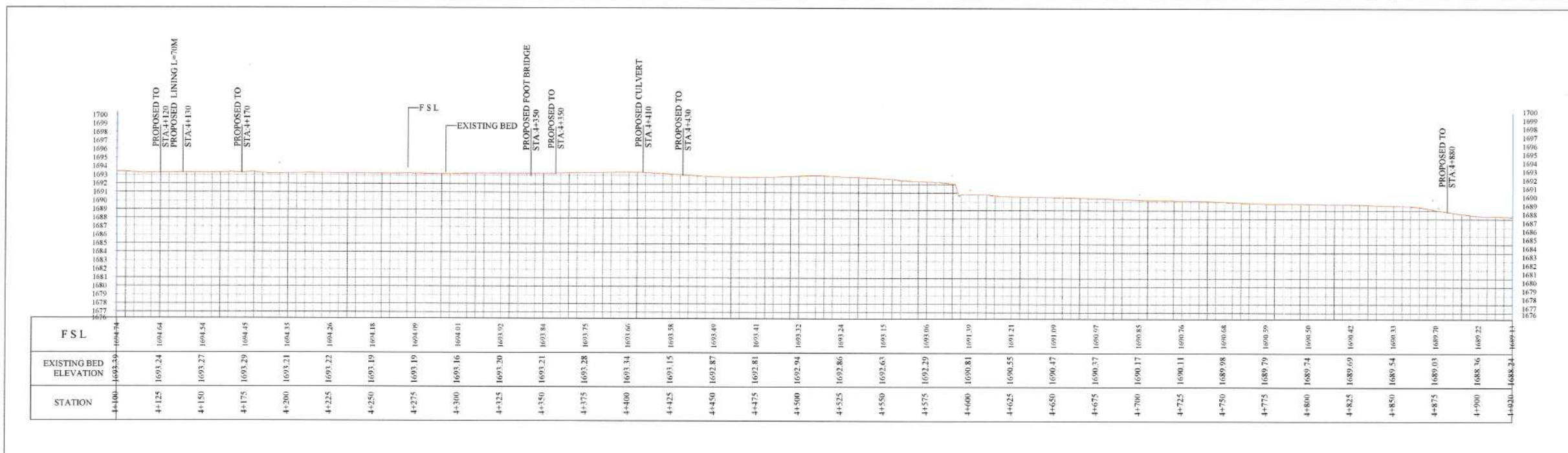


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		MOHAMMAD SALABEG SECONDARY CANAL	DISTRICT: PULI HISAR PROVINCE: BAGHLAN	PLAN AND PROFILE	SWIM	RAFIULLAH RAHMAN ENGINEER HYDRAULIC SPECIALIST	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. AHMAD HASEEB PAYAB ACTING CHIEF OF PARTY		
						DATE: 24 JUL 2019	DATE: 24 JUL 2019	DATE: 24 JUL 2019	DATE: 24 JUL 2019	





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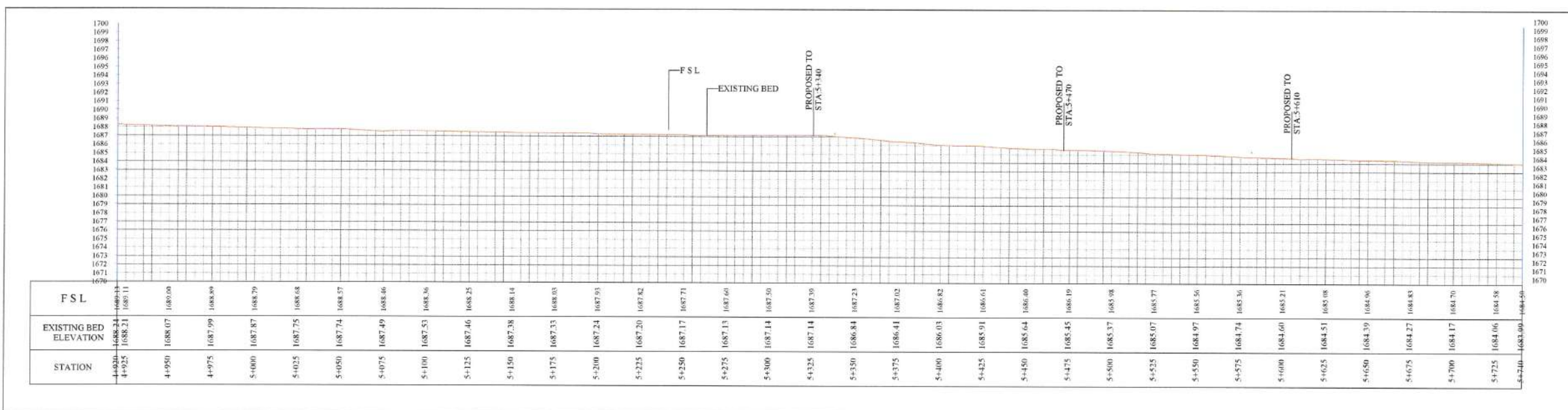
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		MOHAMMAD SALABEG SECONDARY CANAL	DISTRICT: PULI HISAR PROVINCE: BAGHLAN	<u>PLAN AND PROFILE</u>	SWIM	RAFTULLAH RAHMANT ENGINEER HYDRAULIC SPECIALIST	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. AHMAD HASEEB PAYAB ACTING CHIEF OF PARTY		
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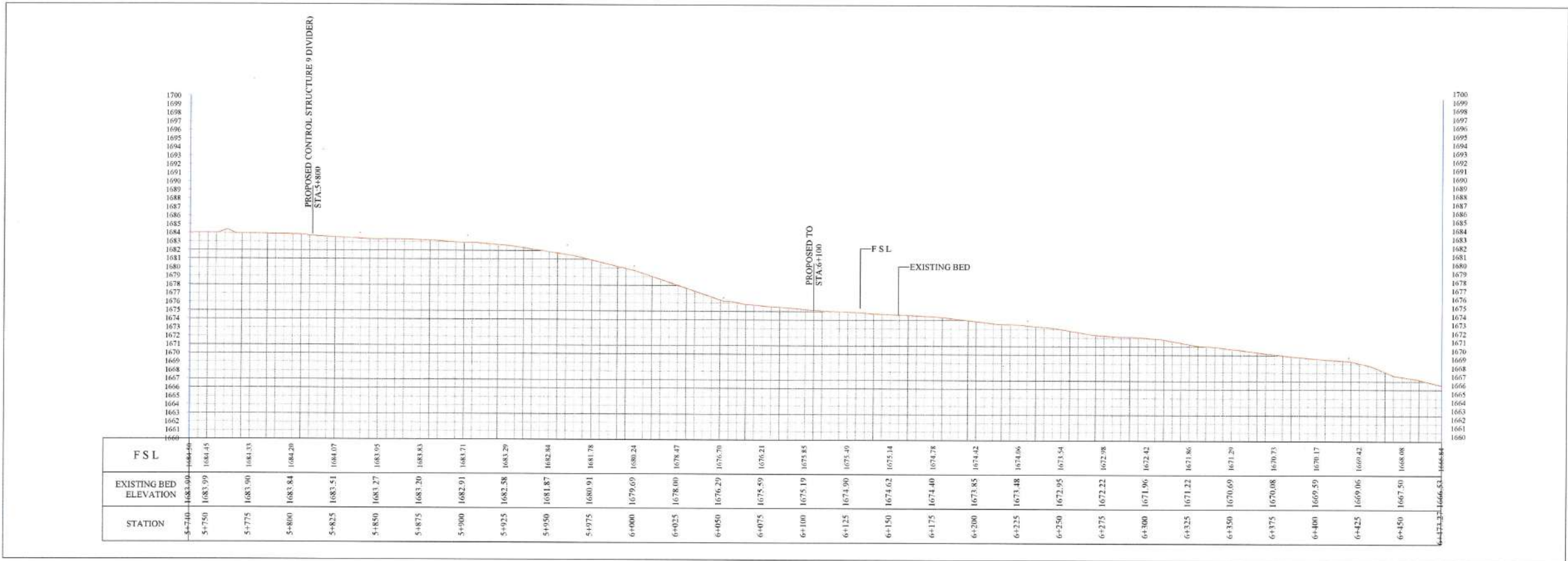
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 <div><b>USAID</b> FROM THE AMERICAN PEOPLE</div>	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL, APPROVAL	SHEET NO 8 /25
	<b>SWIM</b>	MOHAMMAD SALABEG SECONDARY CANAL	DISTRICT: PULI HISAR PROVINCE: BAGHLAN	<u>PLAN AND PROFILE</u>	SWIM	RAFIULLAH RAHMAN ENGINEER HYDRAULIC SPECIALIST	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. AHMAD HASEEB PAYAB ACTING CHIEF OF PARTY		
						DATE: 1 May 2019	DATE: 20 May 2019	DATE: 20 May 2019	DATE: 20 May 2019	






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 <div>UNITED STATES OF AMERICA <b>USAID</b> FROM THE AMERICAN PEOPLE</div>	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT  <b>SWIM</b>	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAILY APPROVAL	SHEET NO. 9 / 25
		MOHAMMAD SALABEG SECONDARY CANAL	DISTRICT: PULI HISAR PROVINCE: BAGHLAN	<u>PLAN AND PROFILE</u>	SWIM	RAFIULLAH RAHMANI ENGINEER HYDRAULIC SPECIALIST	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. AHMAD HASEEB PAYAB ACTING CHIEF OF PARTY		
		DATE: 24 JUN 2019		DATE: 24 JUN 2019		DATE: 24 JUN 2019		DATE: 24 JUN 2019		



SALABEG SECONDARY CANAL PROPOSED TURNOUT STRUCTURE					
S/No	STATION	NORTHING	EASTHING	ELEVATION	Description
1	0+510	35.65453	69.38228	1730.63	Turnout-proposed
2	0+780	35.65514	69.37982	1728.65	Turnout-proposed
3	1+070	35.65513	69.37663	1719.89	Turnout-proposed
4	2+320	35.66122	69.3668	1704.84	Turnout-proposed
5	2+510	35.65355	69.38474	1704.32	Turnout-proposed
6	2+620	35.66295	69.36471	1703.62	Turnout-proposed
7	2+900	35.66516	69.36318	1701.97	Turnout-proposed
8	2+970	35.66566	69.36293	1701.73	Turnout-proposed
9	3+140	35.66609	69.36232	1797.03	Turnout-proposed
10	3+410	35.6676	69.36052	1695.96	Turnout-proposed
11	3+440	35.66875	69.35976	1695.43	Turnout-proposed
12	3+460	35.67034	69.35898	1694.76	Turnout-proposed
13	3+470	35.67187	69.35728	1694.92	Turnout-proposed
14	3+640	35.67187	69.35728	1694.65	Turnout-proposed
15	3+885	35.67237	69.35727	1693.52	Turnout-proposed
16	3+940	35.67368	69.35683	1693.47	Turnout-proposed
17	4+060	35.67409	69.35631	1693.37	Turnout-proposed
18	4+120	35.67481	69.35475	1693.31	Turnout proposed
19	4+170	35.6748	69.35374	1693.19	Turnout-proposed
20	4+350	35.6742	69.35365	1693.1	Turnout-proposed
21	4+430	35.67771	69.35087	1689.47	Turnout-proposed
22	4+880	35.68026	69.34765	1686.86	Turnout-proposed
23	5+340	35.68022	69.34732	1685.9	Turnout-proposed
24	5+470	35.68011	69.3463	1685.49	Turnout-proposed
25	5+610	35.68073	69.34512	1683.88	Turnout-proposed
26	6+100	35.6813	69.34064	1675.19	Turnout-proposed

SALABEG SECONDARY CANAL PROPOSED PROTECTION & RETAINING STRUCTURE					
S/No	STATION	NORTHING	EASTHING	ELEVATION	Description
1	0+290	35.65355	69.38474	1732.19	100m Protection wall-proposed
2	0+890	35.65505	69.37848	1727.19	10m Retaining wall proposed

SALABEG SECONDARY CANAL PROPOSED GATE STRUCTURE					
S/No	STATION	NORTHING	EASTHING	ELEVATION	Description
1	1+920	35.65847	69.36975	1732.49	Gate-Proposed
2	2+100	35.65974	69.36835	1706.14	Existing spillway ( Gate Needed)

SALABEG SECONDARY CANAL PROPOSED LINING					
S/No	STATION	NORTHING	EASTHING	ELEVATION	Description
1	1+030	35.67409	69.35631	1721.63	70m Lining proposed
2	3+980	35.67276	69.35736	1694.2	35m lining
3	4+130	35.67409	69.35631	1693.28	proposed laining 70m

SALABEG SECONDARY CANAL PROPOSED DIVIDER STRUCTURES					
S/No	STATION	NORTHING	EASTHING	ELEVATION	Description
1	5+880	35.6817	69.34343	1683.32	Flow control structure proposed

SALABEG SECONDARY CANAL EXISTING STRUCTURES					
S/No	STATION	NORTHING	EASTHING	ELEVATION	Description
1	0+200	35.67276	69.35736	1732.3	Existing super passage
2	3+270	35.66754	69.36075	1697.46	existing pipe aquadact

SALABEG SECONDARY CANAL PROPOSED CULVERT STRUCTURES LIST					
S/No	STATION	NORTHING	EASTHING	ELEVATION	Description
1	4+410	35.67484	69.35399	1694.25	proposed culvert
2	4+340	35.67481	69.35475	1696.54	Proposed Food Culvert

SALABEG SECONDARY CANAL PROPOSED DROP STRUCTURE					
S/No	STATION	NORTHING	EASTHING	ELEVATION	Description
1	3+170	35.66689	69.36149	1696.94	Drop structure proposed

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	<b>STRENGTHENING WATERSHED &amp; IRRIGATION MANAGEMENT</b> <b>SWIM</b>	<b>CANAL NAME</b> MOHAMMAD SALABEG SECONDARY CANAL	<b>LOCATION</b> DISTRICT: PULI HISAR PROVINCE: BAGHLAN	<b>DRAWING TITLE</b> STRUCTURE LIST ALONG WITH GPS COORDINATES	<b>SURVEYED BY</b> SWIM	<b>DRAWING AND DESIGN BY</b> RAFIULLAH RAHMANI ENGINEER HYDRAULIC SPECIALIST	<b>REVIEWED AND CHECKED BY</b> ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	<b>SWIM APPROVAL</b> DR. AHMAD HASEEB PAYAB ACTING CHIEF OF PARTY	<b>MAIL/DAIL APPROVAL</b>	<b>SHEET NO.</b> 10/25
						DATE: 24 JUN 2019	DATE: 24 JUN 2019	DATE: 24 JUN 2019	DATE: 24 JUN 2019	



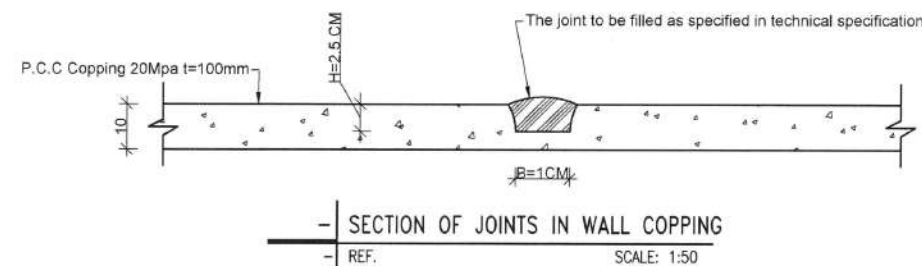
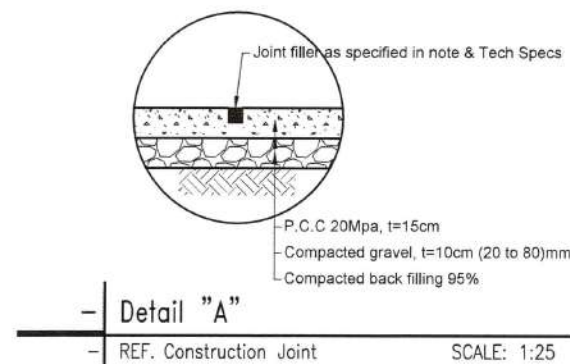
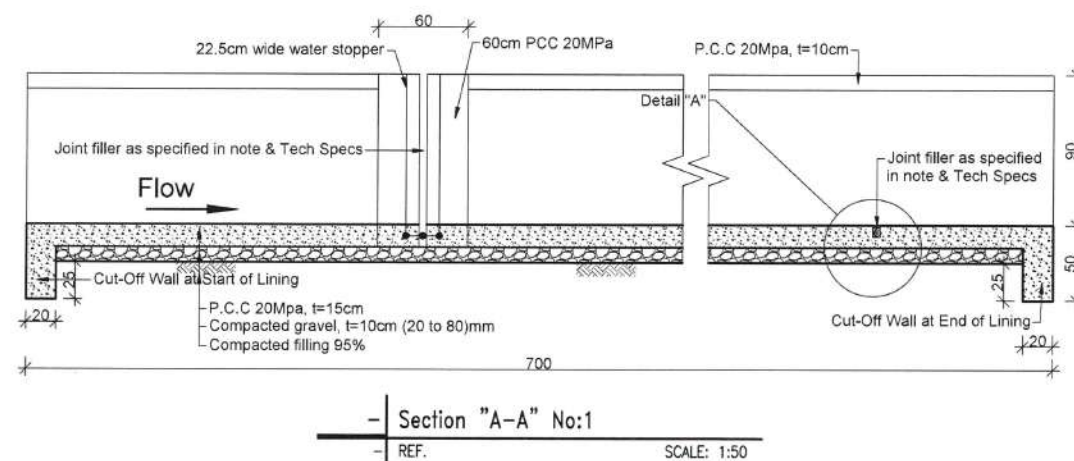
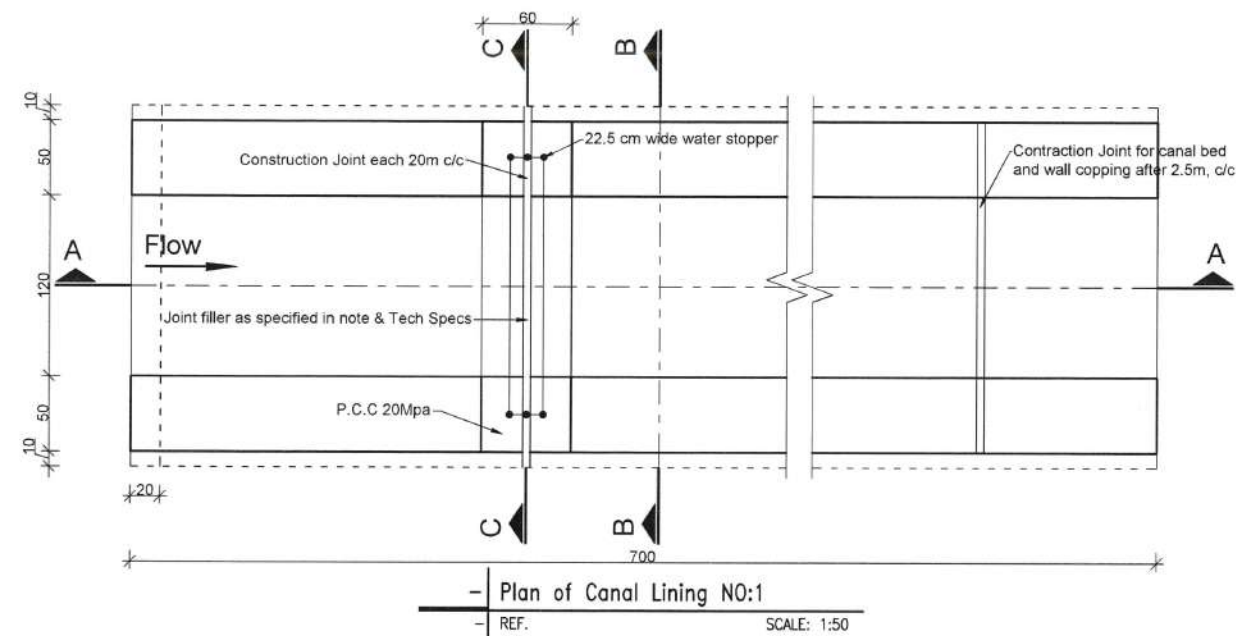
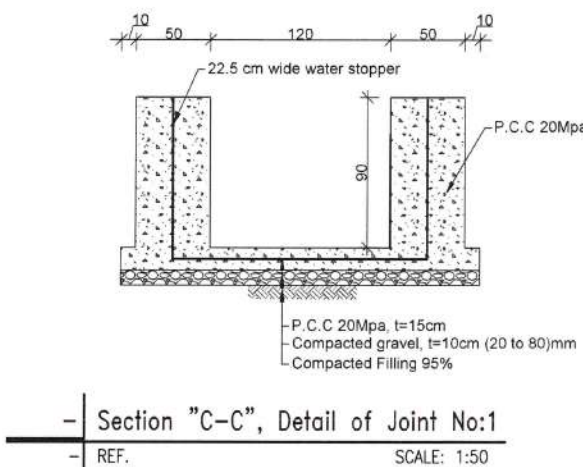
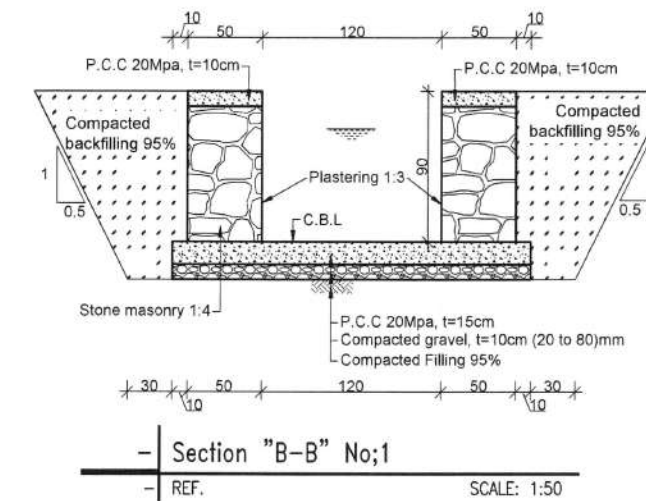


TABLE OF LINING

No	Canal Lining Detail	Dimensions (M)			Station		Canal Slope	Flow Depth	Discharge
		Length	High	Width	Start	End			
1	Mohammad Salabeg Canal	70	90	1.2	1+030	1+100	0.002	0.7	1.2 cum
2	Mohammad Salabeg Canal	35	0.8	1.0	3+980	4+015	0.002	0.6	0.75 cum
3	Mohammad Salabeg Canal	70	0.8	1.0	4+130	4+200	0.002	0.6	0.75 cum





Note:

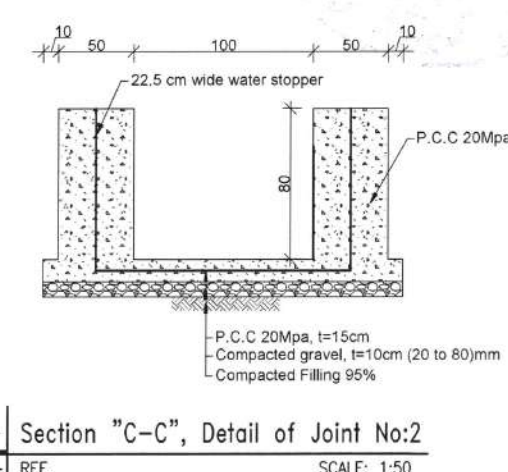
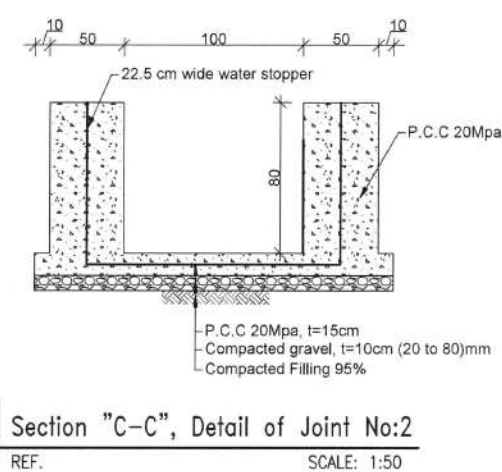
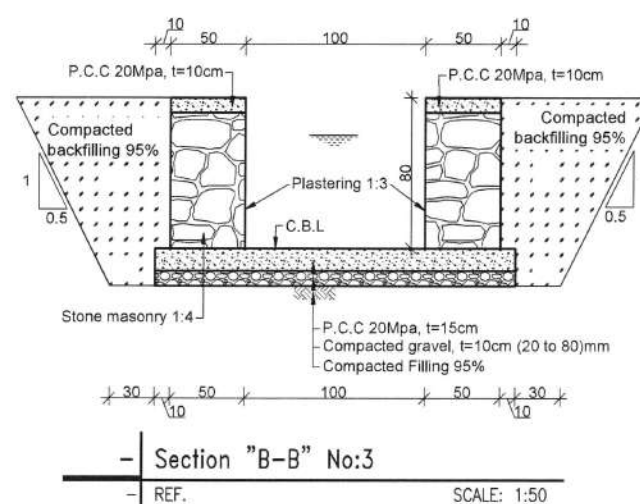
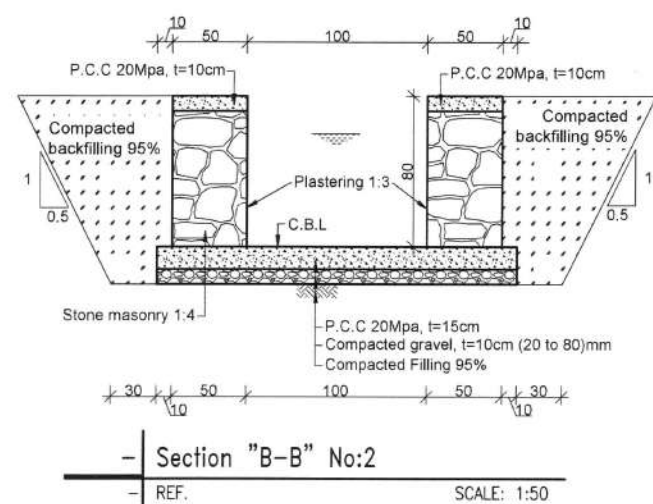
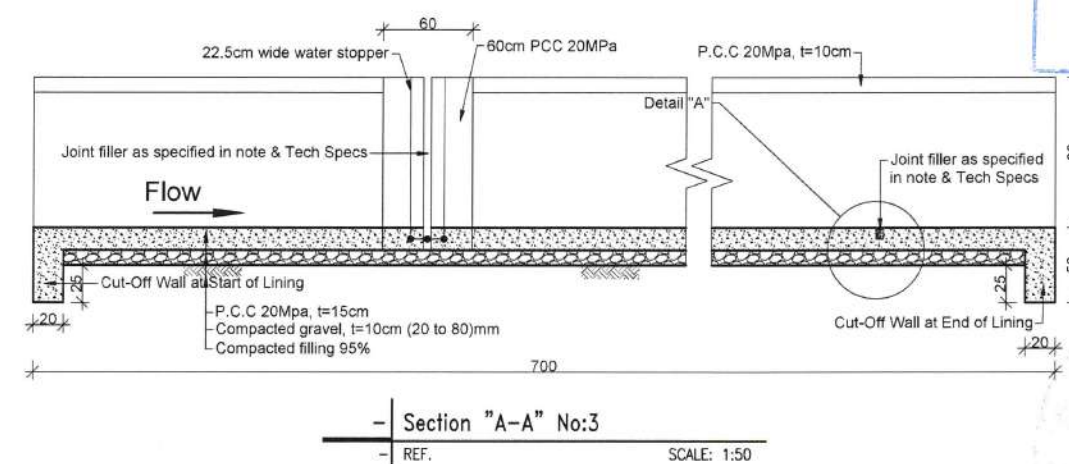
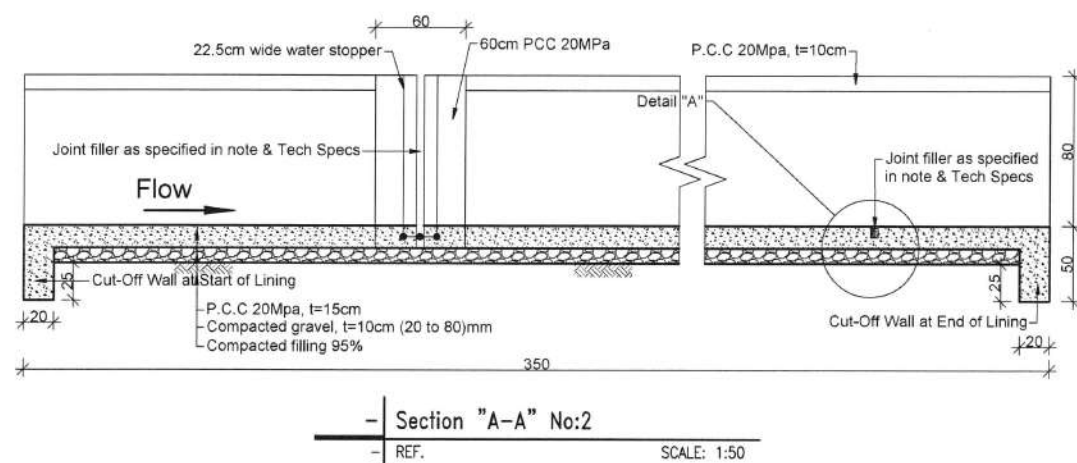
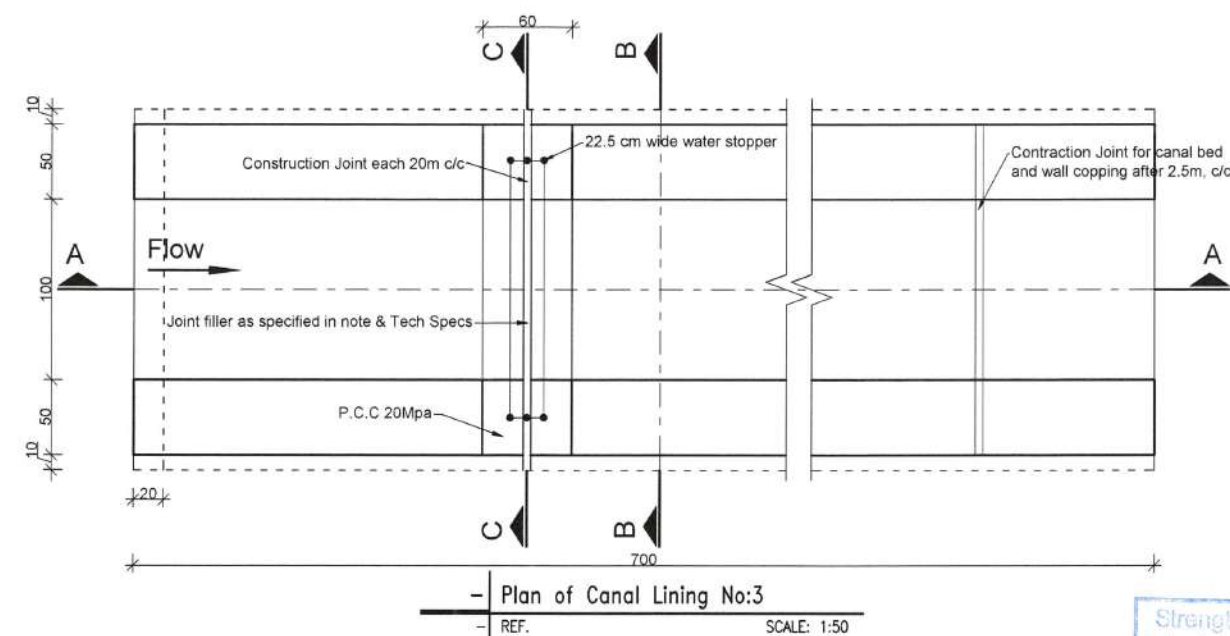
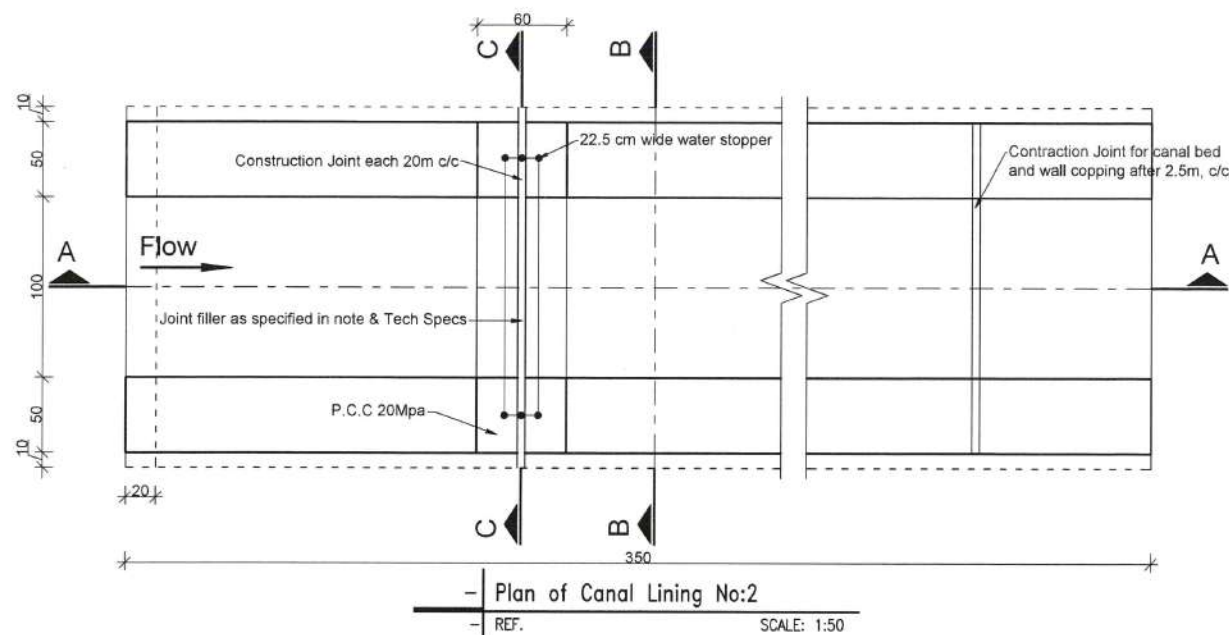
1. Unless noted otherwise, linear dimensions shown on drawing are in centimeters (cm), and elevations are in meters (m).
2. The construction joints are recommended after each segment of 20M length of stone masonry along canal lining.
3. The joint's gape will be around (3.5 to 4)cm and should be filled properly as specified in technical specification.
4. The control joints are recommend on P.C.C coping and Canal Bed of all canal linings @ 2.5M c/c with approximately 5mm wide.
5. Excavation for the Foundation should be checked by the site Engineer as per drawing and Tech Specs.
6. Sand and Gravel should be clean and free from organic material.
7. All filling should be compacted properly in layers of 15cm each as specified in drawing and technical specification.
8. Stone masonry should be done by Mortar (1:4).
9. Fresh cement to be used.
10. Clean water should be used (suitable for drinking).
11. Angle of walls to be adjusted by SWIM engineer as per site conditions.

Strengthening Watershed  
Irrigation Management System  
02 JUL 2019

Thiyyah Issued for construction  
02 JUL 2019

<div><div><div>UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT</div><div></div><div>USAID FROM THE AMERICAN PEOPLE</div></div></div>	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DATE, APPROVAL	SHEET NO. 11 / 25
		MOHAMMAD SALABEG SECONDARY CANAL	DISTRICT: PULI HISAR PROVINCE: BAGHLAN	LINING PLAN, SECTIONS & DETAILS	SWIM	RAFIULLAH RAHMAN ENGINEER HYDRAULIC SPECIALIST	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. AHMAD HASEEB PAYAB ACTING CHIEF OF PARTY		
						DATE: 24 JUN 2019	DATE: 24 JUN 2019	DATE: 24 JUN 2019	DATE:	



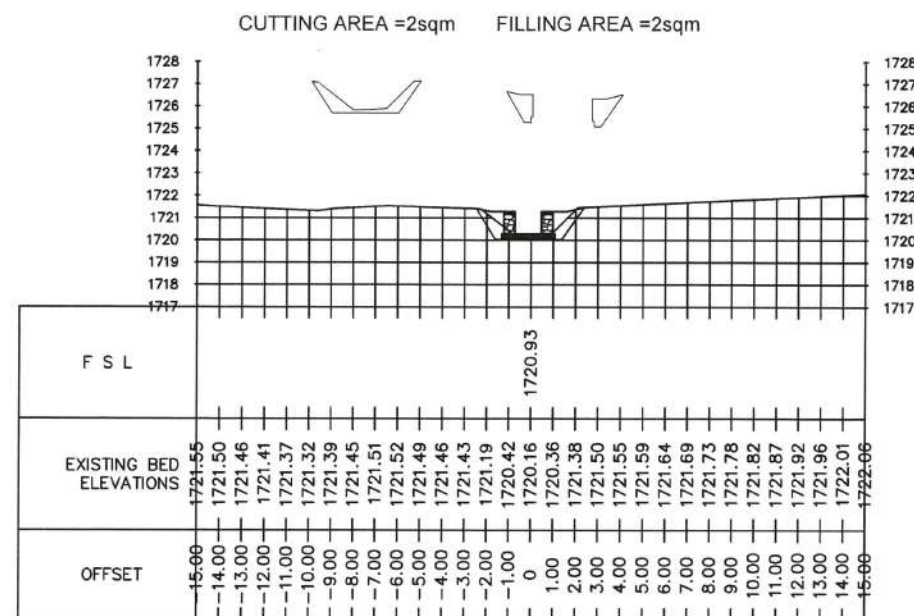


Strengthening Watershed  
Irrigation Management System  
AECOM  
Issued for construction  
02 JUL 2019

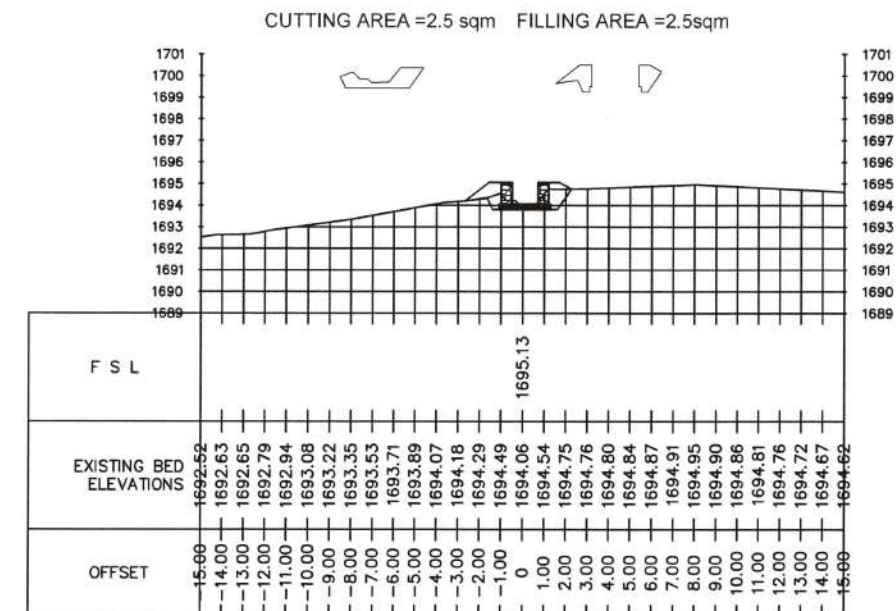
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							<b>DATE</b>	<b>DATE</b>	<b>DATE</b>	<b>DATE</b>	

24 JUN 2019

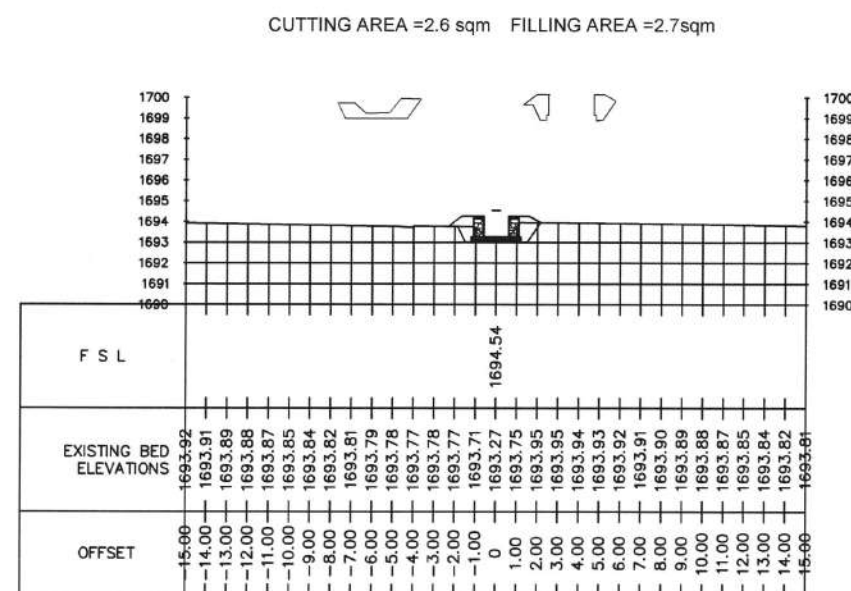




MOHAMMAD SALABEG CANAL LINING AVERAGE CUTTING  
AND FILLING STATION 1+030 TO 1+100



MOHAMMAD SALABEG CANAL LINING AVERAGE CUTTING  
AND FILLING STATION 3+980 TO 4+015




MOHAMMAD SALABEG CANAL LINING AVERAGE CUTTING  
AND FILLING STATION 4+130 TO 4+200

Strengthening Watershed  
Irrigation Management SWI2

Issued for construction  
Zhiyagah

02 JUL 2019



 <b>USAID</b> FROM THE AMERICAN PEOPLE	STRENGTHENING WATERSHED & IRRIGATION MANAGEMENT <b>SWIM</b>	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL, APPROVAL	SHEET NO. 12 /25
		MOHAMMAD SALABEG SECONDARY CANAL	DISTRICT: PULI HISAR PROVINCE: BAGHLAN	LINING CROSS SECTIONS	SWIM	RAFIULLAH RAHMANI ENGINEER HYDRAULIC SPECIALIST DATE: <i>[Signature]</i>	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR DATE: <i>[Signature]</i>	DR. AHMAD HASEEB PAYAB ACTING CHIEF OF PARTY DATE: <i>[Signature]</i>	<i>[Signature]</i> DATE: <i>[Signature]</i>	

24 JUN 2019

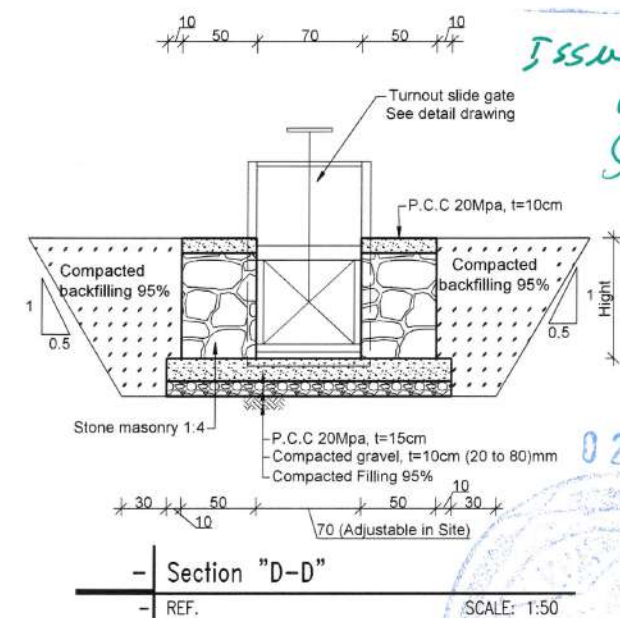
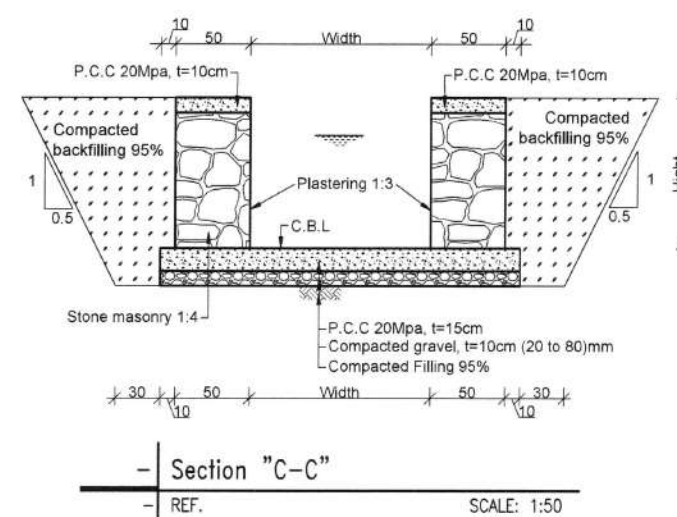
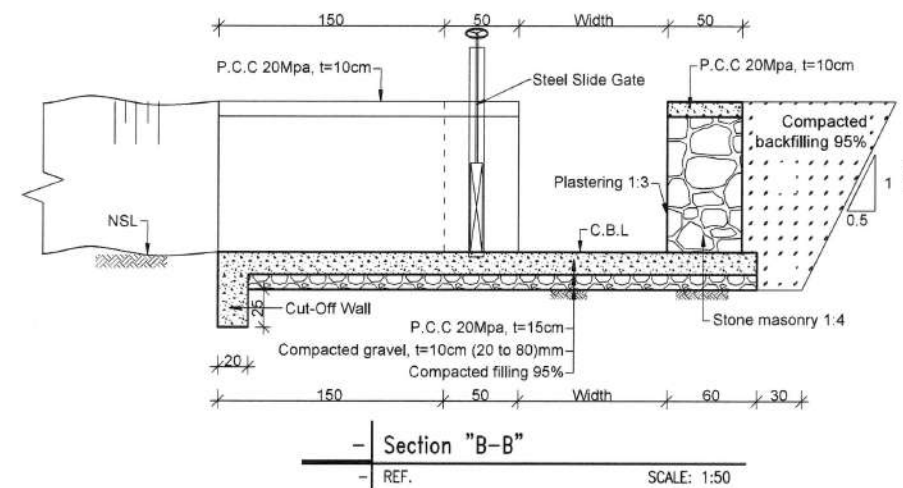
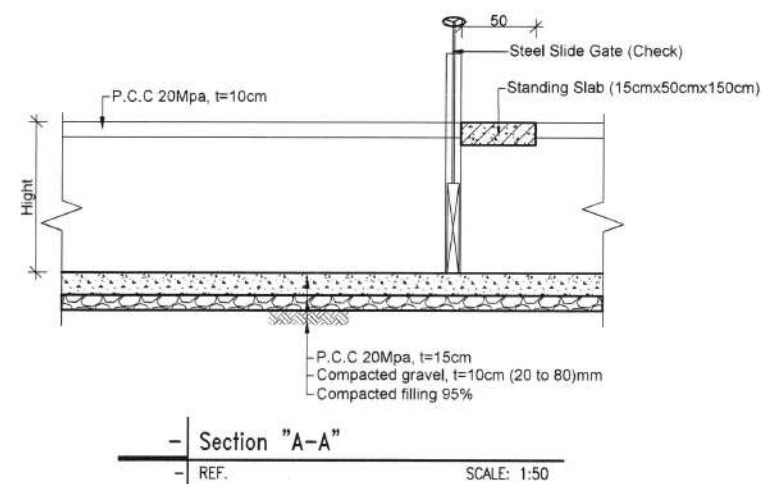
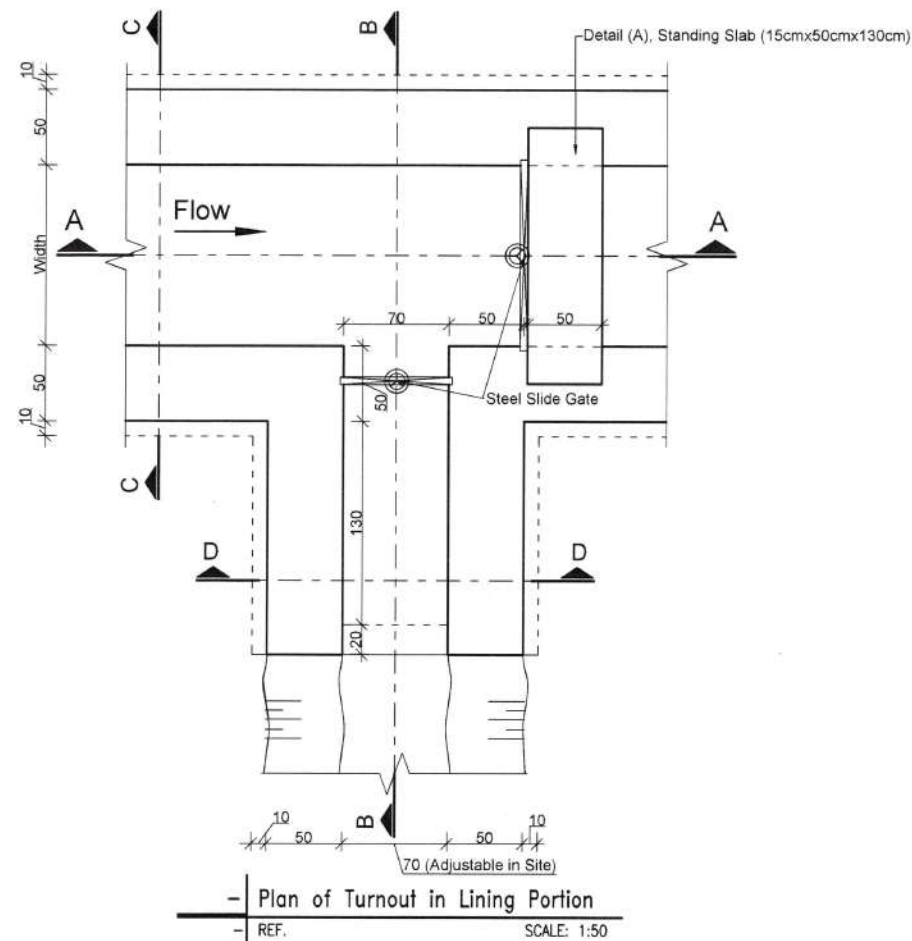


TABLE OF LINING

No	Canal Lining Detail	Dimensions (M)			Station		Canal Slope	Flow Depth	Discharge
		Length	Height	Width	Start	End			
1	Mohammad Salabeg Canal	70	0.9	1.2	1+030	1+100	0.002	0.7	1.2 cum
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## Note:

- 1: Unless noted otherwise, linear dimensions shown on drawing are in centimeters (cm), and elevations are in meters (m).
- 2: Excavation for the Foundation should be checked by the site Engineer,
- 3: Sand and Gravel should be clean and free from organic material
- 4: All filling should be compacted properly in layers of 15cm each as specified in drawing and technical specification
- 5: Stone masonry should be done by Mortar (1:4)
- 6: Angle and length of wing walls to be adjusted by SWIM engineer as per site conditions



Strengthening Watershed  
Irrigation Management  
ABCOM

Issued for construction  
Shirayaf

02 JUL 2019



STRENGTHENING WATERSHED  
&  
IRRIGATION MANAGEMENT  
**SWIM**

CANAL NAME  
MOHAMMAD  
SALABEG  
SECONDARY  
CANAL

LOCATION  
DISTRICT: PULI HISAR  
PROVINCE: BAGHLAN

DRAWING TITLE  
TURNOUT IN LINING CANAL  
PLAN AND SECTIONS

SURVEYED BY  
SWIM

DRAWING AND DESIGN BY  
RAFIULLAH RAHMANI  
ENGINEER  
HYDRAULIC SPECIALIST  
DATE: *[Signature]*

REVIEWED AND CHECKED BY  
ENG. MOHAMMAD MOBIN OMID  
QA/QC & ENVIRONMENTAL  
COMPLIANCE DIRECTOR  
DATE: *[Signature]*

SWIM APPROVAL  
DR. AHMAD HASEEB PAYAB  
ACTING CHIEF OF PARTY  
DATE: *[Signature]*

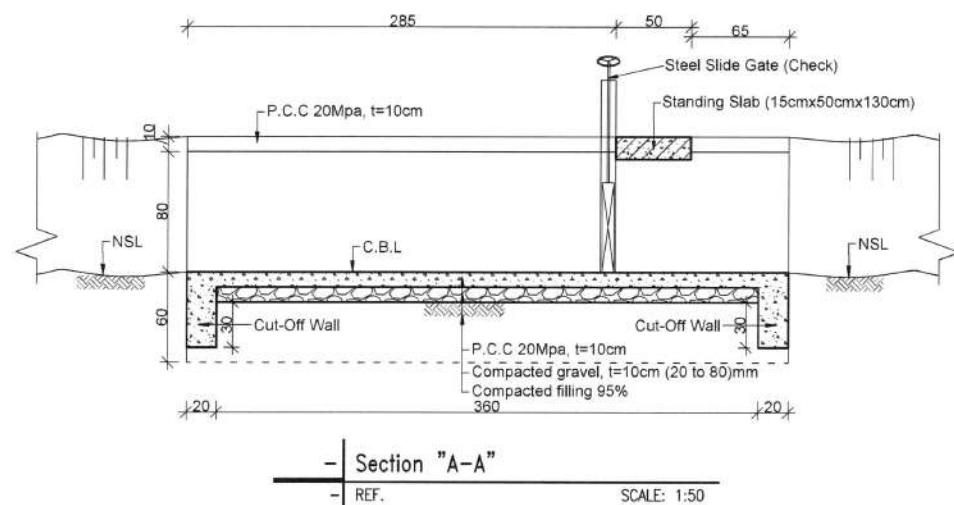
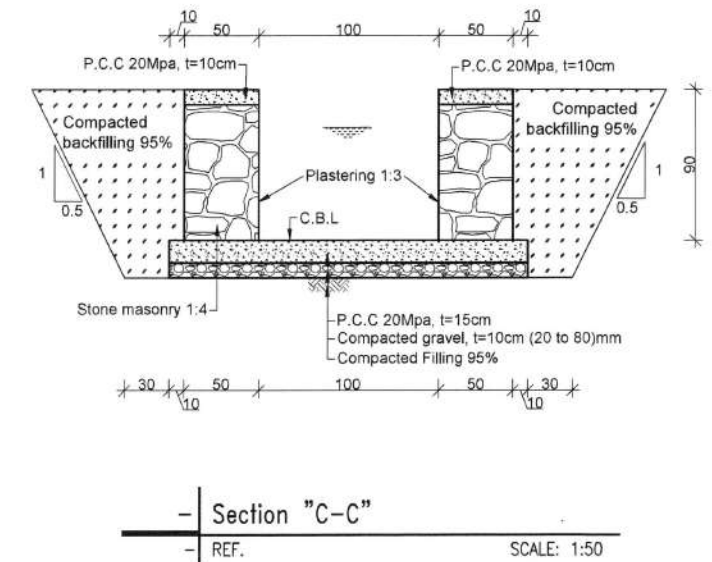
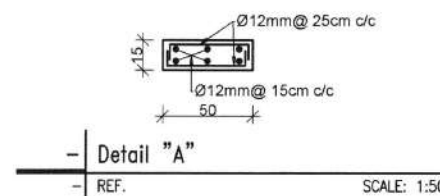
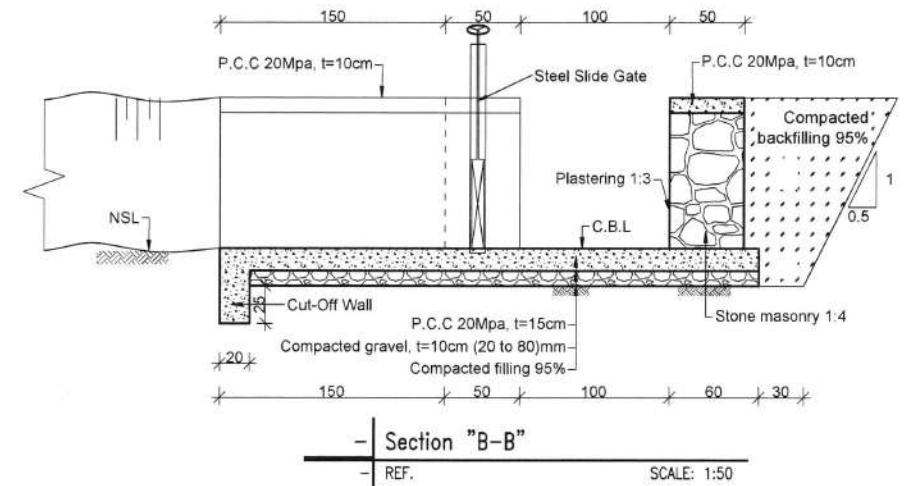
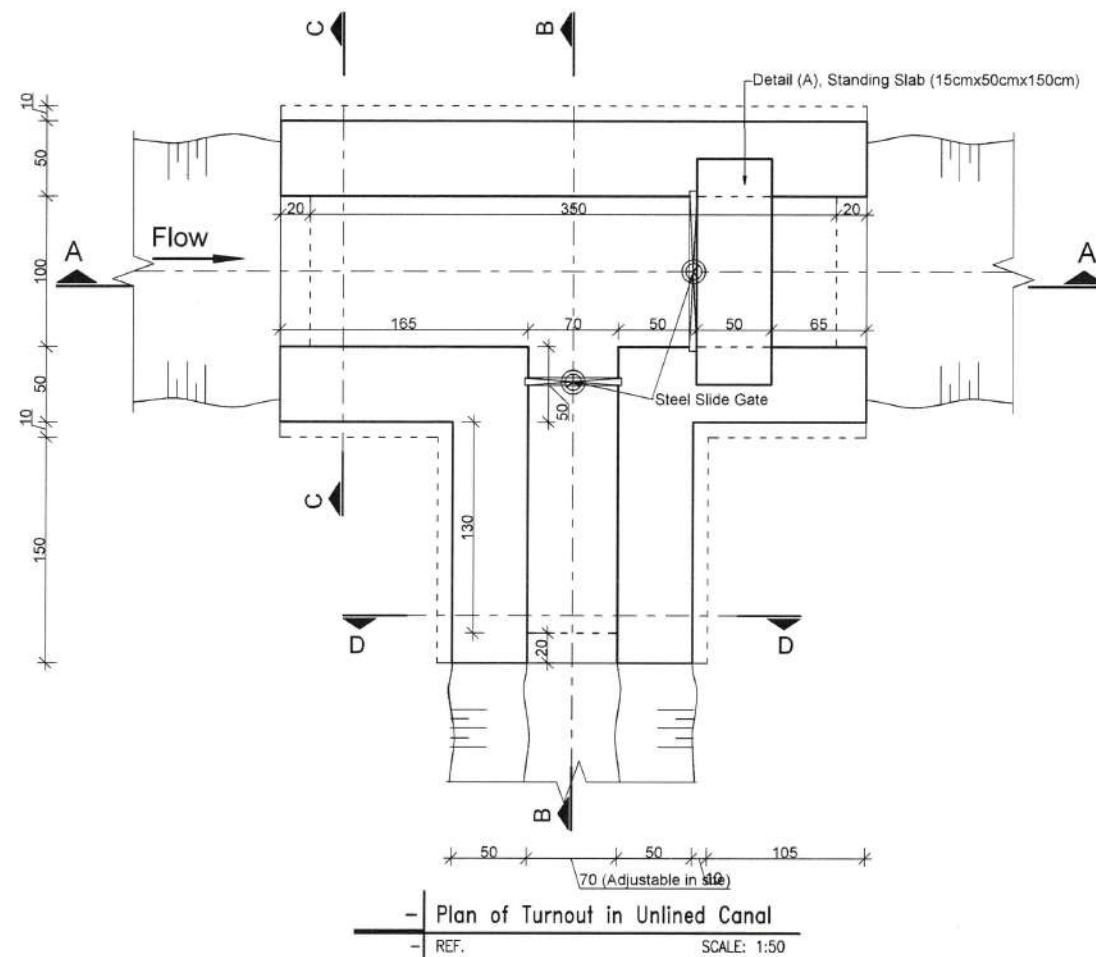
MAIL/DAILY APPROVAL  
DATE: *[Signature]*

SHEET NO.  
13 / 25

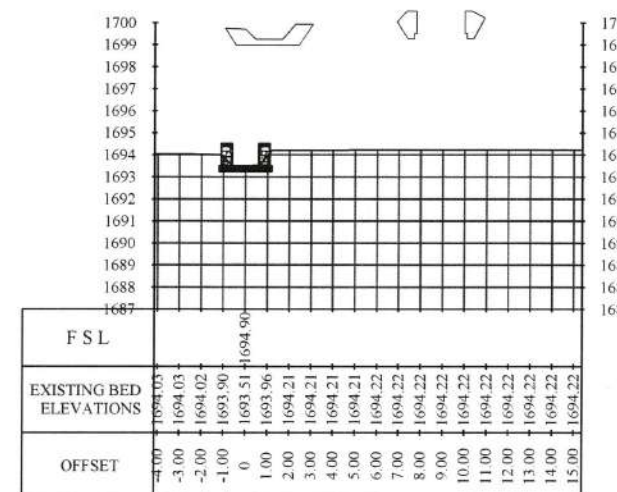


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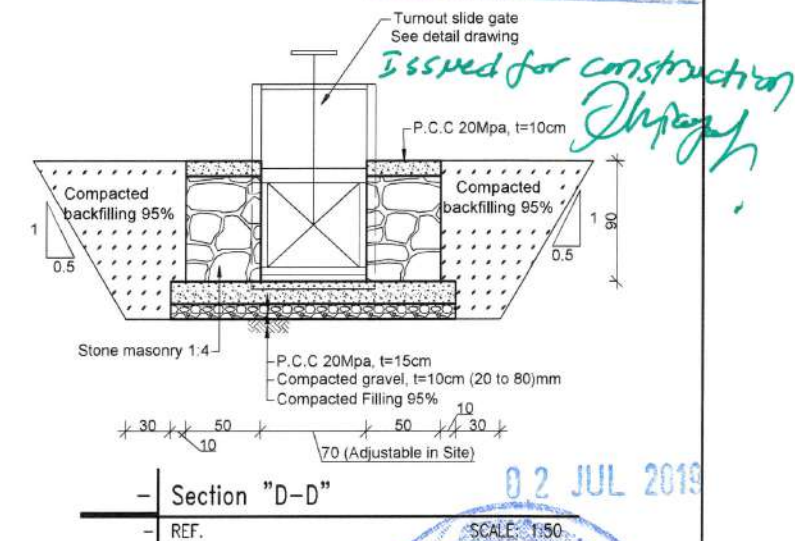
- 1: Unless noted otherwise, linear dimensions shown on drawing are in centimeters (cm), and elevations are in meters (m).
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- 6: Angle and length of wing walls to be adjusted by SWIM engineer as per site conditions



CUTTING AREA = 2.5sqm FILLING AREA = 2sqm



MOHAMMAD SALABEG CANAL AVERAGE CUTTING AND FILLING FOR TURNOUT STRUCTURES IN UNLINED PORTION



STRENGTHENING WATERSHED  
&  
IRRIGATION MANAGEMENT  
**SWIM**

CANAL NAME  
MOHAMMAD SALABEG  
SECONDARY CANAL

LOCATION  
DISTRICT: PULI HISAR  
PROVINCE: BAGHLAN

DRAWING TITLE  
TURNOUT IN EARTHEN  
CANAL  
PLAN AND SECTIONS

SURVEYED BY  
SWIM

DRAWING AND DESIGN BY  
RAFIULLAH RAHMANI  
ENGINEER  
HYDRAULIC SPECIALIST  
DATE: *[Signature]*

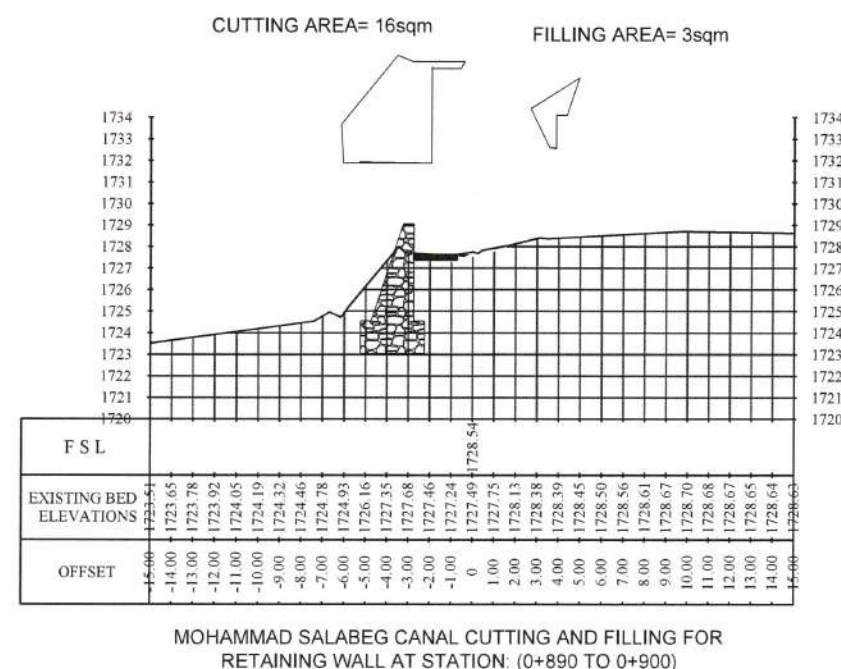
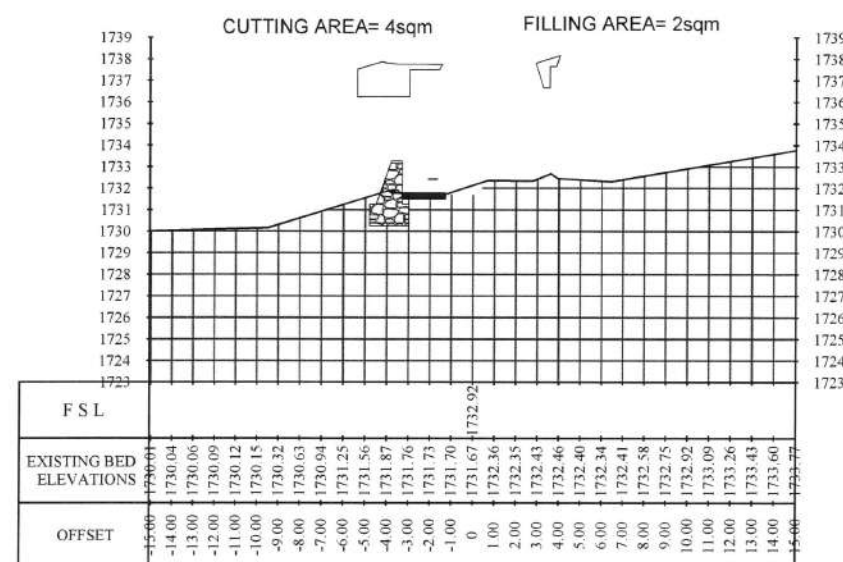
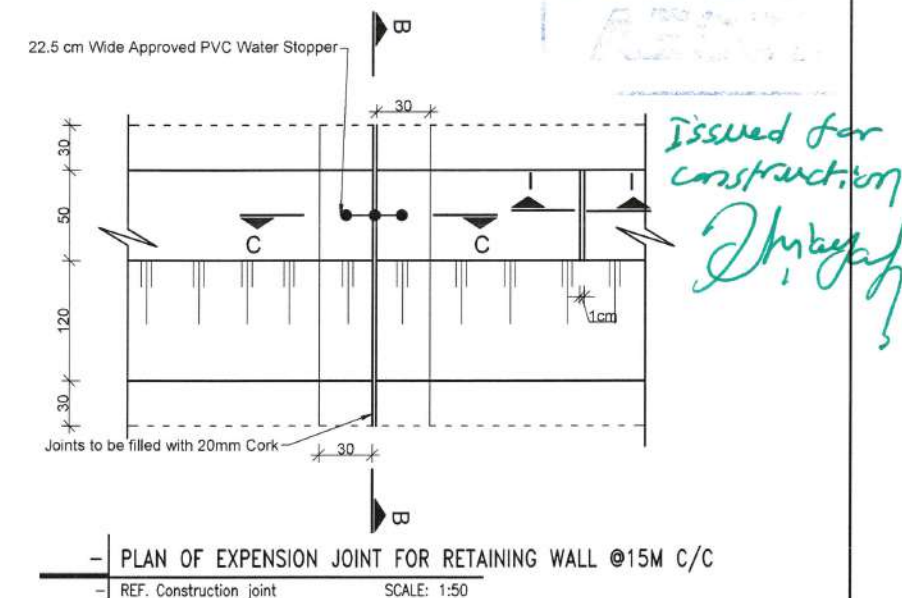
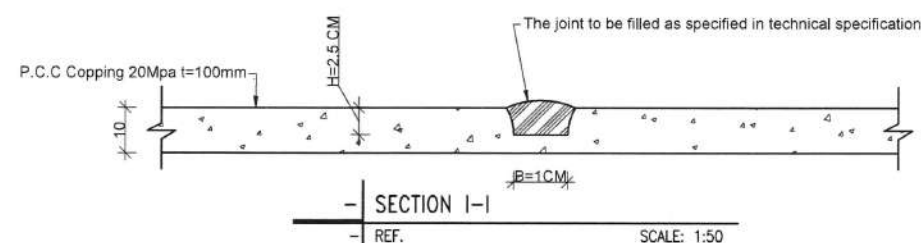
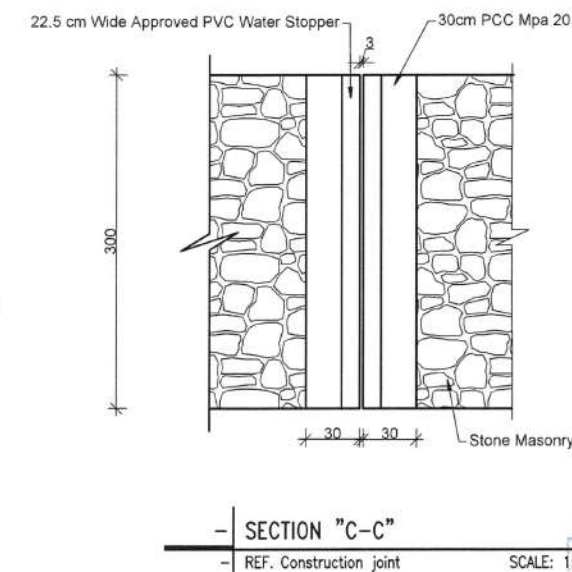
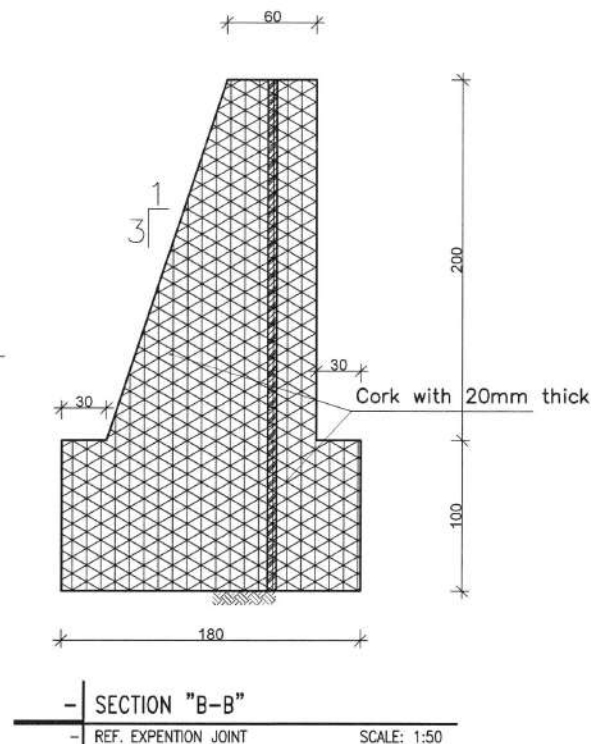
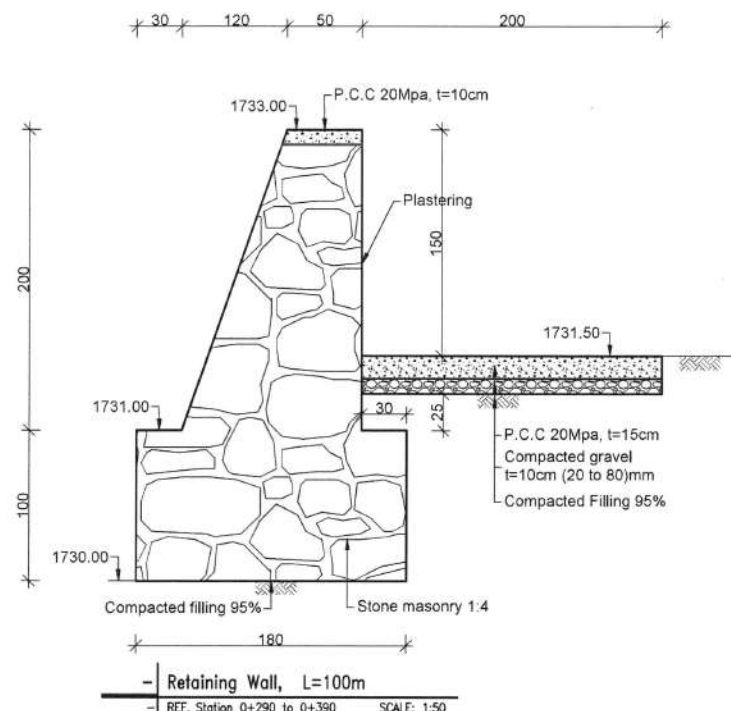
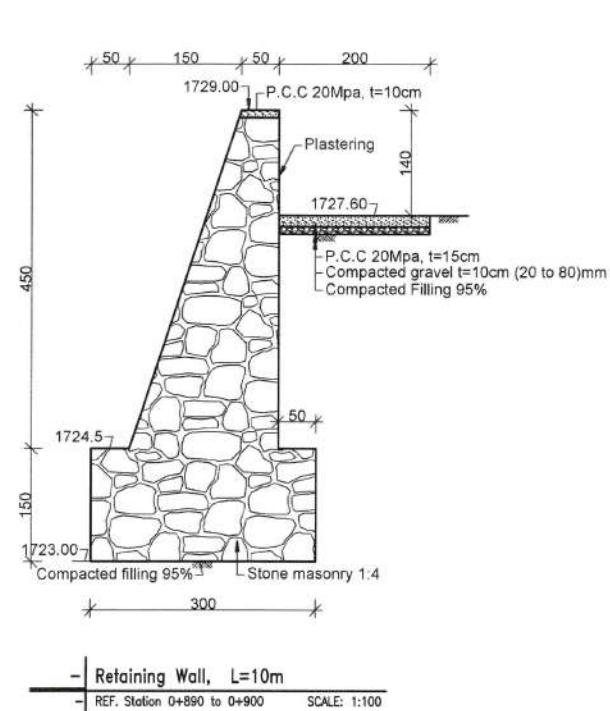
REVIEWED AND CHECKED BY  
ENG. MOHAMMAD MOBIN OMID  
QA/QC & ENVIRONMENTAL  
COMPLIANCE DIRECTOR  
DATE: *[Signature]*

SWIM APPROVAL  
DR. AHMAD HASEEB PAYAB  
ACTING CHIEF OF PARTY  
DATE: *[Signature]*

MAIL/DATE APPROVAL  
DATE: *[Signature]*

SHEET NO.  
14/25





Note:

- 1: Unless noted otherwise, linear dimensions shown on drawing are in centimeters (cm), and elevations are in meters (m).
- 2: Excavation for the Foundation should be checked by the site Engineer,
- 3: Sand and Gravel should be clean and free from organic material
- 4: All filling should be compacted properly in layers of 15cm each as specified in drawing and technical specification
- 5: Stone masonry should be done by Mortar (1:4)
- 6: Angle and length of wing walls to be adjusted by SWIM engineer as per site conditions
- 7: Gravel: Material passing a 75-mm (3-inch) sieve and retained on a 4.75-mm (No.4) sieve.
- 8: Coarse Sand: Material passing a 4.75-mm sieve (No. 4) and retained on a 2.00-mm (No.10) sieve.
- 9: Fine Sand: Material passing a 0.475-mm (No. 40) sieve and retained on a 0.075-mm (No. 200) sieve.

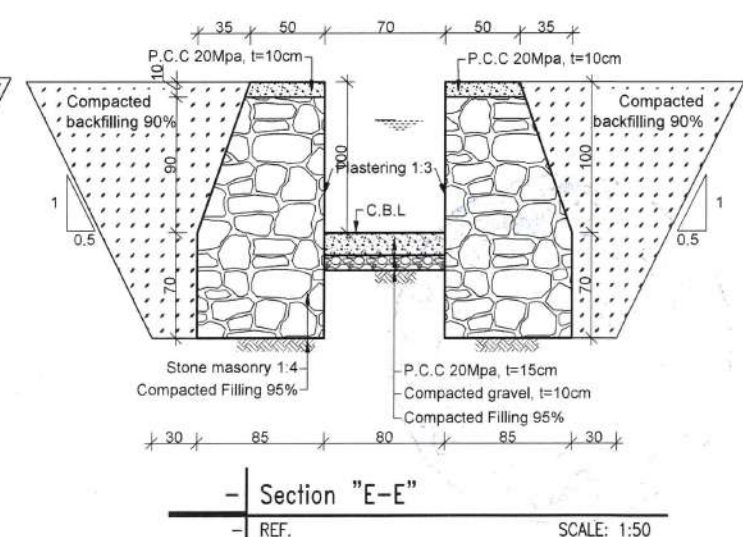
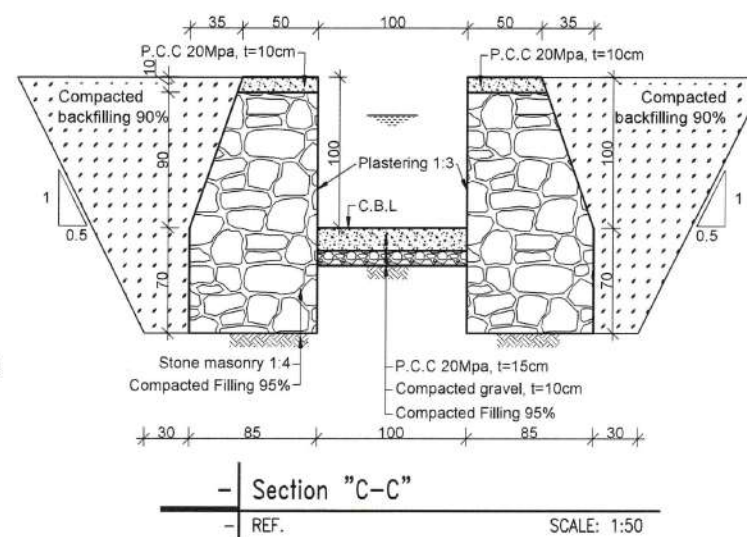
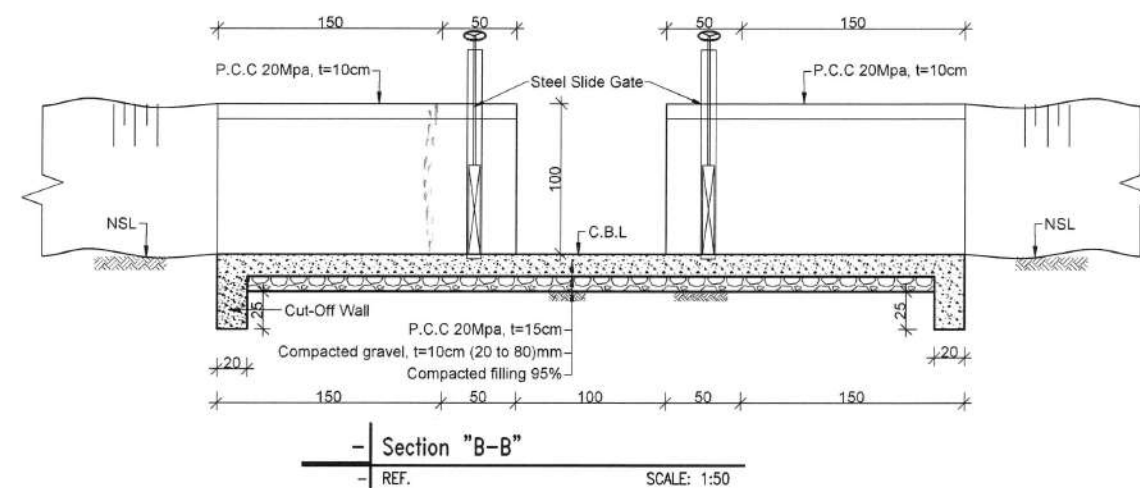
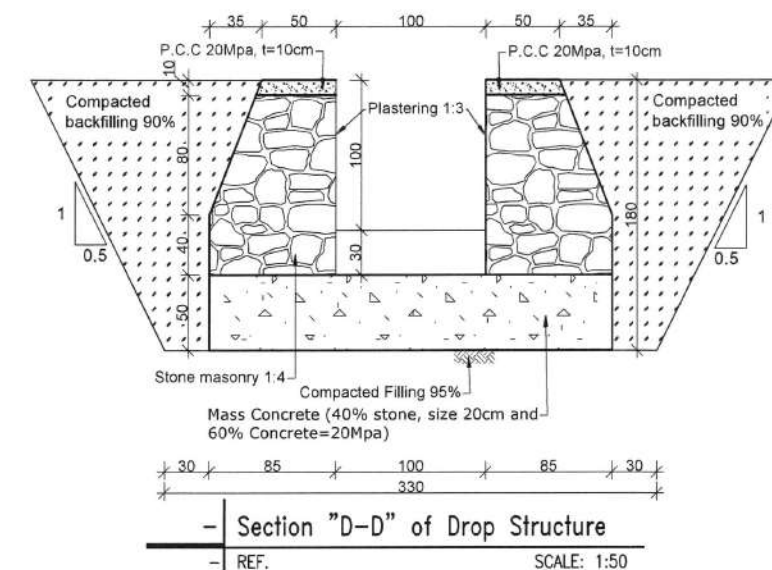
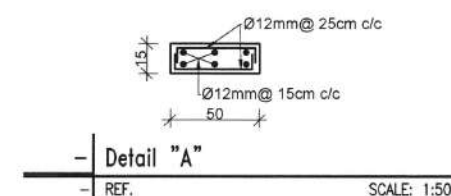
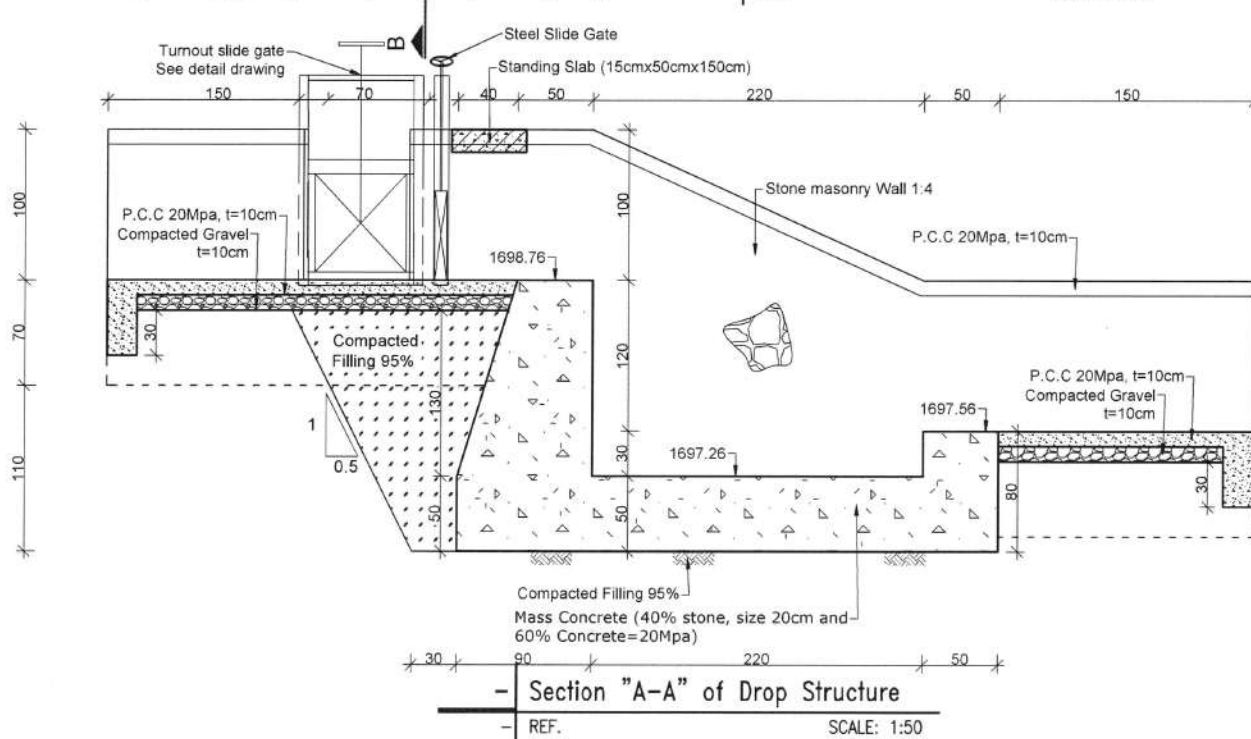
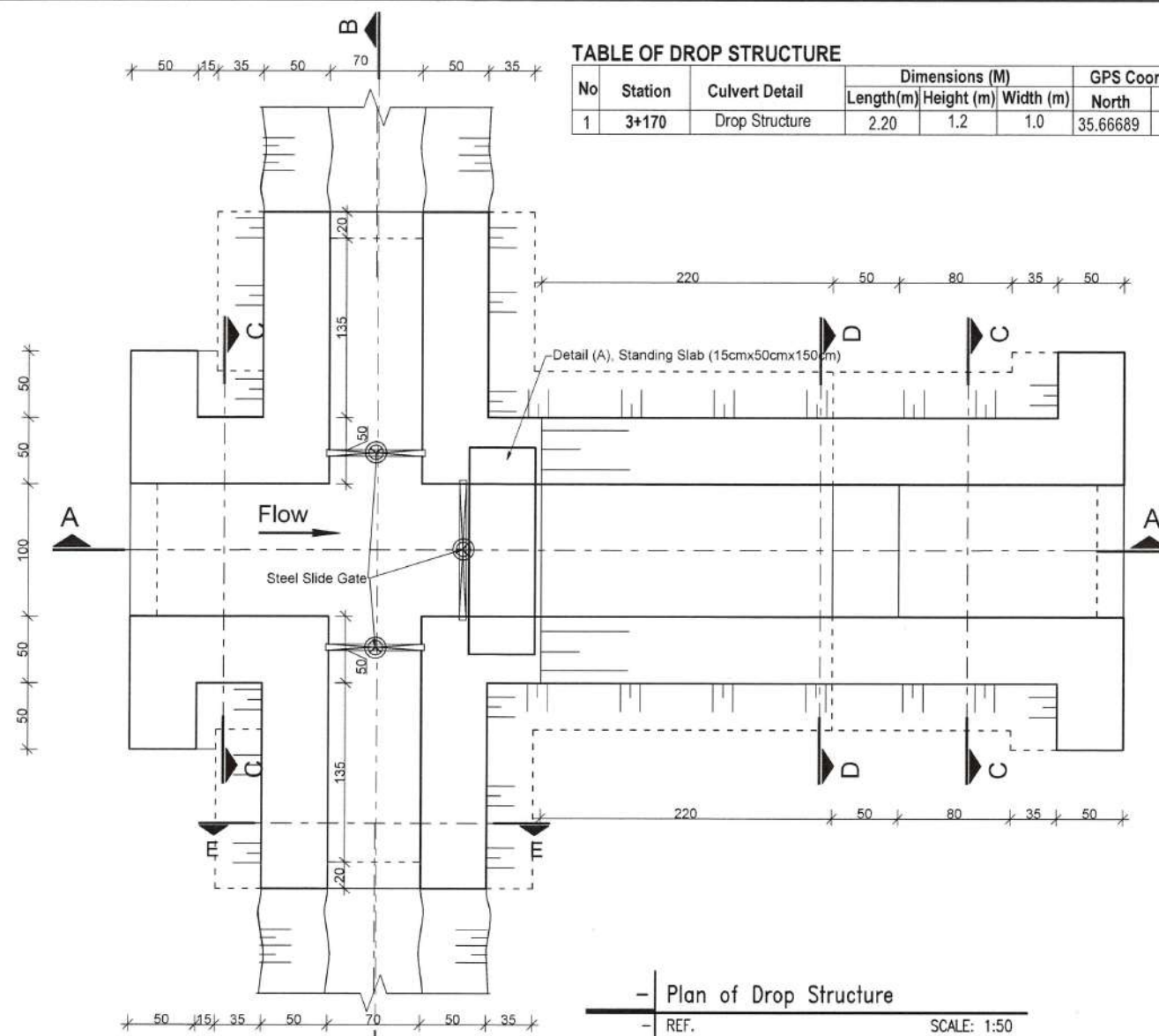
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		MOHAMMAD SALABEG SECONDARY CANAL	DISTRICT: PULI HISAR PROVINCE: BAGHLAN	RETAINING WALL SECTIONS AND DETAIL	SWIM	RAFIULLAH RAHMANI ENGINEER HYDRAULIC SPECIALIST	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. AHMAD HASEEB PAYAB ACTING CHIEF OF PARTY		

24 JUN 2019



TABLE OF DROP STRUCTURE

No	Station	Culvert Detail	Dimensions (M)			GPS Coordinate		Bed Elevation (m)	Remarks
			Length (m)	Height (m)	Width (m)	North	East		
1	3+170	Drop Structure	2.20	1.2	1.0	35.66689	69.36149	1696.94	



Strengthening Watershed and  
Irrigation Management (SWIM)  
ALCOA

Issued for construction  
24 JUL 2019



STRENGTHENING WATERSHED  
&  
IRRIGATION MANAGEMENT  
**SWIM**

CANAL NAME  
MOHAMMAD  
SALABEG  
SECONDARY  
CANAL

LOCATION  
DISTRICT: PULI HISAR  
PROVINCE: SAMANGAN

DRAWING TITLE  
DROP STRUCTURE  
PLAN AND SECTIONS

SURVEYED BY  
SWIM

DRAWING AND DESIGN BY  
RAFIULLAH RAHMAN  
ENGINEER  
HYDRAULIC SPECIALIST  
DATE: 24 JUN 2019

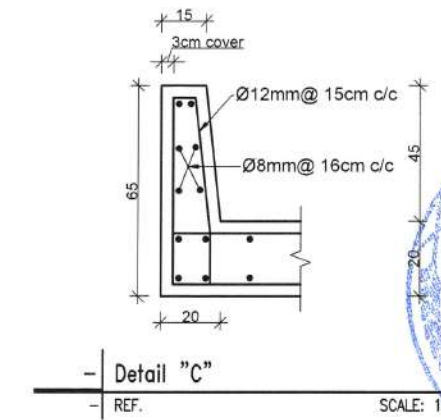
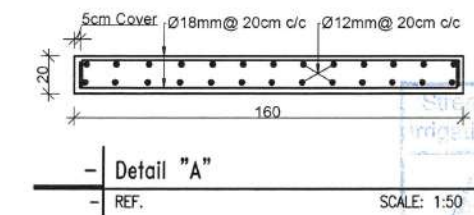
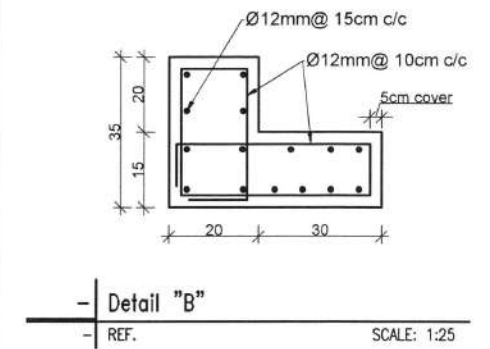
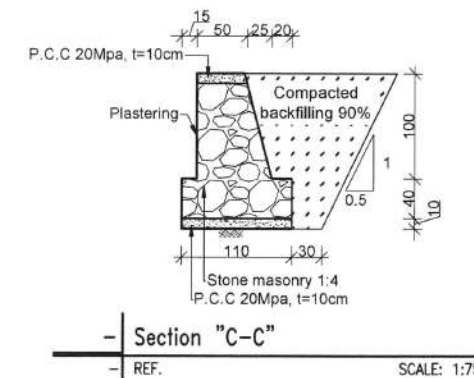
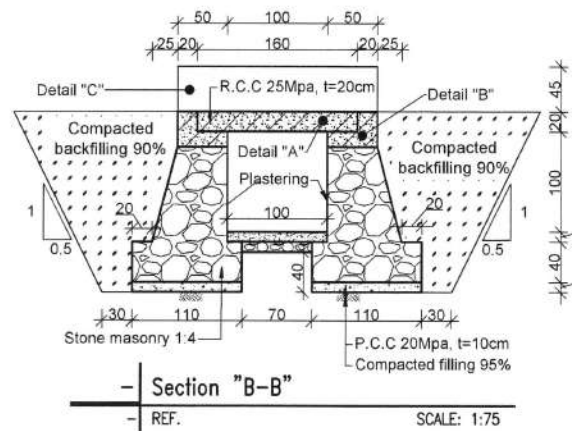
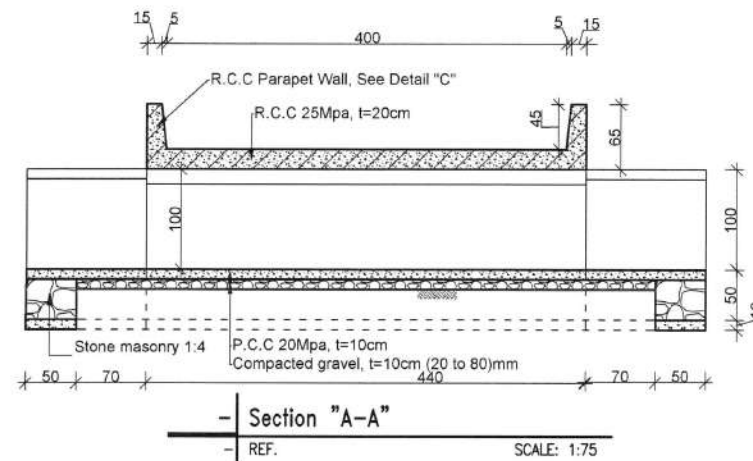
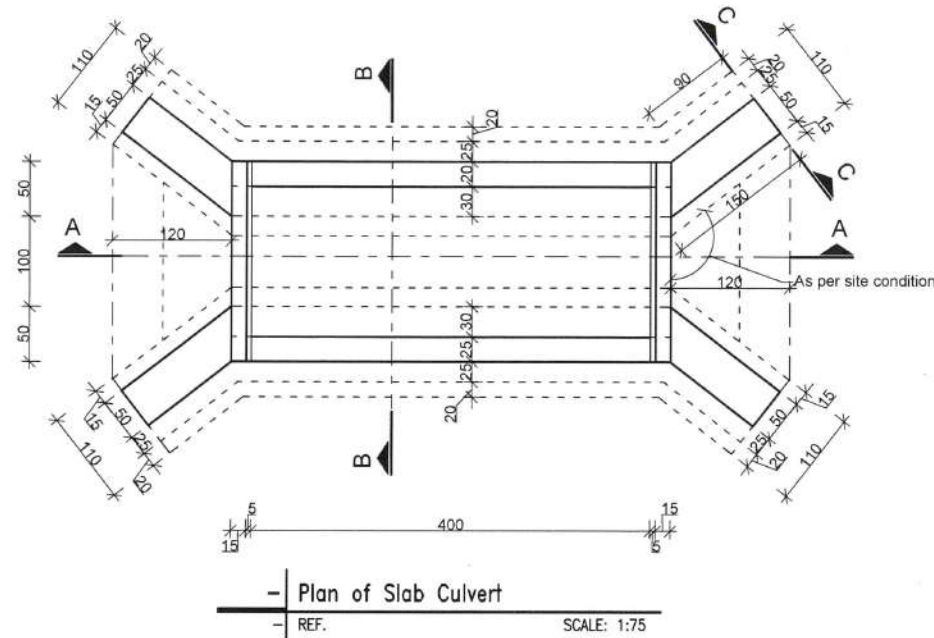
REVIEWED AND CHECKED BY  
ENG. MOHAMMAD MOBIN OMID  
QA/QC & ENVIRONMENTAL  
COMPLIANCE DIRECTOR  
DATE: 24 JUN 2019

SWIM APPROVAL  
DR. AHMAD HASEEB PAYAB  
ACTING CHIEF OF PARTY  
DATE: 24 JUN 2019

MAIL/DAIL, APPROVAL  
DATE:

SHEET NO  
16/25





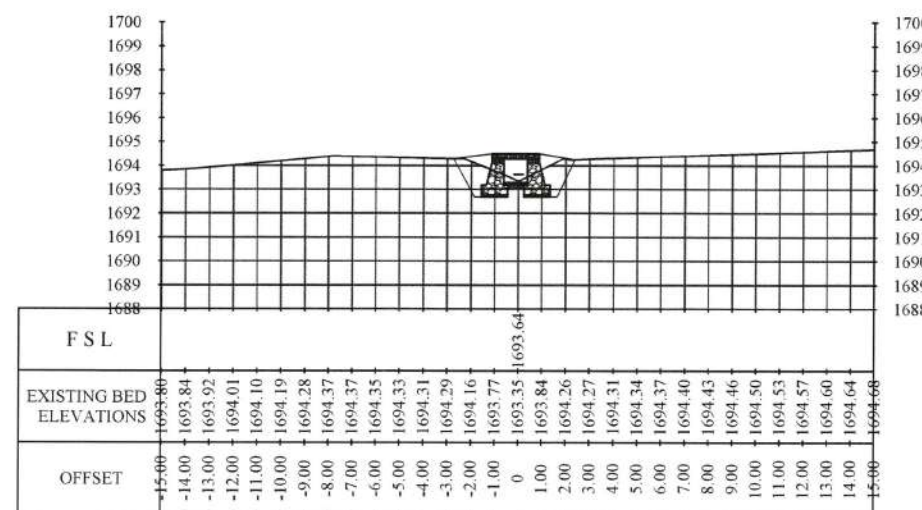
CUTTING AREA= 4.5sqm FILLING AREA= 3 sqm



### Bar Schedule (No. of bars and total bar length presented for 1m culvert)

Member	Bar Diameter	Shape Code	No. of Bars	Segment length (mm)					Total length - varies (metres)
				a	b	c	d	e	
Deck	18	a	5	150	1500				9.00
Deck	18	a	5	150	1500				9.00
Deck	12	a	5	3900					19.50
Deck	12	a	5	3900					19.50
Bearing Shelf	12	b	10		340	240	328	216	9.340
Bearing Shelf	12	c	10		540	90	516	66	12.12
Bearing Shelf	12	a	13	1000					13.000
Parapet Wall	8	a	13	1000					13.000
Parapet wall	12	a	16	600	400	200	140	100	23.04

Note: No. of bars and total bar length Should be calculate as per required length



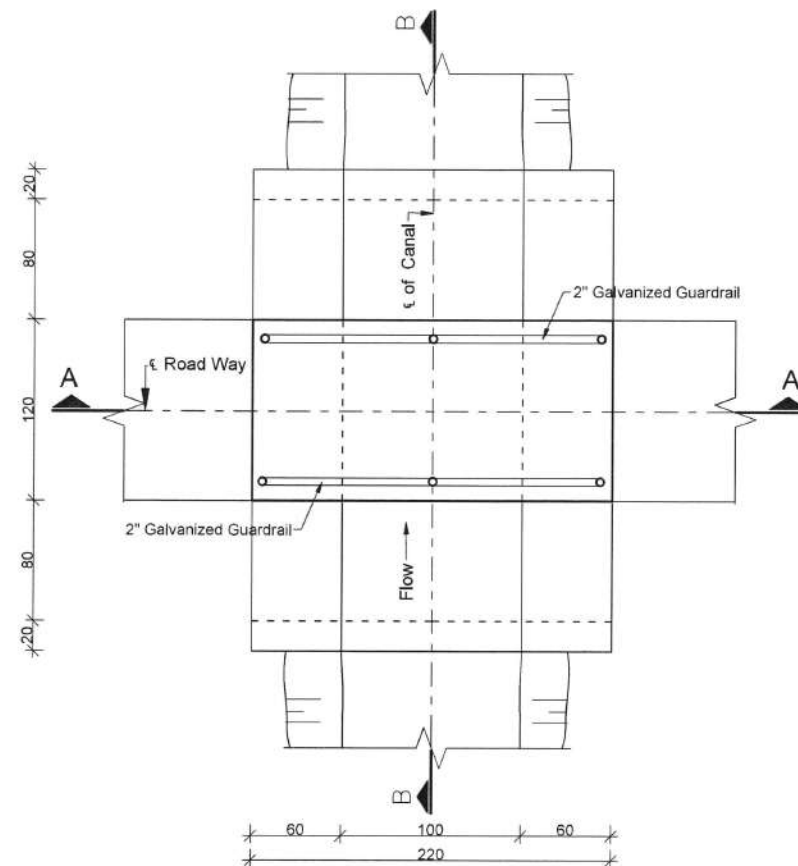
### Note:

- 1: All dimension are in centimeter
- 2: Excavation for the Foundation should be checked by the site Engineer,
- 3: Sand and Gravel should be clean and free from organic material
- 4: Compressive strength of plain cement concrete is 20MPa
- 5: Compressive strength of Reinforced cement concrete is 25MPa
- 6: Mild steel Grad 60 rebar to be used.
- 7: All filling should be compacted properly in layers of 15cm each as specified in drawing and technical specification
- 8: Stone masonry should be done by Mortar (1:4)
- 9: Fresh cement to be used
- 10: Clean water should be used (suitable for drinking)
- 11: Angle and length of wing walls to be adjusted by SWIM engineer as per site conditions



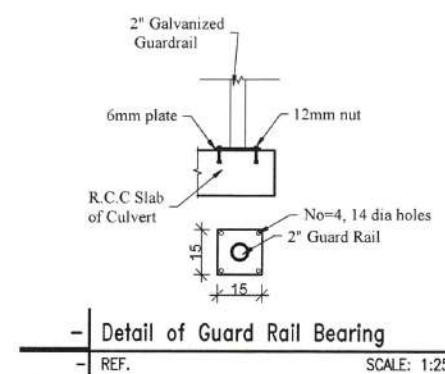
TABLE OF FOOT CULVERT

No	Station	Foot Culvert	Dimensions (M)			GPS Point		Remarks
			Length	High	Wide	North	East	
1	4+340	M. Salabeg Canal	2.4	1.0	1.0	35.67481	69.35475	



- Plan of Foot Culvert

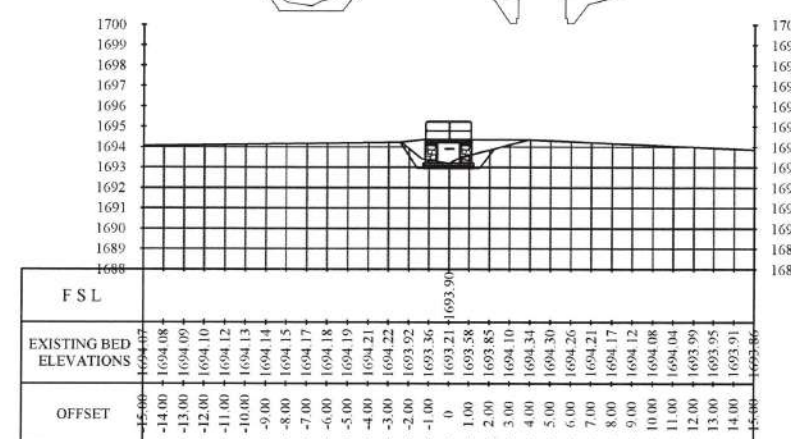
- REF. SCALE: 1:50



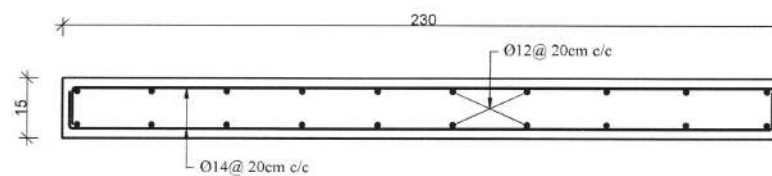
- Detail of Guard Rail Bearing

- REF. SCALE: 1:25

CUTTING AREA= 2sqm FILLING AREA= 2sqm

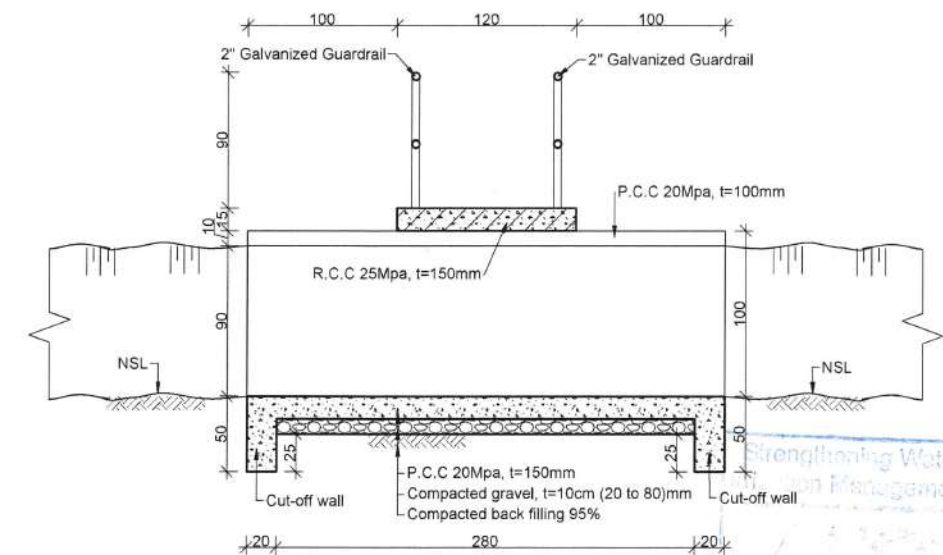


STATION 4+340



- Detail "A"

- REF. SCALE: 1:25



- Section "B-B"

- REF. SCALE: 1:50

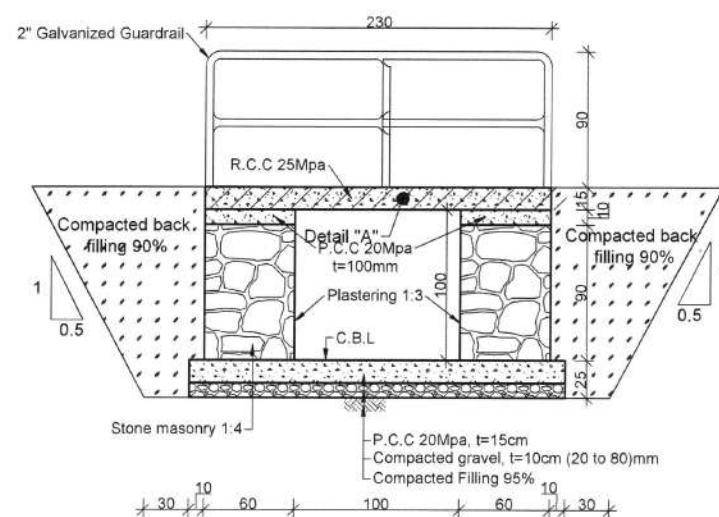
Bar Schedule (No. of bars and total bar length presented is for 1m Foot Culvert)

Member	Bar Diameter	Shape Code	No. of Bars	Segment length (mm)		Total length - varies (metres)
				a	b	
Slab	14	a	5	100	2300	12.50
	14	b	5	100	2300	12.50
	12	a	5	100	1100	6.50
	12	b	5	100	1100	6.50

Note: No. of bars and total bar length Should be calculate as per required length

Note:

- 1: Unless noted otherwise, linear dimensions shown on drawing are in centimeters (cm), and elevations are in meters (m).
- 2: Excavation for the Foundation should be checked by the site Engineer,
- 3: Sand and Gravel should be clean and free from organic material
- 4: All filling should be compacted properly in layers of 15cm each as specified in Tech Specs
- 5: Stone masonry should be done by Mortar (1:4)
- 6: Mild steel Grad 60 rebar to be used.
- 8: Fresh cement to be used
- 9: Clean water should be used (suitable for drinking)
- 10: Angle and length of wing walls to be adjusted by SWIM engineer as per site conditions



- Section "A-A"

- REF. SCALE: 1:50



STRENGTHENING WATERSHED  
&  
IRRIGATION MANAGEMENT  
**SWIM**

CANAL NAME  
MOHAMMAD  
SALABEG  
SECONDARY  
CANAL

LOCATION  
DISTRICT: PULI HISAR  
PROVINCE: BAGHLAN

DRAWING TITLE  
FOOT CULVERT  
PLAN, SECTIONS & DETAILS

SURVEYED BY  
SWIM

DRAWING AND DESIGN BY  
RAFIULLAH RAHMAN  
ENGINEER  
HYDRAULIC SPECIALIST

REVIEWED AND CHECKED BY  
ENG. MOHAMMAD MOBIN OMID  
QA/QC & ENVIRONMENTAL  
COMPLIANCE DIRECTOR

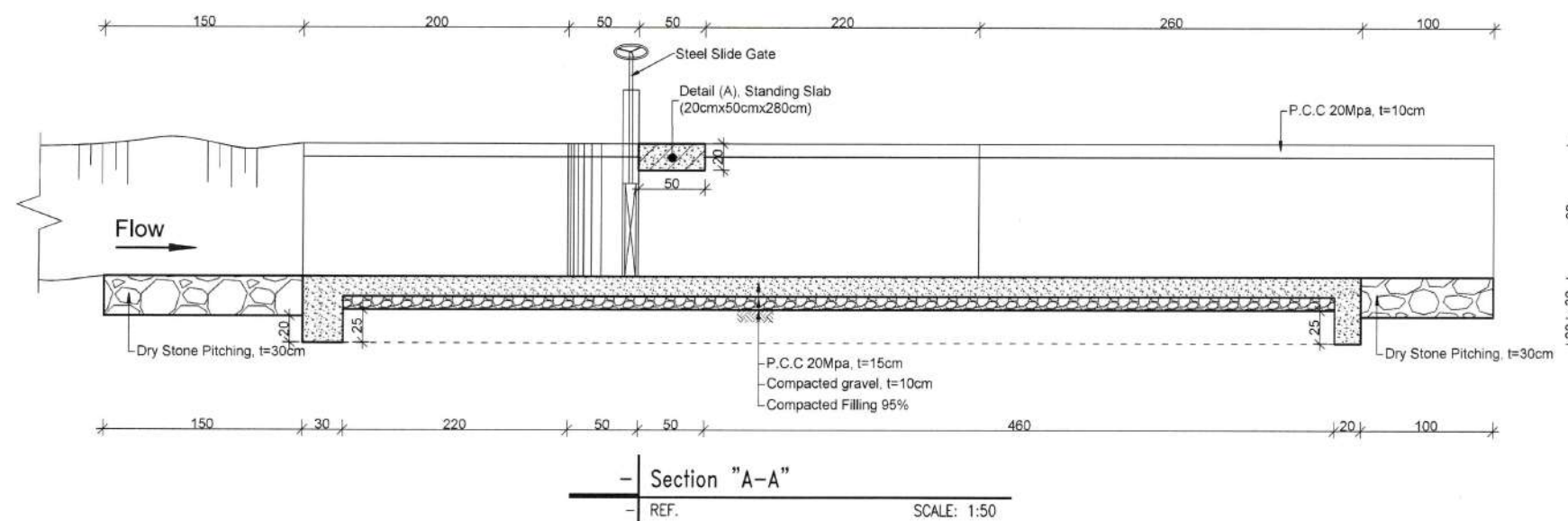
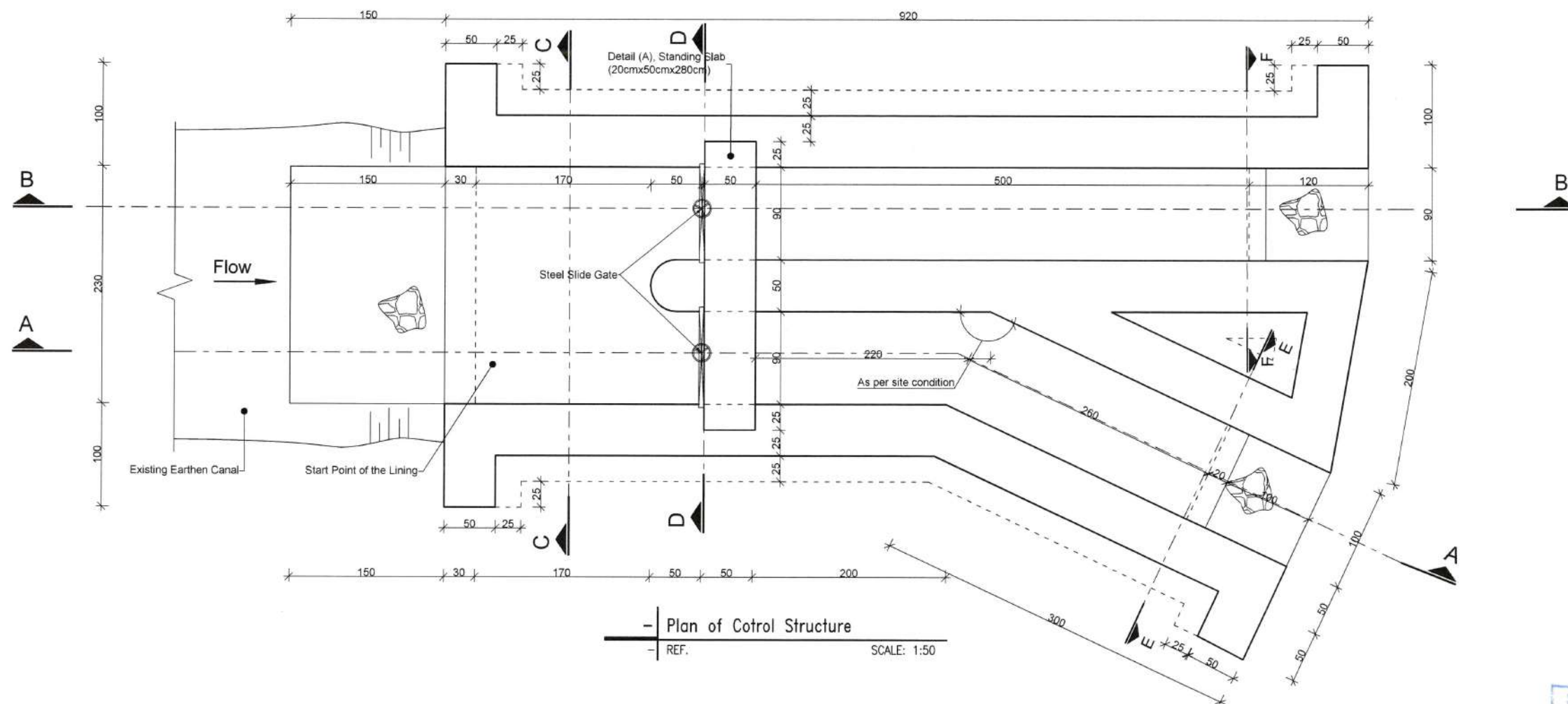
SWIM APPROVAL  
DR. AHMAD HASEEB PAYAB  
ACTING CHIEF OF PARTY

MAIL/DAIL APPROVAL  
[Signature]

SHEET NO.  
18/25

24 JUN 2010



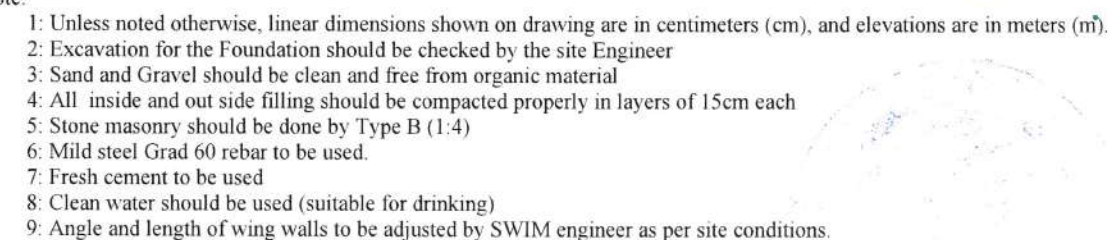


Strengthening Watershed and  
Irrigation Management P.W. A

Issued for construction  
Shaykh  
02 JUL 2019

<p>USAID FROM THE AMERICAN PEOPLE</p>	<p>STRENGTHENING WATERSHED &amp; IRRIGATION MANAGEMENT</p> <p><b>SWIM</b></p>	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MAIL/DAIL, APPROVAL	SHEET NO. 19/25
		MOHAMMAD SALABEG SECONDARY CANAL	DISTRICT: PULI HISAR PROVINCE: BAGHLAN	CONTROL STRUCTURE PLAN AND SECTION	SWIM	RAFIULLAH RAHMANI ENGINEER (HYDRAULIC SPECIALIST) DATE: 14/6/19	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR DATE: 15/6/19	DR. AHMAD HASEEB PAYAB ACTING CHIEF OF PARTY DATE: 15/6/19		

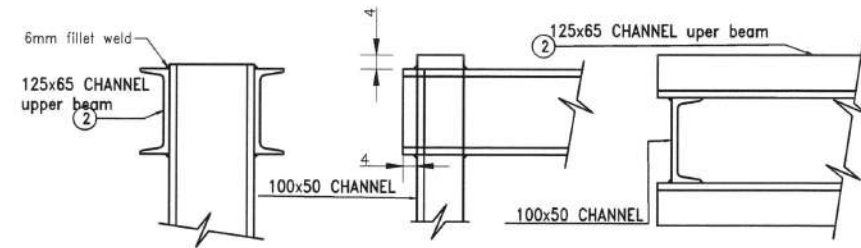
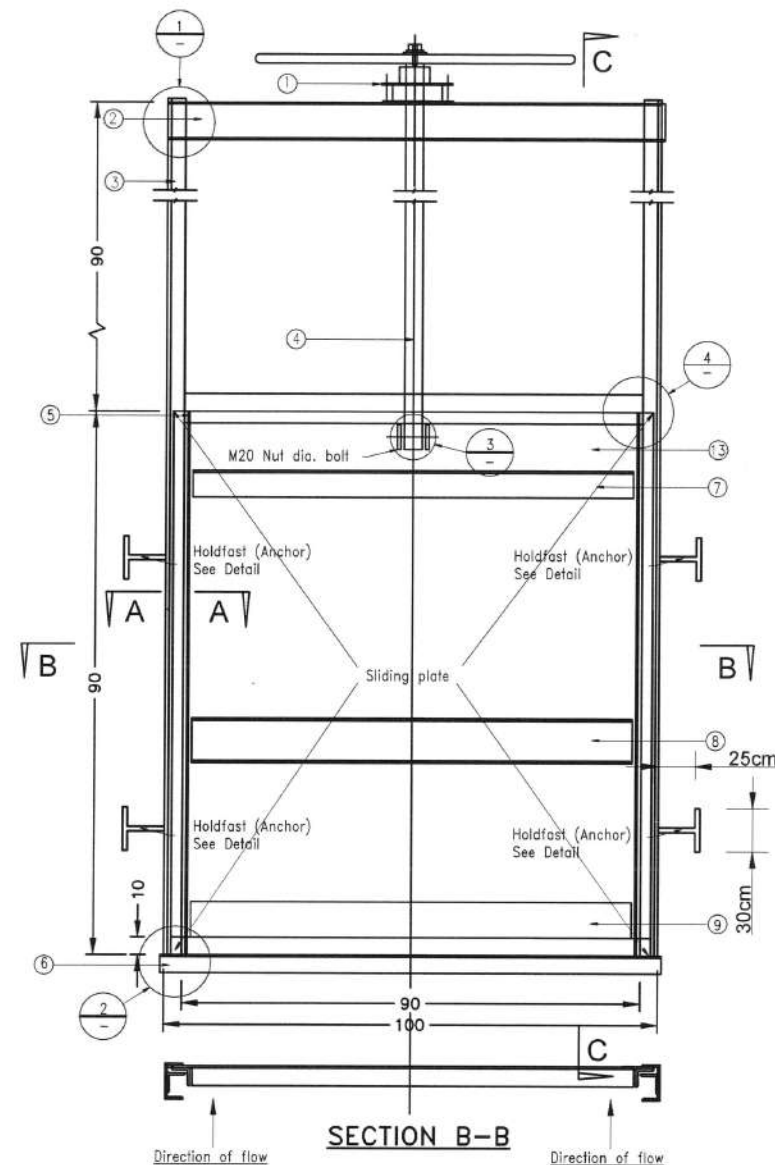




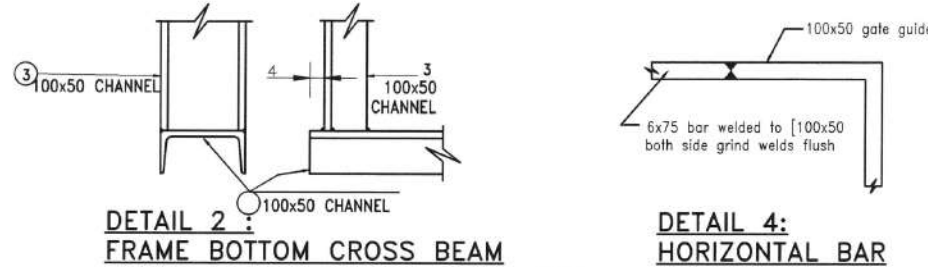
SHEET NO.  
20/25



# Steel Slide Gate Detail For Control Structure Size (100\*180)cm

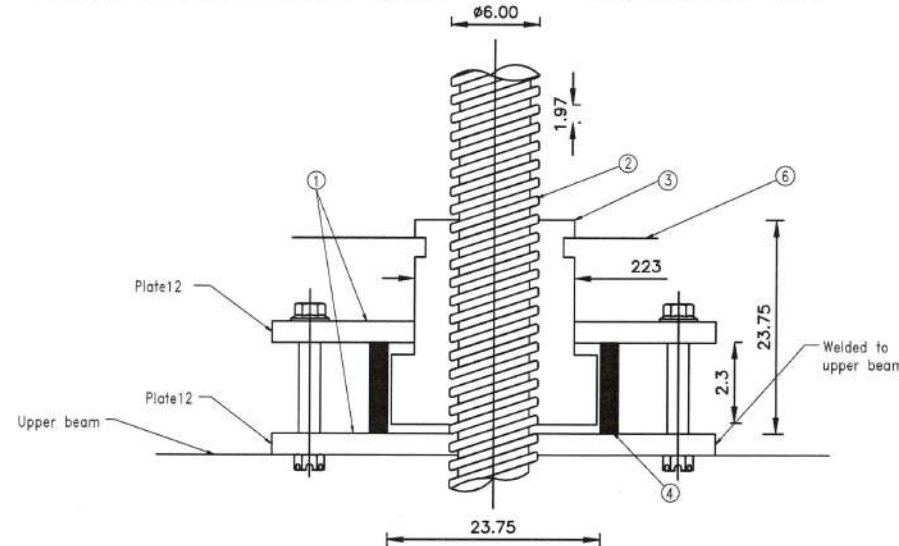


DETAIL 1:  
FRAME CROSS BEAM(TOP)



DETAIL 2:  
FRAME BOTTOM CROSS BEAM

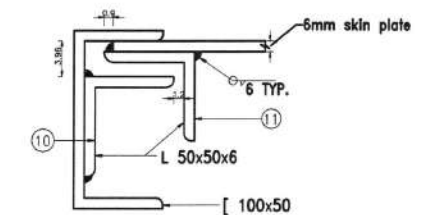
DETAIL 4:  
HORIZONTAL BAR



SECTION C-C

TABLE (2)  
LIFTING COMPONENT

Item	Description
1	Upper&lower plate 250x250x12mm
2	Spindle
3	Bearing nut
4	Spacer
5	Four M12 bolts , nuts
6	ø700mm handle



SECTION A-A

TABLE(1)  
GATE COMPONENT

Item	Description
1	Thrust bearing/nut assembly
2	[125 x 65 Channel Upper beam
3	[100 x 50 Channel
4	Spindle ø 60mm
5	6 x 75 bar
6	[100 x 50 Channel (Lower beam )
7	Stiffener L 75x75x6
8	Stiffener [ 100x65
9	Stiffener L 100x100x6
10	L 50x 50x 6aNSLe
11	L 50x 50x 6aNSLe
12	L 50 X 50 X 6 lifting brackets
13	Plate 6 mm (see notes)



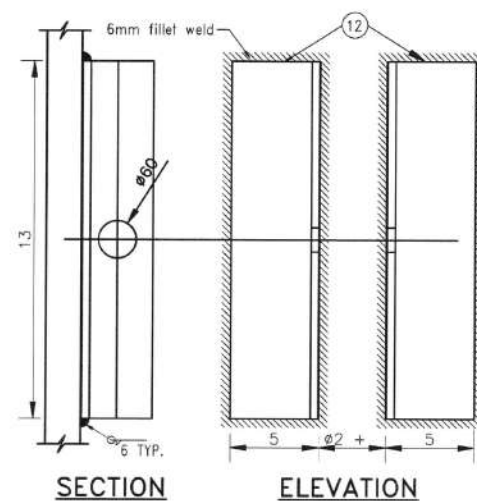
*Design issued for construction*

02 JUL 2019

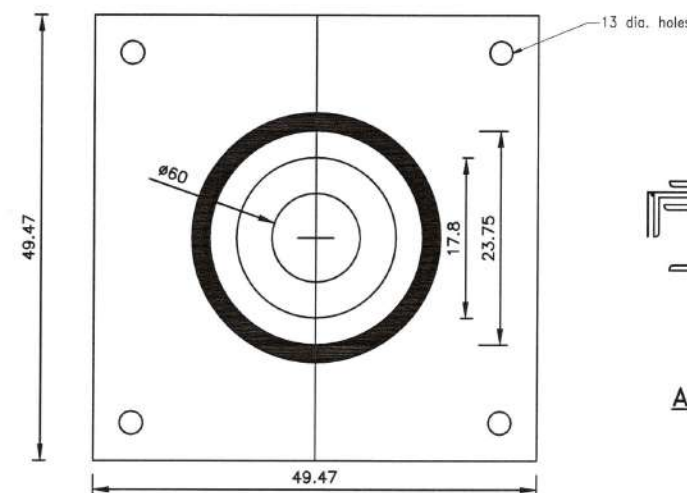


## NOTE:

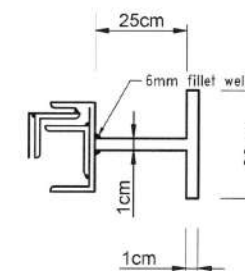
1. Three coats of enamel paint (one coat of red-oxide+ two coat of enamel paint).
2. Operation of the gates to be done by Mirab as per their scheduling.
3. Steel doors should be placed in a dry place to prevent from the oxidization before placement and installation.



DETAIL 3:  
LIFTING BRACKETS



PLAN  
THRUST BEARING



ANCHOR DETAIL



STRENGTHENING WATERSHED  
&  
IRRIGATION MANAGEMENT  
**SWIM**

CANAL NAME  
MOHAMMAD  
SALABEG  
SECONDARY  
CANAL

LOCATION  
DISTRICT: PULI HISAR  
PROVINCE: BAGHLAN

DRAWING TITLE  
STEEL SLIDE GATE FOR  
CONTROL STRUCTURE

SURVEYED BY  
SWIM

DRAWING AND DESIGN BY  
RAFIULLAH RAHMANI  
ENGINEER  
HYDRAULIC SPECIALIST

REVIEWED AND CHECKED BY  
ENG. MOHAMMAD MOBIN OMID  
QA/QC & ENVIRONMENTAL  
COMPLIANCE DIRECTOR

SWIM APPROVAL  
DR. AHMAD HASEEB PAYAB  
ACTING CHIEF OF PARTY

MIAL/DAIL APPROVAL  
*[Signature]*

SHEET NO.  
21/25

DATE: *[Signature]*

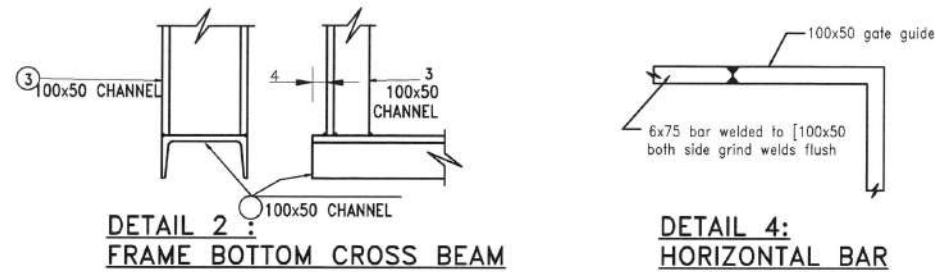
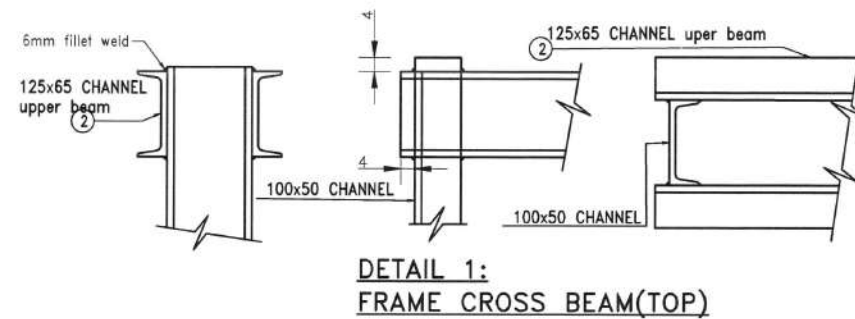
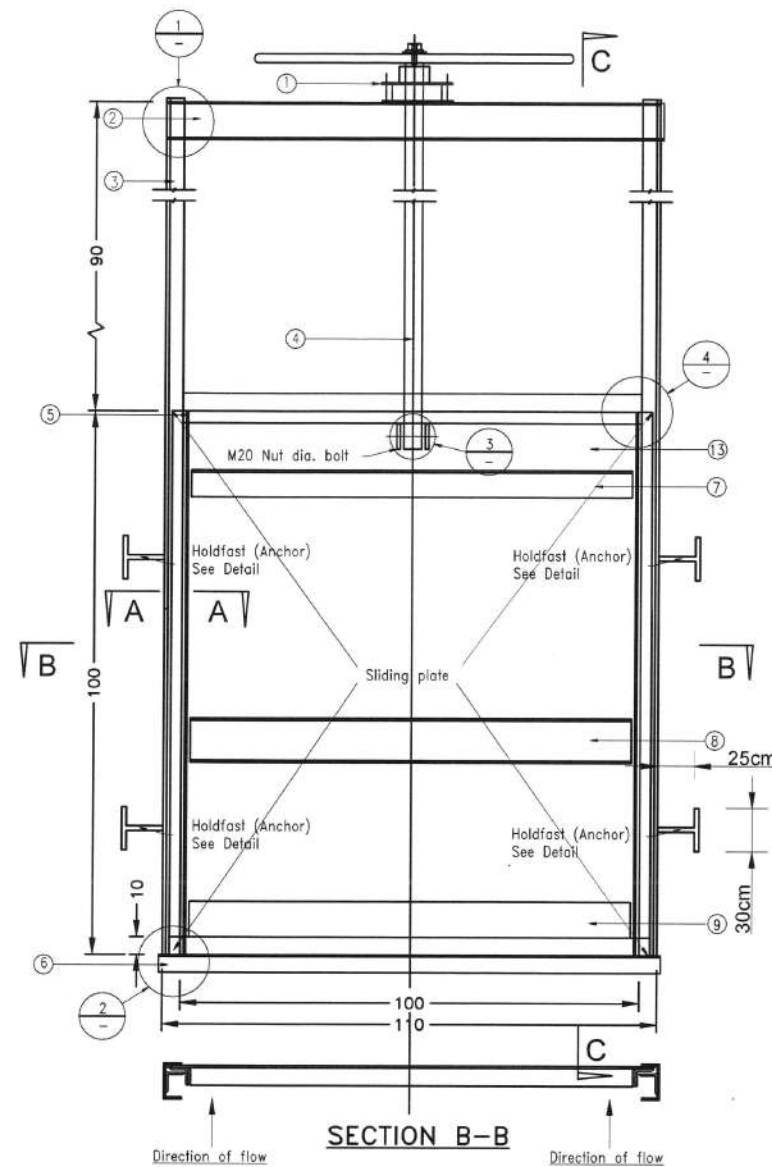
DATE: *[Signature]*

DATE: *[Signature]*  
24 JUN 2019

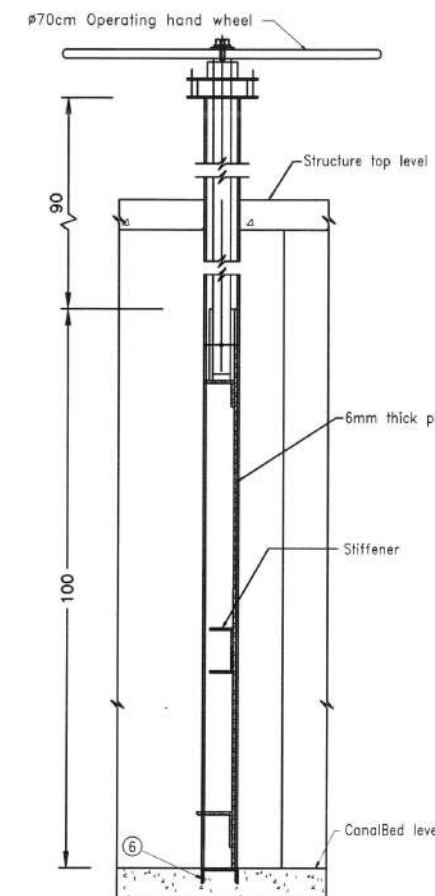
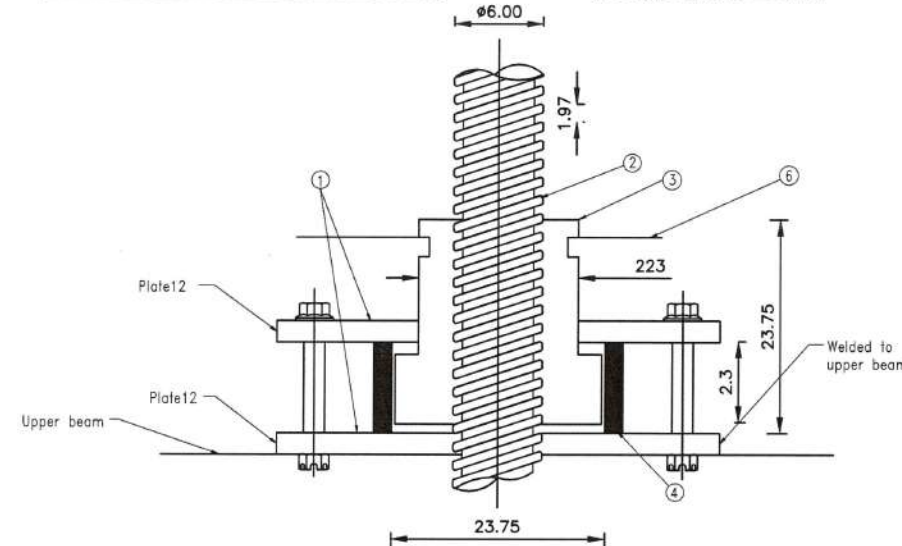
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# Steel Slide Gate Detail For Drop Structure Size (110\*190)cm



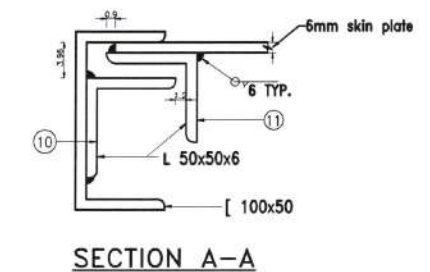
DETAIL 4:  
HORIZONTAL BAR



SECTION C-C

TABLE (2)  
LIFTING COMPONENT

Item	Description
1	Upper&lower plate 250x250x12mm
2	Spindle
3	Bearing nut
4	Spacer
5	Four M12 bolts , nuts
6	ø700mm handle

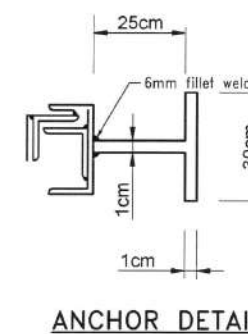
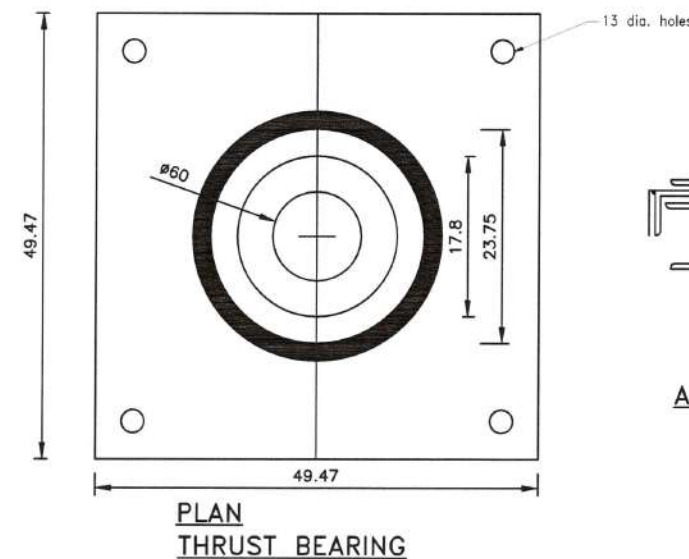
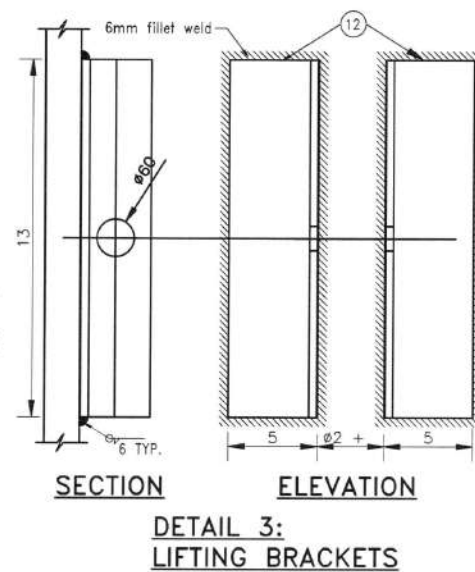


TABLE(1)  
GATE COMPONENT

Item	Description
1	Thrust bearing/nut assembly
2	[125 x 65 Channel Upper beam
3	[100 x 50 Channel
4	Spindle ø 60mm
5	6 x 75 bar
6	[100 x 50 Channel (Lower beam )
7	Stiffener L 75x75x6
8	Stiffener [ 100x65
9	Stiffener L 100x100x6
10	L 50x 50x 6aNSLe
11	L 50x 50x 6aNSLe
12	L 50 X 50 X 6 lifting brackets
13	Plate 6 mm (see notes)

## NOTE:

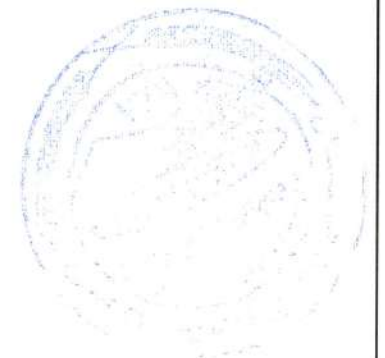
- 1.Three coats of enamel paint (one coat of red-oxide+ two coat of enamel paint).
2. Operation of the gates to be done by Mirab as per their scheduling.
3. Steel doors should be placed in a dry place to prevent from the oxidization before placement and installation.




ANCHOR DETAIL

Strengthening Watershed and  
Irrigation Management (SWIM)

Issued for construction  
24 June 2019  
02 JUL 2019



 <div>STRENGTHENING WATERSHED &amp; IRRIGATION MANAGEMENT</div> <div>SWIM</div>	CANAL NAME	LOCATION	DRAWING TITLE	SURVEYED BY	DRAWING AND DESIGN BY	REVIEWED AND CHECKED BY	SWIM APPROVAL	MIAL/DAIL APPROVAL	SHEET NO. 22/25
	MOHAMMAD SALABEG SECONDARY CANAL	DISTRICT: PULI HISAR PROVINCE: BAGHLAN	STEEL SLIDE GATE FOR DROP STRUCTURE	SWIM	RAFIULLAH RAHMAN ENGINEER HYDRAULIC SPECIALIST	ENG. MOHAMMAD MOBIN OMID QA/QC & ENVIRONMENTAL COMPLIANCE DIRECTOR	DR. AHMAD HASEEB PAYAB ACTING CHIEF OF PARTY		
					DATE: 24 JUN 2019	DATE: 24 JUN 2019	DATE: 24 JUN 2019	DATE: 24 JUN 2019	



# Steel Slide Gate Detail For Check Structure in Lined Portion Size (130\*180)cm

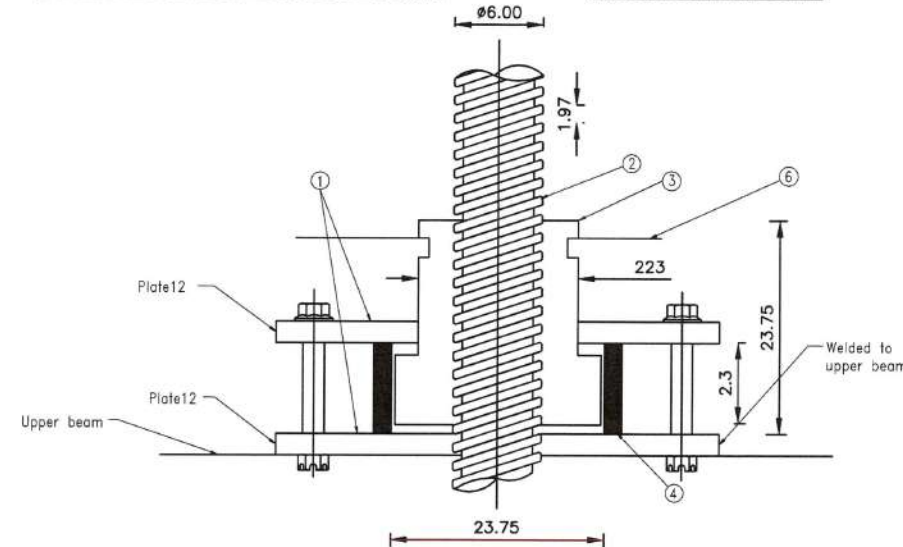
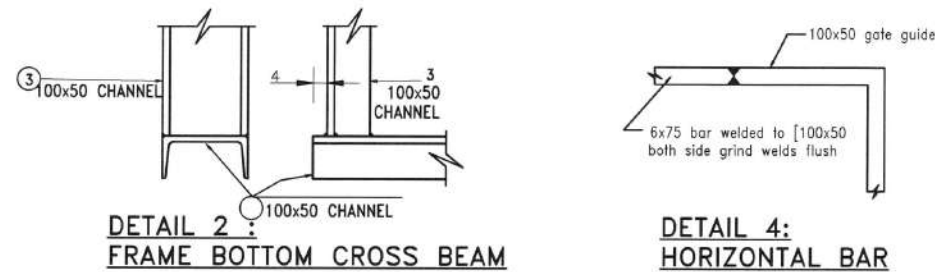
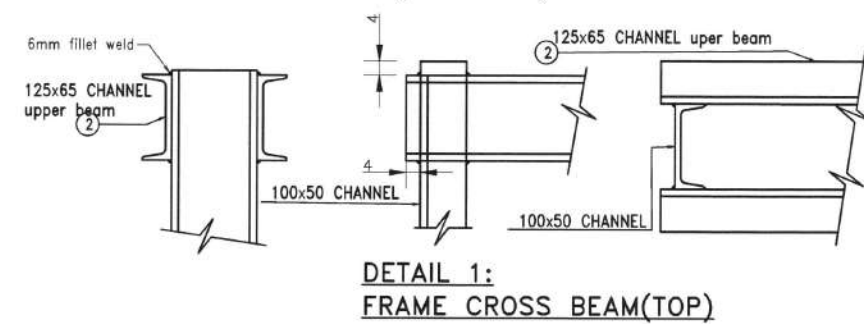
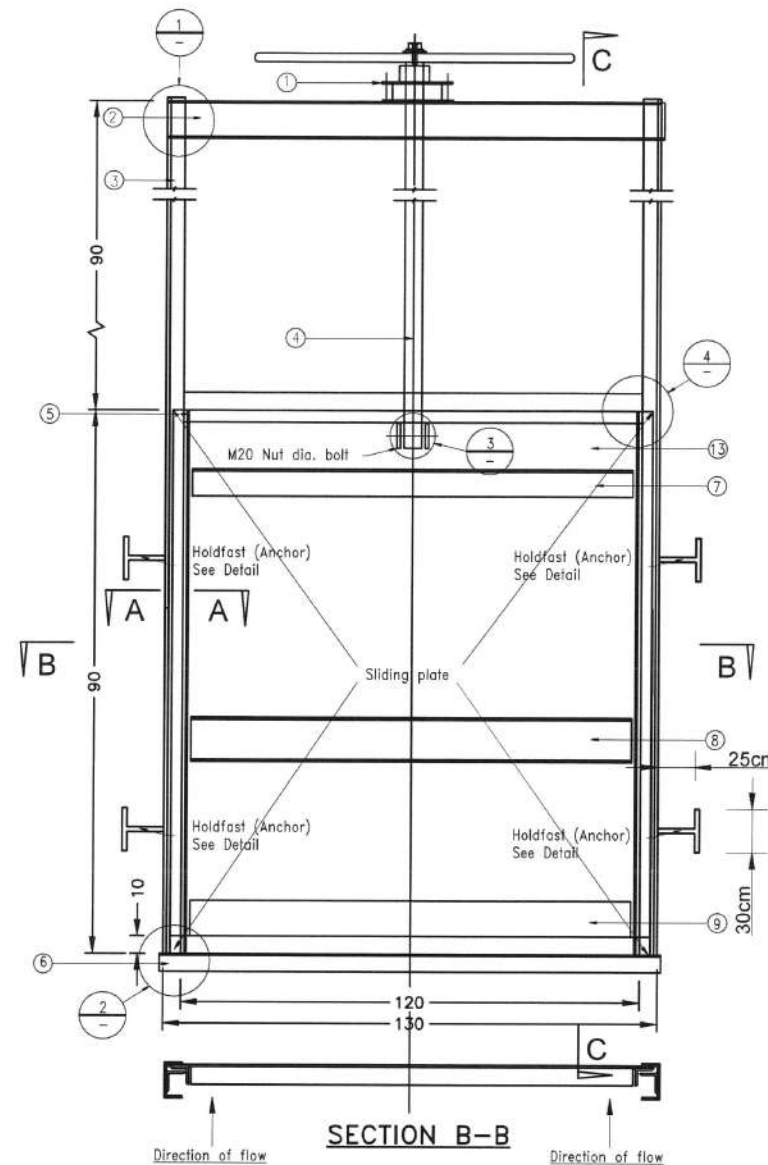
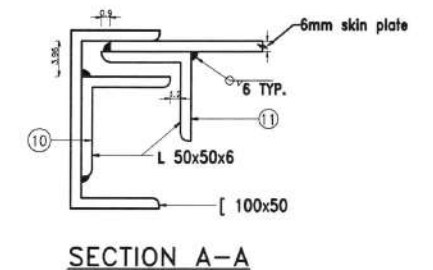


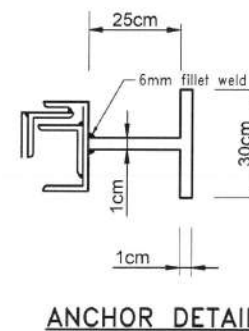
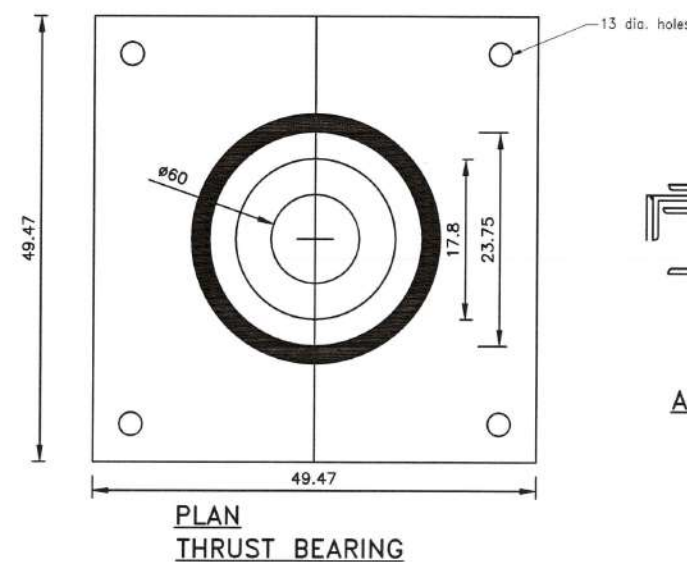
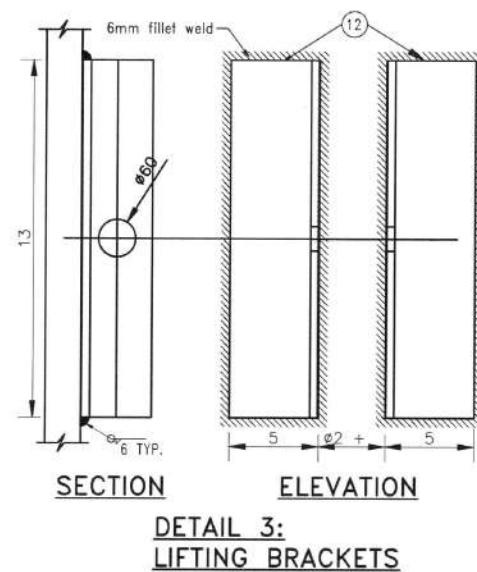
TABLE (2)  
LIFTING COMPONENT

Item	Description
1	Upper & lower plate 250x250x12mm
2	Spindle
3	Bearing nut
4	Spacer
5	Four M12 bolts, nuts
6	Ø700mm handle



## NOTE:

1. Three coats of enamel paint (one coat of red-oxide+ two coat of enamel paint).
2. Operation of the gates to be done by Mirab as per their scheduling.
3. Steel doors should be placed in a dry place to prevent from the oxidization before placement and installation.



TABLE(1)  
GATE COMPONENT

Item	Description
1	Thrust bearing/nut assembly
2	[125 x 65 Channel Upper beam
3	[100 x 50 Channel
4	Spindle Ø 60mm
5	6 x 75 bar
6	[100 x 50 Channel (Lower beam )
7	Stiffener L 75x75x6
8	Stiffener [ 100x65
9	Stiffener L 100x100x6
10	L 50x 50x 6aNSLe
11	L 50x 50x 6aNSLe
12	L 50 X 50 X 6 lifting brackets
13	Plate 6 mm (see notes)

Strengthening Watershed  
Irrigation Management  
Issued for construction  
02 JUL 2019





# Steel Slide Gate Detail For Check Structure in Unlined Portion Size (110\*180)cm

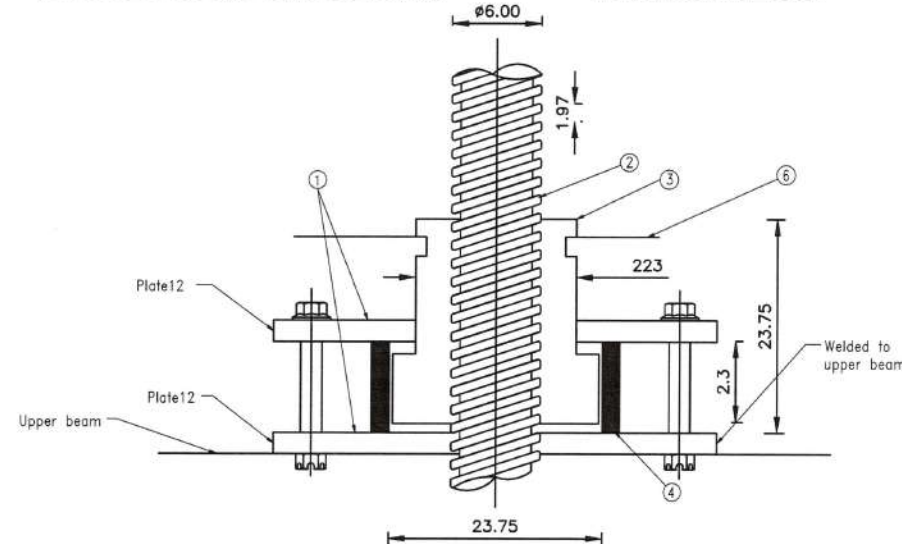
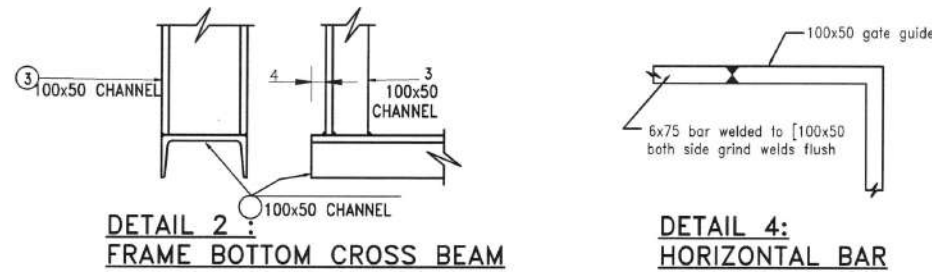
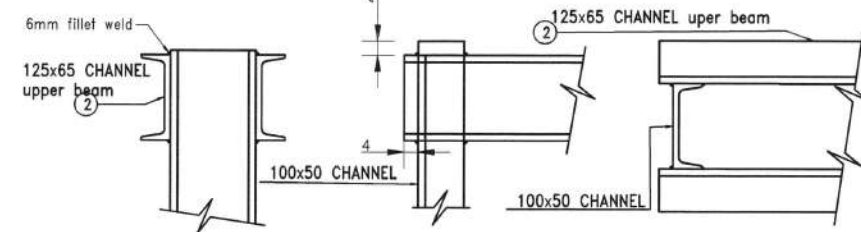
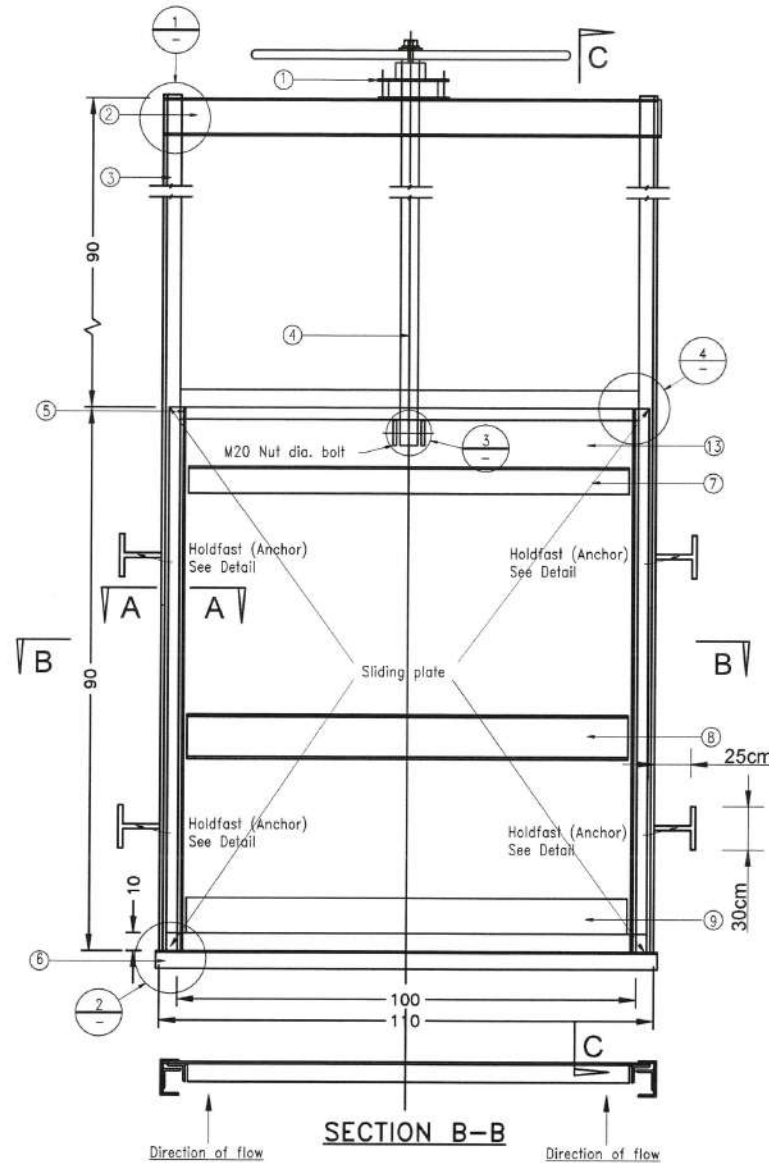
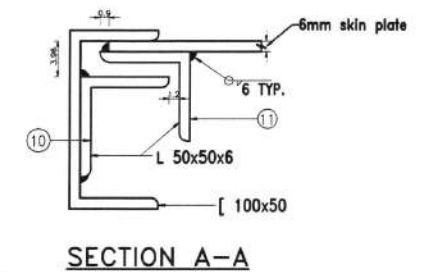


TABLE (2)  
LIFTING COMPONENT

Item	Description
1	Upper&lower plate 250x250x12mm
2	Spindle
3	Bearing nut
4	Spacer
5	Four M12 bolts , nuts
6	ø700mm handle



TABLE(1)  
GATE COMPONENT

Item	Description
1	Thrust bearing/nut assembly
2	[125 x 65 Channel Upper beam
3	[100 x 50 Channel
4	Spindle ø 60mm
5	6 x 75 bar
6	[100 x 50 Channel (Lower beam )
7	Stiffener L 75x75x6
8	Stiffener [ 100x65
9	Stiffener L 100x100x6
10	L 50x 50x 6aNSLe
11	L 50x 50x 6aNSLe
12	L 50 X 50 X 6 lifting brackets
13	Plate 6 mm (see notes)

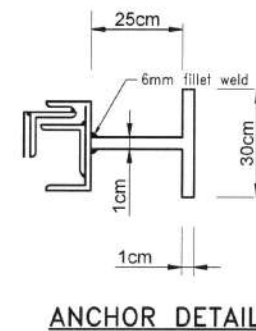
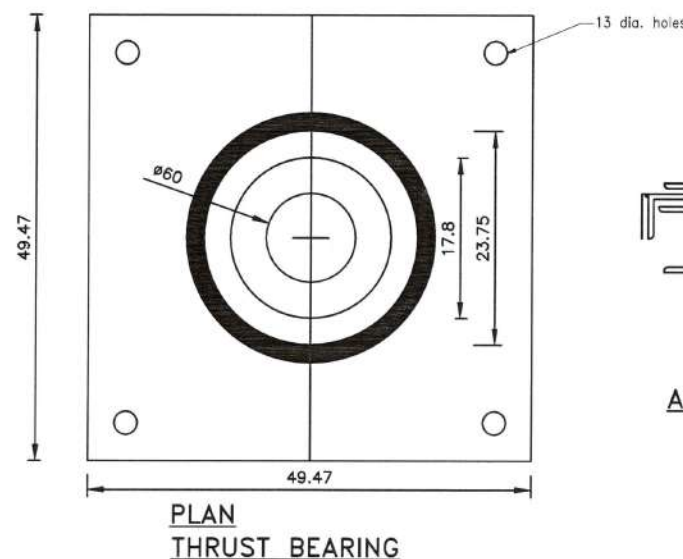
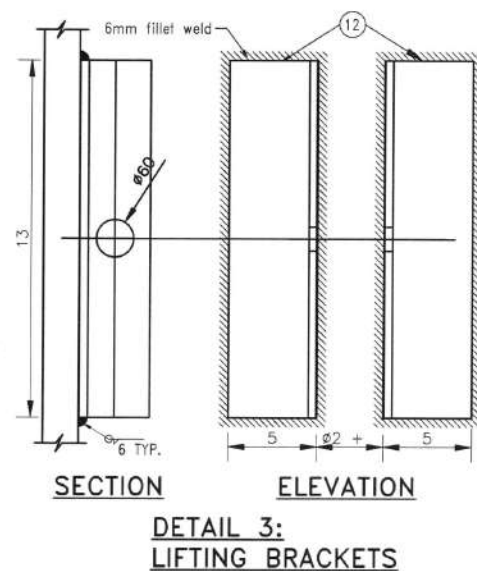
Strengthening Watershed and  
Irrigation Management Project  
AF0001

Issued for construction  
Shayab  
02 JUL 2019



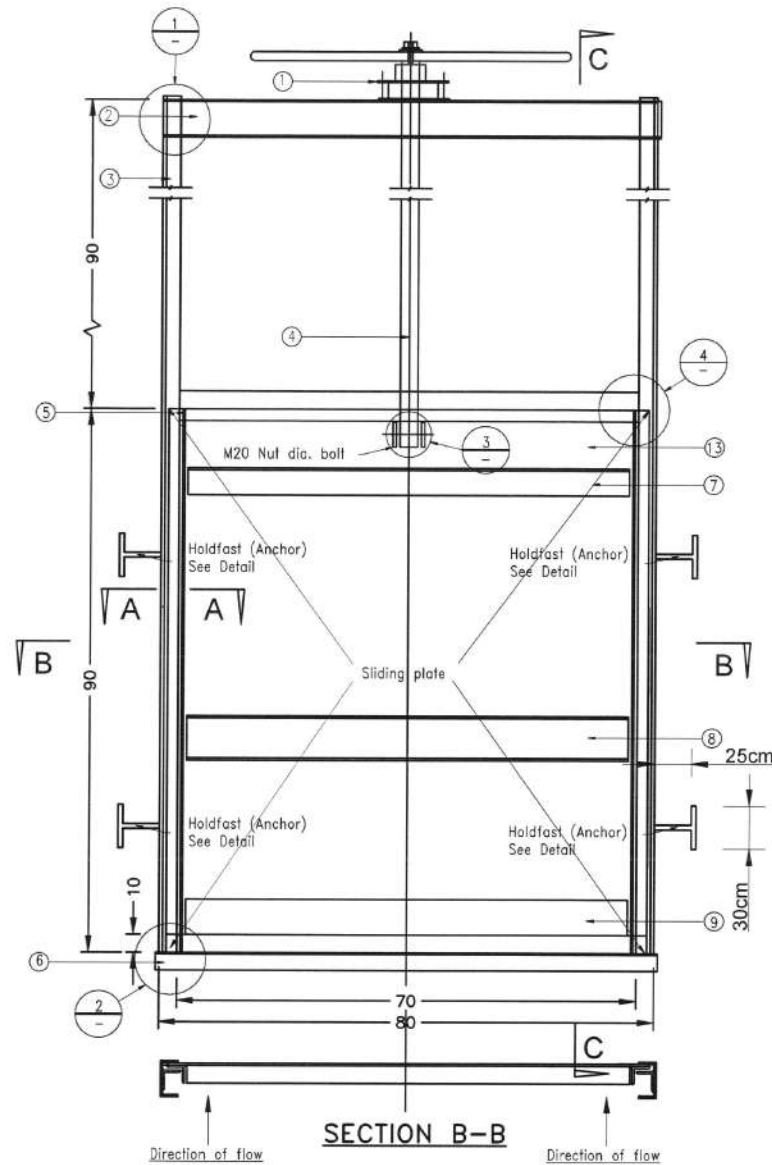
## NOTE:

1. Three coats of enamel paint (one coat of red-oxide+ two coat of enamel paint).
2. Operation of the gates to be done by Mirab as per their scheduling.
3. Steel doors should be placed in a dry place to prevent from the oxidization before placement and installation.

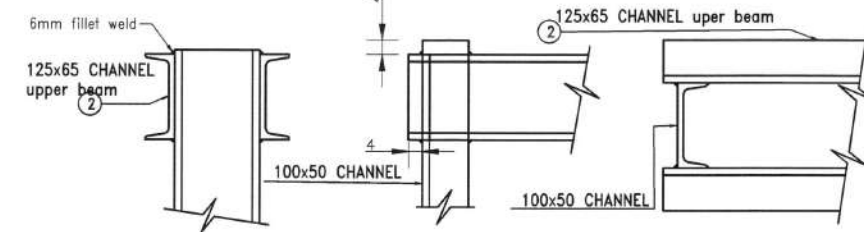




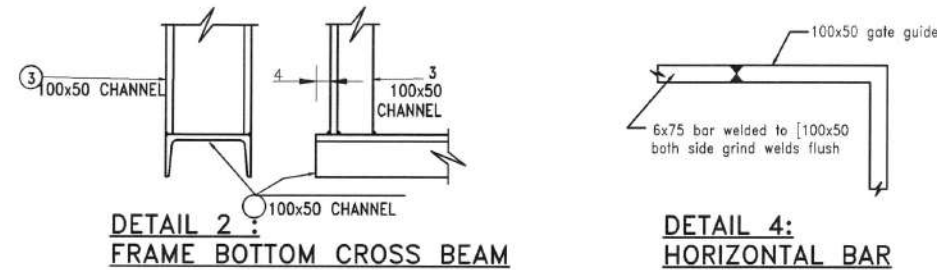
# Steel Slide Gate Detail For Turnout Structure Size (80\*180)cm



SECTION B-B

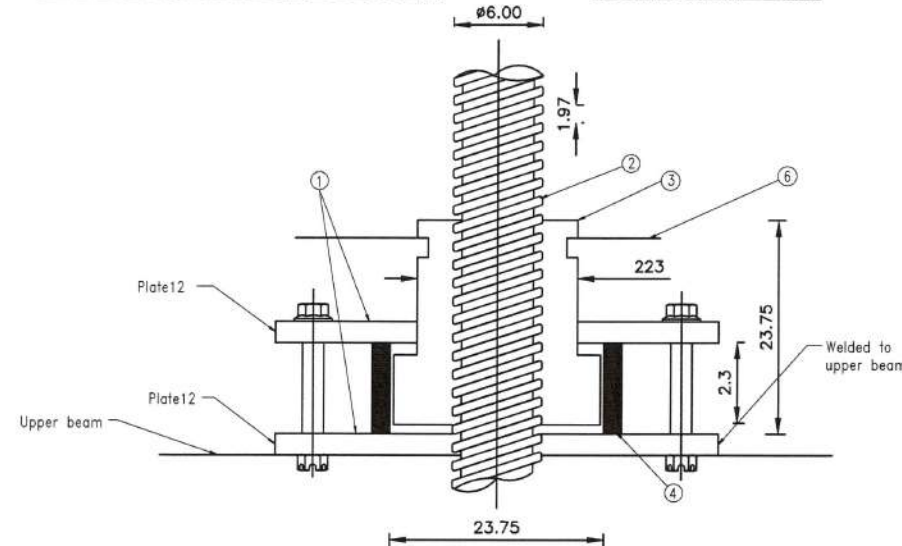


DETAIL 1:  
FRAME CROSS BEAM(TOP)



DETAIL 2:  
FRAME BOTTOM CROSS BEAM

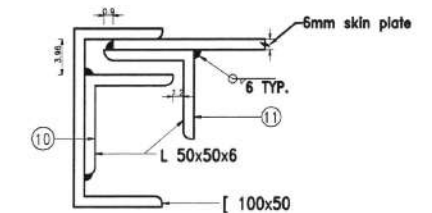
DETAIL 4:  
HORIZONTAL BAR



SECTION C-C

TABLE (2)  
LIFTING COMPONENT

Item	Description
1	Upper&lower plate 250x250x12mm
2	Spindle
3	Bearing nut
4	Spacer
5	Four M12 bolts , nuts
6	ø700mm handle



SECTION A-A

TABLE(1)  
GATE COMPONENT

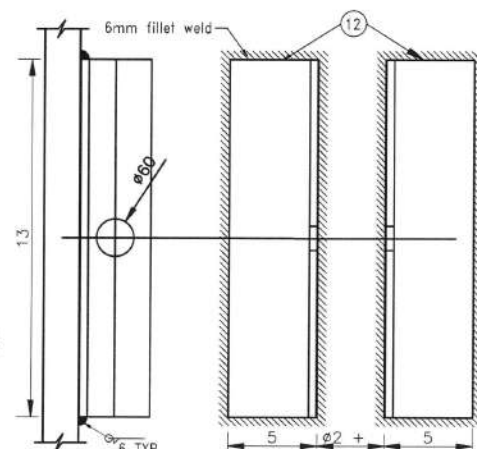
Item	Description
1	Thrust bearing/nut assembly
2	[125 x 65 Channel Upper beam
3	[100 x 50 Channel
4	Spindle ø 60mm
5	6 x 75 bar
6	[100 x 50 Channel (Lower beam )
7	Stiffener L 75x75x6
8	Stiffener [ 100x65
9	Stiffener L 100x100x6
10	L 50x 50x 6aNSLe
11	L 50x 50x 6aNSLe
12	L 50 X 50 X 6 lifting brackets
13	Plate 6 mm (see notes)

Strengthening Watershed and  
Irrigation Management (SWIM)  
ABCOM

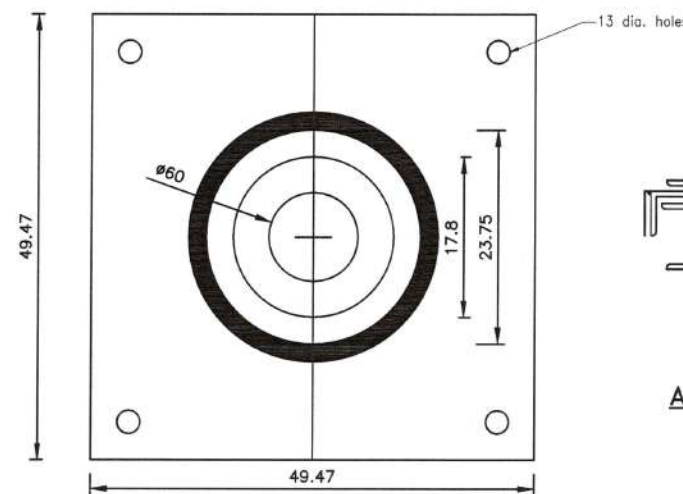
Issued for construction  
Shiraz  
02 JUL 2019

## NOTE:

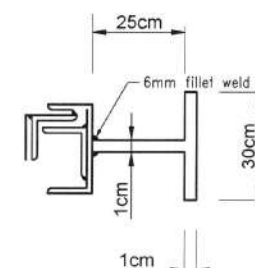
1. Three coats of enamel paint (one coat of red-oxide+ two coat of enamel paint).
2. Operation of the gates to be done by Mirab as per their scheduling.
3. Steel doors should be placed in a dry place to prevent from the oxidization before placement and installation.



DETAIL 3:  
LIFTING BRACKETS



PLAN  
THRUST BEARING



ANCHOR DETAIL





دکړنی، اوبو لگولو او مالدارۍ وزارت  
وزارت زراعت، آبیاری و مالدارۍ

د افغانستان اسلامي جمهوري دولت  
دولت جمهوري اسلامي افغانستان



Islamic Republic of Afghanistan  
Ministry of Agriculture, Irrigation and Livestock

معینیت آبیاری و منابع طبیعی  
ریاست آبیاری  
آمریت انجنیری

تاریخ: ۱۰ / ۴ / ۱۳۹۸

شماره: ( ۳۵۰ / ۲۲۴ )

به پروژہ محترم SWIM:

به جواب مکتوب شماره ۸۷ مورخ ۲۰۱۹/۶/۳۰ شما احترامانه مینگاریم اینکه :  
اوراق تخنیکي کانال آبیاری محمدصلا بیگ واقع ولسوالی پل حصار ولایت بغلان بعد از چک و بررسی همه جانبه  
جهت اجراءات بعدی دوباره به شما گسیل است در مورد اجراءات نموده ممنون سازید.

با احترام

انجنیر خلیل الرحمن "عمر"  
سرپرست ریاست آبیاری