

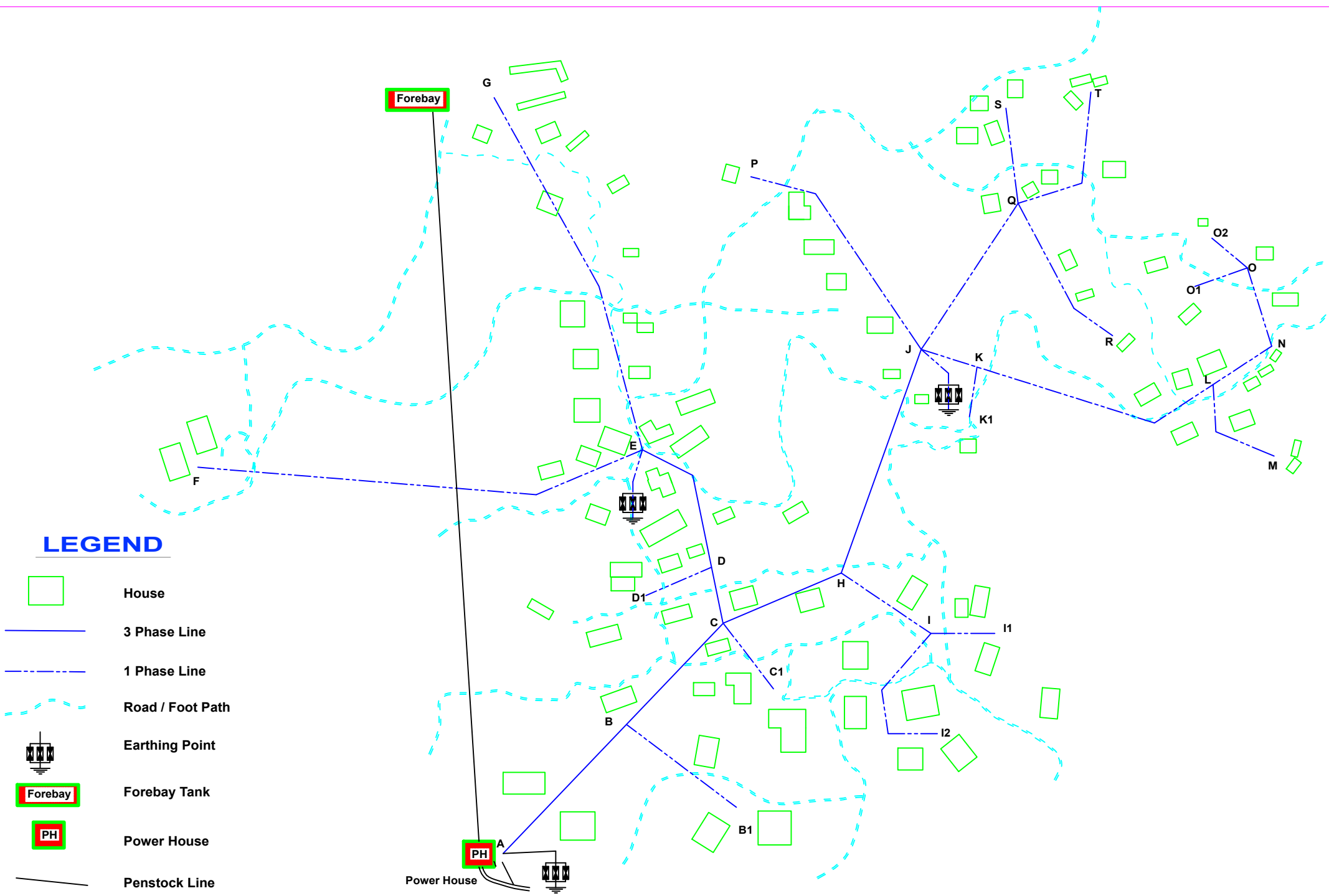
Developer

UN HABITAT MYANMAR, CHIN STATE, TEDIM TOWNSHIP  
 MUIZAWL MICRO HYDROPOWER PROJECT (15kW)  
 Muizawl Village, Tedim Township, Chin State, Myanmar









Not to Scale

**LAYOUT PLAN**

SHEET NO.	1 / 1
DWG NO.	MMHP-01-01
DATE	November, 2017



### LEGEND

-  House
-  3 Phase Line
-  1 Phase Line
-  Road / Foot Path
-  Earthing Point
-  Forebay Tank
-  Power House
-  Penstock Line

Developer

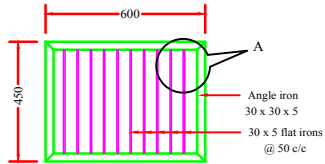
UN HABITAT MYANMAR, CHIN STATE, TEDIM TOWNSHIP  
 MUIZAWL MICRO HYDROPOWER PROJECT (15kW)  
 Muizawl Village, Tedim Township, Chin State, Myanmar

SCALE:  
 1 : 2000

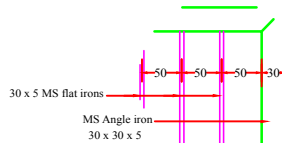
### T & D Lines

PLAN

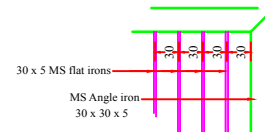
SHEET NO.	1 / 1
DWG NO.	MMHP-02-01
DATE	Nov, 2017



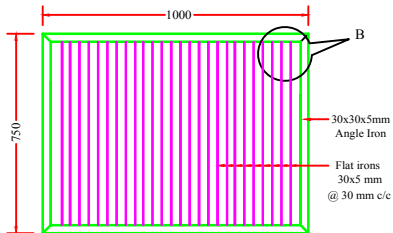
**COARSE TRASHRACK**  
(FOR INTAKE)  
(Scale - 1:15)



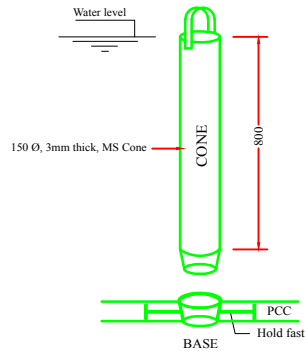
**DETAIL AT A**  
(Scale - 1:5)



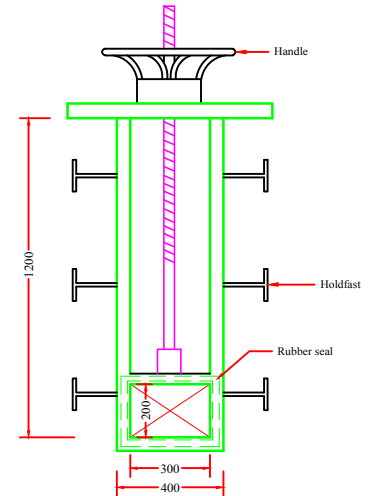
**DETAIL AT B**  
(Scale - 1:5)



**FINE TRASHRACK 2 NOS**  
(FOR DESILTING AND FOREBAY)

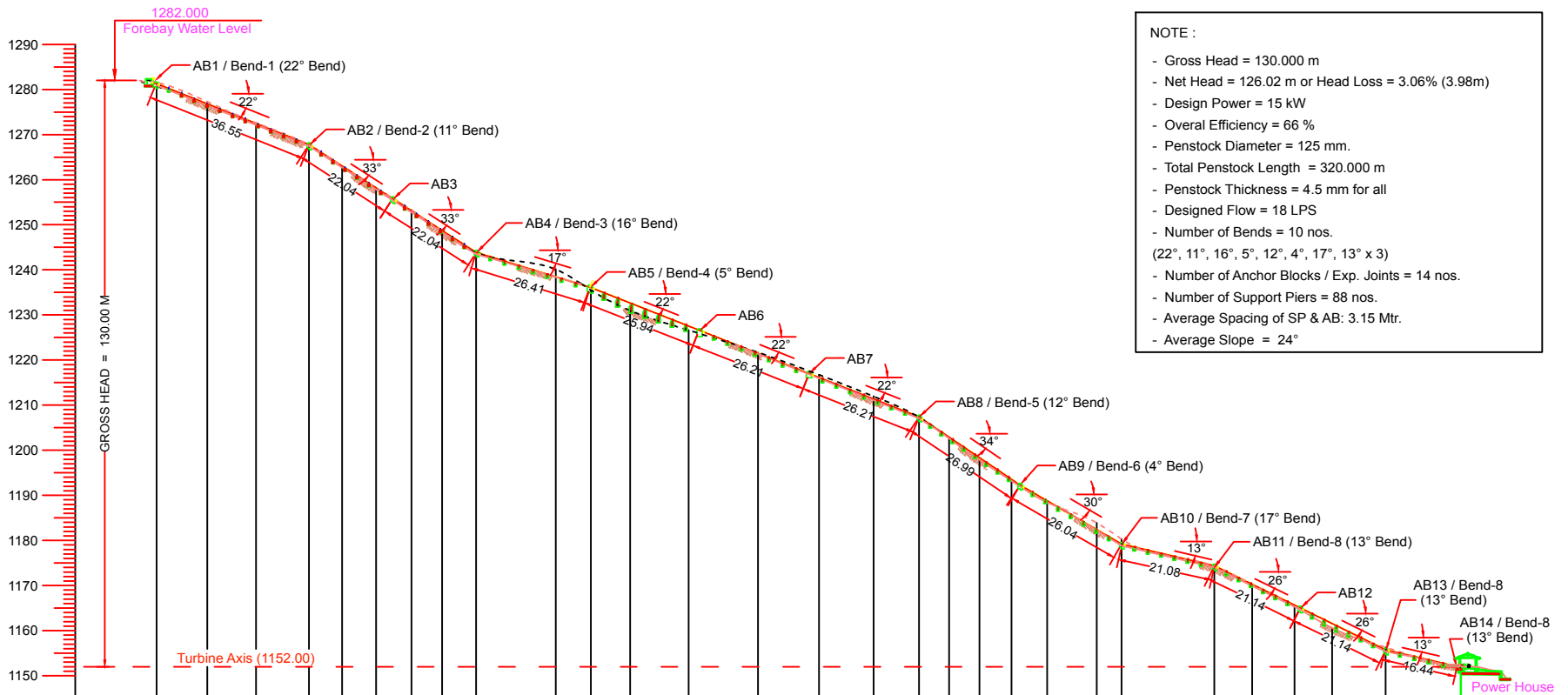


**FLUSH CONE (2 Sets)**  
(FOR DESILTING BASIN AND FOREBAY)



**SLUICE GATE**  
(FOR INTAKE)

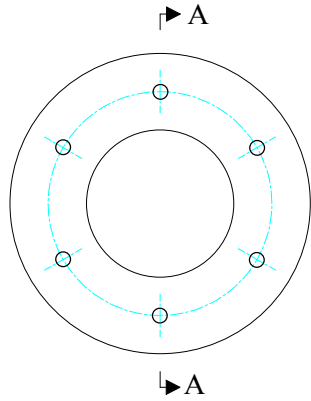
ALL DIMENTIONS ARE IN MM



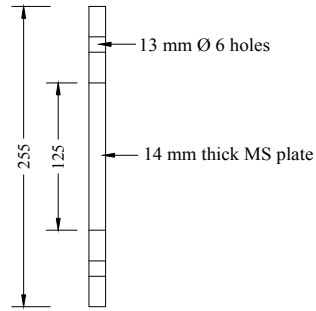
NOTE :

- Gross Head = 130.000 m
- Net Head = 126.02 m or Head Loss = 3.06% (3.98m)
- Design Power = 15 kW
- Overall Efficiency = 66 %
- Penstock Diameter = 125 mm.
- Total Penstock Length = 320.000 m
- Penstock Thickness = 4.5 mm for all
- Designed Flow = 18 LPS
- Number of Bends = 10 nos.
- (22°, 11°, 16°, 5°, 12°, 4°, 17°, 13° x 3)
- Number of Anchor Blocks / Exp. Joints = 14 nos.
- Number of Support Piers = 88 nos.
- Average Spacing of SP & AB: 3.15 Mtr.
- Average Slope = 24°

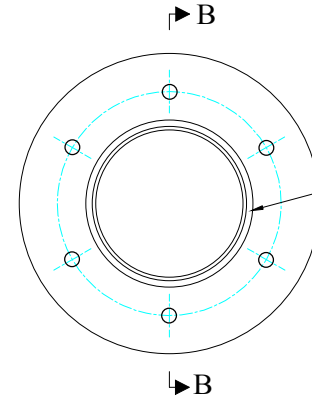
Original Ground Level	1291.700	1287.339	1282.593	1277.719	1273.016	1268.146	1263.306	1258.496	1253.797	1248.464	1245.501	1242.642	1236.607	1231.709	1226.753	1221.968	1217.338	1212.583	1207.836	1203.221	1198.447	1193.914	1189.306	1184.312	1180.226	1175.383	1170.574	1166.289	1162.000
Penstock Level (m) (Centre Line)	1291.305	1286.804	1282.480	1277.786	1273.065	1268.177	1263.123	1258.679	1253.854	1248.464	1246.066	1242.642	1237.523	1231.478	1226.147	1221.382	1217.394	1213.213	1209.012	1204.527	1199.585	1192.671	1189.209	1184.376	1180.277	1175.645	1171.563	1165.736	1162.000
Penstock Length (m)	1.100	13.215	24.851	37.483	46.190	55.200	64.515	72.567	81.565	100.001	108.193	117.533	131.492	147.978	162.510	175.503	186.347	194.231	202.128	210.558	219.846	232.841	239.400	260.496	269.801	280.306	289.563	302.774	320.000
Soil Type	Boulder mixed soil																												



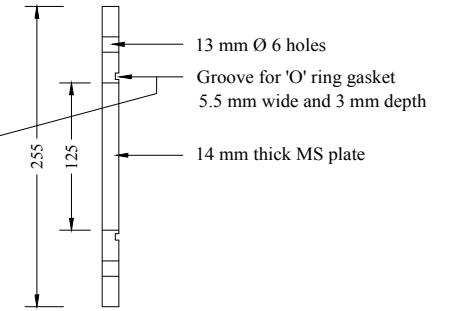
FRONT VIEW - A



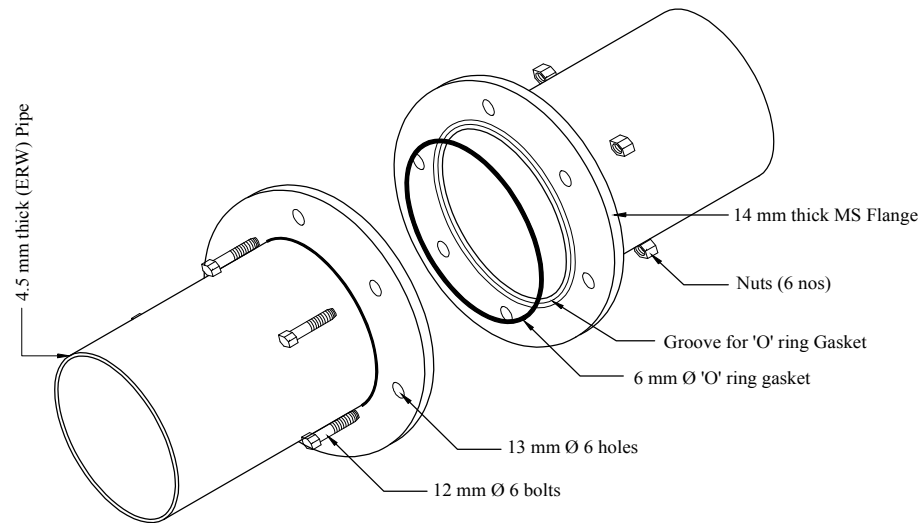
SECTION - AA



FRONT VIEW - B

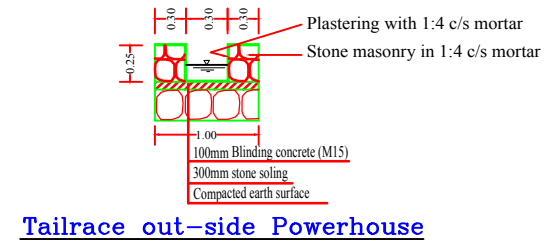
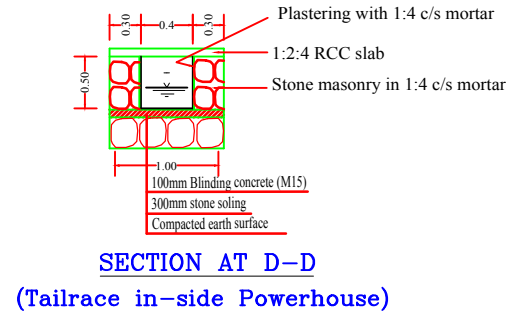
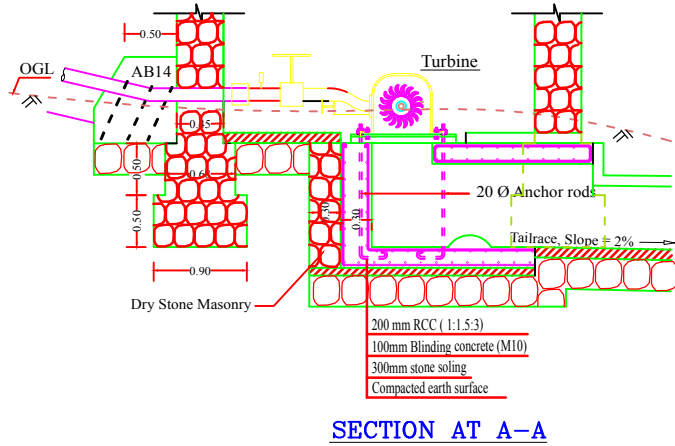
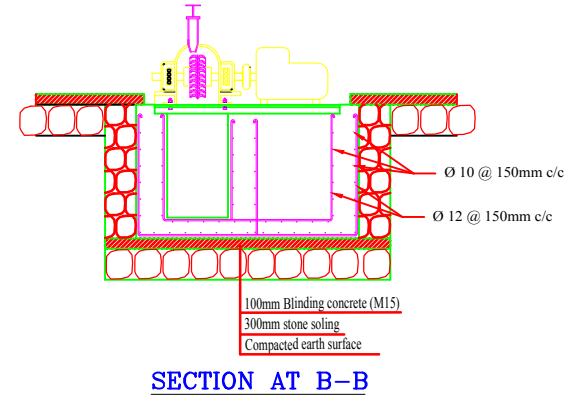
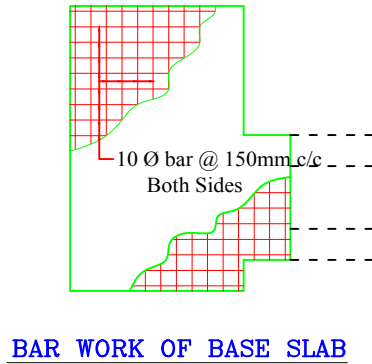
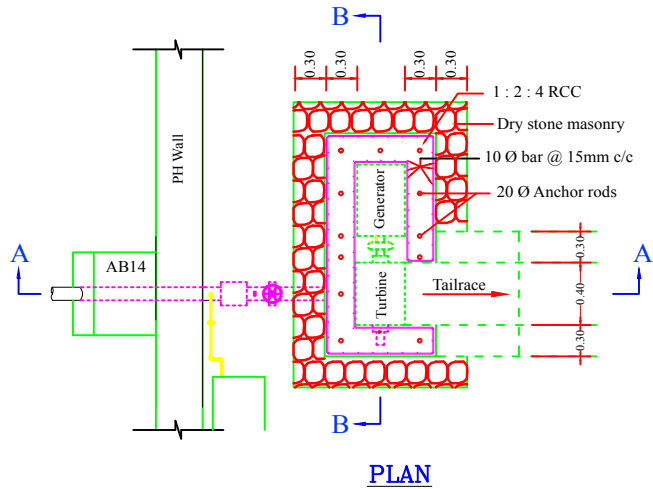


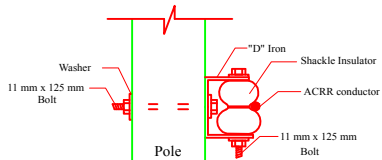
SECTION - BB



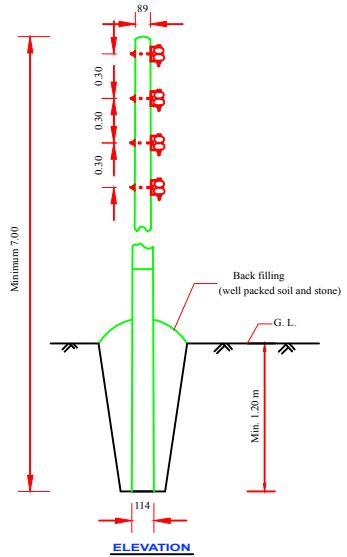
ISOMETRIC VIEW OF THE PENSTOCK JOINT

Not to scale





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



Developer:

UN HABITAT MYANMAR, CHIN STATE, TEDIM TOWNSHIP  
MUIZAWL MICRO HYDROPOWER PROJECT (15kW)  
Mulizawl Village, Tedim Township, Chin State, Myanmar

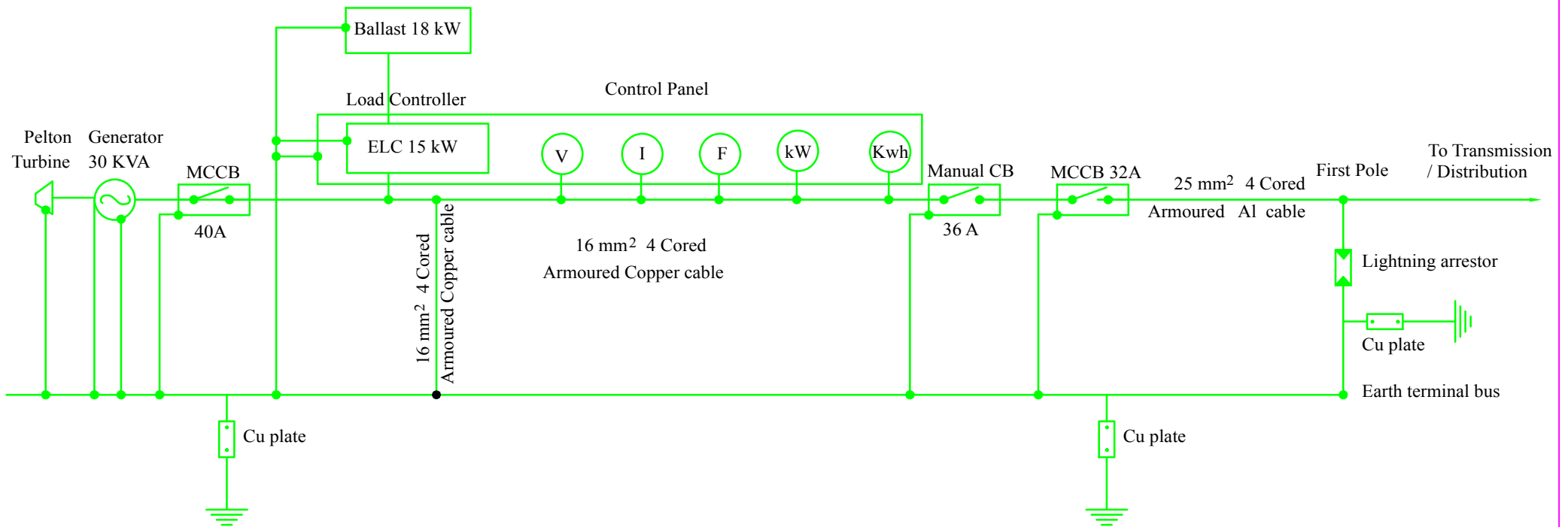
Not to Scale

**ELECTRIC POLE**

SHEET NO. 1 / 1

DWG NO. MMHP-14-01

DATE Nov. 2017



## Specification

Turbine -	Single Jet Pelton Turbine with Magnetic Jet Diflector attachment , 290 PCD , 1500 RPM Nozzle Ø 27.1 , Electrical output 15 kW	Earthing plate -	Copper 3 mm x 600 mm x 600 mm
Generator -	30 KVA, 3 Ph. Brussless, Synchronus	Main voltage -	0 to 500 volt with phase and line voltage selector switch
ELC -	15 kW, 3 Ph.	Ballast voltmeter -	0 to 300 volt
Ballast -	18 kW (Per phase 3 kW heater)	Ameter -	0 to 100 A
MCCB -	40 A & 32 A each of 3 phase, 10 KA breaking capacity	Frequency meter -	45 to 55 HZ niddle type
Power cable -	16 mm <sup>2</sup> armoured 4 cores copper and 25 mm <sup>2</sup> 4 cores aluminium		
Lightning arrester -	0.5 kV (LT)		