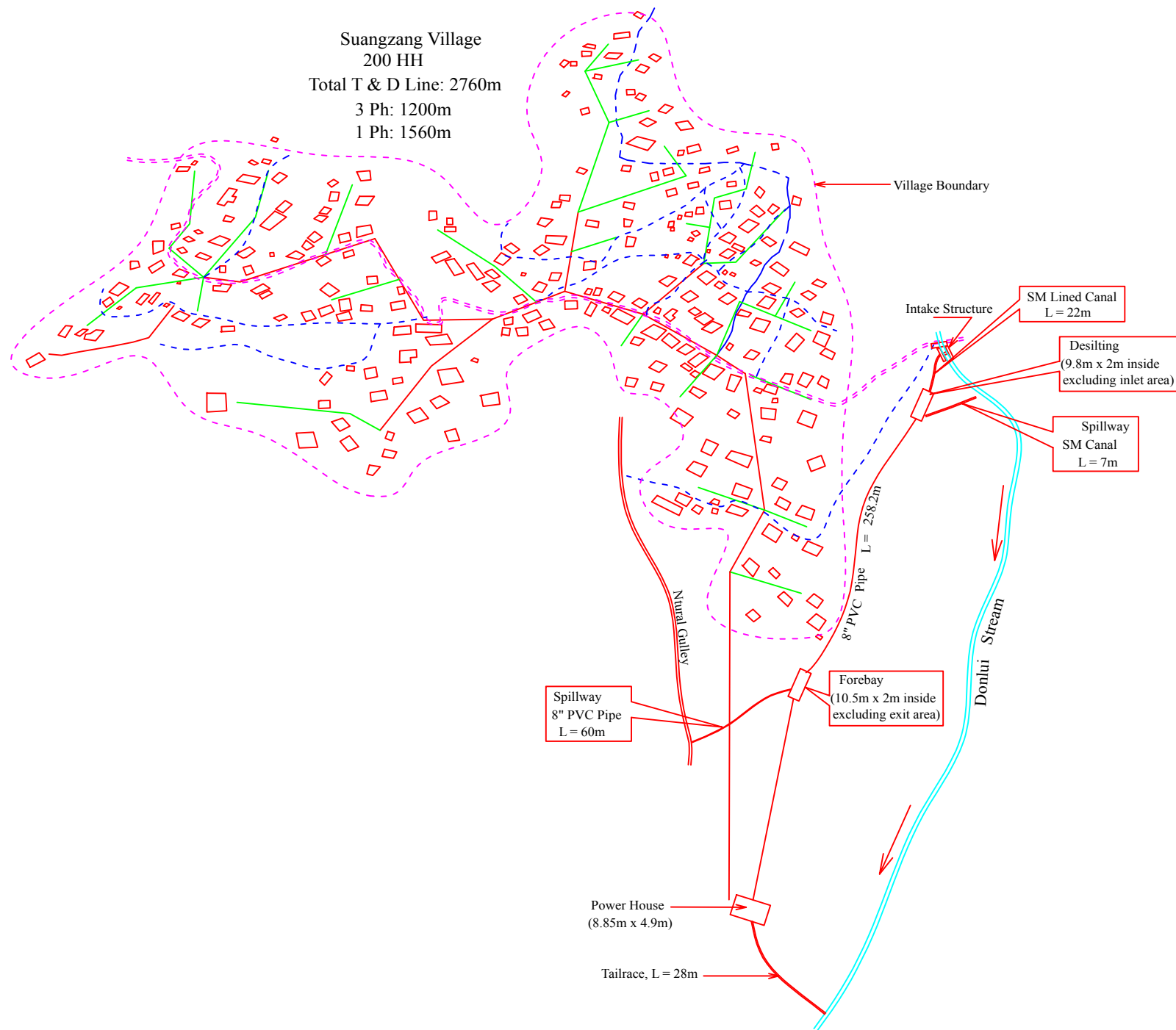
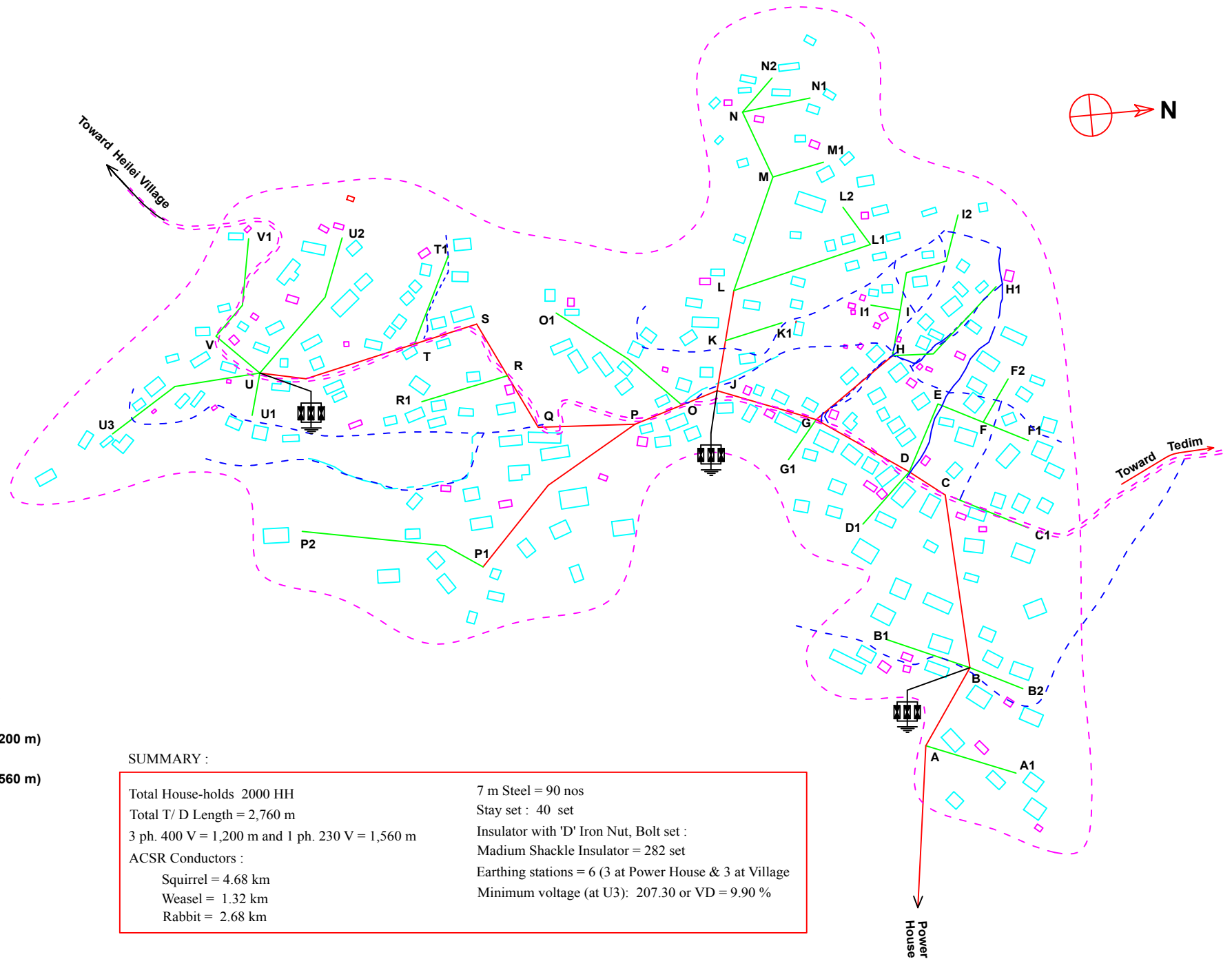








Suangzang Village
 200 HH
 Total T & D Line: 2760m
 3 Ph: 1200m
 1 Ph: 1560m



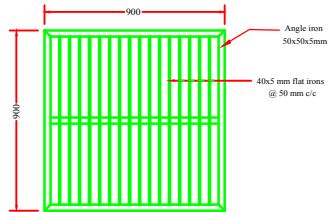


LEGEND

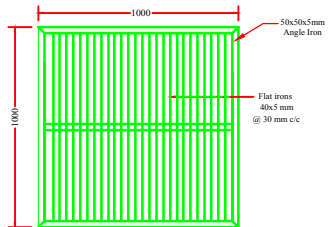
-  House (200 nos)
-  3 Phase Line (1,200 m)
-  1 Phase Line (1,560 m)
-  Motorable Road
-  Foot Path
-  Earthing Point

SUMMARY :

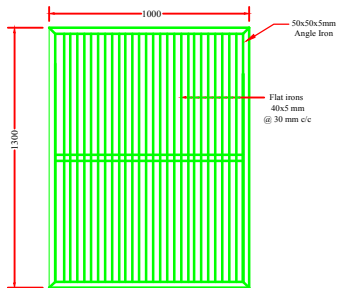
Total House-holds 2000 HH	7 m Steel = 90 nos
Total T/ D Length = 2,760 m	Stay set : 40 set
3 ph. 400 V = 1,200 m and 1 ph. 230 V = 1,560 m	Insulator with 'D' Iron Nut, Bolt set :
ACSR Conductors :	Medium Shackle Insulator = 282 set
Squirrel = 4.68 km	Earthing stations = 6 (3 at Power House & 3 at Village)
Weasel = 1.32 km	Minimum voltage (at U3): 207.30 or VD = 9.90 %
Rabbit = 2.68 km	



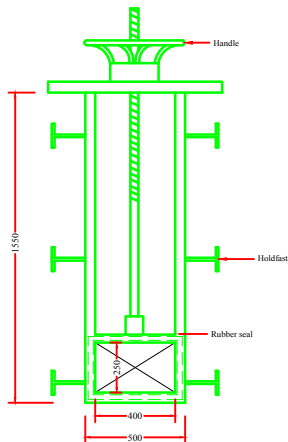
COURSE TRASHRACK
(FOR INTAKE)



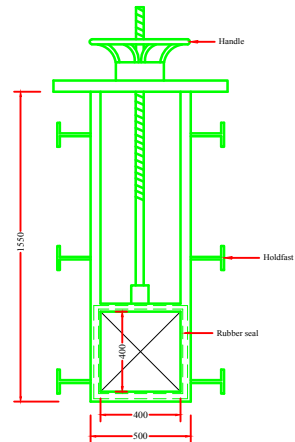
FINE TRASHRACKS 2 NOS
(FOR DESILTING)



FINE TRASHRACK
(FOR FOREBAY)



SLUICE GATE 1 No
(FOR INTAKE)



SLUICE GATE 2 Nos
(EACH ONE FOR DESILTING & FOREBAY)

Developer

UN HABITAT MYANMAR, CHIN STATE, TEDIM TOWNSHIP
DONLUI MICRO HYDROPOWER PROJECT (30 KW)
Suangzang Village, Tedim Township, Chin State, Myanmar

SCALE:

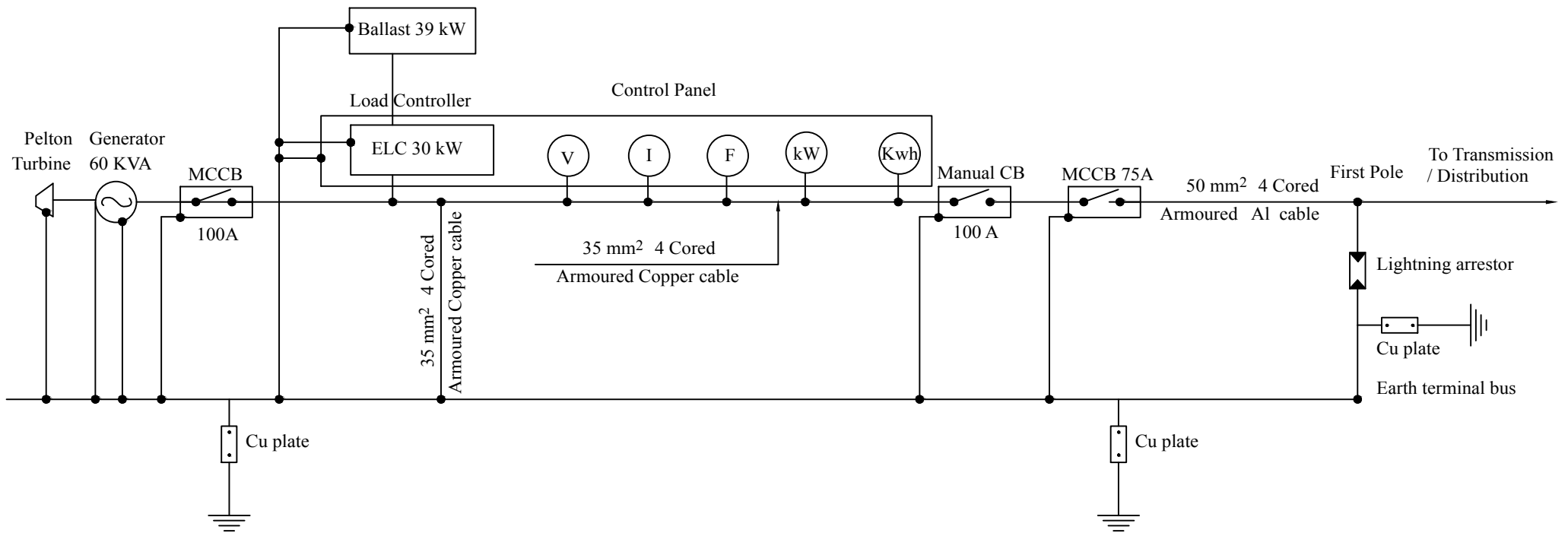
1 : 20

TRASH-RACK & SLUICE GATE

SHEET NO. 1 / 1

DWG NO. DMHP-07-01

DATE December, 2017



Specification

Turbine - Double Jet Pelton Turbine with Magnetic Jet Diflector attachment , 300 PCD , 1058 RPM
 Runner Rated Speed, Bucket Width 121 mm , Shaft out-put = 38 kW

Generator - 60 KVA, 3 Ph. Brussless, Synchronus

ELC - 30 kW, 3 Ph.

Ballast - 39 kW (Per phase 13 kW heater)

MCCB - 100 A & 75 A each of 3 phase, 10 KA breaking capacity

Power cable - 35 mm² armoured 4 cores copper and 50 mm² 4 cores aluminium

Lightning arrester - 0.5 kV (LT)

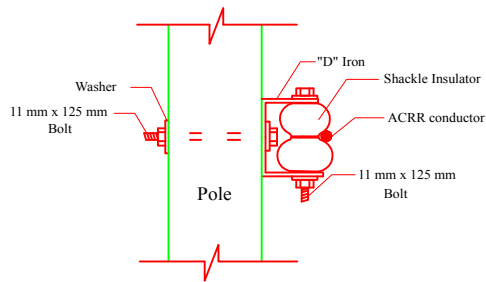
Earthing plate - Copper 3 mm x 600 mm x 600 mm

Main voltage - 0 to 500 volt with phase and line voltage selector switch

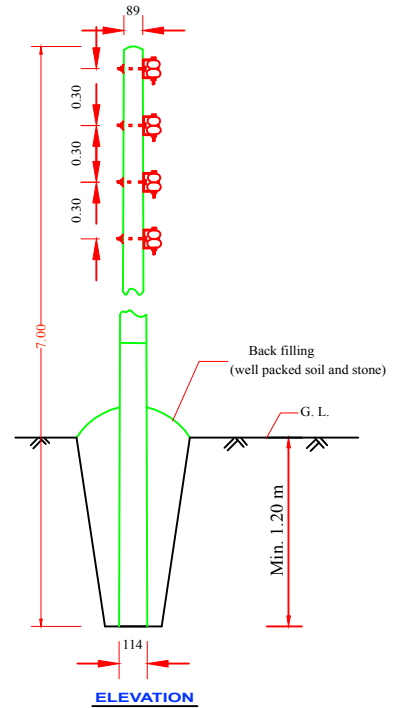
Ballast voltmeter - 0 to 300 volt

Ameter - 0 to 200 A

Frequency meter - 45 to 55 HZ niddle type



**FIXING OF
"D" IRON AND INSULATORS**



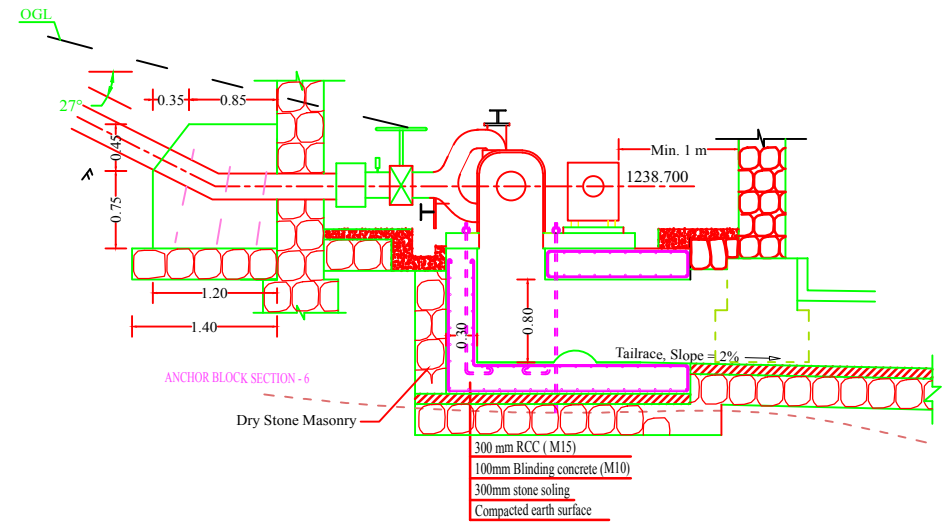
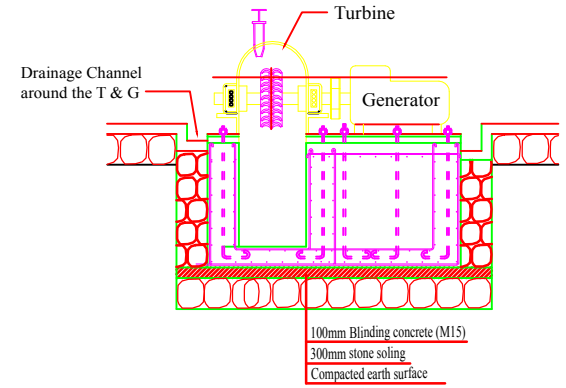
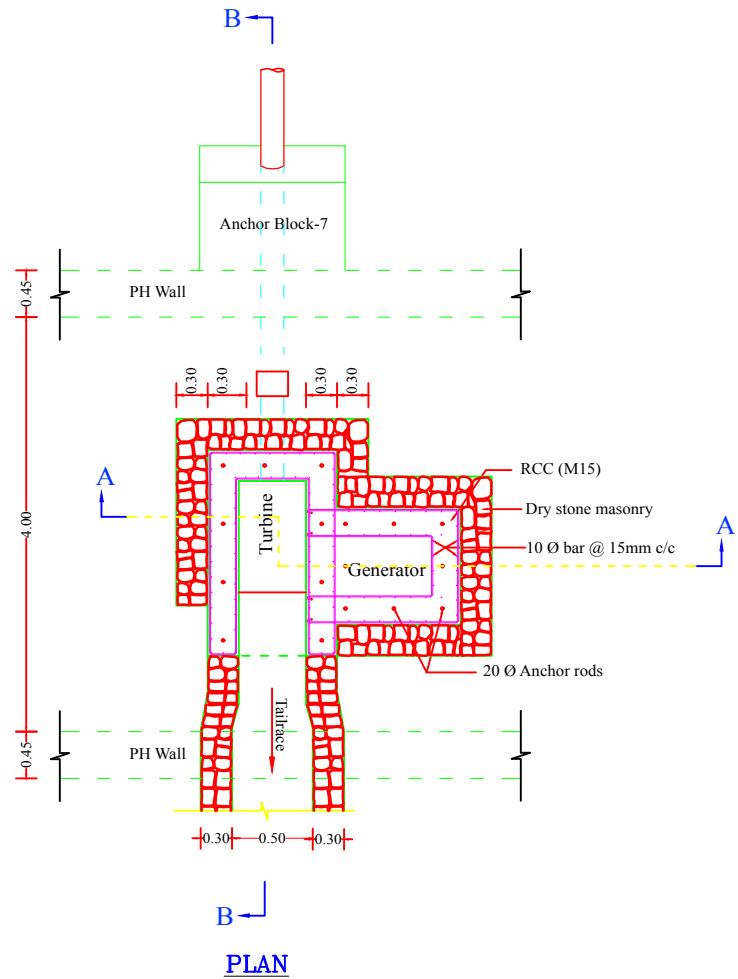
Developer

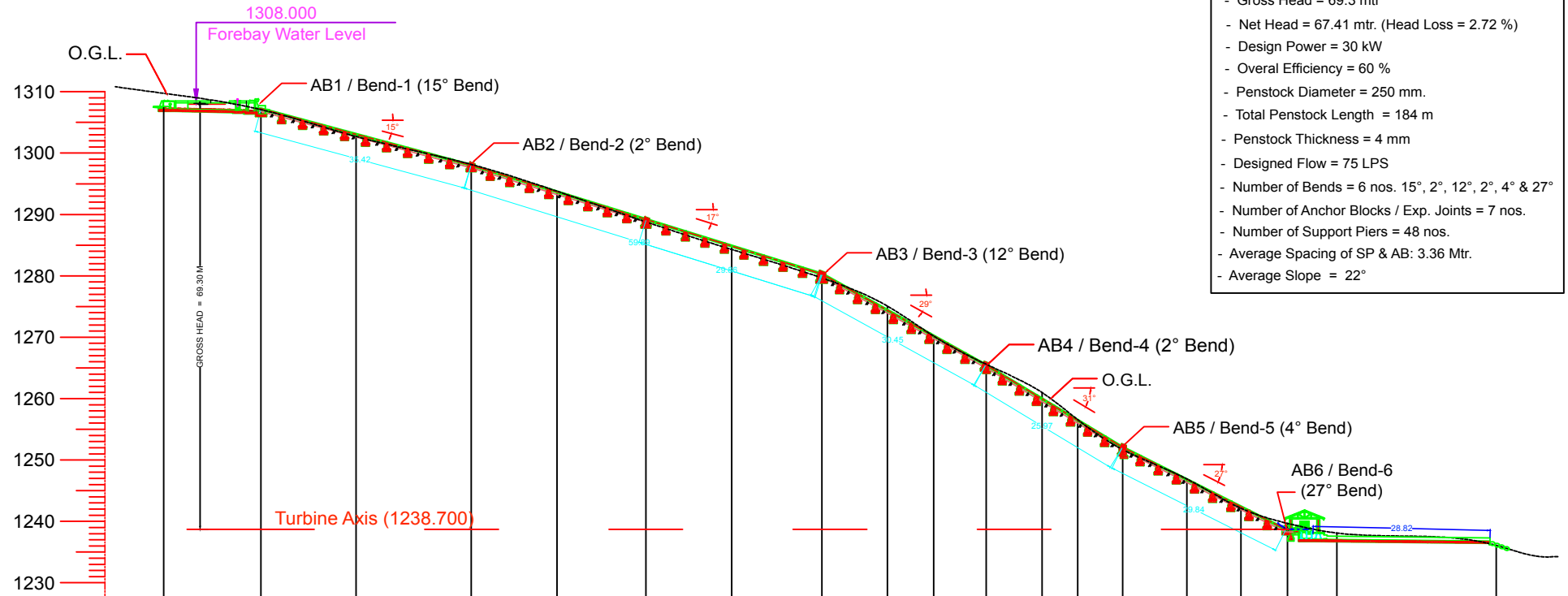
UN HABITAT MYANMAR, CHIN STATE, TEDIM TOWNSHIP
DONLUI MICRO HYDROPOWER PROJECT (30 kW)
Suangzang Village, Tedim Township, Chin State, Myanmar

Not to Scale

ELECTRIC POLE

SHEET NO.	1 / 1
DWG NO.	DMHP-14
DATE	December, 2017





- NOTE :
- Gross Head = 69.3 mtr
 - Net Head = 67.41 mtr. (Head Loss = 2.72 %)
 - Design Power = 30 kW
 - Overall Efficiency = 60 %
 - Penstock Diameter = 250 mm.
 - Total Penstock Length = 184 m
 - Penstock Thickness = 4 mm
 - Designed Flow = 75 LPS
 - Number of Bends = 6 nos. 15°, 2°, 12°, 2°, 4° & 27°
 - Number of Anchor Blocks / Exp. Joints = 7 nos.
 - Number of Support Piers = 48 nos.
 - Average Spacing of SP & AB: 3.36 Mtr.
 - Average Slope = 22°

Original Ground Level		1307.074	1302.690	1298.149	1293.779	1288.787	1284.281	1279.648	1275.076	1270.163	1265.581	1260.975	1256.550	1251.681	1246.899	1242.116	1239.639	1238.077	1236.095
Penstock Level (m) (Centre Line)		1307.199	1303.050	1298.018	1293.676	1289.184	1284.839	1280.279	1274.371	1270.185	1265.435	1259.951	1256.452	1252.041	1246.785	1242.372	1238.689		
Penstock Length (m)		1.092	17.130	36.551	51.193	66.337	80.989	96.367	108.556	117.181	126.962	137.587	144.366	152.9214	164.626	174.455	182.935	Total Penstock Length = 184 m	
Soil Type		Boulder mixed soil																	

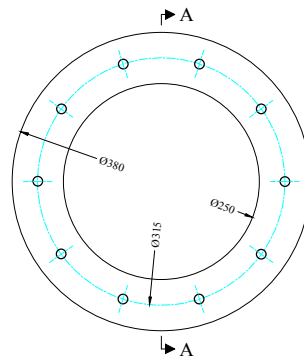
Developer

UN HABITAT MYANMAR, CHIN STATE, TEDIM TOWNSHIP
 DONLUI MICRO HYDROPOWER PROJECT (30 kW)
 Suangzang Village, Tedim Township, Chin State, Myanmar

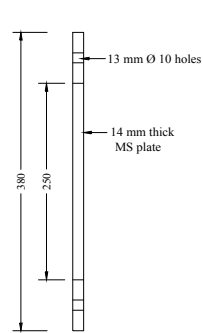
SCALE:
1:1000

PENSTOCK PROFILE

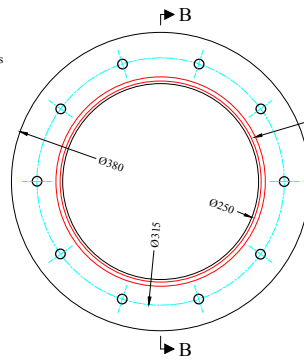
SHEET NO.	1 / 1
DWG NO.	DMHP-08-01
DATE	December, 2017



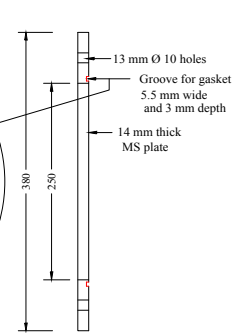
FRONT VIEW - A



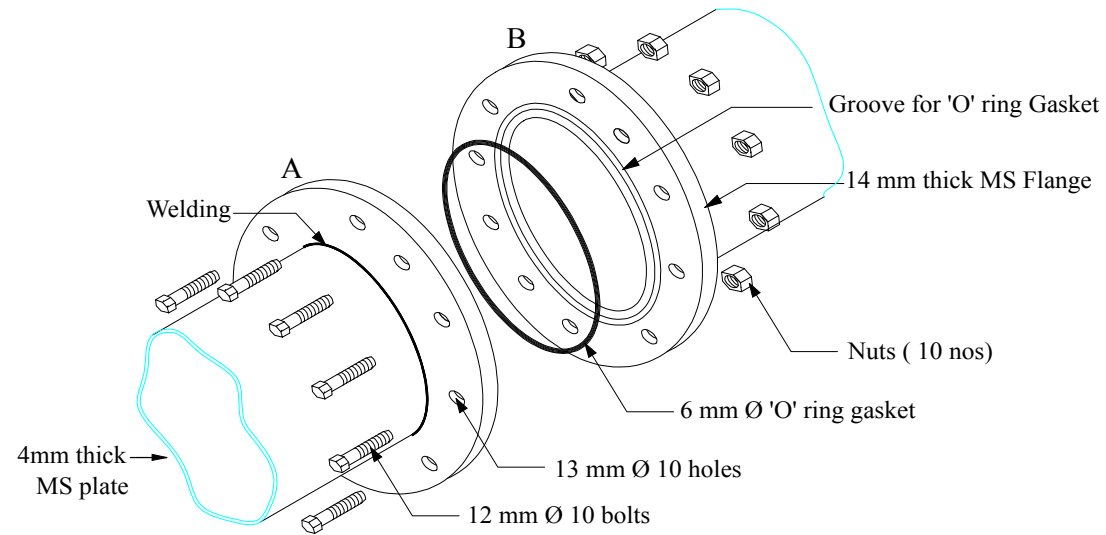
SECTION - AA



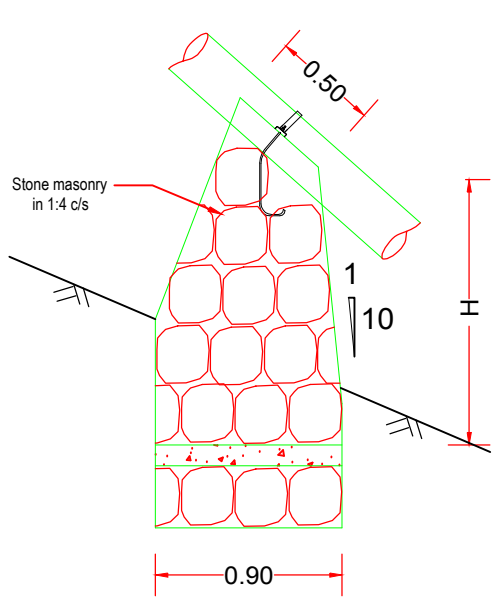
FRONT VIEW - B



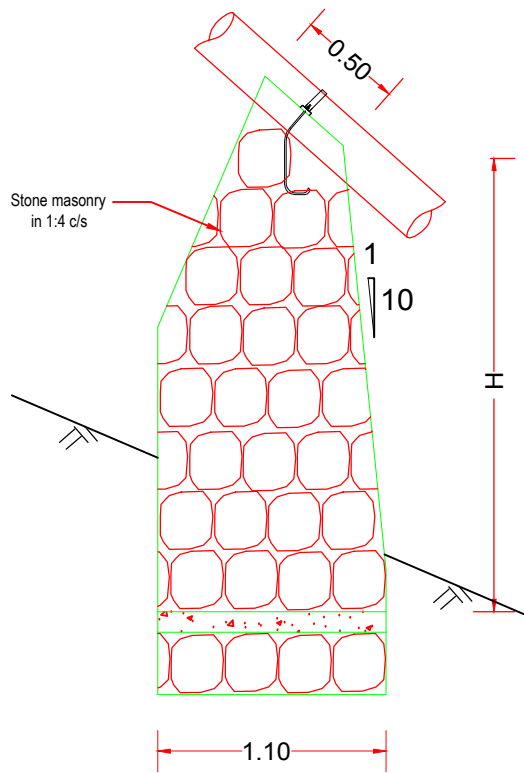
SECTION - BB



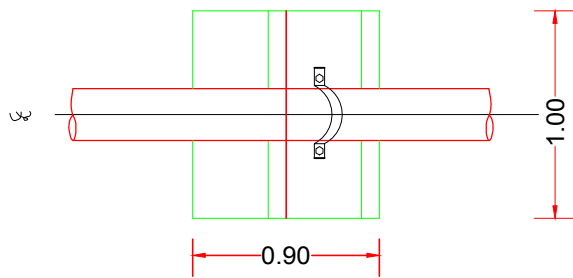
ISOMETRIC VIEW OF THE PENSTOCK JOINT



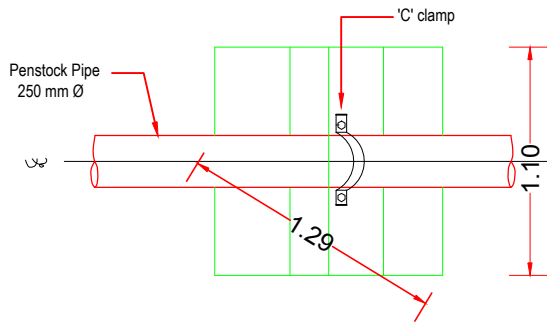
SIDE ELEVATION - 1
(For H < 1.5 m)



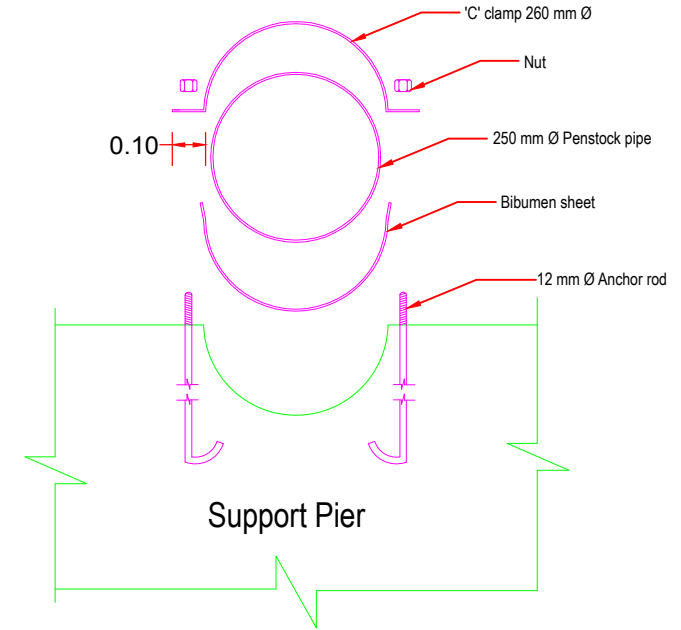
SIDE ELEVATION - 2
(For H > 1.5 m)



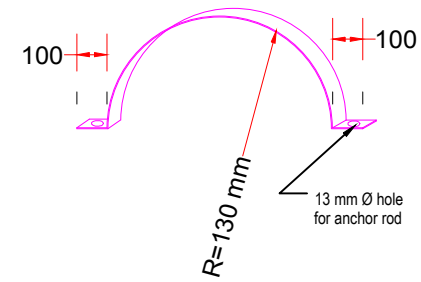
PLAN - 1



PLAN - 2



PENSTOCK ARRANGEMENT ON SUPPORT PIER
(Not to scale)



'C' CLAMP
(Not to scale)

NOTES :

- * Support piers are constructed with stone masonry with 1:4 c/s mortar at about 3.36 m c/c spacing,
- * Height of every support pier (H) varies on the height of penstock above the G.L.