# Project Implementation Unit

Health & Family Welfare Department

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જા.નં.પીઆઈયુ/મુ.ઈ.શ્રી/6680/૨૫ તા. ૧૫/૧૦/ ૨૦૨૫

**વિષય : મૂળ અંદાજમાં બ્રાંડ/મેઇક/સ્પેસીફીકેશન મુજબ કામગીરી અનુસરવા બાબત**

આરોગ્ય અને પરિવાર કલ્યાણ વિભાગના પ્રોજેક્ટ ઈમ્પ્લીમેન્ટેશન યુનિટ દ્વારા વિભાગ કક્ષાએ પુખ્ત વિચારણાના અંતે હોસ્પિટલ, મેડીકલ કોલેજ, મેડીકલ ડેપો, હોસ્ટેલ, બહુમાળી સ્ટાફ ક્વાર્ટર્સ અને સંલગ્ન હેલ્થ ફેસીલીટીનાં કામો માટે Civil Materials, MEP, HVAC, Fire System, ELV માટે મેઇક લિસ્ટ નક્કી કરવામાં આવેલ છે આ સાથે બિડાણમાં સામેલ પત્રક મુજબ અનુસરવાનું રહેશે. તાંત્રિક અધિકારીશ્રીઓ દ્વારા મંજુરી માટે રજુ થનાર અંદાજો અને DTPમાં અને સ્થળ પર ચાલુ કામોમાં સદર મેઇક લિસ્ટનો માલ સામાન વપરાય તેની ખાસ નોંધ લેવી. આ સાથે બીડાણમાં સુધારા સાથેનો મેક-લિસ્ટનું પત્રક સામેલ છે.

મુખ્ય ઈજનેર
પી.આઈ.યુ. (હેલ્થ)
ગાંધીનગર

બીડાણ: ઉપર મુજબ

**નકલ સવિનય રવાના:**

૧) અધિક મુખ્ય સચિવશ્રી (ત.સે. અને ત.શી.), આરોગ્ય અને પરિવાર કલ્યાણ વિભાગ, નવા સચિવાલય, ગાંધીનગર, જાણ સારૂં.

૨) કમિશ્નરશ્રી, આરોગ્ય અને પરિવાર કલ્યાણ વિભાગ, જીવરાજ મેહતા ભવન, ગાંધીનગર, જાણ સારૂં.

**નકલ રવાના:**

૧) તમામ અ.ઈ.શ્રી, પી.આઈ.યુ. (સિવિલ અને ઇલેક્ટ્રિકલ), જાણ તથા અમલ સારૂં.

૨) તમામ કાર્યપાલક ઈજનેરશ્રી, (સિવિલ અને ઇલેક્ટ્રિકલ), જાણ તથા અમલ સારૂં.

૩) તમામ ડિવિઝનલ એકાઉન્ટન્ટ, જાણ તથા અમલ સારૂં.

૪) તમામ નાયબ કાર્યપાલક ઈજનેરશ્રી, (સિવિલ અને ઇલેક્ટ્રિકલ), જાણ તથા અમલ સારૂં.

૫) શ્રી દિલીપ કાપડિયા, આઈ.ટી. આસિસ્ટન્ટ, તમામ ઓનલાઇન ટેન્ડરમાં તમામ આઈટમનું એપ્રુવ લિસ્ટ સામેલ કરવા સારૂં.

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## Make List: CIVIL

1) Approved makes of materials are listed below. The contractor should get approved the sample of material/furniture in respect of quality and source of supply manufacturer approved from the Engineer in charge or committee constituted by department. All such approved samples should be kept at site in the custody of PIU. In case of testing of material of the suggested make shall be tested in GERI, Government approved Laboratory / Institute as per relevant codes and standards.

2) Mockup units furniture should be as directed by Engineer in Charge.

**CIVIL WORKS**

| Sr. No. | Item | Brands |
|---|---|---|
| **1** | **Concrete Work** | |
| a | TMT bars of Virgin Steel (For structure height > G+2 then Tata Tiscon only to be used, For structure height < G+2, then any of these can be used) | Sail, Vizag, Tata – Tiscon, Jindal Panther, Kamdhenu, JSW Steel (Manufacturer Only From Virgin Material), Nilkanth, ANMS, Vizag |
| b | Sand | As per Mix design for concrete work or zone-II. |
| | | For Masonry and plaster work zone – III |
| **2** | **Masonry Work** | |
| a | Brick Masonry | Having crushing strength not less than 35 Kg/Sq.cm. of Locally Available |
| b | Aerated Light Weight Concrete Block Masonry (AAC Block Masonry) | AAC blocks shall be manufactured as per ISI or GRIHA approved and the product should be produced as per IS2185 Part-III (1984) for Grade- I. The manufacturer shall provide valid certification to confirm the compliance with these standards. |
| **3** | **Structural Steel Work** | |
| a | Structural Rolled Steel sections -beams, channels, tee, flats, angles, bars(round, square, hexagonal) Structural Hollow steel sections (Square& Rectangular) Structural tubular sections, MS Grill | Tata,<br>SAIL,<br>Jindal,<br>AMNS,<br>Vizag |
| **4** | **Wood Work (Door, Window & Interior)** | |
| 4a | Teak Wood | Ghana,<br>Nagpur,<br>Berma Teak (Indian Teak) |
| 4b | Flush Door (decorative / non decorative) & Ply Wood | Greenply,<br>Kit Ply,<br>Century,<br>Archidply. |
| 4c | Poly carbonate sheet | Coxwell,<br>DPI,<br>Lexan,<br>BAYER |
| 4d | Dry Wall Partition | Gypsum India<br>Saint Gobbain |
| 5 | Aluminum Work (Door, Window, Structural Glazing &Interior) | Jindal,<br>Hindalco,<br>NALCO |
| 6 | Glass Reinforced Concrete (G.R.C) screens | Unistone<br>Asian<br>Everest. |
| 7 | ANTI - TERMITE TREATMENT | PI Industries,<br>BAYER<br>Bharat Rasayan |

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|---|---|---|
| | | KALYANI INDUSTRIES |
| **8** | **Ceiling** | |
| 8a | Calcium silicate board / Gypsum Board. | Saint Gobain<br>Hilux,<br>Aerolite,<br>ARMSTRONG |
| 8b | Aluminum Metal False Ceiling | Gyproc- Saint Gobain,<br>Aerolite,<br>Armstrong<br>Linder Middle<br>Hunter Douglas |
| 8c | Mineral Fibre False Ceiling | Gyproc- Saint Gobain,<br>Aerolite,<br>Armstrong<br>Linder Middle<br>Hunter Douglas |
| 9 | Dead Locks/ Mortiselocks/ Narrowstile deadlocks/ Tubular locks | Kich,<br>Dorma,<br>Godrej, |
| **10** | **Glass Work** | |
| 10a | Float Glass, Wired Glass, Mirror, Reflective Glass, Glass Processor for HS/HT, Bulletproof, DGU, Toughness, lamination, Hermetically Sealed Insulated Glass etc. | Saint Gobain,<br>Float Glass India Ltd.,<br>AIS<br>SISECAM<br>Modi Guard, |
| **11** | **Tile Work** | |
| 11a | Ceramic Tiles / Glazed Tiles / Vitrified Tiles (Full Body, Double Charges, Matt Finish) / Heat Resistant Tiles | AGL,<br>Johnson,<br>Kajaria,<br>Somany |
| 11b | Tile Adhesives & Grouting material | BAL,<br>Laticrete,<br>Kerakoll,<br>Pidilite(Dr. Fixit) |
| 11c | Vinyl Flooring | FORBO<br>GerFloor<br>Armstrong<br>Tarkett |
| 11d | White Cement, Putty | Birla White,<br>J.K.,<br>Dulux |
| 11e | Dry cladding/ terracotta (Exterior rainscreen Facade) | Claytone,<br>Tempo,<br>Moeding. |
| 12 | Paint Work | Asian Paint,<br>Berger,<br>Nerolac<br>Birla Opus |
| 13 | Natural Stone Texture External | Asian<br>Berger<br>NEROLAC, |

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|---|---|---|
| | | Ultratech Texture |
| 14 | ACP (Aluminium Composite Panel) (FRGrade for two hrs. Resistance) | Alu Décor,<br>Alucobond,<br>Eurobond,<br>Jindal |
| 15 | Construction Chemicals (Plasticisers, Bonding agents, SBR Latex, Micro Concrete) | BASF,<br>Fosroc,<br>Sika India Pvt. Ltd.,<br>Pidilite, |
| **16** | **Water Proofing Chemicals** | |
| 16a | Chemical Water proofing & Integral Water Proofing Compound | Fosroc,<br>Pidilite Ind Ltd<br>Sika,<br>Dr.FIXIT,<br>Plastocrete plus |
| 16b | Epoxy Grouting | Laticrete,<br>Dubond,<br>K2-Epoxy,<br>Kerakoll, |
| 16c | Reber and anchor fastner | Hilti,<br>Fischer,<br>Fosroc. |
| 17 | Silicon Sealant/ Silicon Paint &<br>Poly sulphide Sealant | Wacker,<br>Hilti<br>Fischer,<br>Fosroc<br>Pidilite |
| 18 | PVC Water Stop | Arti Cables Baroda,<br>Fixopan,<br>Maruti |
| 19 | Door Window Hardware (other than locks) & Floor Spring and Door closer | Kich,<br>Dorma,<br>Godrej,<br>hettich,<br>Hafle<br>Ebco |
| 20 | Stainless steel hand Railing & S S daso | KICH<br>EBCO<br>DORMA |
| 21 | Pre-coated Steel Roofing/ Walling Sheets 550 Mpa | Tata Bluescope,<br>Interarch,<br>Nippon Dendro (poly steel) |
| 22 | Fire Door (Metal / Fully Glazed) | Navair,<br>Accodor,<br>Vetrotech,<br>Shakti hormann,<br>Radiant |
| 23 | WPC doors, WPC panels, and frames. | Greenply,<br>Archidply,<br>Centuryply |
| 24 | Corner Guard / Wall Guard | Kleenclad |

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| | | Inprocorp<br>Windowtech |
| 25 | Expansion Joint | Vexcolt,<br>Kantaflex<br>3R |
| 26 | Lead Lined Door / Clean Room Door | Shakti Hormann,<br>Acodoor,<br>Navair,<br>Iclean,<br>JC Fire Door |
| 27 | Fire Mortar & Fire Sealent | Armacell<br>Aerocell<br>Hilti |

**Notes:** **(a)** The contractor shall produce samples of the materials for approval to Engineer in charge.

(b) In case of materials for which approved makes are not specified above and / or short off in market, the makes shall be decided by the Engineer in charge or committee constituted by department.

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# Make List: Plumbing

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| LIST OF MAKES FOR SANATARY AND PLUMBING WORK | | |
|---|---|---|
| **Sr. No.** | **Item** | **Brands** |
| 1 | Vitreous China Sanitary ware with Seat Cover | Jaquar (Premium series Only)<br>Kohler (Premium series Only)<br>Grohe (Premium series Only) |
| 2 | Stainless Steel sinks | Nirali,<br>Johnson, |
| 3 | C. P. Fittings & Accessories | Jaquar – Opal Prime (Premium Specified series Only)<br>Kohler – Aleo Plus (Premium Specified series Only)<br>Grohe – Baudge (Premium Specified series Only) |
| 4 | Ultra Voilet Water Purifier | Ion Exchange, Thermax, Wipro, |
| 5 | Hydro pneumatic System and Water Supply Pumps | Grundfoss,<br>Kirloskar,<br>CRI,<br>Xylem,<br>Lubi,<br>KSB |
| 6 | G. I. Fittings | Unik,<br>DRP,<br>UNCO,<br>ZOLOTO,<br>TATA |
| 7 | G. I. Pipe/M. S. Pipes | Tata,<br>Jindal,<br>Surya,<br>Asian,<br>Appolo |
| 8 | CPVC, UPVC, Soundproof Multilayer Pipes & Fittings | Astral,<br>Supreme,<br>Finolex<br>Prince |
| 9 | Gun metal valves | Zoloto,<br>Leader,<br>Sant,<br>L&K,<br>Aatco,<br>Honeywell,<br>Kartar |
| 10 | CI Sluice Valves, Check valves | Kirloskar,<br>Burn,<br>William Jacks,<br>Indian Valve (IVC),<br>Advance,<br>Leader,<br>Zoloto,<br>Kartar |
| 11 | Ball Cocks | Sant,<br>L & K.,<br>Honeywell, |

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| | | Kartar,<br>Zoloto |
| 12 | UPVC Borewell Column pipe | Astral,<br>Supreme,<br>Precision |
| 13 | HDPE Pipes | Duralinr,<br>Penwalt Agru,<br>Nocil,<br>Jain,<br>Supreme,<br>Reliance |
| 14 | Fiber reinforced R.C.C. Manhole Cover | Pratibha,<br>Himalaya,<br>Alcock,<br>Thermodrain |
| 15 | C. I. Manholes Covers and Frames | Ashok Iron,<br>Raj,<br>Neco, |
| 16 | Submersible Drainage Pumps | Kirloskar,<br>Mather &Platt,<br>KSB,<br>Grundfos,<br>Xylem,<br>CRI,<br>Lubi |
| 17 | Liquid Level Controllers Liquid Level Indicators | Hema, Minilec, Radar, Sant, Gelco, Honeywell |
| 18 | Borewell Pump | KSB, Kirloskar,<br>Mather & Platt,<br>Lubi |
| 19 | Mirror | Modiguard,<br>Asahi,<br>Saint Gobin |
| 20 | Water Treatment Plant | Enviro Engineers,<br>Think Green,<br>Flow-Dynamics,<br>Ion Exchange |
| 21 | Drinking Water Cooler | Usha,<br>Bluestar,<br>Voltas |
| 22 | Chlorine Dosing System | Toshcon,<br>Chloromax,<br>Astalm |
| 23 | Butterfly Valve | Audco,<br>C & R,<br>Zoloto,<br>Kartar |
| 24 | Gunmetal Non Return Valve | Leader,<br>Audco,<br>Zoloto,<br>Sant |
| 25 | Water Meter | Kapstan Bombay,<br>Voltas Kent,<br>Siemens |
| 26 | SWR Pipe | Astral, |

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| | | Supreme,<br>Finolex |
| 27 | Copper Pipe | IBP-Neco, Rajco |
| 28 | Hot Pipe Insulation | Armacell, |
| 29 | RCC Hume Pipe and Fittings | Patel Hume Pipes,<br>Alcock,<br>Indian Hume Pipe |
| 30 | Poly ethylene Composite Pressure Pipe | KITEC |
| 31 | Pump Set | KSB, Kirlosker, Wasp, Crompton, Beacon, Grundfos, Beacon, Lubi |
| 32 | PVC Water Tank (3 Layer) | Astral, Supreme, Sintex |

**Notes:** **(a)** The contractor shall produce samples of the materials for approval to Engineer in charge.

(b) In case of materials for which approved makes are not specified above and / or short off in market, the makes shall be decided by the Engineer in charge or committee constituted by department.

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# Make List: Fire Fighting

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| LIST OF MAKES FOR FIRE FIGHTING SYSTEM | | |
|---|---|---|
| **Sr. No** | **Item Description** | **Approved make / Manufacturer** |
| 1 | CO2 FIRE EXTINGUISHER | Safex, Numax, Kanex , Safron, Ceasefire |
| 2 | Fire Hydrant pumps | Precession, Kirloskar, Willo, Lubi, KSB |
| | Fire Spinklars | Safex, Kanex , Ceasefire, Numax |
| 3 | Control panel | Standard Fabrication CPRI Approved |
| 4 | Cable | Finolax , Polycab, RR cable |
| 5 | Earthing | Erico, Rapid, Electroearth, Ashlok |
| 6 | Pressure Guage | Fiebig, hguru, Bumer |
| 7 | Pressure Switches | Indofoss, Denfoss |
| 8 | M.S. ERW Heavy Duty pipes | Jindal, Tata, SAIL, AMNS, VIZAG, Asian, Appolo |
| 9 | Butterfly Valve | Audco, Intervalve , Sarka , Zoloto, Kartar |
| 10 | Dual Plate CI non-return Valve | Audco, Intervalve , Sarka , Zoloto, Kartar |
| 11 | S.S ball Valve | Audco, Intervalve , Sarka , Zoloto, Kartar |
| 12 | Hose Pipe | Safex, Numax, Kanex, Newage, Ceasefire |
| 13 | Metal Branch | Safex, Numax, Kanex, Newage, Ceasefire |
| 14 | First aid fire hose | Safex, Numax, Kanex, Newage, Ceasefire |
| 15 | Fire hose cabinet | Safex, Numax, Kanex , Newage, Ceasefire |
| 16 | Air Release Valve | Sant , Zoloto, Leader, Kartar |
| 17 | Autoglow Signages | Prolite , EVecab, Aniket |

**Notes:** **(a)** The contractor shall produce samples of the materials for approval to Engineer in charge.

(b) In case of materials for which approved makes are not specified above and / or short off in market, the makes shall be decided by the Engineer in charge or committee constituted by department.

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# Make List: ELECTRICAL

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| SR. | ITEM DESCRIPTION | MAKE LIST |
|---|---|---|
| 1. | HT VCB | L&K (PREVIOUSLY L&T) / SEIMENS / ABB / SCHNEIDER ELECTRIC. HT PANEL SHALL BE OEM OR OEM APPROVED PARTNER ONLY. |
| 2. | PROTECTION RELAY FOR HT PANEL | ABB / L&K (PREVIOUSLY L&T) / SEIMENS / SCHNEIDER / CSPC / ALSTOM |
| 3. | H.T XLPE CABLE | FINOLEX<br>RR CABLE<br>POLYCAB<br>HAVELLS |
| 4. | H.T JOINT (HEAT SHRINKABLE) | RAYCHEM / 3M |
| 5. | DRY TYPE TRANSFORMER | SCHNEIDER<br>VOLTAMP<br>ABB |
| 6. | SWITCHGEAR | L&K (PREVIOUSLY L&T) / LEGRAND / SEIMENS |
| 7. | MEDIEM VOLTAGE CABLE / CONTROL / FLEXIBLE CABLE | RR CABLE / HAVELLS / POLYCAB / FINOLEX / KEI |
| 8. | DG SET | CUMMINS<br>KIRLOSLAR<br>SUPERNOVA<br>PERKINS |
| 9. | DG SET AMF PANEL | AS PER DG SET SUPPLIER. (SWITCHGEAR AS PER MAKE LIST) |
| 10. | LT PANEL AS PER IEC 61439 (TTA) PANELS | LEGRAND / L&K (PREVIOUSLY L&T) / SEIMENS OEM CERTIFIED IEC – 61439 REQUIRED. |
| 11. | LT PANELS AS PER CPRI | FABRICATED PANELS WITH STANDARD APPROVED SWITCH GEARS & ACCESSORIES CPRI / ERDA APPROVED PANEL SUPPLIER, 65 KA SHORT CIRCUITE WITHSTAND STRENGTH. OEM |
| 12. | APFC PANEL | SCHNEIDER – VARSET / DATAR / L&K (PREVIOUSLY L&T) / EPCOS / NEPTUNE |
| 13. | CAPACITOR | SCHNEIDER / EPCOS / CONZERV |
| 14. | DISTRIBUTION BOARD | LEGRAND / L&K (PREVIOUSLY L&T) / SEIMENS / SCHENIDER |
| 15. | LT ACB | LEGRAND / L&K (PREVIOUSLY L&T) / SEIMENS / SCHENIDER |
| 16. | LT MCCB WITH EARTH FAULT. | LEGRAND / L&K (PREVIOUSLY L&T) / SEIMENS / SCHENIDER |
| 17. | LT MCB, ELCB, ISOLATOR | LEGRAND / L&K (PREVIOUSLY L&T) / SEIMENS / SCHENIDER |
| 18. | LT SFU | LEGRAND / SCHNEIDER / SEIMENS / L&K (PREVIOUSLY L&T) / HONEYWELL |
| 19. | LT CONTACTORS | LEGRAND / SCHNEIDER / SEIMENS / L&K (PREVIOUSLY L&T)/ HAGER / C&S / HONEYWELL |
| 20. | CURRENT TRANSFORMER & POTENTIAL TRANSFORMER | AE / ASHMOR / SEI / SARTHI / L&K (PREVIOUSLY L&T) |
| 21. | METERS (DIGITAL) | CONZERVE / SCHNEIDER / SECURE / L&K (PREVIOUSLY L&T)/ |
| 22. | LOAD MANAGER / MFM | CONZERVE / SCHNEIDER / SECURE / L&K (PREVIOUSLY L&T)/ |
| 23. | PROTECTION RELAYS – EARTH FAULT | SIEMENS / L&K (PREVIOUSLY L&T) / SCHNEIDER / ABB / ALSTOM / CSPC |
| 24. | INDICATING LAMP | SIEMENS / SCHNEIDER ELECTRIC / L&K (PREVIOUSLY L&T) |
| 25. | ELECTRIC TIMER | SIEMENS / L&K (PREVIOUSLY L&T) / LEGRAND / CONSERVE/ |
| 26. | ROTARY SWITCH | SIEMENS / SCHNEIDER ELECTRIC / TEKNIC - KEYCEE/ SALZER / |
| 27. | PUSH BUTTON & PUSH BUTTON SET | SCHNEIDER ELECTRIC / L&K (PREVIOUSLY L&T)/ BINAY / RAAS |
| 28. | SELECTOR SWITCH | TEKNIC - KEYCEE / SALZER / L&K (PREVIOUSLY L&T) |
| 29. | ANNUNCIATOR | PROTON / EAPL / TEKNIKA |
| 30. | LUGS / BIMETALLIC LUGS | DOWELL`S / HMI / COMETV/ HEX |

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| 31. | CABLE GLAND | JAINSON / COMET / POLYCAB / HEX |
| 32. | CONNECTORS (COLOURS AS PER PHASE | SALZER / ELMEX / L&K (PREVIOUSLY L&T) |
| 33. | ATS | ASCO / SOCOMEC / L&K (PREVIOUSLY L&T) |
| 34. | CABLE TRAY (ALL TYPE) | LEGRAND – CABLOFOIL / OBO BETTERMAN / PROFAB / INDIANA |
| 35. | SPD | NISHARP – CAPE / OBO / LEGRAND / SCHNEIDER |
| 36. | DWC PIPE | REX / ASTRAL / NIHIR |
| 37. | L.T. CABLE JOINTING KIT | RAYCHEM / 3 – M |
| 38. | PVC CONDUITS AND ACCESSORIES | PRECISION / NIHIR / POLYCAB / ASTRAL / BBC / BEC |
| 39. | CASING CAPING | PRECISION / NIHIR / ASTRAL / BEC |
| 40. | FLOOR TRUNKING & FLOOR JUNCTION | MK – HONEYWELL / LEGRAND / OBO |
| 41. | SWITCHES AND ACCESSORIES<br>ANTI-BACTERIAL OLNY | HONEYWELL – BLENZE PRO<br>LEGRAND – MYRIUS ANTI BAC.<br>SCHNEIDER – UNICA PURE<br>PANASONIC – VISION<br>HAVELLS - ATHENA |
| 42. | METAL CLAD SOCKET WITH MCB | HONEYWELL / LEGRAND / SCHNEIDER / HENSEL |
| 43. | PVC TAP | STEEL GREEP / ANCHOR |
| 44. | PVC JUNCTION BOX | PRECISION / NIHIR / POLYCAB / ASTRAL / BBC / BEC |
| 45. | COAXIAL TV CABLE | DELTON / HAVELLS / RR / FINOLEX / POLYCAB |
| 46. | LIGHT FIXTURE | PHILLIPS<br>WIPRO<br>Panasonic<br>CROMPTON<br>HAVELLS<br>LIGHTING TECNOLOGY |
| 47. | HIGH SPEED FAN & EXHAUST FAN | HAVELLS / CROMPTON / ORIENT |
| 48. | POLE | K – LITE / AMBICA / FABRICATED / OR AS PER APPROVED DRAWING |
| 49. | METAL CONDUIT | BEC / AKG / BHARAT / STEEL CRAFT |
| 50. | UPS SYSTEM WITH BATTERY | NUMERIC<br>FUJI<br>VERTIV<br>EATON<br>HITACHI (BATTERY – EXIDE & AMARRAJA) |
| 51. | EARTHING SYSTEM | CAPE – NISHARP / OBO BETTERMAN / ABB / JEF |
| 52. | LIGHTING PROTECTION | CAPE – NISHARP / OBO BETTERMAN / ABB / JEF |
| 53. | IP JUNCTION BOX | HENSEL / LEGRAND / OBO / RITTAL |
| 54. | WATER COOLER | VOLTAS / USHA / BLUE STAR |
| 55. | MOTOR PUMP SET | CROMPTON / KIRLOSKAR / LUBI |
| 56. | CALL BELL | ANCHOR / ORPAT / VISION |
| 57. | BUSDUCT | SCHNEIDER<br>LEGRAND<br>C&S<br>L&T<br>SEIMENS |
| 58. | LIFT | OTIS / MISTUBISHI / SCHINDLER / Jhonson |

**SPECIAL NOTE: -**

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|---|---|
| 01. | The MCB and MCB DB's must be of same make. |
| 02. | Makes/Models of items of all fixtures/items/materials must be got approved from the engineer in charge well before placing any order to the OEM. The contractor/agency is required to submit all relevant test certificates documents and along with the proposal. The decision of engineer-in-charge is binding in this regard and no variation is acceptable. |
| 03. | All the Material should be IEC compliant as per standard mentioned in tender make list. |
| 04. | The make approved shall be guaranteed to have support from OEM for minimum 10 years with required spares. |
| 05. | The Material with higher delivery lead time shall be immediately informed to client/consultant before order Execution. |
| 06. | Procurement of item with aesthetic value and visibility shall be on prior approval of Engineer in charge for specific area of application. |

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# Project Implementation Unit

## Make List: ELV

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| SR. NO. | ITEM DESCRIPTION | MAKE |
|---|---|---|
| 1. | Cat6 Components and Its Accessories | CommScope -Tyco, Molex, R & M, Belden, Legrand, D-Link, Panduit |
| 2. | Fiber Optics Components (Single Mode – Cables, LIUs, Shelves, Pigtails, Patch-Cords, Connectors, Couplers Splices | CommScope -Tyco, Molex, R & M, Belden, Legrand, D-Link, Panduit |
| 3. | Core Switches and Block/Cluster Distribution Switches And Their Fiber Interface Modules And Optics Transceivers. All These Components Shall Be from A Single OEM. | Cisco Enterprise, HP Enterprise, Juniper, Extreme Network, D - Link Netgear |
| 4. | Access/Edge Switches, NMS Management Tools, Single Mode or Multimode Fiber Optic Transceivers, Licenses Etc. All These Components Shall Be from A Single OEM. | Cisco Enterprise, HP Enterprise, Juniper, Extreme Network, D - Link Netgear |
| 5. | Wireless Access Points, Wireless Controller, Wireless Licenses Etc. All These Components Shall Be from A Single OEM Single OEM. | Cisco Enterprise, HP Enterprise, Juniper, Extreme Network, D - Link Netgear |
| 6. | Addressable Fire Detection & Alarm System | Honeywell – Notifier, Siemens - Cerberus, Tyco-Simplex. |
| 7. | Public Addressing System | Bosch, Honeywell - Vario Dyn Aetis, Toa |
| 8. | 2 X 1.5 Sq. Mm. FRLS Flexible / Armoured Cable for Fire Detection & Alarm System & Public Address | Finolex, Polycab, RR Kable, Havells |
| 9. | CCTV / Video-Surveillance Cameras – Fixed Dome, Fixed Cs-Mount/Box, IR-Bullet (SQTC Certificate Mandatory) | Axis, Bosch, Pelco, Panasonic, Matrix Tyco, Honeywell 60&70 Series |
| 10. | VMS Software Application/Analytics For Cctv/Video-Surveillance | Milestone, Genetec or as per Camera Make. |

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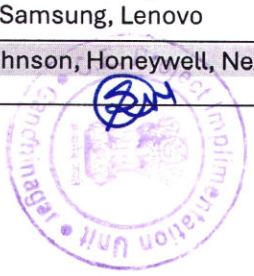
|---|---|---|
| 11. | Server / Client Hardware for Cctv (VMS), i-BMS And Access Control System | Dell, HP, IBM , Lenovo, as per Camera Make |
| 12. | Storage / HDD For CCTV | Lenovo, HP, Hitachi , Infortrend, as per Camera Make |
| 13. | LED Displays | Panasonic, Samsung, LG, Sony |
| 14. | Audio Visual Cables | Liberty AV, Belden, Kramer, Light ware, Crestron, Extron |
| 15. | Networking Racks, Data Centre Racks, Distribution Racks – From Sizes 15U to 42U | Rittal, APC, Elixir, Net-Rack, Val rack |
| 16. | EPABX System | Avaya,<br>Matrix,<br>Cisco,<br>Alcatel-Lucent,<br>Unify |
| 17. | Telephone Instruments | Beetel, Avaya, Panasonic, Alcatel-Lucent |
| 18. | Video Conference System | Cisco / Poly / Avaya |
| 19. | Interactive Display | Samsung / Sony / Panasonic / LG / Newline |
| 20. | Speaker | Bosch / Electro Voice / Toa |
| 21. | Amplifier | Bosch / Electro Voice / Toa |
| 22. | Microphone Wireless | Sennheiser / Biamp / Beyerdynamics / Electro Voice / Telvic |
| 23. | Digital Signal Processor | Amate Audio / Biamp / Sysmetec /Extron/Xilica |
| 24. | 20X NDI PTZ Camera for AV | Crestron / Sony/ Lumens / Panasonic |
| 25. | HD Streaming Transmitter / Receiver | Crestron/ Extron/ Light ware |
| 26. | Distribution Amplifier | Crestron/ Extron/ Light ware |
| 27. | Wireless Presentation System | Crestron / Light ware/ Extron / Dynacord / Barco |
| 28. | Mixer | Mark / Yamaha/ Makie/Sound craft / |
| 29. | Conference Systems | Brahler / Sennheiser/ Bosch / Telvic |
| 30. | BMS Software | Johnson Control – Metasys, Siemens - Desigo, Honeywell |
| 31. | Network / Supervisory Controller/Integrator | Johnson Control – Metasys, Siemens, Honeywell |
| 32. | Central and DDC Controllers | Johnson Control – Metasys, Siemens, Honeywell |
| 33. | Tablet / POT | Johnson Control – Metasys, Siemens, Honeywell, Samsung, Lenovo |
| 34. | Temperature Sensor & Transmitter (Duct/Immersion/Room/Wall/Outdoor) | Siemens, Johnson, Honeywell, Nextech |



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| **35.** | Temperature & RH Transmitter (Duct/Room/Wall/Outdoor Mount) | Siemens, Johnson, Honeywell, Nextech |
| **36.** | Differential Pressure Switch - Air/Water application | Siemens, Johnson, Honeywell, Nextech |
| **37.** | Differential Pressure Transmitter - | Siemens, Johnson, Honeywell, Nextech |
| **38.** | Static Pressure Transmitter – Water/Air | Siemens, Johnson, Honeywell, Nextech |
| **39.** | Level Switch – Water/Diesel application | Siemens, Johnson, Honeywell, Nextech |
| **40.** | Flow Switch -Water/Air application | Siemens, Johnson, Honeywell, Nextech |
| **41.** | CO2/CO/VOC/PM1,2.5,4,10 Transmitter -(Room/Wall/Duct Mount) | Siemens, Johnson, Honeywell, Nextech |
| **42.** | Combined IAQ Transmitter (VOC, CH2O, PM2.5, PM10, CO2, RH & Temperature - Room Mount) – without display/with colour TFT LCD display | Siemens, Johnson, Honeywell, Nextech |
| **43.** | Level Transmitter – Water/Diesel | Johnson Control, Siemens, Nextech, |
| **44.** | Ultrasonic Clamp on/Electromagnetic Inline Type Flow Meters – Water application | Siemens, Nextech, Dwayer, Kamstrup, Trumen |
| **45.** | Ultrasonic Inline type Heat/BTU Meter & Water Meter – water application | Siemens, Nextech, Dwayer, Kamstrup, Trumen |
| **46.** | Modulating / ON & OFF type Damber | Johnson Control, Honeywell, Siemens, |
| **47.** | Thermostats | T&A, Siemens, Oventrop, Schneider, Honeywell |
| **48.** | 2-Way/3-Way control valves | Johnson Control, ALC, Siemens, Belimo, Advance, Honeywell |
| **49.** | Communication Cable (RS-485) | Delton, Finolex, Havells, Polycab, |
| **50.** | Signal Cable | Delton, Finolex, Legrand, Lapp India, Havells, Polycab, Caliplast |

| **Special Note: -** |
|---|
| Need Make Approval from consultant & client before material delivery at site. |
| The Client reserves the right to select the manufacture or approved make from the above list. No change to be permitted in this make during execution contract. |
| If any extra items are required to be executed on site to complete the site requirement, then consultant and client approval required before delivery at site. Also, it should be from the above approved make list only. |
| All the material should be ISI and as per standards mentioned in specifications and BOQ. |
| The make approved shall be guaranteed to have support from OEM for minimum 5 Years with required spares. |
| The Material with higher delivery lead time shall be immediately informed to client / consultant before order execution. |

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# Project Implementation Unit

## Make List: HVAC

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| LIST OF APPROVED MAKES OF HVAC WORKS | | |
|---|---|---|
| **SR. NO.** | **ITEM DESCRIPTION** | **MAKE LIST** |
| 1. | WATER CHILLER | JCI YORK<br>CARRIER<br>TRANE |
| 2. | PLANT SYSTEM MANAGER/PLANT ROOM OPTIMIZER CONTROLLER | JCI YORK<br>CARRIER<br>TRANE |
| 3. | AIR HANDLING UNITS | ZECO<br>EDGETECH<br>VTS<br>CITIZEN<br>SYSTEMAIR<br>CARRIER<br>NEWTECH |
| 4. | TREATED FRESH AIR UNIT | ZECO<br>EDGETECH<br>VTS<br>CITIZEN<br>SYSTEMAIR<br>CARRIER<br>NEWTECH |
| 5. | CHILLED WATER CASSETTES: | CARRIER<br>CITIZEN<br>YORK<br>KUBIC<br>TRANE |
| 6. | CHILLED WATER FANCOIL UNITS | CARRIER<br>CITIZEN<br>YORK<br>KUBIC<br>TRANE |
| 7. | ADJUSTABLE FREQUENCY DRIVE/ AUTOMATIC AFD BYPASS/ PUMP CONTROLLER/ DIFFERENTIAL PRESSURE SENSOR/TRANSMITTER | XYLEM-ITT<br>GRUNDFOS<br>ARMSTRONG<br>FLOWCON<br>NEXTECH<br>MATHER & PLATT<br>DELTA<br>SIEMENS<br>L&T<br>SCHIENDER<br>ABB |
| 8. | DX UNITS (AIR COOLED SPLIT & PACKAGED) | DAIKIN<br>TOSHIBA<br>MITSUBISHI ELECTRIC<br>CARRIER<br>O GENERL<br>YORK |
| 9. | VOLTAGE STABILIZER | V GUARD / BLUE BIRD / VOLTAS / LOGICSTATE / MICROTEK |
| 10. | MOTORS | SIEMENS / ABB / KIRLOSKAR / BBL / HAVELLS |
| 11. | PUMPS (CONDENSER WATER / PRIMARY TYPE CHILLED WATER) | ARMSTRONG<br>GRUNDFOSS<br>ITT-BELL & GOSSETT<br>MATHER & PLATT<br>XYLEM<br>LUBI<br>WILO |

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|---|---|---|
| 12. | VARIABLES SPEED DRIVE SECONDARY CHILLED WATER PUMPING SYSTEM | ARMSTRONG<br>GRUNDFOSS<br>ITT-BELL & GOSSETT<br>MATHER & PLATT<br>XYLEM<br>LUBI<br>WILO |
| 13. | VFD | DELTA / DANFOSS / ALLEN BRADLEY / SCHIENDER / ABB / SIEMENS / L&T / HONEYWELL |
| 14. | CENTRIFUGAL FANS | KRUKGER<br>NICOTRA<br>GREENHECK<br>AIR FLOW<br>MICO (DYNA)<br>VTS<br>HUMIDIN<br>SYSTEMAIR |
| 15. | AXIAL FLOW FANS | KRUKGER<br>NICOTRA<br>GREENHECK<br>AIR FLOW<br>MICO (DYNA)<br>VTS<br>HUMIDIN<br>SYSTEMAIR |
| 16. | INLINE FANS | KRUKGER<br>NICOTRA<br>GREENHECK<br>AIR FLOW<br>MICO (DYNA)<br>VTS<br>HUMIDIN<br>SYSTEMAIR |
| 17. | COOLING TOWER | BELL<br>ADVANCE<br>PAHARPUR<br>BALTIMORE |
| 18. | PROPELLER FANS | KHAITAN / CROMPTON / GE / CARYAIRE / AIRFLOW / KRUGER |
| 19. | BALANCING VALVES / BUTTERFLY VALVES | EMERALD<br>CASTLE<br>SANT<br>LEADER<br>HONEYWELL<br>T&A<br>OVENTROP<br>DANFOSS |
| 20. | P.I.D. VALVES | HONEYWELL / T&A / OVENTROP / DANFOSS |
| 22. | BALL VALVES | HONEYWELL / T&A / OVENTROP / DANFOSS |
| 23. | NON-RETURN VALVES | HONEYWELL / T&A / OVENTROP / DANFOSS |
| 24. | PRE-INSULATED VALVES | HONEYWELL / T&A / OVENTROP / DANFOSS |
| 25. | POT-STRAINER / SUCTION STRAINER / AIR VENT | EMERALD / TRISHUL / CASTLE / SANT / LEADER |
| 26. | COMBINED AIR & DIRT SEPARATOR | BETAFLO / ANERGY / EMERALD / K D AGENCIES / SPIROTECH |
| 27. | CLOSED EXPANSION TANK WITH BUILT-INDEGASSER | SPIROTECH / ITT / ANERGY / EMERALD / K D AGENCIES / ARMSTRONG / GRUNDFOSS |

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|---|---|---|
| 28. | AIR MONITORING SYSTEM | VS ENVIROPURE / EFLOW / ULTRAPURE / NEXTECH |
| 29. | PRESSURIZATION UNITS | XYLEM / ARMSTRONG / SEVCON / EMERALD / ANERGY |
| 30. | COOLING PADS | ECOCOOL / MUNTER (ITALY) / GIGOLA(ITALY) |
| 31. | DE HUMIDIFER UNIT | BRYAIR / DRI / DRY SOLUTION / MUNTER(US) / AQUA AIR |
| 32. | PIPES (MS/GI) | JINDAL HISSAR / TATA / APL APOLLO |
| 33. | FRP LINING FOR CONDENSER PIPING | OWEN-CORNING / UP TWIGA / BINANI |
| 34. | PIPE INSULATION (NITRILE RUBBER) | ARMACELLL / K-FLEX / ARMAFLEX |
| 35. | FLEXIBLE PIPE CONNECTION | RESISTOFLEX / DIAMOND / DUNLOP |
| 36. | INSULATION ADHESIVE | PIDLITE SR-505 / FOSTER / HENKEL. |
| 37. | PROTECTIVE COATING OVER INSULATION (LAG COATING) | PIDLITE / FOSTER / PARAMOUNT / POLYBOND |
| 38. | GROOVED COUPLINGS & FITTINGS | VICTAULIC / JINDAL / TATA / SEVEN STAR / |
| 39. | REFRIGERANT PIPING (COPPER) | RAJCO / MEXFLOW / MANDEV / KWALITY TUBES |
| 40. | DUCT & REFGT. PIPING THERMAL INSULATION CLOSED CELL / CROSS LINKED ELASTOMERIC / POLYETHYLENE FOAM | ARMACELLL / K-FLEX / ARMAFLEX |
| 41. | RP TISSUE | UP TWIGA / OWENS CORNING /STYRENE PACKING |
| 42. | STRIP HEATER | DAS PASS / ESCORTS / KEPL OR EQUIVALENT |
| 43. | V BELT | DUNLOP / FENNER / HILTON |
| 44. | DUCT ACOUSTIC LINING | UP TWIGA / OWENS CORNING / ARMAFLEX / AEROFLEX / SUPREME / K FLEX / KIMMCO / ARMACELLL |
| 45. | XLPE INSULATION | ARMACELLL / K-FLEX / ARMAFLEX |
| 46. | EXPANDED POLYSTYRENE INSULATION | ARMACELLL / K-FLEX / ARMAFLEX |
| 47. | G.I. SHEETS | TATA / SAIL / JINDAL / ESSAR / NIPPON |
| 48. | ALUMINIUM SHEETS | INDALCO / HINDALCO / BALCO / JINDAL |
| 49. | FACTORY FABRICATED DUCTS | DUCTOFAB / NUTECH / WAVES / ZECO / MARUTI HVAC / ROLASTER |
| 50. | CAV BOX | TROX / SYSTEM AIR / RUSKIN TITUS / HONEYWELL / JOHNSON'S CONTROL / BELIMO |
| 51. | SOUND ATTENUATOR | CARYAIRE (NICOTRA) / SYSTEM AIR / RUSKINTITUS / AIR FLOW / MICO (DYNA) / KRUGER |
| 52. | DUCT HANGERS | MUPRO / GRIPPLE / DUCT MATE / DYNAGRIP |
| 53. | DIGITAL THERMOMETER | STAEFA / JOHNSON / SEIMENS / HONEYWELL / SCHNEIDER |
| 54. | PRESSURE GAUGES | JOHNSON / SEIMENS / HONEYWELL / SCHNEIDER / ANERGY / EMERALD / NEXTECH |
| 55. | ALUMINIUM GRILLES / DIFFUSERS | CARYAIRE / DYNACRAFT / SYSTEMAIR / AIRFLOW / GREENHECK / CONAIR / TROX |
| 56. | FLEXIBLE DUCT CONNECTION | AIRFLOW/PYROGUARD / ROLASTAR/ UP TWIGA |
| 57. | FIRE DAMPERS | CARYAIRE / DYNACRAFT / SYSTEMAIR / COSMOS / AIRFLOW / GREENHECK / CONAIR / TROX |
| 58. | ACTUATOR FOR FIRE DAMPER | SIEMENS / BELIMO / SCHNEIDER / HONEYWELL / DANFOSS |
| 59. | ANALOG MEASURING METERS | AE / RISHAB / NEXTECH |
| 60. | P.U.F. PIPE SUPPORTS | MALANPUR / LLOYD / BEARDSELL OR EQUIVALENT |

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| 61. | GATE VALES & GLOBE VALVE (GUN METAL) (DRAIN VALVE) | RAPIDCONTROL / RB-ITAP / SKS / LEADER / ZOLOTO / SANT |
| 62. | PVC / UPVC PIPE | POLYCAB / SUPREME / ASTRAL / FINOLEX |
| 63. | AUTO AIR VENT WITH STOP VALVE | ANERGY / RAPID CONTROL / EMERALD / CASTLE / CALEFFI / SPIROTECH / OPTIVENT |
| 64. | UVGI SYSTEM | ALPHAA UV / RUKS / HONEYWELL / TRANE / NEXTECH |
| 65. | CO / CO2 SENSOR | MSR / GAS ALARM / HONEYWELL / SIEMENS / DANFOSS |
| 66. | RUBBER PADS / VIBRATION ISOLATORS | RESISTOFLEX / EMERALD / KANWAL / EASYFLEX |
| 67. | MODULATING VALVES (3-WAY/2-WAY) | HONEYWELL /JOHNSON / SIEMENS/ ANERGY RAPIDCONTROL / DANFOSS / BELIMO ADVANCE / CASTLE / LEADER / KITZ / OVENTROP / SANT |
| 68. | THERMOSTAT AND ACTUATOR FOR 2-WAY/3WAYVALVE | HONEYWELL / JOHNSON / SIEMENS/ ANERGY / RAPIDCONTROL / DANFOSS / BELIMO |
| 69. | ENERGY METERS | SEIMENS / HONEYWELL / ANERGY / NEXTECH / EQUIVALENT |
| 70. | FLOW SWITCH (BELLOW TYPE) | RAPIDCONTROL / ANERGY / JHONSON / NEXTECH |
| 71. | FLEXIBLE DUCT | PINEAIR / KAAL FLEX / CARRYAIR / GPSPIRA |
| 72. | PRE-INSULATED CHW PIPES | ZECO / TATA / JINDAL / PERMA |
| 73. | ULTRASONIC HUMIDIFIER | CAREL/ DASPASS/ RADIPCOOL/ STULZ |
| 74. | UV LAMP | ALFAA UV/ AEROPURE/ SANUVOX/ RUKS ENGINEERS LTD / HONEYWELL / TRANE / BONPHUL. |
| 75. | HEPA & BIBO | THERMADYNE / SPECTRUM/ CAMFIL/ AMERICAN AIR FILTER |
| 76. | CHEMICAL DOSING | CHEMFLOW / MAXION / N TECH / NALCO |
| 77. | AIR WASHER | ZECO / EDGETECH / SYSTEMAIR / CASILICA / HUMIDIN / VTS / CITIZEN |
| 78. | DRY SCRUBBER | RYDER / TRION / ESPIRE / EDGETECH |
| 79. | AIR FILTER (PRE & FINE) | HONEYWELL / AAF / CAMFILL |

| **Special Note: -** |
|---|
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| If any extra items are required to be executed on site to complete the site requirement, then consultant and client approval required before delivery at site. Also, it should be from the above approved make list only. |
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