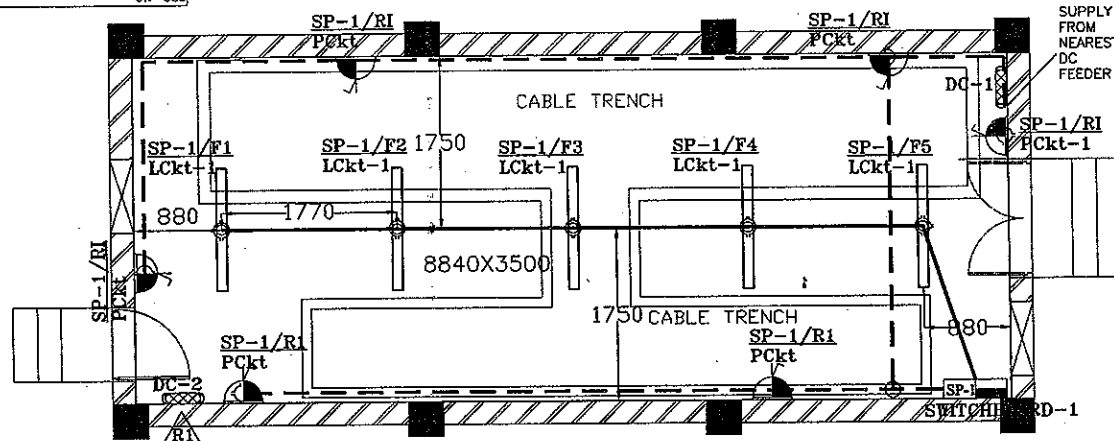


FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)



MOUNTING HEIGHT OF EQUIPMENTS:

S.NO	EQUIPMENT	MOUNTING HEIGHT MTR.	MOUNTING TYPE
01.	SWITCHBOARD (TO BOTTOM)	1.2	FLUSH
02.	5/15A RECEPTACLES	0.45	FLUSH
03.	BULKHEAD FIXTURES OF DC SUPPLY	1.2	WALL
04.	LUMINAIRE CEILING MOUNTED	3.2	SURFACE

LEGEND :

—————	25mm NORMAL AC CONDUIT FOR FIXTURES
-----	25mm AC CONDUIT FOR RECEPTACLES

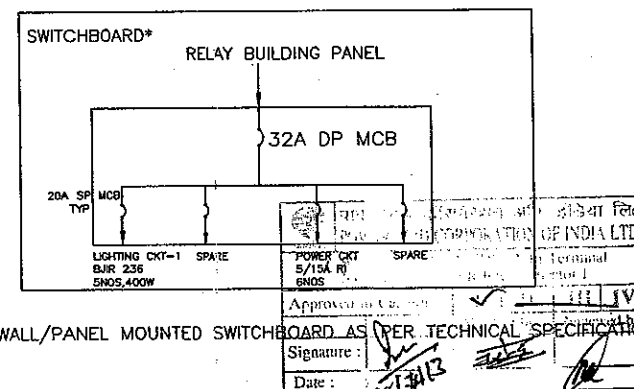
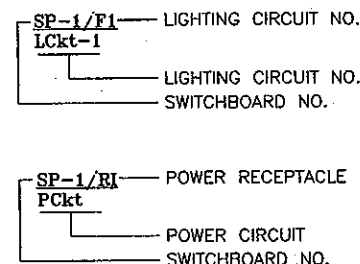
NOTES :

- ALL DIMENSIONS ARE IN mm. UNLESS OTHERWISE SPECIFIED.
 - THE LIGHTING FIXTURES SHALL BE CEILING/RECESSED/WALL MOUNTED AS SUITABLE.
 - LOCATION OF PANELS & RECEPTACLES IS INDICATIVE & MAY CHANGE AS PER SITE REQUIREMENT.
 - SEPARATE NEUTRAL WIRE SHALL RUN FOR EACH CIRCUIT OF LP TO SWITCHBOARD.
 - NO CONDUIT SHALL HAVE DIFFERENT PHASE WIRES.
 - POWER SUPPLY FOR DC FIXTURE IS IN BHEL SCOPE.
 - RELAY BUILDING PANEL FOR EACH RELAY BUILDING AS PER T.S IN MIKA SCOPE.
 - INCOMING SUPPLY FOR RELAY BUILDING PANEL IS FROM NEAREST MARSHALLING KIOSK OF BHEL.
 - TYPICAL LAYOUT FOR ARB/FRB BUILDING (TYPE-1) OF 6 NOS.
- QUANTITY TO BE MULTIPLIED ACCORDINGLY

BILL OF MATERIAL

SYMBOL	DESCRIPTION	MAKE	QTY
	INDUSTRIAL BOX TYPE CHANNEL WITH WHITE FINISH AND DECORATIVE END CAPS SUITABLE FOR 2X36W FTL	BAJAJ BJIR 236/240	5 NOS
	INDUSTRIAL BULKHEAD FIXTURE WITH GLASS COVER & WIREGUARD. SUITABLE FOR 60W GLS LAMP.	BABAJ BJDB 100 BC	2 NOS
	DECORATIVE TYPE 5/15A SOCKET WITH SWITCH	ANY APPROVED MAKE	6 NOS
	SWITCHBOARD FOR LIGHTING AS PER T.S	SCHNIEDER/ MIKA/C&S	1 NOS
	25MM GI CONDUIT	BEC/AST	40 MTR
	2.5SQMM CU / 4SQMM AL WIRE FOR FIXTURE	ANY ISI MAKE	180 MTR
	16 SWG G.I WIRE FOR EARTH.	REPUTED	60 MTR
	JUNCTION BOX	BEC/AST	10 NOS

LEGENDS :-

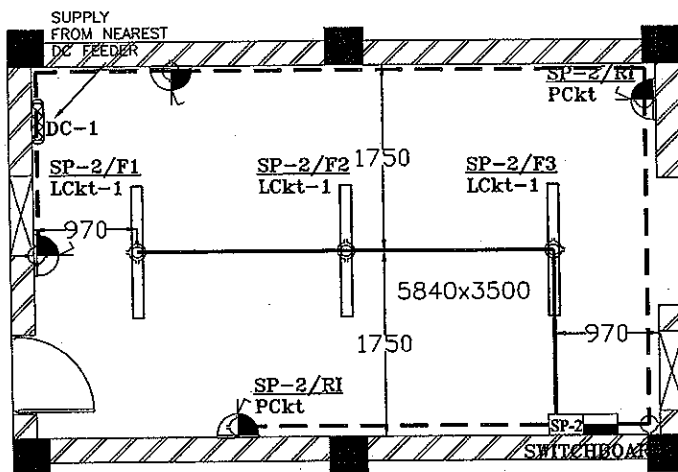


*WALL/PANEL MOUNTED SWITCHBOARD AS PER TECHNICAL SPECIFICATION

FOLLOWING COLOUR CODES FOR WIRES.

R PHASE	- RED
Y PHASE	- YELLOW
B PHASE	- BLUE
DC	- RED & BLACK
NEUTRAL	- BLACK

END USER	POWERGRID CORPORATION OF INDIA LIMITED		
MAIN CONTRACTOR	BHARAT HEAVY ELECTRICALS LTD. TRANSMISSION BUSINESS GROUP, DELHI		
NAME OF PROJECT	±800KV, 6000MW, HVDC MULTI-TERMINAL NER/ER - NR/WR INTERCONNECTOR-I PROJECT		
STATION: AGRA	CA NO.:	C-61901R-5056-2/CA-II/3660 DATED 22.12.2011 FOR ON-SHORE SUPPLIES C-61901R-5056-2/CA-IV/3662 DATED 22.12.2011 FOR SERVICES.	
P.O. NO.: 332P309	MANUFACTURER	NAME	DATE
DT.22-12-12	MIKA ENGINEERS, MUMBAI	U.S.A.	20.12.12
	CERTIFIED ISO 9001-2008 COMPANY	APPRO.	20.12.12
REV. DATE	ALTERED	U.S.A.	DATE
01 21.12	APPROVED	U.S.A.	20.12.12
REVISED AS PER POWER GRID CORPORATION OF INDIAN LIMITED COMMENTS DT. 20.02.13		REVISED AS PER POWER GRID CORPORATION OF INDIAN LIMITED COMMENTS DT. 21.12.12	
TITLE:- CONDUIT LAYOUT FOR RELAY BUILDING - (TYPE-1)		DRAWING NO. ME/BHEL/AGRA/66/02-1 SHT. NO. 1 OF 1 NO. OF SHT. 01	



BILL OF MATERIAL

SYMBOL	DESCRIPTION	MAKE	QTY
	INDUSTRIAL BOX TYPE CHANNEL WITH WHITE FINISH AND DECORATIVE END CAPS SUITABLE FOR 2X36W FTL.	BAJAJ BJIR 236/240	3 NOS
	INDUSTRIAL BULKHEAD FIXTURE WITH GLASS COVER & WIREGUARD. SUITABLE FOR 60W GLS LAMP.	BABAJ BJDB 100 BC	1 NOS
	DECORATIVE TYPE 5/15A SOCKET WITH SWITCH	ANCHOR/ GOLDMEDAL	4 NOS
	SWITCHBOARD FOR LIGHTING AS PER T.S	SCHNEIDER /MIKA/C&S	1 NOS
	25MM GI CONDUIT	BEC/AST	45 MTR
	2.5SQMM CU / 4SQMM AL WIRE FOR FIXTURE	ANY ISI MAKE	90 MTR
	16 SWG G.I WIRE FOR EARTH.	REPUTED	40 MTR
	JUNCTION BOX	BEC/AST	8 NOS

NOTES :

- ALL DIMENSIONS ARE IN mm. UNLESS OTHERWISE SPECIFIED.
- THE LIGHTING FIXTURES SHALL BE CEILING/RECESSED/WALL MOUNTED AS SUITABLE.
- LOCATION OF PANELS & RECEPTACLES IS INDICATIVE & MAY CHANGE AS PER SITE REQUIREMENT.
- SEPARATE NEUTRAL WIRE SHALL RUN FOR EACH CIRCUIT OF LP TO SWITCHBOARD.
- NO CONDUIT SHALL HAVE DIFFERENT PHASE WIRES.
- POWER SUPPLY FOR DC FIXTURE IS IN BHEL SCOPE.
- RELAY BUILDING PANEL FOR EACH RELAY BUILDING AS PER T.S IN MIKA SCOPE.
- INCOMING SUPPLY FOR RELAY BUILDING PANEL IS FROM NEAREST MARSHALLING KIOSK OF BHEL.
- TYPICAL LAYOUT FOR ARB/FRB BUILDING (TYPE-2) OF 11 NOS. QUANTITY TO BE MULTIPLIED ACCORDINGLY

NEAREST MARSHALLING KIOSK OF BHEL

POWERGRID CORPORATION OF INDIA LTD.

Approved by:

Signature:

Date:

MOUNTING HEIGHT OF EQUIPMENTS:

S.NO	EQUIPMENT	MOUNTING HEIGHT MTR.	MOUNTING TYPE
01.	SWITCHBOARD (TO BOTTOM)	1.2	FLUSH
02.	5/15A RECEPTACLES	0.45	FLUSH
03.	BULKHEAD FIXTURES OF DC SUPPLY	1.2	WALL
04.	LUMINAIRE CEILING MOUNTED	3.2	SURFACE

LEGEND :

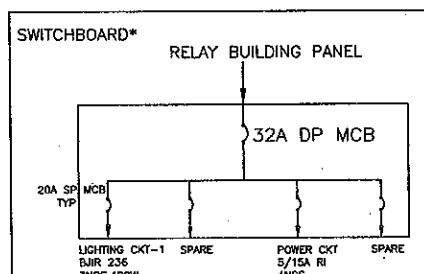
	25mm NORMAL AC CONDUIT FOR FIXTURES
	25mm AC CONDUIT FOR RECEPTACLES

FOLLOWING COLOUR CODES FOR WIRES.

R PHASE - RED DC - RED & BLACK
Y PHASE - YELLOW NEUTRAL - BLACK
B PHASE - BLUE

LEGENDS :-

SP-1/F1 Lckt-1	LIGHTING CIRCUIT NO.	SP-1/RI Pckt	POWER RECEPTACLE
	LIGHTING CIRCUIT NO.		POWER CIRCUIT
	SWITCHBOARD NO.		SWITCHBOARD NO.



*WALL/PANEL MOUNTED SWITCHBOARD AS PER TECHNICAL SPECIFICATION

REV. DATE	ALTERED	BY	DATE	REV. DATE	ALTERED	BY	DATE
01	22.02.13	V.S.A.	21.12	01	21.12	V.S.A.	21.12
02	22.02.13	A.B.S.		02	21.12	A.B.S.	

REVISED AS PER POWER GRID CORPORATION OF INDIAN LIMITED COMMENTS DT. 31.12.12

REVISED AS PER POWER GRID CORPORATION OF INDIAN LIMITED COMMENTS DT. 31.12.12

END USER	POWERGRID CORPORATION OF INDIA LIMITED		
MAIN CONTRACTOR	BHARAT HEAVY ELECTRICALS LTD. TRANSMISSION BUSINESS GROUP, DELHI		
NAME OF PROJECT	±800KV, 6000MW, HVDC MULTI-TERMINAL NER/ER - NR/WR INTERCONNECTOR-1 PROJECT		
STATION: AGRA	CA NO.:	C-61901R-S056-S/CA-N/3460 DATED 22.12.2011 FOR ON-SHORE SUPPLIES & C-61901R-S056-S/CA-N/3462 DATED 22.12.2011 FOR SERVICES.	
P.O. NO.: 332P309	MANUFACTURER	NAME	DATE
DT.22-12-12	MIKA ENGINEERS, MUMBAI	Y.S.A.	20.12.12
	CERTIFIED ISO 9001:2008 COMPANY	V.S.A.	20.12.12
		A.B.S.	20.12.12
SCALE	N.T.S.		
TITLE:-	CONDUIT LAYOUT FOR RELAY BUILDING - (TYPE-2)		
DRAWING NO.	ME/BHEL/AGRA/66/02-2		
REV. NO.	SHT. NO. 1 OF 1 NO. OF SHT. 01		