Date: 06-11-2023

Chairman, M/s Police Officer Multi State Co-operative Housing Society Ltd. Malviya Nagar, Delhi-110017

# Sub: Final Audit report relating to Construction of 616 flats by POMSCHS for Development of Group Housing Society

Sir,

This is with reference to engagement letter No. 2211 dated 02-01-2023 for Special audit to find irregularities and misappropriation of funds in procuring and developing the Police officers Multi State Cooperating Housing Society (POMSCHS) at Faridabad. We have already submitted our report related to Land on 07-07-2023. Now furnishing the audit report relating to the construction and development work by NG Constructions and other vendors.

Hope you will find the same in order.

Thanking You

Yours Faithfully

CA PK Gupta

M. No. 080386

UDIN: 23080386BGZKDE8669

To,

# **Limitation**

Our report is intended solely for the use of the Chairman and Board of Directors of Police Officers Multistate Cooperative Housing Society. It is important to recognize there are inherent limitations in our process. For example, our procedures are generally based on the concept of selective testing of the data being examined and are, therefore, subject to the limitation that material errors, fraud and other illegal acts having a direct and material financial impact, if they exist, may not be detected. We will however, communicate to you as appropriate, any illegal act, material errors or evidence that fraud may exist, identified during the course of our work.

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# I. <u>Civil Work</u>

## A. Background

Police Officers Multi-state Co-operative Housing Society (hereafter referred as POMSCHS) has implemented a Multi-storey housing project at Sector-49, Faridabad for construction of 616 Residential Apartments of four categories and allied services and common facilities like Community Centre, Shopping complex, 110 EWS flats, Primary and Nursery school, Electric Sub-station, Stilted areas, Podium Basement and Development works etc at 11.3875 acres of land at village Dabua and Nawada koh, Sector 49, Faridabad, Haryana.

For which Tenders has been called up from various Development contractors by M/s Architect Forum (hereafter referred as Architect) on behalf of POMSCHS, tender documents to be submitted on 12<sup>th</sup> May 2013.

# B. Tender Process

On 03<sup>rd</sup> May'2013, Sealed Lump Sum Covered Area Rate Tenders were invited for Civil Works, Sewerage, Internal Plumbing, Water, Supply, Storm Water Drainage Work, Electrical Work & Development Work and common facilities of M/s. Police Officers Multi-State Co-operative Housing Society Ltd., for construction of 616 Residential Apartments of Four categories and allied services and common facilities like, Community Centre, Shopping, 110 EWS flats, Primary and Nursery School, Electric Sub-Station, Stilted Areas, Podium, Basement and Development Works etc. at 11.3875 Acres of Land at Village Dabua and Nwada Koh, Sector 49, Faridabad, Haryana, from Pre-Qualified Experienced Contractors.

Tender Documents were issued to all the four contractors out of 20 contractors who were found fit for the process on the basis of Pre-qualification bids submitted by them from the office of the Architects M/s Architects Forum, H-77, Connaught Circus, New Delhi, 110001, from 11.00 A.M. & 5.00 P.M. on payment of Rs. 5000 (Five Thousand) (Non-Refundable) on Saturday, May 04, 2013 till May 07, 2013.

Contractors submitted Pre-qualification bids against the advertisement given by society were as follows:

1. Topline Builtech Pvt. Ltd. 104, Westend Marg,

M.B. Road, N Delhi – 110030

## 2. N.G.Constructions

501, 5th Floor, Mangalam Paradise, Plot No.8, Mangalam Palace, Sec-3, Rohini, Delhi- 110085.

## 3. Indsao Infratech

Flat-1B, DDA, SFS Housing,

Pocket - 1, Sec- 10, Dwarka, Delhi – 110075

- Vilayati Ram Mittal Pvt. Ltd.
   B-33, Defence Colony,
   New Delhi 110024
- 5. Ascent Construction Pvt. Ltd. Ascent House, D-43, Sector 6, Noida
- Millenium Engineers
   C-109, Hari Nagar, Clock Tower, New delhi – 110064
- 7. Gurunanak Engineering Services 840, sector 15-A Faridabad
- 8. Hathwalia Builders AD-48-C, Power Apartment, Pitampura, Delhi – 110088
- Shivam Projects & Infrastructure Structures Pvt. Ltd. 606, Shiva Apartment, GH-6, Sec-21-D, Faridabad
- 10. Vij Contracts Pvt. Ltd.
  313, Ansal Chambers, 6 Bhikaji
  Cama place, New Delhi 110066
- **11. Five Star Constructions Pvt. Ltd.** T-725, Faiz Road, Karol bagh, New Delhi
- 12. Era Infra Engineering Ltd.
   153, Leela Building, Okhla Industrial Estate,
   Phase III, New Delhi 110020
- **13. SRC Realtech Pvt. Ltd.** SCO 24, Main Market, sec-11D, Faridabad, Haryana.
- 14. RIA Constructions Ltd. SCO 176,1st Floor, Sec-5 Panchkula, Haryana
- **15. Anurag Enterprises** 111- H/1 Rakesh Marg,

Nehru Nagar, Ghaziabad, 201001

- **16. YRG Builtech Pvt. Ltd.** A-3/17, Janakpuri, New Delhi
- N.M.Roof Designers Ltd.
   C-41, TarunPath, opp T.Udyan, Tilak Nagar, Jaipur
- **18. Rohit Contractors & Builders Pvt. Ltd.** Shop 120, Blk 4, Ganga shopping, Comp., Sec-29, Noida
- **19. B.R.Kohli Buildtech** T-5, Kohli Plaza, plot no 5, LSC, CU Blk, Pitampura, Delhi

## 20. S.B. Consultants Pvt. Ltd.

Contractors & Builders Supplier Agents

As per Tender Notice, Sealed Lump Sum Covered Area Rate Tenders are invited for Civil Works, Sewerage, Internal Plumbing, Water, Supply, Storm Water Drainage Work, Electrical Work & Development Work and common facilities of **M/s-Police Officers Multi-State Co-operative Housing Society Ltd.,** for construction of 616 Residential Apartments of Four categories and allied services and common facilities like, Community 'Centre, Shopping, 110 EWS flats, Primary and Nursery School, Electric Sub-Station, Stilted Areas, Podium, Basement and Development Works etc. at 11.3875 Acres of Land at Village Dabua and Nwada Koh, Sector 49, Faridabad, Haryana, from Pre-Qualified Experienced Contractors.

Tender Documents can be purchased from the office of the Architects on any working day between 11.00 A.M. & 5.00 P.M. on payment of Rs. 5000 (Five Thousand) (Non-Refundable) from Saturday, May 04, 2013. to Tuesday, May 07, 2013 (both days inclusive).

Sealed Tender shall be addressed to The Chairman Police Officers Multi-State Co-operative Housing Society Ltd., Office Complex, P.T.S., Malviya Nagar, New Delhi - 110017, along with Rs.25,00,000/-(Twenty Lac only) as Earnest Money in shape of Bank Draft / Pay order only in favour of Police Officers Multi-State Co-operative Housing Society Ltd., and shall be submitted at the Registered Office of the Society, Police Officers Multi-State Co-operative Housing Society Ltd., Office Complex, P.T.S., Malviya Nagar, New Delhi - 1)0017, between 4.00 P.M to 4.30 P.M. on Sunday, May 12, 2013. Tenders will be opened at 4.45 P.M. on the same day in presence of the Tenderers who choose to be present.

Upon receiving Pre-Qualification bids from the above mentioned vendors, 6 (Six) Pre-Qualified Contractors were selected out of total 20 (Twenty) Pre-Qualification bids were recommended by Architect on the basis of their capabilities of executing our Project, experience, project executed and completed, and projects under construction. Vendors qualified to submit their rate contracts are as follows:

#### 1. N.G.Constructions

501, 5th Floor, Mangalam Paradise, Plot No.8, Mangalam Palace, Sec-3, Rohini, Delhi- 110085.

- Indsao Infratech
   Flat-1B, DDA, SFS Housing,
   Pocket 1, Sec- 10, Dwarka,
   Delhi 110075
- Shivam Projects & Infrastructure Structures Pvt. Ltd. 606, Shiva Apartment, GH-6, Sec-21-D, Faridabad
- Five Star Constructions Pvt. Ltd. T-725, Faiz Road, Karol bagh, New Delhi
- YRG Builtech Pvt. Ltd. A-3/17, Janakpuri, New Delhi
- B.R.Kohli Buildtech
   T-5, Kohli Plaza, plot no 5, LSC,
   CU Blk, Pitampura, Delhi

On 12<sup>th</sup> May'13, Lump Sum Covered Area Rate Tenders Submitted for Civil Works, Sewerage, Internal Plumbing, Water, Supply, Storm Water Drainage Work, Electrical Work & Development Work and common facilities of **M/s-Police Officers Multi-State Co-operative Housing Society Ltd.,** for construction of 616 Residential Apartments of Four categories and allied services and common facilities like, Community 'Centre, Shopping, 110 EWS flats, Primary and Nursery School, Electric Sub-Station, Stilted Areas, Podium, Basement and Development Works etc., were opened and were as follows:

Vendors	N.G.Constructions	Indsao Infratechs	Shivam Proj. & Infr. Str.	Five Star Const. Pvt. Ltd.
Bid Price quoted	127,77,69,652/-	127,32,14,605/-	125,04,41,375/-	122,77,74,513/-
Vendor Position	L3	L2	L1	L4

Detailed Item wise Quotation of all the vendors are here as under:

\$. N	0.	Std		T-01 P	N.G.Costructions	T-02 In	ndsao Infratechs	T-03 Sh	ivam P. & inf.Str.	T-04 Five	Star Const.Pvt.Ltd
	Block - 1 & 2 - 168 DUs.	Qty			Amount	Rate	Amount	Rate	Amount	Rate	Amount
	A Type Flat - 2 BHK Area including										
	circulation area on all floors i/c										
	circulation and common area.										
1	Rate for Building Work										
	Civil,Sanitary & Electrical Work	13,194	Samt	12,350/-	16,29,45,900/-	12,300/-	16,22,86,200/-	12,375/-	16,32,75,750/-	12,695/-	16,74,97,830/-
		1,41,967	Sqft	1,147.77		1,143.12		1,150.09	10,02,70,700,700,	1,179.83	10, 1,77,000,
2	Balcony Area	1,405	Samt	8,500/-	1.19,42,500/-	8,610/-	1,20,97,050/-	9,850/-	1,38,39,250/-	6,498/-	91,29,690/-
	,	15,118	Sqft	789.96		800.18		915.42	1,00,07,200,	603.90	71,27,0707
3	Stilted Area	1,026		9,000/-	92.34.000/-	8,610/-	88.33.860/-	8,400/-	86,18,400/-	7,147/-	73,32,822/-
-		11,040	Sqft	836.43		800.18		780.66	00,10,400/-	664.21	7 3,32,0227
4	Basement Area, Under Building	1,128	Sqmt	9,000/-	1,01,52,000/-	9,225/-	1,04,05,800/-	9,950/-	1,12,23,600/-	8,447/-	95,28,216/-
	g	12,137	Sqft	836.43	.,,	857.34	.,,	924.72	1,12,23,000/-	785.03	75,20,210,-
	Total	-	1		19,42,74,400/-		19,36,22,910/-		10 / 0 57 000 /	765.05	10 24 00 550 /
					,				19,69,57,000/-		19,34,88,558/-
	Block - 3, 4, 5, & 6 - 336 DUs.										
	B Type Flat - 3 BHK Area including										
	circulation area on all floors i/c										
	circulation and common area.										
5	Rate for Building Work										
5	-	35,442	6 anot	12,350/-	10 77 00 700 /	10 2007	42 50 27 7007	12,375/-			
	Civil, Sanitary & Electrical Work		Samt		43,77,08,700/-	12,300/-	43,59,36,600/-		43,85,94,750/-	12,695/-	44,99,36,190/-
,	Palaony Aroa	3,81,356	Sqft		0.01.07.500.4	1,143.12		1,150.09		1,179.83	
6	Balcony Area	3,435	Samt	8,500/-	2,91,97,500/-	8,610/-	2,95,75,350/-	9,850/-	3,38,34,750/-	6,498/-	2,23,20,630/-
	0.111	36,970	Sqft	789.96		800.18	0.01.0	915.42		603.90	
7	Stilted Area	2,744		9,000/-	2,46,96,000/-	8,610/-	2,36,25,840/-	8,400/-	2,30,49,600/-	7,147/-	1,96,11,368/-
		29,525	Sqft	836.43		800.18		780.66		664.21	
8	Basement Area, Under Building	3,017	Sqmt	9,000/-	2,71,53,000/-	9,225/-	2,78,31,825/-	9,950/-	3,00,19,150/-	8,447/-	2,54,84,599/-
		32,463	Sqft	836.43		857.34		924.72		785.03	
	Total				51,87,55,200/-		51,69,69,615/-		52,54,98,250/-		51,73,52,787/-
	Block - 7 - 56 DUs.										
	C Type Flat - 4 BHK Area including										
	circulation area on all floors i/c										
	circulation and common area.										
9	Rate for Building Work										
	Civil,Sanitary & Electrical Work	7,781	Sqmt	12,000/-	9,33,72,000/-	12,300/-	9,57,06,300/-	12,375/-	9,62,89,875/-	12,695/-	9,87,79,795/-
		83,724	Sqft	1,115.24		1,143.12		1,150.09		1,179.83	
10	Balcony Area	1,405	Sqmt	9,000/-	1,26,45,000/-	8,610/-	1,20,97,050/-	9,850/-	1,38,39,250/-	6,498/-	91,29,690/-
		15,118	Sqft	836.43		800.18		915.42		603.90	
11	Stilted Area	651	Sqmt	9,000/-	58,59,000/-	8,610/-	56,05,110/-	8,400/-	54,68,400/-	7,147/-	46,52,697/-
		7,005	Sqft	836.43		800.18		780.66		664.21	
12	Basement Area, Under Building	715	Sqmt	9,000/-	64,35,000/-	9,225/-	65,95,875/-	9,950/-	71,14,250/-	8,447/-	60,39,605/-
		7,693	Sqft	836.43		857.34		924.72		785.03	
	Total				11,83,11,000/-		12,00,04,335/-		12,27,11,775/-		11,86,01,787/-
									,,,		
	Block - 8 - 56 DUs.										
	D Type Flat -5 BHK Area including										
	circulation area on all floors I/c										
	circulation and common area.										
13	Rate for Building Work										
	Civil,Sanitary & Electrical Work	9,865	Samt	12,350/-	12,18,32,750/-	12,300/-	12,13,39,500/-	12,375/-	12,20,79,375/-	12,695/-	12,52,36,175/-
		1,06,147		1,147.77	,,,,,,	1,143.12	,,,	1,150.09	12,20,17,313/-	1,179.83	12,02,00,173/-
14	Balcony Area	1,745		8,500/-	1,48,32,500/-	8,610/-	1,50,24,450/-	9,850/-	1,71,88,250/-	6,498/-	1,13,39,010/-
4		18,776		789.96	.,	800.18	.,,	915.42	1,/1,00,230/-	6,498/-	1,13,37,010/-
15	Stilted Area			9,000/-	74,07,000/-	8,610/-	70,86,030/-	8,400/-	/0.10.000/		E0 01 001 (
ij		823	Sqft	836.43	, +,07,000/=	800.18	, 0,00,000/-	780.66	69,13,200/-	7,147/-	58,81,981/-
17	Recomposit Area Linder Publisher	8,855			01 45 000 (		02 40 7051			664.21	
10	Basement Area, Under Building	905		9,000/-	81,45,000/-	9,225/-	83,48,625/-	9,950/-	90,04,750/-	8,447/-	76,44,535/-
	- · ·	9,738	Sqft	836.43	15 00 17 050	857.34	15 17 00 105	924.72		785.03	
	Total			<u> </u>	15,22,17,250/-		15,17,98,605/-		15,51,85,575/-		15,01,01,701/-
	G. Total D.Us			<b> </b>	101,35,57,850/-		101,23,95,465/-		100,03,52,600/-		97,95,44,833/-
		10	c .	11.500	15 71 10 000	11 500 5	10 71 10 000	0.0501			
1-		13,662	Sqmt	11,500/-	15,71,13,000/-	11,500/-	15,71,13,000/-	9,950/-	13,59,36,900/-	9,096/-	12,42,69,552/-
17	Basement Area i/c Covered Ramp					1,068.77		924.72		845.35	
_	·	1,47,003	Sqft	1,068.77		-					
_	Basement Area i/c Covered Ramp Podium Area	2,388	Sqmt	9,000/-	2,14,92,000/-	8,850/-	2,11,33,800/-	8,950/-	2,13,72,600/-	7,147/-	1,70,67,036/-
_	Podium Area	2,388 25,695				8,850/- 822.49		8,950/- 831.78	2,13,72,600/-	7,147/- 664.21	1,70,67,036/-
	·	2,388 25,695	Sqmt	9,000/-	2,14,92,000/- 17,86,05,000/-		2,11,33,800/- 17,82,46,800/-		2,13,72,600/- 15,73,09,500/-		1,70,67,036/- 14,13,36,588/-
	Podium Area	2,388 25,695	Sqmt	9,000/-							
18	Podium Area	2,388 25,695	Sqmt	9,000/-							
18	Podium Area Total	2,388 25,695	Sqmt Sqft Sqmt	9,000/- 836.43	17,86,05,000/-	822.49	17,82,46,800/-	831.78	15,73,09,500/-	664.21	14,13,36,588/-
18	Podium Area Total Area of Development Work	2,388 25,695 66,282 7,13,194	Sqmt Sqft Sqmt	9,000/- 836.43	17,86,05,000/-	822.49	17,82,46,800/-	831.78	15,73,09,500/-	664.21 956/-	14,13,36,588/-

	Grand Total				127,77,69,652/-		127,32,14,605/-		125,04,41,375/-		122,77,74,513/-
	Total				1,25,87,500/-		1,15,17,500/-		1,63,96,875/-		1,34,22,500/-
		5,488	Sqft	882.89		836.43		1,150.09		975.83	
24	4 Community Centre/Club Area-2Fl.		Sqmt	9,500/-	48,45,000/-	9,000/-	45,90,000/-	12,375/-	63,11,250/-	10,500/-	53,55,000/-
		5,272		882.89		789.96		1,150.09		882.89	
23	3 Nursery Schools - 2nos 1 Floor	490	Sqmt	9,500/-	46,55,000/-	8,500/-	41,65,000/-	12,375/-	60,63,750/-	9,500/-	46,55,000/-
		3,497	Sqft	882.89		789.96		1,150.09		975.83	
22	2 Shopping Area - 1 Floor	325	Sqmt	9,500/-	30,87,500/-	8,500/-	27,62,500/-	12,375/-	40,21,875/-	10,500/-	34,12,500/-
	Total				2,93,80,000/-		2,68,19,000/-		2,99,85,000/-		3,01,05,000/-
		2,582	Sqft	1,115.24		882.89		836.43		882.89	
21	I ESS Area	240	Sqmt	12,000/-	28,80,000/-	9,500/-	22,80,000/-	9,000/-	21,60,000/-	9,500/-	22,80,000/-
		28,514	Sqft	929.36		860.59		975.83		975.83	
20	) EWS Flats Area - 4 Floors	2,650	Sqmt	10,000/-	2,65,00,000/-	9,260/-	2,45,39,000/-	10,500/-	2,78,25,000/-	10,500/-	2,78,25,000/-

Post receiving Financial Bids from the above 4 vendors, POMCHS negotiated with M/s NG constructions only, there is no documentary evidence available for negotiation held with other vendors. Since M/s Shivam Projects and Infrastructure Structure Pvt. Ltd. was already a L1 vendor on the basis on intial submitted bids. Society has to negotiate with all the vendors who has submitted the financial bids.

Revised/Negotiated Tender Amount after Final Negotiation with NG Constructions dated 17<sup>th</sup> May'2013 was INR 119,68,96,492/- which makes N.G. Constructions as L1 Vendor and hence, contract has been awarded to them.

Vendor	Initial Quoted Price	Final Negotiated Price	Percentage of Rebate negotiated
N.G. Constructions	INR 127,77,69,652/-	INR 119,68,96,492/-	6.3292%

Detailed Description of per unit change post negotiation is here as under:

			NG	Costruction	c		
.	Construction of Dwelling Unit of		N.G.		3		
	lump sum per Sq.mt. basis as per						
	detailed specifications mentiond						
	herein i/c cost of all Civil,						
	Internal Plumbing,Water Supply &						
	Storm Water Disposal & Electrical						
	Works etc. complete for all Floors						
	Basement + Stilted + Fourteen						
	Floors floors plus Mumty and						
	Machine room.						
	Block - 1 & 2 - 168 DUs.	Qty	Unit	Quoted Rate	Quoted Amount	Negotiated Rate	
	A Type Flat - 2 BHK Area including		•••••		400000	Negolialea kale	Negotiated Amoun
	circulation area , on all floors i/c						
	and common area.						
	Rate for Building Work	13194	Samt	12350	162945900	11856	
	Civil,Sanitary & Electrical Work	10171	0 q	12000	102,10,00	11000	1564280
	Balcony Area	1405	Samt	8500	1.19,42,500	0100	
	Stilted Area			9000	9234000	8160	114648
		1026				8000	82080
4	Basement Area, Under Building	1128	Sqmt	9000	10152000	8000	90240
Ţ	Total				194274400	<u> </u>	1851248
	Block - 3, 4, 5, & 6 - 336 DUs.						
	B Type Flat - 3 BHK Area including						
	circulation area , on all floors i/c						
	and common area.						
5	Rate for Building Work Civil,	35442	Samt	12350			
	Sanitary & Electrical Work				437708700	11856	4202003
	Balcony Area	3435	Samt	8500	29197500	8160	280296
	Stilted Area			9000	24696000		
		2744				8000	219520
°	Basement Area, Under Building	3017	Sqmt	9000	27153000	8000	241360
	Total				518755200		4943179
	Block - 7 - 56 DUs.						
9	C Type Flat - 4 BHK Area including						
	circulation area , on all floors i/c						
	and common area.						
	Rate for Building Work	7781	Sqmt	12000	93372000		
	Civil,Sanitary & Electrical Work					11856	922515
10	Balcony Area	1405	Sqmt	9000	12645000	8160	
11	Stilted Area	(51	Sqmt	9000	5859000		
	Basement Area, Under Building		Samt	9000	6435000		
12	Ÿ	/15	Sduu	9000		8000	57200
	Total				118311000		1146443
	Block - 8 - 56 DUs.						
	D Type Flat -5 BHK Area including						
1 1	circulation area , on all floors 1/c						1
				I			
	and common area.						
		9865	Sqmt	12350	121832750		
13	and common area.	9865	Sqmt	12350	121832750	11856	1169594
13	and common area. Rate for Building Work		Sqmt Sqmt	12350 8500	121832750		
13	and common area. Rate for Building Work Civil,Sanitary & Electrical Work	1745	Sqmt			8160	142392
13 14 15	and common area. Rate for Building Work Civil,Sanitary & Electrical Work Balcony Area Stilted Area	1745 823	Sqmt Sqmt	8500 9000	14832500 7407000	8160 8000	142392 65840
13 14 15	and common area. Rate for Building Work Civil,Sanitary & Electrical Work Balcony Area Stilted Area Basement Area, Under Building	1745 823	Sqmt	8500	14832500 7407000 8145000	8160	142392 65840 72400
13 14 15	and common area. Rate for Building Work Civil,Sanitary & Electrical Work Balcony Area Stilted Area Basement Area, Under Building Total	1745 823	Sqmt Sqmt	8500 9000	14832500 7407000	8160 8000	142392 65840 72400
13 14 15	and common area. Rate for Building Work Civil,Sanitary & Electrical Work Balcony Area Stilted Area Basement Area, Under Building	1745 823	Sqmt Sqmt	8500 9000	14832500 7407000 8145000	8160 8000	142392 65840 72400 1450226
13 14 15	and common area. Rate for Building Work Civil,Sanitary & Electrical Work Balcony Area Stilted Area Basement Area, Under Building Total	1745 823	Sqmt Sqmt	8500 9000	14832500 7407000 8145000 <b>152217250</b>	8160 8000	142392 65840 72400 1450226
13 14 15 16	and common area. Rate for Building Work Civil,Sanitary & Electrical Work Balcony Area Stilted Area Basement Area, Under Building Total	1745 823	Sqmt Sqmt	8500 9000	14832500 7407000 8145000 <b>152217250</b>	8160 8000	1169594 142392 65840 72400 1450226 9391097
13 14 15 16	and common area. Rate for Building W ork Civil,Sanitary & Electrical W ork Balcony Area Stilted Area Basement Area, Under Building Total G. Total D.Us	1745 823	Sqmt Sqmt	8500 9000	14832500 7407000 8145000 <b>152217250</b>	8160 8000	142392 65840 72400 1450226
13 14 15 16	and common area. Rate for Building Work Civil,Sanitary & Electrical Work Balcony Area Stilted Area Basement Area, Under Building Total Construction of Basement area	1745 823	Sqmt Sqmt	8500 9000	14832500 7407000 8145000 <b>152217250</b>	8160 8000	142392 65840 72400 1450226
13 14 15 16	and common area. Rate for Building Work Civil,Sanitary & Electrical Work Balcony Area Stilted Area Basement Area, Under Building Total Construction of Basement area beyond Building Tower & Poudium	1745 823	Sqmt Sqmt	8500 9000	14832500 7407000 8145000 <b>152217250</b>	8160 8000	142392 65840 72400 1450226
13 14 15 16	and common area. Rate for Building Work Civil,Sanitary & Electrical Work Balcony Area Stilted Area Basement Area, Under Building Total Construction of Basement area beyond Building Tower & Poudium area, lump sum per. Sq. ft. as per	1745 823	Sqmt Sqmt	8500 9000	14832500 7407000 8145000 <b>152217250</b>	8160 8000	142392 65840 72400 <b>1450226</b>
13 14 15 16	and common area. Rate for Building Work Civil,Sanitary & Electrical Work Balcony Area Stilted Area Basement Area, Under Building Total Construction of Basement area beyond Building Tower & Poudium area, lump sum per. Sq. ft. as per detailed specifications	1745 823	Sqmt Sqmt	8500 9000	14832500 7407000 8145000 <b>152217250</b>	8160 8000	142392 65840 72400 1450226
13 14 15 16	and common area. Rate for Building Work Civil,Sanitary & Electrical Work Balcony Area Stilted Area Basement Area, Under Building Total Construction of Basement area beyond Building Tower & Poudium area, lump sum per. Sq. ft. as per detailed specifications mentioned here i/c cost of all	1745 823	Sqmt Sqmt	8500 9000	14832500 7407000 8145000 <b>152217250</b>	8160 8000	142392 65840 72400 1450226
13 14 15 16	and common area. Rate for Building Work Civil,Sanitary & Electrical Work Balcony Area Stilted Area Basement Area, Under Building Total G. Total D.Us Construction of Basement area beyond Building Tower & Poudium area, lump sum per. Sq. ft. as per detailed specifications mentioned here i/c cost of all Civil,Sewerage Plumbing,	1745 823	Sqmt Sqmt	8500 9000	14832500 7407000 8145000 <b>152217250</b>	8160 8000	142392 65840 72400 1450226
13 14 15 16	and common area. Rate for Building Work Civil,Sanitary & Electrical Work Balcony Area Stilted Area Basement Area, Under Building Total Construction of Basement area beyond Building Tower & Poudium area, lump sum per. Sq. ft. as per detailed specifications mentioned here i/c cost of all Civil,Sewerage Plumbing, Plumbing Water Supply and Storm Water Disposal and & Electrical	1745 823	Sqmt Sqmt	8500 9000	14832500 7407000 8145000 <b>152217250</b>	8160 8000	142392 65840 72400 1450226
13	and common area. Rate for Building W ork Civil,Sanitary & Electrical W ork Balcony Area Stilted Area Basement Area, Under Building Total Construction of Basement area beyond Building Tower & Poudium area, lump sum per. Sq. ft. as per detailed specifications mentioned here i/c cost of all Civil,Sewerage Plumbing, Plumbing Water Supply and Storm	1745 823 905	Sqmt Sqmt	8500 9000	14832500 7407000 8145000 <b>152217250</b>	8160 8000 8000	142392 65840 72400 1450226 9391097
13 14 15 16	and common area. Rate for Building Work Civil,Sanitary & Electrical Work Balcony Area Stilted Area Basement Area, Under Building Total G. Total D.Us Construction of Basement area beyond Building Tower & Poudium area, lump sum per. Sq. ft. as per detailed specifications mentioned here i/c cost of all Civil,Sewerage Plumbing, Plumbing Water Supply and Storm Water Disposal and & Electrical works etc. complete.	1745 823 905	Sqmt Sqmt	8500 9000 9000	14832500 7407000 8145000 152217250 983557850	8160 8000	142392 65840 72400 1450226

03		External Development Work -		<u> </u>				
03		'						
		Lump sum per Sq. ft. basis as per						
		detailed specifications mentioned herein i/c cost of all						
		Civil, Sewerage, Plumbing, Water						
		Supply & Storm Water Disposal,						
		Electrical Work Lasndscaping i/c						
		Open Ramp, excluding Sewerage						
	10	treatment plant etc. Area of Development Work	66282	Samt	1111	73639302		
	17		00202	Sqm	1111		950	62967900
		Total				73639302		62967900
		Sub Total of 01+02+03				1235802152		1156607692
04		Construction of other Building						
04		Ũ						
		area of lump sum per Sq.mt.basis as per detailed specifications						
		mentiond herein i/c cost of all						
		Civil, Int Plumbing,Water Supply &						
		• • • •						
		Storm Water Disposal & Electrical Work.						
	20	EWS Flats Area - 4 Floors	27.50	Samt	10000	26500000		
	-						9600	25440000
	21	ESS Area	240	Sqmt	12000	2880000	11520	2764800
		Total				29380000		28204800
05		Construction of other Building						
		area of lump sum per Sq.mt.basis						
		as per detailed specifications						
		mentiond herein i/c cost of all						
		Civil, Int Plumbing,Water Supply &						
		Storm Water Disposal & Electrical						
		Work.						
		Shopping Area - 1 Floor		Sqmt	9500	3087500	9120	2964000
		Nursery Schools - 2nos 1 Floor		Sqmt	9500	4655000	9120	4468800
	24	Community Centre/Club Area-2Fl.	510	Sqmt	9500	4845000	9120	4651200
		Total				12587500		12084000
		Sub Total of 04+05				41967500		40288800
		Grand Total				1277769652		1196896492

## C. Drawbacks in Vendor Selection Process:

#### 1. Lack of Documentation for Negotiations with Non-Selected Vendors in Vendor Selection Process:

During our review of the vendor selection process conducted through the tendering procedure, we noted that no documented records were provided pertaining to the negotiation process with vendors other than the selected vendor (NG Constructions). The absence of such documentation limits the transparency and accountability of the vendor selection process and its associated negotiations this has resulted the following shortcomings:

• Without documented negotiations and evaluations of non-selected vendors, there is a risk that potentially beneficial alternatives may not have been thoroughly considered. This may resulted in missed opportunities for cost savings, quality improvement, or value-added services.

• The absence of documentation impedes the audit trail for vendor selection, making it challenging to assess whether the selection aligns with the Standardized procurement policies and guidelines.

#### 2. Non-Compliance with Board of Directors' Decision Regarding Vendor Negotiations in Tender Process:

As per the standard procedure for award of contract it is mandatory to negotiate with the participated contractor and not on pick and choose basis. It appears that the favour was given to L3 who after negotiation become L1 from reducing his rate from 127,77,69,652/- to 119,68,96,492/- for detail refer table "Description of per unit change post negotiation" as attached above. Furthermore, as per Minutes of BOD meeting held on 17<sup>th</sup> May'13 attended by Sh. Dayanand (Chairman), Sh. O.P. Sagar (Director), Sh. Sachdev kr. Rana (Director), Sh. Ashok Kr. Sharma (Director), Sh. Virender Singh (Director), it had been agreed that the negotiation has to be done with lowest bidder, However, in the same meeting it has been quoted that after hectic negotiation price has been negotiated with L3 i.e., N G Constructions which is a non-compliance to BOD decision.

# 3. Non-Consideration of Pre-Qualification Bid by a Vendor in Vendor Selection Process Through Tender:

During our audit of the vendor selection process conducted through the tendering procedure, we observed a significant discrepancy involving the exclusion of a prequalification bid submitted by a vendor i.e., **M/s B R Goyal**. It is noted that no reasons have been provided for the non-consideration of this bid, which raises concerns about the transparency and fairness of the selection process.

#### Impact of such negligence may result in following:

- The lack of clarity regarding the non-consideration of a vendor's pre-qualification bid undermines the transparency and fairness of the vendor selection process. Without a clear rationale, it is difficult to ensure that all vendors were given equal opportunity to participate and compete.
- The non-consideration of a vendor's pre-qualification bid without providing reasons can be perceived as inequitable treatment.
- The vendor whose bid was excluded may have offered unique value propositions or competitive advantages that could have contributed to cost savings, improved quality, or innovative solutions. The failure to consider such bids could result in missed opportunities.

# 4. Non-Compliance with Document Requirements for Pre-Qualification Bid in Vendor Selection Process Through Tender:

During our audit of the vendor selection process conducted through the tendering procedure, we identified issue involving the non-compliance with document requirements for pre-qualification bid submitted by vendors. As per clause 4 of tender document in which

list of documents required was specified in which qualified vendors has to submit the bank statement of last 5 years supporting the turnover of the company. It has been noted that none of the vendor has submitted the bank statement and no reasons have been provided for not ensuring the submission of Bank Statements by Vendors evidencing there turnover as required by Point no. 4 of list of Documents at the time of submitting Pre-Qualification Bids. Despite of this fact, Management has ignored and not considered this non-compliance and proceeds with the vendor selection process without disqualify them.

List of documents vendors needs to be submitted for Pre-Qualification Bids are here as under.

#### List of Documents Required for Pre-Qualification Bid Submission:

- I. A list of large buildings of similar nature, completed by the Contractor, giving all detail as to their magnitude and cost, the time within which the works were completed along with names, addresses and telephone numbers of Architects and Owners of the executed projects.
- II. Details of present projects under construction, Detail of project, contract value, time period as per Tender, date of commencement of works and schedule date of completion
- III. List of total equipment, plant and machinery, shuttering scaffolding etc.
- IV. Turnover of Company for last five year supported by Bank statements etc.
- V. List of permanent Technical staff with their names, qualifications& experience.
- VI. Details of organization, If partnership concern, submit partnership Deed. If Private Limited, submit the Company memorandum with list of Directors and Managing Director.
- VII. Details of disputes, arbitrations etc. if you or your Organisation have entered into at any time
- VIII. Details of Registration with DDA/CPWD/MES/RAILWAYS/P&T/GDA/HUDA etc.

Also, Five Star Const. Pvt. Ltd didn't provide details of their Technical Staff and submitted details of Turnover for 3 Yrs only instead of 5 yrs.

## D. Drawback in Contract Awarding:

During our audit of the vendor selection process conducted through the tendering procedure, we identified a significant concern regarding the awarding of a contract to a vendor (NG Constructions) that appears to be technically or financially unfit as per Vendor evaluation done by the third party i.e., M/s Anil K. Gupta & Associates. Despite of Key concerns highlighted by M/s Anil K Gupta in his evaluation report of NG constructions, the contract was awarded to them.

#### Key points highlighting the disqualification are as below:

I. There is a huge reduction in capital of the firm to the tune of 23% and it seems that the contractor has not tied up any long-term funding arrangement with the financer also since there are insignificant long term funds.

- II. As per the Vendor Evaluation report issued by M/s Anil K Gupta It was suggested to raise additional capital or long-term funds by 10 crores.
- III. The contractor has manipulated the figure of Fixed Assets in the opening balance as on 01-04-2012 of balance dated 31-03-2013 by 76 lacs whereas a similar figure of 68 lacs were there in the current assets schedules of the contractor, Representative of the society should go in their office and check accounts of the contractor to arrive at correct Balance sheet and P& L A/c figure and also other manipulation if any can be brought to light
- IV. Contractor will be working with old and worn-out machinery which might delay the project due to frequent break down that may happen.
- V. It seems that the contractor is doing business with short term funds i.e. Current liabilities and working capital reduction also indicates that there has been reduction in order book of the contractor.
- VI. Since the contractor is working on other projects also. He should be asked to pump in enough working capital and long-term funds for construction equipment's as suggested above. His other projects in hand and pending should be duly vetted by the architect, engineers and audit team to evaluate the capacity of contractor to complete society's project.
- VII. A strange fact has come to the notice that despite decreasing turnover the wages has increased by 24%. If turnover has reduced and there is reduction of 56% in turnover tax then, presumably there should not be increment in wages or salary. Tender fees has also been decreased which shows that contractor has not got any new projects during the year.
- VIII. Contractor should be asked to explain formally or informally this fact keeping in mind factors of quality and timely delivery are not issues with current and past customers of the contractor.
  - IX. Loans and advances seem diversion of funds to related parties or capital investments not related to trade.

# Non-Discussion Vendor Evaluation Report of M/s Anil K Gupta in Board of Directors Meeting Prior to awarding contract to M/s NG Constructions:

During our audit of the vendor selection process conducted through the tendering procedure, we identified a significant lapse in governance regarding the awarding of a contract to a technically unfit vendor. The vendor evaluation report of M/s Anil K. Gupta & Associates indicating technical inadequacies was not discussed in a Board of Directors (BOD) meeting before the contract was awarded, raising concerns about Contract awarding process.

## E. Scope and Important Terms and Conditions of the Contract:

## Scope of Contract:

- Project constitutes 616 Apartments of Four different Categories in 8 Blocks -Basement + Stilts + 14 floors + Mumty + Machine Room, Basement, Podium, 110 EWS Fiats, Nursery and School, Shopping. Community Centre/Club, Electric Sub-stations and External Development Work etc. The Owner in consultation with the Architect may divide the Work in 2 or 3 parts and have the absolute right to award the work to 2 or 3 different Contactors.
- 2. The Contractor shall carry out and complete the said work in every respect in accordance with this Contract, terms and conditions and to the entire satisfaction of the Architect and the Owner. The Architect may in their absolute discretion from time to time, issue further drawings, details and written instructions, directions and explanations to be carried out by the Contractor.
- 3. The Contract shall include all materials, Labour, tools, plants and transport which may be required for the full and entire execution and completion of the work and snail unless otherwise stated, including wastage of labour and materials, carriage and cartage carrying of empties, hoisting setting and fixing in position testing and commissioning of aforesaid work in accordance with good Engineering practice and recognized principles.
- 4. The Contractor shall provide everything necessary for proper execution of the work according to the intent and meaning of the specifications and drawings, taken together whether the same may or may not be particularly shown or described therein provided that the same can reasonably be inferred there from and if the contractor finds any discrepancy in the specification and drawings, or between different drawings, he shall immediately refer the same to the Architect in writing, who shall decide which is to be allowed, subject to provision of clauses hereinafter.
- 5. The Contractor shall be deemed to have satisfied, himself as to location of the site location facilities. Access of site and all other matters affecting the execution and completion of the works. No extra charges consequent on misunderstanding or miscalculation or otherwise will be allowed.
- 6. The Contractor shall be deemed to have satisfied as to all matters affecting the full and entire execution and completion of the works.
- 7. The Owner and the Architect reserve full right to delete, add, alter or modify any item from schedule of quantities. The Contractor shall not claim any profits of any kind, which he may have presumed on such Items. The Owner will have full tight to execute any of such items from any other agency or Contractor at any stage during the execution of the project.

## **Date of Commencement and Completion:**

The Contractor shall be allowed admittance to the site on Date of Commencement to be intimated in a work order issued by the Owner and shall there upon and forthwith being 'the works,' and shall regularly proceed with and complete the same on or before the Date of Completion, subject nevertheless, to the provision for extension of time contained hereinafter. Date of completion is the date for completion of the whole or any part of the works, set out in or ascertained in accordance with. The individual work order or the tender documents or any subsequent amendment there to, as provided in the conditions.

As per the letter no. POMCHS/1523 dated 18<sup>th</sup> Aug'2018, Completion date of Project inclusive of all the extension shall be 31<sup>st</sup> October'2018.

First extension was given on 14<sup>th</sup> May'16 for 12 months from Original Completion date i.e., 01st May'16 extended upto 30<sup>th</sup> Apr'17.

Second extension was given on 19<sup>th</sup> May'17 for 8 months, time extended upto 31<sup>st</sup> Dec'17.

Third & Final extension was given on 18<sup>th</sup> Aug'18 for 10 months, time extended upto 31<sup>st</sup> Oct'18.

#### Work Order to Commence the work:

On acceptance of the Contract, the work order shall be issued to the Contractor by the Owner to commence the work. The period of Contract shall be reckoned from the date of commencement specified in the work order. The site is deemed to be handed over to the Contractor for mobilization of his resources and commencing the physical execution of the work shown in the work order. The Contractor shall commence work as early as possible, but not later than 15 days from the date of commencement of the Contract shown in the work order.

#### **CPM Chart for Execution of Work:**

The Contractor shall submit, within one month of the acceptance of the Contract, a CPM chart to The Architect and the Owner, which shall indicate the planning for the execution of the entire work under the contract within the stipulated time given for completion. This shall be scrutinized by the Architect. The Contractor shall carry out changes only suggested by the Architect and the Owner before finalizing the CPM chart. The mutually agreed CPM chart shall binding on the progress of the work for completion by due date.

#### Subletting:

The whole of the works included in the Contract shall be executed by the Contractor and the Contractor shall not directly or indirectly transfer, assign or sublet the Contract or any part thereof or interest therein without the written consent of the Architect and the Owner, but no undertaking shall relieve the Contractor from the full and entire responsibility of the Contract or from active superintendence of the works during the progress.

#### Mandatory Requirement:

 The Contractor shall conform to the provisions of any Act of the legislature relating to the works, and to the Regulations and Bye Laws of any authority, and of any water, lighting and other companies and/ or authorities with whose system the structure is proposed to be connected and shall, before making any variation from the drawings or specifications that may be necessitated by so conforming, give to the Architect and the Owner written notice, specifying the variation proposed to be made and the reason for making it, within 2 weeks, and on receiving such instructions shall proceed with the work in question. Any variations so necessitated shall be dealt with under relevant clause.

2. The Contractor shall bring to the attention of the Owner and the Architect all notices required by the said Acts, regulations or by-laws to be given to any Public Office. All fees that may be properly chargeable in respect of such works shall be paid by the Contractor and he shall lodge the receipts with the Architect and the Owner, the amount shall be reimbursed by the Owner.

#### **Indemnify the Owner:**

- 1. The Contractor shall indemnify the Owner and representative or employee of the Owner against any action, claim or proceeding relating to the infringement or design rights or any alleged patent or design rights, shall defend all actions arising from such claims and himself pay any royalties, license fees, damages, cost of all and every sort of or other charges which may be payable in respect of any articles or material or part thereof legally incurred in respect thereof and included in the Contract. In the event of any claim being made or action being brought against the Owner or representative or employee of the Owner in respect of such matters aforesaid, the Contractor shall be immediately notified thereof. Provided that such indemnity shall not apply when such infringement has taken place in complying with the specific directions issued by the Owner but the Contractor shall pay any royalties or other charges payable in respect of any such use.
- The Contractor shall indemnify the Owner against all claims which may be made upon the Owner under the Workmen's Compensation Act, Maximum wages Act, Contract labour (Regulations & Abolition) Act and such other legislations having a bearing on the work executed under the Contract or under common law in respect of any employee of the Contractor.
- 3. The Contractor shall also be responsible for all injury to persons, animals etc. which arise from the act of negligence of himself or his authorized representative or his employees, whether such injury or damages arise from carelessness, accident or any other cause whatsoever in any way connected with the carrying out this Contract. The Contractor shall indemnify the Owner and save him against any harm in respect of any expense arising from and. such injury or damage to persons, animals etc. and also in respect of any claim made in respect of injury or damage under any Acts of Government or otherwise and also in respect of any Award of compensation or damage consequent upon such claims.
- 4. The Contractor shall be responsible for all structural and decorative damage to any property which may arise from the act of neglect of himself or his authorized representative or his employees, arising out of neglect, carelessness, defective work or any other cause whatsoever in any way connected with the carrying out of this Contract. This clause shall be deemed to include any damage to the buildings whatsoever, immediately adjacent or otherwise, and any damage to roads streets, footpaths, bridges or ways as well as all damages caused to the building and works forming the subject of this Contract by inclemency of weather. The Contractor shall indemnify the Owner against all claim which may be made against the Owner by any member of the public or other third party in respect of any the cost, charges/expense arising out of any claim or proceedings and also in respect of any award or compensation or damage arising thereafter and shall reinstate all

damage of every sort mentioned in this clause, so as to make good or otherwise satisfy all claim for damage to the property of third parties.

5. The Owner with the advice of the Architect shall be at liberty and is empowered to deduct the amount of any damage, compensation, cost, charges and expense arising or occurring from or in respect of any such above said clause or any damages which become due to the Contractor.

## Labour:

- 1. The Contractor shall employ labour in sufficient number to maintain the required pace of constructions and progress & quality to ensure good workmanship and good engineering practice and quality required as per specifications and to the satisfaction of the Architect and the Owner.
- 2. The Contractor shall remain liable for the payment and shall pay all wages and other dues to his work people and employees
- 3. In respect of all labour directly or indirectly employed on the works for the performance on the Contractor's part of this agreement, the Contractor shall comply with or cause to be complied with a current labour regulations in regard to all matters provided therein and with all other labour laws as may be applicable. However, the contractor has not provided any records/ documents for payment of ESI & PF for deposit on behalf of the labour and the society being the principal employer will be responsible for payment of ESI & PF for workers deployed at site further no document has been provided for Labour insurance taken on behalf of worker whereas as per Clause 20 of Contract, "Contractor All Risk Insurance cover shall be arranged by the contractor within one month of acceptance of tender. The insurance cover shall be for the total amount of the contract accepted and shall be for the total period of the contract i.e., completion period plus 12 months of defect liability period. All the expenditure for insurance cover shall be borne by the contractor. The insurance cover shall be in the name of owner."
- 4. The Labour Regulations aforesaid shall be deemed to be part of the Contract and any breach thereof shall be a breach of this Contract.
- 5. The Contractor shall take all Permits/ Licenses and deposit such fees as may be necessary under the Contract Labour (Regulation & Abolition) Act and current Labour Regulation including deposition of money on behalf of the Owner, if required. The Contractor shall at all time keep the Owner indemnified against any action for breach of these Act and Regulations. The Contractor is being the Principal employer for the purpose of the Act and Regulations.
- 6. The Contractor shall during the progress of the works comply at his own expense with all the statutory rules and provisions for the protection of health and sanitary arrangements and safety provisions for the workers employed and shall at his own expense provide for all facilities.
- 7. The Contractor shall obtain a valid license under the Contract Labour (R & A) Act, 1970 and contract Labour (Regulation of Abolition) Central Rules 1971 before Commencement of work and continue to have valid license until the completion of work. The Contractor shall not employ any labour, below the age of 15 years for the work or as per current Labour Laws.
- 8. The Contractor shall pay to his labour, employed directly or indirectly by him, minimum wages as fixed under law by Labour Department of Government of Haryana. The Contractor shall have to submit complete details of labour payments to the Architect and the Owner, if asked for.

## **Testing of Materials:**

- 1. The Architect and the Owner shall be entitled to have tests carried out as specified by IS for any materials procured by the Contractor, at the cost of the Contractor. The Contractor shall provide at his own expense, all facilities which the Architect and the Owner may require for this purpose. The cost of material consumed as well as the cost of testing from approved laboratory shall be borne by the Contractor. Water used for construction shall be tested, materials like Bricks, Fine Sand, Coarse Sand and Structural Concrete shall be tested at regular intervals. Copy of the test reports shall be submitted to the Architect and the Owner.
- 2. The Contractor shall provide basic testing equipment to check crushing strength of coarse blocks and Bricks etc.

## **Rejection of Materials:**

The Architect and the Owner shall have absolute powers to reject or order removal of any or all the materials if brought to the site by the Contractor which is not in accordance with the Contract specifications or does not conform in character or quality to sample approved. In case of default on the part of the Contractor in removing rejected materials the Architect and the Owner shall be at liberty to have these materials removed.by other means at the cost and risk of the Contractor. The Contractor shall bring material conforming to specifications and quality as per approval to substitute the rejected materials.

## Material Supplied by Owner:

- 1. Cement and Steel Tor/TMT will be supplied by the Owner free of cost at Site. The Owner shall have the right to procure any other material on behalf of the Contractor at his cost and risk, in case the Owner observes that progress is being hampered or slow due to non-availability of particular material or materials.
- 2. Consumption of materials shall be as per CPWD standards, Wastage/ Saving beyond following tolerable limits shall be recovered from the Contractor at Penal Rate to be decided by the Architect in consultation with the Owner. Wastage allowed on following material shall be:
  - a. Cement not more than 3%
  - b. Steel not more than 3%
  - c. Bricks not more than 5%

## **Contractor Supervision:**

- 1. The Contractor shall give all necessary personal superintendence during the execution of the works and till expiry of Defect Liability period.
- 2. The Contractor shall employ qualified, experienced site supervision staff to supervise the Construction. Two Graduate Engineers shall be employed as his authorized representative to supervise the works and to receive instructions from the Architect and the Owner. The employment of engineers as aforesaid shall be subject to the approval from the Architect and the Owner who may verify his qualification and experience by referring original, degree, which shall be made available by the Contractor. The engineers employed shall make himself conversant with the Contract and the drawings.
- 3. If the Contractor fails to appoint suitable supervisory staff and Graduate Engineers, the Owner in consultation with the Architect, shall have full powers to suspend the execution of

works until such time, supervisory staff and Graduate Engineers are appointed and the Contractor shall be held responsible for the delay so caused to the works. If the contractor fails to employ supervisory staff and Graduate Engineers, the Owner shall have the discretion to appoint supervisory staff and Graduate Engineers and the cost the expense therefore, shall be recoverable from the Contractor bill.

- 4. Orders given to the Contractor or his authorized representative, who will be nominated by the Contractor before commencement of work shall be considered to have been given to the Contractor.
- The Contractor or his authorized representative shall be in attendance at the site during full working hours and shall supervise the execution of the works with additional technical assistants as per requirement of the project to the satisfaction of the Architect and the Owner,
- 6. The Contractor or his authorized representative shall attend all meetings whenever required, without any payment for doing so, either at site or at the office of the Owner or at the office of the Architect to receive instructions from the Architect or the Owner.

#### Variation:

- No alteration, omissions or variation shall vitiate this Contract but in case the Architect or the Owner think proper, at any time during the progress of the works, to make any alterations in or, omission from the works or any alterations in the Items, specifications or the quality of the material / materials, the Architect with the approval of the Owner, shall give notice, thereof in writing, well in advance under his hand, to the Contractor and the Contractor shall alter, add or omit as the case may be.
- 2. The Owner through the Architect reserves their right to add/delete/alter/withdraw any items or part of the item or to reduce or increase any quantity or area to any extent without any limitations. The Contractor shall execute the work items/area/quantity as per actual requirement of the works as per instructions of the Architect and the Owner. The Contractor will be bound to execute these items as per accepted and negotiated Contract Rates, no claims or damages or part of the profit which the Contractor might lose due to change in the quantities or area will be entertained by the Owner.

#### **Defective Work:**

- 1. The Architect shall during the progress of the works, have power to order in writing, from time to time for the removal and proper re-execution of any work executed with materials or workmanship not in accordance with the drawings and specifications or instructions, and the Contractor shall forthwith carry out such order at his own cost. In case of defaults on the part of the Contractor to carry out such order, the Architect and the Owner shall have the power to employ other agencies to carry out the same and all expense consequence thereon or incidental thereto as certified by the Architect shall be borne by the Contractor or may he deducted by the Owner from any money due or that may become due to the Contractor against this Contract.
- The Contractor is responsible and shall ensure that there is no leakage or seepage in the roofs, ceilings, walls, or floors, or in the water supply, electrical or sewage system.
   Contractor shall re-do the complete stage of work to the satisfaction of the Architect and the Owner. If these defects are not rectified in reasonable time then the Owner shall be at a

liberty to recover an amount equivalent to the cost of redoing the complete stage of work, from any money or that may become due to the Contractor against this Contract.

#### **Delay & Extensions:**

If the work is delayed beyond the time stipulated for completion for reasons given below, then the Contractor shall immediately give a written notice thereof to the Owner through the Architect, but the Contractor shall nevertheless constantly use his endeavors to prevent delay and shall do all that may be reasonably required, to the satisfaction of the Architect, to proceed with the work. The Owner based on the recommendations of the Architect shall allow, in writing, fair and reasonable extension of time for completion of works. However any claim in this respect or compensation or otherwise arising as a result of extension granted above shall not be allowed or admitted:

- 1. By force majeure: or
- 2. By reason of any exceptional inclement weather: or
- 3. By reason of proceedings taken or attended by public authorities, arising otherwise than through the Contractor's own default: or
- 4. By the works or delay of other Contractors or tradesmen engaged by the Owner but not referred in the schedule of quantities or specification: or
- 5. By reason of civil commotion, strike or lock-out affecting any of the Building trades; or
- 6. In consequence of Contractor's not having received in due time necessary instructions from the Architect for which he shall have applied in writing.

## **Defect Liability Period:**

- Defects liability period shall be twelve calendar months after Virtual completion and handing over the Project, either in one part or two parts as decided by the Architect in consultation with the Owner. Any defect in material or workmanship observed in the entire execution of work or within defect liability period shall be notified in writing by the Architect to the Contractor and shall be rectified by him at his own cost within time as specified by the Architect.
- 2. To facilitate prompt attention to the defects, the Contractor shall employ a team of tradesmen like masons, painters, carpenters, plumbers, fitters, electrician, plumber and labour covering all traders along with necessary materials and spares. A team of supervisors will also be available along with the maintenance team to take instructions from the Architect. The maintenance team should be available throughout the defects liability period. The composition of the tradesmen will vary according to nature of recurring defects noticed in the buildings. The nature of their work being in the form of 'after sales services' and the defects rectified being such that they could have been executed properly in the first instance, no extra payment/claim shall be admissible on this account.
- 3. In case of default of Contractor in carrying out the rectifications as per clause 34.02 the Architect/ Owner may employ any other agency to rectify or make good such defects. All expenses consequent thereon or incidental thereto shall be borne by the Contractor and shall be recoverable from him by the Owner and shall be deducted from his bills or retention money or performance guarantee or from any other amount of the Contractor available with the Owner.

4. The Architect shall also certify at the end of the defects liability period regarding the state of rectifications carried out during defect liability period. The performance guarantee and balance amount of Retention Money shall be released subject to compliance of the contract and relevant conditions.

## **Compensation for Delay:**

If the Contractor fails to complete the works by the date and within stipulated period stated in the relevant clause/ within extended time under the relevant clause, the Contractor shall pay as compensation of an amount equal to Rs. 10,000/- per day of delayed period subject to maximum of 10% of his total Contract Amount or any such other amount, the Architect may decide in consultation with the Owner.

## Variation in Prices:

 Variations in Price (Escalation) of Labour and Material will be allowed to the Contractor after one calendar year from actual start of work. Variations in Prices of Labour and Material will be allowed after one year with base Index at the time after one year of actual start of work. The Contractor will be compensated for increase or decrease in Labour & Material component as per following system and will be worked out on following provisions.

Escalation will be worked out on quarterly billing basis as follows:-

- a. The basic date for working out Labour and Material escalation shall be the date after one year from actual start of work.
- b. Cost element in work done on which the escalation will be payable shall be reckoned as 85% of the work done of tender items only as per the bills, running or final bill, and from this amount, value of the material supplied by the Owner shall be deducted before the compensation / escalation is worked out.

The Component of material and labour shall be 75% and 25% Escalation will be paid on quarterly billing basis.

c. Labour Escalation shall be worked out as per formula given below:

- $VL = (W \times 25) / 100 \times (La Lb) / Lb$
- VL = Variation in Labour cost (increase or decrease).
- W = Value of the work done, worked out as indicated in sub-para
   (ii) above
- La & Lb = Basic Minimum rate of unskilled & adult male labour fixed under law by Haryana Government
- La = Basic Labour rate on the date of receiving the tender.
- Lb = Basic Minimum rate on the date of commencement of the period of reckoning.
- d. Material Escalation shall be worked out as per formula given below:
  - $VM = (W \times 75) / 100 \times (Ma Mb) / Mb$
  - ML = Variation in Material cost (increase or decrease).
  - W = Value of the work done, worked out as indicated in sub-para (ii) above
  - Ma & Mb = All India Whole Sale Price Index published by Economic Advisor to Govt. of India, Ministry of Industry and Commerce.
  - Ma = All India Whole Sale Price Index at time of start of work.
  - Mb = Average arithmetical mean of All India Whole Sale Price Index for all the Commodities of relevant quarter (three months).

#### **Termination of Contract:**

- 1. The Owner without prejudice to any other right or remedy which shall have accrued or shall accrue thereafter, will have the right to terminate the Contract in part or whole in any of the following cases:-
- 2. If Contractor being an individual, or if a firm, any 'partner thereof shall at any time be adjudged insolvent or have received order or orders for administration of his estate made against him or shall take any proceedings for liquidation or composition under any Insolvency Act for the time being in force or made any conveyance or assignment of this effects of composition of any arrangement for the benefit of his creditor or purport to do so , or if any application made under any Insolvency Act for the time being in force or if a trust deed be granted by him for and on behalf of his creditors; or,
- 3. If the Contractor being a company shall pass a resolution or the court shall make an order for the liquidation of its affairs or a receiver or a manager on behalf the debenture holders

shall be appointed or circumstances shall arise which entitle the court or debenture holders to appoint a receiver or Manager, or,

- 4. If the Contractor assigns, transfers or sublets or attempt's to assign, transfer or sublet any portion of the works without the prior written approval of the Owner; or,
- 5. If the Contractor makes default in commencing the work within a reasonable time from the date of the handing over of the site and continue the default after reasonable notice from the Architect and the Owner: or,
- 6. In the opinion of the Owner / Architect at any time whether before or after the date or extended date for completion, makes default in proceeding with the works with due diligence and continues the default after reasonable notice from the Architect and the Owner: or,
- 7. If the Contractor fails to comply with any of the terms & conditions of the Contract, orders and directions issued by the Owner / Architect after reasonable notice in writing with directions properly issued there under: or,
- 8. If the Contractor fails to complete the works, work order and items of work with individual dates for completion and clear- the site on or before the date of completion/extended date of completion. Then the Owner shall be at liberty to terminate the contract subject to the following:
  - a. That the Owner gives two reasonable opportunities to the Contractor for taking down the joint measurements of the works so executed by the Contractor.
  - b. And after the above opportunity has not been availed by the Contractor, then the Owner in consultation with the' Architect shall be at liberty to take down the measurement of the work executed by the defaulting Contractor, which shall be final, binding and conclusive on the defaulting Contractor.
- 9. Whenever the Owner exercises his authority to terminate the Contract under the relevant clause he may complete the works by any means, at the Contractor's cost, risk and expense, provided always that, in the event of cost of completion after alternative arrangements have been finalized by the Owner to get the works completed or estimated cost of completion (as certified by the Architect) and approved by the Owner being less than the Contract cost, the advantage shall go to the Owner. If the cost of completion after the alternative arrangements have been .finalized by the Owner to get the work completed or estimated cost of cost of completion (as cost of completion (as certified by the Architect) and approved by the Owner to get the work completed or estimated cost of completion (as certified by the Architect) and approved by the Owner to get the work completed or estimated cost of completion (as certified by the Architect) and approved by the Owner to get the work completed or estimated cost of completion (as certified by the Architect) and approved by the Owner exceeds the money due to the Contractor under this Contract, the contractor shall either pay the excess amount assessed by the Architect or the same shall be recovered from the Contractor by other source.
- 10. The Owner shall also be at liberty to use the Contractor's materials, tools & plant and other stores at site, as he thinks proper, in, completing the work and the Contractor will be allowed the necessary credit. The amount of credit to be allowed in completing the work shall be assessed by the Architect and approved by the Owner and the amount so assessed shall be final and binding.

## Security Money/Retention Money:

 The person(s) whose tender may be accepted (hereinafter called the Contractor) shall permit the Owner at the time of making any payment to him, for work done and measured under the Contract, to deduct a sum at the rate of 5% of gross value of the work done, subject to maximum limit, of total retention / security money i.e. Rs.50,00,000/- (50 lac only) as mentioned in Invitation to Tender from each Running bill. Earnest Money of Rs.25 lac deposited at the time of tendering shall be treated as part of Security Money.

2. In case of approval of the Owner and Architect, Retention / Security Deposit can be in the form of FDR or Bank Guarantee pledged in the name of the Owner valid for full period of contract including defects liability period and such other extended period will not bear any interest at all. The Performa of the bank guarantee shall be approved by the Owner. The total Retention/Security deposit will be guarantee against the defects only in work and shall be returned to the Contractor, if he rectifies all defects pointed out, in two parts --.5Q% after six months and remaining 50% after twelve months after virtual completion and handling over project to Owner.

#### Income Tax Deduction at Source:

1. Income Tax Deduction at source @ 2% and surcharge (or at the rate modified in future by IT Dept.) on the Gross Work done and shall be deducted from the Contractor's Running Bills as per Income Tax Act.

## VAT / SERVICE / WORKS CONTRACT/TURNOVER TAX:

VAT / Service Tax / Works Contract Tax /Turnover Tax applicable as on date or as modified in future by the relevant Govt. Departments shall be borne by the Owner.

#### **Earnest Money:**

 Each tenderer shall furnish Earnest Money of Rs.25,00,000/- (Twenty Five Lac only) as specified under Invitation of Tenders by Bank Draft of Pay Order only, Valid for 90 days, pledged In the name of the Owner, Police Officers Multi-State Co-operative Housing Society Ltd. with the Tender. The Bank Draft/Pay order will be sent back to the unsuccessful tenderers after allotment of work. Tender without the Earnest Money shall not be considered at all. Earnest Money, shall become part of total Security / Retention Money.

#### **Billing & Payments to Contractors:**

- The Contractor has to submit the Running Bill at the end of every month or construction stage as per schedule of payment supported by Measurement Books. The Contractor is required to submit details of measurements based on standard items executed during the period of billing along with the running bill, based on covered area.
- 2. No Adhoc payment would be made unless the bill submitted by the Contractor is duly supported by the Measurement Books and any other documents required.
- 3. The Contractor is entitled to Secured Advance against the finishing material procured by the Contractor with prior approval of the Architect and the Owner, upto 75% of the Cost of any materials as assessed and verified by the Architect, supported by the bills, amount not exceeding 75% of the material element cost in the tender rate of the finished item of the work, whichever is lower, which in the opinion of the Architect and Owner are non-perishable and in accordance with the contract and have been brought at site in connection

therein and are adequately stored and protected against damage by weather or other causes. When materials on account of which an advance has been made under this subclause are incorporated in the work, the amount of such advance shall be deducted from the next payment against R. Bill as per conditions of contract.

The Contractor is advised not to bring any finishing materials, for which secured advance is being paid, which cannot be consumed within a period of 3 months from their first payment in the running bills. If any materials on which the Secured Advance have been paid but not consumed or incorporated in the works after three months period, the amount so paid for the unconsumed materials shall be recovered from the Contractor next payment.

- 4. Part rates will be allowed for the items which are Incomplete and items which are subject to testing and commissioning. Pert rate shall be decided by the Architect keeping in mind that the cost of incomplete part of each item.
- 5. The Contractor will submit theoretical consumption of cement and consumption of steel including wastage with each running bill along with each running bill. Wastage of steel and cement will be on the account of the Contractor. Wastage beyond the allowed limit of 3% will be charged on a penalty rate to be decided by the Architect.
- 6. Contractor shall not execute any extra item before approval of extra item by the Architect and the Owner. Extra items shall be paid to the Contractor only after the approval of rates of extra items by the Architect and the Owner.

As per Agreement dated 21<sup>st</sup> May'2013 executed between the Police Officer Multi-State Cooperative Housing Society and M/s NG Constructions it has been agreed that:

- 1. In consideration of the payments to be made to the Contractor as hereinafter provided, he shall upon and subject to the said conditions of Tender Documents, execute and complete the works shown upon the said drawings and further detailed drawings as may be furnished to him by the said Architects and described in the specifications, scope of work, Schedule of Quantities as given in the Tender Documents.
- The Owner shall' pay the Contractor provisionally such sums as shall become payable hereunder at the times and in the manner specified in the said conditions of Tender Documents. All such progressive payments shall however be regarded as Advance payments for the purpose of the Contract.
- 3. The term "ARCHITECT" in the said conditions shall mean the said M/s Architects Forum or in the event of their ceasing to be Architects for the purpose of this Contract, any such other Architect, as shall be appointed for that purpose by the Owner, subsequently appointed Architects under this Contract shall not be entitled to disregard or over rule any decision or approval or direction given or expressed in writing by the previous Architect.
- 4. The Drawings, Agreement and documents above mentioned shall form the basis of Contract and the decision of the Owner on the advice of said Architects as mentioned
- 5. In the conditions of Contract in reference to all matters of disputes as to the material and Workmanship and as to the intended interpretation of the clauses of this Agreement or any other document attached hereto and detailed below shall be final, conclusive and binding under the law.
- 6. The said Contract comprises the building above mentioned and all subsidiary works connected therewith in the aforesaid buildings at the same site as may be ordered to be

done from time to time by the said Architects & the Owner for the time being even through such works may not be shown on the Drawings or described in the said Specifications of the priced Schedule of Quantities / Rates.

- 7. The Owner through the Architects reserves to himself the right to altering the Drawing and nature of the work by adding to or omitting any items of work or of having portions of the same carried out departmentally or otherwise and such alterations or variations shall be carried out without prejudice to this Contract.
- 8. The various conditions given in the tender and as modified subsequently shall be read and construed forming part of this Agreement and the parties hereto will respectively abide by and submit themselves to the conditions and stipulations and perform the agreement on their parts respectively in such conditions contained.
- 9. All disputes arising out of or in any way connected with this Agreement shall be deemed to have arisen in Faridabad, Haryana and only the Courts of Faridabad, Haryana shall have jurisdiction to determine the same.
- 10. In reference to the negotiations, following conditions are negotiated and accepted.
  - a. The Owner will provide all the documents and fee for Water and Electrical connections, the Contractor shall have to make arrangements of these connections. In case of any treatment plants for Water is require, cost of the plant shall be paid by the Owner and shall be maintained by the Contractor. Cost of tubue well at one point shall be borne by the Owner.
  - b. Labour cess shall be borne by the Owner.
  - c. 50% Security shall be released after 3 months after virtual completion and 25% shall be released after 6 months after virtual completion and balance 25% shall be released within 1 month after defect liability period as per Tender Conditions.
  - d. Payments against R. Bills shall be as per Tender Conditions.
  - e. Escalation shall be as per Tender Clause 36. Base index shall be date of the actual start of work
  - f. Mobilization Advance of 3500 Lac shall be given, subject to the availability of funds with the society, and shall be recovered from 2nd R. Bill in 24 equal monthly installments.

#### **Schedule of Payment:**

Δ.	BUILDING WORK, COMMERCIAL, COMMUNITY CENTRE & BALCONY	
1	Work complete upto DPC level (for all storeyes).	10 %
2.	Work complete upto lintel level including lintels.	8%
3.	Work complete up to roof casting.	20 %
4.	Completion of Brick Work.	6%
4. 5.	Providing & fixing electric conduits in slab and fan boxes.	1.5%
2.	Providing & fixing electrical T. V. telephone conduits in walls and	
0.	fixing boxes in walls.	2%
7.	Railing in balconies and stairs.	2%
	Providing & fixing UPVC/CI pipes (internal & external Dipols at manhole.	2%
8.	providing & lixing of verei pipes internal a control of the	2.5%
9.	Providing and fixing CPVC/GI pipes.	2.3/0

10. Providing and fixing all door and window frames.       6 %         11. Completion of internal plaster.       5 %         12. Completion of floors and skirting.       6 %         13. Completion of external plaster.       6 %         14. Grinding and polishing of floors and dado.       1 %         15. Completion of ceramic tiles and kitchen counter marble slab with sink.       4 %         16. Completion of ceramic tiles and kitchen counter marble slab with sink.       4 %         16. Completion of active viring with witch and sockets etc.       2.3%         17. Completion of a bit of the sub main witing, meter board and earthing.       2 %         19. Completion of sanitary and water supply filtings and fixtures.       2.3%         20. Completion of sanitary and water supply filtings and fixtures.       2.3%         21. Painting of walts celling, doors, window and railing etc. and repolishing of floors it required.       0.5 %         22. Testing of water line, sever line and electric points etc.       0.5 %         23. At the time of handing over.       0.5 %         24. Boundary walls inging and gates.       8 %         3 Underground water tank i/c pump house.       17 %         4. Roads and pavements.       10 %         5. External sewerage (pipe and fixtures).       3 %         9. Under ground stom water Drainage.       7 %		
11. Completion of internal plaster.       5 %         12. Completion of floors and skirting.       6 %         13. Completion of floors and skirting.       6 %         14. Grinding and polishing off floors and dado.       1 %         15. Completion of parapet walls and overhead tanks and Brick Coba.       2 %         14. Completion of parapet walls and overhead tanks and Brick Coba.       2 %         15. Completion of DB with MCB, sub main witing, meter board and earthing.       2 %         16. Completion of other aways with fittings and fatures.       2.5 %         17. Completion of other walls, advertures with fittings and fatures.       2.5 %         20. Completion of sandary and water supply fittings and fatures.       2.5 %         21. Feating of water line, sewer line and electric points etc.       0.5 %         23. At the time of handing over.       0.5 %         24. Boundary walls rolling and gates.       8 %         3 Underground water tank i/c pump hause.       10 %         4. Roads and pavements.       10 %         5. External severage (pipe and fitting)       12 %         6. Completion of Manholes.       5 %         7. Water supply ring main & allied connections.       8 %         8. Under ground storm water Drainage.       7 %         9. External electrification (Fittings and Fixtures).       3 %     <	<ol><li>Providing and fixing all door and window frames.</li></ol>	6%
12. Completion of external plaster.       6%         13. Completion of foros and skirting.       6%         14. Grinding and polishing of floors and kirting.       1%         15. Completion of ceramic files and kirthen counter marble slab with sink.       1%         14. Grinding and polishing of floors and kirthen counter marble slab with sink.       1%         15. Completion of ceramic files and verthead tanks and Brick Coba.       2%         17. Completion of electric witing with switch and sockets etc.       2.5%         18. Completion of door and window shutters with fiftings.       6%         20. Completion of sanitary and water supply fiftings and fixtures.       2.5%         21. Painting of walls.celling, doors, window and railing etc. and repolishing of floors if required.       2%         22 Testing of water line, sever line and electric points etc.       0.5%         23. At the time of handing over.       0.5%         100%       2%         2. Testing of walls rolling and gates.       8%         3. Underground water tank i/c pump house.       17%         4. Roads and pavements.       10%         5. External severage [pipe and fitting]       12%         6. Completion of Manholes.       5%         7. Water supply fing main & allied connections.       8%         8. Under ground storm water Drainage.       1%	11. Completion of internal plaster.	
13. Completion of floors and skirling.       6 %         14. Grinding and polishing of floors and dado.       1 %         15. Completion of parapet walls and overhead tanks and Brick Coba.       2 %         16. Completion of parapet walls and overhead tanks and Brick Coba.       2 %         17. Completion of DB with MCB, sub main wing, meter board and earthing.       2 %         18. Completion of door and window shutters with fittings and fixtures.       2.5 %         20. Completion of door and window shutters with fittings and fixtures.       2.5 %         21. Painting of walls, ceiling, doors, window and railing etc. and repolishing of floors if required.       2 %         22. Testing of water line, sewer line and electric points etc.       0.5 %         23. At the time of handing over.	12. Completion of external plaster.	
14. Grinding and polishing of floors and dado.       1 %         15. Completion of ceramic files and kitchen counter marble slab with sink.       4 %         16. Completion of electric wiring with switch and sockets etc.       2.5%         17. Completion of a electric wiring with switch and sockets etc.       2.5%         18. Completion of of a and window shutters with fittings.       6%         20. Completion of sanitary and water supply fittings and fixtures.       2.5%         17. Painting of walls, ceiling, doors, window and railing etc. and repolishing of floors if required.       2%         21. Painting of walls, ceiling, doors, window and railing etc. and repolishing of floors if required.       2%         22. Testing of walts rule and electric points etc.       0.5 %         23. At the time of handing over.       0.5 %         24. Boundary walls rule and gates.       8 %         3. Underground water tank i/c pump hause.       17 %         4. Roads and pavements.       10 %         5. External severage (pipe and fitting)       12 %         6. Completion of Manholes.       5 %         7. Water supply ring main & allied connections.       8 %         10. Piinth protectrion.       1 %         11. Horticutive.       2 %         2. On completion of plastering painting and other miscellaneous work.       1 %         7. Completi	<ol><li>Completion of floors and skirting.</li></ol>	
15. Completion of ceramic tiles and kitchen counter marble slab with sink.       4 %         16. Completion of ceramic tiles and overhead tanks and Brick Coba.       2 %         17. Completion of DB with MCB, sub main wiring, meter board and earthing.       2 %         18. Completion of DD with MCB, sub main wiring, meter board and earthing.       2 %         19. Completion of door and window shutters with fittings.       2 %         20. Completion of sanitary and water supply fittings and fixtures.       2.5%         21. Pointing of walls, celling, doors, window and railing etc. and repolishing of floors it required.       2 %         22. Testing of water line, sewer line and electric points etc.       0.5 %         23. At the time of handing over.       0.5 %         24. Boundary walls i/c Guard room (Brick work and finishing).       25 %         25. Boundary walls i/c Guard room (Brick work and finishing).       25 %         26. Completion of Manholes.       5 %         27. Water supply ring main & allied connections.       8 %         36. Under ground water tank i/c pump house.       17 %         47. Water supply ring main & allied connections.       8 %         37. Water supply ring main & allied connections.       8 %         37. Water supply ring main & allied connections.       8 %         38. Under ground storm water Drainage.       7 %         39. Compl	14. Grinding and polishing of floors and dado.	
10. Completion of parapet walls and overhead tanks and Brick Coba.       2 %         17. Completion of DB with MCB, sub main wiring, meter board and earthing.       2 %         19. Completion of advantage with with and sockets etc.       2.5%         20. Completion of doar and window shutters with fittings.       2 %         21. Pointing of walls, ceiling, doors, window and railing etc. and repolishing of floors it required.       2 %         22. Testing of water line, sewer line and electric points etc.       0.5 %         23. At the time of handing over.       0.5 %         24. Boundary walls i/C Guard room (Brick work and finishing).       25 %         25. Boundary walls i/C Guard room (Brick work and finishing).       25 %         26. Completion of Manholes.       8 %         3 Underground water tank i/c pump house.       17 %         4. Roads and povements.       10 %         5. External sewerage (pipe and fitting)       12 %         6. Completion of Manholes.       8 %         7. Water supply fing main & allied connections.       8 %         8. Under ground storm water Drainage.       7 %         9. External electrification (Fittings and Fixtures).       3 %         10. Plinth protection.       1 %         11. Horticulture.       2 %         2. Miscellaneous work.       1 %         13 Han	15. Completion of ceramic tiles and kitchen counter marble slab with sink	
1/. Completion of electric wiring with switch and sockets etc.       2.5%         18. Completion of bowith MCB, sub main wiring, meter board and earthing.       2%         19. Completion of door and window shutters with fittings.       6%         20. Completion of sanitary and water supply fittings and fixtures.       2.5%         21. Peainting of walls, ceiling, doors, window and railing etc. and repolishing of floors if required.       2%         22. Testing of water line, sewer line and electric points etc.       0.5 %         23. At the time of handing over.       0.5 %         24. Testing of water line, sewer line and electric points etc.       0.5 %         25. External peveLoPMENT WORKS       0.5 %         26. Boundary walls i/c Guard room (Brick work and finishing).       25 %         27. Boundary walls i/c Guard room (Brick work and finishing).       25 %         28. External sewerage (pipe and fitting)       12 %         39. Underground water tank i/c pump house.       17 %         40. Roads and pavements.       10 %         50. External sewerage (pipe and fitting)       12 %         61. Completion of Manholes.       17 %         70. Water supply ring main & allied connections.       8 %         8. Under ground storm water Drainage.       1 %         9. External sewerage (pipe and fitting)       2 %         10. Real el	16. Completion of parapet walls and overhead tanks and Brick Coba	
18. Completion of DB with MCB, sub main wiring, meter board and earthing.       2 %         19. Completion of door and window shutters with fittings.       6 %         20. Completion of sanitary and water supply fittings and fixtures.       2.5%         21. Pelinting of walls, ceiling, doors, window and railing etc. and repolishing of floors if required.       0.5%         22. Testing of water line, sewer line and electric points etc.       0.5%         23. At the time of handing over.	17. Completion of electric wiring with switch and sockets etc.	
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3. On casting of roof slab.       23 %         4. On completion of electric work.       10 %         5. On completion of flooring.       10 %         6. On completion of plastering painting and other miscellaneous work.       9 %         7. Completion and handing over       1 %         9. PODIUM AREA       10%         1. Work Complete upto DPC level.       25 %         2. ON completion upto roof level.       22 %         3. On casting of roof slab.       23 %         4. On completion of electric work.       10 %         5. On completion of flooring.       10 %         6. On completion of flooring.       10 %         7. Completion of flooring.       10 %         7. Completion of flooring.       10 %         7. Completion of flooring.       10 %         8. On completion of flooring.       10 %         9. Completion of plastering painting and other miscellaneous work.       9 %         7. Completion and handing over       1 %		22 %
4. On completion of electric work.       10 %         5. On completion of flooring.       10 %         6. On completion of plastering painting and other miscellaneous work.       9 %         7. Completion and handing over       1 %         9. PODIUM AREA       10 %         1. Work Complete upto DPC level.       25 %         2. ON completion upto roof level.       22 %         3. On casting of roof slab.       23 %         4. On completion of flooring.       10 %         5. On completion of flooring.       10 %         6. On completion of plastering painting and other miscellaneous work.       9 %         7. Completion of flooring.       10 %         6. On completion of plastering painting and other miscellaneous work.       9 %         7. Completion and handing over       1 %		
5. On completion of flooring.       10 %         6. On completion of plastering painting and other miscellaneous work.       9 %         7. Completion and handing over       1 %         9. PODIUM AREA       10 %         1. Work Complete upto DPC level.       25 %         2. ON completion upto roof level.       22 %         3. On casting of roof slab.       23 %         4. On completion of electric work.       10 %         5. On completion of flooring.       10 %         6. On completion of plastering painting and other miscellaneous work.       9 %         7. Completion and handing over       10 %		
6. On completion of plastering painting and other miscellaneous work.       9 %         7. Completion and handing over.       1 %         9. PODIUM AREA       1 %         1. Work Complete upto DPC level.       25 %         2. ON completion upto roof level.       22 %         3. On casting of roof slab.       23 %         4. On completion of electric work.       10 %         5. On completion of flooring.       10 %         6. On completion of plastering painting and other miscellaneous work.       9 %         7. Completion and handing over       1 %		
7. Completion and handing over       1 %         D. PODIUM AREA       100%         1. Work Complete upto DPC level.       25 %         2. ON completion upto roof level.       22 %         3. On casting of roof slab.       23 %         4. On completion of electric work.       10 %         5. On completion of flooring.       10 %         6. On completion of plastering painting and other miscellaneous work.       9 %         7. Completion and handing over       1 %		
D. PODIUM AREA 100%1. Work Complete upto DPC level.25 %2. ON completion upto roof level.22 %3. On casting of roof slab.23 %4. On completion of electric work.10 %5. On completion of flooring.10 %6. On completion of plastering painting and other miscellaneous work.9 %7. Completion and handing over1 %		
D. PODIUM AREA1. Work Complete upto DPC level.25 %2. ON completion upto roof level.22 %3. On casting of roof slab.23 %4. On completion of electric work.10 %5. On completion of flooring.10 %6. On completion of plastering painting and other miscellaneous work.9 %7. Completion and handing over1 %	7. Completion and Janaing over	
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2. ON completion up to roof level.22 %3. On casting of roof slab.23 %4. On completion of electric work.10 %5. On completion of flooring.10 %6. On completion of plastering painting and other miscellaneous work.9 %7. Completion and handing over1 %		25 %
3. On casting of roof slab.23 %4. On completion of electric work.10 %5. On completion of flooring.10 %6. On completion of plastering painting and other miscellaneous work.9 %7. Completion and handing over1 %		
4. On completion of electric work.       10 %         5. On completion of flooring.       10 %         6. On completion of plastering painting and other miscellaneous work.       9 %         7. Completion and handing over       1 %		
5. On completion of flooring.10 %6. On completion of plastering painting and other miscellaneous work.9 %7. Completion and handing over1 %		
<ul> <li>6. On completion of plastering painting and other miscellaneous work.</li> <li>9 %</li> <li>7. Completion and handing over</li> <li>1 %</li> </ul>		
7. Completion and handing over 1%	5. Un completion of flooring.	
100%	7. Completion and handing over	1%
		100%

<ul> <li>E. E.S.S AREA</li> <li>1. Work Complete up to DPC level.</li> <li>2. ON completion up to roof level.</li> <li>3. On casting of roof slab.</li> <li>4. On completion of electric work.</li> </ul>	25 % 22 % 23 % 10 %
<ol> <li>On completion of channels &amp; flooring.</li> <li>On completion of plastering painting and other miscellaneous work.</li> <li>Completion and handing over</li> <li>BASEMENT WORK – under &amp; beyond Tower Area</li> <li>Work Complete upto DPC level.</li> </ol>	10 % 9 % 1 % 100% 25 %
<ol> <li>ON completion up to roof level.</li> <li>On casting of roof slab.</li> <li>On completion of electric work.</li> <li>On completion of flooring.</li> <li>On completion of plastering painting and other miscellaneous work.</li> <li>Completion and handing over</li> </ol>	22 % 23 % 10 % 10 % 9 % 1 %

# Schedule of Quantity and Price Per Unit:

		N.G.Cos	tructions			
01.		Construction of Dwelling Unit of lump sum per Sq.mt. basis as per detailed specifications mentiond herein i/c cost of all Civil, Internal Plumbing,Water Supply & Storm Water Disposal & Electrical Works etc. complete for all Floors Basement + Stilted + Fourteen Floors floors plus Mumty and Machine room.				
		Block - 1 & 2 - 168 DUs.	Qty	Unit	Rate	Amount
		A Type Flat - 2 BHK Area including circulation area , on all floors i/c and common area.				
	1	Rate for Building Work Civil,Sanitary & Electrical Work	13194	Sqmt	11856	156428064
	2	Balcony Area	1405	Sqmt	8160	11464800
	3	Stilted Area	1026	Sqmt	8000	8208000
	4	Basement Area, Under Building	1128	Sqmt	8000	9024000
		Total				185124864
		Block - 3, 4, 5, & 6 - 336 DUs.				

I		1	1	I.	
	<b>B Type Flat - 3 BHK Area</b> including circulation area , on all floors i/c and				
	common area.				
	5 Rate for Building Work Civil, Sanitary &	35442	Sqmt		
	Electrical Work	00442	Sqriii	11050	420200252
	5 Balcony Area	3435	Sqmt	11856	420200352
	7 Stilted Area	07.4.4	Sqmt	8160	28029600
	B Basement Area, Under Building	<u> </u>	Sqmt	8000	21952000
	Total			8000	24136000
	Block - 7 - 56 DUs.				494317952
	P         C Type Flat - 4 BHK Area including				
	circulation area, on all floors i/c and common area.				
	Rate for Building Work Civil,Sanitary & Electrical Work	7781	Sqmt	11856	92251536
1(	) Balcony Area	1405	Sqmt	8160	11464800
1	Stilted Area	651	Sqmt	8000	5208000
1:	2 Basement Area, Under Building	715	Sqmt	8000	5720000
	Total			8000	114644336
	Block - 8 - 56 DUs.				114044550
	<b>D Type Flat -5 BHK Area</b> including circulation area , on all floors I/c and common area.				
1:	3         Rate for Building Work Civil,Sanitary &           2         Electrical Work	9865	Sqmt	11856	116959440
1.	Balcony Area	1745	Sqmt	8160	14239200
13	5 Stilted Area	000	Sqmt		
10	6 Basement Area, Under Building	823 905	Sqmt	8000	6584000
	Total			8000	7240000
	G. Total D.Us				145022640
					939109792
02.	Construction of Basement area beyond Building Tower & Poudium area, lump sum per. Sq. ft. as per detailed specifications mentioned here i/c cost of all Civil,Sewerage Plumbing, Plumbing Water Supply and Storm Water Disposal and & Electrical works etc. complete.				
1		13662	Sqmt	10000	136620000
18		2388	Sqmt	7500	17910000
	Total				154530000

	I		1	1	1	1
03		External Development Work - Lump sum per Sq. ft. basis as per detailed specifications mentioned herein i/c cost of all Civil, Sewerage, Plumbing, Water Supply & Storm Water Disposal, Electrical Work Lasndscaping i/c Open Ramp, excluding Sewerage treatment plant etc.				
	10		( ( 2020			
	19	Area of Development Work	66282	Sqmt	950	62967900
		Total				62967900
		Sub Total of 01+02+03				1156607692
04		Construction of other Building area of				
		lump sum per Sq.mt.basis as per detailed specifications mentiond herein i/c cost of all Civil, Int Plumbing,Water Supply & Storm Water Disposal & Electrical Work.				
	20	EWS Flats Area - 4 Floors	2650	Sqmt	9600	25440000
	21	ESS Area	240	Sqmt	11520	2764800
		Total				28204800
05		Construction of other Building area of lump sum per Sq.mt.basis as per detailed specifications mentiond herein i/c cost of all Civil, Int Plumbing,Water Supply & Storm Water Disposal & Electrical Work.				
	22	Shopping Area - 1 Floor	325	Sqmt	9120	2964000
	23	Nursery Schools - 2nos 1 Floor	490	Sqmt	9120	4468800
	24	Community Centre/Club Area-2Fl.	510	Sqmt	9120	4651200
		Total				12084000
		Sub Total of 04+05				40288800
		Grand Total				1196896492

## F. Observations:

#### 1. Extra payment of 2.26 Cr for additional area charged by the vendor in running bills:

NG Construction has charged 2,26,95,275 Cr extra in their running bills for the area constructed. Vendor has charged and paid for 56876 Sq Mtr area for 6 towers mentioned below while as per Occupation certificate dated 11-12-2019 issued by Office of District Town planner Faridabad, the total area constructed is 54960.81 in these 6 towers. This is subject to investigation the roll of Architect and method applied by them to measure and approve the running bills of the vendor wherein the area charged is higher than the actually built.

Туре	Tower	Area measure by DTPC	Area charged by NG Construction	Excess Area Claimed (Sq. Mtr)	Excess Amount paid	
5 BHK	А	10282.14	10433.36	151.23	17,92,922	
3 ВНК	C	36784.73	38181.36	1396.63	1,65,58,422	
	D					
	E					
	F					
3 BHK	G	7893.95	8260.34	366.39	43,43,932	
	Total					
Rate	11856/Sq Mtr					

# 2. Excess payment of 2.39 Crore of Service Tax on Free of Charge (FOC) Material (Cement and Steel) provided by the society.

During the period April 2013 till June 2017, NG construction has charged the service tax on FOC material provided by the society.

Society has provided Cement and steel of amounting INR 46.31 Cr to NG Constructions on which NG has asked to pay the service tax of 2.39 Cr. in various trenches on FOC material which was ultimately paid to the NG constructions as per their demands which is not required to be paid as per relevant provisions of the service tax Act.

As per pronouncement of larger bench of CESTAT dated 06-09-2013 in case of M/s Bhayana Builders Pvt Ltd. V. Commissioner of Service Tax Delhi Service tax is not required to be paid on Material provided by the Service Recipient Free of charge.

"As per The value of goods and material supplied free of cost by a service recipient to the provider of the taxable construction service, being neither monetary or non-monetary consideration paid by or flowing from the service recipient, accruing to the benefit of service provider, would be outside the taxable value or the gross amount charged, within the meaning of later expression in section 67 of the Finance Act 1994 and value of free supplies by service recipient do not comprise the gross amount charged under notification No. 15/2004 ST including the explanation thereto as introduced by notification no. 4/2005 ST"

The above decision was also affirmed by the Honorable supreme court of India vide its decision order dated 19<sup>th</sup> Feb 2018.

Sr. No. 💌	Period	Taxable Value 💌	Service Tax 💌	Interest/Penalty 💌	Amount Paid
1	01/04/2017 to 30/06/2017	2,09,81,298	12,58,878	-	12,58,878
2	01/01/2017 to 31/03/2017	1,38,74,676	8,32,481	-	8,32,481
3	01/10/2016 to 31/12/2016	61,41,366	3,68,482	-	3,68,482
4	01/07/2016 to 30/09/2016	89,16,934	5,35,016	-	5,35,016
5	01/04/2016 to 30/06/2016	1,76,80,468	10,38,424	-	10,38,424
6	01/01/2016 to 31/03/2016	1,10,11,267	6,38,653	-	6,38,653
7	01/10/2015 to 31/12/2015	1,13,49,364	6,46,256	-	6,46,256
8	01/07/2015 to 30/09/2015	1,93,31,509	10,82,565	-	10,82,565
9	01/04/2015 to 30/06/2015	3,36,56,073	17,41,688	-	17,41,688
10	01/01/2015 to 31/03/2015	5,96,05,388	29,46,890	-	29,46,890
11	01/10/2014 to 31/12/2014	7,50,76,577	37,11,786	-	37,11,786
12	01/07/2014 to 30/09/2014	5,66,05,468	27,98,574	-	27,98,574
13	01/04/2014 to 30/06/2014	6,88,01,853	34,01,564	6,710	34,08,274
14	01/01/2014 to 31/03/2014	4,32,20,120	21,36,803	-	20,80,306
15	01/01/2014 to 31/03/2014		56497	223	56,720
16	01/10/2013 to 31/12/2013	1,26,04,803	6,23,181	10016	6,51,693
17	01/07/2013 to 30/09/2013	31,51,697	1,55,820	1,287	1,38,611
18	01/04/2013 to 30/06/2013	11,74,643	58,074	401	58,475
	TOTAL	46,31,83,504	2,40,31,632	18,637	2,39,93,772

#### Summary of service tax charged by NG construction on FOC material

Since NG has taken the amount of 2.39 Cr on account of Service tax on FOC material from the society the same needs to be investigated whether the same amount was being actually deposited by the NG construction to the Service tax department against the gross amount charged for FOC material from the society or was used to discharge its own service tax liability.

We further suggest to issue an intimation letter to the concerned service tax department to further investigate the matter in case vendor has charged the service tax on FOC material and adjusted the same against its own service tax liability.

#### 3. Excess Payment of 2.90 Cr for constructing Boundary wall at 11.38 Acre and 7 Acre of land.

As per clause 11.01 of the contract. NG construction has to build the boundary wall along with providing and fixing 600 to 900 mm high boundary wall railing with frame of 25\*25\*6 mm MS angle frame with vertical & Horizontal members.

During our review we noted that NG construction in its running bills has charged an amount of 3.84 Cr for constructing the boundary wall and railing at 11.38 Acre and 7 Acre of land as below.

Description	<b>RA bills</b>	Area (Sq. Mtr)	Rate	% Work	Amount
Boundry wall	65	79136	950	25%	1,87,95,016
Railing and Gate	65	79136	950	25%	60,14,405
Extra for 7 acre land	65			100%	1,36,45,182
	3,84,54,603				

However, On the basis of physical verification and measurement by the site engineer during our review period, It was found that actual boundary wall constructed was 9901.7 Sq Mtr. for which the total amount comes to 94.06 Lacs with the agreed contract rate of 950 per Sq Mtr. Which results excess payment of INR 2.30 Crore to the vendor for construction of boundary wall.

Type of Land	Length Constructed (Sq. Mtr)	Height (Sq. Mtr)	Total Build Boundary wall	Rate/Sq. Mtr	Cost of Boundry wall	Actually paid	Excess Payment
11.38 Acre Land	1038.47						
7 Acre Land	941.87						
	1980.34	5	9901.7	950	94,06,615	3,24,40,198	2,30,33,583

Also, Vendor has charged additional 60.14 lacs for railing and gate in its running bills while as per the contract clause 11.01 the same was included in the contract value of 950/- Sq Mtr.

Thus, overall excess payment of INR 2.90 Crores was made to NG construction for construction of boundary wall and railings.

Further it is prominent to mention that vendor was charging the construction of boundry wall in External development work on 18.75 acre of land till its 61<sup>st</sup> running bill dated 11-11-2020 when the complete construction of the society was already being done. Also, in general as well boundary wall construction is the first step to develop any housing society.

#### 4. Lack of Clarity in Work Order Resulting in Varied Excavation Rates for the Same Land:

During our audit of the construction project executed by Society, a discrepancy was identified pertaining to the excavation work carried out on the same land parcel. The absence of clarity in the work order has led to different contractors executing excavation activities at varying rates, resulting in cost disparities and potential financial implications.

Contractor charged INR 3.37 crores in the name of excavation which could have been reduced if a firm rate was applied or a separate contract was made for Excavation, Excavation rates charged on same land Parcel is as follows:

Description of Area	Description of work	Rate per Sq. mtr. (INR)
Main Building	Excavation	11856
Balcony	Excavation	8160
Stilted	Excavation	8000
Basement	Excavation	8000

#### 2. Excess Area Claimed Leading to Excessive Cash Outflow Compared to Work Order area:

During our audit of the Running Bills claimed by vendor, a significant discrepancy was identified regarding the claimed area in comparison to the area specified in the Contract. It is observed that an excess area has been claimed, resulting in an **unnecessary outflow of cash by INR 16,92,97,430.94/-** that exceeds the intended scope of the contract.

Unit wise detail of Excess Area claimed resulting in excess outflow of cash mentioned as under:

			Main Building			Excess Area	Rate per	Excess Amount
Type of Flat	DU planned	DU made	Std. Area for planned DU	Std. Area for Actual DU	Actual Area	Claimed	Sqm	Claimed
2 BHK	168	168	13194	13194	14068.488	-874.488	11856	-1,03,67,929.7
3 BHK	336	408	35442	43036.71429	46441.704	-3404.989714	11856	-4,03,69,558.0
4 BHK	56	56	7781	7781	8193.36	-412.36	11856	-48,88,940.1
5 BHK	56	56	9865	9865	10433.36	-568.36	11856	-67,38,476.1
			Excess claime	d I				-6,23,64,904.10
			Balcony Area			Excess Area	Rate per	Excess Amount
Type of Flat	DU planned	DU made	Std. Area for planned DU	Std. Area for Actual DU	Actual Area	Claimed	Sqm	Claimed
2 BHK	168	168	1405	1405	1818.768	-413.768	8160	-33,76,346.8
3 BHK	336	408	3435	4171.071429	6092.664	-1921.592571	8160	-1,56,80,195.3
4 BHK	56	56	1405	1405	1616.72	-211.72	8160	-17,27,635.2
5 BHK	56	56	1745	1745	1865.136	-120.136	8160	-9,80,309.7
			Excess claime	d				-2,17,64,487.2
			Stilted Area			Excess Area	Rate per	Excess Amoun
Type of Flat	DU planned	DU made	Std. Area for planned DU	Std. Area for Actual DU	Actual Area	Claimed	Sqm	Claimed
2 BHK	168	168	1026	1026	1109.64	-83.64	8000	-6,69,120.00
3 BHK	336	408	2744	3332	3798.336	-466.336	8000	-37,30,688.00
4 BHK	56	56	651	651	690.144	-39.144	8000	-3,13,152.0
5 BHK	56	56	823	823	868.28	-45.28	8000	-3,62,240.00
			Excess claime	d				-50,75,200.00
			Basement Area			Excess Area	Rate per	Excess Amount
Type of Flat	DU planned	DU made	Std. Area for planned DU	Std. Area for Actual DU	Actual Area	Claimed	Sqm	Claimed
2 BHK	168	168	1128	1128	1109.64	18.36	8000	
3 BHK	336	408	3017	3663.5	3798.336	-134.836	8000	-10,78,688.00
4 BHK	56	56	715	715	690.144	24.856	8000	1,98,848.00
5 BHK	56	56	905		868.28	36.72	8000	2,93,760.00
			Excess claime					-4,39,200.00
		TOT	AL EXCESS AMOUNT CL	AIMED for DU				0 0 0 10 701 0
			AL LACESS AMOUNT CE					-8,96,43,791.32
Type of Flat	Non-T Contract Area		Excess Area Claimed	Rate per Sqm	Excess Amount Claimed			-0,90,43,791.3
Basement beyond		ower		Rate per Sqm				-0,50,43,731.3
<b>Type of Flat</b> Basement beyond Building	Contract Area	ower Actual Area	Excess Area Claimed	Rate per Sqm	Claimed			-0,30,43,731.34
Basement beyond Building	Contract Area	ower Actual Area	Excess Area Claimed -5516.3308 Main Building	Rate per Sqm 10000	Claimed	Fyress Area	Rate per	
Basement beyond	Contract Area	ower Actual Area	Excess Area Claimed	Rate per Sqm 10000	Claimed	Excess Area Claimed	Rate per Sqm	Excess Amoun Claimed
Basement beyond Building Type of Flat	Contract Area 13662	ower Actual Area 19178.3308	Excess Area Claimed -5516.3308 Main Building Std. Area for planned	Rate per Sqm 10000 Std. Area for Actual DU	Claimed			Excess Amoun
Basement beyond Building	Contract Area 13662 DU planned	ower Actual Area 19178.3308 DU made 122	Excess Area Claimed -5516.3308 Main Building Std. Area for planned DU	Rate per Sqm 10000 Std. Area for Actual DU	Claimed -5,51,63,308.00 Actual Area	Claimed	Sqm	Excess Amoun Claimed
Basement beyond Building Type of Flat EWS Type of Flat External Development works	Contract Area 13662 DU planned 110 External Develo Contract Area	ower Actual Area 19178.3308 DU made 122 Opment works Actual Area	Excess Area Claimed -5516.3308 Main Building Std. Area for planned DU 2650 Excess Area Claimed	Rate per Sqm 10000 Std. Area for Actual DU 2939.090909 Rate per Sqm	Claimed -5,51,63,308.00 Actual Area 3356.22 Excess Amount Claimed	Claimed	Sqm	Excess Amoun Claimed
Basement beyond Building Type of Flat EWS Type of Flat External Development works	Contract Area 13662 DU planned 110 External Develo	ower Actual Area 19178.3308 DU made 122 opment works	Excess Area Claimed -5516.3308 Main Building Std. Area for planned DU 2650	Rate per Sqm 10000 Std. Area for Actual DU 2939.090909 Rate per Sqm	Claimed -5,51,63,308.00 Actual Area 3356.22 Excess Amount	Claimed	Sqm	Excess Amoun Claimed
Basement beyond Building Type of Flat EWS	Contract Area 13662 DU planned 110 External Develo Contract Area 66282 Shopping	ower Actual Area 19178.3308 DU made 122 Opment works Actual Area 79136.91 Complex	Excess Area Claimed -5516.3308 Main Building Std. Area for planned DU 2650 Excess Area Claimed	Rate per Sqm 10000 Std. Area for Actual DU 2939.090909 Rate per Sqm	Claimed -5,51,63,308.00 Actual Area 3356.22 Excess Amount Claimed	Claimed	Sqm	Excess Amoun Claimed
Basement beyond Building Type of Flat EWS Type of Flat External Development works for 11 acres Type of Flat	Contract Area 13662 DU planned 110 External Develo Contract Area 66282	ower Actual Area 19178.3308 DU made 122 Dpment works Actual Area 79136.91	Excess Area Claimed -5516.3308 Main Building Std. Area for planned DU 2650 Excess Area Claimed -12854.91 Excess Area Claimed	Rate per Sqm 10000 Std. Area for Actual DU 2939.090909 Rate per Sqm 950 Rate per Sqm	Claimed -5,51,63,308.00 Actual Area 3356.22 Excess Amount Claimed -1,22,12,164.50 Excess Amount	Claimed	Sqm	Excess Amoun Claimed
Basement beyond Building Type of Flat EWS Type of Flat External Development works for 11 acres	Contract Area 13662 DU planned 110 External Develo Contract Area 66282 Shopping Contract Area	ower Actual Area 19178.3308 DU made 122 opment works Actual Area 79136.91 Complex Actual Area 384.69	Excess Area Claimed -5516.3308 Main Building Std. Area for planned DU 2650 Excess Area Claimed -12854.91 Excess Area Claimed	Rate per Sqm 10000 Std. Area for Actual DU 2939.090909 Rate per Sqm 950 Rate per Sqm	Claimed -,5,51,63,308.00 Actual Area 3356.22 Excess Amount Claimed -,1,22,12,164.50 Excess Amount Claimed -,5,44,372.80 Excess Amount	Claimed	Sqm	Excess Amoun Claimed
Basement beyond Building Type of Flat EWS Type of Flat External Development works for 11 acres Type of Flat Shopping Complex	Contract Area 13662 DU planned 110 External Devele Contract Area 66282 Shopping Contract Area 325 Communit	ower Actual Area 19178.3308 DU made 122 opment works Actual Area 79136.91 Complex Actual Area 384.69 ty Centre	Excess Area Claimed -5516.3308 Main Building Std. Area for planned DU 2650 Excess Area Claimed -12854.91 Excess Area Claimed -59.69	Rate per Sqm 10000 Std. Area for Actual DU 2939.090909 Rate per Sqm 950 Rate per Sqm 9120 Rate per Sqm	Claimed -5,51,63,308.00 Actual Area 3356.22 Excess Amount Claimed -1,22,12,164.50 Excess Amount Claimed -5,44,372.80	Claimed	Sqm	Excess Amoun Claimed

#### Impact of negligence result in following:

- a. **Financial Discrepancy:** The excess area claimed beyond the scope of the Contract has led to an unnecessary and inflated cash outflow of INR 16.92 crores. This financial discrepancy adversely affects cost control efforts and impacts overall budget alignment.
- b. **Misallocation of Resources:** The divergence between claimed area and contract area might result in misallocation of resources, including labour, materials, and equipment. This inefficiency further compounds the financial impact and affects project delivery timelines.

c. **Reconciliation and Vendor Relations:** Excessive cash outflow due to the incorrect area claimed instigate complex financial reconciliations and settlements. Additionally, it may strain vendor relations with the society

#### 3. Reduction in Substation Room Size Possibly to Offset Excess Area in Dwelling Units:

During our audit of the construction project executed by M/s NG Constructions, we have identified a potential discrepancy involving the size of the substation room. There are indications that the size of the substation room may have been reduced, possibly as an attempt to compensate for the excess area in dwelling units compared to the specifications agreed upon in the contract. This raises concerns about the integrity of contractual compliance and the adequacy of essential infrastructure.

Reduction in size of Electrical Sub Station room is here as under:

Type of Elet	ES	S	Short Area made (in
Type of Flat	Contract Area	Actual Area	Sq. mm)
Electric Sub Station	240	126.37	113.625593

#### Impact of negligence result in following:

- a. **Infrastructure Adequacy:** A reduction in the size of the substation room may impact the adequate provision of essential infrastructure required for power distribution and management. A smaller substation room may compromise safety, efficiency, and the long-term functionality of the electrical system.
- b. **Contractual Breach:** The reduction in the substation room size constitutes a breach of the contractual agreement. Such deviations undermine the trust and credibility of the contract between Police Officer Multi State Co-operative Housing Society and M/s NG Constructions.

# 4. Claiming Non-Contract Items Without any Contract, Leading to Excessive Cash Outflow to Contractor:

During our audit of the, a significant irregularity has come to our attention regarding the claiming of non-contract items by the contractor. It is noted that these claims involve items not explicitly covered in the original contract, and no separate contractual arrangement has been executed for these additional items. This has led to an **excessive outflow of cash by INR 1,89,25,810.37/- to the contractor.** 

Detail of claimed additional items is here as under:

				Rate claimed for	
Particulars	Area	Rate Claimed	Similar Activity	Similar Activity	Amount claimed
Society Office	94.78	11856	DU's Main Building	11856	11,23,711.68
HT Panel Room	43.27	11520	Electric Substation	11520	4,98,470.40
Electrical room					
under basement	183.37	3520	Not Available	Not Available	6,45,462.40
			Building's Stilted and		
			Basement under		
RO Room	69	8000	building	8000	5,52,000.00
Seweage Treatment					
Plant	213.6271	11520	Electric Substation	11520	24,60,984.19
External					
development work					
for 7 Acres	NA				1,36,45,181.70
		TOTAL			1,89,25,810.37

#### 5. Excess Provision of Cement Bags to Contractor Resulting in Excessive Cash Outflow:

During our review, a significant discrepancy has been identified concerning the provision of cement bags to the contractor. It is noted that as per Technical Forensic Report submitted by Mr. Vijay Pushkarna "Slurry for mobilizing concrete pump (16 Bags for every operation). This amounts to providing cement to the contracting agency to keep his plant in running condition. There is no precedence or no industrial practice to provide anything to the contracting agency to maintain or keep his plant and machinery updated. This remains responsibility of the contractor to maintain his tools, plants, machinery, etc." adding to it "Thus no cement is required to be issued to the contracting agency for any work which is of temporary in nature. Hence, 32000 bags of cement issued to contracting agency for "slurry or any other temporary works" should have been avoided", excess 32,000 cement bags have been provided beyond the actual requirement specified in the contract. This has resulted in an **unnecessary outflow of cash by INR 81,92,744.49/-**, raising concerns about prudent resource management and cost control.

Detail of Excess amount paid is mentioned in bellow attached annexure:

Total Cement Bags	Total Cost paid by	Average Rate of	Cost for 32000
Purchased	Society	1 cement bag	cement bag
7,39,189.00	18,92,49,581.50	256.0232654	81,92,744.49

#### 6. Excess Provision of Steel to Contractor Resulting in Excessive Cash Outflow:

During our review, a significant discrepancy has been identified concerning the provision of quantity of steel bars used by the contractor. It is noted that as per Technical Forensic Report submitted by Mr. Vijay Pushkarna, "In the case of this project, the grades of concrete used were M-25 and M-35. M-35 being high grade concrete, lesser quantity of steel needs to be used. Whereas steel consumption recorded at site is 1 kg/sqft. higher than the industry practice. Hence, excess consumption of steel to the tune of 1 kg/Sqft. gives a smell of encashing the quantity at a later date while using 5.5 kg/Sqft. actually.", This has resulted in an **unnecessary outflow of cash by INR 9,31,41,098.63/-** on account of excess consumption of steel at site by 1 kg/sqft.

Type of Flat $u_{D}$ panel $u_{D}$ make         Sch Area for planes         Sch Are				Main Bu	ilding				Avg. Rate	
part         part <th< th=""><th>Type of Flat</th><th>DU planned</th><th>DU made</th><th></th><th></th><th></th><th></th><th></th><th>per kg of</th><th></th></th<>	Type of Flat	DU planned	DU made						per kg of	
3 and		•		-	-				1	-
sex.         956         956         978 </td <td></td>										
S Birk.         Image: S Birk										
IDEX Starting in the interval interva										
No.         No. <td>3 DHK</td> <td>50</td> <td>50</td> <td></td> <td></td> <td>10435.30</td> <td>112505.7525</td> <td>112303.7323</td> <td>41.05</td> <td></td>	3 DHK	50	50			10435.30	112505.7525	112303.7323	41.05	
Type of Flat         DU planed         DU rade         Std. Area for planed         Actual Area (n)				Exter						0,00,10,777120
Type of Farl DB         DU planed         DU rade DU         Std. Area for planed         Actual Area (n) DU         Actual Area (n) Semin'         Actual Area (n) DE (SS 2000)         Part of Dist 2007 (DS 2007)         Part of Dist 2007 (				Balcony	/ Area				Avg. Rate	_
OD µmicit         Du made         Du         Du         Sqmmin         Sqmmin <td>Type of Flat</td> <td></td> <td></td> <td>Std. Area for planned</td> <td>Std. Area for Actual</td> <td>Actual Area (in</td> <td>Actual Area (in</td> <td></td> <td></td> <td></td>	Type of Flat			Std. Area for planned	Std. Area for Actual	Actual Area (in	Actual Area (in			
38 mic         383         468         3435         417.0722         6692.684         6580.3884         41.5         72.8 <th72.8< th=""> <th72.8< th=""> <th72.8< th=""></th72.8<></th72.8<></th72.8<>		DU planned	DU made	DU	DU	Sqmtr)	Sqft)	used (1kg/sqft)		paid
Berk $56$ $56$ $1405$ $1405$ $156.72$ $1742.2224$ $1742.2224$ $41.85$ $728.232.7$ SBH $56$ $176$ $176.22724$ $1742.2224$ $41.85$ $728.232.7$ Type of Flat $0$	2 BHK	168	168	1405	1405	1818.768	19577.05581	19577.05581	41.85	8,19,299.79
SBMK         Interpret Filt         Interpret Filt </td <td>3 BHK</td> <td>336</td> <td>408</td> <td>3435</td> <td>4171.071429</td> <td>6092.664</td> <td>65580.88945</td> <td>65580.88945</td> <td>41.85</td> <td>27,44,560.22</td>	3 BHK	336	408	3435	4171.071429	6092.664	65580.88945	65580.88945	41.85	27,44,560.22
Type of FlatSile dragSile drag of plannedSile drag of planned <t< td=""><td>4 BHK</td><td></td><td></td><td>1405</td><td>1405</td><td>1616.72</td><td>17402.22924</td><td>17402.22924</td><td>41.85</td><td></td></t<>	4 BHK			1405	1405	1616.72	17402.22924	17402.22924	41.85	
Type of Flat         Out planned         DU mode DU mode         Still Area for planned DU         Still Area for planned DU         Atual Area (in Seque)         Atual Area	5 BHK	56	56	1745	1745	1865.136	20076.15681	20076.15681	41.85	8,40,187.16
Type of Hat Du glannel         Du name Du material         Std. Ares for planes Du du Du         Std. Ares for Autour Public         Autour Ares (n Sprt)         Certa's Sale (Du/yaf)         per base Particip         per base Paritip         per base Paritip     <				Exces	ss claimed					51,32,330.47
Type of Hat Du glannel         Du name Du material         Std. Ares for planes Du du Du         Std. Ares for Autour Public         Autour Ares (n Sprt)         Certa's Sale (Du/yaf)         per base Particip         per base Paritip         per base Paritip     <										
Type of Plat         DU planned         DU made         Std. Area for planned         Std. Area for planned         Actual Area for         Actual Area f								Excess Steel		Excess Amount
DB         DU         DU         Sparth/l 100	Type of Flat	DU planned	DU made							
3 BHK         336         408         7744         3332         3798-336         40684-94941         4084-94941         4185         171.03.05.05           5 BHK         56         56         631         651         651         601.44         7426.84183         7226.64183         7226.84183         301.335.05         391.335.05         7226.94184         4185         301.335.05         391.335.05         391.40.055.05         1104.4056.05         1105.405.105         1104.4055.05<				-	-					-
4 HH         56         56         651         651         651         690.144         7228.48186         722.68186         41.85         3.0138.87           5 BHK         56         58         233         233         283         282.898.86         292.68186         41.85         3.0138.87           7 Pe of Flat         0U planned         0U made         Std. Area for planned         Std. Area fo	2 BHK									4,99,859.14
SBHK         SG         S										
Non-Tower         Actual Area (n building         Excess Steel used building         Area for Actual Area (n Sqntr) DU         Actual Area (n Sqntr) Sqntr)         Excess Steel (lkg/sqnt)         Area for sqntr) Sqntr)         Excess Steel (lkg/sqnt)         Area (lkg/sqnt)         Area (lkg										
Type of Flat         DU planned         DU made         Std. Area for planned         Std. Area for planned         Actual Area (in Semi) DU         Actual Area (in Semi) Paid         Actual Area (in	5 BHK	56	56			868.28	9346.088131	9346.088131	41.85	
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Obj planed         OU         OU         Semt1         Used [12/347]         steel         paid           28HK         103         1108         1128         1108         1108         1108         408         408         3017         3663.5         3798.336         40884.998.914         41.85         4.998.912.1         41.85         4.998.912.1         41.85         17.11.035.07         60.144         7428.648.36         41.85         3.01.088.92           8HK         56         56         715         725         60.144         7428.648.36         41.85         3.01.088.92           50 K         55         50         900         88.8.2         9940         44.85         3.01.088.92           50 K         50         50         900         88.8.2         9940         742.649.851.1         466.05941.47           Tope of Flat         Non-Tower         Actual Area (in Sqft)         Excess Steel used         Actual Area (in Sqft)         Excess Steel used         Actual Area (in Sqft)         Sqft)         360.27.956         41.85         3.50.839.07           Type of Flat         DU planed         DU made         Std.Area for Actual Area (in Sqft)         Ratual Area (in Sqft)         Std.Area for Actual Area (in Sqft)         Std.Ar								Excess Steel		Excess Amount
2 внк         168         1188         1128         1109 AG         1194 AGESS         1144 AGESS         41.85         4.998 950 14           3 BHK         336         408         3017         3663.5         3798 336         4088 4.9841         4438 5.499 850 14         50.805 3.309 833         4088 4.9841         4428 4.9481         41.85         3.10.8835           8 HK         56         56         300         905         88.8         9346.08131         346.08813         44.85         3.10.8835           8 HK         56         56         300         905         88.8         9346.08131         346.08813         44.85         3.10.8835           8 HK         56         56         300         905         88.8         9346.08131         9346.08131         44.85         3.10.8835           Type of Flat         Contract Area         Actual Area (in Sqft)         Contract Area         Actual Area (in Sqft)         Actual Area (in Sqft)         Contract Area         Actual Area (in Sqft)         Cuerts Steel used           7 type of Flat         Contract Area         Actual Area (in Sqft)         Actual Area (in Sqft)         Actual Area (in Sqft)         Actual Area (in Sqft)         Actual Area (in Sqft	Type of Flat	DU planned	DU made					used (1kg/sqft)		paid
3 BHK         3 36         408         3017         3663.5         3798.33         40884.94841         40884.94941         41.85         17.11.035.05           BHK         56         56         715         715         690.144         7428.648186         748.668184         748.648886.768.6488         748.648886         748.648886         748.648886         748.648886         748.648886         748.648886         748.6488869.768         748.6488869.768         748.6488869.76861888 <td>0.0111/</td> <td>4.60</td> <td>160</td> <td>-</td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td>4 00 050 44</td>	0.0111/	4.60	160	-	-					4 00 050 44
BHK         56         56         775         775         600.144         7428.648186         748.648186         748.648186818         748.64818										
SBHK         56         55         905         905         868.28         9346.088131         9346.08813										
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Basement beyond Building         13662         19178.330         200958.000         2005958.000         41.85         86,19,346,11         Image: Constraint of the sector of the sect	Type of Flat		Actual Area (in	Actual Area (in Sqft)						
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Type of FlatDU plannedDU madeStd. Area for planned DUStd. Area for Actual DUActual Area (in Sqft)Actual Area (in <sqft)< th="">Actual Area (in<sqft)< th=""></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<></sqft)<>	-									
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Contract AreaSqmtr)Contract AreaSqmtr)Contract AreaSqmtr)Stability<	EWS	110	122	Std. Area for planned DU	DU	Sqmtr)	Sqft)	used (1kg/sqft)	per kg of steel	paid
External Development works for 11 acres6628279136.91849859.5146849859.514641.853,55,66,620.69Type of FlatContract Area Sqmtr)Actual Area (in Sqft) Shopping ComplexActual Area (in Sqft) (1kg/sqft)Avg. Rate per kg of steelExcess Amount paidExcess Amount paidImage: Complex paidShopping ComplexActual Area (in Sqft) Sqmtr)Actual Area (in Sqft) (1kg/sqft)Aug. Rate per kg of steelExcess Amount 		110	122 opment works	Std. Area for planned DU 2650	DU 2939.090909	Sqmtr) 3356.22	Sqft) 36042.79596	used (1kg/sqft)	per kg of steel	paid
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		110 External Devel	122 opment works Actual Area (in	Std. Area for planned DU 2650	DU 2939.090909 Excess Steel used	Sqmtr) 3356.22 Avg. Rate per kg	Sqft) 36042.79596 Excess Amount	used (1kg/sqft)	per kg of steel	paid
for 11 acres6628279136.918498959.51468498959.514641.853,55,66,20.69())())())Type of FlatShopping ComplexActual Area (in Sqft)Actual A	Type of Flat	110 External Devel	122 opment works Actual Area (in	Std. Area for planned DU 2650	DU 2939.090909 Excess Steel used	Sqmtr) 3356.22 Avg. Rate per kg	Sqft) 36042.79596 Excess Amount	used (1kg/sqft)	per kg of steel	paid
Shopping Type of FlatShopping Contract AreaActual Area (in Sqmtr)Actual Area (in Sqft) Actual Area (in Sqft)Excess Steel used (1kg/sqft)Average and Average and Attual Area (in Sqft)Actual Area (in Sqft) Attual Area (in Sqft)Actual Area (in Sqft) Attu	Type of Flat External	110 External Devel	122 opment works Actual Area (in	Std. Area for planned DU 2650	DU 2939.090909 Excess Steel used	Sqmtr) 3356.22 Avg. Rate per kg	Sqft) 36042.79596 Excess Amount	used (1kg/sqft)	per kg of steel	paid
Type of Flat     Actual Area (in Sqmt)     Actual A	Type of Flat External Development works	110 External Devel Contract Area	00000000000000000000000000000000000000	Std. Area for planned DU 2650 Actual Area (in Sqft)	DU 2939.090909 Excess Steel used (1kg/sqft)	Sqmtr) 3356.22 Avg. Rate per kg of steel	Sqft) 36042.79596 Excess Amount paid	used (1kg/sqft)	per kg of steel	paid
Type of Flat     Actual Area (in Sqmt)     Actual A	Type of Flat External Development works	110 External Devel Contract Area	00000000000000000000000000000000000000	Std. Area for planned DU 2650 Actual Area (in Sqft)	DU 2939.090909 Excess Steel used (1kg/sqft)	Sqmtr) 3356.22 Avg. Rate per kg of steel	Sqft) 36042.79596 Excess Amount paid	used (1kg/sqft)	per kg of steel	paid
Contract AreaSqmtr)(Ikg/sqft)or steelpaidShopping Complex325384.694131.225956413.22595641.851,72,891.81 $\sim$ Shopping Complex325384.694131.2259564131.22595641.851,72,891.81 $\sim$ $\sim$ Type of FlatCommunity CentreActual Area (in Sqft)Excess Steel used (1kg/sqft)Avg. Rate per kg of steelExcess Amount paid $\sim$ $\sim$ Type of FlatActual Area (in Sqft)1357.5214578.5163814578.5163841.856,10,110.91 $\sim$ Type of FlatContract AreaActual Area (in Sqft) Sqmtr)Excess Steel used (1kg/sqft)Avg. Rate per kg of steelExcess Amount paid $\sim$ $\sim$ Electric Sub Station240126.371357.1479121357.14791241.8556,796.64 $\sim$ $\sim$	Type of Flat External	110 External Devel Contract Area 66282	opment works Actual Area (in Sqmtr) 79136.91	Std. Area for planned DU 2650 Actual Area (in Sqft)	DU 2939.090909 Excess Steel used (1kg/sqft)	Sqmtr) 3356.22 Avg. Rate per kg of steel	Sqft) 36042.79596 Excess Amount paid	used (1kg/sqft)	per kg of steel	paid
Shopping Complex         325         384.69         4131.225956         4136.25956         41.85         1,72,891.81         ()         ()           Type of Flat         Community Centre         Actual Area (in Sqft)         Excess Steel used (1kg/sqft)         Al.85         6,10,110.91         ()         ()         ()           Type of Flat         Contract Area         Actual Area (in Sqft)         Excess Steel used (1kg/sqft)         Al.85         6,10,110.91         ()	Type of Flat External Development works for 11 acres	110 External Devel Contract Area 66282	opment works Actual Area (in Sqmtr) 79136.91 Complex	Std. Area for planned DU 2650 Actual Area (in Sqft) 849859.5146	DU 2939.090909 Excess Steel used (1kg/sqft) 849859.5146	Sqmtr) 3356.22 Avg. Rate per kg of steel 41.85	Sqft) 36042.79596 Excess Amount paid 3,55,66,620.69	used (1kg/sqft)	per kg of steel	paid
Image: Second state of the second state of	Type of Flat External Development works for 11 acres	110 External Devel Contract Area 66282 Shopping	opment works Actual Area (in Sqmtr) 79136.91 Complex Actual Area (in	Std. Area for planned DU 2650 Actual Area (in Sqft) 849859.5146	DU 2933.090909 Excess Steel used (1kg/sqft) 849859.5146 Excess Steel used	Sqmtr) 3356.22 Avg. Rate per kg of steel 41.85 Avg. Rate per kg	Sqft) 36042.79596 Excess Amount paid 3,55,66,620.69 Excess Amount	used (1kg/sqft)	per kg of steel	paid
Type of Flat     Actual Area (in Sqft)     Actual Area (in Sqft)     Excess Steel Used (1kg/sqft)     Avg. Rate per kg of steel     Excess Amount paid       Community Centre     510     1357.52     14578.51638     14578.51638     61.0,110.91       Type of Flat     Ess     Actual Area (in Sqft)     Excess Steel Used (1kg/sqft)     Avg. Rate per kg of steel     Excess Amount paid       Electric Sub Station     240     126.37     1357.147912     1357.147912     41.85     56,796.64	Type of Flat External Development works for 11 acres Type of Flat	External Devel Contract Area 66282 Shopping Contract Area	opment works Actual Area (in Sqmtr) 79136.91 Complex Actual Area (in Sqmtr)	Std. Area for planned DU 2650 Actual Area (in Sqft) 849859.5146 Actual Area (in Sqft)	DU 2339.090909 Excess Steel used (1kg/sqft) 849859.5146 Excess Steel used (1kg/sqft)	Sqmtr) 3356.22 Avg. Rate per kg of steel 41.85 Avg. Rate per kg of steel	Sqft) 36042.79596 Excess Amount paid 3,55,66,620.69 Excess Amount paid	used (1kg/sqft)	per kg of steel	paid
Type of Flat     Actual Area (in Sqft)     Actual Area (in Sqft)     Excess Steel Used (1kg/sqft)     Avg. Rate per kg of steel     Excess Amount paid       Community Centre     510     1357.52     14578.51638     14578.51638     61.0,110.91       Type of Flat     Ess     Actual Area (in Sqft)     Excess Steel Used (1kg/sqft)     Avg. Rate per kg of steel     Excess Amount paid       Electric Sub Station     240     126.37     1357.147912     1357.147912     41.85     56,796.64	Type of Flat External Development works for 11 acres Type of Flat	External Devel Contract Area 66282 Shopping Contract Area	opment works Actual Area (in Sqmtr) 79136.91 Complex Actual Area (in Sqmtr)	Std. Area for planned DU 2650 Actual Area (in Sqft) 849859.5146 Actual Area (in Sqft)	DU 2339.090909 Excess Steel used (1kg/sqft) 849859.5146 Excess Steel used (1kg/sqft)	Sqmtr) 3356.22 Avg. Rate per kg of steel 41.85 Avg. Rate per kg of steel	Sqft) 36042.79596 Excess Amount paid 3,55,66,620.69 Excess Amount paid	used (1kg/sqft)	per kg of steel	paid
Contract Area     Sqmtr)     (1kg/sqft)     of steel     paid       Community Centre     510     1357.52     14578.51638     14578.51638     41.85     6,10,110.91       Excess Steel used (1kg/sqft)     41.85     6,10,110.91     Image: Contract Area       Excess Steel used (1kg/sqft)     Actual Area (in Sqft)     Actual Area (in Sqft)     Excess Steel used (1kg/sqft)     Area er kg of steel     Excess Amount paid       Electric Sub Station     240     126.37     1357.147912     1357.147912     41.85     56,796.64	Type of Flat External Development works for 11 acres Type of Flat	110 External Devel Contract Area 66282 Shopping Contract Area 325	opment works Actual Area (in Sqmtr) 79136.91 Complex Actual Area (in Sqmtr) 384.69	Std. Area for planned DU 2650 Actual Area (in Sqft) 849859.5146 Actual Area (in Sqft)	DU 2339.090909 Excess Steel used (1kg/sqft) 849859.5146 Excess Steel used (1kg/sqft)	Sqmtr) 3356.22 Avg. Rate per kg of steel 41.85 Avg. Rate per kg of steel	Sqft) 36042.79596 Excess Amount paid 3,55,66,620.69 Excess Amount paid	used (1kg/sqft)	per kg of steel	paid
Community Centre         510         1357.52         14578.51638         14578.51638         41.85         6,10,110.91         ()         ()           Type of Flat         Excess Steel used (1kg/sqft)         Actual Area (in Sqft)         <	Type of Flat External Development works for 11 acres Type of Flat Shopping Complex	110 External Devel Contract Area 66282 Shopping Contract Area 325 Communi	opment works Actual Area (in Sqmtr) 79136.91 Complex Actual Area (in Sqmtr) 384.69 ty Centre	Std. Area for planned DU 2650 Actual Area (in Sqft) 849859.5146 Actual Area (in Sqft) 4131.225956	DU 2939.090909 Excess Steel used (1kg/sqft) 849859.5146 Excess Steel used (1kg/sqft) 4131.225956 Excess Steel used	Sqmtr) 3356.22 Avg. Rate per kg of steel 41.85 Avg. Rate per kg of steel 41.85	Sqft) 36042.79596 Excess Amount paid 3,55,66,620.69 Excess Amount paid 1,72,891.81 Excess Amount	used (1kg/sqft)	per kg of steel	paid
Type of Flat     Actual Area (in Sqrti)     Actual Area (in Sqrti)     Excess Steel used (1kg/sqft)     Avg. Rate per kg     Excess Amount paid       Electric Sub Station     240     126.37     1357.147912     1357.147912     41.85     56,796.64	Type of Flat External Development works for 11 acres Type of Flat Shopping Complex	110 External Devel Contract Area 66282 Shopping Contract Area 325 Communi	opment works Actual Area (in Sqmtr) 79136.91 Complex Actual Area (in Sqmtr) 384.69 ty Centre Actual Area (in	Std. Area for planned DU 2650 Actual Area (in Sqft) 849859.5146 Actual Area (in Sqft) 4131.225956	DU 2939.090909 Excess Steel used (1kg/sqft) 849859.5146 Excess Steel used (1kg/sqft) 4131.225956 Excess Steel used	Sqmtr) 3356.22 Avg. Rate per kg of steel 41.85 Avg. Rate per kg of steel 41.85	Sqft) 36042.79596 Excess Amount paid 3,55,66,620.69 Excess Amount paid 1,72,891.81 Excess Amount	used (1kg/sqft)	per kg of steel	paid
Type of Flat     Contract Area     Actual Area (in Sqt)     Actual Area (in Sqt)     Excess Steel used (1kg/sqft)     Avg. Rate per kg     Excess Amount paid       Electric Sub Station     240     126.37     1357.147912     1357.147912     41.85     56,796.64	Type of Flat External Development works for 11 acres Type of Flat Shopping Complex Type of Flat	External Devel Contract Area 66282 Shopping Contract Area 325 Communi Contract Area	opment works Actual Area (in Sqmtr) 79136.91 Complex Actual Area (in Sqmtr) 384.69 ty Centre Actual Area (in Sqmtr)	Std. Area for planned DU 2650 Actual Area (in Sqft) 849859.5146 Actual Area (in Sqft) 4131.225956 Actual Area (in Sqft)	DU 2933.090909 Excess Steel used (1kg/sqft) Excess Steel used (1kg/sqft) 4131.225956 Excess Steel used (1kg/sqft)	Sqmtr) 3356.22 Avg. Rate per kg of steel 41.85 Avg. Rate per kg of steel 41.85 Avg. Rate per kg of steel	Sqft) 36042.79596 Excess Amount paid 3,55,66,620.69 Excess Amount paid 1,72,891.81 Excess Amount paid	used (1kg/sqft)	per kg of steel	paid
Type of Flat     Contract Area     Actual Area (in Sqt)     Actual Area (in Sqt)     Excess Steel used (1kg/sqft)     Avg. Rate per kg     Excess Amount paid       Electric Sub Station     240     126.37     1357.147912     1357.147912     41.85     56,796.64	Type of Flat External Development works for 11 acres Type of Flat Shopping Complex Type of Flat	External Devel Contract Area 66282 Shopping Contract Area 325 Communi Contract Area	opment works Actual Area (in Sqmtr) 79136.91 Complex Actual Area (in Sqmtr) 384.69 ty Centre Actual Area (in Sqmtr)	Std. Area for planned DU 2650 Actual Area (in Sqft) 849859.5146 Actual Area (in Sqft) 4131.225956 Actual Area (in Sqft)	DU 2933.090909 Excess Steel used (1kg/sqft) Excess Steel used (1kg/sqft) 4131.225956 Excess Steel used (1kg/sqft)	Sqmtr) 3356.22 Avg. Rate per kg of steel 41.85 Avg. Rate per kg of steel 41.85 Avg. Rate per kg of steel	Sqft) 36042.79596 Excess Amount paid 3,55,66,620.69 Excess Amount paid 1,72,891.81 Excess Amount paid	used (1kg/sqft)	per kg of steel	paid
Contract Area         Sqmtr)         Clkg/sqrtr)         of steel         paid           Electric Sub Station         240         126.37         1357.147912         41.85         56,796.64	Type of Flat External Development works for 11 acres Type of Flat Shopping Complex	110 External Devel Contract Area 66282 Shopping Contract Area 325 Communi Contract Area 510	opment works Actual Area (in Sqmtr) 79136.91 Complex Actual Area (in Sqmtr) 384.69 ty Centre Actual Area (in Sqmtr) 1357.52	Std. Area for planned DU 2650 Actual Area (in Sqft) 849859.5146 Actual Area (in Sqft) 4131.225956 Actual Area (in Sqft)	DU 2939.090909 Excess Steel used (1kg/sqft) 849859.5146 Excess Steel used (1kg/sqft) 4131.225956 Excess Steel used (1kg/sqft) 14578.51638	Sqmtr) 3356.22 Avg. Rate per kg of steel 41.85 Avg. Rate per kg of steel 41.85 Avg. Rate per kg of steel 41.85	Sqft) 36042.79596 Excess Amount paid 3,55,66,620.69 Excess Amount paid 1,72,891.81 Excess Amount paid 6,10,110.91	used (1kg/sqft)	per kg of steel	paid
Electric Sub Station         240         126.37         1357.147912         1357.147912         41.85         56,796.64	Type of Flat External Development works for 11 acres Type of Flat Shopping Complex Type of Flat Community Centre	110 External Devel Contract Area 66282 Shopping Contract Area 325 Communi Contract Area 510	122 opment works Actual Area (in Sqmtr) 79136.91 Complex Actual Area (in Sqmtr) 384.69 ty Centre Actual Area (in Sqmtr) 1357.52	Std. Area for planned DU 2650 Actual Area (in Sqft) 849859.5146 Actual Area (in Sqft) 4131.225956 Actual Area (in Sqft) 14578.51638	DU 2939.090999 Excess Steel used (1kg/sqft) 849859.5146 Excess Steel used (1kg/sqft) 4131.225956 Excess Steel used (1kg/sqft) 14578.51638	Sqmtr) 3356.22 Avg. Rate per kg of steel 41.85 Avg. Rate per kg of steel 41.85 Avg. Rate per kg of steel 41.85	Sqft) 36042.79596 Excess Amount paid 3,55,66,620.69 Excess Amount paid 1,72,891.81 Excess Amount paid 6,10,110.91 Excess Amount	used (1kg/sqft)	per kg of steel	paid
	Type of Flat External Development works for 11 acres Type of Flat Shopping Complex Type of Flat Community Centre	110 External Devel Contract Area 66282 Shopping Contract Area 325 Communi Contract Area 510	opment works Actual Area (in Sqmtr) 79136.91 Complex Actual Area (in Sqmtr) 384.69 ty Centre Actual Area (in Sqmtr) 1357.52 IS Actual Area (in	Std. Area for planned DU 2650 Actual Area (in Sqft) 849859.5146 Actual Area (in Sqft) 4131.225956 Actual Area (in Sqft) 14578.51638	DU 2939.090999 Excess Steel used (1kg/sqft) 849859.5146 Excess Steel used (1kg/sqft) 4131.225956 Excess Steel used (1kg/sqft) 14578.51638	Sqmtr) 3356.22 Avg. Rate per kg of steel 41.85 Avg. Rate per kg of steel 41.85 Avg. Rate per kg of steel 41.85	Sqft) 36042.79596 Excess Amount paid 3,55,66,620.69 Excess Amount paid 1,72,891.81 Excess Amount paid 6,10,110.91 Excess Amount	used (1kg/sqft)	per kg of steel	paid
TOTAL EXCESS AMOUNT CLAIMED FOR CONTRACT ITEMS 9 31 41 098 63	Type of Flat External Development works for 11 acres Type of Flat Shopping Complex Type of Flat Community Centre	External Devel Contract Area 66282 Shopping Contract Area 325 Communi Contract Area 510 Est Contract Area	122 opment works Actual Area (in Sqmtr) 79136.91 Complex Actual Area (in Sqmtr) 384.69 ty Centre Actual Area (in Sqmtr) 1357.52 S Actual Area (in Sqmtr)	Std. Area for planned DU 2650 Actual Area (in Sqft) Actual Area (in Sqft) 4131.225956 Actual Area (in Sqft) 14578.51638 Actual Area (in Sqft)	DU 2939.090999 Excess Steel used (1kg/sqft) Excess Steel used (1kg/sqft) 4131.225956 4131.225956 Excess Steel used (1kg/sqft) 14578.51638 Excess Steel used (1kg/sqft)	Sqmtr) 3356.22 Avg. Rate per kg of steel 41.85 Avg. Rate per kg of steel 4.1.85 Avg. Rate per kg of steel 4.1.85	Sqft) 36042.79596 Excess Amount paid 3,55,66,620.69 Excess Amount paid 1,72,891.81 Excess Amount paid 6,10,110.91 Excess Amount paid	used (1kg/sqft)	per kg of steel	paid
	Type of Flat External Development works for 11 acres Type of Flat Shopping Complex Type of Flat Community Centre	External Devel Contract Area 66282 Shopping Contract Area 325 Communi Contract Area 510 Est Contract Area	122 opment works Actual Area (in Sqmtr) 79136.91 Complex Actual Area (in Sqmtr) 384.69 ty Centre Actual Area (in Sqmtr) 1357.52 S Actual Area (in Sqmtr)	Std. Area for planned DU 2650 Actual Area (in Sqft) Actual Area (in Sqft) 4131.225956 Actual Area (in Sqft) 14578.51638 Actual Area (in Sqft)	DU 2939.090999 Excess Steel used (1kg/sqft) Excess Steel used (1kg/sqft) 4131.225956 4131.225956 Excess Steel used (1kg/sqft) 14578.51638 Excess Steel used (1kg/sqft)	Sqmtr) 3356.22 Avg. Rate per kg of steel 41.85 Avg. Rate per kg of steel 4.1.85 Avg. Rate per kg of steel 4.1.85	Sqft) 36042.79596 Excess Amount paid 3,55,66,620.69 Excess Amount paid 1,72,891.81 Excess Amount paid 6,10,110.91 Excess Amount paid	used (1kg/sqft)	per kg of steel	paid

#### Detail of Excess amount paid is mentioned in bellow attached annexure:

#### 7. Excess amount charged by Contractor:

During our review a discrepancy has been noted where the Contractor has charged INR 15,00,000 and INR 7,00,000 on account of Horticulture and Miscellaneous work respectively, whereas it has been communicated to us by the society that no work regarding Horticulture

was undertaken or Performed by the Contractor but the amount has been certified by Site Engineer and Architect, similarly no detail regarding the Miscellaneous work was also available in society records.

#### 8. Absence of Test Reports for Civil Work

During our audit of the civil construction work, it has come to our attention that test reports for the civil work have not been provided or documented. The absence of these critical test reports raises concerns about the quality, safety, and compliance of the constructed infrastructure.

#### Impact of such negligence may result in following:

- a. **Quality Assurance**: The absence of documented test reports undermines the ability to verify the quality of the civil work, leaving doubts about the structural integrity, durability, and adherence to industry standards.
- b. **Safety Implications**: The lack of documented test reports can pose safety risks to residents and occupants of the housing society. Without proper testing, there may be hidden defects or weaknesses in the construction that could compromise safety.
- c. **Compliance Concerns**: The absence of test reports may indicate a lack of adherence to regulatory requirements and industry best practices, which can lead to legal and regulatory implications.

#### 9. Penalty to be Imposed on NG Constructions for delay in work:

As per Clause 35 "Compensation for Delay" of Contract, "*The contractor shall pay as compensation of an amount equal to INR 10,000 per day of delayed period subject to maximum of 10% of contract value*", As per the letter no. POMCHS/1523 dated 18<sup>th</sup> Aug'2018, Completion date of Project inclusive of all the extension shall be 31<sup>st</sup> October'2018 but the contractor failed to comply with the deadline provided to him in consequence to that Contractor is bound to **pay for Liquidated damages that amounts to INR 1,73,50,000/-**, refer below attached annexure for details:

Deadline for	Penalty	Delay in no.	Penalty	Penalty
Completion	calculated upto	of Days	per day	Amount
31-10-2018	01-08-2023	1735	10000	1,73,50,000.00

#### 10. Discrepancy in Work Certification by Site Engineer and Architect in Running Bills:

During our review of running bills approved by Site Engineer and Architect, various instances have been noticed where a discrepancy has been identified concerning the certification of work completed in running bills. It is observed that there was inconsistency between the work certifications provided by the site engineer and the architect in two perpetual Running bills as work certified in one running bill alters to uncertified in its successor running bill. Such discrepancies raise concerns about the accuracy of progress assessment, financial reporting, and potential misrepresentations.

Some of the Instances highlighting such discrepancies are below:

Vendor name	State	e Natu	re Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Total Area (S qm) to be	Total Area (Sqm)	Rate per Sq. mtr. (INR)	Total % age by NG	sage certified b Structure Eng	% age y certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	r Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Society
NG Constructions					il External	Boundary wall i/c guard	Brick work and Finishing Brick work and Finishing	13-10-2014 03-11-2014					67321 67321	950 950	25 2 25 2	2 2	1 21 1 20	1,40,70,089.00 1,40,70,089.00	1,34,30,539.50	1,34,30,539.50 1,27,90,990.00	6,64,005.87 6,32,386.55						1,40,94,545.37 1,34,23,376.55	
Vendor name	State	e Natu	re Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	of Flat	Area per Flat	Total Area (S qm) to be	Area (Sqm)	Rate per Sq. mtr. (INR)	Total s age by NG	% age certified b Structure Eng	%age y certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	r Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Society
NG Constructions NG Constructions	Haryan Haryan				5 B 5 B		Completion of Electrical work Completion of Electrical work	03-11-2014 20-11-2014	RA-13 RA-14	8		741.72 741.72	741.58 741.58	8000 8000		5	5 5	2,96,632.00 2,96,632.00	2,96,632.00 2,37,305.60	2,96,632.00 2,37,305.60	14,665.49 11,732.39						3,11,297.49 2,49,037.99	J
Vendor name	State	e Notu na Civil	re Type	Block	Flat Type	Area Basement under Building	Material Desc.	Invoice receipts Date 03-11-2014	Bill. No. RA-13	Total No of Flat	Area per Flat	Total Area (S qm) to be 741.72	Total Area (Sqm) 741.58	Rate per S q. mtr. (INR) 8000	Total s age by NG	sage certified b Structure Eng	sage y certified by Architect	Amount claimed by NG 2,96,632.00	Amount certified by Structure Eng 2,96,632.00	Amount certified by Architect 2,96,632.00	Service Tax 14,665.49	TDS deducte d	Recovery of Mob. Adv. Made	r Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount 3,11,297.49	WCT deposite d by Society
NG Constructions		na Civil			4 B	Basement under Building	Completion of Electrical work	20-11-2014		8			741.58			5	4 4	2,96,632.00	2,37,305.60	2,37,305.60	11,732.39						2,49,037.99	/
Vendor name	State	e Natu	re Type	Block	Flat Type	Area Boundary wall i/c guard	Material Desc.	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Total Area (Sqm) to be	Total Area (Sqm)	Rate per Sq. mtr. (INR)	Total % age % age by NG	sage certified b Structure Eng	%age y certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	r Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Remarks Society
NG Constructions	Haryan Haryan	na Civil na Civil	Invoice		il External	room Boundary wall i/c guard	Brick work and Finishing Brick work and Finishing	03-11-2014 20-11-2014	RA-13 RA-14	-			67321 67321	950 950	25 2	2 2 2 2	1 20 0 20	1,40,70,089.00 1,40,70,089.00	1,34,30,539.50 1,27,90,990.00	1,27,90,990.00 1,27,90,990.00	6,32,386.55 6,32,386.55						1,34,23,376.55 1,34,23,376.55	
Vendor name	State	e Natu	re Type	Block	Flat Type	Area	Material Desc. P/Fixing Upvc/CI Internal &	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Total Area (Sqm) to be	Total Area (Sqm)	Rate per Sq. mtr. (INR)	Total % age % age by NG	s age certified b Structure Eng	%age y certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	r Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Society
NG Constructions	Haryan	na Civil	Invoice		6 B	Main Building	External upto 1st M/H P/Fixing Upvc/CI Internal &	20-11-2014	RA-14	:	108.57	217.14	217.14	11856	2	2 1.	5 15	51,488.24	38,616.18	38,616.18	1,909.18						40,525.36	
NG Constructions	Haryan	na Civil	Invoice		6 B	Main Building	External upto 1st M/H	08-12-2014	RA-15		108.57	217.14 Total	217.14	11856		2 %aae	1 1 5 ope	51,488.24	25,744.12	25,744.12	1,272.79		Recovery	Recovery		Security	27,016.91	wct
Vendor name	State		те Туре	Block	Flat Type		Material Desc. P/Fixing Upvc/CI Internal &	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Area (Sqm) to be	Area (Sqm)	Rate per Sq. mtr. (INR)	Total % age % age by NG	certified b Structure Eng	by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	of Mob. Adv. Made	of Mob. Adv. To be	Security Money Amount	Money deducte d	Net Payable Amount	deposite d by Society
NG Constructions	Haryan		Invoice		6 B 6 B		External upto 1st M/H P/Fixing Upvc/CI Internal & External upto 1st M/H	20-11-2014				30.06	30.05	8160		2 1	5 1.5	4,904.16	3,678.12	3,678.12	181.85						3,859.97	
Vendor name	State		re Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Total Area (S qm) to be	Total Area (Sqm)	Rate per Sq. mtr. (INR)	Total s age s age by NG	sage certified b Structure Eng	sage y certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	r Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Remarks Society
NG Constructions						Main Building	P/Fixing Upvc/Cl Internal & External upto 1st M/H P/Fixing Upvc/Cl Internal & External upto 1st M/H	20-11-2014 08-12-2014			138.95 138.95					2 1	5 1.5 1 1	32,947.82 32,947.82	24,710.87	24,710.87 16,473.91	1,221.71 814.47						25,932.57 17,288.38	
Vendor name	State	e Natu	те Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Total Area (Sqm) to be	Total Area (Sqm)	Rate per Sq. mtr. (INR)	Total % age % age by NG	sage certified b Structure Eng	%age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	Recovery of Mab. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Remarks Society
NG Constructions	Haryan	na Civil	Invoice		1 4 BHK	Balcony	P/Fixing Upvc/CI Internal & External upto 1st M/H	20-11-2014	RA-14		25.09	25.09	25.09	8160	2	2 1	5 1.5	4,094.69	3,071.02	3,071.02	151.83						3,222.85	
NG Constructions	Haryan	na Civil	Invoice		1 4 BHK		P/Fixing Upvc/CI Internal & External upto 1st M/H	08-12-2014	RA-15		25.09	25.09	25.09	8160	2	2	1 1	4,094.69	2,047.34	2,047.34	101.22						2,148.56	
Vendor name	State	e Notu	re Type	Block	Flat Type	Area	Material Desc. P/Fixing Upvc/CI Internal &	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Total Area (S qm) to be	Total Area (Sqm)	Rate per S q. mtr. (INR)	Total % age % age by NG	sage certified b Structure Eng	sage y certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	r Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Society
NG Constructions	Haryan	na Civil	Invoice		2 5 BHK	Main Building	External upto 1st M/H P/Fixing Upvc/Cl Internal &	20-11-2014	RA-14		176.16	176.16	176.16	11856	2	2 1	5 1.5	41,771.06	31,328.29	31,328.29	1,548.87						32,877.17	
NG Constructions	Haryan	na Civil	Invoice		2 5 BHK		External upto 1st M/H	08-12-2014	RA-15		176.16	176.16				2	1 1	41,771.06	20,885.53	20,885.53	1,032.58			0		Course in the	21,918.11	WCT
Vendor name	State	e Natu	re Type	Block	Flat Type	Area	Material Desc. P/Fixing Upvc/CI Internal &	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Area (Sqm) to be	Total Area (Sqm)	Rate per Sq. mtr. (INR)	Total soge by NG	certified b	sage y certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	of Mob. Adv. Made	r Recovery of Mob. Adv. To be	Security Money Amount	Money deducte d	Net Payable Amount	deposite d by Remarks Society
NG Constructions							External upto 1st M/H P/Fixing Upvc/CI Internal & External upto 1st M/H	20-11-2014			31.16		31.16	8160		2 1	5 15	5,085.31	3,813.98	3,813.98	188.56						4,002.55	
NG Constructions	naryan		Involo			Balcony	external upto 1st wym	Invoice	KA-15			Total		Rate per	% oge	sage	5 age		Amount	2,542.00		TDS	Recovery	Recovery	Security	Security		wcr
Vendor name	State Haryan		re Type	Block	Flat Type 3 2 BHK		Material Desc. P/Fixing Upvc/CI Internal & External upto 1st M/H	Date	Bill. No.	Total No of Flat	Area per Flat 78.54	Area (S qm) to be 78.54	Area (Sqm) 78.54	Sq. mtr. (INR)	s age by NG	certified b Structure Eng	by Architect	Amount claimed by NG 18,623.40	certified by Structure Eng 13,967.55	certified by Architect 13,967.55	Service Tax 690.56	deducte d	of Mob. Adv. Made	of Mob. Adv. To be	Money Amount	Money deducte d	Net Payable Amount 14,658.11	deposite d by Remarks Society
NG Constructions		na Civil					P/Fixing Upvc/CI Internal & External upto 1st M/H	08-12-2014			78.54		78.54			2	1 1	18,623.40	9,311.70	9,311.70	460.37						9,772.07	
Vendor name	State	e Natu	re Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Total Area (S qm) to be	Total Area (Sqm)	Rate per S q. mtr. (INR)	Total % age % age by NG	s age certified b Structure Eng	%age y certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	r Recovery of Mab. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Remarks Society
NG Constructions	Haryan Haryan				3 2 BHK 3 2 BHK	Balcony	P/Fixing Upvc/CI Internal & External upto 1st M/H P/Fixing Upvc/CI Internal & External upto 1st M/H	20-11-2014 08-12-2014			8.36			8160 8160		2 1	5 1.5 1 1	1,364.35 1,364.35	1,023.26 682.18	1,023.26 682.18	50.59 33.73						1,073.85 715.90	
Vendor name	State			Block	Туре	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Total Area (S qm) to be	Area (Sqm)	Rate per Sq. mtr. (INR)	Total s age s age by NG	sage certified b Structure Eng	sage y certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	r Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Society
	Haryan Haryan				6 B 6 B		P/Fixing Cpvc/GI Pipes P/Fixing Cpvc/GI Pipes	04-02-2015 02-03-2015			108.798 108.798	3263.94 3263.94					2 2 5 15	9,67,431.82 9,67,431.82	7,73,945.45 5,80,459.09	7,73,945.45 5,80,459.09	38,263.86 28,697.90						8,12,209.32 6,09,156.99	
Vendor name	State	e Natu	re Type	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No of Flat	Area per Flat	Total Area (S qm) to be	Total Area (Sqm)	Rate per Sq. mtr. (INR)	Total % age % age by NG	sage certified b Structure Eng	sage certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	r Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Society
NG Constructions	Haryan	na Civil	Invoice	•	6 B	Main Building	Completion of Sanitary and Water Supply Fitting & Fixtures Completion of Sanitary and	04-02-2015	RA-18		108.798	217.60	217.60	11856	2.5 2	5	2 2	64,495.45	51,596.36	51,596.36	2,550.92						54,147.29	
NG Constructions	Haryan	na Civil	Invoice		6 B		Water Supply Fitting & Fixtures	02-03-2015	RA-19	:	108.798	217.60	217.60	11856	2.5 2	5 1	S 15	64,495.45	38,697.27	38,697.27	1,913.19						40,610.47	ļ
Vendor name	State			Block	Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Total Area (S qm) to be	Area (Sqm)	Rate per Sq. mtr. (INR)	Total % age % age by NG	Eng	by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	r Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Remarks Society
NG Constructions NG Constructions					6 B 6 B		P/Fixing Cpvc/GI Pipes P/Fixing Cpvc/GI Pipes	04-02-2015 02-03-2015		3	15.036 <b>A</b> 03	451.08 451.08	451.08 451.08				2 2 5 15	92,020.32 92,020.32	73,616.26 55,212.19	73,616.26 55,212.19	3,639.59 2,729.69						77,255.84 57,941.88	

Vendor name	State	Nature	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Total Area (Sqm) to be	Total Area (S qm)	Rate per Sq. mtr. (INR)	Total % age	%age claimed by NG	%age certified by Structure Eng	sage certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Society	Remarks
NG Constructions	Haryana	a Civil	Invoice	6	в	Balcony	Completion of Sanitary and Water Supply Fitting & Fixtures	04-02-2015	RA-18	2	15.036	30.07	30.07	8160	2.5	25		2 2	6,134.69	4,907.75	4,907.75	242.64						5,150.39		
NG Constructions	Haryana	a Civil	Invoice	6	в	Balcony	Completion of Sanitary and Water Supply Fitting & Fixtures	02-03-2015	RA-19	2	15.036	30.07	30.07	8160	2.5	2.5	1	5 15	6,134.69	3,680.81	3,680.81	181.98						3,862.79		
Vendor name	State	Nature	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Total Area (Sqm) to be	Total Area (Sqm)	Rate per Sq. mtr. (INR)	Total % age	% age claimed by NG	%age certified by Structure Eng	% age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Society	Remarks
NG Constructions NG Constructions	Haryana Haryana	-	Invoice Invoice	5		Main Building Main Building	P/Fixing Cpvc/GI Pipes P/Fixing Cpvc/GI Pipes	04-02-2015 02-03-2015			108.798 108.798	2937.55 2937.55	2937.55 2937.55			25 25	1	2 2 5 1.5	8,70,688.63 8,70,688.63	6,96,550.91 5,22,413.18	6,96,550.91 5,22,413.18	34,437.48 25,828.11						7,30,988.38 5,48,241.29		
Vendor name	State	Nature	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Total Area (S qm) to be	Total Area (S qm)	Rate per Sq. mtr. (INR)	Total % age	%age claimed by NG	%age certified bj Structure Eng	% age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Society	Remarks
NG Constructions NG Constructions	Haryana Haryana		Invoice Invoice	5		Balcony Balcony	P/Fixing Cpvc/GI Pipes P/Fixing Cpvc/GI Pipes	04-02-2015 02-03-2015		27		405.972 405.972	405.97 405.97	8160 8160		25 25	1		82,818.29 82,818.29	66,254.63 49,690.97	66,254.63 49,690.97	3,275.63 2.456.72						69,530.26 52,147.69		
ind constructions	noryone	, crm	monee			corcorry .	i friang opiel or ripes		10122		25050	Total		0100		23	sage	sage	uguines			2,130.72		Recovery	Recovery		Security	34,211.00	WCT	
Vendor name	State	Nature	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Area (Sqm) to be	Total Area (S qm)	Rate per Sq. mtr. (INR)	Total % age	%age claimed by NG	suge certified by Structure Eng	y certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	of Mob. Adv. Made	of Mob. Adv. To be	Security Money Amount	Money deducte d	Net Payable Amount	deposite d by Society	Remarks
NG Constructions NG Constructions	Haryana		Invoice Invoice			Main Building Main Building	P/Fixing Cpvc/GI Pipes P/Fixing Cpvc/GI Pipes	04-02-2015 02-03-2015			108.798 108.798	1523.17 1523.17	1523.17 1523.17			25		2 2	4,51,468.18 4,51,468.18	3,61,174.54 2,70,880.91	3,61,174.54	17,856.47						3,79,031.01 2,84,273.26		
Vendor name	State	Nature	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Total Area (Sqm) to be	Total Area (Sqm)	Rate per Sq. mtr. (INR)	Total % age	%age claimed by NG	% age certified by Structure Eng	s age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Society	Remarks
	Haryana Haryana		Invoice Invoice	4		Balcony Balcony	P/Fixing Cpvc/GI Pipes P/Fixing Cpvc/GI Pipes	04-02-2015 02-03-2015		14	15.036 15.036	210.50 210.50	210.50 210.50			25 25	1	2 1	42,942.82 42,942.82	34,354.25 25,765.69	34,354.25 25,765.69	1,698.47 1,273.86						36,052.73 27,039.55		
Vendor name	State	Nature	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Total Area (Sqm) to be	Total Area (S qm)	Rate per Sq. mtr. (INR)	Total % age	%age claimed by NG	% age certified by Structure Eng	s age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Society	Remarks
NG Constructions NG Constructions	Haryana Haryana		Invoice Invoice	3		Main Building Main Building	P/Fixing Cpvc/GI Pipes P/Fixing Cpvc/GI Pipes	04-02-2015			108.798	1958.36 1958.36	1958.36 1958.36			25	1	2 2	5,80,459.09 5,80,459.09	4,64,367.27 3,48,275.45	4,64,367.27 3,48,275.45	22,958.32 17,218.74						4,87,325.59 3,65,494.19		
Vendor name	State	Nature	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Total Area (Sqm) to be	Total Area (S qm)	Rate per Sq. mtr. (INR)	T otal % age	%age claimed by NG	%age certified by Structure Eng	% age ( certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Society	Remarks
	Haryana Haryana		Invoice Invoice	3		Balcony Balcony	P/Fixing Cpvc/GI Pipes	04-02-2015 02-03-2015		18	15.036 15.036	270.648	270.65 270.65			25		2 1	55,212.19 55,212.19	44,169.75 33,127.32	44,169.75 33,127.32	2,183.75 1,637.81						46,353.51 34,765.13		
Vendor name	State	Nature	Туре	Block	Flat Type	Area	P/Fixing Cpvc/GI Pipes Material Desc.	Invoice receipts Date	Bill. No.		Area per Flat	Total Area (Sqm) to be	Total Area (S qm)	Rate per Sq. mtr. (INR)	Total % age	sage claimed by NG	% age certified by Structure Eng	s age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Society	Remarks
	Haryana		Invoice			Main Building	P/Fixing Cpvc/GI Pipes	04-02-2015			141.947	141.95	141.95			25		2 2	42,073.09	33,658.47	33,658.47	1,664.07						35,322.55		
NG Constructions	Haryana	Civil	Invoice	1	4 BHK	Main Building	P/Fixing Cpvc/GI Pipes	02-03-2015	RA-19	1	141.947	141.95	141.95	11856	2.5	2.5	1	1.5	42,073.09	25,243.85	25,243.85	1,248.06						26,491.91		
Vendor name	State	Nature	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Total Area (Sqm) to be	Total Area (S qm)	Rate per Sq. mtr. (INR)	Total % age	% age claimed by NG	%age certified by Structure Eng	% age certified by Architect	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Made	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Society	Remarks
NG Constructions	Haryana	a Civil	Invoice	1	4 BHK	Main Building	Completion of DB & MCB, Sub Main Wiring, Meter Board and Earthing Completion of DB & MCB, Sub	04-02-2015	RA-18	1	141.947	141.95	141.95	11856	2	2	1	5 1.5	33,658.47	25,243.85	25,243.85	1,248.06						26,491.91		
NG Constructions	Haryana	a Civil	Invoice	1	4 BHK	Main Building	Main Wiring, Meter Board and Earthing	02-03-2015	RA-19	1	141.947	141.95	141.95	11856	2	2		1 1	33,658.47	16,829.24	16,829.24	832.04						17,661.27		

Vendor name	State	Nature	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Total Area (S gm) to	T otal Area	Rate per Sq. mtr. (INR)	Total age	oge imed NO	hage hage rtified by certifie tructure by Eng Archite	d Amount claimed by NG	Amount certified by	Amount certified by Architect	Service Tax	TDS deducte	Recovery of Mob. Adv.	Recovery of Mab. Adv. To	Security Money	Security Money deducte	Net Payable Amount	WCT deposite d by Remarks
NG Constructions	Haryana	Civil	Invoice	1	4 BHK	Main Building	Painting of Walls, Ceiling, Door, Window & Raiings	Date 04-02-2015	RA-18		141.947	be 141.95	( <b>5 qm</b> ) 141.95		Цŕ	2	Eng Architer	s 33,658.47	25,243.85	25,243.85	1,248.06	d	Mode	be	Amount	d	26,491.91	Society
NG Constructions	Haryana	Givil	Invoice	1	4 BHK	Main Building	Painting of Walls, Ceiling, Door, Window & Raiings	02-03-2015	RA-19	1	141.947	141.95	141.95	11856	2	2		33,658.47	16,829.24	16,829.24	832.04						17,661.27	
Vendor name	State	Noture	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Total Area (Sqm) to be	Total Area (Sqm)	Rote per Sq. mtr. (INR)			* age * age rtified by certifie tructure by Eng Archites	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	of Mob. Adv. Mode	of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	deposite d by Remarks Society
	Haryana Haryana		Invoice Invoice		4 BHK 4 BHK	Balcony Balcony	P/Fixing Cpvc/GI Pipes P/Fixing Cpvc/GI Pipes	04-02-2015 02-03-2015		1	28.351 28.351	28.35 28.35	28.35 28.35	8160 8160		25 25	2	2 5,783.60 5 5,783.60	4,626.88 3,470.16	4,626.88 3,470.16	228.75 171.56						4,855.64 3,641.73	
Vendor name	State	Nature	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Total Area (Sqm) to be	Total Area (Sqm)	Rote per Sq. mtr. (INR)	i orai clai		rtified by certifie tructure by Eng Archite	d Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Mode	Recovery of Mab. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Society
NG Constructions	Haryana	Civil	Invoice	1	4 BHK	Balcony	Completion of DB & MCB, Sub Main Wiring, Meter Board and Earthing	04-02-2015	RA-18		28.351	28.35	28.35	8160	2	2	15 1	5 4,626.88	3,470.16	3,470.16	171.56						3,641.73	
NG Constructions	Haryana	Civil	Invoice	1	L 4 BHK	Balcony	Completion of DB & MCB, Sub Main Wiring, Meter Board and Earthing	02-03-2015	RA-19	1	28.351	28.35	28.35	8160	2	2	1	4,626.88	2,313.44	2,313.44	114.38						2,427.82	
Vendor name	State	Nature	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Total Area (Sqm) to be	Total Area (Sqm)	Rote per Sq. mtr. (INR)	c lai	5	trified by certifie tructure by Eng Archites	d Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Mode	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Society
NG Constructions	Haryanz		Invoice		4 ВНК 4 ВНК	Balcony	Painting of Walls, Ceiling, Door, Window & Raiings Painting of Walls, Ceiling, Door, Window & Raiings	04-02-2015		1	28.351	28.35	28.35 28.35			2	1.5 1	5 4,626.88	2,313.44	3,470.16	171.56						3,641.73	
Vendor name	State	Nature	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Total Area (S qm) to be	Totol Area (Sqm)	Rate per Sq. mtr. (INR)	Total clai	oge imed NO S	soge soge rtified by certifie tructure by Eng Archite	d Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv.	Recovery of Mob. Adv. To	Security Money Amount	Security Money deducte	Net Payable Amount	deposite d by Remarks
NG Constructions NG Constructions	Haryana Haryana		Invoice Invoice		2 5 BHK 2 5 BHK	Main Building Main Building	P/Fixing Cpvc/GI Pipes P/Fixing Cpvc/GI Pipes	04-02-2015 02-03-2015		1	183.150 183.150	183.15	183.15 183.15	11856	2.5	2.5 2.5	2 1.5 1	2 54,285.66 54,285.66	43,428.53	43,428.53 32,571.40	2,147.11		mode	De		a	45,575.63 34,181.73	Society
Vendor name	State	Nature	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Total Area (Sqm) to be	Total Area (Sqm)	Rote per Sq. mtr. (INR)		oge imed NG	sage sage rtified by certifie tructure by Eng Archite	Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Mode	Recovery of Mab. Adv. To be	Security Money Amount	Security Money deducte	Net Payable Amount	WCT deposite d by Society
NG Constructions					5 BHK	Main Building	Completion of DB & MCB, Sub Main Wiring, Meter Board and Earthing	04-02-2015			183.150	183.15	183.15	11856			15 1	5 43,428.53	32,571.40	32,571.40	1,610.33		made			ŭ	34,181.73	Jocary
NG Constructions	Haryanz	Civil	Invoice			Main Building	Completion of DB & MCB, Sub Main Wiring, Meter Board and Earthing	02-03-2015			183.150			11856		2	1	43,428.53	21,714.26	21,714.26	1,073.55						22,787.82	
Vendor name	State	Nature	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Total Area (5 qm) to	Total Area (Sqm)	Rote per Sq. mtr. (INR)	Total clai	NG S	sage rtified by tructure by	d Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv.	Recovery of Mob. Adv. To	Security Money	Security Money deducte	Net Payable Amount	WCT deposite d by Remarks
NG Constructions	Haryana	Givil	Invoice	2		Main Building	Painting of Walls, Ceiling, Door, Window & Raiings	Date 04-02-2015	RA-18		183.150	be 183.15	( <b>S qm</b> ) 183.15			2	Eng Archite	t 5 43,428.53	Structure Eng 32,571.40	Architect 32,571.40	1,610.33	-	Mode	be	Amount	d	34,181.73	Society
NG Constructions	Haryana	Civil	Invoice	2	5 ВНК	Main Building	Painting of Walls, Ceiling, Door, Window & Raiings	02-03-2015	RA-19	1	183.150	183.15	183.15		2	2	-	43,428.53	21,714.26	21,714.26	1,073.55						22,787.82	
Vendor name	State	Noture	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Total Area (Sqm) to be	Total Area (Sqm)	Rote per Sq. mtr. (INR)	by	NOS	sage sage rtified by certifie tructure by Eng Archite	d Amount claimed by NC	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Mode	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Remarks Society
NG Constructions NG Constructions	Haryana Haryana	a Civil Civil	Invoice Invoice	2	2 S BHK S BHK	Balcony Balcony	P/Fixing Cpvc/GI Pipes P/Fixing Cpvc/GI Pipes	04-02-2015 02-03-2015		1	33.174 33.174	33.17 33.17	33.17 33.17			25 25	2 15 1	2 6,767.50 5 6,767.50	5,414.00 4,060.50	5,414.00 4,060.50	267.67 200.75						5,681.66 4,261.25	
Vendor name	State	Nature	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Total Area (Sqm) to be	Total Area (Sqm)	Rate per S.q. mtr. (INR)	Total sage by	oge imed NG	sage sage rtified by certifie tructure by Eng Archites	d Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Mode	of Mob. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	WCT deposite d by Society
NG Constructions	Haryana	Givil	Invoice	2	2 5 BHK	Balcony	Main Wiring, Meter Board and Earthing Completion of DB & MCB, Sub	04-02-2015	RA-18	1	33.174	33.17	33.17	8160	2	2	1.5 1	5 5,414.00	4,060.50	4,060.50	200.75						4,261.25	
NG Constructions	Haryana	Givil	Invoice	2	2 S BHK	Balcony	Main Wiring, Meter Board and Earthing	02-03-2015	RA-19	1	33.174	33.17	33.17	8160	2	2	1	5,414.00	2,707.00	2,707.00	133.83						2,840.83	
Vendor name	State	Nature	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Total Area (5 qm) to be	Total Area (Sqm)	Rate per S.q. mtr. (INR)	c lai	imed S	trified by certifie tructure by Eng Archites	Amount claimed by NC	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv.	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte	Net Payable Amount	deposite d by Remarks
NG Constructions	Haryana	Givil	Invoice	2	2 5 BHK	Balcony	Painting of Walls, Ceiling, Door, Window & Raiings Painting of Walls, Ceiling,	04-02-2015	RA-18	1	33.174	33.17	33.17	8160	2	2	1.5 1	5 5,414.00	4,060.50	4,060.50	200.75		mode	De		a	4,261.25	Society
NG Constructions	Haryana	Civil	Invoice	2	5 BHK	Balcony		02-03-2015	RA-19	1	33.174	33.17 Total	33.17	8160	2	2	1 Noge Noge	5,414.00	2,707.00	2,707.00	133.83	TDS	Recovery	Recovery		Security	2,840.83	wer
Vendor name	State	Nature	Туре	Block	Flat Type	Area	Moterial Desc.	receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Area (Sqm) to be	Area (Sqm)	Sq. mtr. (INR)	Total age by	imed NO	rtified by certifie tructure by Eng Archites	d Amount claimed by NG t	certified by Structure Eng	certified by Architect	Service Tax	deducte d	of Mob. Adv. Made	of Mob. Adv. To be	Money Amount	Money deducte d	Net Payable Amount	deposite d by Remarks Society
NG Constructions	Haryana	Gvil	Invoice	13	8 2 BHK	Main Building	Main Wiring, Meter Board and Earthing Completion of DB & MCB, Sub	04-02-2015	RA-18	1	79.930	79.93	79.93	11856	2	2	15 1	5 18,953.00	14,214.75	14,214.75	702.78						14,917.53	
NG Constructions	Haryana	Civil	Invoice	13	2 BHK	Main Building	Main Wiring, Meter Board and	02-03-2015	RA-19	1	79.930	79.93	79.93	11856	2	2	1	1 18,953.00	9,476.50	9,476.50	468.52						9,945.02	
Vendor name	State	Nature	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Total Area (Sqm) to be	Total Area (Sqm)	Rote per Sq. mtr. (INR)		oge imed NG	sage sage rtified by certifie tructure by Eng Archited	d Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Mode	Recovery of Mab. Adv. To be	Security Money Amount	Security Money deducte d	Net Payable Amount	deposite d by Society
NG Constructions	Haryana	Givil	Invoice			Main Building	Painting of Walls, Ceiling, Door, Window & Raiings Painting of Walls, Ceiling,	04-02-2015		1	79.930	79.93	79.93			2	15 1	5 18,953.00	14,214.75	14,214.75	702.78						14,917.53	
NG Constructions	Haryana	Civil	Invoice		2 BHK	Main Building	Door, Window & Raiings	02-03-2015	RA-19	Total No.	79.930	79.93 Total Area	79.93 Total	Rate per		2 oge	sage sage rtified by certifie	18,953.00	9,476.50	9,475.50	468.52	TDS	Recovery of Mob.	Recovery of Mab.	Security	Security	9,945.02	WCT
Vendor name	State	restore	Туре	Block	Туре	Area	Material Desc.	receipts Date	Jin. No.	of Flat	Flat	(Sqm) to be	Area (Sqm)	Sq.mtr. (INR)	∿ oge by	NG S	tructure by Eng Archite	claimed by NG	certified by Structure Eng	certified by Architect	Tax	deducte d	Adv. Mode	Adv. To be	Amount	deducte d	Amount	d by Society
NG Constructions	Haryana	Givil	Invoice	13	2 BHK	Balcony	Main Wiring, Meter Board and Earthing Completion of DB & MCB, Sub	04-02-2015	RA-18	1	10.826	10.83	10.83	8160	2	2	1.5 1	5 1,766.80	1,325.10	1,325.10	65.51						1,390.62	
NG Constructions	Haryana	Civil	Invoice	13	2 BHK	Balcony	Main Wiring, Meter Board and Earthing	02-03-2015	RA-19	1	10.826	Total	10.83	8160	2	2	1	1,766.80	883.40	883.40	43.68	105	Recover	Recovery		Security	927.08	WCT
Vendor nome	State	Nature	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Area (S qm) to be	Total Area (Sqm)	Rote per Sq. mtr. (INR)	Total s age by	oge imed NO S	rtified by certifie tructure by Eng Archite	d Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	deducte d	of Mob. Adv. Mode	of Mob. Adv. To be	Security Money Amount	Money deducte d	Net Payable Amount	deposite d by Society
NG Constructions	Haryanz	Givil	Invoice			Balcony	Painting of Walls, Ceiling, Door, Window & Raiings Painting of Walls, Ceiling, Door, Window & Raiings	04-02-2015		1	10.826	10.83	10.83			2	1.5 1	5 1,766.80	1,325.10	1,325.10	65.51						1,390.62	
Vendor name	State	Nature	Туре	Block	Flat	Area	Material Desc.	Invoice	Bill. No.	Total No. of Flat	Area per	Total Area (Sigm) to	Total	Rate per	Total Lai		sage sage rtified by certifie	Amount	Amount certified by	Amount certified by	Service	TD5 deducte	Recovery of Mob.	Recovery of Mob. Adv. To	Security Money	Security Money deducte	Net Payable	WCT deposite
					Туре		Completion of DB & MCB, Sub Main Wiring, Meter Board and	receipts Date		of Flat	Flat	(Sqm) to be	Area (Sqm)	Sq.mtr. (INR)	s oge by	5	tructure by Eng Archite	claimed by NG	Structure Eng	Architect	Tax	deducre	of Mob. Adv. Mode	Adv. To be	Amount	deducte d	Amount	d by Society
NG Constructions	Haryana	Civil	Invoice	1	4 BHK	Main Building	Main Wiring, Meter Board and Earthing Completion of DB & MCB, Sub Main Wiring, Meter Board and	02-03-2015	RA-19	1	141.947	141.95	141.95	11856	2	2	1	1 33,658.47	16,829.24	16,829.24	832.04						17,661.27	
NG Constructions	Haryana	Gvil	Invoice			Main Building	Earthing	20-03-2015		1	141.947	141.95 Total				0.75	0.75 0.3	12,621.93	12,621.93	12,621.93	624.03	TDS	Recovery	Recovery	Securit	Security	13,245.96	wct
Vendor name	State	Nature	Туре	Block	Flat Type	Area	Moterial Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Area (Sqm) to be	Total Area (Sqm)	Rate per S.q. mtr. (INR)	Total age by	oge imed NO S	nge nge rtified by certifie tructure by Eng Archited	d Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	deducte d	of Mob. Adv. Mode	of Mob. Adv. To be	Security Money Amount	Money deducte d	Net Payable Amount	deposite d by Society
NG Constructions	Haryana	Civil	Invoice	1	4 BHK	Balcony	Main Wiring, Meter Board and Earthing Completion of DB & MCB, Sub	02-03-2015	RA-19	1	28.351	28.35	28.35	8160	2	2	1	1 4,626.88	2,313.44	2,313.44	114.38						2,427.82	
NG Constructions	Haryana	Civil	Invoice	1	4 BHK	Balcony	Main Wiring, Meter Board and Earthing	20-03-2015	RA-20	1	28.351	28.35			2	0.75	0.75 0.1	1,735.08	1,735.08	1,735.08	85.78		Recover	Recover		Security	1,820.86	wet
Vendor name	State	Noture	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Area (Sqm) to be	Total Area (Sqm)	Rote per Sq. mtr. (INR)	Total sage by	oge imed NG	rtified by certifie tructure by Eng Archites	d Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	of Mob. Adv. Mode	of Mob. Adv. To be	Security Money Amount	Money deducte d	Net Payable Amount	deposite d by Society
NG Constructions	Haryanz	Givil	Invoice	2	2 5 BHK	Main Building	Completion of DB & MCB, Sub Main Wiring, Meter Board and Earthing	02-03-2015	RA-19	1	183.150	183.15	183.15	11856	2	2	1	1 43,428.53	21,714.26	21,714.26	1,073.55						22,787.82	
NG Constructions	Haryana	Civil	Invoice	2	2 5 BHK	Main Building	Completion of DB & MCB, Sub Main Wiring, Meter Board and Earthing	20-03-2015	RA-20	1	183.150	183.15	183.15	11856	2	0.75	0.75 0.3	5 16,285.70	16,285.70	16,285.70	805.16						17,090.86	
Vendor name	State	Noture	Туре	Block	Flat Type	Area	Material Desc.	Invoice receipts Date	Bill. No.	Total No. of Flat	Area per Flat	Total Area (Sqm) to be	Totol Area (Sqm)	Rate per Sq. mtr. (INR)	Total s age by	5	sage sage rtified by certifie tructure by Eng Archites	d Amount claimed by NG	Amount certified by Structure Eng	Amount certified by Architect	Service Tax	TDS deducte d	Recovery of Mob. Adv. Mode	Recovery of Mob. Adv. To be	Security Money Amount	Security Money deducte	Net Payable Amount	WCT deposite d by Society
NG Constructions	Hanner	Circl	Involo		5 BHK	Balcony	Completion of DB & MCB, Sub Main Wiring, Meter Board and Earthing	02-03-2015	RA-10	<u> </u>	33.174	33.17	33.17			,	ang Architer	1 5,414.00	2,707.00	2,707.00	133.83		mode	De		d	2,840.83	JCIETY
NG Constructions	Happing	Circl	invoice		5 BHK		Completion of DB & MCB, Sub Main Wiring, Meter Board and	20-03-2015			33.174					4	07	2.030.25	2,030.25	2,707.00	135.83						2,840.83	
	yurla	A	df					15					, 39.17					4,000.43	4,000.23		400.30	-						

#### 11. Non-Adherence to Payment Terms Through Unauthorized Partial Payments:

During our review of the financial transactions, it has been identified that partial payments have been made to the vendor that do not align with the specified payment terms. These partial payments have been made despite the absence of any contractual provision allowing for such partial payments. For Eg: As per my payment terms for Building work first 10% would be released when work for all storeys would be completed upto DPC level but it has been noted that partial payments were being made to vendor time to time for any part of work done by him even for 1% work as well.

Payment Schedule which was agreed between the POMSCHS and Contractor is as follows:

A. BUILDING WORK, COMMERCIAL, COMMUNITY CENTRE & BALCONY	
<ol> <li>Work complete upto DPC level (for all storeyes).</li> </ol>	10 %
<ol><li>Work complete upto lintel level including lintels.</li></ol>	8%
3. Work complete up to roof casting.	20 %
4. Completion of Brick Work.	6%
<ol> <li>Providing &amp; fixing electric conduits in slab and fan boxes.</li> </ol>	1.5%
and the start V talenhane conduits in walls and	
<ol> <li>Providing &amp; fixing electrical 1. V. telephone conduits in walls and fixing boxes in walls.</li> </ol>	2%
	2%
	e. 2%
	2.5%
9. Providing and fixing CPVC/GI pipes.	1
10 Providing and fining all the second secon	
10. Providing and fixing all door and window frames.	6%
11. Completion of internal plaster.	5%
12. Completion of external plaster.	6%
13. Completion of floors and skirting.	6%
14. Grinding and polishing of floors and dado.	1%
15. Completion of ceramic tiles and kitchen counter marble slab with sink.	4%
16. Completion of parapet walls and overhead tanks and Brick Coba.	2%
17. Completion of electric wiring with switch and sockets etc.	2.5%
18. Completion of DB with MCB, sub main wiring, meter board and earthing.	2%
19. Completion of door and window shutters with fittings.	6%
20. Completion of sanitary and water supply fittings and fixtures.	2.5%
<ol> <li>Painting of walls, ceiling, doors, window and railing etc. and repolishing of floors if required.</li> </ol>	0 97
22. Testing of water line, sewer line and electric points etc.	2 % 0.5 %
23. At the time of handing over.	0.5 %
	100%
	10070

	100%
B. EXTERNAL DEVELOPMENT WORKS	· .
<ol> <li>Boundary walls i/c Guard room (Brick work and finishing).</li> </ol>	25 %
<ol><li>Boundary walls railing and gates.</li></ol>	8%
3 Underground water tank i/c pump house.	17%
<ol><li>Roads and pavements.</li></ol>	10 %
5 External sewerage (pipe and fitting)	12 %
<ol><li>Completion of Manholes.</li></ol>	5%
<ol><li>Water supply ring main &amp; allied connections.</li></ol>	8%
<ol><li>Under ground storm water Drainage.</li></ol>	7%
<ol><li>External electrification (Fittings and Fixtures).</li></ol>	3%
10. Plinth protection.	1%
11. Horticulture.	2%
12. Miscellaneous work.	1 %
13 Handing Over.	1% '.
	100%
C. STILTED AREA	
1. Work Complete upto DPC level.	25 %
2. ON completion up to roof level.	22 %
3. On casting of roof slab.	23 %
<ol><li>On completion of electric work.</li></ol>	10 %
5. On completion of flooring.	10 %
<ol><li>On completion of plastering painting and other miscellaneous work.</li></ol>	9%
7. Completion and handing over	1%
	100%
D. PODIUM AREA	
<ol> <li>Work Complete upto DPC level.</li> </ol>	25 %
<ol><li>ON completion uptp roof level.</li></ol>	22 %
3. On casting of roof slab.	23 %
4. On completion of electric work.	10 %
5. On completion of flooring.	10 %
6. On completion of plastering painting and other miscellaneous work.	9%
<ol><li>Completion and handing over</li></ol>	1%
	100%
E. E.S.S AREA	0.5 .07
1. Work Complete upto DPC level.	25 %
<ol><li>ON completion up to roof level.</li></ol>	22 %
3. On casting of roof slab.	23 %
4. On completion of electric work.	10 %
5. On completion of channels & flooring.	10 %
6. On completion of plastering painting and other miscellaneous work.	9%
7. Completion and handing over	1%
	100%
F. BASEMENT WORK - under & beyond Tower Area	100%
1. Work Complete upto DPC level.	25 %
2. ON completion up to roof level.	22 %
3. On casting of roof slab.	23 %
4. On completion of electric work.	10 %
5. On completion of flooring.	
6. On completion of plastering nainting and other misselfers and other	10 %
<ol> <li>On completion of plastering painting and other miscellaneous work.</li> <li>Completion and handing over</li> </ol>	9%
second and nunding over	1 %
AAL 18 19 -	100%

#### 12. Unauthorized Alteration of Escalation Formula Leading to Excessive Price Claim:

During our audit of the contract between POMSCHS and M/s NG Constructions for development of group housing society, we have identified a significant discrepancy concerning the escalation in price claimed by the contractor. It has come to our attention that the contractor has altered the escalation formula mentioned in the contract, as per the escalation formula mentioned in the contract while calculating escalation of material and labour the dividing factor in the formula is Basic Labour Rate on the date of commencement of period of reckoning & Average of All India wholesale Price Index for all the commodities of relevant quarter for calculating escalation for Labour and Material respectively whereas while calculating the same by contractor same has been changed to Basic Labour Rate on the date of receiving of tender & All India wholesale Price Index at start of work for calculating escalation for Labour and Material respectively, resulting in an excessive claim for price escalation and **excessive cash outflow of INR 2,95,86,295.34/-**.

Escalation formula mentioned in contract is as below:

#### For Labour Escalation:

VL	= (W	X 25)	1	100 X	(La – Lb)	/ Lb
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- VL = Variation in Labour cost (increase or decrease).
- W = Value of the work done, worked out as indicated in sub-para
   (ii) above
- La & Lb = Basic Minimum rate of unskilled & adult male labour fixed under law by Haryana Government
- La = Basic Labour rate on the date of receiving the tender.
- Lb = Basic Minimum rate on the date of commencement of the period of reckoning.

#### For Material Escalation:

VM	= (W X 75) / 100 X (Ma - Mb) / Mb
ML	= Variation in Material cost (increase or decrease).
Ψ.	= Value of the work done, worked out as indicated in sub-para (ii) above
Ma & N	Ab =All India Whole Sale Price Index published by Economic Advisor to Govt. of India, Ministry of Industry and Commerce.
Ма	= All India Whole Sale Price Index at time of start of work.
Mb	= Average arithmetical mean of All India Whole Sale Price Index for all the Commodities of relevant quarter (three months).

#### Impact of such negligence result in following:

- **a. Contractual Violation:** Unauthorized alteration of the escalation formula constitutes a breach of the contractual agreement between POMSCHS and M/s NG Constructions. Such deviations undermine the trust and credibility of the contract.
- **b.** Financial Accuracy: The excessive price claim due to the altered escalation formula can lead to excessive cash outflow of INR 2,95,86,295.34/-.

Escalation Bill no	T en der Opening Date	Agreement Date	Date of actual start of work	Escalation Payable from	Quarter Covered	Invoice during Quarter	Gross Work done	W (ass of work done)	La (Basic Labour Rate on the date of rec. of tender)	Lb (Basic Labour Rate on the date of commencement of period of reckoning)	Escalation in labour cost W*25%*(Lo-Lb)/Lb	Ma (All India wholesale Price Index at start of work)	Mb (Average of All India wholes ale Price Index for all the coomodities of rel. quarter)	Escalation in Material cost W*25%*(Mo:Mb)/Mb	Escalation Cost calculated as per Contract	Escalation claimed in bill	Excess Escalation claimed in bill
RA-01 RA-01 RA-01 RA-01 RA-01	12/05/2013 12/05/2013 12/05/2013 12/05/2013 12/05/2013	21/05/2013 21/05/2013 21/05/2013 21/05/2013 21/05/2013	01/11/2013 01/11/2013 01/11/2013 01/11/2013 01/11/2013	01/11/2014 01/11/2014 01/11/2014	Nov'14-Jan'15 Nov'14-Jan'15 Nov'14-Jan'15 Nov'14-Jan'15 Nov'14-Jan'15	RA-15 RA-16 RA-17	3,02,95,942.00 2,86,85,145.00 3,38,80,607.00 2,29,14,258.00 2,75,07,269.05	12,17,90,737.89	205.44	216.90	-16,08,715.83	180.41	192.40	-56,90,840.45	72,99,556.29	80,98,109.00	7,98,552.71
									Sub	total							7,98,552.71
RA-02 RA-02 RA-02 RA-02 RA-02	12/05/2013 12/05/2013 12/05/2013 12/05/2013 12/05/2013	21/05/2013 21/05/2013 21/05/2013 21/05/2013 21/05/2013	01/11/2013 01/11/2013 01/11/2013 01/11/2013 01/11/2013	01/11/2014 01/11/2014 01/11/2014	Feb'15-Apr'15 Feb'15-Apr'15 Feb'15-Apr'15 Feb'15-Apr'15 Feb'15-Apr'15	RA-19 RA-20 RA-21	48,54,223.95 2,93,94,403.00 2,80,14,791.00 1,27,56,408.00 5,42,53,498.00	10,98,82,325.36	205.44	223.56	-22,26,547.39	180.41	194.26	-58,76,957.53	81,03,504.92	87,49,646.00	6,46,141.08
RA-03 RA-03 RA-03	12/05/2013 12/05/2013 12/05/2013	21/05/2013 21/05/2013 21/05/2013	01/11/2013 01/11/2013 01/11/2013	01/11/2014	May'15-Jul'15 May'15-Jul'15 May'15-Jul'15	RA-24	4,28,05,694.00 4,43,39,180.00 4,65,29,639.00	11,36,23,336.05	Sub 205.44	total 223.56	-23,02,351.55	180.41	197.45	-73,52,983.98	96,55,335.53	1,06,85,699.00	6,46,141.08 10,30,363.47
									Sub	total		-					10,30,363.47
RA-04 RA-04 RA-04	12/05/2013 12/05/2013 12/05/2013	21/05/2013 21/05/2013 21/05/2013	01/11/2013 01/11/2013 01/11/2013	01/11/2014	Aug'15-Oct'15 Aug'15-Oct'15 Aug'15-Oct'15	RA-27	3,20,92,579.00 3,37,49,896.00 4,47,50,124.00	9,40,03,709.15	205.44 Sub	226.40	-21,75,704.22	180.41	196.74	-58,51,938.74	80,27,642.96	87,79,313.00	7,51,670.04
RA-05 RA-05 RA-05	12/05/2013 12/05/2013 12/05/2013	21/05/2013	01/11/2013 01/11/2013 01/11/2013	01/11/2014	Nov'15-Jan'16 Nov'15-Jan'16 Nov'15-Jan'16	RA-30	2,07,78,503.00 2,48,21,023.00 2,71,53,674.00	6,18,40,220.00	205.44	292.31	-45,94,488.65	180.41	194.22	-32,98,597.90	78,93,086.55	1,10,96,627.00	32,03,540.45
									Sub	total							32,03,540.45
RA-06 RA-06 RA-06	12/05/2013 12/05/2013 12/05/2013		01/11/2013 01/11/2013 01/11/2013	01/11/2014	Feb'16-Apr'16 Feb'16-Apr'16 Feb'16-Apr'16	RA-33	2,74,57,040.00 2,38,56,118.00 3,05,89,084.00	6,96,16,905.70	205.44 Sub	306.77 total	-57,48,835.49	180.41	194.04	-36,68,422.14	94,17,257.63	1,33,10,442.00	38,93,184.37 38,93,184.37
RA-07 RA-07 RA-07	12/05/2013 12/05/2013 12/05/2013	21/05/2013 21/05/2013 21/05/2013	01/11/2013 01/11/2013 01/11/2013	01/11/2014	May'16-Jul'16 May'16-Jul'16 May'16-Jul'16	RA-36	1,91,41,470.00 2,50,75,914.00 2,09,22,726.00	5,53,69,093.50	205.44	306.77	-45,72,277.48	180.41	196.74	-34,46,848.49	80,19,125.97	1,05,86,324.00	25,67,198.03
	1								Sub	total							25,67,198.03
RA-08 RA-08 RA-08	12/05/2013 12/05/2013 12/05/2013	21/05/2013 21/05/2013 21/05/2013	01/11/2013 01/11/2013 01/11/2013	01/11/2014	Aug'16-Oct'16 Aug'16-Oct'16 Aug'16-Oct'16	RA-39	2,02,03,364.00 1,72,10,684.00 1,48,37,560.00	4,44,13,866.80	205.44	306.77	-36,67,615.09	180.41	196.74	-27,64,861.41	64,32,476.50	84,91,734.00	20,59,257.50
RA-09 RA-09	12/05/2013 12/05/2013	21/05/2013 21/05/2013	01/11/2013 01/11/2013		Nov'16-Jan'17 Nov'16-Jan'17		2,25,15,019.00 2,04,05,025.11	3,64,82,037.49	205.44	306.77	-30,12,619.27	180.41	196.74	-22,71,087.50	52,83,706.77	77,75,653.00	24,91,946.23 24,91,946.23
RA-10 RA-10 RA-10	12/05/2013 12/05/2013 12/05/2013	21/05/2013 21/05/2013 21/05/2013	01/11/2013 01/11/2013 01/11/2013	01/11/2014	Feb'17-Apr'17 Feb'17-Apr'17 Feb'17-Apr'17	RA-43	49,25,350.89 3,48,55,089.00 1,85,42,895.00	4,95,74,834.66	205.44	306.77	-40,93,798.28	180.41	196.74	-30,86,143.07	71,79,941.35	86,77,936.00	14,97,994.65
RA-11	12/05/2013	21/05/2013	01/11/2013	01/11/2014	May'17-Jun'17	RA_45	2.66.99.528.00					1					
RA-11	12/05/2013	21/05/2013	01/11/2013	01/11/2014	May'17-Jun'17	RA-46	3,54,74,779.00	5,28,48,160.95	205.44 Sub	306.77 total	-43,64,103.52	180.41	196.74	-32,89,914.87	76,54,018.39	1,01,04,333.00	24,50,314.61 24,50,314.61
RA-12 RA-12 RA-12	12/05/2013 12/05/2013 12/05/2013	21/05/2013	01/11/2013 01/11/2013 01/11/2013	01/11/2014	Jul'17-Oct'17 Jul'17-Oct'17 Jul'17-Oct'17	RA-48	1,92,88,801.00 1,87,12,946.00 1,86,02,816.00	4,81,13,878.55	205.44	305.77	-39,73,155.22	180.41	196.74	-29,95,195.32	69,68,350.55	91,99,160.00	22,30,809.45 22,30,809.45
RA-13 RA-13 RA-13 RA-13	12/05/2013 12/05/2013 12/05/2013 12/05/2013	21/05/2013 21/05/2013 21/05/2013 21/05/2013	01/11/2013 01/11/2013 01/11/2013 01/11/2013	01/11/2014 01/11/2014	Nov'17-Apr'18 Nov'17-Apr'18 Nov'17-Apr'18 Nov'17-Apr'18	RA-51 RA-52	1,55,72,165.00 2,01,36,348.00 1,69,74,378.00 1,69,37,498.00	5,91,77,330.65	205.44	306.77	-48,86,754.67	180.41	196.74	-36,83,919.68	85,70,674.34	1,13,14,442.00	27,43,767.66
									Sub	total							27,43,767.66
RA-14 RA-14	12/05/2013 12/05/2013	21/05/2013 21/05/2013	01/11/2013 01/11/2013		May'18-Nov'18 May'18-Nov'18		1,49,34,889.00 1,11,29,535.00	2,21,54,760.40	205.44 Sub	306.77 total	-18,29,499.19	180.41	196.74	-13,79,182.82	32,08,682.01	42,35,891.00	10,27,208.99
RA-15 RA-15	12/05/2013 12/05/2013	21/05/2013 21/05/2013	01/11/2013 01/11/2013		Dec'18-july'19 Dec'18-july'19		1,12,47,912.00 98,96,307.00	1,79,72,586.15	205.44	306.77 total	-14,84,142.97	180.41	196.74	-11,18,833.23	26,02,976.20	34,36,279.00	8,33,302.80 8,33,302.80
RA-16 RA-16 RA-16	12/05/2013 12/05/2013 12/05/2013	21/05/2013	01/11/2013 01/11/2013 01/11/2013	01/11/2014	Aug'19-Aug'20 Aug'19-Aug'20 Aug'19-Aug'20	RA-59	46,66,027.00 45,19,821.00 30,27,157.00	1,03,81,054.25	205.44	306.77	-8,57,248.29	180.41	196.74	-6,46,243.58	15,03,491.87	19,84,811.00	4,81,319.13
RA-17 RA-17	12/05/2013 12/05/2013	21/05/2013 21/05/2013	01/11/2013 01/11/2013		Sept'20-Feb'21 Sept'20-Feb'21		76,33,701.00 52,32,066.00	1,09,35,901.95	205.44	total 306.77	-9,03,066.58	180.41	196.74	-6,80,784.08	15,83,850.66	20,90,983.00	4,81,319.13 5,07,132.34
RA-18 RA-18	12/05/2013 12/05/2013	21/05/2013 21/05/2013	01/11/2013 01/11/2013		Mar'21-Mar'22 Mar'21-Mar'22		37,83,292.00 56,70,853.00	80,36,023.25	Sub 205.44	306.77	-6,63,599.96	180.41	196.74	-5,00,260.22	11,63,860.17	15,36,452.00	5,07,132.34 3,72,591.83
									Sub	total							3,72,591.83

Detail of excess amount claimed per escalation running bill is as follows:

#### 13. Unaccounted Unused Material at Site Despite Payment

During our audit of the material procurement and payment process for Finished goods, a concerning situation has been identified regarding unused materials that are noticed lying at the site as per Running bills. It has come to our attention that payments have been made by the society as advance for these materials, yet no proper record documenting the physical presence and utilization of the materials is available in the civil audit. This discrepancy raises serious concerns about transparency, financial accountability, and potential mismanagement of resources.

S. No.	Material	<b>Total Purchased Amount</b>	Total Utilised Amount	Material remain unused
1	Kajaria Ceremic Tiles	3,96,76,600.00	-3,06,67,295.50	90,09,304.50
2	M.S Pipe	37,19,651.00	-32,31,379.00	4,88,272.00
3	CPVC Items	35,18,412.00	-29,81,392.00	5,37,020.00
4	Sinks	26,86,068.00	-18,61,398.00	8,24,670.00
5	UPVC Items	65,21,564.00	-63,23,590.00	1,97,974.00
6	GI Fittings	14,06,014.00	-8,16,490.00	5,89,524.00
7	GI Pipes	34,91,525.00	-22,84,422.00	12,07,103.00
8	PRV & Bal Valve	12,80,052.00	-2,45,766.00	10,34,286.00
9	Granite	41,77,805.00	-37,58,903.00	4,18,902.00
10	Wall Putty	10,32,183.00	-7,50,500.00	2,81,683.00
11	Flush Door	1,00,50,335.00	-68,19,661.00	32,30,674.00
12	Door Lock	35,15,302.00	-33,18,927.00	1,96,375.00
13	Hardware	1,83,834.00	0	1,83,834.00
14	Wires & Cables	27,02,909.00	-15,48,088.00	11,54,821.00
15	Paints	9,88,917.00	-3,87,039.00	6,01,878.00
16	Switch & Socket	29,86,477.00	-9,91,839.00	19,94,638.00
17	MCB/RCCB	8,95,594.00	-736474	1,59,120.00
18	C.P fittings	13,95,183.00	0	13,95,183.00
19	Key Less handle	12,52,764.00	0	12,52,764.00
20	Key Less latch	1,11,378.00	0	1,11,378.00

Multiple other vendors were also admitted at site for works like setup of Electrical Sub-Station, lying of HT Cables, installation of RO plant, lifts, fountain, horticulture work, solar plant etc, for whom detailed discussion is as follows:

Police Officers Multi-state Co-operative Housing Society (hereafter referred as POMSCHS) has executed a Multi-storey housing project at Sector-49, Faridabad for construction of 688 Residential Apartments of four categories and allied services and common facilities like Community Centre, Shopping complex, 122 EWS flats, Electric Sub-station, Stilted areas, Basement and external Development works etc at 11.3875 acres of land at village Dabua and Nawada koh, Sector 49, Faridabad, Haryana.

# II. <u>Electrical Sub Station:</u>

## A. Background

This audit report provides a comprehensive overview of the implementation of an Electric Substation project within the premises of the Police Officers Multi-state Co-operative Housing Society. The project was initiated by the Management Committee with the aim of ensuring a reliable and efficient electricity supply for the residents of the society. The implementation process followed a rigorous tender process, wherein qualified contractors were selected based on competitive bidding. This report will delve into the details of the tender process, the contract terms, and the subsequent execution of the Electric Substation project. The Police Officers Multi-state Co-operative Housing Society, recognized the need for a dedicated Electric Substation to meet the energy demands of its residents. In response to this need, the society's Management Committee embarked on a project to establish a state-of-the-art Electric Substation that would enhance the reliability of the electricity supply, and ensure the overall well-being of the residents.

# B. Tender Process:

To ensure transparency, competitiveness, and adherence to industry standards, the Management Committee of initiated a tender process for the Electric Substation project. This process involved the following key stages:

- 1. **Project Documentation Preparation:** The Management Committee collaborated with Architect to develop comprehensive project documentation, including technical specifications, scope of work, and project timelines. These documents were designed to provide a clear understanding of the project's requirements.
- 2. Invitation to Submit Pre-qualification bids: Once the project documentation was finalized, the Management Committee issued interested vendors to submit pre-qualification bids containing all the information regarding their financials, work experience, company profile and details of similar projects executed in past.

As per records available with Police Officer Multi-state Co-operative Housing Society, following vendors had submitted their Pre-Qualification Bids.

- a. Shivani Power Engineers Pvt. Ltd.
- b. R.K Industries
- c. SBP Electricals
- d. Landmark Electrical Pvt. Ltd.
- e. MEC Engineers
- f. Teneja Vidyut Control Pvt Ltd
- g. Radius Synergies International Pvt. Ltd.
- h. Sharika Enterprises
- i. NP Power & Engineers Pvt. Ltd.
- j. N G Constructions
- 3. **Invitation to Bid**: Once the pre-qualification bids were submitted by vendors, the Management Committee issued an invitation to bid, inviting qualified and experienced contractors to participate in the competitive bidding process. The invitation contained detailed instructions on submission requirements, evaluation criteria, and deadlines.

Upon receiving Pre-Qualification bids from the above mentioned vendors, 7 (Seven) Pre-Qualified Contractors were selected out of total 10 (Ten) Pre-Qualification bids were recommended by Architect on the basis of their capabilities of executing our Project, experience, project executed and completed, and projects under construction. Vendors qualified to submit their rate contracts are as follows:

- a. Shivani Power Engineers Pvt Ltd.
- b. R.K Industries

- c. Landmark Electrical Pvt Ltd.
- d. Teneja Vidyut Control Pvt Ltd
- e. Radius Synergies International Pvt Ltd.
- f. NP Power & Engineers Pvt Ltd.
- g. N G Constructions

Item wise financial bid have been submitted by the following vendors out of above mentioned vendors for Electric Substation Project executed at Police Officers Multi-state Cooperative Housing Society at village Dabua and Nawada koh, Sector 49, Faridabad, Haryana.

List of bidders submitted their financial bids are as follows:

- a. Shivani Power Engineers Pvt. Ltd.
- b. R.K Industries
- c. Landmark Electrical Pvt. Ltd.
- d. Radius Synergies International Pvt. Ltd.

Rate contract submitted by the above mentioned vendors for the execution of Electrical Sub-station project at Police Officers Multi-State Co-Operative Housing society are as follows

	<b>Financial Bid</b>	Initail Bid	Vendor
Vendor Name	Submitted	Amount	Position
Shivani Power Engineers Pvt. Ltd.	$\checkmark$	53,714,000.00	L3
R.K Industries	$\checkmark$	45,510,863.00	L2
Landmark Electrical Pvt. Ltd.	$\checkmark$	29,583,575.00	L1
Radius Synergies International Pvt. Ltd.	$\checkmark$	66,578,204.00	L4

Upon submission of Initial quotes the Board of Directors of Police Officers Multi-state Cooperative Housing Society rejects the bid submitted by Landmark Electricals Pvt. Ltd. On the grounds of incomplete tender documents where initially tender rates were called upon for the installation of two Electrical substations and Landmark Electricals Pvt. Ltd. Submitted their bids for installation of one Electrical Substation only afterwards Board of Directors proceeds with multiple rounds of negotiations with the remaining vendors that are as follows:

- a. Shivani Power Engineers Pvt. Ltd.
- b. R.K Industries
- c. Radius Synergies International Pvt. Ltd.

Further it has been noted that record regarding negotiation during 3 rounds of negotiation i.e., R1, R2 & R3 with the selected vendors i.e., L2, L3 & L4 as mentioned above isn't available with the society, however, Revised/Negotiated Tender Amount after Final Negotiation is INR 2,64,00,203.16/- which makes Radius Synergies International Pvt. Ltd.as L2 but L1 L1 was not selected on the basis that rates quoted for panel fabrication was local which are below standard and very Poor Quality Vendor and this was concluded by management committee post field visit at L1 Site hence, contract has been awarded to L2, it has to be noted that at final awarding stage of contract the records of final bids reflects that during the course of negotiation BOQ for the execution of Electrical Sub-station project has been reduced from Initial BOQ of two substations to installation of one sub-station only.

Final quoted price by the vendors are as follows:

	Financial Bid	Initail Bid						Vendor
Vendor Name	Submitted	Amount	Revision 1	Revision 2	Revision 3	Revision 4	Final Amount	Position
Shivani Power Engineers Pvt. Ltd.	$\checkmark$	53,714,000.00	Records NA	Records NA	Records NA	28,433,316.00	27,000,000.00	L3
R.K Industries	$\checkmark$	45,510,863.00	Records NA	Records NA	Records NA	25,147,180.00	25,147,180.00	L1
Radius Synergies International Pvt. Ltd.	$\checkmark$	66,578,204.00	Records NA	Records NA	Records NA	28,723,035.00	26,400,203.00	L2

## Detailed Description of per unit rate quoted by vendors post negotiation is here as under:

	COMPARATIVE STATEMENT OF EXTERNAL ELECTRICAL W	ORKS	ESS R						
	Vendors				vani		Radius		ustries
S , No. 00	Discription of Item MAIN LT Curn, SYNC, PANEL and Cap, PANEL	Qty	Unit	Rate	Amount	Rate	Amount	Rate	Amou
	Want Li Cum STNC, PAREL and Cap, PAREL Supplying installation, testing and cormissioning of 415V, 3 Phase, 50 Hz., 4 wire system, sheet steel dad, dust and vernin proof autical and Indoor type floor mounted, free standing extendie type Main LT Panel with IP - 42 protection, compartmentatized design and fabricated out of 2 mm / 1.6 mm CRCA sheet steel complete with Aluminum Bus bars, Electrical interfacts as per the various status of all the equipments indicated on the drawings. Providing & Fixing of base plate / dramet, P.F. the fallowing Switchgeors, complete with earth Bus bor throughout the length of the panel, termind arrangement for Incoming / Outgoing, cables and diso outgoing terminations for various sizes of cables, The incoming and outgoing feeders shall be accommodated in a modular multi-liter arrangement, adequate size bas dua/lactile alley. Sign writing Painting, Earthing, Numbering, Danger plate etc. complete as required as per specifications and drawing.								
1	MAIN LT CUM SYNC, PANEL IN BASEMENT								
	INCOMING:								
	2 nos. 3200A 415V, 4P 50kA EDO ACB with Microprocessor based release having O/L, S/C/, E/F, RPR , O/V, U/V Protection and ON /OFF/T RIP Indications with MCB.								
	2 nos. 800A 415V, 4P 50KA EDO ACB with Microprocessor based release having O/L, S/C/, E/F, RPR, O/V, U/V Protection and ON /OFF/TRIP Indications with MCB.								
	4 nos. Digital type Multifunction Meters to show (V, A, kWh, KVAh, KW, KVA, KVAR, PF, Hz.) with cast resin CTs.								
	4 Set of LED phase indicating lamps with MCB protection.								
	4 nos. Trip Circuit S upervision relays.								
	1 no. 50kVAR capacitor bank with 125A TP MCCB of 36kA, with one set of indicating Lights.								
	1 no. Electronic type Auto matic power factor correction relay.								
	1 nos. TPN surge protection device of Class 1 & 2.								
	BUSBARS:								
	<ol> <li>Set of TPN duminium bus bar of minimum of 3200 A capacity with heat shrinkable caloured sleeves and <i>i/c</i> DN/CS/MC bus bars supports at required intervals complete for aross section, size supports &amp; their spacing etc. for with standing fault level of SKA for 1 Sec.</li> </ol>								
	Electrical Interlocking between all incomers and Bus Couplers through PLC.								
	BUS COUPLER :								
	1 no. 3200A 415V, 4P 50kA EDO ACB with O/L & S /C protection and ON /OFF/T RIP Indications with MCB.								
c	OUT GOING FROM BUSBAR SECTION - 1								
	5 nos. 800A 415V, TP+Neutral Link MCCB of 50kA with O/L and S/C protection and a set of CT's., Multi Function meter (V+A+Hz.)								
	1 no. 800A 415V, TP+Neutral Link MCCB of 50kA with O/L and S/C protection.								
	4 nos. 630A 415V, TP+Neutral Link MCCB of 50kA with O/L and S/C protection and a set of CT's., Multi Function meter (V+A+Hz.)								
	2 nos. 250A 415V, TP+Neutral Link MCCB of 50kA with O/L and S/C protection and a set of CT's., Multi Function meter (V+A+Hz.)								
Ł									
	3 nos. 800A 415V, TP-Neutral Link MCCB of 50kA with O/L and S/C protection and a set of CT's., Multi Function meter (V+A+Hz.)								
	2 nos. 630A 415V, TP+Neutral Link MCCB of 50kA with O/L and S/C protection and a set of CT's., Multi Function meter (V+A+Hz.)								
	2 nos. 400A 415V, TP+Neutral Link MCCB of 50kA with O/L and S/C protection and a set of CT's., Multi Function meter (V+A+Hz.)								
+	3 nos. 250A 415V, TP+Neutral Link MCCB of 50kA with O/L and S/C protection and a set of CT's., Multi Function meter (V+A+Hz.)								
	3 nos. 200A 415V, TP+Neutral Link MCCB of 50kA with O/L and S/C protection and a set of CT's., Multi Function meter (V+A+Hz.)								
	The interlocking in the panel and the load mangement and AUT O ON / OFF of the DG Set shall be Achieved through a Micro PLC installed in the LT Panel with manual overriding facility , The panel shall be complete with the Battery charger of the each DG Set and the DC supply / UPS for the relay , protection and PLC.	1		3,885,500					

1.02	CAP. PANEL								
	i CAP. PANEL (450 kVAR)								
	INCOME R Cable direct connected from Main LT Panel to Cap. Panel bus bar with a set of CT's., Multi Function meter								
	(V+A+Hz.) and Phase indicating lamp with MCB.								
	BUSBARS:								
	1 Set of TPN duminium bus bar of minimum of 800A capacity with heat shrinkable coloured sleeves and i/c DMC/SMC bus bars supports at required intervals complete for aross section, size supports & their spacing etc, for								
	withstanding fault level of 50KA for 1 S ec.								
	OUT GOING								
	8 nos. 50kVAR capacitor bank with 125ATP MCCB of 25kA and Contactor, one set of indicating Lights and Push Buttons.								
	<ol> <li>Diricits.</li> <li>1 no. 25kVAR capacitor bank with 63A TP MCCB of 25kA and Contactor, one set of indicating Lights and Push</li> </ol>								
	Buttons.								
	2 nos. 10kVAR capacitor bank with 32A TP MCCB of 25kA and Contactor, one set of indicating Lights and Push Buttons.								
	1 no. 5kVAR capacitor bank with 16A TP MCCB of 25kA and Contactor, one set of indicating Lights and Push								
	Buttons.	1	Set	495,000	495,000	473,770	473,770	285,000	285,000
1.03	3200A 4P ACB Near Transformer.								
	Supplying, fixing in position, testing and commissioning of IP-55, M.V. cubical type totally endosed dust, dump and vermin proof 3200A, 4P 415 valts fixed type ACB with inbuilt protection in weather proof endosure for autdoor duty								
	connection with suitable capacity duminium strips/rods, connection of incoming and outgoing cables with thimbles,								
	indication lamps, powder coated complete as required.								
1.04	COMMON UT ILITIES PANEL -1	1	Set	372,000	372,000	513,075	513,075	290,000	290,000
1.04	INCOMER :								
	1 no. 630A 415V, 4P MCCB of 35kA with Microprocessor based release having O/L,E/F and S /C protection.								
	Less Nobel en Winseling andre 0.0.0.000 vite en et al andre siz Ch. (20.000								
	1 no. Digital multifunction meter (V+A+Hz) with a set of cast resin CT s 630/5A.     1 set of Phase indicating lamp with MCB								
	BUS BARS:								
	1 Set of TPN duminium bus bar of minimum of 630 A capacity with heat shrinkable coloured sleeves and i/c								
	DMC/SMC bus bars supports at required intervals complete for aross section, size supports & their spacing etc, for withstanding fault level of 50 KA for 1 Sec.								
	OUT GOING:								
	2 nos. 125A 415V, TP+N MCCB of 25kA with O/L and S /C protection with thermal magnetic trip unit								
	9 nos. 100A 415V, TP+N MCCB of 25kA with O/L and S/C protection with thermal magnetic trip unit								
	3 nos. 63A 415V, TP+N_MCCB of 25kA with O/L and S/C protection with thermal magnetic trip unit	1	Set	241,200	241,200	267,712	267,712	163,700	163,700
1.05	COMMON UTILITIES PANEL -2 INCOMER :								
	Inc. COMER : 1 no. 630A 415V, 4P MCCB of 35kA with Microprocess or based release having O/L,E/F and S /C protection.		1						
	1 no. Digital multifunction meter (V+A+Hz) with a set of cast resin CT s 630/5A.								
	1 set of Phase indicating lamp with MCB BUS BARS:								
	1 Set of TPN duminium bus bar of minimum of 630 A capacity with heat shrinkable coloured sleeves and i/c								
	DMC/SMC bus bars supports at required intervals complete for aross section, size supports & their spacing etc, for								
	withstanding fault level of 50 KA for 1 S ec.								
	OUT GOING: 10 nos. 100A 415V, TP+N MCC8 of 25kA with O/L and S/C protection with thermal magnetic trip unit								
	3 nos. 63A 415V, TP+N_MCCB of 25kA with O/L and S/C protection with thermal magnetic trip unit	1	Set	219,000	219,000	259,600	259,600	157,000	157,000
1.06	MAIN DIST RIBUTION BOARD		0.01	217,000	217,000	207,000	237,000	137,000	107,000
	Supplying, fixing ,testing and commissioning of 415V, 3 Phase, 50 Hz., 4 wire system, sheet steel clad, clust and								
	vermin proof cubical and indoar type floar mounted, free standing Main Distribution Board with IP - 42 protection, compartmentalized design and fabricated out of 2 mm / 1.6 mm CRCA sheet steel complete with Aluminium Bus								
	bars, Providing & Fixing of base plate / channel, P/F the following Switchgears, complete with earth Bus bar								
	throughout the length of the panel, terminal arrangement for Incomings / Outgoings cables and also outgoing								
	terminations for various sizes of cables, The incoming and outgoing feeders shall be accommodated in a modular multi-lier arrangement, adequate size bus duct/cable alley, Sign writing, Painting, Earthing, Numbering, Danger plate								
	etc. complete as required as per specifications and drawing.								
	i LIGHT MDB-1 & 3 (Located in Electrical Room)								
	INCOMER :								
	1 no. 100A, 415V, Ics=25kA, 4P MCCB with thermal megnetic trip unit. 1 no. Digital multifunction meter (V+A+Hz) with a set of cast resin CTs 150/5A.								
	1 set of Phase indicating lamp with MCB								
	BUS BARS:								
	150ATPN bus bars of aluminium alloy.								
	OUT GOING: 2 nos 634.415V_TP+N_MCCB of 25kA with O/L and S/C protection with thermal magnetic trip unit								
	7 nos. 40A, 415V, 4P MCB of 10kA.	2	Set	75,000	150,000	90,860	181,720	60,000	120,000
	ii LIGHT MDB-2 & 4 (Located in Electrical Room)	-		, 3,000	. 30,000	70,000	/01,/20	30,000	120,000
	INCOME R :								
	1 no. 63A, 415V, Ics=25kA, 4P MCCB with thermal megnetic trip unit.								
	no. Digital multifunction meter (V+A+Hz) with a set of cast resin CT s 60/5A.     set of Phase indicating lamp with MCB								
	BUS BARS:								
	150ATPN bus bars of aluminium alloy.								
	OUT GOING:								
	8 nos. 40A, 415V, 4P MCB of 10kA.	2	Set	54,000	108,000	48,675	97,350	40,000	80,000
	POWER MDB-1,2,3 & 4 (Located in Electrical Room)  INCOMER :		I						
	INCOME K: 1 no. 63A, 415V, Ics=25kA, 4P MCCB with thermal megnetic trip unit.		1						
	1 no. Digital multifunction meter (V+A+Hz) with a set of cast resin CT s 60/5A.								
	1 set of Phase indicating lamp with MCB								
	BUS BARS: 150A TPN bus bars of aluminium allay.								
	OUT GOING:		1						
	8 nos. 63A, 415V, 4P MCB of 10kA.	4	Set	54,000	216,000	48,675	194,700	40,000	160,000
	iv EMERGENCY MDB-1 & 2 (Located in Electrical Room)								
			1						
	INCOMER:								
	1 no. 63A, 415V, 4P on load change over switch with ON-OFF indication.								
	Inc. 63A, 415V, 4P on load change over switch with ON-OFF indication.     Inc. 63A, 415V, 1cs=25KA, 4P MCCB with thermal magnetic trip unit.     Inc. Digit a multifunction meet (V+A+Hz) with a set of cast resin CTs 60/5A.     I set of Phase indicating lamp with MCB								
	I no. 63A, 415V, 4P on load change over switch with ON-OFF indication.     I no. 63A, 415V, Ics-25kA, 4P MCCB with thermal magnetic trip unit.     I no. Digital multifunction meter (V+A+Hz) with a set of acst resin CTs 60/5A.     I set of Phose indicating lamp with MCB     BUS BARS:								
	I no. 63A. 415V, 4P on load charge over switch with ON+OFF indication.     I no. 63A. 415V, Ics=25K4.4P MCCB with thermal magnetic trip unit.     Ino. Digital multifunction meter. [V+A+IL] with a set of cast resin CTs 60/5A.     Is et of Phase indicating lamp with MCB     BUS DARS:     ISOA TPN bas bars of Cu. diay.								
	I no. 63A. 415V, 4P on load change over switch with ON-OFF indication.     I no. 63A. 415V, 1cs = 25kA. 4P MCCB with thermal magnetic trip unit.     I no. Digit a multifunction where (V+A+Iz) with a set of cast resin CTs 60/5A.     I set of Phase indicating lamp with MCB     BUS BARS:     ISOA TPN bas bars of Cu. dloy.     OUT GOING:	2	Set	83,000	] 66.000	56 788	113.574	39.000	78 00
	I no. 63A. 415V, 4P on load charge over switch with ON+OFF indication.     I no. 63A. 415V, Ics=25K4.4P MCCB with thermal magnetic trip unit.     Ino. Digital multifunction meter. [V+A+tL] with a set of cast resin CTs 60/5A.     Is et of Phase indicating lamp with MCB     BUS DARS:     ISOA TPN bas bars of Cu. diay.	2	S et	83,000	166,000	56,788	113,576	39,000	78,00
	I no. 63A, 415V, 4P on load change over switch with ON-OFF indication.     I no. 63A, 415V, 1cs =25kA, 4P MCCB with thermal magnetic trip unit.     I no. Digital multifunction meter (V+A+Hz) with a set of cast resin CTs 60/5A.     I set of Phase indicating lamp with MCB     BUS BARS:     ISOA TPN bus bars of Cu. dloy.     OUT GOING:     Is no. 25A, 220V, DP MCB of 10kA.	2	Set	83,000	166,000	56,788	113,576	39,000	78,00
	1 no. 63A, 415V, 4P on load charge over switch with Ox+OFF indication.     1 no. 054, 415V, 1cs=25kA, 4P MCCB with thermal magnetic trip unit.     1 no. Digital multitunction meter (V+A+K) with a set of cast resin CTs 60/5A.     1 set of Prase indicating lamp with MCB     BUS 8ARS:     150A TPN bus bars of Cu. alloy.     OUT GOING:     15 nos. 155A, 220V, DP MCB of 10kA.     V LIFT MDB-1 & 2 (Located in Electrical Room)     INCOME R:     1 no. 250A, 415V, Ics=25kA, 4P MCCB with thermal magnetic trip unit.	2	Set	83,000	166,000	56,788	113,576	39,000	78,000
	1 no. 63A. 415V, 4P on load charge over switch with ON-OFF indication.     1 no. 63A. 415V, 16z=25KA. 4P MCCB with thermal magnetic trip unit.     1 no. Digital multifunction meter [V+A+Hz] with a set of cast resin CTs 60/5A.     1 set of Phase indicating lamp with MCB     BUS BARS:     150A TPN bas bars of Cu. dioy.     OUT GOING:     15 no. 25A. 220V, DP MCB of 10/cA.     V LIFT MDB-1 & 2 (Located in Electrical Room)     INCOMER :     1 no. 250A, 415V, Ics=25KA. 4P MCCB with thermal magnetic trip unit.     1 no. Digital multifunction meter [V+A+Hz] with a set of cast resin CTs 250/5A.	2	S et	83,000	166,000	56,788	113,576	39,000	78,000
	1 no. 63A, 415V, 4P on load change over switch with ON-OFF indication.     1 no. 63A, 415V, 162=25KA, 4P MCCB with thermal magnetic trip unit.     1 no. Digit multifunction meter (V+A+tz) with a set of cast resin CTs 60/5A.     1 set of Phase indicating lamp with MCB     150 ATPN bas bars of Cu. diay.     OUT GOING:     15 no. 25A, 220V, DP MCB of 10kA.     V LIFT MDB-18 2 (Located in Electrical Room)     INCOMER :     1 no. 250A, 415V, Ics=25KA, 4P MCCB with thermal magnetic trip unit.     1 no. Digit multifunction meter (V+A+tz) with a set of cast resin CTs 250/5A.     1 set of Phase indicating lamp with MCB	2	Set	83,000	166,000	56,788	113,576	39,000	78,000
		2	S et	83,000	166,000	56,788	113,576	39,000	78,00
	1 no. 63A, 415V, 4P on load change over switch with ON-OFF indication.     1 no. 63A, 415V, 162=25KA, 4P MCCB with thermal magnetic trip unit.     1 no. Digit multifunction meter (V+A+tz) with a set of cast resin CTs 60/5A.     1 set of Phase indicating lamp with MCB     150 ATPN bas bars of Cu. diay.     OUT GOING:     15 no. 25A, 220V, DP MCB of 10kA.     V LIFT MDB-18 2 (Located in Electrical Room)     INCOMER :     1 no. 250A, 415V, Ics=25KA, 4P MCCB with thermal magnetic trip unit.     1 no. Digit multifunction meter (V+A+tz) with a set of cast resin CTs 250/5A.     1 set of Phase indicating lamp with MCB	2	S et	83,000	166,000	56,788	113,576	39,000	78,000

1.07										
1.07		Design, Manufacturing, supplying, fixing in position, testing and commissioning of the following front operated front		1						
		access 2mm thick CR CA steel endosure free standing, water, dust and vermin proof outdoor type Feeder pillars								
		with IP-54 protection hinged and lockable doors complete with interconnections copper arimping lugs, brass glands								
		bonding to earth and painting, suitable for use at 415 volts, 3 phase 4 wire 50 Hz system. The panels fault								
		withs tancing capacity shall be of 25 MVA at 415 volts. All live accessories part shall be shrouded and all equipment shall be finger touch proof. The bus bars shall be of colure coded with Heat shrinkable PVC insulated sleeves. The								
		job includes all labour & material required for cement concrete plat-form of suitable dimensions.								
	i	INCOMER :								
	Ľ	1 no. 125A, 415V, Ics=25kA, 4P MCCB with thermal magnetic trip unit.								
		1 no. Digital multifunction meter (V+A+Hz) with a set of cast resin CT s 150/5A.								
		1 set of Phase indicating lamp with MCB								
		BUS BARS:								
		200ATPN bus bars of aluminium alloy.								
		OUT GOING:								
		2 nos. 100A 415V, TP+N MCCB of 25kA with O/L and S/C protection with thermal magnetic trip unit								
		1 no. 63A 415V, TP+N MCCB of 25kA with O/L and S/C protection with thermal magnetic trip unit	1	Set	61,500	61,500	89,238	89,238	46,000	46,00
		SUB-T OT AL				6,342,200		6,836,141		4,226,70
2.00		SUBSTATION EQUIPMENTS								
2.01		11 KVTHREE BOARD HT PANEL NEAR 11 KV METER BOARD.								
		Supplying, erection, testing and commissioning of Extendable type 630A, 11KV, 3 phase, 50 Hz. metal clad, dead								
		front, 3 Board, VCB Panel, 500MVA repturing capacity having one incoming and two outgoing as per specification								
		and requirement.	1	Set	1,312,000	1,312,000	1,129,260	1,129,260	1,135,000	1,135,00
2.02		11 KV SINGLE BOARD HT PANEL IN THE SUBSTATION								
		Supplying, erection, testing and commissioning of Extendable type 630A, 11KV, 3 phase, 50 Hz, metal clad, dead								
	1	front, Single Board, VCB Panel, 500MVA repturing capacity having one incoming and outgoing as per specification		1				l		
		and requirement.	1	Set	446,500	446,500	561,500	561,500	370,000	370,00
2.03		TRANSFORMER			L					
	i	Supplying, receiving, erection, testing and commissioning of 2000kVA, 11kV/415Volts,out door type, all cooled 3								
		phase, 4 wire 50 Hz. with off load tap changer, +5 % to -7 % , 2.5 % per step with cable box at primary and at secondary end for outdoor installation, Winding Temperature Indicator, restricted earth fault CT, buchholz relay,		1						
		silica breather, MOG with contacts, Marshal Box to connect control cable between HT panel and Transformer as per								
	1	specification etc. as required.	1	5.04	2,410,200	2.410.200	2,350,000	2 350 000	2,380,000	2,380,0
2.04		Supplying, laying, testing and commissioning of 3Cx 300 sq.mm XLPE AI, armoured cable, 11kV grade in Trench /		36	2,410,200	2,410,200	2,350,000	2,350,000	2,380,000	2,380,0
2.04		on pole complete as per specification and requirement.	250	Mtr.	2,050	512,500	1,983	495,750	1,345	336,2
2.05		Supplying, fixing, testing and commissioning of 11kV heat shrinkable, push on type cable end joint kit for indoor use	230	17411.	2,030	312,300	1,703	475,750	1,343	336,2
2.05		at cable end of size 3Cx300 sq.mm. completed as per specification	5	Set	0.500	47 500	9 500	42 500	5 500	07 F
2.06		Supplying, fixing, testing and commissioning of 11kV heat shrinkable, push on type cable end joint kit for outdoor use	3	36	9,500	47,500	8,500	42,500	5,500	27,5
2.00		at cable end of size 3Cx300 sq.mm. completed as per specification	1	C -4	10 500	10 500			7 000	
2.07		Supplying and laying of following sizes under ground RCC pipe Class NP-2 with coller jointed with stiff mixture of		Set	10,500	10,500	9,000	9,000	7,000	7,0
2.07		cement martar in the proportion of 1:2, completed as required.								
	i	200 mm dia.	20	A 4400	450	9,000	954	19,080	380	7,60
			20	Mtr.	400	7,000	734	17,000	300	
3.00		ISUB-T OT AL				4 748 200		4 607 090		
	1	SUB-T OT AL E ART HING AND MISCELLANEOUS IT EMS			-	4,748,200		4,607,090		4,263,35
		EARTHING AND MISCELLANEOUS ITEMS				4,748,200		4,607,090		
3.01						4,748,200		4,607,090		
		EARTHING AND MISCELLANEOUS IT EMS Supply, installation, testing and commissioning of waterless and maintenance free earthing (grounding) electrode of overall size 100 mm da, 3000 mm depth, 17.2 mm in da with capper bonded MS conductor Conductive aggregate mixed with cement to embed ar badkfill the vaids surrounding the 17.2 mm Cu banded MS conductor placed at the				4,748,200		4,607,090		
		EART HING AND MISCELLANEOUS IT EMS Supply, installation, testing and commissioning of waterless and maintenance free earthing (grounding) electrode of overall size 100 mm da, 3000 mm depth, 17.2 mm in da with copper banded MS conductor Conductive agregate mixed with cement to embed ar backfill the vaids surrounding the 17.2 mm Cu banded MS conductor placed at the centre of a cugured bare hole of 100 mm bio 8 3000 mm depth. The surface are of the earth electrode shall lower				4,748,200		4,607,090		
		EART HING AND MISCELLANE OUS IT EMS Supply, installation, testing and cormissioning of waterless and maintenance free earthing (grounding) electrode of overal size 100 mm da; 300 mm depth. 17.2 mm in da with copper banded MS candudar Candudire oggregate mixed with cement to embed or baddill the viaids surrounding the 17.2 mm. Cu banded MS candudar placed at the centre of a cugured bare hale of 100 mm bia & 3000 mm depth. The surface are of the earth electrodes shall have the earth resistance permonently without periodic waterlang or redarge of earth endmaining compound for a period of				4,748,200		4,607,090		
		EART HING AND MISCELLANEOUS IT EMS Supply, installation, testing and commissioning of waterless and maintenance free earthing (grounding) electrade of overall size 100 mm da, 3000 mm depth, 17.2 mm in dia with copper banded MS canductor Canductive aggregate mixed with centre of a augured bare hole of 100 mm Dia & 3000 mm depth. The surface area of the earth electrade shall have the earth resistance permanently without perioda variant ending or each erab and and for a period of over 30 years in all type of soil canditions and shall not leach into the soil or undergrand water charnels,				4,748,200		4,607,090		
		EART HING AND MISCELLANEOUS IT EMS Supply, installation, testing and cormissioning of waterless and maintenance free earthing (grounding) electrode of overal size 100 mm da, 3000 mm depth, 17.2 mm in da with copper bonded NS conductor Conductive oggregate mixed with cement to embed or boxefull the vaids surrounding the 17.2 mm Cu bonded NS conductor graced the centre of a cugued bore hole of 100 mm bio.8, 3000 mm depth. The surface area of the earth electrode shall lower the earth-resistance permanently without periodic waterling or redorage of earth enhancing compound for a period of over 30 years in all type of sail conditions and shall not leach into the sail or underground water charnels. Electrode's top terminal shall be seeded permonently & earth shirp shall becken out rand terminated to earth base				4,748,200		4,607,090		
		EART HING AND MISCELLANEOUS IT EMS Supply, installation, testing and commissioning of waterless and maintenance free earthing (grounding) electrade of overall size 100 mm da, 3000 mm depth, 17.2 mm in dia with copper banded MS canductor Canductive aggregate mixed with centre of a augured bare hole of 100 mm Dia & 3000 mm depth. The surface area of the earth electrade shall have the earth resistance permanently without perioda variant ending or each erab and and for a period of over 30 years in all type of soil canditions and shall not leach into the soil or undergrand water charnels,				4,748,200		4,607,090		
		EART HING AND MISCELLANEOUS IT EMS Supply, installation, testing and commissioning of waterless and maintenance free earthing (grounding) electrode of overal size 100 mm da, 3000 mm depth, 17.2 mm in da with apper banded MS conductor Conductive aggregate mixed with cament to embed ar backfill the vicits surrounding the 17.2 mm Cu banded MS conductor placed of the centre of a cugured bare hole of 100 mm bio.8 3000 mm depth. The surface area of the earth electrodes shall lower the earth resistance permanently without periodic waterlarging redorage of earth enhancing compound for a period of over 30 years in all type of soil conditions and shall not leach into the soil or underground water chamels, Electrode's top terminal shall be added permanently & earth strip shall be taken out and terminated to earth back and, the earth electrode shall be added be withstand the fault current up to 40 KA for 1 second complete as per								4,263,3
3.01		EART HING AND MISCELLANEOUS IT EMS Supply, installation, testing and commissioning of waterless and maintenance free earthing (grounding) electrode of overal size 100 mm da; 3000 mm depth, 17.2 mm in da with copper banded NS candudar Conductive aggregate mixed with cenent to embed or backfill the vicks surrounding the 17.2 mm Cu banded NS conductor and background to the state of 100 mm Dice 3000 mm depth. The surface are of the earth electrode shall lower the earth resistance permanently without periodic watering or recharge of earth enhancing compound for a period of over 30 years in all type of soil conditions and shall not leach into the soil or underground water chamels, Electrodes top terminal shall be seded permanently & earth ship shall be taken out and terminated to earth back tar, the earth electrode shall be date to withstand the fault current up to 40 KA for 1 second complete as per specification and requirement.	22	Na	9,800		11,033	<b>4,607,090</b>	5,000	4,263,3
3.01		EART HING AND MISCELLANE OUS IT EMS Supply, installation, testing and cormissioning of waterless and maintenance free earthing (grounding) electrode of overal size 100 mm da; 3000 mm depth. 17.2 mm in da with copper banded NS canductor Conductive aggregate mixed with centent to embed or backfill the vaids surrounding the 17.2 mm. Ou banded NS canductor Conductive aggregate mixed with centent to embed or backfill the vaids surrounding the 17.2 mm. Ou banded NS canductor Conductive aggregate the earth resistance permanentity without periodic watering or redurage of earth enhancing compound for a period of over 30 years in all type of sail canditions and shall not leach into the sail or underground water charnels. Electrodes top terminal shall be seded permemently, & earth shirp shall be taken out and terminated to earth back the earth electrode shall be edde to withstand the fault current up to 40 KA for 1 second complete as per specification and requirement. Supply, installation, effecting proper connection testing and commissioning of the following size GI earth shirps/GI	22	No	9,800		11,033		5,000	4,263,3
3.01		EART HING AND MISCELLANEOUS IT EMS Supply, institution, testing and commissioning of widerless and maintenance free earthing (grounding) electrode of overal size 100 mm da; 3000 mm depth, 17.2 mm in da with copper banded NS canductor Canductive aggregate mixed with cement to embed or backfill the vaids surrounding the 17.2 mm Cu banded NS canductor Canductive aggregate mixed with agued bare hold of 100 mm Dic 8.3000 mm depth. The surface are of the earth electrode shall lover the earth resistance permanently without periodic watering or recharge of earth enhancing compound for a period of vary 30 years in all type of soil conditions and shall not leach into the soil or underground water channels, Electrode's top terminal shall be seded permanently & earth strip shall be taken out and terminated to earth bas bar, the earth electrode shall be due to withstand the fault current up to 40 KA for 1 second camplete as per specification and requirement. Supply, installation, effecting proper connection testing and commissioning of the following size GL earth strips/GL wires as required.				215,600		242,726		<b>4,263,3</b>
3.01		EART HING AND MISCELLANEOUS IT EMS Supply, institution, testing and cormissioning of widerless and maintenance free earthing (grounding) electrode of overal size 100 mm da; 3000 mm depth. 17.2 mm in dia with capper banded NS canductor Conductive aggregate mixed with cement to embed or backfill the vicits surrounding the 17.2 mm Cu banded NS canductor Conductive aggregate rived with aggregate bace held of 100 mm Dia \$3000 mm depth. The surface area of the earth electrode shall lower the earth resistance permanently without periodic watering or redrage of earth enhancing compound for a period of over 30 years in all type of soil canditions and shall not leach into the soil or underground water charnels. Electrode's top termind shall be seded permemently & earth shirth shall be taken out and terminated to earth bas bar, the earth electrode shall be adde permemently & earth shirth shall be taken out and terminated to earth bas bar, the earth electrode shall be adde to withstand the fault current up to 40 KA for 1 second complete as per specification and requirement. Supply, installation, effecting proper connection testing and commissioning of the following size GI earth strips/GI withes as required. Supply, installation, strip.	300	Mtr.	350	215,600	230	242,726 69,600	180	<b>4,263,3</b>
3.01	ii.	EART HING AND MISCELLANE OUS IT EMS Supply, installation, testing and cormissioning of waterless and maintenance free earthing (grounding) electrode of overal size 100 mm da; 3000 mm depth. 17.2 mm in da with copper bonded MS concludar Conductive aggregate mixed with centent to embed or boardill the vaids surrounding the 17.2 mm. Ou bonded MS concludar placed of the centre of a cugured bore hale of 100 mm bia. 8, 3000 mm depth. The surface area of the earth technoles shall lower the earth resistance permonentity without periodic watering or redorage of earth enhanding compound for a period of over 30 years in all type of soil conditions and shall not leach into the soil or underground water charnels, Electrode's top termind shall be seede permonently. & earth ship shall be taken out rand terminated to earth be able to bar, the earth electrode shall be edde to withstand the fault current up to 40 KA for 1 second complete as per specification and requirement. Supply, installation, effecting proper connection testing and commissioning of the following size GI earth strips/GI wires as required 30 mmx 6 mm GI strip.	300 200	Mtr. Mtr.	350 250	215,600	230 95	242,726 69,600 19,000	180 120	<b>4,263,3</b> 1110,4 54,1 24,2
3.01		EART HING AND MISCELLANEOUS IT EMS Supply, installation, testing and cormissioning of waterless and maintenance free earthing (grounding) electrode of overal size 100 mm da; 3000 mm depth, 17.2 mm in da with copper banded NS candudor Conductive aggregate mixed with cenent to embed or backfill the vicks surrounding the 17.2 mm Cu banded NS candudor Conductive aggregate mixed with aggregate bare held of 100 mm Dias 3000 mm depth. The surface are of the earth electrode shall lower the earth resistance permanently without periodic watering or resharge of earth enhancing compound for a period of over 30 years in all type of soil conditions and shall not leach into the soil or underground water channels, Electrodes top terminal shall be sedeel permanently & earth stirip shall be taken out and terminated to earth back bar, the earth electrode shall be date to withstand the fault current up to 40 KA for 1 second complete as per specification and requirement. Supply, installation, effecting proper connection testing and commissioning of the following size GL earth strips/GL wires as required 90 mm x 6 mm GL stripp 25 mm x 6 mm GL stripp 25 mm x 6 mm GL stripp	300	Mtr.	350	215,600	230	242,726 69,600	180	<b>4,263,3</b> 1110,4 54,1 24,2
3.01	ii.	EART HING AND MISCELLANE OUS IT EMS Supply, installation, testing and cormissioning of waterless and maintenance free earthing (grounding) electrode of overal size 100 mm da; 3000 mm depth. 17.2 mm in da with copper bonded MS concludar Conductive aggregate mixed with centent to embed or boardill the vaids surrounding the 17.2 mm. Ou bonded MS concludar placed of the centre of a cugured bore hale of 100 mm bia. 8, 3000 mm depth. The surface area of the earth technoles shall lower the earth resistance permonentity without periodic watering or redorage of earth enhanding compound for a period of over 30 years in all type of soil conditions and shall not leach into the soil or underground water charnels, Electrode's top termind shall be seede permonently. & earth ship shall be taken out rand terminated to earth be able to bar, the earth electrode shall be edde to withstand the fault current up to 40 KA for 1 second complete as per specification and requirement. Supply, installation, effecting proper connection testing and commissioning of the following size GI earth strips/GI wires as required 30 mmx 6 mm GI strip.	300 200	Mtr. Mtr.	350 250	215,600	230 95	242,726 69,600 19,000	180 120	<b>4,263,3</b>
3.01	ii.	EART HING AND MISCELLANE OUS IT EMS Supply, installation, testing and cormissioning of waterless and maintenance free earthing (grounding) electrode of overal size 100 mm da; 3000 mm depth. 17.2 mm in da with copper bonded NS conductor Conductive aggregate mixed with cement to embed or backfill the vaids surrounding the 17.2 mm Cu bonded NS conductor Conductive aggregate the carthresis tance permanently without periodic waterling or redorage of earth enhancing compound for a period of over 30 years in all type of sail conditions and shall not leach into the sail or underground water charnels. Electrode's top terminal shall be seede permonently & earth shifts shall be taken out nant terminated to earth bas bar, the earth electrode shall be eade permonently & earth shifts shall be taken out and terminated to earth bas bar, the earth electrode shall be eade to withstand the fault current up to 40 KA for 1 second complete as per specification and requirement. Supply, installation, effecting proper connection testing and commissioning of the following size GI earth shifts 25 mm x 6 mm GI shifts Supply, installation, effecting proper connection testing and commissioning of the following size copper earth shifts Supply, installation, effecting proper connection testing and commissioning of the following size copper earth shifts Supply, installation, effecting proper connection testing and commissioning of the following size copper earth shifts Supply, installation, effecting proper connection testing and commissioning of the following size copper earth shifts Supply, installation, effecting proper connection testing and commissioning of the following size copper earth shifts Supply, installation, effecting proper connection testing and commissioning of the following size copper earth shifts Supply, installation, effecting proper connection testing and commissioning of the following size copper earth shifts	300 200	Mtr. Mtr.	350 250	215,600	230 95	242,726 69,600 19,000	180 120	<b>4,263,3</b> 110,0 54,0 24,1 25,0
3.01 3.02 3.03	ii.	EART HING AND MISCELLANEOUS IT EMS Supply, institution, testing and commissioning of widerless and maintenance free earthing (grounding) electrode of overal size 100 mm da; 3000 mm depth, 17.2 mm in da with capper banded NS canductor Canductive aggregate mixed with cenent to embed or backfill the vaids surrounding the 17.2 mm Cu banded NS canductor Canductive aggregate the earth resistance permanently without periodic waterings or restrage of earth enthancing campound for a period of over 30 years in all type of soil canditions and shall not leach into the soil or underground water channels, Electrade's top terminal shall be seded permanently & earth strip shall be taken out and terminated to earth bus bar, the earth electrade shall be adde to withstand the fault current up to 40 KA for 1 second camplete as per specification and requirement. Supply, installation, effecting proper connection testing and commissioning of the following size GI earth strips/GI wires as required 50 mm x 6 mm GI strip 25 mm x 6 mm GI strip Supply, installation, effecting proper connection testing and commissioning of the following size capper earth strips/GI wires (Stripp).	300 200 1600	Mtr. Mtr. Mtr.	350 250 35	215,600 105,000 50,000 56,000	230 95 8	242.726 69,600 19,000 12,800	180 120 16	<b>4,263</b> ,3 110, 54, 24, 25,
3.01 3.02 3.03	ii.	EART HING AND MISCELLANEOUS IT EMS Supply, installation, testing and cormissioning of waterless and maintenance free earthing (grounding) electrice of overal size 100 mm da; 3000 mm depth. 1.2 mm in da with copper banded NS canductor Conductive aggregate mixed with cement to embed or backfill the vicks surrounding the 17.2 mm Cu banded NS canductor Conductive aggregate rearting of a cayred bare held of 100 mm Dias 3000 mm depth. The surface are of the earth electrades shall lower the earth resistance permanently without periods watering or recharge of earth erhancing compound for a period of over 30 years in all type of soil canditions and shall not leach into the soil or underground water channels, Electrades top terminal shall be seded permanently & earth stirip shall be taken out and terminated to earth bas bar, the earth electrade shall be date to withstand the fault current up to 40 KA for 1 second complete as per specification and requirement. Supply, installation, effecting proper connection testing and commissioning of the following size GL earth strips/GL wires as required. 30 mm x 6 mm GL strip. 25 mm x 6 mm GL strip. 20 mm x 6 mm GL strip. 30 mm x 6 mm GL strip. 30 mm x 6 mm GL strip.	300 200 1600	Mtr. Mtr. Mtr.	350 250 35	215,600 105,000 50,000 56,000	230 95 8	242.726 69,600 19,000 12,800	180 120 16	<b>4,263,3</b> 110,1 54,1 24,1 25,- 89,
3.01 3.02 3.03 3.07	ii.	EART HING AND MISCELLANE OUS IT EMS Supply, installation, testing and cormissioning of waterless and maintenance free earthing (grounding) electrode of overal size 100 mm da; 3000 mm depth 1.72 mm in da with capper bonded NS conductor Conductive aggregate mixed with cement to embed or backfill the vaids surrounding the 17.2 mm. Cu bonded NS conductor Conductive aggregate mixed with cement to embed or backfill the vaids surrounding the 17.2 mm. Cu bonded NS conductor faced of the centre of a cugured bare hale of 100 mm bia.8 3000 mm depth. The surface area of the earth electrode shall lower the earth resistance permanently without periodic waterling or rebrage of earth erhaning compound for a period of over 30 years in all type of sail conditions and shall not leach into the sail or underground water chamets, leaterode's top termind shall be seded permonently & earth shift shall be taken out and terminated to earth bas bar, the earth electrode shall be eaded permonently & earth shift shall be taken out and terminated to earth bas bar, the earth electrode shall be eaded permonently & earth shift shall be taken out and terminated to earth bas bar, the earth electrode shall be eaded permonently & earth shift shall be taken out and terminated to earth bas bar, the earth electrode shall be eaded permonently & earth shift shall be taken out and terminated to earth bas bar, the earth electrode shall be eaded permonently & earth shift shall be taken out and terminated to earth bas bar, the earth electrode shall be abde to withstand the fault current up to 40 KA for 1 second complete as per specification and requirement.  Supply, installation, effecting proper connection testing and commissioning of the following size Gl earth shifts/Gl wires as required So umax 6 mm Gl shiftp 4mm da Gl wire Supply, installation, effecting proper connection testing and commissioning of the following size copper earth shifts/SI Supply installation, effecting proper connection testing and commissioning of the following size copper earth sh	300 200 1600 60	Mtr. Mtr. Mtr.	350 250 35 1,850	215,600 105,000 56,000 1111,000 24,000	230 95 8 2,272	242,726 69,600 19,000 12,800 136,320	180 120 16 1,486	<b>4,263,3</b> 110,0 54,0 25,0 89, 54,0
3.01 3.02 3.03 3.07 3.08	ii.	EART HING AND MISCELLANEOUS IT EMS Supply, institution, testing and cormissioning of widerless and maintenance free earthing (grounding) electrode of overal size 100 mm da; 3000 mm depth, 17.2 mm in da with copper banded NS canductor Canductive aggregate mixed with cement to embed or backfill the vaids surrounding the 17.2 mm Cu banded MS canductor Canductive aggregate mixed with agured bare hold 100 mm Dia 8, 3000 mm depth. The surdox are of the earth electrode shall lover the earth resistance permanently without periodic watering or restrage of earth enhancing compound for a period of vary 30, years in all type of said conflictions and shall not leach into the said or undergraund water channels, Electrode's top terminal shall be saded permanently & earth strip shall be taken out and terminated to earth bus bar, the earth electrode shall be added to withstand the fault current up to 40 KA for 1 second complete as per Specification and requirement. Supply, installation, effecting proper connection testing and commissioning of the following size GI earth strips/GI wires as required 50 mm x 6 mm GI strip. 42 mm x 6 nm GI strip. 43 mm da GI wire 50 gmax 6 mm GI strip. 50 mm x 6 mm GI strip. 50 mmm	300 200 1600 60 20	Mtr. Mtr. Mtr. Mtr.	350 250 35 1,850 1,200	215,600 105,000 56,000 1111,000 24,000	230 95 8 2,272 2,397	242.726 69,600 19,000 12,800 136,320 47,940	180 120 16 1,486 2,700	4,263,3 110,0 54,( 25,0 89, 54,( 2,1
3.01 3.02 3.03 3.07 3.08 3.09	ii.	EART HING AND MISCELLANEOUS IT EMS Supply, installation, testing and commissioning of waterless and maintenance free earthing (grounding) electrode of overal size 100 mm da; 3000 mm depth, 17.2 mm in da with copper banded NS canductor Canductive aggregate mixed with cement to embed or backfill the vicks surrounding the 17.2 mm. Cu banded NS canductor Canductive aggregate mixed with cement to embed or backfill the vicks surrounding the 17.2 mm. Cu banded NS canductor Canductive aggregate with aggregate bare held of 100 mm Dia 8.3000 mm depth. The surface are of the earth electrode shall lover the earth resistance permanently without periodic watering or restrage of earth enhaning compound for a period of over 30 years in all type of soil canditions and shall not leads into the soil or undivergation and vater channels, Electrode's top terminal shall be seded permanently & earth strip shall be taken out and terminated to earth bac bar, the earth electrode shall be due to withstand the fault current up to 40 KA for 1 second camplete as per specification and requirement.  Supply, installation, effecting proper connection testing and commissioning of the following size GL earth strips/GL 4mm da GL wire Surguived Surguived the fault are connection testing and commissioning of the following size capper earth strips, Supply, installation, affecting proper connection testing and commissioning of the following size capper earth strips, Surguived Surgui	300 200 1600 60 20 3	Mtr. Mtr. Mtr. Mtr. Mtr.	350 250 35 1,850 1,200 400	215,600 105,000 56,000 111,000 24,000 1,200	230 95 8 2,272 2,397 662	242.726 69,600 19,000 12,800 136,320 47,940 1,986	180 120 16 1,486 2,700 700	4,263,3 110,1 54,1 24,2 25,- 89, 54,1 2,1
3.01 3.02 3.03 3.07 3.08 3.09 3.10	ii.	EART HING AND MISCELLANEOUS IT EMS Supply, institution, testing and cormissioning of waterless and maintenance free earthing (grounding) electrice or overal size 100 mm da; 3000 mm depth 1.2 mm in da with capper banded NS canductor Canductive aggregate mixed with cement to embed or backfill the vicks surrounding the 17.2 mm Cu banded MS canductor Canductive aggregate mixed with cement to embed or backfill the vicks surrounding the 17.2 mm Cu banded MS canductor Canductive aggregate the earth resistance permanently without periodic watering or recharge of earth enhancing compound for a period of over 30 years in all type of soil canditions and shall not leach into the soil or underground water charnels. Electrade's top termind shall be seded permently & earth shifts shall be taken out and terminated to earth be the earth electrade shall be date to withstand the fault current up to 40 KA for 1 second complete as per specification and requirement. Supply, installation, effecting proper connection testing and commissioning of the following size GI earth strips/GI wires as required 50 mm x 6 mm GI strip. 50 m	300 200 1600 60 20 3	Mtr. Mtr. Mtr. Mtr. Mtr.	350 250 35 1,850 1,200 400	215,600 105,000 56,000 111,000 24,000 1,200	230 95 8 2,272 2,397 662	242.726 69,600 19,000 12,800 136,320 47,940 1,986	180 120 16 1,486 2,700 700	4,263,3 110,0 54,4 24,1 25,0 89, 54,1 2,1 8
3.01 3.02 3.03 3.07 3.08 3.09 3.10	ii.	EART HING AND MISCELLANEOUS IT EMS Supply, installation, testing and commissioning of waterless and maintenance free earthing (grounding) electrode of overal size 100 mm da; 3000 mm depth, 17.2 mm in da with copper banded NS canductor Canductive aggregate mixed with cement to embed or backfill the vicks surrounding the 17.2 mm. Cu banded NS canductor Canductive aggregate mixed with cement to embed or backfill the vicks surrounding the 17.2 mm. Cu banded NS canductor Canductive aggregate with aggregate bare held of 100 mm Dia 8.3000 mm depth. The surface are of the earth electrode shall lover the earth resistance permanently without periodic watering or restrage of earth enhaning compound for a period of over 30 years in all type of soil canditions and shall not leads into the soil or undivergation and vater channels, Electrode's top terminal shall be seded permanently & earth strip shall be taken out and terminated to earth bac bar, the earth electrode shall be due to withstand the fault current up to 40 KA for 1 second camplete as per specification and requirement.  Supply, installation, effecting proper connection testing and commissioning of the following size GL earth strips/GL 4mm da GL wire Surguived Surguived the fault are connection testing and commissioning of the following size capper earth strips, Supply, installation, affecting proper connection testing and commissioning of the following size capper earth strips, Surguived Surgui	300 200 1600 60 20 3 5	Mtr. Mtr. Mtr. Mtr. No.	350 250 35 1,850 1,200 400 100	215,600 105,000 50,000 1111,000 24,000 1,200 500	230 95 8 2,272 2,397 662 250	242.726 69,600 19,000 12,800 136,320 47,940 1,986 1,250	180 120 16 1,486 2,700 700 170	4,263,3 110,1 54,1 24,1 25,1 89, 54,1 2,1 8 33,00
3.01 3.02 3.03 3.07 3.08 3.09 3.10	ii.	EART HING AND MISCELLANEOUS IT EMS Supply, institution, testing and cormissioning of waterless and maintenance free earthing (grounding) electrice or overal size 100 mm da; 3000 mm depth 1.2 mm in da with capper banded NS canductor Canductive aggregate mixed with cement to embed or backfill the vicks surrounding the 17.2 mm Cu banded MS canductor Canductive aggregate mixed with cement to embed or backfill the vicks surrounding the 17.2 mm Cu banded MS canductor Canductive aggregate the earth resistance permanently without periodic watering or recharge of earth enhancing compound for a period of over 30 years in all type of soil canditions and shall not leach into the soil or underground water charnels. Electrade's top termind shall be seded permently & earth shifts shall be taken out and terminated to earth be the earth electrade shall be date to withstand the fault current up to 40 KA for 1 second complete as per specification and requirement. Supply, installation, effecting proper connection testing and commissioning of the following size GI earth strips/GI wires as required 50 mm x 6 mm GI strip. 50 m	300 200 1600 60 20 3 5	Mtr. Mtr. Mtr. Mtr. No.	350 250 35 1,850 1,200 400 100 6,500	215,600 105,000 50,000 56,000 111,000 24,000 1,200 500 39,000	230 95 8 2,272 2,397 662 250 5,900	242.726 69,600 19,000 12,800 136,320 47,940 1,986 1,250 35,400	180 120 16 1,486 2,700 700 170 5,500	
3.01 3.02 3.03 3.03 3.07 3.08 3.09 3.10 3.11 3.12	ii.	EART HING AND MISCELLANEOUS IT EMS Supply, installation, testing and cormissioning of waterless and maintenance free earthing (grounding) electricede of overal size 100 mm da, 3000 mm depth 1.7.2 mm in da with copper bonded NS conductor Conductive aggregate mixed with cement to embed or bookfill the voids surrounding the 17.2 mm. Cu bonded NS conductor Conductive aggregate mixed with cement to embed or bookfill the voids surrounding the 17.2 mm. Cu bonded NS conductor Conductive aggregate the earth resistance permanently without periods waterling or recharge of earth enhancing compound for a period of over 30 years in all type of soil conditions and shall not leach into the soil or underground water charnels. Electrode's top termind shall be sedel permemently & earth shift shall be taken out not terminated to earth be additer charnels. Electrode's top termind shall be be sedel permemently & earth shift shall be taken out not terminated to earth be additer charnels. Supply, installation, effecting proper connection testing and commissioning of the following size GI earth strips/GI wires as required Supply, installation, effecting proper connection testing and commissioning of the following size capper earth strips/GI wires as required Supply, installation, effecting proper connection testing and commissioning of the following size capper earth strips Supply, installation, effecting proper connection testing and commissioning of the following size capper earth strips Supply, installation, effecting proper connection testing and commissioning of the following size capper earth strips Supply, installation effecting proper connection testing and commissioning of the following size capper earth strips as required Supplying of non-skid rubber mat 12 mm thick and 900mm width ISI approved as required induding autifing to required lengths Supplying of fire backet painted red and approved quality confarming to 15:254/1974 Supplying of fire backet painted red and approved quality confarming to 15:254/1974 Supplying of firi	300 200 1600 60 20 3 5	Mtr. Mtr. Mtr. Mtr. No.	350 250 35 1,850 1,200 400 100 6,500	215,600 105,000 50,000 50,000 1111,000 24,000 1,200 500 39,000 500	230 95 8 2,272 2,397 662 250 5,900	242.726 69,600 19,000 12,800 136,320 47,940 1,986 1,250 35,400	180 120 16 1,486 2,700 700 170 5,500 500	<b>4,263,3</b> 110,1 54,(1 24,3 25,) 25,1 2,1,2 25,1 2,1,2 3,3,00 5,5
3.01 3.02 3.03 3.03 3.07 3.08 3.09 3.10 3.11 3.12	ii.	EART HING AND MISCELLANEOUS IT EMS Supply, institution, testing and commissioning of waterless and maintenance free earthing (grounding) electrode of word size 100 mm da; 3000 mm depth, 17.2 mm in da with copper banded NS canduct Canductive aggregate mixed with cement to entbed or backfill the vaids surrounding the 17.2 mm. Cu banded MS canduct Canductive aggregate with agured bare hold 100 mm Dio 8.3000 mm depth. The surdoue are of the earth electrode shall lower the earth resistance permanently without periodic watering or recharge of earth enhancing compaund for a period of word size as in all type of soil canditions and shall not leach into the soil or underground water channels, Electrode's top terminal shall be seded permanently & earth strip shall be taken out and terminated to earth bus bar, the earth electrode shall be date to withstand the fault current up to 40 KA for 1 second camplete as per Supply, institution, effecting proper connection testing and commissioning of the following size GL earth strips/GL Wires as required Supply, institution, effecting proper connection testing and commissioning of the following size capper earth strips/GL Wires as required Supply, institution water the advector testing and commissioning of the following size capper earth strips, are required Supply, institution to the strip attempt to the strip and commissioning of the following size capper earth strips, are required Supply, institution table particular and approved quality conforming to 15:254/1974 Supplying of fire bucket painted red and approved quality conforming to 15:254/1974 Supplying and fixing ABC fire estinguister type 4.5 kgs capability of approved make with wall mounting bracket as required conforming to 15:2878/1976 Supplying and fixing ads shock treatment chart written in English and Local language duy framed in glass as required. Fabricaling and installation following sizes of perforated MS cable Trays induding horizontal and vertical bends.	300 200 1600 60 20 3 5	Mtr. Mtr. Mtr. Mtr. No. No. No.	350 250 35 1,850 1,200 400 100 6,500 500	215,600 105,000 50,000 1111,000 24,000 1,200 500 39,000 500	230 95 8 2,272 2,397 662 250 5,900 1,000	242,726 69,600 19,000 12,800 136,320 47,940 1,986 1,250 35,400 1,000	180 120 16 1,486 2,700 700 170 5,500 500	4,263,3 110,0 54,0 225,0 89, 54,0 2,1 8 33,00
3.01 3.02 3.03 3.03 3.07 3.08 3.09 3.10 3.11 3.12	ii.	EART HING AND MISCELLANEOUS IT EMS Supply, installation, testing and cormissioning of waterless and maintenance free earthing (grounding) electriced of overal size 100 mm da; 300 mm depth 1.72 mm in da with copper bonded NS conductor Conductive aggregate mixed with cenent to embed or backfill the vaids surrounding the 17.2 mm Cu bonded NS conductor Conductive aggregate mixed with cenent to embed or backfill the vaids surrounding the 17.2 mm Cu bonded NS conductor Conductive aggregate inter da augured bare held 100 mm Dia 3000 mm depth. The surface are of the earth reductade shall lower the earth resistance permanently without periods valening or recharge of earth enhaning compound for a period of over 30 years in all type of soil conditions and shall not leach into the soil or underground water charnels, leactrode's top terminal shall be sedet permently. & earth shift bital be taken out and terminated to earth earth advert charnels, bar, the earth electrode shall be date to withstand the fault current up to 40 KA for 1 second complete as per spedification and requirement). Supply, installation, effecting proper connection testing and commissioning of the following size GI earth strips/GI wires as required. So mmx 6 mm GI shifp. 25 mmx 6 mm GI shifp. 30 mmx 6 mm GI shifp. 30 mmx 6 mm GI proper somedion testing and commissioning of the following size copper earth strips/GI wires as required. So propy, installation, effecting proper connection testing and commissioning of the following size copper earth strips/GI wires as required. So mmx 6 mm GI shifp. 30 mm 4 mm GI shifp. 30 mm 6 mm GI shifp. 30 mm 6 mm GI shiff avde mod 12 mm thick and 900 mm width	300 200 1600 60 20 3 5	Mtr. Mtr. Mtr. Mtr. No. No. No.	350 250 35 1,850 1,200 400 100 6,500 500	215,600 105,000 50,000 1111,000 24,000 1,200 500 39,000 500	230 95 8 2,272 2,397 662 250 5,900 1,000	242,726 69,600 19,000 12,800 136,320 47,940 1,986 1,250 35,400 1,000	180 120 16 1,486 2,700 700 170 5,500 500	<b>4,263,3</b> 110,1 54,(1 24,3 25,) 25,1 2,1,2 25,1 2,1,2 3,3,00 5,5
3.01 3.02 3.03 3.03 3.07 3.08 3.09 3.10 3.11 3.12	ii.	EART HING AND MISCELLANEOUS IT EMS Supply, institution, testing and cormissioning of widerless and maintenance free earthing (grounding) electrode of overal size 100 mm da; 3000 mm depth. 17.2 mm in da with copper banded NS canductor Canductive aggregate mixed with cement to embed or backfill the vaids surrounding the 17.2 mm. Cu banded NS canductor Canductive aggregate mixed with agreed bac holds till the vaids surrounding the 17.2 mm. Cu banded NS canductor Canductive aggregate the earth resistance permanently without periodic watering or restrage of earth enthancing compound for a period of vare 30, years in all type of soil canditions and shall not leach into the soil or underground water channels, Electrode's top terminal shall be seded permanently & earth strip shall be taken out and terminated to earth bus bar, the earth electrode shall be eaded to withstand the fault current up to 40 KA for 1 second complete as per spedification and requirement. Supply, installation, effecting proper connection testing and commissioning of the following size GI earth strips/GI wires as required 50 mm x 6 mm GI strip 25 mm x 6 mm GI strip 25 mm x 6 mm GI strip 50 mm x 6 m	300 200 1600 20 3 5 6 1 1	Mtr. Mtr. Mtr. Mtr. No. No. No.	350 250 35 1,850 400 400 6,500 500 150	215,600 105,000 50,000 24,000 1111,000 24,000 1,200 500 39,000 500 150	230 95 8 2,272 2,397 662 250 5,900 1,000 750	242,726 69,600 19,000 12,800 47,940 1,250 1,250 1,250 1,250 1,250 1,250 1,250 1,250 1,250 1,000	180 120 16 2,700 700 170 5,500 500 300	<b>4,263,3</b> 1110,1 54,4 24,1 25,- 897, 54,4 24,1 25,- 33,0(0,2) 89,- 5,- 33,0(0,2) 33,0(0,2) 33,0(0,2) 33,0(0,2) 33,0(0,2) 33,0(0,2) 33,0(0,2) 33,0(0,2) 33,0(0,2) 34,0(0,2)) 34,0(0,2))
3.01 3.02 3.03 3.03 3.07 3.08 3.09 3.10 3.11 3.12	ii.	EART HING AND MISCELLANEOUS IT EMS Supply, installation, testing and commissioning of waterless and maintenance free earthing (grounding) electrode of overal size 100 mm da; 3000 mm depth, 17.2 mm in da with copper banded NS conductor Conductive aggregate mixed with cement to embed or backfill the vicits surrounding the 17.2 mm. Cu banded MS conductor Conductive aggregate overal size larger and the original state of 100 mm Dice 3000 mm depth. The surface are of the earth electrode shall lover the earth resistance permanently without periodic watering or resharge of earth enhancing compound for a period of view 30 years in all type of soil conditions and shall not leach into the soil or undergraund water channels, Electrode's top terminal shall be seded permanently & earth strip shall be taken out and terminated to earth bus bar, the earth electrode shall be date to withstand the fault current up to 40 KA for 1 second complete as per specification and requirement. Supply, installation, effecting proper connection testing and commissioning of the following size GL earth strips/GL witres as required. Supply, installation, effecting proper connection testing and commissioning of the following size capper earth strips/GL witres as required. Supply, installation, up the strip and the maintenance of the strip strips. Supplying of non-skid nubber mot 12 mm thick and 900mm width IS1 approved as required including auting to required lengths Supplying of fire bucket painted red and approved quality conforming to 15:254/1974. Supplying on fixing danger paide 440 Volt, writhen in three languages as required Supplying of fire bucket painted red and approved quality conforming to 15:254/1974. Supplying of firs in above the adment and real main and it is a pres arbed by Indam Red Crass. Supplying of firs in above the adment and real main and is a single hand using harder and were as required. Fabricating and installation following sizes of perforated MS cable Trays including harizontal and vertical bends,	300 200 1600 60 20 3 5 6 1 1 1 600	Mtr. Mtr. Mtr. No. No. No.	350 250 35 1,200 400 100 6,500 500 150	215.600 105.000 50.000 24.000 111,000 24,000 1,200 39,000 39,000 150 330,000	230 95 8 2,272 2,397 662 250 5,900 1,000 750 5,900	242,726 69,600 19,000 12,800 47,940 1,250 35,400 1,000 7,50 348,000	180 120 16 1,486 2,700 700 170 5,500 500	4,263,3 110, 110, 54,1 24,1 25, 89, 54,1 2,1,1 33,00 5 33,00 33,00 342,0,1 442,
3.01 3.02 3.03 3.07 3.08 3.09 3.10 3.11 3.12 3.14	ii.	EART HING AND MISCELLANEOUS IT EMS Supply, installation, testing and cormissioning of waterless and maintenance free earthing (grounding) electricede of overal size 100 mm da; 300 mm depth 1.7.2 mm in da with copper bonded MS conductor Conductive aggregate mixed with cenent to embed or bookfill the vicks surrounding the 17.2 mm. Cu bonded MS conductor Conductive aggregate mixed with cenent to embed or bookfill the vicks surrounding the 17.2 mm. Cu bonded MS conductor Conductive aggregate with aggregate bare held of 100 mm Dia 3000 mm depth. The surfoce are of the earth electrades shall lower the earth resistance permanently without periodic watering or resharge of earth erhanding compound for a period of over 30 years in all type of soil conditions and shall not leach into the soil or underground water channels, leactrades top terminal shall be sedeel permanently & earth siting shall be taken out not terminaded to earth sep specification and requirement. Supply, installation, effecting proper connection testing and commissioning of the following size GL earth strips/GL wires as required Supply, installation, effecting proper connection testing and commissioning of the following size capper earth strips/GL wires as required Supply, installation, effecting proper connection testing and commissioning of the following size capper earth strips/GL Supply, installation, effecting proper connection testing and commissioning of the following size capper earth strips Supplying of non-skid rubber mot 12 mm thick and 900mm width ISL approved as required including autiling to required lengths Supplying of first backet painted red and approved quality conforming to IS:254/1974 Supplying and fixing darger pide 440 Volt, written in three languages as required Supplying and fixing darger pide 440 Volt, written in three languages as required Supplying and fixing darger pide 440 Volt, written in three languages as required Supplying and fixing darger pide 440 Volt, written in three languages as required Supplying and fixing darge	300 200 1600 20 3 5 6 1 1	Mtr.           Mtr.           Mtr.           Mtr.           Nto.           No.           No.	350 250 35 1,850 400 400 6,500 500 150	215,600 105,000 50,000 24,000 1111,000 24,000 1,200 500 39,000 500 150	230 95 8 2,272 2,397 662 250 5,900 1,000 750	242,726 69,600 19,000 12,800 47,940 1,250 1,250 1,250 1,250 1,250 1,250 1,250 1,250 1,250 1,000	180 120 16 2,700 700 170 5,500 500 300	4,263,3 110, 110, 54,1 24,1 25, 89, 54,1 2,1,1 33,00 5 33,00 33,00 342,0,1 442,
3.01 3.02 3.03 3.07 3.08 3.09 3.10 3.11 3.12 3.14	ii. iii. i.	EART HING AND MISCELLANEOUS IT EMS Supply, installation, testing and commissioning of waterless and maintenance free earthing (grounding) electrode of word size 100 mm da; 300 mm depth, 17.2 mm in do with capper banded NS canductor Canductive aggregate mixed with cement to entbed or backfill the vaids surrounding the 17.2 mm. Cu banded NS canductor Canductive aggregate with agured bare hole 1100 mm Dia. 3000 mm depth, 17.5 urthough the soil or underst and to aggregate the earth resistance permanently without periodic watering or restrage of earth enthancing compound for a period of word size as in all type of soil conditions and shall not leach into the soil or underground water channels, Electrode's top terminal shall be steled permanently & earth strips shall be taken out and terminated to earth bus bar, the earth electrode shall be adde to withstand the fault current up to 40 KA for 1 second complete as per Spedification and requirement.  Supply, installation, effecting proper connection testing and commissioning of the following size GI earth strips/GI wires as required So mmx 6 mm GI strip  Supply, installation under facility proper connection testing and commissioning of the following size capper earth strips Supply, installation under earting parts and the string and commissioning of the following size capper earth strips Supplying of fire backet painted and approved quality conforming to 15:254/1974 Supplying of fire backet painted red and approved quality conforming to 15:254/1974 Supplying and fixing ABC fire extinguisher type 4.5 kgs capacity of approved make with wall mounting bracket as supplying and fixing ABC fire extinguisher type 4.5 kgs capacity of approved make with wall mounting bracket as required conforming to 15:2878/1976 Supplying and fixing ABC fire extinguisher type 4.5 kgs capacity of approved make with wall mounting bracket as required conforming to 15:2878/1976 Supplying and fixing ABC fire extinguisher type 4.5 kgs capacity of approved make with wall mounting bracket as required c	300 200 1600 60 20 3 5 6 1 1 1 600	Mtr. Mtr. Mtr. No. No. No.	350 250 35 1,200 400 100 6,500 500 150	215.600 105.000 50.000 24.000 111,000 24,000 1,200 39,000 39,000 150 330,000	230 95 8 2,272 2,397 662 250 5,900 1,000 750 5,900	242,726 69,600 19,000 12,800 47,940 1,250 35,400 1,000 7,50 348,000	180 120 16 1,486 2,700 7000 170 5,500 5,500 300 300	4,263,3 110, 110, 54,1 24,1 25, 89, 54,1 2,1,1 33,00 5 33,00 33,00 342,0,1 442,
3.01 3.02 3.03 3.07 3.08 3.09 3.10 3.11 3.12 3.14	ii. iii. i.	EART HING AND MISCELLANEOUS IT EMS Supply, installation, testing and commissioning of waterless and maintenance free earthing (grounding) electrode of overal size 100 mm da; 300 mm depth 1.7.2 mm in da with copper bonded MS conductor Conductive oggregate mixed with cenent to embed or bookfill the vicks surrounding the 17.2 mm. Cu bonded MS conductor Conductive oggregate rived with cenent to embed or bookfill the vicks surrounding the 17.2 mm. Cu bonded MS conductor Conductive oggregate with equired bare hold 100 mm Dia 3000 mm depth. The surface are of the earth electrode shall lover the earth resistance permanently without periods watering or resharge of earth erhanding compound for a period of over 30 years in all type of soil conditions and shall not leach into the soil or underground water charnels, Electrode's top terminal shall be sedeel permanently & earth sthip shall be taken out and terminated to earth sep- specification and requirement.  Supply, installation, effecting proper connection testing and commissioning of the following size GL earth strips/GL wires as required.  Supply, installation, effecting proper connection testing and commissioning of the following size capper earth strips/GL wires as required.  Supply, installation, affecting proper connection testing and commissioning of the following size capper earth strips are required.  Supply, installation, the enting the real multiply and a commissioning of the following size capper earth strips are required.  Supplying of non-skid nubber mat 12 mm thick and 900mm width ISI approved as required induding autting to required lengths  Supplying of firs bucket painted red and approved quality conforming to IS:254/1974  Supplying and fixing darger pide 440 Vati, written in three languages as required.  Supplying and fixing darger pide 440 Vati, written in three languages as required.  Fabricating and fixing at shock treatment chart written in English and Local language duly framed in scas.  Supplying and fixing darger pide 440 Vati, written in there	300 200 1600 60 20 3 5 6 1 1 1 600	Mtr. Mtr. Mtr. No. No. No.	350 250 35 1,200 400 100 6,500 500 150	215.600 105.000 50.000 24.000 111,000 24,000 1,200 39,000 39,000 150 330,000	230 95 8 2,272 2,397 662 250 5,900 1,000 750 5,900	242,726 69,600 19,000 12,800 47,940 1,250 35,400 1,000 7,50 348,000	180 120 16 1,486 2,700 7000 170 5,500 5,500 300 300	4,263,3 110, 110, 54,1 24,1 25, 89, 54,1 2,1,1 33,00 5 33,00 33,00 342,0,1 442,
3.01 3.02 3.03 3.07 3.08 3.09 3.10 3.11 3.12 3.14	ii. iii. i.	EART HING AND MISCELLANEOUS IT EMS Supply, institution, testing and commissioning of widerless and maintenance free earthing (grounding) electrode of workal size 100 mm da; 300 mm depth. 17.2 mm in do with capper banded NS canductor Canductive aggregate mixed with cenent to embed or backfill the vaids surrounding the 17.2 mm. Cu banded NS canductor Canductive aggregate with aggregate bare hole of 100 mm Dis 8.3000 mm depth. The surface are of the earth electrades hall lower the earth resistance permanently without periodic watering or restrage of earth enthancing compound for a period of workal size 100 km. Dis 8.3000 mm depth. The surface are of the earth electrades hall lower the earth resistance permanently without periodic watering or restrage of earth enthancing compound for a period of workal size in all type of soil carditions and shall not leach into the soil or underground water channels, Electrade's top terminal shall be eaded permanently & earth strip shall be taken out and terminated to earth bus tay, the eartified the date to withstand the fault current up to 40 KA for 1 second complete as per specification and requirement. Supply, installation, effecting proper connection testing and commissioning of the following size GI earth strips/GI wires as required 30 mm X 6 mm GI strip 25 mm X 6 mm GI strip 30 mm X 6 mm GI strip 40 mm da GI wire 50 upply; and fileing proper connection testing and commissioning of the following size capper earth strips 30 groups a minor strip 30 groups and the patheter and not approved quality conforming to 13:254/1974 50 upply; and filing darger pitel 440 VdL, written in three languages as required 50 groups and filing darger pitel 440. VdL, written in English and Loca language duty framed in glass as required. 50 groups and filing darger pitel 440. VdL, written in three languages as required 50 groups and filing darger pitel 440. VdL, written in English and Loca language duty framed in	300 200 1600 20 3 5 6 1 1 1 600 1000	Mtr. Mtr. No. No. No. No. No.	350 250 35 1,850 400 400 6,500 500 150 550 750	215,600 105,000 50,000 24,000 1111,000 24,000 1,200 500 39,000 500 150 330,000 750,000	230 95 8 2,272 2,397 662 250 5,900 1,000 750 750 580 900	242.726 69.600 19.000 12.800 47.940 1.250 35.400 1.000 750 348.000 900.000	180 120 16 2,700 700 170 5,500 5,500 300 300 788	<b>4,263,3</b> 110, 110, 110, 110, 110, 110, 110, 110
3.01 3.02 3.03 3.07 3.08 3.09 3.10 3.11 3.12 3.14	ii. iii. i. i. ii. ii.	EART HING AND MISCELLANE OUS IT EMS Supply, installation, testing and commissioning of waterless and maintenance free earthing (grounding) electrode of word size 10 mm da, 3000 mm depth, 17.2 mm in da with copper banded NS conductor Conductive aggregate mixed with cement to entbed or backfill the vaids surrounding the 17.2 mm. Cu banded MS conductor Conductive aggregate word size and the entbed or backfill the vaids surrounding the 17.2 mm. Cu banded MS conductor Conductive aggregate word size and the entbed or backfill the vaids surrounding the 17.2 mm Cu banded MS conductor Conductive aggregate word size and the deal to a model NS a000 mm depth. The surdox are ad the earth electrades hall love the earth resistance permanently without periodic watering or recharge of earth enthancing compound for a period of word 30 years in all type of soil conditions and shall not leads into the soil or undergraund water channels, Electrade's tap terminal shall be seded permanently & earth strip shall be taken out and terminated to earth bas bar, the earth electrade shall be date to withstand the fault current up to 40 KA for 1 second complete as per specification and requirement.  Supply, installation, effecting proper connection testing and commissioning of the following size GL earth strips/GL 4mm do GL wire  Supply, installation, the effecting proper connection testing and commissioning of the following size copper earth strips  25 mm x 6 mm GL strip  4mm do GL wire  Supplying of non-skid nubber mat 12 mm thick and 900mm width ISI approved as required including autifing to  35 gaphying of fire bucket painted red and approved quality conforming to 15:254/1974  35 gupplying and fixing damag related 400 Vait, written in three languages as required  30 mm width x 50 mm deep x 1.6 mm thickness.  300 mm width x 50 mm deep x 1.6 mm thickness.  300 mm width x 50 mm deep x 1.6 mm thickness.  300 mm width x 50 mm deep x 1.6 mm thickness.  300 mm width x 50 mm deep x 1.6 mm thickness.  300 mm width x 50 mm deep x 1.6 mm thickness.	300 200 1600 60 20 3 3 5 6 1 1 1 8 600 1000 300	Mtr. Mtr. Mtr. No. No. No. No. No. No. No.	350 250 35 1,850 400 6,500 500 150 150 550 750 850	215.600 105.000 50.000 24.000 1,200 39.000 39.000 150 330.000 750.000 255.000	230 95 8 2,272 2,397 662 250 5,900 1,000 750 5,800 900	242,726 69,600 19,000 12,800 134,320 47,940 1,250 35,400 1,000 750 348,000 900,000 448,500	180 120 16 1,486 2,700 700 170 5,500 5,500 300 300 5,700 7,88 805	4,263,3 110,1 54,1,1 25, 89, 24,1 2,1 2,1 2,1 2,1 33,00 788,0 788,0 788,0 241,5,1 241,
3.01 3.02 3.03 3.07 3.08 3.09 3.10 3.11 3.12 3.14	ii. i. i. i. i. ii. ii.	EART HING AND MISCELLANE OUS IT EMS Supply, installation, testing and commissioning of waterless and maintenance free earthing (grounding) electricede of overal size 100 mm da; 300 mm depth 1.7.2 mm in da with copper banded NS conductor Conductive aggregate mixed with cement to embed or backfill the vicks surrounding the 17.2 mm. Cu banded MS conductor Conductive aggregate areatine and augured bare held of 100 mm Dia 3000 mm depth. The surface are on the earth electrades shall lower the earth resistance permanently without periodic watering or resharge of earth enhaning compound for a period of over 30 years in all type of soil conditions and shall not leach into the soil or underground water channels, Electrades top lemmind shall be sedeel permanently & earth stinip shall be taken out and terminated to earth especification and requirement.  Supply, installation, effecting proper connection testing and commissioning of the following size GL earth strips/GL wires as required.  Supply, installation, effecting proper connection testing and commissioning of the following size capper earth strips/GL wires as required.  Supply, installation, effecting proper connection testing and commissioning of the following size capper earth strips/GL wires as required.  Supply, installation, diffeding proper connection testing and commissioning of the following size capper earth strips as required engrine  Supply, installation, the earth electrade and approved as required including autting to required lengths  Supplying on ansking at the wither in three longuages as required including autting to required lengths  Supplying on fising add probe eding prove capses or lengthed by inden Red Crass.  Supplying and fising add prote at ond perforated MS cable Trays including harizontal and vertical bends, supplying and fising add shock readment chart written in English and Load language duly framed in glass as required.  Fabricating and installation following sizes of perforated MS cable Trays including harizontal and vertical bends, su	300 200 1600 60 20 3 5 5 6 1 1 1 000 1000 800	Mtr. Mtr. Mtr. Mtr. No. No. No. No. No. No. No. No. M	350 250 35 1,850 400 400 6,500 500 150 550 750 750 8500 1,200	215.600 105.000 56,000 111,000 24,000 1,200 500 39,000 500 150 330,000 750,000 2255,000	230 95 8 2,272 2,397 662 250 5,900 1,000 750 5,900 1,000 750	242,726 69,600 19,000 12,800 136,320 47,940 1,986 1,250 35,400 1,000 750 348,000 900,000	180 120 14 1,486 2,700 700 170 5,500 5,500 5,500 3000 3000 5,700 7,88 805 9,08	4,263,3 110,1 54,1,2 25,1 24,2 25,1 24,2 25,1 24,2 33,0 24,2 24,1,5 25,2 342,0 24,1,5
3.01 3.02 3.03 3.07 3.08 3.09 3.10 3.11 3.12 3.14	ii. iii. i. i. ii. ii. ii.	EART HING AND MISCELLANE OUS IT EMS Supply, installation, testing and commissioning of waterless and maintenance free earthing (grounding) electrode of word size 100 mm da 300 mm deph 1.2 mm in da with capper banded NS canductor Canductive aggregate mixed with cement to embed or backfill the vaids surrounding the 17.2 mm. Cu banded NS canductor Canductive aggregate with aggregate bare hole of 100 mm Dio 8.3000 mm deph 1.7 re surface are of the earth electrode shall lover the earth resistance permanently without periodic watering or restrage of earth enhancing compound for a period of word 30 years in all type of soil conditions and shall not leach into the soil or undergraund water charnels, Electrode's top terminal shall be saded permanently & earth strip shall be taken out and terminated to earth bus bar, the earth electrode shall be adie to withstand the fault current up to 40 KA for 1 second complete as per Spedification and requirement.  Supply, installation, effecting proper connection testing and commissioning of the following size GI earth strips/GI wires as required 30 mm x 6 mm GI strip 42 mm dia GI wire 45 mm x 6 mm GI strip 46 mm dia GI wire 50 group, installation under partmention testing and commissioning of the following size capper earth strips 47 mm dia GI wire 50 group ying of fire bucket painted red and approved quality conforming to 15:254/1974 50 group ying and fixing ABC fire estinguisher type 4.5 kgs capacity of approved make with wall mounting bracket as 50 group ying and fixing days 1.4 mm thickness. 500 mm width x 25 mm deep x 1.4 mm thickness. 500 mm width x 25 mm deep x 1.4 mm thickness. 500 mm width x 50 mm deep x 1.4 mm thickness. 500 mm width x 50 mm deep x 1.4 mm thickness. 500 mm width x 50 mm deep x 1.4 mm thickness. 500 mm width x 50 mm deep x 1.4 mm thickness. 500 mm width x 50 mm deep x 1.4 mm thickness. 500 mm width x 75 mm deep x 1.4 mm thickness. 500 mm width x 75 mm deep x 1.4 mm thickness. 500 mm width x	300 200 1600 60 20 3 5 5 6 1 1 1 600 1000 3000 800 400	Mtr. Mtr. Mtr. No. No. No. No. No. No. No. No. No. No	350 250 35 1,200 400 100 6,500 500 150 150 750 750 750 750 1,200 1,750	215,600 105,000 50,000 24,000 1,200 39,000 500 330,000 750,000 2255,000 960,000 700,000	230 95 8 2,272 2,397 662 250 5,900 1,000 750 5,900 900 900 900	242,726 69,600 19,000 12,800 47,940 1,250 1,250 35,5400 750 348,000 900,000 1,336,000 814,000	180 120 16 2,700 700 170 5,500 5,500 5,500 300 300 788 805 908 1,204	4,263,3 110,1 54,4,24,1 25,- 897, 54,4 24,1,25,- 897, 54,4 24,1,25,- 33,0,0 3,30,0,0 7,88,0 24,1,8,7,6,4,4 81,6,4,481,661,661,661,661,661,661,661,661,661,6
	ii. iii. i. i. ii. ii. ii.	EART HING AND MISCELLANE OUS IT EMS Supply, installation, testing and commissioning of waterless and maintenance free earthing (grounding) electricede of overal size 100 mm da; 300 mm depth 1.7.2 mm in da with copper banded NS conductor Conductive aggregate mixed with cement to embed or backfill the vicks surrounding the 17.2 mm. Cu banded MS conductor Conductive aggregate areatine and augured bare held of 100 mm Dia 3000 mm depth. The surface are on the earth electrades shall lower the earth resistance permanently without periodic watering or resharge of earth enhaning compound for a period of over 30 years in all type of soil conditions and shall not leach into the soil or underground water channels, Electrades top lemmind shall be sedeel permanently & earth stinip shall be taken out and terminated to earth especification and requirement.  Supply, installation, effecting proper connection testing and commissioning of the following size GL earth strips/GL wires as required.  Supply, installation, effecting proper connection testing and commissioning of the following size capper earth strips/GL wires as required.  Supply, installation, effecting proper connection testing and commissioning of the following size capper earth strips/GL wires as required.  Supply, installation, diffeding proper connection testing and commissioning of the following size capper earth strips as required engrine  Supply, installation, the earth electrade and approved as required including autting to required lengths  Supplying on ansking at the wither in three longuages as required including autting to required lengths  Supplying on fising add probe eding prove capses or lengthed by inden Red Crass.  Supplying and fising add prote at ond perforated MS cable Trays including harizontal and vertical bends, supplying and fising add shock readment chart written in English and Load language duly framed in glass as required.  Fabricating and installation following sizes of perforated MS cable Trays including harizontal and vertical bends, su	300 200 1600 60 20 3 5 5 6 1 1 1 000 1000 800	Mtr. Mtr. Mtr. Mtr. No. No. No. No. No. No. No. No. M	350 250 35 1,850 400 400 6,500 500 150 550 750 750 8500 1,200	215.600 105.000 50.000 24.000 1111,000 24.000 1,200 500 39,000 750.000 750.000 2255.000 960.000 700.000	230 95 8 2,272 2,397 662 250 5,900 1,000 750 5,900 1,000 750	242,726 69,600 19,000 12,800 136,320 47,940 1,986 1,250 35,400 1,000 750 348,000 900,000	180 120 14 1,486 2,700 700 170 5,500 5,500 5,500 3000 3000 5,700 7,88 805 9,08	4,263,3 110,1 54,1,2 25,1 24,2 25,1 24,2 25,1 24,2 33,0 24,2 24,1,5 25,2 342,0 24,1,5

4.00		DGSET								
4.01		Providing ,Installing and commissioning of Silent type Diesel generator set along with having Prime Power rating of								
		250 kVA ,415 volt at 1500 Rpm,0.8 lagging power factor at 415 v suitable for 50 Hz, 3 phase system & 0.85 load factor and consisting of following								
		Diesel Engine								
		Diesel Engine Diesel Engine 4 stroke water cooled ,Electric start of suitable BHP AT 1500 RPM suitable for above output of								
		alternator at 40 degree c,50 % RH & at 1000 meter MSL and conforming to BS 5514,BS 649,IS 10000,Capable of								
		taking 10 % overloading for one hour after 12 hour of continuous operation. The engine will be fitted complete with								
		all required access ories								
		Engine mounted instrument panel fitted with and having digital display for following								
		Start -stop switch with Key								
		water temperature indication								
		Lubrication all pressure indication Lubrication all temperature indication								
		Battery Charging Indication								
		RPM Indication								
		Over speed indication								
		Low Lub. Oil trip indication								
	ix	Engine Hours indication								
		Alternator								
		Synchronous alternator rated at 250 KVA.415 volts at 1500 Rpm.3 Phase 50 Hz.AC supply with 0.8 Logging power factor at 40 Degree C,50 % RH & at 1000 Metre MSL.The alternator shall be having SPDP enclasure.Brustless.Continous duty, Self excited and self regulated through AVR conforming to IS: 4722/BS 2613 suitable for trapical condition and with dass-F/H insulation.								
_		Base Frame &Foundation Both the engine and atternator shall be mounted on suitable Base frame made up of MS channel with necessary								
		is on the engine and atternator shall be mounted on suitable base frame made up or MS anannel with necessary reinforcement which shall be installed on suitable cement concrete foundation and vibration isolation arrangement as								
		per recommendation of manufacturer								
		Exhaust S ystem								
		Dry exhaust manifold with hospital exhaust silencer and catalytic convertor								
	f	Starting System								
[		12V/24V DC Starting system comprising of starter motors: Voltage Regulator and arrangement of for initial	_							
		excitation complete with suitable nos of batteries (25 Plates, 180 Amp. Hours Capacity Lead acid type) as required as per specification								
		Acoustic and weather proof endosure with arrangement fresh air intake for cooling of the engine &		I						
		Account and weather proof endoside with an angenenin tresh air intake to cooling of the engine & alternator, extraction, als charging hot air in to the atmosphere as per specification	1	s~4	1 418 000	1,618,000	1 670 450	1,672,650	1 435 000	1,63
02		Providing ,Installing and commissioning of Silent type Diesel generator set along with having Prime Power rating of	1	26	1,616,000	1,616,000	1,0/2,030	1,0/2,030	1,635,000	1,63
		400 kVA ,415 volt at 1500 Rpm,0.8 lagging power factor at 415 v suitable for 50 Hz, 3 phase system & 0.85 load								
		factor and consisting of following								
	а	Dies el Engine								
		Diesel Engine 4 stroke water cooled , Electric start of suitable BHP AT 1500 RPM suitable for above output of								
		attendra at 40 degree c,50 % RH & at 1000 meter MSL and confarming to BS 5514,85 649,15 10000. Capable of taking 10 %, overloading for one hour after 12 hour of continuous operation. The engine will be fitted complete with all required access ories								
		Engine mounted instrument panel fitted with and having digital display for following								
		Start -stop switch with Key								
		water temperature indication Lubrication ail pressure indication								
-		Lubrication all temperature indication								
		Battery Charging Indication								
		RPM Indication								
	vii	Over speed indication								
		Low Lub. Oil trip indication								
		Engine Hours indication								
	С	Alternator								
		Synchronous atternator rated at 400 KVA,415 volts at 1500 Rpm,3 Phase 50 Hz,AC supply with 0.8 Lagging power factor at 40 Degree C,50 % RH & at 1000 Metre MSL.The atternator shall be having SPDP								
		endosure, Brushless, Continous duty, Self excited and self regulated through AVR conforming to IS: 4722/BS 2613								
		suitable for tropical condition and with class-F /H insulation								
	d	Base Frame & Foundation								
		Both the engine and attendar shall be mounted on suitable Base frame made up of MS channel with necessary reinforcement which shall be installed on suitable cement concrete foundation and vibration isolation arrangement as par recommendation of manufacturer								
		Exhaust S ystem								
		Dry exhaust manifold with hospital exhaust silencer and catalytic convertor								
	f	StartingSystem								
		12V/24V DC Starting system comprising of starter motors : Voltage Regulator and arrangement of far initial excitation complete with suitable nos of batteries (25 Plates, 180 Amp. Hours Capacity Lead acid type) as required as								
		per specification								
-	g	 Acoustic and weather proof enclosure with arrangement fresh air intake for cooling of the engine &								
		alternator, extraction, dis charging hot air in to the atmosphere as per specification	1	Set	2,456,000	2,456,000	2,275,000	2,275,000	2,477,400	2,47
03		Supply, fixing and commissioning 285 lins capacity 16 SWG MS steel, Disel all Tark with marchele, PVC gauge intel and outlet connections with gate valve, drain plug, piping between tark and engine vert etc. manited on suitade MS staging Io maintain gravity liow of deset all From tark to DG set induding pairling etc. as required.								
04		Supplying and fixing exhaust gas piping of following dia welded black MS, B dass pipe conforming to IS :3589 cut to required lengths and installed with necessary Bends, support and damps, and anti-vitration mounting, insulation of	2	Each	25,000	50,000	25,000	50,000	92,500	18
		exhast system with mineral waa/Raakwad. S0mm thiak wire mesh. & duminium daading etc as required as per specification including Supplying. Fabricating and installation of MS. fabricated support for silencer complete with welding, graufing and paining etc. including providing the suitable support on DG set side and other side complete as per the instruction of the Engineer in charge / Architect								
-+	i	1x200mm dia Class - B MS pipe.	RO	Mtr.	4,500		7,200		5,000	
	ii.	1x250mm dia Class - B MS pipe.	RO	Mtr.	5,500		9,750		3,800	
05		Supply, fixing testing and commissioning of 25 mm dia. Class C, MS pipe with welded joints including all accessories								
~		valves etc.	RO	Mtr.	650		2,150		2,500	
06		Copper control cables Copper control cable amoured type XLPE 1.1KV grade								
-		Copper control cable amoured type XLPE 1.1KV grade 20x2.5s.gmm	RO	Mtr.	150		90		52	
		4Cx2.5sgmm	RO	Mtr.	220		139		85	
			200	Mtr.	550	110,000	337	67,400	415	8
		120x2.5sqmm	200							
		Termination of the above cables	8	Nos.	350	2,800 4,236,800	140	1,120	600	4,38

5.00		L.T. CABLES								
5.00		Supply, laying, fixing in position of the following size XLPE insulated PVC sheathed aluminium conductor armoured					'			
5.01		cables direct in ground inducting excavation, s and cus hioning, brick protection, covering and refilling the trench etc. or					1			
		on surface, or through existing under ground pipe or on cable tray or open duct as per IS :7098 (part-1)					1			
							1			
	i	1C x 630 sq.mm Al. Arm. XLPE Cable	140	Mtr.	980	137,200	1,437	201,180	860	120,400
	i	3.5C x 300 sq.mm Al. Arm. XLPE Cable	2375	Mtr.	1,355	3,218,125	1,182	2,807,250	1,280	3,040,000
	ï	3.5C x 240 sq.mm Al. Arm. XLPE Cable	3220	Mtr.	1,130	3,638,600	979	3,152,380	1,080	3,477,600
	=	3.5C x 185 sq.mm Al. Arm. XLPE Cable	810	Mtr.	985	797,850	794	643,140	890	720,900
	iv	3.5C x 150 sq.mm Al. Arm. XLPE Cable	870	Mtr.	820	713,400	649	564,630	715	622,050
		3.5C x 120 sq.mm Al. Arm. XLPE Cable	250	Mtr.	685	171,250	566	141,500	600	150,000
		3.5C x 95 sq.mm Al. Arm. XLPE Cable	350	Mtr.	529	185,150	475	166,250	499	174,650
		3.5C x 70 sq.mm Al. Arm. XLPE Cable	220	Mtr.	450	99,000	412	90,640	415	91,300
	viii	3.5C x 50 sq.mm Al. Arm. XLPE Cable	200	Mtr.	350	70,000	321	64,200	370	74,000
	ix	4C x 35 sq.mm Al. Arm. XLPE Cable	140	Mtr.	320	44,800	278	38,920	280	39,200
	х	4C x 25 sq.mm Al. Arm. XLPE Cable	50	Mtr.	265	13,250	202	10,100	212	10,600
	xi	4C x 16 sq.mm Al. Arm. XLPE Coble	2400	Mtr.	200	480,000	169	405,600	149	357,600
	xii	3C x 10 sq.mm Al. Arm. XLPE Cable	100	Mtr.	150	15,000	157	15,700	112	11,200
5.02		Supply, installation, effecting connection testing and commissioning cable and joints with solderless arimping lugs, single compression brass glands etc. as required with earthing of cable glands								
	i	1C x 630 sq.mm Al. Arm. XLPE Cable	28	Set	2.800	78,400	630	17.640	1.500	42.000
	i	3.5C x 300 sq.rmm AL Arm, XLPE Cable	38	Set	2,500	95.000	1440	54,720	1,500	57,000
	ii	3.5C x 240 sq.mm Al. Arm XLPE Cable	26	Set	2,300	59,800	997	25,922	1,300	36,400
		3.5C x 185 sq.mm Al. Arm. XLPE Cable	16	Set	1,950	31,200	885	14,160	980	15,680
	iv	3.5C x 150 sq.mm Al. Arm XLPE Cable	12	Set	1,850	22,200	720	8,640	955	11,460
	v	3.5C x 120 sq.mm Al. Arm. XLPE Cable	2	Set	1,750	3.500	700	1,400	950	1,900
	vi	3.5C x 95 sq.mm Al. Arm, XLPE Cable	4	Set	1,650	6,600	405		850	3,400
	vii	3.5C x 70 s a.mm Al. Arm, XLPE Cable	2	Set	1,550	3,100	387	774	780	1,560
	viii	3.5C x 50 s a.mm Al. Arm, XLPE Cable	4	Set	1,350	5,400	222	888	670	2,680
		4C x 35 samm Al, Arm, XLPE Cable	28	Set	1.050	29,400	194	5,432	470	13,160
	X	4C x 25 sourm AL Arm, XLPE Codde	4	Set	950	3,800	194	776	450	1.800
	xi	4C x 16 sourm AL Arm, XLPE Code	48	Set	850	40,800	155	7,440	200	9,600
	xii	3C x 10 sq.mm Al. Arm. XLPE Cable	12	Set	700	8,400	155	1.860	150	1,800
		SUB-T OT AL	12	0.01	,	9,971,225		8,442,762	100	9,087,940
		SUMMARY				S hivani		Radius	R	Kindustries
L.NO.		SUBHEAD				AMOUNT		AMOUNT		AMOUNT
1		SUBHEAD -1.00 MAIN LT CUM SYNC, PANEL AND CAP, PANEL				6,342,200		6,836,141		4,226,700
2		SUBHEAD - 2.00 SUBSTATION EQUIPMENTS				4,748,200		4,607,090		4,263,350
3		SUBHEAD - 3.00 EARTHING AND MISCELLANEOUS ITEMS				3,863,950		4,770,872		3,183,990
4		SUBHEAD - 4.00 DG SETS				4,236,800		4,066,170		4,385,200
5		SUBHEAD - 5.00 L.T. CABLES				9,971,225	L	8,442,762		9,087,940
		GR AND T OT AL				29,162,375		28,723,035		25, 147, 180
		Less Discount				729,059	GST	1.148.921		l nil
			2.50%			121,051	4%	1,140,721		
		NET TOTAL	2.00/3	· · · · ·		28.433.316		27.574.113		25,147,180

#### C. Drawbacks in tender process:

#### 1) Lack of Pre-Qualification Bids in Tender Process Audit:

During the course of our review of the tender process, we have observed a noteworthy aspect that requires attention. Specifically, it was noted that the prequalification bids, which are a crucial component of the tender evaluation process, were not available with the society. This observation raises concerns about the transparency, and completeness of the tender process under review.

The absence of pre-qualification bids restricts our ability to comprehensively assess the initial screening and shortlisting of vendors or contractors. These bids typically contain essential information such as the qualifications, experience, financial capabilities, and technical expertise of the bidders. The exclusion of this vital data prevents us from evaluating whether the criteria established for pre-qualification were applied consistently and fairly to all potential participants.

This omission impedes our ability to validate the effectiveness of the procurement procedures and ascertain whether the selected vendors or contractors were indeed the most suitable candidates based on their merits.

#### 2) Modification in Quantity of Electrical Substations during Tender Process:

During our meticulous review of the tender process for the installation, testing, and commissioning of electrical substations at the Police Officer Multi-state Co-operative Housing Society at village Dabua and Nawada koh, Sector 49, Faridabad, Haryana, a noteworthy observation has come to our attention. Initially, the tender initiation documentation indicated the requirement for the installation of two electrical

substations at site and the quoted were received for same from the following vendors:

- a. Shivani Power Engineers Pvt. Ltd.
- b. R.K Industries
- c. Radius Synergies International Pvt. Ltd.

However, it has been observed that during the negotiation phase, the quantity was amended to a single substation without a discernible rationale provided for this reduction. This observation raises questions regarding transparency and effective communication in the tender modification process.

The modification of the tender quantity, especially one as substantial as transitioning from two electrical substations to a single unit, has the potential to impact the overall scope, and timeline of the project.

#### 3) Incomplete Tender Document Rejection and Lack of Negotiation with Vendor

In the course of our thorough examination of the procurement process for the installation of electrical substations, a significant observation has come to light. During the initial bidding stage, one vendor i.e., Landmark Electricals Pvt. Ltd.'s proposal was rejected due to incomplete tender documents, specifically, a quote for only one substation was submitted when the tender originally called for the installation of two substations. Subsequently, the Bill of Quantities (BOQ) quantity was revised to accommodate a single substation. However, despite this adjustment, it has been noted that no attempt was made to re-engage in negotiations with the previously rejected Landmark Electricals Pvt. Ltd. This observation raises concerns about consistency, and effective vendor management.

The rejection of a vendor in the initial bidding stage based on incomplete tender documents is a standard practice to ensure compliance with the specified requirements. However, the subsequent change in the project scope through the reduction of the BOQ quantity necessitates a revaluation of the earlier decision. Failing to initiate negotiations with the previously rejected vendor, who could potentially meet the revised requirements, disregards an opportunity for cost efficiency, competitive pricing, and the inclusion of potentially qualified suppliers.

#### D. Contractual Terms and Conditions:

- Scope of work encompassed to Installation, testing and commissioning of Electrical Substation- External Electrical Works at Police Officers Multi state Housing Society Ltd. Under construction at Sector 49, Faridabad, Haryana, as per tender quoted and final negotiations on 17.01.2018 in the office of society.
- 2) The Contractor has deposited INR 1,00,000/- (Rupees One Lac only) as Earnest Money with the Owner for the due-performance of the Agreement.

- 3) Time Period shall be 3 (Three) Months.
- 4) Mobilization Advance of 10% (INR 26,40,000/-) is being paid by the Society, to be recovered in Four equal instalments in Four monthly Running Bills, on pro rata basis.
- 5) Retention Money 5% of Work done, deducted from each Running Bill, subject to maximum INR 10 Lac including Earnest Money. 50% of Retention Money will be Refunded after 06 months from Virtual Completion. Balance 50% will be refunded after Defect Liability Period of 12 months from Virtual Completion.
- 6) Additional Retention Money 5% of Work done, deducted from each Running Bill, subject to maximum Rs.10 Lac. To be retained against procurement of obtaining approvals, NOCs and Final Electrical Connection from the concerned Departments and Local authorities.
- 7) Fixed Rate Contract, No Escalation on Material or Labour.

#### Payment Terms as per Tender are as follows:

- 1) 10% advance, subject to availability of funds with the society
- 2) 55% against supply of material at site. Material to be supplied only after taking due approval of client
- 3) 25% against installation, testing and commissioning-in 2 to 3 parts
- 4) 10% retention money

#### Liquidated Damages/Penalty Clause:

The contractor shall pay as compensation of an amount equal to INR 10,000 per day of delayed period subject to maximum of 10% of contract value

## E. Observations:

#### 1) Excessive Quantity Claimed in Running Bills Beyond Purchase Order Specifications:

During our audit of the running bill submissions by M/s Radius Synergies International Pvt. Ltd. for installation, testing and commissioning of Electrical Substation-External Works, a significant discrepancy has been identified in the quantities claimed for certain project components. It is observed that the contractor has claimed quantities in excess of those specified in the Purchase Order (PO). **This leads to excess outflow of cash by INR 18,99,190/- which is a loss to society.** 

Impact of this negligence leads to:

- a. **Contractual Breach:** Submitting quantities that exceed the specifications in the Purchase Order constitutes a breach of the contractual agreement.
- b. **Financial Accuracy:** The excessive quantity claim in running bills lead to financial inaccuracies i.e., in additional cash outflow of INR 18.99 lacs

S. No.	Particular	Per unit Rate	Claimed Qty	PO qty	Excess Qty claimed	Excess Amt. claimed
1	Light MDB-1 & 3	90,860.00	12	2	10	908,600.00
2	Feeder Pillars	89,238.00	3	1	2	178,476.00
3	Earthing	11,033.00	26	22	4	44,132.00
4	50 mm * 6 mm GI Strip	230.00	330	300	30	6,900.00
5	25 mm * 6 mm GI Strip	95.00	400	200	200	19,000.00
6	MS Cable tray- 150*25*1.6	580.00	725	600	125	72,500.00
7	2C * 2.5 sqmm Control cables	90.00	120	0	120	10,800.00
8	4C * 2.5 sqmm Control cables	139.00	120	0	120	16,680.00
9	LT Cables 3.5C*185 sq. mm.	794.00	997	810	187	148,478.00
10	LT Cables 3.5C*120 sq. mm.	566.00	540	250	290	164,140.00
11	LT Cables 4C*35 sq. mm.	278.00	1280	140	1140	316,920.00
12	LT Cables 4C*25 sq. mm.	202.00	54	50	4	808.00
13	LT Cables 4C*16 sq. mm.	169.00	2444	2400	44	7,436.00
14	XLPE Cable 3.5C*300 sq. mm.	1,440.00	40	38	2	2,880.00
15	XLPE Cable 3.5C*150 sq. mm.	720.00	14	12	2	1,440.00
		Total				1,899,190.00

Item wise details regarding the excess quantity claimed by vendor is as follows:

#### 2) Non-Adherence to Payment Terms for Mobilization Advance Recovery

During our audit of the payment and recovery process for installation, testing and commissioning of Electrical Substation-External Works, a notable discrepancy has been identified regarding the recovery of the mobilization advance paid to the vendor. As per the payment terms, "Mobilization Advance of 10% (INR 26,40,000/-) is being paid by the Society, to be recovered in Four equal instalments in Four monthly Running Bills, on pro rata basis" i.e., the mobilization advance was intended to be recovered in four equal installments across the running bills. However, it has been noted that the owner did not recover any portion of the advance in the first three running bills, and the entire advance was recovered in the fourth running bill. This deviation from the agreed payment terms has led to financial inconsistencies.

#### 3) Absence of Stamped and Signed Delivery Challans for Material Supply in Running Bills

During our audit of the material supply and payment process for installation, testing and commissioning of Electrical Substation-External Works, a significant gap has been identified regarding the evidence of material supply by the vendor. It has come to our attention that the vendor has not provided stamped and signed delivery challans by the storekeeper as proof of material supply at the site for claiming payment in the running bill 4 & 5. This discrepancy raises concerns about the adequacy of documentation, the absence of stamped and signed delivery challans deprives the payment process of essential evidence to verify the actual timeline for supply of materials at the site.

#### 4) Absence of Test Reports for Claiming Payment of Electrical Substation Testing

During our audit of the testing and payment process for the electrical substation, a significant deficiency has been identified regarding the provision of test reports. It has come to our attention that the required test reports, which serve as essential evidence for claiming payment of testing activities conducted on the electrical substation, were not provided. The absence of these critical test reports raises concerns about the quality, safety, and compliance of the constructed infrastructure.

#### 5) Inappropriate Release of Retention Money Despite Noted Flaws in Electrical Line:

During our review of the payment and retention process, a significant discrepancy has been identified regarding the release of retention money as per the specified payment terms. It has come to our attention that despite the payment terms stating that "5% of Work Done, deducted from each R.Bill, subject to maximum Rs.10 Lac. To be retained against procurement of obtaining approvals, NOCs and Final Electrical Connection from the concerned Departments and Local authorities", all retention was released on 18<sup>th</sup> Sept'2019. However as per letter from Executive Engineer, Electrical Department, Haryana, dated 20.09.2019 there were flaws noted in the Electrical line, therefore NO retention has to be released which is deducted against NOC.

# 6) Penalty to be Imposed on M.s Radius Synergies International Pvt. Ltd. for delay in work:

As per Clause "Compensation for Delay" of Contract, "The contractor shall pay as compensation of an amount equal to INR 10,000 per day of delayed period subject to maximum of 10% of contract value". As the time allowed for performance of contract was 3 months i.e., contract should have been completed upto Apr'2018, & no document regarding extension of time period presented to audit team during course of audit & still some work is pending to be done there, therefore Contractor is bound to **pay for Liquidated damages that amounts to INR 26,40,020/-**, refer below attached annexure for details:

	Penalty completed upto	Delay in no. of days	Penalty per day	,	Restricted to 10% of contract value
30/04/2018	01/08/2022	1554	10000	15,540,000.00	2,640,020.32

#### Detail of work still pending to be completed:

S. No.	Particular	Claimed Qty	PO qty	Qty remaining to be executed
	Supplying, receiving, erection, testing and			
	commissioning of 2000kVA, 11kV/415Volts, out			
	door type, oil cooled 3 phase, 4 wire 50 Hz. with off load tap changer,+5 % to -7 % , 2.5 % per			
	step with cable box at primary and at secondary			
	end for outdoor installation, Winding Temperature			
	Indicator, restricted earth fault CT, buchholz			
	relay, silica breather, MOG with contacts, Marshal			
	Box to connect control cable between HT panel			
1	and Transformer as per specification etc. as required.	0	1	1
	Supplying and laying of following sizes under			
2	ground RCC pipe 20 mm dia	0	20	20
-	50 mm * 6 mm Copper Strip	20	60	40
4	MS Cable tray- 300*50*1.6	0	1000	1000
5	AcOUstic and weather proof enclosure with arar	0	1	1
6	Diesel Oil Tank 285 ltrs.	1	2	1
7	12C * 2.5 sqmm Control cables	50	200	150
8	LT Cables 3.5C*300 sq. mm.	2278	2375	97
9	LT Cables 3.5C*240 sq. mm.	3161	3220	59
10	LT Cables 3.5C*150 sq. mm.	710	870	160
11	LT Cables 3.5C*70 sq. mm.	210	220	10
12	LT Cables 3C*10 sq. mm.	0	100	100
13	XLPE Cable 4C*16 sq. mm.	36	48	12
14	XLPE Cables 3C*10 sq. mm.	0	12	12

#### 7) Discrepancy Between Tested/Commissioned Quantity and Installed Quantity:

During our audit of the testing and commissioning process, a significant discrepancy has been identified between the quantity of "Supply, installation, testing and commissioning of waterless and maintenance free earthing (grounding) electrode of overall size 100 mm dia, 3000 mm depth, 17.2 mm in dia with copper bonded MS conductor Conductive aggregate mixed with cement to embed or backfill the voids surrounding the 17.2 mm Cu bonded MS conductor placed at the centre of a augured bore hole of 100 mm Dia & 3000 mm depth. The surface area of the earth electrode shall lower the earth resistance permanently without periodic watering or recharge of earth enhancing compound for a period of over 30 years in all type of soil conditions and shall not leach into the soil or underground water channels, Electrode's top terminal shall be sealed permanently & earth strip shall be taken out and terminated to earth bus bar, the earth electrode shall be able to withstand the fault current up to 40 KA for 1 second complete as per specification and requirement." tested and commissioned by the vendor and the quantity that was originally installed by the vendor. It is observed that the vendor has tested and commissioned a greater quantity than was actually installed. This discrepancy raises

concerns about accuracy in testing, compliance with contractual specifications, certification of running bills.

Detail of discrepancy is as under:

Particular	UOM	<b>Qty Supplied</b>	<b>Qty Installed</b>	Qty tested	Qty commissioned
Supply, installation, testing and commissioning of waterless and maintenance free earthing (grounding) electrode of overall size 100 mm dia, 3000 mm depth, 17.2 mm in dia with copper bonded MS conductor Conductive aggregate mixed with cement to embed or backfill the voids surrounding the 17.2 mm QL bonded MS conductor placed at the centre of a augured bore hole of 100 mm Dia & 3000 mm depth. The surface area of the earth electrode shall lower the earth resistance permanently without periodic watering or recharge of earth enhancing compound for a period of over 30 years in all type of soil conditions and shall not leach into the soil or underground water channels, Electrode's top terminal shall be sealed permanently & earth strip shall be taken out and terminated to earth bus bar, the earth electrode shall be able to withstand the fault aurrent up to 40 KA for 1 second complete as per specification and requirement.	No.	26	25.2	26	26

# III. External Electrical Work-11KV HT Cable Laying Work:

### A. <u>Background & Tender Process</u>

This audit report provides a comprehensive overview of the implementation of an External Electrical Work-11KV HT Cable Laying Work project within the premises of the Police Officers Multi-state Co-operative Housing Society. The project was initiated by the Management Committee with the aim of ensuring a reliable and efficient electricity supply for the residents of the society. The implementation process followed a tender process, wherein qualified contractors were selected based on competitive bidding. This report will delve into the details of the tender process, the contract terms, and the subsequent execution of the Electric Substation project.

Financial Bids were received from the following qualified vendors:

- 1. Radius Synergies International Pvt. Ltd.
- 2. R.K. Industries
- 3. Brother Electrical Services
- 4. KNG Engineering Services

Rate contract submitted by the above mentioned vendors for the execution of External Electrical Work-11KV HT Cable Laying Work project at Police Officers Multi-State Co-Operative Housing society are as follows:

Vendor Name	Financial bid submitted	Initial Bid amount	Vendor Position
Radius Synergies International Pvt. Ltd.	V	1,88,81,813.00	L4
R.K. Industries	V	1,43,10,374.21	L2
Brother Electrical Services	V	1,56,21,020.00	L3
KNG Engineering Services	V	1,39,34,315.00	L1

Upon submission of Initial quotes the Board of Directors of Police Officers Multi-state Cooperative Housing Society Board of Directors proceeds with negotiation with the vendors and also decided to procure 3C x 300 sq.mm XLPE Al. armoured cable, 11 KV grade, conforming to IS : 7098 Part-II and as per DHBVN Technical Specifications separately and the same has been decided to remove from BOQ and amount would be reduced accordingly with the remaining vendors that are as follows:

	EXTERNAL ELEC	T R ICA	AL WC	ORK - 11KV H	T CABLE L	AYING W	ORK		2	0.08. 2018	
Note	<ol> <li>Prices shall be including all Taxes. Quantifies are based on DHBVN Es</li> <li>Makes of Material as per Guidelines of DHBVN, in case of any change</li> <li>For items or the ratings which are not cover in the list permission to be</li> </ol>	in Man	ufactur					Nanufactures / Mal	kes as annexure to t	his T ender.	
S.	4.) Work to be executed as per DHBVN Specifications Description of items	Unit	Qtv		Amount	Rate	Amount	Rate	Amount	Rate	Amount
No.	Supply, fixing, testing and commissioning of PCC Pole 11 M long	01111	Gry	01 Radius S	ynergies	02 R.K.	INDUST RIES	03 B R OT HE	RELECSER	04 K NG	ENGSERV
	as per DHBVNT echnical Specication.	Nos	105	7241	760305	8602.20	903231	9700	1018500	105	1128750
2.0	Supply, fixing, testing and commissioning of 11 KV 400 Amps GO Switch complete with handle, pipe & supporting channel, as per DHBVN Technical Specifications.	bles		12206	36618	8496	25488	9400	28200	45000	135000
3.0	Supply ,laying , testing and commissioning of 3C x 300 sa.mm XLPE AI, armoured cable, 11 KV grade, confarming to IS : 7098 Part-II and as per DHBVN Technical Speaifications .	Nos	5500								
4.0	Loying, testing & commissioning of 3 x 300 sq.mm 11KV (E), XLPE AI, armoured adde conforming to IS: 7098 (Part- amendments) Shall be operational at 11 KV, 50 Hz, AC systemin graund at a depth of 1000 mm below ground level ower a cushion of 75 mm thick sand around and protected with bricks on sides and top on surface of cable complete in all respect. The price are inclusive of all earth work such as rook aufting, digging, back filling, supply & spreading of good earth all around the cable as per DHBVN spedification and requirement of the job.	Mtr	5500	1859	10224500	1784.88	9816840	2000	11000000	1590	8745000
		Mtr.	3000	1050	3150000	466.10	1398300	525	1575000	350	1050000
5.0	Laying, testing & commissioning of 3 x 300 sq.mm 11KV (E), XLPE AI, armoured cable conforming to IS: 7098 (Part- amendments) Shall be operational of 11 KV, 50 Hz. AC system over head cable with 50 sq.mm stranded steel wire for cable supart including GI Clamps for tieing the cable from steel wire complete as required as per DHBVN Guidlines and specifications.										
		Mtr.	2500	690	1725000	250.16	625400	300	750000	250	625000
6.0	Supplying, erection, testing and commissioning of 800A, 11KV, 3 phase, 50 Hz, metal dad, dead front, Single Board, VCB Panel, SOOMVA repturing capacity as per DHBVN specification and requirement.										
7.0	Supplying, erection, testing and commissioning of 11 KV, 3 phase, 50 Hz, HT Metering Cubical with Three nos. 11 KV Epoxy resin cast CT Ratio 300/5A, 10 VA, Class 0.5, and 01 no. 11 KV/11 0V Epoxy resin cast 3 Phase Metering PT class 0.5, 25 VA including internal wiring as per electricity board requiremnt and handing over to the Electricity board as per DHBVN Specification complete as required.	No	1	712425	712425	457427	457427	51060	51060	690300	<u> </u>
8.0	Supplying, erection, testing and commissioning of 11 KV, 3 phase, 50 Hz. HT Meter as per electricity board requiremnt including caliberation of the same and handing over to the Electricity board as per DHBVN Specification complete as required.	No	2	75000			177000	99400	198800	69030	138060
9.0	Supply , fixing , testing and commissioning of MS. Channel cross	No	2	6500	13000	33040	66080	37200	74400	38350	76700
	arms 100x50x6mm, as per DHBVN Technical Specifications.	Kg	500	355	177500	116.82	58410	105	52500	125	62500
10.0	Supply , fixing , testing and commissioning of MS. Channel arass arms 75x40x6mm. as per DHBVN Technical Spedifications.										
11.0	Supply , fixing , testing and commissioning of M.S. angle iron S0x50x6 mm. as per DHBVNT echnical Specifications.as per DHBVNT echnical Specifications.	Kg	500	355	177500	116.82	58410	105	52500	125	62500
12.0	Supply , fixing , testing and commissioning of M.S. flat iron 50x6	Kg	200	296	59200	116.82	23364	105	21000	125	25000
	mm, as per DHB VN Technical Specifications.	Kg	300	296	88800	116.82	35046	105	31500	125	37500
13.0	Supply, fixing, testing and commissioning of M.S. Nuts & Balt off size as per DHBVN T edmical Specifications.	.,			05000	11/00	11/00	105	10500	1.50	1 5000
14.0	Supply , fixing , testing and commissioning of 11KV, 3C 300samm XLPE cable bax indoor as per DHBVNTechnical Specifications.	Kg No		250	25000		11682 34361.6	<u>105</u> 9500	10500 38000	150 9970	<u>1 5000</u> 39880
15.0	Supply , fixing , testing and commissioning of 11KV, 3C 300sqmm XLPE cadle box outdoor as per DHBVNTechnical Specifications.										
16.0	Supply , fixing , testing and commissioning of 11 KV pin insulator	No			340000	9322	186440	10400	208000	11970	239400
	with pin as per DHBVN Technical Specifications.	No	18	450	8100	503.86	9069.48	550	9900	670	12060

Item wise Breakup of Bid values before exclusion of 11KV Armoured cable from BOQ:

17.0	Supply , fixing , testing and commissioning 11 KV Disc insulator										
	with fitting as per DHBVN Technical Specifications.										
		No	16	790	12640	233.64	3738.24	260	4160	1070	17120
18.0	Supply, fixing, testing and commissioning of Stay Sets 8' Long										
	complete with X-Plate 460mm of angle 65x65x6 Elbow & rod Wt. 13.80 Kg, as per DHBVN Technical Specifications.										
	13.80 kg. as per Drib vivi red fricalis pedilications.	No	16	3800	60800	4484	71744	5000	80000	16870	269920
19.0	Supply, fixing, testing and commissioning of Stay wire 7/8 SWG	140	10	3000	00000	4404	/ 1/ 44	5000	00000	10070	207720
	as per DHBVN Technical Specifications.	Ка	160	480	76800	120.36	19257.6	125	20000	130	20800
20.0	Supply, fixing, testing and commissioning of G.I. Pipe 40 mm dia										
	6 mtr. long for earthing set B class as per DHBVN Technical										
	S pecifications.	No	20	3500	70000	2714	54280	3000	60000	230	4600
21.0	S upply , fixing , testing and commissioning of G.I. S trip 25X6 mm 9										
	Mtr. For earthing Wt. 10.80 Kg. (TATA/SAIL Make) as per DHBVN										
	T echnical S pecifications.										
		No	20	560	11200	1678.34	33566.80	1850	37000	5370	107400
22.0	Supply , fixing , testing and commissioning of Earthing set										
00.0	complete as per DHBVNT echnical Specifications.	No	11	3500	38500	6726	73986	7500	82500	27600	303600
23.0	S upply , fixing , testing and commissioning of wooden deat as per DHB VN T echnical S pecifications .	No	105	185	19425	250	26250	275	28875	425	44625
24.0	Supply, fixing, testing and commissioning of Danger plate as per	INU	105	105	17423	230	20230	2/ 3	20073	423	44023
24.0	DHBVN Technical Specifications.										
		No	105	250	26250	265.50	27877.50	290	30450	160	16800
25.0	Supply, fixing, testing and commissioning of Number plate as per	INO	105	230	26230	265.50	2/6/7.30	290	30430	160	16600
20.0	DHB VN T echnical S pecifications.										
		No	105	250	26250	125	13125	135	14175	160	16800
26.0	Civil work including cost of materials, labour, excavation, earth	110	103	230	20230	125	13123	133	14173	160	18800
20.0	work, complete structural work in RCC, column, beam, slab & infill										
	brick wall, plaster, flooring, painting as per the requirement and										
	specifications of DHBVN.										
1		C. mtr	20	41300	826000	5000	100000	7200	144000	2500	50000
	Total Cost i/c GST				18881813	,	14310374.21		15621020		13934315

Contract value of the vendor's post exclusion of 3C x 300 sq.mm XLPE Al. armoured cable, 11 KV grade from BOQ is as under:

Vendor Name	Initial Bid amount	Price for 11 KV	Revised bid value	
Vendor Name		armoured cable	post exclusion	
Radius Synergies International Pvt. Ltd.	1,88,81,813.00	1,02,24,500.00	86,57,313.00	
R.K. Industries	1,43,10,374.21	98,16,840.00	44,93,534.21	
Brother Electrical Services	1,56,21,020.00	1,10,00,000.00	46,21,020.00	
KNG Engineering Services	1,39,34,315.00	87,45,000.00	51,89,315.00	

Further it has been noted that no record regarding negotiation with vendors (i.e., Radius Synergies International Pvt. Ltd., Brother Electrical Services, & KNG Engineering Services) other than selected vendor i.e., M/s R.K. Industries is available with the society, however, Revised/Negotiated Tender Amount after Final Negotiation is INR 51,00,197/- (post inclusion of liaisoning fee of INR 10,00,000 and considering a discount of 7.16%) and hence, contract has been awarded to them.

Summary of Revision of contract value as mentioned below:

Tender Opening Amount	Rs. 1,43,10,374/-
Less: Cost of cable shown in item No. 03 of tender i.e. Rs.98,16,840/- less: liaisoning fee of Rs.10 lakhs Net amount	<u>Rs. 88,16,840/-</u> Rs. 54,93,434/-
Less: As per negotiation 7.16% Net amount as negotiated	<u>Rs. 3,93,337/-</u> Rs. 51,00,197/-
(Rupees Fifty-one lakhs one hundred and r	ninety-seven nonly)

NOTE:

The above amount is inclusive of taxes and all other charges.

S. No.	Description of items	Unit	Ot v		R.	K.Industries	
	Description of frems	Unir	Gry	Initial Rate	Initial Amount	Negotiated Rate	Negotiated Amount
1.0	Supply, fixing, testing and commissioning of PCC						
	Pole 11 M long as per DHBVN Technical Speciaation.	Nos	105	8602.20	903231	7986.2825	838559.66
2.0	S upply , fixing , testing and commissioning of 11 KV						
	400 Amps GO S witch complete with handle, pipe &						
	supporting channel, as per DHBVN Technical Specifications.	Nos	3	8496	25488	7887.6864	23663.06
3.0	Laying, testing & commissioning of 3 x 300 sq.mm			01/0	20100		
	11KV (E), XLPE Al. armoured cable conforming to						
	IS: 7098 (Part-amendments) Shall be operational at 11 KV, 50 Hz. AC system in ground at a depth of						
	1000 mm below ground level over a cushion of 75						
	mm thick s and around and protected with bricks on						
	sides and top on surface of cable complete in all respect. The price are indusive of all earth work						
	such as rock cutting, digging, back filling, supply &						
	spreading of good earth all around the cable as per						
	DHB VN specification and requirement of the job.						
4.0	Laying, testing & commissioning of 3 x 300 sq.mm		3000	466.10	1398300	432.7272	1298181.72
4.0	11KV (E), XLPE AI. armoured cable conforming to						
	IS: 7098 (Part-amendments) Shall be operational at						
	11 KV, 50 Hz. AC system over head cable with 50 sq.mm stranded steel wire for cable supprt						
	inducting GI Clamps for tieing the cable from steel						
	wire complete as required as per DHBVN Guidlines						
	and specifications.						
		Mtr.	2500	250.16	625400	232.2485	580621.36
5.0	Supplying, erection, testing and commissioning of						
	800A, 11KV, 3 phase, 50 Hz. metal dad, dead front, Single Board,VCB Panel, 500MVA repturing						
	capacity as per DHBVN specification and						
	requirement.	No	1	457427	457427	424675.2268	424675.23
6.0	S upplying, erection, testing and commissioning of 11 KV, 3 phase, 50 Hz. HT Metering Cubical with Three						
	nos. 11KV Epoxy resin cost CT Ratio 300/5A,						
	10VA, Class 0.5 and 01 no. 11KV/110V Epoxy resin cast 3 Phase Metering PT dass 0.5, 25 VA						
	including internal wiring as per electricity board						
	requiremnt and handing over to the Electricity board						
	as per DHBVN Specification complete as required.	No	2	88500	177000	82163.4000	164326.80
7.0	Supplying, erection, testing and commissioning of 11	110		00000	177000	02103.1000	101020.00
	KV, 3 phase, 50 Hz. HT Meter as per electricity						
	board requiremnt including caliberation of the same and handing over to the Electricity board as per						
	DHBVNS pecification complete as required.	No	2	33040	66080	30674.3360	61348.67
8.0	Supply, fixing, testing and commissioning of MS						
	Channel cross arms 100x50x6mm, as per DHBVN Technical Specifications.		500	116.82	58410	108.4557	54227.84
9.0	Supply , fixing , testing and commissioning of MS						
	Channel cross arms 75x40x6mm. as per DHBVN Technical Specifications.	Кg	500	116.82	58410	108.4557	54227.84
10.0	Supply, fixing, testing and commissioning of M.S.	Ng	500	110.02	30410	100.4337	54227.04
	angle iron 50x50x6 mm. as per DHBVNT echnical						
	S pecifications.as per DHBVN Technical S pecifications.	Кg	200	116.82	23364	108.4557	21691.14
11.0	S upply , fixing , testing and commissioning of M.S.			.10.02	20004		
	flat iron 50x6 mm, as per DHBVN Technical	Кg	300	116.82	35046	108.4557	32536.71
12.0	<u>Specifications.</u> Supply, fixing, testing and commissioning of M.S.	ĸy	300	110.02	33046	100.4557	52550.71
	Nuts & Bolt off size as per DHBVN Technical						
13.0	<u>Specifications</u> . Supply, fixing, testing and commissioning of 11KV,	Kg	100	116.82	11682	108.4557	10845.57
10.0	3C 300s gmm XLPE cable box indoor as per DHBVN						
1	Technical Specifications.	No	4	8590.4	34361.6	7975.3274	31901.31
1.4.2							
14.0	Supply, fixing, testing and commissioning of 11KV, 3C 300sqmm XLPE cable box outdoor as per						

#### Detailed Description of per unit change post negotiation is here as under:

	Liaisoning Fee after 7.16% discount Total Contract Valu	<b>\</b>	,000-7	.16%)			00.0000 .97.1698
	Total Cost i/c GST				14310374.21		97.1698
25.0	Givil work inducing cost of materials, labour, excavation, earth work, complete structural work in RCC, column, beam, slab & infill brick wall, plaster, flooring, painting as per the requirement and specifications of DHBVN.		20	5000	100000	4642.0000	92840.0
	Supply, fixing, testing and commissioning of Number plate as per DHBVN Technical Specifications.	No	105	125	13125	116.0500	12185.2
23.0	Supply, fixing, testing and commissioning of Danger plate as per DHBVN Technical Specifications.	No	105	265.50	27877.50	246.4902	25881.4
22.0	Supply, fixing, testing and commissioning of wooden deat as per DHBVN Technical Specifications.	No	105	250	26250	232.1000	24370.5
21.0	Supply, fixing, testing and commissioning of Earthing set complete as per DHBVN Technical Specifications.	No	11	6726	73986	6244.4184	68688.6
20.0	Supply, fixing, testing and commissioning of G.I. Strip 25X6 mm 9 Mtr. For earthing Wt. 10.80 Kg. (TATA/SAIL Make) as per DHBVN Technical Specifications.	No	20	1678.34	33566.80	1558.1709	31163.4
	Supply , fixing , testing and commissioning of G.I. Pipe 40 mm dia 6 mtr. long for earthing set B class as per DHBVN Technical Specifications.	No	20	2714	54280	2519.6776	50393.5
	Supply, fixing, testing and commissioning of Stay wire 7/8 SWG as per DHBVN Technical Specifications.	Kg	160	120.36	19257.6	111.7422	17878.7
	S upply, fixing, testing and commissioning of Stay S ets 8' Long complete with X-Plate 460mm of angle 65x65x6 Elbow & rod Wt. 13.80 Kg, as per DHBVN T echnical S pecifications.	No	16	4484	71744	4162.9456	66607.1
16.0	Supply, fixing, testing and commissioning 11 KV Disc insulator with fitting as per DHBVN Technical Specifications.	No	16	233.64	3738.24	216.9114	3470.5
	Supply, fixing, testing and commissioning of 11 KV pin insulator with pin as per DHBVN Technical Specifications.	No	18	503.86	9069.48	467.7836	8420.1

## B. Drawbacks in Vendor Selection Process and Contract Awarding:

# 1. Lack of Documentation for Negotiations with Non-Selected Vendors in Vendor Selection Process:

During our review of the vendor selection process for implementation of an External Electrical Work-11KV HT Cable Laying Work project within the premises of the Police Officers Multi-state Co-operative Housing Society conducted through the tendering procedure, we noted that no documented records were provided pertaining to the negotiation process with vendors other than the selected vendor. The absence of such documentation limits the transparency and accountability of the vendor selection process and its associated negotiations.

#### Impact of such negligence may result in following:

- Without documented negotiations and evaluations of non-selected vendors, there is a risk that potentially beneficial alternatives may not have been thoroughly considered. This could result in missed opportunities for cost savings, quality improvement, or value-added services.
- The absence of documentation impedes the audit trail for vendor selection, making it challenging to assess whether the selection aligns with the Standardized procurement policies and guidelines.

#### 2. Impact of Unforeseen Liaisoning Fee on Contract Award for HT Cable Project:

During our audit of the contract award process for the laying of 11KV HT cables, an observation of significant concern emerged. The selected vendor's introduction of a Liaisoning fee of 10 lakhs stating that same was inclusive in value of HT Cables however nothing like that was mentioned in bids submitted to the society, during the negotiation process upon society's decision of not procuring 11KV HT Armoured cables and after getting selected in comparative as lowest bidder, which was not initially accounted for, and the subsequent alterations in contract terms had a noteworthy impact on the ultimate contract value and the vendor selection outcome.

#### Impact of such negligence may result in following:

- **Cost Escalation:** The unanticipated introduction of a 10 lakh liaisoning fee by the initially selected vendor contributed to a notable escalation in the overall contract value. This increase directly impacted the project's cost structure, potentially exceeding the budgeted allocation.
- **Contract Value Inflation:** The addition of the liaisoning fee post-negotiation inflated the contract value, which may have compromised the originally intended competitiveness of the bid.
- **Contract Award Decision:** The revised contract value, influenced by the introduction of the liaisoning fee, must had to lead to the reconsideration of the vendor selection outcome. The alteration could have played a decisive role in awarding the contract to the second-lowest bidder (L2).

## C. Contractual Terms and Conditions:

1. Scope of work encompassed to Laying, Installation, Testing & Commissioning of 11KV HT Armoured Cable Work - External Electrical Works at Police Officers Multi state Housing Society Ltd. Under construction at Sector 49, Faridabad, Haryana, as per tender quoted and final negotiations in the office of society.

#### 2. Payment terms:

- 10% Advance
- 55% against supply of material at site.
- 25% against installation
- 10% will be retained towards security deposit. 50% of the Security deposit will be released after six months from the Date virtual and satisfactory completion of work. Balance 50% after expiry of the defect liability period.

#### 3. Contract Price:

Contract price for Laying, Installation, Testing & Commissioning of 11KV HT Armoured Cable Work - External Electrical Works fixed at INR 51,00,197/-. Detailed description is as under:

#### Tender Opening Amount Rs. 1,43,10,374/-

Less: Cost of cable shown in item No. 03 of tender i.e. Rs.98,16,840/- less: liaisoning fee of Rs.10 lakhs Net amount Rs. 54,93,434/-

> Less: As per negotiation 7.16% Rs. 3,93,337/-Net amount as negotiated Rs. 51,00,197/-

(Rupees Fifty-one lakhs one hundred and ninety-seven nonly)

#### <u>NOTE:</u> The above amount is inclusive of taxes and all other charges.

- 4. Time Period shall be 2 (Two) Months from the date of LOI.
- 5. Society had paid INR 5,04,900/- towards 10% advance via Cheque bearing cheque no. 048589 dated 08/10/2018.
- 6. HT Cable 3x300 sqmm XLPE AI. Armoured Cable will be supplied by the Society free of Cost. The Negotiated amount of Rs.51,00,197/- shall include all Tender Items excluding Item no.03 (3x300 sqmm XLPE AI. Armoured Cable).
- 7. All type of Liaisoning expenditure for Cable Laying from DHBVN Sub-Station to Society HT Room, including expenditure of Pre-Inspection or Inspection of all Material & HT Cable by DHBVN Officials, including inspection charges.
- 8. Fixed Rate Contract, No Escalation on Material or Labour.
- 9. Liquidated Damages: INR 10,000/- (Rupees Ten Thousand only) per day subject to a maximum of 10% of the contract amount.

## D. Observations:

#### 1. Delay in Providing Agreed Discount as per Contract Terms:

During the course of our audit, a concerning observation was noted regarding the application of the agreed discount in the contract for the project under review. Despite the presence of a negotiated discount clause, the discount was not applied in the first three running bills and was only provided in the final running bill. This deviation from the contract terms has implications for the project's financial management and potentially raises concerns about adherence to agreed-upon terms as it leads to enhanced cash outflow in first 3 running bills and the same was adjusted in final running bills.

Details of different arises in bills due to non-consideration of discount amount in first three running bills:

Running Bill	Total Amount as per bill	Total amount needs to be	Excess amount claimed in bill
RA-1	16,52,019.00	15,33,729.40	1,18,289.60
RA-2	31,55,740.00	30,48,069.80	1,07,670.20
RA-3	46,74,249.00	45,65,521.93	1,08,727.07

#### 2. Absence of Delivery Challan and Measurement Certificate for HT Cable Installation Work:

During the course of our audit of the 11KV HT armoured cable installation work, a notable observation has come to light regarding the absence of supporting documentation in the form of delivery challan and measurement certificate. These documents are essential for verifying the actual work performed and the quantities of materials delivered. The absence of these documents raises concerns about the accuracy and transparency of the reported work and its alignment with the contract terms.

#### Impact of this negligence leads to:

- Verification Challenges: The absence of a delivery challan makes it difficult to verify the receipt of the specified quantity of HT armoured cable.
- **Material Accountability:** Without a proper delivery challan, it becomes challenging to establish a clear link between the materials used in the installation and the actual quantities delivered.

#### 3. Penalty to be Imposed on M.s R.K. Industries for delay in work:

As per Clause "Liquidated Damages", "The contractor shall pay as compensation of an amount equal to INR 10,000 per day of delayed period subject to maximum of 10% of contract value". As the time allowed for performance of contract was 2 months i.e., contract should have been completed upto Dec'2018, & no document regarding extension of time period presented to audit team during course of audit & Final bill was submitted by contractor on 16<sup>th</sup> Oct'2019 i.e., beyond the permissible completion date, therefore Contractor is bound to **pay for Liquidated damages that amounts to INR 5,10,019.70/- ,** refer below attached annexure for details:

Deadline for	Work	Delay in no.	Penalty	Penalty	Restriced to 10% of
completion	Completed on	of days	per day	amount	Contract Value
12-12-2018	16-10-2019	308	10,000.00	30,80,000.00	5,10,019.70

# IV. Supply of HT Line Cable:

# A. Background

This audit report provides a comprehensive overview of the procurement of 11KV HT Armoured Cable for the premises of the Police Officers Multi-state Co-operative Housing Society. The project was initiated by the Management Committee with the aim of ensuring a reliable and efficient electricity supply for the residents of the society. The implementation process followed a tender process, wherein qualified contractors were selected based on competitive bidding. This report will delve into the details of the tender process, the contract terms, and the subsequent execution of the project.

## B. Tender Process:

Financial Bids were received from the following qualified vendors:

- 1. KEI Industries Ltd.
- 2. Polycab Wires
- 3. Paramount Cables
- 4. Havells India
- 5. Shree Nursingsahay Mudungopal (Engineers) Pvt. Ltd.

Rate contract submitted by the above mentioned vendors for the supply of External Electrical Work-11KV HT Cable at Police Officers Multi-State Co-Operative Housing society are as follows:

S.No.	Company Name	Bid Amount	Vendor Position
1	KEI Industries Ltd.	56,65,000.00	L5
2	Polycab Wires	56,21,000.00	L3
3	Paramount Cables	54,45,000.00	L2
4	Havells India	56,48,665.00	L4
5	Shree Nursingsahay Mudungopal (Engineers) Pvt.Ltd.	53,90,000.00	L1

Item wise Breakup of Bid values are as follows:

Comparative Statement of HT Cable													
S.N	COMPANY NAME	QTY IN K.M	RATE per mtr	RATE PER K.M	TOTAL	GST @ 18%	TOTAL	SCHEDULE OF SUPPLY	FREIGHT & TRANSIT INSURANCE	Unloading at site			
1	KEI Industries Ltd.	5.5	1,030.00	10,30,000	56,65,000	10,19,700	66,84,700	10-12 weeks after PI	Including	By Society/ Contractor			
2	Polycab Wires	5.5	1,022.00	10,22,000	56,21,000	10,11,780	66,32,780	3-5 weeks after PI	Including	By Society/ Contractor			
3	Paramount Cables	5.5	990.00	9,90,000	54,45,000	9,80,100	64,25,100	6-8 weeks after PI	Including	By Society/ Contractor			
4	Havells India	5.5	1,027.03	10,27,030	56,48,665	10,16,760	66 65 425	Completed upto 26.12.2018	Including	By Society/ Contractor			
5	Shree Nursingsahay Mudungopal (Engineers) Pvt.Ltd.	5.5	980.00	9,80,000	53,90,000	9,70,200	63,60,200	6-8 weeks after PI	Including	By Society/ Contractor			

Further it has been noted that Tender Amount quoted by Shree Nursingsahay Mudungopal (Engineers) Pvt.Ltd. is INR 53,90,000/- (excl. GST) which makes Shree Nursingsahay Mudungopal (Engineers) Pvt.Ltd. as L1 Vendor and hence, contract has been awarded to them.

# C. Contractual Terms and Conditions:

- Purchase Order for Supply of KEC-HT Cable XLPE Insulated Aluminium Conductor 3 core 300 sqmm 11KV (E) at site, Police Officers Multi State Co-operative Housing Society Ltd., Sector-49, Faridabad (Haryana) awarded to Shree Nursingsahay Mudungopal (Engineers) Pvt.Ltd. on 10th Dec'2018.
- 2. Quantity to be supplied will be 5,500 Mtrs.
- 3. Per Unit rate for the Supply of KEC-HT Cable XLPE Insulated Aluminium Conductor 3 core 300 sqmm 11KV (E) at site is INR 980/- per mtr.
- 4. Contract price for Supply of KEC-HT Cable XLPE Insulated Aluminium Conductor 3 core 300 sqmm 11KV (E) fixed at INR 53,90,000/- (excl. GST)
- 5. GST to be paid at 18% which makes the total contract value to INR 63,60,200/- (incl. GST)
- 6. The Supply in 6 weeks from the date of Purchase Order
- 7. Freight & Transit Insurance & Inspection by DHBVN at Factory at Vadodara is included in the rates and shall be the responsibility of Shree Nursingsahay Mudungopal (Engineers) Pvt.Ltd.
- 8. Guarantee/Warranty 12 months from date of Supply or 18 months from Installation date.
- 9. Unloading at Site/any other location shall be responsibility of society or their contractor
- 10. Payment terms (20%+80%), 20% along with Purchased Order & 80% against Performa Invoice before dispatch
- 11. Time will be considered essence of the contract, Entire delivery shall be completed within period stipulated.

## D. Invoice details:

Contractor i.e., Shree Nursingsahay Mudungopal (Engineers) Pvt. Ltd. Has issued the following invoice for Supply of KEC-HT Cable XLPE Insulated Aluminium Conductor 3 core 300 sqmm 11KV (E) at site, Police Officers Multi State Co-operative Housing Society Ltd., Sector-49, Faridabad (Haryana) and the same has been paid by the society as per contract terms upon deducting TDS.

# V. Fiber to the Home:

# A. Background:

This audit report provides a comprehensive overview of Supply Order for "Fiber to the home (FTTH" Infrastructure through GPON (Gigabit passive optical network) Technology for providing Voice, Video (DTH) & Data services for all the residents/users for "Police Officers Multi State Co-Op. Housing Society Ltd" residential multi-storied project Sector-49, Faridabad (Haryana). The project was initiated by the Management Committee with a commitment to providing modern amenities and enhanced living experiences to its members, the society has embarked on a transformative project focused on bringing advanced communication services to its residents. The implementation process has not followed a tender process for vendor selection, and the contract has been awarded on single rate contract basis.

# B. Tender Process:

In the course of our comprehensive audit of Fiber to the home (FTTH" Infrastructure through GPON (Gigabit passive optical network) Technology for providing Voice, Video (DTH) & Data services conducted for Police Officer Multi-State Co-operative Housing Society Ltd., we examined the vendor selection process employed for employing M/s Softone Solutions Pvt. Ltd. Our evaluation focused on the methods adopted for vendor selection and the subsequent awarding of contracts. Notably, our observation reveals that the traditional competitive tender process was not employed in this instance, and the decision to award the contract was made on a single vendor basis.

It has been noted that Contract Amount quoted by M/s Softone Solutions Pvt. Ltd. is INR 65,36,000/- (incl. of applicable taxes) and as this is a single vendor contract hence, contract has been awarded to M/s Softone Solutions Pvt. Ltd.

SN 1	Description ONT Box Total	UoM	Supply Rate (INR)	Total VoM	Supply Rate @ per unit (INR)
2		1	1250	688	860000
3	Uninterrupted Power Supply (UPS) for ONT Audio IP phone	1	1250	688	860000
4	One port in RG/ONI for BMS	1	2200	688	1513600
5	ONT in common areas	1	2050	688	1410400
6	Perpetual IRU (Indefeasible Right of Use) of 20 Mbps/port in common areas and 10 Mbps/port in each home for running Building Management Services (BMS). SIP based IPBX server Passive Fiber Infrastructure Cloud based Intelligent Building Management Solution (iBMS) for near real time remote monitoring and smart management of water level, DG and common area lights.	1	2750	688	1892000
axes	Above Rates are inexclusives of applicable taxes.	Total			6536000

Detailed Breakup for Contract value is as follows:

# C. Drawbacks in Vendor Selection and Contract Awarding:

### Absence of Tender Process for Vendor Selection and Single Vendor Contract Award:

During our audit of the vendor selection process for Fiber to the home, a significant observation has come to light regarding the absence of a formal tender process. Instead, the contract has been awarded on a single vendor basis. This approach departs from established procurement practices and raises concerns about transparency, and competition in the selection of vendors.

Impact of absence of a formal tender process leads to:

- Lack of Competitive Bidding: The absence of a tender process means that multiple vendors were not provided an equal opportunity to compete for the contract. This raises doubts about whether the selected vendor truly offers the best value for the project in terms of cost, quality, and expertise.
- **Transparency and Accountability:** The absence of a competitive bidding process diminishes the transparency and accountability of the vendor selection
- **Risk of Higher Costs:** Without a competitive bidding process, there is a risk that the project might not achieve optimal cost savings. A lack of market benchmarking could lead to higher costs compared to what might have been achieved through competitive bids.

# D. Contractual Terms and Conditions:

### 1. SCOPE OF WORK

"Fiber to the home (FTTH)" as per BOQ for "Police Officers Multi State Co- Op. Housing Society Ltd" Housing Complex at Sector-49, Faridabad, (Haryana)

### 2. TIME SCHEULE

Since time of completion is the essence of this supply contract all efforts should be made by you to Supply all the materials within stipulated time/schedule to be decided by the Society in consultation with M/s Softone Solutions Pvt. Ltd.

#### 3. **PRICE**

- a. This is an item rate contract and the price quoted shall be final within the scope as mentioned in BOQ. These unit rates shall remain firm and shall not be subject to any revision whatsoever during the currency of this supply contract and any extension thereof.
- b. The rates quoted are inclusive of all applicable taxes and duties & nothing extra shall be payable on these accounts.
- c. Any increases either market or statutory on labour and materials shall not be entertained.

### 4. PAYMENTS

It is agreed that payment shall be made as under:

- **a.** 20% advance along with PO.
- **b.** 55% against proforma invoice. (ONT Box-Rs1250, UPS with battery- Rs.1250, 1P Audio Phone-Rs. 250, Gateway-Rs.2050, Networking, Optical Fiber deployment BMS and iBMS-Rs.2750)
- c. 15% after installation of material on prorate basis
- **d.** 10% after complete handover to POMCHS LTD

### 5. DEFECT LIABILITY PERIODWARRANTY

The supplier shall warranty the equipment against all defects of materials and Workmanship for a period of 12 (Twelve) months from the date of commissioning as certified by the Society. Any defects arising during the Warranty Period shall be rectified by the Contractor at his own expense to the satisfaction of the Society.

6. You shall abide by all labour laws in that respect of all the labour/manpower engaged for this work. In the event of any liability on M/s Police Officers Multi State Co-Op. Housing Society Ltd. by virtue of its being the Principal Employer, due to your failure to comply with the said Acts, you will indemnify and reimburse the amount payable by the Society on this account.

### 7. ESCALATION

No escalation of the prices shall be allowed during the period of the supply contract and any extension thereof for any reasons whatsoever and the prices quoted by the contractor shall be deemed to be fixed.

#### 8. PENALTY CLAUSE:

In case the contractor fails to complete the work in time without justified reason, penalty of Rs.5,000/- per day shall be levied.

### E. Observations:

# 1. Absence of Delivery Challan and Measurement Certificate for HT Cable Installation Work:

During the course of our audit of the 11KV HT armoured cable installation work, a notable observation has come to light regarding the absence of supporting documentation in the form of delivery challan and measurement certificate. These documents are essential for verifying the actual work performed and the quantities of materials delivered. The absence of these documents raises concerns about the accuracy and transparency of the reported work and its alignment with the contract terms.

#### Impact of this negligence leads to:

• Verification Challenges: The absence of a delivery challan makes it difficult to verify the receipt of the specified quantity of HT armoured cable.

 Material Accountability: Without a proper delivery challan, it becomes challenging to establish a clear link between the materials used in the installation and the actual quantities delivered.

### 2. Absence of Time Schedule for Contract Completion and Uncertainty Regarding Penalty Applicability

The contract executed between POMSCHS and M/s Softone Solutions Pvt Ltd. lacks a clearly defined time schedule for the completion of the project as Clause mentioned for Time Schedule in Contract state that, *"Since time of completion is the essence of this supply contract all efforts should be made by you to Supply all the materials within stipulated time/schedule to be decided by the Society in consultation with M/s Softone Solutions Pvt. Ltd."*. The absence of such a specific timeline raises concerns about the contract's enforceability with respect to potential delays and penalties.

The absence of a specified time schedule and its related implications impact several key areas:

- **Penalty Applicability:** Without a defined time schedule, the determination of whether delays warrant the imposition of penalty clauses becomes challenging.
- **Financial Consequences:** The ambiguity surrounding the applicability of penalties for delay can impact the project's financial aspects. The absence of penalties might discourage timely completion

Details of Quantity still pending for installation at site is:

Material Description	PO qty	Actual Qty Supplied	Actual Qty installed	Balance Qty to be installed
UPS for ONT	688	688	317	371
Audio IP phone	688	688	317	371
RNT/ONS for BMS	688	688	317	371

# VI. Security System

### A. <u>Background:</u>

This audit report provides a comprehensive overview of Supply Order for of Supply, Installation, Testing and Commissioning of "Security System" for "Police Officers Multi State Co-Op. Housing Society Ltd" residential multi-storied project Sector-49, Faridabad (Haryana). The project was initiated by the Management identified the need to booster its security infrastructure, Recognizing the increasing importance of modern security solutions in enhancing the quality of life and safeguarding the community, the society has undertaken a project to install a comprehensive security system. The implementation process has not followed a tender process for vendor selection, and the contract has been awarded on single rate contract basis.

# B. Tender Process:

In the course of our comprehensive audit of Supply, Installation, Testing and Commissioning of "Security System" conducted for Police Officer Multi-State Co-operative Housing Society Ltd., we examined the vendor selection process employed for employing M/s Radius Infotech Pvt. Ltd. Our evaluation focused on the methods adopted for vendor selection and the subsequent awarding of contracts. Notably, our observation reveals that the traditional competitive tender process was not employed in this instance, and the decision to award the contract was made on a single vendor basis.

It has been noted that Contract Amount quoted by M/s Radius Infotech Pvt. Ltd. is INR 28,99,920/- (incl. of applicable taxes) and as this is a single vendor contract hence, contract has been awarded to M/s Radius Infotech Pvt. Ltd.

POLICE OFFICERS MULTISTATE HOUSING SOC	IETY LTD, FARIDABAD
Description	Amount
IP VIDEO SURVEILLANCE SYSTEM	
	1663500
CONTROL ROOM EQUIPMENTS	260170
	2001/0
P NETWORKING, CONDUITING & CABLING	
P NETWORK C,	683000
Sub Total	2605570
WCT @5.25% on Total	2606670
	136850
Service Tax @ 6 % on Total	156400
Grand Total	2899920

Detailed Breakup for Contract value is as follows:

Unit Wise Breakup of Contract value is as below:

S.NO.	DESCRIPTION		NIT	QTY	. Unit Rate	Amour
5.140.						Amour
I	IP VIDEO SURVEILLANCE SYSTEM					
	All Cameras have to be UL, ONVIF, SIP & NMS Compli	ant				
	models only					
	Supply, installation, testing and commissioning of UL Listed Megapixel CMOS, Network Bullet Camera, (1280x9 resolution, 1/3" Progressive scan CMOS, 0.01@F1.2, AGC ON Lux with IR on, IR cut filter with auto switch,, H.264 / MPEG Dual stream, Bit rate 32 Kbps-16Mbps, ROI, BLC, 3D DI DWDR, Standard IP66, PoE, with Fixed Lens between (4 12mm), size of lens shall be as per site requirement, IR rar 30mtr illuminators, motion detection, with ONVIF, SIP & NI supported, connectors complete as required IR Bullet fixed ty for mounting on wall or surface mounted (For Gates, Rar Entry / Exit, Basement Lobby & Perimeter security)	60) 1.0 54, NR, 4- 5 MS (pe	iet	62	12750	790500
2)	Make: HIKVISION, ( DS-2CD2015-I ) Supply, installation, testing and commissioning of UL Listed : Megapixel CMOS Vandal-proof, Network Dome Camera (1280 960) resolution, 1/3" Progressive scan CMOS, 0.01Lux@F1 AGC ON. 0 Lux with IR on, IR cut filter with auto switch, H.26 MJPEG, Dual stream, motion detection, Bit rate 32 Kbj 16Mbps, BLC, 3D DNR, DWDR, Standard IP66, 12 VDC ± 10%, P ,with fixed lens between (2.5 - 12mm), size of lens shall be per site requirement. IR range up to 20 mtrs, ONVIF, SIP & NI supported, connectors complete as required in Dome sha fixed type for mounting recessed in false ceiling complete as p technical specifications required. (For Stilt floor Lift Lobby, T 2, 3, 4, 5, 6, 9, 13, 14)	4 / ps- oE as NS pe pe	os.	20	12750	255000
	DESCRIPTION					
And	DESCRIPTION	UNI	T	QTY.	Unit Rate	Amount
L	<sup>P</sup> Lift Camera: UL Listed CMOS Vandal-proof, Network Dome Camera 1/3" progressive scan CMOS, 0.01Lux@F1.2, AGC ON. C Camera 1/3" progressive scan CMOS, 0.01Lux@F1.2, AGC ON. C Camera 1/3" progressive scan CMOS, 0.01Lux@F1.2, AGC ON. C Lux with IR on, IR cut filter with auto switch, H.264 / MJPEG, Lux with IR on, IR cut filter with auto switch, H.264 / MJPEG, Dual stream, motion detection, Bit rate 32 Kbps-16Mbps, BLC, Dual stream, motion detection, Bit rate 32 Kbps-16Mbps, BLC, 30 DNR, DWDR, Standard IP66, 12 VDC ± 10%, PoE, with fixed lens between (2.8 - 8mm), size of lens shall be as per site requirement. ONVIF, SIP & NMS supported, connectors complete as required in Dome shape fixed type for mounting in lift inside, T-1, 2, 3, 4, 5, 6, 9, 13, 14 Make: HIKVISION, (DS-2CD7164-E)	Nos		18	10000	180000
H	supply, installation, testing and commissioning of Professional					
	video management and recording software and hardware comprising 32Ch. NVR to record output of all cameras mentioned above, Third-party network cameras supported, H.264 Compression - Up to 5 Megapixels resolution recording, multiple Hard Disk with each having maximum storage capacity of 4 TB & 4 SATA, as required for, 10/100/1000 MBps network interface with each NVR, 2 USB2.0, HTTP Networkable, backup by USB/DVDWR, required Client software included, Client licenses complete as per technical specifications and as required			4	50000	200000
5)	Make: HIKVISION, ( DS-7732NI-ST-R ) Special Surveillance 4 TB HDD for NVR					
51	special servemence 4 to HDD for NVR	Nos.		8	12,000	96000
6)	Supply, installation, testing and commissioning of 21" LCD TFT monitor complete as required as per specification.	Nos.		4	8500	34000
	Extended Surveillance Box (ESB) / Decoder for monitoring of CCTV, Display (1 / 4 / 9 / 16 split) maximum up to 64 cameras in Each, with HDMI Cable up to 5mtr at Main Gates,	Set		2	29000	58000

	32" HD LED Professional Display for Monitoring with mounting accessories for CCTV View at Main Gates	Set	2	25000	50000
	IP VIDEO SURVEILLANCE SYSTEM - S.TOTAL				1663500
11					1
	CONTROL ROOM EQUIPMENTS				
1)	Supply, installation, testing and commissioning of 2 KVA Online UPS with sealed maintenance free batteries (to support NVR /Access control PC etc.) complete as required.	Set	1	30170	30170
2)	Supply instaliation Testing and Commissioing of NMS (Network Monitoring System) support for all IP active devices upto 200 nos. (Cameras, Managed network switches, Access Control Systems, Monitoring & Storage system PC / NVR ) include all required hardware and the software cost for the same as per required specifications.	Set	1	150000	150000
	Supply, installation, testing and commissioning of Layer 3 switc	UNIT		Unit Rate	Amo
	with 24 Ports For Control Room support all IP cameras, For Control Room	ch Nos	1	35000	350
F	Supply, installation of 42U Network Rack for Control Room	- 6-1			
F		Set	1	45000	4500
F	CONTROL ROOM EQUIPMENTS- S.TOTA	L			2000
F	WORKING CONDUITING & CARLING				2601
I	IP NETWORKING, CONDUITING & CABLING				
r	Providing and fixing in position the following medium duty IS marked PVC conduit including all accessories (i.e clamps nuts,bolts, bends, junction boxes, pull boxes etc.) for CCTV,	51 5,			
3	25mm dia.	RM	2.000		
-			2,000	40	80000
-	suching laving marking making connection			1 1	
	Supplying, laying, marking, making connections and testing of a core Un-Armoured power cable of size 1.5 sqmm in existing counduits.	B RM	RO	68	
) :	core Un-Armoured power cable of size 1.5 sqmm in existing	g RM	RO 4,500	68 32	144000
) :	core Un-Armoured power cable of size 1.5 sqmm in existing counduits. Supplying, laying, marking, making connections and testing of CAT-6 Un-Armoured Data cable in existing conduits/Tray. (For	g RM f r RM			
) :	core Un-Armoured power cable of size 1.5 sqmm in existing counduits. Supplying, laying, marking, making connections and testing of CAT-6 Un-Armoured Data cable in existing conduits/Tray. (For CCTV Cameras, Access & required Intercom Network) Supply, installation, testing and commissioning of Managed switches - 24 Port PoE 10/100 EB Switch with Fibre uplinks including for LAN base feature set with support to integration	g RM f RM f Nos Nos	4,500	32	
) :	core Un-Armoured power cable of size 1.5 sqmm in existing counduits. Supplying, laying, marking, making connections and testing of CAT-6 Un-Armoured Data cable in existing conduits/Tray. (For CCTV Cameras, Access & required Intercom Network) Supply,installation,testing and commissioning of Managed switches - 24 Port PoE 10/100 EB Switch with Fibre uplinks including for LAN base feature set with support to integration with CCTV, with all related hardware Box (L2 Switch) Supply,installation,testing and commissioning of Managed switches - 8 Port PoE 10/100/1000 EB Switch with Fibre uplinks including for LAN base feature set with support to integration	g RM	4,500	32	144000 225000 90000 144000

# C. Drawbacks in Vendor Selection and Contract Awarding:

### Absence of Tender Process for Vendor Selection and Single Vendor Contract Award:

During our audit of the vendor selection process for Security System, a significant observation has come to light regarding the absence of a formal tender process. Instead, the contract has been awarded on a single vendor basis. This approach departs from established procurement practices and raises concerns about transparency, and competition in the selection of vendors.

Impact of absence of a formal tender process leads to:

- Lack of Competitive Bidding: The absence of a tender process means that multiple vendors were not provided an equal opportunity to compete for the contract. This raises doubts about whether the selected vendor truly offers the best value for the project in terms of cost, quality, and expertise.
- **Transparency and Accountability:** The absence of a competitive bidding process diminishes the transparency and accountability of the vendor selection
- **Risk of Higher Costs:** Without a competitive bidding process, there is a risk that the project might not achieve optimal cost savings. A lack of market benchmarking could lead to higher costs compared to what might have been achieved through competitive bids.

# D. Contractual Terms and Conditions:

### 1. SCOPE OF WORK

- The entire scope of Security system works (As per attached BOQ) is a fixed item rate Contract being awarded to M/s. Radius Infotech Pvt. Ltd.
- All the works shall be carried out in accordance and as per Technical Specification, Makes in the BOQ and drawings.
- Approval of drawings, materials along with all necessary accessories is the scope of the Society.
- All necessary statutory requirements like furnishing of Labour License, Provident Fund, Excise Tax, Sales Tax, ESI, etc. are to be complied by the Contractor.
- The Contractor shall be responsible to furnish all necessary Technical Guarantees, Operation Manuals and other desired documentation for the said works

### 2. PAYMENT TERMS:

Following shall be terms of payment:

- 20% of the contract value shall be paid advance along with Work Oder
- 55% of the contract value against Proforma Invoice against delivery
- 15% of the contract value after installation
- 10 % after testing & commissioning on pro-rata basis

#### 3. Completion Dates:

Contractor have to complete the work within 3 months from the date of issue of work order depending upon the site condition But any extension in the contract duration shall be on back to back basis upon approval by the Society. Contractor had been awarded work order on 22<sup>nd</sup> Dec'16.

#### 4. Taxes & Duties:

The rates quoted by you are inclusive of all Taxes & Duties, ESI, Insurance or any other Direct/ Indirect Tax.

### 5. Escalation:

The Contract is on fixed price basis and the price will remain fixed and firm till March 2017 or completion of the work and no escalation stand admissible

### 6. Defect Liability / Maintenance period:

Defect liability/ Maintenance period shall be 12 months from the date of handing over the work after successful commissioning.

### 7. Penalty Clause:

In case the contractor fails to complete the work in time without justified reason, penalty of Rs.5,000/- per day shall be levied.

### E. Observations:

### 1) Absence of Test Reports for Claiming Payment of Security System

During our audit of the testing and payment process for the Security System, a significant deficiency has been identified regarding the provision of test reports. It has come to our attention that the required test reports, which serve as essential evidence for claiming payment of testing activities conducted on the Security System, were not provided. The absence of these critical test reports raises concerns about the quality, safety, and compliance of the constructed infrastructure.

#### 2) Penalty to be Imposed on M.s Radius Infotech Pvt. Ltd. for delay in work:

As per Clause "Compensation for Delay" of Contract, "*The contractor shall pay as compensation of an amount equal to INR 5,000 per day of delayed period*". As the time allowed for performance of contract was 3 months i.e., contract should have been completed upto Mar'2017, & no document regarding extension of time period presented to audit team during course of audit & final bill was submitted by vendor

in Jan'22, therefore Contractor is bound to **pay for Liquidated damages that amounts to INR 88,15,000/- ,** refer below attached annexure for details:

Date of Work Order	Contract to be performed upto	Actual Date of Completion	Delay in no. of days	Penalty per day	Penalty to be imposed
22-12-2016	22-03-2017	18-01-2022	1763.00	5000.00	88,15,000.00

# VII. Smart Meter and Electricity Meter

### A. Background:

This audit report provides a comprehensive overview of Supply Order for of Supply of "Automatic Dual Energy Meter Reading System" for "Police Officers Multi State Co-Op. Housing Society Ltd" residential multi-storied project Sector-49, Faridabad (Haryana). The project was initiated by the Management, the society has undertaken a project to procure Energy meter reading system. The implementation process has not followed a tender process for vendor selection, and the contract has been awarded on single rate contract basis.

### B. Tender Process:

In the course of our comprehensive audit of Supply of "Automatic Dual Energy Meter Reading System" conducted for Police Officer Multi-State Co-operative Housing Society Ltd., we examined the vendor selection process employed for employing M/s Radius Synergies International Pvt. Ltd. Our evaluation focused on the methods adopted for vendor selection and the subsequent awarding of contracts. Notably, our observation reveals that the traditional competitive tender process was not employed in this instance, and the decision to award the contract was made on a single vendor basis.

It has been noted that Contract Amount quoted by M/s Radius Synergies International Pvt. Ltd. is INR 65,36,000/- (incl. of applicable taxes) and as this is a single vendor contract hence, contract has been awarded to M/s Radius Synergies International Pvt. Ltd.

Detailed Breakup for Contract value is as follows:

	BOQ OF DUAL RECORDING ENERGY N			K	HUM BRILLING MACHINE
	ALCORDING ENERGY N	TER	S		
Sr.No	Description	UOM	QTY		Supply Amour
1	BIS-13779 APPROVED 3 PHASE 4 WIRE, Smart ENERGY METER (WHOLE CURRENT UPTO 60A (IB-IMAX:10-60A) compatabile for Automatic Meter Reading System with internal disconnection, dual source, kWh.	Nos	688	4,750.00	32,68,000.0
	RF enabled Data Concentrator supporting embedded client-server module for maximum of 12 Energy Meters supporting feature like source based dynamic Load Allocation facility for every meter, Over the Air(OTA) for on the fly configuration AES-128 bit encryption for RF Communication.				
2	Embedded firmware for each consumer to perform - interval based and on-demand data acquisition and storage for each consumer Meter - Communication protocol for wired link with each meter and embedded encryption hardware - Protocol multiplexer and aggregator functionality - Fault detection - Data Validation - Alert	Nos	688	4,750.00	32,68,000.0
	Generation - Configuration management for each meter.				
axes	Above Rates are inexclusives of applicable taxes.	+ +			65,36,00

# C. Drawbacks in Vendor Selection and Contract Awarding:

#### Absence of Tender Process for Vendor Selection and Single Vendor Contract Award:

During our audit of the vendor selection process for Security System, a significant observation has come to light regarding the absence of a formal tender process. Instead, the contract has been awarded on a single vendor basis. This approach departs from established procurement practices and raises concerns about transparency, and competition in the selection of vendors.

Impact of absence of a formal tender process leads to:

- Lack of Competitive Bidding: The absence of a tender process means that multiple vendors were not provided an equal opportunity to compete for the contract. This raises doubts about whether the selected vendor truly offers the best value for the project in terms of cost, quality, and expertise.
- **Transparency and Accountability:** The absence of a competitive bidding process diminishes the transparency and accountability of the vendor selection
- **Risk of Higher Costs:** Without a competitive bidding process, there is a risk that the project might not achieve optimal cost savings. A lack of market benchmarking could lead to higher costs compared to what might have been achieved through competitive bids.

### D. Contractual Terms and Conditions:

- 1. Purchase Order for Supply of Automatic Dual Energy Meter Reading System at Police Officer Multi State Co-operative Housing Society Ltd.
- Date of Completion- Within 10 Weeks. Work order was awarded to M/s Radius Synergies International Pvt Ltd on 22<sup>nd</sup> Dec'16

- 3. The supply has to be started immediately.
- 4. The supply is to be carried out as per standard engineering practices and direction of the mentioned in the order.
- 5. The complete system will be warranted for 18 month from the date of commissioning, unless otherwise specified in the item itself.
- 6. In case the contractor fails to complete the work in time without justified reason, penalty of Rs.5,000/- per day shall be levied.
- 7. The Payment will be released as per following Payment terms:
  - 20% Advance Along with PO.
  - 55% against Proforma invoice.
  - 15% after installation of Material on prorata Basis
  - 10% after complete handover to POMCHS LTD.

### E. Observations:

# 1. Claiming Non-BOQ Items Without any Contract, Leading to Excessive Cash Outflow to Contractor:

During our audit of the, a significant irregularity has come to our attention regarding the claiming of non-BOQ items by the contractor. It is noted that these claims involve items not explicitly covered in the original contract, and no separate contractual arrangement has been executed for these additional items. This has led to an **excessive outflow of cash by INR 61,500/- to the contractor.** 

Detail of claimed additional items is here as under:

Particulars	<b>Qty Claimed</b>	Rate per unit	Total Amount
<b>Cordination Bridges</b>	2	19500	39000
M2M Gateway	1	22500	22500
	61500		

#### 2. Penalty to be Imposed on M/s Radius Synergies International Pvt. Ltd. for delay in work:

As per Clause "Compensation for Delay" of Contract, "The contractor shall pay as compensation of an amount equal to INR 5,000 per day of delayed period". As the time allowed for performance of contract was 10 weeks i.e., contract should have been completed upto 2<sup>nd</sup> Mar'2017, & no document regarding extension of time period presented to audit team during course of audit & final bill was submitted by vendor in Dec'20, therefore Contractor is bound to pay for Liquidated damages that amounts to INR 69,00,000/-, refer below attached annexure for details:

	Contract to be	Actual date of	Delay in no.		
Date of work order	completed upto	Completion	of Days	<b>Penalty Per Day</b>	Penalty to be imposed
22-12-2016	02-03-2017	11-12-2020	1380	5000.00	69,00,000.00

# VIII. <u>RO System:</u>

## A. Background:

This audit report provides a comprehensive overview of the implementation of an RO System project within the premises of the Police Officers Multi-state Co-operative Housing Society. The project was initiated by the Management Committee with the aim of ensuring to ensuring the health and well-being of its members, the society has initiated a project to install Reverse Osmosis (RO) water purification systems. The implementation process followed a rigorous tender process, wherein qualified contractors were selected based on competitive bidding. This report will delve into the details of the tender process, the contract terms, and the subsequent execution of the Electric Substation project.

The Police Officers Multi-state Co-operative Housing Society, recognized the significance of ensuring potable water for its residents. In response to this need, the society's Management Committee embarked on a project to establish a state-of-the-art RO System Purification plant that would enhance water quality and accessibility through the installation of modern RO systems.

# Universal Tech Trade Pvt. Ltd.

### B. Tender Process:

To ensure transparency, competitiveness, and adherence to industry standards, the Management Committee of initiated a tender process for the RO System project., the Management Committee issued an invitation to bid, inviting qualified and experienced contractors to participate in the competitive bidding process.

Contractor name	Finacial Bid submitted	Amount quoted in initial bid	Vendor Position
M/s. Clear-lon Enterprises (P) Ltd.	V	1280000	L4
M/s. Watertec Enterprises	V	1170000	L3
M/s. ENKI Water Environment Co. Pvt. Ltd.	V	1114400	L2
M/s. Universal Tech Trade Pvt. Ltd.	V	900000	L1

Following qualified vendors submitted their financial Bids as follows:

The above tenders were scrutinised by the BOD in its meeting held 09/04/2019 and decided to finalise the tender in the next BOD Meeting. In the meantime, the BOD decided to negotiate with the bidders for price deduction.

All the aforesaid bidders were asked to attend the PNC meeting on 13/04/2019. The outcome of the PNC meeting is as under:

Contractor name	Finacial Bid submitted	Amount quoted in initial bid	Negoatiated amount	Vendor Position
M/s. Clear-lon Enterprises (P) Ltd.	V	1280000	1125000	L4
M/s. Watertec Enterprises	v	1170000	1080000	L3
M/s. ENKI Water Environment Co. Pvt. Ltd.	V	1114400	1051000	L2
M/s. Universal Tech Trade Pvt. Ltd.	V	900000	900000	L1

After scrutiny, the price quoted by M/s. Universal Tech Trade Pvt. Ltd. was found to be the lowest and hence the BOD decided to award the tender to them.

# C. Contractual Terms and Conditions:

- 1. Work Order for Supply and installation of RO Plant capacity 10,000 LPH at our project at Sector49, Faridabad.
- 2. Contract value: Rs.9,00,000/-(Rupees Nine lakhs only)+ GST @18%. The price is inclusive of Erection and Commissioning.
- 3. Fixed Rate Contract, no escalation on material or labour

### 4. Mode of payment:

- 25% advance along with Work Order
- 45% against delivery
- 15% against installation
- 10% on testing & commissioning of the System
- 5% after 6 months of handing over the System.
- 5. Delivery/Completion: 3-4 weeks after getting advance and commercial clear.
- **6.** Warranty: One year from the date of installation against manufacturing defect on mechanical item

# Clear-Ion Experts Pvt. Ltd. & Watertec Enterprises

### D. Tender Process:

In the course of our comprehensive audit of RO System project conducted for Police Officer Multi-State Co-operative Housing Society Ltd., we examined the vendor selection process employed for employing M/s Watertec Enterprises and M/s Clear-Ion Experts Pvt Ltd in 2013 & 2014 respectively. Our evaluation focused on the methods adopted for vendor selection and the subsequent awarding of contracts. Notably, our observation reveals that the traditional competitive tender process was not employed in this instance, and the decision to award the contract was made on a single vendor basis.

It has been noted that Contract Amount quoted by M/s Watertec Enterprises and M/s Clear-Ion Experts Pvt Ltd is INR 6,18,750 & INR 14,00,000 respectively (incl. of applicable taxes) and as this is a single vendor contract hence, contract has been awarded to the respective vendors.

### E. Drawbacks in Vendor Selection and Contract Awarding:

#### Absence of Tender Process for Vendor Selection and Single Vendor Contract Award:

During our audit of the vendor selection process for Security System, a significant observation has come to light regarding the absence of a formal tender process. Instead, the contract has been awarded on a single vendor basis. This approach departs from established procurement practices and raises concerns about transparency, and competition in the selection of vendors.

Impact of absence of a formal tender process leads to:

- Lack of Competitive Bidding: The absence of a tender process means that multiple vendors were not provided an equal opportunity to compete for the contract. This raises doubts about whether the selected vendor truly offers the best value for the project in terms of cost, quality, and expertise.
- **Transparency and Accountability:** The absence of a competitive bidding process diminishes the transparency and accountability of the vendor selection
- **Risk of Higher Costs:** Without a competitive bidding process, there is a risk that the project might not achieve optimal cost savings. A lack of market benchmarking could lead to higher costs compared to what might have been achieved through competitive bids.

# IX. <u>Horticulture:</u>

### A. Background:

This audit report provides a comprehensive overview of the implementation of an RO System project within the premises of the Police Officers Multi-state Co-operative Housing Society. The project was initiated by the Management Committee of enriching the living experience of its residents and enhancing the aesthetic appeal of its surroundings, the society is embarking on a transformative project focused on comprehensive horticulture work.

# Preetam Singh Horticulture:

# B. Tender Process:

To ensure transparency, competitiveness, and adherence to industry standards, the Management Committee of initiated a tender process for the Horticulture work project., the Management Committee issued an invitation to bid, inviting qualified and experienced contractors to participate in the competitive bidding process.

Following qualified vendors submitted their financial Bids as follows:

Contractor name	Finacial Bid submitted	Amount quoted in initial bid	Vendor Position
M/s. Preetam Singh Horticulture Contractor & Supplier	V	608000	L1
M/s. Nature's Lap Landscaping & Nursery	V	822600	L2
Dada Dev Nursery	V	902900	L3

After scrutiny of the above quotations, the BOD decided to negotiate the price with the lowest bidder M/s. Preetam Singh Horticulture Contractor & Supplier who had quoted Rs.6,08,000/-

### Outcome of the negotiation:

After negotiation, M/s.Preetam Singh Horticulture Contractor & Supplier had agreed to reduce the price to Rs.5,00,000/- (Rupees Five lakhs). So, the BOD decided to award the tender to M/s.Preetam Singh Horticulture Contractor & Supplier for the Horticulture work at Sector-49, Faridabad project Site on the following terms & conditions:

- They will maintain the plantation for one year including watering the Trees and Plants and pruning etc.
- In case any Tree or Plant is dead, it will be replaced by them with fresh Trees & Plants free of cost.
- They will keep a watch that the plantation is not destroyed by vehicles or by animals or for any other reason.

# Vijay Nursery

In the course of our comprehensive audit of Horticulture work conducted for Police Officer Multi-State Co-operative Housing Society Ltd., we examined the vendor selection process employed for employing M/s Vijay Nursery in 2019. Our evaluation focused on the methods adopted for vendor selection and the subsequent awarding of contracts. Notably, our observation reveals that the traditional competitive tender process was not employed in this instance, and the decision to award the contract was made on a single vendor basis.

It has been noted that Contract Amount quoted by M/s Vijay Nursery is INR 16,00,000/- (Post Negotiation) and as this is a single vendor contract hence, contract has been awarded to the respective vendors.

### C. Drawbacks in Vendor Selection and Contract Awarding:

Absence of Tender Process for Vendor Selection and Single Vendor Contract Award:

During our audit of the vendor selection process for Security System, a significant observation has come to light regarding the absence of a formal tender process. Instead, the contract has been awarded on a single vendor basis. This approach departs from established procurement practices and raises concerns about transparency, and competition in the selection of vendors.

Impact of absence of a formal tender process leads to:

- Lack of Competitive Bidding: The absence of a tender process means that multiple vendors were not provided an equal opportunity to compete for the contract. This raises doubts about whether the selected vendor truly offers the best value for the project in terms of cost, quality, and expertise.
- **Transparency and Accountability:** The absence of a competitive bidding process diminishes the transparency and accountability of the vendor selection
- **Risk of Higher Costs:** Without a competitive bidding process, there is a risk that the project might not achieve optimal cost savings. A lack of market benchmarking could lead to higher costs compared to what might have been achieved through competitive bids.

# X. <u>Sewage Treatment Plant:</u>

# A. Background:

This audit report provides a comprehensive overview of the implementation of an Sewage Treatment Plant project within the premises of the Police Officers Multi-state Co-operative Housing Society. The project was initiated by the Management Committee with the aim of ensuring efficient waste management and ecological preservation. The implementation process followed a rigorous tender process, wherein qualified contractors were selected based on competitive bidding. This report will delve into the details of the tender process, the contract terms, and the subsequent execution of the STP project.

# B. Tender Process:

To ensure transparency, competitiveness, and adherence to industry standards, the Management Committee of initiated a tender process for the Electric Substation project. This process involved the following key stages:

- 1. **Project Documentation Preparation:** The Management Committee collaborated with Architect to develop comprehensive project documentation, including technical specifications, scope of work, and project timelines. These documents were designed to provide a clear understanding of the project's requirements.
- 2. Invitation to Submit Pre-qualification bids: Once the project documentation was finalized, the Management Committee issued interested vendors to submit pre-

qualification bids containing all the information regarding their financials, work experience, company profile and details of similar projects executed in past.

As per records available with Police Officer Multi-state Co-operative Housing Society, following vendors had submitted their Pre-Qualification Bids.

- a. M/s Enki Water & Environment Co. Pvt. Ltd.
- b. M/s Fontus Water Pvt. Ltd.
- c. M/s Cleanko India Pvt. Ltd.
- d. M/s Watech Consultants and Engineers
- e. M/s Netsol Water Solutions Pvt. Ltd.
- f. M/s Vision Solutions
- g. M/s. Gautam Tehno Sanitation
- h. M/s Clear-Ion Experts P. Ltd.
- 3. **Invitation to Bid**: Once the pre-qualification bids were submitted by vendors, the Management Committee issued an invitation to bid, inviting qualified and experienced contractors to participate in the competitive bidding process. The invitation contained detailed instructions on submission requirements, evaluation criteria, and deadlines.

Upon receiving Pre-Qualification bids from the above mentioned vendors, 7 (Seven) Pre-Qualified Contractors were selected out of total 10 (Ten) Pre-Qualification bids were recommended by Architect on the basis of their capabilities of executing our Project, experience, project executed and completed, and projects under construction. Vendors qualified to submit their rate contracts are as follows:

- a. M/s Enki Water & Environment Co. Pvt. Ltd.
- b. M/s Fontus Water Pvt. Ltd.
- c. M/s Watech Consultants and Engineers
- d. M/s Netsol Water Solutions Pvt. Ltd.
- e. M/s Vision Solutions
- f. M/s. Gautam Tehno Sanitation
- g. M/s Clear-lon Experts P. Ltd.

Item wise financial bid have been submitted by the following vendors out of above mentioned vendors for Electric Substation Project executed at Police Officers Multi-state Cooperative Housing Society at village Dabua and Nawada koh, Sector 49, Faridabad, Haryana.

Rate contract submitted by the above mentioned vendors for the execution of Electrical Sub-station project at Police Officers Multi-State Co-Operative Housing society are as follows

Contractor name	Finacial Bid submitted	Amount quoted in initial bid	Vendor Position
M/s Enki Water & Environment Co. Pvt. Ltd.	V	57,80,540.00	L6
M/s Fontus Water Pvt. Ltd.	V	39,81,000.00	L2
M/s Watech Consultants and Engineers	V	49,78,000.00	L4
M/s Netsol Water Solutions Pvt. Ltd.	V	63,89,000.00	L7
M/s Vision Solutions	V	51,95,000.00	L5
M/s. Gautam Tehno Sanitation	V	47,00,000.00	L3
M/s Clear-lon Experts P. Ltd.	V	36,67,000.00	L1

### Detailed unit wise breakup in Comparative statement is attached as under:

	Police Officers Multistate Co-op. Housing Society Ltd., Sector 49, Farodabad, Haryana.																
					I	INSTALLATIO	ON, TESTING	& COMMISS	SIONING OF S	ГР							
						COMPAR	ATIVE STATE										
	Description				ENKI		ONTUS		ATECH		/ISION		AUTAM		ETSOL		AR-ION
		Unit	Qty	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount	Rate	Amount
A	Preliminary Works																
	Shop Drawings.																
	Detailed GA drawing, flow diagram, equipment list, power load requirement with design calculations of all elements of the plant, electrical and mechanical work to satisfy / supply adequacy of design followed by submission of detailed GOOD FOR CONSTRUCTION' architectural, structural, construction, electrical, mechanical and piping drawing for approval.	LS/ Job	1	25,000/-	25,000/-	150,000/-	15,0000/-	1,00,000/-	1,00,000/-	2,90,000/-		75,000/-	75,000/-	1,50,000/-		50,000/-	50,000/-
	TOTAL				25,000/-		150,000/-		1,00,000/-		2,90,000/-		75,000/-		1,50,000/-		50,000/-
в	SEWAGE TREATMENT PLANT																
	Design, Supplying, Installing, Testing & Commissioning of Sewage Treatment Plant capacity400 X2 KLD. The plant is proposed to be installed in basement level accessible from the top through stair asse, for the following: Nature of effluent - Domestic Sewage from Toilet use																
	and kitchen waste.																
	Daily average flow - 800 Cum / Day (400X2)																
<u> </u>	pH - 7.5 - 8.5 BOD5 - upto 200-250 Mg/L								-		-						
	S. Solids - 200- 400 Mg/L																
	COD - upto 400-500 Mg/L																
	Oil & Grease - 30 Mg / L																
	Effluent discharge standard after treatment pH - 6.0 - 8																
	BOD5 - Less than 10 Mg/L																
	S. Solids - Less than 10 Mg/L																
	COD - Less than 40 Mg/L																
	Oil & Grease - Less than 5mg/l Sewage treatment plant shall include the following																
	items:																
	Screen Chamber / Oil and Grease Chamber - 1No Equalization / Collection Tank - 1 No																
	Equalization / Collection Tank - 1 No FAB TANK - 4 Nos																
	Secondary Settling tank - 2 Nos																
	Clear water tank - 2 Nos																
	Treated Effluent Tank - 1 Nos																
	Sludge Holding Tank 1 Nos Filtration through MGF & ACF																
	UV System / Ozonator																
	Air Blowers, Pumps & equipment																
-	Piping, valves etc Electrical Panel & Cabling																
-	Common plant room adjacent to STP.																
	All piping, valves & level indicator/controller etc. within plant room.																
B.1	Supply, installation, testing & commissioning of 1 Nos Stainless Steel Perforated Screen with suitable lifting arrangement mechanically (size 450mm wide x 600 mm high approx)Bar sizing will be 40mm x 6mm & Bar spacing should be min 15mm	Set	1	9,900/-	9,900/-	13,000/-	13,000/-	5,000/-	5,000/-	15,000/-	15,000/-	37,500/-	37,500/-	40,000/-	40,000/-	40,000/-	40,000/-
B.2	Supply, installation, testing & commissioning of electronic type level indicator and controller for automatic operation of the system with high/low level alarm complete with auxillary NO/NC contacts.	Set	2	9,450/-	18,900/-	7,500/-	15,000/-	4,000/-	8,000/-	8,500/-	17,000/-	37,500/-	75,500/-	8,000/-	16,000/-	26,000/-	52,000/-
B.3	Supply, installation, testing & commissioning of non clogging type pumps, having CI casing & SS shaft, bronze impelier complete with all accessories, motor of required capacity. Delivery header with isolation vake/NRV etc. pressure gauge on delivery line with isolation cock level controller with wiring to control the level of sump automatically. Pump shall following duty.																

B.3.1	Submersible Sump Pumps for equilisation tank/ Sewage lifting pump (3 Nos 2 working & one standby) :-																
	(Solid handling cap. 30-40 mm) Flow rate (each) = 20 m3 / hr																
	Head = 15 Mtr (presently installed 2 pumps + keep provision 1 pump	Nos	2	1,22,400/-	2,44,800/-	92,000/-	1,84,000/-	1,10,000/-	2,20,000/-	1,01,000/-	2,02,000/-	1,05,000/-	2,10,000/-	36,000/-	72,000/-	52,000/-	1,04,000/-
	for future) Submersible Sump Pumps for plant room sump 2 Nos (1																
0.3.2	working + 1 standby)																
	Flow rate = 35.0 cum/hr Head = 10 Mts	Each	2	1,22,400/-	2,44,800/-	99,000/-	1,98,000/-	1,10,000/-	2,20,000/-	1,17,500/-	2,35,000/-	1,05,000/-	2,10,000/-	49,500/-	99,000/-	66,000/-	1,32,000/-
	(Solid handling size for this pump shall be 15 mm). Sludge Recirculation Pumps (CI IMPELLER, CS SHAFT)																
	(Solid handling cap. 8-15 mm) Flow rate (each) = 5 m3 / hr																
	Head = 10 Mtr	Each	2	1,17,000/-	2,34,000/-	19,500/-	39,000/-	22,000/-	44,000/-	22,000/-	44,000/-	85,000/-	1,70,000/-	18,700/-	37,400/-	28,000/-	56,000/-
	(presently installed 2 pumps + keep provision 1 pump for future)																
B.4	Air diffusion system shall include the following:																
	Twin type rotary air blowers (2 working & 1 standby) capable of delivering 400 cum/hr (each) of free air at																
	0.55 kg/cm2 driven through "V" belt or directly coupled through flexible coupling to a TEFCmotor of suitable HP																
	Suitable for 415 $\pm$ 10% volts, 3 phase, 50 cycles a/c supply	For all	2	2 07 000/	5 04 000/	2 07 000/	4 4 4 000 /	2 00 000/	c 00 000/	2 20 000/	4.76.000/	2 00 000/	5 60 000/	2 45 000/	4 20 000 (	1 56 000/	2.42.000/
	(presently installed 2 air blowers + keep provision 1 air	Each	2	2,97,000/-	5,94,000/-	2,07,000/-	4.14,000/-	3,00,000/-	6,00,000/-	2,38,000/-	4,76,000/-	2,80,000/-	5,60,000/-	2,15,000/-	4,30,000/-	1,56,000/-	3,12,000/-
	blower for future) Air piping shall comprise of pipes droppers/ laterals with																
	M S (epoxy coated) Header complete with all fittings such as tees, crosses, plugs, sockets, elbows, reducers,																
	supports & clamps, puddle flanges etc cutting chases & making good.																
P.6	Non clog type air dispersion system capable of handling	Lot	1	81,000/-	81,000/-	28,000/-	28000/-	1,75,000/-	1,75,000/-	1,68,000/-	1,68,000/-	3,25,000/-	3,25,000/-	75,000/-	75,000/-	1,25,000/-	1,25,000/-
	3-5 cfm of air with oxygen transfer efficiency of 3-4% per/meter water depth. Air dispersion grid shall be																
	assembled in modular form so that they can be replaced / repaired.																
	Fine bubble diffusers required Nos For Equalization / Collection Tank -1 Nos.																
	For Sludge Holding Tank - 1 No. FAB Reactor Tank- 4Nos. (Presently 2 Nos)																
	Air dispersion system shall be provided for Equalisation Tank, Sludge holding Tank and FAB reactor Tank.	Lot	1	1,22,000/-	1,22,000/-	1.16.000/-	1.16.000/-	1,00,000/-	1,00,000/-	1.35.000/-	1,35,000/-	2,50,000/-	2,50,000/-	1,10,000/-	1,10,000/-	75,000/-	75,000/-
B.7	Providing and fixing all piping (as described below) and isolation control valves for making the system complete.		_		-,,,	_,,,	_))	_,,		_,,,	_,,	2,00,000,	_/==/===/	-,,,	_,,,	,,	
-	SS 304 :Submerged air piping																
	MS Epoxy : Air piping																
	PVC piping :Pumped effluent & tank overflow pipe line Supply, installation, testing and commissioning of PVC bio	Job	1	5,31,000/-	5,31,000/-	2,54,000/-	2,54,000/-	1,50,000/-	1,50,000/-	3,70,000/-	3,70,000/-	1,85,000/-	1,85,000/-	4,50,000/-	4,50,000/-	68,000/-	68,000/-
	deck FAB circular floating type media to be installed in FAB Tank (4Nos.) presently in 2 tanks and PVC tube deck																
	settling media to be installed in Secondary Settling Tank alonwith suitable sludge removal arrangement																
	Considered for 800KLD	Job	1	6.69.600/-	6.69.600/-	5.15.000/-	5.15.000/-	4.90.000/-	4.90.000/-	5.36.000/-	5.36.000/-	2.80.000/-	2.80.000/-	7.35.000/-	7,35,000/-	3.75.000/-	3.75.000/-
B.9	Supply, installation, testing & commissioning of UV system of capacity 20 cum/hr & min 12Nos of UV lamps,																
	electrical cabinate including Auto cleaning system as per requirment, SS treatment chamber mat etc complete																
	with all accessories to functioning the plant properly.																
	(presently installed 1 set + keep provision 1 set for	Set	1	5,58,000/-	5,58,000/-	3,80,000/-	3,80,000/-	1,57,000/-	1,57,000/-	3,86,000/-	3,86,000/-	3,60,000/-	3,60,000/-	1,30,000/-	1,30,000/-	1,75,000/-	1,75,000/-
	future)																
B10	Supply, installation, testing & commissioning of ozonator of min 120mg capacity complete with all accessories to																
	functioning the plant properly.	Set	1	6,30,000/-	6,30,000/-	2,48,000/-	2,48,000/-	6,70,000/-	6,70,000/-	8,90,000/-	8,90,000/-	3,60,000/-	3,60,000/-	4,45,000/-	4,45,000/-	2,58,000/-	2,58,000/-
B11	Supplying, installing, testing & commissioning of centrifugal filter feed water pumps CIBody, CS shaft, CI																
	Impeller with mechanical seal along with motor. Pressure gauge with isolation cock. NRV. Isolation valve on																
	delivery line. Isolation valve, stainer at suction. The pump shall be suitable for 415 ± 10% volts, 3 phase, 50 cycles																
	a/c supply																
	Capacity : 25 M3/hr. Head : 25-30 M																
	No. of Pumps (2 working + 1 standby) ( for Phase-1 consider 2 nos of pumps +1 no to be added	No	2	76,920/-	1,53,840/-	30,000/-	60,000/-	31,000/-	62,000/-	33,000/-	66,000/-	80,000/-	1,60,000/-	40,500/-	81,000/-	65,000/-	1,30,000/-
Note:	in phase-2) Operation of pump shall be based on level controller																
	proposed to be installed in tank as per site location. The contractor to ascertain the Head required for pumps as																
	per site conditions and provide accordingly.																
	(presently installed 2 pumps + keep provision 1 pump			1													
	for future) Supplying, installing, testing and commissioning of MS			<u> </u>			-										
	with epoxy paint (thicknes of 6/8 mm) vessel filter with frontal piping and associated valves and accessories.																
	Filter shall be suitable for minimum working pressure of 5 kg / cm2 and shall include media, standard fittings like																
	pressure.																
B12.1	Multigrade pressure sand filter media Flow rate : 25 cum/hr																
	Filteration velocity : 17 cum/hr/sqm	C		2 20 600 1	2 20 6001	1 70 000 /	1 70 000 /	2.00.0001	2.00.0001	2.01.000	2.01.0001	2.00.000/	2.00.0001	2.60.000/	2.60.0001	1.00.0001	1.00.000/
	Filter Diameter : 1400 mm. Activated Carbon Filter	Set	1	2,28,600/-	2,28,600/-	1,70,000/-	1,70,000/-	2,00,000/-	2,00,000/-	2,01,000/-	2,01,000/-	3,00,000/-	3,00,000/-	2,00,000/-	2,60,000/-	1,90,000/-	1,90,000/-
L	Flow Rate : 25 cum/hr Filteration velocity : 17 cum/hr/sqm																
	Filter Diameter : 1400 mm Contractor may be asked to alter the number of filters	Set	1	2,43,000/-	2,43,000/-	1,80,000/-	1,80,000/-	2,45,000/-	2,45,000/-	2,18,000/-	2,18,000/-	3,25,000/-	3,25,000/-	2,85,000/-	2,85,000/-	2,56,000/-	2,56,000/-
	and pumps subject to any revision to meet the desired capacities.																
R12	Approval from pollution board at initial & various other																
	stages of works including preparation of report /																
	drawings as per pollution board requirement, arrangement of raw sewage for testing & commissioning.																
	Contractor shall include the cost of all chemicals (consumed during testing & commissioning and the cost																
	of such items of works which are not explicitly mentioned above, but are mendatory to have pollution																
	board approval. Nothing extra shall be payable in this regard. (ONLY TECHNICAL SUPPORT WILL BE GIVEN BY																
	CONTRACTOR FOR APPROVAL)																
		Job	1	90,000/-	90.000/-	15.000/-	15.000/-	75,000/-	75.000/-	60,000/-	60,000/-	62,500/-	62,500/-	Nil	Nil	2 50 000/-	2,50,000/-

B14	Supply, installation, testing and commissioning of Filter Press of plate size 30" X 30" plate with screw feed																
	pumps for required capacity for total capacity with																
	interconnecting piping and poly dosing system all																
	complete.	Set	1	2,19,600/-	2,19,600/-	2,20,000/-	2,20,000/-	4,00,000/-	4,00,000/-	5,33,000/-	5,33,000/-	4,25,000/-	4,25,000/-	2,50,000/-	2,50,000/-	2,90,000/-	2,90,000/-
B15	Providing & fixing bypass line with arrangement of valve																
015	from equilization tank tank to outside sewer manhole/																
	for tanker connection.																
	PIPE - GI 'C' Class, DIA - 100 mm, LENGTH - 200 Mt	Set	1	35,000/-	35,000/-	25,000/-	25,000/-	3,10,000/-	3,10,000/-	4,19,000/-	4,19,000/-	2,00,000/-	2,00,000/-	3,74,000/-	3,74,000/-	2,00,000/-	2,00,000/-
B16	Supply, installation, testing & commissioning of pH Meter																
010	(only in outlet), Electronic magnetic flow meter in inlet &																
	outlet of filtration system complete in all respect.	Set	1	21,000/-	21,000/-	1,10,000/-	1,10,000/-	2,20,000/-	2,20,000/-	3,26,000/-	3,26,000/-	42,500/-	42,500/-	1,45,000/-	1,45,000/-	88,000/-	88,000/-
B17	Supply, installation, testing and commissioning of Energy															<u> </u>	
017	supply, instantion, testing and commissioning of Energy																
	Meter for electrical panel of STP complete in all respect.	No.	1	7,500/-	7,500/-	2,000/-	2,000/-	20,000/-	20,000/-	4,000/-	4,000/-	37,500/-	37,500/-	15,000/-	15,000/-	18,000/-	18,000/-
B18	Supply, installation, testing & commissioning of Dosing																
818	Supply, Installation, testing & commissioning of Dosing System. Horizontal centrifugal with PP/ PVC impeller,																
	Capacity 0-12 LPH, HDPE tank 500 ltrs.	Each	2	19,500/-	39,000/-	20,000/-	40,000/-	20,000/-	40,000/-	39,000/-	78,,000/-	42,500/-	85,000/-	30,300/-	60,600/-	19,000/-	38,000/-
	TOTAL				49,75,540/-		32,26,000/-		44,11,000/-		53,79,000/-		46,60,000/-		41,10,000/-		32,32,000/-
с	ELECTRICAL INSTALLATION FOR STP																
	Design, fabrication, assembling, wiring, supply,																
	installation, testing and commissioning of motor control																
	centre fully compartmentalised fabricated out of 14																
	gauge CRCA sheet steel. Cable gland plates shall be																
	provided on top as well as at the bottom of the panels. Panels shall be treated with all anticorrosive process							1							1	1	1
1	before painting as per specifications with 2 coats of red														1	1	
1	oxide primer and final approved shade of powder coated														1	1	
	paint. 2 Nos. earthing terminals shall be provided for 3														1	1	
1	phase, 4 wire, 50 Hz supply system. Lifting hooks shall also be provided in case of large panels. Approval shall be														1	1	
	also be provided in case of large panels. Approval shall be taken for each panel before fabrication. Quoted rates							1							1	1	1
	shall be inclusive of cables (in accordance to							1							1	'	
1	specification) with earthing from panel to each motor /														1	1	
1	equipment.														1	1	
1															1	1	
	Motor Control Centre														1	1	
	Incoming													L			
	125 amps TPN MCCB with the following accessories:																
	a. 0-500 volts 96 x 96 mm square electronic voltmeter																
	with selector switch shall be protected by 2 amps TP MCB. 1 Set																
	b. 0-200 amps 96 x 96 mm square electronic ammeter															-	
	with selector switch and 125./5 amps 10 VA CL:1 CTs. 1																
	Set														L		
	c. Phase indicating lamps shall be protected by 2 amp SP MCB 3 Sets																
	Bus Bar																
	200 amps TPN (15 KA) copper bus bar with heat																
	shrinkable insulation sleeves.														L	L	
	a. Required Nos of required capacity TPN MCB for direct on line starter/star delta starters and out going feeders																
	to all the pumps/blowers etc. (including standbies). Each																
	compartment shall contain auto / manual selector switch																
	and indicating lamp with MCB's for 'ON/OFF/TRIP' status																
	of motor																
	b. Spare MCB's of following capacities:																
	i. 32 amps TPN MCB's 4 Nos.																
	c. Necessary cable alleys, internal / cabling, wiring,																
	cabling from MCC to various pumps / equipment and																
	interlocking, earthing for all equipment shall also included																
	a. All MCCBs / MCBs shall be of 15 KA breaking															1	
:	capacity and suitable for motor duty application.														<u> </u>		
	b. All motor starters shall be provided with Automatic																
	level controller c. DOL starters shall be used for mototrs below 10HP and														<del> </del>	<u> </u>	
L	Star-Delta Starters for other motors .																
	d. Provision shall be made for providing potential free							ľ								[	
	contacts to all pumps starters MCC for all STP equipments/pumps as described in sub														<del> </del>	<b>├</b> ─── <sup> </sup>	
	MCC for all STP equipments/pumps as described in sub head II	Job	1	4,95.000/-	4,95.000/-	3,45.000/-	3,45.000/-	3.10.000/-	3.10.000/-	3,90.000/-	3,90.000/-	1.85.000/-	1.85.000/-	2,40.000/-	2,40,000/-	2,90.000/-	2,90.000/-
				,==,000/-	.,,	.,,	.,,	,,,000/-	0,000/-	.,==,000)-	=,==,0000/-	.,,000/-	-,,000/-	., .=,000/-		,==,000/-	
C.2	Cable Tray and its support											L					
	a) Cable																
	Type - Armoured 3 core Capacity - As per the control panel and machines to													I	l	<b>├</b> ──── <sup>′</sup>	
1	capacity - As per the control panel and machines to connected.														1	1	
	Size of cable - 3core x 10 sqmm or as required.																
	b) Cable Tray																
L	Qty - As required														I	'	
	Type - Slotted GI Size - 2" x 4" x 8" or as required.														<u> </u>	<u> </u>	
<u> </u>	Size - 2" x 4" x 8" or as required. c) Cable Tray Support					<u> </u>		<u> </u>							<u> </u>	<u>├</u> ───	
	Quantity - As per site requirment of approved quality.	Lot	1	2,10,000/-	2,10,000/-	1,75,000/-	1,75,000/-	90,000/-	90,000/-	2,55,000/-	2,55,000/-	2,50,000/-	2,50,000/-	1,50,000/-	1,50,000/-	40,000/-	40,000/-
	TOTAL				6,05,000/-		5,20,000/-		4,00,000/-		6,45,000/-		4,35,000/-		3,90,000/-		3,30,000/-
ļ															<u> </u>	<u> </u>	
	MAINTENANCE CONTRACT														<del> </del>	'	
D.1	To operate the entire STP under available load conditions for further period as desired by client on round the clock							1							1	1	1
	basis. All tools equipment and testing devises to be														1	1	
	provided by the contractor. Consumable including							1							1	1	1
					1	1	I	1	I		1	1	1	1	1	1 '	
	lubricants and chemicals will be provided by Owners. This																
	lubricants and chemicals will be provided by Owners. This is not to be misred with the 24 months warranty period																
	lubricants and chemicals will be provided by Owners. This	Month	1	75.000/-	75.000/-	85.000/-	85.000/-	67.000/-	67.000/-	75.000/-	75.000/-	25.000/-	25.000/-	50.000/-	50.000/-	55,000/-	55.000/-
	lubricants and chemicals will be provided by Owners. This is not to be misred with the 24 months warranty period stated in the specs.	Month	1	75,000/-	75,000/-	85,000/-	85,000/-	67,000/-	67,000/-	75,000/-	75,000/-	25,000/-	25,000/-	50,000/-	50,000/-	55,000/-	55,000/-
	lubricants and chemicals will be provided by Owners. This is not to be misred with the 24 months warranty period	Month	1	75,000/-	75,000/- <b>75,000/</b> -	85,000/-	85,000/- <b>85,000/</b> -	67,000/-	67,000/- <b>67,000/-</b>	75,000/-	75,000/- <b>75,000/</b> -	25,000/-	25,000/- <b>25,000/-</b>	50,000/-	50,000/- 50,000/-	55,000/-	55,000/- <b>55,000/-</b>

After Various discussions and negotiations in regard of various possibilities in regard to expendable system and functioning of this STP System, revise quotations are waited.

Revised possibilities in reference to expandable system in open or in basement were received from following Contractors.

- 1. M/s. ENKI Water & Environment Co. Pvt. Ltd.,
- 2. M/s, Gautam Tehno Sanitation.
- 3. M/s. Fontus Water Pvt. Ltd..
- 4. M/s. Watech Consultants & Engineers.
- 5. M/s. Vision Solutions.

After discussion with all above Contractors, it was decided to get revised offer from all the above Contractors of 200 x4 expandable system with Steel Zink alloy tanks, due to following reasons.

- No RCC STP Structure, which is time Consuming &Costly, approximately 1 10 lac.
- Only Last manhole shall be made bigger in RCC to be used as collection chamber.
- Steel Zink alloy tanks in place of MS Tanks.
- Expandable STP system as occupation of flats will be in phases.
- Choose Technically Sound organization.

Revised Offers were reteived from 3 following Contractors.

Contractor name	Finacial Bid submitted	Amount quoted in initial bid	Vendor Position
M/s Enki Water & Environment Co. Pvt. Ltd.	V	75,38,906.00	L1
M/s Vision Solutions	V	92,70,000.00	L3
M/s. Gautam Tehno Sanitation	V	89,16,000.00	L2

Revised Offers were discussed in terms of Technical Feasibility and quote was Negotiated on 18.03.2017 in the office of the Society.

M/s. ENKI Water & Environment Co. Pvt. Ltd., were found best & Cost was negotiated to Rs.71,00,000/- including Taxes, it was decided to award he work io M/s. ENKI Water & Environment Co. Pvt. Ltd.

### C. Observations:

### 1) Absence of Test Reports for Claiming Payment of STP

During our audit of the testing and payment process for the STP, a significant deficiency has been identified regarding the provision of test reports. It has come to our attention that the required test reports, which serve as essential evidence for claiming payment of testing activities conducted on the STP, were not provided. The absence of these critical test reports raises concerns about the quality, safety, and compliance of the constructed infrastructure.

# XI. <u>Water Treatment Plant:</u>

# A. Background:

This audit report provides a comprehensive overview of the implementation of laying, installation, testing & Commissioning of Pumps & WTP work within the premises of the Police Officers Multi-state Co-operative Housing Society. The implementation process followed a tender process, wherein qualified contractors were selected based on

competitive bidding. This report will delve into the details of the tender process, the contract terms, and the subsequent execution of the Electric Substation project.

Financial Bids were received from the following qualified vendors:

- 1. M/s. ENKI Water & Environment Co. Pvt. Ltd.,
- 2. M/s, Gautam Tehno Sanitation
- 3. M/s Univeral Tech Trade Pvt. Ltd.

Rate contract submitted by the above mentioned vendors for the execution of laying, installation, testing & Commissioning of Pumps & WTP work project at Police Officers Multi-State Co-Operative Housing society are as follows:

Contractor name	Finacial Bid submitted	Amount quoted in initial bid	Vendor Position
M/s Enki Water & Environment Co. Pvt. Ltd.	V	36,20,675.00	L3
M/s Univeral Tech Trade Pvt. Ltd.	v	34,91,125.00	L1
M/s. Gautam Tehno Sanitation	V	35,59,675.00	L2

Upon submission of Initial quotes the Board of Directors of Police Officers Multi-state Cooperative Housing Society Board of Directors proceeds with negotiation with the vendors and impact of negotiation with the vendors was as follows:

Contractor name	Finacial Bid	Amount quoted in	Negotiated	Vendor
Contractor name	submitted	initial bid	Amount	Position
M/s Enki Water & Environment Co. Pvt. Ltd.	V	36,20,675.00	36,20,675.00	L3
M/s Univeral Tech Trade Pvt. Ltd.	V	34,91,125.00	34,00,007.00	L1
M/s. Gautam Tehno Sanitation	V	35,59,675.00	35,00,000.00	L2

Item wise Breakup of Bid value is as follows:

	SUPPLY, ERECTION, TESTING & COMMISSIO	NING OF P	UMPS, W		ATMENT & ALI	ED EQUIP/	MENT SYSTEM	N	
	COMP AR AT IVE S	T AT E ME N	T-REV-02					1	
	250.02.07.10.1		~~~~		Enki		autam		sal Tech
NO.	DES CRIPTION	UNIT	QTY.	RATE (Rs.)	AMOUNT (Rs.)	RATE (Rs.)	AMOUNT (Rs.)	RATE (Rs.)	AMOUNT (R
1	PUMPS, WATER TREATMENT & ALIED EQUIPMENT								
	Vertical/horizontal monoblock centrifugal transfer pumping set								
	with SS body and SS impeller, SS shaft mechanical seal, connected to a TEFC induction motor suitable for 415 volts $\pm 3\%$								
	phase 50 cycles AC supply with a common suction header with								
	Butterfly valves, Y strainer, Bellow, in suction side and NRV and								
	butterfly valves in delivery side on main connecting & pumps inlet								
	and a common delivery header with MS galvanized supports and	1							
	painting with one coat of primer and two coats of synthetic								
	enamel paint including a 100mm dia pressure gauge, Vibration								
	eliminating pads under foundation, all mounted on a common								
	base plate of MS 80x40mm I section bolted to RCC foundation	1							
a)	complete in all respects. Filter feed pump								
ų	(1 working + 1 stand by + 1 provision only)								
	Capacity - 500 lpm (Each)								
		C -+	1	105000	105000	150000	1,50000	000000	000
	Head - 30 m	Set	1	195000	195000	150000	150000	200000	200
	WILO Make Vertical Multistage Pump Model: MV13203				0				
	/5.5K w/3P has e(2W+IS) (MOC:SS 304 Shaft/Impeller/Casing)								
	with GI Suc. & Disch. Header, Valves & Fittings Complete								
2	Set. Domestic Water Supply Pump (Hydropneumatic System				0				
-	With variable Speed System)	1			0				
	Providing, fixing and testing of packaged fixed skid mounted				0				
	hydropneumatic system comprising of :-				5				
a)	Vertical, inline multistage centrifugal pumping set with stainless				0				
	steel SS-304 stage casing and SS-304 impellers with stainless								
	steel SS-431 shaft as per IEC standards and GJL250 cast iron								
	suction & discharge casing, connected to TEFC ventilated								
	induction motor of 2 pole, 2900rpm, suitable for 400/440 Volts,								
1-3	3 phose, 50 Hz A.C.				-				
b)	Pressure vessel of non corrosive FRP composite construction				0				
	lined with NSF and/or FDA listed material, like high density polyethylene with fully replaceable polyurethane. Air cell burst								
	pressure of minimum of 5 times the vessel operating pressure								
	and cycle tested for 2,50,000 cycles.								
	No. and capacity of Pressure Vessel – 01 Nos. x 200 Ltrs				0				
C)	Control Panel with programmable logic controller (PLC) for cyclic				0			0.00	
9	operation of pumps. Pump working sequence should change				Ū			0.00	
	after every operation. Contractor overload relays and MCBs								
	should confirm to IEC 898 - 1995/ specifications. Blinking	1							
	indications for pumps start, trip, low level trip, health supply								
	should be provided in the panel along with the ammeter &	L.							
	voltmeter. Control panel should also consist of cooling fan.				-				
d)	Pressure switches bellow type fitted with micro switch and				0				0.00
	having maximum pressure and differential scale should confirming BS-6134 standards and IP55 protection dass.	1							
e)	Stainless steel suction and delevery header, ball valve on each				0				0.00
9	pump on section delivery side, non return valves, Y stainer				0				0.00
	complete in all respect.								
f)	Ball valves to be used should be Hot Pressed brass OT-58 with	1			0				0.00
,	stainless steel ball and P.T.F.E seal and O-Ring. NRVs to be	•							
	used should be with Springs and O-Ring arrangement.								
g)	Complete set system to be mounted on a common base				0				0.00
,	frame and shall follow following duty.				6				0.00
1	For Domestic Water Supply (Make - WILLO)				0				0.00
	(2 working + 1 stand by)				0				0.00
	Capacity : 750 lpm	L			0				0.00
	Head : 80 m	Set	1	1150000	1150000	1200000	1200000	700000	700
	WILO Make Hypn (VFD) System with GI Suc. & Disch.				0				
	Header, Pressuere Transmitter & Gauge, Ele VFD Control								
-	Panel & 1 Nos.x200 Ltr. Ptressure Tank Complete Set.								
3	Drainage Sump Pumps				0				0.00
	Submersible pumps for basement drainage & Pump Room				0				0.00
	drainage. Submersible single stage single entry pumps with C.I.body and C.I. two vane endosed type impeller connected to								
	TEFC submersible motor for 415 volts, 3 phase, 50 cycles								
	inducting MCC panel with level controllers, auto control.								
	sequential change over facility with one proper working at low								
	level & two proper working at high level with an audible darm	1							
	including all interconnectivity cables, with both pumps connected								
	to common outlet header including valves, non return valves,								
	lifting chains etc. complete in all respect								
a)	(one working + one standby) both working in high flow conditions	Set	1	63000	63000	90000	90000	130000	130
b)	(2 Pump) (one working + provision for one standby) working in high flow					-			-
Ŋ	conditions (1 Pump)	Set	9	35000	315000	45000	405000	65000	585
	For Pump room / Basement drainage					S.Pho	ise Pumps		0.00
	(S olid handling capacity 10 mm)				0	0.110			0.00
	Capacity- 200 lpm (Each)				0				0.00
					U				0.00
	Head - 10 m					L			
	WILO Make Sub. Drainage Pump Model: STS 50-								
	15/0.75Kw/3Phase the Set Consist of 1 No. Pump								
	(MOC:CICasing/CI Impeller/SS Shaft with 26MM Solid								
	Handling) with Common Outlet Header & Electrical Control						1	1	

4									
	Vertical Downflow Filter				0				
	Providing and fixing Vertical Downflow Filter in MS fabricated in accordance with IS 2825 from minimum 6 mm thick M.S. plate				0				0.00
	on shell and minimum 8 mm thick M.S. plate on dished ends,								
	epoxy coated construction. The filter shall have :								
	a) One no. pressure tight manholes and at least one no.				0				0.00
	pressure tight side hole for maintenance purposes. b) Initial charge of Filter Media.				0				0.00
	<ul> <li>c) Complete underdrain system and raw water distributor as per</li> </ul>				0		0.00		
	manufacturer's design.								
	(d)Complete uPVC frontal face piping (10 kg/am <sup>2</sup> rating				0				0.00
	conforming to IS:4985) and valves battery with CI Butterfly valves, pressure gauges and sampling points at inlet and outlet.								
	etc. covering all functions of service, backwash, rinse, air								
	release etc.								
	e) Pressure gauges (100 mm dia bourdon type pressure gauge)/				0				0.00
	s ampling points as per manufacturer design. f) All internal parts of the filtration plant shall be coated with two				0				0.00
	coats of epoxy paint after thorough s and blasting. All external				0				0.00
	surfaces of the plant including piping shall be coated with two								
	coats of red iron oxide/zinc chromate primer followed by two								
	coats of high gloss enamel paint . g) The filter shall be complete with all gaskets/fasteners of				0		0.00		
	standard quality as required.				0		0.00		
	h) The filter shall be designed to give rated output at given raw				0				0.00
	water quality and flow rate without any operational problem and								
	should not get any loss of performance as long as the operating pressure remains within the given range. Any additional provision								
	is required to make the item complete, the same should be								
- 4	included herein.								0.00
a)	Dud Media Filter				0				0.00
	Capacity - 30000 lph				0		0.00		0.00
	Filtration rate - 14,500 lph/m <sup>2</sup> Filter ata approx. 1800 mm				0		0.00		0.00
	Working pressure: 4.5 kg/cm <sup>2</sup>				0				0.00
	Test pressure : 7.0 kg/cm <sup>2</sup>	Set	1	323000	323000	325000	325000	275000	2750
	UNIVERSAL Make SMF Plant with Upvc Frontal Piping &						0.00		
	Different Grade of S and Media Complete S et.								^
5	Chlorinationation System	Set	1	14000	14000	40000	40000	10500	0
	Providing and fixing chemical dosing pump capacity 0-6 lph mounted inducing 500 lit capacity uPVC container with lid,	sei	1	14000	14000	40000	40000	10500	105
	injection fitting assembly, suction and delivery hase upto the								
	point of injection including supports complete in all respects.								
6	Control Cables						0.00		
	Supply, laying, testing and commissioning of the following sizes of 1.1 KV grade PVC insulated, stranded copper conductor,							0.00	
	round armoured control/Power cable in the existing pipes,								
	channels, trays etc. complete as required and as per								
	specifications. It should include both ends terminal joints								
	specifications. It should include both ends terminal joints providing tinned copper terminal lugs, single compression brass								
	specifications. It should include both ends terminal joints								
7	specifications. It should include both ends terminal joints providing timed copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 care x 2.5 sq. mm cable	RM	100	212	21200	250	25000.00	350	3500
<b>7</b> b	specifications. It should indude both ends terminal joints providing timed copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable	RM RM	100 50	212 335	21200 16750	250 350	25000.00 17500.00	350 410	350
	specifications. It should include both ends terminal joints providing tinned copper terminal lugs, single compression brass cadle glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 care x 2.5 sq. mm cadle 3 care x 2.5 sq. mm cadle S upply, Unlocading, shifting, Storing, Laying, Fixing, Testing &								
	specifications. It should indude both ends terminal joints providing timed copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable								
	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable Supply, Unloading, shifting, Storing, Laying, Fixing, Testing & Commissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, stranded Aluminum/Copper conductor, Armoured/Flexible cables as per 1S:1255/1983 will be								
	specifications. It should induce both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable 5 upply. Unlocading. shifting. Storing. Laying. Fixing. Testing & Commissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, stranded Aluminum/Copper conductor, Armoured/Flexible cables as per IS:1255/1983 will be followed for Laying & IS:7098 (Part 1) for Supply of XLPE cable								
	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable Commissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, stranded Aluminum/Copper conductor, Armoured/Flexible cables as per IS:1255/1983 will be followed for Loying & IS:7098 (Part 1) for supply of XLPE cable and IS 694:1990 for Supply of Copper Flexible Cable.							410	205
	specifications. It should induce both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable 5 upply. Unlocading. shifting. Storing. Laying. Fixing. Testing & Commissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, stranded Aluminum/Copper conductor, Armoured/Flexible cables as per IS:1255/1983 will be followed for Laying & IS:7098 (Part 1) for Supply of XLPE cable								
	specifications. It should induce both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 correx 2.5 sq. mm cable 3 corex 2.5 sq. mm cable 3 corex 2.5 sq. mm cable Commissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, stranded Aluminum/Copper conductor, Armoured/Flexible cables as per 1S:1255/1983 will be followed for Loying & 15:7098 (Part 1) for Supply of XLPE cable and 1S 694:1990 for Supply of Copper Flexible Cable. Loying of cables on existing cable trays/ in existing hume pipes/ PVC pipes/ GI pipes/ on surface of slabs, walls or masonary/ RCC trenches/ ducts induding cables fies, GI saddles, damps							410	205
	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable Cormissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, stranded Aluminum/Copper conductor, Armoured/Flexible cables as per IS:1255/1983 will be followed for Laying & IS:7098 (Part 1) for Supply of XLPE cable and IS 694:1990 for Supply of Capper Flexible Cable. Laying of cables on existing cable trays/ in existing hume pipes/ PVC pipes/ G pipes/ on surface of slads, walls or masonary/ RCC trenches/ ducts inducting cables ties, GI saddes, damps and necessary hard ware. It should include both ends terminal							410	205
	specifications. It should induce both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable 5 upply. Unloading, shifting. Staring, Laying, Fixing, Testing & Commissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, stranded Aluminum/Copper conductor, Armoured/Tekible cables as per 15:1255/1983 will be followed for Laying & IS:7098 (Part 1) for Supply of XLPE cable and IS 694:1990 for Supply of Copper Flexible Cable. Laying of cables on existing cable trays, in existing hume pipes/ PVC pipes/ GI pipes/ on surface of slabs, walls or mas.onary/ RCC trenches/ ducts including cables ties, GI scables, damps and necessary hard ware. It should include both ends terminal joints providing tinned copper terminal lugs, single compression							410	205
	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 core x 2.5 sq. mm cable 3 core x 2.5 sq. mm cable 3 core x 2.5 sq. mm cable 3 core x 2.5 sq. mm cable Cormissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, stranded Aluminum/Copper conductor, Armoured/Flexible cables on per IS:1255/1983 will be followed for Loying & IS:7098 (Part 1) for Supply of XLPE cable and IS 694:1990 for Supply of Copper Flexible Cable. Loying of cables on existing cable trasy. In existing hume pipes/ PVC pipes/ GI pipes/ on surface of slabs, walls ar masonary/ RCC trenches/ ducts including cables fies, GI saddes, damps and necessary hard ware. It should include both ends terminal joints providing tinned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required.		50	335	16750	350	17500.00	0.00	0.00
b	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable Cormissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, stranded Aluminum/Copper conductor, Armoured/Flexible cables as per IS:1255/1983 will be followed for Laying & IS:7098 (Part 1) for Supply of XLPE cable and IS 694:1990 for Supply of Capper Flexible Cable. Laying of cables on existing cable trays/ in existing hume pipes/ PVC pipes/ G pipes/ on surface of slats, walls or masonary/ RCC trenches/ ducts including cables ties, GI saddes, damps and necessary hard ware. It should include both ends termind joints providing tinned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment camplete as required. 4 care 10 sq.mm. Al Ar, XLPE cable	RM	50	335 530	16750	350 400	40000	410 0.00 315	0.00
b a) b)	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable Cormissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, stranded Aluminum/Copper conductor, Armoured/Flexible cables as per IS:1255/1983 will be followed for Laying & IS:7098 (Part 1) for Supply of XLPE cable and IS 694:1990 for Supply of Copper Flexible Cable. Laying of cables on existing cable trays / in existing hume pipes/ PVC pipes/ GI pipes/ on surface of slads, walls or masonary/ RCC trenches/ ducts including cables ties, GI saddes, damps and necessary hard ware. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 4 care 10 sg.mm, Al Ar, XLPE cable	RM Metre Metre	50 100 50	335 530 600	16750 53000 30000	350 400 500	17500.00 40000 25000	410 0.00 315 290	0.00
b a) b) c)	specifications. It should induce both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 core x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable 5 upply. Unloading. shifting. Storing. Laying. Fixing. Testing & Commissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, stranded Aluminum/Copper conductor, Armoured/Flexible cables as per IS:1255/1983 will be followed for Loying & IS:7098 (Part 1) for Supply of XLPE cable and IS 694:1990 for Supply of Copper Flexible Cable. Laying of cables on existing cable trays in existing hume pipes/ PVC pipes/ GI pipes/ on surface of slads, walls or mas.onary/ RCC trenches/ ducts including cables ties, GI saddes, damps and necessary hard ware. It should include both ends terminal joints providing timed copper terminal lugs, single compression brass cable glands, insulation tape, effecting termind connections to the equipment complete as required. 4 care 10 s.g.mm. Al Ar. XLPE cable 3 care 10 s.g.mm. Al Ar. XLPE cable	RM Metre Metre Metre	50 100 50 60	335 530 600 500	16750 53000 30000 30000	350 400 500 450	17500.00 40000 25000 27000	410 0.00 315 290 270	205 0.00 315 145 162
b 0 0 0 0 0	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 correx 2.5 sq. mm cable 3 corex 2.5 sq. mm cable 3 corex 2.5 sq. mm cable Commissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, strandad Aluminum/Copper conductor, Armoured/Flexible cables as per IS:1255/1983 will be followed for Loying & IS:7098 (Part 1) for Supply of XLPE cable and IS 694:1990 for Supply of Copper Flexible Cable. Loying of cables on existing cable trays/ in existing hume pipes/ PVC pipes/ GI pipes/ on surface of slads, walls or masonary/ RCC trenches/ ducts including cables files, GI scaddes, damps and necessary hard ware. It should include both ends terminal joints providing tinned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 4 care 10 sg.mm, Al Ar. XLPE cable 3 care 10 sg.mm, Al Ar. XLPE cable 3 care 6 sg.mm, Al Ar. XLPE cable	RM Metre Metre Metre Metre	50 100 50 60 60	335 530 600 500 350	16750 53000 30000 30000 21000	350 400 500 450 300	40000 25000 18000	410 0.00 315 290 270 220	205 0.00 315 145 162 132
b a) b) c)	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 core x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable Commissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, stranded Aluminum/Copper conductor, Armoured/Flexible cables on per IS:1255/1983 will be followed for Loying 8.15:7098 (Part 1) for Supply of XLPE cable and IS 694:1990 for Supply of Copper Flexible Cable. Loying of cables on existing cable trays / in existing hume pipes/ PVC pipes/ GI pipes/ on surface of slabs, walls or masonary/ RCC trenches/ ducts including cables fies, GI saddles, damps and necessary hard ware. It should include both ends terminal joints providing tinned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 4 care 10 sq.mm, AI Ar. XLPE cable 3 care 16 sq.mm, AI Ar. XLPE cable 3 care 6 sq.mm, AI Ar. XLPE cable	RM Metre Metre Metre	50 100 50 60	335 530 600 500	16750 53000 30000 30000	350 400 500 450	17500.00 40000 25000 27000	410 0.00 315 290 270	205 0.00 315 145 162 132
b a) b) c) d)	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 correx 2.5 sq. mm cable 3 corex 2.5 sq. mm cable 3 corex 2.5 sq. mm cable Commissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, strandad Aluminum/Copper conductor, Armoured/Flexible cables as per IS:1255/1983 will be followed for Loying & IS:7098 (Part 1) for Supply of XLPE cable and IS 694:1990 for Supply of Copper Flexible Cable. Loying of cables on existing cable trays/ in existing hume pipes/ PVC pipes/ GI pipes/ on surface of slads, walls or masonary/ RCC trenches/ ducts including cables files, GI scaddes, damps and necessary hard ware. It should include both ends terminal joints providing tinned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 4 care 10 sg.mm, Al Ar. XLPE cable 3 care 10 sg.mm, Al Ar. XLPE cable 3 care 6 sg.mm, Al Ar. XLPE cable	RM Metre Metre Metre Metre	50 100 50 60 60	335 530 600 500 350	16750 53000 30000 30000 21000	350 400 500 450 300	40000 25000 18000	410 0.00 315 290 270 220	0.00
b 0) b) c) 0) e)	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 correx 2.5 sq. mm cable 3 corex 2.5 sq. mm cable 3 corex 2.5 sq. mm cable Commissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, stranded Aluminum/Copper conductor, Armoured/Flexible cables os per 1S:1255/1983 will be followed for Loying 8.15:7098 (Part 1) for Supply of XLPE cable and 1S 694:1990 for Supply of Copper Flexible Cable. Loying of cables on existing cable trays/ in existing hume pipes/ PVC pipes/ GI pipes/ on surface of slabs, walls or masonary/ RCC trenches/ ducts including cables files, GI sackles, damps and necessary hard ware. It should include both ends termind joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting termind connections to the equipment complete as required. 4 core 10 s.g.mm. AI Ar. XLPE cable 3 care 6 s.g.mm. AI Ar. Step cable trays complete with aII bends, tees,	RM Metre Metre Metre Metre	50 100 50 60 60	335 530 600 500 350	16750 53000 30000 30000 21000	350 400 500 450 300 450	40000 25000 18000	410 0.00 315 290 270 220	205 0.00 315 145 162 132
b a) b) c) d) e)	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable 3 care x 2.5 sq. mm cable Supply, Unloading, shifting, Storing, Laying, Fixing, Testing & Cormissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, stranded Aluminum/Copper conductor, Armoured/Flexible cables as per IS:1255/1983 will be followed for Laying & IS:7098 (Part 1) for supply of XLPE cable and IS 64:1990 for Supply of Copper Flexible Cable. Laying of cables on existing cable trays/ in existing hume pipes/ PVC pipes/ GI pipes/ on surface of slabs, walls or masonary/ RCC trenches/ ducts including cables fies, GI saddes, damps and necessary hard ware. It should include both ends termind joints providing tinned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 4 care 10 sq.mm. Al Ar. XLPE cable 3 care 16 sq.mm. Al Ar. XLPE cable 3 care 6 sq.mm. Al Ar. Step cable 9 care 10 sq.mm. Al Ar. Step cabl	RM Metre Metre Metre Metre	50 100 50 60 60	335 530 600 500 350	16750 53000 30000 30000 21000	350 400 500 450 300 450	40000 25000 18000	410 0.00 315 290 270 220	205 0.00 315 145 162 132
b a) b) c) d) e)	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 correx 2.5 sq. mm cable 3 corex 2.5 sq. mm cable 3 corex 2.5 sq. mm cable Commissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, stranded Aluminum/Copper conductor, Armoured/Flexible cables os per 1S:1255/1983 will be followed for Loying 8.15:7098 (Part 1) for Supply of XLPE cable and 1S 694:1990 for Supply of Copper Flexible Cable. Loying of cables on existing cable trays/ in existing hume pipes/ PVC pipes/ GI pipes/ on surface of slabs, walls or masonary/ RCC trenches/ ducts including cables files, GI sackles, damps and necessary hard ware. It should include both ends termind joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting termind connections to the equipment complete as required. 4 core 10 s.g.mm. AI Ar. XLPE cable 3 care 6 s.g.mm. AI Ar. Step cable trays complete with aII bends, tees,	RM Metre Metre Metre Metre	50 100 50 60 60	335 530 600 500 350	16750 53000 30000 30000 21000	350 400 500 450 300 450	40000 25000 18000	410 0.00 315 290 270 220	205 0.00 315 145 162 132
b a) b) c) d) e)	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 corex 2.5 sq. mm cable 3 carex 2.5 sq. mm cable 3 carex 2.5 sq. mm cable 3 carex 2.5 sq. mm cable Commissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, stranded Aluminum/Copper conductor, Armoured/Flexible cables or psr IS:1255/1983 will be followed for Loying 8.15:7098 (Part 1) for Supply of XLPE cable and IS 694:1990 for Supply of Copper Flexible Cable. Loying of cables on existing cable trays / in existing hume pipes/ PVC pipes/ GI pipes/ on surface of slabs, walls or masonary/ RCC trenches/ ducts including cables fies, GI saddles, damps and necessary hard ware. It should include both ends terminal joints providing tinned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 4 care 10 sq.mm. AI Ar. XLPE cable 3 care 6 sq.mm. AI Ar. Step cable cable for Sump Pump Supply, fabrication and installation of M.S. Painted factory built in perforated type cable trays complete with all bends, tees, elbows, reducers etc. of various width in two tier/ three/ five tier fashion either on one side of the wall or on two sides of the wall or at other places and point of the ward if required. (The cast of angle iron/C Channel, Fasther & GI Down rod shall be included	RM Metre Metre Metre Metre	50 100 50 60 60	335 530 600 500 350	16750 53000 30000 30000 21000	350 400 500 450 300 450	40000 25000 18000	410 0.00 315 290 270 220	205 0.00 315 145 162 132
a)       b)       c)       d)       e)       8	specifications. It should induce both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 corex 2.5 sq. mm cable 3 corex 2.5 sq. mm cable 3 corex 2.5 sq. mm cable 5 upply. Unloading, shifting. Storing, Laying, Fixing, Testing & Commissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, strandsd Aluminum/Copper conductor, Armoured/Flexible cables as per IS:1255/1983 will be followed for Laying & IS:7098 (Part 1) for Supply of XLPE cable and IS 694:1990 for Supply of Copper Flexible Cable. Laying of cables on existing cable trays/ in existing hume pipes/ PVC pipes/ Gl pipes/ on surface of slats, walls or mas onary/ RCC trenches / ducts inducting cables ties, GI scadles, damps and necessary hard ware. It should include both ends terminal joints providing tinned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 4 core 10 sq.mm, Al Ar. XLPE cable 3 core 16 sq.mm, Al Ar. XLPE cable 3 core 6 sq.mm, Al Ar. Store 6 cable with IP:67 gland inside water for Sump Pump	RM Metre Metre Metre Metre	50 100 50 60 60 120	335 530 600 500 350 550	16750 53000 30000 21000 66000	350 400 500 450 300 450 0.00	17500.00 40000 25000 27000 18000 54000	410 0.00 315 290 270 220 450	205 0.00 315 145 162 132 540
b d) b) c) d) e) 8	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 corex 2.5 sq. mm cable 3 corex 2.5 sq. mm cable 3 corex 2.5 sq. mm cable Commissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheatthed, strandsd Aluminum/Copper conductor, Armoured/Flexible cables as per IS:1255/1983 will be followed for Loying & IS:7098 (Part 1) for Supply of XLPE cable and IS 694:1990 for Supply of Copper Flexible Cable. Laying of cables on existing cable trays / in existing hume pipes/ PVC pipes / GL pipes / on surface of slads, walls or mas.onary/ RCC trenches / ducts including cables ties, GL saddes, damps and necessary hard ware. It should include both ends termind joints providing tinned copper terminal lugs, single compression trass cable glands, insulation tape, effecting termind connections to the equipment complete as required. 4 core 10 s.g.mm. ALAr. XLPE cable 3 core 16 s.g.mm. ALAr. XLPE cable 3 core 6 s.g.mm. Copper Flexible Cables with IP:67 gland inside water for Sump Pump Supply, fabrication and installation of M.S. Painted factory built in perfarated type acble trays complete with all bends, tees, elbows, reducers etc. of various width in two tier/ three/ five tier fastion either on one side of the wall or on two sides of the wall or at other places and paint offerward if required. (The cost of angle iron/C' Channel, Fastner & GI Down rod shall be induded here measured & paid).	RM Metre Metre Metre Metre	50 100 50 60 60	335 530 600 500 350	16750 53000 30000 30000 21000	350 400 500 450 300 450	40000 25000 18000	410 0.00 315 290 270 220	205 0.00 315 145 162 132 540
b d) b) c) d) e) 8	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 correx 2.5 sq. mm cable 3 corex 2.5 sq. mm cable 3 corex 2.5 sq. mm cable 3 corex 2.5 sq. mm cable Cormissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, stranded Aluminum/Copper conductor, Armoured/Flexible cables as per IS:1255/1983 will be followed for Loying & IS:7098 (Part 1) for Supply of XLPE cable and IS 694:1990 for Supply of Copper Flexible Cable. Loying of cables on existing cable trays/ in existing hume pipes/ PVC pipes/ GI pipes/ on surface of slads, walls or masonary/ RCC trenches/ ducts including cables files, GI saddles, damps and necessary hard ware. It should include both ends termind joints providing finned copper termind lugs, single compression brass cable glands, insulation tape, effecting termind connections to the equipment complete as required. 4 care 10 s.g.mm. AI Ar. XLPE cable 3 care 10 s.g.mm. AI Ar. XLPE cable 3 care 6 s.g.mm. Copper Flexible Cable with IP:67 gland inside water for Sump Pump Supply, fobrication and installation of M.S. Painted factory built in perforated type cable trays complete with all bends, tees, elbows, reducers etc. of various width in two tier/three/five tier fashion either on one side of the wall or on two sides of the wall or at other places and paint offerward if required. (The cast of angle iron/C Channel, Fastner & GI Down rod shall be included here measured & paid). 150mm wide Providing, fixing, testing and commissioning moterise Ball valve	RM Metre Metre Metre Metre	50 100 50 60 60 120	335 530 600 500 350 550	16750 53000 30000 21000 66000	350 400 500 450 300 450 0.00	17500.00 40000 25000 27000 18000 54000	410 0.00 315 290 270 220 450	205 0.00 315 145 162 132
b d) b) c) d) e) 8	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 core x 2.5 sq. mm cable 3 core x 2.5 sq. mm cable 3 core x 2.5 sq. mm cable 5 upply. Unloading, shifting. Storing, Laying, Fixing, Testing & Cormissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheatthed, strandsd Aluminum/Copper conductor, Armoured/Flexible cables as per IS:1255/1983 will be followed for Laying & IS:7098 (Part 1) for Supply of XLPE cable and IS 694:1990 for Supply of Copper Flexible Cable. Laying of cables on existing cable trays / in existing hume pipes/ PVC pipes/ GL pipes/ on surface of slads, walls or mas.onary/ RCC trenches/ ducts including cables ties, GL saddes, damps and necessary hard ware. It should include both ends termind joints providing timed copper terminal lugs, single compression brass cable glands, insulation tape, effecting termind connections to the equipment complete as required. 4 core 10 sq.mm, ALAr, XLPE cable 3 core 16 sq.mm, ALAr, XLPE cable 3 core 6 sq.mm, ALAr, Step cable 9 supply, fabrication and installation of M.S. Prainted factory built in perforated type cable trays complete with IIP:67 gland inside water for Sump Pump 5 upply, fabrication and installation of M.S. Prainted factory built in perforated type cable trays complete with all bends, tees, elbows, reducers etc. of various width in two tier/ three/ five tier fastion either on one side of the wall or on two sides of the wall or at other places and paint afterward if required. (The cost of angle iron/C Channel, Fastner & GI Down rod shall be induded here meas ured & paid).	RM Metre Metre Metre Metre	50 100 50 60 60 120	335 530 600 500 350 550	16750 53000 30000 21000 66000	350 400 500 450 300 450 0.00	17500.00 40000 25000 27000 18000 54000	410 0.00 315 290 270 220 450	205 0.00 315 145 162 132 540
b d) b) c) d) e) 8	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 corex 2.5 sq. mm cable 3 corex 2.5 sq. mm cable 3 corex 2.5 sq. mm cable Supply, Unloading, shifting, Staring, Laying, Fixing, Testing & Cormissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, strandad Aluminum/Copper conductor, Armoured/Flexible cables as per IS:1255/1983 will be followed for Laying & IS:7098 (Part 1) for Supply of XLPE cable and IS 694:1990 for Supply of Copper Flexible Cable. Laying of cables on existing cable trays/ in existing hume pipes/ PVC pipes/ Gl pipes/ on surface of slads, walls or masonary/ RCC trenches/ ducts including cables files, Gl saddles, damps and necessary hard ware. It should include both ends termind joints providing tinned copper terminal lugs, single compression brass cable glands, insulation tape, effecting termind connections to the equipment complete as required. 4 care 10 s.g.mm, Al Ar. XLPE cable 3 care 16 s.g.mm, Al Ar. XLPE cable 3 care 6 s.g.mm, Copper Flexible Cable with IP:67 gland inside water for Sump Pump Supply, fabrication and installation of M.S. Painted factory built in perforated type cable trays complete with all bends, tees, elbows, reduces etc. of various width in two sides of the wall or at other places and paint offerward if required. (The cast of angle iron/C Channel, Fasther & Gl Down rod shall be included here measured & paid). 1 Somm wide Providing, fixing, testing and commissioning materise Ball valve of following sizes, for filling of overhead tanks complete with the valve. The level controller shall be installed in over head tank. The level	RM Metre Metre Metre Metre	50 100 50 60 60 120	335 530 600 500 350 550	16750 53000 30000 21000 66000	350 400 500 450 300 450 0.00	17500.00 40000 25000 27000 18000 54000	410 0.00 315 290 270 220 450	205 0.00 315 145 145 145 540
b () () () () () () () () () () () () ()	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 correx 2.5 sq. mm cable 3 corex 2.5 sq. mm cable 3 corex 2.5 sq. mm cable Commissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, stranded Aluminum/Copper conductor, Armoured/Flexible cables os per 1S:1255/1983 will be followed for Loying 8.15:7098 (Part 1) for Supply of XLPE cable and IS 694:1990 for Supply of Copper Flexible Cable. Loying of cables on existing cable trays/ in existing hume pipes/ PVC pipes/ GI pipes/ on surface of slabs, walls or masonary/ RCC trenches/ ducts including cables fies, GI saddles, damps and necessary hard ware. It should indude both ends termind joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 4 core 10 s.g.mm. Al Ar. XLPE cable 3 care 6 s.g.mm. Al Ar. XLPE cable 9 care 6 s.g.mm. Al Ar. XLPE cable 9 care 6 s.g.mm. Al Ar. XLPE cable 9 care 6 s.g.mm. Al Ar. Stelle cable with IP:67 gland inside water for Sump Pump 9 Supply, fabrication and installation of M.S. Painted factory built in perforated type cable trays complete with all bends, tees, elbows, reducers etc. of various width in two tier/three/five tier fashion either on one side of the wall or on two sides of the wall here measured &.p.ad1. 150mm wide Providing, fixing, testing and commissioning moterise Ball valve of following sizes, for filling of overhead tanks complete with high & low level switchs & pressure switch to cantral the valve. The level controller shall be installed in over head tank. The level switch will dose the valve when water level is high & open the eval controller shall be installed in over head tank. The level switch will dose th	RM Metre Metre Metre Metre	50 100 50 60 60 120	335 530 600 500 350 550	16750 53000 30000 21000 66000	350 400 500 450 300 450 0.00	17500.00 40000 25000 27000 18000 54000	410 0.00 315 290 270 220 450	203 0.00 313 143 143 145 135 540
b d) b) c) d) e) 8	specifications. It should induce both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 core x 2.5 sq. mm cable 3 core x 2.5 sq. mm cable 3 core x 2.5 sq. mm cable 5 upply. Unloading. shifting. Storing. Laying. Fixing. Testing & Cormissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, strandsd Aluminum/Copper conductor, Armoured/Flexible cables as per IS:1255/1983 will be followed for Loying & IS:7098 (Part 1) for Supply of XLPE cable and IS 694:1990 for Supply of Copper Flexible Cable. Laying of cables on existing cable trays/ in existing hume pipes/ PVC pipes/ GI pipes/ on surface of slats, walls or masionary/ RCC trenches/ ducts including cables ties, GI saddes, damps and necessary hard ware. It should include both ends terminal joints providing timed copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 4 core 10 sq.mm. Al Ar. XLPE cable 3 core 16 sq.mm. Al Ar. XLPE cable 3 core 6 sq.mm. Copper Flexible Cable with IP:67 gland inside water for Sump Pump Supply, fabrication and installation of M.S. Painted factory built in perforated type acble trays complete with all bends, tees, elbows, reducers etc. of various width in two tier/ three/ five tier fashion either on one side of the wall or on two sides of the wall or at other places and paint offerward if required. (The cast of angle iron/C Channel, Fastner & GI Down rod shall be induded of following sizes, for filling of overhead tanks. The level switch will dase the valve when water level is high & open the valve when level is low in the tank. The system should be	RM Metre Metre Metre Metre	50 100 50 60 60 120	335 530 600 500 350 550	16750 53000 30000 21000 66000	350 400 500 450 300 450 0.00	17500.00 40000 25000 27000 18000 54000	410 0.00 315 290 270 220 450	203 0.00 313 143 143 145 135 540
b d) b) c) d) e) 8	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 correx 2.5 sq. mm cable 3 corex 2.5 sq. mm cable 3 corex 2.5 sq. mm cable Commissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, stranded Aluminum/Copper conductor, Armoured/Flexible cables os per 1S:1255/1983 will be followed for Loying 8.15:7098 (Part 1) for Supply of XLPE cable and IS 694:1990 for Supply of Copper Flexible Cable. Loying of cables on existing cable trays/ in existing hume pipes/ PVC pipes/ GI pipes/ on surface of slabs, walls or masonary/ RCC trenches/ ducts including cables fies, GI saddles, damps and necessary hard ware. It should indude both ends termind joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 4 core 10 s.g.mm. Al Ar. XLPE cable 3 care 6 s.g.mm. Al Ar. XLPE cable 9 care 6 s.g.mm. Al Ar. XLPE cable 9 care 6 s.g.mm. Al Ar. XLPE cable 9 care 6 s.g.mm. Al Ar. Stelle cable with IP:67 gland inside water for Sump Pump 9 Supply, fabrication and installation of M.S. Painted factory built in perforated type cable trays complete with all bends, tees, elbows, reducers etc. of various width in two tier/three/five tier fashion either on one side of the wall or on two sides of the wall here measured &.p.ad1. 150mm wide Providing, fixing, testing and commissioning moterise Ball valve of following sizes, for filling of overhead tanks complete with high & low level switchs & pressure switch to cantral the valve. The level controller shall be installed in over head tank. The level switch will dose the valve when water level is high & open the eval controller shall be installed in over head tank. The level switch will dose th	RM Metre Metre Metre Metre	50 100 50 60 60 120	335 530 600 500 350 550	16750 53000 30000 21000 66000	350 400 500 450 300 450 0.00	17500.00 40000 25000 27000 18000 54000	410 0.00 315 290 270 220 450	203 0.00 313 143 143 145 135 540
a)       b)       c)       d)       e)       8       9	specifications. It should induce both ends terminal joints providing finned copper terminal lugs, single compression brass cable glanck, insulation tape, effecting terminal connections to the equipment complete as required. 2 corex 2.5 sq. mm cable 3 corex 2.5 sq. mm cable 3 corex 2.5 sq. mm cable 5 upply. Unloading, shifting. Storing, Laying, Fixing, Testing & Cormissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheathed, strandad Aluminum/Copper conductor, Armoured/Flexible cables as per IS:1255/1983 will be followed for Laying & IS:7098 (Part 1) for Supply of XLPE cable and IS 694:1990 for Supply of Copper Flexible Cable. Laying of cables on existing cable trays / in existing hume pipes/ PVC pipes/ Gl pipes/ on surface of slats, walls or mas onary/ RCC trenches / ducts inducing cables ties, GI saddes, damps and necessary hard ware. It should induce both ends terminal joints providing tinned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 4 core 10 sq.mm, Al Ar. XLPE cable 3 core 16 sq.mm, Al Ar. XLPE cable 3 core 6 sq.mm, Al Ar. Store Cable with IP:67 gland inside water for Sump Pump Supply, fabrication and installation of M.S. Painted factory built in perforated type cable trays complete with all bends, tees, lebows, reducers etc. of various width in two tier/ three/ five tier fashion either on one side of the wall or on two sides of the wall or at other places and paint offerward if required. (The cast of angle iron/C Channel, Fastner & GI Down rod shall be induced here measured & paid). In perforated shall be installed in over head tank. The level level controller shall be installed in over head tank. The level switch will dose the valve wine water level is high & gonen the valve when l	RM Metre Metre Metre Metre	50 100 50 60 60 120 100	335 530 600 500 350 550 350	16750 53000 30000 21000 66000 335000 335000	350 400 500 450 300 450 0.00	17500.00 40000 25000 27000 18000 54000 54000	410 0.00 315 290 270 220 450 450	203 0.00 0.00 313 143 143 132 540 450
a)       b)       c)       d)       e)       8       c       g	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 core x 2.5 sq. mm cable 3 core x 2.5 sq. mm cable 3 core x 2.5 sq. mm cable Commissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheatthed, strandsd Aluminum/Copper conductor, Armoured/Flexible cables as per IS:1255/1983 will be followed for Loying & IS:7098 (Pcrt 1) for Supply of XLPE cable and IS 694:1990 for Supply of Copper Flexible Cable. Laying of cables on existing cable trays / in existing hume pipes/ PVC pipes/ GL pipes/ on surface of slads, walls or mas.onary/ RCC trenches/ ducts including cables ties, GL saddes, damps and necessary hard ware. It should include both ends terminal joints providing tinned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 4 core 10 sq.mm. ALAr. XLPE cable 3 core 16 sq.mm. ALAr. XLPE cable 3 core 6 sq.mm. Copper Flexible Cable with IP:67 gland inside water for Sump Pump Supply, fabrication and installation of M.S. Painted factory built in perforated type cable trays complete with all bends, tees, elbows, reducers etc. of various width in two tier/ three/ five tier fastion either an one side of the wall or on two sides of the wall or at other places and paint afterward if required. (The cast of angle iron/C Channel, Fastner & GI Down rod shall be included bere meas ured & paid). Isomm wide Providing, fixing, testing and commissioning materise Ball valve of following sizes, for filling of overhead tanks complete with high & low level switchs & pressure switch to control the valve. The level control and installed in over head tank. The level switch will dose the valve when water level is high & open the valve when level is low in the tank. The system should be complete in all respect with accessories, 220V AC / 24 V DC, IP 67 water lev	RM Metre Metre Metre Metre Metre	50 100 50 60 60 120 100 9	335 530 600 500 350 350 350	16750 53000 30000 21000 66000 335000 335000	350 400 500 450 300 450 0.00 550 550	17500.00 40000 25000 27000 18000 54000 54000 55000	410 0.00 315 290 270 220 450 450 25000	203 0.00 313 143 143 143 540 450 450
a)       b)       c)       d)       e)       8       9       a)       b)	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 corex 2.5 sq. mm cable 3 carex 2.5 sq. mm cable 3 carex 2.5 sq. mm cable Supply. Unloading, shifting, Storing, Laying, Fixing, Testing & Commissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheatthed, strandad Aluminum/Copper conductor, Armoured/Flexible cables as per IS:1255/1983 will be followed for Loying & IS:7098 (Part 1) for Supply of XLPE cable andIS 694:1990 for Supply of Copper Flexible Cable. Laying of cables on existing cable trays/ in existing hume pipes/ PVC pipes/ Gl pipes/ on surface of slads, walls or mas.onary/ RCC trenches/ ducts including cables ties, Gl saddes, damps and necessary hard ware. It should include both ends terminal joints providing tinned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 4 care 10 s.g.mm. AI Ar. XLPE cable 3 care 16 s.g.mm. AI Ar. XLPE cable 3 care 6 s.g.mm. Copper Flexible Cable with IP:67 gland inside water for Sump Pump Supply, fabrication and installation of M.S. Painted factory built in perforated type cable trays complete with all bends, tees, elbows, reducers etc. of various width in two tier/ three/ five fier fastion either on one side of the wall or on two sides of the wall or at other places and paint afterward if required. (The cast of angle iron/C Channel, Fasther & Gl Down rod shall be included here meas ured & paid). 1 Jomm wide Providing, fixing, testing and commissioning materise Ball valve of following sizes, for filling of overhead tanks complete with high & low level switchs & pressure switch to control the valve. The level control er shall be installed in over head tank. The level switch will close the valve when water level is high & open the valve when level is low in the tork. The system should be co	RM Metre Metre Metre Metre	50 100 50 60 60 120 100	335 530 600 500 350 550 350	16750 53000 30000 21000 66000 335000 335000	350 400 500 450 300 450 0.00	17500.00 40000 25000 27000 18000 54000 54000	410 0.00 315 290 270 220 450 450	203 0.00 313 143 143 143 540 450 450
a)       b)       c)       d)       e)       8       c       g	specifications. It should include both ends terminal joints providing finned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 2 core x 2.5 sq. mm cable 3 core x 2.5 sq. mm cable 3 core x 2.5 sq. mm cable Commissioning of following sizes of 1.1kV grade LT XLPE insulated, HR PVC sheatthed, strandsd Aluminum/Copper conductor, Armoured/Flexible cables as per IS:1255/1983 will be followed for Loying & IS:7098 (Pcrt 1) for Supply of XLPE cable and IS 694:1990 for Supply of Copper Flexible Cable. Laying of cables on existing cable trays / in existing hume pipes/ PVC pipes/ GL pipes/ on surface of slads, walls or mas.onary/ RCC trenches/ ducts including cables ties, GL saddes, damps and necessary hard ware. It should include both ends terminal joints providing tinned copper terminal lugs, single compression brass cable glands, insulation tape, effecting terminal connections to the equipment complete as required. 4 core 10 sq.mm. ALAr. XLPE cable 3 core 16 sq.mm. ALAr. XLPE cable 3 core 6 sq.mm. Copper Flexible Cable with IP:67 gland inside water for Sump Pump Supply, fabrication and installation of M.S. Painted factory built in perforated type cable trays complete with all bends, tees, elbows, reducers etc. of various width in two tier/ three/ five tier fastion either an one side of the wall or on two sides of the wall or at other places and paint afterward if required. (The cast of angle iron/C Channel, Fastner & GI Down rod shall be included bere meas ured & paid). Isomm wide Providing, fixing, testing and commissioning materise Ball valve of following sizes, for filling of overhead tanks complete with high & low level switchs & pressure switch to control the valve. The level control and installed in over head tank. The level switch will dose the valve when water level is high & open the valve when level is low in the tank. The system should be complete in all respect with accessories, 220V AC / 24 V DC, IP 67 water lev	RM Metre Metre Metre Metre Metre	50 100 50 60 60 120 100 9	335 530 600 500 350 350 350	16750 53000 30000 21000 66000 335000 335000	350 400 500 450 300 450 0.00 550 550	17500.00 40000 25000 27000 18000 54000 54000 55000	410 0.00 315 290 270 220 450 450 25000	205 0.00 315 145 145 145 540

	Rebate			Less		Less	596/5	Less 2.619	911
				1	3020075				
	G. T OT AL				3620675		3559675		34911
	ELECTRICAL PLUMBING PANEL as described above.	Set	1	310000	310000	100000	100000	200000	2000
j.	Actual floar to floar height for rising mains.				0				0
i.	S ufficient height available above panel for cable drop.				0				0
h.	S ufficient space available at front & back after door opening.				0				0
	i.e length, width etc. and the transportation sections shall be designed accordingly.								
g.	Path for movement of transportation of panel is possible or not				0				0
f.	If the panel is wall mounted whether the wall is available or not.				0				0
e.	If entry from bottom whether MS. S tand is required or not.				0				0
d.	Cable entry will be from top or bottom.				0				0
С.	Back access will be possible or not.				0				0
b.	Possible width for Panel				0				0
a.	drawings and submit a report consisting following: Possible height for Panel.				0				0
	The Manufacturer must visit the site before submitting GA				0			Γ	0
	before submitting GA.								
	General Notes for site visit report for Panels/Rising Main				0				0
	size higher terminal block in cable alley and interconnecting wires between bus bars and terminals via MCB/MCCB.								
	Panels will be painted with Powder coating (60-80micron as per IS:13871 for indoor and 90-100 micron for outdoor), include one								
	shrouds, reusidale type covers for busbars Boots on corners								
	& IEC 6068-3-247 Standard. Provide electrical insulating								
	coloured Insulated tube (make-GALA or Eq.) confirms to RoHS								
	The Bus bars will be Copper purity 99.9% / electrolytic grade E91 Aluminium duly sleeved with Helogen Free heat shrink				0				0
	at site.				0				
	(IP:65), extendible type, duly wired up and ready for installation								
	case may, indoor (IP: 44) / semi outdoor (IP:54) / Fully Outdoor								
	tor incoming and outgoing, Single front compartmentalized, totally enclosed, free standing, Floar / Wall mounted type as								
	earthed for each compartment provide bus bar interconnections for incoming and outgoing, Single front compartmentalized,								
	specified otherwise, vermin proof hinged lockable doors & door								
	for Removable Glad Plate & base Frame Meterial, unless								
	in CRCA Sheet bolted cubide made up of 1.6mm for non-stress members & 2.0mm for all stress bearing members and 3.0mm								
	up to 450Volts ±10%, 3P hase, 4Wire, 50Hz ±6%, are housed in CRCA S heet balted cubide made up of 1.6mm for non-stress								
	following Modular cubical type construction, Electrical Panels								
	fasteners, GI nuts-bolts, testing and commissioning of the								
	position, making proper connections, grouting with dash								
	Receiving, Unloading, Shifting to Sub-Station at various locations, handling, assembling, installation in correct aligned								
	Design, Manufacture, Supplying, Transport to the site,				0				0
13	ELECTRICAL PANELS								
e)	100mm dia	Metre	20	30	600	80	1600	2274	45
d)	80 mm ɗia	Metre	200	30	6 000	65	13000	1584	316
c)	65 mm dia	Metre	25	25	625	55	1375	1268	31
b)	50 mm dia	Metre	10	20	200	40 50	400 500	1006	10
a)	pipe colour code). 40 mm dia	Metre	10	20	200	40	400	726	7
	and damps as directed by the Engineer-in-charge (shade as per								
	coat of approved prming coat including galvanized MS supports								
12	synthetic enamel paint of approved quality and shade over a								
e) 12	100mm dia Painting GL pipes (heavy class) with two or more coats of	Metre	20	1700	34 000	1550	31000	1705	34
d)	80 mm dia	Metre	200	1200	2 40 000	1250	250000	1188	237
C)	65 mm dia	Metre	25	1000	25 000	1100	27500	951	23
b)	50 mm dia	Metre	10	800	8 000	880	8800	745	7
a)	40 mm dia	Metre	10	600	6 000	600	6000	550	5
	including cutting and making good the walls etc. complete.								
	fittings, flanges & damps & galvanized MS structural supports								

# B. Contractual Terms and Conditions:

- **1.** Work Order for laying, installation, testing & Commissioning of Pumps & WTP work within the premises of the Police Officers Multi-state Co-operative Housing Society.
- 2. Price: 34,00,007/- (excl. GST)
- 3. Fixed Rate Contract, No Escalation on Material or Labour

### 7. Mode of payment:

- 25% advance along with Work Order
- 45% against delivery
- 15% against installation
- 10% on testing & commissioning of the System
- 5% after 6 months of handing over the System
- 8. Warranty: 18 Months
- **9.** Delivery/ Completion: 6-8 weeks from the date of work order and signing the agreement.

### C. Observations:

### 1) Absence of Test Reports for Claiming Payment of WTP

During our audit of the testing and payment process for the WTP, a significant deficiency has been identified regarding the provision of test reports. It has come to our attention that the required test reports, which serve as essential evidence for claiming payment of testing activities conducted on the WTP, were not provided. The absence of these critical test reports raises concerns about the quality, safety, and compliance of the constructed infrastructure.

# XII. Fire Fighting System:

### A. <u>Background:</u>

This audit report provides a comprehensive overview of the implementation of Fire Fighting System project within the premises of the Police Officers Multi-state Co-operative Housing Society. The project was initiated with its commitment to providing a secure living environment, the society has undertaken a pivotal project focused on the installation of a comprehensive Fire Fighting System. The implementation process followed a rigorous tender process, wherein qualified contractors were selected based on competitive bidding. This report will delve into the details of the tender process, the contract terms, and the subsequent execution of the Fire Fighting System project.

The Police Officers Multi-state Co-operative Housing Society, the importance of proactive measures in preventing and addressing fire emergencies. In response to this, the society's Management Committee had taken a proactive approach to enhance its fire safety infrastructure through the installation of advanced fire fighting systems.

### B. Tender Process:

To ensure transparency, competitiveness, and adherence to industry standards, the Management Committee of initiated a tender process for the Fire Fighting System project. This process involved the following key stages:

- 4. **Project Documentation Preparation:** The Management Committee collaborated with Architect to develop comprehensive project documentation, including technical specifications, scope of work, and project timelines. These documents were designed to provide a clear understanding of the project's requirements.
- 5. **Invitation to Submit Pre-qualification bids:** Once the project documentation was finalized, the Management Committee issued interested vendors to submit pre-qualification bids containing all the information regarding their financials, work experience, company profile and details of similar projects executed in past.

As per records available with Police Officer Multi-state Co-operative Housing Society, following vendors had submitted their Pre-Qualification Bids.

- a. Jaspin Jacob Wire Drawing Pvt. Ltd.
- b. Avert Fire Protection Systems
- c. Shanti Trading Company
- d. Everalem Systems
- e. Bavaria Fire Appliances
- f. Gautam Techno Sanitation
- g. RSR Engineering
- h. SSE & S Engineers Pvt. Ltd.
- i. Creative System
- 6. **Invitation to Bid**: Once the pre-qualification bids were submitted by vendors, the Management Committee issued an invitation to bid, inviting qualified and experienced contractors to participate in the competitive bidding process. The invitation contained detailed instructions on submission requirements, evaluation criteria, and deadlines.

Upon receiving Pre-Qualification bids from the above mentioned vendors, 5 (Five) Pre-Qualified Contractors were selected out of total 9 (Nine) Pre-Qualification bids were recommended by Architect on the basis of their capabilities of executing our Project, experience, project executed and completed, and projects under construction. Vendors qualified to submit their rate contracts are as follows:

- a. Avert Fire Protection Systems
- b. Gautam Techno Sanitation
- c. RSR Engineering
- d. SSE & S Engineers Pvt. Ltd.
- e. Creative System

Item wise financial bid have been submitted by the following vendors out of above mentioned vendors for Fire Fighting System Project executed at Police Officers Multi-state Co-operative Housing Society at village Dabua and Nawada koh, Sector 49, Faridabad, Haryana.

List of bidders submitted their financial bids are as follows:

- a. Gautam Techno Sanitation
- b. SSE & S Engineers Pvt. Ltd.
- c. Creative System

Rate contract submitted by the above mentioned vendors for the execution of Fire Fighting System project at Police Officers Multi-State Co-Operative Housing society are as follows

Contractor name	Finacial Bid submitted	Amount quoted in initial bid	Vendor Position
Gautam Techno Sanitation	v	2,55,98,960.00	L3
SSE & S Engineers Pvt. Ltd.	V	2,48,97,279.00	L2
Creative System	V	2,44,20,363.00	L1

Detailed unit wise rate submission by contractors are as below:

	POLICE OFFICERS MULTISTATE HOUSING S	OCIETY AT SE	C 49, FARIDABA	D, HARYANA								
	SUPPLY, ERECTION, TESTING & COMN											
	COMPARATIV	E STATEMENT										
					M TECHNO		ENGINNERS		VE STSTEM			
NO.	DESCRIPTION FIRE PUMPS	UNIT	QTY	RATE	AMOUNT	RATE	AMOUNT	RATE	AMOUNT			
1.01	Electrical Fire Pumps											
1.01	Providing and fixing horizontal split casing single/multi stage, single/multi outlet pumping set with bronze impeller with C.I. body and											
	connected by a flexible coupling to a totally enclosed fan cooled induction motor mounted on a common structural base plates with											
	all pump accessories complete as per specifications including anti vibration pads, motor to be suitable for 415 volts, 3 phase, 50 cycles A.C.											
	supply (Specifications as per fire fighting requirements and on the pattern of TAC or local authority approval) as per instruction and following specifications:											
(A)	Main fire Pump											
	Type : Split casing											
	Speed (rpm) : 2965											
	Capacity : 2280 lpm											
	Head : 100 Mtr.	Each	2	4,10,000/-	8,20,000/-	3,90,631/-	7,81,262/-	3,68,000/-	7,36,000/-			
(B)	Fire Jockey Pump											
	Speed (rpm) : 2900							1				
	Capacity : 180 lpm											
	Head : 100 Mtr.	Each	1	1,65,000/-	1,65,000/-	1,13,644/-	1,13,644/-	1,38,000/-	1,38,000/-			
1.02	Providing and fixing horizontal split casing single/multi stage, single/multi outlet pumping set with C.I.body and bronze impeller connected											
1.02	by means of a flexible coupling to a water cooled diesel engine mounted on a common structural base plate with anti-vibration pads and											
	foundation complete with electric panel, battery , automatic starting arrangement exhaust pipe of required length to discharge outside											
	building with muffler, day oil tank mounted on suitable structural supports complete in all respects as per specifications ready for use and as per latest requirement of fire authority regularities.											
	as per latest requirement of fire authority regularities.											
	Fire Diesel Pump											
	Speed (rpm) : 1800											
	Capacity : 2280 lpm											
	Head : 100 Mtr.	Each	1	5,50,000/-	5,50,000/-	7,72,778/-	7,72,778/-	7,10,000/-	7,10,000/-			
1.03	Air Vessel for Fire Pump											
	Providing and fixing double flanged vertical air vessel fabricated from 10mm M.S. plate with dished ends from 10mm M.S. plate, outside with one coat of primer and two coats of synthetic enamel paint of approved shade, complete with approved quality of pressure switches,											
	pressure gauge and all other required accessories to operate commonly main fire pump, sprinkler pump and Jockey pump at drop of											
	pressure, automatically at required pressure setting;											
	Recommended dia. : 400											
	Height of shell : 2000mm											
	Working pressure : 7 Kg/Sq.cm Test Pressure : 10 Kg/Sq.cm					-						
	Test Pressure : 10 Kg/Sq. cm	Each	1	30,000/-	30,000/-	25,603/-	25,603/-	34,500/-	34,500/-			
1.04	Panel- for Fire Pumps											
	Providing and Fixing in position, testing and commissioning of the following front operated cubicle type, front access 2mm thick steel											
	enclosed free standing, dust and vermin proof, switchboard with IP42 protection with hinged and lockable doors complete with							1				
	interconnections, tinned copper crimping lugs, bonding to earth and painting, suitable for use at 415 volts, 3 phase 4 wire 50 Hz system and							1				
	suitable for a fault level of 25 MVA symmetrical at 415 volts with a suitable power capacitor to improve power factor.							1				
	All switchboards shall have provision for entry of cables from the top or bottom as required.	-				-	-					
	All live accessible parts shall be shrouded and all equipment shall be finger touch proof. The busbars insulation shall be with heat											
	shrinkable sleeves. SMC/DMC shrouds and busbar supports shall be used. Padlocking facility shall be provided on all outgoing feeders							1				
	doors and switch handles shall be locakble in OFF position.											
	INCOMING											
a)	2 No. 250 amps TPN switch fuse unit with HRC fuses complete.											
b)	1 No. square flush mounting 0-500 volts scaled voltmeter with selector switch & control MCB'S	-										
c)	Three phase indicating lights with 2A SP Control MCB's.											
-,				1	1	I	I	1	1			

	OUTGOING UNITS	-							
a)	4 Nos. 160 amps TPN MCCB (25KA) c curve with rotary handle								
b)	4 No 63amps TPN MCCB 25KA "C" Curve with rotary handle.								
c)	4 Nos. fully automatic Star-delta starters suitable for main pump motor with OLR, SPP, timer, Push button, Auto, manual slector switch, ON OFF lamp etc. complete.								
d)	1 No. fully automatic Star-delta starter suitable for terrece fire pump motor with OLR, SPP, timer, Push button, Auto, manual slector switch, ON OFF lamp etc. complete.								
e)	2 No. fully automatic DOL Strarter for jockey pump with OLR, SPP, timer, Push button, Auto, manual slector switch, ON OFF lamp etc. complete.								
f)	1 No. fully automatic DOL Strarter for water curten pump with OLR, SPP, timer, Push button, Auto, manual slector switch, ON OFF lamp								
-17	etc. complete.								
g)	Provide digital ameter for each pump with CTS ASS etc.								
6/	Provide digital anieter for each pump with C13 Add etc.								
h)	Phase Indicating lamps with each starter								
i)	All inter connecting busbar/power cable control cable etc inside panel shall be fully automatic DE starting panel complete with battary								
	charger, Hooter, Anunciator window, transformer, Rectifier, Ameter, Volt meter, push butten, Relay etc complete as required.								
	The motor control panel shall be prewired with colour coded wires with identification labels complete in all respects as required.	Set	1	4,50,000/-	4,50,000/-	3,91,875/-	3,91,875/-	2,25000/-	2,25000/-
1.05	Providing and fixing heavy duty aluminium armored cables 1.1 KVA grade including necessary support clamps at ceiling level and								
-	connection legs complete in all respects.								
a) b)	Power cable 3 core 16 Sq.mm Power cable 3 core 70 Sq.mm	Metre	60	300/-	18,000/-	119/-	7,140/-	1,058/-	63,480/-
	romer cause a core no diplimit	Metre	75	800/-	60,000/-	328/-	24,600/-	1,840/-	1,38,000/-
1.06	G.I. earthing wire 8 gauge from all motor and M.C.C panel to be connected in as approved manner to the general earthing system	Metre	100	150/-	15,000/-	48/-	4,800/-	87/-	8,700/-
	complete.				.,,				.,,
1.07	Providing earthing station for pumps and M.C.C panel including excavation, C.I. manhole cover and frame complete as per specifications	Each	1	15,000/-	15,000/-	9,928/-	9,928/-	8,500/-	8,500/-
	and I.E. rules.			.,,	.,,	.,		.,,	.,,
1.08	Providing and fixing M.S. slotted cable tray supported from ceiling at intervals of 60cms on both ends including cable clips with nuts and								
	bolts welding of support rods with celling inserts or through dash fasteners cutting and making good complete.								
a)	300mm wide	Metre	30	800/-	24,000/-	497/-	14,910/-	575/-	17,250/-
b)	150mm wide	Metre	30	600/-	18,000/-	340/-	10,200/-	345/-	10,350/-
1.09	Providing and fixing Copper Earthing strip of Size 25 x 3mm for higher size motors and MCC panels to be connected in as approved manner								
	to the general earthing system complete.	Metre	120	450/-	54,000/-	194/-	23,280/-	195/-	23,400/-
1.10	Providing, laying on steel supports, jointing and testing of Mild Steel Black Pipe (IS: 1239 Part-1) Medium class including cutting,								
1.10	rovaning targing on sees supports, pointing and testing of while sees land. Pipe (13, 1239 Parts) weaking targing welding/screwing etc. and providing all fittings viz. Flanges. Bends,Tees, Elbow, Reducers, Clamps. Hangers etc. including cutting holds and chases in brick or RCC wells/slabs and making good the same to the approval of engineer/consultant complete including painting in the same to the approval of engineer/consultant complete including painting in the same to the approval of engineer/consultant complete including painting in the same to the approval of engineer/consultant complete including painting in the same to the approval of engineer/consultant complete including painting in the same to the approval of engineer/consultant complete including painting in the same to the approval of engineer/consultant complete including painting the same to the approval of engineer/consultant complete including painting the same to the approval of engineer/consultant complete including painting the same to the approval of engineer/consultant complete including painting the same to the approval of engineer/consultant complete including painting the same to the approval of engineer/consultant complete including painting the same to the approval of engineer/consultant complete including painting the same to the approval of engineer/consultant complete including the same to the approval of engineer/consultant complete including the same to the approval of engineer/consultant complete including the same to the approval of engineer/consultant complete including the same to the approval of engineer/consultant complete including the same to the approval of engineer/consultant complete including the same to the approval of engineer/consultant complete including the same to the same to the approval of engineer/consultant complete including the same to the approval of engineer/consultant complete including the same to the same to the approval of engineer/consultant complete including the same to the approval of engineer/con								
	with one coat of primer and two or more coats of enamel paint of approved make and shade including steel work. Note : All								
	pipe should be proper welded								
a) b)	65mm dia pipe 80mm dia Pipe	Metre Metre	12	1,000/- 1,200/-	12,000/- 14,400/-	675/- 863/-	8,100/- 10,356/-	736/- 890/-	8,832/- 10,680/-
c)	150mm dia pipe	Metre	50	2,200/-	1,10,000/-	1,949/-	97,450/-	1,680/-	84,000/-
d)	200mm dia pipe	Metre	24	3,200/-	76,800/-	2,978/-	71,472/-	2500/-	60,000/-
e)'	250mm dia pipe	Metre	Rate Only	4,800/-		3,736/-		3,680/-	
1.11	Providing and fixing rubber expansion joints (to provide relief from stresses at pipe flanges) as per specification of the manufacturers								
a) b)	65mm dia pipe 80mm dia	Metre Each	Rate Only 2	6,000/- 8.000/-	16,000/-	4,849/-	10,848/-	2,800/- 5.500/-	11,000/-
c)	150mm dia pipe	Each	6	8,000/-	75.000/-	5,424/- 8,408/-	10,848/-	5,500/-	72,000/-
d)	200mm dia pipe	Each	Rate Only	22,000/-	75,0007	12,383/-	50,440/	15,800/-	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
1.12	Providing and fixing C.I double flanges suction strainer bucket type/ "Y" type including, nuts, bolts and 3mm thick rubber insertion complete.								
a)	100 mm dia pipe	Each	Rate Only	15,000/-		5,476/-		5,750/-	
b)	150mm dia pipe	Each	3	18,000/-	54,000/-	10,743/-	32,229/-	12,000/-	36,000/-
1.13	Providing and fixing C.I butterfly valve, wafer end type class PN 1.6 as per I.S:13095 or BS:5155, including necessary nuts, bolts, gaskets								
a)	etc., complete 65mm dia nominal bore.	Each	Rate Only	4,500/-		1,850/-		2,930/-	
a) b)	80mm dia nominal bore.	Each	Rate Only Rate Only	4,500/- 5,500/-		1,850/- 2,138/-		2,930/- 3,200/-	
c)	100mm dia nominal bore.	Each	2	6,500/-	13,000/-	2,613/-	5,226/-	4000/-	8000/-
d)	150mm dia nominal bore.	Each	6	10,000/-	60,000/-	3,486/-	20,916/-	7,500/-	45,000/-
e)	200mm dia nominal bore.	Each	2	16,500/-	33,000/-	6,349/-	12,698/-	14,000/-	28,000/-
1.15	Providing and fixing C.I double flanged horizontal/vertical type non-return valve including nuts, bolts, 3mm thick rubber insertions complete to I.S:S312, Part-I, swing type, class PN 1.6.								
a)	25mm dia nominal bore	Each	Rate Only	3,500/-		957/-		1,725/-	
b)	65 mm dia nominal bore.	Each	Rate Only	4,000/-		4,776/-		2,550/-	
c)	80 mm dia nominal bore. 100mm dia nominal bore.	Each	Rate Only	4,800/-	44 6777	5,925/-	47.0'	2,985/-	2005 - /
d) e)	100mm dia nominal bore. 150mm dia nominal bore.	Each Each	2	5,800/- 8,800/-	11,600/- 26,400/-	8,648/- 14,030/-	17,296/- 42.090/-	4,000/- 7,500/-	8000/- 45,000/-
e) f)	200mm dia nominal bore.	Each	2	12,500/-	25,000/-	25,190/-	42.090/-	14,000/-	28,000/-
1.16	providing & fixing standard type pressure switches to operate /stop fire pumps as per requirement with complete required accessories.	Each	10	8,000/-	80,000/-	1,568/-	15,680/-	3,500/-	35,000/-
1.17	Providing and fixing M.S. structural work fabricated from standard section e.g. M.S. rounds, angles, channels, plates including cutting to size, drilling, welding fixing and welding to insert plates in RCC structural members or through dash fasteners as per site conditions as	<i>u</i> -			5.400/		5.249/	201	5.400/
	directed by Engineer-in-charge including cutting and making good the walls, ceilings and floors (for pipe supports, clamps etc.)	Kg	60	90/-	5,400/-	89/-	5,340/-	90/-	5,400/-
1.18	Providing and fixing Pressure gauge with isolation cock suitable with 'U' tube for maximum pressure of 7 Kg/cm2. (0-14 Kg./cm2; dial								
	size:100 mm dia.)	Each	12	1,200/-	14,400/-	888/-	10,656/-	1,200/-	14,400/-
1.19	Providing and fixing MS class C diesel engine exhaust pipe (including all fitting clamps steel support) of suitable dia for the engine. The pipe						-		
1.17	providing and rixing wis class closest engine exhaust pipe (including all ritung clamps sceer support) of suitable dia for the engine. The pipe shall be provided with 12mm thick supercera ceramic fire rope.	Metre	60	2,200/-	1,32,000/-	2,717/-	1,63,020/-	2,500/-	1,50,000/-
	TOTAL				30,26,600/-		28,04,225/-		27,39,992/-

П	HYDRANT SYSTEM								
2.01	Providing and fixing MS black pipes as per IS 1239 (Part 1) MEDIUM Class including cutting, welding etc. complete with fittings viz Tees, Elbows, Bends, flanges, reducer, clamps, hanger etc. including painting with one coat of primer and two coat of synthetic enamel paint of approved make and shade								
a)	150 mm dia.	Metre	1675	1,850/-	30,98,750/-	1,949/-	32,64,575/-	1,680/-	28,14,000/-
c)	80 mm dia.	Metre	113	1,200/-	1,35,600/-	863/-	97,519/-	890/-	1,00,570/-
d)	25 mm dia.	Metre	181	350/-	63,350/-	324/-	58,644/-	280/-	50,680/-
2.02	Providing, laying, jointing and testing of Mild Steel black. pipe (IS: 1239)(5: 3895) MEDIUM class including cutting, screwing, weiding etc. complete with fitting viz. Itese above, bends, fittinger, reducers, etc including excavation in all kind of soil effiling , ramming-bioring incremoning the excavated supple naturality, providing adequate support to the log-and making good the same. Providing and cut- torstone (Icotating and wrapped) with 4 mm thick tape and holdely test check as per (S: 10221 complete as required. Note : All the Pipes full blace proper weided.								
a)	150 mm dia.	Metre	900	2,400/-	21,60,000/-	2,341/-	21,06,900/-	1,800/-	16,20,000/-
b)	80 mm dia	Metre	100	1,550/-	1,55,000/-	1,035/-	1,03,500/-	1000/-	1,00,000/-
2.03	Providing and fixing butterfly valves, wafer end type class PN 1.6 as per I.S:13095 - 1991, includingb lever key and necessary nuts, bolts, gaskets etc. complete								
a)	150 mm dia	Each	Rate Only	12,500/-		3,486/-		7,500/-	
b)	80 mm dia	Each	60	4,500/-	2,70,000/-	2,138/-	1,28,280/-	3,200/-	1,92,000/-
2.04	Providing, fixing, testing and commissioning of Single headed stainless steel, ISI marked oblique pattern hydrant landing valve Type 'A' with 80mm dia flanged inlet & 63mm dia instanteous type female outlet complete with gumental cap and chain, twist release type lug and all accessories as per (IS : 5290-1983)	Each	201	5,500/-	11,05,500/-	6,435/-	12,93,435/-	5,200/-	10,45,200/-
2.05	Providing and fixing standard short size Stainless steel branch pipe with Stainless steel nozzle 20mm nominal bore outlet with standard instantaneous type 63mm dia coupling in all respects.	Each	201	1,600/-	3,21,600/-	1,698/-	3,41,298/-	2,000/-	4,02,000/-
2.07	Providing and placing in proper position Controlled Percolating (CP) Hose ISI marked (IS:8423) 63 mm dia x 15 m long complete with instantaneous type gunnetal 63 mm dia, ISI marked Male & Female couplings (IS:903) bound and riveted to hose pipe with copper rivets and 1.5 mm copper wite.	Each	402	4,500/-	18,09,000/-	5,198/-	20.89,596/-	5,500/-	22,11.000/-
2.08	Providing, fluing, testing and commissioning of First-Ald-fire Hose real wall mounting swinging type complete with drum, bracket, stop valve and 20mm dia. 30M long high pressure thermoplast hose real tubing with shutoff nozzle. Conforming to 15: 8030 - 1376 with 5mm conflict. The hose real values are per 538-1385.	Each	181	6,800/-	12,30,800/-	9,405/-	17,02,305/-	7,500/-	13,57,500/-
2.09	Proving and fixing standarad fire man's axe with heavy insulated rubber handle.( ISI marked)	Each	181	500/-	90,500/-	471/-	85,251/-	650/-	1,17,650/-
2.10	Providing and fixing pre fabricasted 5 mm thick glass door (with MS frame) of size 2.1 m x 0.9 m with center opening for fire hose cabinet. Suitably marked on the outside with the letters 'FIRE HOSE' including locking arrangement. All MS work to be in Red P.O. colour over appropriate prime. The above term is only for maxonary fire station.	Each	181	8,800/-	15,92,800/-	7,425/-	13,43,925/-	9,200/-	16,65,200/-
2.11	Providing and fixing external fire hose box, wall mounting or free standing type, made out of fibre glass reinforced plastics of approved colour of 78.58.4425.80m (30°x34'141) size to accommodate two Size meght of delivery hoses and a branch pipes with glass fronted double door with lock and keys and break glass recess for keys, all complete.	Each	20	5,500/-	1,10,000/-	4,703/-	94,060/-	3,500/-	70,000/-
2.12	Providing and fixing C.I. ball with wheel tested to 20 Kg/cm2 (I.S:778-1971, Class - II) of approved quality for hose reel						+		
a)	25 mm dia.	Each	181	1,000/-	1,81,000/-	826/-	1,49,506/-	415/-	75,115/-
2.13	Providing and fixing 150mm dia TWO-way fire brigade inlet connection consisting of 63mm instantaneously male coupling and a check valve protected by cap scored with a chain glass bore etc. complete with one 150mm dia valve and 150mm dia non-return valve (To be connected to Riser/RING)	Each	2	15,000/-	30,000/-	12,375/-	24,750/-	10,500/-	21,000/-
2.14	Providing and flaing 4-way fire brigade inlet connection of 4 nos. 63mm dia instantaneous type male coupling with built in check valves and 150mm dia flanged outlet complete with bolts, nuts and rubber insertions as per I.5504. (to be connected to static tank).	Each	2	16,500/-	33,000/-	14,355/-	28,710/-	15,000/-	30,000/-
2.15	Providing and fixing fire brigade suction (draw out connection) with female coupling as per LS:902-1974 complete and with 150mm dia. suction pipe and foot valve (To be connected to static tank)	Each	1	12,500/-	12,500/-	15,494/-	15,494/-	7,500/-	7,500/-
	Parallelan and Roles Paraman and the Indextant and subscher with (11 to be far maximum analysis) of 7 Malanch (0.44 Malanch did	Each	181	1,200/-	2,17,200/-	888/-	1,60,728/-	1,200/-	2,17,200/-
2.16	Providing and fixing Pressure gauge with isolation cock suitable with 'U' tube for maximum pressure of 7 Kg/cm2. (0-14 Kg./cm2; dial size:100 mm dia.)	Each							
2.16		set	11	15,000/-	1,65,000/-	12,375/-	1,36,125/-	7,000/-	77,000/-

III         Provint, Statistical Statisti Statisti Statis Statistica Statis Statistical Statistical Statis								
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Image: Second								
Image:	Metre Metre	750 420	1,850/- 1,400/-	13,87,500/- 5,88,000/-	1,949/- 1,264/-	14,61,750/- 5,30,880/-	1,680/- 1,180/-	12,60,000/- 4,95,600/-
Image         Binned a	Metre	380	1,000/-	3,80,000/-	863/-	3,27,940/-	890/-	3,38,200/-
η         Bern ab           η	Metre Metre	671 310	800/- 650/-	5,36,800/- 2,01,500/-	675/-	4,52,925/- 2,03,980/-	736/- 575/-	4,93,856/- 1,78,250/-
Nome a           No	Metre	450	550/-	2,47,500/-	470/-	2,11,500/-	425/-	1,91,250/-
Including, layer, parting and testing of MB Start Back, page (5: 129)(5: 189) medium class building carting, curring, envire, mediag etc.           Including, layer, parting and testing of MB Start Back, page (5: 129)(5: 189) medium class building test.           Including and marging and starting of MB Start Back, page (5: 129)(5: 189) medium class building test.           Including and marging and starting of MB Start Back and the Layer of NB Start Start Back and the Asses (5: 1892) complex and expanding AMD AND AND AND AND AND AND AND AND AND AN	Metre	900	450/- 330/-	4,05,000/- 19,80,000/-	403/- 324/-	3,62,700/- 19,44,000/-	360/- 280/-	3,24,000/- 16,80,000/-
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testurent (solving and marging) with 3 mm thick tage and holding test (etc. is per (5 1022) complete an regarded hole: All the Pa data of anyone wield of anyone calling the sequences of the latter of anyone of the sequences of the latter of anyone of the sequences of the latter of anyone calling and incigence calling having minimum working persons of 30 by (cm).								
a)       Boy mails.         b)       Investigate of procurbing the reported ball value of the forum of calling start ball (AS) bod and guider AS 420 with users indigate of angenetic paulity barge informance working pressure of 20 bg/cm <sup>2</sup> .         a)       Borm de         a)       Borwall ge         b)       Borwall ge         a)       Borwall ge         a)       Borwall ge         a)       Downall ge	5							
3         Providing and fund general/books beer operated ball take of full flow with statistics state bal (MS) MA and quode A09 410 with state and pland al uponto quality brang minimum working persoure of 20 kg/ml.           3         Rem 64           4         Rem 64           4         Rem 64           4         Rem 64           4         Rem 64           5         Rem 64           5         Rem 64           6         Rem 64           6         Rem 64           6         Rem 64           7         Rem 64           8         Rem 64           8         Rem 64           10         Rem 64           10         Rem 64           10         Rem 64           11         Rem 64           12         Rem 64           13         Rem 64           14         Rem 64           15         Rem 64           16         Rem 64           16         Rem 64           17         Rem 64           18         Rem 64           19         Rem 64           10         Rem 64           10         Rem 64           10	Metre	10	2450/-	24,500/-	2,341/-	23,410/-	1,800/-	18,000/-
add and f augebor quite braing minimum working pressure of 20 kg cm <sup>2</sup> .           300         Bornels           310         Bornels           311         Bornels           312         Bornels           313         Bornels           314         Bornels           315         Bornels           316         Bornels           317         Bornels           318         Bornels           319         Bornels           310         Bornels           310         Bornels           311         Bornels           312         Bornels           313         Bornels           314         Bornels           315         Bornels           316         Bornels           317         Bornels           318         Bornels           319         Bornels           310         Bornels           311         Bornels           311         Bornels           312         Bornels           313         Bornels           314         Bornels           315         Bornels           316         Bornels </td <td></td> <td></td> <td>2.007</td> <td>,</td> <td>2/6 . 2/</td> <td></td> <td>_,,</td> <td></td>			2.007	,	2/6 . 2/		_,,	
3.8         Providing and Fundy C J butterfly value, wafer and type class PH 15 is apr 15 1308 or 15 5355, including vencessary nutt, bolts, parket (a. and the standard of th	>							
exclosely and the second and a second a second and a second a seco	Each	Rate Only	3200/-		2,947/-		2,800/-	
a)       Jobom da         b)       Jobom da         c)       Germ da         c)       Forder type (Jr regt Sprainer         c)       Ja negth         d)       Jobom da         c)       Ja negth         d)       Jobom da         c)       Ja dameter 50 mm calaciton 0.18 (get Main get antimication concellants in pain at the concel antimication sector concellants in pain at the concel antin concellants in pain secoc	s							
Cl       Bimmedia         Cl       Bimmedia         State       Providing, Raling and Stategie of Stam da, Chronn finished spinisher head with quartz balo, set to operate at GPC, complete as per give         State       Providing, Raling and Statelies statelies Statel (AS 300 μm brades finished spinisher pare diops of 25 mm da of following trends and maximum weaking personal of 125 mm das of following trends and an operative statelies spinisher branching on particle (Statelies and Statelies Statelies Statelies Statelies Completes and Statelies Statelies Statelies Completes and Statelies Completes (Statelies Completes A) (	Each	5	10,000/-	50,000/-	3,486/-	17,430/-	7,500/-	37,500/-
10         Providing, forug, and testing of 15mm da. Chome finished opinishe head with quarts bub, set to opense at GPC, complete as per give definition. IUL/IA Approval wherever required           11         Providing, forug, and testing of 15mm da. Chome finished opinishe head with quarts bub, set to opense at GPC, complete as per give definition. IUL/IA Approval, The per Source definition of the GPC approvements of the GPC approvement approvements of the GPC approvement approvements	Each Each	Rate Only Rate Only	8000/- 6,000/-		2,613/- 2,138/-		4,300/- 3,200/-	
exercitations (ULYPA Approved) wherever required in a section of the section	Each	Rate Only	5,000/-		1,850/-		2,930/-	
a)         Provide year (Jir regis Sprisher           b)         See will           c)         Provide year fing of compatel stateless stel (AS 300) unbaided flexible price of point and of following length an excession and climps ar required. The flexible pre doys that but it, approved. The price of point and the sprisher price of point and t	1							
100.         Providing and fraining of comparison transmiss required. The finable generate page drops of 23 mm clus of following reging and 73 pp with all accessories and clumps as required. The finable gene drop shall be Ut approved. The print drop shall be Ut approved. The print drops that be utable drops and that drops that be utable drops that be utable. The print drops that be utable drops that be drops that be utable drops that be utable drops tha	Each	2652	380/-	10,07,760/-	261/-	6,92,172/-	300/-	7,95,600/-
maximum working pressure of 175 pit with all accessories and clamps as required. The fielded pipe dog ball be UL approved. The pipe dog ball be UL approved to the pipe dog ball be UL approved. The pipe dog ball be UL approved. The pipe dog ball be UL approved to the pipe dog ball be UL approved to the pipe dog ball be UL approved. The pipe dog ball be UL approved to the pipe dog ball be upper dog ball be approved to the pipe dog ball be upper dog ball be approved to the pipe dog ball be upper dog ball be approved to the pipe dog ball be pipe dog ball be approved to the pipe dog ball be pipe dog ball balappipe dog ball ball balappine balappine dog balappine dog balappin	Each		680/-		470/-			
a) a) b) b) c) b) c) b) b) c) c) b) c) c) c) b) c)	5							
<ul> <li>a) In lweigh</li> <li>b) In lweigh</li> <li>c) B a meght</li> <li>c) B a meght&lt;</li></ul>	Each	Rate Only	1650/-		1,933/-		1,500/-	
3.07         Providing and fixing electrically oparated flow indicating watches with threaded connection for indicating water flow in spinalate branchalle in a testical or approximation and included.           3.10         Intervention box installed in accessible place. Including cost of calse etc. complete. (Wrining from switches to panel and included.)           3.11         Somm dia         Comm dia           3.12         Providing and fixing dial type pressure grage with isolation cock and pipe at sprinker iner at flow switch.           3.10         Providing and fixing dial type pressure grage with isolation cock and pipe at sprinker iner at flow switch.           3.10         Providing and fixing dial type pressure grage with isolation cock and pipe at sprinker iner at flow switch.           3.10         Providing fixing testing to corner takew with turbine type automatic Marm Grag to be connected with control wake, dian is the value with a laber eccessing sprinter. The panel should have iterface for connection to complet corner to building management system. The panel should have :           3.11         Providing fixing testing to commission of an annucle turk is printer to the sprinter to	Each	Rate Only	1550/-		1,620/-		1,200/-	
Ine with receasing later to be installed in accessible place. Including cost of cable etc. complete. (Wring from switches to panel and that that cable pressuration on textuded).     Jostom da     Some da     Monording and fixing dail type pressure gauge with loadston cock and pipe at spraker line mear flow switch.     Monording and fixing dail type pressure gauge with loadston cock and pipe at spraker line mear flow switch.     Monording and fixing dail type pressure gauge with loadston cock and pipe at spraker line mear flow switch.     Monording fixing testing & commostoning of annuncister Panel for flow control which, going in the strate start Sum and later control value, dain is the switch and all other increasing components is per manufacturer's specifications. Complete as required.     Jostom dia     Monording, fixing testing & commissioning of annuncister Panel for flow control which, going Maddo, Musail indication of actuation.      Automatic Spraker synthem, The panel should have :     Jack indication for each come.     Jostom dia     Marrier Mart for furfulat.     Jostom dia     Jostom flow for furfulat.     Jostom dia     Jostom rememports,     Jack indication for furfulat.     Jostom rememports,     Josto	Each	Rate Only	1400/-		1,411/-		1,000/-	
a) Somm dia b) So	1 J							
b)       Johann dia         C)       Born dia         30.       Providing and fixing dial type presure guage with isolation cost and gape at sprinkler line near flow wetch.         a)       Dia diameter 150 mm calberation 0-15 & g.         30.00       Providing & Fixing of installation Control Valve with turbine type automatic Atarm Gong to be connected with control valve, drain & te whe are and in them exercising components as per manufacturer's specifications complete a singuierd.         a)       Jobarn dia         31.01       Providing fixing testing commissioning of annuccater hand for flow control valutes, providing Audio Alves interface for connection to complet control leads from each none complet as per specifications.         a)       Fixing fixing testing for immugation system. The panel should have interface for connection to complet control leads from each none complet as per specifications.         a)       Batter of hanger.         a)       Mains supply, and shall cate for:         a)       minimum (Scones working + 1 zines spart)         3.11       Providing and fixing share tradient particular & data set sign as set sign and sign shares supply and shall cater for:         a)       minimum (Scones working + 1 zines spart)         3.12       Providing and fixing Stom da inspecting & testing assembly with isolation valve, gumental sight glass byspass whee & connected to life dario stanger standard particle of code luckulong pressure).         3.12       Providing fixing fixing	Each	5	11,000/-	55,000/-	3,396/-	16,980/-	5,500/-	27,500/-
1.00         Providing and fixing dail type pressure guige with isolation cock and pape at sprivider line near flow switch.           1.01         Providing & Fixing of installation Corticol Valve with turbine type automatic Alarm Gong to be connected with control valve, drain & tervial et al. al. al. al. other necessary components as per manufacturer's specifications complete as required.           1.02         Providing, fixing, testing & commissioning of amunctater Panel for flow control valvetae, providing Audio/Pisual Indication of actuation.           1.01         Providing, fixing, testing & commissioning of amunctater Panel for flow control valvetae, providing Audio/Pisual Indication of actuation.           1.02         Providing, fixing, testing & commissioning of amunctater Panel for flow control valvetae, providing Audio/Pisual Indication of actuation.           1.02         Instruct disclosific for each one complete as per specifications.           0.01         Providing and fixing Panel.           0.02         Instruct disclosific for each.           0.03         Batters of meregency.           0.04         Batters of harger.           0.01         Batters of harger.           0.02         Batters of harger.           0.13.12         Providing and fixing Samm dia inspecting & stealing asset of a providing panels and connection legs connected to life and inspection.           0.12.1         Providing fixing testing commissioning of MA arc cushing twith isolatation valve, examples of a providing and fixing Sattem and arc c	Each	Rate Only	11,000/-	55,0007	3,292/-	10,5007	4,500/-	27,500
<ul> <li>a) Do dameter 350 mm calabotion 0-16 Kg.</li> <li>Do dameter 350 mm calabotion 0-16 Kg.</li> <li>Do dameter 350 mm calabotion 0-16 Kg.</li> <li>Do dameter 350 mm calabotion 0-16 Kg.</li> <li>a) I50 mm dia</li> <li>J50 mm dia</li> <li>J51 moviding and fixing s L50 mm dia</li> <li>J51 moviding and fixing S mm dia</li></ul>	Each	Rate Only	11,000/-		3,187/-		3,800/-	
1.00         Providing & Italia for Installation Control Valve with turbine type automatic Alarm Gong to be connected with control valve, drain & te valve and all other necessary components as per manufacturer's specifications complete as required.           a)         150mm dia           3.01         Providing fing, tetring & formissioning of annurciater Paned for flow control switches, providing Audio/Visual indication of actuation is device the data of the connection to complete indication of actuation for each name, the panel ishold have interface for connection to complete outper set of the data of the connection to complete indication of actuation for each name, the panel ishold have interface for connection to complete indication of actuation for each name, the panel ishold have interface for connection to complete outper set of the data of the connection for complete indication of actuation for each name, the panel ishold have interface for connection to complete indication of some fire?           10         Read Term Connection for each name of the fire flag data.           11         Battery Orange, and shall care for for hore indicating necessary support clamps and connection legs complete in a respects.           12         Providing fining tetring commissioning of MG air cohine tank on top each riser fabricated from form the MS glate addom also providing panels sight glates bypeass whe & connection to a shall be also providing pressure).           13.13         Providing fining tetring commissioning of MG air cohine tank on top each riser fabricated from form the MS glate addom minimater shall be orange addition or a shall be also pressure player with an interface of the following type.           13.13         Providing and fi		_		/				/
avie and all other necessary components as per manufacturer's specifications complete as required.           a)         130mm dia           3.10         Providing fixing testing & commissioning of annuclater Panel for flow control switches, providing Audio/Visual Indication of actuation Automatic Sprinker system for each zone complete as per specifications. The panel should have interface for connection to complet controlled building management system. The panel should have :           10         If suff indication for each zone.           10         If suff indication for each zone.           10         If suff indication for each zone.           11         If for figula.           12         If suff indication for each zone.           13         If the figula.           14         If the figula.           15         Battery for emergency.           16         Battery for emergency.           17         If battery darger.           18         If original and fining 25mm dia inspecting & testing assembly with isolation valve, gummetal sigte glass bepaas valve & connected to bill dain complete in all respect as per standard practice of code including persure gauges of approved make.           13.13         Providing fixing testing commissioning of MS ar cushion tank on top cach inser fabricate from form thick MS plate zonom in takenet to 2 not Maged inter comections in the stabulate or racted working persure).           14         Vian complete with divelate eas fabricated f	Each	5	1200/-	6,000/-	888/-	4,440/-	1,200/-	6,000/-
1.0         Providing, fusing, testing & commissioning of annunciater Panel for flow control switches, providing Audio/Yisual indication of actuation. Automatic Sprinker system for each zone complete as per specifications. The panel should have interface for connection to comple controlled building management system. The panel should have :           10         Fault Indication for each zone.           11         Fault Indication for each zone.           12         Fault Indication for reach zone.           13         Relative for energency.           14         Battery for energency.           15         Mains sysph, and shall care for           16         Mains sysph, and shall care for           17         Battery for energency.           18         All cores 1. Sogrim           19.1         Providing and fining zomm dia inspecting & testing assembly with isolation valve, gummetal sight glass byepass valve & connected to lind an onceptein al respects.           1.1         Providing fusing testing commissioning of MS ar cushion tank on top of each riser fabricated from form thick MS plate zomm, in dianaret 1.2 m. In height with diaheed ends fabricated for a method walve with stop cock. Imaged inter comercition in to a valve presure gauge with an arcessonies as required and comprise to rais dark and conforming to IS JSBAS.           10.1         Providing fusing testing commissioning of MS ar cushion tank on top of each riser fabricated from form thick MS plate zoome.           1.2         ToTAL	t							
1.0         Providing, fusing, testing & commissioning of annunciater Panel for flow control switches, providing Audio/Yisual indication of actuation. Automatic Sprinker system for each zone complete as per specifications. The panel should have interface for connection to comple controlled building management system. The panel should have :           10         Fault Indication for each zone.           11         Fault Indication for each zone.           12         Fault Indication for reach zone.           13         Relative for energency.           14         Battery for energency.           15         Mains sysph, and shall care for           16         Mains sysph, and shall care for           17         Battery for energency.           18         All cores 1. Sogrim           19.1         Providing and fining zomm dia inspecting & testing assembly with isolation valve, gummetal sight glass byepass valve & connected to lind an onceptein al respects.           1.1         Providing fusing testing commissioning of MS ar cushion tank on top of each riser fabricated from form thick MS plate zomm, in dianaret 1.2 m. In height with diaheed ends fabricated for a method walve with stop cock. Imaged inter comercition in to a valve presure gauge with an arcessonies as required and comprise to rais dark and conforming to IS JSBAS.           10.1         Providing fusing testing commissioning of MS ar cushion tank on top of each riser fabricated from form thick MS plate zoome.           1.2         ToTAL	Each	2	48.000/-	96.000/	56,953/-	1 12 006/	40.000/-	80.000/-
Automatic Sprinkler system for each zone complete as per specifications. The panel should have interface for connection to complet controllor during management system. The panel should have :         a)       Full, Indication for each zone.         b)       indication of zone fire         c)       Treyfault hooter.         d)       Alarm name for fire/fault.         d)       Battery for emergency.         g)       Main supply, and shall cater for         n)       minimum 6(3zones working + 1 zones spare)         1.11       Providing and firing aluminisum amored cables 1.1 KVA grade including necessary support clamps and connection legs complete in a respects.         a)       & core x 1.5 symm         1.12       Providing and firing aluminisum amored cables 1.1 KVA grade including necessary support clamps and connection legs complete in all respect as per standkard practice of code including pressure gauges of approved make.         1.12       Providing firing texting commisioning of MS air cushion tank on top of each riser habricated from 6mm thick MS plate 200mm in damet 1.2 x in height with divide ends fabricated from 8mm thick MS plate with X release with supports.         1.11       HWAD APPLIANCES         4.01       HWAD APPLIANCES         4.01       HWAD APPLIANCES         4.01       HWAD APPLIANCES         5.01       Supply, installation, testing & Commissioning of manual call box for fire Alarm System <t< td=""><td>Each</td><td>2</td><td>48,000/-</td><td>96,000/-</td><td>36,933/-</td><td>1,13,906/-</td><td>40,000/-</td><td>80,000/-</td></t<>	Each	2	48,000/-	96,000/-	36,933/-	1,13,906/-	40,000/-	80,000/-
a) East: indication for each zone. b) Indication of zone fire c) Hie/Plant hoster. c) Hie/Plant Hie/Plant Hie/Plant Hie/Plant Hie/Plan	2							
c)       Pre/fault houter.         d)       Alarm Rund for fire/fault.         e)       Battery for emergency.         f)       Battery for emergency.         f)       Battery for emergency.         f)       Mains supply, and shall cater for         h)       minimum 6(Stones survive)         f)       Battery for emergency.         f)       Battery for emergency.         f)       Providing and fixing aluminum amored cables 1.1 KVA grade including necessary support clamps and connection legs complete in a respects.         a)       & core x 1.5 spm         f)       Providing fixing testing commissioning of MS air cushion tank on top of each riser fabricated from 6mm thick MS plate 200mm in damete 1.2 m in height with dieled ends fabricated from 8mm thick MS plate with all accessories as required and conforming to 15 476-1580(the cushion tank is hould be suitable for rated working pressure).         toTAL       IV         IV       NAN APPLIANCES         4.01       Providing and fixing 151 marked portable fire extinguishers including initial fill & wall suspension bracket of the following type.         a)       CO, type 4.5Kg, capacity RE Stored Pressure type fire extinguisher IS1 marked under IS15683 complete with imported Mor Ammonium Phoophate based Alc Provider suitable for all classes of fire.         f)       Brauding and fixing 4 kg capacity ABC Stored Pressure type fire extinguisher IS1 marked under IS15683 complete wi								
d)       Asmm Panel for (Inc/Luit.         e)       Sattery charger.         f)       Sattery charger.         g)       Mains supply. and shill cater for         h)       minimum Giscone: working - 1 zones spare)         3.11       Providing and fixing aluminium ammored cables 1.1 KVA grade including necessary support clamps and connection legs complete in a respects.         a)       Accre x 1.5 sgmm         3.12       Providing and fixing 25mm dia inspecting & testing assembly with lookaton vulve, gumetal sight glass brepass valve & connected to lir drain complete in all respect as per standard practice of code including pressure gauges of approved make.         3.13       Providing fixing testing commissioning of MS air cushion tank on top of each riser fabricated from form thick MS plate 200mm in damet 1.2 in in leight with 3dies of achieval tor more many thick by dave with Air release valve with the connection and to its 154 736-1968(the cushion tank should be suitable for rated working pressure).         TOTAL       IV         IV       NMO APPLIANCES         4.01       Providing and fixing 12 marked portable fire estinguishers including initial fill. & wall suspension bracket of the following type.         irotaL       In indy and fixing 4 kg capacity AEC Stored Pressure type fire estinguisher 151 marked under 1515683 complete with imported Mor Ammonum Phosphate based ABC Powder suitable for all classes of fire.         b)       Providing and fixing 4 kg capacity AEC Stored Pressure type fire estringuisher 151 marked un								
f)       Battery charger.         g)       Mains suppy, and shall cater for         h)       minimum 6(stones working + 1 sones spare)         3.11       Providing and fixing aluminium armored cables 1.1 KVA grade including necessary support clamps and connection legs complete in a respects.         a)       Ecore x 1.5 symm         3.12       Providing and fixing 25mm dia inspecting & testing assembly with isolation valve, gummetal sight glass bepass valve & connected to lir drain complete in all respect as per standard practice of code including pressure gauges of approved make.         3.13       Providing fixing testing commissioning of MS air cushion tank on top of each riser fabricated from fimm thic MS plate 200mm in diamet 1.2. in height with diadee and Fabricat Grom Rom thic KMS plate 200mm in diamet 1.2. Sin height with 3che ends Fabricat Grom Rom thic KMS plate 200mm in diamet 1.2. Sin height with 3che ends Fabricat Grom Rom thic KMS plate 200mm in diamet 1.2. Sin height with 3che ends Fabricat Grom Rom thic KMS plate 200mm in diamet 1.2. All height with 3che ends Fabricat Grom Rom Thick KMS plate 200mm in diamet 1.2. Sin height with 3che ends Fabricat Grom Rom Thick KMS plate 200mm in diamet 1.2. Total         TOTAL       TOTAL         10       NMAD APPLIANCES         4.01       Providing and fixing 151 marked portable fire extinguisher late base including valve, discharge hose of not less than 10 mm dia 1 m long and complete in a respect including mutal fill wall suspension bracket of the following type.         5.01       Providing and fixing 4 kg capacity AEC Sored Prescure type fire extinguisher 151 marked under								
g)       Names supply, and hull cater for         h)       minimum 6(Stones working + 1 nones space)         3.11       rowing and fung and hung auwinisum armored cables 1.1 KVA grade including necessary support clamps and connection legs complete in a respects.         a)       & core x 1.5 symm         3.12       rowing and hung and hung atomica inspecting & testing assembly with itolation valve, gumental sight glass byepass valve & connected to lindra omplete in all respect as per standard practice of code including pressure gauges of approved make.         1.13       Providing fung testing commisioning of MS ar cushion tank on top of each riser fabricated from firm thick MS plate 200mm in dameet 1.2 m in height with dished ends fabricated from 8mm thick MS plate with all respects as required and conformit to is 4736-1958(the cushion tank should be suitable for rated working pressure).         707AL       TOTAL         1V       MAND APPLIANCES         4.01       Providing and fixing SI marked portable fire extinguishers including initial fill. & wall suspension bracket of the following type.         a)       CO <sub>2</sub> type 4.5(g, capacity Fire Extinguisher flat base including valve, discharge bose of not less than 10 mm dia 1 m long and complete in a respects including and fixing SI marked portable for eatinguishers including initial fill. A wall suspension bracket of the following type.         a)       CO <sub>2</sub> type 4.5(g, capacity Fire Extinguisher flat base including valve, discharge bose of not less than 10 mm dia 1 m long and complete in a respects including initial fill. Tom arked under IS 15883 complete with imported Mor Arm								
1.11         Providing and fixing aluminium ammored cables 1.1 KVA grade including necessary support clamps and connection legs complete in a respects.           a)         Core x 1.5 sorum           1.12         Providing and fixing 25mm dia inspecting & testing assembly with isolation valve, gurmetal sight glass byepass valve & connected to lir drain complete in all respect as per standard practice of code including pressure gauges of approved make.           1.12         Providing fixing testing commisioning of MS air cushion tank on top of each riser fabricated from 6mm thick MS plate 200mm in diameters.           1.2.1         In height with diabed ends fabricated from 8mm thick MS plate with air release valve with all accessories as required and conformit to IS 4736-1988(the cushion tank should be suitable for rated working pressure).           1.11         IV         HAND APPLIANCES           4.01         Providing and fixing ISI marked portable fire estinguishers including initial fill. & wall suspension bracket of the following type.           2.0         CO, type 4.5% capacity Fire Estinguisher fat base including walve, discharge hose of not less than 10 mm dia 1 m long and complete in a respect is cluding initial fill. & wall suspension bracket of the following type.           3.0         Providing and fixing K ac capacity AIAC Stored Pressure type fire estinguishers [StoR3.           4.01         Providing and fixing K ac capacity AIAC Stored Pressure type fire estinguishers [StoR3.           5.01         Supply, installation, testing & Commissioning of mannual call box for Fire Alarm System								
respects.           a         Gores A: Sagmm           1.12         Providing and fixing 25mm dia inspecting & testing assembly with isolation valve, gurmetal sight glass byepass valve & connected to lindvalue pressure gauges of approved make.           1.12         Providing fixing testing commisioning of MS air cushion tank on top of each riser fabricated from 6mm thick MS plate 200mm in diameter.           1.2         In height with dished ends fabricated from 8mm thick MS plate with air release valve with alloc ecosories as required and conformit to 15 4736-1968(the cushion tank should be suitable for rated working pressure).           1.11         IN MND APPLIANCCS           707AL         NAND PPLIANCCS           2.01         Providing and fixing 15 marked portable fire estinguishers including initial fill & wall suspension bracket of the following type.           2.01         Providing and fixing 4 ke capacity ARC Stored Pressure type fire estinguishers for 515683.           2.01         Providing and fixing 4 ke capacity ARC Stored Pressure type fire estinguisher 15 marked under 15:15683 complete with imported Mor Armonium Phosphate based ABC Powder suitable for all classes of fire.           3.02         Supply, installation, testing & Commissioning of Awatt speaker cun boater with line matching transformer enclosed in a MS box manual call box with hinged cover glate and fixing strew as per 15:2189           3.03         Supply, installation, testing & Commissioning of Fault speaker cun boater with line matching transformer enclosed in a MS box manua call box with hinged cover glate and fixing strew as	Each	1	1,00,000/-	1,00,000/-	26,125/-	26,125/-	50,000/-	50,000/-
a)         Core x 1 Signm           3.12         Providing and Tking 25mm dia inspecting & testing assembly with isolation valve, gurunetal sight glass byepass valve & connected to lind an complete in all respect as per standard practice of code including pressure gauges of approved make.           3.13         Providing fixing testing commissioning of MS air cushion tank on top of each riser fabricated from 6mm thick MS plate 200mm in diamet 1.2, an in height with 3ideed ends fabricated from 8mm thick MS plate with air release valve with agrock. Canaged inter connection and 2 an arregment with 25mm dia valve pressure gauge with gun metal stop cock. complete with all accessories as required and conformit to IS 4736-1968(the cushion tank should be suitable for rated working pressure).           TOTAL         INM DAPPLANCCS           4.01         Providing and fixing 15 marked portable fire extinguishers including intial fill. & wall suspension bracket of the following type.           a)         CO <sub>2</sub> type 4.5Kg, capacity RE Stored Pressure type fire extinguisher 15 marked under 15.15833 complete with imported Mor Ammonium Phosphate based ARC Powder suitable for all classes of fire.           TOTAL         V           NRE ALARM SYSTEM           5.01         Supply, installation, testing & Commissioning of manual call box for Fire Alarm System           5.02         Supply, installation, testing & Commissioning of some betector for Fire Alarm System           5.03         Supply, installation, testing & Commissioning of manual call box for Fire Alarm System           5.04         Providing and fixing of 16 sone ma	1							
drain complete in all respect as per standard practice of code including pressure gauges of approved make.         1.1       Providing fixing testing commisioning of MS ar cushion tank on top of each riser fabricated from 6mm thick MS plate 200mm in diameter.         1.2       In in height with diabed ends fabricated from 8mm thick MS plate with Air release value with a top cock flanged inter connection an drain arrengement with 25mm dia value pressure gauge with gan metal stop cock complete with all accessories as required and conformit to 15 4736-1988(the cushion tank should be suitable for rated working pressure).         TOTAL       TOTAL         11/1       IAMD APPLIANCES         0       Providing and fixing 1S marked portable fire estinguishers including initial fill. & wall suspension bracket of the following type.         a)       CO, type 4.5% capacity Fire Estinguisher flat base including value, discharge hose of not less than 10 mm dia 1 m long and complete in a respects including initial fill wall suspension bracket and conforming to 5: 15683.         b)       Providing and flaving 4.5 capacity AEC Stored Presure type fire estinguisher 19 marked under 15:15683 complete with imported Mor Armonium Phosphate based ABC Powder suitable for all casses of fire.         5.01       Supply, installation, testing & Commissioning of manual call box for fire Alarm System         5.02       Supply, installation, testing & Commissioning of Snoke Detector for Fire Alarm System         5.03       Supply, installation, testing & Commissioning of manual call box for fire Alarm System         5.04       Supply,	Metre	1000	150/-	150,000/-	114/-	1,14,000/-	400/-	4,00,000/-
In the light with dished ends fabricated from 8mm thick MS plate with Air release value with atop cock flanged inter connection and a varegment with 25mm dia value pressure gauge with gun metal stop cock complete with all accessories as required and conforming to 15 4736-1988(the cushon tank should be suitable for rated working pressure).     ToTAL     ToTAL     Co, type 4.5%, capacity Fire Extinguisher flat base including value, discharge hose of not less than 10 mm dia 1 m long and complete in a respects including intial fill wall suspension bracket of the following type.     Co, type 4.5%, capacity Fire Extinguisher flat base including value, discharge hose of not less than 10 mm dia 1 m long and complete in a respect including intial fill wall suspension bracket of the following type.     Co, type 4.5%, capacity Fire Extinguisher flat base including value, discharge hose of not less than 10 mm dia 1 m long and complete in a respect including intial fill wall suspension bracket and conforming to 15: 1583.     Providing and fixing 4 kg capacity AEC Source Pressure type fire extinguisher 15 marked under 15: 15683 complete with imported More Ammonium Phosphate based ABC Powder suitable for all classes of fire.     TOTAL     V RE ALARM SYSTEM     Supply, installation, testing & Commissioning of namual call box for fire Alarm System     Supply, installation, testing & Commissioning of manual call box for fire Alarm System     Supply, installation, testing & Commissioning of main panel complete in all respects and confirming to the requirements of 15: 2189     Soo Supply, installation, testing & Commissioning of main panel complete in all respects and confirming to the requirements of 15: 2189     Soo Supply, installation, testing & Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and rain monoted complete in all respects and confirming to the requirements of 15: 2189     Soo Supply, installation, testing & Commissioning of main fire alarm panel complete with P.A.	2							
1.2 m in height with dihed ends fabricated from 8mm thick MS plate with Air release value with an ope cost flanged inter connection at drain arrangement with 2smm dia value pressure gauge with gan metals top cost. Complete with all accessories as required and conformit to 15 4735-1968(the cushion tank should be suitable for rated working pressure).         TOTAL         1V       HAND APPLIANCES         4.01       Providing and fixing 15 marked portable fire extinguishers including initial fill. & wall suspension bracket of the following type.         a)       C0, type 4.5% capacity Fire Extinguisher fat base including value, discharge hose of not less than 10 mm dia 1 m long and complete in a spects including initial fill wall suspension bracket of the following type.         a)       C0, type 4.5% capacity Fire Extinguisher fat base including value, discharge hose of not less than 10 mm dia 1 m long and complete in a spects including initial fill wall suspension bracket and conforming to 15:15683.         b)       Providing and fixing 48 capacity ARC Stored Presure type fire extinguisher 15 marked under 15:15683 complete with imported Mor Ammonium Phosphate based ABC Powder suitable for all classes of fire.         TOTAL       TOTAL         V       RE ALARM SYSTEM         5.01       Supply, installation, testing & Commissioning of manual call box for Fire Alarm System         5.02       Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System         5.03       Supply, installation, testing & Commissioning of manual complete in all respects and confirming to the requirements of 15:	Each	5	4,500/-	22,500/-	8,883/-	44,415/-	7,000/-	35,000/-
1.2 m in height with dished ends fabricated from 8mm thick MS plate with Air release value with nop cock flanged inter connection an drain arrangement with 2smm dia value pressure gauge with gun metals top cock complete with all accessories as required and conformit to 15 4736-1988(the cushion tank should be suitable for rated working pressure).         TOTAL         1V       IAMD APPLIANCES         4.01       Providing and fixing 1S marked portable fire extinguishers including initial fill. & wall suspension bracket of the following type.         a)       CO, type 4.5% capacity Fire Extinguisher flat base including value, discharge hose of not less than 10 mm dia 1 m long and complete in a respects including initial fill walls suspension bracket of the following type.         a)       CO, type 4.5% capacity Fire Extinguisher flat base including value, discharge hose of not less than 10 mm dia 1 m long and complete in a respects including initial fill walls suspension bracket and conforming to ES 1568.3.         b)       Providing and fixing 14 capacity AEC Stored Porseur type fire resultinguisher 15 marked under 15 15683 complete with imported Mor Armonium Phosphate based ABC Powder suitable for all classes of fire.         7       TOTAL         8       V       RRE ALARM SYSTEM         9       V       RRE ALARM SYSTEM         9       Supply, installation, testing & Commissioning of mannual call box for Fire Alarm System         5.01       Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System         5.02       Supply, installat	r							
b: IS 4738-1988(the cushion tank should be suitable for rated working pressure).           TOTAL           IV         NAND APPLIANCES           4.01         Providing and fixing 157 marked portable fire extinguishers including initial fill. & wall suspension bracket of the following type.           a)         CO, type 4.5%, capacity Fire Extinguisher fat base including wake, discharge hose of not less than 10 mm dia 1 m long and complete in a respects including initial fill ways persion bracket and conforming to 15: 15683.           b)         Providing and fixing 4.8 capacity AIC Stored Pressure type fire extinguisher 15 marked under IS:15683 complete with imported Mor Anmonium Phosphate based ABC Powder suitable for all casses of fire.           b)         Providing and fixing 4.8 capacity AIC Stored Pressure type fire extinguisher 15 marked under IS:15683 complete with imported Mor Anmonium Phosphate based ABC Powder suitable for all casses of fire.           5.01         Supply, installation, testing & Commissioning of mannual call box for Fire Alarm System           5.02         Supply, installation, testing & Commissioning of Snoke Detector for Fire Alarm System           5.03         Supply, installation, testing & Commissioning of Snoke Detector for Fire Alarm System           5.04         Providing and fixing of 16 zone mannual fire alarm panel complete in all respects and confirming to the requirements of IS: 2189           5.05         Supply, installation, testing & Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and ra momet complete on the requirements of IS:	4	Rate only	25,000/-		12,375/-		7,000/-	
IV         HAND APPLIANCES           4.01         Providing and fixing IS marked portable fire extinguishers including total fill & wall suspension bracket of the following type.           a)         C0, type 4.5kg capacity Fire Extinguisher flat base including value , discharge hose of not less than 10 mm dia 1 mlong and complete in a respects including initial fill wall suspension bracket and conforming to 15: 1568.           b)         Providing and fixing 4 kg capacity Fire Extinguisher flat base including value , discharge hose of not less than 10 mm dia 1 mlong and complete in a respects including initial fill wall suspension bracket and conforming to 15: 1568.           b)         Providing and fixing 4 kg capacity ABC Stored Pressure type fire extinguisher ISI marked under ISI 15683 complete with imported Mor Annonoum Phosphate based ABC Powder subtable for all classes of fire.           CDTAL         PRE ALARM SYSTEM           5.01         Supply, installation, testing & Commissioning of mannual call box for Fire Alarm System           5.02         Supply, installation, testing & Commissioning of A watt speaker cun hooter with line matching transformer enclosed in a MS box mannu call box with hieged cover plate and filting screws as per IS 2189           5.03         Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System           5.04         Providing and fixing of 4 some manual fire alarm panel complete in all respects and confirming to the requirements of IS: 2189           5.05         Supply, installation, testing & Commissioning of main fire alarm panel complete with P.A. system operator co	s sec	nate only	23,000/-		12,373/-		7,000/-	
IV         HAND APPLIANCES           4.01         Providing and fixing 19 marked portable fire extinguishers including initial fill. & wall suspension bracket of the following type.           a)         C0, type 4.5kg, capacity Fire Extinguisher flat base including valve , discharge hose of not less than 10 mm dia 1 m long and complete in a respects including initial fill wall suspension bracket and conforming to 1s. 1583.           b)         Providing and fixing 4 kg capacity Fire Extinguisher flat base including valve , discharge hose of not less than 10 mm dia 1 m long and complete in a respects including initial fill wall suspension bracket and conforming to 1s. 1583.           b)         Providing and fixing 4 kg capacity ABC Stored Pressure type fire extinguisher 151 marked under 15.15683 complete with imported Mor Ammonium Phosphate based ABC Powder suitable for all classes of fire.           TOTAL         V         RRE ALARM SYSTEM           5.01         Supply, Installation, testing & Commissioning of mannual call box for Fire Alarm System           5.02         Supply, Installation, testing & Commissioning of Smoke Detector for Fire Alarm System           5.03         Supply, Installation, testing & Commissioning of Smoke Detector for Fire Alarm System           5.04         roviding and fixing of 16 zone mannual fire alarm panel complete in all respects and confirming to the requirements of 15: 2189           5.05         Supply, Installation, testing & Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and ram monted comprising of:           5.06								
A01 Providing and fixing 13 marked portable fire extinguishers including initial fill & wall suspension bracket of the following type.     C0, type 4.5kg, capacity Fire Extinguisher flat base including valve, discharge hose of not less than 10 mm dia 1 m long and complete in a     constraint of the second secon				72,38,060/-		65,48,553/-		64,10,756/-
a) C0, type 4.5fg, capacity Fire Extinguisher flat base including valve , discharge tose of not less than 10 mm dia 1 miong and complete in a respects including intal fill wall suspension bracket and conforming to 15: 15683.     Providing and filing 4 kg capacity AE Stored Pressure type fire extinguisher 15 marked under 15:15683 complete with imported Mor Ammonium Phosphate based ABC Powder: suitable for all classes of fire.     TOTAL     TOTAL     Supply, installation, testing & Commissioning of mannual call box for fire Alarm System     Supply, installation, testing & Commissioning of manual call box for fire Alarm System     Supply, installation, testing & Commissioning of smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of main panel complete in all respects and confirming to the requirements of 15: 2189     Forviding and fixing of 16 sone mannual fire alarm panel complete in all respects and confirming to the requirements of 15: 2189     Supply, Irrection, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and rar mointed comprising of:     Supply, Errection, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and rar mointed comprising of:     Supply, Errection, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and rar mointed comprising of:     Supply, Errection, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and rar mointed comprising of:     Supply Terection, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and rar								
respects including initial fill wall suggestion bracket and conforming to 15: 15883.     Providing and fixing 4 kg capacity ABS Stored Pressure type fire extinguisher 15: In arked under 15: 15683 complete with imported Mor Ammonium Phosphate based ABC Powder: suitable for all classes of fire.     TOTAL     TOTAL     V Fire AARMA SYSTEM     Supply, installation, testing & Commissioning of mannual call box for Fire Alarm System     Supply, installation, testing & Commissioning of mannual call box for Fire Alarm System     Supply, installation, testing & Commissioning of smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System     Supply, function and fixing of 16 zone mannual fire alarm panel complete in all respects and confirming to the requirements of 15: 2189     Supply, functional fixing of 4 zone mannual fire alarm panel complete with P.A. system operator console all prewired and ran     morter four Side 24, 27 ab DC     So AF batteries of 244, 27 ab DC     So AF batteries of 244, 27 ab DC     So AF and commission for the Mixel Al all call facility     Monitor Fael compraining of speaker, volume control, on/off sw, fuses & with all in								
b)         Providing and fixing 4 kg capacity ABC Stored Pressure type fire extinguisher ISI marked under ISI 5683 complete with imported Mor Ammonium Phosphate based ABC Powder suitable for all classes of fire.           TOTAL         Y           V         REE ALARM SYSTEM           5.01         Supply, installation, testing & Commissioning of manual call box for Fire Alarm System           5.02         Supply, installation, testing & Commissioning of manual call box for Fire Alarm System           5.03         Supply, installation, testing & Commissioning of 4 watt speaker cum hooter with line matching transformer enclosed in a MS box manu call box with hinged cover plate and fixing screws as per IS 2189           5.03         Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System           5.04         Providing and fixing of 16 zone manual fire alarm panel complete in all respects and confirming to the requirements of IS: 2189           5.05         Supply, Irrection, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and rai mounted comprising or:           5.06         Supply, Irrection, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and rai mounted comprising or:           5.05         Supply, Irrection, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and rai mounted comprising or:           5.06         Supply, Irrection, Testing and Commissioning of main fire alarm panel complete with P.A. s	Each	170	5,500/-	9,35,000/-	5,957/-	10,12,690/-	6,000/-	10,20,000/-
Ammonium Phosphate based ABC Powder suitable for all classes of fire.     TOTAL     TOTAL     V REALARM SYSTEM     Supply, installation, testing & Commissioning of manual call box for Fire Alarm System     Supply, installation, testing & Commissioning of manual call box for Fire Alarm System     Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System     Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System     Supply, installation, testing and Commissioning of main fire alarm panel complete in all respects and confirming to the requirements of 15: 2189     Supply, installation, testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and raim mutual fire alarm panel complete in all respects and confirming to the requirements of 15: 2189     Supply, installation, testing and Commissioning of Supply, Supp				-	_			_
V         Rie ALARM SYSTEM           5.01         Supply, Installation, testing & Commissioning of mannual call box for Fire Alarm System           5.02         Supply, Installation, testing & Commissioning of a watt speaker cun hooter with line matching transformer enclosed in a MS box mannu call box with hieged cover plate and fixing of a watt speaker cun hooter with line matching transformer enclosed in a MS box mannu call box with hieged cover plate and fixing of smoke Detector for Fire Alarm System           5.03         Supply, Installation, testing & Commissioning of Smoke Detector for Fire Alarm System           5.04         Providing and fixing of 16 zone mannual fire alarm panel complete in all respects and confirming to the requirements of IS: 2189           5.05         Providing and fixing of 4 zone mannual fire alarm panel complete in all respects and confirming to the requirements of IS: 2189           5.06         Supply, Errection, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and rai mounted comprising of:           5.07         Supply Literation, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and rai mounted comprising of speaker, volume: control, out/of sw, fuses & with all indications           5.08         For Vamplifier           Cardiod gooseneck microphone         18 zone floor selector console with individual / all call facility           Monitor Panel completing of speaker, volume: control, out/of sw, fuses & with all indications           Panel & PA system to corrier to 52:	Each	170	1800/-	3,06,000/-	1,599/-	2,71,830/-	2,000/-	3,40,000/-
5.01         Supply, Installation, testing & Commissioning of mannual call box for Fire Alarm System           5.02         Supply, Installation, testing & Commissioning of A watt speaker cum hooter with line matching transformer enclosed in a MS box mannu call box with hinged cover plate and fixing screws as per IS 2189           5.03         Supply, Installation, testing & Commissioning of Smoke Detector for Fire Alarm System           5.04         Providing and fixing of 16 zone mannual fire alarm panel complete in all respects and confirming to the requirements of IS: 2189           5.05         Supply, Installation, testing & Commissioning of main fire alarm panel complete in all respects and confirming to the requirements of IS: 2189           5.05         Supply, Irrection, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and rar mouter comprising of:           5.05         Supply, Irrection, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and rar mouter comprising of:           5.06         Supply, Irrection, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and rar mouter comprising of:           5.06         Supply, Irrection, Testing and Commissioning of fire latar panel complete with P.A. system operator console all prewired and rar mouter comprising of:           5.07         Providing asserts, Nolume control, Our/Off sw, fuses & with all indications           Panel & PA system to confirm to IS: 2189           5.07         Prov				12,41,000/-		12,84,520/-		13,60,000/-
5.02       Spoply, Installation, testing & Commissioning of 4 watt speaker cum hooter with line matching transformer enclosed in a MS box manu call box with hinged cover plate and fixing screws as per IS 2189         5.03       Spoply, Installation, testing & Commissioning of Smoke Detector for Fire Alarm System         5.04       Providing and fixing of 16 zone manual fire alarm panel complete in all respects and confirming to the requirements of IS: 2189         5.05       Spoply, Installation, testing & Commissioning of main fire alarm panel complete in all respects and confirming to the requirements of IS: 2189         5.06       Skipply, Errection, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and raim mounted comprises of:         5.05       Supply, Errection, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and raim of the comprises of:         5.06       Supply, Errection, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and raim of the statement of the system to previde the individual / all call facility         Cardiod gouseneck microphone       16 zone floor selector console with individual / all call facility         Monitor Teal comprising of speaker, volume control, on/off sw, fuses & with all indications         Panel & PA system to confirm to 15:2189         5.07       Providing and fixing of Tire Exit Signages         5.08       Providing and fixing of Tire Dist LIFT IN CASE OF FIRE" caution sign sheet 600mm x 100mm				<u> </u>				
cill tox with hinged cover plate and fixing screws as per IS 2189      Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System      Providing and fixing of 16 zone mannual fire alarm panel complete in all respects and confirming to the requirements of IS: 2189      Providing and fixing of 4 zone mannual fire alarm panel complete in all respects and confirming to the requirements of IS: 2189      Providing and fixing of 4 zone mannual fire alarm panel complete in all respects and confirming to the requirements of IS: 2189      Supply, Errection, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and ram mourted comprising of:      Supply the statement of 24, 27 ah DC      Supply to Av angulter      Eardiod gooseneck microphone      Eardiod gooseneck microphone      Eardiod gooseneck microphone      Some Panel comprising of:      Panel & PA system to confirm to IS: 2189      Poviding and fixing of Fine Exit Signages      Poviding and fixing of Fine Exit Signages      Poviding and fixing of TON DI USE LIFT IN CASE OF FIRE" caution sign sheet 600mm x 100mm	Each	225	350/-	78,750/-	261/-	58,725/-	400/-	90,000/-
5.00         Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System           5.01         Supply, installation, testing & Commissioning of Smoke Detector for Fire Alarm System           5.02         Providing and fixing of 16 zone mannual fire alarm panel complete in all respects and confirming to the requirements of IS: 2189           5.02         Providing and fixing of 4 zone mannual fire alarm panel complete in all respects and confirming to the requirements of IS: 2189           5.03         Sopply, threction, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and rai mounted comprises of 244, 27 ah DC           5.04         Soft Patteries of 244, 27 ah DC           5.05         Sopply, threction, Testing and Commission of main fire alarm panel complete with P.A. system operator console all prewired and rai mounted comprises of 244, 27 ah DC           5.05         Softy, threeton, Testing and Commission of fire alarm panel complete with P.A. system operator console all prewired and rai mounted comprises of 244, 27 ah DC           5.02         Varial providing and system to complete with individual / all call facility           Monitor Panel comprising of speaker, volume control, on/off sw, fuses & with all indications           Panel & PA system to confirm to IS: 2189           5.00         Providing and fixing of Fire Exit Signages           5.01         Providing and fixing of "DO NOT USE LIFT IN CASE OF FIRE" caution sign sheet 600mm x 100mm	Each	225	350/-	78,750/-	309/-	69,525/-	600/-	1,35,000/-
Soft Providing and fixing of 16 zone mannual fire alarm panel complete in all respects and confirming to the requirements of 15: 2189     Providing and fixing of 4 zone mannual fire alarm panel complete in all respects and confirming to the requirements of 15: 2189     Soft Providing and fixing of 4 zone mannual fire alarm panel complete in all respects and confirming to the requirements of 15: 2189     Soft Partericon, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and rai mounted comprising of:     Soft Parterice of 24: 27 and CC     Soft Parterice of 24: 27 and 24								
5.05         Providing and fixing of 4 zone mannual fire alarm panel complete in all respects and confirming to the requirements of IS: 2189           5.05         Speky, Errection, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and rai mounted comprising of:           5.05         Speky, Errection, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and rai mounted comprising of:           5.05         Speky, Errection, Testing and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and rai mounted comprising of:           5.05         Speky, Wratteries of J24, 27 a DC           5.05         Varphilfer           Cardiod gooseneck microphone           5.00         Droviding and fixing of speaker, volume control, on/off sw, fuses & with all indications           Panel & PA system to confirm to IS:2189           5.07         Providing and fixing of Fire Exit Signages           5.08         Providing and fixing of "DO NOT USE LIFT IN CASE OF FIRE" caution sign sheet 600mm x 100mm <td>Each</td> <td>135</td> <td>1200/-</td> <td>1,62,000/-</td> <td>904/-</td> <td>1,22,040/-</td> <td>1,800/-</td> <td>2,43,000/-</td>	Each	135	1200/-	1,62,000/-	904/-	1,22,040/-	1,800/-	2,43,000/-
Soft Strategies and Commissioning of main fire alarm panel complete with P.A. system operator console all prewired and rai mounted comprising of:     Soft Patteries of 244, 27 ah DC     Soft Patteries     Soft Patteries of 244, 27 ah DC     Soft Patteries	Each	9	30,000/-	2,70,000/-	21,632/-	1,94,688/-	50,000/-	4,50,000/-
mounted comparing of:     SMF batters of 24V, 27 ah DC     SG X 2 W Amplifier     Cardiod gooseneck microphone     Lisone floor selector console with individual / all call facility     Monitor Panel comprising of speaker, volume control, on/off sw, fuses & with all indications     Panel & PA system to confirm to IS-2189     So?     Providing and fixing of "DO NOT USE LIFT IN CASE OF FIRE" caution sign sheet 600mm x 100mm	1	1	10,000/-	10,000/-	5,957/-	5,957/-	15,000/-	15,000/-
Self-batteries of 24%, 27 ah DC Self-batteries of 24\%, 27 ah	k Each	1	1,25,000/-	1,25,000/-	1,06,277/-	1,06,277/-	2,25,000/-	2,25,000/-
Cardiod gosserect, microphone Lis zone filor selector console with individual / all call facility Monitor Panel comprising of speaker, volume control, on/off sw, fuses & with all indications Panel & PA system to confirm to IS:2189 S.00 Providing and fixing of Fire Exit Signages S.08 Providing and Fixing of "DO NOT USE LIFT IN CASE OF PIRE" caution sign sheet 600mm x 100mm								
16 zone floor selector console with individual / all call facility Monitor Panel comprising of speaker, volume control, on/off sw, fuses & with all indications Panel & PA system to confirm to 15:2189 5.07 Providing and fixing of Fire Exit Signages 5.08 Providing and Fixing of "DO NOT USE LIFT IN CASE OF FIRE" caution sign sheet 600mm x 100mm		+		+		+		
Panel & PA system to confirm to 15:2189  5.07 Providing and fixing of Fire Exit Signages  5.08 Providing and Fixing of "DD NOT USE LIFT IN CASE OF FIRE" caution sign sheet 600mm x 100mm								
5.07         Providing and fixing of Fire Exit Signages           5.08         Providing and Fixing of "DO NOT USE LIFT IN CASE OF FIRE" caution sign sheet 600mm x 100mm								
5.08 Providing and Fixing of "DO NOT USE LIFT IN CASE OF FIRE" caution sign sheet 600mm x 100mm	F 2	400	cro /	147.007	55 M	1.01.555	cro/	147077
	Each	180	650/-	1,17,000/-	564/-	1,01,520/-	650/-	1,17,000/-
5.09 Siren 1/2 KM Range	Each	180	750/-	1,35,000/-	752/-	1,35,360/-	650/-	1,17,000/-
unon a kinninge	Each	4	3,800/-	1,52,000/-	2,822/-	11,288/-	6,000/-	24,000/-
5.10 Providing and fixing aluminium armored cables including necessary support clamps and connection legs complete in all respects.	Each	2000	160/-	3,20,000/-	115/-	2,30,000/-	160/-	3,20,000/-
SUBTOTAL GRAND TOTA				13,11,700/- 2,55,98,960/-		10,35,380/- 2,48,97,279/-		17,36,000/- 2,44,20,363/-

Upon submission of Initial quotes the Board of Directors of Police Officers Multi-state Cooperative Housing Society, Board of Directors proceeds with negotiations with the vendors.

Final quoted price by the vendors post negotiation are as follows:

Contractor name	Finacial Bid submitted	Amount quoted in initial bid	Negotiated Amount	Vendor Position
Gautam Techno Sanitation	v	2,55,98,960.00	2,30,00,153.00	L1
SSE & S Engineers Pvt. Ltd.	V	2,48,97,279.00	2,48,97,279.00	L3
Creative System	٧	2,44,20,363.00	2,31,99,345.00	L2

Gautam Techno Sanitation was found to be lowest bidding vendor upon final Negotiation which makes him L1, therefore contract for fighting system had been awarded to him.

### C. Contractual Terms and Conditions:

M/S.

- 1. Work Order for Installation Testing & Commissioning of Fire Fighting System at Police Officers Multistate Co-op. Housing Society Ltd., under Construction at Sector 49, Faridabad, Haryana.
- 2. Contract Value: INR 2,30,00,154/- (detail as under)

<sub>. Gaut</sub> am Tehno Sanitation,	Tender Opening Amount Less 10.152% Discount	Rs. 2,55,98,960/- Rs. 25,98,806/-
Ν	et Final Negotiated Amount	Rs. 2,30,00,154/-

- 3. Date of Commencement: 7 days from the date of issue of Letter of Intent
- **4. Mobilization Advance** Rs.10,00,000/-(Approximately 57%) without Bank Guarantee, to be recovered in 4 equal monthly instalments in 4 monthly R. Bills.
- 5. Date of Completion: 4 months from the date of receiving of Letter of Intent
- **6.** Compensation for Delay: INR 10,000/- (Ten Thousand only) per day subject to maximum of 10% of Contract Value.
- **7. Defect Liability Period:** 2 (Two) years from the date of issue of certificate of Virtual Completion.
- Retention Money 5% of Work done, deducted from each Running Bill, subject to maximum Rs.10 Lac I/c E. Money. 50% of Retention Money will be refunded after 12 months from Virtual Completion. Balance 50% will be refunded after Defect Liability Period of 24 months from Virtual Completion.

**9.** Additional Retention Money 5% of Work done, deducted from each Running Bill, subject to maximum Rs.10 Lac. To be retained against procurement NOC/Completion from Haryana Fire Service. Shall be refunded after procurement of NOC by the Contractor.

### 10. Payment Terms:

- 65% on Approval of Shop Drawings and Supply of Material at Site. Material to be Supplied only after taking due approval from Owner & Architect.
- 20% against Installation of Complete System.
- 7.5% against Testing of Complete System.
- 7.5% against Commissioning of Complete System as whole.

# D. Observations:

### 1) Excessive Quantity Claimed in Running Bills Beyond Purchase Order Specifications:

During our audit of the running bill submissions by M/s Gautam Techno Sanitation for Supply, installation, testing and commissioning of Fire Fighting System, a significant discrepancy has been identified in the quantities claimed for certain project components. It is observed that the contractor has claimed quantities in excess of those specified in the Purchase Order (PO). This leads to excess outflow of cash by INR 26,48,399.20/- which is a loss to society.

### Impact of this negligence leads to:

- a. **Contractual Breach:** Submitting quantities that exceed the specifications in the Purchase Order constitutes a breach of the contractual agreement.
- b. **Financial Accuracy:** The excessive quantity claim in running bills lead to financial inaccuracies i.e., in additional cash outflow of INR 26.48 lacs

#### Item wise details regarding the excess quantity claimed by vendor is as follows:

Particulars	Actual Qty completed	Qty to be implented	Excess Qty executed	Rate	Excess amount claimed
Providing, laying on steel supports, jointing and testing of Mild Steel Black Pipe (IS: 1239 Part- 1) Medium class including cutting. and providing all fittingS viz welding/screwing etc. Flanges. Bends, Tees, Elbow, Reducers, Clamps. Hangers etc. incduding cutting holes and chases in brick or RCC walls/slabs and ma king good the same to the approval of engineer/consultant complete including painting with one coat of primer and two or more coats of enamel paint of approved make and shade including steel work. Note : All pipe should be proper welded: 150 mm dia pipe	51.41	50.00	1.41	2,200.00	3,102.00
Providing and fiXing CI double flanges suction strainer bucket "Y" type					
including, nuts, bolts and 3mm thick rubber complete.	1.00	-	1.00	15,000.00	15,000.00
100 mm dia pipe					
Providing and fixing C.I butterfly valve, wafer end type class PN 1.6 as per					
I.S:13095 or BS:5155, including necessary nuts, bolts, gaskets etc., complete	1.00	-	1.00	4,500.00	4,500.00
65 mm dia nominal bore					

Providing and fixing C.I butterfly valve, wafer end type class PN 1.6 as per I.S:13095 or BS:5155, including necessary nuts, bolts, gaskets etc., complete	8.00	-	8.00	5,500.00	44,000.00
80 mm dia nominal bore					
Providing and fixing C.I butterfly valve, wafer end type class PN 1.6 as per I.S:13095 or BS:5155, including necessary nuts, bolts, gaskets etc., complete	9.00	6.00	3.00	10,000.00	30,000.00
150 mm dia nominal bore Providing and fixing C.I double flanged horizontal/vertical type non return					
valve including nuts, bolts, 3mm thick rubber insertions complete to I.S:5312, Part-I, swing type, class PN 1.6	1.00	-	1.00	4,800.00	4,800.00
80 mm dia nominal bore					
Providing and fixing C.I double flanged horizontal/vertical type non return valve including nuts, bolts, 3mm thick rubber insertions complete to I.S:5312, Part-I, swing type, class PN 1.6	15.00	3.00	12.00	8,800.00	1,05,600.00
150 mm dia nominal bore					
Providing and fixing M.S. structural work fabricated from standard section e.g. M.S rounds, angles, channels, plates including cutting  to size, rilling, welding fixing and welding to insert plates in RCC structural members or through dash fasteners as per site conditions as directed by Engineer-in-charge including cutting and making good the walls, ceilings and floors (for pipe supports,	137.38	60.00	77.38	90.00	6,964.20
clamps etc.)					
Providing and fixing MS black pipes as per IS 1239 (Part 1) MEDIUM Class including cutting, welding etc. complete with fittings viz Tees,) Elbows, Bends, flanges. reducer, clamps, hanger etc. including painting with one coat of primer and two coat of synthetic enamel paint of approved make and shade	2,227.41	1,675.00	552.41	1,850.00	10,21,958.50
150 mm dia					
Providing and fixing MS black pipes as per IS 1239 (Part 1) MEDIUM Class including cutting, welding etc. complete with fittings viz Tees.) Elbows, Bends, flanges. reducer, clamps, hanger etc. including painting with one coat of primer and two coat of synthetic enamel paint of approved make and shade	169.99	113.00	56.99	1,200.00	68,388.00
princi and two coat of synthetic channel paint of approved make and shade					
80 mm dia					
Providing and fixing butterfly valves, wafer end type class PN 1.6 as per					
1.S:13095 - 1991, includingb lever key and necessary nuts, bolts, gaskets etc. complete	44.00	-	44.00	12,500.00	5,50,000.00
150 mm dia					
Providing end fixing external fire hose box, wall mounting or free standing type, made out of fibre glass reinforced plastics of approved colour of 76.8x61.44x25.80cm (30"x24"x10") size to accommodate two 15m length of delivery hoses and a branch pipes with glass fronted double door with lock	30.00	20.00	10.00	5,500.00	55,000.00
and keys and break glass recess for keys all complete					
Providing and fixing CL ball with wheel tested to 20 Kg/cm2 (1.S:778 1971, Class -1) of approved quality for hose reel	228.00	181.00	47.00	1,000.00	47,000.00
25 mm dia Supply, Installation, Testing & Commissioning of Mild Steel pipe (IS:1239 Part-I)					
medium class including cutting, welding etc. bends, elbows reducers, clamps, hangers etc. including cutting holes in brick or RCC walls/slabs and making good the same complete including the cost of structural work for supports fabricated from standard sections of required sizes and thickness e.g. galvanised M.S. rods, angles channels, slotted angle, etc., cutting to sizes, drilling welding fixing to insert plates, including painting with one coat of primer and two or more coats of synthetic enamel paint of approved make and shade including all steel work. Note :All Pipes shall be welded	893.49	750.00	143.49	1,850.00	2,65,456.50
150 mm dia Supply, Installation, Testing & Commissioning of Mild Steel nine (IS:1239 Part-I)					
Supply, Installation, Testing & Commissioning of Mild Steel pipe (IS:1239 Part-I) medium class including cutting, welding etc. bends, elbows reducers, clamps, hangers etc. including cutting holes in brick or RCC walls/slabs and making good the same complete including the cost of structural work for supports fabricated from standard sections of required sizes and thickness e.g. galvanised M.S. rods, angles channels, slotted angle, etc., cutting to sizes, drilling welding fixing to insert plates, including painting with one coat of primer and two or more coats of synthetic enamel paint of approved make and shade including all steel work. Note :AII Pipes shall be welded	443.30	310.00	133.30	650.00	86,645.00
50 mm dia					

Total					26,48,399.20
Pendant type/UP right sprinkler					
with quartz bulb, set to operate at 68 C, complete as per given specifications. (UL/EM Approved) wherever required	2,763.00	2,652.00	111.00	380.00	42,180.00
Providing, fixing, and testing of 1 5mm dia. Chrome finished sprinkler head					
Supply, Installation, Testing & Commissioning of Mild Steel pipe (IS:1239 Part-I) medium class including cutting, welding etc. bends, elbows reducers, clamps, hangers etc. including cutting holes in brick or RCC walls/slabs and making good the same complete including the cost of structural work for supports fabricated from standard sections of required sizes and thickness e.g. galvanised M.S. rods, angles channels, slotted angle, etc., cutting to sizes, drilling welding fixing to insert plates, including painting with one coat of primer and two or more coats of synthetic enamel paint of approved make and shade including all steel work. Note :AII Pipes shall be welded 32 mm dia	1,136.70	900.00	236.70	450.00	1,06,515.00
Supply, Installation, Testing & Commissioning of Mild Steel pipe (IS:1239 Part-I) medium class including cutting, welding etc. bends, elbows reducers, clamps, hangers etc. including cutting holes in brick or RCC walls/slabs and making good the same complete including the cost of structural work for supports fabricated from standard sections of required sizes and thickness e.g. galvanised M.S. rods, angles channels, slotted angle, etc., cutting to sizes, drilling welding fixing to insert plates, including painting with one coat of primer and two or more coats of synthetic enamel paint of approved make and shade including all steel work. Note :AII Pipes shall be welded 40 mm dia	797.80	450.00	347.80	550.00	1,91,290.00

#### 2) Commissioning Despite Pending Work Due to Discrepancies in Material Execution and Testing:

During our audit of the execution, installation, and testing processes for Fire Fighting system project, significant discrepancies have been identified in the quantities of materials executed, installed, and tested by the vendor compared to the quantities mentioned in the Purchase Order (PO). Additionally, it has come to our attention that certain materials were installed and tested in quantities less than those actually supplied, and some material are pending for even to be supplied, yet the site was commissioned.

Details of Materials short supplied by Contractor are:

Particulars	Actual Qty executed at site	Qty to be execited as per PO	Qty short supplied and executed
Providing and fixing heavy duty aluminium armored cables 1.1 KVA grade including necessary support clamps at ceiling level and connection legs complete in all respects.	17.00	60.00	-43.00
Power cable 3 core 16 Sq.mm			
Providing and fixing heavy duty aluminium armored cables 1.1 KVA grade including necessary support clamps at ceiling level and connection legs complete in all respects. Power cable 3 core 70 Sq.mm	73.20	75.00	-1.80
G.I. earthing wire 8 gauge from all motor and M.C.C panel to be connected in as approved manner to the general earthing system complete.	33.00	100.00	-67.00
Providing earthing station for pumps and M.C.C panel including excavation, C.I. manhole cover and frame complete as per specifications and I.E. rules.	-	1.00	-1.00

Providing and fixing M.S. slotted cable tray supported from ceiling at intervals of 60cms on both ends including cable clips with nuts and bolts welding of support rods with ceiling inserts or through dash fasteners cutting and making good complete. 300 mm wide	12.30	30.00	-17.70
Providing and fixing M.S. slotted cable tray supported from ceiling at intervals of 60cms on both ends including cable clips with nuts and bolts welding of support rods with ceiling inserts or through dash fasteners cutting and making good complete.	20.00	30.00	-10.00
150 mm wide Providing and fixing Copper Earthing strip of Size 25 x 3mm for higher size motors and MCC panels to be connected in as approved manner to the general earthing system complete.	-	120.00	-120.00
Providing, laying on steel supports, jointing and testing of Mild Steel Black Pipe (IS: 1239 Part-1) Medium class including cutting, welding/screwing etc. and providing all fittings viz. Flanges. Bends,Tees, Elbow, Reducers, Clamps. Hangers etc. including cutting holes and chases in brick or RCC walls/slabs and making good the same to the approval of engineer/consultant complete including painting with one coat of primer and two or more coats of enamel paint of approved make and shade including steel work. Note : All pipe should be proper welded 65 mm dia pipe	3.50	12.00	-8.50
Providing, laying on steel supports, jointing and testing of Mild Steel Black Pipe (IS: 1239 Part-1) Medium class including cutting, welding/screwing etc. and providing all fittings viz. Flanges. Bends,Tees, Elbow, Reducers, Clamps. Hangers etc. including cutting holes and chases in brick or RCC walls/slabs and making good the same to the approval of engineer/consultant complete including painting with one coat of primer and two or more coats of enamel paint of approved make and shade including steel work. Note : All pipe should be proper welded	4.68	12.00	-7.32
80 mm dia pipe			
Providing, laying on steel supports, jointing and testing of Mild Steel Black Pipe (IS: 1239 Part-1) Medium class including cutting, welding/screwing etc. and providing all fittings viz. Flanges. Bends,Tees, Elbow, Reducers, Clamps. Hangers etc. including cutting holes and chases in brick or RCC walls/slabs and making good the same to the approval of engineer/consultant complete including painting with one coat of primer and two or more coats of enamel paint of approved make and shade including steel work. Note : All pipe should be proper welded 200 mm dia pipe	18.00	24.00	-6.00
Providing and fixing C.I double flanged horizontal/vertical type non- return valve including nuts, bolts, 3mm thick rubber insertions complete to I.S:5312, Part-I, swing type, class PN 1.6.	-	2.00	-2.00
100 mm dia pipe providing & fixing standard type pressure switches to operate /stop fire	4.00	10.00	-6.00
pumps as per requirement with complete required accessories . Providing and fixing MS class C diesel engine exhaust pipe (including all fitting clamps steel support) of suitable dia for the engine. The pipe shall be provided with 12mm thick supercera ceramic fire rope.	37.80	60.00	-22.20
Providing and fixing MS black pipes as per IS 1239 (Part I) MEDIUM Class including cutting, welding etc. complete with fittings viz Tees, Elbows, Bends, flanges, reducer, clamps, hanger etc. including painting with one coat of primer and two coat of synthetic enamel paint of approved make and shade 25 mm dia	-	181.00	-181.00

Providing, laying, jointing and testing of Mild Steel black pipe (IS: 1239/IS: 3895) MEDIUM class including cutting, screwing, welding etc. complete with fitting viz. tees elbow, bends, flanges, reducers. etc including excavation in all kind of soil, refilling, ramming, shoring, removing the excavated surplus material, providing adequate support to the pipe and making good the same. Providing anti-corrosive treatment (coating and wrapping) with 4 mm thick tape and holiday test check as per IS: 10221 complete as required. Note : All the Pipes shall be proper welded.	849.65	900.00	-50.35
Providing, laying, jointing and testing of Mild Steel black pipe (IS: 1239/IS: 3895) MEDIUM class including cutting, screwing, welding etc. complete with fitting viz. tees elbow, bends, flanges, reducers. etc including excavation in all kind of soil, refilling, ramming,shoring, removing the excavated surplus material, providing adequate support to the pipe and making good the same. Providing anti-corrosive treatment (coating and wrapping) with 4 mm thick tape and holiday test check as per IS: 10221 complete as required. Note : All the Pipes shall be proper welded. 80 mm dia		100.00	-84.90
Providing and fixing butterfly valves, wafer end type class PN 1.6 as per I.S:13095 - 1991, includingb lever key and necessary nuts, bolts, gaskets etc. complete	55.00	60.00	-5.00
80 mm dia Providing, fixing, testing and commissioning of Single headed stainless steel, ISI marked oblique pattern hydrant landing valve Type 'A' with 80mm dia flanged inlet & 63mm dia instanteous type female outlet complete with gunmetal cap and chain, twist release type lug and all accessories as per (IS : 5290:1983)		201.00	-3.00
Providing and fixing standard short size Stainless steel branch pipe with Stainless steel nozzle 20mm nominal bore outlet with standard instantaneous type 63mm dia coupling in all respects.	198.00	201.00	-3.00
Providing and placing in proper position Controlled Percolating (CP) Hose ISI marked (IS:8423) 63 mm dia x 15 m long complete with instantaneous type gunmetal 63 mm dia, ISI marked Male & Female couplings (IS:903) bound and riveted to hose pipe with copper rivets and 1.5 mm copper wire.	394.00	402.00	-8.00
Providing, fixing, testing and commissioning of First-Aid-fire Hose reel wall mounting swinging type complete with drum, bracket, stop valve and 20mm dia. 30M long high pressure thermoplast hose reel tubing with shutoff nozzle conforming to IS: 8090 - 1976 with 5mm orifice. The hose reel shall be as per IS:884-1985.	173.00	181.00	-8.00
Proving and fixing standarad fire man's axe with heavy insulated rubber handle.( ISI marked)	173.00	181.00	-8.00
Providing and fixing pre fabricated 5 mm thick glass door (with MS frame) of size 2.1 m x 0.9 m with center opening for fire hose cabinet. Suitably marked on the outside with the letters "FIRE HOSE" including locking arrangement. All MS work to be in Red P.O. colour over appropriate primer. The above item is only for masonary fire station.		181.00	-11.00
Providing and fixing 150mm dia TWO-way fire brigade inlet connection consisting of 63mm instantaneously male coupling and a check valve protected by cap scored with a chain glass bore etc. complete with one 150mm dia valve and 150mm dia non-return valve (To be connected to Riser/RING)	1.00	2.00	-1.00

Providing and fixing 4-way fire brigade inlet connection of 4 nos. 63mn	n		
dia instantaneous type male coupling with built in check valves and 150mm dia flanged outlet complete with bolts, nuts and rubbe insertions as per I.S:904. (to be connected to static tank).	1.00	2.00	-1.00
Providing and fixing Pressure gauge with isolation cock suitable with 'U tube for maximum pressure of 7 Kg/cm2. (0-14 Kg./cm2; dial size:100 mm dia.)		181.00	-10.00
Supply, Installation, Testing & Commissioning of Mild Steel pipe (IS:1239 Part-I) medium class including cutting, welding etc. bends, elbow: reducers, clamps, hangers etc. including cutting holes in brick or RCC walls/slabs and making good the same complete including the cost o structural work for supports fabricated from standard sections o required sizes and thickness e.g. galvanised M.S. rods, angles channels slotted angle, etc., cutting to sizes, drilling welding fixing to insert plates including painting with one coat of primer and two or more coats o synthetic enamel paint of approved make and shade including all stee work. Note :All Pipes shall be welded	s C f f f , , , f	420.00	-7.80
Supply, Installation, Testing & Commissioning of Mild Steel pipe (IS:1239 Part-I) medium class including cutting, welding etc. bends, elbows reducers, clamps, hangers etc. including cutting holes in brick or RCC walls/slabs and making good the same complete including the cost o structural work for supports fabricated from standard sections o required sizes and thickness e.g. galvanised M.S. rods, angles channels slotted angle, etc., cutting to sizes, drilling welding fixing to insert plates including painting with one coat of primer and two or more coats o synthetic enamel paint of approved make and shade including all stee work. Note :All Pipes shall be welded	s c f f f s, 371.80 f	380.00	-8.20
<sup>30</sup> mm dia Supply, Installation, Testing & Commissioning of Mild Steel pipe (IS:123) Part-I) medium class including cutting, welding etc. bends, elbows reducers, clamps, hangers etc. including cutting holes in brick or RCC walls/slabs and making good the same complete including the cost o structural work for supports fabricated from standard sections o required sizes and thickness e.g. galvanised M.S. rods, angles channels slotted angle, etc., cutting to sizes, drilling welding fixing to insert plates including painting with one coat of primer and two or more coats o synthetic enamel paint of approved make and shade including all stee work. Note :All Pipes shall be welded	s c f f ;, 586.10 f	671.00	-84.90
55 mm dia Supply, Installation, Testing & Commissioning of Mild Steel pipe (IS:1239 Part-I) medium class including cutting, welding etc. bends, elbow: reducers, clamps, hangers etc. including cutting holes in brick or RCC walls/slabs and making good the same complete including the cost o structural work for supports fabricated from standard sections o required sizes and thickness e.g. galvanised M.S. rods, angles channels slotted angle, etc., cutting to sizes, drilling welding fixing to insert plates including painting with one coat of primer and two or more coats o synthetic enamel paint of approved make and shade including all stee work. Note :All Pipes shall be welded 25 mm dia	s C f f f, 5,988.75 f	6,000.00	-11.25
Providing, laying, jointing and testing of Mild Steel black pipe (IS 1239/IS: 3895) medium class including cutting, screwing, welding etc complete with fitting viz. tees elbow, bends, flanges, reducers. et including excavation in all kind of soil, refilling, ramming, shoring removing the excavated surplus material, providing adequate support to the pipe and making good the same. Providing anti-corrosive treatmen (coating and wrapping) with 3 mm thick tape and holiday test check as per IS: 10221 complete as required. Note : All the Pipes shall be prope welded	 c g, b t - s	10.00	-10.00
150 mm dia	e		

1.00	2.00	-1.00
-	1.00	-1.00
-	1,000.00	-1,000.00
-	5.00	-5.00
142.00	170.00	-28.00
142.00	170.00	-28.00
142.00	225.00	-83.00
142.00	225.00	-83.00
-	135.00	-135.00
5.00	9.00	-4.00
-	2,000.00	-2,000.00
	1.00 - - 142.00 142.00 142.00 142.00 - -	1.00       2.00         .       1.00         .       1.00         .       1,000.00         .       1,000.00         .       5.00         142.00       170.00         142.00       170.00         142.00       225.00         142.00       225.00         142.00       9.00

# Details of Material having discrepancy between Quantity supplied and executed:

S. No.	Particulars	<b>Qty Supplied</b>	Qty Installed	Qty Tested	<b>Qty Commissioned</b>	Remarks
1	Providing and fixing MS black pipes as per IS 1239 (Part I) MEDIUM Class including cutting, welding etc. complete with fittings viz Tees, Elbows, Bends, flanges, reducer, clamps, hanger etc. including painting with one coat of primer and two coat of synthetic enamel paint of approved make and shade 150 mm dia		2227.41	2227.41	2728.2	Qty Commissioned is more than Qty exected at site
2	Providing and fixing butterfly valves, wafer end type class PN 1.6 as per I.S:13095 - 1991, includingb lever key and necessary nuts, bolts, gaskets etc. complete 80 mm dia		55	55	55	Qty Supplied is more than Qty installed, tested & Commissioned
3	Providing, fixing, testing and commissioning of Single headed stainless steel, ISI marked oblique pattern hydrant landing valve Type 'A' with 80mm dia flanged inlet & 63mm dia instanteous type female outlet complete with gunmetal cap and chain, twist release type lug and all accessories as per (IS : 5290:1983)	201	198	198	198	Qty Supplied is more than Qty installed, tested & Commissioned

	Providing and fixing standard short size Stainless steel branch pipe with	200	108	108	109	Qty Supplied is more than Q
	Stainless steel nozzle 20mm nominal bore outlet with standard instantaneous type 63mm dia coupling in all respects.	200	198	198	198	installed, tested & Commissio
	Providing and placing in proper position Controlled Percolating (CP) Hose ISI marked (IS:8423) 63 mm dia x 15 m long complete with instantaneous type gunmetal 63 mm dia, ISI marked Male & Female couplings (IS:903) bound and riveted to hose pipe with copper rivets	400	394	394	394	Qty Supplied is more than C installed, tested & Commissic
	and 1.5 mm copper wire. Proving and fixing standarad fire man's axe with heavy insulated rubber handle.( ISI marked)	180	173	173	173	Qty Supplied is more than C installed, tested & Commissio
	Providing and fixing external fire hose box, wall mounting or free standing type, made out of fibre glass reinforced plastics of approved colour of 76.8x61.44x25.80cm (30"x24"x10") size to accommodate two 15m length of delivery hoses and a branch pipes with glass fronted double door with lock and keys and break glass recess for keys, all complete.	35	30	30	30	Qty Supplied is more than C installed, tested & Commissio
	Providing and fixing 150mm dia TWO-way fire brigade inlet connection consisting of 63mm instantaneously male coupling and a check valve protected by cap scored with a chain glass bore etc. complete with one 150mm dia valve and 150mm dia non-return valve (To be connected to Riser/RING)	2	1	1	1	Qty Supplied is more than C installed, tested & Commissic
	Providing and fixing 4-way fire brigade inlet connection of 4 nos. 63mm dia instantaneous type male coupling with built in check valves and 150mm dia flanged outlet complete with bolts, nuts and rubber insertions as per I.S:904. (to be connected to static tank).	2	1	1	1	Qty Supplied is more than ( installed, tested & Commissio
	Providing and fixing Pressure gauge with isolation cock suitable with 'U' tube for maximum pressure of 7 Kg/cm2. (0-14 Kg./cm2; dial size:100 mm dia.)	181	173	173	173	Qty Supplied is more than ( installed, tested & Commission
	(IS:1239 Part-I) medium class including cutting, welding etc. bends, elbows reducers, clamps, hangers etc. including cutting holes in brick or RCC walls/slabs and making good the same complete including the cost of structural work for supports fabricated from standard sections of required sizes and thickness e.g. galvanised M.S. rods, angles channels, slotted angle, etc., cutting to sizes, drilling welding fixing to insert plates, including painting with one coat of primer and two or more coats of synthetic enamel paint of approved make and shade including all steel work. Note :All Pipes shall be welded 100 mm dia	412.2	412.2	142.2	142.2	Qty Supplied & installed is m than Qty tested & Commissic
	Providing and fixing ISI marked portable fire extinguishers including intial fill & wall suspension bracket of the following type. CO2 type 4.5Kg. capacity Fire Extinguisher flat base including valve, discharge hose of not less than 10 mm dia 1 m long and complete in all respects including intial fill wall suspension bracket and conforming to IS: 15683.	165	142	142	142	Qty Supplied is more than ( installed, tested & Commissio
	Providing and fixing ISI marked portable fire extinguishers including intial fill & wall suspension bracket of the following type. Providing and fixing 4 kg capacity ABC Stored Pressure type fire extinguisher ISI marked under IS:15683 complete with imported Mono Ammonium Phosphate based ABC Powder suitable for all classes of fire.	170	142	142	142	Qty Supplied is more than ( installed, tested & Commissio
	Supply, Installation, testing & Commissioning of mannual call box for Fire Alarm System	225	142	142	142	Qty Supplied is more than 0 installed, tested & Commission
	Supply, Installation, testing & Commissioning of 4 watt speaker cum hooter with line matching transformer enclosed in a MS box mannual call box with hinged cover plate and fixing screws as per IS 2189	225	142	142	142	Qty Supplied is more than ( installed, tested & Commission
	Providing and fixing of 4 zone mannual fire alarm panel complete in all respects and confirming to the requirements of IS: 2189	65	0	0	0	Qty Supplied is more than installed, tested & Commission
	Providing and fixing of Fire Exit Signages	180	0	0	0	Qty Supplied is more than a installed, tested & Commission
				1		
17	Providing and Fixing of "DO NOT USE LIFT IN CASE OF FIRE" caution sign sheet 600mm x 100mm	180	0	0	0	Qty Supplied is more than C installed, tested & Commission

#### 3) Absence of Test Reports for Claiming Payment of Fire Fighting System

During our audit of the testing and payment process for the Fire Fighting System, a significant deficiency has been identified regarding the provision of test reports. It has come to our attention that the required test reports, which serve as essential evidence for claiming payment of testing activities conducted on the Fire Fighting System, were not provided. The absence of these critical test reports raises concerns about the quality, safety, and compliance of the constructed infrastructure.

#### 4) Penalty to be Imposed on M/s Gautam Techno Sanitation for delay in work:

As per Clause "Liquidated Damages", "The contractor shall pay as compensation of an amount equal to INR 10,000 per day of delayed period subject to maximum of 10% of contract value". As the time allowed for performance of contract was 4 months i.e., contract should have been completed up to Jun'2017, & no document regarding extension of time period presented to audit team during course of audit & Final bill was submitted by contractor on 21<sup>st</sup> Oct'2019 i.e., beyond the permissible completion date, therefore Contractor is bound to **pay for Liquidated damages that amounts to INR 23,00,000/-**, refer below attached annexure for details:

Deadline for	Work	Delay in no.	Penalty		Restriced to 10% of		
completion	Completed on	of days	per day	amount	Contract Value		
21-06-2017	21-10-2019	852	10,000.00	85,20,000.00	23,00,000.00		

# XIII. Lift Work:

This comprehensive audit report embarks on an insightful exploration into the installation of elevators within the prestigious Police Officer Multi State Co-operative Housing Society. The foresight of the Management Committee in envisioning and executing this vital addition to the society's infrastructure is a testament to their commitment to elevating the living standards of the residents.

As the Minutes of meetings of Board of Directors dated 16<sup>th</sup> July'2016, the chairman informed the BOD that the society has received tenders from 3 bidders for installation of 18 lifts at Sector-49, Faridabad. The Architect has checked the bids in general and particularly the technical specification of the lift quoted in all 3 bids.

Vondor	Amount p	er lift for
Vendor	13 People	8 People
Kone	22,25,000.00	20,50,000.00
Otis	22,12,000.00	19,95,000.00
Johnson	21,25,000.00	18,75,000.00

The following are the price quoted by them:

The Chairman also informed the board of Directors that in its meeting held on 8<sup>th</sup> July'16. The BOD had authorised him to negotiate the price with the aforesaid bidders with the help of Architect and accordingly the prices were negotiated with the bidders and the reduced prices are as under:

Vendor	Amount p	er lift for	Negotiated Amount per lift for				
venuor	13 People	8 People	13 People	8 People			
Kone	22,25,000.00	20,50,000.00	21,35,000.00	19,90,000.00			
Otis	22,12,000.00	19,95,000.00	21,00,000.00	19,00,000.00			
Johnson	21,25,000.00	18,75,000.00	20,90,000.00	18,40,000.00			

On 20<sup>th</sup> July'16, as per BOD minutes of meetings, After going through the details of the findings and taking into consideration the price factor, the quality and matching of our specifications of the lifts, the BOD have found that the OTIS Lift specifications meet exactly

as per our requirement and as such all the Board of Directors have finally decided the tender in favour of OTIS Elevator Company (India) ltd, despite being L2 the contract was awarded to OTIS as decided by BOD which leads to excess cash outflow.

# XIV. Fountain Work:

This comprehensive audit report embarks on a captivating exploration of the installation of a magnificent fountain within the Police Officer Multi State Co-operative Housing Society. The visionary undertaking of the Management Committee to enhance the aesthetics and ambiance of the society's common areas underscores their commitment to creating a harmonious living environment for the residents.

It has been noted that the quotes had been received from qualified vendors for Supply, Installation, Testing and Commissioning of "Diamond with Foam Jet Fountain with Filtration system" at Sector 49, Faridabad.

Quoted has been received from three vendors which are mentioned below along with their quoted price:

Vendor	13 People	Taxes & Freight	Vendor Position
Gautam Techno Sanitation	7,97,090.00	GST & Freight included	L3
		1.) GST excuded	
OASES water care	2,59,400.00	2.) Freight included	L1
ENKI Water & Environment Co.	5,19,746.00	GST & Freight excluded	L2

The BOD had decided to negotiate the price with all the above three vendors and give the work order to the lowest bidder. Accordingly the price was negotiated with all the bidders and only M/s OASES water care had agreed to reduce the price after allowing a discount of 15% which reduces the contract value from INR 2,59,400/- to INR 2,20,490/- (excl. GST) which makes him L1 and accordingly it was decided to award the work order to them with 25% advance for installation of Fountain in Faridabad Project.

# XV. Solar Power Generation System:

# A. Background:

This audit report embarks on an enlightening journey to explore the installation of a solar power generation system within the prestigious Police Officer Multi State Co-operative Housing Society. The forward-thinking initiative of the Management Committee in harnessing renewable energy sources underscores their dedication to sustainability and the well-being of the society's residents.

# B. Tender Process:

It has been noted that the quotes had been received from qualified vendors for Supply, Installation, Testing and Commissioning of 40KW Solar Power Generation System at Sector 49, Faridabad.

Quoted has been received from four vendors which are mentioned below along with their quoted price

		SOLAR POW		ON SYSTEM.	COMP AR AT IVE ST AT EMENT
S.N	Name of Contractor	Cost	GST	Total	Term & Conditions
					Operation & Maintenance of the plant is not included in this scope.
					For Modules :
					- 90% Peak Output Warranty for first 10 years
					- 80% Peak Output Warranty for next 15 years
					- For Inverters :
					<ul> <li>5 years warranty against manufacturing defects</li> </ul>
1	M/a Dawararaan Franzi Salutiana	17 50 000	1 55 750	19,05,750	Payment Terms :
1	M/s. Powergreen Energy Solutions	17,50,000	1,55,750	19,05,750	- 30% advance along with technically clear Purchase Order
					<ul> <li>60% prior to despatch of material against proforma invoice</li> </ul>
					- 5% against Installation of Structure & Modules
					Balance 5% against Commissioning of Solar Power Plant
					Delivery & Commissioning
					Within 8 - 10 weeks from the date of receipt of technically clear PO, drawings,
					advance and availability of site for construction.
					Delivery & Installation:
					A. Delivery: 07 to 10 Days from the date of order along with advance.
					2. Warrantee:
					A. 05 years warranty for complete System.
					B. 25 years performance warranty for Solar Panels
2	M/s. Creative Systems	2160000	108000	2268000	Payment Terms:
					<ul> <li>50% along with Purchase order.</li> </ul>
					35% amount shall be released at the time of delivery
					10% after Installation of the system
					Balance 5% after handing over of the project.
					Net meter cost & other related Govt. fees will be paid by the client.
					Meter Charges additional, payable to DISCOM
					Transportation Charges are additional.
					Equipment Cost
					50% advance with PO to initiate the approval process.
					20% on Structure Dispatch
					25% on Panel Dispatch
					5% on Inverter Dispatch
					Labour Cost
					40% on Structure Erection completion
					25% on Inverter & Panel Mounting
					25% on Wiring Completion
					10% on Inverter ON
3	M/s. Geo Power	1480000	131720	1611720	Solar Inverter Exclusive 7 Years from Manufacturer
					Solar PV Panel 27 Years from Vikram Solar
					ACDB & DCDB Comprehensive Replacement 5 Years from GeoPower
					Earthing 5 Years from GeoPower
					AC-DC Cable Comprehensive Replacement 5 Years from GeoPower
					Insurance 5 Years included
					Service Support
					& AMC
					Comprehensive Service support for breakdown for 5 Years
					RMS One time Configuration Included. Support @chargeable basis if
					WIFI connection error at client end.
					Maintenance Quarterly maintenance visit for general plant health check
					Freight and Insurance : Excluding
					Product Warranty : 12years on SolarEdge inverter AND 5yea of SMA Solid Q
					,with "25 years for
					linear power warranty" on solar modules as per company policy.
					Service Warranty : 1 year
					Validity : 15 days from the date mentioned herein.
					Payment Terms : All payments are made through DD/Cheques payable at par of
					current date.
					* 50% Advance along with confirmed order.
4	M/s. Alpine Energies	1517000	135013	1652013	* 50% before dispatch of material.
					Taxes and Duties: The offer is Inclusive of GST @ 5% as mentioned in above price
					schedule. Please note that the
					rates quoted above are subject to the Purchase Order being issued to us and not as
					per Work order. However, rate prevalent at
					time of dispatch will be finally applicable, governed by the DVAT or GST Act / other
					taxations governed by the central / state
					authorities. Any other or additional taxes / Work Contract Tax payable will be extra
					to customer's account.
L		I	I	L	

Further it has been noted that no record regarding negotiation with vendors other than selected vendor i.e., M/s Alpine Energies is available with the society, however, Revised/Negotiated Tender Amount after Final Negotiation is INR 16,52,013/- (post inclusion of freight & Insurance) and hence, contract has been awarded to them.

# C. Observations:

### 1) Lack of Documentation for Negotiations with Non-Selected Vendors in Vendor Selection Process:

During our review of the vendor selection process for implementation of Solar Power Generation System project within the premises of the Police Officers Multi-state Cooperative Housing Society conducted through the tendering procedure, we noted that no documented records were provided pertaining to the negotiation process with vendors other than the selected vendor. The absence of such documentation limits the transparency and accountability of the vendor selection process and its associated negotiations.

### Impact of such negligence may result in following:

- Without documented negotiations and evaluations of non-selected vendors, there is a risk that potentially beneficial alternatives may not have been thoroughly considered. This could result in missed opportunities for cost savings, quality improvement, or value-added services.
- The absence of documentation impedes the audit trail for vendor selection, making it challenging to assess whether the selection aligns with the Standardized procurement policies and guidelines.

# XVI. <u>LED Lights:</u>

# I. <u>Background:</u>

This audit report embarks on an illuminating exploration of the installation of LED lights within the Police Officers Multi-State Co-operative Housing Society. The visionary pursuit of the Management Committee to upgrade lighting infrastructure signifies their commitment to energy efficiency, sustainability, and enhancing the residents' quality of life.

# Paul Enterprises:

### II. Observation:

### Lack of Formal Contract and Work Order for Vendor Payment:

During our audit of the procurement and payment process for LED Lights project, a significant concern has been identified regarding the lack of a formal contract and work order for Paul Enterprises who was awarded the contract based solely on their quote. It has

come to our attention that payments have been released to the vendor against the Incoice no. 26 & 47 dated 22<sup>nd</sup> Aug'19 & 22<sup>nd</sup> Aug'2020 for INR 1,06,908/- & INR 41,772/- without the establishment of a formal contractual agreement. This deficiency raises serious concerns about contractual integrity, financial accountability, and potential risks to the project.

# Tredava Sourcing & Trading:

In the course of our comprehensive audit of LED Lights work conducted for Police Officer Multi-State Co-operative Housing Society Ltd., we examined the vendor selection process employed for employing M/s Tredava Sourcing & Trading in 2020. Our evaluation focused on the methods adopted for vendor selection and the subsequent awarding of contracts. Notably, our observation reveals that the traditional competitive tender process was not employed in this instance, and the decision to award the contract was made on a single vendor basis.

It has been noted that Contract Amount quoted by M/s Tredava Sourcing & Trading is INR 18,800/- (dated 13<sup>th</sup> Jun'2020), INR 37,600/- (dated 22<sup>nd</sup> Jun'2020) & INR 64,500/- (dated 24<sup>th</sup> Jun'2020) and as this is a single vendor contract hence, contract has been awarded to the respective vendors.

### III. Drawbacks in Vendor Selection and Contract Awarding:

Absence of Tender Process for Vendor Selection and Single Vendor Contract Award:

During our audit of the vendor selection process for Security System, a significant observation has come to light regarding the absence of a formal tender process. Instead, the contract has been awarded on a single vendor basis. This approach departs from established procurement practices and raises concerns about transparency, and competition in the selection of vendors.

Impact of absence of a formal tender process leads to:

- Lack of Competitive Bidding: The absence of a tender process means that multiple vendors were not provided an equal opportunity to compete for the contract. This raises doubts about whether the selected vendor truly offers the best value for the project in terms of cost, quality, and expertise.
- **Transparency and Accountability:** The absence of a competitive bidding process diminishes the transparency and accountability of the vendor selection
- **Risk of Higher Costs:** Without a competitive bidding process, there is a risk that the project might not achieve optimal cost savings. A lack of market benchmarking could lead to higher costs compared to what might have been achieved through competitive bids.

### XVIII. <u>Summary of Total Loss:</u>

Total loss suffered by Society is as under:

Sr. No.	Nature of Work	Particulars	Amount
1	Civil	Extra payment of Additional area charged by NG Construction	2,26,95,275
2	Civil	Excess payment made to NG Construction on account of service tax on FOC material	2,39,93,772
3	Civil	Excess payment made to NG Construction on account of Construction of boundary wall	3,84,54,603
4	Civil	Excess Area Claimed Leading to Excessive Cash Outflow Compared to Work Order area	16,92,97,431
5	Civil	Claiming Non-Contract Items Without any Contract, Leading to Excessive Cash Outflow to Contractor	1,89,25,810
6	Civil	Excess Provision of Cement Bags to Contractor Resulting in Excessive Cash Outflow	81,92,744
7	Civil	Excess Provision of Steel to Contractor Resulting in Excessive Cash Outflow	9,31,41,099
8	Civil	Excess amount charged by Contractor	22,00,000
9	Civil	Penalty to be Imposed on NG Constructions for delay in work	1,73,50,000
10	Civil	Unauthorized Alteration of Escalation Formula Leading to Excessive Price Claim	2,95,86,295
11	Electrical Sub Station	Excessive Quantity Claimed in Running Bills Beyond Purchase Order Specifications	18,99,190
12	Electrical Sub Station	Penalty to be Imposed on M/s Radius Synergies International Pvt. Ltd. For delay in work	26,40,020
13	External Electrical Work- 11KV HT Cable Laying Work	Penalty to be Imposed on M/s R. K. Industries for delay in work	5,10,020
14	Security System	Penalty to be Imposed on M/s Radius Infotech Pvt. Ltd. For delay in work	88,15,000
15	Smart Meter and Electricity meter	Penalty to be Imposed on M/s Radius Synergies International Pvt. Ltd. For delay in work	69,00,000
16	Fire Fighting System	Excessive Quantity Claimed in Running Bills Beyond Purchase Order Specifications	26,48,399
17	Fire Fighting System	Penalty to be Imposed on M/s Gautam Techno Sanitation for delay in work	23,00,000
		TOTAL LOSS TO SOCIETY	44,95,49,659

**Footnote:** As per layman's interpretation of contractual terms of the contract executed between Police Officer Multi State Co-operative Housing Society & M/s N G Constrictions for construction of 616 Residential Apartments of four categories and allied services and common facilities like Community Centre, Shopping complex, 110 EWS flats, Primary and Nursery school, Electric Substation, Stilted areas, Podium Basement and Development works etc at 11.3875 acres of land at village Dabua and Nawada koh, Sector 49, Faridabad, Haryana. As per Clause 36, "Variation in Prices" of contract M/s N G Constrctions is obliged to pay the escalation amount which were paid by Police Officer Multi State Co-operative Housing Society in good faith during construction phase & the final escalation amount due on the basis of our calculations, total amount to be recovered by society due to in-accurate escalation formula is INR 25,07,21,372.66/- on account of escalation (refer below attached annexure for details):

E scalatio n Bill no	Tender Opening Date	Agreement Date	Date of actual star of work	Escalation Payable from	Quarter Covered	Invoice during Quarter	Gross Work done	W (ass of work done)	La (Basic Labour Rate on the date of rec. of tender)	Lb (Basic Labour Rate on the date of commencement of period of reckoning)	Escalation in labour cost W*25% *(La-Lb)/Lb	Ma (All India wholesale Price Index at start of work)	Mb (Average of All India wholesale Price Index for all the coomodities of rel. quarter)	Escalation in Material cost W*75% *(Ma-Mb)/Mb	Escalation Cost calculated as per Contract (which was to be recovered from contractor)	Escalation claimed in bill (paid in good faith, now to be repay by contractor)	Escalation amount to be received by POMSCHS
RA-01 RA-01 RA-01 RA-01 RA-01	12/05/2013 12/05/2013 12/05/2013	21/05/2013 21/05/2013 21/05/2013	8 01/11/201 8 01/11/201 8 01/11/201	8 01/11/2014 8 01/11/2014 8 01/11/2014	Nov'14-Jan'15 Nov'14-Jan'15 Nov'14-Jan'15 Nov'14-Jan'15 Nov'14-Jan'15	RA-15 RA-16 RA-17		12,17,90,737.89	205.44	216.90 Subtotal	-16,08,715.83	180.41	192.40	-56,90,840.45	-72,99,556.29	80,98,109.00	1,53,97,665.29
RA-02	***				Feb'15-Apr'15	B	48,54,223.95	-		Subtotal		1	-	1			1,53,97,665.29
RA-02 RA-02 RA-02 RA-02 RA-02	12/05/2013 12/05/2013 12/05/2013	21/05/2013 21/05/2013 21/05/2013	01/11/2013 01/11/2013 01/11/2013	8 01/11/2014 8 01/11/2014 8 01/11/2014	Feb'15-Apr'15 Feb'15-Apr'15 Feb'15-Apr'15 Feb'15-Apr'15	RA-19 RA-20 RA-21	2,93,94,403.00 2,80,14,791.00 1,27,56,408.00	10,98,82,325.36	205.44		-22,26,547.39	180.41	194.26	-58,76,957.53	-81,03,504.92	87,49,646.00	1,68,53,150.92
RA-03	13/05/2012	21/05/2012	01/11/201	01/11/2014	March 15 Inc. 11	0.6.22	4 38 05 604 00		1	Subtotal	1		1	1			1,68,53,150.92
RA-03	12/05/2013	21/05/2013	01/11/2013	8 01/11/2014	May'15-Jul'15 May'15-Jul'15 May'15-Jul'15	RA-24	4,28,05,694.00 4,43,39,180.00 4,65,29,639.00	11,36,23,336.05	205.44	223.56 Subtotal	-23,02,351.55	180.41	197.45	-73,52,983.98	-96,55,335.53	1,06,85,699.00	2,03,41,034.53 2,03,41,034.53
RA-04 RA-04 RA-04	12/05/2013	21/05/2013	01/11/201	8 01/11/2014	Aug'15-Oct'15	RA-27	3,20,92,579.00 3,37,49,896.00 4,47,50,124.00	9,40,03,709.15	205.44	226.40	-21,75,704.22	180.41	196.74	-58,51,938.74	-80,27,642.96	87,79,313.00	1,68,06,955.96
										Subtotal		r					1,68,06,955.96
RA-05 RA-05 RA-05	12/05/2013	21/05/2013	01/11/2013	01/11/2014	Nov'15-Jan'16	RA-30	2,07,78,503.00 2,48,21,023.00 2,71,53,674.00	6,18,40,220.00	205.44		-45,94,488.65	180.41	194.22	-32,98,597.90	-78,93,086.55	1,10,96,627.00	1,89,89,713.55
RA-06	12/05/2012	21/05/2012	01/11/201	01/11/2014	Seb'16-April 6	RA-22	2,74,57,040.00			Subtotal	1						1,89,89,713.55
RA-06	12/05/2013	21/05/2013	01/11/201	8 01/11/2014	Feb'16-Apr'16	RA-33	2,38,56,118.00 3,05,89,084.00		205.44	306.77 Subtotal	-57,48,835.49	180.41	194.04	-36,68,422.14	-94,17,257.63	1,33,10,442.00	2,27,27,699.63
RA-07	12/05/2013	21/05/2013	01/11/201	01/11/2014	May'16-Jul'16	RA-35	1,91,41,470.00	1	1	Subcotai	T	1	[	1	[		2,21,21,055.05
RA-07	12/05/2013	21/05/2013	01/11/2013	8 01/11/2014	May'16-Jul'16	RA-36		5,53,69,093.50	205.44	306.77 Subtotal	-45,72,277.48	180.41	196.74	-34,46,848.49	-80,19,125.97	1,05,86,324.00	1,86,05,449.97 1,86,05,449.97
RA-08 RA-08 RA-08	12/05/2013	21/05/2013	01/11/201	01/11/2014	Aug'16-Oct'16	RA-39	2,02,03,364.00 1,72,10,684.00 1,48,37,560.00	4,44,13,866.80	205.44	306.77	-36,67,615.09	180.41	196.74	-27,64,861.41	-64,32,476.50	84,91,734.00	1,49,24,210.50
										Subtotal							1,49,24,210.50
							2,25,15,019.00 2,04,05,025.11	3,64,82,037.49	205.44	306.77 Subtotal	-30,12,619.27	180.41	196.74	-22,71,087.50	-52,83,706.77	77,75,653.00	1,30,59,359.77 1,30,59,359.77
RA-10 RA-10 RA-10	12/05/2013	21/05/2013	01/11/2013	8 01/11/2014	Feb'17-Apr'17 Feb'17-Apr'17 Feb'17-Apr'17	RA-43		4,95,74,834.66	205.44	306.77	-40,93,798.28	180.41	196.74	-30,86,143.07	-71,79,941.35	86,77,936.00	1,58,57,877.35
										Subtotal	1						1,58,57,877.35
RA-11 RA-11	12/05/2013	21/05/2013	01/11/201	01/11/2014	May'17-Jun'17	RA-46	2,66,99,528.00 3,54,74,779.00	5,28,48,160.95	205.44	306.77 Subtotal	-43,64,103.52	180.41	196.74	-32,89,914.87	-76,54,018.39	1,01,04,333.00	1,77,58,351.39 1,77,58,351.39
RA-12 RA-12 RA-12	12/05/2013	21/05/2013	01/11/2013	01/11/2014	Jul 17-Oct 17 Jul 17-Oct 17 Jul 17-Oct 17	RA-48			205.44	306.77	-39,73,155.22	180.41	196.74	-29,95,195.32	-69,68,350.55	91,99,160.00	1,61,67,510.55
RA-13 RA-13 RA-13 RA-13	12/05/2013 12/05/2013	21/05/2013 21/05/2013	01/11/201 01/11/201	01/11/2014 01/11/2014	Nov'17-Apr'18 Nov'17-Apr'18	RA-51 RA-52	1,55,72,165.00 2,01,36,348.00 1,69,74,378.00 1,69,37,498.00	5,91,77,330.65	205.44		-48,86,754.67	180.41	196.74	-36,83,919.68	-85,70,674.34	1,13,14,442.00	1,61,67,510.55 1,98,85,116.34
RA-14 RA-14	12/05/2013 12/05/2013	21/05/2013 21/05/2013	01/11/201 01/11/201	01/11/2014 01/11/2014	May'18-Nov'18 May'18-Nov'18	RA-54 RA-55	1,49,34,889.00 1,11,29,535.00	2,21,54,760.40	205.44	Subtotal 306.77	-18,29,499.19	180.41	196.74	-13,79,182.82	-32,08,682.01	42,35,891.00	1,98,85,116.34 74,44,573.01
RA-15 RA-15					Dec'18-july'19 Dec'18-july'19			1,79,72,586.15	205.44	Subtotal 306.77	-14,84,142.97	180.41	196.74	-11,18,833.23	-26,02,976.20	34,36,279.00	74,44,573.01 60,39,255.20
	12/05/2013	21/05/2013	01/11/2013	8 01/11/2014	Aug'19-Aug'20 Aug'19-Aug'20 Aug'19-Aug'20	RA-59	46,66,027.00 45,19,821.00 30,27,157.00	1,03,81,054.25	205.44	Subtotal 306.77	-8,57,248.29	180.41	196.74	-6,46,243.58	-15,03,491.87	19,84,811.00	60,39,255.20 34,88,302.87
			1							Subtotal			•	÷			34,88,302.87
RA-17 RA-17	12/05/2013	21/05/2013	01/11/201	01/11/2014	Sept'20-Feb'21 Sept'20-Feb'21	RA-62	76,33,701.00 52,32,066.00	1,09,35,901.95	205.44	306.77 Subtotal	-9,03,066.58	180.41	196.74	-6,80,784.08	-15,83,850.66	20,90,983.00	36,74,833.66 36,74,833.66
RA-18 RA-18	12/05/2013 12/05/2013	21/05/2013 21/05/2013	01/11/201	01/11/2014 01/11/2014	Mar'21-Mar'22 Mar'21-Mar'22	RA-63 RA-64	37,83,292.00 56,70,853.00	80,36,023.25	205.44	306.77 Subtotal	-6,63,599.96	180.41	196.74	-5,00,260.22	-11,63,860.17	15,36,452.00	27,00,312.17 27,00,312.17
	Subtral Total Exercise Exalistico calande by vendor											25,07,21,372.66					