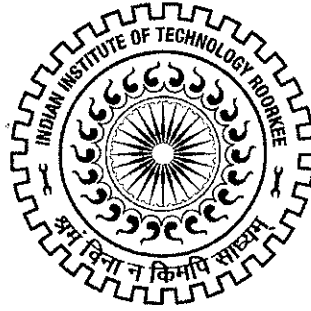


भवन एवं निर्माण कार्य समिति  
की अट्ठाईसवीं बैठक का कार्यवृत्त

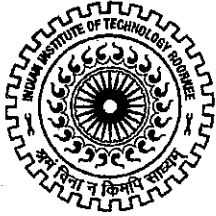
**MINUTES OF THE 28<sup>TH</sup> MEETING OF THE  
BUILDING & WORKS COMMITTEE**

**19<sup>TH</sup> NOVEMBER 2012**



भारतीय प्रौद्योगिकी संस्थान रुड़की  
रुड़की – 247 667 (भारत)

**INDIAN INSTITUTE OF TECHNOLOGY ROORKEE  
ROORKEE - 247 667 (INDIA)**



Lt. Col A K Srivastava (Retd)  
Registrar

भारतीय प्रौद्योगिकी संस्थान रुड़की  
रुड़की-247 667, उत्तराखण्ड, भारत

**INDIAN INSTITUTE OF TECHNOLOGY ROORKEE**  
ROORKEE-247 667, UTTARAKHAND, INDIA

FAX : (91) 1332 - 285310, 273560  
Tele : (91) 1332 - 272430, 285311 (O), 272445, 285312 (R)  
e-mail : regis@iitr.ernet.in / anilsrivast@gmail.com

No.IITR/MS/28<sup>th</sup> B&WC / 7940  
Dated 22<sup>nd</sup> November 2012

**Subject: Recommendations (Minutes) of the 28<sup>th</sup> meeting of the Building & Works Committee held on 19<sup>th</sup> November 2012.**

Enclosed herewith please find a copy of the recommendations (minutes) of the 28<sup>th</sup> meeting of the Building & Works Committee of this Institute held on 19<sup>th</sup> November 2012 for favour of information of the members and record. Members who attended the meeting are requested to kindly offer their comments, if any, within a week. If no comments are received, it will be presumed that they have no comments to offer and approve of the minutes as recorded.

Encl: as above.

Yours faithfully,

(A.K. Srivastava)  
Lt. Col. (Retd.)

Registrar  
& Member Secretary, B&WC

22 NOV 2012

To:

1. Prof. Pradipta Banerji  
Director, IIT Roorkee  
(Chairman)
2. Prof. Mahendra Singh  
Chairman, Estate & Works  
Indian Institute of Technology Roorkee

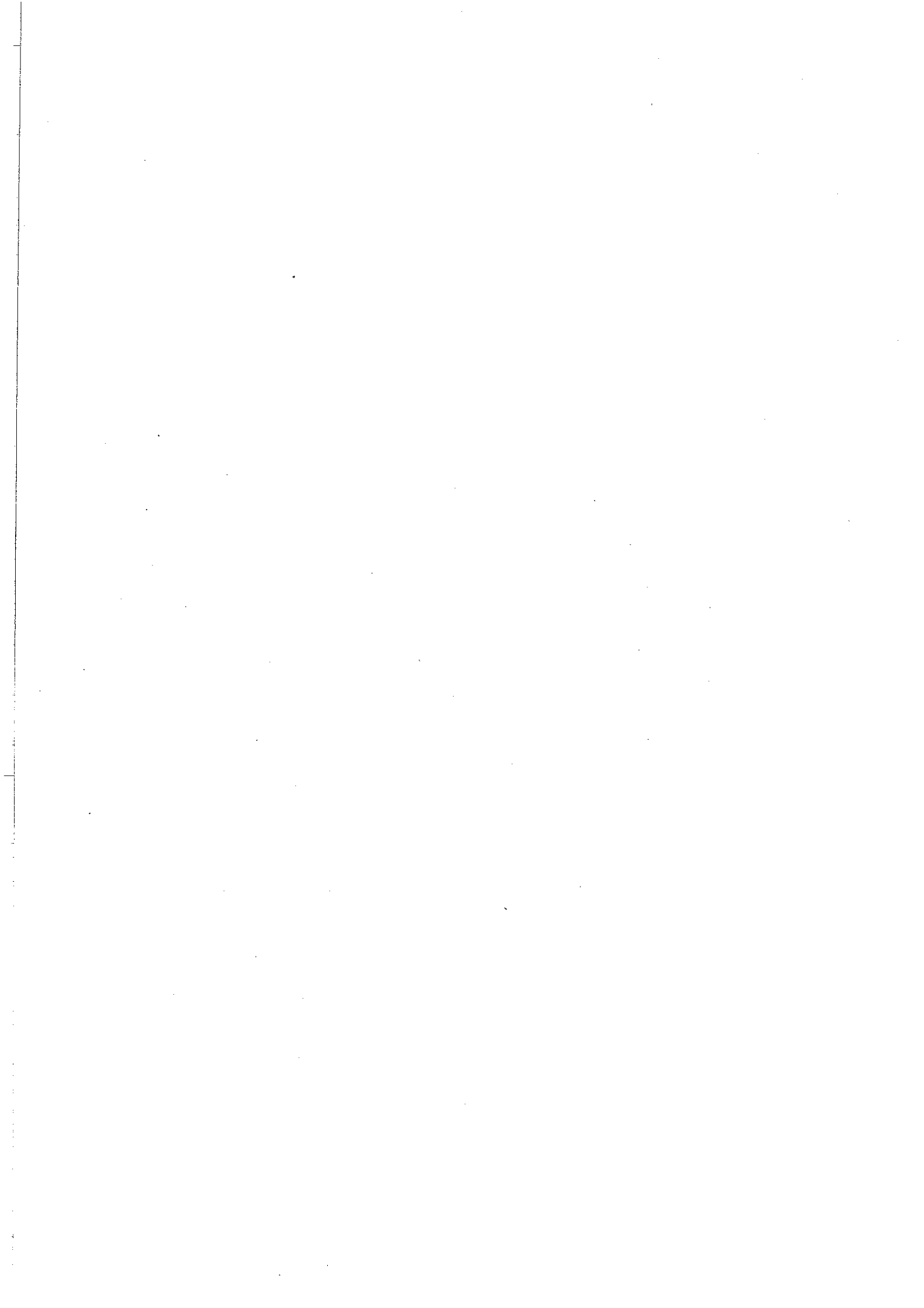
3. Er. H.K. Upreti  
Chief Engineer, National Highway  
Uttarakhand PWD,  
Dehradun  
Uttarakhand
4. Prof. H.Sinvhal  
Dy. Director  
Indian Institute of Technology Roorkee
5. Er. Saied Ahmed  
Dy. General Manager,  
Uttarakhand Power Corporation Ltd.,  
Roorkee - 247 667
6. Prof. S.C. Sharma  
Department of Mechanical & Indl. Engg.  
Indian Institute of Technology Roorkee
7. Prof. S.P. Srivastava  
Department of Electrical Engineering  
Indian Institute of Technology Roorkee
8. Prof. Pradeep Bhargava  
Department of Civil Engineering  
Indian Institute of Technology Roorkee
9. Er. Salek Chand  
Superintending Engineer  
Indian Institute of Technology Roorkee
10. Prof. Pradeep Kumar - Special Invitee  
Dean, Finance & Planning  
Indian Institute of Technology of Roorkee
11. Lt. Col. (Retd) A. K. Srivastava - Member Secretary  
Registrar  
Indian Institute of Technology Roorkee

**INDIAN INSTITUTE OF TECHNOLOGY ROORKEE  
ROORKEE 247 667**



**Minutes of the 28<sup>th</sup> meeting of the Building & works Committee held on 19<sup>th</sup> November 2012 at 12.00 noon in the Board Room of the Institute.**

Item No.	Particulars	Page(s)
28.1	Confirmation of the minutes of the 27 <sup>th</sup> meeting held on 12.08.2011.	1
28.2	Report on the action taken to implement the decisions of the 27 <sup>th</sup> meeting of the Building & Works Committee held on 12.08.2011	2
28.3	Construction of two overhead water tanks each of 500 kilolitres capacity at the Roorkee Campus.	2
28.4	(a) Preliminary estimate of Rs.950.00 lacs for the widening and resurfacing of the Roads and the construction of 1500 meter long trench for laying of Telephone and Internet cables at the IIT Roorkee Campus. (b) Preliminary estimate of Rs.71.00 lacs for the resurfacing of the roads at the Saharanpur Campus.	2
App. 'A'	Preliminary estimate of Rs.188.02 lacs for construction of two overhead water tank.	4
App. 'B'	Preliminary estimate of Rs.950.00 lacs for widening and resurfacing of the roads and the construction of 1500 meter long trench for laying of Telephone and Internet cables at the IIT Roorkee Campus.	6
App. 'C'	Preliminary estimate of Rs.71.00 lacs for the resurfacing of the roads at the Saharanpur Campus.	10
App. 'D'	Map of proposed roads for widening and resurfacing at IIT Roorkee Campus	12
App. 'E'	Map of proposed roads for resurfacing at Saharanpur Campus	13



**INDIAN INSTITUTE OF TECHNOLOGY ROORKEE  
ROORKEE – 247 667**



**Minutes of the 28<sup>th</sup> meeting of the Building & Works Committee held on 19<sup>th</sup> November 2012 at 12.00 Noon in the Board Room of the Institute.**

The following were present:

- |   |                    |
|---|--------------------|
| 1. Prof. Pradipta Banerji, Director   | -Chairman          |
| 2. Prof. S.P. Gupta, Officiating Dy. Director                                     | - Member           |
| 3. Prof. Mahendra Singh. Chairman, Estate & Works                                 | - Member           |
| 4. Er. H.K. Upreti, Chief Engineer, NH, Uttarakhand PWD                           | - Member           |
| 5. Prof. S.C. Sharma, Mechanical & Industrial Engineering Department, IIT Roorkee | - Member           |
| 6. Er. Salek Chand, Superintending Engineer                                       | - Member           |
| 7. Prof. Pradeep Kumar, Dean, Finance & Planning                                  | -Permanent Invitee |
| 8. Lt. Col. (Retd.) A.K. Srivastava, Registrar                                    | -Member Secretary  |

The Chairman welcomed the members of the Building & Works Committee.

**Deliberations:**

The items on the Agenda were discussed and the deliberations/recommendations are summarized as under:

**Item No. 28.1: To confirm the minutes of the 27<sup>th</sup> meeting held on 12.08.2011.**

Having received no comments, the minutes of the 27<sup>th</sup> meeting of the Building & Works Committee, as recorded and circulated, were **confirmed**.

  
22 NOV 2012

**Item No. 28.2 To receive a report on the action taken to implement the decisions of the 27<sup>TH</sup> meeting of the Building & Works Committee held on 12.08.2011**

The Building & Works Committee **noted** the actions taken on the minutes of the 27<sup>th</sup> meeting, as reported.


**Item No.28.3: To consider the construction of two overhead water tanks each of 500 kilolitres capacity at the Roorkee Campus.**

The B&WC considered the preliminary estimate submitted by the U.P. Rajkiya Nirman Ltd. for construction of two overhead water tanks, each of 500 Kilolitres capacity, near the newly constructed multistoried Canal View Apartments and Govind Bhawan, at the Roorkee Campus. The B&WC recommended that the work be assigned to the U.P. Rajkiya Nirman Nigam Ltd. at the estimated cost of Rs.188.02 lacs (**Appendix 'A'**). The matter be placed before the Finance Committee and the Board of Governors for according administrative approval and expenditure sanction.

**Item No.28.4: To consider -**

- (a) **Preliminary estimate of Rs.950.00 lacs for the widening and resurfacing of the Roads and the construction of 1500 meter long trench for laying of Telephone and Internet cables at the IIT Roorkee Campus.**
- (b) **Preliminary estimate of Rs.71.00 lacs for the resurfacing of the roads at the Saharanpur Campus.**

The B&WC considered the preliminary estimate for widening and resurfacing of the Roads and the construction of 1500 meter long trench in the side of roads for laying of Telephone and Internet cables at the IIT Roorkee Campus and resurfacing of the roads at the Saharanpur Campus. The B&WC recommended that the work be sanctioned at the estimated cost of Rs.950.00 lacs and Rs.71.00 lacs, respectively (**Appendices 'B' & 'C'**) with the under-mentioned provisions:

  
22 NOV 2012

1. Paved pedestrian paths be provided to all the hostels, as well as on all major roads.
2. All gates and roads leading to the Departments/Centres/Facilities, be widened, wherever possible, for fire prevention accessibility.
3. All major roads should be marked as per the IRC code, to clearly demarcate the pedestrian and vehicular areas.

The proposed roads for widening and resurfacing at IIT Roorkee Campus and Saharanpur Campus are shown in **Appendices 'D' & 'E'**.

The matter be placed before the Finance Committee and the Board of Governors for according administrative approval and expenditure sanction.

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



22 NOV 2012





उ०प्र० राजकीय निर्माण निगम लि० हरिद्वार इकाई  
(राज्य सरकार का उपक्रम)

कार्यालय :  
इकाई प्रभारी  
हरिद्वार इकाई

I.S.O. 9001:2000  
CERTIFIED

स्पॉन्सर्स साइड  
भरखा कॉलेज रोड  
दूरभाष नं० 0109142000

पत्रांक : 1164/रा०नि०नि०/एच-213( )/2011

दिनांक : 08/08/2011

सेवा में,  
संस्थान अभियन्ता  
आई०आई०टी०  
रूड़की (हरिद्वार)

विषय—500 किलोलीटर क्षमता के 02 नं० ओवर हैड टैंक के निर्माण कार्य के सम्बन्ध में।


महोदय,

उपरोक्त विषयक आपके पत्र के अनुपालन में आई०आई०टी० परिसर रूड़की में प्रत्येक 500 किलोलीटर क्षमता के 02 ओवर हैड टैंक बनाये जाने प्रस्तावित है। जिनका आगणन रू० 188.02 लाख का गठित कर प्रशासनिक एवं वित्तीय स्वीकृति हेतु प्रेषित किया जा रहा है।

सधन्यवाद

भवदीय

संलग्नक— उपरोक्तानुसार

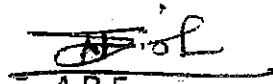
  
8/8/11  
अपर परियोजना प्रबन्धक




22 NOV 2012

**NAME OF WORK : CONSTRUCTION OF TWO NOS OVER  
HEAD TANK OF 500 K.L. CAPACITY EACH AT I.I.T  
CAMPUS ROORKEE IN DISTRICT HARIDWAR ( U.K)**

S.No	PARTICULAR OF ITEM	QUANTITY	RATE	AMOUNT
1	Construction of R.C.C over head tank 500 K.L to 20.00 m standing complete	500 00 K.L	17.75 per ltr	Rs 88.75 Lacs
2	Less 5 % due to U.P.R.N.N LTD working		(-)	Rs 4.44 Lacs Rs 84.31 Lacs
3	Add 11.5 % U.P.R.N.N ltd centage charges including architecture & structural drawing		(+)	Rs 9.70 Lacs Rs 94.01 Lacs
	Cost of two nos 500 K.L O.H.T	2 x 94.01		Rs 188.02 Lacs

  
A.R.E  
U.P.R.N.N . L.T.D

  
PROJECT MANAGER  
U.P.R.N.N . L.T.D

  
22 NOV 2012

**Road Estimate of IIT Roorkee Campus.**

Item No.	Description of Item	Units	Rate	Qty.	Amount in Rs.
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 with lead upto 50 metres.	sqm	61.25	39550	2422437.50
16.3	Providing, laying, spreading and compacting stone aggregate of specific sizes to water bound Macadam (grad II) specification including spreading in inform thickness (for 7.5 cm compacted) hand packing, rolling with 3 wheeled steel/vibration roller 8-10 tones in stages to proper grade and cambeo, applying and booming requisite type of screening/binding materials to fill up the voids of coorgeagg, watering and compacting to required density with stone ballast size.				
16.3.2	63 mm to 45 mm size stone aggregate.	cum	2,024.14	1100	2226554.00
16.3.3	53 mm to 22.4 mm size stone aggregate.	cum	2,272.73	550	1250001.50
16.25	Surface dressing on new surface with paving bitumen of grade VG -10 of approved quality using 2.25 kg of bitumen per sqm with 1.65 cum of stone chippings 13.2 mm nominal size per 100 sqm of road surface including consolidation with road roller of 6 to 8 tonne capacity etc. complete:	sqm	145.80	7050	1027890.00
16.31	Providing and applying tack coat using bitumen emulsion conforming to IS: 8887, using emulsion pressure distributor including preparing the surface & cleaning with mechanical broom.				
16.31.1	With rapid setting bitumen emulsion.				
16.31.2.1	On W.B.M/ W.M.M. @ 0.4kg/sqm.	sqm	14.50	5800	84100.00
16.31.2.2	On bituminous surface @ 0.25kg/sqm.	sqm	9.55	186000	1776300.00
16.55	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 equipped 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 specifcatons and directions of Engineer-in-Charge.				
16.55.2	50 to 100 mm average compacted thickness with bitumen of	cum	6,149.90	5000	30749500.00
16.56	Providing and laying semi- dense Bituminous				

  
22 NOV 2012

Item No.	Description of Item	Units	Rate	Qty.	Amount in Rs.
	concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equiped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.				
16.56.1	25 mm compacted thickness with bitumen of grade VG-30 @5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	sqm	208.15	98000	20398700.00
16.62	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.	sqm	505.80	200	101160.00
16.68	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.	sqm	536.65	32500	17441125.00
4.1	Providing and laying in position cement concrete of specified grade including the cost of centering and shuttering - All work up to plinth level :				
4.1.5	1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).	cum	4,024.00	3250	13078000.00
<b>Total Rs.</b>					<b>90555768.00</b>
Cost of trench for 1500 RM for telephone /internet cable					<b>4440810.00</b>
					<b>9,49,96,578.00</b>

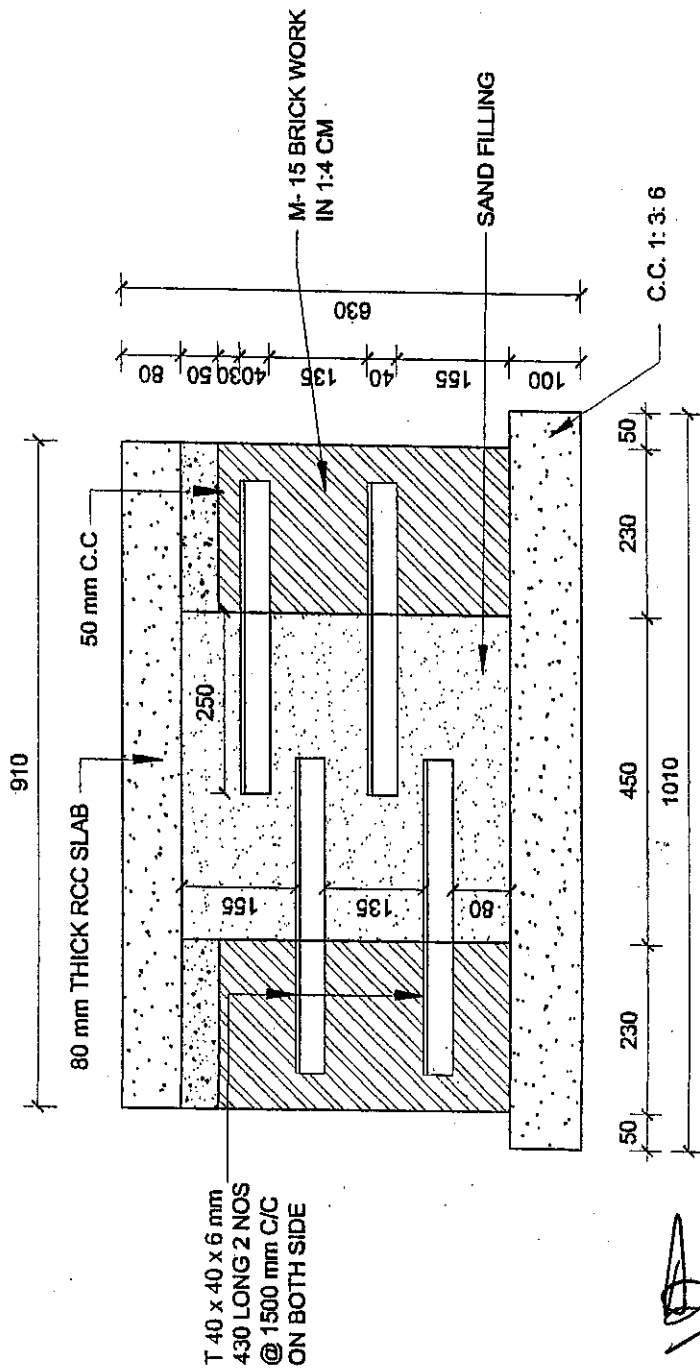
  
 22 NOV 2012

Quantity for one running meter of trench for telephone /internet cable.

Item No.	Description of Item	Units	Rate	Qty.	Amount in Rs.
4.1.3	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	4,514.05	0.061	275.36
4.1.5	1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).	cum	4,024.00	0.101	406.42
2.6	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	All kinds of soil	cum	129.35	0.636	82.27
6.2	First class Brick work with common burnt clay modular bricks of class designation M-15 in foundation and plinth in:				
6.2.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	3,370.55	0.207	697.70
10.13	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.				
10.13.1	Fixing of 40x40x6 mm T 45 cm. long embedded in cement concrete block 15x10x10 cm of C.C. 1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	kg	73.30	7	513.10
19.19	Providing and fixing in position pre-cast R.C.C. cover of required shape and approved quality				
19.19.1.1	Rectangular shape 1000x850x80 mm	RM	815.77	1	815.77
0983	Fine sand Filling in Trench	cum	640.00	0.203	129.92
				<b>Total Rs.</b>	<b>2920.54</b>
	For 1500 RM x2920.54=4380812.25				4380810.00
	Add extra for 30 Numbers chambers 30x2000=60000.00				60000.00
				<b>Grand total</b>	<b>4440810.00</b>

  
22 NOV 2012

**PROPOSED TRENCH FOR TELEPHONE / INTERNET CABLE  
(SIZE 450 mm WIDE X 450 mm DEEP)**





**TYPICAL X - SECTION OF TRENCH**

*[Signature]*  
22 NOV 2012

**Road Estimate of IIT Roorkee Saharanpur Campus.**

Item No.	Description of Item	Units	Rate	Qty.	Amount in Rs.
16.3	Providing, laying, spreading and compacting stone aggregate of specific sizes to water bound Macadam (grad II) specification including spreading in inform thickness (for 7.5 cm compacted) hand packing, rolling with 3 wheeled steel/vibration roller 8-10 tones in stages to proper grade and cambeo, applying and booming requisite type of screening/binding materials to fill up the voids of coorgeagg, watering and compacting to required density with stone ballast size.				
16.3.2	63 mm to 45 mm size stone aggregate.	cum	2,024.14	90.00	182172.60
16.3.3	53 mm to 22.4 mm size stone aggregate.	cum	2,272.73	42.00	95454.66
16.25	Surface dressing on new surface with paving bitumen of grade VG -10 of approved quality using 2.25 kg of bitumen per sqm with 1.65 cum of stone chippings 13.2 mm nominal size per 100 sqm of road surface including consolidation with road roller of 6 to 8 tonne capacity etc. complete:	sqm	145.80	560.00	81648.00
16.31	Providing and applying tack coat using bitumen emulsion conforming to IS: 8887, using emulsion pressure distributer including preparing the surface & cleaning with mechanical broom.				
16.31.1	With rapid setting bitumen emulsion.				
16.31.2.1	On W.B.M/ W.M.M. @ 0.4kg/sqm.	sqm	14.50	560.00	8120.00
16.31.2.2	On bituminous surface @ 0.25kg/sqm.	sqm	9.55	14140.00	135037.00
16.55	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 specificatons and directions of Engineer-in-Charge.				
16.55.2	50 to 100 mm average compacted thickness with bitumen of specified grade@ 3.50%	cum	6,149.90	637.00	3917486.30
16.56	Providing and laying semi- dense Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to				

22 NOV 2012

Item No.	Description of Item	Units	Rate	Qty.	Amount in Rs.
	work site by tippers, laying with paver finisher equiped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.				
16.56.1	25 mm compacted thickness with bitumen of grade VG-30 @5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	sqm	208.15	7070.00	1471620.50
16.62	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.	sqm	505.80	125.00	63225.00
16.68	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.	sqm	536.65	990.00	531283.50
4.1	Providing and laying in position cement concrete of specified grade including the cost of centering and shuttering - All work up to plinth level :				
4.1.5	1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).	cum	4,024.00	100.00	402400.00
				Total Rs.	6888447.56
				3% Contg.	2,06,653.43
				<b>Grand Total Rs.</b>	<b>7095100.99</b>
				Say -	70,96,000.00

Say Rs 71.00 lacs

*Jhal*  
(J.E. Civil)

*[Signature]*  
22 NOV 2012