

PROCUREMENT PLAN

Group: GE & GHRR

| Sl. No. | Name of the Equipment | Cost Approx. |
|---------|---|--------------|
| 01 | Fredlund SWCC equipment | 25 Lakhs |
| 02 | 3D Printer for rock sample preparation | 15 lakhs |
| 03 | High Speed camera | 20 lakhs |
| 04 | Bi-axial Shaking table | 300 lakhs |
| 05 | 3D Digital Image correlation system | 25 lakhs |
| 06 | Dynamic/Cyclic Simple shear apparatus | 100 lakhs |
| 07 | Advanced dynamic triaxial testing system | 150 lakhs |
| 08 | Actuator with power pack | 100 lakhs |
| 09 | FBG sensor network | 80 lakhs |
| 10 | Upgradation of Plaxis 3D software | 10 lakhs |
| 11 | Fourier Transform Infrared Spectrometer | 75 lakhs |
| 12 | Resonant Column Apparatus | 40 lakhs |
| 13 | Infrared Moisture Meter | 3 lakhs |
| 14 | Seismic Down/cross Hole Tester | 35 lakhs |
| 15 | Light Dynamic Penetrometer | 2 lakhs |
| 16 | ERT wire | 6 lakhs |
| 17 | Laser displacement sensor | 25 lakhs |
| 18 | Miniature earth pressure cell | 8 lakhs |
| 19 | Low strain pile integrity test | 10 lakhs |
| 20 | Strong motion accelerometer | 30 lakhs |
| 21 | Computer controlled triaxial and consolidation apparatus (for saturated and unsaturated conditions) | 80 lakhs |
| 22 | Ground Penetrating Radar | 100 lakhs |

Group: ASCD

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| 1. | Multichannel Electrochemical Work Station with software and all accessories | Rs. 45 Lakh |
| 2. | Universal Testing Machine with software and all accessories | Rs. 25 Lakh |
| 3. | Contact Angle Analyzer | Rs. 10 Lakh |
| 4. | Digital Viscometer | Rs. 2 Lakh |
| 5. | Digital Colorimeter | Rs. 0.50 Lakh |
| 6. | Spectrophotometer | Rs. 3.50 Lakh |
| 7. | Light Microscope | Rs. 4 Lakh |
| 8. | Cyclic tensile Testing System | 15.0 Lakh |
| 9. | Axial Load Testing System | 10.0 Lakh |
| 10. | Pull Off testing equipment's | 2.5 Lakh |
| 11. | UPV Instrument | 2.0 Lakh |
| 12. | High Speed Camera | 2.0 Lakh |
| 13. | Accelerometer | 1.0 Lakh |
| 14. | Laser Transducer | 1.0 Lakh |

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| 15. | High Speed Impact Instrument | 10.0 Lakh |
| 16. | Concrete Mixer | 2.0 Lakh |
| 17. | Work Station | 5.0 Lakh |
| 18. | Flat Jack Apparatus | 4.0 Lakh |
| 19. | NT Build | 2.5 Lakh |
| 20. | Fatigue testing system | 100 Lakh |
| 21. | Atomic absorption spectrophotometer | 25.0 Lakh |
| 22. | UTM (50 kN) | 20.0 Lakh |
| 23. | Impact testing machine | 5.0 Lakh |
| 24. | High Temperature Electric furnace (1600°C) | 15.0 Lakh |
| 25. | Laboratory Autoclave | 5.0 Lakh |
| 26. | Ball mill (10 kg capacity) | 5.0 Lakh |
| 27. | Digital Analytical balance (220 gm) | 5.0 Lakh |
| 28. | Ultrasonicator | 1.0 Lakh |
| 29. | Doubled distilled water apparatus | 2.0 Lakh |
| 30. | Resin blender | 1.0 Lakh |
| 31. | Homogenizer | 1.0 Lakh |
| 32. | Chemical & Consumable | Rs 80 lakhs |

Group: SE

| S.No | Items | Tentative Rate (Rs) |
|------|--|---------------------|
| 1. | 3D concrete Printer (lab scale) | 80,00,000/- |
| 2. | 3D concrete Printer (full scale) | 1,80,00,000 |
| 3. | Pycnometer (500ml) | 3,000/- |
| 4. | Mortar Mixer (5-8ltrs) | 80,000/- |
| 5. | Le-Chatlier Flask | 4,000/- |
| 6. | Moulds(Cast iron 3 gang Mould) | 32,000/- |
| 7. | Slump Test Apparatus | 40000/- |
| 8. | Flow Table Test Apparatus | 10,000 |
| 9. | Le-Chatleir apparatus (For soundness test) | 2000/- |
| 10. | Weighing Machine Range 1gm-10kg) | 5000/- |
| 11. | Vicat Apparatus | 5000/- |
| 12. | Set of sieve (Brass) | 10,000/- |
| 13. | Putty Mixture | 5000/- |
| 14. | Cut & Pull out Testing equipment CAPO | 18,00,000/- |
| 15. | Pull off Testing equipment | 15,00,000/- |
| 16. | Rheometer for Building Materials:2- 8mm particle Size. | 80,00,000/- |
| 17. | Modular phased array pulse-echo instrument incorporating dry-point contact transducers | 15,00,000/- |
| 18. | Digital Radiography equipment for concrete. | 20,00,000/- |
| 19. | Displacement controlled universal testing machine. (100 ton) | 10,00,000/- |
| 20. | Analytical Balance Range: 01mg –220g | 10,000/- |
| 21. | Carbonation Chamber | 1,50,000/- |

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| 22. | Electric Furnace (6X6X12)ft Max temp 1400° C thermocouple type-R | 3,00,000/- |
| 23. | Concrete Resistivity metre equipment. | 5,00,000/- |
| 24. | Rainbow indicator (carbonation test kit) | 3,50,000/- |
| 25. | Ferro scanner | 22,00,000/- |
| 26. | Vane shear apparatus | 1,00,000/- |
| 27. | Core cutting machine | 3,50,000/- |
| 28. | Set of Rebound hammer (P-type, N-type, M-type) | 10,00,000/- |
| 29. | Impact echo testing equipment | 23,00,000/- |
| 30. | Corrosion analyser | 18,00,000/- |
| 31. | 3D-Digital Image correlation system and supporting software | 85,00,000/- |
| 32. | LED light for DIC/HSFC | 10,00,000/- |
| 33. | High speed framing camera (Phantom V411) | 35,00,000/- |
| 34. | Infra-Red Thermography (IR Thermography) | NA |
| 35. | Ultrasonic Pulse Velocity Tester (Immediate need) | 5,00,000/- |
| 36. | Profometer Corrosion (Immediate need) | 6,60,000/- |
| 37. | Rebound Hammer (L type) | 2,00,000/- |
| 38. | Ferrosan | 24,00,000/- |
| 39. | Rapid Chloride Permeability Test Apparatus | 7,50,000/- |
| 40. | Core Cutting Machine | 7,00,000/- |
| 41. | Potentiostat | 25,00,000/- |
| 42. | Impact Echo | 4,00,000/- |

Group - Centre for Climate Change

| Sl. No. | Equipment Name/ Software | Approx Cost (Rs.) |
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| 1 | Climate Simulation Chamber | 80,00,000.00 |
| 2 | Environmental Air Monitoring System | 6,00,000.00 |
| 3 | Solar Simulator | 25,00,000.00 |
| 4 | Carbonation Chamber | 17,00,000.00 |
| 5 | One Click Life Cycle Assessment | 4,00,000.00 |
| 6 | Virtual Environment | 4,00,000.00 |
| 7 | Meteonorm | 1,00,000.00 |
| 8 | High computing PC with Server | 4,00,000.00 |
| 9 | Data acquisition systems | 8,00,000.00 |
| 10 | Spectroradiometer | 5,00,000.00 |
| 11 | Thermal Comfort meter | 6,00,000.00 |
| 12 | Pyronometer | 4,00,000.00 |
| 13 | Lux meter | 1,00,000.00 |
| 14 | Thermal Image Camera | 5,00,000.00 |

Group: OBM

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| 1. | Autoclave (Working Pressure - Up to 227 psi; Working Temp. - Up to 200 Deg. C) | 6 Lakhs |
| 2. | Chloride migration test apparatus | 1.5 Lakhs |
| 3. | Conducto-meter | |

Group: Ar&P

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| 1. | Carbonation Chamber | 17 Lakh |
| 2. | UV-Vis-NIR Spectrophotometer | 50 Lakh |
| 3. | Trimble Sefaira for SketchUp and Revit | 20 Lakh |