



**NOTES:**

1- MINIMUM PIPE COVER:

DN (mm)	COVER (m)
< 150	0.80
< 300	1.00
< 450	1.10
< 1000	1.20

2- MINIMUM PIPE COVER AT CHAMBERS LOCATIONS:

DN (mm)	VALVE	ARY	WD
25	1.10	1.10	1.10
32	1.10	1.10	1.10
40	1.10	1.10	1.10
50	1.10	1.10	1.10
75	1.20	1.20	1.20
100	1.30	1.30	1.30
125	1.20	1.20	1.50
150	1.20	1.20	1.50
200	1.20	1.20	1.50
250	1.20	1.20	1.50
300	1.20	1.20	1.50

3- AIR VALVES WILL BE PROVIDED AT HIGH POINTS AND WASHOUT VALVES AT LOW POINTS.

4- FINAL LOCATION OF CHAMBERS AND PIPES TO BE CONFIRMED ON SITE AND SHALL BE APPROVED BY THE ENGINEER.

5- ALL LEVELS SHALL BE CHECKED BY THE CONTRACTOR PRIOR TO THE INSTALLATION PHASE AND SHALL BE REPORTED TO THE ENGINEER FOR APPROVAL.

6- FOR PIPE DIAMETER LESS OR EQUAL TO 300mm, THE VALVES MUST BE TYPE GATE VALVE AND BUTTERFLY VALVE OTHERWISE.

7- PIPES DIAMETERS LESS OR EQUAL TO 90mm SHALL BE POLYETHYLENE PIPES (PE) AND DUCTILE IRON (D.I.) OTHERWISE.

8- D.I. PIPES SHALL BE SOCKET/SPIGOT PIPES K9 AS PER ISO2531 AND BRITZ.

9- FITTINGS FOR D.I. PIPES SHALL BE K14 FOR TEES AND K12 FOR OTHER FITTINGS ACCORDING TO ISO2531 AND BS4772.

10- ALL FLANGED VALVES AND FITTINGS SHALL BE DRILLED TO PN16 OR OTHERWISE MENTIONED.

11- ALL POLYETHYLENE PIPES SHALL BE PE100 OR PE80 WITH MINIMUM RATING PRESSURE PN10 OR OTHER MENTIONED.

12- PROPOSED PIPELINE ALIGNMENTS MUST BE CHECKED AND CONFIRMED BY THE CONTRACTOR PRIOR TO THE INSTALLATION TO ASSURE THE FOLLOWING:

a- PIPELINE SHALL BE INSTALLED INSIDE PUBLIC LANDS.

b- PROPOSED ALIGNMENTS ARE NOT INTERFERING WITH ANY OF THE EXISTING FACILITIES.

c- PROPOSED CHAMBERS ON PIPELINES ALIGNMENTS ARE TO BE PLACED ON A SURFACE LOCATIONS.

13- ALL PIPES, FITTINGS, ACCESSORIES, VALVES, ETC. PROPOSED ON THIS DRAWING ARE TO BE PROVIDED WITH A PRESSURE RATING OF PN16.

14- THRUST/ANCHOR FLANGES SHALL BE USED WHERE DUCTILE IRON PIPES OR FITTINGS ARE CAST INTO CHAMBER WALL AND SHALL BE INSTALLED TO RESTRAIN THE CONNECTING VALVES OR OTHER EQUIPMENT INSTALLED INSIDE THE CHAMBER.

15- THE PROPOSED CHAMBERS DETAILS ARE TO BE USED WHERE THE PRESSURE RATING IS LESS OR EQUAL TO PN10, OTHERWISE, THE CONTRACTOR MUST PROVIDE THE STRUCTURAL DESIGN OF ALL THE CHAMBERS TO THE ENGINEER FOR APPROVAL, ACCORDING TO THE PROPOSED SOILING AND BASES ON THE FOLLOWING:

a- CHAMBERS HAVE TO BE DESIGNED TO WITHSTAND THE LOADS TRANSMITTED THROUGH PUDDLE FLANGES OR TEES ACCORDING TO THE CORRESPONDING PRESSURE RATING.

b- THE OVERALL STABILITY OF THE CHAMBERS AGAINST OVERTURNING AND SLIDING WILL BE ASSURED BY PROVIDING AN UNDERGROUND THRUST WALL (SHEAR KEY).

16- LOCATIONS OF THE PROPOSED PRESSURE BREAKER TANKS WILL BE SET ON SITE AND SUBMITTED TO THE ENGINEER FOR APPROVAL.

**LEGEND :**

REV.	DATE	MODIFICATION	DRAWN	DESIGNED	CHECKED
B	JUNE 10	ISSUED FOR TENDER	E.G.J.	Z.Z.Z.	RELK
A	JUNE 09	ISSUED FOR APPROVAL	E.G.J.	Z.Z.Z.	RELK

SUBJECT:

**REPUBLIC OF LEBANON**

COUNCIL FOR DEVELOPMENT AND RECONSTRUCTION

PROJECT NAME:  
UPDATING DETAILED DESIGN AND TENDER DOCUMENTS OF THE WATER PROJECT COMPONENTS OF THE WESTERN BEKAA AREA

DRAWING TITLE:

**WATER SUPPLY NETWORK**

SAGHBINE VILLAGE

KEY PLAN

SHEET 1 OF 1

DRAWING NUMBER:

WBK	-	WS	-	240	-	B
REFERENCE		DIVISION		SHEET NO.		REV.

SCALE : N.T.S.      DATE : JUNE 2010

DISCIPLINE : INFRASTRUCTURE      PHASE : FINAL

