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SHIVSHAHI PUNARVASAN PRAKALP LTD.

CIN: 70200MH1998SGC116664

No.SPPL/MD/172/2016, Date: 10/02/2016

**RFI CUM RFP
FOR
CONSTRUCTION OF AFFORDABLE HOUSING TENEMENTS
UNDER
SLUM REHABILITATION SCHEMES
IN
GREATER MUMBAI**

SPPL intends to provide Institutional Support by way of greater access to finance for promotion of Private Sector participation in construction of Affordable Housing Tenements under Slum Rehabilitation Schemes in Greater Mumbai.

SPPL's Memorandum of Association & Articles of Association; Summary of Financial Results & Other Information are available on Website of SPPL: www.sppl.biz. 'Annexure' 1 to 2 of the RFI Cum RFP with complete Information/Data relating to the Slum Rehabilitation Scheme has to be submitted online on Website of SPPL: www.sppl.biz while 'Annexure' 3 regarding specific offer for construction of Affordable Housing Tenements has to be submitted online on Website of MahaTenders: www.mahatenders.gov.in through link provided on Website of SPPL: www.sppl.biz. 'Annexure' 1 to 3 of only those Developers/ NGO's/ Slum Dwellers CHS who fulfill the Qualifying Standards & General Terms & Conditions and agree to undertake construction of Affordable Housing Tenements as per requirements specified will be considered by SPPL.

- (a) Appendix 1 : Qualifying Standards.
- (b) Appendix 2 : General Terms & Conditions.
- (c) Appendix 3 : Scope of Work
- (d) Appendix 4 : Technical Specifications
- (e) Appendix 5 : Construction Finance
- (f) Appendix 6 : Selection Criteria

SPPL accordingly invites Developers/NGO's/ Slum Dwellers CHS interested in construction of Affordable Housing Tenements under Slum Rehabilitation Schemes in Greater Mumbai to respond to its RFI Cum RFP. 'Annexure' 1 to 3 of the RFI Cum RFP can be viewed & downloaded from 11.00 am on 15th February, 2016 & submitted online from 11.00 am on 22nd February, 2016 upto 3.00 pm on 7th March, 2016. Copies of 'Annexure' 1 to 3 with requisite attachments such as Financial Statements; Site Photographs; Original/ Revised LoI; Layout & Building Plans & Other Documents also have to be submitted in Sealed Envelopes on or before 3.00 pm on 7th March, 2016 at the following address: SPPL, 5th Floor, Grihanirman Bhavan, Kalanagar, Bandra (E), Mumbai-400 051.

SPPL will open 'Annexure' 1 & 2 at 5.00 pm on 7th March 2016 while 'Annexure' 3 will be opened on a later date to be declared on Website of SPPL: www.sppl.biz.

SPPL reserves all rights to accept or reject all or any of the offers received in response to its RFI Cum RFP from Developers/ NGO's/Slum Dwellers CHS for construction of Affordable Housing Tenements under Slum Rehabilitation Schemes in Greater Mumbai.

**MUMBAI
10TH FEBRUARY, 2016**

**MANAGING DIRECTOR
SPPL**

APPENDIX – 1
QUALIFYING STANDARDS

- (a) Developers who offer to construct Affordable Housing Tenements should have completed with OC atleast 100 Rehabilitation Tenements under any 1 Slum Rehabilitation Scheme or atleast 60 Rehabilitation Tenements each under any 2 Slum Rehabilitation Schemes or atleast 50 Rehabilitation Tenements each under any 3 Slum Rehabilitation Schemes during last 3 years. No criteria of past experience is prescribed for NGO's/Slum Dwellers CHS's.
- (b) Developers who offer to construct Affordable Housing Tenements should have Gross Turnover of atleast Rs. 25 Crores during last 3 years and Net Worth of atleast Rs. 2.5 Crores as on 31/12/2015. No criteria of Gross Turnover & Net Worth is prescribed for NGO's/Slum Dwellers CHS's.
- (c) Developers/NGO's/ Slum Dwellers CHS who offer to construct Affordable Housing Tenements should have completely vacated substantial portion of the Slum Plot to enable early commencement of work of Rehabilitation Buildings and Sale Buildings.
- (d) Developers/NGO's/ Slum Dwellers CHS who offer to construct Affordable Housing Tenements should not have created any Third Party Interests to the extent of Sale Component required for Affordable Housing Tenements and in addition must offer in FSI form equivalent In Situ Built Up Area from their Sale Component as 'Collateral Security' & execute Mortgage Deed in favour of SPPL.

- (e) Developers/ NGO's /Slum Dwellers CHS will be required to initially deploy from their own resources atleast 10.00% of 'Construction Finance' as their 'Seed Investment' and commence construction of Affordable Housing Tenements.
- (f) Developers/NGO's/Slum Dwellers CHS who offer to construct Affordable Housing Tenements should not have Directors/Partners/Trustees/ Promoters who have been convicted for Criminal Offences by Courts of Law.

APPENDIX - 2
GENERAL TERMS & CONDITIONS

- (a) Affordable Housing Tenements have to be constructed by Developers/NGO's/ Slum Dwellers CHS as Primary Charge on entitlement of Sale Component & must be provided in Green Buildings confirming to standards not below 'GRIHA- Two Stars'.
- (b) Affordable Housing Tenements of 30 Sqr.Mts. Carpet Area have to be provided by Developers/NGO's/Slum Dwellers CHS in 'Independent Wing' of any Sale Building or as standalone Sale Building and not as part of any Rehabilitation Buildings or Composite Buildings.
- (c) Affordable Housing Tenements have to be offered by Developers/NGO's/Slum Dwellers CHS only in Standard Lots of 50-60 or 100-110 or 150-160 or 200-210 or 250-260 tenements in Green Buildings with Maximum Height of 70 Meters.
- (d) Affordable Housing Tenements have to be completed with OC by Developers/NGO's/ Slum Dwellers CHS in timebound manner & within 12 months if offer is for 50-60 tenements; 18 months if offer is for 100-110 tenements; 24 months if offer is for 150-160 tenements; 30 months if offer is for 200-210 tenements & 36 months if offer is for 250-260 tenements from date of CC for Plinth Level
- (e) Affordable Housing Tenements of 30 Sqr.Mts. Carpet Area have to be constructed by Developers/NGO's/Slum Dwellers CHS strictly as per Floor Plans & Green Buildings approved by concerned authorities of SPPL.

APPENDIX – 3
SCOPE OF WORK

- (a) Developer/NGO/Slum Dwellers CHS shall continue to be responsible for obtaining Revised LOI's/Layout Plans and all Building Permissions such as IOA's; CC's; BCC; OC etc relating to construction of Affordable Housing Tenements.
- (b) Developer/ NGO/ Slum Dwellers CHS will have to carryout joint demarcation with concerned authorities of SPPL of identified area within approved Layout Plan which is proposed for construction of Affordable Housing Tenements.
- (c) Developer/NGO/Slum Dwellers CHS shall continue to be responsible for payment of all Premiums/Deposits/ Charges etc. leviable under M.R. & T.P.; 1966 & DCR-1991 for Greater Mumbai by Planning Authorities/ Special Planning Authorities and Statutory Authorities under Maharashtra Slum Areas (I.C. & R.) Act, 1971 regarding construction of Affordable Housing Tenements.
- (d) Developer/NGO/Slum Dwellers CHS will have to plan & design the Affordable Housing Tenements & Green Buildings in conformity with the provisions of M.R. & T.P., 1966 & DCR-1991 for Greater Mumbai & take into account planning requirements such as for Open Spaces; Parking Areas; Solid Waste Management; Rain Water Harvesting; Solar Energy & Fire Fighting System.
- (e) Developer/NGO/Slum Dwellers CHS shall be required to maintain strict Quality Standards during construction of Affordable Housing Tenements as per the Technical Specifications stipulated by SPPL and ensure that on site work is carried out under supervision of PMC appointed by SPPL.

APPENDIX – 4
TECHNICAL SPECIFICATIONS

(a) Mandatory Requirements for Affordable Housing Buildings/Wings :

Developers/NGO's/Slum Dwellers CHS have to undertake construction of Affordable Housing Tenements strictly as per the following Technical Specifications. Technical Specifications enlisted below are not exhaustive so Developers/NGO's/Slum Dwellers CHS may if required use Technical Specifications of now specified items fixed by MCGM or any department of State Government. SPPL based on the recommendations its PMC shall have right to enforce such Technical Specifications which may be reasonably required for ensuring strict Quality Standards. The Developers/NGO's/Slum Dwellers CHS must undertake to adopt immediately modifications in the IS Codes and in case any procedures are replaced by upgraded methodologies under the same or different IS Codes, such upgraded methodologies shall be forthwith made applicable to construction of Affordable Housing Tenements. The Developers/NGO's/Slum Dwellers CHS shall be bound to develop on site & off site infrastructure services will can seamlessly integrate with the development relating to Slum Rehabilitation Schemes. All off-site infrastructure services created shall be constructed as per the approvals given by respective Planning Authorities/Special Planning Authorities and/or Statutory Authorities.

(b) R.C.C. Structure :

- i) Structural Design of Concrete for the building components shall be based on LIMIT STATE METHOD.
- ii) Design of the building shall be in accordance with IS 456 -2000 & shall also be conforming to seismic resistant norms. Necessary references may be taken from IS 875 (For Load calculation), IS 1893-2000(For Seismic loads), IS 432-1982 (For MS/Tensile R/F), IS 1786-2000(For HYSD Bars), IS 4326-1976 (For Earthquake Resistant Design), IS 13920-1993(For Ductile Detailing of RCC structures subjected to seismic forces), IS 4926 (For RMC Concrete) & IS 1641(For Fire Resistance) for durability consideration.
- iii) Minimum permissible grade of Concrete to be used for this work shall be M30. Further higher grade of concrete may also be used as per actual design of the structural elements.
- iv) Corrosion resistant Steel not below the grade Fe 415 shall be used & IS 9077-1979 shall be referred for corrosion protection of Steel Reinforcement.

v) The building design shall be evaluated by duly authorized Structural Design Consultant. While certifying Stability Certificate, the consultant has to ensure that it is designed as per the provisions of NBC-2005(National Building code) as well as earthquake resistant building code which is required under the provisions of NDMA (National Disaster Management Authority) guidelines.

(c) Anti-termite Treatment :

Anti termite treatment conforming to IS: 6313 Part II-1981 shall be carried out for the protection of buildings from attack by subterranean termites and to create a chemical barrier against attack by subterranean termites.

(d) Masonry work - External Walls :

i) 230mm thick burnt clay bricks conforming to IS 1077 in cement mortar 1:5

OR

ii) 150mm thick solid concrete blocks having minimum average compressive strength of 50 kg/sqcm conforming to IS:2185 Part-I in cement mortar 1:5

OR

iii) 200mm thick Autoclaved Aerated Cellular concrete blocks (AAC Blocks) having minimum average compressive strength of 50 Kg/sqcm conforming to IS: 2185 Part-3 in cement mortar 1:5 and the workmanship shall conform to IS: 6041. Mortar for masonry work shall consist of cement & sand and shall be prepared as per IS: 2250. Sand for masonry mortar shall conforming to IS:2116. The thickness of both horizontal & vertical joints shall not be more than 10 mm.

(e) Masonry work - Internal Partition Walls :

115mm thick burnt clay bricks conforming to IS 1077 in cement mortar 1:4

OR

100mm thick solid concrete blocks having minimum average compressive strength of 50 kg/sqcm conforming to IS:2185 Part-I in cement mortar 1:4

OR

100mm thick Autoclaved Aerated Cellular concrete blocks (AAC Blocks) having minimum average compressive strength of 50 Kg/sqcm conforming to IS: 2185 Part-3 in cement mortar 1:4 Mortar for masonry work shall consist of cement & sand and shall be prepared as per IS: 2250. Sand for masonry mortar shall conforming to IS:2116. The thickness of both horizontal & vertical joints shall not be more than 10 mm.

(f) Plastering :

- i) Internal plastering to vertical surfaces:

Cement plaster 12mm thick in cement mortar 1:4 with POP punning of 6mm thick

OR

12mm thick gypsum plaster (manufactured by saint Gobain - Gyproc /USG or approved equivalent)

- ii) Internal plastering to ceilings:

Cement plaster 6mm thick in cement mortar 1:3 with POP punning of 3mm thick.

OR

6mm thick gypsum plaster (manufactured by saint Gobain - Gyproc /USG or approved equivalent)

- iii) External plastering to concrete / masonry surfaces:

Sand faced cement plaster 22mm thick in two coats; base coat of 15mm thick in cement mortar 1: 4 admixed with integral water proofing compound as per IS 2645 and finishing coat of 7mm thick in cement mortar 1:3

(f) Floor Finishes :

- i) Rooms:

Fully homogeneous glazed vitrified tiles of size 600 x 600 mm x 8mm to 10mm thick in cement mortar bedding of 1:4 (1 cement:4 coarse sand) and skirting of 100mm high with the same tile of floor.

- ii) WC / Bath :

Anti-skid finished ceramic tile flooring conforming to IS: 13756 (300 x 300mm x 6mm to 8mm size) in cement mortar bedding of 1:4 (1 cement : 4 coarse sand) and coloured glazed ceramic tiles (300mm x 200 mm x 6mm to 8mm) dado upto door height.

- iii) Passage & Stair Area:

16 to 18mm thick granite stone slab flooring in cement mortar 1:6 (1 cement : 6 coarse sand) bedding with 100mm high skirting same as of flooring material upto & including first floor level.

25 to 30mm thick kota stone flooring in cement mortar 1:6 (1 cement : 6 coarse sand) bedding with 100mm high skirting same as of flooring material for all floors above first floor.

The stair treads upto & including first floor shall be 16 to 18mm thick granite stone slab in single piece with rounded edge nosing and 17 to 20mm thick risers of the same stone as of treads

The stair treads for all floors above first floor shall be with 25 to 30mm thick kota stone in single piece with rounded edge nosing and 25 to 30mm thick risers of the same stone as of treads

iv) Kitchen Area

Flooring in matt/ antiskid finished ceramic tile flooring conforming to IS: 13756 (300 x 300mm x 6 to 8mm size) in cement mortar bedding of 1:4 (1 cement : 4 coarse sand) and skirting of 100mm high with the same tile of floor.

(g) Door Frame :

i) Main Door / Internal doors of rooms:

Seasoned Salwood door frames of finished size 125 mm x 65 mm

ii) Toilet / Bath / WC

17 to 20mm thick Green Marble stone door jamb and soffit in two pieces with minimum 20mm overlap to form rebate with polished & chamfered edges.

iii) Stair Doors

All enclosed staircases shall have access through self-closing doors of at least **two hour** fire resistance conforming NBC. These shall be single swing doors opening in the direction of the escape. The door shall be fitted with check action door closures.

(h) Door Shutters :

i) Main Door / Internal doors of rooms :

External grade, hot pressed solid core flush doors (35 mm thick) decorative type of exterior grade, approved based laminated on external face with heavy duty ISI marked dyed aluminium fixtures & fittings.

ii) Toilet / Bath / WC

FRP moulded 30mm thick paneled doors with heavy duty ISI marked dyed aluminium fixtures & fittings.

iii) **Stair Doors**

All enclosed staircases shall have access through self-closing doors of at least **two hour** fire resistance conforming NBC . These shall be single swing doors opening in the direction of the escape. The door shall be fitted with check action door closures.

(i) Windows & Louvers :

15 micron anodised heavy duty aluminium sliding window (3/4" series) with white/green marble (17 to 20mm thick) sub-frame and ISI marked dyed fixtures.

3/4" Louvered windows in Bath & W.C. 3/4" Series in Aluminum (15 micron anodised) over marble sub frames.

Minimum 5.5mm thick float glass of approved brands shall be used for the glazing.

(j) Painting :

i) **Internal surfaces:**

One coat of cement primer and 2 coats of Oil Bound Distemper

ii) **Doors:**

Two coats of synthetic enamel paint over a coat of wood primer

iii) **External surfaces:**

One coat of priming coat compatible for acrylic paints and 2 coats of exterior quality 100% acrylic weather shield paint.

(k) Kitchen Platform:

Polished granite stone of platform of minimum 1.80 m to 2.20 m length 0.70 m wide polished granite counter top 16 to 20mm thick with supporting kadappa stone slab below, glazed ceramic tile, dado upto beam bottom of slab above the platform, stainless steel sink 460 x 400 x 200 mm deep and white glazed ceramic tiles (300mm x 200mm X 6mm to 8mm) dado.

(l) Water-Proofing:

i) **Terrace :**

20 - 25mm thick joint less water proof protective screed in cement mortar 1:4 (1 cement : 4 coarse sand) admixed with acrylic based shrinkage compensating plasticizer and pure acrylic based polymer modified water proofing compound over average 125 mm thick brick bat coba with slope not flatter than 1:120 with china mosaic finish.

ii) Toilet / Bath / WC

Pure acrylic based polymer modified cementitious water proofing treatment and filling the sunken area with brick bats.

iii) Storage Reservoirs

a) Underground Tanks (Domestic & Fire)

Chemical impregnated box type water proofing using 20 to 25mm thick Shahabad stone shall be carried out to horizontal / vertical areas externally.

Pure acrylic based polymer modified cementitious water proofing treatment shall be carried out internally.

Provide 20 - 25mm thick joint less water proof protective screed in cement mortar 1:4 (1 cement : 4 coarse sand) admixed with acrylic based shrinkage compensating plasticizer and pure acrylic based polymer modified water proofing compound over average 125 mm thick brick bat coba with slope not flatter than 1:120 in horizontal top area.

b) Over Head Tanks

Provide 22mm thick sand faced cement plaster in two coats; base coat of 15mm thick in cement mortar 1: 4 admixed with integral water proofing compound as per IS 2645 and finishing coat of 7mm thick in cement mortar 1:3 externally.

Pure acrylic based polymer modified cementitious water proofing treatment shall be carried out internally.

20 - 25mm thick joint less water proof protective screed in cement mortar 1:4 (1 cement : 4 coarse sand) admixed with acrylic based shrinkage compensating plasticizer and pure acrylic based polymer modified water proofing compound over average 125 mm thick brick bat coba with slope not flatter than 1:120 in horizontal top area.

(m) Parapet :

Terrace Parapet should be of minimum 125 mm thick RCC / 230mm thick burnt clay brick work / 150mm thick solid cement concrete block work / 200mm thick AAC block (Conforming to clause 1.3 above) masonry of minimum 1200mm with high above the finished level minimum 100mm thick RCC M25 coping on top.

(n) Hand Railing :

Hand railing of staircase should be of minimum 100 mm thick RCC (Conforming to clause 1.1 above) of minimum 1100 mm with high above floor level. The Hand Railing of Staircase shall be finished in cement plaster of 15 mm thickness in Cement Mortar 1:4.

(o) Loft Area :

Loft Area in kitchen shall be provided as per DCR. Additional loft above W.C. & Bathroom shall be provided.

(p) Plumbing (Concealed) & Sanitary :

Plumbing & Sanitary works shall be conforming to National Building Code of India. All the Plumbing & Sanitary works must conform to the requirements of MCGM and necessary approval shall be obtained from MCGM / Local Authority without any extra cost to the SPPL. The developer shall be responsible for getting the entire installation for Water Supply, Drainage and Fire Fighting System duly approved by the Local Authorities concerned, and shall bear expenses if any, in connection with the same.

(q) Water Supply :

- i) Consumption as per relevant guidelines of Local Authorities/MCGM.
- ii) Family Size per tenement may be considered as 5.
- iii) Top of underground tank shall be 0.60 mt., above finish plot level.
- iv) Duration for availability of water for pumping shall be assumed as per relevant guidelines of local authorities in this matter - 100% stand by electric pumps shall be provided. Separate electric meter shall be provided.
- v) Water pumps shall be submersible with automatic control panel with water level indicator having 50% standby arrangement of pumps.
- vi) Water pumps shall be so designed that all the overhead tank shall be filled within 2 hours and stop with automatic sequential controller.
- vii) Power supply arrangement to the pumping station including XLPE 3.5 Core armoured cables of suitable size shall be laid from meter room with earthing arrangement.
- viii) Electric Accessory Work shall contain required switchgear, starter, and capacitor with separate metering arrangement including energy meter as per BEST/TATA POWER requirements.

- ix) Separate tested water meter with stand by water meter of ISI Mark & with Test Report, shall be provided for each underground tank. The location of water meter should be nearest to the compound wall with approval from MCGMs competent authority.
- x) Water Supply Piping System: PPRC (Polypropylene Random Co-polymer) type-3 pipes (Finolex /Astral/ Supreme) with necessary fittings and accessories of CP Brass type shall be used for water supply piping works

OR

Chlorinated Poly Vinyl Chloride (CPVC) water supply piping system (Flowguard /Astral / Supreme) with pipes as per CTs SDR -13.5 at a working pressure of 320 PSI at 23 deg C and 80 PSI at 82 deg.C, using solvent welded CPVC fittings including transition fittings with brass adapters (both Male & Female threaded) and all conforming to ASTM D-2846 with only CPVC solvent cement conforming to ASTM F-493 shall be used.

OR

G.I. pipe of 'c' class shall only be allowed for piping.

- xi) Design shall be such as to ensure equal and simultaneously flow (tolerance ± 15 min) for all tenements.
- xii) Testing of acceptance of the system as per B.I.S./M.C.G.M. requirements.
- xiii) Teflon/Synthetic tape shall be used for jointing.
- xiv) All G.I. pipes embedded in wall shall be well covered by bitumen dipped spun yarn.
- xv) At terrace level criss-crossing of pipe line shall not be permitted. All pipe lines shall run along the parapet walls.

- xvi) 50 mm dia. meter Chromium plated brass shower rose including necessary bends & sockets etc complete.
- xvii) Water taps : All water taps should be of heavy class.
- xviii) Stop cock should be provided for the wash basin and flushing tank. In addition to this stop cock should also be provided at the entry of the water supply pipe into the tenement.
- xix) Deep seal PVC nahani trap with grating shall be provided in bath area, and below kitchen sink with appropriate size.
- xx) Mildsteel ladder of 450mm width of adequate length and structural sections shall be provided to each of the overhead water storage tanks. The inclination, hand railing steps etc. shall be structurally sound and safe to climb up. The ladder shall be finished in epoxy paint over a coat of epoxy primer.

(r) Minimum Facilities:

- i) Water closet:
580 x 450mm Size Orissa type glazed earthenware water closet pan with dual flushing Cistern conforming to MCGM approval shall be used with chrome plated brass plumbing fixture including Bib Cock, angle cock, Flush cock etc,
- ii) Water Supply Pipes :
PPRC (Polypropylene Random Co-polymer) type-3 pipes (Finolex / Astra/ Supreme) with necessary fittings and accessories of CP Brass type shall be used for water supply piping works.
- iii) Wash Basin :
300mm x 450mm size white glazed earthenware wash hand basin and glazed ceramic tile dado upto 600mm height with chrome plated brass plumbing fixture including Pillar Cock, angle cock, bottle trap etc,
- iv) Plumbing fixtures & fittings in bath / toilet:
Chrome plated brass fixtures such as Basin, Bib Cock, angle cock & Shower rose, shower arm etc.
- v) Plumbing fixtures & fittings in Kitchen:
Chrome plated brass fixtures such as Bib Cock, angle cock, bottle trap etc. in Kitchen Sink.

(s) Sewerage :

- i) Sewage and Sullage collection system shall be based on IS:1742 and applicable standards for domestic drainage conforming to MCGM requirements.
- ii) Soil and waste shall be carried down in separate independently vented pipes. Two pipe drainage systems shall be adopted as per NBC (Part-IX) and applicable standards for domestic drainage conforming to MCGM requirements.
- iii) Cast Iron spun pipes of heavy quality conforming to IS - 389 for ground floor upto first inspection chamber (1st inspection chamber to 1st floor level) and for above exterior quality UPVC pipes as per IS: 4985 & IS:13592 shall be used with Epoxy joints. The pipes shall be fixed on proper MS flats brackets (50mm wide x 6 mm thick Mild steel flats) and GI 'U' clamp and nuts with , 50 mm gap from wall.
- iv) All hidden joints shall be provided with flash stripes.
- v) No joints shall be permitted in wall, slab or columns.
- vi) Rat-Guards shall be provided on the pipes.
- vii) Joints with floors/walls and fixtures shall be treated/caulked with Epoxy mortar.
- viii) Acceptance testing - smoke test.
- ix) Deep seal PVC Nahani trap below kitchen sink is compulsory. "P" type bottle trap with PVC pipe 40 mm dia for wash hand basin should be provided.
- x) Single piece PVC pipe from WC upto flushing cistern to be provided.
- xi) No combined pipe for S.W. Drains and sewerage shall be permitted.
- xii) All P & S trap shall be deep seal with seal not less than 80 mm.
- xiii) UPVC will be accepted for soil and waste water pipes / Cast Iron spun pipes of heavy quality conforming to IS - 389 of required dia. shall be provided upto 1st floor level.
- xiv) All pipe lines shall be painted in oil paint of colour of external wall.

(t) Rain Water Pipe :

- i) The size of Rain Water pipe shall be sufficient to carry storm water discharge due to rain fall intensity of 15. 87 cms/hr. and with run off co-efficient of one.
- ii) Approved make PVC SWR grade ultra violet stabilized pipes conforming to IS 4985 with rubber groove socket and with fittings conforming to B.S. 4514 shall be used with all accessories like, treated door access, bends, shoes, access, chips etc. complete and with C.I. gratings, PVC clamps.

- iii) No Spout for discharging rain water shall be allowed except for staircase mid-landing, landing, and balconies.
- iv) Acceptance Testing – hydraulic test or Smoke test as per direction of Engineer in charge (PMC).
- v) All pipe line shall be suitably painted in oil paint.

(u) External Drainage :

Piping work mainly consists of laying of Salt glazed stoneware pipes conforming to IS : 651, reinforced cement concrete pipes and cast iron soil pipes. All piping shall be installed at depth greater than 80 cm below finished ground level. The disposal system shall include construction of gully traps, inspection chambers, manholes, intercepting chambers within the premises. The piping system shall be vented suitably at the starting point of all branch drains, main drains, the highest/lowest point of drain and at intervals. All ventilating arrangements shall be unobstructive and concealed. The work shall be executed strictly in accordance with IS: 1742 and shall conform to MCGM requirements as applicable. The sewage system shall be subject to smoke test for its soundness. Wherever the sewerage pipes run above water supply lines, same shall be completely encased in cement concrete 1:2:4 all round. All external drainage works shall conform to MCGM requirements as applicable.

(v) Rain Water Harvesting :

Rain Water Harvesting shall be provided as per National Building Code of India. The Rain Water Harvesting system must conform to the requirements of MCGM and necessary approval shall be obtained from MCGM / Local Authority.

(w) Sewage Treatment Plant :

Sewage Treatment Plant if required, shall be provided as per National Building Code of India. The Sewage Treatment Plant must conform to the requirements of MCGM and necessary approval shall be obtained from MCGM / Local Authority.

(x) Fire Fighting System :

Fire Fighting & Protection Systems shall be provided as per National Building Code of India. The Fire Fighting & Protection Systems must conform to the requirements of MCGM and necessary approval shall be obtained from MCGM / Local Authority.

(y) Electrification Works :

- (i) HT Power Cable Electrolytic grade Aluminium /annealed copper conductor, as per IS : 8130, conductor screen of semi-conducting compound. XLPE insulation, insulation screen of semi-conducting compound (All these three extruded in single tandem process of triple extrusion), copper tape screen (only above 6.6 KV (E)), cores laid up with PP fillers & PVC fillers and tape, PVC inner as per IS : 5831, armoured as per IS : 3975 and overall Flame Retardant ST2 PVC Sheath as per IS : 5831, from 3.3 KV (E) grade cable as per IS : 7098 (II).
- ii) LT Power Cable Electrolytic grade of Aluminium/high conductivity annealed copper conductor, as per IS : 8130, XLPE insulation, all sector shaped cores laid up with PP filler and PP tape (in case of extruded PVC inner sheath), taped/ extruded PVC inner sheath as per IS : 5831, armoured as per IS : 3975 and overall Flame Retardant ST2 PVC sheath as per IS:5831, 1100 Volts grade cable as per IS : 7098 (I).
- iii) Control Cable Plain annealed electrolytic grade of Copper conductor, as per IS : 8130, PVC insulation as per IS : 5831, cores laid up, STI PVC inner sheath as per IS : 5831, armoured as per IS : 3975 and overall STI PVC sheath as per IS : 5831, 1100 Volts grade cable as per IS : 1554 (I).
- iv) Panels / DB Main L.T. Panel, Power Control Centers, distribution boards shall be metal clad, totally enclosed, rigid, floor/wall mounting, air-insulated, cubicle type for use on 415 volts, 3 phase 50 cycles system and as per IS 13947.
- v) LA Protection Air termination shall be five prong type copper Rod with round head and the same shall be securely clamped/installed to withstand severe weather conditions and provide protection against lightning. Horizontal air termination conductors shall be Copper or Galvanized Iron flat/strip and shall be provided where specified as per IS.

vi) Point Wiring (Minimum requirement)	<p>Living Room : Minimum two tube light points, one fan point, one step-up fan regulator, one 6Amp individual plug point, one bell point, one 16Amp. Switch socket Power point, one TV socket with wire, one two pair Telephone point, two 6 Amp. half point on board. 10 way distribution box with incomer of 40 Amp. 4 pole ELCB+ MCB + single pole MCB 6 to 20 Amp for each circuit and one fan hook Box with round cover.</p> <p>Cooking - Kitchen : 1 tube light point, 1 fan point, 1 exhaust fan point, two 6 Amp. Socket point, one half point on board, one 16 Amp. switch socket power point and one fan hook Box with round cover.</p> <p>Bath : One light point, one 16 Amp. Switch Socket power point.</p> <p>W.C. : One light point and one exhaust fan point.</p> <p>Bed Room: One light point, one fan point, one step-up fan regulator, one 6 Amp. individual plug Point, one AC power point with 2 x 2.5 sqmm wire + 1.5 green earth wire metal clad switch and one fan hook Box with round cover.</p> <p>Internal Passage : One light point</p> <p>Internal Concealed PVC Conduit Wiring with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable, with modular type switch, suitable size MS box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.</p> <p>Common Area Lighting: Light point in staircase- landing and midway with 2.5 sq.mm. copper wire concealed in slab and open in duct with energy efficient LED fitting. Switching ON-OFF station near Meter Room. All staircase lights in one switch control. Power points in staircase for any function in terrace area</p> <p>Street lighting, terrace lighting, stilt lighting shall be considered with separate MCB, DB.</p>
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Condominium lighting with energy efficient decorative fitting.

150 mm RCC Pipe for cable entry near the Meter Room.

Main Supply: 2 x 6 sqmm. FRLS PVC insulated copper conductor cable + 2.5 sqmm FRLS PVC insulated copper conductor earth wire in 25 mm PVC pipe, wiring with DP switch in the room and DP MCB in the meter room.

The wiring shall be as per IS 2274 (Wiring Practice). Connectors should not be used without specific prior approval. Looping in on the phase side shall be at the switches and that on the neutral side at the ceiling roses. Every light point, fan point and plug point shall have individual control switch unless stated otherwise. Earthing shall be provided for all the points according to the statutory requirement wherever necessary. The number of points per circuit shall not exceed 8 in any case.

Obtaining NOC for high rise permission, from the Local Authority is the responsibility of the developer.

- vii) Earthing Entire earth system shall conform to the Code of Practice as per IS. 3043 of 1987 and latest amendments
- viii) Cable Tray Perforated Cable Trays of ladder type and associated accessories tees, bends, elbows and reducers shall be fabricated from 12 gauge (2.5 mm) mild steel. Prefabricated Cable trays of perforated type and associated accessories tees, elbows and reducers shall be fabricated from 14 gauge (2 mm) CRCA Sheets.
- ix) Testing Entire installation after completion of work shall be subjected to the following tests:
 - a) Insulation Continuity Test.
 - b) Insulation Resistance Test.
 - c) Earth Continuity Test.
 - d) Earth Resistivity Test.Besides the above tests, any other test specified by the Local Authority shall also be carried out.

- | | | |
|-----|----------------------|--|
| x) | Solar Power Lighting | Solar Panels to cater all the common areas such as compound lighting, podium lighting, open parking etc. of particular building with individual pole having solar panels & batteries. |
| xi) | General | Electrical equipments offered shall comply to the relevant Indian Standard Specifications, Fire Insurance Regulations, Tariff Advisory Committee's Regulations, and in particular to Indian Electricity Rules in all respects with all its latest amendments up-to-date. |

(z) Elevators / Lifts :

Lifts of reputed manufacturers (OTIS/Schindler/Thyssen-Krupp /Toshiba /Kone) with the number, speed, capacity, etc. conforming to NBC - 2005.

Lift car shall be of SS brush finished.

Scope includes obtaining necessary certificates of approval from statutory and or Local Authorities for the installation, maintenance and operating the elevator system wherever such approval or certification is required including PWD Lift Inspectors NOC/ Certificate / License.

(aa) Meter Room :

Individual meters with 2 pole MCB for the tenements to be located in a meter room at ground floor level.

Separate meter for common lighting facility, lifts, passage lighting, pumps. Adequate lighting shall be provided using Tube lights in common areas, staircase, lift, etc. conforming to the lux level specified in the relevant IS codes/NBC.

Wiring shall be as per standards of BEST/Tata Power/ Reliance Energy/MSEB with service cable, accessories etc, and to obtain electric supply connection from them.

Meter room with adequate lighting & ventilation should be provided in the ground-floor of the building.

(bb) Pump House & Security Cabin :

Pump House with backup generator facility and a security cabin for each building unit shall be provided.

(cc) Paving around the building :

80mm thick paver block (M40 grade) shall be provided over cement concrete base of M10 around the building.

(dd) Pathway :

Paver Blocks shall be provided for the pathways within the premises of the building.

(ee) Storage Reservoir :

Underground domestic storage tanks, underground fire storage tanks, overhead tanks etc. shall be provided conforming to National Building Code of India. All the storage reservoirs must conform to the requirements of MCGM also.

Underground domestic storage tanks, underground fire storage tanks, overhead tanks etc. shall be designed & provided as per the required capacity for the building unit conforming to IS 3370-2000 & it shall be water tight for a minimum period of 10 years.

(ff) Compound Wall :

Compound Wall of adequate height shall be constructed as per the direction of SPPL.

(gg) Green Building Norms :

Green Building concepts conforming the minimum GRIHA-Two Star shall be mandatory for design & construction. However, every effort should be made by the Developers/NGO's/Slum Dwellers CHS to achieve higher star ratings and aim at achieving even GRIHA- Three Star.

(hh) Defect Liability Period:

Defect Liability Period for Affordable Housing Buildings/ Wings will be 3 years for any repairs/ rectifications required during this period w.e.f. the date of Occupation Certificate.

APPENDIX – 5
CONSTRUCTION FINANCE

- (a) SPPL will provide ‘Construction Finance’ at prevailing Interest Rate of 10.15% P.A. fixed by HUDCO for EWS construction by Public Agencies + 1.00% P.A. towards ‘Institutional Support’ by SPPL for construction of Affordable Housing Tenements.
- (b) SPPL will levy ‘Penal Interest’ of 2.00% P.A. in eventuality of any delay beyond stipulated period for handing over with O.C. of all Affordable Housing Tenements.
- (c) SPPL will calculate ‘Construction Finance’ as ‘Principal Amount’ required and ‘Interest Dues’ recoverable thereupon from Developers/NGO’s/Slum Dwellers CHS as per Cash Flow Statements for construction of Affordable Housing Tenements.
- (d) SPPL will consider the Cash Flow Statements & following Stages of Construction for release of payments to Builders/ NGO’s/Slum Dwellers CHS and will require CPM & PERT Charts to be submitted for construction of Affordable Housing Tenements.

Sr. No.	Stages of Construction	Percentage of Work
1.	Plinth	10.00%
2.	R.C.C.	37.00%
3.	Masonry	8.00%
4.	Joinery	6.00%
5.	Water Proofing	2.50%
6.	Plastering Internal	7.00%
7.	Plastering External	5.00%
8.	Kitchen Platform	1.00%
9.	Flooring & Tiling	6.00%
10.	Aluminum Windows	3.00%
11.	Plumbing	5.00%

12.	Electrical Work	2.00%
13.	Painting	2.00%
14.	Lift	2.50%
15.	U.G.T.	2.00%
16.	Miscellaneous Items	1.00%
17.	Total	100.00%

- (e) SPPL will require Developers/NGO's/Slum Dwellers CHS to sou-moto pay their 'Interest Dues' recoverable on 'Principal Amount'; however if this is not done voluntarily, SPPL will recover 'Interest Dues' at time of release of payments in installments to Developers/NGO's/Slum Dwellers CHS for accepted offers of 'Lowest All Inclusive Fixed Prices' for construction of Affordable Housing Tenements.
- (f) SPPL; will release payments for accepted offers of 'Lowest All Inclusive Fixed Prices' in Minimum 10 and Maximum 20 installments based on requirements indicated in Cash Flow Statements of Developers/NGO's/Slum Dwellers CHS & progress of on site work as per Stages of Construction of Affordable Housing Tenements.
- (g) SPPL will provide need based hand holding support to Developers/NGO's/ Slum Dwellers CHS on specific matters relating to Planning Authorities/Special Planning Authorities and/or other Statutory Authorities which relate directly to scheduled completion of Affordable Housing Tenements.

APPENDIX – 6
SELECTION CRITERIA

- (a) 'Selection Criteria' of SPPL will be applicable to only those specific offers made by Builders/NGO's/Slum Dwellers CHS which are compliant with all requirements of Qualification Standards & General Terms & Conditions.
- (b) 'Selection Criteria' for specific offers made by Builders/ NGO's/Slum Dwellers CHS will be based on the 'Competitive Index' of 'Maximum Number of Affordable Housing Tenements of 30 Sq.Mts. Carpet Area' offered at 'Lowest All Inclusive Fixed Price' to SPPL.
- (c) 'Selection Criteria' for specific offers made by Builders/NGO's/Slum Dwellers CHS will include benchmarking by SPPL against 'Cost Norms' considered for Affordable Housing Tenements under Guidelines & Policies of the State Government and/ or Central Government and/or those adopted for Home Loans by Scheduled Banks and/or Housing Finance Companies.

ANNEXURE- 1

INFORMATION OF SLUM REHABILITATION SCHEME

Part No.	Sr. No.	Subject/ Descriptions	Information/ Data
I.	<u>Information about Slum Plot :</u>		
	1.	Name of Slum Rehabilitation Scheme	
	2.	Ownership/ Title of Land	
	3.	Survey No./CTS No./C.S. No./TP Plot No.	
	4.	Name of Village/ Tehsil/ Division	
	5.	Name of Developers/NGO/Slum Dweller's CHS	
	6.	Name of Architect/ Licensed Surveyor	
II.	<u>Information about Slum Dwellers :</u>		
	7.	No. of Slum Dwellers	
	8.	Eligible Slum Dwellers as per Annexure-II	
	9.	Non-Eligible Slum Dwellers as per Annexure-II	
	10.	Non Eligible Slum Dwellers filed Appeal Cases	
	11.	No. of Individual Agreements of Slum Dwellers	
III.	<u>Information about Slum Plot :</u>		
	12.	Total Area of Slum Plot	
	13.	Net Area of Slum Plot	
	14.	Original LoI No. and Date of Issue	
	15.	Revised LoI No. and Date of Issue	
	16.	Total FSI admissible on Slum Plot	
	17.	DP Reservations on Slum Plot	
	18.	Status of clearance of Slum Plot	
IV	<u>Information about Rehabilitation Component :</u>		
	19.	Total Rehabilitation Component & FSI	
	20.	Types & Sizes of Rehabilitation Tenements	

	21.	Date of first CC of Rehabilitation Buildings	
	22.	Constructed Rehabilitation Buildings & Tenements	
	23.	Under Construction Rehabilitation Buildings & Tenements	
	24.	Transit Tenements constructed on Slum Plot	
	25.	Construction Technology for Rehabilitation Buildings	
	26.	Civil Contractors of Rehabilitation Building	
V	<u>Information about Sale Component :</u>		
	27.	Total Sale Component & FSI	
	28.	Types & Sizes of Sale Tenements	
	29.	In Situ Construction of Sale Component	
	30.	TDR entitlement of Sale Component	
	31.	Date of first CC of Sale Buildings	
	32.	Constructed Sale Buildings & Tenements	
	33.	Under Construction Sale Buildings & Tenements	
	34.	Construction Technology for Sale Building	
	35.	Civil Contractors for Sale Buildings	
VI	<u>Information about NOC's :</u>		
	36.	NOC from SEIAA/ MoEF	
	37.	NOC from CFO/ MCGM	
	38.	NOC from High Rise Committee/ MCGM	
	39.	NOC from AAI	
	40.	NOC from Western/ Central Railway	
	41.	NOC from Defense Establishments	
	42.	NOC from Forest Department	
	43.	NOC from Archeology Department	
	44.	NOC from Other Statutory Authorities	

VII	<u>Information about Legal Cases:</u>	
	45.	Status of Appeal Cases pending in HPC
	46.	Status of FIR's lodged in Police Stations
	47.	Status of Criminal Cases pending in Metropolitan Magistrate Court
	48.	Status of Criminal Cases pending in District Session Court
	49.	Status of PIL's/WP's subjudice in Hon'ble High Court at Bombay
	50.	Status of PIL's/SLP's/CA's subjudice in Hon'ble Supreme Court of India

**Ordinary Signature
of
Authorized Signatory**

Name of Authorized Signatory _____

e-mail ID of Authorized Signatory _____

Mobile Phone No. of Authorized Signatory _____

Date: _____

ANNEXURE- 2

INDICATIVE COSTS OF DEVELOPMENT & CONSTRUCTION ACTIVITES

Sr. No.	Subject/ Description	Indicative Cost per Affordable Housing Tenement (Rs. Lakhs)
1.	Demolition of Slum Structures	
2.	Clearance of Slum Plot	
3.	Construction of Transit Camps	
4.	Monthly Rentals	
5.	Infrastructure Charges	
6.	Maintenance Deposits	
7.	ASR Land Premium Charges	
8.	Land & Construction Development Charges	
9.	Staircase; Lift & Open Space Deficiencies Charges	
10.	Construction of Rehabilitation Tenements	
11.	Site Supervision Charges	
12.	Onsite Infrastructure Development	
13.	Offsite Infrastructure Development	
14.	Consultancy Charges	
15.	Architect Fees	
16.	Interest Dues	
17.	Service Tax	
18.	O & M Expenses	
19.	Contingencies & Unforeseen Expenses	
20.	Total	

**Ordinary Signature
of**

Authorized Signatory

Name of Authorized Signatory _____

e-mail ID of Authorized Signatory _____

Mobile Phone No. of Authorized Signatory _____

Date: _____

ANNEXURE- 3

NATURE OF SPECIFIC OFFER FOR AFFORDABLE HOUSING TENEMENTS

Sr. No.	Subject/Description	Information/ Data
1.	Slum Rehabilitation Scheme with LoI No. under which Affordable Housing Tenements are offered to SPPL	
2.	'Principal Amount' required as 'Construction Finance' for Affordable Housing Tenements offered to SPPL.	
3.	'Interest Dues' recoverable towards 'Construction Finance' for Affordable Housing Tenements offered to SPPL	
4.	Maximum Number of Affordable Housing Tenements of 30 Sqr.Mts. Carpet Area offered to SPPL.	
5.	'Lowest All Inclusive Fixed Price' for Affordable Housing Tenements of 30 Sq.Mts. Carpet Area offered to SPPL.	

**Digital Signature
of
Authorized Signatory**

Name of Authorized Signatory _____

e-mail ID of Authorized Signatory _____

Mobile Phone No. of Authorized Signatory _____

Date: _____