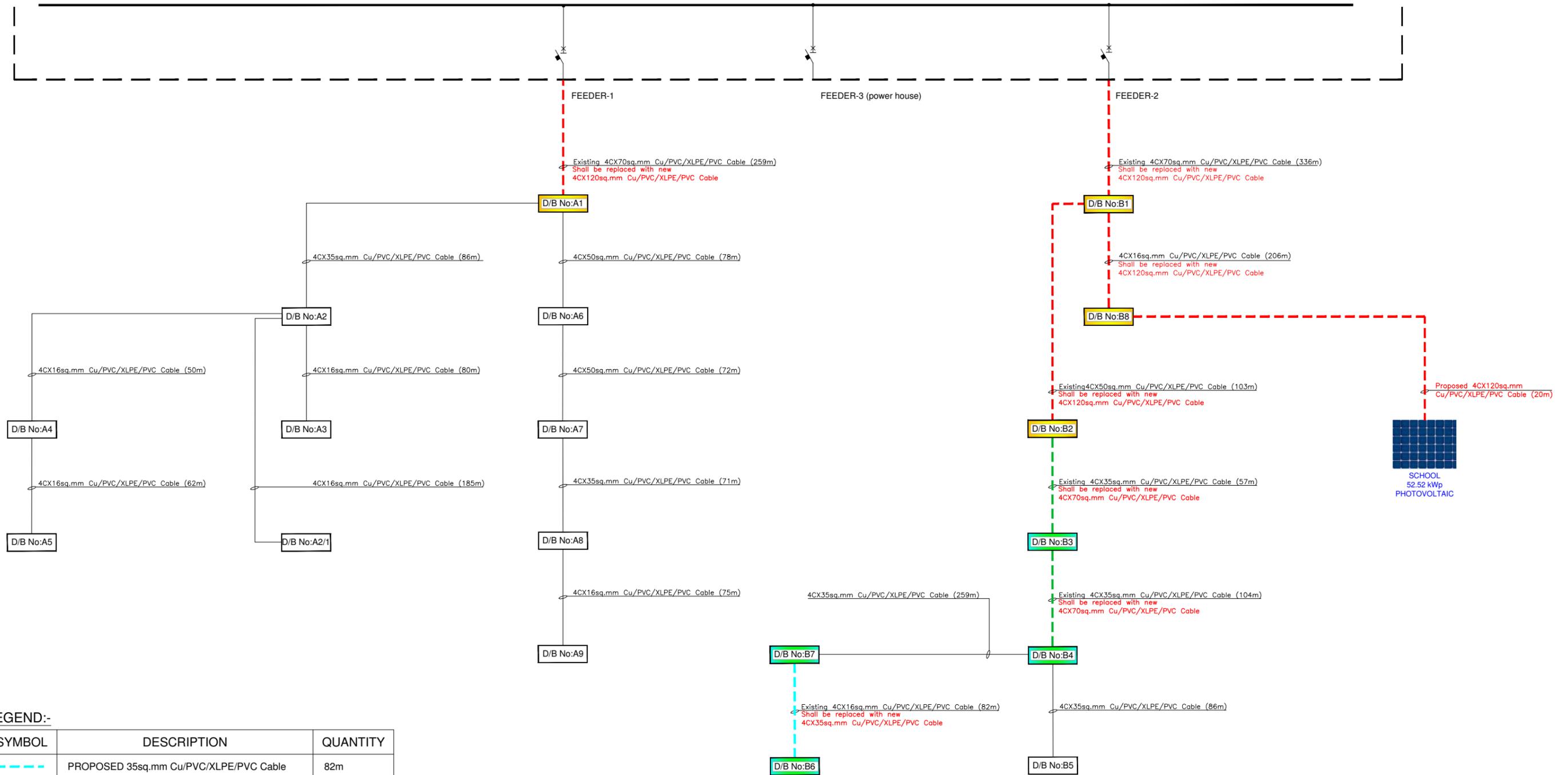


**POWER HOUSE (HIRIMARADHOO)
MAIN LV DISTRIBUTION BOARD**



LEGEND:-

SYMBOL	DESCRIPTION	QUANTITY
	PROPOSED 35sq.mm Cu/PVC/XLPE/PVC Cable	82m
	PROPOSED 70sq.mm Cu/PVC/XLPE/PVC Cable	161m
	PROPOSED 120sq.mm Cu/PVC/XLPE/PVC Cable	924m
	EXISTING Cable	-
	DISTRIBUTION BOX	-
	EXISTING DISTRIBUTION BOX TO BE REPLACED	4 Nos.
	EXISTING DISTRIBUTION BOX TO BE MODIFIED	4 Nos.

NOTES:-

1. THESE DRAWINGS ARE PRELIMINARY AND ARE FOR TENDERING PURPOSES ONLY.
2. CONTRACTOR SHALL CARRY OUT DETAILED SITE SURVEY AND ENGINEERING / STUDY TO EVALUATE AND PROPOSE THE EXTENT OF REPLACEMENT / MODIFICATION REQUIRED IN THE EXISTING DISTRIBUTION NETWORK. THIS IS SUBJECT TO REVIEW AND APPROVAL BY THE EMPLOYER DURING THE ENGINEERING PHASE OF THE PROJECT.

	PURPOSE OF SUBMISSION	REV	AUTHORISED BY	DATE	DRAWING TITLE NETWORK DIAGRAM FOR B06-HIRIMARADHOO	DESIGN : ESM	SCALE : N.T.S
	INITIAL DOCUMENTS	A	GKH	28/03/16		DRAWN : DAI	DRW NO. : J431-GOPA-007-GR-E-D-0001-RevB
	FIRST REVISION	B	GKH	17/04/16	PROJECT PREPARING OUTER ISLANDS SUSTAINABLE DEVELOPMENT	LICENCE NO:	ISLAND NAME : HIRIMARADHOO
					CLIENT: GOVERNMENT OF THE REPUBLIC OF MALDIVES	DATE: : 17APR16	PAGE : 1/4

EXISTING HIRIMARADHOO

Cable										Voltage (%) at DB Main Bus	Total Voltage Drop (%) in Cable Section	% Voltage Drop upto Distribution Boards	% Voltage Drop Acceptable (Less Than 5%)	Remarks
From	To	No. of Runs	Cable Size (sq.mm)	Length (M)	Cable Current Capacity (A)	Cable Current Capacity After Deration (0.6) (A)	Power (kW)	Current (A)	Cable Loading (%)					
Hirimaradhoo Feeder-1	DB-A1	1	4C x 70	259	265	159	52.07	92.53	58.20	96.81	3.19	3.19	YES	
DB-A1	DB-A2	1	4C x 35	86	180	108	25.07	46.41	43.00	95.84	0.97	4.16	YES	
DB-A2	DB-A3	1	4C x 16	80	115	69	4.95	9.29	13.50	95.46	0.37	4.54	YES	
DB-A2	DB-A4	1	4C x 16	50	115	69	9.91	18.59	26.90	95.37	0.47	4.63	YES	
DB-A4	DB-A5	1	4C x 16	62	115	69	4.93	9.32	13.50	95.08	0.29	4.92	YES	
DB-A2/1	DB-A2	1	4C x 16	185	115	69	4.97	9.31	13.50	94.97	0.87	5.03	NO	
DB-A1	DB-A6	1	4C x 50	78	215	129	19.94	37.00	28.70	96.27	0.53	3.73	YES	
DB-A6	DB-A7	1	4C x 50	72	215	129	14.89	27.82	21.60	95.91	0.37	4.09	YES	
DB-A7	DB-A8	1	4C x 35	71	180	108	9.90	18.58	17.20	95.59	0.32	4.41	YES	
DB-A8	DB-A9	1	4C x 16	75	115	69	4.94	9.31	13.50	95.24	0.35	4.76	YES	
Hirimaradhoo Feeder-2	DB-B1	1	4C x 70	336	265	159	42.08	74.47	46.80	96.66	3.34	3.34	YES	
DB-B1	DB-B2	1	4C x 50	103	215	129	30.38	56.05	43.50	95.59	1.07	4.41	YES	
DB-B2	DB-B3	1	4C x 35	57	180	108	25.07	46.88	43.40	94.94	0.65	5.06	NO	
DB-B3	DB-B4	1	4C x 35	104	180	108	19.94	37.59	34.80	93.99	0.95	6.01	NO	
DB-B4	DB-B5	1	4C x 35	86	180	108	4.92	9.44	8.70	93.79	0.2	6.21	NO	
DB-B4	DB-B7	1	4C x 35	259	180	108	9.91	18.90	17.50	92.8	1.19	7.20	NO	
DB-B7	DB-B6	1	4C x 16	82	115	69	4.85	9.40	13.60	92.41	0.39	7.59	NO	
DB-B1	DB-B8	1	4C x 16	206	115	69	4.99	9.27	13.40	95.69	0.96	4.31	YES	

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							DATE: : 17APR16	PAGE : 2/4

PROPOSED HIRIMARADHOO

Cable										Voltage (%) at DB Main Bus	Total Voltage Drop (%) in Cable Section	% Voltage Drop upto Distribution Boards	% Voltage Drop Acceptable (Less Than 5%)	Remarks
From	To	No. of Runs	Cable Size (sq.mm)	Length (M)	Cable Current Capacity (A)	Cable Current Capacity After Deration (0.6) (A)	Power (kW)	Current (A)	Cable Loading (%)					
Hirimaradhoo Feeder-1	DB-A1	1	4C x 120	259	216	216	51	91.95	42.60	98.00	2	2.00	YES	Existing 4C x 70 sq.mm LV Cable Replaced with New 4C x 120 sq.mm LVCable
DB-A1	DB-A2	1	4C x 35	86	108	108	25	46.08	42.70	97.04	0.96	2.96	YES	
DB-A2	DB-A3	1	4C x 16	80	69	69	5	9.21	13.30	96.67	0.37	3.33	YES	
DB-A2	DB-A4	1	4C x 16	50	69	69	10	18.45	26.70	96.57	0.46	3.43	YES	
DB-A4	DB-A5	1	4C x 16	62	69	69	5	9.23	13.40	96.29	0.29	3.71	YES	
DB-A2/1	DB-A2	1	4C x 16	185	69	69	5	9.24	13.40	96.18	0.86	3.82	YES	
DB-A1	DB-A6	1	4C x 50	78	129	129	20	36.76	28.50	97.47	0.53	2.53	YES	
DB-A6	DB-A7	1	4C x 50	72	129	129	15	27.61	21.40	97.11	0.37	2.89	YES	
DB-A7	DB-A8	1	4C x 35	71	108	108	10	18.43	17.10	96.79	0.32	3.21	YES	
DB-A8	DB-A9	1	4C x 16	75	69	69	5	9.22	13.40	96.44	0.35	3.56	YES	
Hirimaradhoo Feeder-2	DB-B1	1	4C x 120	336	216	216	41	73.55	34.10	97.93	2.07	2.07	YES	Existing 4C x 70 sq.mm LV Cable Replaced with New 4C x 120 sq.mm LVCable
DB-B1	DB-B2	1	4C x 120	103	216	216	30	55.28	25.60	97.45	0.48	2.55	YES	Existing 4C x 50 sq.mm LV Cable Replaced with New 4C x 120 sq.mm LVCable
DB-B2	DB-B3	1	4C x 70	57	159	159	25	46.16	29.00	97.1	0.35	2.90	YES	Existing 4C x 35 sq.mm LV Cable Replaced with New 4C x 70 sq.mm LVCable
DB-B3	DB-B4	1	4C x 70	104	159	159	20	36.99	23.30	96.59	0.51	3.41	YES	Existing 4C x 35 sq.mm LV Cable Replaced with New 4C x 70 sq.mm LVCable
DB-B4	DB-B5	1	4C x 35	86	108	108	5	9.24	8.60	96.4	0.19	3.60	YES	
DB-B4	DB-B7	1	4C x 35	259	108	108	10	18.56	17.20	95.42	1.16	4.58	YES	
DB-B7	DB-B6	1	4C x 35	82	69	69	5	9.25	13.40	95.24	0.18	4.76	YES	Existing 4C x 16 sq.mm LV Cable Replaced with New 4C x 35 sq.mm LVCable
DB-B1	DB-B8	1	4C x 16	206	69	69	5	9.19	13.30	96.97	0.95	3.03	YES	

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							LICENCE NO: DATE: : 17APR16 PAGE : 3/4

PROPOSED HIRIMARADHOO PV FEEDER

From	To	No. of runs	Cable Size (sq.mm)	Length (M)	Losses (%)
POWER HOUSE	DB-A1	1	4C X300	285	3.09%
DB-A1	DB-A2	1	4C X300	107	
DB-A1	AGRICULTURAL CENTER-PV	1	4C X70	150	
DB-A2	DB-A3	1	4C X300	90	
DB-A3	DB-A4	1	4C X50	107	
DB-A3	DB-A3.1x1	1	4C X240	91	
DB-A3	DB-A3.2x1	1	4C X240	154	
DB-A3.1x1	DB-A3.1x2	1	4C X120	78	
DB-A3.1x2	DB-A3.1x3	1	4C X120	58	
DB-A3.1x2	DB-A3.1x2x1	1	4C X35	83	
DB-A3.1x2x1	DB-A3.1x2x2	1	4C X35	59	
DB-A3.1x3	DB-A3.1x4	1	4C X120	97	
DB-A3.1x4	DB-A3.1x5	1	4C X35	78	
DB-A3.1x4	OLD SCHOOL-PV	2	4C X120	75	
DB-A3.2x1	DB-A3.2x1x1	1	4C X120	120	
DB-A3.2x1	DB-A3.2x2	1	4C X35	92	
DB-A3.2x1x1	DB-A3.2x1x2	1	4C X120	78	
DB-A3.2x1x2	DB-A3.2x1x3	1	4C X70	61	
DB-A3.2x1x3	DB-A3.2x1x4	1	4C X50	92	
DB-A3.2x2	DB-A3.2x3	1	4C X35	62	
POWER HOUSE	NEW SCHOOL-PV	1	4C X300	500	2.87%

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