

- Name of Work** : C/o 24460 LIG houses & 4855 EWS houses by using prefab technology (having structural RCC members i.e. columns, beams & slabs all pre-cast or walls & slabs all precast) in Rohini & Narela, Delhi.
- Sub-Head** : C/o 11566 LIG houses & 2276 EWS houses including internal development and electrification at sector G-7 & G-8 Narela and Sector - 34 & 35 Rohini ( Group-I).
- NIT No.** : 25/EE/ND-12/DDA/2011-12

Reference to pre-bid meeting held on 24.01.2012 for the above mentioned work in the Conference Hall at Vikas Minar, queries in respect of Electrical & Mechanical Works raised by the intending tenderers are clarified as under:

**A) M/s B.G. Shirke Construction Technology Pvt. Ltd. (Letter dated: 23.01.2012)**

i) **Serial no. A (6), Lift Capacity, Sr. No.2, Page -295:**

**Clarification:** In Part-6 Serial No.2 "Passenger lift shall be for 13 passengers & hospital lift shall be for 20 passengers" is deleted. In place of it following is added.

**"One hospital lift / stretcher lift in each block / bank of lifts shall be provided. Passenger lifts shall be provided as per NBC"**

ii) **Serial no. B (5), Electrical layout: Clause No.2, Page-7:**

**Clarification:** Electrical layout plan in respect of all the E&M component of works shall also be submitted along with tender.

iii) **Serial no. B (6), External Electrification: Page-12 to 18, Page-256:**

**Clarification:** Part-1: Laying / providing 11 KV feeders from nearest source i.e. 66/ 11 KV Sub-Station to Sub-Station ( RMU / HT Panel) of this scheme **OR** 11 KV Sub-Station of DISCOM to Sub-Station ( RMU / HT Panel) of this scheme, is not in the scope of tender.

Beyond RMU / HT Panel, the work of Sub-Stations & L.T. Network including interconnection / looping of HT/LT system of all the Sub-Stations of the scheme as covered in Part-II, is in the scope of tender.

iv) **Serial no. B (13), Stretcher Lift: Clause 5(1), (i), Page-19:**

**Clarification:** It has been clarified at serial no. (i) above.

v) **Serial no. B (22), Sewage Pumping Station: Page-34 & Serial No.42, Page-232:**

*C/o 11566 LIG houses & 2276 EWS houses at Narela Rohini (Group-I) 25/EE/ND-12/DDA/2011-12*

**Clarification:** Since civil works for sewage pumping station are not covered in the scope of this tender as per discussion with Chief Engineer (NZ). Therefore, payment term for **Sewage Pumping Installation** for electrical component of work, is being deleted.

It is clarified that in the schedule of payment from serial no. 35 to 45, cost of Civil Works such as construction of buildings is not covered. Serial no. 35 to 45 includes E&M works. If in the tender document of E&M Works, construction of building work is mentioned anywhere in the scope of E&M works it may be treated as cancelled.

vi) **Serial no. B (48), Plan of payment: Page-230: (b)**

**Clarification:** Payment terms given at serial no.11 on Page-250, 251 & 252 is modified as under:

- i) Tendered cost of E&M components of work shall be payable as per given below percentages of total tendered cost of the scheme.

S.No.	E&M Work		Payment terms
1	External electrification	Part-1	NIL
2	Sub- Station & L.T. Network	Part-2	4 %
3	Internal electric installation (Y)	Part-3	4.20%
4	Street lighting	Part-4	0.60 %
5	Lighting & tube wells in the parks	Part-5	0.20%
6	Lift	Part-6	11%
7	Clear water supply pumping installation	Part-7	0.58%
8	Sewage Pumping Station	Part-8	NIL
9	Fire fighting system	Part-9	0.80%
10	Manual fire alarm system	Part-10	0.42%
11	DG set for emergency services	Part-11	1.20%
		<b>Total</b>	<b>23 %</b>

- ii) The following **percentage of contract values** shall be payable against the stages of work shown herein. Deduction/release of security deposit shall be as per standard relevant clause.

S. No.	Stage of Work	Detail given in the foot note	All other items
A.	B.	C.	D.
1.	After initial inspection (wherever specified) and delivery at site in good condition on pro rata basis.	85%	75%
2.	After completion of installation in all respect.	10%	20%



3.	After testing commissioning trial run and handing over.	5%	5%
<b>Note: Payment for following items shall be governed as per column C</b>			
Part-2	Transformer, HT & LT Panels		
Part-6	Material of Lift		
Part-7 & 9	Clear water pump sets, Fire fighting pumps, plumbing material, de-watering pump, HOT crane, electric panel, D.G. Set, Submersible pumps, fans, exhaust fans		
Part-11	D.G. Set, AMF Panel.		

ii) For **Internal Electric Installation** Part-3 stages of payment shall be as under.

S. No.	Stage of Work	
1	Laying of conduit in roof	15% of Part-3
2	Laying of all down conduits & fixing of boxes	12% of Part-3
3	Fixing of SDB	3% of Part-3
4	Fixing of MDB & Meter Board	15% of Part-3
5	Laying of sub-main conduit	10% of Part-3
6	Wiring & fixing of sheet-switches & MCBs	35 % of Part-3
7	Testing	5% of Part-3
8	Handing over	5% of Part-3
	<b>Total</b>	<b>100%</b>

vii) Serial no. B (50), Lift maintenance: Page-295, Clause-4 (ii):

**Clarification:** Clause -4(ii) is modified as under:

Lifts shall be taken over by the department after completion of warranty period of 12 months. Operation of the lifts during the warranty period of 12 months shall be carried out by the agency.

viii) Serial no. B (57), specialized work: Page-335 & 336, Clause-43:

**Clarification:** Clause-43 at page no. 335 & 336 stands deleted.

### **Electrical Points (General)**

i) Serial no. 1, Scope of work: Page-253, Clause 14 (ii)

**Clarification:** Sub-Station & LT Work and DG Set work are specialized works as per CPWD Works Manual. Therefore, these works shall remain under the category of specialized works.

**Part-3 Internal Electric Installation (IEI)**

**ii) Serial no. 2, Switches & Sockets: Page-263 Clause-5 & Page-271, S.No-17**

**Clarification:** It is clarified that modular switches, sockets, stepped type fan regulators & mounting boxes shall be of same make.

**iii) Serial no. 3, Lighting fixtures: Page-264, Clause-11**

**Clarification:** It is clarified that 1x28W lighting fixtures with T-5 lamp shall be provided for common area of building by the tenderer.

**iv) Serial no. 4, Energy meters: Page-264, Clause-12**

**Clarification:** In the clause no.12 at page-264, words **Energy Meters** are deleted.

**v) Serial no. 5, Inventory for LIG & EWS Houses: Page-266-269**

**Clarification:** In order to design the sub-station following load shall be considered:

a) As per present norms of DISCOM effective from 15-10-2001, 12 KW per 1000 sq. ft. of built up area including the load of common services for dwelling units shall be considered (for residential). For non-domestic 20KW per 1000sq. ft. of built-up area shall be considered. However, changes in load norms if any by DISCOM shall be given due consideration.

b) Electrical load of all other E&M installation covered in the tender.

**vi) Serial no. 6, Inventory for LIG & EWS Houses: Page-266-269**

**Clarification:** it is clarified that no. of power points in LIG are 4 nos. (room, kitchen & bathroom) & in EWS no. of power points are 2nos. (kitchen & bathroom).

**vii) Serial no. 7, List of acceptable makes: Page-272-273**

**Clarification:**

a) Makes of modular type switch / bell push / socket/ fan regulator shall be as specified in the tender document.

b) Makes of cable shall be as specified in the tender document.

c) Makes of PVC conduit shall be **BEC / AKG / PPI Precision.**

d) In Part-3 (list of acceptable makes) page no.-272, the makes of MCB & distribution board shall be "**L&T/ Legrand/ Schneider**".

e) In part-3 (list of acceptable makes) page no.-273, at Sr. No. 17, make of MCCB "**Schneider**" is added.

f) In part-3 (list of acceptable makes) page no.-272, at Sr. No. 12, make of connector/ terminal block "**ELMEC**" is added and "**or equivalent**" deleted.

**viii) Serial no. 8**

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H/ **Clarification:** Feeder Pillars shall be got manufactured from the CPRI approved manufacturers given in the list of acceptable makes.

ix) **Part-7, Page-301, Clause-4(ii) & Part-11 Page-316, Clause-1**

**Clarification:** DG Sets for clear water supply & emergency services shall be provided separately.

x) **Part-11, Page-316-317, Clause-1 (iv)**

**Clarification:** It is clarified that bulk storage tank of diesel is deleted from the tender.

**B) M/s B.G. Shirke Construction Technology Pvt. Ltd. (Letter dated: 06.02.2012)**

**Serial no. 9 :** RO plant for drinking purpose has not been included in the scope of Electrical works. This point is required to be clarified by the Civil Wing.

**Serial no. 11:** Standard design norms of NDPL/ BSES in respect of capacity of transformer, distribution cable sizes, HT ring main cable sizes etc. shall be made available by the department to the successful tenderer for preparing the scheme of electrification for approval of DISCOM.

**C) M/s B.G. Shirke Construction Technology Pvt. Ltd. (Letter dated: 21.03.2012)**

**Serial no. 2 :** Standard design norms of NDPL/ BSES in respect of capacity of transformer, distribution cable sizes, HT ring main cable sizes etc. shall be made available by the department to the successful tenderer for preparing the scheme of electrification for approval of DISCOM.

**Serial no. 5 :** In Part-3 (IEI) Sr. no. 22 is added as under:

Light points of all the signage / sign boards to be provided in the scheme may also be considered to have been included in the scope of work of successful tenderer.

**Serial no. 6 :** In Part-3 (IEI) Sr. no. 23 is added as under:

Light points for corridor / common areas may also be considered to have been included in the scope of work of successful tenderer.

**Serial no. 7 & 8 :** All E&M services such as street lighting, lighting & tube wells in the parks, lifts, fire fighting system, manual fire alarm system & DG sets for emergency services shall be taken over by the department after completion of warranty period of 12 months. Operation & maintenance of these installations during the warranty period of 12 months shall be carried out by the agency.

However, for "Sub-Station & LT Network" and "Clear Water Supply" Installation, it shall be responsibility of the contractor to hand over all electrical services as per norms to the service provider (DISCOM) and DJB respectively. Charges, if any, demanded by DISCOM / DJB at the time of handing over the services including deficiency charges and rectification shall be borne by the contractor.

During the warranty period of 12 months these installations shall be operated & maintained by the successful tenderer.

**D) Lakeshore Group (Lakeshore Engineering Pvt. Ltd.)**

No query raised in respect of Electrical & Mechanical Works.

**E) Indu Group ( Indu Projects Ltd.)**

i) Serial no.7 Page-232, Serial no.40 (percentage of payment for lift)

Clarification: Payment plan for E&M works shall be as given above at A (vi) Serial no. B (48), Plan of payment: Page-230: (b) to M/s B.G. Shirke Construction Technology Pvt. Ltd.

ii) Serial no.32 Page-264 (Light fixtures for common area is T-5 1x28 watt fixtures)

Clarification: Clause no.11 at Page-264 is modified as under:

"Lighting fixtures of T-5 Type 1x28 watt & fans for common areas of building shall be provided by the tenderer".

iii) Serial no.33 Page-256 (External Electrification Works)

Clarification: Part-1: Laying / providing 11 KV feeders from nearest source i.e. 66/ 11 KV Sub-Station to Sub-Station ( RMU / HT Panel) of this scheme **OR** 11 KV Sub-Station of DISCOM to Sub-Station ( RMU / HT Panel) of this scheme, is not in the scope of tender.

Beyond RMU / HT Panel, the work of Sub-Stations & L.T. Network including interconnection / looping of HT/LT system of all the Sub-Stations of the scheme as covered in Part-II, is in the scope of tender.

iv) Serial no.34 Page-316 (DG Sets)

Clarification: Generator shall be radiator cooled.

v) Serial no.36 General (Community Hall & other non residential buildings)

Clarification: E&M specifications for community hall & other non residential buildings shall be as under.



S.no	Building	Range of service illuminance in Lux	Ceiling fan	Exhaust fan
i)	Community Hall	200 - 300	As per requirement which will be approved by Engineer-in-Charge as per layout of the building.	Shall be provided as per requirement approved by Engineer-in-Charge.
ii)	Society Office	150 - 200		
iii)	Anganbari	150 - 200		
iv)	Building for clear water supply	50 - 100		
v)	Building for fire fighting system	50 - 100		
vi)	Building for tube well for clear water supply	50		
vii)	Building for D.G. Sets	150 - 200		
viii)	Shops	150 - 200		
ix)	Chowkidar Hut	150 - 200		
x)	Building for horticulture purpose	50		

#### **F) IVRCL Limited**

- i) Laying of electrical conduits in IEI works shall be concealed / recessed. It has already been clarified that page no. 263, serial no.1
- ii) Governing Specifications are mandatory. However, it has further been clarified at page no. 246 (1.4 a & b)

#### **G) IL & FS Engineering Services**

- i) It is clarified that construction of buildings as specified at page no. 247 (scope of work) is not covered in the scope of electrical works. However, internal electrification of these buildings is covered in the scope of electrical works. It has already been clarified at page no. 264, serial no.18.

#### **H) L&T Construction (Technical queries)**

- i) **Serial no.7, Page-263, Clause-5**

**Clarification:** It is clarified that only modular type switches, sockets, stepped type fan regulators & mounting boxes of same make shall be used.

- ii) **Serial no.8, Page-315, Clause-5.6 & 7.8**

**Clarification:** At page no. 315 clauses-5.6 & 7.8 are not traceable.

iii) **Serial no.9, Page-309/310**

**Clarification:** It is clarified that scheme shall be prepared and installed as per provision given in NBC & subsequently approved by Delhi Fire Service.

iv) **Serial no.10 (Basement Ventilation)**

**Clarification:** Basement is not in the scheme.

v) **Serial no.15 (Lift)**

**Clarification:** In Part-6 Serial No.2 "Passenger lift shall be for 13 passengers & hospital lift shall be for 20 passengers" is deleted. In place of it following is added.

**"One hospital lift / stretcher lift in each block / bank of lifts shall be provided. Passenger lifts shall be provided as per NBC"**

vi) **Serial no.16 (Distributor Transformers)**

**Clarification:** Rating of the transformers shall be as per approved scheme by NDPL / BSES.

vii) **Serial no.17 (Television / Telephone cable)**

**Clarification:** Scope of telephone / television cable shall be as given in clause-7&8 of Part-III at Page-263.

viii) **Serial no.18 (Transformer / DG Set)**

**Clarification:** Transformers shall be indoor type. D.G sets shall be indoor type.

ix) **Serial no.19 (Electrical fitting for amenities)**

**Clarification:**

a) "Lighting fixtures of T-5 Type 1x28 watt & fans for common areas of building shall be provided by the tenderer".

b) For other buildings clause-18 & 19 of Part-III at Page-264 & 265 of tender document may be refer.

c) At page-265 serial no.(xii) **"Building for Electric Sub-Station"** is added

x) **Serial no.20 (Fire Protection System) – GI Heavy grade pipe**

**Clarification:** It is confirmed that for fire fighting system G.I Heavy grade , C-Class pipe shall be used.

xi) **Serial no.21 (Fire Protection System) – External Hydrant System**

**Clarification:** Requirement of External Hydrant System shall be as per provision given in NBC & subsequent approval from Delhi Fire Service.



**I) General corrections/ modifications/ additions / deletions in the tender document**

Reference	Existing in the tender document	
Part-2 (Sub- Station & L.T. Network) page no.257	In S. No. 1 (f) is corrected as.	Interconnection / looping of HT/LT system of all the Sub-Station of the scheme.
Part-2 (Sub- Station & L.T. Network) page no.257	In S. No. (ii) (b) note is added as	Drawing of feeder pillar and technical specification shall be as given in Part-5 (Lighting & tube wells in the parks)
Part-3 (Internal electric installation) page no.263	In S.No. 1 , 1995 is corrected as	1994
Part-3 (Internal electric installation) page no. 264 & 265	In S.No. 18 added as	xii) Building for Electrical sub-station &
Part-3 (Internal electric installation) page no. 265	In S.No. 19 IP-65 is corrected as	IP-66
Part-3 (List of acceptable makes for EI) page no 272		
S.No.2	Precision is corrected as	PPI Precision
S.No.3	Anchor (Wood) is corrected as	Anchor (Woods)
S.No.3		Precision (Blue Era) and C&S (Gewiss System) are added
S.No.7		Anchor and Precision are added
Part-5 (Lighting & tube wells in the parks) page no 294	In drawing no 9 width 600 mm is deleted	
Part-5	List of acceptable makes serial no. 10 is modified as	KSB / Crompton Greaves / WPIL / Shakti / Kirloskar
Part-6 (Lift ) page no 299	S.No. 9 is added as	Pressurization of lift shaft if required as per approved scheme by Delhi Fire Service, shall be provided by the tenderer.
Part-7 (Clear water supply ) page no 302	S.No. 5 is added as	Installation shall be operated & maintained by the agency during maintenance period of 12 months. Thereafter, installation shall be taken over by the department.
Part-7	Water supply system may be read as	Dual water supply system
Part-10 (Fire alarm system ) page no 314	S.No. 8 is added as	Fire Alarm System shall be integrated with fire fighting system for the purpose of monitoring the system.
Part-10 (Fire alarm system ) page no 312	S.No. 1.2 (i) NBCC is corrected as	NBC
Part-3 S.No. 7	May be read as	TV outlet point wiring of each house shall be terminated in suitable size of G.I. box along with splitter at every floor. The interconnections of all splitter boxes fixed

		at all floors shall be done properly making proper distribution system with the prior approval of Engineer-in-charge.
Part-3 S.No. 8	May be read as	Telephone outlet point wiring of each house shall be terminated in suitable size of G.I. Junction in DUs direct from ground floor to each DU. However, conduit for telephone wiring may be provided through branching by providing suitable size of G.I. box alongwith suitable tag block at each floor. The inter connections of all junction boxes fixed at all floors shall be done properly making proper distribution system with the prior approval of Engineer-in-charge.
Part-11	Serial no. 2 (iv) & (vi) deleted	
Additional Terms & Conditions	Sl.No. 14 (i) at page no. 253 is modified as	given at Annexure- I



## Annexure -1

Additional Terms & Conditions Sl.No. 14 (i) at page no. 253 is modified as given below

Work of IEI, pumps for clear water supply, sewage pumping installation, submersible pumps, compound lighting / road lighting comes under category of **General Works**. For these works eligibility criteria shall be as under:

i) **For tendered cost of minor component of work upto 3 Crores.**

a) Approved and eligible contractors of DDA & CPWD and those of enlisted contractors of appropriate class of MES, BSNL, and Railway are eligible

**OR**

b) Contractors who have successfully completed works during the last 7 years ending last day of the month pervious to the one in which applications are invited:

Three similar completed works costing not less than the amount equal to 40% of tendered cost

Or

Two similar completed work, costing not less then the amount equal to 50% of tendered cost

Or

One similar completed work of aggregate cost not less than the amount equal to 80 % of tendered cost

And

One completed work of any nature (either part of (b) or a separate one) costing not less than the amount equal to 40% of the tendered cost with some Central Government Department / State Government Department / Central Autonomous Body / Central Public Sector undertaking.

ii) **For tendered cost of minor component of work more than 3 Crores.**

a) Approved and eligible Class-I contractors of DDA & CPWD and those of enlisted contractors of appropriate class of MES, BSNL, and Railway and who have

successfully completed during the last 7 years ending last day of the month previous to the one in which applications are invited:

Three similar completed works costing not less than the amount equal to 40% of tendered cost

Or

Two similar completed work, costing not less than the amount equal to 50% of tendered cost

Or

One similar completed work of aggregate cost not less than the amount equal to 80 % of tendered cost

And

One completed work of any nature (either part of (b) or a separate one) costing not less than the amount equal to 40% of the tendered cost with some Central Government Department / State Government Department / Central Autonomous Body / Central Public Sector undertaking.

## OR

- b) Contractors who have successfully completed any nature of General Work with some Central Government Department / State Government Department / Central Autonomous Body / Central Public Sector undertaking and who have successfully completed during the last 7 years ending last day of the month previous to the one in which applications are invited:

Three similar completed works costing not less than the amount equal to 40% of tendered cost

Or

Two similar completed work, costing not less than the amount equal to 50% of tendered cost

Or

One similar completed work of aggregate cost not less than the amount equal to 80 % of tendered cost

And



One completed work of any nature (either part of (b) or a separate one) costing not less than the amount equal to 40% of the tendered cost with some Central Government Department / State Government Department / Central Autonomous Body / Central Public Sector undertaking.