




KABARNET

132/33kV SUBSTATION

DISPATCHING SYSTEM LAYOUT

COVER

REFERENCE DRAWINGS			
DESIGNED BY:	TSS		
CHECKED BY:			
DATE:			
<input type="checkbox"/> APPROVED <input type="checkbox"/> APPROVED WITH COMMENTS <input type="checkbox"/> NOT APPROVED <input type="checkbox"/> FOR INFORMATION			
SIGNATURE:		PROJECT COORDINATOR:	
		KENYA ELECTRICITY TRANSMISSION COMPANY LTD	
		COLENCO CONSULTING LIMITED	
PROJECT:			
KENYA TRANSMISSION NETWORK IMPROVEMENT PROJECT (KTRNIP).			
PROJECT DRAWING NO. [REDACTED]			
PREPARED BY:	NAME:	DATE:	PROJECT NO.:
DESIGNED BY:	NAME:	DATE:	KABARNET 132/33kV SUBSTATION
CHECKED BY:	NAME:	DATE:	
APPROVED BY:	NAME:	DATE:	
			COVER
TSS NAME DATE			
SCALE:	1:400	DWG NO.	REV.:

NOTE:



- 1- THE CONTRACTOR'S SCOPE OF WORK FOR COMPLETE FUNCTIONALITY, INCLUDES BUT IS NOT LIMITED TO:
 - PROVISION/INSTALLATION OF ALL NECESSARY HARDWARE AND SOFTWARE TO CONTROL AND MONITOR THE ENTIRE SUBSTATION LOCALLY AND ALSO REMOTELY FROM NCC, RCC AND NSCC.
 - PROVISION OF ALL FACILITIES FOR COMPLETE INTEGRATION OF SUBSTATION AUTOMATION & CONTROL SYSTEM (SACS).
 - INCORPORATION OF SUBSTATION INTO THE SCADA/EMS SYSTEM AT THE NCC, RCC AND NSCC.
 - PROVISION OF ALL NECESSARY WORKS INCLUDING DESIGN, SUPPLY, IMPLEMENTATION AND TESTING AT THE INTERFACING SUBSTATION(S) FOR COMPLETE FUNCTIONALITY.
 - ANY OTHER FACILITIES REQUIRED FOR COMPLETE FUNCTIONALITY.
- 2- EACH GATEWAY SHALL HAVE THREE COMMUNICATION CHANNELS: ONE FOR CONNECTION TO NCC, ONE FOR CONNECTION TO RCC AND ANOTHER ONE FOR CONNECTION TO NSCC .
- 3- TWO SEPARATE AND INDEPENDENT PORTS SHALL BE ASSIGNED FOR EACH PROTOCOL.
- 4- TRANSFERRING AND TESTING OF ALL DATA AND PROTOCOLS FROM GATEWAY TO THE REMOTE CONTROL CENTERS (NCC/RCC/NSCC) ARE IN EPC CONTRACTOR'S SCOPE OF WORK.
- 5- ALL OUT OF PANEL FIBER OPTIC CABLES SHALL PASS THROUGH FLEXIBLE METALLIC TUBES.
- 6- PATCH CORD CONNECTORS AND PATCH PANELS SHALL BE CONSIDERED IN ALL NETWORK PANELS.
- 7- TWO INDEPENDENT GATEWAYS ARE CONSIDERED FOR WORKING AS MAIN AND HOT-STANDBY.
- 8- POWER SUPPLY TO ALL THE SACS COMPONENTS (SWITCHES, GATEWAYS, SERVERS, PROTOCOL CONVERTERS AND ETC.) SHALL DERIVED FROM THE SUBSTATION 110VDC/UPS POWER SYSTEM.
- 9- THE CONTRACTOR SHALL PROVIDE THE DETAILS INCLUDING BRAND NAME, MODEL, MANUFACTURER, CATALOG AND SPECIFICATIONS OF DEVICES IN DETAIL DESIGN STAGE FOR THE CLIENT/CONSULTANT APPROVAL.

LEGEND:

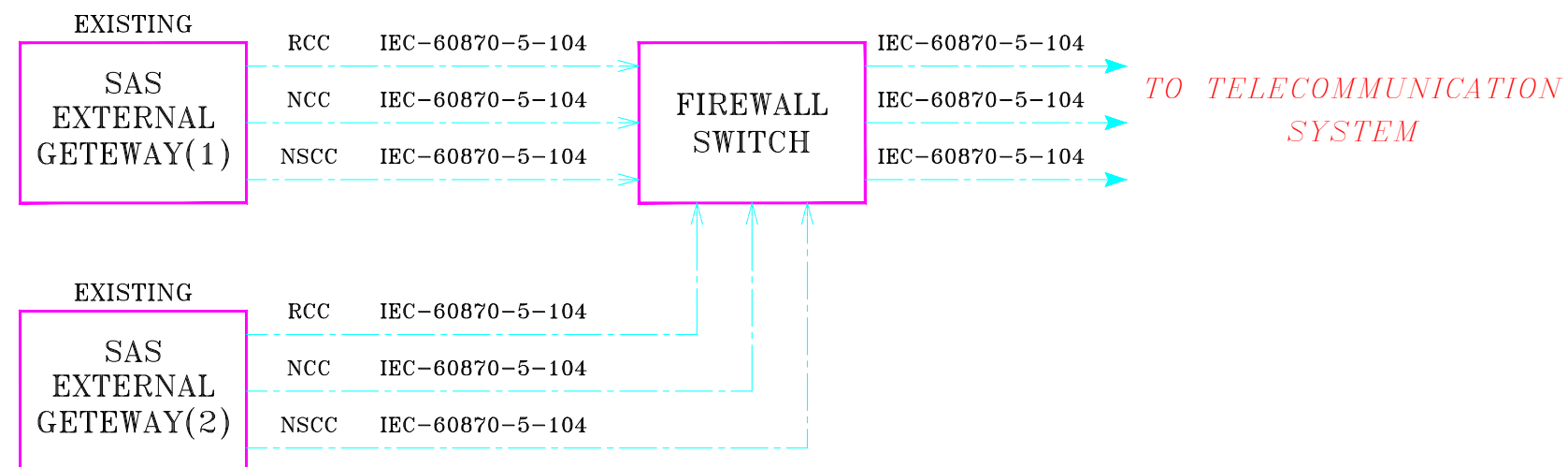
----- ETHERNET CAT6 CABLE

ABBREVIATION:

<i>NSCC</i>	KETRACO'S NATIONAL SYSTEM CONTROL CENTER, A FUTURE PROJECT FOR THE CONTROL AND OPERATION OF KETRACO'S TRANSMISSION NETWORK AND FOR POWER DISPATCH.
<i>NCC</i>	NATIONAL CONTROL CENTER OWNED AND OPERATED BY KPLC FOR THE OPERATION OF THE COUNTRY'S TRANSMISSION GRID AND FOR POWER DISPATCH.
<i>RCC</i>	REGIONAL CONTROL CENTER OWNED AND OPERATED BY KPLC FOR THE OPERATION OF THE REGION'S DISTRIBUTION NETWORK AND MONITORING OF GRID.

REFERENCE DRAWINGS									
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APPROVE		APPROVED WITH COMMENTS		NOT APPROVED		FOR INFORMATION			
DATE:				SIGNATURE/STAMP:.....PROJECT CONSULTANT.....					
				KENYA ELECTRICITY TRANSMISSION COMPANY LTD					
									
PROJECT:				COLENCO CONSULTING LIMITED					
KENYA TRANSMISSION NETWORK IMPROVEMENT PROJECT (KTRNIP).									
PROJECT DRAWING NO.		NAME:		DATE:		PROJECT NO.			
PREPARED:		NIL		09/05/2025		KABARNET 132/33kV SUBSTATION			
DRAWN:		F.J		09/05/2025					
APPROVED:		S.DESHMUKH		09/05/2025		TITLE:			
DISPATCHING SYSTEM LAYOUT		LEGEND & NOTE							
REVISIONS		NO.		NAME		DATE			
SCALE:		1:600		DWG NO.				REV.:	

DISPATCHING SYSTEM LAYOUT KABARNET 132/33kV SUBSTATION



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DATE:.....			SIGNATURE/STAMP:.....PROJECT CONSULTANT.....		
			KENYA ELECTRICITY TRANSMISSION COMPANY LTD		
			COLENCO CONSULTING LIMITED		
PROJECT:					
KENYA TRANSMISSION NETWORK IMPROVEMENT PROJECT (KTRNIP).					
PROJECT DRAWING NO.					
NAME:		DATE:		PROJECT NO:	
PREPARED: NIL				KABARNET 132/33kV SUBSTATION	
DRAWN: F.J		09/05/2025		TITLE:	
CHECKED: V.JOSHI		09/05/2025		DISPATCHING SYSTEM LAYOUT	
APPROVED: S.DESHMUKH		09/05/2025			
NO. NAME DATE					
SCALE: 1:600		DWG NO.		KABARNET-DISPATCH-001	REV.: