



World Vision International World Vision Afghanistan Badghis Zonal Office



WASH Sector
DAWAM WASH Project

Design and Drawing for Water Supply Network by Water Source of Spring

Project Name: Water Supply Network

By water source of spring

Village: Khaja Sorkhian

District: Jawand

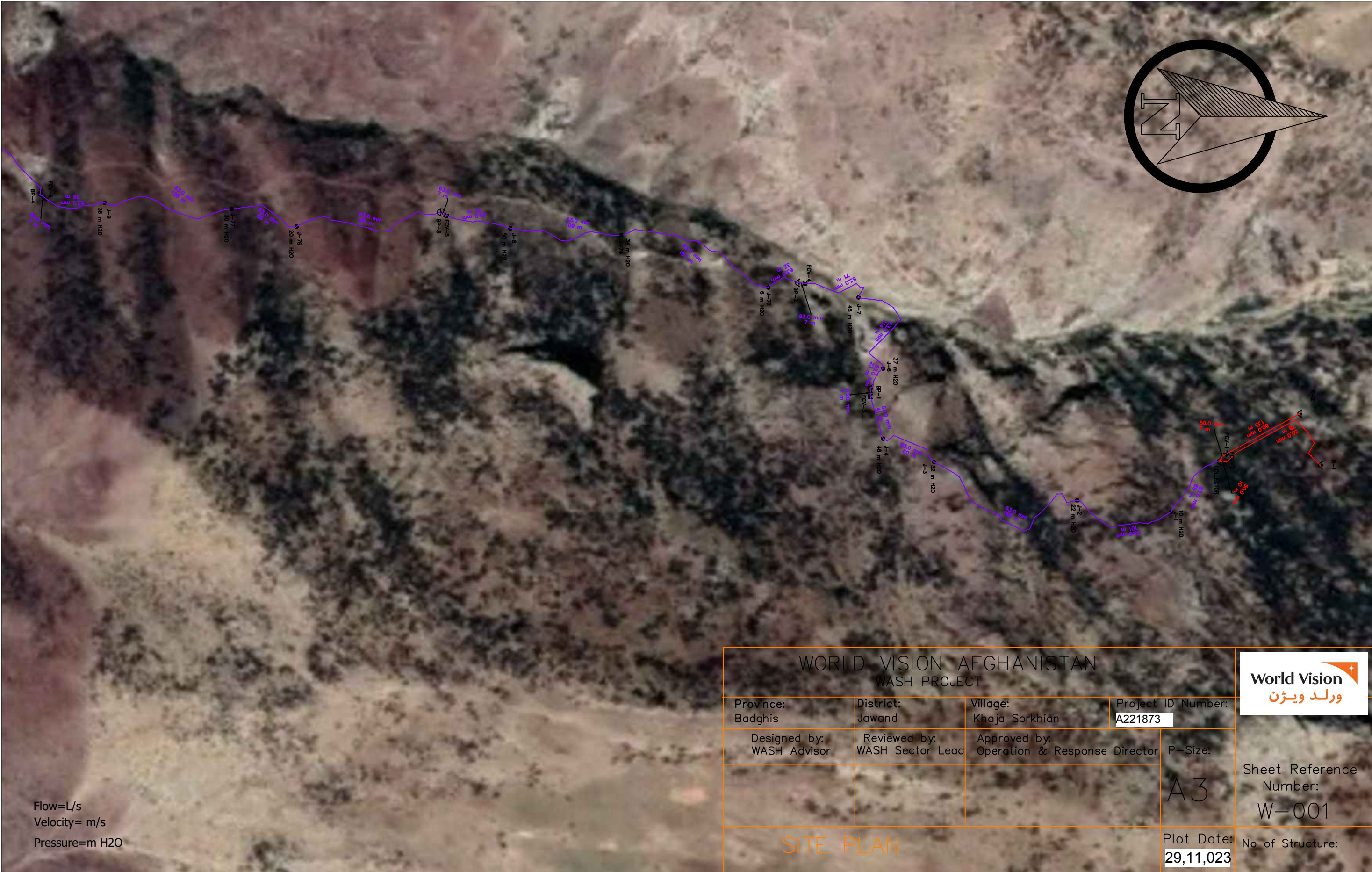
Province: Badghis

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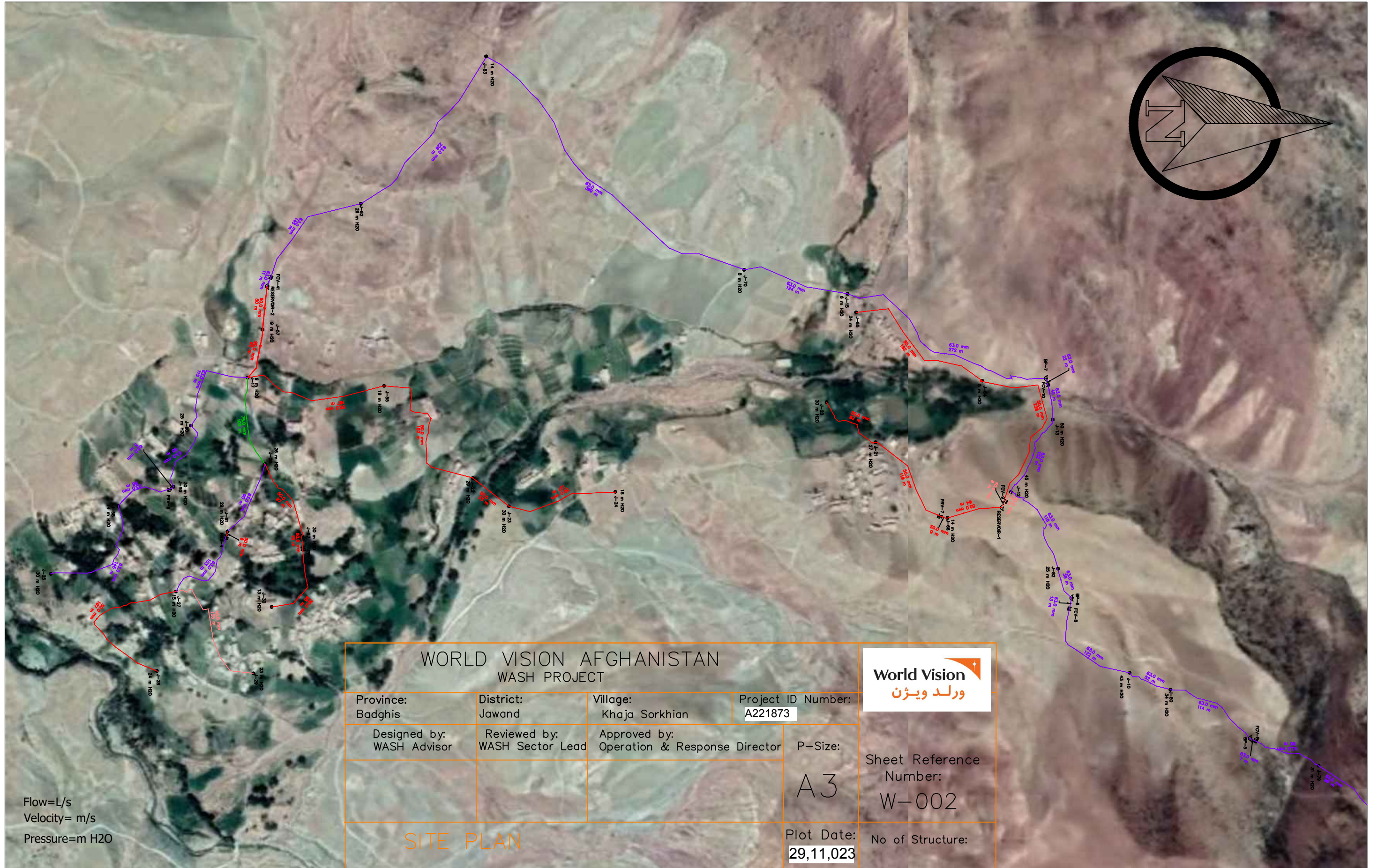
Project Information

Number of Families	230
Number of House Holds (Meter)	67
Source Discharge Required(2 Spring-Joint)	1.3 l/sec
Length of Network	6.216 km
Source Discharge (Spring) Actual Discharge	1.3 l/sec
Work Days	60 days
RCC Water Reservoir(2 Structures)	20 M3
No of Break Pressure Structure	8



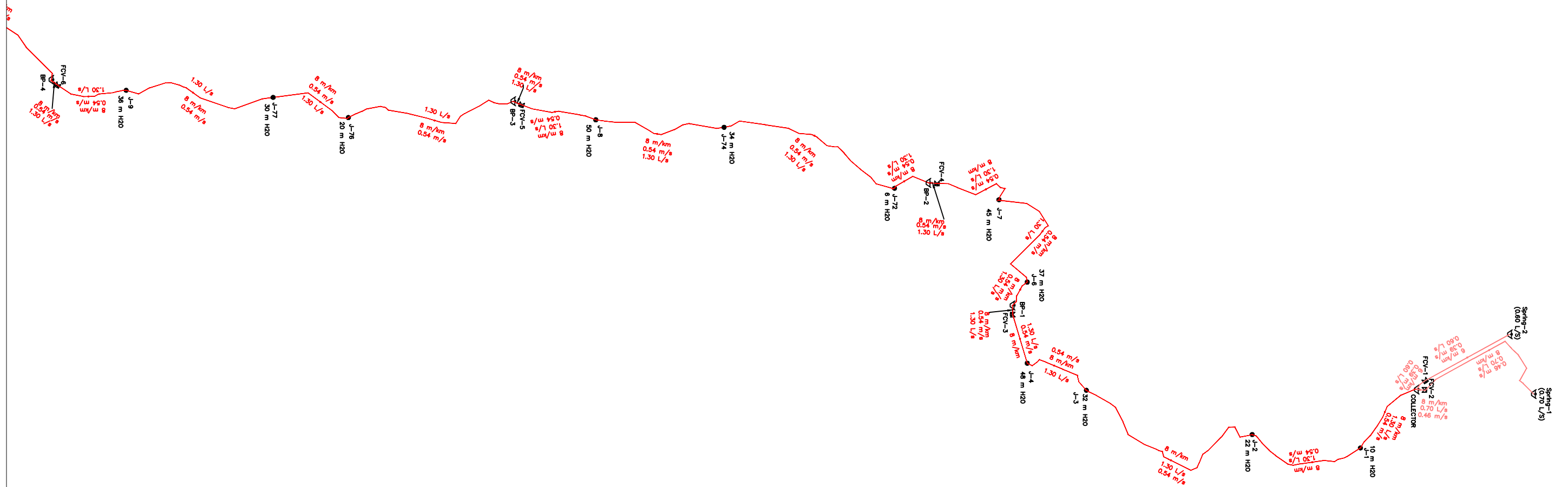
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WORLD VISION AFGHANISTAN WASH PROJECT				
Province: Badghis	District: Jawand	Village: Khaja Sorkhian	Project ID Number: A221873	
Designed by: WASH Advisor	Reviewed by: WASH Sector Lead	Approved by: Operation & Response Director	P-Size: A3	Sheet Reference Number: W-001
SITE PLAN			Plot Date: 29,11,023	No of Structure:



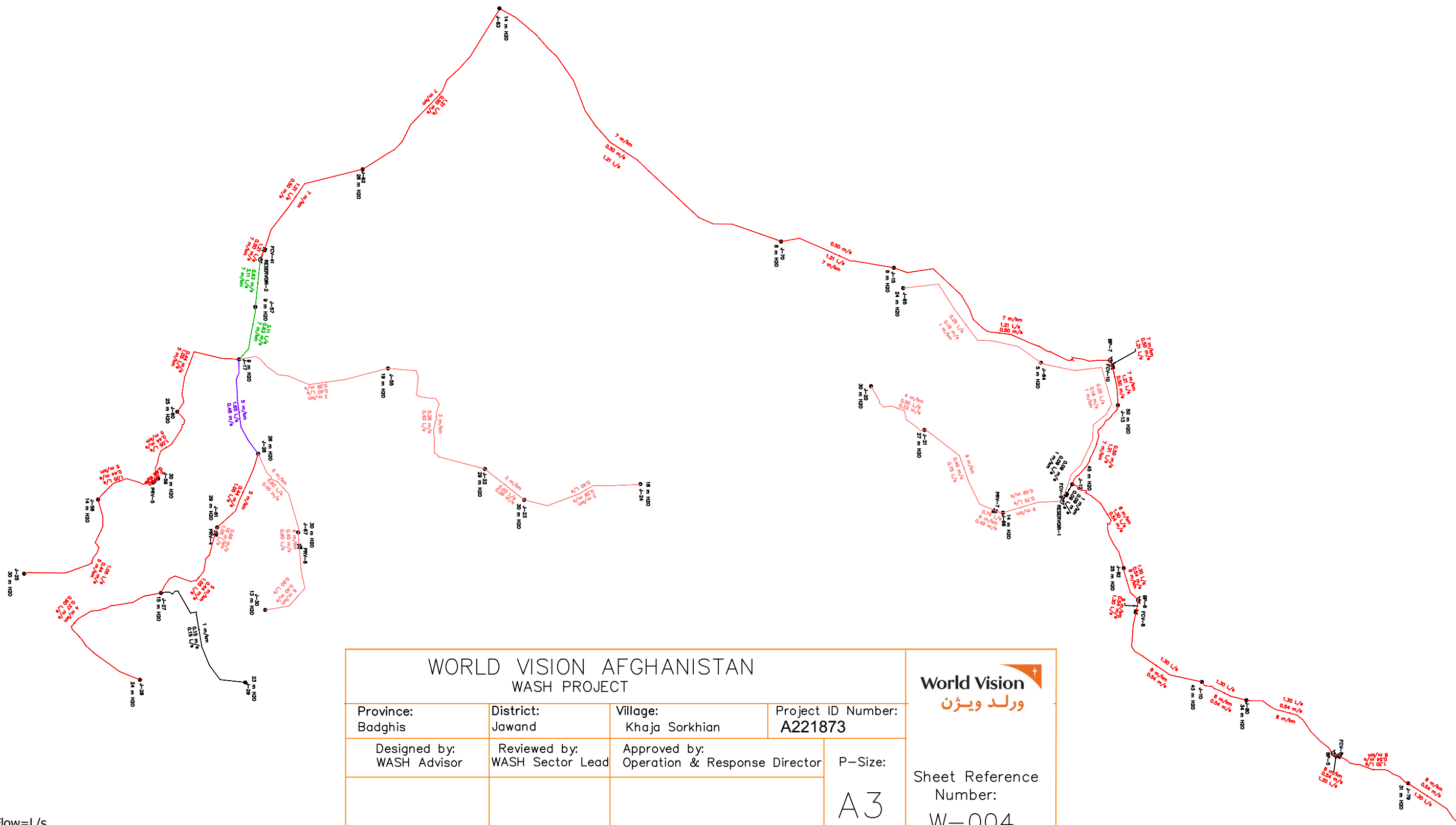
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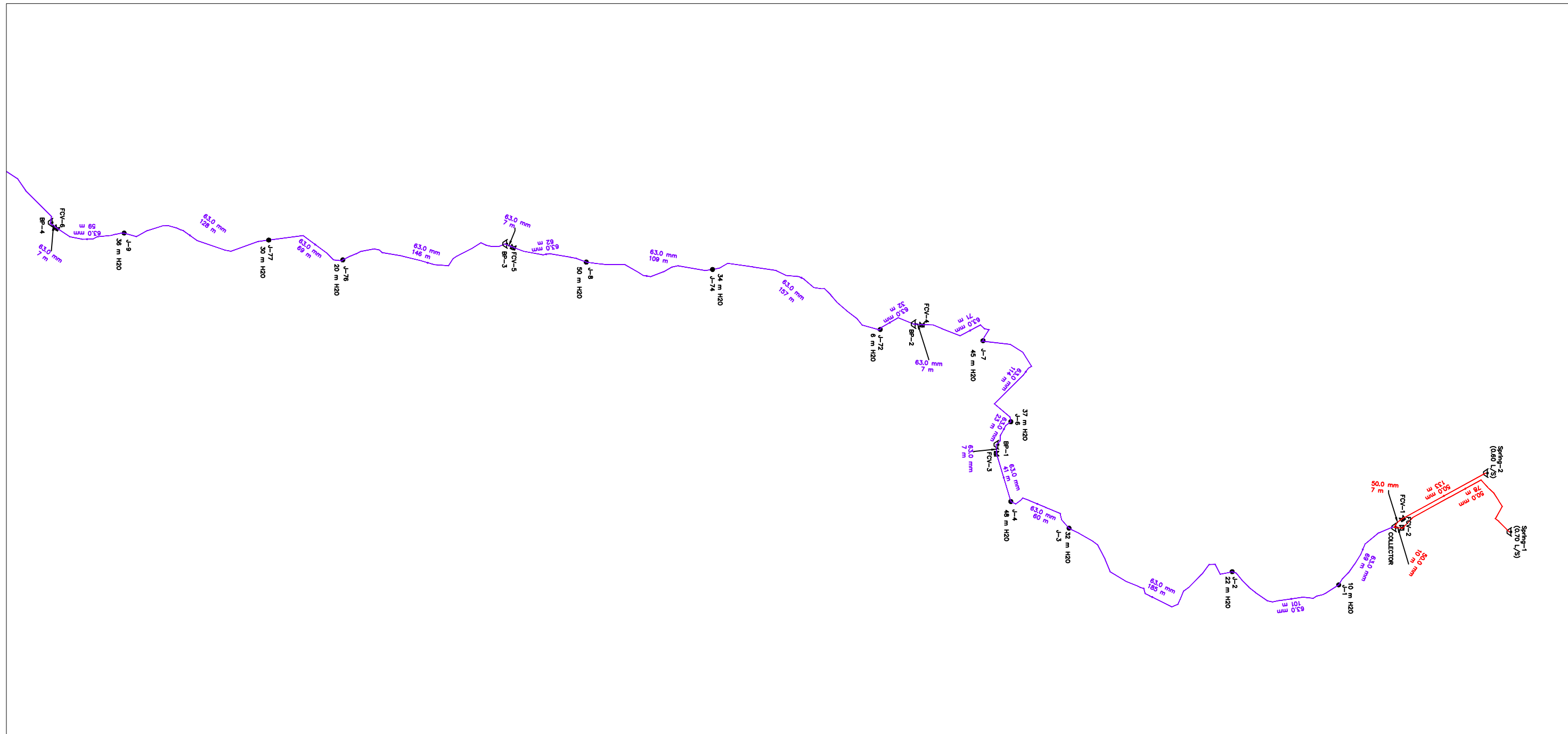
WORLD VISION AFGHANISTAN WASH PROJECT				<div>World Vision ورلد ویژن</div>	
Province: Badghis	District: Jawand	Village: Khaja Sorkhian	Project ID Number: A221873		
Designed by: WASH Advisor	Reviewed by: WASH Sector Lead	Approved by: Operation & Response Director		P-Size: A3	Sheet Reference Number: W-002
SITE PLAN			Plot Date: 29,11,023	No of Structure:	



Flow=L/s
Velocity= m/s
Pressure=m H2O

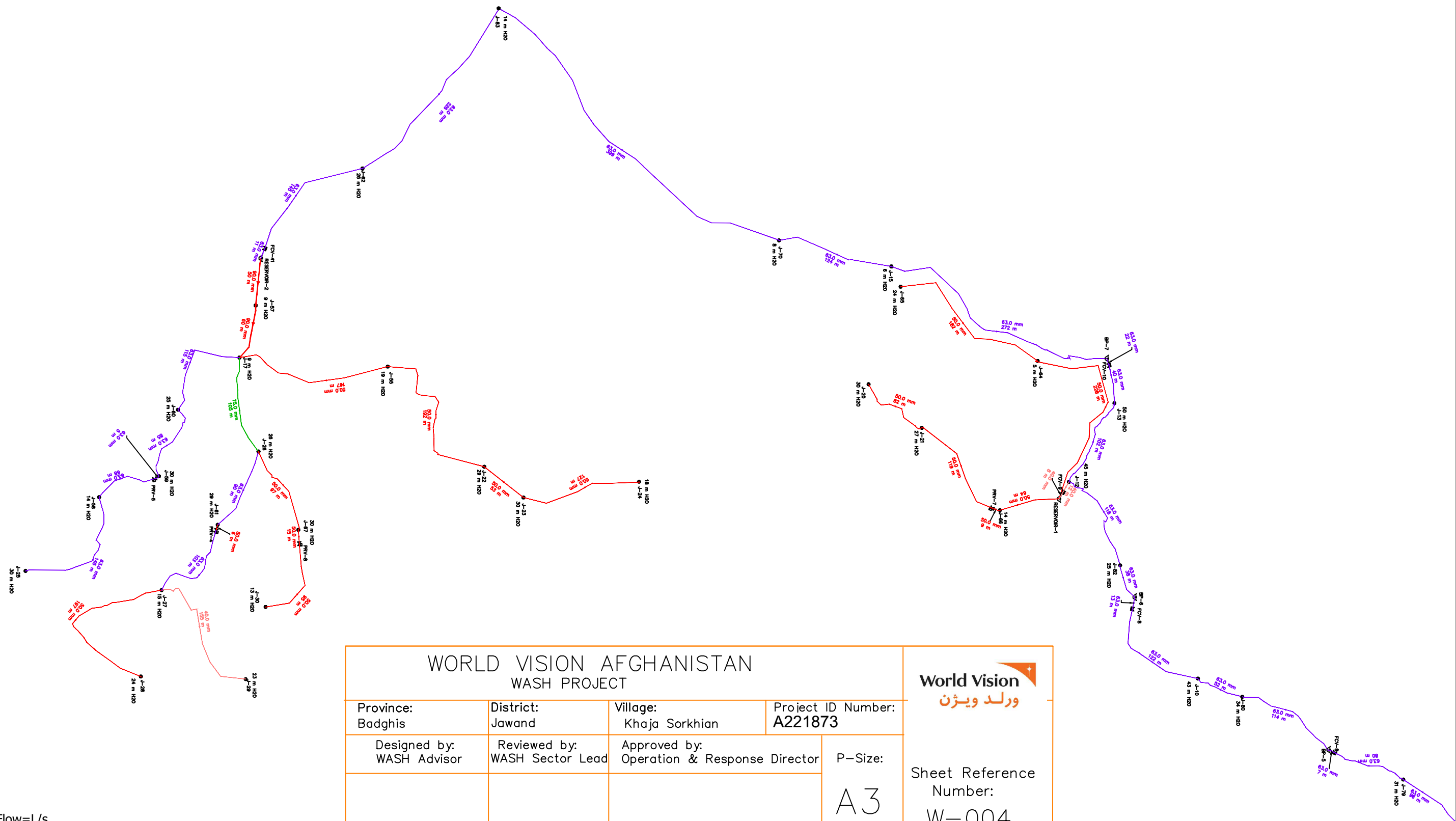
WORLD VISION AFGHANISTAN WASH PROJECT				 ورلد ویژن Sheet Reference Number: W-003
Province: Badghis	District: Jawand	Village: Khaja Sorkhian	Project ID Number: A221873	
Designed by: WASH Advisor	Reviewed by: WASH Sector Lead	Approved by: Operation & Response Director	P-Size: A3	
Hydrualic Design			Plot Date: 29,11,023	
				No of Structure:





Flow=L/s
Velocity= m/s
Pressure=m H2O


WORLD VISION AFGHANISTAN WASH PROJECT				 ورلد ویژن
Province: Badghis	District: Jawand	Village: Khaja Sorkhian	Project ID Number: A221873	
Designed by: WASH Advisor	Reviewed by: WASH Sector Lead	Approved by: Operation & Response Director	P-Size: A3	
LENGHT AND DIA			Plot Date: 29,11,023	
			No of Structure:	Sheet Reference Number: W-004



Flow=L/s
Velocity= m/s
Pressure=m H2O

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Province: Badghis	District: Jawand	Village: Khaja Sorkhian	Project ID Number: A221873	Sheet Reference Number: W-004	
Designed by: WASH Advisor	Reviewed by: WASH Sector Lead	Approved by: Operation & Response Director	P-Size: <div>A3</div>		
LENGHT AND DIA			Plot Date: 29,11,023	No of Structure:	

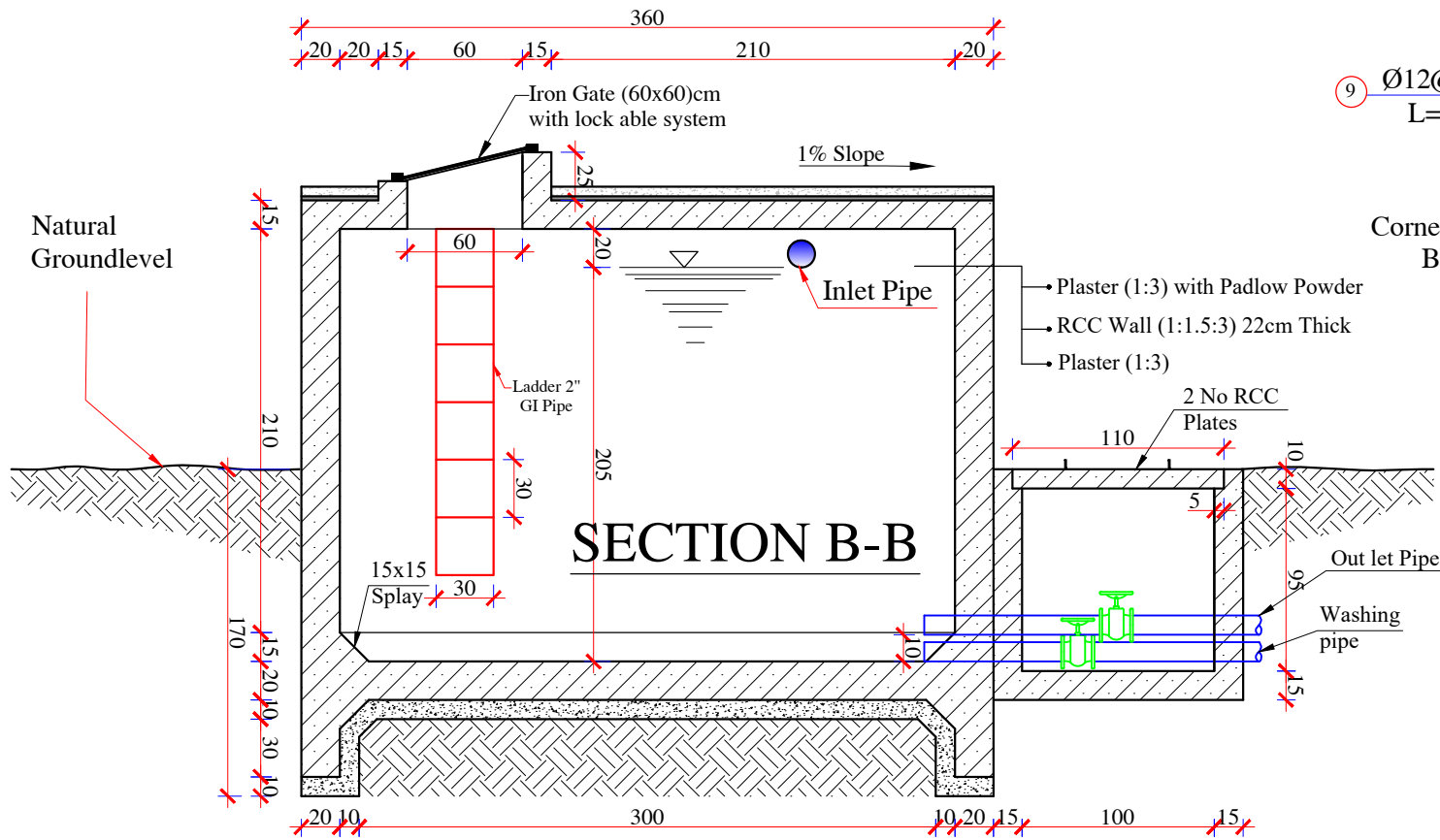
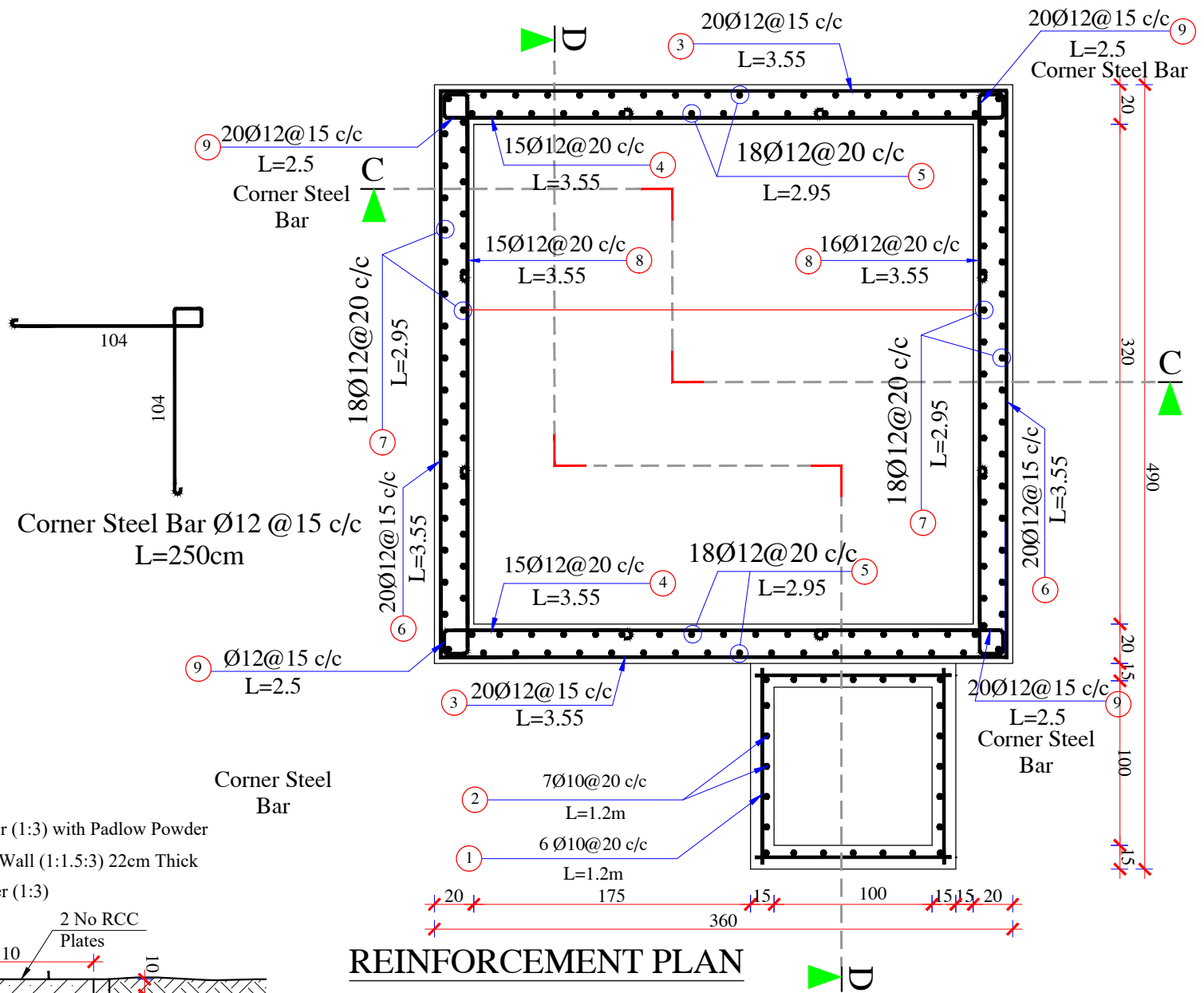


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Province: Badghis	District: Jawand	Village: Khaja Sorkhian	Project ID Number: A221873
Designed by: WASH Advisor	Reviewed by: WASH Sector Lead	Approved by: Operation & Response Director	<div> P-Size A3 </div> <div> Sheet Reference Number: W-007 </div>
<div>20 Cubic Meter RCC-Reservoir</div>			<div> Plot Date: 29,11,023 </div> <div> No of Structure: 2 </div>

STEEL BAR SCHEDULE FOR 20 CUBIC METER RCC WATER RESERVOIR

[illegible]

Bar Dia (mm)	Total Length (m)	Weight (kg/m)	Total weight (kg)	Total weight +5% (kg)
10	102	0.6166	62.9	66
12	1675.6	0.888	1487.9	1561.2



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WASH PROJECT

Province: Badghis	District: Jawand	Village: Khaja Sorkhian	Project ID Number: A221873		ورلد ویژن	
Designed by: WASH Advisor	Reviewed by: WASH Sector Lead	Approved by: Operation & Response Director		P-Size A3		Sheet Reference Number: W-008
20 Cubic Meter RCC-Reservoir				Plot Date: 29,11,023	No of Structure: 2	

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P-Size
A3

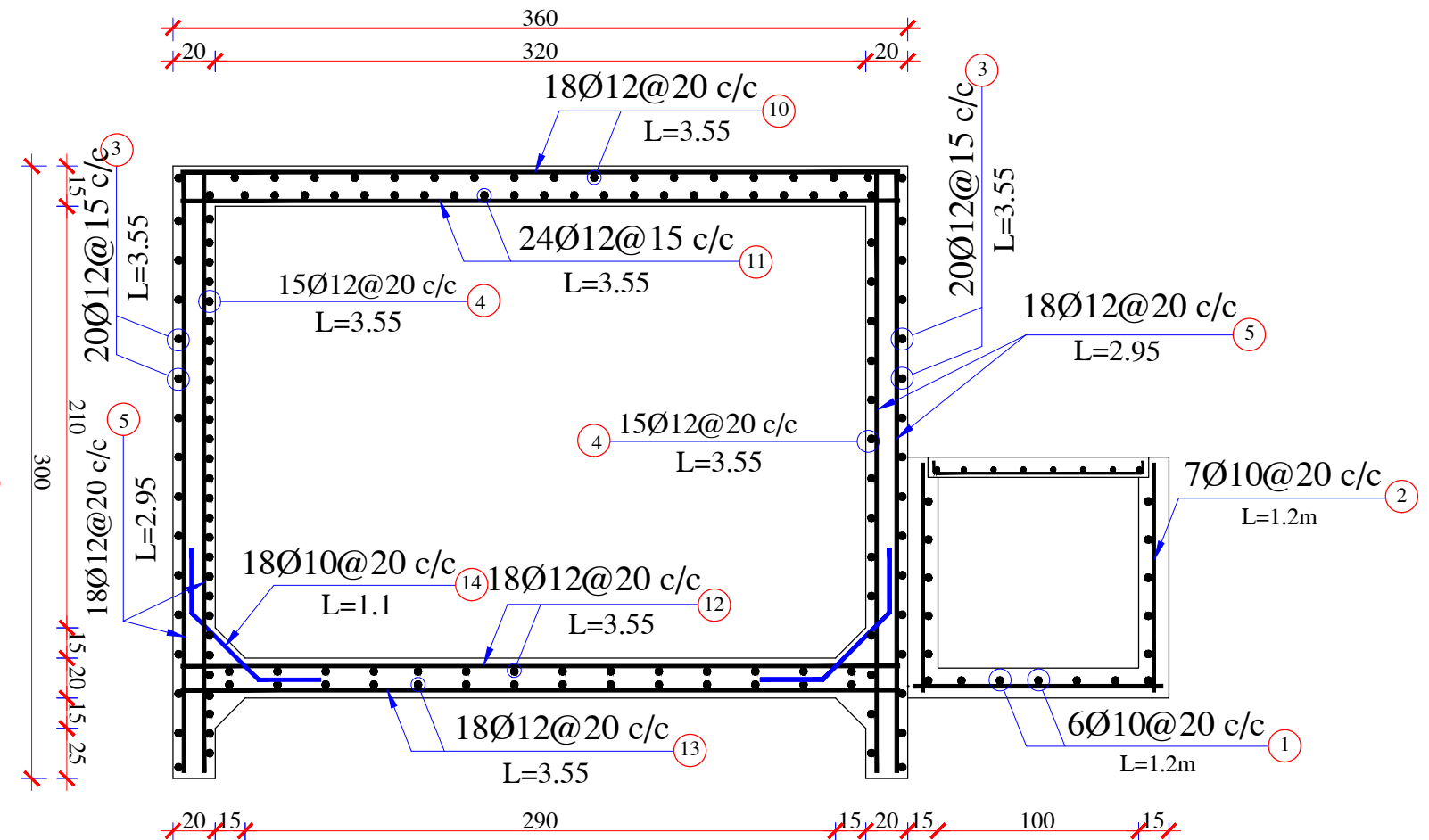
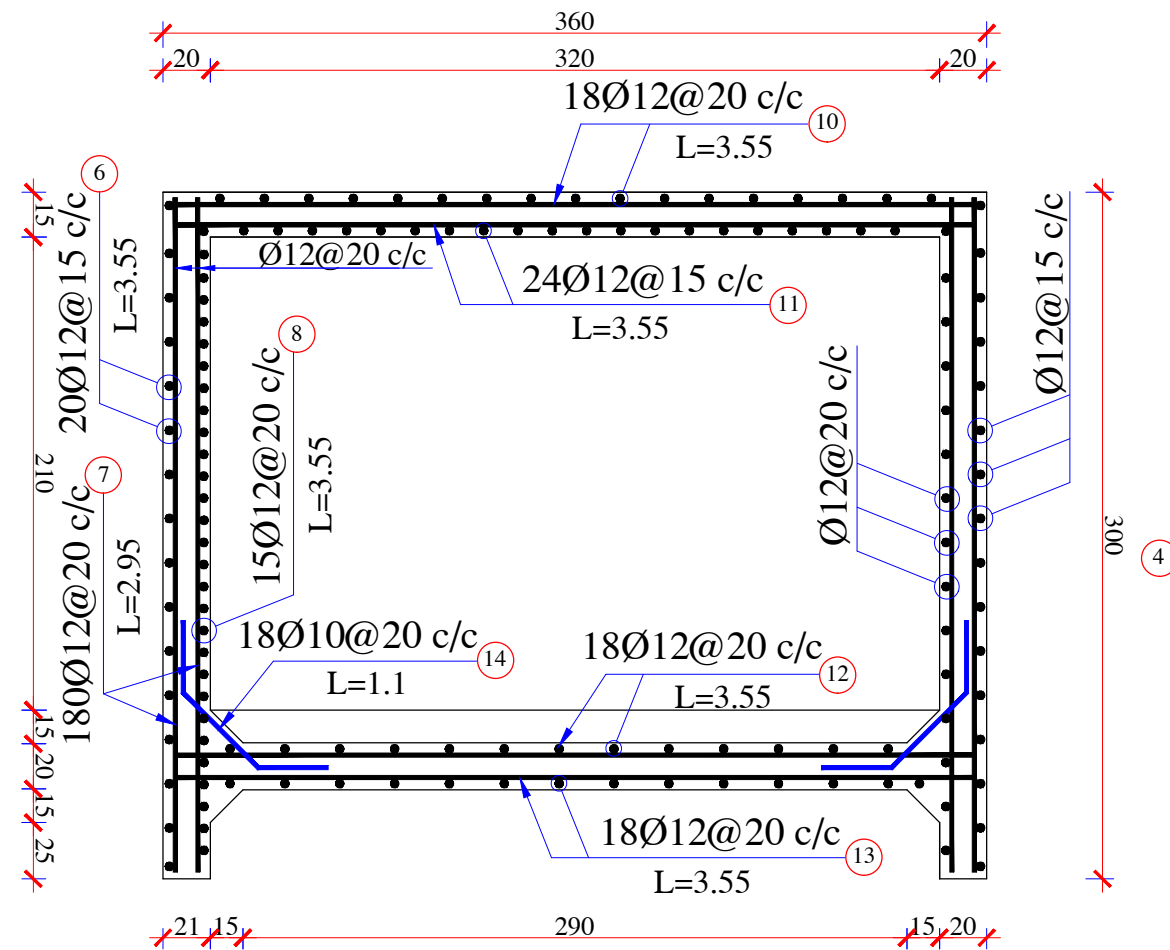
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Number:
W-008

20 Cubic Meter RCC-Reservoir

Plot Date:
29,11,023

No of Structure:
2

SECTION C-C



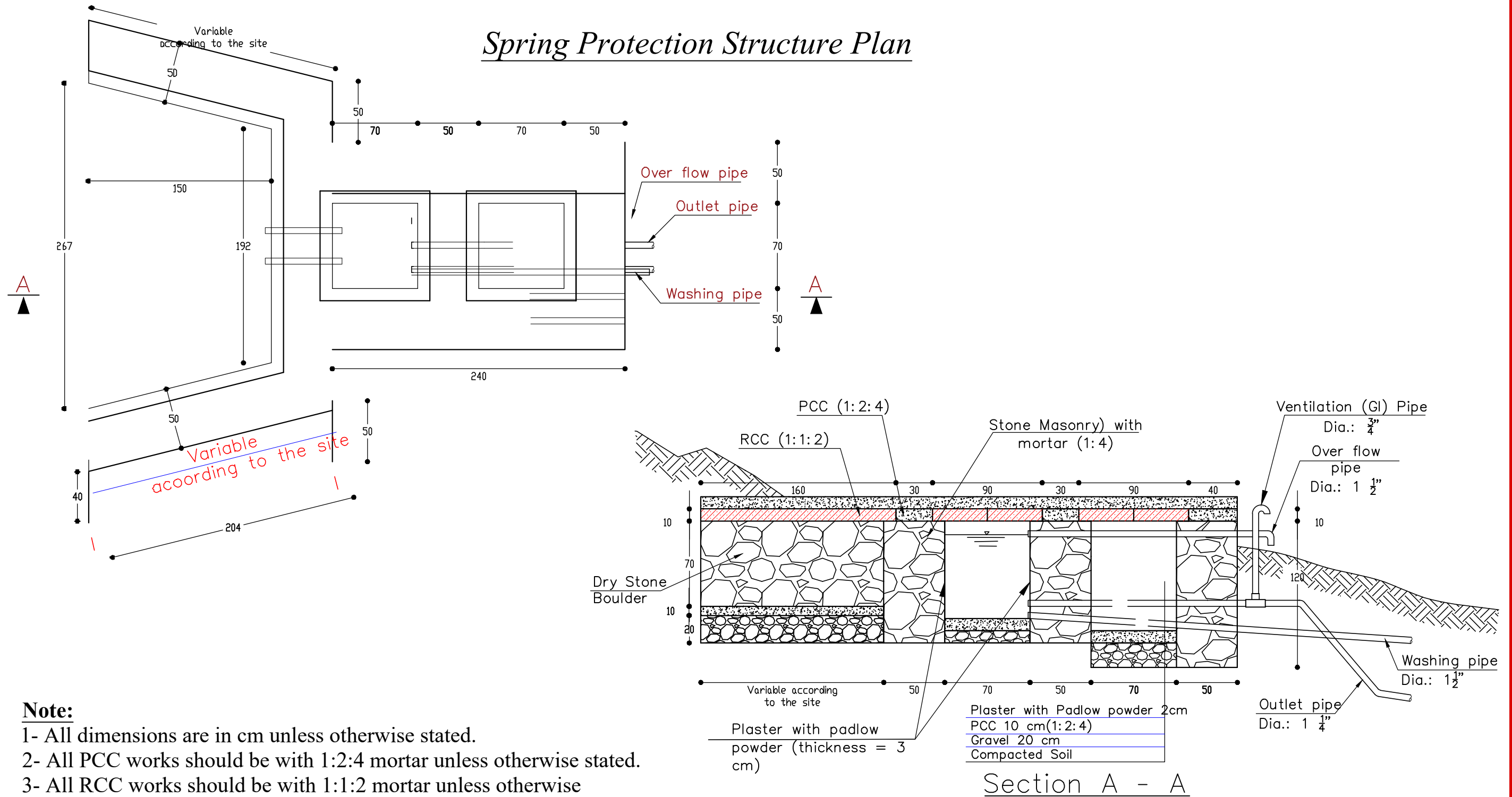
STEEL BAR SCHEDULE FOR 20 CUBIC METER RCC WATER RESERVOIR

Shape of bar	Bar No	Bar Dia (mm)	Number of Bar	Total Number	Length (m)	Total Leng (m)	Weight (kg/m)	Total weight (kg)	Total weight +5% (kg)
	1	10	4x6	24	1.2	28.8	0.6166	17.76	18.65
	2	10	4x7	28	1.2	33.6	0.6166	20.72	21.75
	3	12	2x20	40	3.55	142	0.888	126	132.3
	4	12	2x15	30	3.55	106.5	0.888	94.57	99.3
	5	12	4x18	72	2.95	212.4	0.888	188.6	198
	6	12	2x20	40	3.55	142	0.888	126	132.3
	7	12	4x18	72	2.95	212.4	0.888	188.6	198
	8	12	2x15	30	3.55	106.5	0.888	94.5	99.23
	9	12	4x20	80	2.5	200	0.888	177.6	186.5
	10	12	2x18	36	3.55	127.8		113.4	119
	11	12	2x24	48	3.55	170.4	0.888	151.3	158.8
	12	12	2x18	36	3.55	127.8	0.888	113.4	119
	13	12	2x18	36	3.55	127.8	0.888	113.4	119
	14	10	2x18	36	1.1	39.6	0.6166	24.41	25.6
Total Weight Bar +5% (Kg)								1627.2 kg	

SECTION D-D

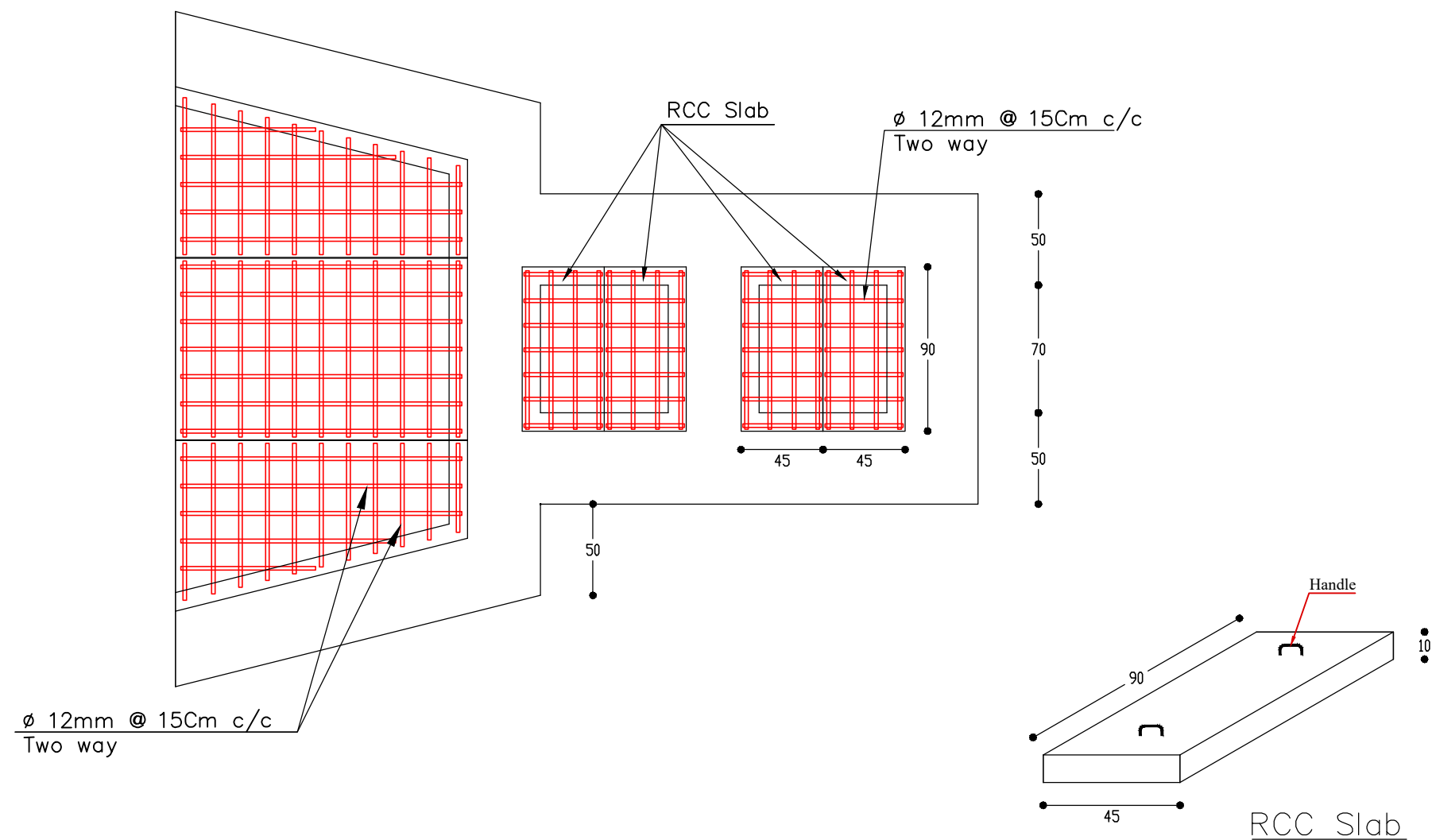
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Province: Badghis	District: Jawand	Village: Khaja Sorkhian	Project ID Number: A221873	P-Size A3	Sheet Reference Number: W-009
Designed by: WASH Advisor	Reviewed by: WASH Sector Lead	Approved by: Operation & Response Director			
20 Cubic Meter RCC-Reservoir			Plot Date: 29,11,023		
				No of Structure: 2	

Spring Protection Structure Plan



WORLD VISION AFGHANISTAN WASH PROJECT				World Vision ورلد ویژن
Province: Badghis	District: Jawand	Village: Khaja Sorkhian	Project ID No: A221873	Sheet Reference NO: W-010
Designed by: WASH Advisor	Reviewed by: WASH Sector Lead	Approved by: Operation & Response Director	A3	NO of Structure: 2
Spring Protection			Plot Date: 29,11,023	

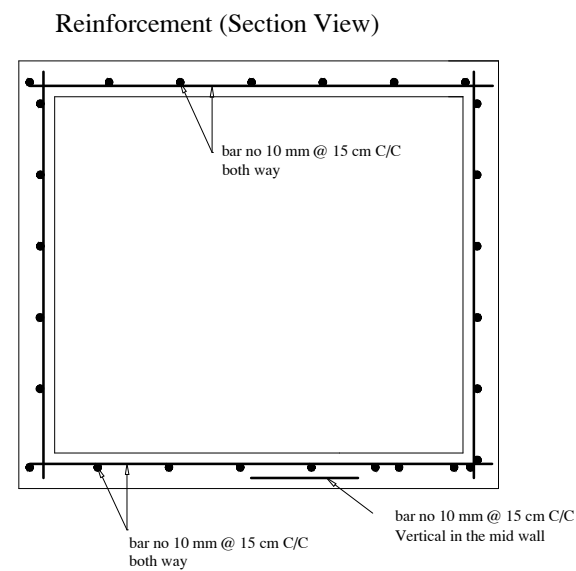
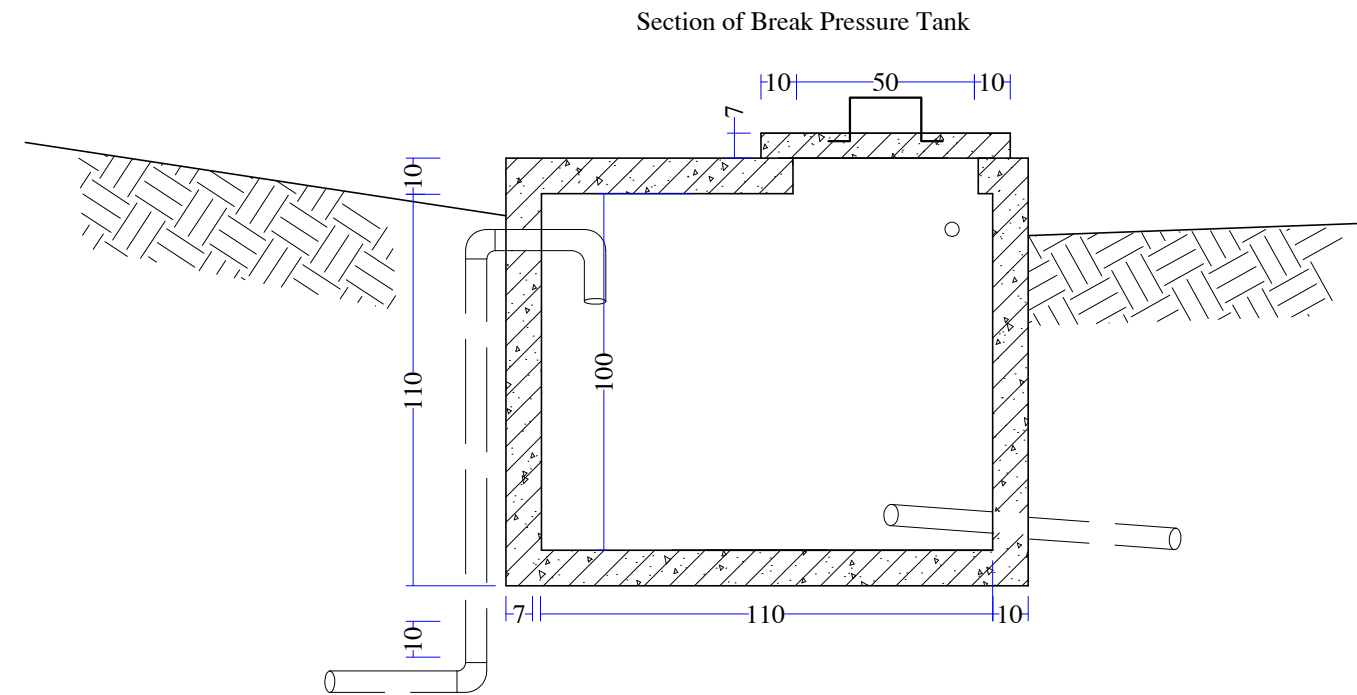
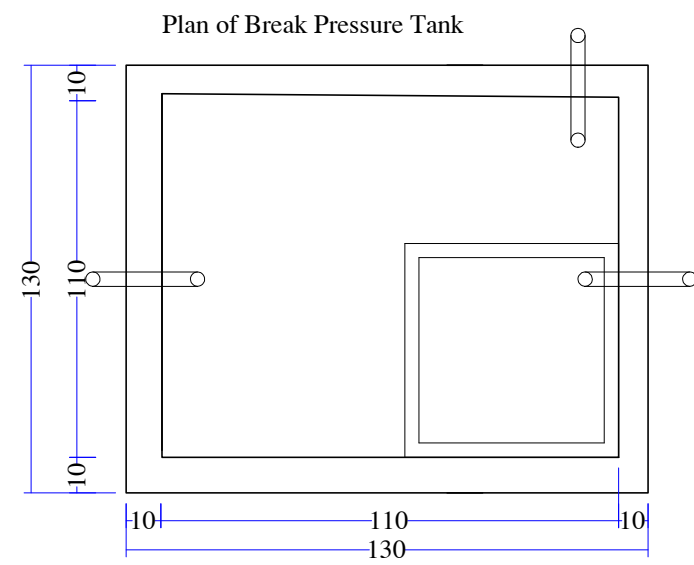
Spring Protection Structure Reinforcement



Note:

- 1- All dimensions are in cm unless otherwise stated.
- 2- All PCC works should be with 1:2:4 mortar unless otherwise stated.
- 3- All RCC works should be with 1:1:2 mortar unless otherwise stated.
- 4- Stone masonry must be worked with 1:4 mortar unless otherwise stated.
- 5- Curing must be continued upto 28 days.
- 6- Clear and Clean water must be used every where.
- 7- The inside of sedimentation and gate valve box should be plasterd with cement-sand mortar and padlow powder.
- 8- The RCC Cover should be protected with 10cm PCC

WORLD VISION AFGHANISTAN WASH PROJECT				
Province: Badghis	District: Jawand	Village: Khaja Sorkhian	Project ID No: A221873	Sheet Reference NO: 2
Designed by: WASH Advisor	Reviewed by: WASH Sector Lead	Approved by: Operation & Response Director	A3	NO of Structure: 2
Spring Protection			Plot Date: 29,11,023	

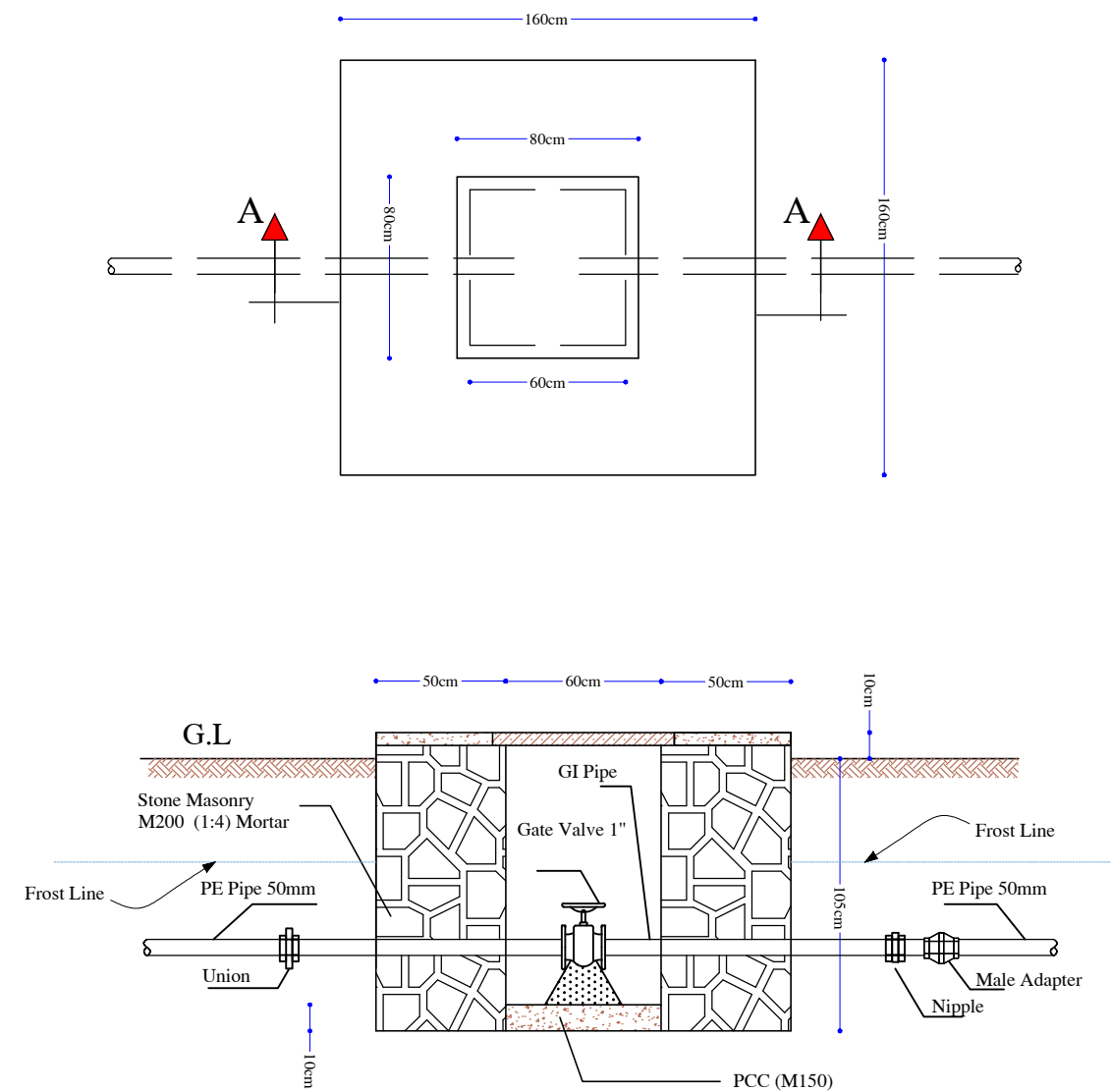


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Province: Badghis	District: Jawand	Village: Khaja Sorkhian	Project ID Number: A221873	
Designed by: WASH Advisor	Reviewed by: WASH Sector Lead	Approved by: Operation & Response Director	P-Size A3	
Break Pressure & Collector			Plot Date: 29,11,023	No of Structure: 8

Structure's Locations

S#	Description	Latitude	Longitude	Elevation
1	Water Source (Spring 1)	35 28.651	64 06.916	2473
2	Water Source (Spring 2)	35 28.642	64 06.885	2453
3	Break Pressure #1	35.473988	64.114748	2394
4	Break Pressure #2	35.473815	64.113611	2335
5	Break Pressure #3	35.471098	64.112861	2274
6	Break Pressure #4	35.467573	64.11257	2215
7	Break Pressure #5	35.465673	64.111561	2155
8	Break Pressure #6	35.464158	64.110262	2094
9	Break Pressure #7	35.463196	64.10859	2035
10	Reservoir 1	35 27.262	64 06.285	1985
11	Reservoir 2	35 27.270	64 06.290	
12	Valve Box#1			
13	Valve Box #2			
14	Valve Box #3			
15	Valve Box #4			

Valve Box Details



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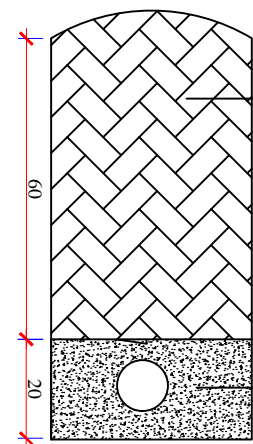
Sheet Reference
Number:
W-013

Valve Box Details & Locations

Plot Date:
29,11,023

No of Structure:
4

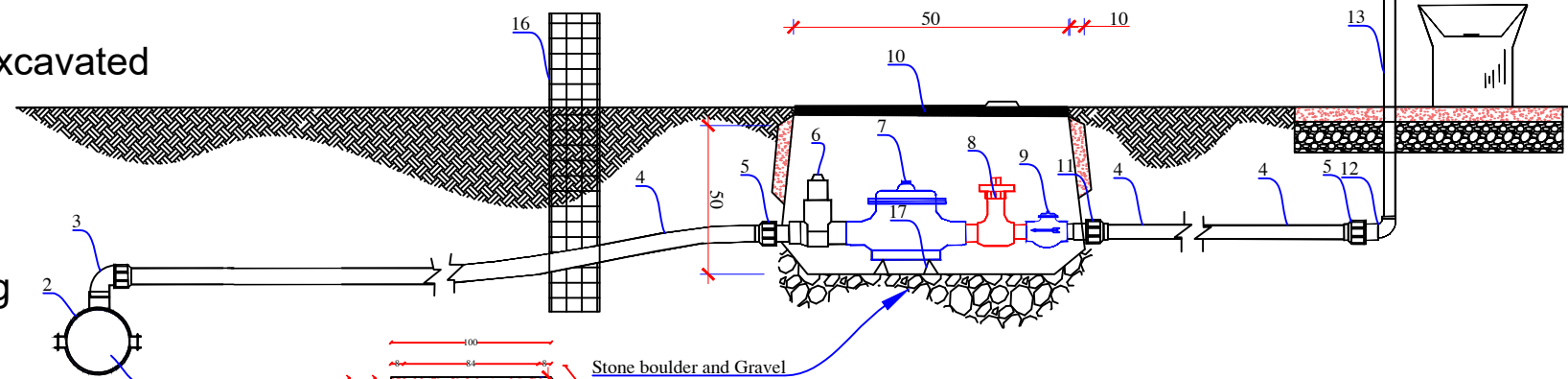
Branch pipe section



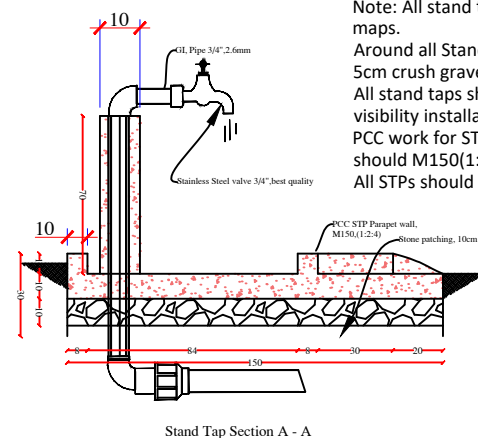
Filling from excavated material

Soft soil filling

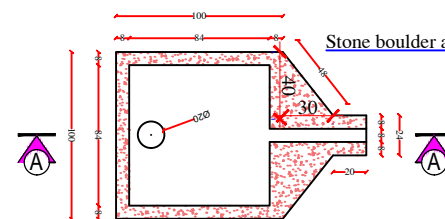
STP for House Connection Design



Note: All stand taps should be made according to the maps.
Around all Stand, taps should be backfilled and use 5cm crush gravel.
All stand taps should be uncoiled painting, and for better visibility installation of Logos.
PCC work for STP and Apron Parapet wall should be M150(1:2:4).
All STPs should be curing 7 day.

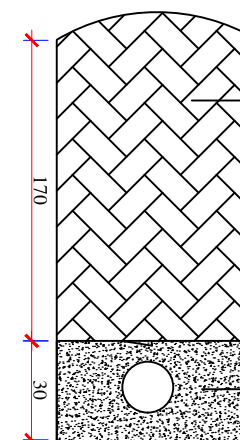


Stand Tap Section A - A



Stone boulder and Gravel

River Crossing Trench Details



Filling from excavated material

PCC and PE pipe must be covered by GI pipe

No	Descriptions	Unite	Quantity/ Tap	Total	Remark
1	Supply main Pipe	LM			
2	saddle size (main pipe 1/2")	No	1	67	
3	90 Elbow with threaded male off take (20x1/2")	No	1	67	
4	Service PE Pipe 20mm, PE 100, PN20	LM			
5	Female threaded adaptor (20x1/2")	No	3	201	
6	Male threaded Lockable Valves (1/2")	No	1	67	
7	Domestic water meter 1/2" and 1" PN16	No	1	67	
8	Brass ball valves-cock handle 1/2"	No	1	67	
9	Male threaded check valve 1/2"	No	1	67	

10	Under ground meter Box resistant to pressure and impact	No	1	67	
11	Male threaded adaptor (20x1/2")	No	2	134	
12	90 Elbow with threaded female off take (20x1/2")	No	1	67	
13	Galvanized Pipe 1/2"	LM	2	134	
14	90 Elbow with threaded male off take (20x1/2")	No	2	134	
15	Water Tap 1/2"	No	1	67	
16	Boundary wall	HH	1	67	
17	Lockable meter setter	No	1	67	

WORLD VISION AFGHANISTAN WASH PROJECT

Province:
Badghis

District:
Jawand

Village:
Khaja Sorkhian

Project ID Number: A221873

Designed by:
WASH Advisor

Reviewed by:
WASH Sector Lead

Approved by:
Operation & Response Director

P-Size
A3

Sheet Reference
Number:
W-014

STPs Details and Trench Details

Plot Date:
29,11,023

No of Structure:
67

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