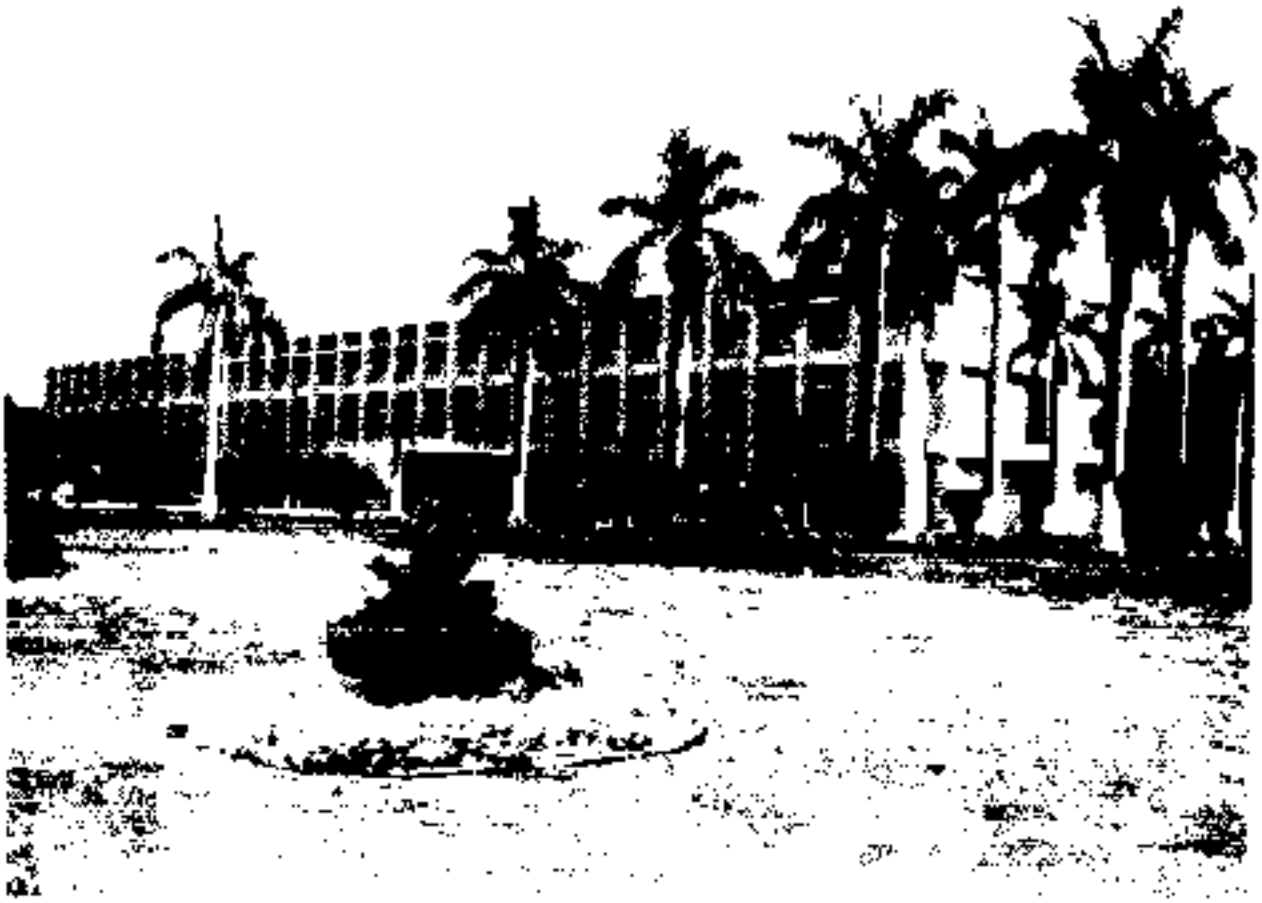
AGENDA FOR 16TH MEETING OF BUILDING & WORKS COMMITTEE NOVEMBER 19, 2012



NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA-136119

AGENDA FOR 16TH MEETING OF BUILDING & WORKS COMMITTEE

VENUE	:	**BOARD ROOM** **GOLDEN JUBLIEE ADMINSTRATIVE BUILDING** **NATIONAL INSTITUTE OF TECHNOLOGY** **KURUKSHETRA**
DAY	:	**MONDAY**
DATE	:	**19.11.2012**
TIME	:	**11:30 AM**

NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA

CONTENTS

CONSTITUTION OF BUILDING AND WORKS COMMITTEE

1.	**Prof. Anand Mohan** Director, National Institute of Technology, Kurukshetra	**Chairman**
2	**Nominee of the Central Government** On the B & WC of the Institute, (to be nominated by the MHRD) **Through** **Sh. Rajesh Singh** Director (NITs), Deptt. of Higher Education, M.H.R.D., Shastri Bhawan, New Delhi-110001	**Member**
3	**Vacant (to be nominated by the board)**	**Member**
4	**Prof. V.K. Arora** Dean (Planning & Development) National Institute of Technology, Kurukshetra	**Member**
5.	**Er. Iqbal Singh,** Executive Engineer (Civil), Karnal Central Division, CPWD, Karnal.	**Member**
6.	**Er. Surender Singh,** Superintending Engineer (Electrical), Chandigarh Electrical Central Circle, CPWD, Chandigarh	**Member**
7.	**Prof. K.K. Singh** Dean (Estate) National Institute of Technology, Kurukshetra	**Special Invitee**
8.	**Prof. Ashwani Jain** Prof. in-charge (Estate & Construction), National Institute of Technology, Kurukshetra	**Special Invitee**
9.	**Dr. Ashwani Kumar** Prof- in- Charge (Elect. Mtc) National Institute of Technology, Kurukshetra	**Special Invitee**
10.	**Er. A.L. Kamboj,** Executive Engineer (Construction cell) National Institute of Technology, Kurukshetra	**Special Invitee**
11.	**Sh. S.N. Kaushik,** Assistant Engineer (Civil) National Institute of Technology, Kurukshetra	**Special Invitee**
12.	**Sh. G. R. Samanthray** Registrar-in-Charge National Institute of Technology, Kurukshetra	**Member-Secretary**

Item No.16.1 **To confirm the minutes of 15th meeting of the Building & Works Committee held on 19.12.2011**

The minutes of 15th meeting of Building & Works Committee held on 19.12.2011 were circulated amongst the members vide letter No.NIT/15th BWC/324 dated 16.01.2012. No comments were received from any member. The minutes are enclosed as Annexure- I from page 3 to 8 .

The minutes may be confirmed.

NATIONAL INSTITUTE OF TECHNOLOGY
KURUKSHETRA-136119

Minutes of the 15th meeting of the Building & Works Committee, National Institute of Technology, Kurukshetra held on 19th December, 2011 at 11.30 AM in the Board Room of the Institute.

The following were present:

1.	Prof. Anand Mohan Director, National Institute of Technology Kurukshetra	Chairman
2	Sh. Vijay Prakash Saha Mamta Bagicha, Morahabis, Ranchi-834008	Member
3.	Prof. V.K. Arora Dean (Planning & Development) National Institute of Technology, Kurukshetra	Member
4.	Er. Niranjan Singh Superintending Engineer (Civil), Chandigarh Central Circle, CPWD, Chandigarh.	Member
5.	Er. Vimal Kumar Superintending Engineering (Electrical), Chandigarh Electrical Central Circle, CPWD, Chandigarh.	Member
6	Prof. K.K. Singh Chairman (Estate, Const. & Elect. Mtc.), National Institute of Technology, Kurukshetra	Special Invitee
7	Dr. Ashwani Jain Prof. In-charge (Estate & Construction), National Institute of Technology, Kurukshetra	Special Invitee
8	Dr. Ashwani Kumar Prof. In-charge (Elect. Mtc.), National Institute of Technology Kurukshetra	Special Invitee

9.	Er. B.B. Mittal Executive Engineer (Construction Cell), National Institute of Technology, Kurukshetra.	Special Invitee
10	Sh. S.N. Kaushik Junior Engineer (Civil) & EO In-charge National Institute of Technology, Kurukshetra.	Special Invitee
11.	Sh. G. R. Samantaray Registrar In-charge National Institute of Technology, Kurukshetra	Member-Secretary

The nominee of the MHRD could not attend the meeting.

The Hon'ble Director and Chairperson, Building & Works Committee extended hearty welcome to all the members and special invitees present in the meeting.

The Building & Works Committee took the following decisions:

15.1 To confirm the minutes of 14th (Special) meeting of the Building & Works Committee held on 17.06.2010.

The Building & Works Committee confirmed the minutes of 14th (Special) meeting of the Building & Works Committee held on 17.06.2010

15.2 To report the action taken on the minutes of the 13th meeting of the Building & Works Committee held on 25.02.2010.

The Building & Works Committee noted and approved the action taken on the minutes of the 13th meeting of the Building & Works Committee held on 25.2.2010. The BWC also noted that 'No further action is required to be taken' under agenda item 13.2(1)

Further, under 13.2 (2) for the construction of Swimming Pool, the Building & Works Committee acceded to the request of the CPWD for extending the time limit from 31.01.2012 to 28.02.2012

Under item 13.2 (5) the committee advised that the agenda items of this 15th meeting be also revised on DSR basis instead of HSR

B & WC was also informed under item 13.4 that Mega Boys Hostel (1200 capacity) is likely to be completed by May 2012

15.3 To report the action taken on the minutes of the 14th (Special) meeting of the Building & Works Committee held on 17.06.2010.

The Building & Works Committee approved the actions taken on the minutes of the 14th (Special) meeting of the Building & Works Committee held on 17.6.2010.

15.4 To consider & approve the Revised Cost Estimate for Boundary Wall of Hostel No. 1 & 2 at NIT, Kurukshetra.

The Building & Works Committee noted the cost estimate presented in the agenda on HSR basis and advised to adopt DSR for revised cost estimate.

The BWC approved the Revised Estimated Cost of Rs. 45.00 lacs for Boundary Wall of Hostel No. 1 and 2 as calculated on the basis of DSR (Annexure -1)

15.5 To consider and approve the Revised Cost Estimate for providing 20mm thick premix carpeting "B" type seal coat on various existing roads at NIT, Kurukshetra.

The Building & Works Committee approved the revised estimated cost of Rs. 48.51 Lacs for providing 20 mm thick premix carpeting "B" type seal coat on various existing roads of NIT, Kurukshetra.

It was also decided that as per General Financial Rules (GFR) if the revised cost estimate falls within 10% of the original estimate then the matter may not be brought before B & WC.

Further, it was desired that in future escalation in cost for previously approved works should be presented before the BWC on the Form-IV (Annexure- 2).

15.6 To consider & approve the Revised Cost Estimate for Construction of 20 Nos. Professor & 20 Nos. Asstt. Professor Multi storeyed Staff Housing at NIT, Kurukshetra.

The Building & Works Committee approved the Revised Estimated Cost of Rs. 1633 lacs + Rs 57 lacs (cost of 2 Nos. lifts) = Rs 1690 lacs for construction of 20 Nos. Professor & 20 Nos. Asstt. Professor Multi storied Staff Housing at NIT, Kurukshetra. Escalation in cost as per Form-IV enclosed – (Annexure-3).

Further, the Building & Works Committee was of the view that although the DG set is required for the smooth running of lifts during power failure, but it is not desirable to have separate DG sets for various buildings. Therefore, it was decided that the existing DG set of the Guest House be

utilized for the purpose of back-up supply of lifts and if need be the capacity of DG set of Guest House be increased to cater to the needs of Health Centre also.

15.7 To consider & approve the Rough Cost Estimate for construction of 2 No. Institute Main Gates at NIT, Kurukshetra.

The Building & Works Committee approved the Rough Cost Estimate for construction of 2 No. Institute Main Gates at a total cost of Rs. 82.99 lacs.

15.8 To consider & approve the Rough Cost Estimate for construction of 2 Nos. Parking at NIT, Kurukshetra.

The Building & Works Committee approved the Rough Cost Estimate for construction of 2 Nos. Parking at NIT, Kurukshetra at a cost of Rs. 94.21 lacs including works for electrical installations @ 12.5% of cost of civil works.

15.9 To consider & approve the Rough Cost Estimate for Sewage Treatment Plant (STP) at NIT, Kurukshetra.

The Building & Works Committee approved the Rough Cost Estimate for Sewage Treatment Plant (STP) of 1 MLD capacity at the cost of Rs. 318.08 lacs.

It was also desired that the coordinator of the newly proposed School of Renewable Energy of the Institute should approach Ministry of Renewable Energy, Govt. of India to explore the possibilities of utilization of biogas for generation of cooking gas.

15.10 To consider & approve the Rough Cost Estimate for Cold Water Tanks & Supply Pipe line to the Solar Water Heating System Installed in the Hostel No. 1 to 9 Boys Hostel, Girls Hostel No. 1 & 2 at NIT, Kurukshetra.

The Building & Works Committee approved the Rough Cost Estimate for Cold Water Tanks & Supply Pipe line to the Solar Water Heating System Installed in the Boys Hostels No. 1 to 9 and Girls Hostel No. 1 & 2 of the Institute at the cost of Rs. 60.64 lacs.

15.11 To consider and approve the Rough Cost Estimate for Construction of 600 seater Girls Hostel (Multi-Storeyed framed structure, Ground Floor + 5) at NIT, Kurukshetra.

The Building & Works Committee approved the Rough Cost Estimate for construction of 600 seater Girls Hostel (Multi-Storeyed framed structure, Ground Floor + 5) at a cost of Rs. 48.99 crores including additional 5% for the provisions of green building i.e. provision of solar water heating system, solar lighting system etc.

15.12 To consider and approve the Rough Cost Estimate for Construction of 300 seater Multi-Purpose Boys Hostel including 100 suites for foreign students, research scholars and married PG students. (Multi-Storeyed framed structure Ground Floor + 5) at NIT, Kurukshetra.

The Building & Works Committee approved the Rough Cost Estimate for construction of 300 seater Multi-Purpose Boys Hostel including 100 suites for foreign students, research scholars and married PG students. (Multi-storied framed structure Ground Floor + 5) at a cost of Rs. 35.96 crores including additional 5% for the provisions of green building i.e. provision of solar water heating system, solar lighting system etc.

15.13 To consider and approve the Rough Cost Estimate for Construction of 3 Storey bearer barrack comprising of 2 blocks to accommodate 96 bearers at NIT, Kurukshetra.

The Building & Works Committee approved the Rough Cost Estimate for Construction of 3 Storey bearer barrack comprising of 2 blocks to accommodate 96 bearers at a cost of Rs. 2.45 crores.

15.14 To consider & approve the Rough Cost Estimate for construction of Boundary Wall (left out stretches) for a length of about 800 mtr. and Gate (near UHBVN office) at NIT, Kurukshetra.

The Building & Works Committee advised to adopt DSR for revised cost estimate instead of HSR.

The Building & Works Committee approved the Rough Cost Estimate for construction of Boundary Wall (left out stretches) for a length of about 800 mtr. and Gate (near UHBVN office) at the cost of Rs. 48.25 lacs on DSR basis (Annexure -4).

15.15 To consider and approve the Rough cost estimate providing permanent fencing along the lawns & gardens of the Institute with revolving entry gates including CC pathways at NIT, Kurukshetra.

The Building & Works Committee advised to adopt DSR for revised cost estimate instead of HSR.

The Building & Works Committee approved the Rough cost estimate providing permanent fencing along the lawns & gardens in the academic blocks of the Institute with revolving entry gates including CC pathways at the cost of Rs. 66.00 lacs on DSR basis (Annexure -5)

15.16 To consider & approve the Rough Cost Estimate for widening of Institute Road from Kirmich Road Gate to Hostel No. 4 (approx. length of 400 mtr.) at NIT, Kurukshetra.

The Building & Works Committee advised to adopt DSR for revised cost estimate instead of HSR.

The Building & Works Committee approved the Rough Cost Estimate for widening of Institute Road from Kirmich Road Gate to Hostel No. 4 (approx. length of 400 mtr.) at the cost of Rs. 39.00 lacs on DSR basis (Annexure – 6).

15.17 To consider & approve the Rough Cost Estimate for Providing & Installation of 16/20 meter High Mast lights at Sports Ground and various other location at NIT, Kurukshetra.

The Building & Works Committee approved the Rough Cost Estimate for Providing & Installation of 16/20 meter High Mast lights at Sports Ground and various other location at NIT, Kurukshetra at the cost of Rs. 40.95 lacs.

15.18 To consider & approve the Rough Cost Estimate for Renovation of Labs in Electrical, Mechanical and Civil Engineering Departments (Under TEQIP-II) of NIT, Kurukshetra.

The Building & Works Committee advised to adopt DSR for revised cost estimate instead of HSR.

The Building & Works Committee approved the Rough Cost Estimate at Rs. 37.50 lacs on DSR basis for Renovation of Labs in Electrical Mechanical and Civil Engineering Departments (Under TEQIP-II) (Annexure -7)

15.19 To consider & approve the Rough Cost Estimate for preparation of Institute Master Plan, NIT, Kurukshetra.

The Building & Works Committee approved the Rough Cost Estimate for preparation of Institute Master Plan of NIT, Kurukshetra at the cost of Rs. 31.00 lacs.

The meeting ended with a vote of thanks to the Chair.

Registrar(Incharge) & Member-Secretary
Building & Works Committee,
NIT, Kurukshetra

Authenticated

Director, NITK & Chairman,
Building & Works Committee,
NIT, Kurukshetra

Item No. 16.2 **To report the action taken on the minutes of the 15th meeting of the Building & Works Committee held on 19.12.2011.**

The action taken on the minutes of the 15th meeting of the Building & Works Committee held on 19.12.2011 is enclosed.

To report the action taken on the minutes of the 15th meeting of the Building & Works Committee held on 19.12.2011.

Item No.	Subject	Decision taken	Action taken
16.1	To confirm the minutes of 15th meeting of the Building & Works Committee held on 19.12.2011	The Building & Works Committee confirmed the minutes of 15th meeting of the Building & Works Committee held on 19.12.2011.	No further action is required.
16.2	To report the action taken on the minutes of the 15th meeting of the Building & Works Committee held on 19.12.2011.	The Building & Works Committee noted the action taken on the minutes of the 15th meeting of the Building & Works Committee held on 19.12.2011.	
15.4	To consider & approve the Revised Cost Estimate for Boundary Wall of Hostel No. 1 & 2 at NIsT, Kurukshetra.	The Building & Works Committee noted the cost estimate presented in the agenda on HSR basis and advised to adopt DSR for revised cost estimate. The BWC approved the Revised Estimated Cost of Rs. 45.00 lacs for Boundary Wall of Hostel No. 1 and 2 as calculated on the basis of DSR	Work likely to be allotted to CPWD
15.5	To consider and approve the Revised Cost Estimate for Providing 20mm thick premix carpeting "B" type seal coat on various existing roads at NIT, Kurukshetra.	The Building & Works Committee approved the revised estimated cost of Rs. 48.51 Lacs for providing 20 mm thick premix carpeting "B" type seal coat on various existing roads of NIT, Kurukshetra. It was also decided that as per General Financial Rules (GFR) if the revised cost estimate falls within 10% of the original estimate then the matter may not be brought before	Work completed

		B & WC. Further, it was desired that in future escalation in cost for previously approved works should be presented before the BWC on the Form-IV .	
15.6	To consider & approve the Revised Cost Estimate for Construction of 20 Nos. Professor & 20 Nos. Asstt. Professor Multi storeyed Staff Housing at NIT, Kurukshetra.	The Building & Works Committee approved the Revised Estimated Cost of Rs. 1633 lacs + Rs 57 lacs (cost of 2 Nos. lifts) = Rs 1690 lacs for construction of 20 Nos. Professor & 20 Nos. Asstt. Professor Multi storied Staff Housing at NIT, Kurukshetra. Escalation in cost as per Form-IV. Further, the Building & Works Committee was of the view that although the DG set is required for the smooth running of lifts during power failure, but it is not desirable to have separate DG sets for various buildings. Therefore, it was decided that the existing DG set of the Guest House be utilized for the purpose of back-up supply of lifts and if need be the capacity of DG set of Guest House be increased to cater to the needs of Health Centre also.	Work is in progress
15.7	To consider & approve the Rough Cost Estimate for construction of 2 No. Institute Main Gates at NIT, Kurukshetra.	The Building & Works Committee approved the Rough Cost Estimate for construction of 2 No. Institute Main Gates at a total cost of Rs. 82.99 lacs.	Work likely to be allotted to CPWD
15.8	To consider & approve the Cost Estimate for	The Building & Works Committee approved the	Compliance made and work likely to be allotted

	construction of 2 Nos. Parking at NIT, Kurukshetra.	Rough Cost Estimate for construction of 2 Nos. Parking at NIT, Kurukshetra at a cost of Rs. 94.21 lacs including works for electrical installations @ 12.5% of cost of civil works.	to CPWD
15.9	To consider & approve the Rough Cost Estimate for Sewage Treatment Plant (STP) at NIT, Kurukshetra.	The Building & Works Committee approved the Rough Cost Estimate for Sewage Treatment Plant (STP) of 1 MLD capacity at the cost of Rs. 318.08 lacs. It was also desired that the coordinator of the newly proposed School of Renewable Energy of the Institute should approach Ministry of Renewable Energy, Govt. of India to explore the possibilities of utilization of biogas for generation of cooking gas	Work likely to be allotted to CPWD
15.10	To consider & approve the Rough Cost Estimate for Cold Water Tanks & Supply Pipe line to the Solar Water Heating System Installed in the Hostel No. 1 to 9 (Boys Hostel, Girls Hostel No. 1 & 2 at NIT, Kurukshetra.	The Building & Works Committee approved the Rough Cost Estimate for Cold Water Tanks & Supply Pipe line to the Solar Water Heating System Installed in the Boys Hostels No. 1 to 9 and Girls Hostel No. 1 & 2 of the Institute at the cost of Rs. 60.64 lacs.	Work likely to be allotted to CPWD
15.11	To consider and approve the Rough Cost Estimate for Construction of 600 seater Girls Hostel (Multi-Storeyed framed structure, Ground Floor + 5) at NIT, Kurukshetra.	The Building & Works Committee approved the Rough Cost Estimate for construction of 600 seater Girls Hostel (Multi-Storeyed framed structure, Ground Floor + 5) at a cost of Rs. 48.99 crores including additional 5% for the provisions of green building i.e. provision of solar water heating system, solar lighting	Work likely to be allotted to CPWD

		system etc.	
15.12	To consider and approve the Rough Cost Estimate for Construction of 300 seater Multi-Purpose Boys Hostel including 100 suites for foreign students, research scholars and married PG students. (Multi-Storeyed framed structure Ground Floor + 5) at NIT, Kurukshetra.	The Building & Works Committee approved the Rough Cost Estimate for construction of 300 seater Multi-Purpose Boys Hostel including 100 suites for foreign students, research scholars and married PG students. (Multi-storied framed structure Ground Floor + 5) at a cost of Rs. 35.96 crores including additional 5% for the provisions of green building i.e. provision of solar water heating system, solar lighting system etc.	Work likely to be allotted to CPWD
15.13	To consider and approve the Rough Cost Estimate for Construction of 3 Storey bearer barrack comprising of 2 blocks to accommodate 96 bearers at NIT, Kurukshetra.	The Building & Works Committee approved the Rough Cost Estimate for Construction of 3 Storey bearer barrack comprising of 2 blocks to accommodate 96 bearers at a cost of Rs. 2.45 crores.	Work likely to be allotted to CPWD
15.14	To consider & approve the Rough Cost Estimate for construction of Boundary Wall (left out stretches) for a length of about 800 mtr. and Gate (near UHBVN office) at NIT, Kurukshetra.	The Building & Works Committee advised to adopt DSR for revised cost estimate instead of HSR. The Building & Works Committee approved the Rough Cost Estimate for construction of Boundary Wall (left out stretches) for a length of about 800 mtr. and Gate (near UHBVN office) at the cost of Rs. 48.25 lacs on DSR basis .	Compliance made and work likely to be allotted to CPWD
15.15	To consider and approve the Rough cost estimate providing permanent fencing along the lawns & gardens of the Institute with revolving entry gates including CC pathways at NIT,	The Building & Works Committee advised to adopt DSR for revised cost estimate instead of HSR. The Building & Works Committee approved the Rough cost estimate	Compliance made and work likely to be allotted to CPWD

	Kurukshetra.	providing permanent fencing along the lawns & gardens in the academic blocks of the Institute with revolving entry gates including CC pathways at the cost of Rs. 66.00 lacs on DSR basis	
15.16	To consider & approve the Rough Cost Estimate for widening of Institute Road from Kirmich Road Gate to Hostel No. 4 (approx. length of 400 mtr.) at NIT, Kurukshetra.	The Building & Works Committee advised to adopt DSR for revised cost estimate instead of HSR. The Building & Works Committee approved the Rough Cost Estimate for widening of Institute Road from Kirmich Road Gate to Hostel No. 4 (approx. length of 400 mtr.) at the cost of Rs. 39.00 lacs on DSR basis.	Compliance made and work likely to be allotted to CPWD
15.17	To consider & approve the Rough Cost Estimate for Providing & Installation of 16/20 meter High Mast lights at Sports Ground and various other location at NIT, Kurukshetra.	The Building & Works Committee approved the Rough Cost Estimate for Providing & Installation of 16/20 meter High Mast lights at Sports Ground and various other location at NIT, Kurukshetra at the cost of Rs. 40.95 lacs.	Work likely to be allotted to CPWD
15.18	To consider & approve the Cost Estimate for Renovation of Labs in Electrical, Mechanical and Civil Engineering Departments (Under TEQIP-II) at NIT, Kurukshetra.	The Building & Works Committee advised to adopt DSR for revised cost estimate instead of HSR. The Building & Works Committee approved the Rough Cost Estimate of Rs. 37.50 lacs on DSR basis for Renovation of Labs in Electrical, Mechanical and Civil Engineering Departments (Under TEQIP-II)	Work is in process by the Institute
15.19	To consider & approve the Rough Cost Estimate for preparation of Institute Master Plan, NIT, Kurukshetra.	The Building & Works Committee approved the Rough Cost Estimate for preparation of Institute	Work likely to be allotted to CPWD

		Master Plan of NIT, Kurukshetra at the cost of Rs. 31.00 lacs.	
		The building and Works Committee approved cost estimate for the construction of additional block of Health Centre at National Institute of Technology, Kurukshetra at the cost of Rs. 68.8 lacs in its 8th meeting held on 28.05.2007 vide Item No. 8.11.	Work is in progress by the Institute
		The Building & Works Committee approved in its 11th meeting held on 28.07.2009 vide Item No. 11.3 the revised cost estimate for amounting to Rs. 801.40 lacs for (i) & ii). (i) providing & installation of Electrical Sub-station HT/LT Distribution i/c street lighting & feeder pillars etc. non residential area at NIT, Kurukshetra. (ii) Providing & Installation of Electrical sub-station HT/LT Distribution and feeder pillars in residential area at NIT, Kurukshetra	Work is in progress and separate Agenda item No. 16.4 is being placed for revision of cost estimate.
		The Building & Works Committee approved the cost estimate for construction of Administrative Block in National Institute of Technology, Kurukshetra for amounting to Rs. 659.00 lacs in its 9th meeting held on 17.03.2008 vide Item No. 9.12.	Work completed and a separate Agenda item No. 16.3 is being placed for revision of cost estimate.
		The Building & Works Committee approved the revised cost estimate for the construction of Swimming Pool at NIT, Kurukshetra for amounting to Rs. 396.76 lacs in its 10th meeting of the B & WC held on 19.02.2009 vide Item No. 10.4.	Work is in progress

Item No.16.3 **To consider & approve the Revised Cost Estimate for Construction of Administrative Block at NIT, Kurukshetra.**

The above mentioned work was approved in the 9th meeting of B & WC vide Agenda Item No.9.12 held on dated 17.03.2008 for an amount of Rs.659.06 lacs with plinth area of building 3925 sqm. Revision of the cost estimate is essential due to increase in plinth area of the Administrative Building from 3925 sqm. to 4552 sqm., weight of the trusses due to revision of structural drawings of trusses, providing of arm strong & aluminum sheet false ceiling and earthen pivot tiles on floor, additional provision of S.I.T.C. of 500 KVA out door type Sub-Station equipment, hot & cold cassette type Air Conditioners, S.I.T.C. of 320 KVA D.G. Power Set etc. during construction. Now, the Chief Engineer, CPWD has submitted the revised cost estimate amounting to Rs. 855.34 lacs for revised A/A & E/S.

The B & WC may consider and approve the revised cost estimate for the above cited work for an amount of Rs. 855.34 lacs.

Pl. examine & discuss

Pl. file (EIC) ex file

Dy. No.	4870				7/12/11
R	OFL			DAE	C
E	M			Ch	Ma
Hydrant	Cr			DS	LDC
PE	CO	F			
[illegible]	SO	EO		FA	AE

भारत सरकार

कार्यालय मुख्य अभियंता । उ०अ

के०लो०नि०वि०, केन्द्रीय सदन, [illegible]

चण्डीगढ़

संख्या : 23(390)/SE(P)/EE(P)-II / 3403 दिनांक: 30.11.11

सेवा में :

Chairman (E,C & EM)
For kind information pl.
05/12/11

Registrar
National Institute of Technology
Kurukshetra PIN-136119

विषय: C/o Administrative Block at N.I.T., Kurukshetra

मुझे सक्षम अधिकारी के प्रशासनिक अनुमोदन एवं व्यय स्वीकृति के लिए रू० 8,55,34,300/- (रुपये आठ करोड़ पचपन लाख चौंतीस हजार तीन सौ) की प्रशासनिक अनुमति (RE) प्रतियों में भेजने का निर्देश हुआ है । कार्य की आवश्यकता और अनुमान में प्रावधानों को रिपोर्ट में दर्शाया गया है । अनुरोध है कि कार्य की मंजूरी भेजते समय "लेख शीर्ष" जिसके अन्तर्गत व्यय किया जाना है सूचित किया जाए ।

संलग्न: प्रशासनिक अनुमान । दो प्रतियां ।

कार्यपालक अभियंता (यो०)

प्रतिलिपि:-

1. अधीक्षण अभियंता, चण्डीगढ़..... केन्द्रीय परिमण्डल, के०लो०नि०वि०, चण्डीगढ़ ।
2. अधीक्षण अभियंता, चण्डीगढ़ केन्द्रीय वैद्युत परिमण्डल-I, के०लो०नि०वि०, चण्डीगढ़ ।
3. परिरक्षा वास्तुकार (उ०अ०-एक), के०लो०नि०वि०, चण्डीगढ़ ।
4. कार्यपालक अभियंता, कैथल..... केन्द्रीय मण्डल, के०लो०नि०वि०, कैथल ।
5. कार्यपालक अभियंता, कैथल..... केन्द्रीय वैद्युत मण्डल, के०लो०नि०वि०, कैथल ।

कार्यपालक अभियंता (यो०)

Central Public Works Department

State: *J&K.* **Division:** *KCD* **Branch:** *B& R*

Name of Work: **C/o Administrative Block at NIT Kurukshetra.**

Major Head	Minor Head	Detailed Head

This Revised Preliminary Estimate framed by Er. Iqbal Singh, Executive Engineer, Karnal Central Division, CPWD, Karnal and further processed by Er. Tejinder Kumar, Executive Engineer(P)-II, O/o Chief Engineer (NZ-I), CPWD, Chandigarh for the probable cost of Rs. 8,55,34,300/- i/c 3% contingencies

History

Report This revised preliminary estimate amounting to **Rs 8,55,34,300/-** i/c 3% contingencies has been framed to cover up the probable cost of above mentioned work for accord of revised A/A & E/S of the competent authority. The A/A & E/S for the above said work had been received from the Client Department vide letter No. CC/3418/6198-208 dated 24.07.2007 amounting to Rs. 6,59,06,000/- i/c electrical provisions. In this amount the corresponding provisions of civil works was Rs. 4,89,86,540/-. Now as the civil & electrical provisions are more than 10% of the original provisions. Hence this revised preliminary estimate. The details reasons for increase in the cost of this work have been elucidated in the remarks column of the format of this RPE.

Design & Scope: This preliminary estimate is based on preliminary drawings approved by client on dated 04.06.2007, for G.F., F.F., S.F. Now the revised preliminary estimate has been prepared based on the drawings received during execution from Arch. of NIT Authority.

Specifications: CPWD Specifications 2009, vol. I & II with upto date correction slips.

Rates: As per PAR 1992 enhanced by cost index 234 (Base 100) & market rates.

Cost: **Rs. 8,55,34,300/-** i/c 3% contingencies.

W.C. Estt.:- Shall be met out of contingencies.

T&P: Shall be arranged by the contractor, if required.

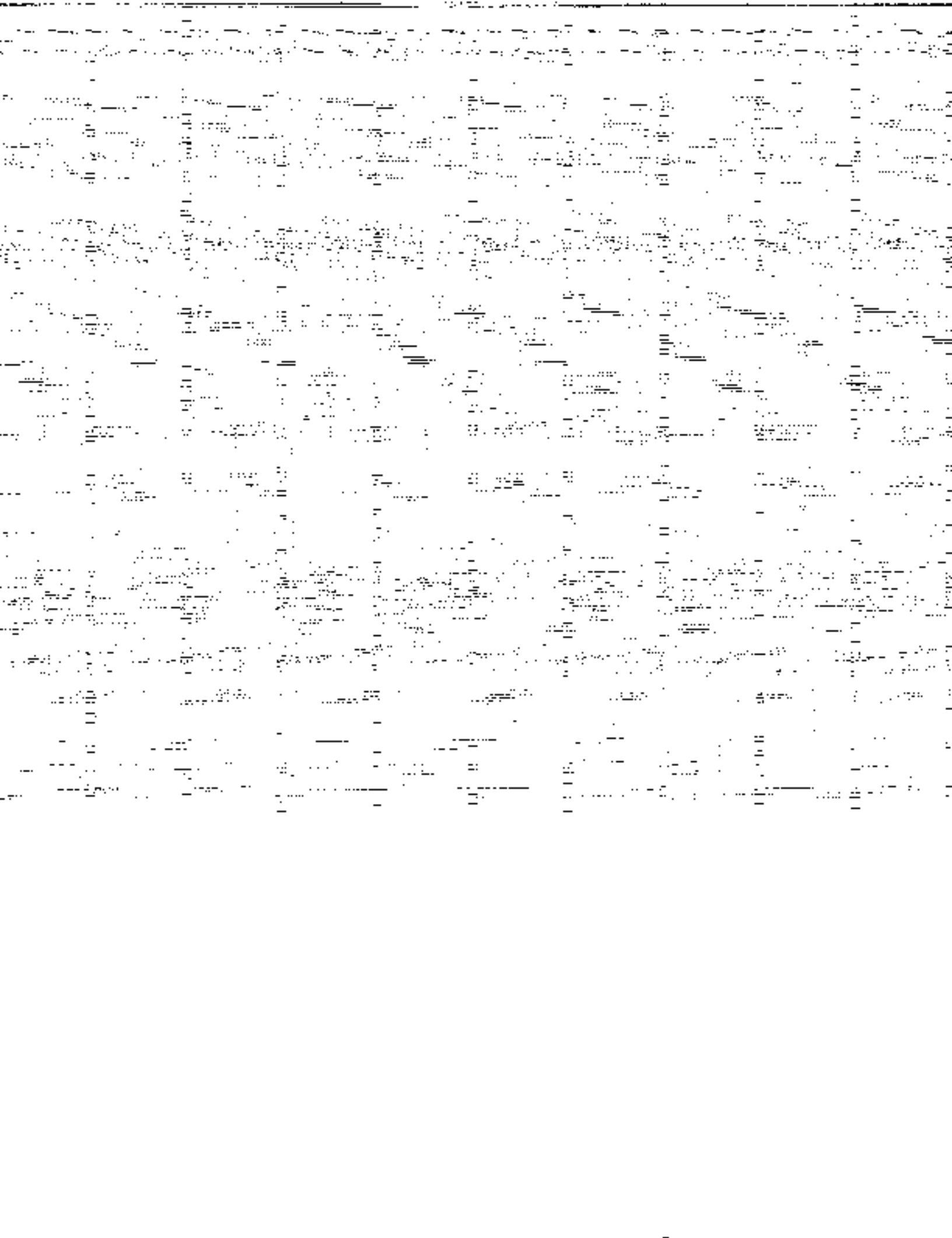
Method: Through contract after call of tenders.

Land: Available.

Time: Work completed.

Assistant Engineer (P)
C.P.W.D., Chandigarh.

Executive Engineer(P)II
C.P.W.D., Chandigarh.



GENERAL ABSTRACT OF COST(REVISED ESTIMATE)

Name of Work: C/o Administrative Block at NIT Kurukshetra.

Description of item	as per original Estimate		Total	Remarks	as per Revised Estimate		Total	Remarks
	Civil work	Electrical work			Civil work	Electrical work		
Main Building	45165108.00	7013963.00	52179071.00	As per Annexure-I & III	55549497.00	7013963.00	62563460.00	As per Annexure-I & III
Development work	1382402.00	9250000.00	10632402.00	As per Annexure-II & III	483110.00	17860521.00	19343631.00	As per Annexure-II & III
Horticulture	239148.00	--	239148.00	As per Annexure-II	313713.00	--	313713.00	As per Annexure-I
			63050621.00				**82220804.00**	
Add 1% cess			630506.00				822208.00	
			63681127.00				**83043012.00**	
Add 3% contingencies			1910434.00				2491290.00	
		Grand Total	**65591561.00**			**Grand Total**	**85534302.00**	
		Say Rs.	**65591600.00**			**Say Rs.**	**85534300.00**	

Assistant Engineer (P)
CPWD, Chandigarh

Executive Engineer(P)II
CPWD, Chandigarh

Superintending Engineer(P)
CPWD, Chandigarh

Revised preliminary estimate amounting to **Rs. 8,55,34,300/-** (Rs. Eight crore Fifty Five lacs Thirty Four Thousand and Three Hundred only) is hereby submitted to Client department for obtaining revised A/A and E/S of the competent authority.

Chief Engineer (NZ-I)
CPWD, Chandigarh

ABSTRACT OF COST

Name of Work: C/o Administrative Block at NIT Kurukshetra.

S.No	Description of item	as per original Estimate				Remarks	as per Revised Estimate (Actual)				Remarks
		Qty	Unit	Rate	Amount		Qty	Unit	Rate	Amount	
	Civil work										
1	RCC framed structure upto six storeys										
1.1	Floor height 3.35mtr. (Office / College / Hospital)	3925.00	sqm	2920.00	11461000.00		4552.00	sqm	2920.00	13291840.00	Plinth area increased as per Archt. Drg. Received during execution from Arch. of NIT resulted in increase in cost of this work
						12360492.00					**14335022.00**
1.2	Every 0.30 m additional height of floor above normal floor height of 3.35 m (125 - 0.55/0.30 = 229.17	3925.00	sqm	229.17	899492.00	**"A"**	4552.00	sqm	229.17	1043182.00	**"A"** -- do--
3	Extra for										
3.1	Every 0.3 mtr. Additional height of floor above normal floor height of 0.65mtr. (on ground floor area only)	1575.00	sqm	125.00	196875.00		1862.00	sqm	125.00	232750.00	--do--
3.2	Resisting earth quake forces	3925.00	sqm	250.00	981250.00		4552.00	sqm	250.00	1138000.00	--do--
3.3	Larger module over 35 sqm.	1279.33	sqm	220.00	281453.00		1279.33	sqm	220.00	281453.00	--do--
3.4	Termite proof treatment (On ground floor area)	1575.00	sqm	75.00	118125.00		1862.00	sqm	75.00	139650.00	--do--
4	Internal water supply & sanitary installations (Office / College)	12360492.00	%	4.00	494420.00		14335022.00	%	4.00	573401.00	--do--
5	External service connection	12360492.00	%	3.75	463518.00		14335022.00	%	3.75	537563.00	--do--
					14896133.00					**17237839.00**	
	Add cost index 134% (approved cost index for kurukshetra 234 as on 30.06.2006 over PAR-92 as base 100) on all items.	14896133.00	%	134.00	19960818.00		17237839.00	%	134.00	23098704.00	
					34856951.00	**'X'**				**40336543.00**	**'X'**

S.No	Description of item	as per original Estimate				Remarks	as per Revised Estimate				Remarks
		Qty	Unit	Rate	Amount		Qty	Unit	Rate	Amount	
	Extra provisions										
1	Glass mosaic tiles	126.00	sqm	1600.00	201600.00	A/R	5.00	sqm	1600.00	8000.00	Extra for provision actual as per detailed drg. receiv from Arch. which result in increase in some items also saving in some oth items as per actu execution at the site.
2	Extra for providing vitrified tiles in lieu of ordinary flooring	1078.00	sqm	1116.85	1203964.00	A/R	1100.00	sqm	1116.85	1228535.00	--do--
3	Extra for providing granite stone flooring in lieu of ordinary flooring	264.00	sqm	2333.80	616123.00	A/R	482.00	sqm	2333.80	1124892.00	--do--
4	Extra for providing aluminium door & windows instead of steel section windows	1828.00	kg	165.80	303082.00	A/R	7877.00	kg	165.80	1306007.00	--do--
5	Extra for earth filling in ground floor due to higher plinth.	1510.00	cum	139.64	210856.00	A/R	1510.00	cum	139.64	210856.00	--do--
6	Extra for water proofing of terrace gardens instead of mudphaska.	460.00	sqm	269.10	123786.00	A/R	1527.87	sqm	269.10	411150.00	--do--
7	Extra for providing aluminium grill instead of M.S.	2352.00	kg	250.00	588000.00	A/R	297.00	kg	250.00	74250.00	--do--
8	Extra for sandtex matt finish on outer surface of building instead of water proofing cement paint.	1025.00	sqm	56.50	57923.00	A/R	5046.00	sqm	56.90	287117.00	--do--
9	Extra for provision of clay tiles on outer surface of building instead of snowcem.	512.00	sqm	350.20	179302.00	A/R	0.00	sqm	350.20	0.00	--do--
10	Extra for providing stainless steel railing for staircase.	307.00	kg	270.85	83151.00	A/R	681.00	kg	270.85	184445.00	--do--

		Qty	Unit	Rate	Amount		Qty	Unit	Rate	Amount	
11	Extra for providing track deck sheets for top dome. (Polycarbonate sheet).	153.00	sqm	4937.00	755361.00	A/R	228.12	sqm	4937.00	1126228.00	--do--
12	Extra for trimix concrete with sub base course 1:5:10 outside the main building	4674.00	sqm	564.87	2640202.00	A/R	4674.00	sqm	564.87	2640202.00	--do--
13	Extra for boundary wall 4' height.	291.00	metre	992.23	288739.00		291.00	metre	992.23	288739.00	--do--
14	Extra for provision of steel gate	450.00	kg	29.15	13118.00		450.00	kg	29.15	13118.00	--do--
15	Extra for provision of truss in slanting from ground level to top of terrace.	7890.00	kg	24.30	191727.00		52780.00	kg	24.30	1282554.00	Increase in weight trusses due to revis structural drawing receiv from architect resulted cost of work as per act execution at the site.
16	Extra for factory made kerb stone.	300.00	metre	200.10	60030.00		0.00	metre	200.10	0.00	--do--
17	Extra for brick work toe-wall	180.00	metre	217.30	39114.00		180.00	metre	217.30	39114.00	
					7556478.00					**10225211.00**	
	Add cost index 40.96% on extra provisions on all except item No. 10 & 11	6717966.00	%	40.96	2751679.00		8914534.00	%	40.96	3651393.00	
					10308157.00	'Y'				**13876604.00**	'Y'
	Total of 'X' + 'Y'				**45165108.00**		**Total of 'X' + 'Y'**			**54213147.00**	

		Qty	Unit	Rate	Amount	Qty	Unit	Rate	Amount	
	More Extra provision as per actual at site which were not covered in PE.									
	Armstrong flase ceiling	0.00	sqm	0.00	0.00	505.00	sqm	900.00	454500.00	
	Aluminium sheet false ceiling	0.00	sqm	0.00	0.00	127.00	sqm	1350.00	171450.00	The items had to executed as per actual s requirement of the cli department which result in increase in ccst of t work..
	Earthen pivot tiles on floor	0.00	sqm	0.00	0.00	444.00	sqm	1600.00	710400.00	
									55549497.00	
	Grand Total				**45165108.00**	**Grand Total**			**55549497.00**	

Assistant Engineer (P),
CPWD, Chandigarh

Executive Engineer(P)II
CPWD, Chandigarh

S.No	Description of item	as per original Estimate				Remarks	as per Revised Estimate				Remark
		Qty	Unit	Rate	Amount		Qty	Unit	Rate	Amount	
	Development work										
1	Overhead tank without independent staging	10000.00	sqm	4.75	47500.00	4.1	13000.00	sqm	4.75	61750.00	
2	Sewer	5600.00	sqm	24.45	136920.00	5.3.	5600.00	sqm	24.45	136920.00	
											356030.0
3	Water supply distribution lines 100mm dia & below	5600.00	sqm	17.90	100240.00	5.4.1	5600.00	sqm	17.90	100240.00	
4	Filter water supply distribution lines	5600.00	sqm	10.20	57120.00	5.4.1	5600.00	sqm	10.20	57120.00	
5	Storm water drain	5600.00	sqm	29.20	163520.00	5.5	As per final bill amount			650000.00	
										1006030.00	
6	Rain water harvesting				200000.00						
					705300.00						
	Add cost index 134% (approved cost index for kurukshetra 234 as on 30.06.2006 over PAR-92 as base 100) on all items except item No. 6.	505300.00	%	134.00	677102.00		356030.00	%	134.00	477080.00	
					1382402.00					**1483110.00**	
	Horticulture Operation	5600.00	sqm	18.25	102200.00		....	....	....	313713.00	
					102200.00						
	Add cost index 134% (approved cost index for kurukshetra 234 as on 30.06.2006 over PAR-92 as base 100) on all items.	102200.00	%	134.00	136948.00		....	....	....	0.00	
					239148.00					313713.00	

Assistant Engineer (P)
CPWD, Chandigarh

Executive Engineer(P)II
CPWD, Chandigarh

Name of Work: O/o Administrative Block at IIT Ropar etc

S.No	Description of item	as per original Estimate				Remarks	as per Revised Estimate				Remarks
		Qty	Unit	Rate	Amount		Qty	Unit	Rate	Amount	
(A)	**Building work (Electrical)**										
1	Providing Internal Electrical Installations	12360492.00	%	12.50	1545062.00		12360492.00	%	12.50	1545062.00	
2	Providing External service connection	12360492.00	%	1.25	154506.00		12360492.00	%	1.25	154506.00	
3	Extra provision for power wiring & power plugs	12360492.00	%	4.00	494420.00		12360492.00	%	4.00	494420.00	
4	Extra provision for telephone conduit & wiring	12360492.00	%	2.00	247210.00		12360492.00	%	2.00	247210.00	
5	Extra for lightening conductor	12360492.00	%	1.00	123605.00		12360492.00	%	1.00	123605.00	
6	Extra for LAN & fire alarm conduit	12360492.00	%	1.00	123605.00		12360492.00	%	1.00	123605.00	
7	Extra for Energy saving fittings	12360492.00	%	2.50	309012.00		12360492.00	%	2.50	309012.00	
					2997420.00					**2997420.00**	
	Add cost index 134% (approved cost index for Kurukshetra 214 as on 30.06.2006 over PAR-92 as base 100) on all items.	2997420.00	%	134.00	4016543.00		2997420.00	%	134.00	4016543.00	
					7013963.00					**7013963.00**	
(B)	**Development work (Electrical)**										
1	Provision for feeder pillars, Essential & Non essential Panels + LT cables		L.S.		1000000.00			L.S.		1000000.00	
2	Provision for compound lighting including cables poles & fittings etc		L.S.		500000.00			L.S.		500000.00	
3	Provision for fire Alarm system		L.S.		1000000.00			L.S.		1000000.00	

4	Provision for Acs 150 Ton capacity @ 25,000/- per ton including stabilizers	L.S.	3750000.00	L.S.	3750000.00	
5	Provision for 2 Nos 13 passengers lift	L.S.	3000000.00	L.S.	3000000.00	
			9250000.00		**9250000.00**	
	Electrical provisions (Additional)					
6	SITC of 500 KVA outdoor type sub station equipment for Admn. Block building at NIT Kurukshetra				1720950.00	
7	a) Provision of Hot & Cold cassette type Air conditioners				3147371.00	As per the additiona request & A/A & E/ issued by NIT author
	b) SITC of 320 KVA DG set at NIT Kurukshetra				3742200.00	
					17860521.00	

Assistant Engineer (P),
CPWD, Chandigarh

Executive Engineer(P)II
CPWD, Chandigarh

Item No. 16.4 **To consider & approve the revised cost estimate for Providing & Installation of Electrical Sub-Station HT/LT Distribution including Street Lightening & Feeder Pillar etc. in Non-Residential area at NIT, Kurukshetra.**

The above mentioned work was approved in the 11th meeting of B & WC vide Agenda Item No.11.3 held on dated 28.07.2009 for an amount of Rs.801.40 lacs which includes (i) Providing & Installation of Electrical Sub-Station HT/LT Distribution i/c street lighting & feeder pillars etc. non residential Area at NIT, Kurukshetra for an amount of Rs. 578.00 lacs and (ii) Providing & Installation of Electrical sub-station HT/LT Distribution and fidder pillars in residential area at NIT, Kurukshetra for an amount of Rs. 223.40 lacs. It was also discussed in the 15th meeting of B& WC while reporting on the action taken of 14th meeting of B&WC vide Item No. 14.1 and it was decided that the work of Providing & Installation of Electrical sub-station HT/LT Distribution and feeder pillars in residential area at NIT, Kurukshetra should be taken in the 2nd phase. During execution of work lot of changes were made in non-residential area such as reduced length of LT Cables from Sub-Stations to existing buildings/hostels etc., feeder pillar added in between them, increase in load of the various buildings, rating & capacity of cable, switch gears. Additional works like providing HT supply to Mega Boys Hostel & Administrative Block, replacement of old LT Panels of existing buildings & providing HT service/Bulk supply connection from 33 KVA Sub-Station, UHBVN to metering room near main gate on Kirmich Road were executed during construction. Now, the Chief Engineer, CPWD has submitted the revised cost estimate amounting to Rs. 724.90 lacs for non-residential area for A/A & E/S.

The B & WC may consider and approve the revised cost estimate for the above cited work for an amount of Rs. 724.90 lacs.

Estimate has been checked and may send for approval of the competent authority.

30/8/12

HC to prepare the noting for approval of competent authority.

भारत सरकार
कार्यालय मुख्य अभियन्ता(वै0)उ0 क्षे0
केन्द्रीय लोक निर्माण विभाग, पूर्वी खण्ड–1, तल–5
रामा कृष्णा पुरम, नई दिल्ली–110066
फैक्स न0 011–26101469 दूरभाष 011–26182195
E-mail: ceenzpwd@ rediffmail.com

HC/J.E. (Electrical) 23/8/12

संः 42/26/11/EE(E) P-I/CE(E)NR/2012 13447 दिनांकः 07/8/2012

Chairman (EC & EM)

सेवा में,

The Director
National Institute of Technology
(Institute of National Importance)
KURUKSHETRA (Hr)

Director's Office
Received on 9/8/12
Time 5:00 pm
NIT, KURUKSHETRA.

विषयः– **Revised Preliminary Estimate for A/A & E/S and release of additional funds.**

कार्य का नामः–**Providing and installation of Electrical Substation HT/LT Distribution including street lighting and Feeder Pillars at non-residential area at NIT KURUKSHETRA.**

संदर्भः– Your office letter No. C.C./No.49/1212 dated 05.03.2012

उपरोक्त विषय से संबंधित आपके संदर्भित पत्र के अनुसार संशोधित प्रारम्भिक अनुमान रू0 7,24,89,538/– (सात करोड चौबीस लाख नवासी हजार पांच सौ अड़तीस) का मुख्य अगियन्ता(वै0)उ0 क्षे0 की स्वीकृति के पश्चात आपके कार्यालय को सक्षम अधिकारी से प्रशासनिक अनुमोदन एवं व्यय स्वीकृति प्रदान करने हेतु भेजा जाता है !

यह पत्र मुख्य अभियन्ता(वै0)उ0 क्षे0 की अनुमति से जारी किया जाता है !

संलग्नः Revised Preliminary Estimate Amounting Rs.7,24,89,538/–

अधीक्षण अभियन्ता(वै0)यो0एंव प्रशा0

प्रतिलिपिः

1. अधी0अभि0(वै0)च0के0वै0परि0–I, के0ला0नि0वि0, केन्द्रीय सदन तीसरा तल सैक्टर–9, चण्ड़ीगढ़ के पत्र सं 23(130)/CCEC – I/2012 1039 dated 04.06.2012 के अनुसार सूचनार्थ !

अधीक्षण अभियन्ता(वै0)यो0एंव प्रशा0

N.I.T. KURUKSHETRA
Dy. No. 5361 Date 9/8/12

R	DR()	D				CoE	C
E	M					CD	Me
Hi	CW	W			PC	DS	EO
PE	CA	P			RC		
GA	A	SO	EO	DS	PS	PC	

ghuraj sir Hi 6

भारत सरकार
केन्द्रीय लोक निर्माण विभाग
अधीक्षण अभियंता (वैद्युत)
चण्डीगढ केन्द्रीय वैद्युत परिमंडल 1, केलोनिगि,
केन्द्रीय सदन, सैक्टर-9, चण्डीगढ
दूरभाष एवं फैक्स संख्या 0172-2703111
दूरभाष -0172-2741728

GOVT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT
Superintending Engineer(Elect),
Chandigarh Central Electrical Circle, CPWD,
Kendriya Sadan, Sector 9, Chandigarh
Phone & FAX No. 0172-2703111,
Phone 0172-2741728

सं0अ.अ.व ई.वे.परि-1/ 23(130) 1576 दि0 28/8/12

सेवा में,

Sh K.K.Singla
S.D.O(Elect)-cum-incharge(E&M),
O/o Hon. Administration block,
NIT, Kurukshetra.

Pvt. Ltd. (EM) | EXER

31/8/12

N.I.T Revised Preliminary Estimate for AA & ES and release of additional funds for the work "Providing & Installation of Electrical Sub Station HT/LT Distribution including Street lighting and feeder pillars at non-residential area at NIT Kurukshetra.

Ref Letter no 42/26/11/EE(E)/P-IV/CE[NR/2012/1344 (Hindi) dated 07.08.2012 of Superintending Engineer(Elect.)Planning & Admin. O/o The C.E(Elect.)NR, CPWD, New Delhi

Chief Engineer(Elect)NR vide their above referred letter has submitted the revised preliminary estimate for accord of AA & ES. It may kindly be seen that the work have already been executed as per the requirement of NIT authorities and to ensure earliest possible accord of AA&ES and placement of funds with the Executive Engineer(Elect.) Karnal Central Electrical Division is essential to avoid problems related to funds and to enable functional adjustments.

It is therefore requested that necessary AA&ES be conveyed at your(E) Hon'ble Lieutenant Governor(Elect)NR(CPWD)

(S.O. विमल कुमार)
अधीक्षण अभियंता (वैद्युत),
चण्डीगढ केन्द्रीय वैद्युत, परिमंडल-1,

Copy to

1. Chief Engineer(Elect)NR CPWD Opp Bhai Veer Singh Marg, New Delhi for information please.

2. Executive Engineer(Elect.) Karnal Central Electrical Division I, Karnal. He is directed to expedite action in the matter with the client and to get the revised AA&ES and placement of funds

अधीक्षण अभियंता (वैद्युत),

भारत सरकार

GOVERNMENT OF INDIA

चण्डीगढ़ केन्द्रीय वैधुत परिमण्डल-1

CHANDIGARH CENTRAL ELECTRICAL CIRCLE-I

केन्द्रीय लोक निर्माण विभाग
चण्डीगढ़

Central Public Works Department
Chandigarh

REVISED PRELIMINARY ESTIMATE

कार्य का नाम:
Name of work : Providing & Installation of Substation HT/LT Distribution i/c Street Lighting & Feeder Pillar in Non Residential Area at NIT Kurukshetra

अनुमानित लागत : रुपये:
ESTIMATED COST Rs. 7,24,89,538

कार्यालय :–
अधीक्षण अभियन्ता (वै0),
चण्डीगढ़ केन्द्रीय वैधुत परिमण्डल-1,
केन्द्रीय लोक निर्माण विभाग,
तीसरा तल, केन्द्रीय सदन,
चण्डीगढ़।

भारत सरकार
GOVERNMENT OF INDIA

चण्डीगढ़ केन्द्रीय वैधुत परिमण्डल-1
CHANDIGARH CENTRAL ELECTRICAL CIRCLE-I

केन्द्रीय लोक निर्माण विभाग
चण्डीगढ़

Central Public Works Department
Chandigarh

प्रारम्भिक अनुमान
REVISE PRELIMINARY ESTIMATE

कार्य का नाम:
Name of work: Providing & Installation of Sub station, HT/LT Distribution s/c Street Lighting & Feeder Pillar in Non Residential Area at NIT Kurukshetra.

अनुमानित लागत : रुपये:
ESTIMATED COST Rs. 7,24,89,538/-

कार्यालय :—
अधीक्षण अभियन्ता (वै0)
चण्डीगढ़ केन्द्रीय वैधुत परिमण्डल-1
केन्द्रीय लोक निर्माण विभाग,
तीसरा तल, केन्द्रीय सदन,
चण्डीगढ़।

CENTRAL PUBLIC WORKS DEPARTMENT

State: Haryana
Branch: E&M

Division: Karnal Central Elect. Divn.Karnal
Sub-Division: Karnal Central Elect. Sub-Divn

Name of work: Providing & Installation of Electric Sub-Station, HT/ LT Distribution including street lighting & Feeder Pillar in Non-Residential area at NIT Kurukshetra.

Head of Account: 8443 Deposit work

This Revised Preliminary Estimate has been framed by Er. Narender Kaushal, Executive Engineer (Elect.), Karnal Central Elect. Division, CPWD, Karnal and processed in the office of SE(E) CCEC-1, Chandigarh for the probable cost of Rs.7,24,89,538/- including 3% contingencies.

REPORT

History: The Admn. Approval and Expenditure sanction for the above work was given by NIT vide their letter No. CC/ No/610/7167 dt. 13/8/2009 for Rs. 57869147/- only. As per discussions/ meetings held with NIT authorities from time to time lots of changes made in the original scheme of work, like to reduce the length of LT cables from sub stations to existing building / hostels etc, Feeder pillars added in between them. Due to increase in load of the various buildings, ratings & capacity of cable switch gears increased accordingly. Some additional work like providing HT supply to Mega boys hostel & Admn block, replacement of old LT panels of existing buildings and providing HT service connection from 33 KV UHBVN to meeting room in NIT campus requested by NIT authorities to include in the above mentioned work as these related works are part of original HT/LT distribution work. Considering all above factor revised preliminary estimate has been prepared for obtaining Admn approval & Expenditure sanction of the competent authority. The reasons for cost variation have also been included in PE in remarks column.

Design & Scope: The following provisions have been kept in this estimate:

1. Three Nos sub stations inter connected with each other having 2x1000 KVA and 2x1600 KVA capacity transformers.
2. 4 Nos. VCB panel board in each substation, LT panel & capacitor pane of suitable capacity.
3. 3 Nos. VCB panel board and metering panel in metering room of the campus.
4. All the sub stations inter linked with 3x300 Sq.mm XLPE insulated 11 KV cable and 3x185 Sq.mm XLPE insulated 11 KV cable inside the substation from HT panel up to transformer rooms.
5. Suitable number of copper plate earthing sets for neutral / body earthing of transformers and body Earthing of LT panels/ capacitor panels etc.
6. Suitable capacity LT cables from substation to feeder pillar and form feeder pillars to existing Buildings.
7. Feeder pillars for street lighting and for existing buildings etc.
8. Suitable numbers of G.I plate/ GI pipe earthing.
9. 7.5 meter height octagonal pole for inside the campus and 9 mtr height octagonal poles for boundary Wall of the campus.
10. Suitable size GI/ HDPE pipes for laying of LT/HT cables.
11. 3x300 Sq.mm XLPE insulated 11 KV cable from substation No. 2 to Mega boys hostel and from 33 KV UHVBN to metering panel room and 3x185 Sq.mm XLPE insulated 11 KV cable for New Admn Block.

Method: Through Contract

Rates: DSR-2012/ Market Rate

Time: Six Months

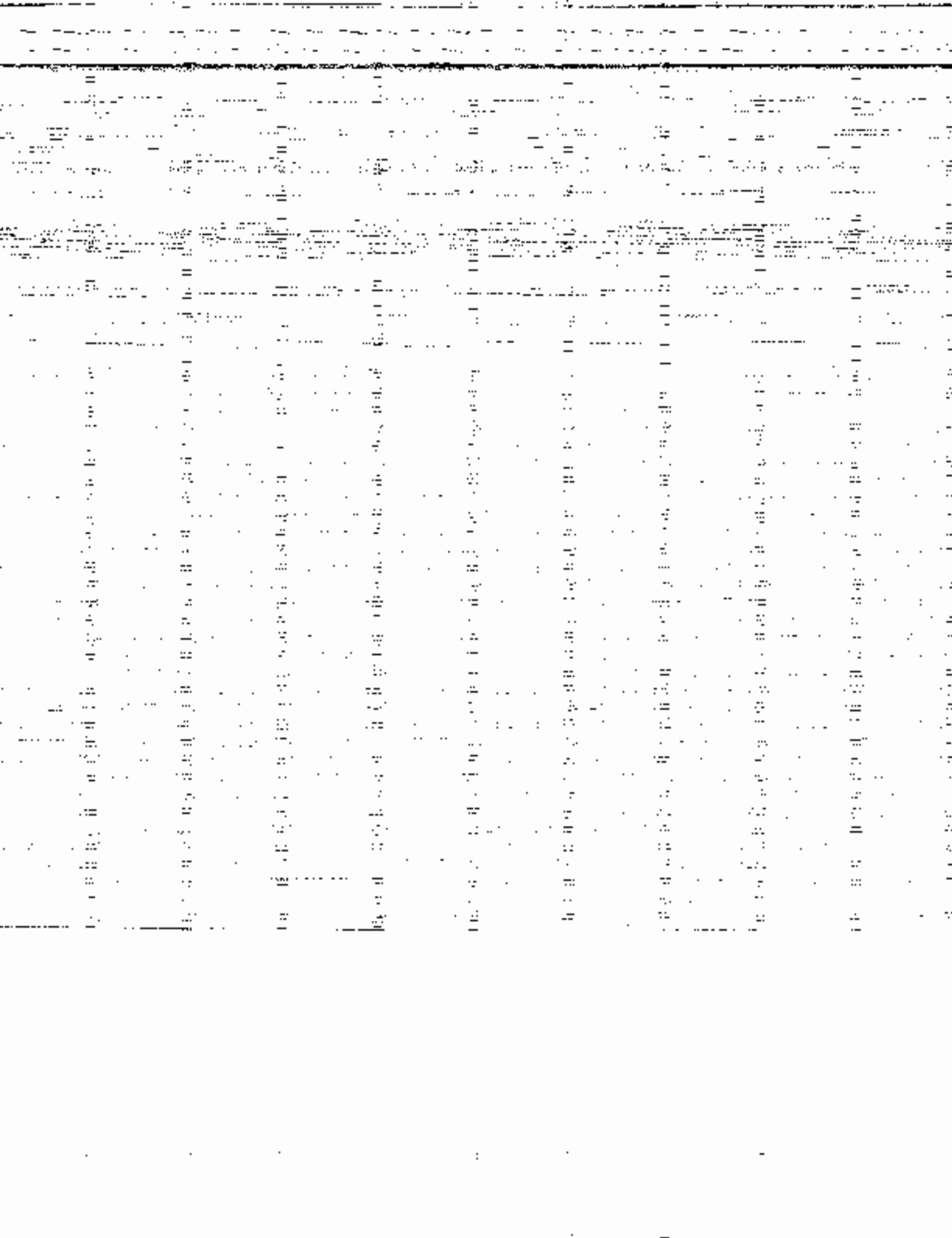
Cost: Rs. 7, 24, 89,538/including 3% contingencies

Assistant Engineer (E)P Chandigarh Cent. Elect. Circle-I CPWD, Chandigarh	Executive Engineer (E)P Chandigarh Cent. Elect. Circle-I CPWD, Chandigarh	Superintending Engineer (E) Chandigarh Cent. Elect. Circle-I CPWD, Chandigarh

3/8/2012

CE (E) NR CPWD
East Block-I, Level-5
R.K. Puram, New Delhi

HISKNI 12



Abstract of Original and Revised Estimate

State: Haryana | Division:

Branch: E&M | Sub-Divn

Name of work: Providing & Installation of Electric Sub-Station, HT/ LT Distribution including street lighting & Feeder Pillar in Non-Residential area at NIT Kurukshetra.

	Sub-Head of estimate and Items of work	Original estimates Qty.	Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty	Rate	Unit	Cost	Difference	Reason
	SUB HEAD-I (EQUIPMENTS - HT PANEL BOARD)											
	INCOMING H.T PANEL - Institutional					**INCOM.NG H.T PANEL - Institutional**						
1	Supplying, installation, testing & commissioning of indoor type floor mounted metal clad, 11 KV VCB panel with 4 No. VCBs, totally enclosed & fully interlocked, horizontal drawout, horizontal isolation type breaker as per IS 13118, as ammended up to date and additional specifications, having capacitities as mentioned below, single break, trip free mechanism, motorised charged and auto closing breaker, suitable for use on 11 KV, 3 Phase, 50 Hz A.C supply with short circuit fault level of 350 MVA. complete with self contained, fully interlocked, rack in and rack out mechanism, air insulated but encapsulated copper bus bars of 630 Amps capacity, suitable power pack of 24 volt DC, breaker featured with mechanical ON/OFF indicator with hand trip device, spring release coil, shunt trip coil and auxiliary switch of 4 NO + 4 NC and equipped with following switchgears and accessories including connections suitable for 3 x 400 sq.mm and 3 x 240 sq mm XLPE 11 KV cable (cable entry from bottom sides), end termination itch gears: Note: The drawing should be got					Supplying, installation, testing & commissioning of indoor type floor mounted metal clad, 11 KV VCB panel with 4 No. VCBs, totally enclosed & fully interlocked, horizontal drawout, horizontal isolation type breaker as per IS 13118, as ammended up to date and additional specifications, having capacitities as mentioned below, single break, trip free mechanism, motorised charged and auto closing breaker, suitable for use on 11 KV, 3 Phase, 50 Hz A.C supply with short circuit fault level of 350 MVA. complete with self contained, fully interlocked, rack in and rack out mechanism, air insulated but encapsulated copper bus bars of 630 Amps capacity, suitable power pack of 24 volt DC, breaker featured with mechanical ON/OFF indicator with hand trip device, spring release coil, shunt trip coil and auxiliary switch of 4 NO + 4 NC and equipped with following switchgears and accessories including connections suitable for 3 x 400 sq.mm and 3 x 240 sq.mm XLPE 11 KV cable (cable entry from bottom sides), end termination witch gears: Note: The drawing should be got						

	Sub-Head of estimate and	Original estimates					Sub-Head of estimate and	Revised estimates					Difference	Reason
	Items of work	Qty.		Rate	Unit	Cost	Items of work (REVISED)	Qty		Rate	Unit	Cost		
A	INCOMING						INCOMING							
(a)	1 No. 630 Amp. VCB						1 No. 630 Amp. VCB							
(b)	1 No. 11 KV/ 110 Volts PT Class 0.5 accuracy and 100 VA burden with 1 No. Volmeter (0-15 KV) digital type selector sw itch for voltmeter and MCB for HT metering upto 12 KV on incomer.						1 No. 11 KV/ 110 Volts PT Class 0.5 accuracy and 100 VA burden with 1 No. Volmeter (0-15 KV) digital type selector switch for voltmeter and MCB for HT metering upto 12 KV on incomer.							
(c)	1 No. (0-300A) dual scale Ammeter, digital type, selector swtiches for ammeters.						1 No. (0-300A) dual scale Ammeter, digital type, selector swtiches for ammeters.							
(d)	3 No. - microprocessor based numerical relay with O/L, E/F and S/C protection.						3 No. - microprocessor based numerical relay with O/L, E/F and S/C protection.							
(e)	1 No., 1 set of dual core dual ratio 3 CTs 300/ 150/ 5/ 5 A of 15VA burden and accuracy Class - 0.5 for metering and class 5 P 10 for protection.						1 No., 1 set of dual core dual ratio 3 CTs 300/ 150/ 5/ 5 A of 15VA burden and accuracy Class - 0.5 for metering and class 5 P 10 for protection.							
B	OUTGOING						OUTGOING							
(a)	3 Nos 630 A VCB						3 Nos 630 A VCB							
(b)	3 Nos - (0-100A) Ammeters, dual scale digital type & selector switches for Ammeters.						3 Nos - (0-100A) Ammeters, dual scale digital type & selector switches for Ammeters.							
(c)	9 Nos, Microprocessor based numerical relays with O/L, E/F & S/C protections.						9 Nos, Microprocessor based numerical relays with O/L, E/F & S/C protections.							
(d)	3 Nos 1 - set of dual core dual ration 3 CTs 100/ 500/ 5/ 5 A of 15 VA burden and accuracy Class -1.0 for metering and class 5 P 10 for protection.	3	sets	1588608.00	set	4765824.00	3 Nos 1 - set of dual core dual ration 3 CTs 100/ 500/ 5/ 5 A of 15 VA burden and accuracy Class -1.0 for metering and class 5 P 10 for protection.	3	sets	1225000.00	set	3675000.00	-1090824.00	As per actual

	Sub-Head of estimate and Items of work	Original estimates Qty.		Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty		Rate	Unit	Cost	Difference	Reason
2	Supplying, installation, testing & commissioning of indoor type floor mounted metal clad, 11 KV VCB panel with 3 Nos, VCBs, totally enclosed & fully interlocked, horizontal drawout, horizontal isolation type breaker as per IS 13118, as amended up to date and additional specifications, having capacities as mentioned below, single break, trip free mechanism, motorised charged and auto closing breaker suitable for use on 11 KV, 3 Phase, 50 Hz A.C supply with short circuit fault level of 350 MVA complete with self contained fully interlocked, rack in and rack out mechanism, air insulated but encapsulated copper bus bars of 630 amps capacity, suitable power pack of 24 Volt D.C breaker featured with mechanical ON/OFF indicator with hand trip device, spring release coil, shunt trip coil and auxiliary switch of 4 NO + 4 NC and equipped with following switchgears and accessories including connections suitable for 3 x 400 sq.mm and 3 x 240 sq.mm XLPE 11 KV cable (cable entry from bottom side) end termination with heat itch gears: Note: The drawing should be got ap						Supplying, installation, testing & commissioning of indoor type floor mounted metal clad, 11 KV VCB panel with 3 Nos, VCBs, totally enclosed & fully interlocked, horizontal drawout, horizontal isolation type breaker as per IS 13118, as amended up to date and additional specifications, having capacities as mentioned below, single break, trip free mechanism, motorised charged and auto closing breaker suitable for use on 11 KV, 3 Phase, 50 Hz A.C supply with short circuit fault level of 350 MVA complete with self contained fully interlocked, rack in and rack out mechanism, air insulated but encapsulated copper bus bars of 630 amps capacity, suitable power pack of 24 Volt D.C breaker featured with mechanical ON/OFF indicator with hand trip device, spring release coil, shunt trip coil and auxiliary switch of 4 NO + 4 NC and equipped with following switchgears and accessories including connections suitable for 3 x 400 sq.mm and 3 x 240 sq.mm XLPE 11 KV cable (cable entry from bottom side) end termination with heat itch gears: Note: The drawing should be got ap							
A	**INCOMING**						**INCOMING**							
(a)	1 No. 630 Amp. VCB						1 No. 630 Amp. VCB							
(b)	1 No. 11 KV/110 Volts PT Class 0.5 accuracy and 100 VA burden with 1 No. Voltmeter (0-15 KV) digital type selector switch for voltmeter and MCB for HT metering upto 12 KV on incomer.						1 No. 11 KV/110 Volts PT Class 0.5 accuracy and 100 VA burden with 1 No. Voltmeter (0-15 KV) digital type selector switch for voltmeter and MCB for HT metering upto 12 KV on incomer.							
(c)	1 No. (0-300A) dual scale Ammeter, digital type selector switches for ammeters.						1 No. (0-300A) dual scale Ammeter, digital type, selector switches for ammeters.							
(d)	1 No. - microprocessor based numerical relay with O/L, E/F and S/C protection.						1 No. - microprocessor based numerical relay with O/L, E/F and S/C protection.							
(e)	1 No. 1 Set of dual core dual ratio 3 CTs 300/ 150/ 5/ 5 A of 15 VA burden and accuracy class- 0.5 for metering and class 5 P 10 for protection.						1 No. 1 Set of dual core dual ratio 3 CTs 300/ 150/ 5/ 5 A of 15 VA burden and accuracy class- 0.5 for metering and class 5 P 10 for protection.							Earlier 3 Nos VCB Panel was

	Sub-Head of estimate and	Original estimates					Sub-Head of estimate and	Revised estimates					Difference	Reason
	Items of work	Qty.		Rate	Unit	Cost	Items of work (REVISED)	Qty		Rate	Unit	Cost		
B	OUTGOING						OUTGOING							proposed for residential area. Later it was decided to provide New HT supply system to Non-Resdl. Area of the campus only.As per actual
(a)	2 Nos 630 A VCB						2 Nos 630 A VCB							
(b)	2 Nos - (0-100A) Ammeters, dual scale digital type & selector switches for Ammeters.						2 Nos - (0-100A) Ammeters, dual scale digital type & selector switches for Ammeters.							
(c)	6 Nos, Microprocessor based numerical relays with O/L, E/F & S/C protections.						6 Nos, Microprocessor based numerica relays with O/L, E/F & S/C protections.							
(d)	2 Nos 1 - set of dual core dual ration 3 CTs 100/ 500/ 5/ 5 A of 15 VA burden and accuracy Class -1.0 for metering and class 5 P 10 for protection.	2	set	1176746.00	set	2353492.00	2 Nos 1 - set of dual core dual ration 3 CTs 100/ 500/ 5/ 5 A of 15 VA burden and accuracy Class -1.0 for metering and class 5 P 10 for protection.	1	set	825000.00	set	825000.00	-1528492.00	
	H.T METERING													
3	Supplying, installation, testing and commissioning of compartmentalized cubical type floor mounted self supported H.T metering panel of suitable size with cable entry space on both sides and having suitable arrangement lockable fabricated with 2mm thick CRCA sheet with supplying and fixing following mountings therein duly approved and tested by HSEB, Haryana including powder coated painting with one coat of red oxide paint and two coats of grey colour paint and wiring connections etc. as required.						Supplying, installation, testing and commissioning of compartmentalized cubical type floor mounted self supported H.T metering panel of suitable size with cable entry space on both sides and having suitable arrangement lockable fabricated with 2mm thick CRCA sheet with supplying and fixing following mountings therein duly approved and tested by HSEB, Haryana including powder coated painting with one coat of red oxide paint and two coats of grey colour paint and wiring connections etc. as required.							
(i)	HT CT's ratio 60/5 Amp with ratio burden of 10VA/ Phase class 0.5 accuracy or suitable capacity CT as recommended by PSEB Punjab - 3 Nos						HT CT's ratio 60/5 Amp with ratio burden of 10VA/ Phase class 0.5 accuracy or suitable capacity CT as recommended by PSEB Punjab - 3 Nos							
(ii)	P.T 11 KV/ 100 Volts 200 VA burden per phase Class 0.5 - 1 No.						P.T 11 KV/ 100 Volts 200 VA burden per phase Class 0.5 - 1 No.							
(iii)	Digital trivectometer 3 phase 4 wire 11 KV digital CT operated class - 0.5 with suitable CT ratio, 11 KV/ 110 V - 1 No.						Digital trivectometer 3 phase 4 wire 11 KV digital CT operated class - 0.5 with suitable CT ratio, 11 KV/ 110 V - 1 No.							
(iv)	11 KV terminal block - 1 No.	1	set	132550.00	each	132550.00	11 KV terminal block - 1 No.	1	set	110000.00	each	110000.00	-22550.00	As per actual
	TOTAL OF SUB HEAD-I					**7251866.00**						**4610000.00**	**-2641866.00**	-
	SUB HEAD - II (TRANSFORMER)						SUB HEAD - II (TRANSFORMER)							

	Sub-Head of estimate and	Original estimates					Sub-Head of estimate and	Revised estimates					Difference	Reason
	Items of work	Qty.		Rate	Unit	Cost	Items of work (REVISED)	Qty		Rate	Unit	Cost		
1	Supplying, installation, testing and commissioning of 1000 KVA, 11/0.433 KV, 3 phase, 50Hz, Dyn11, indoor ONAN type, copper wound transformer with OFF load tap changing arrangement on HV side in steps of +/- 2.5% +/- 5% & -7.5% having cable end boxes on HV side suitable for 3 x 240 sq.mm XLPE cable of 11 KV grade and 2500 Amp bus trunking arrangement on LV side complete with all accessories including first filling of filtered dehydrated oil and confirming to IS 2026 (Part 1 to Part 5) & as per specification attached complete in all respects as required at site.	2	Nos	941397.00	each	1882794.00	Supplying, installation, testing and commissioning of 1000 KVA, 11/0.433 KV, 3 phase, 50Hz, Dyn11, indoor ONAN type, copper wound transformer with OFF load tap changing arrangement on HV side in steps of +/- 2.5% +/- 5% & -7.5% having cable end boxes on HV side suitable for 3 x 240 sq.mm XLPE cable of 11 KV grade and 2500 Amp bus trunking arrangement on LV side complete with all accessories including first filling of filtered dehydrated oil and confirming to IS 2026 (Part 1 to Part 5) & as per specification attached complete in all respects as required at site.	2	Nos	1000000.00	each	2000000.00	117206.00	As per actual
2	Supplying, installation, testing and commissioning of 1250 KVA, 11/0.433 KV, 3 Phase, 50 Hz, Dyn11, indoor ONAN type, copper wound transformer with OFF load, tape changing arrangement on HV side in steps of +/- 2.5% +/- 5% & -7.5% having cable end boxes on HV side suitable for 3 x 240 sq.mm XLPE cable of 11 KV grade and 2500 Amp bus trunking arrangement on LV side complete with all accessories including first filling of filtered dehydrated oil and confirming to IS 2026 (Part 1 to Part 5) & as per specification attached complete in all respects as required at site.	2	Nos	1094374.00	each	2188748.00	Supplying, installation, testing and commissioning of 1250 KVA, 11/0.433 KV, 3 Phase, 50 Hz, Dyn11, indoor ONAN type, copper wound transformer with OFF load, tape changing arrangement on HV side in steps of +/- 2.5% +/- 5% & -7.5% having cable end boxes on HV side suitable for 3 x 240 sq.mm XLPE cable of 11 KV grade and 2500 Amp bus trunking arrangement on LV side complete with all accessories including first filling of filtered dehydrated oil and confirming to IS 2026 (Part 1 to Part 5) & as per specification attached complete in all respects as required at site.	2	Nos	1125000.00	each	2250000.00	61252.00	

	Sub-Head of estimate and	Original estimates					Sub-Head of estimate and	Revised estimates					Difference	Reason
	Items of work	Qty.		Rate	Unit	Cost	Items of work (REVISED)	Qty		Rate	Unit	Cost		
3	Supplying, installation, testing and commissioning of 800 KVA, 11/0.433 KV, 3 Phase, 50 Hz, Dyn11, indoor ONAN type, copper wound transformer with OFF load, tape changing arrangement on HV side in steps of +/- 2.5% +/- 5% & -7.5% having cable end boxes on HV side suitable for 3 x 240 sq.mm XLPE cable of 11 KV grade and 2500 Amp bus trunking arrangement on LV side complete with all accessories including first filling of filtered dehydrated oil and confirming to IS 2026 (Part 1 to Part 5) & as per specification attached complete in all respects as required at site.	2	Nos	817839.00	each	1635678.00	Supplying, installation, testing and commissioning of 1600 KVA, 11/0.433 KV, 3 Phase, 50 Hz, Dyn11, indoor ONAN type, copper wound transformer with OFF load, tape changing arrangement on HV side in steps of +/- 2.5% +/- 5% & -7.5% having cable end boxes on HV side suitable for 3 x 185 sq.mm XLPE cable of 11 KV grade and 3000 Amp bus trunking arrangement on LV side complete with all accessories including first filling of filtered dehydrated oil and confirming to IS 2026 (Part 1 to Part 5) & as per specification attached complete in all respects as required at site.	2	Nos	1435000.00	each	2870000.00	1234322.00	Due to increase in load of the various buildings by NIT authorities 800 KVA capacity transformers can not take the additional load so capacity of the transformers enhanced according to the load requirement.
4	Supplying, installation, testing and commissioning of following sizes of Pre-fabricated sandwitched bus trucking suitable for 415 volt 3 phase 4 wire 50 Hz AC supply system (between transformer's LT side & incomer of LT Panel side) of aluminium bus bars complete with bends, expansion joints, fire barriers, copper flexible end connections at both ends earthing with 2 runs of copper earth of size 25mm x 5mm strips etc. including necessary supports etc. as per speciications attached as required.						Supplying, installation, testing and commissioning of following sizes of Pre-fabricated sandwitched bus trucking suitable for 415 volt 3 phase 4 wire 50 Hz AC supply system (between transformer's LT side & incomer of LT Panel side) of aluminium bus bars complete with bends, expansion joints, fire barriers, copper flexible end connections at both ends earthing with 2 runs of copper earth of size 25mm x 5mm strips etc. including necessary supports etc. as per speciications attached as required.							At Sub-station No.3 Transformer s rooms are at some distance from LT Panel room so it was not possible to provide bus trunking arrangemen as per actualt
4.1	1600 Amps (2 Transformer to L.T Panel)	32	mtrs	12356.00	metre	395392.00	1600 Amps (2 Transformer to L.T Panel)	-		-	-	0.00	-395392.00	
4.2	2000 Amps (2 Transformer to L.T Panel)	32	mtrs	15062.00	metre	481984.00	2000 Amps (2 Transformer to L.T Panel)	32	mtrs	19300.00	metre	617600.00	135616.00	
4.3	2500 Amps (2 Transformer to L.T Panel)	32	mtrs	18828.00	metre	602496.00	2500 Amps (2 Transformer to L.T Panel)	32	mtrs	22150.00	metre	708800.00	106304.00	

Sub-Head of estimate and Items of work	Original estimates Qty.		Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty		Rate	Unit	Cost	Difference	Reason
						Supplying and laying of 5 Nos 3½ core x 630 sq.mm XLPE aluminium conductor armoured cable of 1.1 KV grade in ground in the existing pipe/ in existing open duct including fabrication, supp ying and installation of factory built cable end box on transformer suitable for 5 Nos 3½ x 630 sq.mm cables with providing and fixing of brass compression glands for 5 x 3½ x 630 sq.mm UG cable including making connections, testing etc. as required.							At Sub-station No.3 Transformers rooms are at some distance from LT Panel room so it was not possible to provide bus trunking arrangemen so 5 No LT
						a) Length of cable 48 mtrs	1	Job	920235.00	Job	920235.00	920235.00	cable of size 3x1/2
						b) Length of cable 40 mtrs	1	Job	779226.00	Job	779226.00	779226.00	x630sqmm laid from LT panel room upto both the transformer rooms laid as per actualas per actualt
	TOTAL OF SUB HEAD-II				7187092.00						10145861.00	2958769.00	
	SUB HEAD - III (MAIN L.T PANEL)					SUB HEAD - III (MAIN L.T PANEL)							

	Sub-Head of estimate and	Original estimates				Sub-Head of estimate and	Revised estimates					Difference	Reason
	Items of work	Qty.		Rate	Unit	Cost	Items of work (REVISED)	Qty		Rate	Unit	Cost		
1	Supplying, installation, testing & commissioning of cubical type LT panel suitable for 415 V, 3 Phase, 4 wire 50 Hz AC supply system having front face area 40 sqmtr (Approx) fabricated in compartmentalized (preferably) design from CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates including cleaning & finishing complete with 7 tank process for power coating in approved shade, having 4000 Amp capacity extensible type TPN Aluminium Alloy bus bars of high conductivity DMC/ SMC bus bar supports, with short circuit withstand capacity of 31 MVA for 1 Sec. bottom base channel of MS section not less than 100mm x 50mm x 5mm thick fabrication shall be done in transportable sections, entire panel shall have a common copper earth bar of size 25mm x 5mm at the rear with 2 Nos, earth stud, solid connections from main bus bar to switch gears with required size of Al. bus bars and control wiring with 1.5 sq.mm PVC insulated copper conductor S/C cable, cable alleys, cable gland plates in two half including providing following switch gears:						*Supplying, installation, testing & commissioning of cubical type LT panel suitable for 415 V, 3 Phase, 4 wire 50 Hz AC supply system of suitable size fabricated in compartmentalized from CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates including cleaning & finishing complete with 7 tank process for power coating in approved shade, having 2000 Amp capacity extensible type 4 strips Aluminium Alloy bus bars of high conductivity DMC/ SMC bus bar supports, with short circuit withstand capacity of 31 MVA for 1 Sec. bottom base channel of MS section not less than 100mm x 50mm x 5mm thick fabrication shall be done in transporteble sections, entire panel shall have a common copper earth bar of size 25mm x 5mm at the rear with 2 Nos, earth stud, solid connections from main bus bar to switch gears with required size of Al. bus bars and control wiring with 1.5 sq.mm PVC insulated copper conductor S/C cable, cable alleys, cable gland plates in two half including providing following switch gears:*							
A	**INCOMING**						**INCOMING**							
	2 Nos 1600 Amps each four pole horizontal drawout type air circuit breaker of fault breaking capacity 50 KA (Ics=Icu upto 433V) manually operated, fitted with interlocked door, automatic safety shutters, mechanical ON/OFF and service/ test/ isolated position indicators and frame earthing contact, confirming to IS-13947-2 1993 as amended up-to-date complete with following accessories for each ACB.						2 Nos 1600 Amps each four pole horizontal drawout type air circuit breaker of fault breaking capacity 50 KA (Ics=Icu upto 433V) manually operated, fitted with interlocked door, automatic safety shutters, mechanical ON/OFF and service/ test/ isolated position indicators and frame earthing contact, confirming to IS-13947-2 1993 as amended up-to-date complete with following accessories for each ACB.							
(a)	Independent manual spring closing mechanism - 1 No.						Independent manual spring closing mechanism - 1 No.							
(b)	Microprocessor release (EMI & EMC certified) for over current, earth fault and short circuit protection - 1 Set						Microprocessor release (EMI & EMC certified) for over current, earth fault and short circuit protection - 1 Set							

	Sub-Head of estimate and	Original estimates				Sub-Head of estimate and	Revised estimates				Difference	Reason
	Items of work	Qty.	Rate	Unit	Cost	Items of work (REVISED)	Qty	Rate	Unit	Cost		
(c)	Digital type Voltmeter (0-500 Volt) with selector switch - 1 Set					Digital type Voltmeter (0-500 Volt) with selector switch - 1 Set						
(d)	Digital type Ammeter (0-2500 Amp) with selector switch and one set of 3 Nos CTs of ratio 2500/5A Class I accuracy and 15 VA burden - 1 set					Digital type Ammeter (0-2000 Amp) with selector switch and one set of 3 Nos CTs of ratio 1600/5A Class I accuracy and 15 VA burden - 1 set						
(e)	3 Nos Phase indication LED lamps with 2 Amp back up HRC fuse, breaker 'ON' indicating light with 2 A HRC fuse , test terminal block set, circuits as per standard practice, auxiliary contacts for positive interlocking of the breakers as required.					3 Nos Phase indication LED lamps with 2 Amp back up HRC fuse, breaker 'ON' indicating light with 2 A MCB, test terminal block set, circuits as per standard practice, auxiliary contacts for positive interlocking of the breakers as required.						
(f)	Shunt trip coil 220V A.C.					Shunt trip coil 220V A.C.						
B	BUS COUPLERS					BUS COUPLERS						
	1 No. 1600 Amps horizontal four pole drawout type, air circuit breakers of fault breaking capacity 50 KA (Ics= Icu upto 433 V) manually operated with interlocked door, automatic safety shutters, mechanical ON/OFF and service/ test/ isolated position indicators and frame earthing contact, confirming to IS-13947-2-1993 as amended upto date complete with following accessories for each ACB-					1 No. 1600 Amps horizontal four pole drawout type, air circuit breakers of fault breaking capacity 50 KA (Ics= Icu upto 433 V) manually operated with interlocked door, automatic safety shutters, mechanical ON/OFF and service/ test/ isolated position indicators and frame earthing contact, confirming to IS-13947-2-1993 as amended upto date complete with following accessories for each ACB-						
(a)	Independent manual spring closing mechanisum - 1 No.					Independent manual spring closing mechanisum - 1 No.						
(b)	Breaker 'ON' indicating light with back up 2A HRC fuse test terminal block,fuses, circuits as per standard practice, auxiliary contact contactors for positive electrical interlocking of breakers, etc. as required - 1 Set					Breaker 'ON' indicating light with back up 2A MCB fuse test terminal block,circuits as per standard practice, auxiliary contact contactors for positive electrical interlocking of breakers, etc. as required - 1 Set						
C	BUS BARS					BUS BARS						
	TPN aluminium bus bars of minimum of 2000 Amps capacity with heat shrinkable coloured sleeves and including DMC/ SMC bus bars supports at required intervals complete for cross section, size support & their spacing etc. for with standing fault level of 31 MVA for 1 sec.					4 strips aluminium bus bars of minimum of 2000 Amps capacity with heat shrinkable coloured sleeves and including DMC/ SMC bus bars supports at required intervals complete for cross section, size support & their spacing etc. for with standing fault level of 31 MVA for 1 sec						
D	OUTGOINGS					OUTGOINGS						

	Sub-Head of estimate and	Original estimates					Sub-Head of estimate and	Revised estimates					Difference	Reason
	Items of work	Qty.		Rate	Unit	Cost	Items of work (REVISED)	Qty		Rate	Unit	Cost		
1(a)	2 Nos 800 Amp TPN MDO type ACB (Ics - 50 KA upto 433 V)SFU with HRC fuse (BC:80KA)						2 Nos 800 Amp TPN MDO type ACB (Ics - 50 KA upto 433 V)							
(b)	CT's of ratio 800/5 Amps- set (1 set of 3 Nos)						CT's of ratio 800/5 Amps- 1 set (1 set of 3 Nos)							
(c)	Digital type ammeter (0-800 Amp) with selector switch						Digital type ammeter (0-800 Amp) with selector switch - 2 set							
2(a)	2 Nos 630 Amp TPN MDO type ACB (Ics-50 KA upto 433 V)/SFU with HRC fuse (BC:80KA)						3 Nos 630 Amp TPN MCCB (50 KA upto 433 V)							
(b)	CT's of ratio 630/5 Amps - set (1 set of 3 Nos)						CT's of ratio 630/5 Amps - 2 set (1 set of 3 Nos)							
(c)	Digital type ammeter (0-630 Amp) with selector switch - 3 set						Digital type ammeter (0-630 Amp) with selector switch - 3 set							
3(a)	3 Nos 315 Amp TPN MCCB (Ics - 50 KA upto 433 V)/SFU with HRC fuse(BC:80KA)						3 Nos 315 Amp TPN MCCB (Ics - 30 KA upto 433 V)							Due to increase in the load of various buildings by the Client Deptt. Capacity & rating of the various switch gears installed in the LT panels increase accordingly as per actuals.
(b)	CT's of ratio 315/5 Amps - set (1 set of 3 Nos)						CT's of ratio 400/5 Amps -1 set (1 set of 3 Nos)							
(c)	Digital type ammeter (0-315 Amp) with selector switch - 3 set						Digital type ammeter (0-400 Amp) with selector switch - 3 set							
4(a)	2 Nos 100 Amp 4P MCCB (Ics - 50 KA upto 433 V)/SFU with HRC fuse(BC:80KA)						3 Nos 100 Amp TPN MCCB (Ics - 25 KA upto 433 V)							
(b)	CT's of ratio 100/5 Amps - set (1 set of 3 Nos)						CT's of ratio 100/5 Amps - 2 set (1 set of 3 Nos)							
(c)	Digital type ammeter (0-100 Amp) with selector switch - 3 set						Digital type ammeter (0-100 Amp) with selector switch - 3 set							
5(a)	2 Nos 63 Amp TPN MCCB (Ics - 10 KA upto 433 V)/SFU with HRC fuse(BC:80KA)						2 Nos 63 Amp TPN MCCB (Ics - 10 KA upto 433 V)							
(b)	CT's of ratio 63/5 Amps - set (1 set of 3 Nos)						CT's of ratio 100/5 Amps - 2 set (1 set of 3 Nos)							
(c)	Digital type ammeter (0-100 Amp) with selector switch t	1	job	801450.00	job	801450.00	Digital type ammeter (0-100 Amp) with selector switch - 2 set	1	job	1215000.00	job	1215000.00	413550.00	

	Sub-Head of estimate and	Original estimates					Sub-Head of estimate and	Revised estimates					Difference	Reason
	Items of work	Qty.		Rate	Unit	Cost	Items of work (REVISED)	Qty		Rate	Unit	Cost		
2	Supplying, installation, testing & commissioning of cubical type LT panel suitable for 415 V, 3 Phase, 4 wire 50 Hz AC supply system having front surface area 40 sq.mtr (Approx.) fabricated in compartmentalized (preferably) design from CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates including cleaning & finishing complete with 7 tank process for power coating in approved shade, having 4000 Amp capacity extensible type TPN Aluminium Alloy bus bars of high conductivity DMC/ SMC bus bar supports, with short circuit withstand capacity of 31 MVA for 1 Sec. bottom base channel of MS section not less than 100mm x 50mm x 5mm thick fabrication shall be done in transportable sections, entire panel shall have a common copper earth bar of size 25mm x 5mm at the rear with 2 Nos, earth stud, solid connections from main bus bar to switch gears with required size of Al. bus bars and control wiring with 1.5 sq.mm PVC insulated copper conductor S/C cable, cable alleys, cable gland plates initch gears:						Supplying, installation, testing & commissioning of cubical type LT panel suitable for 415 V, 3 Phase, 4 wire 50 Hz AC supply system having front surface area 40 sq.mtr (Approx.) fabricated in compartmentalized (preferably) design from CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates including cleaning & finishing complete with 7 tank process for power coating in approved shade, having 4000 Amp capacity extensible type TPN Aluminium Alloy bus bars of high conductivity DMC/ SMC bus bar supports, with short circuit withstand capacity of 31 MVA for 1 Sec. bottom base channel of MS section not less than 100mm x 50mm x 5mm thick fabrication shall be done in transportable sections, entire panel shall have a common copper earth bar of size 25mm x 5mm at the rear with 2 Nos, earth stud, solid connections from main bus bar to switch gears with required size of Al. bus bars and control wiring with 1.5 sq.mm PVC insulated copper conductor S/C cable, cable alleys, cable gland plates initch gears:							
A	INCOMING						INCOMING							
	2 Nos 1600 Amps each four pole horizontal drawout type air circuit breaker of fault breaking capacity 50 KA (Ics=Icu upto 433V) manually operated, fitted with interlocked door, automatic safety shutters, mechanical ON/OFF and service/ test/ isolated position indicators and frame earthing contact, confirming to IS-13947-2 1993 as amended up-to-date complete with following accessories for each ACB.						2 Nos 2000 Amps each four pole horizontal drawout type air circuit breaker of fault breaking capacity 50 KA (Ics=Icu upto 433V) manually operated, fitted with interlocked door, automatic safety shutters, mechanical ON/OFF and service/ test/ isolated position indicators and frame earthing contact, confirming to IS-13947-2 1993 as amended up-to-date complete with following accessories for each ACB.							
(a)	Independent manual spring closing mechanism - 1 No.						Independent manual spring closing mechanism - 1 No.							
(b)	Microprocessor release (EMI & EMC certified) for over current, earth fault and short circuit protection - 1 Set						Microprocessor release (EMI & EMC certified) for over current, earth fault and short circuit protection - 1 Set							

	Sub-Head of estimate and	Original estimates				Sub-Head of estimate and	Revised estimates					Difference	Reason
	Items of work	Qty.		Rate	Unit	Cost	Items of work (REVISED)	Qty		Rate	Unit	Cost		
(c)	Digital type Voltmeter (0-500 Amp.) with selector switch & back up HRC fuses/MCBs - 1 Set						Digital type Voltmeter (0-500 Amp.) with selector switch & back up HRC fuses/MCBs - 1 Set							
(d)	Digital type Ammeter (0-2500 Amp) with selector switch and one set of 3 Nos CTs of ratio 2500/5A Class I accuracy and 15 VA burden - 1 set (Ratio to be filled up)						Digital type Ammeter (0-2000 Amp) with selector switch and one set of 3 Nos CTs of ratio 2500/5A Class I accuracy and 15 VA burden - 1 set (Ratio to be filled up)							
(e)	3 Nos Phase indication LED lamps with 2 Amp back up HRC fuse, breaker 'ON' indicating light with 2 A HRC fuse, test terminal block set, fuses, circuits as per standard practice, auxiliary contacts for positive interlocking of the breakers as required.						3 Nos Phase indication LED lamps with 2 Amp back up HRC fuse, breaker 'ON' indicating light with 2 A HRC fuse, test terminal block set, fuses, circuits as per standard practice, auxiliary contacts for positive interlocking of the breakers as required.							
(f)	Shunt trip coil 220V A.C.						Shunt trip coil 220V A.C.							
B	**BUS COUPLERS**						**BUS COUPLERS**							
	1 No. 1600 Amps horizontal four pole drawout type, air circuit breakers of fault breaking capacity 50 KA (Ics= Icu upto 433 V) manually operated with interlocked door, automatic safety shutters, mechanical ON/OFF and service/ test/ isolated position indicators and frame earthing contact, confirming to IS-13947-2-1993 as amended upto date complete with following accessories for each ACB-						1 No. 2000 Amps horizontal four pole drawout type, air circuit breakers of fault breaking capacity 50 KA (Ics= Icu upto 433 V) manually operated with interlocked door, automatic safety shutters, mechanical ON/OFF and service/ test/ isolated position indicators and frame earthing contact, confirming to IS-13947-2-1993 as amended upto date complete with following accessories for each ACB-							
(a)	Independent manual spring closing mechanism - 1 No.						Independent manual spring closing mechanism - 1 No.							
(b)	Breaker 'ON' indicating light with back up 2A HRC fuse test terminal block, fuses, circuits as per standard practice, auxiliary contact contactors for positive electrical interlocking of breakers, etc. as required - 1 Set						Breaker 'ON' indicating light with back up 2A HRC fuse test terminal block, fuses, circuits as per standard practice, auxiliary contact contactors for positive electrical interlocking of breakers, etc. as required - 1 Set							

	Sub-Head of estimate and	Original estimates					Sub-Head of estimate and	Revised estimates					Difference	Reasor
	Items of work	Qty.		Rate	Unit	Cost	Items of work (REVISED)	Qty		Rate	Unit	Cost		
C	BUS BARS						BUS BARS							
	TPN aluminium bus bars of minimum of 2000 Amps capacity with heat shrinkable coloured sleeves and including DMC/ SMC bus bars supports at required intervals complete for cross section, size support & their spacing etc. for with standing fault level of 31 MVA for 1 Sec.						TPN aluminium bus bars of minimum of 2500 Amps capacity with heat shrinkable coloured sleeves and including DMC/ SMC bus bars supports at required intervals complete for cross section, size support & their spacing etc. for with standing fault level of 31 MVA for 1 Sec.							
D	OUTGOINGS						OUTGOINGS							
1(a)	4 Nos 800 Amp TPN MDO type ACB (Ics - 50 KA upto 433 V)/ SFU with HRC fuse (BC:80 KA)						2 Nos 800 Amp TPN MDO type ACB (Ics - 50 KA upto 433 V)/ SFU with HRC fuse (BC:80 KA)							
(b)	CT's of ratio 800/5 Amps- set (1 set of 3 Nos)						CT's of ratio 800/5 Amps- set (1 set of 3 Nos)							
(c)	Digital type ammeter (0-800 Amp) with selector switch						Digital type ammeter (0-800 Amp) with selector switch							
2(a)	2 Nos 630 Amp TPN MDO type ACB (Ics - 50 KA upto 433 V)/ SFU with HRC fuse (BC:80 KA)						4 Nos 630 Amp TPN MDO type ACB (Ics - 50 KA upto 433 V)/ SFU with HRC fuse (BC:80 KA)							Due to increase in the load of various buildings by the Client Deptt. Capacity & rating of the various switch gears installed in the LT panels increase accordingly as per actuals
(b)	CT's of ratio 630/5 Amps - set (1 set of 3 Nos)						CT's of ratio 630/5 Amps - set (1 set of 3 Nos)							
(c)	Digital type ammeter (0-630 Amp) with selector switch						Digital type ammeter (0-630 Amp) with selector switch							
3(a)	1 No. 400 Amp TPN MCCB (Ics - 50 KA upto 433 V)/ SFU with HRC fuse (BC:80 KA)						1 No. 400 Amp TPN MCCB (Ics - 50 KA upto 433 V)/ SFU with HRC fuse (BC:80 KA)							
(b)	CT's of ratio 400/5 Amps - set (1 set of 3 Nos)						CT's of ratio 400/5 Amps - set (1 set of 3 Nos)							
(c)	Digital type ammeter (0-400 Amp) with selector switch						Digital type ammeter (0-400 Amp) with selector switch							
4(a)	3 No. 315 Amp TPN MCCB (Ics - 50 KA upto 433 V)/ SFU with HRC fuse (BC:80 KA)						1 No. 160 Amp 4 P MCCB (Ics - 50 KA upto 433 V)/ SFU with HRC fuse (BC:80 KA)							
(b)	CT's of ratio 315/5 Amps - set (1 set of 3 Nos)						CT's of ratio 160/5 Amps - set (1 set of 3 Nos)							
(c)	Digital type ammeter (0-315 Amp) with selector switch						Digital type ammeter (0-160 Amp) with selector switch							
5(a)	1 Nos 160 Amp TP 4 Nos MCCB (Ics - 50 KA upto 433V)/SFU with HRC fuse (BC:80KA)						2 Nos 100 Amp TP 4 Nos MCCB - 35 KA upto 433V							
(b)	CT's of ratio 160/5 Amps - set (1 set of 3 Nos)						CT's of ratio 100/5 Amps - 2 set (1 set of 3 Nos)							
(c)	Digital type ammeter (0-160 Amp) with selector switch	1	job	921101.00	job	921101.00	Digital type ammeter (0-100 Amp) with selector switch - 2 set	1	job	1400000.00	job	1400000.00	478899.00	

	Sub-Head of estimate and	Original estimates					Sub-Head of estimate and	Revised estimates					Difference	Reason
	Items of work	Qty.		Rate	Unit	Cost	Items of work (REVISED)	Qty		Rate	Unit	Cost		
C	BUS BARS						BUS BARS							
	TPN aluminium bus bars of minimum of 2000 Amps capacity with heat shrinkable coloured sleeves and including DMC/ SMC bus bars supports at required intervals complete for cross section, size support & their spacing etc. for with standing fault level of 31 MVA for 1 Sec.						TPN aluminium bus bars of minimum of 2500 Amps capacity with heat shrinkable coloured sleeves and including DMC/ SMC bus bars supports at required intervals complete for cross section, size support & their spacing etc. for with standing fault level of 31 MVA for 1 Sec.							
D	OUTGOINGS						OUTGOINGS							
1(a)	4 Nos 800 Amp TPN MDO type ACB (Ics - 50 KA upto 433 V)/ SFU with HRC fuse (BC:80 KA)						2 Nos 800 Amp TPN MDO type ACB (Ics - 50 KA upto 433 V)/ SFU with HRC fuse (BC:80 KA)							
(b)	CT's of ratio 800/5 Amps- set (1 set of 3 Nos)						CT's of ratio 800/5 Amps- set (1 set of 3 Nos)							
(c)	Digital type ammeter (0-800 Amp) with selector switch						Digital type ammeter (0-800 Amp) with selector switch							
2(a)	2 Nos 630 Amp TPN MDO type ACB (Ics - 50 KA upto 433 V)/ SFU with HRC fuse (BC:80 KA)						4 Nos 630 Amp TPN MDO type ACB (Ics - 50 KA upto 433 V)/ SFU with HRC fuse (BC:80 KA)							Due to increase in the load of various buildings by the Client Deptt. Capacity & rating of the various switch gears installed in the LT panels increase accordingly as per actuals
(b)	CT's of ratio 630/5 Amps - set (1 set of 3 Nos)						CT's of ratio 630/5 Amps - set (1 set of 3 Nos)							
(c)	Digital type ammeter (0-630 Amp) with selector switch						Digital type ammeter (0-630 Amp) with selector switch							
3(a)	1 No. 400 Amp TPN MCCB (Ics - 50 KA upto 433 V)/ SFU with HRC fuse (BC:80 KA)						1 No. 400 Amp TPN MCCB (Ics - 50 KA upto 433 V)/ SFU with HRC fuse (BC:80 KA)							
(b)	CT's of ratio 400/5 Amps - set (1 set of 3 Nos)						CT's of ratio 400/5 Amps - set (1 set of 3 Nos)							
(c)	Digital type ammeter (0-400 Amp) with selector switch						Digital type ammeter (0-400 Amp) with selector switch							
4(a)	3 No. 315 Amp TPN MCCB (Ics - 50 KA upto 433 V)/ SFU with HRC fuse (BC:80 KA)						1 No. 160 Amp 4 P MCCB (Ics - 50 KA upto 433 V)/ SFU with HRC fuse (BC:80 KA)							
(b)	CT's of ratio 315/5 Amps - set (1 set of 3 Nos)						CT's of ratio 160/5 Amps - set (1 set of 3 Nos)							
(c)	Digital type ammeter (0-315 Amp) with selector switch						Digital type ammeter (0-160 Amp) with selector switch							
5(a)	1 Nos 160 Amp TP 4 Nos MCCB (Ics - 50 KA upto 433V)/SFU with HRC fuse (BC:80KA)						2 Nos 100 Amp TP 4 Nos MCCB - 35 KA upto 433V							
(b)	CT's of ratio 160/5 Amps - set (1 set of 3 Nos)						CT's of ratio 100/5 Amps - 2 set (1 set of 3 Nos)							
(c)	Digital type ammeter (0-160 Amp) with selector switch	1	job	921101.00	job	921101.00	Digital type ammeter (0-100 Amp) with selector switch - 2 set	1	job	1400000.00	job	1400000.00	478899.00	

	Sub-Head of estimate and Items of work	Original estimates Qty.		Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty		Rate	Unit	Cost	Difference	Reason
3	Supplying, installation, testing & commissioning of cubical type LT panel suitable for 415 V, 3 Phase, 4 wire 50 Hz AC supply system of suitable size fabricated in compartmentalized (preferably) design from CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates including cleaning & finishing complete with 7 tank process for power coating in approved shade, having 4000 Amp capacity extensible type TPN Aluminium Alloy bus bars of high conductivity DMC/ SMC bus bar supports, with short circuit withstand capacity of 31 MVA for 1 Sec. bottom base channel of MS section not less than 100mm x 50mm x 5mm thick fabrication shall be done in transportable sections, entire panel shall have a common copper earth bar of size 25mm x 5mm at the rear with 2 Nos, earth stud, solid connections from main bus bar to switch gears with required size of Al. bus bars and control wiring with 1.5 sq.mm PVC insulated copper conductor S/C cable, cable alleys, cable gland plates in two half including providingitch gears: Note. The dr						Supplying, installation, testing & commissioning of cubical type LT panel suitable for 415 V, 3 Phase. 4 wire 50 Hz AC supply system of suitable size fabricated in compartmentalized (preferably) design from CRCA sheet steel of 2mm thick for frame work and covers, 3mm thick for gland plates including cleaning & finishing complete with 7 tank process for power coating in approved shade, having 4000 Amp capacity extensible type TPN Aluminium Alloy bus bars of high conductivity DMC/ SMC bus bar supports, with short circuit withstand capacity of 31 MVA for 1 Sec. bottom base channel of MS section not less than 100mm x 50mm x 5mm thick fabrication shall be done in transportable sections, entire panel shall have a common copper earth bar of size 25mm x 5mm at the rear with 2 Nos, earth stud, solid connections from main bus bar to switch gears with required size of Al. bus bars and control wiring with 1.5 sq.mm PVC insulated copper conductor S/C cable, cable alleys, cable gland plates in two half including providingitch gears: Note: The dr							
A	INCOMING						INCOMING							
	2 Nos 2000 Amps each four pole horizontal drawout type air circuit breaker of fault breaking capacity 50 KA (Ics=Icu upto 433V) manually operated, fitted with interlocked door, automatic safety shutters, mechanical ON/OFF and service/ test/ isolated position indicators and frame earthing contact, confirming to IS-13947-2 1993 as amended up-to-date . complete with following accessories for each ACB.						2 Nos 2500 Amps each four pole horizontal drawout type air circuit breaker of fault breaking capacity 50 KA (Ics=Icu upto 433V) manually operated, fitted with interlocked door, automatic safety shutters, mechanical ON/OFF and service/ test/ isolated position indicators and frame earthing contact, confirming to IS-13947-2 1993 as amended up-to-date complete with following accessories for each ACB.							
(a)	Independent manual spring closing mechanism - 1 No.						Independent manual spring closing mechanism - 1 No.							
(b)	Microprocessor release (EMI & EMC certified) for over current, earth fault and short circuit protection - 1 Set						Microprocessor release (EMI & EMC certified) for over current, earth fault and short circuit protection - 1 Set							

	Sub-Head of estimate and	Original estimates				Sub-Head of estimate and	Revised estimates					Difference	Reason
	Items of work	Qty.		Rate	Unit	Cost	Items of work (REVISED)	Qty		Rate	Unit	Cost		
(c)	Digital type Voltmeter (0-500 Amp.) with selector switch & back up HRC fuses/MCBs - 1 Set						Digital type Voltmeter (0-500 Amp.) with selector switch & back up HRC fuses/MCBs - 1 Set							
(d)	Digital type Ammeter (0-2500 Amp) with selector switch and one set of 3 Nos CTs of ratio 2500/5A Class I accuracy and 15 VA burden - 1 set (Ratio to be filled up)						Digital type Ammeter (0-2500 Amp) with selector switch and one set of 3 Nos CTs of ratio 2500/5A Class I accuracy and 15 VA burden - 1 set (Ratio to be filled up)							
(e)	3 Nos Phase indication LED lamps with 2 Amp back up HRC fuse, breaker 'ON' indicating light with 2 A HRC fuse, test terminal block set, fuses, circuits as per standard practice, auxiliary contacts for positive interlocking of the breakers as required.						3 Nos Phase indication LED lamps with 2 Amp back up HRC fuse, breaker 'ON' indicating light with 2 A HRC fuse, test terminal block set, fuses, circuits as per standard practice, auxiliary contacts for positive interlocking of the breakers as required.							
(f)	Shunt trip coil 220V A.C.						Shunt trip coil 220V A.C.							
B	**BUS COUPLERS**						**BUS COUPLERS**							
	1 No. 2000 Amps horizontal four pole drawout type, air circuit breakers of fault breaking capacity 50 KA (Ics= Icu upto 433 V) manually operated with interlocked door, automatic safety shutters, mechanical ON/OFF and service/ test/ isolated position indicators and frame earthing contact, confirming to IS-13947-2-1993 as amended upto date complete with following accessories for each ACB-						1 No. 2500 Amps horizontal four pole drawout type, air circuit breakers of fault breaking capacity 50 KA (Ics= Icu upto 433 V) manually operated with interlocked door, automatic safety shutters, mechanical ON/OFF and service/ test/ isolated position indicators and frame earthing contact, confirming to IS-13947-2-1993 as amended upto date complete with following accessories for each ACB-							
(a)	Independent manual spring closing mechanisum - 1 No.						Independent manual spring closing mechanisum - 1 No.							
(b)	Breaker 'ON' indicating light with back up 2A HRC fuse test terminal block, fuses, circuits as per standard practice, auxiliary contact contactors for positive electrical interlocking of breakers, etc. as required - 1 Set						Breaker 'ON' indicating light with back up 2A HRC fuse test terminal block, fuses, circuits as per standard practice, auxiliary contact contactors for positive electrical interlocking of breakers, etc. as required - 1 Set							

	Sub-Head of estimate and Items of work	Original estimates Qty.		Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty		Rate	Unit	Cost	Difference	Reason
C	BUS BARS						BUS BARS							
	TPN aluminium bus bars of minimum of 2500 Amps capacity with heat shrinkable coloured sleeves and including DMC/ SMC bus bars supports at required intervals complete for cross section, size support & their spacing etc. for with standing fault level of 31 MVA for 1 Sec.						TPN aluminium bus bars of minimum of 2500 Amps capacity with heat shrinkable coloured sleeves and including DMC/ SMC bus bars supports at required intervals complete for cross section, size support & their spacing etc. for with standing fault level of 31 MVA for 1 Sec.							
D	OUTGOINGS						OUTGOINGS							
1(a)	1 No. 1250 Amp TPN MDO type ACB (Ics - 50 KA upto 433 V)/SFU with HRC fuse(BC:80KA)						1 No. 1250 Amp TPN MDO type ACB (Ics - 65 KA upto 433 V)/SFU with HRC fuse(BC:80KA)							
(b)	CT's of ratio 1250/5 Amps- set (1 set of 3 Nos)						CT's of ratio 1250/5 Amps- set (1 set of 3 Nos)							
(c)	Digital type ammeter (0-1250 Amp) with selector switch						Digital type ammeter (0-1250 Amp) with selector switch							
2(a)	2 Nos 1000 Amp TPN MDO type ACB (Ics - 50 KA upto 433 V)/SFU with HRC fuse (BC:80KA)						2 Nos 1000 Amp TPN MDO type ACB (Ics - 50 KA upto 433 V)/SFU with HRC fuse (BC:80KA)							
(b)	CT's of ratio 1000/5 Amps - set (1 set of 3 Nos)						CT's of ratio 1000/5 Amps - set (1 set of 3 Nos)							
(c)	Digital type ammeter (0-1000 Amp) with selector switch						Digital type ammeter (0-1000 Amp) with selector switch							
3(a)	1 No 630 Amp TPN MDO type ACB(Ics - 50 KA upto 433 V)/SFU with HRC fuse(BC:80KA)						1 No 630 Amp TPN MCCB(Ics - 50 KA upto 433 V)/SFU with HRC fuse(BC:80KA)							
(b)	CT's of ratio 630/5 Amps - set (1 set of 3 Nos)						CT's of ratio 630/5 Amps - set (1 set of 3 Nos)							
(c)	Digital type ammeter (0-630 Amp) with selector switch						Digital type ammeter (0-630 Amp) with selector switch - 1 set							Due to increase in load of various buildings by the client Deptt. Capacity & rating of the various switch gears installed in the LT panels increase accordingly as per actuals.
4(a)	1 Nos 400 Amp TPN MDO type ACB(Ics - 50 KA upto 433 V)/SFU with HRC fuse(BC:80KA)						1 Nos 400 Amp TPN MCCB(Ics - 35 KA upto 433 V)							
(b)	CT's of ratio 400/5 Amps - set (1 set of 3 Nos)						CT's of ratio 400/5 Amps - set (1 set of 3 Nos)							
(c)	Digital type ammeter (0-400 Amp) with selector switch						Digital type ammeter (0-400 Amp) with selector switch							
5(a)	1 No 250 Amp TPN MCCB (Ics - 50 KA upto 433 V)/SFU with HRC fuse(BC:80KA)						1 No. 250 Amp TPN MCCB (Ics - 50 KA upto 433 V)							
(b)	CT's of ratio 250/5 Amps - set (1 set of 3 Nos)						CT's of ratio 250/5 Amps - set (1 set of 3 Nos)							
(c)	Digital type ammeter (0-250 Amp) with selector switch						Digital type ammeter (0-250 Amp) with selector switch							

	Sub-Head of estimate and	Original estimates					Sub-Head of estimate and	Revised estimates					Difference	Reason
	Items of work	Qty.		Rate	Unit	Cost	items of work (REVISED)	Qty		Rate	Unit	Cost		
6(a)	2 No 200 Amp TPN MCCB (Ics - 50 KA upto 433 V)/SFU with HRC fuse (BC:80KA)						2 No 200 Amp TPN MCCB (Ics - 50 KA upto 433 V)/SFU with HRC fuse (BC:80KA)							
(b)	CT's of ratio 200/5 Amps - set (1 set of 3 Nos)						CT's of ratio 200/5 Amps - set (1 set of 3 Nos)							
(c)	Digital type ammeter (0-200 Amp) with selector switch						Digital type ammeter (0-200 Amp) with selector switch - 2 sets							
7(a)	1 Nos 20 Amp TPN MCB (Ics - 50 KA upto 433 V)/SFU with HRC fuse(BC:80KA)						1 Nos 20 Amp TPN MCB (ics - 50 KA upto 433 V)							
(b)	CT's of ratio 20/5 Amps - 5 sets (1 set of 3 Nos)						CT's of ratio 100/5 Amps - 5 sets (1 set of 3 Nos)							
(c)	Digital type ammeter (0-20 Amp) with selector switch						Digital type ammeter (0-100 Amp) with selector switch - 2 sets							
8(a)							4 Nos 63 Amp TPN MCCB (Ics - 10 KA upto 433 V)							
(b)							CT's of ratio 63/5 Amps - 2 sets (1 set of 3 Nos)							
(c)		1	job	1008734.00	job	1008734.00	Digital type ammeter (0-63 Amp) with selector switch - 4 sets	1	job	1823000.00	job	1823000.00	814266.00	
4	(CAPACITOR PANEL)						(CAPACITOR PANEL)							
a)	Capacitor Panel - 430 KVAR						Capacitor Panel - 430 KVAR							
	Automatic Capacitor Control Panel with 430 KVAR capacitors comprising of (7 x 50 KVAR + 2 x 20 KVAR + 3 x 10 KVAR + 2 x 5 KVAR) unit in a bank formation to achieve Automatic operation. The Panel shall be fabricated out of 2mm thick sheet steel, dust & vermin proof and channel iron frame work of cubicle construction suitable to with stand a fault level of 35 MVA at 415 volts, 3 phase, 50 HZ AC supply including interconneciton, wiring, painting, earthing, labeling and providing danger plates etc. as per specificastions.						Automatic Capacitor Control Panel with 430 KVAR capacitors comprising of (7 x 50 KVAR + 2 x 20 KVAR + 3 x 10 KVAR + 2 x 5 KVAR) unit in a bank formation to achieve Automatic operation. The Panel shall be fabricated out of 2mm thick sheet steel, dust & vermin proof and channel iron frame work of cubicle construction suitable to with stand a fault level of 35 MVA at 415 volts, 3 phase, 50 HZ AC supply including interconneciton, wiring, painting, earthing, labeling and providing danger plates etc. as per specificastions.							
i)	1000 A TP ACB (35 KA) - 1 No.						800 A TP ACB (35 KA) - 1 No.							
ii)	1600 A TPN Aluminium bus bars - 1 Set						1000 A TPN Aluminium bus bars - 1 Set							

	Sub-Head of estimate and Items of work	Original estimates Qty.	Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty	Rate	Unit	Cost	Difference	Reason
iii)	Digital Voltmeter 0 - 500 V with 4 position selector switch - 1 Set					Digital Voltmeter 0 - 500 V with 4 position selector switch - 1 Set						
iv)	Digital Ammeter 0 - 1000 A with 4 position selector switch & suitable size of CTs -1					Digital Ammeter 0 - 1000 A with 4 position selector switch & suitable size of CTs -1						
v)	One set of (3 Nos) LED type RYB phase indicating lamps with 2 A SP MCBs for protection.					One set of (3 Nos) LED type RYB phase indicating lamps with 2 A SP MCBs for protection.						
vi)	Power factor meter with Automatic P.F.C.R & CT for unbalanced load - 1 Set					Power factor meter with Automatic P.F.C.R & CT for unbalanced load - 1 Set						
	Control MCCBs:					**Control MCCBs:**						
i)	7 Nos 100 Amp TP MCCB					7 Nos 125 Amp TP MCCB						
ii)	ON/OFF push buttons (2 Nos ON & 2 Nos OFF)					ON/OFF push buttons (2 Nos ON & 2 Nos OFF)						
iii)	2 Nos 40 Amp TP MCCB - 10 KA					2 Nos 63 Amp TP MCCB - 10 KA						
iv)	ON/OFF push buttons (2 Nos ON & 2 Nos OFF)					ON/OFF push buttons (2 Nos ON & 2 Nos OFF)						
v)	3 Nos 32 Amp TP MCCB					3 Nos 32 Amp TP MCCB - 10 KA						
vi)	ON/OFF push buttons (3 Nos ON & 3 Nos OFF)					ON/OFF push buttons (3 Nos ON & 3 Nos OFF)						
vii)	2 Nos 16 Amp TP MCB					2 Nos 16 Amp TP MCB						
viii)	ON/OFF push buttons (2 Nos ON & 2 Nos OFF)					ON/OFF push buttons (2 Nos ON & 2 Nos OFF) alongwith each MCB						
	Contactors:					**Contactors:**						
i)	Capacitor Duty Contactor with O/L realy for 50 KVAR 7 Nos					Capacitor Duty Contactor with O/L realy for 50 KVAR 7 Nos						
ii)	Capacitor Duty Contactor with O/L realy for 20 KVAR 3 Nos					Capacitor Duty Contactor with O/L realy for 20 KVAR 3 Nos						
iii)	Capacitor Duty Contactor with O/L realy for 10 KVAR 3 Nos					Capacitor Duty Contactor with O/L realy for 10 KVAR 3 Nos						
iv)	Capacitor Duty Contactor with O/L realy for 5 KVAR 2 Nos					Capacitor Duty Contactor with O/L realy for 5 KVAR 2 Nos						
vii)	ON/ OFF indication lights for each unit 14 Sets					ON/ OFF indication lights for each unit 14 Sets						
viii)	Auto - Manual Switch - 1 No.					Auto - Manual Switch - 1 No.						

	Sub-Head of estimate and	Original estimates					Sub-Head of estimate and	Revised estimates					Difference	Reason
	Items of work	Qty.		Rate	Unit	Cost	Items of work (REVISED)	Qty		Rate	Unit	Cost		
ix)	P.F sensing cable & control MCB - Lot.						P.F sensing cable & control MCB - Lot.							
x)	Time delay relay resistance, aux, relays A/M selector switch and necessary control for above.						Time delay relay resistance, aux, relays A/M selector switch and necessary control for above.							
xi)	430 KVAR capacitors comprising of (7 x 50 KVAR + 2 x 20 KVAR + 3 x 10 KVAR + 2 x 5 KVAR) units	2	sets	456768.00	set	913536.00	430 KVAR capacitors comprising of (7 x 50 KVAR + 2 x 20 KVAR + 3 x 10 KVAR + 2 x 5 KVAR) units	2	sets	483500.00	set	967000.00	53464.00	As per actual
b)	Capacitor Panel - 380 KVAR						Capacitor Panel - 380 KVAR							
	Automatic Capacitor Control Panel with 380 KVAR capacitors comprising of (6 x 50 KVAR + 2 x 20 KVAR + 3 x 10 KVAR + 2 x 5 KVAR) unit in a bank formation to achieve Automatic operation. The Panel shall be fabricated out of 2mm thick sheet steel, dust & vermin proof and channel iron frame work of cubicle construction suitable to with stand a fault level of 35 MVA at 415 volts, 3 phase, 50 HZ AC supply including interconneciton, wiring, painting, earthing, labeling and providing danger plates etc. as per specificastions.						Automatic Capacitor Control Panel with 380 KVAR capacitors comprising of (6 x 50 KVAR + 2 x 20 KVAR + 3 x 10 KVAR + 2 x 5 KVAR) unit in a bank formation to achieve Automatic operation. The Panel shall be fabricated out of 2mm thick sheet steel, dust & vermin proof and channel iron frame work of cubicle construction suitable to with stand a fault level of 35 MVA at 415 volts, 3 phase, 50 HZ AC supply including interconneciton, wiring, painting, earthing, labeling and providing danger plates etc. as per specificastions.							
i)	800 A TP ACB (35 KA) - 1 No.						630 A TP ACB (35 KA) - 1 No.							
ii)	1000 A TPN Aluminium bus bars - 1 No.						1000 A TPN Aluminium bus bars - 1 No.							
iii)	Digital Voltmeter 0 - 500 V with 4 position selector switch - 1 Set						Digital Voltmeter 0 - 500 V with 4 position selector switch - 1 Set							
iv)	Digital Ammeter 0 - 800 A with 4 position selector switch & suitable size of CTs -1						Digital Ammeter 0 - 800 A with 4 position selector switch & suitable size of CTs -1							
v)	One set of (3 Nos) LED type RYB phase indicating lamps with 2 A SP MCBs for protection.						One set of (3 Nos) LED type RYB phase indicating lamps with 2 A SP MCBs for protection.							
vi)	Power factor meter with Automatic P.F.C.R & CT for unbalanced load - 1 Set						Power factor meter with Automatic P.F.C.R & CT for unbalanced load - 1 Set							
	Control MCCBs:						Control MCCBs:							
i)	6 Nos 100 Amp TP MCCB						6 Nos 125 Amp TP MCCB							

	Sub-Head of estimate and items of work	Original estimates Qty.		Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty		Rate	Unit	Cost	Difference	Reason
ii)	ON/OFF push buttons (2 Nos ON & 2 Nos OFF)						ON/OFF push buttons (2 Nos ON & 2 Nos OFF)							
iii)	2 Nos 40 Amp TP MCB						2 Nos 63 Amp TP MCB							
iv)	ON/OFF push buttons (2 Nos ON & 2 Nos OFF)						ON/OFF push buttons (2 Nos ON & 2 Nos OFF)							
v)	3 Nos 32 Amp TP MCB						3 Nos 32 Amp TP MCB							
vi)	ON/OFF push buttons (3Nos ON & 3 Nos OFF)						ON/OFF push buttons (3Nos ON & 3 Nos OFF)							
vii)	2 Nos 16 Amp TP MCB						2 Nos 16 Amp TP MCB							
viii)	ON/OFF push buttons (2 Nos ON & 2 Nos OFF)						ON/OFF push buttons (2 Nos ON & 2 Nos OFF)							
	Contactors:						**Contactors:**							
i)	Capacitor Duty Contactor with O/L realy for 50 KVAR 6 Nos						Capacitor Duty Contactor with O/L realy for 50 KVAR 6 Nos							
ii)	Capacitor Duty Contactor with O/L realy for 20 KVAR 2 Nos						Capacitor Duty Contactor with O/L realy for 20 KVAR 2 Nos							
iii)	Capacitor Duty Contactor with O/L realy for 10 KVAR 3 Nos						Capacitor Duty Contactor with O/L realy for 10 KVAR 3 Nos							
iv)	Capacitor Duty Contactor with O/L realy for 5 KVAR 2 Nos						Capacitor Duty Contactor with O/L realy for 5 KVAR 2 Nos							
v)	ON/ OFF indication lights for each unit 13 Sets						ON/ OFF indication lights for each unit 13 Sets							
vi)	Auto - Manual Switch - 1 No.						Auto - Manual Switch - 1 No.							
vii)	P.F sensing cable & control MCB Lot						P.F sensing cable & control MCB - Lot.							
viii)	Time delay relay resistance, aux, relays A/M selector switch and necessary control for above.						Time delay relay resistance, aux, relays A/M selector switch and necessary control for above.							
ix)	380 KVAR capacitors comprising of (6 x 50 KVAR + 2 x 20 KVAR + 3 x 10 KVAR + 2 x 5 KVAR) units	2	set	401842.00	set	803684.00	380 KVAR capacitors comprising of (6 x 50 KVAR + 2 x 20 KVAR + 3 x 10 KVAR + 2 x 5 KVAR) units	2	set	425000.00	set	850000.00	46316.00	As per actuals

	Sub-Head of estimate and	Original estimates				Sub-Head of estimate and	Revised estimates				Difference	Reason
	Items of work	Qty.	Rate	Unit	Cost	Items of work (REVISED)	Qty	Rate	Unit	Cost		
c)	Capacitor Panel - 300 KVAR					Capacitor Panel - 300 KVAR						
	Automatic Capacitor Control Panel with 300 KVAR capacitors comprising of (5 x 50 KVAR + 1 x 20 KVAR + 2 x 10 KVAR + 2 x 5 KVAR) unit in a bank formation to achieve Automatic operation. The Panel shall be fabricated out of 2mm thick sheet steel, dust & vermin proof and channel iron frame work of cubicle construction suitable to with stand a fault level of 35 MVA at 415 volts, 3 phase, 50 HZ AC supply including interconneciton, wiring, painting, earthing, labeling and providing danger plates etc. as per specificastio ns.					Automatic Capacitor Control Panel with 300 KVAR capacitors comprising of (5 x 50 KVAR + 1 x 20 KVAR + 2 x 10 KVAR + 2 x 5 KVAR) unit in a bank formation to achieve Automatic operation. The Panel shall be fabricated out of 2mm thick sheet steel, dust & vermin proof and channel iron frame work of cubicle construction suitable to with stand a fault level of 35 MVA at 415 volts, 3 phase, 50 HZ AC supply including interconneciton, wiring, painting, earthing, labeling and providing danger plates etc. as per specificastions.						
i)	630 A TP MCCB (35 KA) - 1 No.					630 A TP MCCB (35 KA) - 1 No.						
ii)	800 A TPN Aluminium bus bars - 1 No.					1000 A TPN Aluminium bus bars - 1 No.						
iii)	Digital Voltmeter 0 - 500 V with 4 position selector switch - 1 Set					Digital Voltmeter 0 - 500 V with 4 position selector switch - 1 Set						
iv)	Digital Ammeter 0 - 630 A with 4 position selector switch & suitable size of CTs -1					Digital Ammeter 0 - 630 A with 4 position selector switch & suitable size of CTs -1						
v)	One set of (3 Nos) LED type RYB phase indicating lamps with 2 A SP MCBs for protection.					One set of (3 Nos) LED type RYB phase indicating lamps with 2 A SP MCBs for protection.						
vi)	Power factor meter with Automatic P.F.C.R & CT for unbalanced load - 1 Set					Power factor meter with Automatic P.F.C.R & CT for unbalanced load - 1 Set						
	Control MCCBs:					Control MCCBs:						
i)	5 Nos 100 Amp TP MCCB					5 Nos 125 Amp TP MCCB						
ii)	ON/OFF push buttons (2 Nos ON & 2 Nos OFF)					ON/OFF push buttons (2 Nos ON & 2 Nos OFF)						
iii)	1 No 40 Amp TP MCB					1 No 63 Amp TP MCB						
iv)	ON/OFF push buttons (2 Nos ON & 2 Nos OFF)					ON/OFF push buttons (2 Nos ON & 2 Nos OFF)						
v)	2 Nos 32 Amp TP MCB					2 Nos 32 Amp TP MCB						
vi)	ON/OFF push buttons (3Nos ON & 3 Nos OFF)					ON/OFF push buttons (3Nos ON & 3 Nos OFF)						
vii)	2 Nos 16 Amp TP MCB					2 Nos 16 Amp TP MCB						
viii)	ON/OFF push buttons (2 Nos ON & 2 Nos OFF)					ON/OFF push buttons (2 Nos ON & 2 Nos OFF)						

	Sub-Head of estimate and Items of work	Original estimates Qty.		Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty		Rate	Unit	Cost	Difference	Reason
	Contactors:						**Contactors:**							
i)	Capacitor Duty Contactor with O/L realy for 50 KVAR 5 Nos						Capacitor Duty Contactor with O/L realy for 50 KVAR 5 Nos							
ii)	Capacitor Duty Contactor with O/L realy for 20 KVAR 1 No						Capacitor Duty Contactor with O/L realy for 20 KVAR 1 No							
iii)	Capacitor Duty Contactor with O/L realy for 10 KVAR 2 Nos						Capacitor Duty Contactor with O/L realy for 10 KVAR 2 Nos							
iv)	Capacitor Duty Contactor with O/L realy for 5 KVAR 2 Nos						Capacitor Duty Contactor with O/L realy for 5 KVAR 2 Nos							
v)	ON/ OFF indication lights for each unit 10 Sets						ON/ OFF indication lights for each unit 10 Sets							
vi)	Auto - Manual Switch - 1 No.						Auto - Manual Switch - 1 No.							
vii)	P.F sensing cable & control MCB - Lot.						P.F sensing cable & control MCB - Lot.							
viii)	Time delay relay resistance, aux, relays A/M selector switch and necessary control for above.						Time delay relay resistance, aux, relays A/M selector switch and necessary control for above.							
ix)	430 KVAR capacitors comprising of (5 x 50 KVAR + 1 x 20 KVAR + 2 x 10 KVAR + 2 x 5 KVAR) units	2	set	323881.00	set	647762.00	430 KVAR capacitors comprising of (5 x 50 KVAR + 1 x 20 KVAR + 2 x 10 KVAR + 2 x 5 KVAR) units	2	set	352000.00	set	704000.00	56238.00	As per actual
	TOTAL OS SUB HEAD-III					**5096267.00**	**TOTAL OS SUB HEAD-III**					**6959000.00**	**1862733.00**	
	SUB HEAD - IV (H.T CABLE LAYING & TERMINATIONS)													
1	**H.T Cable Laying**						**H.T Cable Laying**							
1.1	11 KV Cable laying upto 400 sq.mm in ground						11 KV Cable laying upto 400 sq.mm in ground							
	Supplying, laying, testing & commissioning of one number PVC insulated and PVC sheathed/ XLPE power cable of grade exceeding 1.1 KV but not exceeding 120 sq.mm of size not exceeding 400 sq.mm direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc. as required.						Supplying, laying, testing & commissioning of one number PVC insulated and PVC sheathed/ XLPE power cable of grade exceeding 1.1 KV but not exceeding 120 sq.mm of size not exceeding 400 sq.mm direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc. as required.							As per actuals
a)	3 C x 300 sq.mm	2330	mtrs	2567.00	metre	5931110.00	3 C x 300 sq.mm	2330	mtrs	1165.00	metre	2714450.00	-3266660.00	

	Sub-Head of estimate and Items of work	Original estimates					Sub-Head of estimate and Items of work (REVISED)	Revised estimates					Difference	Reason
		Qty.		Rate	Unit	Cost		Qty		Rate	Unit	Cost		
1.2	11 KV cable laying upto 400 sq.mm in same trench:						11 KV cable laying upto 400 sq.mm in same trench:							
	Supplying, laying, testing & commissioning of one number PVC insulated and PVC sheathled/ XLPE power cable of grade exceeding 1.1 KV but not exceeding 11 KV of size not exceeding 120 sq.mm but not exceeding 400 sq.mm direct in ground in the same tench in one tier horizontal formation including excavation, sand cushioning, protective covering and refilling the trench etc. as required.						Supplying, laying, testing & commissioning of one number PVC insulated and PVC sheathled/ XLPE power cable of grade exceeding 1.1 KV but not exceeding 11 KV of size not exceeding 120 sq.mm but not exceeding 400 sq.mm direct in ground in the same tench in one tier horizontal formation including excavation, sand cushioning, protective covering and refilling the trench etc. as required.						
a)	3 C x 300 sq.mm	2330	mtrs	2524.00	metre	5880920.00	3 C x 300 sq.mm	2330	mtrs	1160.00	metre	2702800.00	-3178120.00	
1.3	11 KV cable laying upto 400 sq.mm in pipe:						11 KV cable laying upto 400 sq.mm in pipe:							
	Supplying, laying, testing & commissioning of one number PVC insulated and PVC sheathed/ XLPE power cable of grade exceeding 1.1 KV but not exceeding 11 KV of size not exceeding 400 sq.mm but not exceeding RCC/ HUME/ STONEWARE/ METAL pipe as required.						Supplying, laying, testing & commissioning of one number PVC insulated and PVC sheathed/ XLPE power cable of grade exceeding 1.1 KV but not exceeding 11 KV of size not exceeding 400 sq.mm but not exceeding RCC/ HUME/ STONEWARE/ METAL pipe as required.						
a)	3 C x 300 sq.mm	20	mtrs	2477.00	metre	49540.00	3 C x 300 sq.mm	20	mtrs	1100.00	metre	22000.00	-27540.00	
1.4	11 KV cable laying upto 400 sq.mm in open duct:						11 KV cable laying upto 400 sq.mm in open duct:							
	Supplying laying, testing & commissioning of one number PVC insulated and PVC sheathed/ XLPE power cable of grade exceeding 1.1 KV but not exceeding 11 KV of size not exceeding 400 sq.mm in the existing masonry open duct as required.						Supplying, laying, testing & commissioning of one number PVC insulated and PVC sheathed/ XLPE power cable of grade exceeding 1.1 KV but not exceeding 11 KV of size not exceeding 400 sq.mm in the existing masonry open duct as required.							
a)	3 C x 185 sq.mm	200	mtrs	1767.00	metre	353400.00	3 C x 185 sq.mm	200	mtrs	785.00	metre	157000.00	-196400.00	
b)	3 C x 300 sq.mm	200	mtrs	2471.00	metre	494200.00	3 C x 300 sq.mm	200	mtrs	1100.00	metre	220000.00	-274200.00	

	Sub-Head of estimate and Items of work	Original estimates Qty.		Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty		Rate	Unit	Cost	Difference	Reason
1.5	S/M 11 KV cast resin compound indoor XLPE cable jointing:													
	Supplying, making, testing & commissioning INDOOR cable end jointing with cast resin compound including lugs and other jointing materials, for following size of 3 core, XLPE aluminium conductor cable of 11 KV grade as required.						Supplying, making, testing & commissioning INDOOR cable end jointing with cast resin compound including lugs and other jointing materials, for following size of 3 core, XLPE aluminium conductor cable of 11 KV grade as required.							As per actuals
(i)	185 sq.mm	12	nos	4820.00	each	57840.00	185 sq.mm	12	nos	3000.00	each	36000.00	-21840.00	
(ii)	300 sq.mm	16	nos	4820.00	each	77120.00	300sqmm	16	nos	3000.00	each	48000.00	-29120.00	
	TOTAL OF SUB HEAD-IV					12894130.00						5900250.00	-6993880.00	
	SUB HEAD - V (CABLES & TERMINATION)													
1	LT CABLE LAYING & TERMINATIONS:													
1.1	MV Cable laying upto 25 sq.mm in ground:													
	Supplying, laying, testing & commissioning of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of size not exceeding 25 sq.mm direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc. as required.						Supplying, laying, testing & commissioning of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of size not exceeding 25 sq.mm direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc. as required.							As per actua site requirement some additional poles provided in the campus on request from NIT authorities.
(a)	4 X 25 sq.mm	5800	mtrs	208.00	metre	1206400.00	4 X 25 sq.mm	12000	mtrs	208.00	metre	2496000.00	1289600.00	
1.2	MV cable laying upto 120 sq.mm in ground:						MV cable laying upto 120 sq.mm in ground:							
	Supplying, laying, testing & commissioning of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of size exceeding 25 sq.mm but not exceeding 120 sq.mm direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc. as required.						Supplying, laying, testing & commissioning of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of size exceeding 25 sq.mm but not exceeding 120 sq.mm direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc. as required.							As per actual site requirement and additional cables of different sizes provided from Feeder pillar to various
(a)	3½ x 70 sq.mm	493	mtrs	314.00	metre	154802.00	3½ x 70 sq.mm	700	mtrs	314.00	metre	219800.00	64998.00	

	Sub-Head of estimate and Items of work	Original estimates Qty.		Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty		Rate	Unit	Cost	Difference	Reason
b)	3½ x 95 sq.mm	95	mtrs	473.00	metre	44935.00	3½ x 95 sq.mm	1500	mtrs	473.00	metre	709500.00	664565.00	various buildings/ hostel etc. according to load requirement of the buildings/ hostel.
c)	4 x 35 sq.mm	11480	mtrs	234.00	metre	2686320.00	4 x 35 sq.mm	-		-	-	0.00	-2686320.00	
							d) 3½ x 35 sq.mm	900	mtrs	234.00	metre	210600.00	210600.00	
							e) 3½ x 50 sq.mm	3100	mtrs	337.00	metre	1044700.00	1044700.00	
							f) 3½ x 120 sq.mm	1200	mtrs	508.00	metre	609600.00	609600.00	
1.3	MV Cable laying upto 400 sq.mm in ground:						MV Cable laying upto 400 sq.mm in ground:							
	Supplying, laying, testing & commissioning of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of size exceeding 120 sq.mm but not exceeding 400 sq.mm direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc. as required.						Supplying, laying, testing & commissioning of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of size exceeding 120 sq.mm but not exceeding 400 sq.mm direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc. as required.							As per actual site requirement and additional cables of different sizes provided
a)	3½ x 150 sq.mm	270	mtrs	428.00	metre	115560.00	3½ x 150 sq.mm	-		-	-	0.00	-115560.00	from Feeder pillar to
b)	3½ x 240 sq.mm	1206	mtrs	721.00	metre	869526.00	3½ x 240 sq.mm	1300	mtrs	721.00	metre	937300.00	67774.00	various buildings/
c)	3½ x 300 sq.mm	6013	mtrs	846.00	metre	5086998.00	3½ x 300 sq.mm	7200	mtrs	846.00	metre	6091200.00	1004202.00	hostel etc. according to
							d) 3½ x 185 sq.mm	650	mtrs	655.00	metre	425750.00	425750.00	load requirement
							e) 3½ x 400 sq.mm	700	mtrs	1122.00	metre	785400.00	785400.00	of the
1.4	MV Cable laying upto 25 sq.mm in pipe:						MV Cable laying upto 25 sq.mm in pipe:							
	Supplying, laying, testing & commissioning of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of size not exceeding 25 sq.mm in the exceeding RCC/ HUME/ STONEWARE/ METAL pipe as required.						Supplying, laying, testing & commissioning of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of size not exceeding 25 sq.mm in the exceeding RCC/ HUME/ STONEWARE/ METAL pipe as requirec.							As per actual site requirement.
a)	4 x 25 sq.mm	230	mtrs	138.00	metre	31740.00	4 x 25 sq.mm	1000	mtrs	138.00	metre	138000.00	106260.00	

	Sub-Head of estimate and items of work	Original estimates Qty.		Rate	Unit	Cost	Sub-Head of estimate and items of work (REVISED)	Revised estimates Qty		Rate	Unit	Cost	Difference	Reason
1.5	MV Cable laying upto 400 sq.mm in pipe:						MV Cable laying upto 400 sq.mm in pipe:							
	Supplying, laying, testing & commissioning of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of size not exceeding 25 sq.mm but not exceeding 400 sq.mm in the existing RCC/ HUME/ STONEWARE/ METAL pipe as required.						Supplying, laying, testing & commissioning of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of size not exceeding 25 sq.mm but not exceeding 400 sq.mm in the existing RCC/ HUME/ STONEWARE/ METAL pipe as required.							
a)	3½ x 150 sq.mm	40	mtrs	358.00	metre	14320.00	3½ x 150 sq.mm	-		-	-	0.00	-14320.00	
b)	3½ x 240 sq.mm	100	mtrs	645.00	metre	64500.00	3½ x 240 sq.mm	100	mtrs	645.00	metre	64500.00	-	– do –
c)	3½ x 300 sq.mm	170	mtrs	776.00	metre	131920.00	3½ x 300 sq.mm	170	mtrs	776.00	metre	131920.00	0.00	
d)	4 x 35 sq.mm	180	mtrs	176.00	metre	31680.00	4 x 35 sq.mm	-		-	-	0.00	-31680.00	As per actual site requirement
							d) 3½ x 35 sq.mm	50	mtrs	129.00	metre	6450.00	6450.00	
							e) 3½ x 50 sq.mm	100	mtrs	172.00	metre	17200.00	17200.00	
							f) 3½ x 120 sq.mm	100	mtrs	345.00	metre	34500.00	34500.00	
							g) 3½ x 185 sq.mm	50	mtrs	492.00	metre	24600.00	24600.00	
							h) 3½ x 400 sq.mm	100	mtrs	961.00	metre	96100.00	96100.00	
1.6	MV cable laying upto 400 sq.mm in open duct:						MV cable laying upto 400 sq.mm in open duct:							
	Supplying, laying, testing & commissioning of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1 KV grade of size not exceeding 25 sq.mm but not exceeding 400 sq.mm in the existing masonry open duct as required.						Supplying, laying, testing & commissioning of one number PVC insulated and PVC sheathed/ XLPE power cable of 1.1. KV grade of size not exceeding 25 sq.mm but not exceeding 400 sq.mm in the existing masonry open duct as required.							
a)	3½ x 150 sq.mm	20	mtrs	354.00	metre	7080.00	3½ x 150 sq.mm	-		-	-	0.00	-7080.00	
b)	3½ x 185 sq.mm	30	mtrs	536.00	metre	16080.00	3½ x 185 sq.mm	50	mtrs	536.00	metre	26800.00	10720.00	
c)	3½ x 240 sq.mm	100	mtrs	641.00	metre	64100.00	3½ x 240 sq.mm	100	mtrs	641.00	metre	64100.00	0.00	
d)	3½ x 300 sq.mm	240	mtrs	772.00	metre	185280.00	3½ x 300 sq.mm	130	mtrs	772.00	metre	100360.00	-84920.00	
														As per actual site requirement.
							d) 3½ x 35 sq.mm	50	mtrs	126.00	metre	6300.00	6300.00	

	Sub-Head of estimate and Items of work	Original estimates Qty.		Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty		Rate	Unit	Cost	Difference	Reason
							e) 3½ x 50 sq.mm	100	mtrs	170.00	metre	17000.00	17000.00	
							f) 3½ x 120 sq.mm	100	mtrs	340.00	metre	34000.00	34000.00	
							g) 3½ x 400 sq.mm	100	mtrs	955.00	metre	95500.00	95500.00	
2	**MV Cable End Termination & Joining**						**MV Cable End Termination & Joining**							
	BRASS COMPRESSION GLAND						**BRASS COMPRESSION GLAND**							
2.1	S/M LV/MV Cable end termination:						S/M LV/MV Cable end termination:							
	Supplying, making, testing & commissioning end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed/ XLPE aluminium conductor cable of 1.1 KV grade as required.						Supplying, making, testing & commissioning end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed/ XLPE aluminium conductor cable of 1.1 KV grade as required.							
a)	3½ x 70 sq.mm	2	nos	168.00	each	336.00	3½ x 70 sq.mm	8	nos	168.00	each	1344.00	1008.00	
b)	3½ x 95 sq.mm	16	nos	197.00	each	3152.00	3½ x 95 sq.mm	6	nos	197.00	each	1182.00	-1970.00	
c)	3½ x 150 sq.mm	2	nos	278.00	each	556.00	3½ x 150 sq.mm	-		-	-	0.00	-556.00	
d)	3½ x 240 sq.mm	20	nos	381.00	each	7620.00	3½ x 240 sq.mm	20	nos	381.00	each	7620.00	0.00	
e)	3½ x 300 sq.mm	48	nos	508.00	each	24384.00	3½ x 300 sq.mm	34	nos	508.00	each	17272.00	-7112.00	
f)	4 x 25 sq.mm	140	nos	137.00	each	19180.00	4 x 25 sq.mm	580	nos	137.00	each	79460.00	60280.00	As per actual site requirement
g)	4 x 35 sq.mm	286	nos	157.00	each	44902.00	4 x 35 sq.mm	-		-	-	0.00	-44902.00	
							d) 3½ x 35 sq.mm	10	nos	223.00	each	2230.00	2230.00	
							e) 3½ x 50 sq.mm	10	nos	262.00	each	2620.00	2620.00	
							f) 3½ x 120 sq.mm	10	nos	383.00	each	3830.00	3830.00	
							g) 3½ x 185 sq.mm	8	nos	616.00	each	4928.00	4928.00	
							h) 3½ x 400 sq.mm	14	nos	1109.00	each	15526.00	15526.00	

Sub-Head of estimate and Items of work	Original estimates				Sub-Head of estimate and Items of work (REVISED)	Revised estimates					Difference	Reason
	Qty.		Rate	Unit	Cost		Qty		Rate	Unit	Cost		
						Supplying and laying of 100mm GI pipe class-B under the road/ plinth protection/ pucca path not less than 0.75 mtr below the ground level for crossing HT/ LT cables with trenchless system and making good the damages etc. as required.	400	mtrs	1575.00	metre	630000.00	630000.00	
						Supplying and laying of ISI Marked HDPF PN-4 pipe having capacity of 4Kg/ sq.cm under the bituminous metal road/ floor/ pacca passage etc. by trenchless system(HDD Method) with machine including jointing the HDPE pipe with couplers wherever necessary and covering mouth of pipes etc. complete as required.							Since road/ floor/ pacca passage cutting is not allowed by Client Department and is not appropriate too so pipe laid with trenchless system according to site requirement.
						(a) 100mm dia	336	mtrs	1698.00	metre	570528.00	570528.00	
						(b) 140mm dia	300	mtrs	2382.00	metre	714600.00	714600.00	
						(c) 200mm dia	198	mtrs	3178.00	metre	629244.00	629244.00	
						Supplying and laying of ISI Marked HDPF PN-4 pipe having capacity of 4Kg/ sq.cm under the bituminous metal road/ floor/ pacca passage etc. by Manual moiling including jointing the HDPE pipe with couplers wherever necessary and covering mouth of pipes etc. complete as required.							
						(a) 100mm dia	300	mtrs	1300.00	metre	390000.00	390000.00	Since road/ floor/ pacca passage cutting is not allowed by Client Department and is not appropriate too so pipe laid with trenchless system according to site requirement.

	Sub-Head of estimate and Items of work	Original estimates Qty.		Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty		Rate	Unit	Cost	Difference	Reason
							Supplying and laying 50mm dia OD DWC HDPE pipe confirming to IS-14930 (Part-II) and ISI marked of 1.2 mtr length suitably bended for cable entry and grounting the same in the foundation of pole complete as required. (Rex/ Duraline Make)	560	Nos	154.00	each	86240.00	86240.00	Pipe laid in RCC foundation of poles as it was not possible to laid the GI pipe in RCC foundation.
	TOTAL OF SUB HEAD-V					10811371.00						17543804.00	6732433.00	
	SUB HEAD-VI (STREET LIGHTING POLES & FITTINGS)													
1	Supplying, installation, testing and commissioning of 410 SP - 31/9 Mtr. High steel tubular pole complete with 1 metre long bracked duly primed and painted complete with base plate of 30 cm x 30 cm x 12 mm size in cement concrete 1:3:6(1 cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size) foundation excavation and refilling etc. as required (as per specifications).	231	Nos	10602.00	each	2449062.00		-		-	-	0.00	-2449062.00	It was decided by the Client Deptt. & consultant to install 7.5 mtrs height Octagonal poles inside the campus & 9 mtrs height pole the boundary wall in place of high steel tubular poles

	Sub-Head of estimate and Items of work	Original estimates Qty.		Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty		Rate	Unit	Cost	Difference	Reason
							Supplying, Installation, Testing and Commissioning of 7.5 mtrs. long octagonal pole galvanized continuously tapered (bolt fixing type) in single section made out of 3mm thick sheet having top dia 70mm and bottom dia 155mm with 04 Nos. foundation bolts of size 24mm dia x 600mm long with integral junction box. The foundation bolts should be hot dipped galvanized complete with door and locking arrangement including cost of concrete cement 1:2:4 with foundation of size 0.8X0.8X1.4 mtr depth in ground with cost of iron bars for fixing of pole i/c providing and fixing bakelite sheet of size 25cm x 10cm x 6mm thick, connector, TPN aluminium bus bar of suitable size and SP MCB of 10 Amp rating complete etc as required (Make:-Philips/GE/Wipro/ Volmont/Lyseght/Bajaj).	118	Nos	18300.00	each	2159400.00	2159400.00	The increase in quantity of poles is as per site requirement finalized in consultation with client. The height of pole is as per site requirement with road width quantities as per actual cost is inclusive of bracket.
							Supplying, Installation, Testing and Commissioning of 9.0 mtrs. long octagonal pole galvanized continuously tapered (bolt fixing type) in single section made out of 3mm thick sheet having top dia 70mm and bottom dia 170mm with 04 Nos. foundation bolts of size 24mm dia x 750mm long with integral junction box. The foundation bolts should be hot dipped galvanized complete with door and locking arrangement including cost of concrete cement 1:2:4 with foundation of size 0.8X0.8X1.4 mtr depth in ground with cost of iron bars for fixing of pole i/c providing and fixing bakelite sheet of size 25cm x 10cm x 6mm thick, connector, TPN aluminium bus bar of suitable size and SP MCB of 10 Amp rating complete etc as required. (Make: Philips/GE/Wipro/ Volmont/Lyseght/Bajaj).	158	Nos	21000.00	each	3318000.00	3318000.00	-- do --

	Sub-Head of estimate and Items of work	Original estimates Qty.		Rate	Unit	Cost	Sub-Head of estimate and items of work (REVISED)	Revised estimates Qty		Rate	Unit	Cost	Difference	Reason
2	Supplying, installation, testing and commissioning of road way lighting luminaires single pieve, integral, grey powder coated die-cast aluminium housing, GLASKOTE pot optics reflector with acrylic bowl cover and accessories on the exiting pole of the following ratings:						Supplying, installation, testing and commissioning of road way lighting luminaires single pieve, integral, grey powder coated die-cast aluminium housing, GLASKOTE pot optics reflector with acrylic bowl cover and accessories on the exiting pole of the following ratings:							150 W HPSV fitting IP66/65 with 150W SON-T tubular lamp and 250W HPSV fitting IP66/65 with 250W SON-T tubular lamps
(i)	Bajaj make BGEST 150 SV complete with 150 watt S.V.T lamp	218	Nos	5400.00	each	1177200.00	Bajaj make BGEST 150 SV complete with 150 watt S.V.T lamp	-		-	-	0.00	-1177200.00	
(ii)	Bajaj make BGEST 400 SV complete with 400 watt S.V.T lamp	158	Nos	5600.00	each	884800.00	Bajaj make BGEST 400 SV complete with 400 watt S.V.T lamp	-		-	-	0.00	-884800.00	
							Supplying, installation, testing and commissioning of 150 watt HPSV IP-66/65 street light fitting having single piece, integral powder coated die-cast aluminium housing, pot optics reflector, acrylic bowl, igniter, ballast, capacitor etc. complete with 150 watt SON-T tubular lamp on existing street light pole complete as required.							
							(Philips make Cat No.SGP-325 1XSONT 150W/GE make Model No.GER-150W SPPT/DPP/ Wipro make Model No.WST 71150 1 x 150W HPSVT).	218	Nos	4300.00	each	937400.00	937400.00	Fittings provided as per decision taken by the Client Deptt. & as per site requirement.
							Supplying, installation, testing and commissioning of 250 watt HPSV IP-66/65 street light fitting having single piece, integral powder coated die-cast aluminium housing, pot optics reflector, acrylic bowl, igniter, ballast, capacitor etc. complete with 250 watt SON-T tubular lamp on existing street light pole complete as required.							
							(Philips make Cat No.SGP-335 1XSONT 250W GB/GE make model No.SKYGEN Pro.250W/Wipro make Model No.WST 76250 1x250 HPSVT).	158	Nos	6650.00	each	1050700.00	1050700.00	

	Sub-Head of estimate and	Original estimates					Sub-Head of estimate and	Revised estimates					Difference	Reason
	Items of work	Qty.		Rate	Unit	Cost	Items of work (REVISED)	Qty		Rate	Unit	Cost		
3	Supplying and fixing of pole box of minimum size 250mm x 300mm x 150mm deep made from 16 SWG MS sheet duly fitted with 100 Amp TPN aluminium bus bar, din bar 10 Amp 10 KA 'C' series SP MCB complete with MS clamp for fixing on the street light pole including connections, earthing and painting etc. as required.	389	Nos	557.00	each	216673.00	Supplying and fixing of pole box of minimum size 250mm x 300mm x 150mm deep made from 16 SWG MS sheet duly fitted with 100 Amp TPN aluminium bus bar, din bar 10 Amp 10 KA 'C' series SP MCB complete with MS clamp for fixing on the street light pole including connections, earthing and painting etc. as required.	-		-	-	0.00	-216673.00	Not required as the boxes are in built in the poles installed.
4	Supplying and drawing 3 x 4 sq.mm FR PVC insulated copper conductor, single core cable in the existing pole including connections etc. as required.	3700	mtrs	58.00	metre	214600.00	Supplying and drawing 3 x 4 sq.mm FR PVC insulated copper conductor, single core cable in the existing pole including connections etc. as required.	3700	mtrs	85.00	metre	314500.00	99900.00	
5	Supplying and fixing 5 Amps to 32 Amps rating, 240 Volts 'B' series miniature circuit breaker suitable for lighting and other loads of following poles in the existing cut out of the pole. Complete with connection, testing and commissioning etc. as required.						Supplying and fixing 5 Amps to 32 Amps rating, 240 Volts 'B' series miniature circuit breaker suitable for lighting and other loads of following poles in the existing cut out of the pole. Complete with connection, testing and commissioning etc. as required.							Not required as SP MCB is included in the item of pole.
(i)	Single pole and neutral	376	Nos	171.00	each	64296.00	Single pole and neutral	-		-	-	0.00	-64296.00	
6	Supplying and laying following sizes to GI pipe (medium class) in ground including excavation and refilling as required (for road crossing).						Supplying and laying following sizes to GI pipe (medium class) in ground including excavation and refilling as required (for road crossing).							As road/ floor/ pucca passage cutting is not allowed by Client Department. So item is not executed
(i)	GI pipe 100mm dia (Medium Class)	300	mtrs	850.00	metre	255000.00	GI pipe 100mm dia (Medium Class)	-		-	-	0.00	-255000.00	
(ii)	GI pipe 80mm dia (Medium Class)	600	mtrs	700.00	metre	420000.00		-		-	-	0.00	-420000.00	
	TOTAL OF SUB HEAD-VI					**5681631.00**						**7780000.00**	**2098369.00**	

	Sub-Head of estimate and Items of work	Original estimates Qty.		Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty		Rate	Unit	Cost	Difference	Reason
	SUB HEAD-VII (FEEDER PILLAR)						SUB HEAD-VII (FEEDER PILLAR)							
1	Supply and fixing of floor mounting, totally enclosed, compartmentalized, cubical, dust, vermin proof and outdoor type Feeder Pillar (IP55) fabricated out of 2mm thick cold rolled carbon annealed, sheet steel, internally strengthened with angle iron frame work with following incoming and outgoing feeders (fabricated out of 2 mm CRCA sheet steel) including supplying and mounting including making connections/ inter connections with lugs/ gland crimping tools, testing and commissioning.						Supply and fixing of floor mounting, totally enclosed, compartmentalized, cubical, dust, vermin proof and outdoor type Feeder Pillar (IP55) fabricated out of 2mm thick cold rolled carbon annealed, sheet steel, internally strengthened with angle iron frame work with following incoming and outgoing feeders (fabricated out of 2 mm CRCA sheet steel) including supplying and mounting including making connections/ inter connections with lugs/ gland crimping tools, testing and commissioning.							
1.1	STREET LIGHT FEEDER PILLAR						STREET LIGHT FEEDER PILLAR							
a)	Incoming:						Incoming:							
i)	100 A 4 pole MCCB (25 KA) with on/ off indications in the front.						100 A 4 pole MCCB (25 KA) with on/ off indications in the front.							
ii)	LED type phase indicating - (R, Y & B) Lamps provided with 2 A SP MCBs for protection having lens and lamp openable from the top - 3 Nos						LED type phase indicating - (R, Y & B) Lamps provided with 2 A SP MCBs for protection having lens and lamp openable from the top - 3 Nos							
b)	Bus Bar:-						Bus Bar:-							
i)	One No. (1 No.) 200 Amp TPN Al bus bar						One No. (1 No.) 200 Amp TPN Al. bus bar							
c)	Outgoing:-						Outgoing:-							
i)	63 A DPMCB - B Series 10 KA - 12 Nos						63 A DPMCB - B Series 10 KA - 12 Nos							
d)	Control:						Control:							
i)	4 Pole contactor with a thermal rating of 63 A - 1 No						4 Pole contactor with a thermal rating of 63 A - 1 No.							
ii)	Time switch with daily dial, suitable for operationg on 230 volt, single phase, 50 Hz, AC Supply - 1 No.						Time switch with daily dial, suitable for operationg on 230 volt, single phase, 50 Hz, AC Supply - 1 No.							
iii)	Auto - Manual Selector switch - 1 No.]						Auto - Manual Selector switch - 1 No.]							
iv)	ON/ OFF Push Buttons - 2 Nos	5	set	39803.00	set	199015.00	ON/ OFF Push Buttons - 2 Nos	5	set	56300.00	set	281500.00	82485.00	

Sub-Head of estimate and items of work	Original estimates				Sub-Head of estimate and Items of work (REVISED)	Revised estimates				Difference	Reason
	Qty.	Rate	Unit	Cost		Qty.	Rate	Unit	Cost		
					Fabrication, supplying, installation, testing and commissioning of (IP-54) outdoor type Feeder Pillar fabricated with 2mm thick CRCA sheet, dust & vermin proof with hinged single/ double door mounted from front and back side with locking arrangement having bottom cable entry duly fixed 300mm above GL with brick masonary foundation including fabricating, supplying, installation, testing & commissioning of compartmentalized cubical panel board of following sizes fabricated with 2mm thick CRCA sheet with hinged doors inside the feeder pillar, cable alley at both side, detachable gland plate having bottom cable entry earthing studs at both sides, duly painted with one coat of anti-corrosion paint and two coats of powder coated paint of approved colour for both feeder pillar and cubical panel board including connections/ inter connections with suitable capacity of aluminium strips with heat shrinkable colourec sleeves including providing, installation.						As the buildings/ roads etc. which are to fed are too far from Sub-Station buildings, so to reduce the length of LT cables, Feeder pillar provided in between sub stations and tracings/ pockets to be fed.
					Testing and commissioning of following accessories, cutting the body etc complete as required, inc including LED phase indicating lamps for each of the outgoing switchgear/MCCB with MCB protection for vamps, for the following feeder pillars:-						
					(Feeder Pillar No.1 Sub-Station No.1 near existing Girl's Hostel)						
					(Approx. size of feeder pillar 1.80 mtr x 1.65mtr x 1.20mtr deep)						

Sub-Head of estimate and Items of work	Original estimates Qty.	Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty.	Rate	Unit	Cost	Difference	Reason
					Incoming :-						
					800 Amps three pole horizontal drawout type air circuit breaker of fault breaking capacity 50 kA (rms for upto 433 V) manually operated, fitted with interlocked door, automatic safety shutters, mechanical ON/OFF and service/isolated position indicators and frame earthing contact, conforming to IS-13947-2 1993 as amended upto date complete with following accessories required for ACB - 1 No						
					Independent manual spring closing mechanism-1 No.						
					Microprocessor release (EMI & EMC certified) for over current, earth fault and short circuit protection - 1 Set						
					Microprocessor release (EMI & EMC certified) for over current, earth fault and short circuit protection - 1 Set						
					Analogue 96 mm square flush pattern/Digital type voltmeter (0-500) Volt with selector switch and back Lp MCBs - 1 Set						
					Analogue 96 mm square flush pattern/digital type Ammeter (0-1000 Amp) with selector switch and one set of 3 Nos. CTs of ratio 1000/5A Class-I accuracy and 15 VA burden - 1 Set.						
					Shunt trip coil 230 Volt AC.						
					Busbar:						
					4 strip aluminium bus bars of minimum of 1000 Amps capacity with heat shrinkable coloured sleeves and including DMC/ SMC bus bars supports as required intervals complete for cross section, size support & their spacing etc. for with standing fault level of 31 MVA for 1 sec. – 1 Set						

Sub-Head of estimate and	Original estimates				Sub-Head of estimate and	Revised estimates					Difference	Reason
Items of work	Qty.		Rate	Unit	Cost	Items of work (REVISED)	Qty		Rate	Unit	Cost		
						OUTGOING SWITCHGEARS:							
						315 Amp 3 pole 415 Volts 50 KA breaking capacity MCCB with thermal magnetic release - 4 Nos							
						200 Amp 3 pole 415 Volts 35 KA breaking capacity MCCB with thermal magnetic release - 3 Nos							
						100 Amp 3 pole 415 Volts 25 KA breaking capacity MCCB with thermal magnetic release - 1 No.							
						(Note: Ics = 100% Icu for all MCCBs)							
							1	set	360000.00	set	360000.00	360000.00	
						b) (Feeder Pillar No.1 of Sub-Station No.2 near existing Hostel No.8)							
						(Appx. Size of feeder pillar 1.90 Mtr. x 1.50 Mtr. x 1.20 Mtr.)							
						Incoming:-							
						800 Amps three pole horizontal drawout type air circuit breaker of fault breaking capacity 50 KA (Ics = Icu upto 433 V) manually operated, fitted with interlocked door, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact, conforming to IS-13947-2 1993 as amended upto date complete with following accessories required for ACB - 1 No.							
						Independent manual spring closing mechanism-1 No.							As the buildings/ hostels etc. which are to fed are too far from Sub-Station buildings, so to reduce the length of LT cables. Feeder pillar provided in between sub stations and buildings/
						Microprocessor release (EMI & EMC certified) for over current, earth fault and short circuit protection - 1 Set.							
						Analogue 96 mm square flush pattern/Digital type voltmeter (0-500 Volt) with selector switch and back up MCBs - 1 Set.							
						Analogue 96 mm square flush pattern/digital type Ammeter (0-1000 Amp) with selector switch and one set of 3 Nos. CTs of ratio 1000/5A Class-I accuracy and 15 VA burden - 1 Set.							
						Shunt trip coil 220 Volt AC.							

Sub-Head of estimate and Items of work	Original estimates Qty.	Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty	Rate	Unit	Cost	Difference	Reason
					Busbar: 4 strip aluminium bus bars of minimum of 1000 Amps capacity with heat shrinkable coloured sleeves and including GMC/ SMC bus bars supports at required intervals complete for cross section, size support & their spacing etc. for with sounding fault level of 31 MVA for 1 sec. = 1 Set						
					OUTGOING SWITCHGEARS: 400 Amp 3 pole 415 Volts 50 KA breaking capacity MCCB with thermal magnetic release - 4 Nos						
					100 Amp 3 pole 415 Volts 25 KA breaking capacity MCCB with thermal magnetic release - 2 Nos						
					(Note: Ics = 100% Icu for all MCCBs)	1 set	3' 6000.00	set	315000.00	$15000.00	
					c) Feeder No.2 of Sub-Station No.2 near Hostel No.4 & 5) Approx. size of feeder pillar 2.00mtr x 1.75mtr x 1.20 mtr deep						

Sub-Head of estimate and Items of work	Original estimates Qty.	Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty	Rate	Unit	Cost	Difference	Reason
					Incomer:-						
					630 Amps three pole horizontal drawout type air circuit breaker of icw breaking capacity 50 KA (Ics = Icu upto 415 V) manually operated, fitted with interlocked door, automatic safety shutters, mechanical ON/OFF and service/test/isolated position indicators and frame earthing contact, conforming to IS-13947-2 1993 as amended upto date complete with following accessories required for ACB - 1 No.						As the buildings/ hostels etc which are to fed are far from Sub-Station buildings, so to reduce the length of LT cables. Feeder pillar provided in between sub-stations and buildings/ hussels to be fed.
					Independent manual spring closing mechanism-1 No						
					Microprocessor release (EMI & EMC certified) for over current, earth fault and short circuit protection - 1 Set						
					Analogue 90 mm square flush pattern/Digital type voltmeter (0-500 Volt) with selector switch and back up MCBs - 1 Set						
					Analogue 96 mm square flush pattern/digital type Ammeter (0-600 Amp) with selector switch and one set of 3 Nos. CTs of ratio 600/5A Class-I accuracy and 15 VA burden - 1 Set						
					Shunt trip coil 220 Volt AC						
					Busbar:						
					4 strip aluminium bus bars of minimum of 1000 Amps capacity with heat shrinkable colloured sleeves and including DMC/ SMC bus bars supports at required intervals complete for cross section size support & their spacing etc for with standing fault level of 31 MVA for 1 sec. – 1 Set						
					OUTGOING SWITCHGEARS:						
					315 Amp 3 pole 415 Volts 50 KA breaking capacity MCCB with thermal magnetic release - 2 Nos.						
					200 Amp 3 pole 415 Volts 35 KA breaking capacity MCCB with thermal magnetic release - 1 Nos.						

Sub-Head of estimate and Items of work	Original estimates Qty.	Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty	Rate	Unit	Cost	Difference	Reason
					100 Amp 3 pole 415 Volts 25 KA breaking capacity MCCB with thermal magnetic release - 6 Nos (NOTE: Ics = 100% Icu for all MCCBs)	1 set	346500.00	set	346500.00	346500.00	
					d) Feeder Pillar No.1 of Sub-Station No.3 near Old Admn. Block. (Approx. size of feeder pillar 1.85mtr x 1.50mtr x 1.20 mtr deep)						
					Incoming:-						
					630 Amps three pole horizontal drawout type air circuit breaker of fault breaking capacity 50 KA (Ics = Icu upto 433 V) manually operated, fitted with interlocked door, automatic safety shutters, mechanical ON/OFF and service/isolated position indicators and frame earthing contact, conforming to IS-13947-2 1993 as amended upto date complete with following accessories required for ACB - 1 No						
					Independent manual spring closing mechanism 1 No.						As the buildings/ hostels etc. which are to be fed are too far from Sub-Station buildings, so to reduce the length of LT cables. Feeder pillar provided in between sub-stations and buildings
					Microprocessor release (EMI & EMC certified) for over current, earth fault and short circuit protection - 1 Set.						
					Analogue 96 mm square flush pattern/Digital type voltmeter (0-500 Volt) with selector switch and back up MCBs - 1 Set.						
					Analogue 90 mm square flush pattern/digital type Ammeter (0-630 Amp) with selector switch and one set of 3 Nos. CTs of ratio 400/5A Class-I accuracy of 15 VA burden - 1 Set.						
					Shunt trip coil 220 Volt AC						
					Busbar:						

Sub-Head of estimate and Items of work	Original estimates Qty.		Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty		Rate	Unit	Cost	Difference	Reason
						4 strip aluminium bus bars of minimum of 1000 Amps capacity with heat shrinkable coloured sleeves and including DMC/ SMC bus bars supports at required intervals complete for cross section, size support & their spacing etc. for with standing fault level of 31 MVA for 1 sec. – 1 Set							
						OUTGOING SWITCHGEARS:							
						400 Amp 3 pole 415 Volts 50 KA breaking capacity MCCB with thermal magnetic release - 3 Nos							
						200 Amp 3 pole 415 Volts 35 KA breaking capacity MCCB with thermal magnetic release - 3 Nos							
						(Note: Ics = 100% Icu for all MCCBs)	1	set	328500.00	set	328500.00	328500.00	
						e) (Feeder Pillar No.2 of Sub Station 3 near Guest House)							
						(Approx. size of feeder pillar 1.40mtr x 1.20mtr x 0.30mtr deep).							
						Incoming:-							As the buildings/ hostels etc. which are to fed are too far from Sub-Station buildings, so to reduce the length of LT cables, Feeder pillar provided in between sub-staions and buildings/ hostels to be fed.
						200 Amp TP MCCB 35 KA breaking capacity with thermal magnetic release – 1 No.							
						Busbar:							
						4 strip aluminium bus bars of minimum of 300 Amps capacity with heat shrinkable coloured sleeves and including DMC/ SMC bus bars supports at required intervals complete for cross section, size support & their spacing etc. for with standing fault level of 31 MVA for 1 sec. – 1 Set							
						OUTGOING SWITCHGEARS:							
						160 Amp 3 pole 415 Volts 35 KA breaking capacity MCCB with thermal magnetic release - 2 Nos							
						100 Amp 3 pole 415 Volts 25 KA breaking capacity MCCB with thermal magnetic release - 4 Nos							
						(Note: Ics = 100% Icu for all MCCBs)							

Sub-Head of estimate and Items of work	Original estimates Qty.	Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty	Rate	Unit	Cost	Difference	Reason
					Metering System: Comprising of Analogue 96mm square flush pattern type voltmeter (0-500 V), Analogue 96mm square flush pattern type Ammeter (0-300 A), Selector switches for voltmeter & Ammeter, suitable rating 3 Nos CTs for Ammeter, indicating lamps for (R/Y/B) with protection back up MCB etc - 1 set	1 set	123000.00	set	123000.00	123000.00	
					1) (Feeder Pillar No.3 of Sub-Station No.3 near proposed Gym) (Approx size of feeder pillar 1.40mtr x 1.20mtr x 0.30mtr deep).						
					Incoming: 200 Amp TP MCCB 35 KA breaking capacity with thermal magnetic release – 1 No						As the buildings/ hostles etc. which are to fed are too far from Sub-Station buildings, so to reduce the length of LT cables, Feeder pillar provided in between sub stations and buildings/
					Busbar: 4 strip aluminium bus bars of minimum of 300 Amps capacity with heat shrinkable coloured sleeves and unpainted DMC/ SMC bus bars supports at required intervals complete for cross section, size support & their spacing etc. for withstanding fault level of 31 MVA for 1 sec – 1 Set						
					OUTGOING SWITCHGEARS: 100 Amp 3 pole 415 Volts 25 KA breaking capacity MCCB with thermal magnetic release - 6 Nos (Note: Ics = 100% Icu for all MCCBs)						
					Metering System: Comprising of Analogue 96mm square flush pattern type voltmeter (0-500 V), Analogue 96mm square flush pattern type Ammeter (0-400 A), Selector switches for voltmeter & Ammeter, suitable rating 3 Nos CTs for Ammeter, indicating lamps for (R/Y/B) with protection back up MCB etc - 1 set	1 set	119200.00	set	119200.00	119200.00	

Sub-Head of estimate and Items of work	Qty.	Original estimates Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Qty	Revised estimates Rate	Unit	Cost	Difference	Reason
					Supplying and fixing following rating thermal release type MCCB's in cubical type sheet steel enclosure of size 1300mm x 650mm x 310mm made out of 2mm thick CRCA sheet, duly powder coated, making arrangement for fixing of MCCB, fixing the sheet steel enclosure on wall with fasteners including providing incoming and outgoing terminals solid aluminium busbar strips as per rating of MCCBs incuding gland plate for incoming and outgoing cables complete connections, testing etc as required.						Required to be provided at load ends as existing panel boards are very old rusted and unsafe.
					a) 600 Amp 3 Pole 50 KA (Make-GE Spectra EZ)	1	No. 37444.00	each	37444.00	37444.00	
					b) 400 Amp 3 Pole 50 KA (Make-GE Spectra EZ)	21	Nos 34922.00	each	733362.00	733362.00	– do –
					Supplying and fixing following rating thermal release type MCCB's in cubical type sheet steel enclosure of size 750mm x 400mm x 210mm made out of 2mm thick CRCA sheet, duly powder coated, making arrangement for fixing of MCCB, fixing the sheet steel enclosure on wall with fasteners including providing incoming and outgoing terminals solid aluminium busbar strips as per rating of MCCBs including gland plate for incoming and outgoing cables complete connections, testing etc as required						
					c) 250 Amp 3 Pole 50 KA	7	Nos 22709.00	each	158963.00	158963.00	– do –

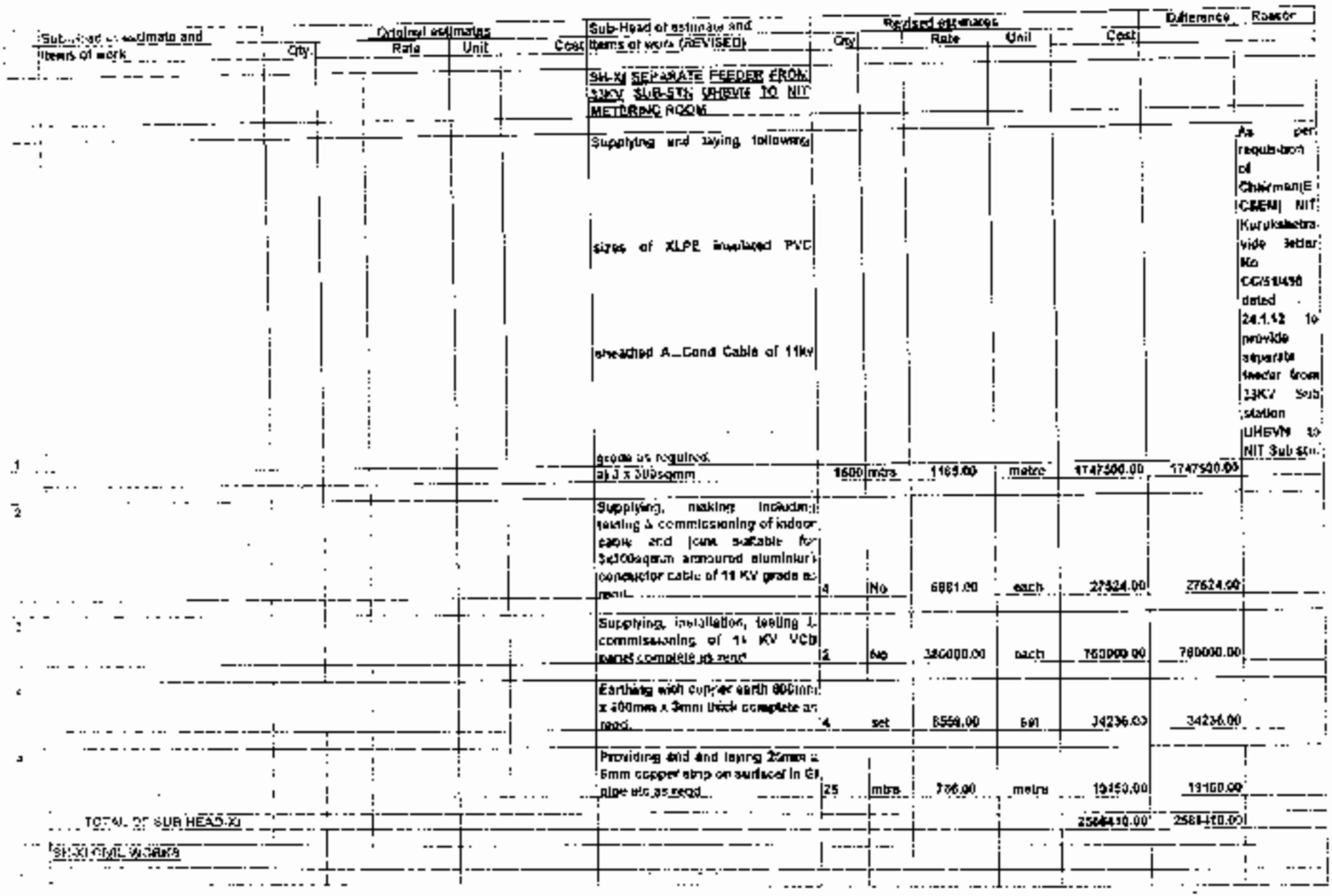
	Sub-Head of estimate and Items of work	Original estimates Qty.		Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty		Rate	Unit	Cost	Difference	Reason
							Supplying and fixing following rating thermal release type MCCB's in cubical type sheet steel enclosure of size 500mm x 350mm x 210mm made out of 2mm thick CRCA sheet, duly powder coated, making arrangement for fixing of MCCB, fixing the sheet steel enclosure on wall with fastners including providing incoming and outgoing terminals solid aluminium busbar strips as per rating of MCCBs including gland plate for incoming and outgoing cables complete, connections, testing etc. as required.							Required to be provded at load ends as existing panel boards are very old, rusted and un-safe.
							a) 160 Amp 4 Pole 35 KA	1	No.	12608.00	each	12608.00	12608.00	
							b) 100 Amp 4 Pole 35 KA	17	Nos	9310.00	each	158270.00	158270.00	-- do --
							c) 63 Amp 4 Pole 35 KA	2	Nos	9310.00	each	18620.00	18620.00	-- do --
	TOTAL OF SUB HEAD-VII					**199015.00**						**2992967.00**	**2793952.00**	
	SUB HEAD - VIII (EARTHING)													
1	EARCUPL						EARCUPL							
	Copper earth plate electrode:						Copper earth plate electrode:							
	Earthing with copper earth plate 600 mm x 600 x 3 mm thick including accessories and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc. (but without charcoal or coke and salt) as required.	66	sets	3263.00	set	215358.00	Earthing with copper earth plate 600 mm x 600 x 3 mm thick including accessories and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc. (but without charcoal or coke and salt) as required.	24	sets	8500.00	set	204000.00	-11358.00	Copper earthing done only for 3 Nos Sub-Station buildings and for One No. metering panel room only.
2	Extra for using salt and coke for G.I or copper plate earth electrode as required	66	sets	603.00	set	39798.00	Extra for using salt and coke for G.I or copper plate earth electrode as required	70	sets	700.00	set	49000.00	9202.00	
3	EARGIWRPIP						EARGIWRPIP							
	P/F 6 SWG GI earth wire in pipe:						P/F 6 SWG GI earth wire in pipe:							
	Providing and laying earth connection from earth electrode with 6 SWG dia G.I wire in 15mm dia GI pipe from earth electrode as required.	104	mtrs	494.00	metre	51376.00	Providing and laying earth connection from earth electrode with 6 SWG dia G.I wire in 15mm dia GI pipe from earth electrode as required.	500	mtrs	140.00	metre	70000.00	18624.00	As per acutal site requirement.

	Sub-Head of estimate and Items of work	Original estimates Qty.		Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty		Rate	Unit	Cost	Difference	Reason
4	EARCUSTSUR						EARCUSTSUR							
	P/F 25mm x 5mm copper earth strip in surface/ recess:						P/F 25mm x 5mm copper earth strip in surface/ recess:							Copper strip provided for earthing of HT panels/ LT panels/ Transformers and capacitor panels etc. as per actual site
	Providing and fixing 25 mm x 5 mm copper strip on surface or in recess for connections etc. as required.	260	mtrs	358.00	metre	93080.00	Providing and fixing 25 mm x 5 mm copper strip on surface or in recess for connections etc. as required.	350	mtrs	750.00	metre	262500.00	169420.00	
							Providing and fixing 25 mm X 5 mm copper strip in 40 mm dia G.I. pipe from earth electrode including connection with brass nut, bolt, spring, washer excavation and re-filling etc. as required.	250	mtrs	1000.00	metre	250000.00	250000.00	
5	EARBUS						EARBUS							
	P/F 25mm x 5mm earth bus on surface:						P/F 25mm x 5mm earth bus on surface:							
	Providing and fixing earth bus of 50mm x 5mm copper strip on surface for connections etc. as required.	360	set	665.00	metre	239400.00	Providing and fixing earth bus of 50mm x 5mm copper strip on surface for connections etc. as required.	-		-	-	0.00	-239400.00	Not required as per site requirement.
6	Providing and fixing 6 SWG dia G.I wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ submain wiring/ cable as required.	6000	mtrs	11.00	metre	66000.00	Providing and fixing 6 SWG dia G.I wire on surface or in recess for loop earthing along with existing surface/ recessed conduit/ submain wiring/ cable as required.	28000	mtrs	20.00	metre	560000.00	494000.00	As per acutal requirement at site.
7							Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. (but without charcoal/ coke and salt) as required.	46	sets	3300.00	set	151800.00	151800.00	GI plate earthing done for existing buildings/ hostels
8							Earthing with G.I. earth pipe 4.5 metre long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required.	86	sets	3000.00	set	258000.00	258000.00	GI pipe earthing done for existing buildings/ street lighting poles.
9							Providing and fixing 6 SWG dia G.I. wire on surface or in recess for loop earthing as required.	2000	mtrs	20.00	metre	40000.00	40000.00	As per actual requirement at site.

	Sub-Head of estimate and	Original estimates					Sub-Head of estimate and	Revised estimates					Difference	Reason
	Items of work	Qty.		Rate	Unit	Cost	Items of work (REVISED)	Qty		Rate	Unit	Cost		
10							Providing and fixing earth bus of 50 mm X 10 mm copper strip on surface for connections etc. as required.	20	mtrs	2400.00	metre	48000.00	48000.00	Provided in the Sub-Stations as main earth bus.
	TOTAL OF SUB HEAD - VIII					**705012.00**						**1893300.00**	**1188288.00**	
	SUB HEAD - IX (SAFETY EQUIPMENT)													
1	Supplying and erection of the following equipment at suitable place in the sub-station building as required.						Supplying and erection of the following equipment at suitable place in the sub-station building as required.							
a)	Set of 4 Nos 9.5 Litre capacity GI bucket painted in post office red colour with pnor coat of red-oxide paint and written with white paint 'FIRE' and mounted on MS angle iron frame with bracket of appropriate size & capacity including filling sand etc.	3	sets	1200.00	set	3600.00	Set of 4 Nos 9.5 Litre capacity GI bucket painted in post office red colour with prior coat of red-oxide paint and written with white paint 'FIRE' and mounted on MS angle iron frame with bracket of appropriate size & capacity including filling sand etc.	4	sets	3000.00	set	12000.00	8400.00	As per actual requirement at site.
b)	First aid box as approved by St. John Ambulance Brigade/ Indian Red Cross society confirming to IS: 2217 - 1963	1	No.	300.00	each	300.00	First aid box as approved by St. John Ambulance Brigade/ Indian Red Cross society confirming to IS: 2217 - 1963	4	No.	500.00	each	2000.00	1700.00	-- do --
c)	Shock treatment chart duly mounted on a wooden frame with glass on, as required in 2 languages (Hindi & Englisn)	1	No.	150.00	each	150.00	Shock treatment chart duly mounted on a wooden frame with glass on, as required in 2 languages (Hindi & English)	4	No.	500.00	each	2000.00	1850.00	-- do --
d)	Rubber Mat 914.4 mm wide and 12 mm thick checkered rubber mat to withstand 11 KV dielectric strength confirming to IS:5424 - 1969 complete as required.	3	nos	1468.00	each	4404.00	Rubber Mat 914.4 mm wide and 12 mm thick checkered rubber mat to withstand 11 KV dielectric strength confirming to IS:5424 - 1969 complete as required.	-		-	-	0.00	-4404.00	SMC sheet flooring is to be provided in place of rubber mats.
e)	Rubber mat 914.4 mm wide and 6 mm thick to withsand 15 KV dielectric strength.	9	nos	1201.00	each	10809.00	Rubber mat 914.4 mm wide and 6 mm thick to withsand 15 KV dielectric strength.	-		-	-	0.00	-10809.00	
f)	Providing 11 KV tested Hand & GLOVES	3	nos	150.00	each	450.00	Providing 11 KV tested Hand & GLOVES	4	nos	200.00	each	800.00	350.00	As per actual requirement

Sub-Head of estimate and Items of work	Original estimates				Sub-Head of estimate and Items of work (REVISED)	Revised estimates				Difference	Reason
	Qty.	Rate	Unit	Cost		Qty	Rate	Unit	Cost		
12 Supply and fixing of Carbon Dioxide fire (CO2) type fire extinguishers of 4.5 Kg each mounted on wall hooks conforming to IS 2878 - 1978 and cylinders fully charged of following capacity	6 Nos	2261.00	each	13566.00	Supply and fixing of Carbon Dioxide fire (CO2) type fire extinguishers of 4.5 Kg each mounted on wall hooks conforming to IS 2878 - 1978 and cylinders fully charged of following capacity	6	nos	6000.00	each	36000.00	16434.00	
13 Supply and fixing of Dry chemical fire extinguishers, 5 Kg. capacity) hanged on wall with bracket complete as required	5 nos	2261.00	each	13566.00	Supply and fixing of Dry chemical fire extinguishers, 5 Kg capacity hanged on wall with brackets complete as required	0	nos	1000.00	each	8000.00	-7566.00	
14 Providing and fixing danger plates made of mild steel at least 2mm thick & vitreous enamelled white on both sides & with inscriptions in signal red colour on front side as required.					Providing and fixing danger plates made of mild steel at least 2mm thick & vitreous enamelled white on both sides & with inscriptions in signal red colour on front side as required.						
a) High Voltage size 250mm x 200mm	6 nos	75.00	each	450.00	a) High Voltage size 250mm x 200mm	6	nos	150.00	each	900.00	450.00	
b) Medium Voltage size 200mm x 150mm	9 nos	68.00	each	612.00	a) Medium Voltage size 200mm x 150mm	9	nos	100.00	each	900.00	288.00	
					Providing and fixing 2.5mm SMC sheet in front of LT/ HT panels etc as required	50	sq.mtr	5000.00	sq.mtr	250000.00	250000.00	SMC sheet flooring is to be provided in front of HT/ LT Capacitor panels in the Sub Stations
TOTAL OF SUB HEAD - IX				47907.00						304800.00	256893.00	

Sub-head of estimate and items of work	Original estimates				Sub-Head of estimate and Items of work (REVISED)	Revised estimates				Difference	Reason
	Qty.	Rate	Unit	Cost		Qty.	Rate	Unit	Cost		
					SH-X HT SUPPLY TO MEGA BOYS HOSTEL & ADMN BLOCK IN BUILDING:						
1					Supplying and laying following sizes of XLPE insulated PVC sheathed aluminium conductor cable of 11KV grade as per I.S.:						As per requirement given by Executive Engineer, NIT, Kurukshetra vide letter No. CC/1311675 dated 7.12.2011 & progress review meeting (discussion in the chamber of Chairman/E (C&EM) on 1.12.11 it was decided to provide HT Service connection to Mega Boys hostel & Admn
					a) 3 x 185sqmm	500 mtrs	1900.00	metre	950000.00	950000.00	
2					Supplying, installation, testing & commissioning of 11KV VCB, panel complete as req.	2	Nos	390000.00	each	780000.00	780000.00
	TOTAL OF SUB HEAD-X								1710000.00	1710000.00	



Sub-Head of estimate and Items of work	Original estimates Qty.	Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty.	Rate	Unit	Cost	Difference	Reason
					SH-XI SEPARATE FEEDER FROM 33KV SUB-STN. UHEVN TO NIT METERING ROOM.						
					Supplying and laying following						As per requisition of Chairman(E CE&M) NIT Kurukshetra-vide letter No CC/51456 dated 24.1.12 to provide separate feeder from 33KV Sub station UHEVN to NIT Sub stn.
					sizes of XLPE insulated PVC						
					sheathed A_Cond Cable of 11kv						
					grade as required.						
1					a) 3 x 300sqmm	1600	mtrs	1165.00	metre	1747500.00	1747500.00
2					Supplying, making including testing & commissioning of indoor pots and cast suitable for 3c300sqmm armoured aluminium conductor cable of 11 KV grade as read.	4	No	6881.00	each	27524.00	27624.00
3					Supplying, installation, testing & commissioning of 11 KV VCB panel complete as read	2	No	380000.00	each	760000.00	760000.00
4					Earthing with copper earth 600mm x 300mm x 3mm thick complete as read.	4	set	8559.00	Set	34236.00	34236.00
5					Providing and laying 25mm x 6mm copper strip on surface in GI pipe etc as read.	25	mtrs	776.00	metre	19400.00	19100.00
					TOTAL OF SUB HEAD XI					2581160.00	2581160.00
					SH-XII CIVIL WORKS						

	Sub-Head of estimate and Items of work	Original estimates Qty.		Rate	Unit	Cost	Sub-Head of estimate and Items of work (REVISED)	Revised estimates Qty		Rate	Unit	Cost	Difference	Reason
	Cost of construction of Sub-Station building (3 Nos Sub-Stations of 525 sq.mtrs x Rs. 8400/- (As per PAR)= Rs.44,10,000/- + 12.5% E.I works = Rs.49,61,250/- x 26% C.I = Rs.62,51,200/-	1	Job	6251200.00	job	6251200.00	Cost of construction of Sub-Station building (3 Nos Sub-Stations of 525 sq.mtrs x Rs. 8400/- (As per PAR)= Rs.44,10,000/- + 12.5% E.I works = Rs.49,61,250/- x 26% C.I = Rs.62,51,200/- and the cost of approach road to Sub-Stations.	1	Job	7950000.00	job	7950000.00	1698800.00	Addl. Funds provided to Civil wing for construction of approach road to Sub-Station
	TOTAL OF SUB HEAD - XI					**6251200.00**						**7950000.00**	**1698800.00**	

SUMMARY

1	SUB HEAD-I (EQUIPMENTS - HT PANEL BOARD)					7251866.00						4610000.00	-2641866.00	
2	SUB HEAD - II (TRANSFORMER)					7187092.00						10145861.00	2958769.00	
3	SUB HEAD - III (MAIN L.T PANEL)					5096267.00						6959000.00	1862733.00	
4	SUB HEAD - IV (H.T CABLE LAYING & TERMINATIONS)					12894130.00						5900250.00	-6993880.00	
5	SUB HEAD - V (CABLES & TERMINATION)					10811371.00						17543804.00	6732433.00	
6	SUB HEAD-VI (STREET LIGHTING POLES & FITTINGS)					5681631.00						7780000.00	2098369.00	
7	SUB HEAD-VII (FEEDER PILLAR)					199015.00						2992967.00	2793952.00	
8	SUB HEAD - VIII (EARTHING)					705012.00						1893300.00	1188288.00	
9	SUB HEAD - IX (SAFETY EQUIPMENT)					47907.00						304600.00	256693.00	
10	SUB HEAD - X (HT SUPPLY TO MEGA BOYS HOSTEL & ADMN BLOCK					0.00						1710000.00	1710000.00	
11	SH-XI SEPRATE FEEDER FROM 33KV SUB STN UHBVN TO NIT MEETRING ROOM					0.00						2588410.00	2588410.00	
13	SH-XIII CIVIL WORKS					6251200.00						7950000.00	1698800.00	
				TOTAL		**56125491.00**						**70378192.00**	**14252701.00**	
				Add contingencies @ 3%		1683764.73						2111345.76	427581.03	
				G. TOTAL		**57809255.73**						**72489537.76**	**14680282.03**	
				or Say		**57809256.00**						**72489538.00**	**14680282.00**	

ASST. ENGINEER (E)P
CHANDIGARH CENTRAL ELECTRICAL CIRCLE-1
CHANDIGARH

EXECUTIVE ENGINEER(E)P
CHANDIGARH CENTRAL ELECTRICAL CIRCLE-1

SUPERINTENDING ENGINEER(E)
CHANDIGARH CENTRAL ELECTRICAL CIRCLE-1
CHANDIGARH

EE(E)P-II

S.E.(E)P
अधीक्षक इन्जीनियर (योजना कोर प्रभाग)

CE (E) NR CPWD
East Block-I, Level-5
R.K. Puram, New Delhi

Item No. 16.5 **To consider & approve the Revised Cost Estimate for construction of Convocation Hall (3000 capacity) at NIT, Kurukshetra.**

The above mentioned work was approved in the 8th meeting of B & WC vide Agenda Item No.8.9 held on dated 28.05.2007 for an amount of Rs.550.00 lacs. The work could not be under-taken due to non-allocation of funds. Subsequently Chief Engineer, CPWD has now submitted a revised cost estimate for the above work for an amount of Rs. 6800.00 lacs.

The B & WC may consider and approve the revised cost estimate for the above cited work for an amount of Rs. 6800.00 lacs

GOVT. OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT
O/O THE CHIEF ENGINEER (NZ-I)
KENDRIYA SADAN, SECTOR-9A
CHANDIGARH

0172-2743914

No. : 23(390)/SE (P)/EE(P)II/ 3504 Dated: 14/12/11

To

The Director,
National Institute of Technology,
Kurukshetra.

Director's Office
Received on 16/12/2011
Time 4:00 PM
NIT, KURUKSHETRA.

Sub: Rough Cost Estimate of proposed Convocation Hall of 3000 capacity at NIT, Kurukshetra.

N.I.T. KURUKSHETRA
Dy. No. 5059 Date 19.12.11

R	DPD		DAd	CVO	CoE	C
E	M		Co	Ph	Ch	Ma
Hu	Cw		SW	PC	PS	EDC
PE	CCn	PT	PCE	PRO	LMO	L
GA	A	SO	EO	DS	PIS	PIC

Ref.: Your office letter No. CC/1533/5788 dated 30.9.2011.

Sir,

Kindly refer to your above cited letter vide which requisition for various works has been forwarded to Executive Engineer, Karnal Central Division, CPWD, Karnal. In this regard a Rough Cost Estimate for 3000 capacity has been prepared and forwarded to you for obtaining the approval of Building & Works Committee. for 68 crores

It would not be out of place to mention that the formal Preliminary Estimate shall be prepared on approval of the Arch. Drawings and freezing of various requirements in due course.

Encl.: As above.

Chairman (EC&EM)
19/12/11

Yours faithfully

(Nand Lal Chauhan)
Superintending Engineer (P)

Copy to:

1. The Superintending Engineer, Chandigarh Central Circle, CPWD, Chandigarh for information w.r.t. his letter No. CCC/23(4515/W-3/206 dated 13.12.2011.
2. The Superintending Engineer (E), Chandigarh Central Elect. Circle-I, CPWD, Chandigarh.
3. The Executive Engineer, Karnal Central Division, CPWD, Karnal.
4. The Executive Engineer, Karnal Central Elect. Division, CPWD, Karnal.

Kumar

Ry JE(EC)/Ry JE(EM) 21/12/11

/Ex Er

Superintending Engineer (P)

Rough cost of proposed convocation hall of 3000 capacity at NIT, Kuruksheta

The requisition of the subject work has been received from NIT, Kurukshetra vide letter No. CC/1533/5788 Dt. 30.9.2011 wherein it has been desired to obtain rough cost estimate for according in-Principle approval of client deptt. Accordingly, the rough estimate showing rough cost of the project has been prepared.

Following provisions are projected for the present scheme:

(A) Scope of Work:-

1. Basement for car & scooter parking plus services.
2. Auditorium of 3000 capacity.
3. Seminar hall of 500 persons capacity.
4. Two Nos. conference hall of 150 each capacity.
5. Exhibition gallery.
6. Cafeteria
7. Green room
8. Workshop rooms
9. Lifts (2 Nos.) 13 persons capacity each.
10. Staircase
11. Fire fighting such as sprinkler system, wet risers and fire extinguishers.
12. Surface parking
13. Central Air Conditioning.
14. Furniture, accessories etc.
15. Projection and Sound System for Seminar Hall and Conference Rooms.
16. Stage Lighting, Projection System, Motorized curtains for Main Hall.
17. EPBAX/LAN.
18. Ventilation System for Basement.

Contd. P-2

Built up area for 2000 persons is 10000 sqm.
Therefore built up area for 3000 person is $\frac{10000 \times 3000}{2000}$ = 15000 sqm

Costing based on PAR – 2007

R.C.C. frame structure =15000 sqm @ ₹.13,200/-	= ₹. 21,78,00,000.00
Extra height = $\frac{0.65}{0.30}$ = 2.16	
Area = 15000 x 3= 45000 @ ₹ 150/-	=₹. 67,50,000.00
Resisting Earthquake forces 15000 @ ₹ 630/-	=₹. 94,50,000.00
Strong structural member = 15000@ ₹ 850/-	=₹.1,27,50,000.00
Larger module – 15000 @ ₹ 990/-	=₹.1,48,50,000.00
Mostic W.P.T. – 3000 @ ₹ 1140/-	=₹. 34,20,000.00
Fire lighting – including Wet riser and Sprinkler system 15000@₹ 750(300+450)	=₹.1,12,50,000.00
Automatic Fire alarm system – 15000 @ ₹ 300	=₹. 45,00,000.00
	=₹28,07,70,000.00
Add for :- Services & development work as per Annexure A attached.	=₹. 8,12,05,000.00
	=₹36,19,75,000.00
Add : 37% Cost Index	=₹ 13,39,30,750.00
	=₹49,59,05,750.00
Add: 3% Contingencies	=₹ 1,48,77,173.00
	=₹51,07,82,923.00
Add for acoustics, chairs, tables for Conference hall, Air conditioning, sub station, D.G. sets etc.as per Annex-B attached	=₹13,98,00,000.00
	=₹65,05,82,923.00
Add: 1% Cess	=₹ 65,05,829.00
	=₹ 65,70,88,752.00
Add: 4% VAT	=₹ 2,62,83,550.00
Grand Total	**=₹ 68,33,72,302.00**

Say ₹. 68,00,00,000/- (Say ₹ Sixty eight crores)

P.T.O./P3

ABSTRACT OF COST-ORIGINAL ESTIMATE

PWD-1

[Refer Para. 4.23 and CPWD Code Para. No. 87]

State Haryana — Division Karnal Central Division
Branch Civil — Sub-division Karnal Central Sub

Name of Work : Construction of convocation hall of 1800 capacity at NIT Kurukshetra

Item No	Sub-heads and Item of work	Qty	Rate	Per	Amount	Total
			Rs. P.		Rs. P.	
	SH 1 SERVICES					
1.1	Internal water supply & sanitary installations (Office/ College)	2047500000 B.cost	4.00	100 B.cost	8 190 000.00	1.1
1.2	External services connections.	2047500000 B.cost	5.00	100 B.cost	10 237 500.00	1.2
1.3	Internal electric installations. (Non resi. Bldg)	2047500000 B.cost	12.50	100 B.cost	25 593 750.00	1.3
1.4	Extra for :					
1.4.1	Power wiring & plugs	2047500000 B.cost	4.00	100 B.cost	8 190 000.00	1.4.1
1.4.2	Central call bell system	2047500000 B.cost	1.00	100 B.cost	2 047 500.00	1.4.2
1.4.3	Lightning conductors					
1.4.3.1	Upto 4 storeyed buildings	2047500000 B.cost	0.50	100 B.cost	1 023 750.00	1.4.3.1
1.4.4	Telephone conduits	2047500000 B.cost	0.50	100 B.cost	1 023 750.00	1.4.4
1.4.5	Computer conduiting	2047500000 B.cost	0.50	100 B.cost	1 023 750.00	1.4.5
1.4.6	Quality Assurance	2047500000 B.cost	1.00	100 B.cost	2 047 500.00	1.4.7
1.4.7	Add for Green Building @ 5%	2047500000 B.cost	5.00	100 B.cost	10 237 500.00	MR Item
	SubTotal				69 615 000.00	
	SH 2 LIFTS					
2.1	PASSENGER LIFTS					
2.1.1	Passenger lift Capacity 13 persons, 834Kg. Speed 1.00m/s Ac., Travel G+6. Power operated doors, A.C.V.V. control	2 Nos	1 900 000.00	Each	3 800 000.00	2.1.1
	SubTotal				3 800 000.00	
	SH 3 WATER TANKS (RCC UNIT)					
3.1	Over head tank upto staging height 20 metres	100000 litre	15.20	litre	1 520 000.00	3.1

P.T.O./P.4

Item No.	Sub-heads and Item of work	Qty	Rate	Per	Amount	Total
			Rs P.		Rs. P.	
3.2	Underground sump	200000 litre	9.00	litre	1 800 000.00	5 5
	Sub Total				1 320 000.00	
	SH # DEVELOPMENT OF SITE					
4.1	Levelling	50000 sq.mtr	55.00	sq.mtr	550 000.00	b 1
4.2	Internal roads & paths	10500 sq.mtr.	81.60	sq.mtr	830 000.80	b 2
4.3	Sewer	10000 sq.mtr.	63.00	sq.mtr	630 000.00	b 3
4.4	Water Supply					
4.4.1	Filtered water supply distribution lines 100mm dia & below	10000 sq.mtr.	46.00	sq.mtr.	460 000.00	b 4 1
4.4.2	Peripheral grid 450mm to 560mm dia pipes	80000 sq.mtr.	35.00	sq.mtr	350 000.00	b 4 2
4.5	Storm water drains	10000 sq.mtr.	50.00	sq.mtr	500 000.00	b 5
4.6	Horticulture Operations	10000 sq.mtr.	47.00	sq.mtr	470 000.00	b 6
	Sub Total				3,790, 000.00	
	Grand Total				81,205,000.00	

Executive Engineer
Kamal Central Division
CPWD, Kamal

P.T.O/P.S

Annexure –A is attached with other file in this mail.

Annexure-B

Extra Provision:-

Chairs 3000 + 500 +300 = 3800 Nos. @ ₹5000/- each =₹ 1,90,00,000.00

Acoustics L.S. : 1 job =₹ 50,00,000.00

A) Tables for two conference Halls =₹. 10,00,000.00

B) P A Systems

1. 2 No's for conference Halls and 1 No for Seminar Hall, 1 No for Main Hall =₹ 75,00,000.00

2. Projection System for the 2 Nos Conference Hall, I No Seminar Hall and 1 Nos for Main Hall =₹ 50,00,000.00

3. CCTV & EPABX System for Building =₹ 60,00,000.00

4. Motorized Curtain, Stage Lighting for Main Hall =₹ 75,00,000.00

c) HVAC say 15000sqm to be covered

Basement – say 2500sqmt.

Rest 15000-2500=12500Sqm

65% of 12500=8125 Sqmt.

Costing for HVAC $= \frac{8125\text{Sqm}}{20} = 406.25$ TR

Say 2 x 225 TR + 1x225 TR Standby

HVAC – For A/C

450 TR x 78000 =₹ 3,51,00,000.00

Contd P-7

Mechanical Ventilation	2000 x 2500	=₹	50,00,000.00
	Total for HVAC:	=₹	4,91,00,000.00

(D) S/S Equipments:-

2 x 1000 KVA S/S with HT, LT Panels, APFC Panels, Cabling etc. =₹ 1,12,00,000.00

(E) Security & Compound Lighting with Solar Power Plants. Exit signages. =₹ 1,50,00,000.00

(F) Water supply Pumps with Level indicator =₹ 10,00,000.00

(G) D. G. Sets for standby Power Supply 2 x 500KVA With AMF/ATS panels =₹ 1,25,00,000.00

Total: =₹13,98,00,000.00

Item No. 10.6 **construction of Community Hall at NIT, Kurukshetra.**

The above mentioned work was approved in the 1st meeting of B & WC vide Agenda Item No.1.9 held on dated 08.11.2002 for an amount of Rs.64.15 lacs. The work could not be under-taken due to non-allocation of funds. Subsequently Chief Engineer, CPWD has now submitted a revised cost estimate for the above work for an amount of Rs. 715.32 lacs.

The B & WC may consider and approve the revisecd cost estimate for the above cited work for an amount of Rs. 715.32 lacs.

KENDRIYA SADAN, SECTOR-9A, CHANDIGARH

STATE : Haryana **DIVISION :** KCD **BRANCH :** B & R

Name of work: C/o Community hall at NIT Campus, Kurukshetra.

Major Head:	Minor Head:	Detailed Head:

This preliminary Estimate framed by Er. Iqbal Singh, Executive Engineer, Karnal Central Division, CPWD, Karnal and processed by Er. Tejinder Kumar, Executive Engineer (P)II, O/o Chief Engineer (NZ-I), CPWD, Chandigarh for the probable cost of **Rs. 7,15,31,600/-** including 3% contingencies.

REPORT

HISTORY : This preliminary estimate amounting to **Rs. 7,15,31,600/-** including 3% contingencies has been framed to cover up the probable cost of above mentioned work for accord of A/A & E/S of the competent authority. The requisition of the above said work has been received from client department vide letter No. CC/219/6899 dated 08.10.2012. The preliminary estimate for C/o Community hall & Gymnasium hall was sent vide SE/CCC letter No. CCC/23(4515)/N-3/3427 dated 24.11.2011 amounting to Rs. 5,67,85,5000/- to client deptt. for A/A & E/S. But they have desired that estimate of community hall is to be proposed separately. Accordingly this estimate has been prepared by deleting the provision of gymnasium hall in early approved drawing of community hall and gymnasium hall.

DESIGN & SCOPE: -This estimate is based on Architectural drawing received vide No. SA(NZ)I/ 366/3247 dated 11.11.2011 (excluding multipurpose hall) as below:
Following provisions has been made in the estimate:-

1. RCC framed structure with isolated footing
2. Extra for earth resisting earthquake forces.
3. Internal water supply, sanitary and electrical installations i/c external service connection.
4. Provision for development of site for 8000 sqm area has been taken.
5. Provision for Main LT Panel, essential panel, HT cabling, LT cabling, earthing & safety equipments, Air conditioning with VRV air conditioning system & room with spilt Acs, EPABX system, DG set with AMF panel 250 KVA silent type & N1 No. standby, Stage lighting, PA system etc. have also been taken in this estimate.

SPECIFICATIONS: As per CPWD Specifications 2009 Vol. I to II with upto date correction slips.

RATES : By contract after call of tender.

COST: **Rs. 7,15,31,600/-** i/c 3% contingencies

W.C. Estt: Shall be met out of contingencies.

T & P : All T&P shall be arranged by the contractor.

METHOD : Based on PAR-2007 (Re-print 2010) and market rates.

LAND: Available with the client department.

TIME : After receipt of A/A & E/S

(i) Pre-construction period : 04 Months.
(ii) Post construction period : 12 months
: **16 Months**

9/11/2012

Assistant Engineer (P)
CPWD, Chandigarh

Executive Engineer(P)II
CPWD, Chandigarh

GENERAL ABSTRACT OF COST

Name of Work:- C/o Community hall at NIT Campus, Kurukshetra.

S. No.	Description of Item	Civil	Electical	Total Amount	Remarks
1	Community Hall	45,167,947.00	22,257,436.00	67,425,383.00	As per Annexure A - B
		45,167,947.00	22,257,436.00	**67,425,383.00**	**(C)**
	Add 2% VATT	903,359.00	445,149.00	1,348,508.00	
		46,071,306.00	**22,702,585.00**	**68,773,891.00**	
	Add 1% labour cess on (C)	451,679.00	222,574.00	674,254.00	
		46,522,985.00	22,925,159.00	69,448,145.00	
	Add 3% contingencies.	1,395,690.00	687,755.00	2,083,444.00	
				71,531,589.00	
			Say Rs.	**71,531,600.00**	

Assistant Engineer (P)	**Executive Engineer (P)II**	**Superintending Engineer(P)**
CPWD, Chandigarh	**CPWD, Chandigarh**	**CPWD, Chandigarh**

Preliminary Estimate amounting to ₹ 7,15,31,600/- (Rupees Seven Crore Fifteen LacsThirty One Thousand and Six Hundred Only) submitted to the Competent Authority for accord of A/A & E/S.

Chief Engineer (NZ-I)
CPWD, Chandigarh

Annexure-A

ABSTRACT OF COST

Name of work : C/o Community hall at NIT Campus, Kurukshetra.

SH:- Civil Work.

S.No.	Description of Item	Qty.	Rate	Unit	Amount	Remarks
	R.C.C. framed Structure					
1	R.C.C. framed structure upto six storeys.					
1.1	Floor height 3.35mtr.(Office/ College/ Hospital)	1440.00	13200.00	sqm	19008000.00	1.1,1
	Extra height					19836000.00
1.2	Floor height 3.35mtr.(Office/ College/ Hospital)	1440.00	575.00	sqm	828000.00	(A)
	Extra height					1.2.3
	4.50-3.35=1.15					
	150*1.15/0.30=575					
	Extra for					
.2	Every 0.3mtr. deeper foundations over normal depth of 1.20mtr. (on Ground Floor area only)	1440.00	150.00	sqm	216000.00	1.2.5
3	Roasting earth quake forces.	1440.00	630.00	sqm	907200.00	1.2.6
	Services					
4	Internal water supply & sanitary installations on (A)	19836000.00	4.00	%	793440.00	3.1
5	External services on (A)	19836000.00	3.75	%	743850.00	3.2
6	Quality Assurance on (A)	19836000.00	1.00	%	198360.00	3.6.7
7	Green building concept (GRIHA)	19836000.00	10.00	%	1983600.00	
8	Overhead tank without independent staging	54000.00	9.00	sqm	486000.00	5.1
	Development of site					
9	Leveling	8000.00	55.00	sqm	440000.00	6.1
10	Internal road & paths	8000.00	83.00	sqm	664000.00	6.2
11	Sewer	8000.00	63.00	sqm	504000.00	6.3
12	Water supply					6.4
12.1	Filtered water supply distribution lines 100mm dia & below	8000.00	46.00	sqm	368000.00	6.4.1
12.2	Unfiltered water supply distribution lines	8000.00	27.00	sqm	216000.00	6.4.3
13	Storm water drains	8000.00	50.00	sqm	400000.00	6.5
14	Horticulture Operations	8000.00	47.00	sqm	376000.00	6.6
15	Add for rain harvesting			L.S.	1000000.00	
					29132450.00	
	Add cost index @ 57% except on item No. 15				16035497.00	
					45167947.00	

Assistant Engineer(P)
CPWD, Chandigarh

Executive Engineer(P)II
CPWD, Chandigarh

Abstract of cost

Name of work : C/o Community hall at NIT Campus, Kurukshetra.
SH:- Electrical Work.

Sr. No.	Description	Qty.	Unit	Rate	Amount	Remarks
1	**Building work**					
1.1	Internal electrical installation on (A)	19836000.00	%	12.50%	2479500	3.3
1.2	External services on (A)	19836000.00	%	1.25%	247950	3.2
	Extra for:					
1.2	Power wiring plug on (A)	19836000.00	%	4.00%	793440	3.6.1
1.3	Telephone conduit on (A)	19836000.00	%	0.50%	99180	3.6.4
1.4	Lighting conductor on (A)	19836000.00	%	0.50%	99180	3.6.3
1.5	Call bell system on (A)	19836000.00	%	1.00%	198360	3.6.2
1.6	Floor distribution panel with necessary connections on (A)	19836000.00	%	1.50%	297540	
1.7	Special energy efficient lighting fixtures on (A)	19836000.00	%	1.50%	297540	
1.8	Computer cabling (A)	19836000.00	%	0.50%	99180	3.6.6
	Fire fighting system & fire alarm system					
1.9	Fire fighting system with sprinkler system.	1440	sqm	450.00	648000	2.9.2
	Fire alarm system					
1.10	Automatic fire alarm system for entire building	1440	sqm	300.00	432000	1.5.2
1.11	Compound lighting, street light with HPSV lamp control panel with timer controls	8000	sqm	95.00	760000	6.7.3
3.2	Exit sign board & electric signage	8000	sqm	50.00	400000	6.7.4
					6851870	
	Add cost index @57%				3905566	
					10757436	
2	**Bulk services**					
2.1	Main LT Panel essential panel, HT cabling LT cabling, earthing & safety equipments	1	job	1000000.00	1000000	MR

Sr. No.	Description	Qty.	Unit	Rate	Amount	Remarks
2.2	Air conditioning with VRV air conditioning system & room with split Acs	1	job	6000000.00	6000000	MR
2.3	EPABX system	1	job	400000.00	400000	MR
2.4	DG set with AMF panel 250 KVA silent type & N1 No. standby	1	set	2100000.00	2100000	MR
2.5	Stage lighting	1	job	1000000.00	1000000	MR
2.6	PA system	1	job	1000000.00	1000000	MR
					22257436	

Sd/-
Assistant Engineer(P)
CPWD, Chandigarh

Sd/-
Executive Engineer(P)II
CPWD, Chandigarh

Item No. 10.7 **To consider [illegible] construction of Gymnasium/Badminton Hall at NIT, Kurukshetra.**

The above mentioned work was approved in the 6th meeting of B & WC vide Agenda Item No.6.11 held on dated 24.04.2006 for an amount of Rs.40.02 lacs. The work could not be under-taken due to non-allocation of funds. Subsequently Chief Engineer, CPWD has now submitted a revised cost estimate for the above work for an amount of Rs. 532.88 lacs.

The B & WC may consider and approve the revised cost estimate for the above cited work for an amount of Rs. 532.88 lacs.

KENDRIYA SADAN, SECTOR-9A, CHANDIGARH

STATE : Haryana **DIVISION :** KCD **BRANCH :** B & R

Name of work: C/o Badminton hall in NIT Campus, Kurukshetra.

Major Head:	Minor Head:	Detailed Head:

This preliminary Estimate framed by Er. Iqbal Singh, Executive Engineer, Karnal Central Division, CPWD, Karnal and processed by Er. Tejinder Kumar, Executive Engineer (P)II, O/o Chief Engineer (NZ-I), CPWD, Chandigarh for the probable cost of **Rs. 5,32,88,000/-** including 3% contingencies.

REPORT

HISTORY : This preliminary estimate amounting to **Rs. 5,32,88,000/-** including 3% contingencies has been framed to cover up the probable cost of above mentioned work for accord of A/A & E/S of the competent authority. The requisition of the above said work has been received from client department vide letter No. CC/219/6899 dated 08.10.2012. During the discussion with client on the subject matter it was desired by the client that the least 4 Nos. badminton court should be adjusted in the badminton hall i.e. just like multipurpose hall. Accordingly the sizes of the hall taken as per multipurpose hall under construction at NDRI, Karnal.

DESIGN & SCOPE: -Following provisions have been made in the estimate:-

1. RCC framed structure with isolated footing
2. Extra for earth resisting earthquake forces.
3. Internal water supply, sanitary and electrical installations i/c external service connection.
4. Provision for development of site for 4800 sqm area has been taken.
5. Provision for automatic fire alarm, Street lighting with HPSV lamps, Exit signage board i/c electrical signage etc. have also been taken in this estimate.

SPECIFICATIONS: As per CPWD Specifications 2009 Vol. I to II with upto date correction slips.

RATES : By contract after call of tender.

COST: **Rs. 5,32,88,000/-** i/c 3% contingencies

W.C. Estt: Shall be met out of contingencies.

T & P : All T&P shall be arranged by the contractor.

METHOD : Based on PAR-2007 (Re-print 2010).

LAND: Available with the client department.

TIME : After receipt of A/A & E/S

(i) Pre-construction period : 03 Months.
(ii) Post construction period : 09 months
: **12 Months**

9/11/2012

Assistant Engineer (P)
CPWD, Chandigarh

Executive Engineer(P)II
CPWD, Chandigarh

GENERAL ABSTRACT OF COST

Name of Work:- C/o Badminton hall in NIT Campus, Kurukshetra.

S. No.	Description of Item	Civil	Electical	Total Amount	Remarks
1	Badminton Hall	46,968,591.00	3,260,457.00	50,229,048.00	As per Annexure A - B
		46,968,591.00	3,260,457.00	**50,229,048.00**	(C)
	Add 2% VATT	939,372.00	65,209.00	1,004,581.00	
		47,907,963.00	**3,325,666.00**	**51,233,629.00**	
	Add 1% labour cess on (C)	469,686.00	32,605.00	502,290.00	
		48,377,649.00	3,358,271.00	51,735,919.00	
	Add 3% contingencies.	1,451,329.00	100,748.00	1,552,078.00	
				53,287,997.00	
			Say Rs.	**53,288,000.00**	

Assistant Engineer (P)	**Executive Engineer (P)II**	**Superintending Engineer(P)**
CPWD, Chandigarh	**CPWD, Chandigarh**	**CPWD, Chandigarh**

Preliminary Estimate amounting to ₹ 5,32,88,000/- (Rupees Five Crore Thirty Two Lacs and Eighty Eight Thousand Only) submitted to the Competent Authority for accord of A/A & E/S.

Chief Engineer (NZ-I)
CPWD, Chandigarh

ABSTRACT OF COST

Name of work :C/o Badminton hall In NIT Campus, Kurukshetra.
SH:- Civil Work

S.No.	Description of Item	Qty.	Rate	Unit	Amount	Remarks
	R.C.C. framed Structure					
1	R C C framed structure upto six storeys.					
1.1	Floor height 3.35mtr.(Office/ College/ Hospital)	1600.00	13200.00	sqm	21120000.00	1.1.1
	Extra for					22440000.00 (A)
2	Every 0.3mtr additional height of floor above normal floor height of 3.35mtr / 2.00mtr Extra height 5.00-3.35=1.65 150*1.65/0.30=825	1600.00	825.00	sqm	1320000.00	1.2.3
3	Every 0.30mtr. Higher plinth over normal plinth height of 0.60m (on GF area only)	1600.00	150.00	sqm	240000.00	1.2.4
4	Every 0.30m deeper foundation over normal depth of 1.20m (on GF area only)	1600.00	150.00	sqm	240000.00	1.2.5
5	Resisting earth quake forces	1600.00	630.00	sqm	1008000.00	1.2.8
	Services					
6	Internal water supply & sanitary installations on (A)	22440000.00	4.00	%	897600.00	3.1
7	External services on (A)	22440000.00	3.75	%	841500.00	3.2
8	Quality Assusrane on (A)	22440000.00	1.00	%	224400.00	3.6.7
9	Green building concept (GRIHA)	22440000.00	10.00	%	2244000.00	
	Development of site					
9	Levelling	4800.00	55.00	sqm	264000.00	6.1
10	Internal road & paths	4800.00	83.00	sqm	398400.00	6.2
11	Sewer	4800.00	63.00	sqm	302400.00	6.3
12	Water supply					6.4
12.1	Filtered water supply distribution lines 100mm d.a & below	4800.00	46.00	sqm	220800.00	6.4.1
12.2	Unfiltered water supply distribution lines	4800.00	27.00	sqm	129600.00	6.4.3
13	Storm water drains	4800.00	50.00	sqm	240000.00	6.5
14	Horticulture Operations	4800.00	47.00	sqm	225600.00	6.6
					29916300.00	
	Adc cost index @ 57%				17052291.00	
					46968591.00	

Sd/-
Assistant Engineer(P)
CPWD, Chandigarh

Sd/-
Executive Engineer(P)II
CPWD, Chandigarh

Annexure-B

ABSTRACT OF COST

Name of work : C/o Badminton hall in NIT Campus, Kurukshetra.
SH:- Electrical Work

S. No.	Description of Item	Qty.	Rate	Unit	Amount	Remarks
	Services					
1	Internal Elect. Installation on (A)	22440000.00	12.50	%	2805000.00	3.3
2	External service connection	22440000.00	1.25	%	280500.00	3.2
3	Extra for power wiring plugs on (A)	22440000.00	4.00	%	897600.00	3.6.1
4	Extra for call bell system on (A)	22440000.00	1.00	%	224400.00	3.6.2
5	Extra for lighting conductors on (A)	22440000.00	0.50	%	112200.00	3.6.3
6	Telephone conduits on (A)	22440000.00	0.50	%	112200.00	3.6.4
7	Computer conduiting on (A)	22440000.00	0.50	%	112200.00	3.6.6
	Development of site					
1	Street lighting with HPSV lamps	4800.00	95.00	sqm	456000.00	6.7.3
2	Exit signage board i/c electrical signage	4800.00	50.00	sqm	240000.00	6.7.4
3	Automatic fire alram system	1600.00	300.00	sqm	480000.00	2.10.2
					5720100.00	
	Add cost index @ 57%				3260457.00	
					3260457.00	

- Sd -
Assistant Engineer(P)
CPWD, Chandigarh

- Sd -
Executive Engineer(P)II
CPWD, Chandigarh

Item No. 10.3

Aviation Light & Lightening conductor in the Mega Boys Hostel (1000 capacity) at NIT, Kurukshetra.

The above mentioned work was placed before the High Power Committee in its meeting held on 01.10.2012. Being the essential requirement of the work, the committee recommended for approval and same was approved by the Hon'ble Director, NIT, Kurukshetra. Executive Engineer (Elect.), CPWD has submitted a cost estimate for the above work for an amount of Rs. 22.55 lacs.

The B & WC may consider and approve the cost estimate for the above cited work for an amount of Rs. 22.55 lacs.

भारत सरकार
केन्द्रीय लोक निर्माण विभाग
करनाल केंद्रीय वैद्युत मण्ड़ल
TEL & FAX-01842254952
E-mail:eeekced@gmail.com, cpwdknl@hotmail.com,cpwdeknl@yahoo.com

संख्या : 20 (38)/क0के0वै0मं0/2012/149 दिनांक 24.7.2012

To

The Chairman (E & M),
1st Floor, Admn. Block,
NIT, Kurukshetra (Haryana)

Sub : Providing & Installation of DLPS on the Newly Constructed Mega Boys Hostel at NIT, Kurukshetra.

Enclosed, Please find herewith the Preliminary Estimate amounting to ₹ 22,54,854/- in duplicate of above work to get the administrative approval and expenditure sanction of competent authority.

24.7.12

Executive Engineer (E),
Karnal, Central Elect. Divn.,
CPWD, Karnal

Copy to :-Asstt. Engineer (E), Karnal Central Electrical Sub Division, CPWD Karnal for information.

Pwt-in-charge (EM) / EE

26/7/12

JE(E) 27/7

Executive Engineer (E)

Left to discuss.
Also call AE (CPWD) for discussion.

Prof. In-C (EM)

30/7/12

The matter has been discussed in the office of undersigned to process the case

30-7-12

XEN C/E) for info.

H.C/C.O

1/8/12

6

CENTRAL PUBLIC WORKS DEPARTMENT

State: Haryana
Branch: E&M

Division: Karnal Central Elect. Divn.Karnal
Sub-Division: Karnal Central Elect. Sub-Divn

Estimate No.

Name of Work: Providing & Installation of DLPS on the Newly Constructed Mega Boys Hostel at NIT, Kurukshetra.

This Preliminary Estimate has been framed by Er. Narender Kaushal, Executive Engineer(Elect.), Karnal Central Elect. Division, CPWD, Karnal for the probable cost of ₹ 22,54,854/- including 5% contingencies.

REPORT

History: This estimate has been framed to cover the probable cost of ₹ 22,54,854/- including 5% contingencies for the above noted work in accordance with the letter No. 3461/CC/156/3781 dated 19.7.12 from Chairman(EC & EM) for providing aviation lighting and lightning conductor on the newly constructed Mega Boys Hostel (1000 Capacity) at NIT Kurukshetra. Accordingly this preliminary estimate has been prepared for obtaining Administrative Approval & Expenditure Sanction of the Competent Authority. cl-64

Design & Scope: The following provisions have been kept in this estimate:

a) Dual source based (Wind & Solar) Direct lightning, Protection system complete with remote control tester, lightning event counter etc complete. - 2 sets
b) 70 sq.mm copper conductor cable as down conductor.
c) Gel chemical earthing alongwith GI strips in pipe/ on surface etc. - 16 sets
d) Twin dome Aviation lights - 2 sets

Method: Through Contract

Rates: Market Rate

Time: 2 Months

Cost: ₹ 22,54,854/- including 5% contingencies

Assistant Engineer(Elect.)
Karnal Central Elect. Division,
C.P.W.D. Karnal.

24.7.12

Executive Engineer(Elect.),
Karnal Central Elect. Division,
C.P.W.D. Karnal.

PRELIMINARY ESTIMATE

Name of Work: Providing & Installation of DLPS on the Newly Constructed Mega Boys Hostel at NIT, Kurukshetra.

S.No.	Description of Item	Qty.		Rate	Unit	Amount
1	Providing and fixing of dual source base (Wind & Solar) direct lightning, Protection system & Air terminal complete as required.	2	sets	600000.00	each	1200000.00
2	Providing and fixing of lightning remote control tester complete as required.	2	Nos	75000.00	each	150000.00
3	Providing and fixing of lightning event counter complete as required.	2	Nos	37000.00	each	74000.00
4	Supplying and laying of 70 sq.mm copper conductor cable as down conductor from air terminal complete as required.	200	mtrs	800.00	metre	160000.00
5	Providing and fixing of Gel chemical earthing complete as required.	16	sets	32000.00	set	512000.00
6	Providing and fixing 25mm x 5mm cu conductor in 40mm dia GI pipe etc. as required.	70	mtrs	364.00	metre	25480.00
7	Providing and fixing 25mm x 5mm cu strip on surface/ recess etc. as required.	50	mtrs	120.00	metre	6000.00
8	Providing twin dome aviation light including wiring/ connections etc. complete as required.	2	Nos	10000.00	each	20000.00
					TOTAL	**2147480.00**
		Add contingencies @ 5%				107374.00
					G.TOTAL	**2254854.00**

Assitant Engineer(Elect.)
Karnal Central Elect. Sub-Division,
C.P.W.D. Karnal

Executive Engineer(Elect.)
Karnal Central Elect. Division,
C.P.W.D. Karnal.

CENTRAL PUBLIC WORKS DEPARTMENT

State: Haryana
Branch: E&M

Division: Karnal Central Elect. Divn.Karnal
Sub-Division: Karnal Central Elect. Sub-Divn

Estimate No.

Name of Work: Providing & Installation of DLPS on the Newly Constructed Mega Boys Hostel at NIT, Kurukshetra.

This Preliminary Estimate has been framed by Er. Narender Kaushal, Executive Engineer(Elect.), Karnal Central Elect. Division, CPWD, Karnal for the probable cost of ₹ 22,54,854/- including 5% contingencies.

REPORT

History: This estimate has been framed to cover the probable cost of ₹ 22,54,854/- including 5% contingencies for the above noted work in accordance with the letter No. 3461/CC/156/3781 dated 19.7.12 from Chairman(EC & EM) for providing aviation lighting and lightning conductor on the newly constructed Mega Boys Hostel (1000 Capacity) at NIT Kurukshetra. Accordingly this preliminary estimate has been prepared for obtaining Administrative Approval & Expenditure Sanction of the Competent Authority.

Design & Scope: The following provisions have been kept in this estimate:

a) Dual source based (Wind & Solar) Direct lightning, Protection system complete with remote control tester, lightning event counter etc. complete. - 2 sets
b) 70 sq.mm copper conductor cable as down conductor.
c) Gel chemical earthing alongwith GI strips in pipe/ on surface etc. - 16 sets
d) Twin dome Aviation lights - 2 sets

Method: Through Contract

Rates: Market Rate

Time: 2 Months

Cost: ₹ 22,54,854/- including 5% contingencies

Assistant Engineer(Elect.)
Karnal Central Elect. Division,
C.P.W.D. Karnal.

24.7.12

Executive Engineer(Elect.),
Karnal Central Elect. Division,
C.P.W.D. Karnal.

PRELIMINARY ESTIMATE

Name of Work: Providing & Installation of DLPS on the Newly Constructed Mega Boys Hostel at NIT, Kurukshetra.

S.No.	Description of Item	Qty.		Rate	Unit	Amount
1	Providing and fixing of dual source base (Wind & Solar) direct lightning, Protection system & Air terminal complete as required.	2	sets	600000.00	each	1200000.00
2	Providing and fixing of lightning remote control tester complete as required.	2	Nos	75000.00	each	150000.00
3	Providing and fixing of lightning event counter complete as required.	2	Nos	37000.00	each	74000.00
4	Supplying and laying of 70 sq.mm copper conductor cable as down conductor from air terminal complete as required.	200	mtrs	800.00	metre	160000.00
5	Providing and fixing of Gel chemical earthing complete as required.	16	sets	32000.00	set	512000.00
6	Providing and fixing 25mm x 5mm cu conductor in 40mm dia GI pipe etc. as required.	70	mtrs	364.00	metre	25480.00
7	Providing and fixing 25mm x 5mm cu strip on surface/ recess etc. as required.	50	mtrs	120.00	metre	6000.00
8	Providing twin dome aviation light including wiring/ connections etc. complete as required.	2	Nos	10000.00	each	20000.00
					TOTAL	**2147480.00**
		Add contingencies @ 5%				107374.00
					G.TOTAL	**2254854.00**

Assitant Engineer(Elect.)
Karnal Central Elect. Sub-Division,
C.P.W.D. Karnal

24.7.12

Executive Engineer(Elect.)
Karnal Central Elect. Division,
C.P.W.D. Karnal.

Item No. 16.9 **To consider & approve the Cost Estimate for construction of underground static water tank of 1.5 lakh liter capacity for fire-fighting purpose in Mega Boys hostel at NIT, Kurukshetra.**

The above mentioned work was placed before the High Power Committee in its meeting held on 01.10.2012. Being the essential requirement of the work, the committee recommended for approval and same was approved by the Hon'ble Director, NIT, Kurukshetra. Executive Engineer, CPWD has submitted a cost estimate for the above work for an amount of Rs. 64.29 lacs.

The B & WC may consider and approve the cost estimate for the above cited work for an amount of Rs. 64.29 lacs.

केन्द्रीय लोक निर्माण विभाग
करनाल केन्द्रीय मण्डल
448, सुभाष कालोनी, करनाल

पत्र सं. 210(142)/सी.ओ./क.के.म./2012/3145 दिनांक 25/10/12

N.I.T. KURUKSHETRA
Dy. No. 6912 Dated 25/10/12

सेवा में,

The Director,
NIT, Kurukshetra

विषय : **1. Construction of boundary wall for additional block of Health centre at NIT, Kurukshetra.**
2. Construction of boundary wall enclosing the Girls hostel at NIT, Kurukshetra.
3. Extension of existing corridor towards south ward upto road in the NIT campus, Kurukshetra.
4. Provision of 150000 litre capacity underground static water storage tank for fire fighting in Mega boy's hostel (1000 capacity) at NIT Campus, Kurukshetra.

संदर्भ : आपके कार्यालय पत्र संख्या CC/219/6899 Dt. 8.10.2012.

महोदय,

उपरोक्त कार्य का विस्तृत प्राक्कलन जिसकी लागत रुपये 8,23,200/-, रुपये 23,82,300/- रुपये 29,26,600/- एवं रुपये 64,29,500/- (रुपये 19,79,500 (सिविल) + रुपये 19,75,000 (विद्युत) है, आपके कार्यालय से प्रशासनिक अनुमति एवं वित्त मंजूरी प्राप्त करने हेतू संलग्न है।

आपसे अनुरोध है कि उपरोक्त स्वीकृति जल्दी से जल्दी भेजें ताकि अग्रिम कार्यवाही की जा सके। प्राक्कलन की एक प्रति भी प्रशासनिक स्वीकृति पत्र के साथ संलग्न है।

Chairman (EC&EM)

भवदीय,

31/10/12

कार्यालय अधीक्षक

25/10/12

कार्यपालक अभियंता
करनाल केन्द्रीय मंडल
के.लो.नि.वि, करनाल

प्रतिलिपि, सूचनार्थ एवं आवश्यक कार्यवाहेतु अधीक्षण अभियन्ता, करनाल केन्द्रीय उप-मण्डल, के.लो.नि.वि, कुरुक्षेत्र को अग्रसारित।

Proj. SE(EC)/Exe Gr/DEC 31/10/12

कार्यपालक अभियंता

GOVERNMENT OF INDIA

CENTRAL PUBLIC WORKS DEPARTMENT

State HARYANA | DIVISION KARNAL CENTRAL

Branch KARNAL | SUB-DIVISION KARNAL CENTRAL

Name of Work : Provision of 150000 litre capacity underground static water storage tank for fire fighting in Mega boy's hostel (1000 capacity) at NIT Campus, Kurukshetra.

Major Head	Minor Head	Detailed Head

This preliminary estimate has been framed by Sh. Iqbal Singh, Executive Engineer, Karnal Central Division, CPWD, Karnal for Rs. 64,29,500/- (Civil + Electrical) i/c 5% contingencies.

REPORT

History This preliminary estimate amounting to Rs. 64,29,500/- (Civil + Electrical) i/c 5% contingencies has been framed to cover up the probable cost of above mentioned work for accord of A/A & E/S of the competent authority. The requisition of the above said work has been received from client department vide letter No. CC/219/6899 Dt. 8.10.2012.

Design Following provision has been made (for civil work only) in the estimate:-
1. Underground water storage tank 150000 litre capacity.
2. Pump room for installation of pumps.
3. Room for pump operator.

Specification As per CPWD Specification 2009 vol I to II with upto date correction slip

W/C Establishment Shall be met out of contingencies.

T. & P. Shall be arranged by the contractor.

Land Available.

Rate By contract after call of tender.

Method Based on PAR-2007 with upto date correction slip.

Time Six months

Cost Rs. 64,29,500/- (Civil + Electrical) i/c 5% contingencies.

ASSISTANT ENGINEER
KARNAL CENTRAL DIVISION
CPWD, KARNAL

EXECUTIVE ENGINEER
KARNAL CENTRAL DIVISION
CPWD, KARNAL

GENERAL ABSTRACT

Name of work :- Provision of 150000 litre capacity underground static water storage tank for fire fighting in Mega boy's hostel (1000 capacity) at NIT Campus, Kurukshetra.

Annexure –I (Civil works)	Rs. 44,54,500/-
Annexure – II (Elect. Works)	Rs. 19,75,000/-
Total	**Rs. 64,29,500/-**

Say Rs. 64,29,500/-

AE(P)

Executive Engineer
Karnal Central Division
CPWD, Karnal

ABSTRACT OF COST

Name of work : **Provision of 150000 litre capacity underground static water storage tank for fire fighting in Mega boy's hostel (1000 capacity) at NIT Campus, Kurukshetra.**

S.No.	Description of Item	Qty.	Rate	Unit	Amount	Remarks
1	Pump room (basement)	50.00	18035.00	sqm	901750.00	1.3.1
1.1	Load bearing construction floor height 2.90 metre (room for pump operator)	25.00	6390.00	sqm	159750.00	2.2.1
	Services					
2	Internal water supply & sanitary installations	1061500.00	4.00	100 B.Cost	42460.00	3.1
3	External services connections.	1061500.00	5.00	100 B.Cost	53075.00	3.2
4	Internal electric installation	1061500.00	12.50	100 B.Cost	132688.00	3.6.7
5	Underground sump	150000.00	9.00	litre	1350000.00	5.5
	Total				2639723.00	
	Add Cost Index @ 53.00%				1399053.00	
	TOTAL				4038776.00	
	Add Contingencies @ 5%				201939.00	
	TOTAL				4240715.00	
	Add Labour Cess @ 1%				42407.00	
	TOTAL				4283122.00	
	Add Sale Tax @ 4%				171325.00	
	GRAND TOTAL				**4454447.00**	
				Say Rs.	**44,54,500/-**	

Executive Engineer
Karnal Central Division
CPWD, Karnal

Annexure-B

ABSTRACT OF ELECTRICAL WORK

Details given by Executive Engineer(Electrical)

Name of work :- Provision of 150000 litre capacity underground static water storage tank for fire fighting in Mega boy's hostel (1000 capacity) at NIT Campus, Kurukshetra.

Description of work	**Amount**
Electrical motor & Pump	Rs. 4.00 lacs
Diesel operated motor & pump	**Rs. 7.00 lacs**
Pressurisation pump	Rs. 1.75 **lacs**
Electical panel	Rs. 3.00 lacs
L.T. cable & earthing	**Rs. 2.00 lacs**
Emergency panel	**Rs. 2.00 lacs**
Total Amount	**Rs. 19.75 lacs**

AE(P)

Executive Engineer
Karnal Central Division
CPWD, Karnal

Item No. 16.10 **To consider & approve ... existing LT Panels with MCB's in the Institute at NIT, Kurukshetra.**

The above mentioned work was placed before the High Power Committee in its meeting held on 01.10.2012. Being the essential requirement of the work, the committee recommended for approval and same was approved by the Hon'ble Director, NIT, Kurukshetra. Executive Engineer (Elect.) , CPWD has submitted a cost estimate for the above work for an amount of Rs. 43.62 lacs.

The B & WC may consider and approve the cost estimate for the above cited work for an amount of Rs. 43.62 lacs.

भारत सरकार
केन्द्रीय लोक निर्माण विभाग
करनाल केंद्रीय वैद्युत मण्ड़ल
TEL & FAX-01842254952
E-mail:eeekced@gmail.com, cpwdknl@hotmail.com,cpwdeknl@yahoo.com

संख्या : 20 { 38 }/क0के0वै0मं0/2011-12/328 दिनांक 21/2/2012

To,

The Chairman (E & M),
Ist Floor, Admn. Block,
NIT, Kurukshetra (Haryana)

Prof. I/C (EM) / 13/2/12

Subject : Providing L.T. Panels at the various Buildings in the Non-Residential Area at NIT Kurukshetra

Enclosed, Please find herewith the Preliminary Estimate amounting to ₹ 43,62,960 /- for accord of Admn. approval and Expenditure Sanction.

21/2

Executive Engineer (E),
Karnal, Central Elect. Divn.,
CPWD, Karnal

Copy to :-
Asstt. Engineer (E), Karnal Central Electrical Sub Division, CPWD Karnal for information.

Executive Engineer (E)

J.E(E) to process the case.

The items included in the estimate are required for various buildings in institute for proper termination of cables and for safety. It may be sent for approval of Competent authority.

6/9/12

Prof. I/C (EM)

HC to process the case urgently

7/9/12

CENTRAL PUBLIC WORKS DEPARTMENT

State: Haryana
Branch: E&M

Division: Karnal Central Elect. Divn.Karnal
Sub-Division: Karnal Central Elect. Sub-Divn

Estimate No.

Name of Work: Providing L.T Panels at the various Buildings in the Non-Residential Area at NIT Kurukshetra.

This Preliminary Estimate has been framed by Er. Narender Kaushal, Executive Engineer(Elect.), Karnal Central Elect. Division, CPWD, Karnal for the probable cost of ₹ 43,62,960 /- including 5% contingencies.

REPORT

History: This Preliminary estimate amounting to ₹ 43,62,960/- only including 5% contingencies has been framed for the above noted work in accordance with the letter No. PM/2012/NITK/413 dated 19.1.12 received from Prof. Incharge(EM). LT Panels/Distribution Boards installed at the various buildings in the non-residential area of NIT Campus are rusted and very dangerous from fire point of view. It is proposed to replace these old panels/ distribution boards with cubical type panel/ double door DB's with MCCB/ MCB's. Accordingly this preliminary estimate has been framed for obtaining administrative approval and expenditure sanction of the competent authority.

Design & Scope: The following provisions have been kept in this estimate:

a) Cubical type L.T Panels with MCCB's/ Changeover switch/ MCB's etc. of required size in the various buildings.

b) Double door TP DB's/ SP MCB DB's with MCCB's/ MCB's of suitable ratings in the various buildings.

Method: Through Contract

Rates: Market Rate

Time: 4 Months

Cost: ₹ 43,62,960/- including 5% contingencies

Executive Engineer (E) 21/2/12
Karnal Central elect Division
CPWD, Karnal

[illegible] NIT, KUK etc

PRELIMINARY ESTIMATE

Name of Work: Providing L.T Panels at the various Buildings in the Non-Residential Area at NIT Kurukshetra.

S.No.	Description of Item	Qty.		Rate	Unit	Amount
1	Fabrication & installation of cubical L.T Panels made out of 2mm thick CRCA sheet of required size as per site requirement complete with TP&N busbar of suitable rating complete as required.	60	sq.mtr	15500.00	sq.mtr	930000.00
						0.00
2	Supplying and fixing following switchgears/ accessories in the existing cubical panel including testing and commissioning complete as required.					0.00
	a) 63 Amp TP MCCB's	85	Nos	4600.00	each	391000.00
	b) 100 Amp TP MCCB's	95	Nos	6300.00	each	598500.00
	c) 250 Amp TP MCCB's	24	Nos	13000.00	each	312000.00
	d) 400 Amp TP MCCB's	6	Nos	33000.00	each	198000.00
	e) 100 Amp Onload changeover switch	6	Nos	5800.00	each	34800.00
	f) 200 Amp Onload changeover switch	6	Nos	12000.00	each	72000.00
	g) 40/ 63 Amp double pole MCB's	35	Nos	1100.00	each	38500.00
	h) 40/ 63 Amp Four pole MCB's	25	Nos	2100.00	each	52500.00
	i) SP MCB's (Assorted ratings)	150	Nos	226.00	each	33900.00
3	Supplying and fixing following DB's including connections, testing, commissioning etc. as required.					
	a) 8/12 way double door SP MCB DB complete with 1 No. 40/63 Amp DP MCB and 8 Nos SP MCB's of assorted rating complete.	240	sets	4600.00	set	1104000.00
	b) 4 way double door TP DB complete with 1 No. 63 Amp MCCB & 12 Nos SP MCB's of assorted rating complete.	10	sets	16000.00	set	160000.00
	c) 8 way double door TP DB complete with 1 No. 100 Amp MCCB & 24 Nos SP MCB's pf assorted rating complete.	10	sets	23000.00	set	230000.00
					TOTAL	**4155200.00**
				Add contingencies @ 5%		207760.00
					G.TOTAL	**4362960.00**

Executive Engineer(Elect.)
Karnal Central Elect. Division,
C.P.W.D. Karnal.

NATIONAL INSTITUTE OF TECHNOLOGY
(INSTITUTION OF NATIONAL IMPORTANCE)
KURUKSHETRA

No. EM/2012/NITK/ 413 Date: 17.01.2012
19

To

Executive Engineer (Electrical),
Karnal Central Electrical Division,
CPWD-22A, Indira Colony,
Karnal.

Sub: Installation of HT/LT Substation Street light & feeder pillar in non- residential area, NITK.

You are requested to provide the preliminary estimate for providing LT panels at the various buildings in the non- residential area of the institute. As these buildings are very old and termination points may not be comfortable and safe. The list of these buildings are as under:-

1. Boys Hostel no. 1 to 6
2. Girls Hostel no 1
3. Workshop building
4. Old Administrative Building
5. Examination Hall
6. Electrical/ Civil/ Mechanical/ Applied Mechanics/CCN/Electronics/ Computer Departments.
7. Library
8. Health Centre
9. Sports Complex
10. Guest House
11. Faculty House
12. Student Activity Centre
13. Estate Store

17.1.12

Prof I/C (EM)

Chairman [E, C & EM]

Item No. 19.11 To consider and approve the Cost Estimate for Replacement of existing Electrical wirings in instructional building at NIT, Kurukshetra.

The above mentioned work was placed before the High Power Committee in its meeting held on 01.10.2012. Being the essential requirement of the work, the committee recommended for approval and same was approved by the Hon'ble Director, NIT, Kurukshetra. Superintending Engineer, CPWD has submitted the following cost estimates.

(i) Replacement/rewiring of Al Wiring with copper wiring in Electrical Engineering Department for an amount of Rs. 1,42,72,401/-.

(ii) Replacement/rewiring of Al Wiring with copper wiring in old Admn. Block for an amount of Rs. 1,40,22,008/-

(iii) Replacement/rewiring of Al Wiring with copper wiring in Examination Cell, Mechanical Engineering Department & Civil Engineering Department for an amount of Rs. 1,10,17,292/-

(iv) Replacement/rewiring of Al Wiring with copper wiring in Electronics & Communication, CCN Department & Exam Hall for an amount of Rs. 1,62,75,545/-

The B & WC may consider and approve the cost estimate for the above cited works for an amount of Rs. 142.72 [illegible], 140.22, 110.17 and 162.76 lacs respectively.

भारत सरकार
केन्द्रीय लोक निर्माण विभाग
अधीक्षण अभियंता (वैधुत)
चण्डीगढ़ केन्द्रीय वैधुत परिमडंल, केलोनिवि,
केन्द्रीय सदन, सैक्टर–9, चण्डीगढ़
दूरभाष एवं फैक्स सख्यां: 0172–2740413,
दूरभाष :–0172–2741778

GOVT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT
Superintending Engineer(Elect),
Chandigarh Central Elect Circle, CPWD,
Kendriya Sadan, Sector-9, Chandigarh
Phone & FAX No . 0172-2740413,
Phone:-0172-2741778

सख्यां-23(130)/CCEC/2012/ 48

दिनांकः– 9/11/2012

सेवा में.

The Chairman (I/C E&M)
1st floor , Admn, Block,
NIT Kurukshetra.

विषयः– **Preliminary Estimates for re-wiring of old Academic Buildings**

संदर्भः– **Letter No. CC/220/6900 dated 08.10.2012**

With reference to your above referred letter please find enclosed herewith Preliminary Estimates of following works to get the administrative approval and expenditure sanction of the competent authority.

Sr. No	Name of Work	Amount
1	Replacement/ rewiring of Al. wiring with copper wiring in Electrical Engineering Department at NIT, Kurukshetra.	Rs. 1,42,72,401/=
2	Replacement/ rewiring of Al. wiring with copper wiring in old Admn Block at NIT, Kurukshetra.	Rs. 1,40,22,008/=
3	Replacement/ rewiring of Al. wiring with copper wiring in Examination Cell, Mechanical Engineering Department & Civil Engineering Department at NIT, Kurukshetra.	Rs. 1,10,17,292/=
4	Replacement/ rewiring of Al. wiring with copper wiring in Electronics & Communication, CCN Department & Exam Hall at NIT, Kurukshetra.	Rs. 1,62,75,545/=

Encl:- As above (4 Nos. PE)

अधीक्षण अभियन्ता(वै०)
चण्डी० केन्द्रीय वैद्युत परिमण्डल,
के०लो०नि०वि, सै०–9ए चण्डीगढ़।

Copy to:-

1. The Executive Engineer (E), Karnal Central Electrical Division, CPWD, 22A, Indira Colony, Karnal-132001 for information with Encl:- As above (4 Nos)

अधीक्षण अभियन्ता(वै०)

NAME OF WORK ;- **Replacement/ rewiring of Al. wiring with copper wiring in Electrical Engineering Department at NIT, Kurukshetra.**

Head of A/c :- Deposits Work.

This preliminary estimate framed by Er. Narender Kaushal, Executive Engineer (E), Karnal Central Electrical Division, CPWD, Karnal and processed in the office of Superintending Engineer (E), Chandigarh Central Electrical Circle, CPWD, Chandigarh for the probable cost of **Rs. 1,42,72,401/-** i/c 3% contingencies.

REPORT

HISTORY

1. These buildings are about 15-20 years old. The electrical installation has already completed its useful prescribed life. The physical condition of wiring is not satisfactory. Hence, it is technically inevitable to replace the old wiring by new. The existing DBs and MDBs are old & rewirable type which are to be replaced by MCBs & MCB DBs.
2. Hence, this preliminary estimate amounting to Rs. 1,42,72,401/- i/c contingencies has been prepared on the basis of the request received from NIT authorities vide their letter No. No/CC/220/6900 dated 08/10/2012 for obtaining the Administrative Approval and Expenditure Sanction of the competent Authority and for deposit of funds.

DESIGN & SCOPE:-

This estimate keeps the following provisions in it.

a) Replacement of complete aluminium wiring with copper wiring.
b) Provision of aesthetically good looking modular type switches.
c) Provision for Cubical type L.T. Panels in place of industrial type.
d) Provision of MCB type DBs in place of conventional type of DBs..
e) Replacement of old/obsolete type fittings and ceiling fans by the new ones of higher energy efficiencies.
f) Extra provisions for telephone conduits, cables and outlets.

All items considered necessary have been accounted for, unforeseen item, if any, will be met out of contingencies kept in the estimates.

RATES:-	N.S.R. 2008
AMOUNT:-	Rs. 1,42,72,401/- including contingencies.
TIME:-	2 months for tendering and 6 months for execution.
METHOD:-	Through Contract.

-Sd-

Executive Engineer (E) P
Chandigarh Central Elect. Circle,
CPWD, Sec-9A, Chandigarh

Superintending Engineer (E)
Chandigarh Central Elect. Circle,
CPWD, Sec-9A, Chandigarh

SCHEDULE OF WORK

NAME OF WORK: Replacement/ rewiring of Al. wiring with copper wiring in old Admn Block at NIT, Kurukshetra.

Sl. No.	Description of item	Qty.	Rate	Unit	Amount
1	Complete rewiring including provision of Modular switches, Cubical panels, MCB DB,s telephone conduits and replacement of fans and fittings.	5600 Sq.Mtr	2210.00	Sq.Mtr	12376000.00
2	Extra for use of energy efficient luminiaries	10% of item No. 1			1237600.00
	Total				13613600.00
	Adding contingencies @	3%			408408.00
	G/Total				**14022008.00**

-Sd-

Executive Engineer (E)P
Chandigarh Central Electrical Circle
CPWD, Chandigarh

Superintending Engineer(E)
Chandigarh Central Electrical Circle
CPWD, Chandigarh

NAME OF WORK :- **Replacement/ rewiring of Al. wiring with copper wiring in old Admn Block at NIT, Kurukshetra.**

Head of A/c :- Deposits Work.

This preliminary estimate framed by Er. Narender Kaushal, Executive Engineer (E), Karnal Central Electrical Division, CPWD, Karnal and processed in the office of Superintending Engineer (E), Chandigarh Central Electrical Circle, CPWD, Chandigarh for the probable cost of **Rs. 1,40,22,008/-** i/c 3% contingencies.

REPORT

HISTORY

1. These buildings are about 15-20 years old. The electrical installation has already completed its useful prescribed life. The physical condition of wiring is not satisfactory. Hence, it is technically inevitable to replace the old wiring by new. The existing DBs and MDBs are old & rewirable type which are to be replaced by MCBs & MCB DBs.
2. Hence, this preliminary estimate amounting to Rs. 1,40,22,008/- i/c contingencies has been prepared on the basis of the request received from NIT authorities vide their letter No. No/CC/220/6900 dated 08/10/2012 for obtaining the Administrative Approval and Expenditure Sanction of the competent Authority and for deposit of funds.

DESIGN & SCOPE:-

This estimate keeps the following provisions in it.

a) Replacement of complete aluminium wiring with copper wiring.
b) Provision of aesthetically good looking modular type switches.
c) Provision for Cubical type L.T. Panels in place of industrial type.
d) Provision of MCB type DBs in place of conventional type of DBs..
e) Replacement of old/obsolete type fittings and ceiling fans by the new ones of higher energy efficiencies.
f) Extra provisions for telephone conduits, cables and outlets.

All items considered necessary have been accounted for, unforeseen item, if any, will be met out of contingencies kept in the estimates.

RATES:-	N.S.R. 2008
AMOUNT:-	Rs. 1,40,22,008/- including contingencies.
TIME:-	2 months for tendering and 6 months for execution.
METHOD:-	Through Contract.

-58-

Executive Engineer (E) P
Chandigarh Central Elect. Circle,
CPWD, Sec-9A, Chandigarh

Superintending Engineer (E)
Chandigarh Central Elect. Circle,
CPWD, Sec-9A, Chandigarh

NAME OF WORK ;- **Replacement/ rewiring of Al. wiring with copper wiring in Examination Cell, Mechanical Engineering Department & Civil Engineering Department at NIT, Kurukshetra.**

Head of A/c :- Deposits Work.

This preliminary estimate framed by Er. Narender Kaushal, Executive Engineer (E), Karnal Central Electrical Division, CPWD, Karnal and processed in the office of Superintending Engineer (E), Chandigarh Central Electrical Circle, CPWD, Chandigarh for the probable cost of **Rs. 1,10,17,292/-** i/c 3% contingencies.

REPORT

HISTORY

1. These buildings are about 15-20 years old. The electrical installation has already completed its useful prescribed life. The physical condition of wiring is not satisfactory. Hence, it is technically inevitable to replace the old wiring by new. The existing DBs and MDBs are old & rewirable type which are to be replaced by MCBs & MCB DBs.
2. Hence, this preliminary estimate amounting to Rs. 1,10,17,292/- i/c contingencies has been prepared on the basis of the request received from NIT authorities vide their letter No. No/CC/220/6900 dated 08/10/2012 for obtaining the Administrative Approval and Expenditure Sanction of the competent Authority and for deposit of funds.

DESIGN & SCOPE:-

This estimate keeps the following provisions in it.

a) Replacement of complete aluminium wiring with copper wiring.
b) Provision of aesthetically good looking modular type switches.
c) Provision for Cubical type L.T. Panels in place of industrial type.
d) Provision of MCB type DBs in place of conventional type of DBs..
e) Replacement of old/obsolete type fittings and ceiling fans by the new ones of higher energy efficiencies.
f) Extra provisions for telephone condults, cables and outlets.

All items considered necessary have been accounted for, unforeseen item, if any, will be met out of contingencies kept in the estimates.

RATES:-	N.S.R. 2008
AMOUNT:-	Rs. 1,10,17,292/- including contingencies.
TIME:-	2 months for tendering and 6 months for execution.
METHOD:-	Through Contract.

-Sd-

Executive Engineer (E) P
Chandigarh Central Elect. Circle,
CPWD, Sec-9A, Chandigarh

Superintending Engineer (E)
Chandigarh Central Elect. Circle,
CPWD, Sec-9A, Chandigarh

SCHEDULE OF WORK

NAME OF WORK: Replacement/ rewiring of Al. wiring with copper wiring in Electrical Engineering Department at NIT, Kurukshetra.

Sl. No.	Description of item	Qty.	Rate	Unit	Amount
1	Complete rewiring including provision of Modular switches, cubical panels, MCB DB,s telephone conduits and replacement of fans.	5700 Sq.Mtr	2210.00	Sq.Mtr	12597000.00
2	Extra for use of energy efficient luminiaries	10% of item No. 1			1259700.00
	Total				13856700.00
	Adding contingencies @	3%			415701.00
	G/Total				**14272401.00**

-Sd-

Executive Engineer (E)P
Chandigarh Central Electrical Circle
CPWD, Chandigarh

Superintending Engineer(E)
Chandigarh Central Electrical Circle
CPWD, Chandigarh

NAME OF WORK :- **Replacement/ rewiring of Al. wiring with copper wiring in Electronics & Communication, CCN Department & Exam Hall at NIT, Kurukshetra.**

Head of A/c :- Deposits Work.

This preliminary estimate framed by Er. Narender Kaushal, Executive Engineer (E), Karnal Central Electrical Division, CPWD, Karnal and processed in the office of Superintending Engineer (E), Chandigarh Central Electrical Circle, CPWD, Chandigarh for the probable cost of **Rs. 1,62,75,545/-** i/c 3% contingencies.

REPORT

HISTORY

1. These buildings are about 15-20 years old. The electrical installation has already completed its useful prescribed life. The physical condition of wiring is not satisfactory. Hence, it is technically inevitable to replace the old wiring by new. The existing DBs and MDBs are old & rewirable type which are to be replaced by MCBs & MCB DBs.
2. Hence, this preliminary estimate amounting to Rs. 1,62,75,545/- i/c contingencies has been prepared on the basis of the request received from NIT authorities vide their letter No. No/CC/220/6900 dated 08/10/2012 for obtaining the Administrative Approval and Expenditure Sanction of the competent Authority and for deposit of funds.

DESIGN & SCOPE:-

This estimate keeps the following provisions in it.

a) Replacement of complete aluminium wiring with copper wiring.
b) Provision of aesthetically good looking modular type switches.
c) Provision for Cubical type L.T. Panels in place of industrial type.
d) Provision of MCB type DBs in place of conventional type of DBs..
e) Replacement of old/obsolete type fittings and ceiling fans by the new ones of higher energy efficiencies.
f) Extra provisions for telephone conduits, cables and outlets.

All items considered necessary have been accounted for, unforeseen item, if any, will be met out of contingencies kept in the estimates.

RATES:-	N.S.R. 2008
AMOUNT:-	Rs. 1,62,75,545/- including contingencies.
TIME:-	2 months for tendering and 6 months for execution.
METHOD:-	Through Contract.

Executive Engineer (E) P
Chandigarh Central Elect. Circle,
CPWD, Sec-9A, Chandigarh

Superintending Engineer (E)
Chandigarh Central Elect. Circle,
CPWD, Sec-9A, Chandigarh

SCHEDULE OF WORK

NAME OF WORK: Replacement/ rewiring of Al. wiring with copper wiring in Examination Cell, Mechanical Engineering Department & Civil Engineering Department at NIT, Kurukshetra.

Sl. No.	Description of item	Qty.	Rate	Unit	Amount
1	Complete rewiring including provision of Modular switches, Cubical panels, MCB DB,s telephone conduits and replacement of fans and fittings.	4400 Sq.Mtr	2210.00	Sq.Mtr	9724000.00
2	Extra for use of energy efficient luminiaries	10% of item No. 1			972400.00
	Total				10696400.00
	Adding contingencies @	3%			320892.00
	G/Total				**11017292.00**

-Sd-

Executive Engineer (E)P
Chandigarh Central Electrical Circle
CPWD, Chandigarh

Superintending Engineer(E)
Chandigarh Central Electrical Circle
CPWD, Chandigarh

SPEED POST

NATIONAL INSTITUTE OF TECHNOLOGY
(INSTITUTION OF NATIONAL IMPORTANCE)
KURUKSHETRA

No/CC/ 220/6900 Dated: 08.10.2012

To

The Executive Engineer (Elect.)
Karnal Central Electrical Division,
CPWD, 22-A Indira Colony,
Karnal.

Subject: Providing preliminary estimate for various works.

On the subject cited above it is intimated that the following works estimate are to be prepared for approval from the B&WC.

1. Provision of Centralized AC for Jubilee Hall and Senate Hall.
2. Provision of Lifts for Persons with Disabilities (PwD) at various locations of academic area.
3. Electrical rewiring of Old Academic Buildings.
4. Revised Estimate for HT/LT Sub-Station and Street Light Feeder Pillar in Non-Residential Area.
5. Replacement of old LT Panels at various Non-Residential Buildings for proper termination.
6. Provision of D.G. Set Backup supply for Academic Area.

You are therefore, requested to submit the preliminary estimate within 10 days as per present cost index at the earliest, so that further necessary action be taken.

Chairman (E, C & EM)

CC:

Prof. I/C (EM) for information.

staircase in BA, BB, BC, CA, CB & CC Type residential houses in campus to facilitate the maintenance works at roof top at NIT, Kurukshetra.

The above mentioned work was placed before the High Power Committee in its meeting held on 01.10.2012. Being the essential requirement of the work, the committee recommended for approval and same was approved by the Hon'ble Director, NIT, Kurukshetra. Executive Engineer, CPWD has submitted a cost estimate for Provision of staircase in BA, BB, CB & CC type houses at NIT, Kurukshetra for an amount of Rs. 34.15 lacs.

The B & WC may consider and approve the cost estimate for the Provision of staircase in BA, BB, CB & CC type houses at NIT, Kurukshetra for an amount of Rs. 34.15 lacs.

केन्द्रीय लोक निर्माण विभाग
करनाल केन्द्रीय मण्डल
448, सुभाष कालोनी, करनाल

The Director,
NIT, Kurukshetra

विषय : **Provision pf staircase for reside quarters of Type BA, BB, CB & CC at NIT, Kurukshetra.**

[illegible] कार्यालय पत्र संख्या CC/219/6899 Dt. 8.10.2012.

[illegible]

[illegible]

[illegible]

भवदीय,

[illegible]
कार्यपालक अभियन्ता
[illegible]

[illegible]

कार्यपालक अभियन्ता

GOVERNMENT OF INDIA

CENTRAL PUBLIC WORKS DEPARTMENT

State : HARYANA	DIVISION : KARNAL [illegible]
[illegible] : KARNAL	SUB DIVISION : [illegible]

Name of Work : Provision of staircase for reside quarters of Type BA, BB, CB & CC at NIT, Kurukshetra.

Major Head	Minor Head	Detailed Head

This preliminary estimate has been framed by Sh. Iqbal Singh, Executive Engineer Karnal Central Division, CPWD, Karnal for Rs. 58,15,200/- i/c 5% contingencies

REPORT

History : This preliminary estimate amounting to Rs. 58,15,200/- i/c 5% contingencies has been framed to cover up the probable cost of above mentioned work for accord of A/A & E/S of the competent authority. The requisition of the above said work has been received from client department vide letter No. CC/219/6899 Dt. 8.10.2012

Design :

Type of Qtrs.	No.	Storey
BA	6 Nos.	D/S
BB	8 Nos.	S/S
BB	8 Nos.	[illegible]
CB	[illegible] Nos.	S/S
CB	[illegible] Nos.	D/S
[illegible]	[illegible] Nos.	[illegible]
[illegible]	[illegible] Nos.	[illegible]
[illegible]	[illegible] Nos.	S/S

Following provision has been made for civil work only in the estimate:

1. P/F M.S. channel ISMC 150.
2. P/F M.S. railing with 50mm dia.
3. Painting with synthetic enamel paint.
4. P/L CC 1:1.5:3 for slabs & platform.

Specification : As per CPWD Specification 2009 vol I to II with up to date correction slip

W.C. Establishment : Will be met out of contingencies

T. & P. : Shall be arranged by the contractor

[illegible] : [illegible]

[illegible] : [illegible]

[illegible] : [illegible]

Original Estimate

(N/S) Provision of staircase for reside quarters of Type BA, BB, CB & CC at NIT, Kurukshetra

Sl.No	Description	Qty	Unit	Rate	Amount	DSR No
	EARTH WORK					
	Excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, shoring/ strutting and the connected cost and disposal of surplus excavated soil as directed, within a lead of 50 m					2.6
	All kinds of soil	31.00	cum	130.80	4055.05	2.8
2	CONCRETE WORKS					4
2.1	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level.					4.1
	1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size)	16.00	cum	3357.40	53718.00	4.1.10
2.9	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, buttresses, strengthening diaphragm walls, steps, copings, bed blocks, anchor blocks, kerbs, window sills, fillets, sunken floor, etc. up to floor five storey level, but excluding centering, shuttering and finishing					4.2
	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	62.00	cum	5608.25	347711.50	5.1.1
3	STEEL WORK					10
3.1	Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required					10.23
3.1.1	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	24497.00	kg	77.90	1908306.00	10.15.2
3.2	Providing and fixing hand rail of approved size by welding etc. to steel tubular railing (to be pay for fixing) staircase railing and other works including providing 2 priming coat of approved quality					10.26
	M.S. Pipe	6134.00	kg	86.45	530230.30	10.20
3	FLOORING					3.5
3.5	Providing and laying in position machine made tiles of approved brand and manufacture of any colour and shade in all floors and skirting, risers of steps and dados of required size and shape in all colours, shades and designs as directed, over and including 12 mm thick bed of cement mortar 1:4 (1 cement : 4 coarse sand) and grouting the joints with white cement and matching pigments complete	620.00	sqm	1454.00	901480.00	11.27.1

Sl No.	Description	Qty	Unit	Rate	Amount	DSR No.
	Add Cost Index @ 5.37% (157-149) / 149 x 1001				192855.00	
	Total				3628454.00	
	Add Contingencies @5%				154822.50	
	Total				3783277.50	
	Add Labour Cess @1%				32513.00	
	Total				3815790.00	
	Add VAT @4%				151352.00	
	Grand Total				3455142.00	

Say Rs. 34,15,300/-

Executive Engineer
Normal Central Division
CPWD, Gwalior

existing connecting corridor upto MBA/ MCA and LHC-Block in the Instructional Buildings at NIT, Kurukshetra.

The above mentioned work was placed before the High Power Committee in its meeting held on 01.10.2012. Being the essential requirement of the work, the committee recommended for approval and same was approved by the Hon'ble Director, NIT, Kurukshetra. Executive Engineer, CPWD has submitted a cost estimate for the above work for an amount of Rs. 29.26 lacs.

The B & WC may consider and approve the cost estimate for the above cited work for an amount of Rs. 29.26 lacs.

करनाल केन्द्रीय मण्डल
448, सुभाष कालोनी, करनाल

पत्र सं. 20(42)/सी.प्रा./क.के.मं./2012/3185 दिनांक 25/10/12

N.I.T. KURUKSHETRA

Dy. No. 6248					Date 29/10/12	
R					C&E	C
E					CA	Adm
						CAO
FC	CAO	P1			DS	L
Cash	A	SO	SO	DS	DS	PIC

The Director,
NIT, Kurukshetra

विषय : **1. Construction of boundary wall for additional block of Health centre at NIT, Kurukshetra.**
2. Construction of boundary wall enclosing the Girls hostel at NIT, Kurukshetra.
3. Extension of existing corridor towards south ward upto road in the NIT campus, Kurukshetra.
4. Provision of 150000 litre capacity underground static water storage tank for fire fighting in Mega boy's hostel (1000 capacity) at NIT Campus, Kurukshetra.

संदर्भ : आपके कार्यालय पत्र संख्या CC/219/6899 Dt. 8.10.2012.

उपरोक्त कार्य का विस्तृत प्राक्कलन जिसकी लागत रुपये 8,23,200/-, रुपये 23,82,300/- लागत 29,26,600/- एवं रुपये 64,29,500/- (रुपये 19,75,000 (विद्युत) है, आपके कार्यालय से प्रशासनिक स्वीकृति एवं वित्त मंजूरी प्राप्त करने हेतु संलग्न है।

आपसे अनुरोध है कि उपरोक्त स्वीकृति जल्दी से जल्दी भेजें ताकि अग्रिम कार्यवाही की जा सके। प्राक्कलन की एक प्रति भी प्रशासनिक स्वीकृति पत्र के साथ भेजें।

Chairman (EC&EM)

भवदीय,

31/10/12

कार्यपालक अभियंता
केन्द्रीय मंडल
के.लो.नि.वि.,करनाल

संलग्नः उपरोक्तानुसार

31/10/12

प्रतिलिपि, अधीक्षण अभियन्ता, केन्द्रीय परियोजना, के.लो.नि.वि., कुरुक्षेत्र को सूचनार्थ।

Proj. SE(E&C)/Exe.E/A&F(C)

कार्यपालक अभियंता

(To be issued to the client department)

To

Chairman (E, C&EM)
NIT Kurukshetra

Sub: Execution of Deposit works.

1. Extension of existing corridor towards south ward upto road in the NIT campus, Kurukshetra.
2. Provision of 150000 litre capacity underground static water storage tank for fire fighting in Mega boy's hostel (1000 capacity) at NIT Campus, KKR

_____ (Indicate name of work)

The above work can be taken up by the CPWD as a Deposit work under Para 118-119 of CPWD Code, subject to the following

1. Full estimated cost of the work as worked out by CPWD including departmental charges will have to be deposited by the client department before the work is taken up for execution. No interest will be paid by CPWD to the client department for such deposits.
2. The client department should hand over vacant possession of land/site to CPWD. CPWD may, if so required, take responsibility for demolition/disposal of existing buildings/structures.
3. CPWD does not bind itself to complete the work within the estimated cost. If additional fund's are required, the same will have to be provided by the client department. Necessary revised estimate will be submitted as and when required.
4. Any dispute arising out of the operation of the contract (s) for the subject work will be subject to arbitration as provided for in the contract agreement. CPWD will defend the arbitration proceedings as best as it can and get the arbitrator's award examined by the appropriate authority. The decision of the competent authority in CPWD to accept the award or to challenge the same in a Court of Law will be binding on the client department.
5. Funds for making payment of all amounts which may be decreed by a Court of Law, Tribunal or by Award of an arbitrator in relation to the deposit work will be made available by the client department promptly irrespective of it not being a party before the Court, Tribunal or arbitrator. Such payments will be in addition to the payments made to the contractors for execution of work.
6. After receipt of A/A & E/S from the client department, the CPWD will prepare and submit various detailed architectural drawings and service plans to local bodies whose approvals are required before taking up the construction work. These local bodies are independent organization and CPWD has no control over them. These Local bodies taken their own time for approving the Plans. The time required to get such approvals is not included in the time of construction indicated in the estimate. Although CPWD will make all efforts to get such approvals early, it may be necessary for the client department also to pursue with Local Bodies for early approval.
7. The CPWD has no funds of its own for investing in the work. The client should, therefore, ensure that adequate funds are available with CPWD for executing the work. In case the client department fails to provide funds as per requirements, it may be necessary for CPWD to suspend/abandon the work. In such eventuality, the client department shall be solely responsible for all the consequences arising out of such stoppage/abandonment of work including claims of contractors for compensation/damages.
8. The client department will help CPWD in – a) providing site for labour huts for the contractor's labour free of cost, b) providing free access to contractor's materials and labour to the site of work. C) providing electricity connection for execution of work on payment of usual charges, and d) sanction and release of load from the concerned electricity board/authority.
9. CPWD may at its discretion allow the clients to deposit the funds in installments. In such cases 33 1/3% of the estimated cost should be deposited as advance. Thereafter, expenditure incurred should be reimbursed in full through monthly bills. The initial deposit of 33 1/3% would be retained for adjustment against the last portion of the estimated expenditure.
10. In cases where funds are deposited in installments, CPWD will not be responsible for any delay, damage, stoppage of work, claims of contractors for compensation/damages etc. due to non-receipt of funds in time.

You are requested to convey acceptance of the above to enable this office to proceed further.

Yours faithfully,

Executive Engineer

Executive Engineer
Karnal Central Division,
CPWD, 448, Subhash Colony
KARNAL-132001 (Hry)

AE(W)

-137-

No.	Description	Qty	Unit	Rate	Amount	DSR No.
	EARTH WORK					2
	Earth work in excavation by mechanical means (Hydraulic Excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m					
	All kinds of soil	153.00	cum	130.80	20012.00	2.8 2.8.1
	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m	51.00	cum	83.80	4274.00	2.25
	Supplying and filling in plinth with Jamuna sand under floors including, watering, ramming consolidating and dressing complete.	26.00	cum	749.30	19482.00	2.27
	Sub-Total				43768.00	
	CONCRETE WORK					4
	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level					4.1
	1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40mm nominal size)	26.00	cum	3357.40	87292.00	4.1.10
	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or facing courses, parapets, coping, bed blocks, anchor blocks plain window sills, fillets, sunken floor, etc., up to floor five level, excluding the cost of centering, shuttering and finishing					4.2
	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	2.00	cum	5272.40	10545.00	4.2.3
	Centring and shuttering including strutting, propping etc. and removal of form work for :					4.3
	Retaining walls, return walls, walls (any thickness) including attached pilasters, buttresses, plinth and string courses fillets, kerbs and steps etc.	18.00	sqm	285.15	5133.00	4.3.2
	Providing and laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size)	13.00	sqm	207.55	2698.00	4.1
	Applying a coat of residual petroleum bitumen of grade of VG-10 of approven quality using 1.7kg per square metre on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil	13.00	sqm	96.65	1256.00	4.13
	Sub-Total				106924.00	
	REINFORCED CEMENT CONCRETE					5
	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centring, shuttering, finishing and reinforcement - All work upto plinth level :					5.1
	1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size)	3.00	cum	5094.05	15282.00	5.1.2
	Centring and shuttering including strutting, propping etc. and removal of form for					5.2

bricks, beams, plinth beams, girders, bressumers and arch work.	53.00	sqm	262.25	13899.00	5.9.5
Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.					5.22
1 Thermo-Mechanically Treated bars	9375.00	kg	62.25	583594.00	5.22.6
Reinforced cement concrete work in beams, suspended floors, roofs having slope upto 15° landings, balconies, shelves, chajjas lintels, bands, plain window sills, staircases, and spiral stair cases upto floor five level excluding the cost of centring, shuttering, finishing and reinforcement with 1.1½:3 (1 cement 1½ coarse sand 3 graded stone aggregate 20 mm nominal size)	66.00	cum	5885.50	388443.00	5.5
Sub-Total				1120482.00	
BRICK WORK					6
Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:					6.1
1 Cement mortar 1:6 (1 cement : 6 coarse sand)	93.00	cum	3316.55	308439.00	6.1.2
Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :					6.4
1 Cement mortar 1:6 (1 cement : 6 coarse sand)	65.00	cum	3876.15	251950.00	6.4.2
Sub Total				560389.00	
FLOORING					11
Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :					11.26
1 25 mm thick	315.00	sqm	945.70	297896.00	11.26.1
Sub-Total				297896.00	
ROOFING					12
Providing and fixing on wall face Unplasticised Rigid PVC rain water pipes conforming to IS 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion. (i) Single socketed pipes					12.41
1 110 mm diameter	43.00	metre	206.90	8897.00	12.41.2
Providing and fixing on wall face Unplasticised - PVC moulded fittings/ accessories for Unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion					12.42
1 Bend 87.5°					12.42.5
1 110 mm bend	28.00	each	156.95	4395.00	12.42.5.2
Providing and fixing Unplasticised -PVC pipe clips of approved design to Unplasticised - PVC rain water pipes by means of 50x50x50mm hard wood plugs, screwed with M.S. screws of required length including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete					12.43
1 110 mm	28.00	each	144.60	4049.00	12.43.2
Sub Total				17341.00	
PLASTERING					13
1 12 mm cement plaster on					13.1
(i) Ceiling finished with	260.00	sqm	112.50	29250.00	13.1.2
1 20 mm cement plaster on 15 cm thick rough side of single or half brick					13.2
(i) Flat surface	160.00	sqm	133.20	20832.00	13.2.2

Finishing on brick work or brick flooring with cement mortar 1:3, 1 cement : 3 fine sand)					13.31
Flush / Ruled/ Struck or weathered pointing	207.00	sqm	78.35	16218.00	13.31.1
Distempering with 1st quality acrylic distemper (ready mixed) of approved manufacturer, of required shade and colour complete, as per manufacturer's specification.					13.42
Two or more coats on new work.	433.00	sqm	37.35	16173.00	13.42.1
Finishing walls with textured exterior paint of required shade					13.45
New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including priming coat of exterior primer applied @ 2.20kg/10 sqm	550.00	sqm	117.70	64735.00	13.45.1
Finishing walls with Acrylic Smooth exterior paint of required shade					13.45
Sub-Total				183568.00	
WATER PROOFING					22
Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations::					
a) Applying a slurry coat of neat cement using 2.75 kg/sqm. of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment					
b) Laying brick bats with mortar using broken bricks/brick bats 75 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs					
c After two days of proper curing applying a second coat of cement slurry using 2.75kg/ sqm of cement admixed with water With average thickness of 120mm and minimum thickness at kharra as 65 mm	281.00	sqm	786.70	221063.00	22.7
Sub-Total				221063.00	22.7.1
Total				2551431.00	
Add Cost Index @ 4%				102057.00	
Total				2653488.00	
Add Contingencies @5%				132674.00	
Total				2786162.00	
Add Labour Cess @1%				27862.00	
Total				2814024.00	
Add VAT @4%				112561.00	
Grand Total				**2926585.00**	

Say Rs. 29,26,600/-

Executive Engineer
Karnal Central Division
CPWD Karnal

Item No. 16.14 **To consider & approve the Cost Estimate for Provision of DG power backup at various locations in the Institute covering instructional buildings and related facilities at NIT, Kurukshetra.**

The above mentioned work was placed before the High Power Committee in its meeting held on 01.10.2012. Being the essential requirement of the work, the committee recommended for approval and same was approved by the Hon'ble Director, NIT, Kurukshetra. Executive Engineer (Elect.), CPWD has submitted a cost estimate for the above work for an amount of Rs. 241.83 lacs.

The B & WC may consider and approve the cost estimate for the above cited work for an amount of Rs. 241.83 lacs.

CENTRAL PUBLIC WORKS DEPARTMENT

State: Haryana
Branch: E&M

Division: Karnal Central Elect. Divn.Karnal
Sub-Division: Karnal Central Elect. Sub-Divn

Estimate No.

Name of Work: Providing D.G Sets for Entire Academic area at NIT Kurukshetra.

This Preliminary Estimate has been framed by Er. Narender Kaushal, Executive Engineer(Elect.), Karnal Central Elect. Division, CPWD, Karnal for the probable cost of ` **2,41,82,750/-** including 3% contingencies.

REPORT

History: This estimate has been framed to cover the probable cost of ` **2,41,82,750/-** including 3% contingencies for the above noted work in accordance with the letter No. CC/220/6900 dated 8.10.12 from Chairman (E, C&EM) NIT Kurukshetra for provision of D.G Set Backup supply for Academic area. Accordingly this Preliminary Estimate has been prepared for obtaining Administrative Approval & Expenditure sanction of the Competent Authority.

Design & Scope: The following provisions have been kept in this estimate:

a) Two Nos D.G Sets of 380 KVA Capacity will be installed near Sub-Station No.1 to cater the load of various buildings like MBA/ MCA Block, Civil Engg. Deptt, Mechanical Engg. Deptt. Lecture Halls and Workshop etc.

b) One No D.G Set of 750 KVA and One No. DG Set of 380 KVACapacity will be installed near Sub-Station No.III to cater the load of various buildings like CCN Deptt Electronics & computer Science Deptt., Library Building, Electrical Engg. Deptt. Old Admn. Block, Guest House & Health Centre etc.

b) 2 x 3½ x 300 sq.mm XLPE insulated PVC sheathed Al. cond. cable will be laid between DG set of 380 KVA at Sub-Station No.I & III to share thc load during any breakdown.

c) Two Nos Essential Supply Panel for connecting essential load

d) Four sets of Gel-Chemical earthing for each D.G Set including laying of 25mm x 5mm GI strip in pipe/ on surface as per site requirement.

Method: Through Contract

Rates: Schedule Rate/ Market Rate Items

Time: 6 Months after getting A/A & E/S

Cost: ` **2,41,82,750/-** including 3% contingencies

Executive Engineer (E)
Karnal Central elect Division
CPWD, Karnal

Load which is to be connected to 2 Nos. D.G. Sets of 380 KVA (Near Sub-Station No. 1)				
1	MBA / MCA Block	80	KW	
2	Civil Engg. Deptt.	80	KW	
3	Mechanical Engg. Deptt.	80	KW	
4	12 Nos Lecture Hall	40	KW	
5	Workshop	90	KW	
		370.00	**KW**	

Load which is to be connected to 1 No. D.G. Sets of 750 KVA and 1 No. D.G. Set of 380 KVA (Near Sub-Station No. 3)				
1	CCN Deptt.	60	KW	
2	Electronics Deptt.	120	KW	
3	Computer Engg. Deptt.	120	KW	
4	Library	100	KW	
5	Electrical Engg. Deptt.	80	KW	
6	Old Admn. Building	80	KW	
7	Guest House	140	KW	
8	Health Centre	45	KW	
		745.00	**KW**	

PRELIMINARY ESTIMATE

Name of Work: Providing D.G Sets for Entire Academic area at NIT Kurukshetra.

S.No.	Description of Item	Qty.		Rate	Unit	Amount
1	Supplying, installation testing and commissioning of following capacity Silent Type DG set having Engine mounted instrument panel, synchronous alternator, in built fuel tank, exhaust system, base frame & foundation, 24 V D.C starting system complete with AMF Panel having contactors, MCCB's, Battery charger etc complete as required.					
	a) 380 KVA	3	sets	3800000.00	set	11400000.00
	b) 750 KVA	1	set	7500000.00	set	7500000.00
2	Supplying and laying of 3½ x 300 sq.mm XLPE insulated PVC sheathed Aluminium conductor cable of 1.1 KV grade as required.	1900	mtrs	1650.00	metre	2960000.00
3	Supplying, installation, testing & commissioning of Essential Supply panel complete with ACB's/ MCCB's & other accessories including connections etc. as required.	2	Nos	500000.00	each	1000000.00
4	Providing and fixing of Gel-Chemical earthing complete as required.	16	sets	36000.00	set	576000.00
5	Providing and fixing 25 mm X 5 mm GI strip in 40mm dia GI pipe from earth electrode as required.	100	mtrs	364.00	mtrs	36400.00
6	Providing and fixing 25 mm X 5 mm GI strip on surface or in recess including connections etc as required	50	mtrs	120.00	metre	6000.00
					TOTAL	23478400.00
				Add contingencies @ 3%		704352.00
					G.TOTAL	24182752.00
					say	24182750.00

EXECUTIVE ENGINEER (E),
KARNAL CENTRAL ELECT DIVISION,
CPWD, KARNAL

DG power backup in boys & girls hostels at NIT, Kurukshetra.

The above mentioned work was placed before the High Power Committee in its meeting held on 01.10.2012. Being the essential requirement of the work, the committee recommended for approval and same was approved by the Hon'ble Director, NIT, Kurukshetra. Superintending Engineer, CPWD has submitted a cost estimate as under:

(i) Providing D.G. power backup sets for various Boys hostel 1 to 9 at NIT, Kurukshetra for an amount of Rs. 2,30,44,190/-.

(ii) Providing D.G. power backup sets for various Girl Hostels for an amount of Rs. 89,74,390/-

The B & WC may consider and approve the cost estimate for the above works for an amount of Rs. 230.44 lacs & 89.74 lacs respectively.

भारत सरकार
केन्द्रीय लोक निर्माण विभाग
अधीक्षण अभियंता (वैद्युत)
चण्डीगढ़ केन्द्रीय वैद्युत परिमडंल, केलोनिवि,
केन्द्रीय सदन, सैक्टर–9, चण्डीगढ़
दूरभाष एवं फैक्स सख्यां: 0172–2740413,
दूरभाष :–0172–2741778

GOVT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT
Superintending Engineer(Elect),
Chandigarh Central Elect Circle, CPWD,
Kendriya Sadan, Sector-9, Chandigarh
Phone & FAX No . 0172-2740413,
Phone:-0172-2741778

सख्यां-23(130)/CCEC/2012/49

दिनांकः– 9/11/2012

सेवा में.

The Chairman (I/C E&M)
1st floor , Admn, Block,
NIT Kurukshetra.

विषयः– Preliminary Estimates for providing DG Sets for various Hostels at NIT Kurukshetra.

संदर्भः– Letter No. CC/ dated 08.11.2012

With reference to your above referred letter please find enclosed herewith Preliminary Estimates of following works to get the administrative approval and expenditure sanction of the competent authority.

Sr. No	Name of Work	Amount
1	Providing D.G. Sets for various Boys hostel 1 to 9 at NIT Kurkshetra.	Rs. 2,30,44,190/-
2	Providing D.G. Sets for various Girls Hostel A, B & C at NIT Kurkshetra.	Rs. 89,74,390/-

Encl:- As above (2 Nos. PE)

अधीक्षण अभियन्ता(वै०)
चण्डी० केन्द्रीय वैद्युत परिमण्डल,
के०लो०नि०वि, सै०–9ए चण्डीगढ़।

Copy to:-
1. The Executive Engineer (E), Karnal Central Electrical Division, CPWD, 22A, Indira Colony, Karnal-132001 for information with **Encl:- As above (4 Nos.)**

अधीक्षण अभियन्ता(वै०)

CENTRAL PUBLIC WORKS DEPARTMENT

State: Haryana
Branch: E&M

Division: KCED
Sub-Division: KCESD

Estimate No.

Name of Work: Providing D.G. Sets for various Boys hostel 1 to 9 at NIT Kurkshetra.

This Preliminary Estimate has been framed by Er. Narender Kaushal, Executive Engineer (Elect.), Karnal Central Elect. Division, CPWD, Karnal and processed in the office of Superintending Engineer (E), Chandigarh Central Electrical Circle, CPWD, Chandigarh for the probable cost of Rs. 2,30,44,190/- including 3% contingencies.

REPORT

History: This estimate has been framed to cover the probable cost of Rs. 2,30,44,190/- including 3% contingencies for the above noted work in accordance with the letter No. CC/ dated 8.11.12 from Dean (Estate) for providing DG set at various hostels at NIT Kurukshetra. Accordingly this Preliminary Estimate has been prepared for obtaining Administrative Approval & Expenditure sanction of the Competent Authority.

Design & Scope: The following provisions have been kept in this estimate:

a) 2 Nos. 160 KVA DG sets will be installed near sub station No. 2 for Boys Hostels No. 1 to 6 and 2 Nos. 320 KVA DG sets will be installed near Mega Boys Hostel for Boys Hostels No. 7 to 9.
b) LT cubical panel and inter connected LT cables for above DG sets.
c) LT cable to hostel No. 1 to 9 from DG sets.
d) Segrration of essential and non essential supply load inside the boys hostel no. 1 to 6.
e) Provision of KWH meter for warden residence.
f) Construction of LT panel room for installation of LT panels.

Method: Through Contract

Rates: Market Rate Items

Time: 6 Months after getting A/A & E/S

Cost: Rs. 2,30,44,190/- including 3% contingencies

Executive Engineer (E) P
Chandigarh Central Elect. Circle,
CPWD, Sec-9A, Chandigarh

Superintending Engineer (E)
Chandigarh Central Elect. Circle,
CPWD, Sec-9A, Chandigarh

ABSTRACT OF COST

Name of work:- Providing D.G. Sets for various Boys hostel 1 to 9 at NIT Kurkshetra.

SN	DESCRIPTION	Qty	Rate	Unit	Amount	REMARKS
1	SITC of DG Sets of following capacities :-					
a)	160KVA	2 Nos	1850000.00	Each	3700000.00	MR
b)	320 KVA	2 Nos	3996000.00	Each	7992000.00	MR
2	SITC of cubical type LT panel	2 Jobs	918000.00	Each	1836000.00	MR
3	SITC of UG Cable					
a)	3.5X400 sq mm (for inter connection between DG Sets)	600 MTR	2500.00	Mtr	1500000.00	MR
b)	3.5X120 sq mm (for various bldgs from DG Sets)	1400 MTR	1100.00	Mtr	1540000.00	MR
4	Segerration of ESS and non-ESS loads inside the Boys hostel No 1 to 6	6 Jobs	800000.00	Each	4800000.00	MR
5	Provision of KWH meter for wardern residence inside hostel along with mounting board etc.	9 Jobs	5000.00	Each	45000.00	MR
6	C/o LT panel room of about 6/4 meter	2 Jobs	480000.00	Each	960000.00	MR
	TOTAL:				**22373000.00**	
	Add contingencies @		3%		671190.00	
	G. TOTAL:				**23044190.00**	
			SAY	**Rs**	**23044190.00**	

-Sd-
Assistant Engineer (E)P
Chandigarh Central Electrical Circle
CPWD, Chandigarh

-Sd-
Executive Engineer (E)P
Chandigarh Central Electrical Circle
CPWD, Chandigarh

Superintending Engineer(E)
Chandigarh Central Electrical Circle
CPWD, Chandigarh

CENTRAL PUBLIC WORKS DEPARTMENT

State: Haryana **Division: KCED**
Branch: E&M **Sub-Division: KCESD**

Estimate No.

Name of Work: Providing D.G. Sets for various Girls Hostel A, B & C at NIT Kurkshetra..

This Preliminary Estimate has been framed by Er. Narender Kaushal, Executive Engineer (Elect.), Karnal Central Elect. Division, CPWD, Karnal and processed in the office of Superintending Engineer (E), Chandigarh Central Electrical Circle, CPWD, Chandigarh for the probable cost of Rs. 89,74,390/- including 3% contingencies.

REPORT

History: This estimate has been framed to cover the probable cost of Rs. 89,74,390/- including 3% contingencies for the above noted work in accordance with the letter No. CC/ dated 8.11.12 from Dean (Estate) for providing DG set at various hostels at NIT Kurukshetra. Accordingly this Preliminary Estimate has been prepared for obtaining Administrative Approval & Expenditure sanction of the Competent Authority.

Design & Scope: The following provisions have been kept in this estimate:

a) 2 Nos. 160 KVA DG sets will be installed near Girls Hostel for Girls Hostel No. A to C.
b) LT cubical panel and inter connected LT cables for above DG sets.
c) LT cable to girls hostel No. A to C from DG sets.
d) Segrration of essential and non essential supply load inside the girls hostel no. A.
e) Provision of KWH meter for warden residence.
f) Construction of LT panel room for installation of LT panels.

Method: Through Contract

Rates: Market Rate Items

Time: 6 Months after getting A/A & E/S

Cost: Rs. 89,74,390/- including 3% contingencies

Executive Engineer (E) P
Chandigarh Central Elect. Circle,
CPWD, Sec-9A, Chandigarh

Superintending Engineer (E)
Chandigarh Central Elect. Circle,
CPWD, Sec-9A, Chandigarh

ABSTRACT OF COST

Name of work:-Providing D.G. Sets for various Girls Hostel A, B & C at NIT Kurkshetra.

SN	DESCRIPTION	Qty		Rate	Unit	Amount	REMARKS
1	SITC of DG Sets of following capacities :-						
a)	160KVA	2	Nos	1850000.00	Each	3700000.00	MR
2	SITC of cubical type LT panel	1	Jobs	918000.00	Each	918000.00	MR
3	SITC of UG Cable						
a)	3.5X400 sq mm (for inter connection between DG Sets)	900	MTR	2500.00	Mtr	2250000.00	MR
b)	3.5X120 sq mm (for various bldgs from DG Sets)	500	MTR	1100.00	Mtr	550000.00	MR
4	Segerration of ESS and non-ESS loads inside the Girls Hostel A	1	Jobs	800000.00	Each	800000.00	MR
5	Provision of KWH meter for wardern residence inside hostel along with mounting board etc.	3	Jobs	5000.00	Each	15000.00	MR
6	C/o LT panel room of about 6/4 meter	1	Jobs	480000.00	Each	480000.00	MR
	TOTAL:					**8713000.00**	
	Add contingencies @			3%		261390.00	
	G. TOTAL:					**8974390.00**	
				SAY	Rs	**8974390.00**	

-Sd-

Assistant Engineer (E)P
Chandigarh Central Electrical Circle
CPWD, Chandigarh

-Sd-

Executive Engineer (E)P
Chandigarh Central Electrical Circle
CPWD, Chandigarh

Superintending Engineer(E)
Chandigarh Central Electrical Circle
CPWD, Chandigarh

NATIONAL INSTITUTE OF TECHNOLOGY
(INSTITUTION OF NATIONAL IMPORTANCE)
KURUKSHETRA

NO: CC/ Date: 08-11-2012

To,

Executive Engineer (Electrical) ,
Kamal Central Electrical Division,
CPWD-22A, Indira Colony,
Kamal.

Subject: **Preliminary estimate for providing DG Sets at various hostel at NIT Kurukshetra.**

Please send the preliminary estimate for providing DG sets at various hostels at NIT Kurukshetra. The list of light load of the hostel which is to be connected to the DG set is attached.

Dean (Estate)

Copy to:

Prof-In-Charge (EM) for kind information please

NATIONAL INSTITUTE OF TECHNOLOGY
(INSTITUTION OF NATIONAL IMPORTANCE)
KURUKSHETRA

Detail of Light Load of Hostels.

Sr. No.	Hostel No.	Light Load
1.	Boys Hostel no.1	40 KW
2.	Boys Hostel no.2	40 KW
3.	Boys Hostel no.3	40 KW
4	Boys Hostel no.4	40 KW
5.	Boys Hostel no.5	40 KW
6.	Boys Hostel no.6	40 KW
7.	Boys Hostel no.7	100 KW
8.	Boys Hostel no.8	100 KW
9.	Boys Hostel no.9	100 KW
10.	Girl Hostel A	40 KW
11.	Girl Hostel B	70 KW
12.	Girl Hostel C	100 KW

Newly Constructed Graded seating arrangement for 2000 persons in Open Air Theatre at NIT, Kurukshetra.

The above mentioned work was placed before the High Power Committee in its meeting held on 01.10.2012. Being the essential requirement of the work, the committee recommended for approval and same was approved by the Hon'ble Director, NIT, Kurukshetra. Superintending Engineer, CPWD has submitted the cost estimate for the above work for an amount of Rs. 305.60 lacs.

The B & WC may consider and approve the cost estimate for the above cited work for an amount of Rs. 305.60 lacs.

चण्डीगढ़ केन्द्रीय परिमण्डल

केन्द्रीय सदन, सैक्टर-9ए, चण्डीगढ़-160009

संख्या - अ.क्षे.परि./23(1515)नि.3/ 333 दिनांक: 31/1/12

N.I.T KURUKSHETRA

Dy No.	544			Dt.	7.02.12	
R						
E						
Hy						
PE		PI			Lib.	
GA	A	SO	EO	DS	PIS	PIC

सेवा में,

The registrar
National institute of technology
Kurukshetra.

महोदय,

विषय:- **Covering of newly constructed open air theatre at NIT Kurukshetra including providing and installation of electrical fittings and services withequipments.**

उपरोक्त कार्य का 3,05,60,700/- रुपये राशि का प्रारम्भिक अनुमान इसके साथ दो प्रतियों में संलग्न किया जाता है । इस कार्य के लिए आवेदन आपके पत्र संख्या : CC/15/5/6593 dt 1/11/2011 द्वारा भेजा गया था । आपसे अनुरोध है कि अनुमान को शीघ्र स्वीकृत करने की कृपा करें अन्यथा समय के साथ-साथ मूल्य सूचकांक में वृद्धि होने के कारण इस कार्य के निष्पादन में कठिनाई हो सकती है। कार्य की स्वीकृति करते समय लेखा शीर्ष (हेड ऑफ अंकाउंट) का नाम भी उल्लेख करने की कृपा करें।

संलग्न: अनुमान दो प्रतियां।

भवदीय

अधीक्षण अभियंता,
Telefax : 2743923

प्रतिलिपि: -

1 मुख्य अभियंता (उ.क्षे-I), के.लो.नि.वि.,केन्द्रीय सदन, सैक्टर-9/ए, चण्डीगढ़।
2 अधीक्षण अभियंता, चण्डीगढ़ केन्द्रीय वैद्युत परिमंडल, के.लो.नि.वि., केन्द्रीय सदन, सैक्टर-9ए, चण्डीगढ़ ।
3 कार्यपालक अभियंता, करनाल केन्द्रीय मण्डल, के.लो.नि.वि., करनाल को अनुमान की एक प्रति सहित ।
4 कार्यपालक अभियंता(वैद्युत), करनाल केन्द्रीय वैद्युत मण्डल, करनाल को अनुमान की एक प्रति सहित

अधीक्षण अभियंता

केन्द्रीय लोक निर्माण विभाग
करनाल केन्द्रीय मण्डल
448, सुभाष कालोनी, करनाल

संख्या- 20(142)/लो.नि./क.के.मं/2011/4087 दिनांक 30-11-11

सेवा में,

अधीक्षण अभियंता,
चण्डीगढ केन्द्रीय परिमण्डल,
के.लो.नि.वि. चण्डीगढ।

विषय : **Covering of newly constructed open air theatre at NIT, Kurukshetra.**

संदर्भ : The Chairman (E, C & EM), NIT, Kurukshetra letter's No. CC/1575/6593 dt 21.11.2011.

उपरोक्त कार्य का प्रारम्भिक प्राक्कलन, जिसकी लागत रूपये 1,96,37,200/- है आपके कार्यालय को राजपत्रित विभाग से प्रशासनिक स्वीकृति एवं मंजूरी प्राप्त करने हेतु संलग्न है।

संलग्नः प्राक्कलन दो प्रतियों में।

कार्यपालक अभियन्ता
करनाल केन्द्रीय मण्डल,
के लो नि वि, करनाल।

प्रतिलिपिः
1. The Chairman (E, C & EM), NIT, Kurukshetra for information please.
2. कार्यपालक अभियंता (वै.), करनाल केन्द्रीय विद्युत मण्डल, के.लो.नि.वि, करनाल सिविल कार्य के अनुमान सहित। आपसे अनुरोध है कि उक्त कार्य का विद्युत प्राक्कलन बनाकर संबंधित सक्षम अधिकारी को भेजें।
3. सहायक अभियन्ता, कुरुक्षेत्र केन्द्रीय उप-मण्डल, के.लो.नि.वि, कुरुक्षेत्र को सूचनार्थ।

2/12/11

कार्यपालक अभियन्ता

GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT

STATE : HARYANA DIVISION : KARNAL CENTRAL BRANCH : B & R

Name of Work : **Covering of newly constructed open air theatre at NIT Kurukshetra including providing and installation of Electrical fittings and services with equipments.**

MAJOR HEAD MINOR HEAD DETAILED HEAD

This preliminary estimate framed by Er. Iqbal Singh, Executive Engineer, Karnal Central Division, CPWD, Karnal and processed by Er. Chander Mohan Malhotra, Executive Engineer (P), Chandigarh Central Circle, CPWD, Chandigarh for probable cost of Rs 3,05,60,700/- including 3% contingencies.

History : This preliminary estimate amounting to Rs.3,05,60,700/- i/c 3% contingencies has been framed to cover up the probable cost of above mentioned work for accord of A/A & E/S of the competent authority. The requisition for the above said work has been received from Client Department vide letter No. CC/1575/6593 Dt. 21.11.2011

Design & Scope . Following provision has been made in the estimate:

(A) For civil Work:-

1. Providing &Fixing colour coated galvanized steel sheet roofing over open air theater as per drg sketch attached.
2. Finishing steel work with Epoxy paint.
3. Provision of 15000 lt water storage tank

(B) For electrical work

(a) 250W Metal Halide and CFL fittings in the ceiling/ roof
(b) Wiring for Light/ Power Plugs/ UPS points.
(c) Distribution boards & cables
(d) Stage Lighting & UPS.
(e) ETAC System with ducting
(f) Air circulation fans.
(g) 20 KVA on line UPS (For Audio/ Video System)
(h) Manual Fire Alarm System.
(i) Down Comer System (For Fire Fighting)
(j) PA System comprising of Amplifiers, Speakers & Subwoofers etc.
(k) Video system comprising of DLP Projector, Motorised Screen etc

Specification As per CPWD Specification 1996 vol I to VI with upto date correction slip.

WC Shall be met out of contingencies.

T & P Shall be arranged by the contractor

Land Available

Rate As per DSR 2007 (Reprint 2010) & Market rate

Method By contract after call of tender.

Time 9 months after receipt of A/A &E/S.

Cost Rs 3,05,60,700/- i/c 3% contingencies.

ASSISTANT ENGINEER (P) III
CHANDIGARH CENTRAL CIRCLE,
CPWD, CHANDIGARH.

EXECUTIVE ENGINEER (P)
CHANDIGARH CENTRAL CIRCLE,
CPWD, CHANDIGARH.

GENERAL ABSTRACT

Name of work :- Covering of newly constructed open air theatre at NIT, Kurukshetra including providing and installation of Electrical fittings and services with equipments.

S.No.	Description of items		Amount
1	Civil Work (Annexure-A)		18853900.00
2	Electrical Work (Annexure B)		11906800.00
		Total :-	30560700.00

Assistant Engineer (P)III
Chandigarh Central Circle
CPWD Chandigarh

Executive Engineer (P)
Chandigarh Central Circle
CPWD Chandigarh.

Preliminary estimate amounting to Rs.3,05,60,700/- (Rs. Three crore fifty six thousand seven hundred only) is submitted to client department for accord of A/A & E/S of the competent authority.

Superintending Engineer
Chandigarh Central Circle
CPWD Chandigarh.

Annexure A

ABSTRACT OF COST

Name of work : Covering of newly constructed open air theatre at NIT Kurukshetra.

SCHEDULE OF WORK

S. No	Item Co	Description of Items	Qty	Rate	Unit	Amount
	10	**STEEL WORK**				
1.1	10.16	Steel work in built up tubular trusses including cutting, hoisting fixing in position and applying a priming coat of approved steel primer, welded and bolted including special shaped washers etc. complete.				
1.1	10.16.1	Hot finished welded type tubes	171133	61.5	kg	10524680
	12	**ROOFING**				
2.1	NS	Providing and fixing colour coated galvanized steel sheet roofing having maximum pitch of 196 mm c/c & minimum 30mm crest depth in length as per requirement and fixing with polymer coated J or L hooks, bolts and nuts 8mm dia. G.I. plain and bitumen washers or with self drilling fastener and EPDM washers etc. complete excluding the cost of purlins, rafters and trusses: corrugated sheets and including cutting to size and shape wherever required.. (The fed material is to be manufactured out of 0.50mm (TCT) total coated thickness with 18-20 microns top coat over 5 microns primer and 8-10 micron alkyd backer, 550 Mpa yield strength with zinc-aluminium alloy of AZ-150. The sheet shall have a hot dip metallic zinc-aluminium alloy coating of zinc (45%), aluminium (55%) with total mass coating of 150gsm/sqm on both sides).	3710	628.68	Sqm	2332403
	13	**FINISHING**				
3.1	13.52	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat preparation of surface, etc complete				
3.1.1	13.52.1	On steel work	3710	75.25	sqm	279178

S. No	Item Co	Description of Items	Qty	Rate	Unit	Amount
	18	**WATER SUPPLY**				
1.1	18.48	Providing and placing on terrace (at all floor levels) Polyethylene water storage tank ISI:12702 marked with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.				
			15000	5.25	per litre	78750
		TOTAL				**13215011**
		Add : 37% Cost Index on all except item No. 2.1	10882608			4026665
		Total				17241676
		Add : 3% Contingencies				517247
		Total				**17758923**
		Add : 1% Labour Cess				177588
		Total				17936411
		Add : 4% Vat				717456
		Grand Total				**18653867**
		Say Rs. 1,86,53,900/-				

Assistant Engineer (P)III
Chandigarh Central Circle
CPWD Chandigarh

Executive Engineer (P)
Chandigarh Central Circle
CPWD Chandigarh.

PRELIMINARY ESTIMATE

Name of Work: Covering of Newly constructed Open Air Theatre at NIT, Kurukshetra.
(SH: Providing and Installation of Electrical fittings and services with equipments).

No.	Description of Item	Qty.		Rate	Unit	Amount
	Sub-Head-I (Electrical)					
1	Providing 250 W Metal Halide and CFL fitting in the ceiling/ roof as regd	30	Nos	15000.00	each	450000.00
2	Wiring for light point/ power plugs i/c UPS wiring etc with PVC copper conductor wires in conduit/armoured copper conductor cable	70	Nos	3000.00	each	210000.00
3	Providing distribution board & cables etc. as required.	1	Job	300000.00	Job	300000.00
	Total of Sub Head-I					960000.00
	Sub-Head-II (Stage Lighting & UPS)					
1	Provision of stage lighting, control panel, cable etc. as required.	1	Job	950000.00	Job	950000.00
2	Providing 20 KVA on line UPS complete as required.	1	set	650000.00	set	650000.00
	Total of Sub Head-II					1600000.00
	Sub-Head-III (Air Circulation System)					
1	Providing Air circulation fans etc	1	Job	100000.00	Job	100000.00
2	Providing ETAC System with ducting etc	4	Nos	550000.00	Each	2200000.00
	Total of Sub Head-III					2300000.00
	SubHead-IV (Fire Alarm & Fire Fighting System)					
1	Providing Manual Fire Alarm System.	1	Job	600000.00	Job	600000.00
2	Providing downcomer system including piping, valves, vent/ hydrants and pumps etc.	1	Job	2000000.00	Job	2000000.00
	Total of Sub Head-IV					2600000.00
	SubHead-V (Audio/ Video System)					
1	Providing PA System i/c Amplifiers, speakers, subwoofers, equipments rack and necessary cabling etc. complete	1	job	1600000.00	job	1600000.00
2	Providing DLP Projector motorised screen and necessary cabling etc. complete	1	job	2500000.00	job	2500000.00
	Total of Sub Head-V					4100000.00

Note:-
a) Cost of 15000 Ltrs terrance tank to be included in civil work

ABSTRACT OF COST

Sub-Head-I (Electrical)	Rs.	960000.00
Sub-Head-II (Stage Lighting & UPS	Rs.	1800000.00
Sub-Head-III (Air Circulation System)	Rs.	2300000.00
SubHead-IV (Fire Alarm & Fire Fighting System)	Rs.	2500000.00
SubHead-V (Audio/ Video System)	Rs.	4100000.00
	Total Rs.	11560000.00
	Add 3% contingencies Rs	346800.00
	G. Total Rs.	11906800.00

Assistant Engineer (E)P
Chandigarh Central Electrical Circle-I
CPWD, Chandigarh.

Executive Engineer (E)P
Chandigarh Central Electrical Circle-I
CPWD, Chandigarh.

Superintending Engineer (E)
Chandigarh Cent Elect. Circle-I
CPWD, Chandigarh.

Appendix-50

(Reference – Para 3.6.3)

LETTER OF ACCEPTANCE OF DEPOSIT WORKS

(To be issued to the client department)

To

Sub. Execution of Deposit works. S/R To J.N.V. Kaccha Mohindergarh.

_____ (Indicate name of work)

The above work can be taken up by the CPWD as a Deposit work under Para 118-119 of CPWD Code, subject to the following :

1. Full estimated cost of the work as worked out by CPWD including departmental charges will have to be deposited by the client department before the work is taken up for execution. No interest will be paid by CPWD to the client department for such deposits.
2. The client department should hand over vacant possession of land/site to CPWD. CPWD may, if so required, take responsibility for demolition/disposal of existing buildings/structures.
3. CPWD does not bind itself to complete the work within the estimated cost. If additional fund's are required, the same will have to be provided by the client department. Necessary revised estimate will be submitted as and when required.
4. Any dispute arising out of the operation of the contract (s) for the subject work will be subject to arbitration as provided for in the contract agreement. CPWD will defend the arbitration proceedings as best as it can and get the arbitrator's award examined by the appropriate authority. The decision of the competent authority in CPWD to accept the award or to challenge the same in a Court of Law will be binding on the client department.
5. Funds for making payment of all amounts which may be decreed by a Court of Law, Tribunal or by Award of an arbitrator in relation to the deposit work will be made available by the client department promptly irrespective of it not being a party before the Court, Tribunal or arbitrator. Such payments will be in addition to the payments made to the contractors for execution of work.
6. After receipt of A/A & E/S from the client department, the CPWD will prepare and submit various detailed architectural drawings and service plans to local bodies whose approvals are required before taking up the construction work. These local bodies are independent organization and CPWD has no control over them. These Local bodies taken their own time for approving the Plans. The time required to get such approvals is not included in the time of construction indicated in the estimate. Although CPWD will make all efforts to get such approvals early, it may be necessary for the client department also to pursue with Local Bodies for early approval
7. The CPWD has no funds of its own for investing in the work. The client should, therefore, ensure that adequate funds are available with CPWD for executing the work. In case the client department fails to provide funds as per requirements, it may be necessary for CPWD to suspend/abandon the work. In such eventuality, the client department shall be solely responsible for all the consequences arising out of such stoppage/abandonment of work including claims of contractors for compensation/damages.
8. The client department will help CPWD in – a) providing site for labour huts for the contractor's labour free of cost b) providing free access to contractor's materials and labour to the site of work. C) providing electricity connection for execution of work on payment of usual charges, and d) sanction and release of load from the concerned electricity board/authority
9. CPWD may at its discretion allow the clients to deposit the funds in installments. In such cases 33 1/3% of the estimated cost should be deposited as advance. Thereafter, expenditure incurred should be reimbursed in full through monthly bills. The initial deposit of 33 1/3% would be retained for adjustment against the last portion of the estimated expenditure
10. In cases where funds are deposited in installments, CPWD will not be responsible for any delay, damage of work, claims of contractors for compensation/damages etc. due to non-receipt of funds in time

It is requested to convey acceptance of the above to enable this office to proceed further

Yours faithfully,

Executive Engineer

Item No. 16.17 **To consider & approve the Cost Estimate for Provision of lifts for persons with disabilities (PwD) at various locations in the Institute.**

The above mentioned work was placed before the High Power Committee in its meeting held on 01.10.2012. Being the essential requirement of the work, the committee recommended for approval and same was approved by the Hon'ble Director, NIT, Kurukshetra. Superintending Engineer (Elect.), CPWD has submitted the cost estimate for the above work for an amount of Rs. 262.87 lacs.

The B & WC may consider and approve the cost estimate for the above cited work for an amount of Rs. 262.87 lacs.

भारत सरकार
केन्द्रीय लोक निर्माण विभाग
अधीक्षण अभियंता (वैद्युत)
चण्डीगढ़ केन्द्रीय वैद्युत मण्डल, केलोमिवि,
केन्द्रीय सदन, सैक्टर-9, चण्डीगढ़
दूरभाष एवं फैक्स संख्या: 0172-2740413,
दूरभाष :-0172-2741778

GOVT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT
Superintending Engineer(Elect),
Chandigarh Central Elect Circle, CPWD,
Kendriya Sadan, Sector-9, Chandigarh
Phone & FAX No . 0172-2740413,
Phone:-0172-2741778

पत्रांक.No च.के.वि.मंडि/23(23-1)/2012-13/ 16 दिनांक: 5/11/12

To

Chairman(E, EM & C),
National Institute of Technology,
Kurukshetra.

Sub: **Preliminary Estimate for the work "Provision of lifts at various locations in NIT Kurukshetra.**
Estimated Cost: 26287166/-

Ref: Your office letter no. CC/187/6141 dated 24.8.2012.

Sir,

With reference to above, please find enclosed herewith preliminary estimate for the above mentioned work. The reasons for this work have been explained in the report portion of the estimate. It is requested to convey the Administrative Approval & Expenditure Sanction of the competent authority. CPWD shall take-up the work after receipt of AA&ES and deposit of funds from NIT, Kurukshetra.

Encl: Preliminary estimate as referred above.

[Er.Surendra Singh]
Superintending Engineer[Elect.]
Chandigarh Central Electrical Circle.
Central P.W.D., Chandigarh.

Copy to:

1. Superintending Engineer, Chandigarh Central Circle, CPWD, Chandigarh for information.
2. Executive Engineer, Karnal Central Division, CPWD, 448, Subhash Colony, Karnal w.r.t your office letter no. 20(142)/KCD/2012/2885 dated 17.9.2012 alongwith copy of PE.
   Encl: As above
3. Executive Engineer[Elect.], Karnal Central Elect.Division, CPWD, Karnal, for information alongwith the copy of PE.
   Encl. As above
4. Guard file

Sd/-
Superintending Engineer(Elect.)

भारत सरकार
GOVERNMENT OF INDIA
केन्द्रीय लोक निर्माण विभाग
CENTRAL PUBLIC WORKS DEPARTMENT

सत्यमेव जयते

CPWD

कार्यालय:
अधीक्षण अभियन्ता (वै०)
चण्डीगढ़ केन्द्रीय वैद्युत परिमंडल,
के०लो०नि०वि०, सेक्टर–9(ए), चण्डीगढ़–160019

Office of the:
Superintending Engineer (E),
Chandigarh Central Elect. Circle,
CPWD, Sector-9(A), Chandigarh-160 019

State:- Haryana
Zone:- NZ-I

Circle: - CCEC
Division: - KCED

PRELIMINARY ESTIMATE

Name of work: - Provision of Lifts at Various Locations in NIT Kurukshetra.

1.	ESTIMATED COST	:	Rs. 2,62,87,188/-
2.	COMPLETION PERIOD	:	12 Months.

Assistant Engineer(E)P
Chd. Cent. Elect. Circle,
CPWD, Chandigarh.

Executive Engineer (E) P
Chandigarh Cent. Elect. Circle,
CPWD, Chandigarh.

Superintending Engineer (E)
Chandigarh Cent. Elect. Circle,
CPWD, Chandigarh.

Date: 11-2012

GOVT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT

State	: **Haryana**	**CIRCLE**	: **CCEC,Chandigarh**
Branch	: **E & M**	**Division**	: **KCED, Karnal**

NAme :- **Provision of lifts at various locations in NIT Kurukshetra..**

This Preliminary Estimate has been framed by Er. Narender Kaushal, EE (E). KCED Karnal and processed in the office of Superintending Engineer ("E) Chandigarh Central Electrical Circle, for the probable cost of Rs. 2,62,87,188/- i/c 3% Contingencies.

REPORT

History :-This Preliminary Estimate amounting to Rs 2,62,87,188/- i/c contingencies has been framed to cover the cost of above for which the requisition has been received vide letter No. CC/187/6141 dated 24.08.2012 from the Client Department The estimate has been framed for obtaining A/A & E/S of the competent authority.

Design & Scope :- The provision for energy efficient and jerk free i.e smooth drive, lift has been made in the estimate. Since the height of the building is three story, hence a lift of 1 meter per second speed as per CPWD specification has been proposed in the estimate.

The Provision for Installation Of lifts has been kept for following locations:-

i) Admn. Block.
ii) Elect. Engg. Deptt.
iii) Locture Hall Complex.
iv) MBA / MCA Block
v) New Work Shop.
vi) Library.
vii) Computer Engg
viii) CCN Building.

Method :- By Call of Tenders.

Rates :- **PAR 2007 & M/R**

Time :- 12 months.

Cost :- **Rs 2,62,87,188/-**

Assistant Engineer (E)P Chandigarh Cent. Elect. Circle CPWD, Chandigarh.	Executive Engineer (E)P Chandigarh Cent. Elect. Circle CPWD, Chandigarh.	Superintending Engineer (E) Chandigarh Cent. Elect. Circle CPWD, Chandigarh.

SCHEDULE OF WORK

Name of work:- Provision of Lifts at various locations in NIT, Kurukshetra

S.No	Description of Items	QTY		Rate	Unit	Amount (in Rs)	REMARKS
	Sub Head-I (LIFT EQUIPMENTS)						
1	S/I/T/C of1m/sec 13 passenger LiftVVVF Microprocessor Control Stainless steel doors,Automatic Power Operated Doors,Automatic Rescue device with standard controls and operating device. (for a travel of Ground floor+ 2 floors) Disabled friendly as required.	8	Jobs	1620000.00	Job	12960000.00	PAR2007
	Add Cost Index@			57%		7387200.00	
						20347200.00	
2	Provision for Earthing, LT Panel,LT Cable etc as reqd.	8	Job	200000.00	Job	1600000.00	
	Sub Total					21947200.00	
	Add contingencies@			3%		658416.00	
	Add Labour cess@			1%		219472.00	
	Total of Sub Head-I					22825088.00	
	Sub Head-II (Civil Work)						
1	As intimated by EE©,KCD,Karnal letter No 20(142)/KCD/2012/2805 Dated 17.09.12 For lifts at 8 locations	1	Job	3462100.00	Job	3462100.00	
	GRAND TOTAL (Sub Head-I & Sub Head-II)					26287188.00	
	SAY					26287188.00	

Assistant Engineer (E)P
Chandigarh Central Elect Circle
CPWD, Chandigarh.

Executive Engineer (E)P
Chandigarh Cent Elect Circle
CPWD, Chandigarh.

Superintending Engineer(E)
Chandigarh Central Electrical Circle
CPWD, Chandigarh

GOVERNMENT OF INDIA

CENTRAL PUBLIC WORKS DEPARTMENT

State HARYANA — DIVISION KARNAL CENTRA

Branch KARNAL — SUB DIVISION KARNAL CENTRA

Name of Work : Provision of lifts at various locations in NIT, Kurukshetra. SH : Civil work.

Major Head	Minor Head	Detailed Head

This estimate has been framed by Sh. Iqbal Singh, Executive Engineer, Karnal Central Division, CPWD, Karnal for Rs. 34,62,100/- i/c 5% contingencies.

REPORT

History This detailed estimate amounting to Rs. 34,62,100/- i/c 5% contingencies has been framed to cover up the probable cost of above mentioned work for accord of A/A & E/S of the competent authority. The requisition of the above said work has been received from client deptt. vide letter No. CC/187/6141 Dt. 24.8.2012. The site was inspected with Chairman (E, EM & C) of NIT, Kurukshetra in presence of engineering staff of NIT. Various locations were finalized for making provision of lifts in the buildings. Accordingly this estimate for civil work.

Design Following provision has been made in the estimate:-
I. RCC framed structure for providing lifts of following location :-
i) Admn. Block
ii) Elect. Engg. Deptt.
iii) Lecture Hall complex
iv) MBA/MCA Block
v) New Workshop
vi) Library
vii) Computer Engineering
viii) CCN Building

Specification As per CPWD Specification 2009 vol I to II with upto date correction slip.

WC Establishment Shall be met out of contingencies.

T. & P. Shall be arranged by the contractor.

Land Available.

Rate By contract after call of tender

Method As per DSR 2012 with upto date correction slip

Time Six months

Cost Rs. [illegible] including contingencies

Original Estimate

NAME Providing lifts at various locations in NIT, Kurukshetra.

Sl No	Description	Qty	Unit	Rate	Amount	DSR No.
	EARTH WORK					2
1.1	Earth work in excavation by mechanical means (Hydraulic excavator) manual means over areas (exceeding 30cm in depth, 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed.					2.6
1.1.1	All kinds of soil	193.00	cum	129.35	24966.00	2.6.1
1.2	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	65.00	cum	83.80	5447.00	2.25
1.3	Extra for every additional lift of 1.5 m or part thereof in excavation /sanking excavated or stacked materials.					2.26
1.3.1	All kinds of soil.	165.00	cum	34.60	5709.00	2.26.1
	Sub-Total				36121.00	
	CONCRETE WORK					4
2.1	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level .					4.1
2.1.1	1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size)	14.00	cum	3087.45	43224.00	4.1.11
2	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm bed by dry brick ballast 40mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth.	102.00	sqm	338.75	34553.00	4.17
	Sub-Total				77777.00	
3	REINFORCED CEMENT CONCRETE					5
3.1	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centring, shuttering, finishing and reinforcement - All work upto plinth level :					5.1
3.1.1	1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size)	26.00	cum	5094.85	132466.00	5.1.2
3.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. upto floor five level excluding cost of centring, shuttering, finishing and reinforcement :					5.2
3.2.1	1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size)	56.00	cum	5735.75	321202.00	5.2.2
3.3	Centring and shuttering including strutting, propping etc. and removal of form for					5.9
3.3.1	Foundations, footings bases of columns, etc. for mass concrete	32.00	sqm	466.90	6941.00	5.9.1
3.3.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc	213.00	sqm	285.15	60737.00	5.9
3.3.3	Suspended floors roofs, landings, balconies and access platform	100.00	sqm	311.20	31120.00	5.9

Description	Qty	Unit	Rate	Amount	DSR No.
Lintels, beams, plinth beams, girders, bressumers and cantilevers	225.00	sqm	262.25	59006.00	5.9.5
Columns, Pillars, Piers, Abutments, Posts and Struts.	200.00	sqm	365.60	73120.00	5.9.6
Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.					5.22
Thermo-Mechanically treated bars.	14875.00	kg	62.25	925969.00	5.22.6
Reinforced cement concrete work in beams, suspended floors, roofs having slope upto 15° landings, balconies shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases upto floor five level excluding the cost of centring, shuttering, finishing and reinforcement with 1:1½:3 (1 cement 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size)	35.00	cum	5885.50	205993.00	5.5
Sub-Total				1614954.00	
BRICK WORK					6
Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :					6.4
Cement mortar 1:6 (1 cement : 6 coarse sand)	125.00	cum	3876.15	484519.00	6.4.2
Brick edging 7cm wide 11.4cm. deep to plinth protection with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 including grouting with cement mortar 1:4 (1 cement : 4 fine sand).	102.00	metre	26.05	2657.00	6.44
Sub-Total				487176.00	
STEEL WORK					10
Providing and fixing 1mm thick M.S. sheet door with frame of 40x40x6mm angle iron and 3mm M.S. gusset plates at the junctions and corners, all necessary fittings complete, including applying a priming coat of approved steel primer.					10.5
Using flats 30x6mm for diagonal braces and central cross piece.	16.00	sqm	2427.15	38834.00	10.5.2
Providing and fixing T-Iron frames for doors, windows and ventilators of mild steel Tee-sections, joints mitred and welded, including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primer.					10.13
Fixing with carbon steel galvanised dash fastener of required dia and size (to be paid for separately).	150.00	kg	70.40	10560.00	10.13.2
Sub-Total				49394.00	
FLOORING					11
Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand)					11.26
25 mm thick	65.00	sqm	945.70	61471.00	11.26.1
Kota stone slabs 25 mm thick in risers of steps, skirting, dado and piers laid on 12 mm (average) thick cement mortar 1:3 (1 cement 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete	8.00	sqm	554.10	7633.00	11.27
Sub Total				69104.00	
ROOFING					12

No.	Description	Qty	Unit	Rate	Amount	DSR No.
11	Providing and fixing 100 mm diameter and 60 cm long rain water spout in cement mortar 1:4 (1 cement : 4 fine sand)					12.37
11	Stone ware spout	8.00	each	68.10	545.00	12.37.1
	Sub Total				545.00	
	PAINTING					13
12	12 mm cement plaster of mix :					13.1
12	1:3 (1 cement : 3 fine sand)	550.00	sqm	112.50	61875.00	13.1.2
13	15 mm cement plaster on the rough side of single or half brick wall of mix :					13.2
13	1:6 (1 cement : 6 fine sand)	650.00	sqm	130.20	71610.00	13.2.2
14	6 mm cement plaster of mix :					13.16
14	1:3 (1 cement : 3 fine sand)	565.00	sqm	101.00	57065.00	13.16.1
15	White washing with lime to give an even shade:					13.37
15	New work (three or more coats)	833.00	sqm	11.75	9788.00	13.37.1
16	Finishing walls with Acrylic Smooth exterior paint of required shade:					13.46
16	New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm)	833.00	sqm	67.50	56228.00	13.46.1
17	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :					13.61
17	Two or more coats on new work	16.00	sqm	53.85	862.00	13.61.1
	Sub-Total				267426.00	
	WATER PROOFING					22
	Providing and laying integral cement based treatment for water proofing on horizontal surface at all depth below ground level for under ground structures as directed by Engineer-in-Charge and consisting of :-					
	i) 1st layer of 22mm to 25mm thick approved and specified rough stone slab over a 25mm thick base of cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound conforming to IS:2645 in the recommended proportion over the levelling course (levelling course to be paid separately). Joints sealed and grouted with cement slurry mixed with water proofing compound .:-					
	ii) 2nd layer of 25mm thick cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportions.:-					
	iii) Finishing top with stone aggregate of 10mm to 12mm nominal size spreading @ 8 cudm/sqm thoroughly embedded in the 2nd layer					
21	Using rough Kota stone	62.00	sqm	732.65	45437.00	22.1
21	Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20mm thick with neat cement pointing mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-Charge					22.1.1
						22.2

Description	Qty	Unit	Rate	Amount	DSR No.
Using rough Kota stone	170.00	sqm	884.00	150433.00	22.2.1
Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations.(. a) Applying a slurry coat of neat cement using 2.75 kg/sqm. of cement admixed with water proofing compound conforming to IS 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment.(. b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS . 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS . 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs(c) After two days of proper curing applying a second coat of cement slurry using 2.75kg/ sqm of cement admixed with wate With average thickness of 120mm and minimum thickness at source as 65 mm	38.00	sqm	786.70	29896.00	22.7 22.7.1
Sub-Total				225765.00	
Total				3018264.00	
Add Cost Index @4.00%				120731.00	
Total				3138995.00	
Add Contingencies @5.00%				156950.00	
Total				3295945.00	
Add 1% Cess				32959.00	
Total				3328904.00	
Add 4% VAT				133156.00	
Grand Total				**3462060.00**	

Say Rs. 34,62,100/-

Executive Engineer
Kamal Central Division
CPWD, Kamal

Item No. 16.18 **To consider & approve the Cost Estimate for Widening & strengthening of existing roads at NIT, Kurukshetra.**

The above mentioned work was placed before the High Power Committee in its meeting held on 01.10.2012. Being the essential requirement of the work, the committee recommended for approval and same was approved by the Hon'ble Director, NIT, Kurukshetra. Executive Engineer, CPWD has submitted the cost estimate for the above work for an amount of Rs. 219.32 lacs.

The B & WC may consider and approve the cost estimate for the above cited work for an amount of Rs. 219.32 lacs.

महत्वपूर्ण

भारत सरकार
केन्द्रीय लोक निर्माण विभाग
चण्डीगढ़ केन्द्रीय परिमण्डल
सैक्टर 9 ए, केन्द्रीय सदन, चण्डीगढ़ 160009

सं:-चकेपरि/23(45158)/नि-1/2012-13/ 6219 दिनांक:- 12/11/12

सेवा में,

अध्यक्ष (E, C & EM),
एन आई टी,
कुरुक्षेत्र।

विषय:- Widening & strengthening of roads at NIT, Kurukshetra.

महोदय,

उपरोक्त कार्य का रुपये 2,19,32,000/- राशि का प्राक्कलित अनुमान इस के साथ दो प्रतियों में संलग्न किया जाता है। इस कार्य के लिए आवेदक आप के पत्र संख्या CC/219/6899, दिनांक 08.10.2012 द्वारा भेजा गया था। आपसे अनुरोध है कि अनुमान को शीघ्र स्वीकृत करने की कृपा करें। अध्यधीन राशि के साथ साथ मूल्य सूचकांक में वृद्धि होने के कारण इस कार्य के क्रियान्वयन में कठिनाई हो सकती है। कार्य की स्वीकृति करते समय लिखें। वित्त (हैड आफ अकाउंट) का नाम भी अलॉट करने की कृपा करें।

संलग्न: अनुमान की प्रतियां।

अधिशासी अभियंता
चण्डीगढ़ केन्द्रीय परिमण्डल
के लो नि वि, चण्डीगढ़।

प्रतिलिपि

1. मुख्य अभियंता (3 में 1), केन्द्रीय लोक निर्माण विभाग, चण्डीगढ़ को सूचनार्थ।
2. कार्यपालक अभियन्ता, करनाल केन्द्रीय मण्डल, के लो नि वि, 448, सुभाष कालोनी, करनाल को सूचनार्थ।

अधिशासी अभियंता

Central Public Works Department

Name of Work : Widening & strengthening of roads at NIT, Kuruksbetra.

This estimate has been framed by Sh. Iqbal Singh, Executive Engineer, Karnal Central Division, CPWD, Karnal for Rs. 2,19,32,000/- i/c 3% contingencies

History This preliminary cum detailed estimate amounting to Rs. 2,19,32,000/- i/c 3% contingencies has been framed to cover up the probable cost of above mentioned work for accord of A/A & E/S of the competent authority. The requisition of the above said work has been received from client department vide letter No. CC/219/6899 Dt. 8.10.2012.

Design & Scope :

Following provision has been made in the estimate:-

1. Widening of road - kirmich gate to first crossing.
   - first crossing to NIT chowk.
   - NIT chowk to crossing near main park of residential area.
   - University gate to Girls Hostel.
2. Providing & laying GSB 150mm on widening portion.
3. P/L WMM 150mm on widening portion.
4. P/L B.M. 50mm thick on widening portion.
5. 4cm thick bituminious macadam using crushed stone aggregate on entire road.
6. P/L kerb stone and crossing drainage.

Specification : As per CPWD Specification 2009 vol I to II with upto date correction slip.

WC Establishment : Shall be met out of contingencies.

T&P : Shall be arranged by the contractor.

Land : Available

Method : As per DSR 2012 with upto date correction slip.

Time : Six months.

Cost : Rs. 2,19,32,000/- i/c 3% contingencies.

Executive Engineer
Karnal Central Division
CPWD, Karnal

Method	: By contract after call of tenders
Rate	: DSR 2012 with upto date correction slip.
Time	: Six months after call of tenders.
Cost	: Rs. 2,19,32,000/- i/c 3% contingencies.

Assistant Engineer (P-III)
Chandigarh Central Circle
CPWD, Chandigarh.

Executive Engineer(P)
Chandigarh Central Circle
CPWD, Chandigarh.

W Widening & strengthening of roads at NIT, Kurukshetra.

No	Description	Qty	Unit	Rate	Amount	DSR No.
1	EARTH WORK					2
1	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m.					2.1
1.1.1	All kinds of soil					2 10.1
1 1 1	Pipes, cables etc. exceeding 300 mm dia but not exceeding 600 mm.	2993.00	metre	258.55	773840.00	2.10.1.3
	Sub-Total				773840.00	
2	CONCRETE WORK					4
2.1	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level :					4.1
1.1	1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size)	342.00	cum	3357.40	1148231.00	4 1.10
	Sub-Total				1148231 00	
3	FINISHING					13
i	Finishing walls with Acrylic Smooth exterior paint of required shade					13.46
1.1	New work (Two or more coat applied @ 1 67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm).	1995.00	sqm	67.50	134663.00	13 46.1
	Sub-Total				134663.00	
4	ROAD WORK					16
1	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm. depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth lead upto 50 metres.	6160.00	sqm	61.25	377300.00	15.1
2	Providing and applying tack coat using hot straight run bitumen of grade VG - 10 including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specifications:					16.3
4.2.1	On W.B.M. @ 0.75 Kg / sqm	6160.00	sqm	40.15	247324.00	16.30 1
4.2.2	On bituminous surface @ 0.50 Kg / sqm	6665.00	sqm	29.00	193285.00	16.30.2
3	4 cm thick bitumastic sheet with hot bitumen of approved quality using stone chippings (60% 12.5mm nominal size and 40% 10mm nominal size) @ 2.60cum per 100 sqm and coarse sand at 2.60cum per 100 sqm of road surface and with bitumen @ 56 kg/cum. of stone chippings and at 128 kg/cum of sand over a tack coat with hot straight run bitumen including consolidation with road roller of 8 to 10 tonne etc. complete. (tack coat to be paid separately)					16 39
3.1	With Refinery Modified Bitumen CRMB 55 conforming to IRC: SP 53.	12825 00	sqm	352.45	4520 71 00	16.39.3

	Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by tippers, laid over a previously prepared surface with paver finisher equiped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.					16.55
4.1	50 to 100 mm average compacted thickness with bitumen of grade VG-30 @3.50% (percentage by weight of total mix) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.	308.00	cum	6149.90	1894169.00	16.55.2
5	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/ colour using hot thermoplastic material by fully/ semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour ,T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-in-charge and accordance with applicable specifications.	570.00	sqm	505.80	288306.00	16.62
4.6	Providing and laying and making kerb channel 30cm wide and 50mm thick of cement concrete 1:3:6 (1 cement:3 coarse sand:6 graded stone aggregate 20mm nominal size) over 75mm bed of dry brick ballast 40 mm nominal size well rammed and consolidated and grouted with fine sand, including finishing the top smooth etc. complete and as per direction of Engineer-in-charge.	855.00	Sqm	291.95	249617.00	16.63
4.7	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of fine sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge.	4275.00	sqm	536.65	2294179.00	16.68
4.8	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand) including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment) (Precast C.C kerb stone shall be approved by Engineer-in-charge)	257.00	cum	5045.80	1297028.00	16.69
4.9	Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density complete as per specifications and directions of Engineer-in- Charge					16.72
9.1	With material conforming to Grade-I (size range 75 mm to 0.075 mm) having CBR Value 30	924.00	cum	1940.80	1793299.00	16.78.1

SLNo	Description	Qty	Unit	Rate	Amount	DSR No.
4.1	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to wet mix macadam (WMM) specification including premixing the material with water at OMC in mechanical mix plant, carriage of mixed material by tipper to site, for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	924.00	cum	1960.60	1811594.00	16.79
	Sub-Total				14956272.00	
5	DRAINAGE					19
5.1-	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :					19.6
5.1.1	150 mm dia. R.C.C. pipe	143.00	metre	254.50	36394.00	19.6.2
5.1.2	300 mm dia. R.C.C. pipe	2850.00	metre	422.90	1205265.00	19.6.4
5.2	Constructing brick masonry road gully chamber 50x45x60 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 600x450 mm precast R.C.C. horizontal grating with frame complete as per standard design :					19.27
5.2.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	190.00	each	3193.50	606765.00	19.27.1
	Sub-Total				1848424.00	
6	NSR ITEMS					50
6.1	Providing and fixing RCC horizontal grating of size 500x450mm with frame.	570.00	each	633.60	361152.00	50.187
	Sub-Total				361152.00	
	Total				19232592.00	
	Add Cost Index @ 157-149/149 i.e. 5.40% above				1038559.00	
	Total				20271141.00	
	Add Contingencies @3%				608134.00	
	Total				20879276.00	
	Add Labour Cess @1%				209793.00	
	Total				21088068.00	
	Add VAT @4%				843523.00	
	Grand Total				**21931591.00**	

Say Rs. 2,19,32,000/-

Assistant Engineer (P-III)
Chandigarh Central Circle
CPWD, Chandigarh.

Executive Engineer
Chandigarh Central Circle
CPWD, Chandigarh.

Preliminary Estimate amounting to Rs. 2,19,32,000/- (Rupees Two Crore nineteen lacs thirty two thousand only) submitted to client department for obtaining A/A & E/S of the competent authority

Superintending Engineer
Chandigarh Central Circle
CPWD, Chandigarh

Item No. 16.19 **To consider & approve the cost estimate for Construction of multi-storey building for PG Research Schools (4 nos.) at NIT, Kurukshetra.**

The above mentioned work was approved in the meeting of FC & BOG with covered area of 2000sqm on each floor including the provision of air conditioning etc. Chief Engineer, CPWD has submitted the cost estimate for the above work for an amount of Rs. 3566.43 lacs.

The B & WC may consider and approve the revised cost estimate for the above cited work for an amount of Rs. 3566.43 lacs.

CENTRAL PUBLIC WORKS DEPARTMENT
KENDRIYA SADAN, SECTOR-9A, CHANDIGARH

STATE : Haryana | DIVISION : KCD | BRANCH : B & R

Name of work: C/o School Building, Training and Placement cell (Basement and G+3) in NIT Campus, Kurukshetra.

Major Head:	Minor Head:	Detailed Head:

This preliminary Estimate framed by Er. Iqbal Singh, Executive Engineer, Karnal Central Division, CPWD, Karnal and processed by Er. Tejinder Kumar, Executive Engineer (P)II, O/o Chief Engineer (NZ-I), CPWD, Chandigarh for the probable cost of Rs. 35,66,43,200/- including 3% contingencies.

REPORT

HISTORY : This preliminary estimate amounting to **Rs. 35,66,43,200/-** including 3% contingencies has been framed to cover up the probable cost of above mentioned work for accord of A/A & E/S of the competent authority. The requisition of the above said work has been received from client department vide letter No. CC/219/6899 dated 08.10.2012.

DESIGN & SCOPE: -This estimate is based on Sr. Arch. Letter No. SA(NZ-I)/366 dated 15.10.2012. Following provisions have been made in the estimate:-

1. RCC framed structure with RCC raft footing
2. Extra for earth resisting earthquake forces.
3. Internal water supply, sanitary and electrical installations i/c external service connection.
4. Provision for development of site for 4000 sqm area has been taken.
5. Provision for solar street lights automatic fire alarm,1250KVA transformer, solar power plant, water cooler with RO etc. have also been taken in this estimate.

SPECIFICATIONS: As per CPWD Specifications 2009 Vol. I to II with upto date correction slips.

RATES : By contract after call of tender.

COST: Rs. 35,66,43,200/- i/c 3% contingencies

W.C. Fair: Shall be met out of contingencies.

T & P : All T&P shall be arranged by the contractor.

METHOD : Based on PAR-2007 (Re-print 2010) and market rates.

LAND: Available with the client department.

TIME : After receipt of A/A & E/S

(i) Pre-construction period : 06 Months.
(ii) Post construction period : 12 months
: 18 Months

Assistant Engineer (P)
CPWD, Chandigarh

Executive Engineer(P)II
CPWD, Chandigarh

GENERAL ABSTRACT OF COST

Name of Work:- C/o School Building, Training and Placement cell (Basement and G+3) in NIT Campus, Kurukshetra.

S. No.	Description of Item	Civil	Electical	Total Amount	Remarks
1	School Building	209,433,074.00	126,737,382.00	336,170,456.00	As per Annexure A - E
		209,433,074.00	126,737,382.00	**336,170,456.00**	**(C)**
	Add 2% VATT	4,188,661.00	2,534,748.00	6,723,409.00	
		213,621,735.00	**129,272,130.00**	342,893,865.00	
	Add 1% labour cess on (C)	2,094,331.00	1,267,374.00	3,361,705.00	
		215,716,066.00	130,539,504.00	346,255,570.00	
	Add 3% contingencies.	6,471,482.00	3,916,185.00	10,387,667.00	
				356,643,237.00	
			Say	**356,643,200.00**	

Assistant Engineer (P)	**Executive Engineer (P)II**	**Superintending Engineer(P)**
CPWD, Chandigarh	**CPWD, Chandigarh**	**CPWD, Chandigarh**

Preliminary Estimate amounting to ₹ 35,66,43,200/- (Rupees Thirty Five Crore Sixty Six Lacs Forty Three Thousand and Two Hundred Only) submitted to the Competent Authority for accord of A/A & E/S.

Chief Engineer (NZ-I)
CPWD, Chandigarh

Annexure -A

ABSTRACT OF COST

Name of work : C/o School Building, Training and Placement cell (Basement and G+3) in NIT Campus, Kurukshetra.
S.I. Civil Work

S No	Description of Item	Qty.	Rate	Unit	Amount	Remarks
	R.C.C. framed Structure					
	R.C.C. framed structure upto six storeys					
1.1	Floor height 3.35mtr.(Office/ College/ Hospital)	8000.00	9150.00	sqm	73200000.00	1.1.1
	Basement for services (10452+1144 = 11596)	2000.00	11596.00	sqm	23192000.00	1.3.1 + 1.3.2.1
	Extra for				**98592000.00**	**(A)**
2	Every 0.3mtr. additional height of floor above normal floor height of 3.35mtr./ 2.90mtr Extra height 3.90 - 3.25 = 0.55m 150x0.55/6.30= 275/-	8000.00	275.00	sqm	2200000.00	1.2.3
3	Every 0.3mtr. deeper foundations over normal depth of 1.20mtr. (on Ground Floor area only)	2000.00	150.00	sqm	300000.00	1.2.5
4	Resisting earth quake forces.	8000.00	630.00	sqm	5040000.00	1.2.8
5	RCC raft foundation (GF only)	2000.00	3560.00	sqm	7120000.00	
7	Green building concept (GRIHA) on (A)	98592000.00	10.00	%	9859200.00	As per S.A. letter
8	Internal water supply & sanitary installations on (A)	98592000.00	5.00	%	4929600.00	3.1
9	External services connections on (A)	98592000.00	3.75	%	3697200.00	3.2
10	Quality Assurance on (A)	98592000.00	1.00	%	985920.00	3.6.7
12	Overhead tank without staging	80000.00	9.00	litre	720000.00	5.1
	Development of site					
13	Levelling	4000.00	55.00	sqm	220000.00	6.1
14	Internal road & paths	4000.00	83.00	sqm	332000.00	6.2
15	Sewer	4000.00	63.00	sqm	252000.00	6.3
16	Water supply					6.4
16.1	Filtered water supply distribution lines 100mm dia & below	4000.00	46.00	sqm	184000.00	6.4.1

No	Description of Item	Qty.	Rate	Unit	Amount	Remarks
16	Peripheral grid 150mm to 300mm dia pipes	4000.00	35.00	sqm	140000.00	G 4.2
17	Storm water drains	4000.00	50.00	sqm	200000.00	6.5
18	Horticulture Operations	4000.00	47.00	sqm	188000.00	6.6
19	Add for rain water harvesting			L.S.	1000000.00	
	Total				133759920.00	
	Add Cost Index @ 57.00% except on item No 19				75673154.00	
	TOTAL				209433074.00	

Assistant Engineer(P)
CPWD, Chandigarh

Executive Engineer(P)II
CPWD, Chandigarh

Annexure -B

Abstract of cost

Name of work : C/o School Building, Training and Placement cell (Basement and G+3) in NIT Campus, Kurukshetra.
SH:- Electrical Work.

Sr. No.	Description	Qty.	Unit	Rate	Amount	Remarks
1	**Sub-Head-I (internal electification)**					
1.1	Internal electrical Installation on (A)	98592000.00	%	12.50%	12324000	PAR 3.3
1.2	External services on (A)	98592000.00	%	1.25%	1232400	PAR 3.2
1.3	Power wiring,aternate generator supply and plug on (A)	98592000.00	%	4.00%	3943680	PAR 3.6.1
1.4	Telephone conduit on (A)	98592000.00	%	0.50%	492960	PAR 3.6.4
1.5	Computer conduiting on (A)	98592000.00	%	0.50%	492960	PAR 3.6.6
					18486000	**(B)**
1.6	Extra for Green building features on (B)	18486000.00	%	10.00%	1848600	PAR
1.7	Street lighting with HPSV/LED lamps	4000	sqm	95	380000	PAR 6.7.3
1.8	Fire fighting with wet riser system	10000	sqm	300.00	3000000	PAR (1.4.1)
1.9	Exit sign board and electrical signage	10000	sqm	50.00	500000	PAR (6.7.4)
1.10	LIFT 13 PASSENGER FOR B+ G+3 FLOORS	2	Nos.	1800000	3600000	PAR 4.1.3
					27814600	
	Cost index @ 57%				15854322	
					43668922	
2	**Sub-Head-II (External electification)**					
2.1	solar street lights with LED street light frttigs & GI octagonal pole/decorative pole and decorative lighting around building	40	Nos.	85000	3400000	M.R.
2.2	Addressable Intelligent Automatic fire alarm system + PA system	10000	sqm	500.00	5000000	MR

Sr. No.	Description	Qty.	Unit	Rate	Amount	Remarks
2.3	Portable type fire Extinguishers system	50	Nos.	8000.00	400000	M.R.
3	**Sub-Head -III (Augmentation of Sub- station equipments of existing sub station -I)**					
3.1	750 KVA DG Sets	1	No.	9230000	9230000	M.R.
3.2	1250KVA transformer	1	No.	1911000	1911000	M.R.
3.3	Extension of existing HT panel with 1 no I O/G	1	Job	572000	572000	M.R.
3.4	Augmentation of LT Panels	1	Job	2275000	2275000	M.R.
3.5	Sub station interconnection & earthings 10% of (1.2 to 1.4)	4929600	Job	10%	492960	M.R.
3.6	LT Cables				1000000	M.R.
3.7	APFC PANEL	300	KVAR	1625	487500	M.R.
4	**Sub Head-IV (Solar energy Systems)**					
4.1	Solar Photovoltiac Power plant without batteries for day use with Grid feed unit as required as per green building norms	50	KW	250000	12500000	M.R.
4.2	Water coolers in SS body with RO Water Purifiers, stand etc.	8	Nos.	100000	800000	M.R.
5	**Sub-Head -V (AC Systems)**					
5.1	AC with winter heating including stand by units	400	ton	75000	30000000	M.R.
6	**Sub-Head -VI (LAN Systems, EPBAX, Projection, Displays & sound system)**					
6.1	SITC of LAN system with conduiting cabling. Lan switches of 3 & 2 layers etc as required.	1	job	3000000	3000000	M.R.
6.2	Equipment, Wiring & Outlets for Voice Network			L.S.	800000	M.R
6.3	Projection system with white e-board for each school building	4	jobs	2000000	8000000	M.R.
6.4	Sound system for for each school building	4	jobs	800000	3200000	M.R.
					126737382	

-sd-
Assistant Engineer(P)
CPWD, Chandigarh

-sd-
Executive Engineer(P)II
CPWD, Chandigarh