

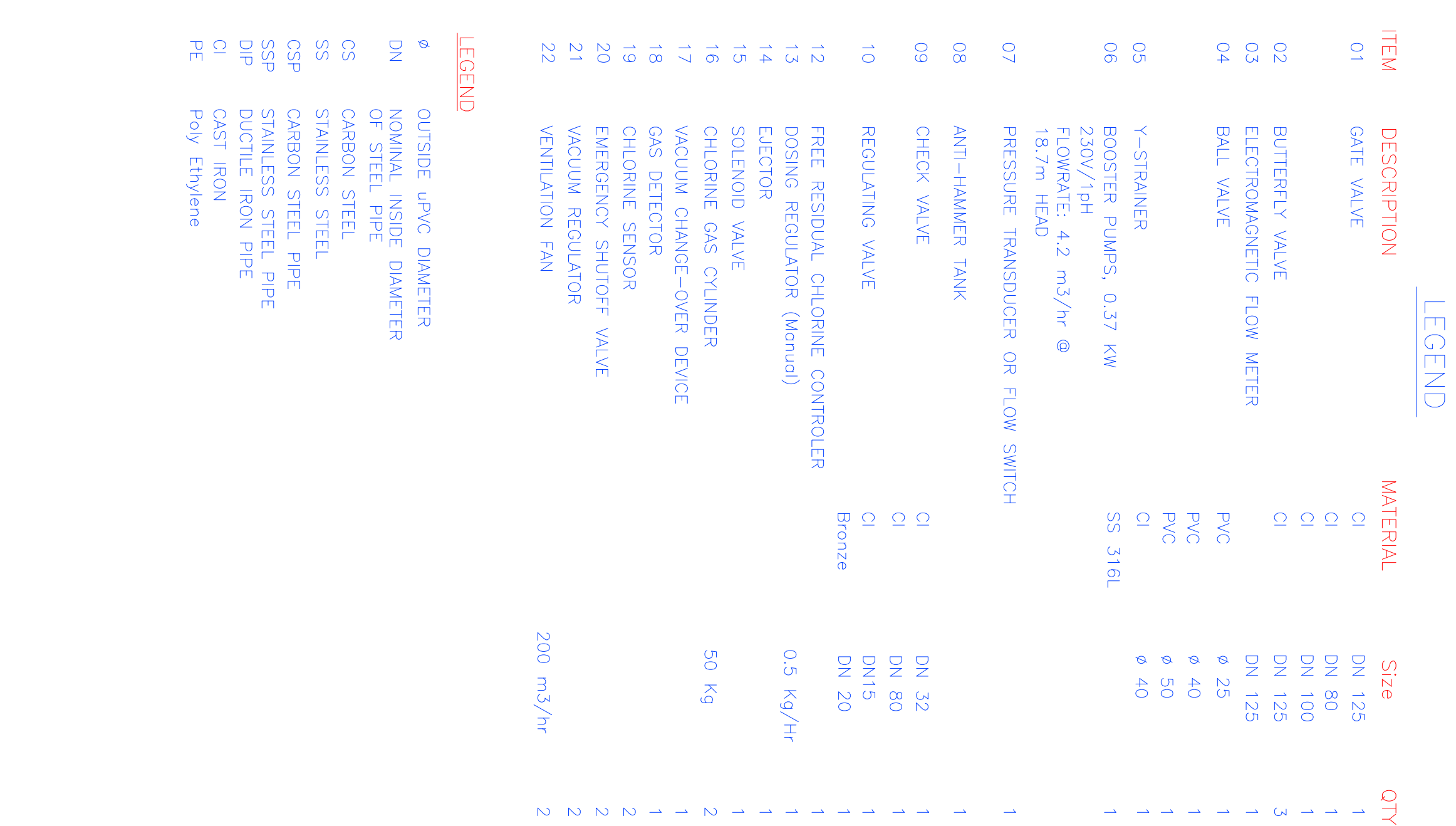


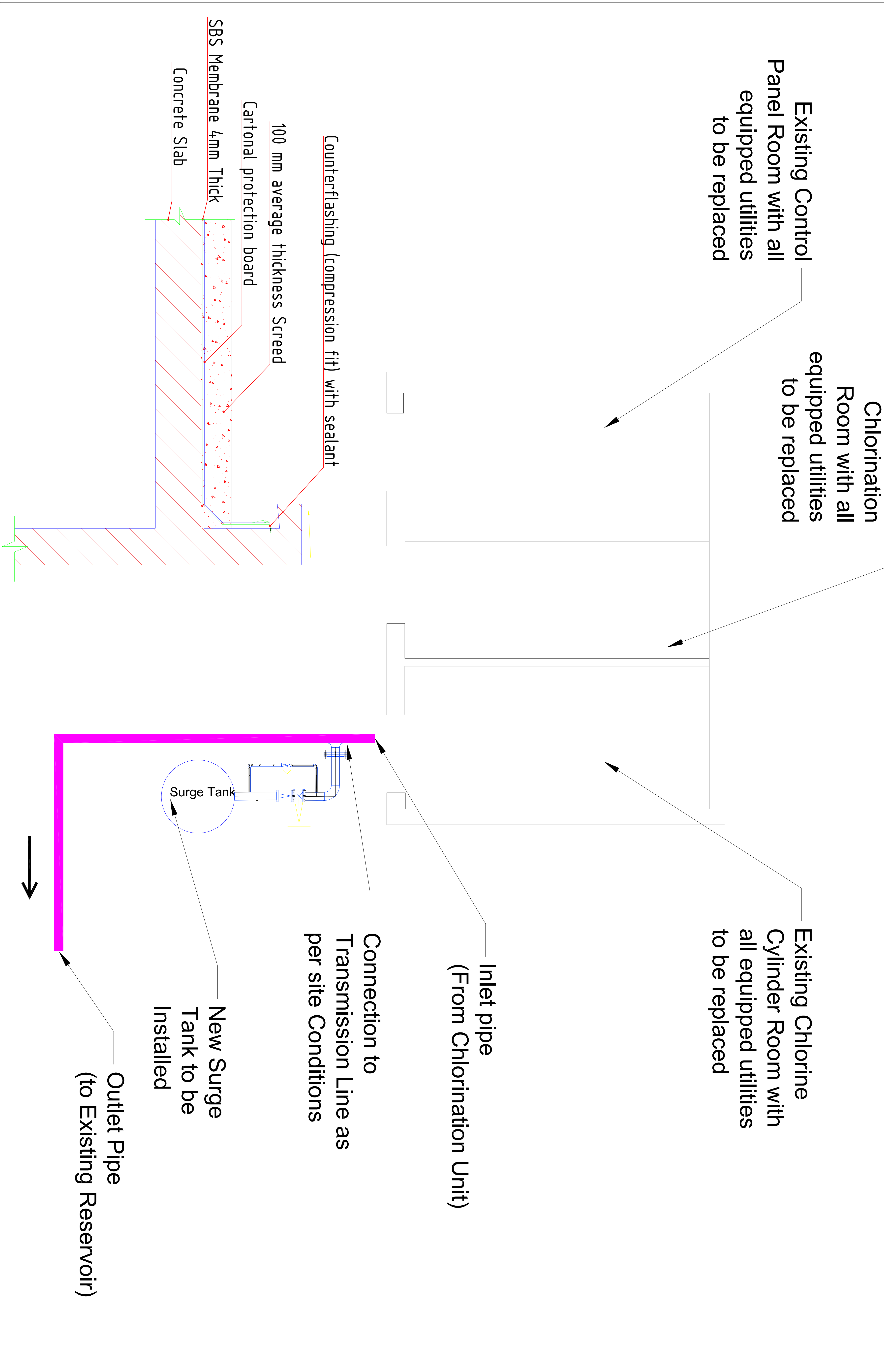
PROVISION OF PROFESSIONAL SERVICES FOR THE DESIGN AND SUPERVISIONS' SITE VISITS OF INFRASTRUCTURE, WATER AND SEWAGE PROJECTS ON LONG TERM AGREEMENT (LTA) BASIS

**TECHNICAL ROOM & TRANSFER LINE
FROM THE WELL TO THE EXISTING WATER RESERVOIR
IN MAZBOUD**

Tender Drawings

September 2017

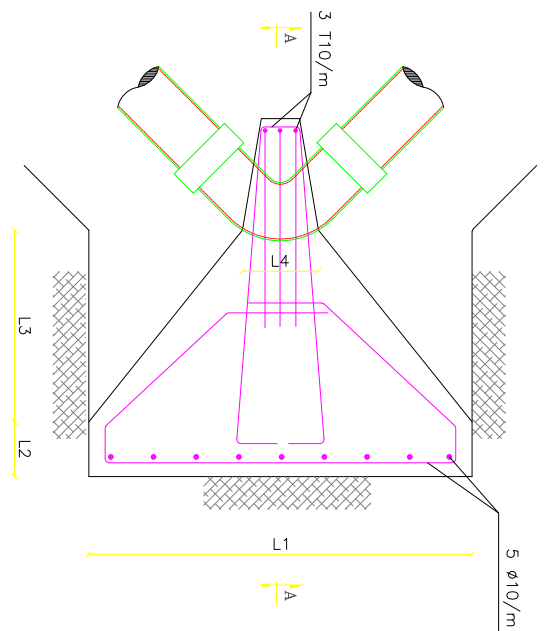
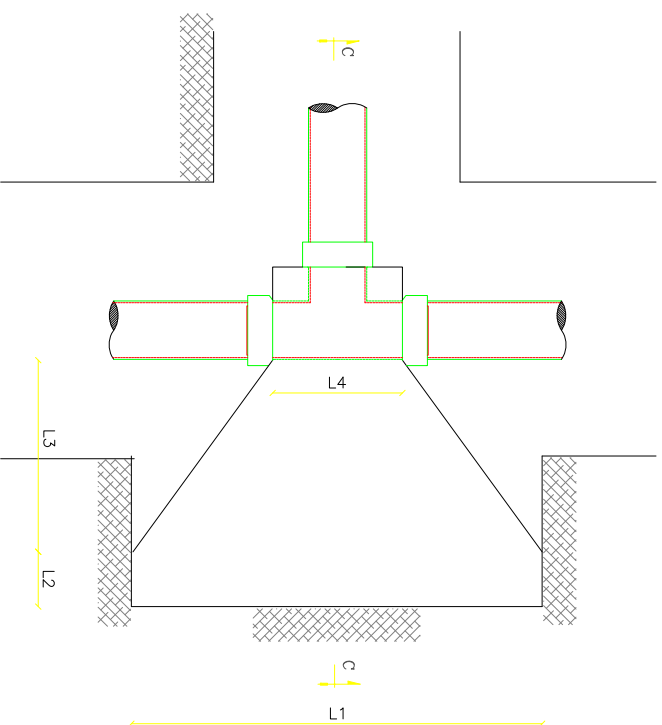
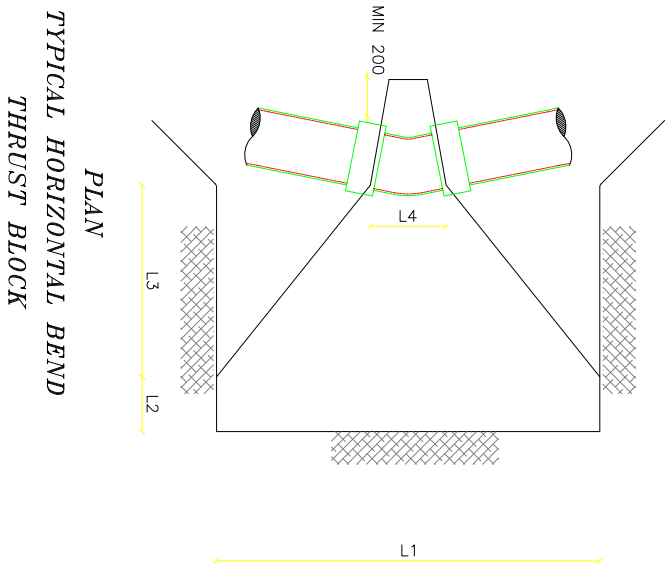




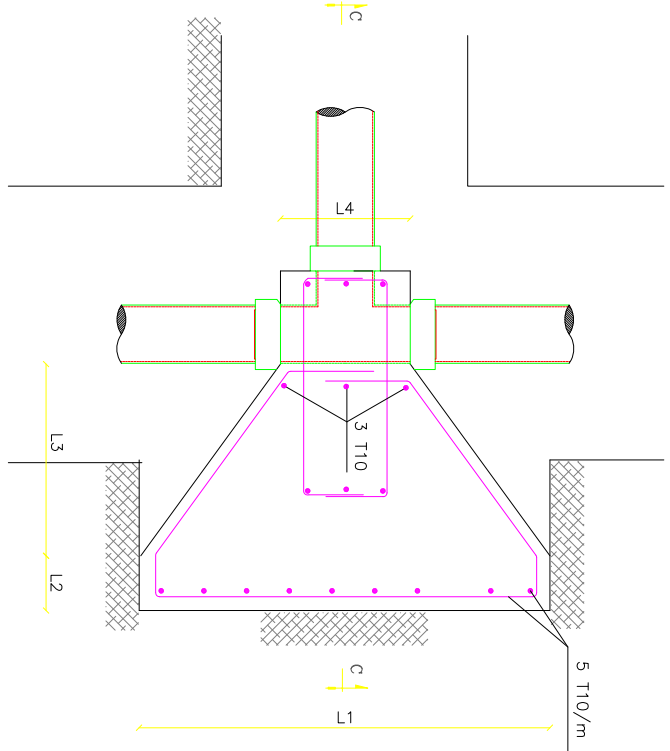
PROVISION OF PROFESSIONAL SERVICES FOR THE DESIGN AND SUPERVISIONS
SITE VISITS OF INFRASTRUCTURE, WATER AND SEWAGE PROJECTS
ON LONG TERM AGREEMENT (LTA) BASIS
TENDER DRAWINGS

TECHNICAL ROOM & TRANSFER LINE IN MAZBOUD
TECHNICAL ROOM - General Layout

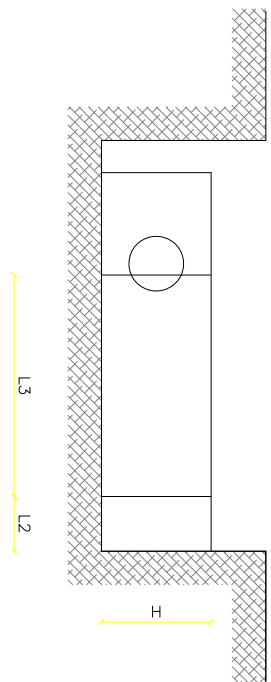
Dwg № 2 Sheet 1 of 2
September 2017
Scale : NTS



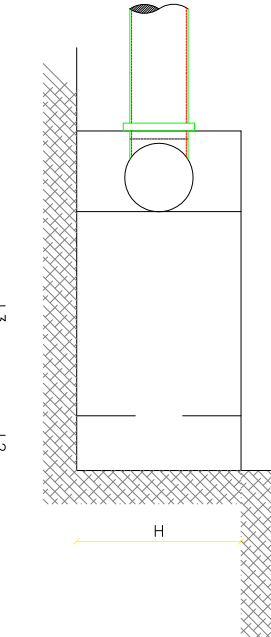
SECTION A-A
TYPICAL HORIZONTAL BEND
THRUST BLOCK
TYPICAL REINFORCEMENT



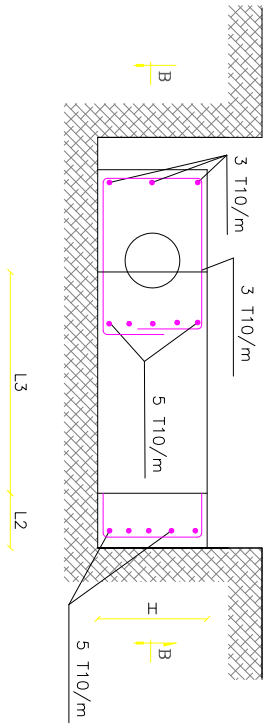
SECTION D-D
TEE THRUST BLOCK
TYPICAL REINFORCEMENT



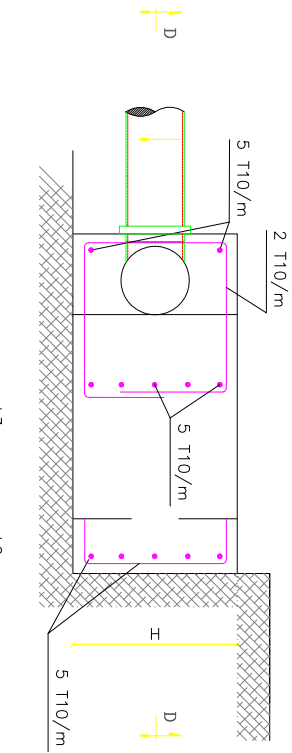
SECTION A-A
TYPICAL HORIZONTAL BEND
THRUST BLOCK
TYPICAL REINFORCEMENT



SECTION C-C
TEE THRUST BLOCK
TYPICAL REINFORCEMENT



SECTION A-A
TYPICAL HORIZONTAL BEND
THRUST BLOCK
TYPICAL REINFORCEMENT



SECTION C-C
TEE THRUST BLOCK
TYPICAL REINFORCEMENT

Diam. BRD (mm)	Type	Soil Cover (mm)	Pressure (kN/m²)				
			Soil bearing	Friction	Angle, ϕ	Angle, δ	Angle, α
150	1	10	20	20	30	30	30
150	2	10	20	20	30	30	30
150	3	10	20	20	30	30	30
150	4	10	20	20	30	30	30
150	5	10	20	20	30	30	30
150	6	10	20	20	30	30	30
150	7	10	20	20	30	30	30
150	8	10	20	20	30	30	30
150	9	10	20	20	30	30	30

TABLE NO. 1 : THRUST BLOCKS TYPES

TYPICAL THRUST BLOCKS FOR TEES – HORIZONTAL BENDS – END CAPS

TABLE NO. 2 : THRUST BLOCKS DIMENSIONS

Type	L1 (m)	L2 (m)	L3 (m)	L4 (m)	H (m)	Volume(m³)
2	0.80	0.15	0.30	0.20	0.35	0.095
3	1.00	0.15	0.40	0.25	0.40	0.160
4	1.20	0.15	0.45	0.30	0.50	0.299
5	1.40	0.15	0.55	0.30	0.60	0.466
6	1.60	0.15	0.65	0.30	0.65	0.557
7	1.80	0.15	0.75	0.30	0.75	0.793
8	2.00	0.15	0.85	0.30	0.80	1.022
9	2.20	0.15	0.95	0.30	0.90	1.366

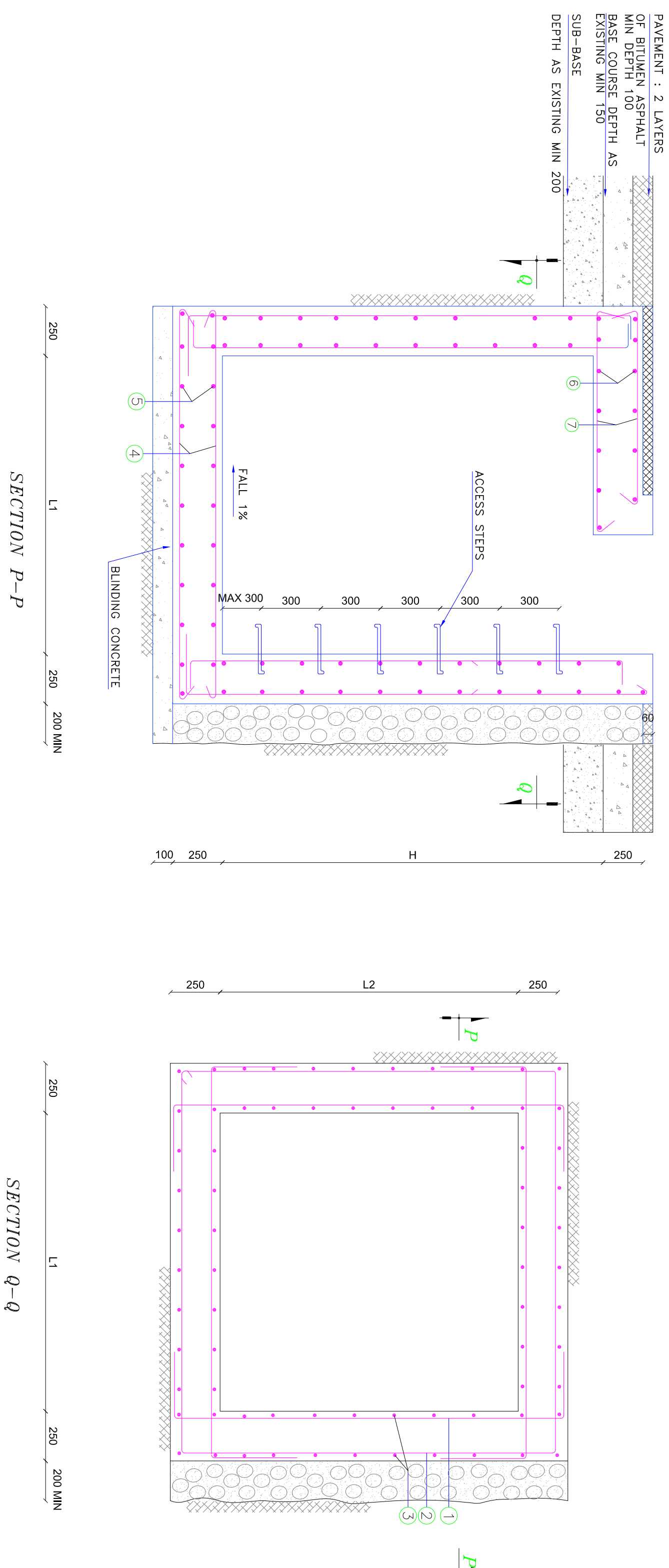


PROVISION OF PROFESSIONAL SERVICES FOR THE DESIGN AND SUPERVISIONS
SITE VISITS OF INFRASTRUCTURE WATER AND SEWAGE PROJECTS
ON LONG TERM AGREEMENT (LTA) BASIS
TENDER DRAWINGS

TECHNICAL ROOM & TRANSFER LINE IN MAZBOUD
Details for Bends and Thrust Blocks

Dwg № 1 Sheet 9 of 9
September 2017
Scale : NTS

TYPICAL REINFORCEMENT DETAIL FOR WASHOUT CHAMBER
NOT TO SCALE



TYPICAL WASHOUT CHAMBER FOR TRANSMISSION PIPELINES-DIMENSIONS

MAIN PIPE DIAMETER	WASHOUT DIAMETER	DIMENSIONS		
		L1	L2	H
mm	mm	mm	mm	mm
150	80	1500	1500	1500

TYPICAL WASHOUT CHAMBER FOR TRANSMISSION PIPELINES-REINFORCEMENT

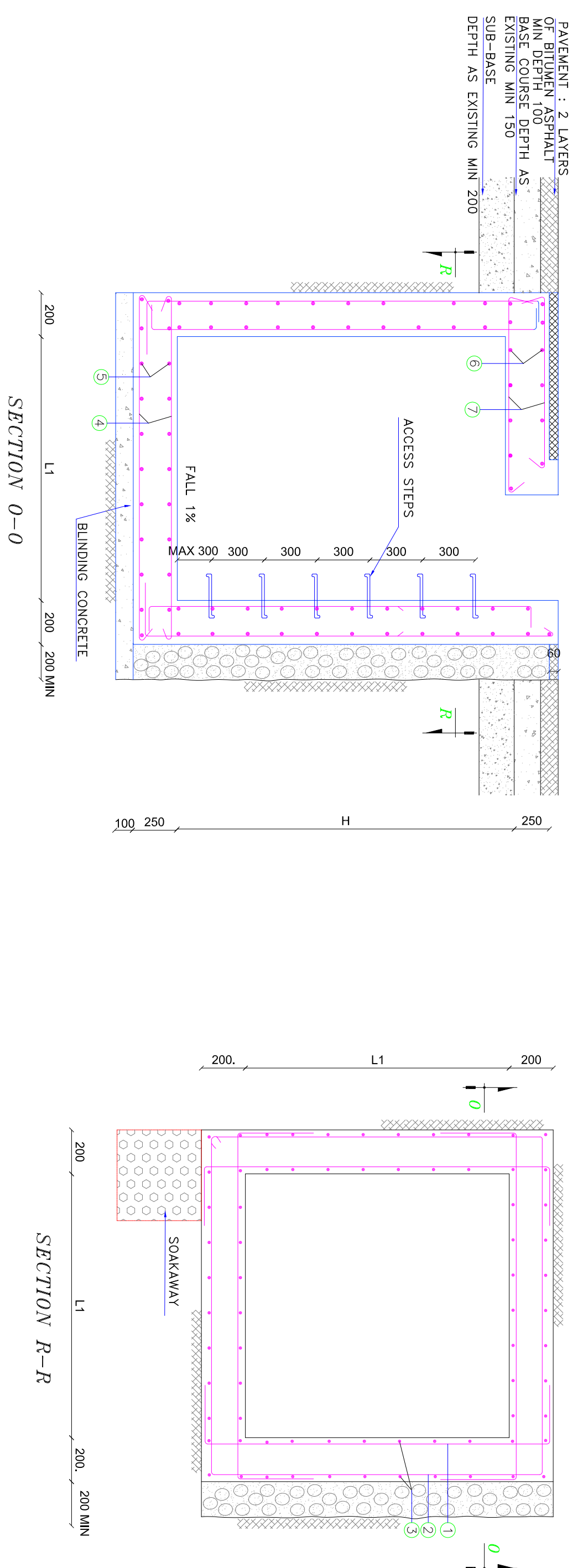
PIPE DIAMETER	REINFORCEMENT						
	1	2	3	4	5	6	7
D	mm	mm	mm	mm	mm	mm	mm
150	T12 @200	T12 @200	T12 @200	T12 @200	T12 @200	T14 @200	T14 @200

TYPICAL DOUBLE AIR VALVE CHAMBER
REINFORCEMENT STEEL TABLE

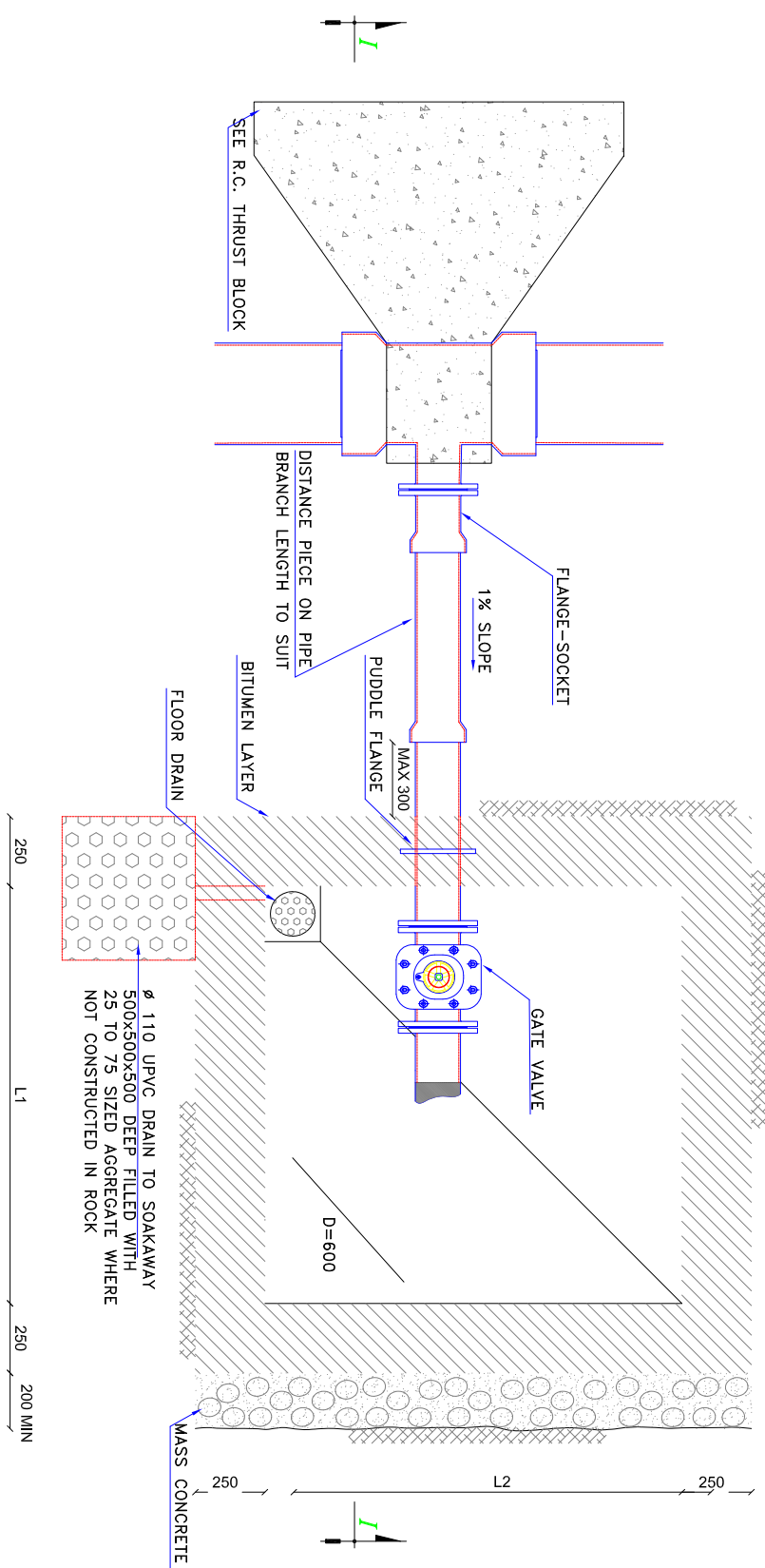
PIPE DIAMETER		REINFORCEMENT					
D	1	2	3	4	5	6	7
mm	mm	mm	mm	mm	mm	mm	mm
150	T12 @200	T12 @200	T12 @200	T12 @200	T12 @200	T14 @200	T14 @200

*TYPICAL DOUBLE AIR VALVE CHAMBER
DIMENSIONS TABLE*

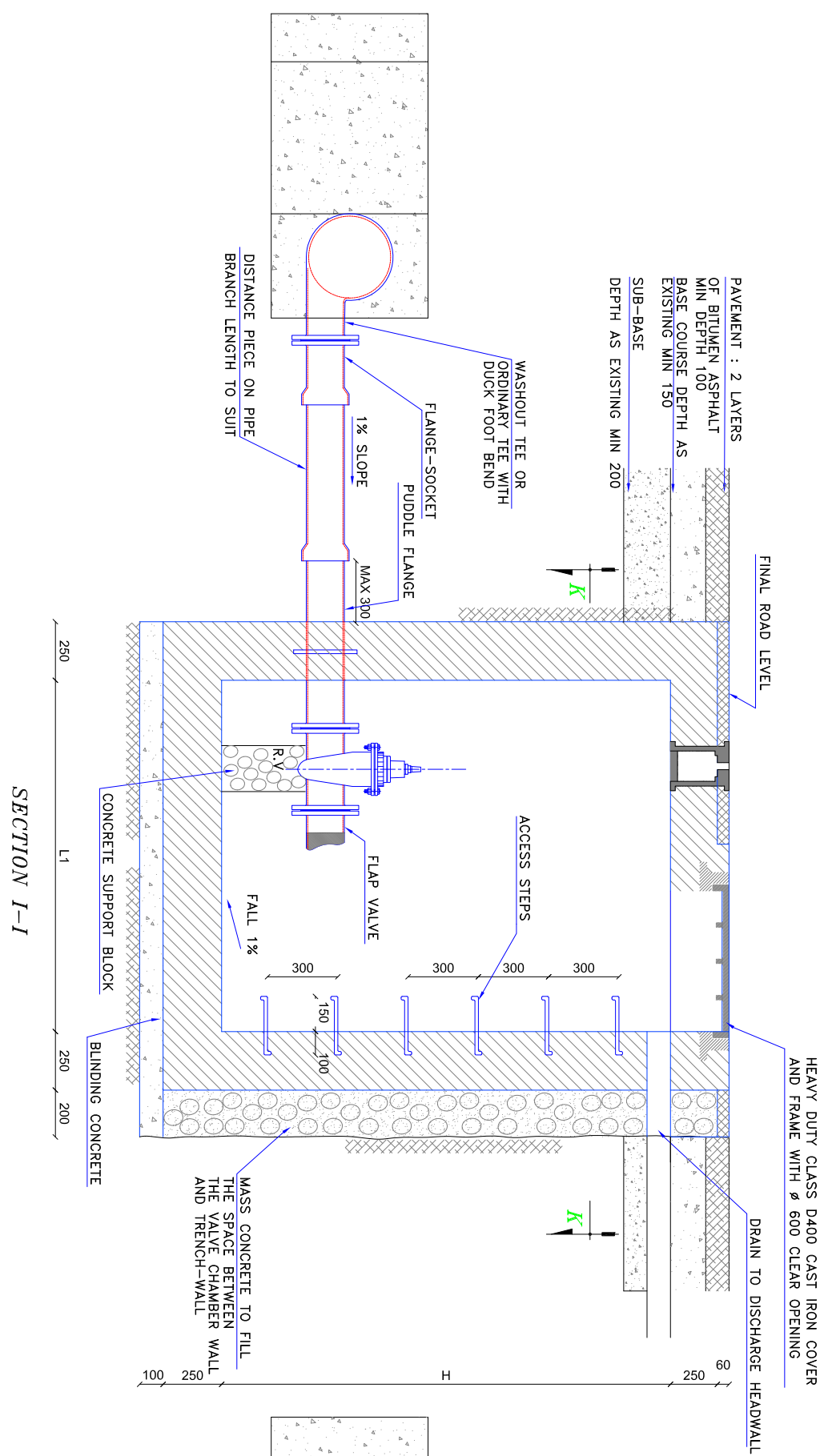
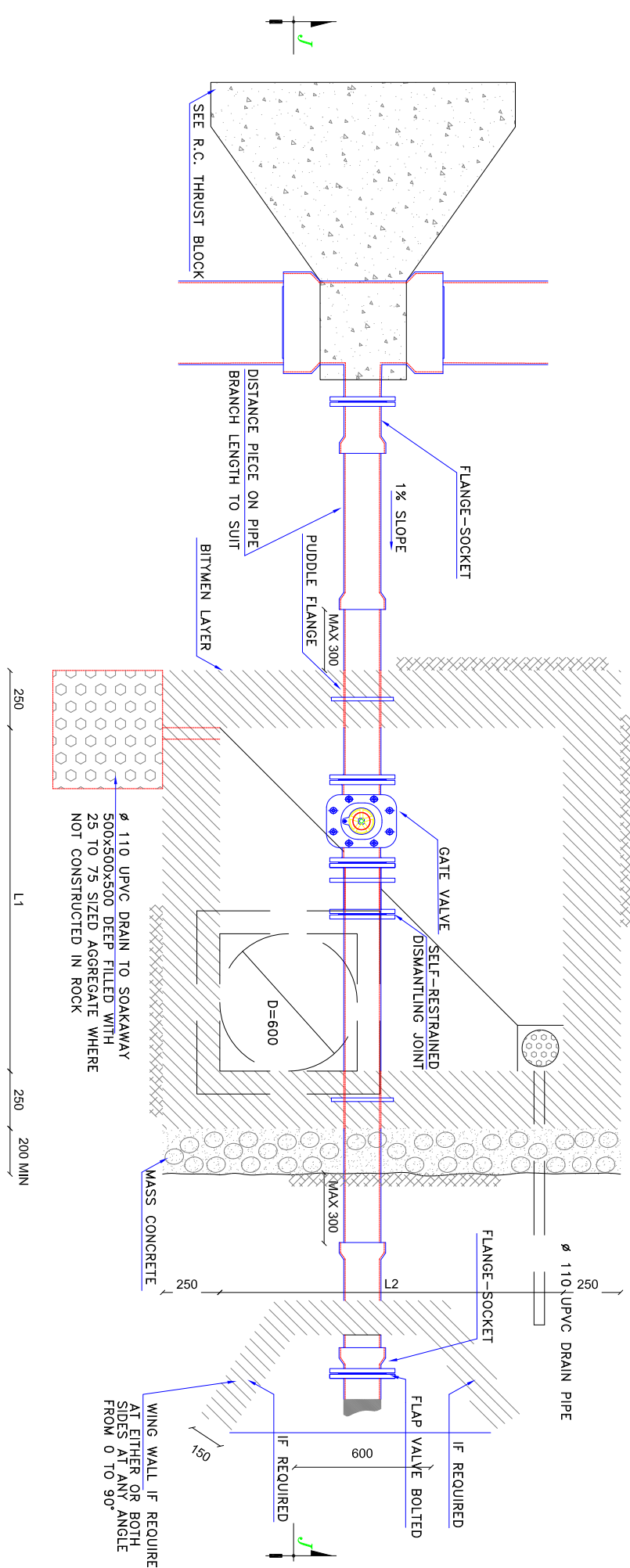
MAIN LINE DIAMETER	AIR VALVE DIAMETER	L2	L1	H
ø mm	ø mm	mm	mm	mm
150	60	1000	1250	1200



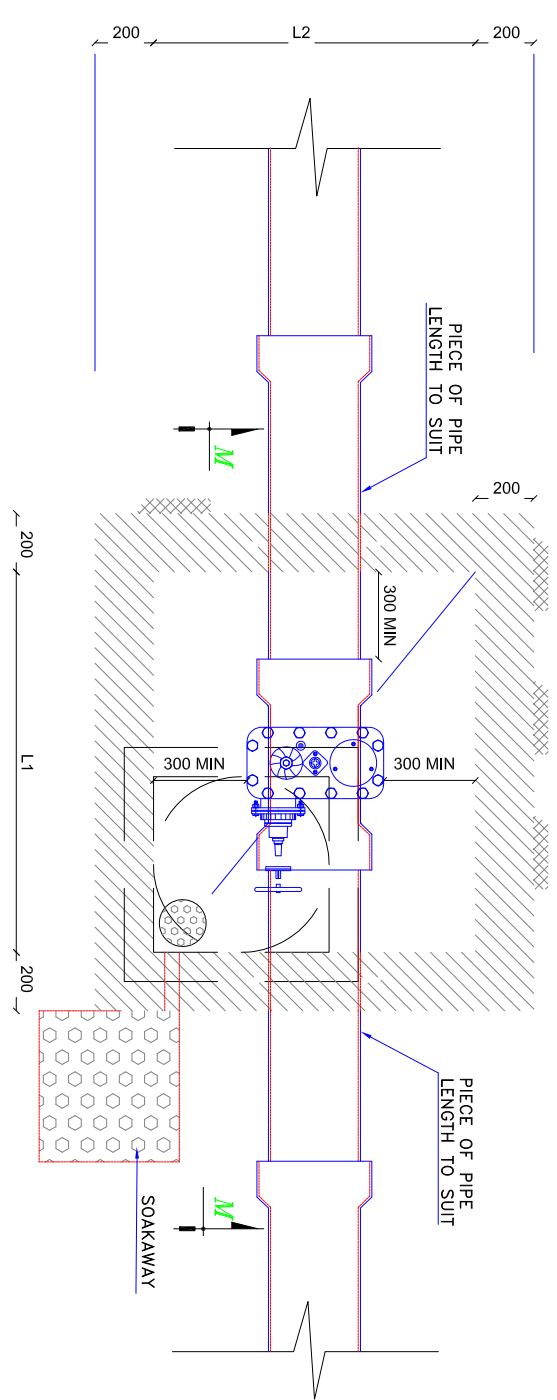
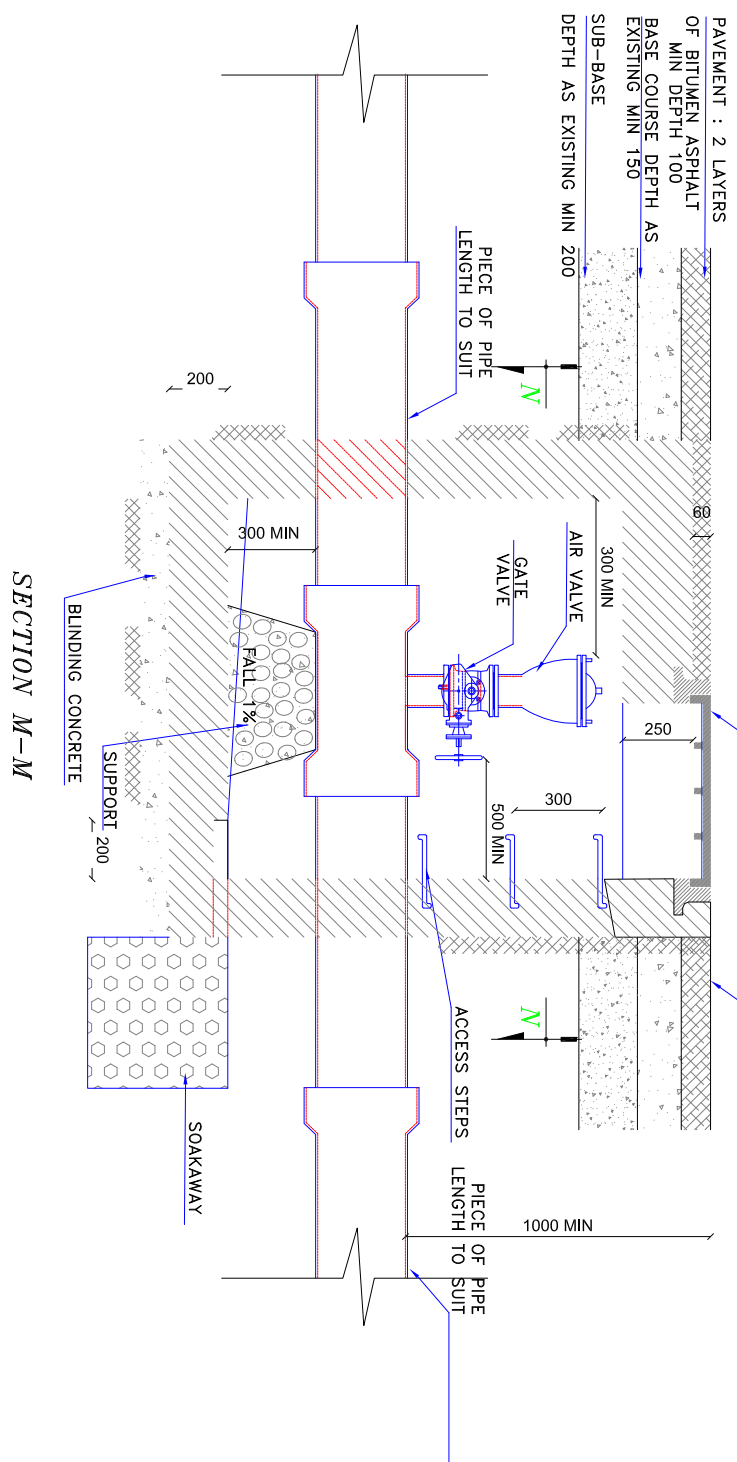
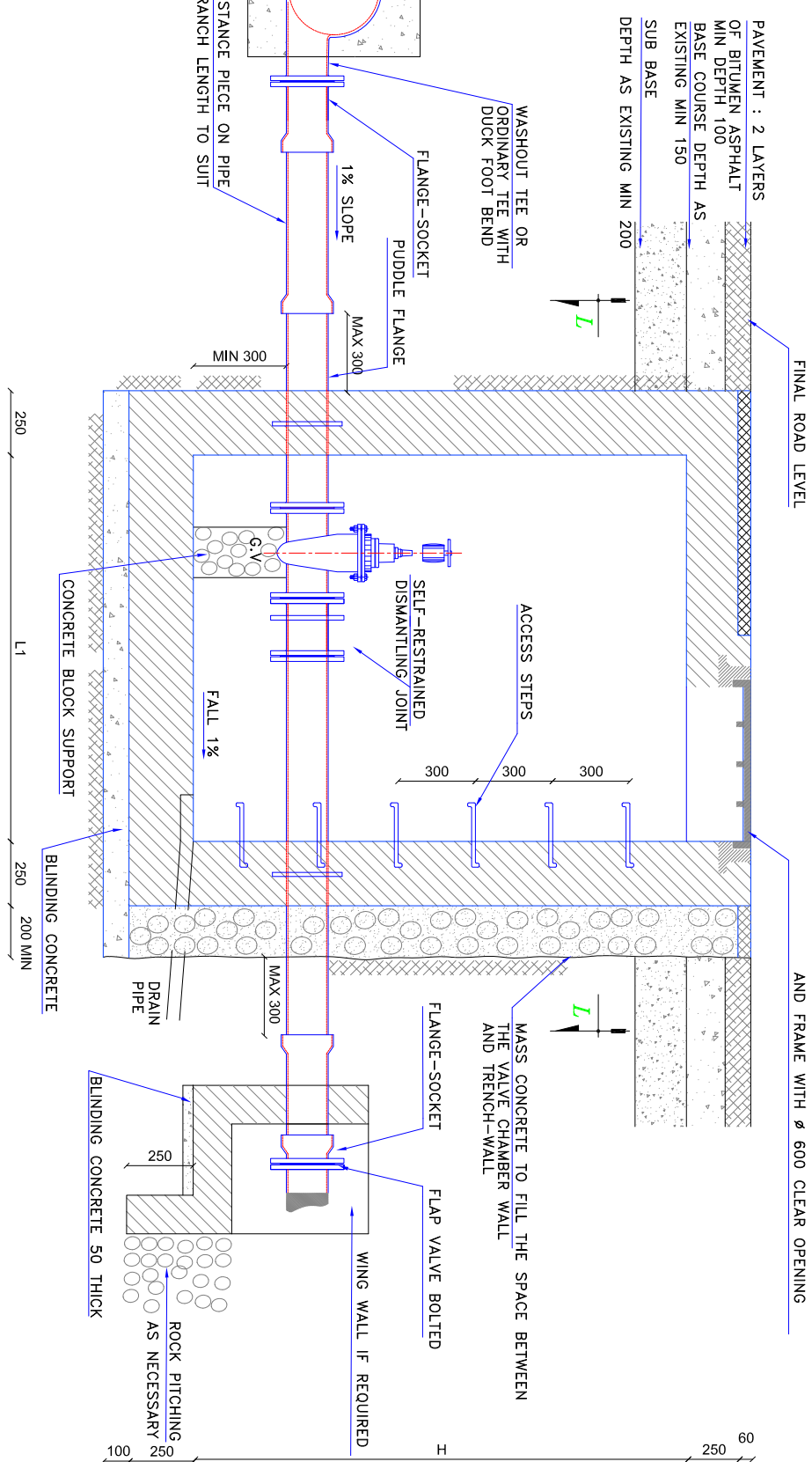
TYPICAL WASHOUT CHAMBER DETAIL
TYPE I



TYPICAL WASHOUT CHAMBER DETAIL
TYPE II



TYPICAL AIR VALVE CHAMBER DETAIL
NOT TO SCALE

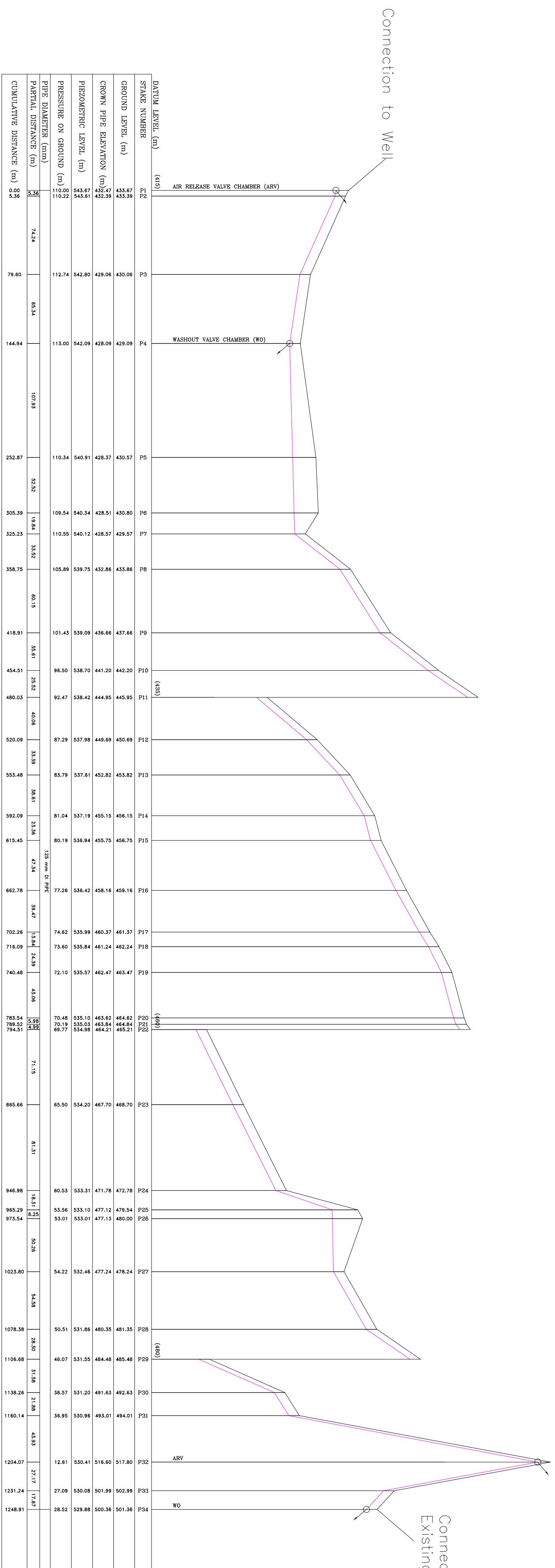


PROVISION OF PROFESSIONAL SERVICES FOR THE DESIGN AND SUPERVISIONS
SITE VISITS OF INFRASTRUCTURE, WATER AND SEWAGE PROJECTS
ON LONG TERM AGREEMENT (LTA) BASIS
TENDER DRAWINGS

TECHNICAL ROOM & TRANSFER LINE IN MAZBOUD
Details for Washout and Air Release Valve Chambers



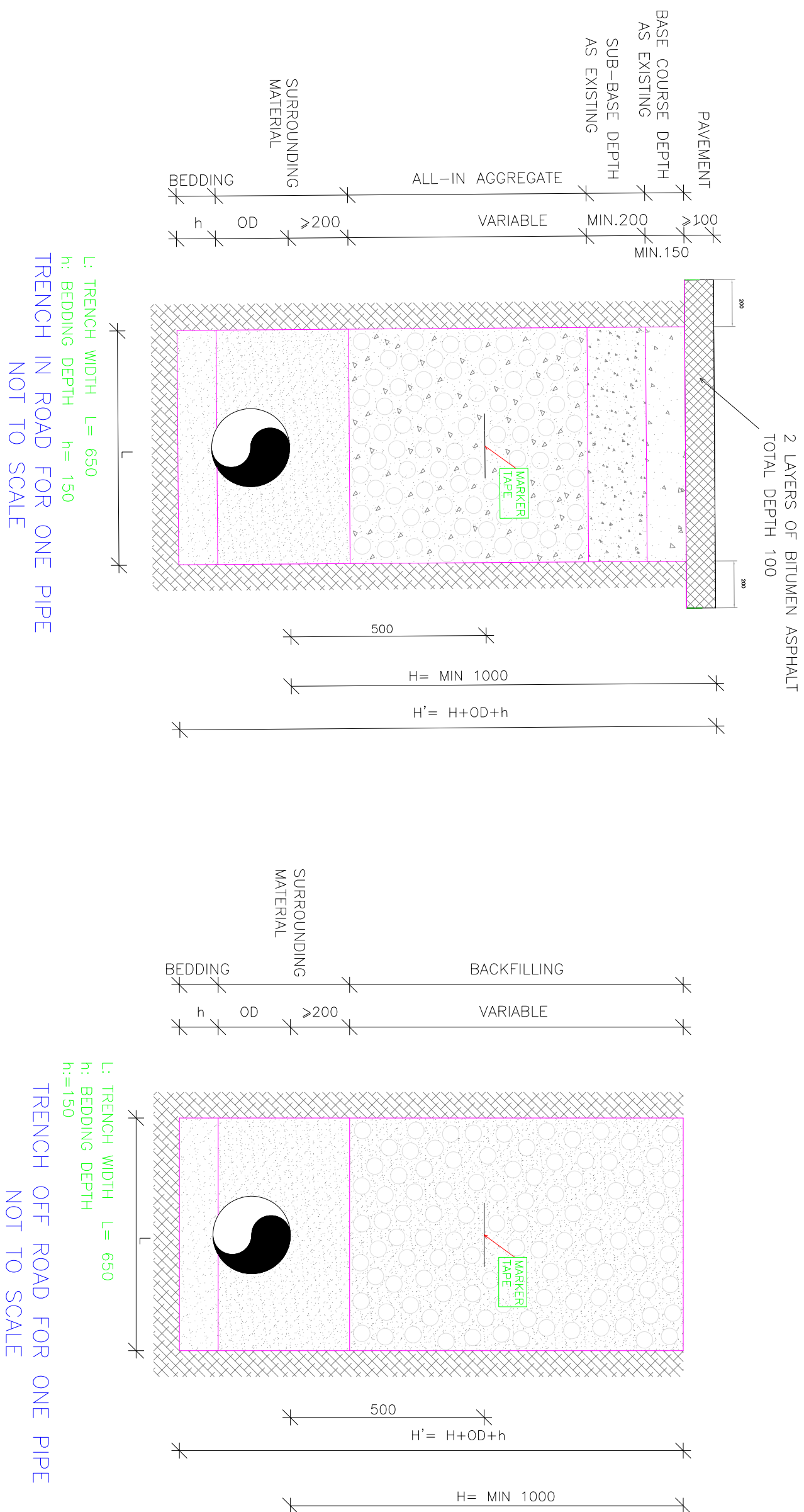
- * Crown Pie Elevation :
Elevation of the highest internal point of the pipe
- * Piezometric level :
imaginary surface that defines the level to which water in a confined aquifer would rise were it completely pierced with wells.
- * Pressure on Ground :
Equal the piezometric level minus the ground level

[illegible]

peg	BENDS
P2	90°

P1	-340181.11	-39466.85	423.39
P2	-340195.88	-39466.84	423.97
P3	-340198.17	-39397.36	429.06
P4	-340292.41	-39335.44	429.09
P5	-340279.43	-39245.80	420.57
P6	-340298.78	-39194.20	420.80
P7	-340208.60	-39179.13	429.37
P8	-340424.26	-39174.20	423.66
P9	-340352.93	-39114.92	427.66
P10	-340387.36	-39082.37	442.20
P11	-340382.23	-39061.62	445.85
P12	-340408.91	-39050.76	440.69
P13	-340403.21	-39036.88	453.82
P14	-340455.54	-38979.62	456.15
P15	-340444.55	-38891.67	456.75
P16	-340450.09	-38828.41	459.16
P17	-340475.07	-38910.19	461.37
P18	-340465.71	-38802.29	462.24
P19	-340379.78	-38883.95	463.47
P20	-340414.65	-38851.34	464.62
P21	-340414.65	-38851.34	464.64
P22	-340411.98	-38844.48	465.21
P23	-340450.44	-38864.70	466.78
P24	-340459.56	-38838.57	472.78

P3	11.25°
P5	11.25°
P6	22.5°
P7	45°
P8	45°+22.5°
P9	11.25°
P10	11.25°
P14	45°+22.5°+11.25°
P15	11.25°
P16	11.25°
P18	90°
P19	11.25°
P20	45°
P21	45°
P22	45°
P25	45°+22.5°
P26	45°+11.25°
P27	45°
P28	90°
P29	11.25°
P30	22.5°
P32	90°+22.5°
P33	22.5°



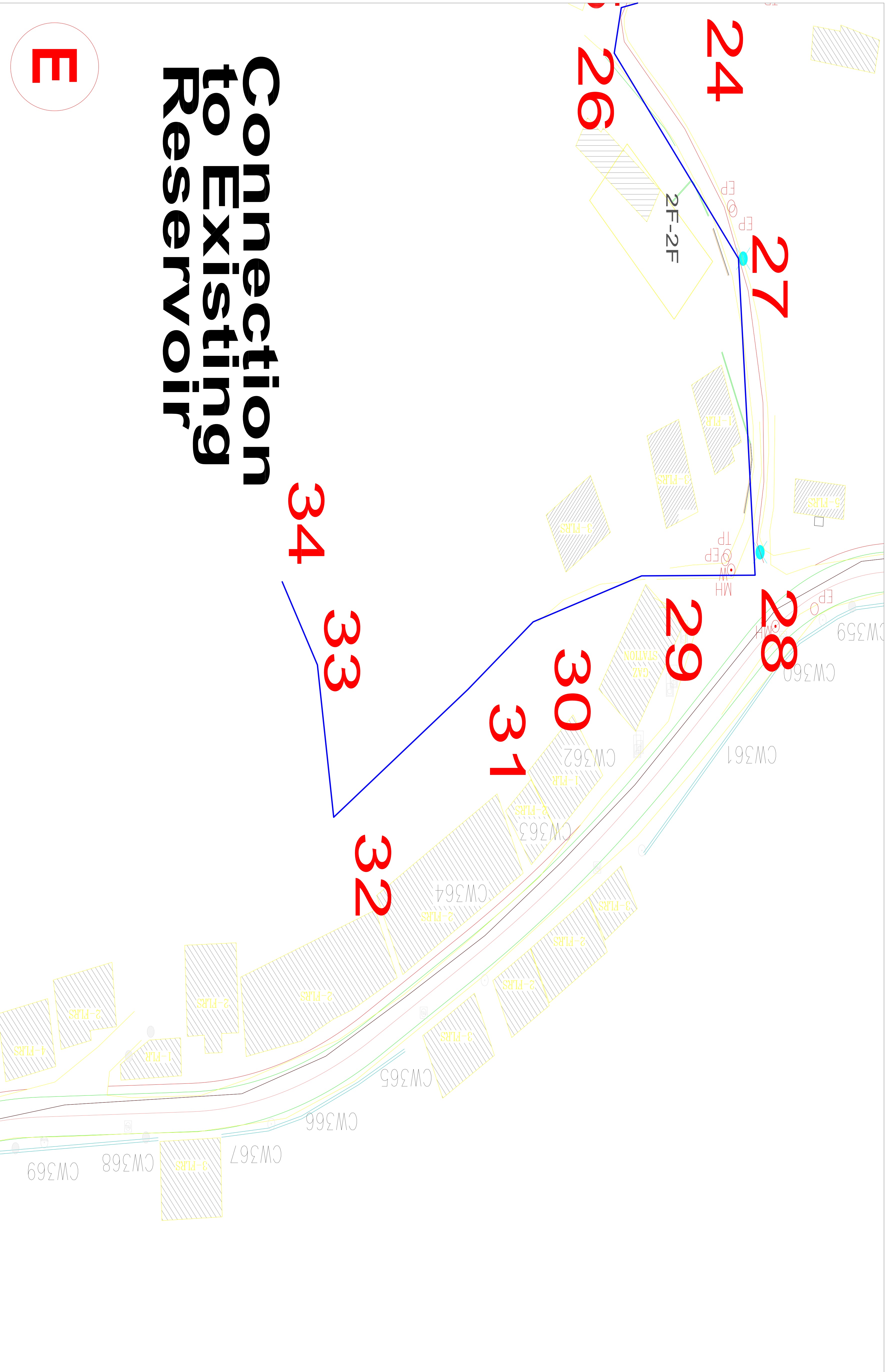
* All dimensions are in mm unless otherwise specified



**PROVISION OF PROFESSIONAL SERVICES FOR THE DESIGN AND SUPERVISIONS
SITE VISITS OF INFRASTRUCTURE, WATER AND SEWAGE PROJECTS
ON LONG TERM AGREEMENT (LTA) BASIS
TENDER DRAWINGS**

TECHNICAL ROOM & TRANSFER LINE IN MAZBOUD

Transfer line Longitudinal Profile and Cross section



Connection to Existing Reservoir

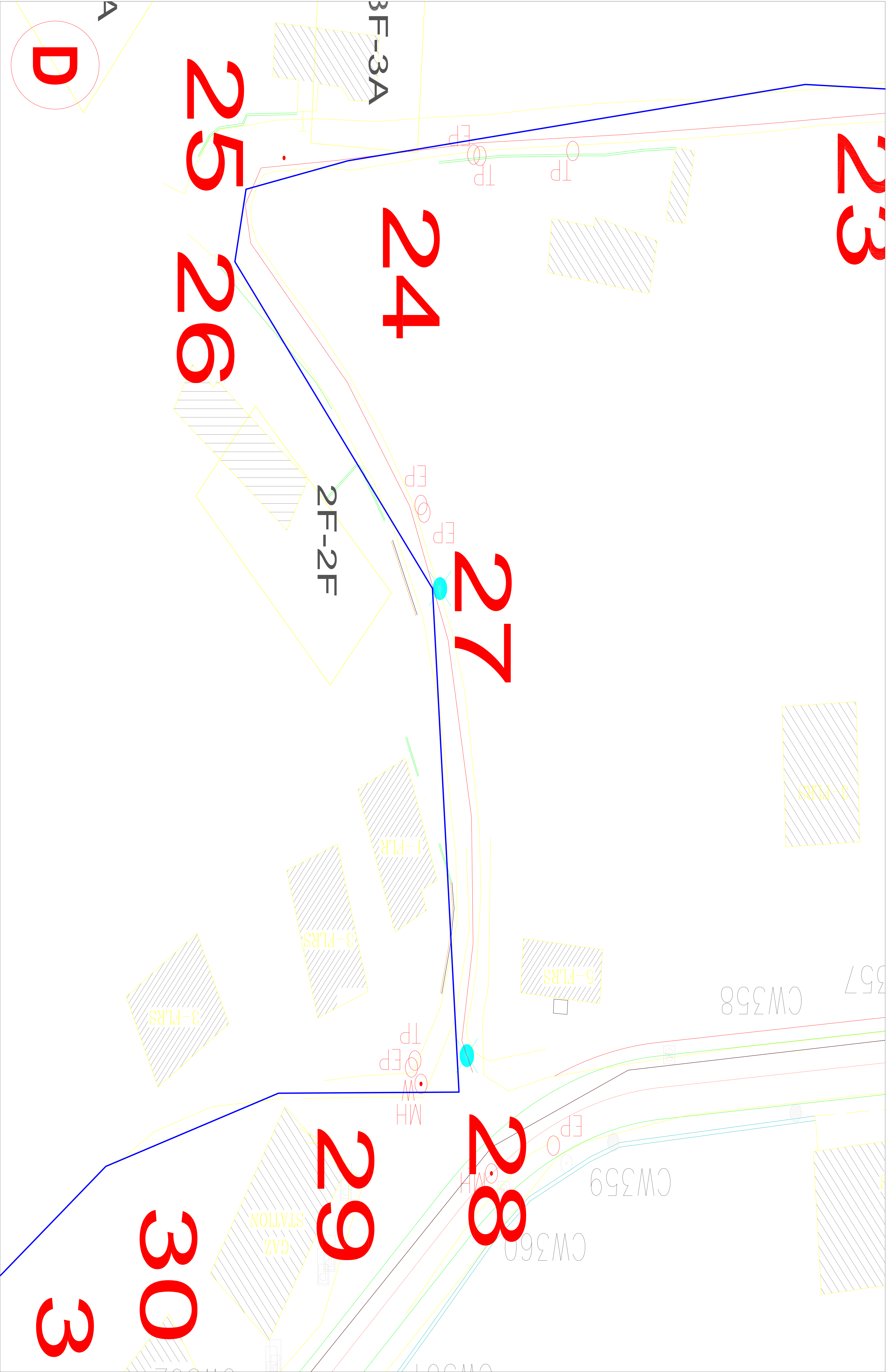
E



PROVISION OF PROFESSIONAL SERVICES FOR THE DESIGN AND SUPERVISIONS
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ON LONG TERM AGREEMENT (LTA) BASIS
TENDER DRAWINGS

TECHNICAL ROOM & TRANSFER LINE IN MAZBOUD
Transfer line Details (E)

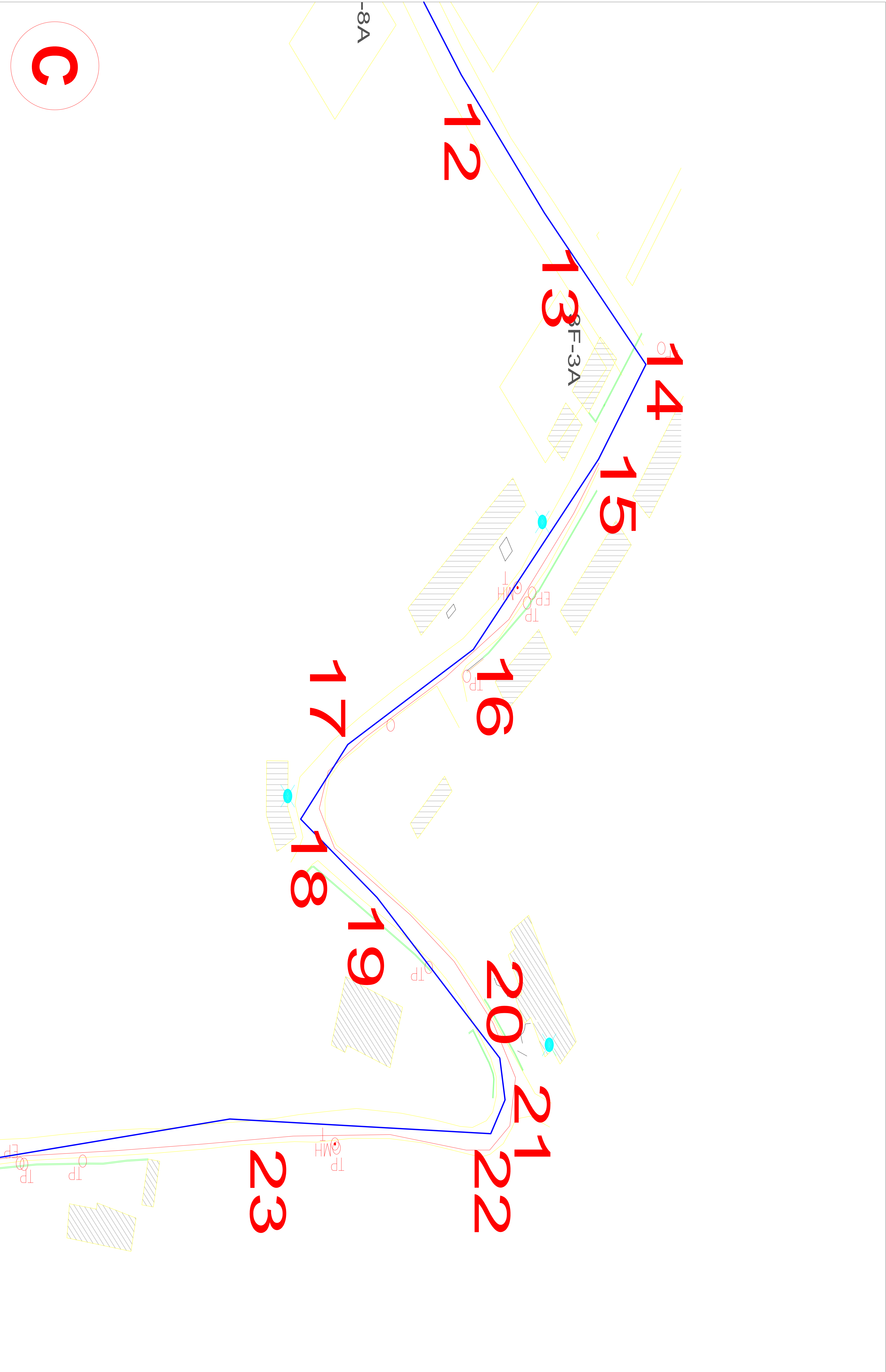
Dwg № 1 Sheet 5 of 9
September 2017
Scale : 1/1000



PROVISION OF PROFESSIONAL SERVICES FOR THE DESIGN AND SUPERVISIONS
SITE VISITS OF INFRASTRUCTURE, WATER AND SEWAGE PROJECTS
ON LONG TERM AGREEMENT (LTA) BASIS
TENDER DRAWINGS

TECHNICAL ROOM & TRANSFER LINE IN MAZBOUD
Transfer line Details (D)

Dwg No 1 Sheet 4 of 9
September 2017
Scale : 1/1000



C



PROVISION OF PROFESSIONAL SERVICES FOR THE DESIGN AND SUPERVISIONS
SITE VISITS OF INFRASTRUCTURE, WATER AND SEWAGE PROJECTS
ON LONG TERM AGREEMENT (LTA) BASIS
TENDER DRAWINGS

TECHNICAL ROOM & TRANSFER LINE IN MAZBOUD
Transfer line Details (C)

Dwg No 1 Sheet 3 of 9
September 2017
Scale : 1/1000

4F-8A
A

[illegible]

4F-8A
A

[illegible][illegible][illegible][illegible][illegible][illegible][illegible]

The map displays a residential area with a blue line connecting points 5, 6, 7, 8, 9, 10, and 11. Point B is also marked near point 5. The map shows various building footprints labeled with floor numbers and letters (e.g., 1F-1A, 2F-2A, 3F-3A, 4F-8A). A red circle highlights point B.

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The map displays a blue line with red numbers 5, 6, 7, 8, 9, 10, 11 and a red letter B. The map includes various building footprints labeled with codes like 1F-1A, 2F-2A, 3F-3A, 2F-4A, 1F-1A, 2F-4A, 1F-1A, 4F-8A. A red circle highlights the letter B.

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U	D
N	P

TENDER DRAWINGS

Transfer line Details (A-B)

September 2017
Scale : 1/1000

Scale : 1/1000

