



**DEPARTMENT OF INFORMATION TECHNOLOGY & COMMUNICATION  
GOVERNMENT OF NAGALAND**

# **DETAIL PROJECT REPORT(DPR)**

*On*  
**NAGALAND INNOVATION HUB  
FOR STARTUP**

**Submitted To:**

**Ministry of Development of North Eastern Region (MDoNER)  
Under NESIDS (OTRI)**

PROOF CHECKED

A. Deka  
25.3.25

## Table of contents

<b>1. Executive Summary .....</b>	<b>4</b>
<b>2. Background .....</b>	<b>4</b>
2.1 Nagaland's Unique Landscape .....	4
2.2 Challenges of Outmigration .....	4
<b>3. Introduction:.....</b>	<b>5</b>
<b>4. Vision &amp; Mission .....</b>	<b>5</b>
<b>5. Key Objectives .....</b>	<b>5</b>
<b>6. Project Implementation Plan :.....</b>	<b>6</b>
6.1 Strategic Development of Infrastructure and Innovation Ecosystem .....	6
6.2 Operational Sustainability and Revenue Generation Strategy.....	6
<b>7. Execution Timeline .....</b>	<b>7</b>
<b>8. Nagaland Innovation Hub for Startups: Operational Plan .....</b>	<b>8</b>
8.1 Co-Working Spaces .....	8
8.2 R&D Laboratories .....	8
8.3 Incubation Center.....	8
8.4 Plug-and-Play Facilities.....	9
8.5 RAW Space.....	9
8.6 Seed Funding and Financial Support.....	9
8.7 Strategic Partnerships and Collaborations.....	9
8.8 Institutional Alliances.....	9
8.9 Investor Connect Programs .....	10
8.10 Capacity Building and Entrepreneurial Development.....	10
8.11 Startup Showcase and Industry Events .....	10
8.12 Networking Opportunities.....	10
8.13 Idea to Validation Program.....	10
8.14 Market Entry Program.....	11
8.15 Scaling Up Program .....	11
<b>9. Institutional Structure .....</b>	<b>11</b>
9.1 Nodal Agency: .....	11
9.2 State Level Apex Committee (SLAC):.....	11
9.3 State Project Monitoring Committee (SPMC):.....	11
9.4 Implementing Agency / Special Purpose Vehicle (SPV): .....	12
<b>10. Key Performance Indicators (KPIs) .....</b>	<b>12</b>

10.1	Startup Awareness & Engagement Initiatives: .....	12
10.2	Strategic Partnerships & Collaborations .....	14
10.3	Innovation & Technology Development.....	14
<b>11.</b>	<b>Monitoring &amp; Evaluation (M&amp;E) Methodology .....</b>	<b>14</b>
11.1	Management Information System (MIS): .....	14
11.2	Stakeholder Involvement .....	15
11.3	Evaluation Schedule & Audits .....	15
11.4	Expected Outcomes of the M&E Plan.....	15
<b>12.</b>	<b>Sustainability Plan .....</b>	<b>15</b>
12.1	Revenue Sources .....	15
12.2	Public-Private Partnerships (PPP) .....	16
<b>13.</b>	<b>Incentive Structure.....</b>	<b>16</b>
13.1	Rental Discounts .....	16
13.2	Connectivity & Digital Infrastructure Support .....	16
13.3	Additional Incentives for Startups.....	17
<b>14.</b>	<b>Building Space Utilization Plan &amp; Area Distribution .....</b>	<b>18</b>
<b>15.</b>	<b>Estimated Budget.....</b>	<b>19</b>
<b>16.</b>	<b>Interim Operational Support.....</b>	<b>20</b>
<b>17.</b>	<b>Conclusion.....</b>	<b>20</b>
<b>18.</b>	<b>NON ENCUMBRANCE CERTIFICATE : .....</b>	<b>21</b>
<b>19.</b>	<b>NO OBJECTION CERTIFICATE .....</b>	<b>22</b>
<b>20.</b>	<b>Location of the Project Proposed site : .....</b>	<b>23</b>
<b>21.</b>	<b>Letter of Intent (LoI) : .....</b>	<b>24</b>
21.1	M/s ChillibreezeSolutios Pvt Ltd.....	24
21.2	M/s Smart-Techies .....	25
21.3	M/s NK Square Infotech Pvt Ltd.....	26
<b>22.</b>	<b>Abstract of Construction of Nagaland Innovation Hub for Startup .....</b>	<b>27</b>
22.1	Table No.1 :Civil Works : As per NPWD Schedule of Rates 2021 .....	27
<b>23.</b>	<b>Bill of Materials (BOM) for Non-IT Works .....</b>	<b>28</b>
23.1	Table No. 2 :Installation, testing and commissioning of VRV System HVAC ....	28
23.2	Table No.3 :Supply & Installation of Fire Fighting equipment.....	29
23.3	Table No.4 :Supply & Installation of Online UPS 50 KVA (2-4 hrs backup).....	30
23.4	Table No.5 :Supply & Installation of 250 KVA Genset .....	31
23.5	Table No.6 :Supply & Installation of chairs & tables for conference hall .....	33
23.6	Table No.7 :Supply & Installation of chairs for Multipurpose Hall.....	33
23.7	Table No.8 :Workstation in Innovation & Startup (Co-working Space).....	34

---

23.8	Table No.9 :Administrative Office .....	35
23.9	Table No.10 :For Accounts office .....	36
23.10	Table No.11 : For First Aid Room.....	36
23.11	Table No.12 : For Café Setup .....	37
23.12	Table No.13 :Workstation for Plug & Play (PnP).....	37
<b>24.</b>	<b>Bill of Materials (BOM) for IT Works .....</b>	<b>38</b>
24.1	Table No. 14 :Supply and Installation of Audio System for Multipurpose hall ....	38
24.2	Table No.15 :Supply & Installation of LED Visual Display for Multipurpose Hall	39
24.3	Table No.16 : Video Conference equipment (Audio & Video) .....	39
24.4	Table No. 17 :Supply & Installation of Networking Infrastructure .....	40
<b>25.</b>	<b>Skilled Development &amp; Open Challenge Program (OCP) .....</b>	<b>41</b>
25.1	Table No.18 :Training & Capacity Building/hackathons/Open Challenge .....	41

## 1. Executive Summary

The **Nagaland Innovation Hub for Start-ups** is a visionary initiative aimed at fostering innovation, entrepreneurship, and socio-economic development in Nagaland through the strategic use of Information Technology (IT) and IT-enabled Services (ITeS). With a budget allocation of **₹20 Crore**, the project seeks to establish a state-of-the-art facility that will serve as a catalyst for the growth of the state's start-up ecosystem. The hub will provide cutting-edge infrastructure, including co-working spaces, R&D laboratories, incubation centers, and plug-and-play facilities, designed to support start-ups across various stages of their growth.

This project aligns with the broader vision of **Digital India** and supports national programs such as **MeitY Startup Hub, Atal Innovation Mission, Startup India**, and the **Sustainable Development Goals (SDGs)**. It particularly contributes to the following key areas:

**SDG 4 – Quality Education & Skill Development :** NIHS will offer structured mentorship, digital literacy programs, and collaborations with **NIELIT, STPI** and other agencies to equip young entrepreneurs and skilled professionals with industry-relevant expertise.

**SDG 8 – Decent Work & Economic Growth :** By promoting **startups, IT/ITeS industries**, and entrepreneurship, NIHS will generate employment opportunities, boost the local economy, and drive inclusive, sustainable growth.

**SDG 9 – Industry, Innovation & Infrastructure :** The establishment of **state-of-the-art R&D labs, high-speed internet connectivity, and incubation centers** will encourage technological advancements and innovation-driven industries in Nagaland.

**SDG 17 – Partnerships for the Goals :** NIHS will collaborate with **national agencies, private enterprises, and global accelerators** to integrate Nagaland's startups into larger innovation ecosystems, facilitating access to funding, mentorship, and policy support.

## 2. Background

### 2.1 Nagaland's Unique Landscape

Nagaland, a state in Northeast India, has a predominantly agrarian economy, with **71% of the population reliant on agriculture**. However, the state has immense potential for diversification, particularly in the IT and ITeS sectors. The state's strategic location, rich cultural diversity, and growing interest in technology-driven solutions make it an **ideal candidate for fostering innovation and entrepreneurship**.

### 2.2 Challenges of Outmigration

Nagaland faces a significant challenge of outmigration, with highly educated and skilled IT and ITeS professionals leaving the state in search of better job opportunities. The lack of local job opportunities, market linkages, industry mentorship, and capital influx has hindered the growth of small IT industries. The Nagaland Innovation Hub aims to address these challenges by providing a supportive ecosystem for start-ups, thereby creating local employment opportunities and retaining talent within the state.

### 3. Introduction:

The Nagaland Innovation Hub for Start-ups is an ambitious project conceptualized by the Department of Information Technology & Communication (IT&C), Government of Nagaland. **The hub will be established on a 4 (four) acres (approx.) of land in Chumoukedima District** and will serve as a dynamic center for innovation and entrepreneurship. The project aims to provide start-ups with access to state-of-the-art infrastructure, mentorship, funding opportunities, and networking platforms.

The hub will also collaborate with NIELIT (National Institute of Electronics and Information Technology), Kohima for capacity building and skill development, ensuring that start-ups and entrepreneurs are equipped with the necessary technical and entrepreneurial skills to thrive in the competitive IT and ITeS sectors. This collaboration will include specialized training programs, workshops, and certification courses in emerging technologies such as AI, IoT, Cloud Computing, Cybersecurity, and Blockchain, as well as entrepreneurial training in business model development, financial literacy, and digital transformation strategies.

The Hub will also collaborate with the Software Technology Parks of India (STPI) to strengthen the start-up ecosystem in the region. This partnership will provide start-ups with access to STPI's OCTaNE (CoE-SIZ) initiative, which focuses on emerging technologies such as AI, IoT, AR/VR, Data Analytics, and Gaming. Through this collaboration, start-ups will benefit from co-working spaces, mentorship, incubation programs, funding opportunities, and industry networking. Additionally, STPI's support will help integrate Nagaland's innovation ecosystem with national and global markets, fostering investment, product development, and entrepreneurship growth in the IT and ITeS sectors.

### 4. Vision & Mission

- **Vision:** To position Nagaland as a hub for technological innovation and entrepreneurial growth.
- **Mission:** To foster a culture of innovation, collaboration, and entrepreneurship by providing start-ups with the necessary resources, mentorship, and support to scale their ideas into viable businesses.

### 5. Key Objectives

- a). To create a vibrant ecosystem for start-ups in IT & ITeS, emerging technologies, e-governance, fintech, e-commerce, and animation & multimedia.
- b). To provide start-ups with access to cutting-edge infrastructure, including co-working spaces, R&D labs, and incubation centers.
- c). To facilitate collaboration between start-ups, industry experts, academia, and government bodies.
- d). To generate employment opportunities and contribute to the socio-economic development of Nagaland.

## 6. Project Implementation Plan :

The Nagaland Innovation Hub for Start-ups is planned to be implemented in three (3) phases over a period of three (3) years, with grant support from the Ministry of Development of North Eastern Region (MDoNER). The phased approach ensures a structured and efficient rollout, starting with civil infrastructure development, followed by technical infrastructure setup, and culminating in full operationalization and ecosystem building. Upon completion of the initial three-year period, from the fourth year onwards, the hub is planned to sustain itself through a self-reliant revenue model, which includes:

- Startup incubation fees and membership charges
- Corporate partnerships and sponsorships
- Revenue from training programs and capacity-building workshops
- Venture funding and investment facilitation
- Grants from national and international innovation programs

### 6.1 Strategic Development of Infrastructure and Innovation Ecosystem

The project strategy is twofold. The first component focuses on building and enhancing the physical and technical facilities essential for supporting startups and innovators. This includes constructing co-working spaces, R&D laboratories, incubation centers, and plug-and-play facilities, as well as establishing vital amenities such as a 24x7 power supply, high-speed internet, and backup systems. The second component aims to cultivate a vibrant innovation ecosystem by launching mentorship programs, investor connect initiatives, and capacity-building workshops, alongside hosting startup showcases, hackathons, and networking events. Furthermore, strategic collaborations with institutions such as the Atal Innovation Mission (NITI Aayog), MeitY Startup Hub, NIELIT, STPI, and other national and international organizations will enable access to advanced technical resources—such as high-performance computing, prototyping tools, and enterprise-grade software—and support the integration of R&D facilities for emerging technologies like IoT, AI, Machine Learning, Drones, and Robotics. These partnerships will also help secure additional funding, market access, and policy support, ensuring a robust and sustainable innovation ecosystem.

### 6.2 Operational Sustainability and Revenue Generation Strategy

To ensure long-term operational sustainability after the initial three-year phase of developing civil and technical infrastructure and establishing a vibrant innovation ecosystem, the hub will transition to a self-sustaining model beginning in the fourth year. This strategy is based on generating diverse revenue streams to cover ongoing operational costs and support further growth. Key revenue sources will include rent from Plug & Play (PnP) spaces, RAW spaces, internet broadband services, startup incubation fees, and membership charges. Corporate partnerships and sponsorships will also play a significant role by providing both financial support and strategic resources. Additionally, training programs and capacity-building workshops will generate steady income while enhancing skills.

Furthermore, the hub will leverage venture funding and investment facilitation to support promising start-ups, ensuring that innovative ideas develop into viable businesses. Grants from national and international innovation programs will supplement these revenue streams, providing additional capital for research and development and infrastructure upgrades.

## 7. Execution Timeline

Task	Duration	Year 1				Year 2				Year 3			
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
<b>Phase 1: Civil Infrastructure Development</b>	<b>18 months</b>												
<b>A. Civil Works</b>													
Bid Process and Selection of contractors	3 Months												
Construction of Physical Infrastructure	16 months												
<b>B. Non IT Works</b>													
SITC of HVAC system, fire safety equipment, CCTV & Biometric access control system	6 Months												
SITC of Furnitures	6 Months												
SITC of UPS and Genset	3 Months												
<b>C. IT Works</b>													
SITC Networking Infrastructure													
SITC of Video Displays and VC sets	3 Months												
SITC of Audio systems	3 Months												
<b>Phase II : Technical Infrastructure Development</b>	<b>12 Months</b>												
Collaboration with Atal Innovation Mission/MeitY	6 Months												
Development of Incubation and R&D Labs	6 Months												
<b>Phase III : Ecosystem Building &amp; Operationalization</b>	<b>24 Months</b>												
Startup Programs Development and launch	6 months												
Induction of Anchor Units	12 Months												
Hosting of Startup bootcamps,Hackathons,Showcases	18 months												
Mentorship/Investor Connect/Workshops	18 months												

## 8. Nagaland Innovation Hub for Startups: Operational Plan

The Nagaland Innovation Hub for Startups will serve as a one-stop destination for entrepreneurs, offering a comprehensive ecosystem that includes raw and plug-and-play workspaces, 24x7 power and high-speed internet, state-of-the-art labs, mentorship programs, seed funding, and investor connect initiatives. By fostering innovation and entrepreneurship, the hub aims to create local employment opportunities, retain talent within the state, and position Nagaland as a hub for technological excellence.

### 8.1 Co-Working Spaces

- **Capacity:** 50 flexible and dedicated seats.
- **Features:** High-speed internet, printing services, meeting rooms, collaboration zones, and community event spaces.
- **Objective:** To create a vibrant community where startups, freelancers, and corporations can collaborate and innovate.
- **Activities:**
  - Dedicated co-working areas and private cabins for diverse team sizes.
  - Flexible, ready-to-use workspaces tailored for startups and entrepreneurs to kick start operations immediately.

### 8.2 R&D Laboratories

- **Facilities:** Prototyping tools (3D printers, CNC machines), high-performance computing for AI and data analytics, and expert staff for mentorship.
- **Objective:** To enable startups to conduct advanced research in AI, IoT, Blockchain, Cybersecurity, Drones, and Robotics.
- **Activities:**
  - High-performance computing resources and prototyping tools for innovation.
  - Collaboration with leading academic and research institutions in India for R&D support, knowledge-sharing, and workforce development.

### 8.3 Incubation Center

- **Focus:** Early-stage startups.
- **Services:** Sector-specific mentorship, structured programs for idea validation and market entry, and networking opportunities with investors and corporations.
- **Activities:**
  - Comprehensive mentorship programs connecting startups with seasoned entrepreneurs, industry experts, and academicians.
  - Regular workshops, webinars, and training sessions to build entrepreneurial and leadership skills.

## 8.4 Plug-and-Play Facilities

- **Capacity:** 100 seats.
- **Support:** Administrative services (legal, compliance, HR), access to shared resources like software licenses.
- **Objective:** To provide startups with ready-to-use office spaces, reducing entry barriers and allowing them to focus on growth.
- **Activities:**
  - Dedicated private workspaces with full infrastructure support.
  - Uninterrupted power supply supported by backup generators and renewable energy sources.

## 8.5 RAW Space

- **Purpose:** Ready-to-Adapt Workspace with open and flexible areas for startups that need minimal infrastructure and want to customize their workspace.
- **Target Audience:** Established businesses or startups focusing on scalability and operational activities.
- **Objective:** To offer highly flexible workspace solutions tailored for dynamic business needs.

## 8.6 Seed Funding and Financial Support

- Provision of seed money to promising startups for scaling their ventures.
- Establishment of a fund with contributions from government grants, corporate CSR, and venture capital firms.
- Collaboration with STPI for access to funding schemes such as OCTANE, CHUNAUTI, and NextGen Startup Challenge.
- Creation of a Startup Venture Fund in partnership with financial institutions.

## 8.7 Strategic Partnerships and Collaborations

- Collaboration with Atal Innovation Mission (AIM) for fostering innovation and entrepreneurship.
- Partnership with MeitY Startup Hubs to provide access to technology, funding, and market connections.
- Engagement with DPIIT (Department for Promotion of Industry and Internal Trade) for policy support and ease of doing business.
- Association with industry leaders to provide sector-specific guidance and funding support.

## 8.8 Institutional Alliances

- Collaboration with leading academic and research institutions in India for R&D support, knowledge-sharing, and workforce development.
- Engagement with incubators and accelerators to create a vibrant ecosystem.

- Partnerships with national and international universities for innovation exchange programs.

### **8.9 Investor Connect Programs**

- Organization of investor pitch days, startup demo days, and networking events to connect startups with angel investors, venture capitalists, and funding agencies.
- Creation of an investor consortium for regular engagement and support.
- Development of an online investment portal to facilitate startup-investor interactions.

### **8.10 Capacity Building and Entrepreneurial Development**

- Skill enhancement programs, focusing on innovation, business acumen, and technical expertise.
- Training on market readiness, fundraising, and customer engagement to prepare startups for growth.
- Collaboration with NIELIT for technical and entrepreneurial training, including hands-on workshops, certification programs, and R&D support.
- Inclusion of Digital Entrepreneurship Bootcamps for young innovators.

### **8.11 Startup Showcase and Industry Events**

- Hosting innovation fairs, startup expos, and hackathons to spotlight local talent and foster a culture of innovation.
- Participation in national and international events to promote startups from Nagaland on a larger stage.
- Organization of Annual Nagaland Startup Summit to highlight emerging entrepreneurs.

### **8.12 Networking Opportunities**

- Creation of forums and platforms for startups to interact with mentors, investors, industry leaders, and government officials.
- Encouragement of collaboration between startups to build synergy and exchange ideas.
- Establishment of a Startup Founders' Club for peer learning and co-mentorship.

### **8.13 Idea to Validation Program**

- Focus:** Help aspiring entrepreneurs validate their ideas through prototyping and user feedback.
- Deliverables:**
  - Validated business models.
  - Low-fidelity MVPs ready for market testing.

### **8.14 Market Entry Program**

- **Focus:** Guide startups in securing their first customers.
- **Activities:** Pilot project execution and pricing strategy workshops.
- **Outcome:** Initial revenue generation and customer acquisition.

### **8.15 Scaling Up Program**

- **Focus:** Support startups with growth strategies, funding readiness, and scaling operations.
- **Activities:** Advanced digital marketing and sales strategy and investor networking sessions.
- Creation of Go-To-Market (GTM) strategies customized for different sectors.

## **9. Institutional Structure**

The Nagaland Innovation Hub for Start-ups will function under a Special Purpose Vehicle (SPV) established under Section 8 of the Companies Act, 2013. This structured framework ensures a sustainable, scalable, and well-regulated approach to fostering start-up growth, innovation, and economic development in Nagaland.

### **9.1 Nodal Agency:**

The Department of Information Technology & Communication (IT&C), Government of Nagaland, will serve as the Nodal Agency for implementing the Nagaland Innovation Hub for Start-ups.

### **9.2 State Level Apex Committee (SLAC):**

A State Level Apex Committee (SLAC) will be established under the chairmanship of the Chief Secretary, Government of Nagaland. Members will be co-opted from various Line Departments of the State Government. The SLAC will be responsible for:

- a). Defining the roles and obligations of all involved entities, including the SPMC, Implementing Agency, Contractors, and Developers.
- b). Making decisions on policy matters related to the project.
- c). Conducting quarterly/half yearly or as and when required to review the progress of the project.
- d). Resolving any interdepartmental issues.
- e). Providing strategic guidance for the project's speedy implementation.

### **9.3 State Project Monitoring Committee (SPMC):**

A State Project Monitoring Committee (SPMC) will be established under the chairmanship of the Secretary, IT&C, Government of Nagaland, with members from Line Departments, Industry, and Academia. The SPMC will:

- a). Monitor the implementation of the project.
- b). Ensure timely execution of SLAC's decisions and directives.

#### **9.4 Implementing Agency / Special Purpose Vehicle (SPV):**

A Special Purpose Vehicle (SPV) will be established under Section 8 of the Companies Act, 2013, within the Department of Information Technology & Communication (IT&C), Government of Nagaland. This SPV will serve as the Implementing Agency for the project, ensuring efficient execution and operational management.

##### **Key Features of the SPV:**

- The SPV will function as an independent legal entity, providing it with the operational autonomy needed to make independent decisions for the success of the project.
- It will have financial flexibility, with funding received through Grants-in-Aid (GIA) from the Government of Nagaland, allowing it to allocate resources efficiently.
- The SPV will act as a catalyst in the innovation ecosystem, facilitating collaboration among government bodies, private sector players, academia, and start-ups.
- The project will be implemented as a Mission Mode Project (MMP), and the SPV will be empowered in all contexts to achieve the desired objectives.

### **10. Key Performance Indicators (KPIs)**

The success of the Nagaland Innovation Hub for Startups (NIHS) will be measured through well-defined KPIs that track the impact of its initiatives in fostering entrepreneurship, job creation, and economic growth. The key indicators include:

#### **10.1 Startup Awareness & Engagement Initiatives:**

##### **a). Hackathons & Open Challenges:**

- i. Conduct 3+ hackathons annually, focusing on AI, IoT, FinTech, Agritech, and other emerging sectors.
- ii. Collaborate with academic institutions, industry leaders, and government bodies for sponsorships and mentorship support.

##### **b). Startup Awareness Programs:**

- i. Conduct 15+ workshops annually in schools, colleges, and universities across Nagaland to promote entrepreneurship.
- ii. Launch an Early Startup Awareness Program targeting students and aspiring entrepreneurs to introduce them to startup ecosystems, incubation benefits, and funding opportunities.
- iii. Create a dedicated online portal for startup education, FAQs, and case studies.
- iv. Startups Incubated & Supported

##### **v. Annual Startup Incubation Target:**

- a. Support 20+ startups per year through structured incubation programs.

- b. Offer seed funding, mentorship, access to R&D labs, and investor connections to selected startups.
- c. Ensure sectoral diversity, covering IT/ITeS, AgriTech, EdTech, HealthTech, FinTech, and more.

**vi. Startups Graduation Rate:**

- a. Ensure incubated startups successfully complete the incubation cycle.
- b. Job Creation & Economic Impact

**vii. Direct & Indirect Job Creation:**

- a. Facilitate the creation of 500+ new jobs through startup hiring, freelancing, and service-based engagements.
- b. Ensure female participation in startup hiring programs.
- c. Collaborate with local IT firms, MSMEs, and government projects for startup-based employment opportunities.

**viii. Skill Development & Training:**

- a. Conduct 5+ capacity-building workshops per year on entrepreneurship, digital skills, market analysis, and innovation trends.
- b. Partner with NIELIT, STPI, and NSDC for certified training programs.
- c. Startup Fundraising & Investment

**ix. Funding Raised by Startups:**

- a. Enable incubated startups to raise funds through government grants, angel investors, venture capital, and CSR partnerships.
- b. Facilitate investment readiness programs and pitch competitions to prepare startups for funding rounds.
- c. Organize Investor Connect Programs with participation from VC firms, angel investors, and industry leaders.

**x. Seed Fund Utilization:**

- a. Disburse pre-seed and seed funding via government schemes (STPI OCTANE, CHUNAUTI, etc.).
- b. Track fund utilization and ROI for better sustainability and accountability.

## 10.2 Strategic Partnerships & Collaborations

### a). New Institutional & Corporate Partnerships:

- i. Establish 4+ strategic partnerships annually with corporates, research institutions, and policy bodies to enhance startup support.
- ii. Collaborate with Atal Innovation Mission (AIM), MeitY Startup Hub, DPIIT, and NASSCOM for policy support and funding access.
- iii. Sign MoUs with leading universities to integrate entrepreneurship into academic curricula.

### b). Startup-Industry Collaborations:

- i. Facilitate 2+ industry-sponsored projects annually to bridge the gap between research and market needs.

## 10.3 Innovation & Technology Development

### a). Startup Showcase & Industry Events:

- i. Organize 1+ large-scale innovation fairs, demo days, and expos annually.
- ii. Participate in national and international startup summits to promote Nagaland startups.

### b). R&D Utilization:

- i. Ensure maximum usage of R&D labs by startups annually.
- ii. Develop at least 10 prototypes annually leveraging high-tech labs (AI, IoT, Blockchain, Robotics).

## 11. Monitoring & Evaluation (M&E) Methodology

The Monitoring & Evaluation (M&E) Methodology for the Nagaland Innovation Hub for Startups (NIHS) is designed to ensure transparency, accountability, and continuous improvement in the startup ecosystem. By systematically tracking Key Performance Indicators (KPIs), collecting stakeholder feedback, and conducting periodic assessments, the M&E framework will measure the impact of NIHS initiatives on entrepreneurship, job creation, and economic growth.

This methodology adopts a data-driven approach, utilizing a real-time Management Information System (MIS) to track progress, conduct regular evaluations, and engage with key stakeholders, including startups, mentors, investors, and industry partners. The structured monitoring mechanisms, stakeholder involvement, and periodic impact assessments will help refine strategies and enhance the effectiveness of NIHS programs.

### 11.1 Management Information System (MIS):

- Implement a real-time KPI tracking dashboard to monitor startup progress, funding status, job creation, and overall program impact.
- Integrate AI-based analytics for trend predictions and data-driven decision-making.

- Track startup performance monthly, including funding raised, employment generated, and technological advancements.
- Conduct quarterly review meetings with stakeholders, including mentors, investors, and government officials, to assess impact.
- Publish annual comprehensive reports with insights, key learnings, and recommendations for improvement.

## 11.2 Stakeholder Involvement

- Conduct bi-annual surveys with startups to assess satisfaction levels, challenges faced, and areas needing improvement.
- Establish a Mentor Advisory Board to provide structured feedback on incubation programs and entrepreneurial support.
- Organize annual investor summits to evaluate fundraising success rates and identify gaps in funding access.
- Encourage corporate sponsorships for startup initiatives by offering tax incentives and policy support.

## 11.3 Evaluation Schedule & Audits

- Conduct monthly internal assessments of program deliverables, fund utilization, and stakeholder engagement.
- Measure progress against KPIs and make real-time course corrections.
- Perform a detailed impact analysis at the end of each financial year to assess ROI and program effectiveness.
- Publish an Annual Startup Ecosystem Report, highlighting success stories, key learnings, and next-phase strategies.
- Engage third-party evaluators to conduct external audits assessing program transparency, efficiency, and alignment with national startup policies.
- Ensure compliance with state and central government funding guidelines.

## 11.4 Expected Outcomes of the M&E Plan

- Stronger Startup Ecosystem – Higher startup success rates, better funding opportunities, and increased industry collaborations.
- Sustained Economic Growth – Increased local job creation, reduced brain drain, and enhanced entrepreneurial participation.
- Improved Policy & Governance – Data-driven refinements in startup policies, funding schemes, and infrastructure development.
- Global Recognition – Position Nagaland as an emerging IT & Innovation Hub in the Northeast, attracting national and international investments.

# 12. Sustainability Plan

## 12.1 Revenue Sources

- **Rent from Plug-and-Play Spaces:** Charged on a per-seat, monthly, or usage-based model.
- **Revenue from Internet Bandwidth:** Tiered pricing based on usage and speed.

- **Revenue from RAW Spaces:** Rental income based on square footage or contract terms.
- **E-Commerce Revenue:** Facilitation fees, training programs, and consultancy services.
- **Grants and Funding:** Linkages with financial institutions like SIDBI, MSME, and Atal Innovation Mission.

## 12.2 Public-Private Partnerships (PPP)

- Forge partnerships with private entities, including IT companies and manufacturing units, to secure additional funding and resources.
- Explore the possibility of establishing an endowment fund or attracting investment from venture capitalists and angel investors.

## 13. Incentive Structure

To foster innovation and entrepreneurship, the Nagaland Innovation Hub offers a structured incentive program designed to support incubatee companies and startups. The following incentives are available:

### 13.1 Rental Discounts

A tiered rental discount structure is provided to support incubatee companies based on their focus areas:

- a). Incubatee companies engaged in Product Development or R&D:
  - 40% discount (Year 1), 25% (Year 2), 15% (Year 3)
  - SC/ST-led: 50% (Year 1), 35% (Year 2), 25% (Year 3)
- b). Incubatee companies not engaged in Product Development or R&D:
  - 20% discount (Year 1), 15% (Year 2), 10% (Year 3)
  - SC/ST-led: 40% (Year 1), 25% (Year 2), 15% (Year 3)
- c). All incubatee companies will receive a 100% rental waiver for the first three months.

### 13.2 Connectivity & Digital Infrastructure Support

Recognizing the challenges of digital infrastructure in Nagaland, the following support will be provided:

- a). High-Speed Internet & Cloud Support: Incubated startups will receive subsidized high-speed internet access and cloud computing credits (AWS, Google Cloud, etc.) for a specified period.
- b). E-Commerce & Digital Marketing Support: Startups focusing on digital services, e-commerce, and tech-enabled solutions will receive access to training on online marketing, payment integration, and logistics solutions.

### 13.3 Additional Incentives for Startups

In addition to rental discounts, startups incubated under the Nagaland Innovation Hub will have access to the following benefits:

- a). Free Access to Labs & Infrastructure: Access to research labs, coworking spaces, and prototyping centers. for a defined period.
- b). Seed Funding for Select Startups: Financial support for high-potential startups.
- c). Mentorship & Advisory Support: Guidance from industry experts and investors
- d). Investor & Industry Networking: Regular pitching sessions, demo days, and networking events opportunities.

***These incentives are designed to create a thriving startup ecosystem, encourage innovation, and drive local entrepreneurship within Nagaland.***

## 14. Building Space Utilization Plan & Area Distribution

*Detailed design and estimated cost (BOM) are enclosed as volume I*

SI No	Floor	Description	Purpose	Area in Sq ft
1	Ground floor	Multipurpose Hall	Space for large events, workshops, and community engagements, designed for flexible use.	1342.00
		Co-Working & Startup space	Dedicated workspace for startups, freelancers, and collaborative teams.	2980.00
		Electrical panel room	For electrical infrastructure, power distribution, and safety systems.	264.00
		Network Operation Centre (NOC)	To monitors and manages IT infrastructure, ensuring seamless network operations.	315.00
		Conference room	Meeting space for discussions, presentations, and client interactions.	410.00
		Administrative Office space	Office for facility management, operations, and administration.	204.00
		Accounts Office space	Workspace for finance and accounting functions.	304.00
		First Aid room	For emergency medical assistance and basic healthcare support.	180.00
2	1 <sup>st</sup> Floor	Lab & R&D	Dedicated space for research, development, and innovation activities.	5052.00
		Plug & Play (PnP)	Fully furnished workstations for IT/ITeS startups, ready for immediate use.	4930.00
3	2 <sup>nd</sup> Floor	RAW space (left wing)	Customizable workspace for startups, entrepreneurs, and institutions, allowing them to develop according to their needs. Basic infrastructure, including electrical wiring, HVAC, and networking, is provided, but final installations are left to the occupants.	5052.00
		RAW space (right wing)		4390.00
4	3 <sup>rd</sup> Floor	Café	Dining and relaxation area for employees, visitors, and networking opportunities.	1895.00
<b>Total usable space available</b>				27,318.00

**Note :**

*The above Space Utilization Plan & Area Distribution is exclusive of staircase area, corridor area, reception area, toilets area, lifts area etc*

## 15. Estimated Budget

SI No	Particulars	Estimated Cost ₹in lakhs	%	Detail Bill of materials (BoM)
1	<b>Civil Construction:</b> Includes civil works, sanitary & Internal water supply, septic tank, rainwater harvesting, elevator, internal/external electrification etc	12,40.81	62.04%	19.1 Table No.1
2	<b>Non-IT Works</b>			
2.1	Installation, testing and commissioning of VRV system HVAC	249.70	12.49%	19.2 Table No. 2
2.2	Supply & Installation of Fire Fighting Equipment	75.52	3.78%	19.3 Table No. 3
2.3	Supply & Installation of Online UPS 50 KVA (2-4 hrs backup)	46.61	2.33%	19.4 Table No. 4
2.4	Supply & Installation of 250 KVA Genset	31.86	1.59%	19.5 Table No. 5
2.5	Supply & Installation of chairs & Tables for conference hall	7.36	0.37%	19.6 Table No. 6
2.6	Supply & Installation of chairs for Multipurpose hall	22.48	1.12%	19.7 Table No. 7
2.7	Supply & Installation of Workstation for Innovation & Startup (Co-working space)	28.73	1.44%	18.8 Table No. 8
2.8	Administrative Office (Executive desk, chairs etc)	1.30	0.07%	19.9 Table No. 9
2.9	Accounts Office (Accounting Desk, chairs, workstation etc)	2.60	0.13%	19.10 Table No. 10
2.10	First Aid Room	1.01	0.05%	19.11 Table No. 11
2.11	Café (Dinner, Pantry & Kitchen)	17.24	0.86%	19.12 Table No. 12
2.12	Supply & Installation of workstation for PnP	44.01	2.20%	19.13 Table No. 13
3	<b>IT-Works</b>			
3.1	Supply & Installation of Audio System for Multipurpose hall	18.41	0.92%	19.14 Table No. 14
3.2	Supply & Installation of LED Visual Display for Multipurpose hall	51.78	2.58%	19.15 Table No. 15
3.3	Supply & Installation of Video Conference equipment (Audio & Video)	11.21	0.56%	19.16 Table No. 16
3.4	Supply and Installation of Networking Infrastructure	91.33	4.57%	19.17 Table No. 17
4	Training & Capacity building	18.04	0.90%	19.18 Table No. 18
5	Consultancy fee (vetting and DPR cost)	20.00	1%	As admissible
6	Administrative cost	20.00	1%	As admissible
<b>Total estimated cost</b>		<b>2,000.00</b>	<b>100%</b>	
<b>Rupees Twenty Crore Only</b>				

## 16. Interim Operational Support

During the interim operational period, the Department of IT&C will cover key expenses—including internet lease lines, power, and other essential utilities—as well as costs for infrastructure maintenance, staffing, and administration. The hub is focused on becoming self-sustaining and reducing its reliance on external grant support. Once break-even is achieved, any additional income will contribute to net profit, enabling further growth and reinvestment.

Below is a table summarizing the key components, revenue streams, and interim support measures:

Component Category	Item	Description	Revenue Source	Interim period
Revenue Streams	Plug & Play (PnP) Space Rental	Leasing of fully equipped workspaces to start-ups	Startup Revenue	Department of IT&C will Contributes towards break-even
	RAW Space Rental	Leasing of raw, customizable space for business needs	Startup Revenue	
	Startup Incubation Fees & Membership Charges	Fees for accessing incubation services and membership benefits	Startup Revenue	
	Training Programs & Capacity-Building Workshops	Revenue generated from professional training and development programs	Participant Fees	
Interim Operational Support	Internet Lease Line	Provision of high-speed internet connectivity	Revenue Source	Department of IT&C will fully cover until break-even
	Power Supply & Backup Systems	Ensuring uninterrupted power supply and operational continuity	Revenue Source	
	Essential Utilities	Maintenance of core infrastructure and facilities	Revenue Source	
	Staffing & Administration cost	Manpower	Revenue Source	

## 17. Conclusion

The Nagaland Innovation Hub for Start-ups is a transformative initiative that aims to position Nagaland as a hub for technological innovation and entrepreneurial growth. By providing start-ups with access to state-of-the-art infrastructure, mentorship, funding opportunities, and networking platforms, the hub will foster a culture of innovation and collaboration. The project is aligned with national goals of technological advancement and economic self-reliance and will contribute significantly to the socio-economic development of Nagaland.

## 18. NON ENCUMBRANCE CERTIFICATE :

**GOVERNMENT OF NAGALAND  
OFFICE OF THE DEPUTY COMMISSIONER  
CHUMOUKEDIMA : NAGALAND.**

NO. DC-CMD/LR-45/2023/ 190

Chumoukedima, Dated: 6<sup>th</sup> Feb.' 2025.

**NON ENCUMBRANCE CERTIFICATE**

This is to certify that the District Administration have no objection for construction of '**Nagaland Innovation Hub for Start-Ups**' at Chumoukedima District.

Further, certified that the aforesaid plot of land measuring an area of **1,75,539 sq.ft or 4.029 Acres** for the proposed site for construction of '**Nagaland Innovation Hub for Start-Ups**' at Chumoukedima District is free from all encumbrances.



  
**(POLAN JOHN) NCS**  
 Deputy Commissioner,  
 Chumoukedima : Nagaland.  
**DEPUTY COMMISSIONER**  
 Chumoukedima : Nagaland

## 19. NO OBJECTION CERTIFICATE

**GOVERNMENT OF NAGALAND  
OFFICE OF THE DEPUTY COMMISSIONER  
CHUMOUKEDIMA : NAGALAND.**

NO. DC-CMD/LR-45/2023/ 1189

Chumoukedima, Dated: 6<sup>th</sup> Feb.' 2025.

**NO OBJECTION CERTIFICATE**

This is to certify that the Office of the undersigned has '**No Objection**' for the construction of '**Nagaland Innovation Hub for Start-Ups**' at Chumoukedima District.

A spot verification was conducted and an area of **1,75,539 sq.ft or 4.029 Acres** was measured and found on the ground which is bounded as under :-

**North : NH - 129A**  
**East : Kasesu**  
**South : Neibu Nagi**  
**West : Pelezo**

Further, certified that there is no objection for the construction of '**Nagaland Innovation Hub for Start-Ups**' at Chumoukedima District.



  
**(POLAN JOHN) NCS**  
 Deputy Commissioner,  
 Chumoukedima : Nagaland.  
**DEPUTY COMMISSIONER**  
 Chumoukedima : Nagaland

## 20. Location of the Project Proposed site :

The proposed site for the Nagaland Technology Innovation Hub is strategically situated on 4.029 acres of land in Chümukedima DistrictHQ (latitude 25.790124, longitude 93.731673). The location has been chosen to ensure accessibility, connectivity, and a conducive environment for innovation and entrepreneurship.

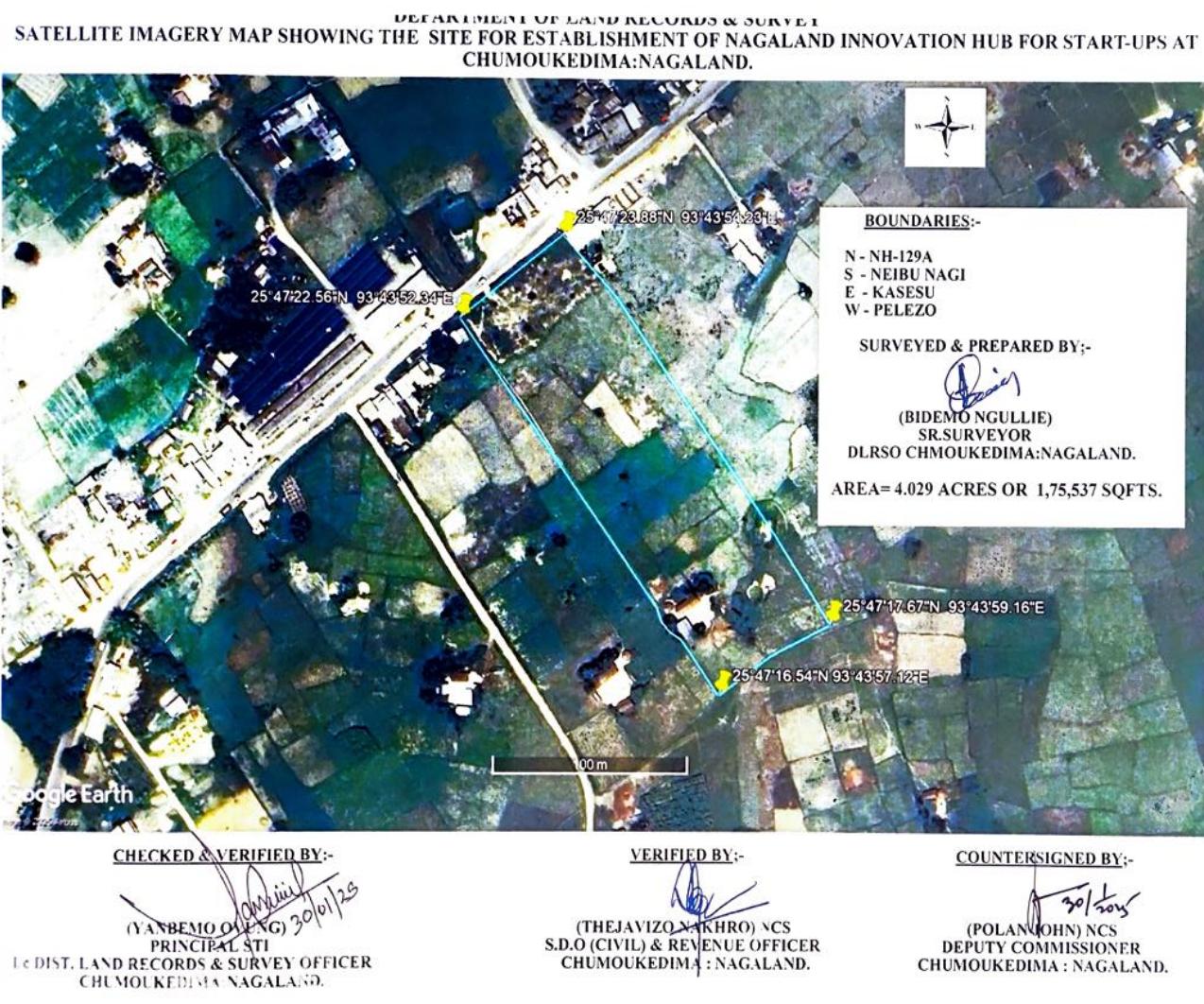
### Key Advantages of the Location:

#### a). Proximity to Administrative Center:

The site is 4 km from the DC Office, Chumukedima, ensuring easy access to government offices, business registration facilities, and administrative support.

#### b). Strategic Connectivity to Road, Railways, Airways:

- 6.15 km close to National Highway No. 29 (4 Lane), the hub will have smooth road connectivity, facilitating the movement of people, goods, and services.
- 14 km from Dimapur Airport, making it convenient for business travelers, investors, and industry stakeholders.
- 19 km from Dimapur Railway Station, ensuring smooth logistics and transportation of materials and goods for startups involved in manufacturing and product development.



## 21. Letter of Intent (LoI) :

### 21.1 M/s ChillibreezeSolutios Pvt Ltd



Chillibreeze Solutions Private Limited  
Corporate Identity No. U64202ML2006PTC008233



To,

The Director  
Directorate of Information Technology & Communication  
Government of Nagaland  
Nagaland: Kohima

Sub: Letter of Intent for occupying Plug & Play seats at "Nagaland Innovation Hub at Chumukedima"

Dear Sir,

We are Chillibreeze Solutions Pvt. Ltd. We are a PowerPoint services provider that specializes in overnight PowerPoint graphic design services for consulting firms and Fortune 500 companies. Chillibreeze is headquartered in Shillong, Meghalaya. We have branch offices in Aizawl, Mizoram, and Kohima, Nagaland with a total headcount of 250+ employees. Chillibreeze offers several levels of design services, including basic cleanups, formatting, and design makeovers.

We, therefore, believe that with reliable/uninterrupted Power & high-speed internet bandwidth, we intend to occupy Plug & Play space (150 seats) and provide employment to local youths, once the "Nagaland Innovation Hub at Chumukedima" is established.

Thanks & Regards.



**Shokentsin Keppen**

Admin & IT Associate  
Chillibreeze Solutions Private Limited. Kohima, India  
+91 7005332339

REGISTERED OFFICE: MEGHALAYA  
Chillibreeze Solutions Private Limited  
Software Technology Parks of India,  
Near Lumjingshal, Lawmali  
Shillong ML 793001 IN  
Tel: +91 9402311258  
Email: [hr@chillibreeze.com](mailto:hr@chillibreeze.com)  
[www.chillibreeze.com](http://www.chillibreeze.com)

1/1

## 21.2 M/s Smart-Techies



Tin No - 13060358064  
CST. No- 13060212160  
GSTIN - 13DPKPS7230N1ZD  
Ph.No:- 9862575751  
Email:- stskohima@gmail.com

Ref. No:- .....

Date:-

To,

The Director,  
Directorate of Information Technology & Communication,  
Government of Nagaland.  
Nagaland: Kohima

**Sub: Letter of intent for occupying Plug & Play seats at “ Nagaland Innovation Hub at Chumukedima”**

Sir,

Greetings to you from M/s Smart techies Service. Firstly, I am very grateful to hear about the upcoming Hub which will enable many innovators to have a platform to start. My firm, M/s Smart techies Service, Kohima was established in the year 2006, our business is sales and services of IT hardware and software. Currently, there are 9 employee working for the firm in Sales, Service and Marketing. Besides from Govt. contract works, we are also in AMC contract with few departments in hardware as well as software.

We therefore belief that with reliable uninterrupted Power & High Speed Internet Bandwidth, we intend to occupy Plug & Play space (20 seats) and provide employment to local youth, once the “ Nagaland Innovation Hub at Chumukedima” is established.

Thank you,

For M/s Smart techies Service, Kohima

## 21.3 M/s NK Square Infotech Pvt Ltd



**NK SQUARE INFOTECH PRIVATE LIMITED**  
 CIN: U72200NL2014PTC008391 GSTIN: 13AAFCN1326E2Z1  
 ISO9001:2015, ISO/IEC20000-1:2018 PAN: AAFCN1326E

ENVISION &  
EMPOWER

Ref No. NK/LTR/2023-24/02-10

Date : 26-Feb-2024

To,

The Director  
 Directorate of Information Technology & Communication  
 Government of Nagaland  
 Nagaland : Kohima

**Sub: Letter of Intent on collaboration for "Nagaland Innovation Hub at Chumukedima**

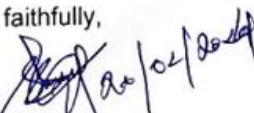
Sir,

NK Square Infotech Private Limited is a Private incorporated on 22 January 2016. It is classified as Non-govt. Company and is registered at Registrar of Companies, Shillong. Its authorized share capital is Rs. 10,000,000 and its paid up capital is Rs. 2,100,000. It is involved in Software development, consultancy and supply. Software publishing includes production, supply and documentation of ready-made (non-customized) software, operating systems software, and business & other applications software, computer games software for all platforms. Consultancy includes providing the best solution in the form of custom software after analyzing the user's needs and problems. Custom software also includes made-to-order software based on orders from specific users. Also, included are writing of software of any kind following directives of the users; software maintenance, web-page design.

We therefore, intend to work together with the Department of Information Technology & Communication, Govt. of Nagaland to collaborate by exchanging ideas and analyses relevant to the technical and economic progress, including evaluating the role of Research & Development and other factors that have driven progress, innovation goals as well as defining actionable plans once the "Nagaland Innovation Hub at Chumukedima" is established.

Thank you

Yours faithfully,

  
 Kepezelhou Semou  
 CEO, NK Square Infotech Private Limited



#62, 3rd floor, Peraciezie,  
 High School Junction, Kohima,  
 797001, Nagaland, India.



+91-940-297-6259



[www.nksquare.co.in](http://www.nksquare.co.in)  
[info@nksquare.co.in](mailto:info@nksquare.co.in)

## 22. Abstract of Construction of Nagaland Innovation Hub for Startup

### 22.1 Table No.1 :Civil Works : As per NPWD Schedule of Rates 2021

Sl No	Head	Total cost ₹
1	Cost for civil construction	8,90,97,948.30
2	Sanitary installation and internal water supply	12,04,470.40
3	Septic Tank (three unit)	7,75,890.59
4	Underground Rain water harvesting tank	7,45,220.44
<b>A</b>	<b>Sub-Total (1+2+3+4)</b>	<b>9,18,23,529.73</b>
B	5.31% of SL A for GST	48,75,829.43
<b>C</b>	<b>Sub-Total (A+B)</b>	<b>9,66,99,358.16</b>
D	9.19% of <b>SL. No.C</b> for 2 years cost escalation I,e, 6.13% for 2022-2023 & 3.06% for 2023-2024 respectively	88,86,671.11
<b>E</b>	<b>Sub-Total (C+D)</b>	<b>10,55,86,030.27</b>
F	Elevator (Design, supply, installation, testing and commissioning)	41,28,000.00
G	Exterior cladding with Greenlam board	3,46,000.00
H	Internal Electrification	67,96,060.00
<b>I</b>	<b>Sub-Total (E+F+G+H)</b>	<b>11,68,56,090.27</b>
J	3% of <b>Sl. No. I</b> for contingency	35,05,682.71
K	External Electrification	37,19,034.00
	<b>Total (I+J+K)</b>	<b>12,40,80,806.97</b>
	<b>Say</b>	<b>12,40,81,000.00</b>

**(Rupees Twelve crore forty lakhs eighty-one thousand) only**

**Note :**Detail Bill of Material (BOM) enclosed as Volume I

## 23. Bill of Materials (BOM) for Non-IT Works

### 23.1 Table No. 2 :Installation, testing and commissioning of VRV System HVAC

Sl No	Items	Specifications	Quantity	Rate per quantity ₹	Total cost ₹
1	VRV System (320 TR equivalent)	Modular VRV system with zoning & high energy efficiency	4 Outdoor Units (80 TR each)	28,29,500.00	1,13,18,000.00
2	Indoor Units (Cassette/Ducted FCU)	2.0-3.0 TR each, for distributed cooling	65 Units	38,470.00	25,00,550.00
3	Air Handling Units (AHU)	Fresh air ventilation for multiple zones	6 Units	2,00,000.00	12,00,000.00
4	Ducting & Insulation	GI sheet ducts with 25mm thermal insulation	Lump-sum	10,00,000.00	10,00,000.00
5	Split ACs (for small rooms)	2.0 Ton, 5-star rated Inverter ACs	10 Units	65,000.0	6,50,000.00
6	Fresh Air Units (FAU)	6,000 CFM system for fresh air circulation	1 System	3,60,497.88	3,60,497.88
7	Exhaust Fans & Ventilation	Air balancing for Indoor Air Quality (IAQ)	Lump-sum	5,00,000.00	5,00,000.00
8	Control Panel & Sensors	Smart automation for temperature & energy monitoring	1 System	7,00,000.00	7,00,000.00
9	HVAC Piping & Wiring for RAW Spaces	Pre-installed for future expansion	Lump-sum	11,31,875.00	11,31,875.00
10	Installation & Commissioning	Complete system setup & testing	Lump-sum	10,00,000.00	10,00,000.00
11	Fire & Smoke Dampers	Installed in ducts to prevent fire/smoke in the ducting system	Lump-sum	8,00,000.00	8,00,000.00
<b>Sub-Total</b>					<b>2,11,60,922.88</b>
<b>18% GST</b>					<b>38,08,966.12</b>
<b>Total</b>					<b>2,49,69,889.00</b>

**23.2 Table No.3 :Supply & Installation of Fire Fighting equipment**

<b>Sl No</b>	<b>Items</b>	<b>Specifications</b>	<b>Quantity</b>	<b>Rate per quantity ₹</b>	<b>Total cost ₹</b>
1	Fire Extinguishers	ABC Type (4 kg), CO2 Type (3 kg), Water Mist (9L), Foam Type (6L)	50 units	15,000.00	7,50,000.00
2	Clean Agent Fire Suppression System (FM200, Novec)	Clean agent system for sensitive areas, installed in server rooms, electrical rooms	1 System	30,00,000.00	30,00,000.00
3	Fire Detection System (Advanced)	Smoke, Heat Detectors, Manual Call Points (MCP), Fire Alarm Control Panel (FACP)	1 System	18,00,000.00	18,00,000.00
4	Emergency Exit Signage & Lighting	LED Exit Signs, Emergency Lights with Battery Backup, Installed in corridors & exit points	100 Units	5,000.00	5,00,000.00
5	Fire Blankets & Sand Buckets	Fire-Retardant Blankets (2m × 2m), Metal Sand Buckets (Filled with Dry Sand)	20 Sets	5,000.00	1,00,000.00
6	Fire Safety Training & Signage	Fire Drill Training (Quarterly), Floor-wise Fire Safety Posters & Maps	1 Set	2,50,000.00	2,50,000.00
<b>Sub-Total</b>					<b>64,00,000.00</b>
<b>18% GST</b>					<b>11,52,000.00</b>
<b>Total</b>					<b>75,52,000.00</b>

**23.3 Table No.4 :Supply & Installation of Online UPS 50 KVA (2-4 hrs backup)**

<b>Sl No</b>	<b>Items</b>	<b>Specifications</b>	<b>Quantity</b>	<b>Rate per quantity ₹</b>	<b>Total cost₹</b>
1	Online UPS 50 Kva	Double-conversion Online UPS. True sine wave output. Input Power Factor Correction (PFC). High efficiency (>90%). LCD/LED display for monitoring. Redundancy options. Or equivalent	1	12,00,000.00	12,00,000.00
2	Batteries (SMF/Tubular)	Type: Sealed Maintenance-Free (SMF) or Tubular Batteries. Backup Time: 2–4 hours (customizable as needed). (12V, 150–200 Ah each).	80	18,750.00	15,00,000.00
3	Battery Rack	Heavy-duty racks for safe storage and easy access	As required	Lump-sum	2,00,000.00
4	Battery Management System (BMS)	To monitor battery health, temperature, and charging/discharging status. Compatibility with SNMP for integration into existing IT systems.	1	2,00,000.00	2,00,000.00
5	Installation Accessories &	Input – Output panels, Cables, MCCB (Molded Case Circuit Breaker) or ACB (Air Circuit Breaker). Surge protection devices (SPDs). and Connectors (3.5-core 50–70 sq.mm copper/aluminum cables) etc	As required	Lump-Sum	8,50,000.00
<b>Sub-Total</b>					<b>39,50,000.00</b>
<b>18% GST</b>					<b>7,11,000.00</b>
<b>Total</b>					<b>46,61,000.00</b>

### 23.4 Table No.5 :Supply & Installation of 250 KVA Genset

Sl No	Items	Specifications	Quantity	Rate per quantity ₹	Total cost ₹
1	Engine	<p><b>Type:</b> Diesel, 4-stroke, water-cooled.</p> <p><b>Power Output:</b> Suitable for 250 kVA at 0.8 power factor (200 kW).</p> <p><b>Fuel System:</b> Direct Injection with a turbocharger for fuel efficiency.</p> <p><b>RPM:</b> 1500 RPM (standard for 50 Hz).</p> <p><b>Fuel Consumption:</b> At 75% load: ~35–40 liters/hour. At 100% load: ~50 liters/hour.</p> <p><b>Emission Compliance:</b> CPCB-II (Central Pollution Control Board Stage II) norms for emissions.</p>	1	25,00,000.00	25,00,000.00
2	Alternator	<p><b>Type:</b> Brushless, self-excited alternator.</p> <p><b>Voltage Output:</b> 415V, 3-phase, 50 Hz.</p> <p><b>Power Factor:</b> 0.8 lagging. Efficiency: &gt;90%.</p> <p><b>Insulation:</b> Class H.</p> <p><b>Regulation:</b> ±1% (Automatic Voltage Regulation, AVR).</p>			
3	Control Panel	<p>Type: AMF (Automatic Mains Failure) panel.</p> <p>Features: Digital display for key parameters (voltage, current, frequency, power factor, fuel level, and engine temperature). Safety alarms for low oil pressure, high coolant temperature, over-speed, and overload.</p> <p>Remote monitoring capability (optional, via GSM/GPS).</p>			
4	Canopy	<p><b>Type:</b> Acoustic enclosure (silent generator).</p> <p><b>Noise Level:</b> ≤75 dB at 1 meter.</p>			

		<b>Material:</b> Powder-coated, weather-resistant, and rust-proof steel.		
5	Fuel Tank	<b>Capacity:</b> ~400–500 liters (providing ~10 hours of operation at 75% load). <b>Material:</b> MS (Mild Steel) with anti-corrosion coating.		
6	Cooling System	<b>Type:</b> Radiator-cooled with a fan. <b>Coolant Capacity:</b> As per manufacturer specifications (20–30 liters).		
7	Battery	<b>Type:</b> Maintenance-free lead-acid battery. <b>Capacity:</b> 12V, 150–200 Ah. <b>Quantity:</b> As per starter motor requirement (usually 2 batteries)		
8	Starting System	<b>Type:</b> Electric start with a key/button.		
9	Accessories.	<b>Exhaust System:</b> Industrial-grade silencer to reduce noise and vibrations. Heat-insulated exhaust piping. <b>Circuit Breaker:</b> MCCB or ACB to protect against overload and short circuits. <b>Earthing Kit:</b> Copper earthing strips and rods for safe operation. <b>Base Frame:</b> Heavy-duty, anti-vibration mounting		
10	Transportation & Installation cost			2,00,000.00
<b>Sub-Total</b>				27,00,000.00
<b>18% GST</b>				4,86,000.00
<b>Total</b>				31,86,000.00

**23.5 Table No.6 :Supply & Installation of chairs & tables for conference hall**

<b>Sl No</b>	<b>Item</b>	<b>Specifications</b>	<b>Quantity</b>	<b>Rate Per Unit ₹</b>	<b>Total Cost ₹</b>
1	Executive Chairs	Ergonomic design, leatherette/premium fabric finish, adjustable armrests, swivel	30	12,000.00	3,60,000.00
2	Conference Table	Modular conference table with cable management system, laminate finish	1	2,20,000	2,20,000.00
3	Side Tables (Optional)	Small side tables for additional storage or materials	4	10,000	40,000.00
					<b>Sub-Total</b> <b>6,20,000.00</b>
					<b>18% GST</b> <b>1,11,600.00</b>
					<b>Total</b> <b>7,36,000.00</b>

**23.6 Table No.7 :Supply & Installation of chairs for Multipurpose Hall**

<b>Sl No</b>	<b>Item</b>	<b>Specifications</b>	<b>Quantity</b>	<b>Rate Per Unit ₹</b>	<b>Total Cost ₹</b>
1	Ergonomic Stackable Chairs	High-density molded, cushioned seat	100	9,750.00	9,75,000.00
2	Executive chairs (VIP)	Ergonomic design, leatherette finish, adjustable armrests	30	14,500.00	4,35,000.00
3	Folding Chairs	Powder-coated steel frame, padded seat, easy fold for storage	30	3500.00	1,05,000.00
4	Breakout space lounge chairs	Comfortable, modern design, upholstered, in theme colors	20	12,000.00	2,40,000.00
5	Breakout space Tables	Round tables, wood or laminate finish, custom logo, suitable for small groups	10	15,000.00	1,50,000.00
					<b>Sub-Total</b> <b>19,05,000.00</b>
					<b>18% GST</b> <b>3,42,900.00</b>
					<b>Total</b> <b>22,47,900.00</b>

### 23.7 Table No.8 :Supply & Installation of workstation in Innovation & Startup (Co-working Space)

Sl No	Item	Specifications	Quantity	Rate Per Unit ₹	Total Cost ₹
1	Workstation	Workstation Desk (60" W 30" D X 28-30" H)	50	25,000.00	12,50,000.00
2	Chairs	Ergonomic Mesh chair (adjustable with lumbar support)	50	15,000.00	7,50,000.00
3	Table	Dimensions: 6ft (W) x 3ft (D) x 30-32in (H). Material: MDF/Engineered Wood with Laminate finish. Design: Modular, reconfigurable for team collaborations. Legs: Powder-coated steel. Features: Cable management slots, smooth finish for easy cleaning.	3	60,000.00	1,80,000.00
4	File cabinet	Material: Steel or Heavy-duty wood. Design: Lockable drawers for file storage, minimalist and durable. Dimensions: 18in (W) x 24in (D) x 36in (H). Finish: Powder-coated or laminate finish.	5	15,000.00	75,000.00
5	White Board	Type: Magnetic dry-erase whiteboard or glassboard. Size: 4ft x 6ft or custom size. Material: High-quality steel or glass with a smooth writing surface. Mounting: Wall-mounted or mobile frame with wheels.	2	15,000.00	30,000.00
6	Projector with screen	Projector: 1080p or 4K resolution, at least 3000 lumens brightness, HDMI/VGA ports, USB support. Screen: 120-inch, manual or electric pull-down screen. Mounting: Ceiling or tripod mount for the projector.	2	50,000.00	1,00,000.00
7	Storage Shelving	Material: Steel, MDF, or solid wood. Design: Open shelves for easy access; Closed options for secure storage. Dimensions: 36in (W) x 14in (D) x 72in (H). Features: Adjustable shelves, with or without doors. Finish: Laminate or wood veneer finish.	5	10,000.00	50,000.00
<b>Sub-Total</b>					<b>24,35,000.00</b>
<b>18% GST</b>					<b>4,38,300.00</b>
<b>Total</b>					<b>28,73,300.00</b>

**23.8 Table No.9 :Administrative Office**

<b>Sl No</b>	<b>Item</b>	<b>Specifications</b>	<b>Quantity</b>	<b>Rate Per Unit ₹</b>	<b>Total Cost ₹</b>
1	Executive desk	Dimensions: 5ft x 3ft, solid wood or laminate, with cable management.	1	15,000.00	15,000.00
2	Ergonomic Office chair	Adjustable height, lumbar support, swivel and armrests.	1	15,000.00	15,000.00
3	Filing cabinet	Material: Steel, 3-drawer lockable unit.	1	12,000.00	12,000.00
4	Book Shelf	Material: steel, adjustable shelves.	1	8,000.00	8,000.00
5	Visitors chairs	Comfortable, with armrests, suitable for visitors.	4	10,000.00	40,000.00
6	Cabinet for stationery/document storage	Compact, lockable for stationery and documents.	1	8,000.00	8,000.00
7	Coffee Table	Wood, engineered wood, glass, or metal frame with wood/glass top, Length: 3ft to 4ft, Width: 2ft to 3ft, Height: 16in to 18in (low profile), Glossy laminate, veneer, or tempered glass	1	12,000.00	12,000.00
<b>Sub-Total</b>					<b>1,10,000.00</b>
<b>18% GST</b>					<b>19,800.00</b>
<b>Total</b>					<b>1,29,800.00</b>

**23.9 Table No.10 :For Accounts office**

Sl No	Item	Specifications	Quantity	Rate Per Unit ₹	Total Cost ₹
1	Accounting Desk	Dimensions: 6ft x 3ft, with storage compartments for documents.	2	22,000.00	44,000.00
2	Ergonomic Office Chairs	Adjustable height, lumbar support, swivel, and armrests.	2	22,000.00	44,000.00
3	Filing Cabinet	Material: Steel, 4-drawer lockable unit.	2	12,000.00	24,000.00
4	Bookshelf	Material: Steel, adjustable shelves.	1	8,000.00	8,000.00
5	Workstation Desk	Dimensions: 5ft x 2.5ft, ergonomic, with cable management.	4	15,000.00	60,000.00
6	Office Chair (for workstation)	Adjustable, with lumbar support and armrests.	4	8,000.00	32,000.00
7	Storage Cabinet	For office supplies, 3-door cabinet with locks.	1	8,000.00	8,000.00
<b>Sub-Total</b>					<b>2,20,000.00</b>
<b>18% GST</b>					<b>39,600.00</b>
<b>Total</b>					<b>2,59,600.00</b>

**23.10 Table No.11 : For First Aid Room**

Sl No	Item	Specifications	Quantity	Rate Per Unit ₹	Total Cost ₹
1	First Aid Cabinet	Lockable, wall-mounted or standing.	1	15,000.00	15,000.00
2	Examination Table	Dimensions: 6ft x 3ft, sturdy frame with padding.	1	20,000.00	20,000.00
3	Ergonomic Chair (for staff, & patients)	Adjustable, comfortable, swivel.	3	10,000.00	30,000.00
4	Bookshelf	Material: Steel, adjustable shelves.	1	8,000.00	8,000.00
5	Storage Cabinet	For medicines, 2-door cabinet with locks.	1	8,000.00	8,000.00
6	Wall-mounted Mirror	For examination purposes, shatterproof glass.	1	5,000.00	5,000.00
<b>Sub-Total</b>					<b>86,000.00</b>
<b>18% GST</b>					<b>15,480.00</b>
<b>Total</b>					<b>1,01,480.00</b>

**23.11 Table No.12 : For Café Setup**

<b>Sl No</b>	<b>Items</b>	<b>Specifications</b>	<b>Quantity</b>	<b>Rate per quantity ₹</b>	<b>Total cost₹</b>
1	Dining Chairs (for seating area)	Comfortable, stackable, with or without armrests.	50	6,000.00	3,00,000.00
2	Dining Tables	Size: 4ft x 2.5ft, wood or metal frame, durable top.	20	10,000.00	2,00,000.00
3	Reception Desk	Modern design, with storage compartments for documents.	1	25,000.00	25,000.00
4	Sofa Set for Waiting Area	Comfortable, durable material, seating 3-4 people.	2	35,000.00	70,000.00
5	Coffee Table (for waiting area)	Material: Wood/Glass, modern design.	2	8,000.00	16,000.00
6	Coffee Bar Counter	With shelves for storage, coffee machine space, etc.	1	50,000.00	50,000.00
7	Kitchen Equipment	Includes stove, oven, fryer, refrigerators, Workstations (for kitchen prep) etc	Lump-sum	5,00,000.00	5,00,000.00
8	Storage Shelves (Kitchen & Pantry)	Stainless steel or wood, for food storage.	10	10,000.00	1,00,000.00
9	Air Conditioning (Cooling System)	Split AC units, energy-efficient.	4	50,000.00	2,00,000.00
<b>Sub-Total</b>					<b>14,61,000.00</b>
<b>18% GST</b>					<b>2,62,980.00</b>
<b>Total</b>					<b>17,23,980.00</b>

**23.12 Table No.13 :Workstation for Plug & Play (PnP)**

<b>Sl No</b>	<b>Item</b>	<b>Specifications</b>	<b>Quantity</b>	<b>Rate Per Unit ₹</b>	<b>Total Cost ₹</b>
1	Ergonomic Workstation Chairs	High-back ergonomic chairs with adjustable armrests, lumbar support, and fabric/mesh upholstery	70	12,000.00	8,40,000.00
2	Workstation Desks	Modular desks with cable management system, laminate finish, and partition panels	70	18,000.00	12,60,000.00
3	Server & Networking Cabinet	Dedicated racks for switches, servers, and networking equipment	3	1,00,000.00	3,00,000.00
4	Collaboration Spaces Tables	Large tables for team collaboration and brainstorming sessions	6	30,000.00	1,80,000.00
5	Collaboration Space Chairs	Comfortable lounge chairs for informal meetings	30	15,000.00	4,50,000.00
6	Cable Management Accessories	Cable trays, floor sockets, and wire organizers	Lump-sum	2,00,000.00	2,00,000.00
7	Installation & Miscellaneous	Installation, logistics, and miscellaneous items	Lump-sum	5,00,000.00	5,00,000.00
<b>Sub-Total</b>					<b>37,30,000.00</b>
<b>18% GST</b>					<b>6,71,400.00</b>
<b>Total</b>					<b>44,01,400.00</b>

## 24. Bill of Materials (BOM) for IT Works

### 24.1 Table No. 14 :Supply and Installation of Audio System for Multipurpose hall

Sl No	Items	Specifications	Quantity	Rate per quantity ₹	Total cost ₹
1	Audio System for Multipurpose Hall	<p>Speakers:Power Rating: Minimum 1000W RMS per speaker (active), 500W RMS (passive), Frequency Response: 50 Hz - 20 kHz, Coverage: 120° horizontal, wall-mounted for even distribution, VTX Series, QSC K Series, or DXR Series, 4 to 6 channels, Active (powered), 1200W RMS minimum, 30 Hz – 200 Hz, SRX818SP, QSC KW181, or Voice EKX-18SP.</p> <p>Amplifiers:2000W per channel for large passive speakers, Minimum 4 channels for separate control of various zones, 4Ω, 8Ω, or 70V line output, QSC PLD Series, Crown XLI Series</p> <p>Digital Audio Mixer (Digital or Analog)</p> <p>Microphones:100 meters range, Signal Processor (Digital Signal Processor – DSP), Audio Processing and Routing, Audio System Control</p>	4 units  1 units  1 units  4 units	2,15,550.00  5,74,800.00  75,000.00  12,000.00	8,62,200.00  5,74,800.00  75,000.00  48,000.00
					<b>Sub-Total</b> <b>15,60,000.00</b>
					<b>18% GST</b> <b>2,80,800.00</b>
					<b>Total</b> <b>18,40,800.00</b>

## 24.2 Table No.15 :Supply & Installation of LED Visual Display for Multipurpose Hall

Sl No	Items	Specifications	Quantity	Rate per quantity ₹	Total Cost₹
1	LED Panels : 500mm-500mm	Pixel Pitch : 4mm, Viewing distance 10-15ft, Brightness : 1000-1500 nits, Contrast ration 4000:1, Resolution for 12ft x 7 ft wall 2880x1440(HD ready), Refresh rate 1920Hz-3840Hz, viewing Angle 160°, Power Consumption ~550W per sq. meter, Lifetime 1,00,000+hours Or equivalent	56 panels	58,000.00	32,48,000.00
2	Video Processor (Controller)		1	4,50,000.00	4,50,000.00
3	Spare Modules (10% recommended)		5 spares	58,000.00	2,90,000.00
4	Installation, Cabling & Mounting				4,00,000.00
					<b>Sub-Total</b> 43,88,000.00
					<b>18% GST</b> 7,89,840.00
					<b>Total</b> 51,77,840.00

## 24.3 Table No.16 :Supply & Installation of Video Conference equipment (Audio & Video)

Sl No	Items	Specifications	Quantity	Rate per quantity ₹	Total cost ₹
1	LED Video wall with VC and audio	Screen size : 75" or higher with 3840 c 2106 (UHD), 350 cd/m2(with glass), 1,1000:1, HDMI-3, USB(3.0), USB(2.0)-2,OPS Slot-I, RGB-1, LAN-1, SPDIF-1 or higher, Audio-1(audio out to connect additional speakers if required), RS-232, IR Spread/PCap/Incell/Ingrass, ±1.5mm or less, 4T(anti-glare), windows10/windows XP/Linux/Mac/Android, min 20 points or higher, build in standard OS (android 9.0 or better) or equivalent. PTZ camera (10X optical Zoom), 1/2.8inch or better CMOS, 2.07 mega pixel, 1080P60/50/30/25/59.94/29.97; USB 2.0, LAN, RS232X2 (in & out), SNR >55Db, 2D &3D DNR, 0.5 Lux	1	9,50,000.00	9,50,000.00
					<b>Sub-Total</b> 9,50,000.00
					<b>18% GST</b> 1,71,000.00
					<b>Total</b> 11,21,000.00

**24.4 Table No. 17 :Supply & Installation of Networking Infrastructure**

<b>Sl No</b>	<b>Items</b>	<b>Specifications</b>	<b>Quantity</b>	<b>Rate per quantity ₹</b>	<b>Total cost ₹</b>
1	Networking Infrastructure	Core layer 3 Switch	3	5,00,000	15,00,000.00
		Layer 2 Swtiches (48 – Port PoE	6	1,00,000	6,00,000.00
		Wi-Fi 6 Access Points	30	20,000	6,00,000.00
		Firewall Application	1	2,00,000	2,00,000.00
		Cat 6 Cables (6000 meters)	Lump-sum	2,00,000	2,00,000.00
		Patch Panels (24/48 Port)	6	10,000	60,000.00
		Server Rack (42U)	3	1,00,000	3,00,000.00
		Cable trays Accessories	Lump-sum	1,00,000	1,00,000.00
2	Server Infrastructure	Rack Servers (2U/4U)	3	4,50,000	13,50,000.00
		Network-Attached Storage	1	3,50,000	3,50,000.00
		Server Software Licenses Windows/Linux OS	Lump-sum	5,00,000	5,00,000.00
		Virtualization Software VMware/Hyper-V	1	6,00,000	6,00,000.00
		Backup Application	1	3,00,000	3,00,000.00
3	Cooling System	Split Acs 2 ton	4	70,000	2,80,000.00
4	Installation & Misc	Setup, configuration, testing and other accessories	Lump-sum		5,50,000.00
5	Load Balancer	Scalable, for high availability & optimized traffic management	1	2,50,000.00	2,50,000.00
<b>Sub-Total</b>					<b>77,40,000.00</b>
<b>18% GST</b>					<b>13,93,200.00</b>
<b>Total</b>					<b>91,33,200.00</b>

## 25. Skilled Development & Open Challenge Program (OCP)

### 25.1 Table No.18 :Training & Capacity Building/hackathons/Open Challenge Program

Sl No	Particulars	Description	No	Cost per activity	Total cost ₹
1	Training Capacity Building &	<p><b>Objective:</b>            To equip entrepreneurs, students, and professionals with skills required for startups, technology, and innovation.</p> <p>Entrepreneurship Development Programs (EDP)            Technical Training Programs            Soft Skills &amp; Leadership Training            Design Thinking &amp; Innovation</p>	4	1,50,000.00	6,00,000.00
2	Hackathons & Innovation Challenges	<p><b>Objective:</b>            To drive innovation, foster collaboration, and find solutions to real-world challenges.</p> <p>Thematic Hackathons            Smart Nagaland Hackathon – Solving governance, education, and rural connectivity issues            Green Tech Hackathon – Sustainable energy, waste management, climate-tech solutions            AgriTech &amp; Food Security Hackathon – Tech-driven solutions for farming &amp; supply chains            HealthTech Challenge – Telemedicine, AI in healthcare, affordable medical devices            Rapid Prototyping Competitions            Hardware Hackathon            App Development Challenge            Graphic Design/Gaming &amp; Creative Tech Hackathon</p>	4	1,50,000.00	6,00,000.00
3	Open Challenge Program	<p><b>Objective:</b>            To invite startups and individuals to solve specific problems through funding &amp; mentorship.</p> <p>Startup Grants &amp; Seed Funding Challenges            Research &amp; Development (R&amp;D) Fellowship</p>	2	1,50,000.00	3,00,000.00
4	Networking & Investor Meetups		1	3,04,000.00	3,04,000.00
<b>Total</b>					<b>18,04,000.00</b>

GOVERNMENT OF NAGALAND



A

DETAILED PROJECT REPORT

ON

CONSTRUCTION OF

**NAGALAND INNOVATION HUB FOR START UP  
AT**

**CHiiMOUKEDIMA, NAGALAND**



GOVERNMENT OF NAGALAND  
OFFICE OF THE EXECUTIVE ENGINEER PWD(HOUSING)  
NEW CAPITAL COMPLEX DIVISION: KOHIMA

PROOF CHECKED

A. Duli  
25.3.25

Professor  
Department of Civil Engineering  
Indian Institute of Technology Guwahati  
Guwahati-781039



DETAILED PROJECT REPORT

ON

*“Construction of Nagaland Innovation Hub for Startup at Chumukedima, Nagaland”*

Estimated Amount= Rs. 12,40,81,000.00

(Rupees Twelve Crore Forty Lakhs Eighty One Thousand) only.

**GOVERNMENT OF NAGALAND**  
**OFFICE OF THE EXECUTIVE ENGINEER, PWD (HOUSING)**  
**NEW CAPITAL COMPLEX DIVISION, KOHIMA**

\*\*\*

<b>Name of Work</b>	: Construction of Nagaland Innovation Hub for Startup at Chumukedima, Nagaland
<b>Division</b>	: New Capital Complex Division, Kohima
<b>Fund</b>	: NESIDS-OTRI
<b>Amount</b>	<b>Rs. 12,40,81,000.00</b>

### **Report**

This Detailed Estimate has been framed by the Executive Engineer, NCCD PWD (H), Kohima to show the probable cost for “Construction of Nagaland Innovation Hub for Startup at Chumukedima, Nagaland” amounting to **Rs. 12,40,81,000.00/-**(Rupees Twelve Crore Forty Lakhs Eighty One Thousand) only.

### History

#### **1. History of Nagaland Innovation Hub for Startups**

The Nagaland Innovation Hub for Startups was conceptualized by the **Department of Information Technology & Communication (IT&C), Government of Nagaland**, as a strategic initiative to **foster innovation, entrepreneurship, and economic development** in the state. Recognizing the **growing potential of IT and ITeS sectors**, the Government of Nagaland proposed the establishment of this hub to provide a **structured ecosystem** for startups, innovators, and entrepreneurs.

The project was envisioned as part of the state's efforts to **leverage emerging technologies, enhance digital infrastructure, and create job opportunities** for the youth. It aligns with national initiatives like **Digital India, Startup India, and Atal Innovation Mission** while also addressing the unique challenges faced by startups in the Northeast region.

To ensure its sustainability and operational efficiency, the **Nagaland Innovation Hub is being implemented under a Special Purpose Vehicle (SPV) registered under Section 8 of the Companies Act, 2013**. The project received critical inputs and guidance from **NITI Aayog, MeitY, and STPI**, strengthening its institutional framework and long-term viability. With financial support planned under the **NESID (OTRI) scheme from the Ministry of DoNER**, the hub is positioned as a **catalyst for innovation-driven growth**, enabling startups to access cutting-edge facilities, mentorship, funding, and global market linkages.

#### **2. Floor-wise Facilities of Nagaland Innovation Hub for Startups**

The Nagaland Innovation Hub is designed as a **state-of-the-art incubation and research facility**, featuring a well-structured, multi-floor layout catering to different startup needs.

##### **I. Ground Floor:**

- **Multipurpose Hall** – A large, flexible event space for startup pitch sessions, investor meetups, hackathons, and networking events.
- **Co-Working Space** – Open workstations for early-stage startups, freelancers, and innovators to collaborate and network.

- **Administrative Block** – Houses hub management offices, startup support desks, and mentorship coordination teams.
- **Network Operating Center (NOC)** – A centralized IT and security control center ensuring seamless digital operations.
- **Electrical Panel & Backup Systems** – Ensuring uninterrupted power supply and infrastructure stability.

## II. First Floor:

### a. Labs & R&D Facilities:

- Cutting-edge laboratories dedicated to IoT, AI, Machine Learning, Drones, and Robotics.
- High-performance computing resources, simulation tools, and prototyping equipment for tech-driven startups.
- Research collaborations with academic institutions, STPI CoE-SIZ, and NIELIT.

### b. Plug & Play (PoP) Facilities:

- Fully equipped office spaces with high-speed internet, meeting rooms, and IT infrastructure.
- Flexible workstations for startups in their scaling phase.

## III. Second Floor:

### a. Labs & R&D Facilities:

- **Ready to Use (RAW) Space** – Customizable office spaces and workstations for high-growth startups and enterprises.
- Ideal for startups that have outgrown co-working spaces and need dedicated office areas.
- Designed to accommodate technology startups, product development teams, and innovation-driven enterprises.

The Nagaland Innovation Hub for Startups is structured to support the entire startup lifecycle, from ideation and incubation to acceleration and expansion, ensuring long-term sustainability and success.

Hence, this estimate has been prepared after technical physical verifications and submitted for technical approval and further Administrative Approval and Expenditure sanction from the competent authority.

<b>Department</b>	: PWD (Housing)
<b>Rate</b>	: PWD Schedule of Rate as per 2021
<b>Specification</b>	: As per NPWD specifications
<b>Time</b>	: 12(Twelve) months
<b>Amount</b>	: Rs. 12,40,81,000.00

*[Signature]*  
Junior Engineer  
PWD(H), New Capital Complex Division  
Kohima, Nagaland

*[Signature]*  
Sub-Division Officer-II  
PWD(H), New Capital Complex Division  
Kohima, Nagaland

*[Signature]*  
Executive Engineer (D-I)  
C.E's Office PWD (H)  
Nagaland : Kohima

*[Signature]*  
Superintending Engineer  
PWD (H)  
Circle No. I, Kohima  
Nagaland : Kohima

*[Signature]*  
Executive Engineer  
P.W.D. (H) New Capital Complex Division  
Kohima : Nagaland

*[Signature]*  
Addl. Chief Engineer  
PWD(Housing)  
Nagaland : Kohima

*[Signature]*  
Superintending Engineer (D)  
C.E's Office PWD (H)  
Nagaland : Kohima

*[Signature]*  
Chief Engineer  
PWD(Housing)  
Nagaland Kohima

PROOF CHECKED

*A. Datta*  
25.3.25

Professor  
Department of Civil Engineering  
Indian Institute of Technology Guwahati  
Guwahati-781039

*[Signature]*  
Sub-Divisional Officer (T.C)  
C.E's Office PWD (H)  
Nagaland : Kohima

*[Signature]*  
Junior Engineer  
C.E's Office PWD(Housing)  
Nagaland:Kohima.

## Abstract of Cost

Annexure - NPWD

<b>Name of the Work:</b> Construction of Nagaland Innovation Hub for Startup at Chumukedima, Nagaland		<b>Head</b>	<b>Amount in Rupees</b>
i	Type of Building:- as per NPWD Schedule of Rates, 2021	:	R.C.C
	Cost of civil works	:	
1	Ground Floor	:	₹ 3,21,33,133.39
2	First Floor	:	₹ 1,82,04,409.23
3	Second Floor	:	₹ 2,02,51,346.27
4	Third Floor	:	₹ 1,85,09,059.41
A	Total of Building Structure= Sl. No.(1+2+3+4)	:	₹ 8,90,97,948.30
5	Sanitary installation and internal water supply	:	₹ 12,04,470.40
6	Septic Tank (Three unit)	:	₹ 7,75,890.59
7	Underground Rain water Harvesting Tank	:	₹ 7,45,220.44
B	C.E's Office PWD(Housing) Total of Civil work= Sl. No.(A+5+6+7)	:	₹ 9,18,23,529.73
C	5.31 % of "Sl. No. (B)" for GST Nagaland:Kohima.	:	₹ 48,75,829.43
D	Sub-Total (B+C)	:	₹ 9,66,99,359.16
E	9.19 % of "Sl. No. (D)" for 2 year Cost Escalation i.e 6.13% for 2022-2023 & 3.06% for 2023-2024 respectively	:	₹ 88,86,671.11
F	Sub-Total (D+E)	:	₹ 10,55,86,030.27
G	Annexure-I (Design, Supply, Installation, testing and commissioning of Elevator)	:	₹ 41,28,000.00
H	Annexure-II (Design, Supply & Installation of exterior cladding with Greenlam board, thickness 6 mm)	:	₹ 3,46,000.00
I	Internal Electrification	:	₹ 67,96,060.00
J	Sub-Total (F+G+H+I)	:	₹ 11,68,56,090.27
K	3 % of "Sl. No. (J)" for Contingency	Superintending Engineer (D)	₹ 35,05,682.71
L	External Electrification	Executive Engineer (D-II) PWD (H) Circle No. I, Kohima Grand Total =(J+K+L)	Nagaland : Kohima Say ₹ 37,19,034.00
	C.E's Office PWD (H) Nagaland : Kohima		₹ 12,40,80,806.97
			₹ 12,40,81,000.00

(In words): Rupees Twelve Crore Forty Lakh Eighty One Thousand only

PROOF CHECKED

A. Dulu  
25.3.25

Professor

Department of Civil Engineering  
Indian Institute of Technology Guwahati  
Guwahati-781039Junior Engineer  
PWD(H), New Capital Complex Division  
Kohima: NagalandSub-Division Officer-II  
PWD(H), New Capital Complex Division  
Kohima, Nagaland

47

Executive Engineer  
P.W.D. (H) New Capital Complex Division  
Kohima: Nagaland  
Addl. Chief Engineer  
PWD(Housing)  
Nagaland: Kohima

Chief Engineer  
PWD(Housing)  
Nagaland: Kohima

**Abstract of Cost****Annexure - NPWD****Name of the Work:** Construction of Nagaland Innovation Hub for Startup at Chümukedima, Nagaland

<b>Sl. No.</b>	<b>Head</b>	<b>R.C.C</b>
i	Type of Building:- as per NPWD Schedule of Rates, 2021	:
<b>Cost of civil works</b>		<b>Amount in Rupees</b>
1	Ground Floor	: ₹ 3,21,33,133.39
2	First Floor	: ₹ 1,82,04,409.23
3	Second Floor	: ₹ 2,02,51,346.27
4	Third Floor	: ₹ 1,85,09,059.41
A	Total of Building Structure= Sl. No.(1+2+3+4)	: ₹ 8,90,97,948.30
5	Sanitary installation and internal water supply	: ₹ 12,04,470.40
6	Septic Tank (Three unit)	: ₹ 7,75,890.59
7	Underground Rain water Harvesting Tank	: ₹ 7,45,220.44
B	Total of Civil work= Sl. No.(A+5+6+7)	: ₹ 9,18,23,529.73
C	5.31 % of "Sl. No. (B)" for GST	: ₹ 48,75,829.43
D	Sub-Total (B+C)	: ₹ 9,66,99,359.16
E	9.19 % of "Sl. No. (D)" for 2 year Cost Escalation i.e 6.13% for 2022-2023 & 3.06% for 2023-2024 respectively	: ₹ 88,86,671.11
F	Sub-Total (D+E)	: ₹ 10,55,86,030.27
G	Annexure-I (Design, Supply, Installation, testing and commissioning of Elevator)	: ₹ 41,28,000.00
H	Annexure-II (Design, Supply & Installation of exterior cladding with Greenlam board, thickness 6 mm)	: ₹ 3,46,000.00
I	Internal Electrification	: ₹ 67,96,060.00
J	Sub-Total (F+G+H+I)	: ₹ 11,68,56,090.27
K	3 % of "Sl. No. (J)" for Contingency	: ₹ 35,05,682.71
L	External Electrification	: ₹ 37,19,034.00
<b>Grand Total =(J+K+L)</b>		: ₹ 12,40,80,806.97
<b>Say</b>		: ₹ 12,40,81,000.00
<b>(In words): Rupees Twelve Crore Forty Lakh Eighty One Thousand only</b>		

**Cost abstract - 1****Name of the Work:** Construction of Nagaland Innovation Hub for Startup at Chūmukedima**Item of the Work:** Ground Floor

Item No	Schedule Number	Description of Item	Quantity	Unit	Rate	Multiplication factor (MF)	Amount in Rupees							
<b>1. GROUND FLOOR</b>														
<b>EARTHWORK</b>														
1.1														
1.1.1	A 2.6	Earth work in excavation by mechanical means (Hydraulic excavator / manual means over an areas exceeding 30 cm in depth, 1.5 m in width or 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m lift upto 1.5 m, as directed by the Engineer-in-charge.												
	A 2.6.1	All type of soil.												
			1,884.33	Cum	220.90	1.00	₹ 4,16,247.66							
			<b>Total of Earthwork:</b>				₹ 4,16,247.66							
1.2		<b>FOUNDATION</b>												
1.2.1	A 4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto the plinth level :												
	A 4.1.5	1:3:6 (1 Cement : 3 coarse sand : 6 stone aggregate 20 mm)												
			52.02	Cum	8,744.80	1.00	₹ 4,54,924.61							
1.2.2	A 11.1	Brick on edge flooring with bricks of class designation 7.5 on a bed of 12 mm cement mortar, including filling the joints with same mortar, with common burnt clay non-modular bricks :												
	A 11.1.2	1:6 (1 cement : 6 coarse sand )												
			413.45	Sqm	1,220.90	1.00	₹ 5,04,775.00							
1.2.3	A 7.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 ( 1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) at the plinth level with :												
	A 7.1.1	Cement mortar 1 : 6 (1 cement : 6 coarse sand)												
			374.90	Cum	6,494.80	1.00	₹ 24,34,871.29							
1.2.4	A 2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundation etc. inlayers not exceeding 20 cm in depth: consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m												
			449.66	Cum	177.30	1.00	₹ 79,724.64							
			<b>Total of Foundation:</b>				₹ 34,74,295.54							
1.3		<b>DAMP-PROOF COURSE</b>												

1.3.1	A 4.11	Providing and laying damp-proof course 50 mm thick with cement concrete 1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).					
			799.54	Sqm	546.50	1.00	₹ 4,36,947.24
		<b>Total of Damp-proof course:</b>					<b>₹ 4,36,947.24</b>
1.4		<b>REINFORCED CONCRETE</b>					
1.4.1	A 5.1	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centring, shuttering, finishing and reinforcement - ( All work upto plinth level )					
	A 5.1.2	1 : 1.5 : 3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)					
			468.62	Cum	10,432.80	1.00	₹ 48,89,069.86
1.4.2	A 5.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts, etc. upto floor five level excluding cost of centring, shuttering, finishing and reinforcement.					
	A 5.2.2	1 : 1.5 : 3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)					
			110.47	Cum	11,768.50	1.00	₹ 13,00,046.48
1.4.3	A 5.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope upto 15°, landings, balconies, shelves, chajjas, lintels, bands. plain window sills, staircases and spiral stair cases upto floor five level excluding the cost of centring, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement: 1.5 coarse sand: 3 graded stone aggregate 20 mm nominal size).					
			149.80	Cum	12,139.40	1.00	₹ 18,18,479.87
		<b>Total of Reinforce Concrete:</b>					<b>₹ 80,07,596.21</b>
1.5		<b>STEEL</b>					
1.5.1	A 5.22	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete.					
	A 5.22.4	Hot rolled deform bars (Tor)					
			69,529.64	Kg	90.10	1.00	₹ 62,64,620.65
	a		<b>Total of Steel Reinforcement:</b>				<b>₹ 62,64,620.65</b>
1.6		<b>SHUTTERING</b>					
1.6.1	A 5.9	Centring and shuttering including strutting, propping etc. and removal of form for:					
	A 5.9.1	Foundations, footings, bases of columns etc. for mass concrete.					
			608.18	Sqm	255.90	1.00	₹ 1,55,633.98
1.6.2	A 5.9.2	Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.					
			72.19	Sqm	544.10	1.00	₹ 39,277.22
1.6.3	A 5.9.3	Suspended floors, roofs, landings, balconies and access platform					
			66.00	Sqm	612.90	1.00	₹ 40,451.40
1.6.4	A 5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.					
			1,033.04	Sqm	494.50	1.00	₹ 5,10,839.86
1.6.5	A 5.9.6	Columns, pillars, piers, abutments, posts and struts.					

1.6.6	A 5.9.7	Stairs, (excluding landings) except spiral-staircases.	487.16	Sqm	650.00	1.00	₹ 3,16,655.63
1.6.7	A 5.9.16	Edges of slabs and breaks in floors and walls.	67.92	Sqm	550.90	1.00	₹ 37,417.13
	A 5.9.16.2	Above 20 cm wide	116.17	Sqm	654.80	1.00	₹ 76,064.84
							<b>Total of Shuttering:</b> ₹ 11,76,340.05
1.8		<b>BRICKWORK</b>					
1.8.1	A 6.1	Brick work with common burnt clay(non modular) bricks of class designation 7.5 in foundation and plinth in					
	A 6.1.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	98.48	Cum	9,603.10	1.00	₹ 9,45,696.24
1.8.2	A 6.4	Brick work with common burnt clay(non modular) bricks of class designation 7.5 in superstructure above plinth level upto floor V level in all shape and sizes in					
	A 6.4.2	Cement mortar 1:6 (1 cement : 6 Coarse sand)	118.95	Cum	10,492.90	1.00	₹ 12,48,089.06
							<b>Total of Brick work:</b> ₹ 21,93,785.30
1.9		<b>WOOD WORK</b>					
1.9.1	A 9.1	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia and length (hold fast lugs or dash fastener shall be paid for separately).					
	A 9.1.3	Kiln seasoned and chemically treated Hollock wood	0.13	Cum	76,054.50	1.00	₹ 9,696.95
1.9.2	A 9.5	Providing and fixing panalled or panalled and glazed shutters for doors, windows and clerestory windows fixing with butt hinges of required size with necessary screws, excluding panelling which will be paid for separately, all complete as per direction of the Engineer-in-charge. (Note:- Butt hinges and necessary screws shall be paid seperately)					
	A 9.5.2	Kiln seasoned and chemically treated Hollock wood					
	A 9.5.2.1	35 mm thick shutters	3.78	Sqm	2,400.10	1.00	₹ 9,072.38
1.9.3	A 9.53	Providing 40 x 5 mm flat iron hold fasts 40 cm long including fixing to frame with 10mm diameter bolts, nuts and wooden plugs and embeddings in cement concrete block 30 x 10 x 15 cm 1:3:6 mix (1 cement :3 coarse sand :6 graded stone aggregate 20 mm nominal size).	8.00	Each	168.40	1.00	₹ 1,347.20
1.9.4	A 9.71.1	Providing and fixing ISI :12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :	12.00	Each	103.70	1.00	₹ 1,244.40

1.9.5	A 9.74	Providing and fixing bright finished brass tower bolts(barrel type) with necessary screws etc. complete :					
	A 9.74.1	250 mm x 10 mm					
			12.00	Each	426.30	1.00	₹ 5,115.60
1.9.6	A 9.88	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete :					
			12.00	Each	893.60	1.00	₹ 10,723.20
1.9.7	A 9.165	Providing and fixing bright/matt finished stainless steel handles of approved quality and make with necessary screws etc. all complete					
	A 9.165.1	125 mm					
			12.00	Each	111.80	1.00	₹ 1,341.60
1.9.8	A 9.101	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete					
		A 9.101.1 Single rubber stopper					
			12.00	Each	37.60	1.00	₹ 451.20
1.9.9	A 9.83	Providing and fixing aluminium die cast body tubular type universal hydraulic door closer (having brand logo with ISI : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door weight upto 701 mm to 1000 mm) with double speed adjustment with necessary accessories and screws etc. complete.					
			12	Each	1129	1	₹ 13,544.40
			<b>Total of Wood work:</b>				₹ 52,536.93
1.10	<b>ALUMINIUM WINDOWS, VENTILATION &amp; GLAZING CURTAIN WALL</b>						
1.10.1	A 21.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropiate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixed with rawl plug and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junction, at top, bottom and sides with required PVC/ neoprene felt etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing/ panelling, C.P. brass/ satinless steel screws, all complete as per architectural drawing.(Glazing and panelling to be paid seperately)					
		A 21.1.1 For fixed portion					
		A 21.1.1.3 Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 microns)					
			6,376.42	Kg	510.70	1.00	₹ 32,56,439.07
1.10.2	A 21.1.2	For shutters of doors, windows, ventilators including providing and fixing hinges/pivots and making provision for fixing of fitting wherever required including the cost of EPDM rubber/neoprene gasket required (Fitting shall be paid seperately)					
		A 21.1.2.2 Powder coated aluminium (minimum thickness of powder costing 50 microns)					
			56.56	Sqm	584.40	1.00	₹ 33,056.29

	<b>A 21.3</b>	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with PVC/ neoprene gasket etc. complete as per the architectural drawings (Cost of aliminium snap beading shall be paid in basic item)					
		With float glass panes of 4.00 mm thickness (weight not less than 10 Kg/sqm)	84.51	Sqm	1,034.90	1.00	₹ 87,462.50
	<b>A 21.3.2</b>	With float glass panes of 5.5 mm thickness (weight not less than 12.5 Kg/sqm)	1,061.44	Sqm	1,376.20	1.00	₹ 14,60,759.92
		With float glass panes of 8 mm thickness (weight not less than 20 Kg/sqm)	6.30	Sqm	1,567.00	1.00	₹ 9,872.10
	<b>A 21.3.3</b>						
	<b>A 21.12</b>	Providing and fixing aluminium tubular handle bar 32 mm outer dia. 3.0 mm thick & 2100 mm long with SS screws etc. complete					
		Powder coated minimum thickness 50 microns aluminium tubular handle bar	32.00	Sqm	643.10	1.00	₹ 20,579.20
	<b>A 21.19</b>	Filling the gap in between aluminium/stone/wood frame & adjacent RCC/ Brick/Stone/ wood/ ceramic/ Gypsum work by providing weather/ structural non sag elastomeric PU sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-Charge complete, complying to ASTM-C 920, DIN 1854-F and ISO-11600..					
		Upto 10 mm depth and 10 mm width	668.59	Metre	183.60	0.00	₹ 1,22,753.12
	<b>A 21.11</b>	Providing and fixing stainless steel (SS-304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-charge complete					
		510 x 19 mm	103.00	Each	829.40	0.00	₹ 85,428.20
	<b>A 9.71</b>	Providing and fixing ISI :12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :					
		125 x 64 x 2.50 mm	484.00	each	103.70	1.00	₹ 50,190.80
	<b>A 9.74</b>	Providing and fixing bright finished brass tower bolts(barrel type) with necessary screws etc. complete :					
		250 mm x 10 mm	86.00	each	426.30	1.00	₹ 36,661.80
	<b>A 9.88</b>	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete :					
			14.00	each	893.60	1.00	₹ 12,510.40
	<b>A 9.100</b>	Providing and fixing aluminium handles ISI marked anodised (anodic coating not less than grade AC 10 as per IS :1868 ) transparent or dyed to required color or shade with nuts and screws etc. complete.					
		125 mm	104.00	each	66.50	1.00	₹ 6,916.00

1.10.12	A 9.101	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete					
	A 9.101.2	Twin rubber stopper					
			20.00	each	69.90	1.00	₹ 1,398.00
			<b>Aluminium Windows, Ventilation &amp; Glazing Cu</b>				
1.11	<b>PLASTERING</b>						
1.11.1	<i>Exterior Plaster</i>						
	A 13.3	20 mm cement plaster of mix:					
	A 13.3.1	1:4 (1 cement : 4 coarse sand)					
			342.23	Sqm	348.00	1.00	₹ 1,19,094.46
1.11.2	<i>Interior Plaster</i>						
	A 13.1	12 mm cement plaster of mix:					
	A 13.1.1	1:4 (1 cement : 4 fine sand)					
			2,279.37	Sqm	250.30	1.00	₹ 5,70,525.49
			<b>Total of Plastering :</b>				<b>₹ 6,89,619.95</b>
1.12	<b>TILING &amp; CLADDING</b>						
1.12.1	A 8.31	Providing and fixing 1 st quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer), of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dados over 12 mm thick bed of Cement Mortar 1:3 ( 1 cement : coarse sand) and jointing with grey cement slurry @ 3.3kg per Sqm including pointing in white cement mixed with pigment of matching shade.complete					
			145.10	Sqm	1,090.40	1.00	₹ 1,58,216.49
1.12.2	A 11.20	Chequered precast cement concrete tiles 22 mm thick in footpath & courtyard jointed with neat cement slurry mixed with pigment to match the shade of tiles including rubbing and cleaning etc. complete on 20 mm thick bed of cement mortar 1:4 ( 1 cement: 4 coarse sand)					
	A 11.20.1	Light shade pigment with white cement					
			97.42	Sqm	1,398.60	1.00	₹ 1,36,250.21
1.12.3	A 11.41	Providing and laying Vitrified tiles in different sizes (thickness to be specified by the manufacturer), with water absorption less than than 0.08% and conforming to IS:15622, of approved make, in all colours and shades, in skirting, riser of steps, over 20 mm thick bed of cement mortar 1:4 (1cement : 4 coarse sand), jointing with grey cement slurry @3.3 kg/sqm including grouting the joints with white cement and matching pigments etc.,complete.					
	A 11.41.2	Size of tiles 600 x 600 mm					
			616.08	Sqm	1,671.00	1.00	₹ 10,29,464.67

1.12.4	A 11.56	Providing and laying polished Granite Stone flooring in requires design and patterns, in linear as well as curvilinear portion of the building, all complete as per the Architectural drawings, with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement: 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-charge.					
	A 11.56.1	Polished Granite Stone slab Jet Black, Cherry Red, Elite Brown, Cat Eye or equivalent	185.48	Sqm	4,169.10	1.00	₹ 7,73,273.20
			<b>Total of Tiling &amp; Cladding:</b>				₹ 20,97,204.58
1.13		<b>STEEL WORK</b>					
1.13.1	A 10.28	Providing and fixing stainless steel (Grade 304) railing made of hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary accessories and stainless steel nuts and bolts complete, i/c fixing the railings with necessary accessories and stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the sided of waist slab with suitable arrangement as per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)	956.22	Kg	627.40	1.00	₹ 5,99,929.29
			<b>Total of Steel Work:</b>				₹ 5,99,929.29
1.14		<b>FALSE CEILING</b>					
1.14.1	A 12.45	Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S sheets and galvanised with zinc coating of 120 gms/sqm (both side inclusive) as per IS:277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flange of 27 mm and 37 mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50 mm long with 6 mm dia bolt, other flange.... with 25 mm long dry wall screws @230 mm interval, including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c, including jointing and finishing to a flush finish of tapered and square edges of the board with recommended jointing compound, jointing tapes... as per drawing, specification and direction of the Engineer-in-Charge but excluding the cost of painting:	575.40	Sqm	1,318.60	1.00	7,58,722.44
	A 12.45.3	12.5 mm thick tapered edge Gypsum moisture resistant board	<b>Total of False ceiling:</b>				₹ 7,58,722.44
1.15		<b>PAINTING</b>					
1.15.1	A 13.43	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface:					
	A 13.43.1	Water thinnable cement primer	342.23	Sqm	54.20	1.00	₹ 18,548.62
1.15.2	A 13.45	Finishing walls with water proofing cement paint "snowcem - plus" of M/s snowcem India Ltd. Or equivalent of required shade:					
	A 13.45.1	New work (Two or more coat applied @ 3.84 kg/10 sqm)	342.23	Sqm	243.20	1.00	₹ 83,229.23

1.15.3	A 13.26	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	2,134.27	Sqm	183.60	1.00	₹ 3,91,851.46
1.15.4	A 13.41	Distempering with oil bounded washable distemper of approved brand and manufacture to give an even shade					
	A 13.41.1	New work (two or more coats) over and includung priming coat with cement primer.	2,134.27	Sqm	134.00	1.00	₹ 2,85,991.81
1.15.5	A13.50	Applying priming coat :					
	A13.50.1	With ready mixed pink or grey primer of approved brand and manufacture on wood work (hard and soft wood)					
1.15.6		Wooden Doors	7.56	Sqm	53.00	1.00	₹ 400.68
	A13.62	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:					
	A13.62.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture					
		Wooden Doors	7.56	Sqm	163.80	1.00	₹ 1,238.33
						<b>Total of Painting:</b>	<b>₹ 7,81,260.13</b>
						<b>Total Cost of Ground Floor</b>	<b>₹ 3,21,33,133.39</b>

**DETAIL ESTIMATE-1****Name of the Work:** Construction of Nagaland Innovation Hub for Startup at Chumukedima**Item of the Work:** Ground Floor**Note:** Item No. refers to the serial item number of this estimate.Schedule Number refers to the corresponding item number in the [Nagaland PWD Schedule of Rates, 2021](#)

Item No	Schedule Number	Description of Item	No.	Part No.	Measurements			Unit	Rate	Multiplication factor (MF)	Amount in Rupees	
					Length	Width	Depth					
<b>1. GROUND FLOOR</b>												
1.1		<b>EARTHWORK</b>										
1.1.1	A 2.6	Earth work in excavation by mechanical means (Hydraulic excavator / manual means over an areas exceeding 30 cm in depth, 1.5 m in width or 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m lift upto 1.5 m, as directed by the Engineer-in-charge.										
	A 2.6.1	All type of soil.										
		Foundation										
			F1	10	1.50	1.50	1.50	33.75				
			F2	30	2.10	2.10	2.40	317.52				
			F3	32	2.40	2.40	2.40	442.37				
			CF1	3	1.50	2.70	2.40	29.16				
			CF2	9	2.25	2.70	2.40	131.22				
			SWF	1	2.00	3.75	3.00	22.50				
		Beam in all direction										
			PB1	1	632.15	1.20	0.60	455.14				
			PB2	1	90.84	1.20	0.65	70.86				
			PB3	1	150.09	1.20	0.50	90.06				
			CB	1	10.21	1.20	0.60	7.35				
			CB1	1	15.80	30.00	0.60	284.40				
					Total			1,884.33	Cum	₹ 220.90	1.00	₹ 4,16,247.66
												<b>Total of Earthwork:</b> ₹ 4,16,247.66
1.2		<b>FOUNDATION</b>										
	A 4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto the plinth level :										
	A 4.1.5	1:3:6 (1 Cement : 3 coarse sand : 6 stone aggregate 20 mm)										
		Foundation										
			F1	10	1.50	1.50	0.100	2.25				

1.2.1		<i>F2</i>	30		2.10	2.10	0.100	13.23					
		<i>F3</i>	32		2.40	2.40	0.100	18.43					
		<i>CF1</i>	3		1.50	2.70	0.100	1.22					
		<i>CF2</i>	9		2.25	2.70	0.100	5.47					
		<i>SWF</i>	1		2.00	3.75	0.100	0.75					
	<i>Beam in all direction</i>												
		<i>PB1</i>	1		632.15	0.40	0.100	0.00					
		<i>PB2</i>	1		90.84	0.40	0.100	3.63					
		<i>PB3</i>	1		150.09	0.40	0.100	6.00					
		<i>CB</i>	1		10.21	0.40	0.100	0.41					
		<i>CB1</i>	1		15.80	0.40	0.100	0.63					
												<i>Total</i>	
												52.02	
												<i>Cum</i>	
												₹ 8,744.80	
												1.00	
												₹ 4,54,924.61	
1.2.2	<b>A 11.1</b>	Brick on edge flooring with bricks of class designation 7.5 on a bed of 12 mm cement mortar, including filling the joints with same mortar, with common burnt clay non-modular bricks :											
	<b>A 11.1.2</b>	1:6 (1 cement : 6 coarse sand )											
	<i>Foundation</i>												
		<i>F1</i>	10		1.50	1.50		22.50					
		<i>F2</i>	30		2.10	2.10		132.30					
		<i>F3</i>	32		2.40	2.40		184.32					
		<i>CF1</i>	3		1.50	2.70		12.15					
		<i>CF2</i>	9		2.25	2.70		54.68					
		<i>SWF</i>	1		2.00	3.75		7.50					
												<i>Total</i>	
												413.45	
												<i>Sqm</i>	
												₹ 1,220.90	
												1.00	
												₹ 5,04,775.00	
1.2.3	<b>A 7.1</b>	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 ( 1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) at the plinth level with :											
	<b>A 7.1.1</b>	Cement mortar 1 : 6 (1 cement : 6 coarse sand)											
		<i>F1</i>	10		2.05	0.35	1.10	7.89					
		<i>F2</i>	30		3.35	0.35	1.85	65.07					
		<i>F3</i>	32		4.00	0.35	1.80	80.64					
		<i>CF1</i>	3		2.50	0.35	1.70	4.46					
		<i>CF2</i>	9		3.35	0.35	1.70	17.94					
		<i>SWF</i>	1		2.00	3.75	0.30	2.25					
	<i>Ground Floor flooring</i>												
												<i>Total</i>	
												374.90	
												<i>Cum</i>	
												₹ 6,494.80	
												1.00	
												₹ 24,34,871.29	

	A 2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundation etc. in layers not exceeding 20 cm in depth: consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m									
1.2.4			F1	10		0.20	0.95	1.100	2.09		
			F2	30		1.06	0.85	1.850	50.01		
			F3	32		1.76	0.80	1.800	81.10		
			CF1	3		1.55	1.70	1.700	13.44		
			CF2	9		2.73	1.60	1.700	66.71		
			SWF	1		3.35	0.35	0.300	0.35		
		Ground Floor flooring		1		1,573.10	0.150	235.97			
						Total		449.66	Cum	₹ 177.30	1.00
											₹ 79,724.64
											Total of Foundation: ₹ 34,74,295.54
1.3		DAMP-PROOF COURSE									
1.3.1	A 4.11	Providing and laying damp-proof course 50 mm thick with cement concrete 1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).									
		Below plinth beam									
			PB1	1		632.15	0.35		221.25		
			PB2	1		90.84	1.35		122.64		
			PB3	1		150.09	2.35		352.72		
			CB	1		10.21	3.35		34.20		
			CB1	1		15.80	4.35		68.73		
						Total		799.54	Sqm	₹ 546.50	1.00
											Total of Damp-proof course: ₹ 4,36,947.24
1.4		REINFORCED CONCRETE									
1.4.1	A 5.1	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centring, shuttering, finishing and reinforcement - ( All work upto plinth level )									
	A 5.1.2	1 : 1.5 : 3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)									
		Foundation footing base									
			F1	10		1.50	1.50	0.30	6.75		
			F2	30		2.10	2.10	0.45	59.54		
			F3	32		2.40	2.40	0.50	92.16		
			CF1	3		1.50	2.70	0.60	7.29		
			CF2	9		2.25	2.70	0.60	32.81		
			SWF	1		2.00	3.75	0.60	4.50		
		Columns below the Ground floor level									
			C1	13		0.55	0.40	1.00	2.86		
			C2	37		0.45	0.40	1.75	11.66		

		C3	9		0.40	0.40	1.70	2.45			
		C4	4		0.20	0.30	1.70	0.41			
		Cc1	15			1.13	1.60	27.13			
		Cc2	5			0.64	1.60	5.09			
		SW3 (2000x 200 mm)on SWF	1		2.00	0.20	3.00	1.20			
		SW2 & SW4 (3350 x 200 mm)on SWF	2		3.35	0.20	3.00	4.02			
		SW1 & SW5 (1000 x 200 mm)on SWF	2		1.00	0.20	3.00	1.20			
		Parking flooring	1			511.00	0.125	63.88			
		Main entrance	1			27.65	0.125	3.46			
		Lounge & Lobby area	1			290.91	0.125	36.36			
		Main Floor	1			847.06	0.125	105.88			
					<i>Total</i>			468.62	Cum	₹ 10,432.80	1.00
											₹ 48,89,069.86
1.4.2	A 5.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts, etc. upto floor five level excluding cost of centring, shuttering, finishing and reinforcement.									
	A 5.2.2	1 : 1.5 : 3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)									
		Columns above the Ground floor level									
		C1	13		0.55	0.40	3.30	9.44			
		C2	37		0.45	0.40	3.30	21.98			
		C3	9		0.40	0.40	3.30	4.75			
		C4	4		0.20	0.30	3.30	0.79			
		Cc1	15		1.13		3.30	55.95			
		Cc2	5		0.64		3.30	10.49			
		SW3 (2000x 200 mm)on SWF	1		2.00	0.20	3.30	1.32			
		SW2 & SW4 (3350 x 200 mm)on SWF	2		3.35	0.20	3.30	4.42			
		SW1 & SW5 (1000 x 200 mm)on SWF	2		1.00	0.20	3.30	1.32			
					<i>Total</i>			110.47	Cum	₹ 11,768.50	1.00
											₹ 13,00,046.48
A 5.3	A 5.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope upto 15°, landings, balconies, shelves, chajjas, lintels, bands. plain window sills, staircases and spiral stair cases upto floor five level excluding the cost of centring, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement: 1.5 coarse sand: 3 graded stone aggregate 20 mm nominal size).									
		Plinth, Tie & Raker beam									
		PB1	1		632.15	0.30	0.45	85.34			
		PB2	1		90.84	0.30	0.50	13.63			
		PB3	1		150.09	0.25	0.45	16.89			
		CB	1		10.21	0.15	0.30	0.46			
		CB1	1		15.80	0.30	0.45	2.13			

1.4.3		<i>RB1</i>	1		48.29	0.30	0.35	5.07			
		<i>B3</i>	1		86.58	0.25	0.35	7.58			
	<i>Staircase-1(measured from CAD drawing)-1.65 m</i>	<i>unit</i>	<i>nos.</i>								
		<i>Flight-1</i>	2	1	1.65	0.67		2.21			
		<i>Flight-2</i>	2	1	1.65	0.67		2.21			
		<i>Landing</i>	2	1	2.72		0.15	0.00			
	<i>Staircase-2(measured from CAD drawing)-1.50 m</i>										
		<i>Flight-1</i>	1	1	1.50	0.67		1.01			
		<i>Flight-2</i>	1	1	1.50	0.67		1.01			
		<i>Landing</i>	1	1	2.25		0.15	0.00			
	<i>lintels for openings</i>										
		<i>LB on the brick wall</i>	1		138.82	0.15	0.15	3.12			
		<i>LB on MD</i>	2		1.50	0.15	0.15	0.07			
		<i>LB on D</i>	8		1.45	0.15	0.15	0.26			
		<i>LB on D1</i>	1		1.20	0.15	0.15	0.03			
		<i>LB on D2</i>	4		1.00	0.15	0.15	0.09			
		<i>LB on D3</i>	2		0.90	0.15	0.15	0.04			
		<i>LB on DT</i>	4		0.75	0.15	0.15	0.07			
		<i>LB on W1</i>	13		1.20	0.15	0.15	0.35			
		<i>Ramp</i>	1		66.00	0.125		8.25			
					<i>Total</i>			149.80	<i>Cum</i>	<b>₹ 12,139.40</b>	1.00

**Total of Reinforce Concrete: ₹ 80,07,596.21**

1.5	<b>STEEL</b>										
	<b>A 5.22</b>	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete .									
	<b>A 5.22.4</b>	Hot rolled deform bars (Tor)	No.	No. of bar	length	Kg/m	Quantity				
		<i>Foundations base</i>									
		<i>F1</i>									
		<i>B1 , 12 mm # @ 150 mm c/c</i>	10		8	1.59	0.890	113.21			
		<i>B2 , 12 mm # @ 150 mm c/c</i>	10		8	1.59	0.890	113.21			
		<i>T1, 10 mm # @ 150 mm c/c</i>	10		8	1.55	0.620	76.88			
		<i>T2, 10 mm # @ 150 mm c/c</i>	10		8	1.55	0.620	76.88			
		<i>F2</i>									
		<i>B1 , 12 mm # @ 150 mm c/c</i>	30		14	2.19	0.890	818.62			
		<i>B2 , 12 mm # @ 150 mm c/c</i>	30		14	2.19	0.890	818.62			
		<i>T1, 10 mm # @ 150 mm c/c</i>	30		14	2.15	0.620	559.86			
		<i>T2, 10 mm # @ 150 mm c/c</i>	30		14	2.15	0.620	559.86			

F3							
B1 , 12 mm # @ 150 mm c/c	32		16	2.49	0.890	1,134.64	
B2 , 12 mm # @ 150 mm c/c	32		16	2.49	0.890	1,134.64	
T1, 10 mm # @ 150 mm c/c	32		16	2.45	0.620	777.73	
T2, 10 mm # @ 150 mm c/c	32		16	2.45	0.620	777.73	
CF1							
B1 , 12 mm # @ 150 mm c/c	3		15	1.59	0.890	63.68	
B2 , 12 mm # @ 150 mm c/c	3		19	2.79	0.890	141.54	
T1, 10 mm # @ 150 mm c/c	3		15	1.55	0.620	43.25	
T2, 10 mm # @ 150 mm c/c	3		19	2.75	0.620	97.19	
CF2							
B1 , 12 mm # @ 150 mm c/c	9		15	2.34	0.890	281.15	
B2 , 12 mm # @ 150 mm c/c	9		14	2.79	0.890	312.87	
T1, 10 mm # @ 150 mm c/c	9		15	2.30	0.620	192.51	
T2, 10 mm # @ 150 mm c/c	9		14	2.75	0.620	214.83	
SWF							
B1 , 12 mm # @ 150 mm c/c	1		20	2.09	0.890	37.20	
B2 , 12 mm # @ 150 mm c/c	1		11	3.84	0.890	37.59	
T1, 10 mm # @ 150 mm c/c	1		20	2.05	0.620	25.42	
T2, 10 mm # @ 150 mm c/c	1		11	3.80	0.620	25.92	
Shear wall & Columns below the Ground level							
SW3 (2000x 200 mm)on SWF							
Main bar, 12T @ 175 c/c	1		23	3.17	0.89	64.45	
Distribution bar, 10T @ 175 c/c	1		34	2.14	0.62	45.49	
SW2 & SW4 (3350 x 200 mm)on SWF							
Main bar, 12T @ 175 c/c	2		38	3.17	0.89	215.89	
Distribution bar, 10T @ 175 c/c	2		34	3.49	0.62	148.37	
SW1 & SW5 (1000 x 200 mm)on SWF							
Main bar, 12T @ 175 c/c	2		11	3.17	0.89	64.45	
Distribution bar, 10T @ 175 c/c	2		34	1.14	0.62	48.47	
C1							
20 mm #	13		12	1.65	2.470	636.55	
One legged lateral ties 8 mm # @ 150 mm C/C	13		10	0.63	0.395	31.17	
Two legged lateral ties 8 mm # @ 150 mm C/C	13		10	1.80	0.395	89.15	
Two legged lateral ties 8 mm # @ 150 mm C/C	13		10	1.50	0.395	74.26	
C2							
16 mm #	37		6	2.55	1.580	895.14	

	20 mm #	37		4	1.35	2.470	494.24			
	One legged lateral ties 8 mm # @ 150 mm C/C	37		15	0.53	0.395	113.18			
	Two legged lateral ties 8 mm # @ 150 mm C/C	37		15	1.60	0.395	342.11			
	Two legged lateral ties 8 mm # @ 150 mm C/C	37		15	1.60	0.395	342.11			
	C3									
	16 mm #	9		8	5.35	1.580	608.84			
	Two legged lateral ties 8 mm # @ 150 mm C/C	9		14	0.48	0.395	24.36			
	Diamond legged lateral ties 8 mm # @ 150 mm C/C	9		14	1.30	0.395	66.04			
	C4									
	16 mm #	4		4	6.65	1.580	168.16			
	Two legged lateral ties 8 mm # @ 150 mm C/C	4		14	0.93	0.395	21.02			
	Cc1									
	20 mm #	15		8	2.55	2.470	756.41			
	Two legged lateral ties 8 mm # @ 150 mm C/C	15		14	3.86	0.395	312.89			
	Cc2									
	16 mm #	2		8	3.35	1.580	84.74			
	Two legged lateral ties 8 mm # @ 150 mm C/C	2		23	3.86	0.395	70.21			
	PB1									
	20 mm #	1		6	633.71	2.470	9391.51			
	Extra 20 mm #	1		2	633.71	2.470	3130.50			
	Two legged lateral ties 8 mm # @ 150 mm C/C	1		4214	1.40	0.395	2323.85			
	PB2									
	20 mm #	1		6	92.40	2.470	1369.41			
	16 mm #	1		4	92.09	1.570	578.33			
	12 mm #	1		2	91.78	0.890	163.37			
	Two legged lateral ties 8 mm # @ 150 mm C/C	1		606	1.20	0.395	286.11			
	PB3									
	16 mm #	1		4	151.34	1.570	950.42			
	Two legged lateral ties 8 mm # @ 150 mm C/C	1		1001	1.20	0.395	472.71			
	CB									
	12 mm #	1		6	11.15	0.890	59.51			
	Two legged lateral ties 8 mm # @ 150 mm C/C	1		68	0.80	0.395	21.40			
	CB1									
	20 mm #	1		8	17.36	1.580	219.43			
	Extra 12 mm #	1		2	16.88	0.890	30.05			
	Two legged lateral ties 8 mm # @ 150 mm C/C	1		105	1.20	0.395	49.76			
	RB1									

	16 mm #	1	8	49.54	1.570	622.22			
	Two legged lateral ties 8 mm # @ 150 mm C/C	1	322	1.20	0.395	152.09			
B3									
	16 mm #	1	8	87.82	1.570	1103.06			
	Two legged lateral ties 8 mm # @ 150 mm C/C	1	577	1.20	0.395	272.67			
<i>Columns above the Ground floor level</i>									
SW3 (2000x 200 mm)on SWF									
	Main bar, 12T @ 175 c/c	1	23	3.47	0.89	70.55			
	Distribution bar, 10T @ 200 c/c	1	33	2.14	0.62	43.78			
SW2 & SW4 (3350 x 200 mm)on SWF									
	Main bar, 12T @ 175 c/c	2	38	3.47	0.89	236.34			
	Distribution bar, 10T @ 200 c/c	2	33	3.49	0.62	142.81			
SW1 & SW5 (1000 x 200 mm)on SWF									
	Main bar, 12T @ 175 c/c	2	11	3.47	0.89	70.55			
	Distribution bar, 10T @ 200 c/c	2	33	1.14	0.62	46.65			
C1									
	20 mm #	13	12	3.65	2.470	1407.19			
	One legged lateral ties 8 mm # @ 150 mm C/C	13	25	0.63	0.395	80.62			
	Two legged lateral ties 8 mm # @ 150 mm C/C	13	25	1.80	0.395	230.56			
	Two legged lateral ties 8 mm # @ 150 mm C/C	13	25	1.50	0.395	192.05			
C2									
	16 mm #	37	6	3.65	1.580	1280.98			
	20 mm #	37	4	3.65	2.470	1335.03			
	One legged lateral ties 8 mm # @ 150 mm C/C	37	25	0.53	0.395	192.92			
	Two legged lateral ties 8 mm # @ 150 mm C/C	37	25	1.60	0.395	583.14			
	Two legged lateral ties 8 mm # @ 150 mm C/C	37	25	1.60	0.395	583.14			
C3									
	16 mm #	9	8	3.65	1.580	415.45			
	Two legged lateral ties 8 mm # @ 150 mm C/C	9	25	0.48	0.395	42.48			
	Diamond legged lateral ties 8 mm # @ 150 mm C/C	9	25	1.30	0.395	115.18			
C4									
	16 mm #	4	4	3.65	1.580	92.32			
	Two legged lateral ties 8 mm # @ 150 mm C/C	4	25	0.93	0.395	36.66			
Cc1									
	20 mm #	15	8	3.65	2.470	1082.45			
	Two legged lateral ties 8 mm # @ 150 mm C/C	15	25	3.86	0.395	572.36			
Cc2									

	20 mm #	5	8	3.65	2.470	360.82			
	Two legged lateral ties 8 mm # @ 150 mm C/C	5	25	3.86	0.395	190.79			
	lintels for openings								
	<i>Lintels on brick wall</i>								
	12 mm #	1	4	139.36	0.890	496.12			
	Stirrups 8 mm # @ 150 mm C/C	1	930	0.30	0.395	108.74			
	<i>LB on MD</i>								
	12 mm #	2	4	2.00	0.890	14.24			
	Stirrups 8 mm # @ 150 mm C/C	2	14	0.30	0.395	3.35			
	<i>LB on D</i>								
	12 mm #	8	4	1.95	0.890	55.54			
	Stirrups 8 mm # @ 150 mm C/C	8	14	0.30	0.395	13.10			
	<i>LB on D1</i>								
	12 mm #	8	4	1.70	0.890	48.42			
	Stirrups 8 mm # @ 150 mm C/C	8	12	0.30	0.395	11.54			
	<i>LB on D2</i>								
	12 mm #	1	4	1.50	0.890	5.34			
	Stirrups 8 mm # @ 150 mm C/C	1	11	0.30	0.395	1.29			
	<i>LB on D3</i>								
	12 mm #	2	4	1.40	0.890	9.97			
	Stirrups 8 mm # @ 150 mm C/C	2	10	0.30	0.395	2.42			
	<i>LB on DT</i>								
	12 mm #	4	4	1.25	0.890	17.80			
	Stirrups 8 mm # @ 150 mm C/C	4	9	0.30	0.395	4.37			
	<i>LB on W1</i>								
	12 mm #	13	4	1.70	0.890	78.68			
	Stirrups 8 mm # @ 150 mm C/C	13	12	0.30	0.395	18.75			
	<i>Parking floor slab Surface area: 511.00 Sq.m</i>								
	Top reinforcement of upper portion(transverse),12 mm @ 150 mm c/c	1	152	23.34	0.89	3151.90			
	Bottom reinforcement of upper portion,12 mm @ 150 mm c/c	1	152	23.34	0.89	3151.90			
	<i>Main entrance floor slab Surface area: 27.65 Sq.m</i>								
	Top reinforcement of upper portion(transverse),12 mm @ 150 mm c/c	1	36	5.99	0.89	192.28			
	Bottom reinforcement of upper portion,12 mm @ 150 mm c/c	1	36	5.99	0.89	192.28			
	<i>Lounge &amp; Lobby slab Surface area: 290.91 Sq.m</i>								
	Top reinforcement of upper portion(transverse),12 mm @ 150 mm c/c	1	115	17.79	0.89	1816.58			
	Bottom reinforcement of upper portion,12 mm @ 150 mm c/c	1	115	17.79	0.89	1816.58			
	<i>Lounge &amp; Lobby slab Surface area: 847.06 Sq.m</i>								

	Top reinforcement of upper portion(transverse),12 mm @ 150 mm c/c	1		195	29.83	0.89	5177.00				
	Bottom reinforcement of upper portion,12 mm @ 150 mm c/c	1		195	29.83	0.89	5177.00				
	<i>Ramp slab Surface area: 66.00 Sq.m</i>										
	Top reinforcement of upper portion(transverse),10 mm @ 150 mm c/c	1		55	8.83	0.62	301.10				
	Bottom reinforcement of upper portion,10 mm @ 150 mm c/c	1		55	8.83	0.62	301.10				
	Top reinforcement of lower portion(transverse),10 mm @ 150 mm c/c	1		55	8.83	0.62	301.10				
	Bottom reinforcement of lower portion,10 mm @ 150 mm c/c	1		55	8.83	0.62	301.10				
	<i>Staircase-1(measured from CAD drawing)-1.65 m</i>	<i>unit</i>	<i>nos.</i>								
	Top reinforcement of upper portion(longitudinal direction), 12 mm Dia @ 150 mm c/c (Flight 1 & 2)	2	2	13	4.27	0.89	197.55				
	Distribution bar (reinforcement) of upper portion(Transverse direction), 10 mm Dia @ 150 mm c/c (Flight 1 & 2)	2	2	18	2.03	0.62	89.50				
	Main reinforcement of lower portion(Longitudinal direction), 12 mm Dia @ 150 mm c/c, (Flight 1 & 2)	2	2	13	5.45	0.889	252.04				
	Distribution bar (reinforcement) of lower portion(Transverse direction), 10 mm Dia @ 150 mm c/c (Flight 1 & 2)	2	2	28	2.03	0.62	139.29				
	Main reinforcement (Longitudinal direction), 12 mm Dia @ 150 mm c/c, (Landing)	1	1	26	2.18	0.889	50.48				
	Distribution bar (Transverse direction), 10 mm Dia @ 150 mm c/c, (Landing)	1	1	26	2.17	0.62	34.98				
	<i>Staircase-2(measured from CAD drawing)-1.50 m</i>										
	Top reinforcement of upper portion(longitudinal direction), 12 mm Dia @ 150 mm c/c (Flight 1 & 2)	1	2	11	4.27	0.89	83.58				
	Distribution bar (reinforcement) of upper portion(Transverse direction), 10 mm Dia @ 150 mm c/c (Flight 1 & 2)	1	2	18	1.73	0.62	38.14				
	Main reinforcement of lower portion(Longitudinal direction), 12 mm Dia @ 150 mm c/c, (Flight 1 & 2)	1	2	11	5.45	0.889	106.63				
	Distribution bar (reinforcement) of lower portion(Transverse direction), 10 mm Dia @ 150 mm c/c (Flight 1 & 2)	1	2	28	1.73	0.62	59.35				
	Main reinforcement (Longitudinal direction), 12 mm Dia @ 150 mm c/c, (Landing)	1	1	22	1.88	0.889	36.85				
	Distribution bar (Transverse direction), 10 mm Dia @ 150 mm c/c, (Landing)	1	1	22	1.87	0.62	25.51				
					<i>Weight of steel bars</i>		68637.36				
					<i>14 kg of binding wire per tonne of steel bars</i>		892.29				
					<i>Total of Steel Reinforcement</i>		69,529.64	Kg	₹ 90.10	1.00	₹ 62,64,620.65
									<i>Total of Steel Reinforcement:</i>		₹ 62,64,620.65
1.6	<b>SHUTTERING</b>										
	A 5.9	Centring and shuttering including strutting, propping etc. and removal of form for:									
	A 5.9.1	Foundations, footings, bases of columns etc. for mass concrete.									
		<i>Foundation footing base</i>									
			F1	10		6.10		0.30	18.30		
			F2	30		8.50		0.45	114.75		

		F3	32		9.70	0.50	155.20				
		CF1	3		8.50	0.60	15.30				
		CF2	9		10.00	0.60	54.00				
		SWF	1		11.60	0.60	6.96				
1.6.1		<i>Columns below the Ground Floor level</i>									
		C1	13		2.00	1.00	26.00				
		C2	37		1.80	1.75	116.55				
		C3	9		1.70	1.70	26.01				
		C4	4		1.10	1.70	7.48				
		Cc1	15		2.36	1.60	56.66				
		Cc2	5		1.37	1.60	10.97				
					<i>Total</i>			608.18	Sqm	₹ 255.90	1.00
											₹ 1,55,633.98
1.6.2	A 5.9.2	Walls (any thickness) including attached pilasters, butterresses, plinth and string courses etc.									
					SW3 (2000x 200 mm)on SWF	1	4.28	3.30	14.11		
					SW2 & SW4 (3350 x 200 mm)on SWF	2	6.75	3.30	44.55		
					SW1 & SW5 (1000 x 200 mm)on SWF	2	2.05	3.30	13.53		
							<i>Total</i>			72.19	Sqm
										₹ 544.10	1.00
											₹ 39,277.22
1.6.3	A 5.9.3	Suspended floors, roofs, landings, balconies and access platform									
					Ramp	1	66.00		66.00		
							<i>Total</i>			66.00	Sqm
										₹ 612.90	1.00
											₹ 40,451.40
1.6.4	A 5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.									
					PB1	1	632.15	0.90	568.93		
					PB2	1	90.84	1.00	90.84		
					PB3	1	150.09	0.90	135.08		
					CB	1	10.21	0.60	6.13		
					CB1	1	15.80	0.90	14.22		
					RB1	1	48.29	1.05	50.71		
					B3	1	86.58	1.00	86.58		
		<i>lintels for openings</i>									
					LB on the brick wall	1	138.82	0.45	62.47		
					LB on MD	2	1.50	0.45	1.35		
					LB on D	8	1.45	0.45	5.22		
					LB on D1	1	1.20	0.45	0.54		
					LB on D2	4	1.00	0.45	1.80		
					LB on D3	2	0.90	0.45	0.81		
					LB on DT	4	0.75	0.45	1.35		
					LB on W1	13	1.20	0.45	7.02		

		<i>Total</i>					1,033.04	Sqm	₹ 494.50	1.00	₹ 5,10,839.86			
1.6.5	A 5.9.6	Columns, pillars, piers, abutments, posts and struts.												
		Columns at Ground floor level												
			C1	13		2.00	3.30	85.80						
			C2	37		1.80	3.30	219.78						
			C3	9		1.70	3.30	50.49						
			C4	4		1.10	3.30	14.52						
			Cc1	15		1.88	3.30	93.26						
			Cc2	5		1.41	3.30	23.31						
1.6.6	A 5.9.7	Stairs, (excluding landings) except spiral-staircases.												
		Staircase-1.65 m	Set	Nos.										
		Stairs flight(4 m) & stringer(measured from CAD drawing)	2	2	4.00	1.80		28.80						
		Landings	2	1	1.80	1.80		6.48						
		Rise- 0.150 m	2	24	1.650		0.15	11.88						
		Staircase-1.5 m												
		Stairs flight(2.7 m) & stringer(measured from CAD drawing)	1	2	4.00	1.60		12.80						
		Stairs flight(2.65 m) & stringer(measured from CAD drawing)	1	1	1.60	1.60		2.56						
		Rise- 0.150 m	1	24	1.500		0.15	5.40						
1.6.7	A 5.9.16	Edges of slabs and breaks in floors and walls.												
	A 5.9.16.2	Above 20 cm wide												
		Ground Floor slab edges	1		663.80	0.175	116.17							
					<i>Total</i>			116.17	Sqm	₹ 654.80	1.00	₹ 76,064.84		
1.8														
			<b>BRICKWORK</b>											
1.8.1	A 6.1	Brick work with common burnt clay(non modular) bricks of class designation 7.5 in foundation and plinth in												
	A 6.1.1	Cement mortar 1:4 (1 cement : 4 coarse sand)												
		Below plinth beam												
		PB1	1		632.15	0.40	0.30	75.86						
		PB2	1		90.84	0.40	0.30	10.90						
		PB3	1		150.09	0.40	0.30	18.01						
		CB	1		10.21	0.40	0.30	1.23						
		CB1	1		15.80	0.40	0.30	1.90						
					<i>Sum of the above</i>			107.89						
		Deduction quantity												

		C1	14		0.55	0.40	0.30	0.92			
		C2	36		0.45	0.40	0.30	1.94			
		C3	9		0.40	0.40	0.30	0.43			
		C4	4		0.20	0.30	0.30	0.07			
		Cc1	15		1.13	0.30	5.09				
		Cc2	5		0.64	0.30	0.95				
					<i>Deduction quantity</i>			9.41			
					<i>Total</i>			98.48	<i>Cum</i>	₹ 9,603.10	1.00
											₹ 9,45,696.24
	<b>A 6.4</b>	Brick work with common burnt clay(non modular) bricks of class designation 7.5 in superstructure above plinth level upto floor V level in all shape and sizes in									
	<b>A 6.4.2</b>	Cement mortar 1:6 (1 cement : 6 Coarse sand)									
		<i>External wall of 150 mm thick Wall</i>					1	123.04	0.150	2.65	48.91
		<i>Internal wall of 150 mm thick Wall</i>					1	201.10	0.150	2.65	79.94
		<i>Footstep</i>					1	14.32	0.30	0.15	0.64
							1	14.92	0.30	0.15	0.67
							1	15.52	0.30	0.15	0.70
		<i>Ramp- 1.1 m</i>					2	2.00	1.100	0.60	2.64
								<i>Sum of the above</i>		133.50	
<b>1.8.2</b>	<i>Deduction of opening</i>										
		<i>D</i>					8	1.45	0.150	2.10	3.65
		<i>D1</i>					1	1.20	0.150	2.10	0.38
		<i>D2</i>					4	1.00	0.150	2.10	1.26
		<i>D3</i>					2	0.90	0.150	2.10	0.57
		<i>DT</i>					4	0.75	0.150	2.10	0.95
		<i>W1</i>					13	1.80	0.150	2.10	7.37
		<i>V</i>					2	1.50	0.150	0.60	0.27
		<i>V1</i>					1	1.20	0.150	0.60	0.11
								<i>Deduction</i>		14.55	
								<i>Total after deduction</i>		118.95	<i>Cum</i>
										₹ 10,492.90	1.00
										<b>Total of Brick work:</b>	₹ 21,93,785.30
<b>1.9</b>	<b>WOOD WORK</b>										
	<b>A 9.1</b>	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia and length (hold fast lugs or dash fastener shall be paid for separately).									
<b>1.9.1</b>	<b>A 9.1.3</b>	Kiln seasoned and chemically treated Hollock wood					<i>Set</i>	<i>Nos.</i>			
							<i>D3</i>	2	1	0.90	0.10
								2	2	0.13	0.10
										2.10	0.11

			Total					0.13	Cum	₹ 76,054.50	1.00	₹ 9,696.95
1.9.2	A 9.5	Providing and fixing panalled or panalled and glazed shutters for doors, windows and clerestory windows fixing with butt hinges of required size with necessary screws, excluding panelling which will be paid for separately, all complete as per direction of the Engineer-in-charge. (Note:- Butt hinges and necessary screws shall be paid separately)										
	A 9.5.2	Kiln seasoned and chemically treated Hollock wood										
	A 9.5.2.1	35 mm thick shutters	Set									
			D3	2	0.90	2.10	3.78					
					Total			3.78	Sqm	₹ 2,400.10	1.00	₹ 9,072.38
1.9.3	A 9.53	Providing 40 x 5 mm flat iron hold fasts 40 cm long including fixing to frame with 10mm diameter bolts, nuts and wooden plugs and embeddings in cement concrete block 30 x 10 x 15 cm 1:3:6 mix (1 cement :3 coarse sand :6 graded stone aggregate 20 mm nominal size).	Set	Nos.								
			D3	2	4			8				
					Total			8	Each	₹ 168.40	1.00	₹ 1,347.20
1.9.4	A 9.71.1	Providing and fixing ISI :12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :	Set	Nos.								
		125 x 64 x 2.50 mm										
			D3	2	6			12				
					Total			12	Each	₹ 103.70	1.00	₹ 1,244.40
1.9.5	A 9.74	Providing and fixing bright finished brass tower bolts(barrel type) with necessary screws etc. complete :	Set	Nos.								
	A 9.74.1	250 mm x 10 mm										
			D3	2	6			12				
					Total			12	Each	₹ 426.30	1.00	₹ 5,115.60
1.9.6	A 9.88	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete :	Set	Nos.								
			D3	2	6			12				
					Total			12	Each	₹ 893.60	1.00	₹ 10,723.20
1.9.7	A 9.165	Providing and fixing bright/matt finished stainless steel handles of approved quality and make with necessary screws etc. all complete	Set	Nos.								
	A 9.165.1	125 mm										
			D3	2	6			12				
					Total			12	Each	₹ 111.80	1.00	₹ 1,341.60
1.9.8	A 9.101	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete	Set	Nos.								
	A 9.101.1	Single rubber stopper										

		D3	2	6				12				
					<i>Total</i>			12	Each	₹ 37.60	1.00	₹ 451.20
1.9.9	A 9.83	Providing and fixing aluminium die cast body tubular type universal hydraulic door closer (having brand logo with ISI : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door weight upto 701 mm to 1000 mm) with double speed adjustment with necessary accessories and screws etc. complete.	Set	Nos.								
		D3	2	6				12				
					<i>Total</i>			12	Each	₹ 1,128.70	1.00	₹ 13,544.40
										<i>Total of Wood work:</i>		₹ 52,536.93
1.10		ALUMINIUM WINDOWS, VENTILATION & GLAZING CURTAIN WALL										
	A 21.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixed with rawl plug and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junction, at top, bottom and sides with required PVC/ neoprene felt etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing/ panelling, C.P. brass/ stainless steel screws, all complete as per architectural drawing.(Glazing and panelling to be paid separately)										
	A 21.1.1	For fixed portion			<i>Product Brand: Jindal Aluminium Ltd.</i>							
	A 21.1.1.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 microns)	Section name	No.	Length		Kg/m	Quantity				
		MD (1500 mm x 2100 mm)-Double leaf										
		Frame - Single groove	19570	4	2.10		0.911	7.65				
		Frame Top & Side	19537	1	1.50		1.911	2.87				
		Bottom Frame	20619	1	1.50		0.974	1.46				
		Shutter top & bottom	20545	2	1.50		0.354	1.06				
		Shutter side (interlock)	20546	4	2.10		0.346	2.91				
		Clip	19352	4	2.10		0.097	0.81				
			19352	2	1.50		0.097	0.29				
					<i>Sum of the above 1 unit</i>			17.05				
					<i>Total (2 unit)</i>			34.11				
		D (1500 mm x 2100 mm)-Double leaf										
		Frame - Single groove	19570	4	2.10		0.911	7.65				
		Frame Top & Side	19537	1	1.50		1.911	2.87				
		Bottom Frame	20619	1	1.50		0.974	1.46				
		Shutter top & bottom	20545	2	1.50		0.354	1.06				

	Shutter side (interlock)	20546	4	2.10	0.346	2.91			
	Clip	19352	4	2.10	0.097	0.81			
		19352	2	1.50	0.097	0.29			
				Sum of the above 1 unit			17.05		
				Total (3 unit)			51.16		
	D1 (1200 mm x 2100 mm)-Double leaf								
	Frame - Single groove	19570	4	2.10	0.911	7.65			
	Frame Top & Side	19537	1	1.20	1.911	2.29			
	Bottom Frame	20619	1	1.20	0.974	1.17			
	Shutter top & bottom	20545	2	1.20	0.354	0.85			
	Shutter side (interlock)	20546	4	2.10	0.346	2.91			
	Clip	19352	4	2.10	0.097	0.81			
		19352	2	1.20	0.097	0.23			
				Sum of the above 1 unit			15.92		
				Total (1 unit)			15.92		
	D2 (1000 mm x 2100 mm)-Single leaf								
	Frame - Single groove	19570	2	2.10	0.911	3.83			
	Frame Top & Side	19537	1	1.00	1.911	1.91			
	Bottom Frame	20619	1	1.00	0.974	0.97			
	Shutter top & bottom	20545	2	1.00	0.354	0.71			
	Shutter side (interlock)	20546	2	2.10	0.346	1.45			
	Clip	19352	2	2.10	0.097	0.41			
		19352	2	1.00	0.097	0.19			
				Sum of the above 1 unit			9.47		
				Total (4 unit)			37.90		
	DT (750 mm x 2100 mm)-Single leaf								
	Frame - Single groove	19570	2	2.10	0.911	3.83			
	Frame Top & Side	19537	1	0.75	1.911	1.43			
	Bottom Frame	20619	1	0.75	0.974	0.73			
	Shutter top & bottom	20545	2	0.75	0.354	0.53			
	Shutter side (interlock)	20546	2	2.10	0.346	1.45			
	Clip	19352	2	2.10	0.097	0.41			
		19352	2	0.75	0.097	0.15			
				Sum of the above 1 unit			8.53		
				Total (4 unit)			34.11		
	W1(1800 mm x 2100 mm)								
	Frame Top & Side	20681	4	2.10	0.659	5.54			

			Frame Top & side	20681	1	1.80		0.659	1.19			
			Bottom Frame	20619	1	1.80		0.695	1.25			
			Shutter top & bottom	20545	2	1.80		0.354	1.27			
			Shutter side (interlock)	20546	6	2.10		0.346	4.36			
			Clip	19352	6	2.10		0.097	1.22			
			Clip	19352	2	1.80		0.097	0.35			
							Sum of the above 1 unit		15.18			
							Total (21 unit)		318.74			
		Pivoted Ventillation										
		V(3755 mm x 600 mm)										
			Top Frame	20653	1	3.76		0.354	1.33			
			Bottom Frame	20653	1	3.76		0.354	1.33			
			Side Frame	20653	2	0.60		0.354	0.42			
			Shutter with Glass	20653	2	3.76		0.350	2.63			
			Shutter with Glass	20653	2	0.60		0.350	0.42			
			Clip	19352	2	3.76		0.097	0.73			
			Clip	19352	2	0.60		0.097	0.12			
							Sum of the above 1 unit		6.98			
							Total (1 unit)		6.98			
		V1(3000 mm x 600 mm)										
			Top Frame	20653	1	3.00		0.354	1.06			
			Bottom Frame	20653	1	3.00		0.354	1.06			
			Side Frame	20653	2	0.60		0.354	0.42			
			Shutter with Glass	20653	2	3.00		0.350	2.10			
			Shutter with Glass	20653	2	0.60		0.350	0.42			
			Clip	19352	2	3.00		0.097	0.58			
			Clip	19352	2	0.60		0.097	0.12			
							Sum of the above 1 unit		5.77			
							Total (1 unit)		5.77			
		V2(900 mm x 600 mm)										
			Top Frame	20653	1	0.90		0.354	0.32			
			Bottom Frame	20653	1	0.90		0.354	0.32			
			Side Frame	20653	2	0.60		0.354	0.42			
			Shutter with Glass	20653	2	0.90		0.350	0.63			
			Shutter with Glass	20653	2	0.60		0.350	0.42			
			Clip	19352	2	0.90		0.097	0.17			
			Clip	19352	2	0.60		0.097	0.12			

			Sum of the above 1 unit			2.40	
			Total (2 unit)			4.81	
	DW(5900 mm x 3100 mm)						
			19554	2	5.90	1.292	
		Frame- Single groove	19527	4	2.55	0.881	
			Shutter-Top	20653	2	5.90	
			Shutter-Bottom	19503	2	5.90	
			Shutter-Vertical	19505	4	2.55	
			Glazing Clip	19352	2	5.90	
				19352	4	2.55	
					Sum of the above 1 unit		
						77.30	
					Total (2 unit)		
	DW1(3520 mm x 3100 mm)					154.60	
			19554	2	3.52	1.292	
		Frame- Single groove	19527	4	3.10	0.881	
			Shutter-Top	20653	2	3.52	
			Shutter-Bottom	19503	2	3.52	
			Shutter-Vertical	19505	4	3.10	
			Glazing Clip	19352	2	3.52	
				19352	4	3.10	
					Sum of the above 1 unit		
						61.82	
					Total (2 unit)		
	Partition wall (PW)-(6510 mm x 3100 mm)					123.64	
			Frame- Single groove	20088	4	6.51	
			Frame- Double groove	20089	6	3.10	
			Shutter-Bottom	19503	6	3.10	
			Shutter-Vertical	19505	4	6.51	
			Glazing Clip	19352	6	3.10	
				19352	4	6.51	
					Sum of the above 1 unit		
						86.53	
					Total (1 unit)		
	Partition wall (PW1)-(2540 mm x 3100 mm)					86.53	
			Frame- Single groove	20088	4	2.54	
			Frame- Double groove	20089	3	3.10	
			Shutter-Bottom	19503	3	3.10	
			Shutter-Vertical	19505	4	2.54	
			Glazing Clip	19352	3	3.10	

			Glazing Clip	19352	4	2.54		0.097	0.99			
					Sum of the above 1 unit				37.40			
					Total (1 unit)				37.40			
	Glazing (GZ)-Glazing curtain wall-(16850 mm x 9600 mm)											
			Mullion	22703	20	16.85		1.751	581.89			
				22703	12	9.60		1.751	196.11			
			Glazing Pressure plate	22706	20	16.85		0.529	175.80			
				22706	12	3.50		0.529	21.60			
	Cover plate			22704	20	16.85		0.245	81.42			
				22704	12	9.60		0.245	27.44			
	Casement in Glazing Curtain wall (GZ)											
			Top Frame	20653	2	0.45		0.354	0.32			
			Bottom Frame	20653	2	0.45		0.354	0.32			
			Side Frame	20653	2	0.90		0.354	0.64			
			Shutter with Glass	20653	2	1.80		0.350	1.26			
			Glazing Clip	19352	2	1.80		0.097	0.35			
					Sum of the above 1 unit				1,087.14			
					Total (3 unit)				3,261.43			
	Glazing (GZ1)-Glazing curtain wall-(21650 mm x 6000 mm)											
			Mullion	22703	8	21.65		1.751	303.27			
				22703	8	6.00		1.751	84.05			
			Glazing Pressure plate	22706	8	21.65		0.529	91.62			
				22706	8	3.50		0.529	14.81			
			Cover plate	22704	8	21.65		0.245	42.43			
				22704	8	6.00		0.245	11.76			
	Casement window in Glazing Curtain wall (GLZ1)											
			Top Frame	20653	2	0.45		0.354	0.32			
			Bottom Frame	20653	2	0.45		0.354	0.32			
			Side Frame	20653	2	0.90		0.354	0.64			
			Shutter with Glass	20653	2	1.80		0.350	1.26			
			Glazing Clip	19352	2	1.80		0.097	0.35			
					Sum of the above 1 unit				550.83			
					Total (4 unit)				2,203.33			
					Total				6376.42	Kg	₹ 510.70	1.00
A 21.1.2	For shutters of doors, windows, ventilators including providing and fixing hinges/pivots and making provision for fixing of fitting wherever required including the cost of EPDM rubber/neoprene gasket required (Fitting shall be paid separately)											

1.10.2	A 21.1.2.2	Powder coated aluminium (minimum thickness of powder costing 50 microns)								
		MD (1500 mm x 2100 mm)-Double leaf	2	1.50	0.00		0.00			
		D (1500 mm x 2100 mm)-Double leaf	3	1.50	1.05		4.73			
		D1 (1200 mm x 2100 mm)-Double leaf	1	1.20	1.05		1.26			
		D2 (1000 mm x 2100 mm)-Single leaf	4	1.00	1.05		4.20			
		DT (750 mm x 2100 mm)-Single leaf	4	0.75	1.05		3.15			
		W1(1800 mm x 2100 mm)	21	1.80	0.00		0.00			
		V(3755 mm x 600 mm)	1	3.76	0.00		0.00			
		V1(3000 mm x 600 mm)	1	3.00	0.00		0.00			
		V2(900 mm x 600 mm)	2	0.90	0.00		0.00			
		DW(5900 mm x 3100 mm)	2	5.90	1.55		18.29			
		DW1(3520 mm x 3100 mm)	2	3.52	1.55		10.91			
		Partition wall (PW)-(6510 mm x 3100 mm)	1	6.51	1.55		10.09			
		Partition wall (PW1)-(2540 mm x 3100 mm)	1	2.54	1.55		3.94			
		Glazing (GZ)-Glazing curtain wall-(16850 mm x 9600 mm)	3	16.85	0.00		0.00			
		Glazing (GZ1)-Glazing curtain wall-(21650 mm x 6000 mm)	4	21.65	0.00		0.00			
						Total	56.56	Sqm	₹ 584.40	1.00
										₹ 33,056.29
1.10.3	A 21.3	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with PVC/ neoprene gasket etc. complete as per the architectural drawings (Cost of aliminium snap beading shall be paid in basic item)								
	A 21.3.1	With float glass panes of 4.00 mm thickness (weight not less than 10 Kg/sqm)								
		MD (1500 mm x 2100 mm)-Double leaf	2	1.50	0.00		0.00			
		D (1500 mm x 2100 mm)-Double leaf	3	1.50	0.00		0.00			
		D1 (1200 mm x 2100 mm)-Double leaf	1	1.20	0.00		0.00			
		D2 (1000 mm x 2100 mm)-Single leaf	4	1.00	0.00		0.00			
		DT (750 mm x 2100 mm)-Single leaf	4	0.75	0.00		0.00			
		W1(1800 mm x 2100 mm)	21	1.80	2.10		79.38			
		V(3755 mm x 600 mm)	1	3.76	0.60		2.25			
		V1(3000 mm x 600 mm)	1	3.00	0.60		1.80			
		V2(900 mm x 600 mm)	2	0.90	0.60		1.08			
		DW(5900 mm x 3100 mm)	2	5.90	0.00		0.00			
		DW1(3520 mm x 3100 mm)	2	3.52	0.00		0.00			
		Partition wall (PW)-(6510 mm x 3100 mm)	1	6.51	0.00		0.00			
		Partition wall (PW1)-(2540 mm x 3100 mm)	1	2.54	0.00		0.00			
		Glazing (GZ)-Glazing curtain wall-(16850 mm x 9600 mm)	3	16.85	0.00		0.00			
		Glazing (GZ1)-Glazing curtain wall-(21650 mm x 6000 mm)	4	21.65	0.00		0.00			
						Total	84.51	Sqm	₹ 1,034.90	1.00
										₹ 87,462.50

<b>A 21.3.2</b>	With float glass panes of 5.5 mm thickness (weight not less than 12.5 Kg/sqm)							
	MD (1500 mm x 2100 mm)-Double leaf	2	1.50	0.00		0.00		
	D (1500 mm x 2100 mm)-Double leaf	3	1.50	1.05		4.73		
	D1 (1200 mm x 2100 mm)-Double leaf	1	1.20	1.05		1.26		
	D2 (1000 mm x 2100 mm)-Single leaf	4	1.00	1.05		4.20		
	DT (750 mm x 2100 mm)-Single leaf	4	0.75	1.05		3.15		
	W1(1800 mm x 2100 mm)	21	1.80	0.00		0.00		
	V(3755 mm x 600 mm)	1	3.76	0.00		0.00		
	V1(3000 mm x 600 mm)	1	3.00	0.00		0.00		
	V2(900 mm x 600 mm)	2	0.90	0.00		0.00		
	DW(5900 mm x 3100 mm)	2	5.90	1.55		18.29		
	DW1(3520 mm x 3100 mm)	2	3.52	1.55		10.91		
	Partition wall (PW)-(6510 mm x 3100 mm)	1	6.51	1.55		10.09		
	Partition wall (PW1)-(2540 mm x 3100 mm)	1	2.54	1.55		3.94		
	Glazing (GZ)-Glazing curtain wall-(16850 mm x 9600 mm)	3	16.85	9.60		485.28		
	Glazing (GZ1)-Glazing curtain wall-(21650 mm x 6000 mm)	4	21.65	6.00		519.60		
			<i>Total</i>			1,061.44 Sqm	<b>₹ 1,376.20</b>	1.00 ₹ 14,60,759.92
<b>A 21.3.3</b>	With float glass panes of 8 mm thickness (weight not less than 20 Kg/sqm)							
<b>1.10.4</b>	MD (1500 mm x 2100 mm)-Double leaf	2	1.50	2.10		6.30		
			<i>Total</i>			6.30 Sqm	<b>₹ 1,567.00</b>	1.00 ₹ 9,872.10
<b>A 21.12</b>	Providing and fixing aluminium tubular handle bar 32 mm outer dia. 3.0 mm thick & 2100 mm long with SS screws etc. complete							
<b>A 21.12.2</b>	Powder coated minimum thickness 50 microns aluminium tubular handle bar		Nos.					
<b>1.10.5</b>	MD (1500 mm x 2100 mm)-Double leaf	2	4			8		
	D (1500 mm x 2100 mm)-Double leaf	3	4			12		
	D1 (1200 mm x 2100 mm)-Double leaf	1	4			4		
	D2 (1000 mm x 2100 mm)-Single leaf	4	2			8		
			<i>Total</i>			32 Sqm	<b>₹ 643.10</b>	1.00 ₹ 20,579.20
<b>A 21.19</b>	Filling the gap in between aluminium/stone/wood frame & adjacent RCC/ Brick/Stone/ wood/ ceramic/ Gypsum work by providing weather/ structural non sag elastomeric PU sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-Charge complete, complying to ASTM-C 920, DIN 1854-F and ISO-11600..							
<b>A 21.19.2</b>	Upto 10 mm depth and 10 mm width							
	MD (1500 mm x 2100 mm)-Double leaf	2	4.25			8.50		
	D (1500 mm x 2100 mm)-Double leaf	3	6.35			19		
	D1 (1200 mm x 2100 mm)-Double leaf	1	5.75			6		

1.10.6	D2 (1000 mm x 2100 mm)-Single leaf	4	5.35		21			
	DT (750 mm x 2100 mm)-Single leaf	4	4.85		19			
	W1(1800 mm x 2100 mm)	21	4.85		102			
	V(3755 mm x 600 mm)	1	8.76		9			
	V1(3000 mm x 600 mm)	1	7.25		7			
	V2(900 mm x 600 mm)	2	3.05		6			
	DW(5900 mm x 3100 mm)	2	16.15		32			
	DW1(3520 mm x 3100 mm)	2	11.39		23			
	Partition wall (PW)-(6510 mm x 3100 mm)	1	17.37		17			
	Partition wall (PW1)-(2540 mm x 3100 mm)	1	9.43		9			
	Glazing (GZ)-Glazing curtain wall-(16850 mm x 9600 mm)	3	54.15		162			
	Glazing (GZ1)-Glazing curtain wall-(21650 mm x 6000 mm)	4	56.55		226			
	Total				668.59	Metre	₹ 183.60	₹ 1,22,753.12
1.10.7	A 21.11	Providing and fixing stainless steel (SS-304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-charge complete						
	A 21.11.4	510 x 19 mm		Nos.				
		W1(1800 mm x 2100 mm)	21	4	84			
		V(3755 mm x 600 mm)	1	4	4			
		V1(3000 mm x 600 mm)	1	3	3			
		V2(900 mm x 600 mm)	2	2	4			
		Glazing (GZ)-Glazing curtain wall-(16850 mm x 9600 mm)	3	1	3			
		Glazing (GZ1)-Glazing curtain wall-(21650 mm x 6000 mm)	4	1	5			
1.10.8	Total				103	Each	₹ 829.40	₹ 85,428.20
	A 9.71	Providing and fixing ISI :12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :		Nos.				
	A 9.71.1	125 x 64 x 2.50 mm						
		MD (1500 mm x 2100 mm)-Double leaf	2	8	16			
		D (1500 mm x 2100 mm)-Double leaf	3	8	24			
		D1 (1200 mm x 2100 mm)-Double leaf	1	8	8			
		D2 (1000 mm x 2100 mm)-Single leaf	4	4	16			
		DT (750 mm x 2100 mm)-Single leaf	4	4	16			
		W1(1800 mm x 2100 mm)	21	12	252			
		V(3755 mm x 600 mm)	1	6	6			
		V1(3000 mm x 600 mm)	1	6	6			
		V2(900 mm x 600 mm)	2	4	8			
		DW(5900 mm x 3100 mm)	2	8	16			

	DW1(3520 mm x 3100 mm)	2	8		16			
	Partition wall (PW)-(6510 mm x 3100 mm)	1	8		8			
	Partition wall (PW1)-(2540 mm x 3100 mm)	1	8		8			
	Glazing (GZ)-Glazing curtain wall-(16850 mm x 9600 mm)	3	12		36			
	Glazing (GZ1)-Glazing curtain wall-(21650 mm x 6000 mm)	4	12		48			
				Total		484	each	₹ 103.70
								1.00
								₹ 50,190.80
1.10.9	A 9.74	Providing and fixing bright finished brass tower bolts(barrel type) with necessary screws etc. complete :		Nos.				
	A 9.74.1	250 mm x 10 mm						
		MD (1500 mm x 2100 mm)-Double leaf	2	2		4		
		D (1500 mm x 2100 mm)-Double leaf	3	2		6		
		D1 (1200 mm x 2100 mm)-Double leaf	1	2		2		
		D2 (1000 mm x 2100 mm)-Single leaf	4	2		8		
		DT (750 mm x 2100 mm)-Single leaf	4	2		8		
		W1(1800 mm x 2100 mm)	21	2		42		
		V(3755 mm x 600 mm)	1	2		2		
		V1(3000 mm x 600 mm)	1	2		2		
		V2(900 mm x 600 mm)	2	2		4		
		DW(5900 mm x 3100 mm)	2	2		4		
		DW1(3520 mm x 3100 mm)	2	2		4		
				Total		86	each	₹ 426.30
								1.00
								₹ 36,661.80
1.10.10	A 9.88	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete :		Nos.				
		MD (1500 mm x 2100 mm)-Double leaf	2	1		2		
		D (1500 mm x 2100 mm)-Double leaf	3	1		3		
		D1 (1200 mm x 2100 mm)-Double leaf	1	1		1		
		D2 (1000 mm x 2100 mm)-Single leaf	4	1		4		
		DW(5900 mm x 3100 mm)	2	1		2		
		DW1(3520 mm x 3100 mm)	2	1		2		
				Total		14	each	₹ 893.60
								1.00
								₹ 12,510.40
1.10.11	A 9.100	Providing and fixing aluminium handles ISI marked anodised (anodic coating not less than grade AC 10 as per IS :1868 ) transparent or dyed to required color or shade with nuts and screws etc. complete.		Nos.				
	A 9.100.1	125 mm						
		DT (750 mm x 2100 mm)-Single leaf	4	2		8		
		W1(1800 mm x 2100 mm)	21	4		84		
		V(3755 mm x 600 mm)	1	4		4		

		V1(3000 mm x 600 mm)	1	4		4					
		V2(900 mm x 600 mm)	2	2		4					
			<i>Total</i>			104 each	₹ 66.50	1.00	₹ 6,916.00		
	A 9.101	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete		Nos.							
	A 9.101.2	Twin rubber stopper									
1.10.12		MD (1500 mm x 2100 mm)-Double leaf	2	2		4					
		D (1500 mm x 2100 mm)-Double leaf	3	2		6					
		D1 (1200 mm x 2100 mm)-Double leaf	1	2		2					
		D2 (1000 mm x 2100 mm)-Single leaf	4	1		4					
		DW(5900 mm x 3100 mm)	2	1		2					
		DW1(3520 mm x 3100 mm)	2	1		2					
			<i>Total</i>			20 each	₹ 69.90	1.00	₹ 1,398.00		
			<b>Total of Aluminium Windows, Ventilation &amp; Glazing Curtain Wall:</b>								₹ 51,84,027.41
1.11	<b>PLASTERING</b>										
1.11.1	<i>Exterior Plaster</i>										
	A 13.3	20 mm cement plaster of mix:									
	A 13.3.1	1:4 (1 cement : 4 coarse sand)		Sides							
		External wall	1	1	123.04	3.00	369.13				
			5 % extra for column & beam				18.46				
		Deduction of opening		Sides							
			D	8	1	1.45	2.10	24.36			
			D1	1	1	1.20	2.10	2.52			
			D2	4	1	1.00	2.10	8.40			
			D3	2	1	0.90	2.10	3.78			
			DT	4	1	0.75	2.10	6.30			
			<i>Deduction</i>				45.36				
			<i>Total exterior plastering</i>				342.23 Sqm	₹ 348.00	1.00	₹ 1,19,094.46	
	<i>Interior Plaster</i>										
	A 13.1	12 mm cement plaster of mix:									
	A 13.1.1	1:4 (1 cement : 4 fine sand)		Sides							
			External wall of 150 mm thick Wall	1	1	123.04	2.65	326.06			
			Internal wall of 150 mm thick Wall	1	2	201.10	2.65	1065.80			
		Ceiling Surface area									
		Multi purpose Hall (measured from CAD drawing)	1		107.69		107.69				

	Innovation & Startup (measured from CAD drawing)	1		270.74		270.74				
	First aid room(measured from CAD drawing)	1		16.96		16.96				
	Account room (measured from CAD drawing)	1		28.43		28.43				
	Office (measured from CAD drawing)	1		18.94		18.94				
	Conference room (measured from CAD drawing)	1		37.98		37.98				
	NOC room (measured from CAD drawing)	1		29.55		29.55				
	Electrical room (measured from CAD drawing)	1		24.53		24.53				
	Administration corridor (measured from CAD drawing)	1		51.92		51.92				
	His Toilet (measured from CAD drawing)	1		19.59		19.59				
1.11.2	HerToilet (measured from CAD drawing)	1		18.35		18.35				
	PWD area (measured from CAD drawing)	1		6.49		6.49				
	Administration corridor (measured from CAD drawing)	1		51.92		51.92				
	Toilet (measured from CAD drawing)	1		5.67		5.67				
	Parking floor (measured from CAD drawing)	1		274.998		275.00				
				<i>Sum of the above</i>			2355.63			
				5 % extra for column & beam			117.78			
		D	8	2	1.45		2.10	48.72		
		D1	1	2	1.20		2.10	5.04		
		D2	4	2	1.00		2.10	16.80		
		D3	2	2	0.90		2.10	7.56		
		DT	4	2	0.75		2.10	12.60		
		W1	13	2	1.80		2.10	98.28		
		V	2	2	1.50		0.60	3.60		
		V1	1	2	1.20		0.60	1.44		
				<i>Deduction</i>			194.04			
				<i>Total interior plastering</i>			2279.37 Sqm	₹ 250.30	1.00	₹ 5,70,525.49
								<i>Total of Plastering :</i>		₹ 6,89,619.95
1.12		<b>TILING &amp; CLADDING</b>								
	A 8.31	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer), of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dados over 12 mm thick bed of Cement Mortar 1:3 ( 1 cement : coarse sand) and jointing with grey cement slurry @ 3.3kg per Sqm including pointing in white cement mixed with pigment of matching shade.complete								
1.12.1										
		Toilet (measured from CAD drawing)	1		9.86		1.95	19.23		
		His Toilet (measured from CAD drawing)	1		27.36		1.95	53.35		
		HerToilet (measured from CAD drawing)	1		26.79		1.95	52.24		

	PWD area (measured from CAD drawing)	1	10.40	1.95	20.28					
			Total		145.10	Sqm	₹ 1,090.40	1.00	₹ 1,58,216.49	
1.12.2	A 11.20	Chequered precast cement concrete tiles 22 mm thick in footpath & courtyard jointed with neat cement slurry mixed with pigment to match the shade of tiles including rubbing and cleaning etc. complete on 20 mm thick bed of cement mortar 1:4 ( 1 cement: 4 coarse sand)								
	A 11.20.1	Light shade pigment with white cement								
		Footstep riser	4	14.92	0.15	8.95				
		Footstep tread	3	14.92	0.30	13.43				
		Ramp	1	66.00		66.00				
		Small ramp	2	2.20		4.40				
				5 % extra for skirting		4.64				
				Total		97.42	Sqm	₹ 1,398.60	1.00	₹ 1,36,250.21
1.12.3	A 11.41	Providing and laying Vitrified tiles in different sizes (thickness to be specified by the manufacturer), with water absorption less than 0.08% and conforming to IS:15622, of approved make, in all colours and shades, in skirting, riser of steps, over 20 mm thick bed of cement mortar 1:4 (1cement : 4 coarse sand), jointing with grey cement slurry @3.3 kg/sqm including grouting the joints with white cement and matching pigments etc.,complete.								
	A 11.41.2	Size of tiles 600 x 600 mm								
		Multi purpose Hall (measured from CAD drawing)	1	107.69		107.69				
		Innovation & Startup (measured from CAD drawing)	1	270.74		270.74				
		First aid room(measured from CAD drawing)	1	16.96		16.96				
		Account room (measured from CAD drawing)	1	28.43		28.43				
		Office (measured from CAD drawing)	1	18.94		18.94				
		Conference room (measured from CAD drawing)	1	37.98		37.98				
		NOC room (measured from CAD drawing)	1	29.55		29.55				
		Electrical room (measured from CAD drawing)	1	24.53		24.53				
		Administration corridor (measured from CAD drawing)	1	51.92		51.92				
				Sum of the above		586.74				
				5 % extra for skirting		29.34				
				Total		616.08	Sqm	₹ 1,671.00	1.00	₹ 10,29,464.67
A 11.56	A 11.56	Providing and laying polished Granite Stone flooring in requires design and patterns, in linear as well as curvilinear portion of the building, all complete as per the Architectural drawings, with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 ( 1 cement: 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-charge.								
	A 11.56.1	Polished Granite Stone slab Jet Black, Cherry Red, Elite Brown, Cat Eye or equivalent								

1.12.4	Main entrance (measured from CAD drawing)	1		27.65		27.65			
	Entrance lobby (measured from CAD drawing)	1		90.45		90.45			
	Staircase-1.65 m	Set	Nos.						
	Footstep riser	2	24	1.65	0.15	11.88			
	Footstep tread	2	23	1.65	0.30	22.77			
	Landing	2	1	1.65	1.65	5.45			
	Staircase-1.5 m								
	Footstep riser	1	24	1.50	0.15	5.40			
	Footstep tread	1	23	1.50	0.30	10.35			
	Landing	1	1	1.50	1.80	2.70			
						5 % extra for skirting	8.83		
						Total	185.48	Sqm	₹ 4,169.10 1.00 ₹ 7,73,273.20
						Total of Tiling & Cladding:		₹ 20,97,204.58	
1.13	<b>STEEL WORK</b>								
A 10.28	Providing and fixing stainless steel (Grade 304) railing made of hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary accessories and stainless steel nuts and bolts complete, i/c fixing the railings with necessary accessories and stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the sided of waist slab with suitable arrangement as per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)								
	Grade 304 Stainless steel(Sch-5S)	Set	Nos.	Length		Kg/m	Quantity		
	Staircase railing-1.65 m								
	Post : 73.0 mm(OD), wall thickness- 2.11 mm	2	12	1.00	3.69	88.56			
	Top rail : 88.9 mm(OD), wall thickness- 2.11 mm	2	1	8.60	4.51	77.57			
	Mid rail : 33.4 mm(OD), wall thickness- 1.65 mm	2	2	8.10	1.30	42.12			
	Bottom rail: 33.4 mm(OD), wall thickness- 1.65 mm	2	1	8.10	1.30	21.06			
	Staircase railing-1.5 m								
	Post : 73.0 mm(OD), wall thickness- 2.11 mm	1	24	1.00	3.69	88.56			
	Top rail : 88.9 mm(OD), wall thickness- 2.11 mm	1	2	7.95	4.51	71.71			
1.13.1	Mid rail : 33.4 mm(OD), wall thickness- 1.65 mm	1	4	7.45	1.30	38.74			
	Bottom rail: 33.4 mm(OD), wall thickness- 1.65 mm	1	2	7.45	1.30	19.37			
	Ramp								
	Post : 73.0 mm(OD), wall thickness- 2.11 mm	1	24	1.00	3.69	88.56			
	Top rail : 88.9 mm(OD), wall thickness- 2.11 mm	1	2	25.20	4.51	227.30			
	Mid rail : 33.4 mm(OD), wall thickness- 1.65 mm	1	4	24.70	1.30	128.44			
	Bottom rail: 33.4 mm(OD), wall thickness- 1.65 mm	1	2	24.70	1.30	64.22			

			<b>Total</b>	956.22	Kg	₹ 627.40	1.00	₹ 5,99,929.29	
						<b>Total of Steel Work:</b>		₹ 5,99,929.29	
1.14		<b>FALSE CEILING</b>							
	A 12.45	Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S sheets and galvanised with zinc coating of 120 gms/sqm (both side inclusivve) as per IS:277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flange of 27 mm and 37 mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50 mm long with 6 mm dia boly, other flange.... with 25 mm long dry wall screws @230 mm interval, including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c, including jointing and finishing to a flush finish of tapered and square edges of the board with recommended jointing compound, jointing tapes... as per drawing, specification and direction of the Engineer-in-Charge but excluding the cost of painting with:							
1.14.1	A 12.45.3	12.5 mm thick tapered edge Gypsum moisture resistant board							
		Innovation & Startup (measured from CAD drawing)	1	270.74		270.74			
		First aid room(measured from CAD drawing)	1	16.96		16.96			
		Account room (measured from CAD drawing)	1	28.43		28.43			
		Office (measured from CAD drawing)	1	18.94		18.94			
		Conference room (measured from CAD drawing)	1	37.98		37.98			
		NOC room (measured from CAD drawing)	1	29.55		29.55			
		Electrical room (measured from CAD drawing)	1	24.53		24.53			
		Administration corridor (measured from CAD drawing)	1	51.92		51.92			
		His Toilet (measured from CAD drawing)	1	19.59		19.59			
		HerToilet (measured from CAD drawing)	1	18.35		18.35			
		PWD area (measured from CAD drawing)	1	6.49		6.49			
		Administration corridor (measured from CAD drawing)	1	51.92		51.92			
				<b>Total</b>	Sqm	₹ 1,318.60	1.00	₹ 7,58,722.44	
						<b>Total of False ceiling:</b>		₹ 7,58,722.44	
1.15		<b>PAINTING</b>							
1.15.1	A 13.43	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface:							
	A 13.43.1	Water thinnable cement primer	1	Sum of exterior plaster & interior plaster Surface area	342.23	Sqm	₹ 54.20	1.00	₹ 18,548.62
1.15.2	A 13.45	Finishing walls with water proofing cement paint "snowcem - plus" of M/s snowcem India Ltd. Or equivalent of required shade:							
	A 13.45.1	New work (Two or more coat applied @ 3.84 kg/10 sqm)	1	same area as exterior	342.23	Sqm	₹ 243.20	1.00	₹ 83,229.23

1.15.3	A 13.26	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	1		Interior plaster- Toilet Cladding	2,134.27	Sqm	₹ 183.60	1.00	₹ 3,91,851.46
1.15.4	A 13.41	Distempering with oil bounded washable distemper of approved brand and manufacture to give an even shade								
	A 13.41.1	New work (two or more coats) over and includung priming coat with cement primer.	1		Interior plaster- Toilet	2,134.27	Sqm	₹ 134.00	1.00	₹ 2,85,991.81
1.15.6	A13.50	Applying priming coat :								
	A13.50.1	With ready mixed pink or grey primer of approved brand and manufacture on wood work (hard and soft wood)								
		Wooden Doors	1		Surface area on both sides of wooden Doors	7.56	Sqm	₹ 53.00	1.00	₹ 400.68
1.15.7	A13.62	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:								
	A13.62.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture								
		Wooden Doors	1		Surface area on both sides of wooden Doors	7.56	Sqm	₹ 163.80	1.00	₹ 1,238.33
										Total of Painting: ₹ 7,81,260.13
										Total Cost of Ground Floor ₹ 3,21,33,133.39

**Cost abstract - 2****Name of the Work:** Construction of Nagaland Innovation Hub for Startup at Chūmukedima**Item of the Work:** First Floor

Item No	Schedule Number	Description of Item	Quantity	Unit	Rate	Multiplication factor (MF)	<b>Amount in Rupees</b>						
							Item No. refers to the serial item number of this estimate. Schedule Number refers to the corresponding item number in the Nagaland PWD Schedule of Rates, 2021						
<b>2. FIRST FLOOR</b>													
<b>REINFORCED CONCRETE</b>													
2.1	A 5.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts, etc. upto floor five level excluding cost of centring, shuttering, finishing and reinforcement.											
2.1.1	A 5.2.2	1 : 1.5 : 3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	110.47	Cum	₹ 11,768.50	1.00	₹ 13,00,046.48						
2.1.2	A 5.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope upto 15°, landings, balconies, shelves, chajjas, lintels, bands. plain window sills, staircases and spiral stair cases upto floor five level excluding the cost of centring, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement: 1.5 coarse sand: 3 graded stone aggregate 20 mm nominal size).	298.67	Cum	₹ 12,139.40	1.00	₹ 36,25,702.03						
2.2	<b>STEEL</b>		<b>Total of Reinforce Concrete:</b>				<b>₹ 49,25,748.52</b>						
2.2.1	A 5.22	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete .											
	A 5.22.4	Hot rolled deform bars (Tor)	47,314.54	Kg	₹ 90.10	1.00	₹ 42,63,039.92						
2.3	<b>SHUTTERING</b>		<b>Total of Steel Reinforcement:</b>				<b>₹ 42,63,039.92</b>						
2.3.1	A 5.9	Centring and shuttering including strutting, propping etc. and removal of form for:											
	A 5.9.2	Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.	72.19	Sqm	₹ 544.10	1.00	₹ 39,277.22						
2.3.2	A 5.9.3	Suspended floors, roofs, landings, balconies and access platform	1,382.45	Sqm	₹ 612.90	1.00	₹ 8,47,303.61						
2.3.3	A 5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	1,088.42	Sqm	₹ 494.50	1.00	₹ 5,38,223.12						
2.3.4	A 5.9.6	Columns, pillars, piers, abutments, posts and struts.											

			487.16	Sqm	₹ 650.00	1.00	₹ 3,16,655.63
2.3.5	A 5.9.7	Stairs, (excluding landings) except spiral-staircases.					
			67.92	Sqm	₹ 550.90	1.00	₹ 37,417.13
2.3.6	A 5.9.16	Edges of slabs and breaks in floors and walls.					
	A 5.9.16.2	Above 20 cm wide					
			116.17	Sqm	₹ 654.80	1.00	₹ 76,064.84
					Total of Shuttering:		₹ 18,54,941.54
2.4		BRICKWORK					
2.4.1	A 6.4	Brick work with common burnt clay(non modular) bricks of class designation 7.5 in superstructure above plinth level upto floor V level in all shape and sizes in					
	A 6.4.2	Cement mortar 1:6 (1 cement : 6 Coarse sand)					
			82.45	Cum	₹ 10,492.90	1.00	₹ 8,65,159.33
					Total of Brick work:		₹ 8,65,159.33
2.5		WOOD WORK					
2.5.1	A 9.1	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia and length (hold fast lugs or dash fastener shall be paid for separately).					
	A 9.1.3	Kiln seasoned and chemically treated Hollock wood					
			0.13	Cum	₹ 76,054.50	1.00	₹ 9,887.09
2.5.2	A 9.5	Providing and fixing panalled or panalled and glazed shutters for doors, windows and clerestory windows fixing with butt hinges of required size with necessary screws, excluding panelling which will be paid for separately, all complete as per direction of the Engineer-in-charge. (Note:- Butt hinges and necessary screws shall be paid separately)					
	A 9.5.2	Kiln seasoned and chemically treated Hollock wood					
	A 9.5.2.1	35 mm thick shutters					
			3.78	Sqm	₹ 2,400.10	1.00	₹ 9,072.38
2.5.3	A 9.53	Providing 40 x 5 mm flat iron hold fasts 40 cm long including fixing to frame with 10mm diameter bolts, nuts and wooden plugs and embeddings in cement concrete block 30 x 10 x 15 cm 1:3:6 mix (1 cement :3 coarse sand :6 graded stone aggregate 20 mm nominal size).					
			8.00	Each	₹ 168.40	1.00	₹ 1,347.20
2.5.4	A 9.71.1	Providing and fixing ISI :12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :					
		125 x 64 x 2.50 mm					
			12.00	Each	₹ 103.70	1.00	₹ 1,244.40
2.5.5	A 9.74	Providing and fixing bright finished brass tower bolts(barrel type) with necessary screws etc. complete :					
	A 9.74.1	250 mm x 10 mm					
			12.00	Each	₹ 426.30	1.00	₹ 5,115.60

2.5.6	A 9.88	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete :					
			12.00	Each	₹ 893.60	1.00	₹ 10,723.20
2.5.7	A 9.165	Providing and fixing bright/matt finished stainless steel handles of approved quality and make with necessary screws etc. all complete					
	A 9.165.1	125 mm					
2.5.8	A 9.101	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete					
	A 9.101.1	Single rubber stopper					
			12.00	Each	₹ 37.60	1.00	₹ 451.20
2.5.9	A 9.83	Providing and fixing aluminium die cast body tubular type universal hydraulic door closer (having brand logo with ISI : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door weight upto 701 mm to 1000 mm) with double speed adjustment with necessary accessories and screws etc. complete.					
			12.00	Each	₹ 1,128.70	1.00	₹ 13,544.40
			<b>Total of Wood work:</b>				₹ 52,727.06
2.10	<b>ALUMINIUM WINDOWS, VENTILATION &amp; GLAZING CURTAIN WALL</b>						
2.10.1	A 21.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixed with rawl plug and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junction, at top, bottom and sides with required PVC/ neoprene felt etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing/ panelling, C.P. brass/ satinless steel screws, all complete as per architectural drawing.(Glazing and panelling to be paid seperately)					
2.10.2	A 21.1.1	For fixed portion					
	A 21.1.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 microns)					
			968.30	Kg	₹ 510.70	1.00	₹ 4,94,512.52
	A 21.1.2	For shutters of doors, windows, ventilators including providing and fixing hinges/pivots and making provision for fixing of fitting wherever required including the cost of EPDM rubber/neoprene gasket required (Fitting shall be paid seperately)					
	A 21.1.2.2	Powder coated aluminium (minimum thickness of powder costing 50 microns)					
			174.55	Sqm	₹ 584.40	1.00	₹ 1,02,007.02

	A 21.3	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with PVC/ neoprene gasket etc. complete as per the architectural drawings (Cost of alimunium snap beading shall be paid in basic item)					
2.10.3	A 21.3.1	With float glass panes of 4.00 mm thickness (weight not less than 10 Kg/sqm)					
			5.13	Sqm	₹ 1,034.90	1.00	₹ 5,312.14
	A 21.3.2	With float glass panes of 5.5 mm thickness (weight not less than 12.5 Kg/sqm)	55.51	Sqm	₹ 1,376.20	1.00	₹ 76,392.86
2.10.4	A 21.12	Providing and fixing aluminium tubular handle bar 32 mm outer dia. 3.0 mm thick & 2100 mm long with SS screws etc. complete					
	A 21.12.2	Powder coated minimum thickness 50 microns aluminium tubular handle bar	34.00	Sqm	₹ 643.10	1.00	₹ 21,865.40
	A 21.19	Filling the gap in between aluminium/stone/wood frame & adjacent RCC/ Brick/Stone/ wood/ ceramic/ Gypsum work by providing weather/ structural non sag elastomeric PU sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-Charge complete, complying to ASTM-C 920, DIN 1854-F and ISO-11600..					
2.10.5	A 21.19.2	Upto 10 mm depth and 10 mm width	270.10	Metre	₹ 183.60	0.00	₹ 49,590.36
	A 21.11	Providing and fixing stainless steel (SS-304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-charge complete					
	A 21.11.4	510 x 19 mm	24.00	Each	₹ 829.00	0.00	₹ 19,896.00
2.10.7	A 9.71	Providing and fixing ISI :12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :					
	A 9.71.1	125 x 64 x 2.50 mm	192.00	each	₹ 103.70	1.00	₹ 19,910.40
	A 9.74	Providing and fixing bright finished brass tower bolts(barrel type) with necessary screws etc. complete :					
2.10.8	A 9.74.1	250 mm x 10 mm	44.00	each	₹ 426.30	1.00	₹ 18,757.20
	A 9.88	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete :	14.00	each	₹ 893.60	1.00	₹ 12,510.40
	A 9.100	Providing and fixing aluminium handles ISI marked anodised (anodic coating not less than grade AC 10 as per IS :1868 ) transparent or dyed to required color or shade with nuts and screws etc. complete.	20.00	each	₹ 66.50	1.00	₹ 1,330.00
2.10.10	A 9.100.1	125 mm					

2.10.11	A 9.101	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete					
	A 9.101.2	Twin rubber stopper					
			17.00	each	₹ 69.90	1.00	₹ 1,188.30
			<b>Total of Aluminium Windows, Ventilation &amp; Glazing Curtain Wall:</b>				
2.11	<b>PLASTERING</b>						
2.11.1	<i>Exterior Plaster</i>						
	A 13.3	20 mm cement plaster of mix:					
	A 13.3.1	1:4 (1 cement : 4 coarse sand)					
			292.86	Sqm	₹ 348.00	1.00	₹ 1,01,914.96
2.11.2	<i>Interior Plaster</i>						
	A 13.1	12 mm cement plaster of mix:					
	A 13.1.1	1:4 (1 cement : 4 fine sand)					
			2,097.56	Sqm	₹ 250.30	1.00	₹ 5,25,019.33
	<b>Total of Plastering :</b>						
2.12	<b>TILING &amp; CLADDING</b>						
2.12.1	A 8.31	Providing and fixing 1 st quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer), of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dados over 12 mm thick bed of Cement Mortar 1:3 ( 1 cement : coarse sand) and jointing with grey cement slurry @ 3.3kg per Sqm including pointing in white cement mixed with pigment of matching shade.complete					
			105.59	Sqm	₹ 1,090.40	1.00	₹ 1,15,138.06
2.12.2	A 11.20	Chequered precast cement concrete tiles 22 mm thick in footpath & courtyard jointed with neat cement slurry mixed with pigment to match the shade of tiles including rubbing and cleaning etc. complete on 20 mm thick bed of cement mortar 1:4 ( 1 cement: 4 coarse sand)					
2.12.3	A 11.20.1	Light shade pigment with white cement					
			117.95	Sqm	₹ 1,398.60	1.00	₹ 1,64,959.97
	A 11.41	Providing and laying Vitrified tiles in different sizes (thickness to be specified by the manufacturer), with water absorption less than than 0.08% and conforming to IS:15622, of approved make, in all colours and shades, in skirting, riser of steps, over 20 mm thick bed of cement mortar 1:4 (1cement : 4 coarse sand), jointing with grey cement slurry @3.3 kg/sqm including grouting the joints with white cement and matching pigments etc..complete.					
	A 11.41.2	Size of tiles 600 x 600 mm					
			1,219.89	Sqm	₹ 1,671.00	1.00	₹ 20,38,436.19

2.12.4	A 11.56	Providing and laying polished Granite Stone flooring in requires design and patterns, in linear as well as curvilinear portion of the building, all complete as per the Architectural drawings, with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement: 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-charge.					
	A 11.56.1	Polished Granite Stone slab Jet Black, Cherry Red, Elite Brown, Cat Eye or equivalent	61.47	Sqm	₹ 4,169.10	1.00	₹ 2,56,283.96
				<b>Total of Tiling &amp; Cladding:</b>		<b>₹ 25,74,818.18</b>	
2.13	<b>STEEL WORK</b>						
2.13.1	A 10.28	Providing and fixing stainless steel (Grade 304) railing made of hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary accessories and stainless steel nuts and bolts complete, i/c fixing the railings with necessary accessories and stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the sided of waist slab with suitable arrangement as per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)					
			1,175.77	Kg	₹ 627.40	1.00	₹ 7,37,678.98
				<b>Total of Steel Work:</b>		<b>₹ 7,37,678.98</b>	
2.14	<b>FALSE CEILING</b>						
2.14.1	A 12.45	Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S sheets and galvanised with zinc coating of 120 gms/sqm (both side inclusive) as per IS:277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flange of 27 mm and 37 mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50 mm long with 6 mm dia bolt, other flange.... with 25 mm long dry wall screws @230 mm interval, including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c, including jointing and finishing to a flush finish of tapered and square edges of the board with recommended jointing compound, jointing tapes... as per drawing, specification and direction of the Engineer-in-Charge but excluding the cost of painting with:					
			1,199.74	Sqm	₹ 1,318.60	1.00	₹ 15,81,977.16
					<b>Total of False ceiling:</b>		<b>₹ 15,81,977.16</b>
2.15.1	<b>PAINTING</b>						
2.15.2	A 13.43	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface:					
			292.86	Sqm	₹ 54.20	1.00	₹ 15,872.96
2.15.3	A 13.45	Finishing walls with water proofing cement paint "snowcem - plus" of M/s snowcem India Ltd. Or equivalent of required shade:					
			292.86	Sqm	₹ 243.20	1.00	₹ 71,223.33

2.15.4	A 13.26	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	1,991.97	Sqm	₹ 183.60	1.00	₹ 3,65,725.28
2.15.5	A 13.41	Distempering with oil bounded washable distemper of approved brand and manufacture to give an even shade					
	A 13.41.1	New work (two or more coats) over and includung priming coat with cement primer.	1,991.97	Sqm	₹ 134.00	1.00	₹ 2,66,923.68
2.15.6	A13.50	Applying priming coat :					
	A13.50.1	With ready mixed pink or grey primer of approved brand and manufacture on wood work (hard and soft wood)					
		Wooden Doors	7.56	Sqm	₹ 53.00	1.00	₹ 400.68
2.15.7	A13.62	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:					
	A13.62.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture					
		Wooden Doors	7.56	Sqm	₹ 163.80	1.00	₹ 1,238.33
					<b>Total of Painting:</b>		<b>₹ 7,21,384.25</b>
					<b>Total Cost of First Floor</b>		<b>₹ 1,82,04,409.23</b>

## DETAIL ESTIMATE-2

**Name of the Work:** Construction of Nagaland Innovation Hub for Startup at Chūmukedima**Item of the Work:** First Floor

Item No	Schedule Number	Description of Item	No.	Part No.	Measurements				Unit	Rate	Multiplication factor (MF)	Amount in Rupees	
					Length	Width	Depth	Quantity					
<b>2. FIRST FLOOR</b>													
2.1		<b>REINFORCED CONCRETE</b>											
	A 5.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts, etc. upto floor five level excluding cost of centring, shuttering, finishing and reinforcement.											
	A 5.2.2	1 : 1.5 : 3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal <i>Columns above the First floor level</i>											
2.1.1			C1	13	0.55	0.40	3.30	9.44					
			C2	37	0.45	0.40	3.30	21.98					
			C3	9	0.40	0.40	3.30	4.75					
			C4	4	0.20	0.30	3.30	0.79					
			Cc1	15	1.13	3.30		55.95					
			Cc2	5	0.64	3.30		10.49					
			SW3 (2000x 200 mm)on SWF	1	2.00	0.20	3.30	1.32					
			SW2 & SW4 (3350 x 200 mm)on SWF	2	3.35	0.20	3.30	4.42					
			SW1 & SW5 (1000 x 200 mm)on SWF	2	1.00	0.20	3.30	1.32					
					<b>Total</b>				110.47	Cum	<b>₹ 11,768.50</b>	1.00	<b>₹ 13,00,046.48</b>
	A 5.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope upto 15°, landings, balconies, shelves, chajjas, lintels, bands. plain window sills, staircases and spiral stair cases upto floor five level excluding the cost of centring, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement: 1.5 coarse sand: 3 graded stone aggregate 20 mm nominal size).											
					<i>Tie beams</i>								
					B1	1	417.41	0.30	0.50	62.61			
					RB1	1	48.29	0.30	0.35	5.07			
					B2	1	231.10	0.30	0.60	41.60			
					B3	1	86.58	0.25	0.35	7.58			

2.1.2		CB	1		9.95	0.15	0.13	0.19			
		CB1	1		15.79	0.30	0.45	2.13			
	Staircase-1(measured from CAD drawing)-1.65 m	unit	nos.								
	Flight-1	2	1	1.65	0.67		2.21				
	Flight-2	2	1	1.65	0.67		2.21				
	Landing	2	1	2.72	0.15	0.00					
	Staircase-2(measured from CAD drawing)-1.50 m										
	Flight-1	1	1	1.50	0.67		1.01				
	Flight-2	1	1	1.50	0.67		1.01				
	Landing	1	1	2.25	0.15	0.00					
	lintels for openings										
	LB on D	2		1.45	0.15	0.15	0.07				
	LB on D2	3		1.00	0.15	0.15	0.07				
	LB on D3	3		0.90	0.15	0.15	0.06				
	LB on DT	4		0.75	0.15	0.15	0.07				
	Suspended Floor (First Floor)		1	1,316.45	0.13	164.56					
	Ramp		1	66.00	0.125	8.25					
				Total		298.67	Cum	₹ 12,139.40	1.00	₹ 36,25,702.03	
											Total of Reinforce Concrete: ₹ 49,25,748.52
2.2	STEEL										
A 5.22	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete .										
	A 5.22.4	Hot rolled deform bars (Tor)	No.	No. of bar	length	Kg/m	Quantity				
		B1									
		20 mm #	1	6	418.97	2.470	6209.14				
		Extra 20 mm #	1	2	418.97	2.470	2069.71				
		Two legged lateral ties 8 mm # @ 150 mm C/C	1	2783	1.40	0.395	1534.45				
		RB1									
		16 mm #	1	8	49.54	1.570	622.22				
		Two legged lateral ties 8 mm # @ 150 mm C/C	1	322	1.20	0.395	152.09				
		B2									
		20 mm #	1	6	232.66	2.470	3448.02				
		16 mm #	1	4	232.35	1.570	1459.15				
		12 mm #	1	2	232.04	0.890	413.02				
		Two legged lateral ties 8 mm # @ 150 mm C/C	1	1541	1.20	0.395	727.84				
		B3									
		16 mm #	1	8	87.82	1.570	1103.06				
		Two legged lateral ties 8 mm # @ 150 mm C/C	1	577	1.20	0.395	272.67				
		CB									

		12 mm #	1	6	10.89	0.890	58.13			
		Two legged lateral ties 8 mm # @ 150 mm C/C	1	66	0.80	0.395	20.86			
		CB1								
		20 mm #	1	8	17.35	1.580	219.24			
		Extra 12 mm #	1	2	16.87	0.890	30.03			
		Two legged lateral ties 8 mm # @ 150 mm C/C	1	105	1.20	0.395	49.71			
	<i>Shear wall &amp; Columns at first floor level</i>									
		SW3 (2000x 200 mm) on SWF								
		Main bar, 12T @ 175 c/c	1	23	3.47	0.89	70.55			
		Distribution bar, 10T @ 250 c/c	1	26	2.14	0.62	35.03			
2.2.1		SW2 & SW4 (3350 x 200 mm) on SWF								
		Main bar, 12T @ 175 c/c	2	38	3.47	0.89	236.34			
		Distribution bar, 10T @ 250 c/c	2	26	3.49	0.62	114.25			
		SW1 & SW5 (1000 x 200 mm) on SWF								
		Main bar, 12T @ 175 c/c	2	11	3.47	0.89	70.55			
		Distribution bar, 10T @ 250 c/c	2	26	1.14	0.62	37.32			
		C1								
		20 mm #	13	12	3.65	2.470	1407.19			
		One legged lateral ties 8 mm # @ 150 mm C/C	13	25	0.63	0.395	80.62			
		Two legged lateral ties 8 mm # @ 150 mm C/C	13	25	1.80	0.395	230.56			
		Two legged lateral ties 8 mm # @ 150 mm C/C	13	25	1.50	0.395	192.05			
		C2								
		16 mm #	37	6	3.65	1.580	1280.98			
		20 mm #	37	4	3.65	2.470	1335.03			
		One legged lateral ties 8 mm # @ 150 mm C/C	37	25	0.53	0.395	192.92			
		Two legged lateral ties 8 mm # @ 150 mm C/C	37	25	1.60	0.395	583.14			
		Two legged lateral ties 8 mm # @ 150 mm C/C	37	25	1.60	0.395	583.14			
		C3								
		16 mm #	9	8	3.65	1.580	415.45			
		Two legged lateral ties 8 mm # @ 150 mm C/C	9	25	0.48	0.395	42.48			
		Diamond legged lateral ties 8 mm # @ 150 mm C/C	9	25	1.30	0.395	115.18			
		C4								
		16 mm #	4	4	3.65	1.580	92.32			
		Two legged lateral ties 8 mm # @ 150 mm C/C	4	25	0.93	0.395	36.66			
		Cc1								
		20 mm #	15	8	3.65	2.470	1082.45			
		Two legged lateral ties 8 mm # @ 150 mm C/C	15	25	3.86	0.395	572.36			
		Cc2								
		16 mm #	5	8	3.65	1.580	230.81			

	Two legged lateral ties 8 mm # @ 150 mm C/C	5	25	3.86	0.395	190.79			
	<i>lintels for openings</i>								
	<i>LB on D</i>								
	12 mm #	2	4	1.95	0.890	13.88			
	Stirrups 8 mm # @ 150 mm C/C	2	14	0.30	0.395	3.27			
	<i>LB on D2</i>								
	12 mm #	3	4	1.50	0.890	16.02			
	Stirrups 8 mm # @ 150 mm C/C	3	11	0.30	0.395	3.86			
	<i>LB on D3</i>								
	12 mm #	3	4	1.40	0.890	14.95			
	Stirrups 8 mm # @ 150 mm C/C	3	10	0.30	0.395	3.62			
	<i>LB on DT</i>								
	12 mm #	4	4	1.25	0.890	17.80			
	Stirrups 8 mm # @ 150 mm C/C	4	9	0.30	0.395	4.37			
	<i>First floor slab Surface area: 1316.45 Sq.m</i>								
	Top reinforcement of upper portion(transverse),10 mm @ 200 mm c/c	1	365	9.27	0.62	2096.43			
	Top reinforcement of upper portion(longitudinal),10 mm @ 200 mm c/c	1	365	9.27	0.62	2096.43			
	Distribution bars of upper portion(longitudinal),10 mm @ 200 mm c/c	1	92	36.78	0.62	2091.09			
	Distribution bars of upper portion(Transverse),10 mm @ 200 mm c/c	1	92	36.78	0.62	2091.09			
	Distribution bars of lower portion,10 mm @ 200 mm c/c	1	182	36.78	0.62	4159.38			
	Bottom reinforcement of lower portion,10 mm @ 200 mm c/c	1	182	36.78	0.62	4159.38			
	<i>Ramp slab Surface area: 66.00 Sq.m</i>								
	Top reinforcement of upper portion(transverse),10 mm @ 150 mm c/c	1	55	8.83	0.62	301.10			
	Bottom reinforcement of upper portion,10 mm @ 150 mm c/c	1	55	8.83	0.62	301.10			
	Top reinforcement of lower portion(transverse),10 mm @ 150 mm c/c	1	55	8.83	0.62	301.10			
	Bottom reinforcement of lower portion,10 mm @ 150 mm c/c	1	55	8.83	0.62	301.10			
	<i>Staircase-1(measured from CAD drawing)-1.65 m</i>	unit	nos.						
	Top reinforcement of upper portion(longitudinal direction), 12 mm Dia @ 150 mm c/c (Flight 1 & 2)	2	2	13	4.27	0.89	197.55		
	Distribution bar (reinforcement) of upper portion(Transverse direction), 10 mm Dia @ 150 mm c/c (Flight 1 & 2)	2	2	18	2.03	0.62	89.50		
	Main reinforcement of lower portion(Longitudinal direction), 12 mm Dia @ 150 mm c/c , (Flight 1 & 2)	2	2	13	5.45	0.889	252.04		
	Distribution bar (reinforcement) of lower portion(Transverse direction), 10 mm Dia @ 150 mm c/c (Flight 1 & 2)	2	2	28	2.03	0.62	139.29		
	Main reinforcement (Longitudinal direction), 12 mm Dia @ 150 mm c/c, (Landing)	1	1	26	2.18	0.889	50.48		
	Distribution bar (Transverse direction), 10 mm Dia @ 150 mm c/c, (Landing)	1	1	26	2.17	0.62	34.98		
	<i>Staircase-2(measured from CAD drawing)-1.50 m</i>								

	Top reinforcement of upper portion(longitudinal direction), 12 mm Dia @ 150 mm c/c (Flight 1 & 2)	1	2	11	4.27	0.89	83.58				
	Distribution bar (reinforcement) of upper portion(Transverse direction), 10 mm Dia @ 150 mm c/c (Flight 1 & 2)	1	2	18	1.73	0.62	38.14				
	Main reinforcement of lower portion(Longitudinal direction), 12 mm Dia @ 150 mm c/c , (Flight 1 & 2)	1	2	11	5.45	0.889	106.63				
	Distribution bar (reinforcement) of lower portion(Transverse direction), 10 mm Dia @ 150 mm c/c (Flight 1 & 2)	1	2	28	1.73	0.62	59.35				
	Main reinforcement (Longitudinal direction), 12 mm Dia @ 150 mm c/c, (Landing)	1	1	22	1.88	0.889	36.85				
	Distribution bar (Transverse direction), 10 mm Dia @ 150 mm c/c, (Landing)	1	1	22	1.87	0.62	25.51				
					<i>Weight of steel bars</i>		46707.34				
					<i>14 kg of binding wire per tonne of steel</i>		607.20				
					<i>Total of Steel Reinforcement</i>		#####	Kg	₹ 90.10	1.00	₹ 42,63,039.92
					<i>Total of Steel Reinforcement:</i>					₹ 42,63,039.92	
<b>2.3</b>	<b>SHUTTERING</b>										
A 5.9	Centring and shuttering including strutting, propping etc. and removal of form for:										
A 5.9.2	Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.										
2.3.1	SW3 (2000x 200 mm)on SWF	1		4.28		3.30	14.11				
	SW2 & SW4 (3350 x 200 mm)on SWF	2		6.75		3.30	44.55				
	SW1 & SW5 (1000 x 200 mm)on SWF	2		2.05		3.30	13.53				
					<i>Total</i>		72.19	Sqm	₹ 544.10	1.00	₹ 39,277.22
A 5.9.3	Suspended floors, roofs, landings, balconies and access platform										
2.3.2	Suspended Floor (First Floor)	1		1,316.45			1316.45				
	Ramp	1		66.00			66.00				
					<i>Total</i>		1,382.45	Sqm	₹ 612.90	1.00	₹ 8,47,303.61
A 5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.										
2.3.3	B1	1		417.41		1.35	563.50				
	RB1	1		48.29		1.05	50.71				
	B2	1		231.10		1.55	358.21				
	B3	1		86.58		1.00	86.58				
	CB	1		9.95		0.45	4.48				
	CB1	1		15.79		1.25	19.73				
	<i>lintels for openings</i>										
	LB on D	2		1.45		0.45	1.31				
	LB on D2	3		1.00		0.45	1.35				
	LB on D3	3		0.90		0.45	1.22				
	LB on DT	4		0.75		0.45	1.35				
					<i>Total</i>		1,088.42	Sqm	₹ 494.50	1.00	₹ 5,38,223.12

2.3.4	A 5.9.6	Columns, pillars, piers, abutments, posts and struts.									
		Columns at First floor level									
			C1	13	2.00	3.30	85.80				
			C2	37	1.80	3.30	219.78				
			C3	9	1.70	3.30	50.49				
			C4	4	1.10	3.30	14.52				
			Cc1	15	1.88	3.30	93.26				
			Cc2	5	1.41	3.30	23.31				
					Total	487.16	Sqm	₹ 650.00	1.00	₹ 3,16,655.63	
2.3.5	A 5.9.7	Stairs, (excluding landings) except spiral-staircases.									
		Staircase-1.65 m	Set	Nos.							
		Stairs flight(4 m) & stringer(measured from CAD drawing)	2	2	4.00	1.80	28.80				
		Landings	2	1	1.80	1.80	6.48				
		Rise- 0.150 m	2	24	1.650	0.15	11.88				
		Staircase-1.5 m									
		Stairs flight(2.7 m) & stringer(measured from CAD drawing)	1	2	4.00	1.60	12.80				
		Stairs flight(2.65 m) & stringer(measured from CAD drawing)	1	1	1.60	1.60	2.56				
		Rise- 0.150 m	1	24	1.500	0.15	5.40				
					Total	67.92	Sqm	₹ 550.90	1.00	₹ 37,417.13	
2.3.6	A 5.9.16	Edges of slabs and breaks in floors and walls.									
	A 5.9.16.2	Above 20 cm wide									
		Ground Floor slab edges	1		663.80	0.175	116.17				
					Total	116.17	Sqm	₹ 654.80	1.00	₹ 76,064.84	
								Total of Shuttering:		₹ 18,54,941.54	
2.4		<b>BRICKWORK</b>									
2.4.1	A 6.4	Brick work with common burnt clay(non modular) bricks of class designation 7.5 in superstructure above plinth level upto floor V level in all shape and sizes in									
	A 6.4.2	Cement mortar 1:6 (1 cement : 6 Coarse sand)									
		External wall of 150 mm thick Wall	1		92.07	0.150	3.30	45.57			
		Internal wall of 150 mm thick Wall	1		82.16	0.150	3.30	40.67			
					Sum of the above			86.24			
		Deduction of opening									
		D	2		1.45	0.150	2.10	0.91			
		D2	3		1.00	0.150	2.10	0.95			
		D3	3		0.90	0.150	2.10	0.85			
		DT	4		0.75	0.150	2.10	0.95			
		V	1		1.50	0.150	0.60	0.14			
					Deduction			3.79			
					Total after deduction	82.45	Cum	₹ 10,492.90	1.00	₹ 8,65,159.33	

			Total of Brick work:								₹ 8,65,159.33	
2.5		WOOD WORK										
	A 9.1	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia and length (hold fast lugs or dash fastener shall be paid										
2.5.1	A 9.1.3	Kiln seasoned and chemically treated Hollock wood	Set	Nos.								
			D2	2	1	1.00	0.10	0.13	0.03			
					2	0.13	0.10	2.10	0.11			
						Total			0.13	Cum	₹ 76,054.50	
											1.00	₹ 9,887.09
2.5.2	A 9.5	Providing and fixing panalled or panalled and glazed shutters for doors, windows and clerestory windows fixing with butt hinges of required size with necessary screws, excluding panelling which will be paid for separately, all complete as per direction of the Engineer-in-charge. (Note:- Butt hinges and necessary screws shall										
	A 9.5.2	Kiln seasoned and chemically treated Hollock wood	Set									
	A 9.5.2.1	35 mm thick shutters										
			D3	2		0.90		2.10	3.78			
						Total			3.78	Sqm	₹ 2,400.10	1.00
												₹ 9,072.38
2.5.3	A 9.53	Providing 40 x 5 mm flat iron hold fasts 40 cm long including fixing to frame with 10mm diameter bolts, nuts and wooden plugs and embeddements in cement concrete block 30 x 10 x 15 cm 1:3:6 mix (1 cement :3 coarse sand :6 graded stone aggregate 20 mm nominal size).	Set	Nos.								
			D3	2	4				8			
						Total			8	Each	₹ 168.40	1.00
												₹ 1,347.20
2.5.4	A 9.71.1	Providing and fixing ISI :12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :	Set	Nos.								
		125 x 64 x 2.50 mm										
			D3	2	6				12			
						Total			12	Each	₹ 103.70	1.00
2.5.5	A 9.74	Providing and fixing bright finished brass tower bolts(barrel type) with necessary screws etc. complete :	Set	Nos.								
	A 9.74.1	250 mm x 10 mm										
			D3	2	6				12			
						Total			12	Each	₹ 426.30	1.00
2.5.6	A 9.88	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc.	Set	Nos.								
			D3	2	6				12			
						Total			12	Each	₹ 893.60	1.00
												₹ 10,723.20
	A 9.165	Providing and fixing bright/matt finished stainless steel handles of approved quality and make with necessary screws etc. all complete	Set	Nos.								

2.5.7	A 9.165.1	125 mm									
			D3	2	6			12			
						Total		12	Each	₹ 111.80	1.00
2.5.8	A 9.101	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete	Set	Nos.							
	A 9.101.1	Single rubber stopper									
			D3	2	6			12			
						Total		12	Each	₹ 37.60	1.00
2.5.9	A 9.83	Providing and fixing aluminium die cast body tubular type universal hydraulic door closer (having brand logo with ISI : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door weight upto 701 mm to 1000 mm) with double speed adjustment with necessary accessories and screws etc. complete.	Set	Nos.							
			D3	2	6			12			
						Total		12	Each	₹ 1,128.70	1.00
2.10	<b>ALUMINIUM WINDOWS, VENTILATION &amp; GLAZING CURTAIN WALL</b>										
A 21.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixed with rawl plug and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junction, at top, bottom and sides with required PVC/ neoprene felt etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing/ panelling, C.P. brass/ stainless steel screws, all complete as per architectural drawing.(Glazing and panelling to be paid seperately)										
	A 21.1.1	For fixed portion				Product Brand: Jindal Aluminium Ltd.					
A 21.1.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 microns)		Section name	No.	Length		Kg/m	Quantity			
	D (1500 mm x 2100 mm)-Double leaf										
	Frame - Single groove		19570	4	2.10		0.911	7.65			
	Frame Top & Side		19537	1	1.50		1.911	2.87			
	Bottom Frame		20619	1	1.50		0.974	1.46			
	Shutter top & bottom		20545	2	1.50		0.354	1.06			
	Shutter side (interlock)		20546	4	2.10		0.346	2.91			
	Clip		19352	4	2.10		0.097	0.81			
			19352	2	1.50		0.097	0.29			
						Sum of the above 1 unit		17.05			

2.10.1	D2 (1000 mm x 2100 mm)-Single leaf	Total (3 unit)					51.16				
		Frame - Single groove	19570	2	2.10	0.911	3.83				
		Frame Top & Side	19537	1	1.00	1.911	1.91				
		Bottom Frame	20619	1	1.00	0.974	0.97				
		Shutter top & bottom	20545	2	1.00	0.354	0.71				
		Shutter side (interlock)	20546	2	2.10	0.346	1.45				
		Clip	19352	2	2.10	0.097	0.41				
			19352	2	1.00	0.097	0.19				
	Sum of the above 1 unit					9.47					
	Total (3 unit)					28.42					
	DT (750 mm x 2100 mm)-Single leaf	Total (3 unit)									
		Frame - Single groove	19570	2	2.10	0.911	3.83				
		Frame Top & Side	19537	1	0.75	1.911	1.43				
		Bottom Frame	20619	1	0.75	0.974	0.73				
		Shutter top & bottom	20545	2	0.75	0.354	0.53				
		Shutter side (interlock)	20546	2	2.10	0.346	1.45				
		Clip	19352	2	2.10	0.097	0.41				
			19352	2	0.75	0.097	0.15				
	Sum of the above 1 unit					8.53					
	Total (4 unit)					34.11					
						Pivoted Ventillation					
	V(3755 mm x 600 mm)	Total (1 unit)					6.98				
		Top Frame	20653	1	3.76	0.354	1.33				
		Bottom Frame	20653	1	3.76	0.354	1.33				
		Side Frame	20653	2	0.60	0.354	0.42				
		Shutter with Glass	20653	2	3.76	0.350	2.63				
			20653	2	0.60	0.350	0.42				
		Clip	19352	2	3.76	0.097	0.73				
			19352	2	0.60	0.097	0.12				
	Sum of the above 1 unit					6.98					
	Total (1 unit)					6.98					
	V1(3000 mm x 600 mm)	Total (1 unit)					6.98				
		Top Frame	20653	1	3.00	0.354	1.06				
		Bottom Frame	20653	1	3.00	0.354	1.06				
		Side Frame	20653	2	0.60	0.354	0.42				
		Shutter with Glass	20653	2	3.00	0.350	2.10				
			20653	2	0.60	0.350	0.42				
		Clin	19352	2	3.00	0.097	0.58				

		19352	2	0.60	0.097	0.12		
		Sum of the above 1 unit			5.77			
		Total (1 unit)			5.77			
	V2(900 mm x 600 mm)							
	Top Frame	20653	1	0.90	0.354	0.32		
	Bottom Frame	20653	1	0.90	0.354	0.32		
	Side Frame	20653	2	0.60	0.354	0.42		
	Shutter with Glass	20653	2	0.90	0.350	0.63		
		20653	2	0.60	0.350	0.42		
	Clip	19352	2	0.90	0.097	0.17		
		19352	2	0.60	0.097	0.12		
		Sum of the above 1 unit			2.40			
		Total (2 unit)			4.81			
	DW2- (7245 mm x 3100 mm)							
	Frame- Single groove	19554	2	7.25	1.292	18.72		
		19527	6	3.10	0.881	16.39		
	Shutter-Top	20653	2	7.25	1.501	21.75		
	Shutter-Bottom	19503	2	7.25	1.511	21.89		
	Shutter-Vertical	19505	6	3.10	1.509	28.07		
	Glazing Clip	19352	2	7.25	0.097	1.41		
		19352	6	3.10	0.097	1.80		
		Sum of the above 1 unit			110.03			
		Total (4 unit)			440.11			
	Partition wall (PW2)-(4050 mm x 3100 mm)							
	Frame- Single groove	20088	4	4.05	0.274	3.98		
	Frame- Double groove	20089	4	3.10	0.316	4.29		
	Shutter-Bottom	19503	4	3.10	1.511	20.49		
	Shutter-Vertical	19505	4	4.05	1.509	24.45		
	Glazing Clip	19352	4	3.10	0.097	1.32		
		19352	4	4.05	0.097	1.57		
		Sum of the above 1 unit			56.09			
		Total (4 unit)			224.35			
	Partition wall (PW3)-(4400 mm x 3100 mm)							
	Frame- Single groove	20088	4	4.40	0.274	4.32		
	Frame- Double groove	20089	5	3.10	0.316	4.57		
	Shutter-Bottom	19503	5	3.10	1.511	21.86		
	Shutter-Vertical	19505	4	4.40	1.509	26.56		
	Glazing Clip	19352	5	3.10	0.097	1.40		
		19352	4	4.40	0.097	1.71		

			Sum of the above 1 unit			60.42			
			Total (2 unit)			120.84			
		Partition wall (PW4)-(3700 mm x 3100 mm)							
		Frame- Single groove	20088	4	3.70	0.274	3.63		
		Frame- Double groove	20089	4	3.10	0.316	4.00		
		Shutter-Bottom	19503	4	3.10	1.511	19.13		
		Shutter-Vertical	19505	4	3.70	1.509	22.33		
		Glazing Clip	19352	4	3.10	0.097	1.23		
			19352	4	3.70	0.097	1.44		
			Sum of the above 1 unit			51.76			
			Total (1 unit)			51.76			
					Total	968.30	Kg	₹ 510.70	1
									₹ 4,94,512.52
	<b>A 21.1.2</b>	For shutters of doors, windows, ventilators including providing and fixing hinges/pivots and making provision for fixing of fitting wherever required including the cost of EPDM rubber/neoprene gasket required (Fitting shall be paid separately)							
	<b>A 21.1.2.2</b>	Powder coated aluminium (minimum thickness of powder costing 50 microns)							
		D (1500 mm x 2100 mm)-Double leaf		3	1.50	1.05	4.73		
		D2 (1000 mm x 2100 mm)-Single leaf		3	1.00	1.05	3.15		
		DT (750 mm x 2100 mm)-Single leaf		4	0.75	1.05	3.15		
		V(3755 mm x 600 mm)		1	3.76	0.00	0.00		
		V1(3000 mm x 600 mm)		1	3.00	0.00	0.00		
		V2(900 mm x 600 mm)		2	0.90	0.00	0.00		
		DW(5900 mm x 3100 mm)		2	5.90	1.55	18.29		
		DW1(3520 mm x 3100 mm)		2	3.52	1.55	10.91		
		DW2(7245 mm x 3100 mm)		4	7.25	3.10	89.84		
		Partition wall (PW2)-(4050 mm x 3100 mm)		4	4.05	1.55	25.11		
		Partition wall (PW3)-(4400 mm x 3100 mm)		2	4.40	1.55	13.64		
		Partition wall (PW4)-(3700 mm x 3100 mm)		1	3.70	1.55	5.74		
			Total			174.55	Sqm	₹ 584.40	1
									₹ 1,02,007.02
	<b>A 21.3</b>	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with PVC/ neoprene gasket etc. complete as per the architectural drawings (Cost of alimunium snap beadng shall be paid in basic item)							
	<b>A 21.3.1</b>	With float glass panes of 4.00 mm thickness (weight not less than 10 Kg/sqm)							
		D (1500 mm x 2100 mm)-Double leaf		3	1.50	0.00	0.00		
		D2 (1000 mm x 2100 mm)-Single leaf		3	1.00	0.00	0.00		
		DT (750 mm x 2100 mm)-Single leaf		4	0.75	0.00	0.00		
		V(3755 mm x 600 mm)		1	3.76	0.60	2.25		
		V1(3000 mm x 600 mm)		1	3.00	0.60	1.80		
		V2(900 mm x 600 mm)		2	0.90	0.60	1.08		

2.10.3	DW(5900 mm x 3100 mm)	2	5.90	0.00	0.00				
	DW1(3520 mm x 3100 mm)	2	3.52	0.00	0.00				
	DW2(7245 mm x 3100 mm)	4	7.25	0.00	0.00				
	Partition wall (PW2)-(4050 mm x 3100 mm)	4	4.05	0.00	0.00				
	Partition wall (PW3)-(4400 mm x 3100 mm)	2	4.40	0.00	0.00				
	Partition wall (PW4)-(3700 mm x 3100 mm)	1	3.70	0.00	0.00				
	<i>Total</i>					5.13 Sqm	₹ 1,034.90	1	₹ 5,312.14
	<b>A 21.3.2</b> With float glass panes of 5.5 mm thickness (weight not less than 12.5 Kg/sqm)								
	D (1500 mm x 2100 mm)-Double leaf	3	1.50	1.05	4.73				
	D2 (1000 mm x 2100 mm)-Single leaf	3	1.00	1.05	3.15				
A 21.3.2	DT (750 mm x 2100 mm)-Single leaf	4	0.75	1.05	3.15				
	V(3755 mm x 600 mm)	1	3.76	0.00	0.00				
	V1(3000 mm x 600 mm)	1	3.00	0.00	0.00				
	V2(900 mm x 600 mm)	2	0.90	0.00	0.00				
	DW(5900 mm x 3100 mm)	2	5.90	0.00	0.00				
	DW1(3520 mm x 3100 mm)	2	3.52	0.00	0.00				
	DW2(7245 mm x 3100 mm)	4	7.25	0.00	0.00				
	Partition wall (PW2)-(4050 mm x 3100 mm)	4	4.05	1.55	25.11				
	Partition wall (PW3)-(4400 mm x 3100 mm)	2	4.40	1.55	13.64				
	Partition wall (PW4)-(3700 mm x 3100 mm)	1	3.70	1.55	5.74				
	<i>Total</i>					55.51 Sqm	₹ 1,376.20	1	₹ 76,392.86
2.10.4	<b>A 21.12</b> Providing and fixing aluminium tubular handle bar 32 mm outer dia. 3.0 mm thick & 2100 mm long with SS screws etc. complete								
	<b>A 21.12.2</b> Powder coated minimum thickness 50 microns aluminium tubular handle bar			Nos.					
	D (1500 mm x 2100 mm)-Double leaf	3	4		12				
	D2 (1000 mm x 2100 mm)-Single leaf	3	2		6				
	DW(5900 mm x 3100 mm)	2	2		4				
	DW1(3520 mm x 3100 mm)	2	2		4				
	DW2(7245 mm x 3100 mm)	4	2		8				
	<i>Total</i>					34 Sqm	₹ 643.10	1	₹ 21,865.40
2.10.5	<b>A 21.19</b> Filling the gap in between aluminium/stone/wood frame & adjacent RCC/ Brick/Stone/ wood/ ceramic/ Gypsum work by providing weather/ structural non sag elastomeric PU sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-Charge complete, complying to ASTM-C 920,								
	<b>A 21.19.2</b> Upto 10 mm depth and 10 mm width								
	D (1500 mm x 2100 mm)-Double leaf	3	6.35		19.05				
	D2 (1000 mm x 2100 mm)-Single leaf	3	5.35		16.05				
	DT (750 mm x 2100 mm)-Single leaf	4	4.85		19.40				
	V(3755 mm x 600 mm)	1	8.76		8.76				

2.10.5	V1(3000 mm x 600 mm)	1	7.25		7.25			
	V2(900 mm x 600 mm)	2	3.05		6.10			
	DW(5900 mm x 3100 mm)	2	13.05		26.10			
	DW1(3520 mm x 3100 mm)	2	8.29		16.58			
	DW2(7245 mm x 3100 mm)	4	15.74		62.96			
	Partition wall (PW2)-(4050 mm x 3100 mm)	4	12.45		49.80			
	Partition wall (PW3)-(4400 mm x 3100 mm)	2	13.15		26.30			
	Partition wall (PW4)-(3700 mm x 3100 mm)	1	11.75		11.75			
	Total				270.10	Metre	₹ 183.60	₹ 49,590.36
	A 21.11 Providing and fixing stainless steel (SS-304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-charge complete							
2.10.6	A 21.11.4 510 x 19 mm			Nos.				
2.10.7	A 9.71 Providing and fixing ISI :12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :			Nos.				
	A 9.71.1 125 x 64 x 2.50 mm							
A 9.74 Providing and fixing bright finished brass tower bolts(barrel type) with necessary screws etc. complete :								
	A 9.74.1 250 mm x 10 mm			Nos.				

	D (1500 mm x 2100 mm)-Double leaf	3	2		6			
	D2 (1000 mm x 2100 mm)-Single leaf	3	2		6			
	DT (750 mm x 2100 mm)-Single leaf	4	2		8			
2.10.8	V(3755 mm x 600 mm)	1	2		2			
	V1(3000 mm x 600 mm)	1	2		2			
	V2(900 mm x 600 mm)	2	2		4			
	DW(5900 mm x 3100 mm)	2	2		4			
	DW1(3520 mm x 3100 mm)	2	2		4			
	DW2(7245 mm x 3100 mm)	4	2		8			
	<i>Total</i>				44	each	₹ 426.30	1
								₹ 18,757.20
A 9.88	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc.			Nos.				
2.10.9	D (1500 mm x 2100 mm)-Double leaf	3	1		3			
	D2 (1000 mm x 2100 mm)-Single leaf	3	1		3			
	DW(5900 mm x 3100 mm)	2	1		2			
	DW1(3520 mm x 3100 mm)	2	1		2			
	DW2(7245 mm x 3100 mm)	4	1		4			
	<i>Total</i>				14	each	₹ 893.60	1
								₹ 12,510.40
A 9.100	Providing and fixing aluminium handles ISI marked anodised (anodic coating not less than grade AC 10 as per IS :1868 ) transparent or dyed to required color or shade with nuts and screws etc. complete.			Nos.				
2.10.10	A 9.100.1 125 mm							
	DT (750 mm x 2100 mm)-Single leaf	4	2		8			
	V(3755 mm x 600 mm)	1	4		4			
	V1(3000 mm x 600 mm)	1	4		4			
	V2(900 mm x 600 mm)	2	2		4			
	<i>Total</i>				20	each	₹ 66.50	1
								₹ 1,330.00
A 9.101	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete			Nos.				
2.10.11	A 9.101.2 Twin rubber stopper							
	D (1500 mm x 2100 mm)-Double leaf	3	2		6			
	D2 (1000 mm x 2100 mm)-Single leaf	3	1		3			
	DW(5900 mm x 3100 mm)	2	1		2			
	DW1(3520 mm x 3100 mm)	2	1		2			
	DW2(7245 mm x 3100 mm)	4	1		4			
	<i>Total</i>				17	each	₹ 69.90	1
								₹ 1,188.30
	<i>Total of Aluminium Windows, Ventilation &amp; Glazing Curtain Wall:</i>							₹ 8,23,272.61
2.11	PLASTERING							

	<b>Exterior Plaster</b>										
	A 13.3	20 mm cement plaster of mix:									
	A 13.3.1	1:4 (1 cement : 4 coarse sand)		Sides							
		External wall	1	1	92.07	3.30	303.83				
					5 % extra for column & beam		15.19				
		Deduction of opening		Sides							
			D	2	1	1.45	2.10	6.09			
			D2	3	1	1.00	2.10	6.30			
			D3	3	1	0.90	2.10	5.67			
			DT	4	1	0.75	2.10	6.30			
			V	1	2	1.50	0.60	1.80			
					Deduction		26.16				
					Total exterior plastering		292.86 Sqm	₹ 348.00	1.00	₹ 1,01,914.96	
	<b>Interior Plaster</b>										
	A 13.1	12 mm cement plaster of mix:									
	A 13.1.1	1:4 (1 cement : 4 fine sand)		Sides							
		External wall of 150 mm thick Wall	1	1	92.07	3.30	303.83				
		Internal wall of 150 mm thick Wall	1	2	82.16	3.30	542.22				
		Ceiling Surface area									
		Lab-Innovation/Prototype/thinking (measured from CAD drawing)	1		466.70		466.70				
		Plug & play (measured from CAD drawing)	1		405.16		405.16				
		Corridor (measured from CAD drawing)	1		243.61		243.61				
		Bridge (measured from CAD drawing)	1		46.33		46.33				
		His Toilet (measured from CAD drawing)	1		19.59		19.59				
		Her Toilet (measured from CAD drawing)	1		18.35		18.35				
					Sum of the above		2045.79				
					5 % extra for column & beam		102.29				
			D	2	2	1.45	2.10	12.18			
			D2	3	2	1.00	2.10	12.60			
			D3	3	2	0.90	2.10	11.34			
			DT	4	2	0.75	2.10	12.60			
			V	1	2	1.50	0.60	1.80			
					Deduction		50.52				
					Total interior plastering		2097.56 Sqm	₹ 250.30	1.00	₹ 5,25,019.33	
											Total of Plastering :
											₹ 6,26,934.29
2.12	TILING & CLADDING										

2.12.1	A 8.31	Providing and fixing 1 st quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer), of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dados over 12 mm thick bed of Cement Mortar 1:3 ( 1 cement : coarse sand) and jointing with grey cement slurry @ 3.3kg per Sqm including pointing in white cement mixed with pigment of matching shade									
		His Toilet (measured from CAD drawing)	1	27.36	1.95	53.35					
		Her Toilet (measured from CAD drawing)	1	26.79	1.95	52.24					
				Total		105.59	Sqm	₹ 1,090.40	1.00	₹ 1,15,138.06	
2.12.2	A 11.20	Chequered precast cement concrete tiles 22 mm thick in footpath & courtyard jointed with neat cement slurry mixed with pigment to match the shade of tiles including rubbing and cleaning etc. complete on 20 mm thick bed of cement mortar 1:4 ( 1 cement: 4 coarse sand)									
		A 11.20.1 Light shade pigment with white cement									
		Ramp	1	66.00		66.00					
		Bridge (measured from CAD drawing)	1	46.33		46.33					
2.12.3	A 11.41	5 % extra for skirting		5.62							
				Total		117.95	Sqm	₹ 1,398.60	1.00	₹ 1,64,959.97	
		Providing and laying Vitrified tiles in different sizes (thickness to be specified by the manufacturer), with water absorption less than than 0.08% and conforming to IS:15622, of approved make, in all colours and shades, in skirting, riser of steps, over 20 mm thick bed of cement mortar 1:4 (1cement : 4 coarse sand), jointing with grey cement slurry @3.3 kg/sqm including grouting the joints with white cement and matching pigments etc. complete.									
		A 11.41.2 Size of tiles 600 x 600 mm									
2.12.3		Lab-Innovation/Prototype/thinking (measured from CAD drawing)	1	466.70		466.70					
		Plug & play (measured from CAD drawing)	1	405.16		405.16					
		Corridor (measured from CAD drawing)	1	243.61		243.61					
		Bridge (measured from CAD drawing)	1	46.33		46.33					
2.12.3				Sum of the above		1161.80					
				5 % extra for skirting		58.09					
				Total		1219.89	Sqm	₹ 1,671.00	1.00	₹ 20,38,436.19	
	A 11.56	Providing and laying polished Granite Stone flooring in requires design and patterns, in linear as well as curvilinear portion of the building, all complete as per the Architectural drawings, with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 ( 1 cement: 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc. all complete as specified and as									
		A 11.56.1 Polished Granite Stone slab Jet Black, Cherry Red, Elite Brown, Cat Eye or									

2.12.4	Staircase-1.65 m	Set	Nos.						
	Footstep riser	2	24	1.65	0.15	11.88			
	Footstep tread	2	23	1.65	0.30	22.77			
	Landing	2	1	1.65	1.65	5.45			
	Staircase-1.5 m								
	Footstep riser	1	24	1.50	0.15	5.40			
	Footstep tread	1	23	1.50	0.30	10.35			
	Landing	1	1	1.50	1.80	2.70			
				5 % extra for skirting		2.93			
				Total		61.47 Sqm	₹ 4,169.10	1.00	₹ 2,56,283.96
									<b>Total of Tiling &amp; Cladding:</b> ₹ 25,74,818.18
2.13	<b>STEEL WORK</b>								
A 10.28	Providing and fixing stainless steel (Grade 304) railing made of hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary accessories and stainless steel nuts and bolts complete, i/c fixing the railings with necessary accessories and stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the sided of waist slab with suitable arrangement as per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixings accessories								
	Grade 304 Stainless steel(Sch-5S)	Set	Nos.	Length		Kg/m	Quantity		
	Staircase railing-1.65 m								
	Post : 73.0 mm(OD), wall thickness- 2.11 mm	2	12	1.00	3.69	88.56			
	Top rail : 88.9 mm(OD), wall thickness- 2.11 mm	2	1	8.60	4.51	77.57			
	Mid rail : 33.4 mm(OD), wall thickness- 1.65 mm	2	2	8.10	1.30	42.12			
	Bottom rail: 33.4 mm(OD), wall thickness- 1.65 mm	2	1	8.10	1.30	21.06			
	Staircase railing-1.5 m								
	Post : 73.0 mm(OD), wall thickness- 2.11 mm	1	24	1.00	3.69	88.56			
	Top rail : 88.9 mm(OD), wall thickness- 2.11 mm	1	2	7.95	4.51	71.71			
2.13.1	Mid rail : 33.4 mm(OD), wall thickness- 1.65 mm	1	4	7.45	1.30	38.74			
	Bottom rail: 33.4 mm(OD), wall thickness- 1.65 mm	1	2	7.45	1.30	19.37			
	Connecting Bridge								
	Post : 73.0 mm(OD), wall thickness- 2.11 mm	1	24	1.00	3.69	88.56			
	Top rail : 88.9 mm(OD), wall thickness- 2.11 mm	1	2	8.02	4.51	72.34			
	Mid rail : 33.4 mm(OD), wall thickness- 1.65 mm	1	4	7.52	1.30	39.10			
	Bottom rail: 33.4 mm(OD), wall thickness- 1.65 mm	1	2	7.52	1.30	19.55			
	Ramp railing								
	Post : 73.0 mm(OD), wall thickness- 2.11 mm	1	24	1.00	3.69	88.56			
	Top rail : 88.9 mm(OD), wall thickness- 2.11 mm	1	2	25.20	4.51	227.30			

	Mid rail : 33.4 mm(OD), wall thickness- 1.65 mm	1	4	24.70	1.30	128.44				
	Bottom rail: 33.4 mm(OD), wall thickness- 1.65 mm	1	2	24.70	1.30	64.22				
		<b>Total</b>				1175.77	Kg	<b>₹ 627.40</b>	1.00	₹ 7,37,678.98
		<b>Total of Steel Work:</b>						<b>₹ 7,37,678.98</b>		
<b>2.14</b>	<b>FALSE CEILING</b>									
<b>2.14.1</b>	<b>A 12.45</b>	Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S sheets and galvanised with zinc coating of 120 gms/sqm (both side inclusivve) as per IS:277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flange of 27 mm and 37 mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50 mm long with 6 mm dia boly, other flange.... with 25 mm long dry wall screws @230 mm interval, including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c, including jointing and finishing to a flush finish of tapered and square edges of the board with recommended jointing compound, jointing tapes... <u>as per drawing, specification and direction of the Engineer-in-Charge but</u>								
	<b>A 12.45.3</b>	12.5 mm thick tapered edge Gypsum moisture resistant board								
	Lab-Innovation/Prototype/thinking (measured from CAD drawing)	1		466.70		466.70				
	Plug & play (measured from CAD drawing)	1		405.16		405.16				
	Corridor (measured from CAD drawing)	1		243.61		243.61				
	Bridge (measured from CAD drawing)	1		46.33		46.33				
	His Toilet (measured from CAD drawing)	1		19.59		19.59				
	Her Toilet (measured from CAD drawing)	1		18.35		18.35				
		<b>Total</b>				1199.74	Sqm	<b>₹ 1,318.60</b>	1.00	₹ 15,81,977.16
		<b>Total of False ceiling:</b>						<b>₹ 15,81,977.16</b>		
<b>2.15</b>	<b>PAINTING</b>									
<b>2.15.1</b>	<b>A 13.43</b>	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface:								
	<b>A 13.43.1</b>	Water thinnable cement primer	1		Sum of exterior plaster & interior plaster Surface	292.86	Sqm	<b>₹ 54.20</b>	1.00	₹ 15,872.96
<b>2.15.2</b>	<b>A 13.45</b>	Finishing walls with water proofing cement paint "snowcem - plus" of M/s snowcem India Ltd. Or equivalent of required shade:								
	<b>A 13.45.1</b>	New work (Two or more coat applied @ 3.84 kg/10 sqm)	1		same area as exterior	292.86	Sqm	<b>₹ 243.20</b>	1.00	₹ 71,223.33
<b>2.15.3</b>	<b>A 13.26</b>	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	1		Interior plaster- Toilet Cladding	1,991.97	Sqm	<b>₹ 183.60</b>	1.00	₹ 3,65,725.28
<b>2.15.4</b>	<b>A 13.41</b>	Distempering with oil bounded washable distemper of approved brand and manufacture to give an even shade								
	<b>A 13.41.1</b>	New work (two or more coats) over and includung priming coat with cement primer.	1		Interior plaster- Toilet	1,991.97	Sqm	<b>₹ 134.00</b>	1.00	₹ 2,66,923.68
	<b>A13.50</b>	Applying priming coat :								

2.15.5	A13.50.1	With ready mixed pink or grey primer of approved brand and manufacture on wood work (hard and soft wood)							
		Wooden Doors	1		Surface area on both sides of wooden Doors	7.56	Sqm	₹ 53.00	1.00
2.15.6	A13.62	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:							
	A13.62.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture							
		Wooden Doors	1		Surface area on both sides of wooden Doors	7.56	Sqm	₹ 163.80	1.00
								Total of Painting:	₹ 7,21,384.25
								Total Cost of First Floor	₹ 1,82,04,409.23

**Cost abstract - 3****Name of the Work:** Construction of Nagaland Innovation Hub for Startup at Chūmukedima**Item of the Work:** Second Floor

Item No	Schedule Number	Description of Item	Quantity	Unit	Rate	Multiplication factor (MF)	Amount in Rupees
							Item No. refers to the serial item number of this estimate. Schedule Number refers to the corresponding item number in the Nagaland PWD Schedule of Rates, 2021
<b>3. SECOND FLOOR</b>							
3.1		<b>REINFORCED CONCRETE</b>					
3.1.1	A 5.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts, etc. upto floor five level excluding cost of centring, shuttering, finishing and reinforcement.					
	A 5.2.2	1 : 1.5 : 3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	110.47	Cum	11,768.50	1.00	₹ 13,00,046.48
3.1.2	A 5.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope upto 15°, landings, balconies, shelves, chajjas, lintels, bands. plain window sills, staircases and spiral stair cases upto floor five level excluding the cost of centring, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement: 1.5 coarse sand: 3 graded stone aggregate 20 mm nominal size).					
			321.17	Cum	12,139.40	1.00	₹ 38,98,768.47
			<b>Total of Reinforce Concrete:</b>				<b>₹ 51,98,814.96</b>
3.2		<b>STEEL</b>					
3.2.1	A 5.22	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete .					
	A 5.22.4	Hot rolled deform bars (Tor)					
			50,278.81	Kg	90.10	1.00	₹ 45,30,120.97
			<b>Total of Steel Reinforcement:</b>				<b>₹ 45,30,120.97</b>
3.3		<b>SHUTTERING</b>					
	A 5.9	Centring and shuttering including strutting, propping etc. and removal of form for:					
3.3.1	A 5.9.2	Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.					
			75.16	Sqm	544.10	1.00	₹ 40,893.20
3.3.2	A 5.9.3	Suspended floors, roofs, landings, balconies and access platform					
			1,460.01	Sqm	612.90	1.00	₹ 8,94,840.13
3.3.3	A 5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.					
			1,201.79	Sqm	494.50	1.00	₹ 5,94,287.16
3.3.4	A 5.9.6	Columns, pillars, piers, abutments, posts and struts.					

			482.69	Sqm	650.00	1.00	₹ 3,13,750.22
3.3.5	A 5.9.7	Stairs, (excluding landings) except spiral-staircases.	67.92	Sqm	550.90	1.00	₹ 37,417.13
3.3.6	A 5.9.16	Edges of slabs and breaks in floors and walls.	93.65	Sqm	654.80	1.00	₹ 61,325.13
	A 5.9.16.2	Above 20 cm wide					
							<b>Total of Shuttering:</b> ₹ 19,42,512.96
3.4		<b>BRICKWORK</b>					
3.4.1	A 6.4	Brick work with common burnt clay(non modular) bricks of class designation 7.5 in superstructure above plinth level upto floor V level in all shape and sizes in					
	A 6.4.2	Cement mortar 1:6 (1 cement : 6 Coarse sand)	70.42	Cum	10,492.90	1.00	₹ 7,38,961.07
							<b>Total of Brick work:</b> ₹ 7,38,961.07
3.5		<b>WOOD WORK</b>					
3.5.1	A 9.1	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia and length (hold fast lugs or dash fastener shall be paid for separately).					
	A 9.1.3	Kiln seasoned and chemically treated Hollock wood	0.13	Cum	76,054.50	1.00	₹ 9,696.95
3.5.2	A 9.5	Providing and fixing panalled or panalled and glazed shutters for doors, windows and clerestory windows fixing with butt hinges of required size with necessary screws, excluding panelling which will be paid for separately, all complete as per direction of the Engineer-in-charge. (Note:- Butt hinges and necessary screws shall be paid separately)					
	A 9.5.2	Kiln seasoned and chemically treated Hollock wood					
	A 9.5.2.1	35 mm thick shutters	3.78	Sqm	2,400.10	1.00	₹ 9,072.38
3.5.3	A 9.53	Providing 40 x 5 mm flat iron hold fasts 40 cm long including fixing to frame with 10mm diameter bolts, nuts and wooden plugs and embeddings in cement concrete block 30 x 10 x 15 cm 1:3:6 mix (1 cement :3 coarse sand :6 graded stone aggregate 20 mm nominal size).	8.00	Each	168.40	1.00	₹ 1,347.20
3.5.4	A 9.71.1	Providing and fixing ISI :12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :					
		125 x 64 x 2.50 mm	12.00	Each	103.70	1.00	₹ 1,244.40
3.5.5	A 9.74	Providing and fixing bright finished brass tower bolts(barrel type) with necessary screws etc. complete :					
	A 9.74.1	250 mm x 10 mm	12.00	Each	426.30	1.00	₹ 5,115.60

3.5.6	A 9.88	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete :					
			12.00	Each	893.60	1.00	₹ 10,723.20
3.5.7	A 9.165	Providing and fixing bright/matt finished stainless steel handles of approved quality and make with necessary screws etc. all complete					
	A 9.165.1	125 mm					
			12.00	Each	111.80	1.00	₹ 1,341.60
3.5.8	A 9.101	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete					
	A 9.101.1	Single rubber stopper					
			12.00	Each	37.60	1.00	₹ 451.20
3.5.9	A 9.83	Providing and fixing aluminium die cast body tubular type universal hydraulic door closer (having brand logo with ISI : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door weight upto 701 mm to 1000 mm) with double speed adjustment with necessary accessories and screws etc. complete.					
			12.00	Each	1,128.70	1.00	₹ 13,544.40
			<b>Total of Wood work:</b>				₹ 52,536.93
3.6	<b>ALUMINIUM WINDOWS, VENTILATION &amp; GLAZING CURTAIN WALL</b>						'
3.6.1	A 21.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixed with rawl plug and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junction, at top, bottom and sides with required PVC/ neoprene felt etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing/ panelling, C.P. brass/ satinless steel screws, all complete as per architectural drawing.(Glazing and panelling to be paid seperately)					
	A 21.1.1	For fixed portion					
	A 21.1.1.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 microns)	968.30	Kg	510.70	1.00	₹ 4,94,512.52
3.6.2	A 21.1.2	For shutters of doors, windows, ventilators including providing and fixing hinges/pivots and making provision for fixing of fitting wherever required including the cost of EPDM rubber/neoprene gasket required (Fitting shall be paid seperately)					
	A 21.1.2.2	Powder coated aluminium (minimum thickness of powder costing 50 microns)	174.55	Sqm	584.40	1.00	₹ 1,02,007.02
3.6.3	A 21.3	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with PVC/ neoprene gasket etc. complete as per the architectural drawings (Cost of alimunium snap beading shall be paid in basic item)					
	A 21.3.1	With float glass panes of 4.00 mm thickness (weight not less than 10 Kg/sqm)					

			5.13	Sqm	1,034.90	1.00	₹ 5,312.14
	A 21.3.2	With float glass panes of 5.5 mm thickness (weight not less than 12.5 Kg/sqm)					
3.6.4	A 21.12	Providing and fixing aluminium tubular handle bar 32 mm outer dia. 3.0 mm thick & 2100 mm long with SS screws etc. complete					
	A 21.12.2	Powder coated minimum thickness 50 microns aluminium tubular handle bar	34.00	Sqm	643.10	1.00	₹ 21,865.40
3.6.5	A 21.19	Filling the gap in between aluminium/stone/wood frame & adjacent RCC/ Brick/Stone/ wood/ ceramic/ Gypsum work by providing weather/ structural non sag elastomeric PU sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-Charge complete, complying to ASTM-C 920, DIN 1854-F and ISO-11600..					
	A 21.19.2	Upto 10 mm depth and 10 mm width	270.10	Metre	183.60	1.00	₹ 49,590.36
3.6.6	A 21.11	Providing and fixing stainless steel (SS-304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-charge complete					
	A 21.11.4	510 x 19 mm	24.00	Each	829.00	1.00	₹ 19,896.00
3.6.7	A 9.71	Providing and fixing ISI :12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :					
	A 9.71.1	125 x 64 x 2.50 mm	192.00	each	103.70	1.00	₹ 19,910.40
3.6.8	A 9.74	Providing and fixing bright finished brass tower bolts(barrel type) with necessary screws etc. complete :					
	A 9.74.1	250 mm x 10 mm	44.00	each	426.30	1.00	₹ 18,757.20
3.6.9	A 9.88	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete :					
			14.00	each	893.60	1.00	₹ 12,510.40
3.6.10	A 9.100	Providing and fixing aluminium handles ISI marked anodised (anodic coating not less than grade AC 10 as per IS :1868 ) transparent or dyed to required color or shade with nuts and screws etc. complete.					
	A 9.100.1	125 mm	20.00	each	66.50	1.00	₹ 1,330.00
3.6.11	A 9.101	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete					
	A 9.101.2	Twin rubber stopper	17.00	each	69.90	1.00	₹ 1,188.30

			<b>Total of Aluminium Windows, Ventilation &amp; Glazing Curtain Wall:</b>		<b>₹ 8,23,272.61</b>
3.7		<b>PLASTERING</b>			
		<b>Exterior Plaster</b>			
3.7.1	A 13.3	20 mm cement plaster of mix:			
	A 13.3.1	1:4 (1 cement : 4 coarse sand)			
			208.73	Sqm	348.00
				1.00	₹ 72,637.25
		<b>Interior Plaster</b>			
3.7.2	A 13.1	12 mm cement plaster of mix:			
	A 13.1.1	1:4 (1 cement : 4 fine sand)			
			1,951.34	Sqm	250.30
				1.00	₹ 4,88,421.00
					<b>Total of Plastering :</b>
3.8		<b>TILING &amp; CLADDING</b>			
3.8.1	A 8.31	Providing and fixing 1 st quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer), of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dados over 12 mm thick bed of Cement Mortar 1:3 ( 1 cement : coarse sand) and jointing with grey cement slurry @ 3.3kg per Sqm including pointing in white cement mixed with pigment of matching shade.complete			
			105.59	Sqm	1,090.40
				1.00	₹ 1,15,138.06
3.8.2	A 11.20	Chequered precast cement concrete tiles 22 mm thick in footpath & courtyard jointed with neat cement slurry mixed with pigment to match the shade of tiles including rubbing and cleaning etc. complete on 20 mm thick bed of cement mortar 1:4 ( 1 cement: 4 coarse sand)			
	A 11.20.1	Light shade pigment with white cement			
			117.95	Sqm	1,398.60
				1.00	₹ 1,64,959.97
3.8.3	A 11.41	Providing and laying Vitrified tiles in different sizes (thickness to be specified by the manufacturer), with water absorption less than than 0.08% and conforming to IS:15622, of approved make, in all colours and shades, in skirting, riser of steps, over 20 mm thick bed of cement mortar 1:4 (1cement : 4 coarse sand), jointing with grey cement slurry @3.3 kg/sqm including grouting the joints with white cement and matching pigments etc..complete.			
	A 11.41.2	Size of tiles 600 x 600 mm			
			1,158.96	Sqm	1,671.00
				1.00	₹ 19,36,619.65
3.8.4	A 11.56	Providing and laying polished Granite Stone flooring in requires design and patterns, in linear as well as curvilinear portion of the building, all complete as per the Architectural drawings, with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 ( 1 cement: 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc. all complete as specified and as directed by the Engineer-in-charge.			
	A 11.56.1	Polished Granite Stone slab Jet Black, Cherry Red, Elite Brown, Cat Eye or equivalent			

			61.47	Sqm	4,169.10	1.00	₹ 2,56,283.96
			<b>Total of Tiling &amp; Cladding:</b>				
<b>3.9</b>		<b>STEEL WORK</b>					<b>₹ 24,73,001.65</b>
3.9.1	A 10.28	Providing and fixing stainless steel (Grade 304) railing made of hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary accessories and stainless steel nuts and bolts complete, i/c fixing the railings with necessary accessories and stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the sided of waist slab with suitable arrangement as per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)					
			1,175.77	Kg	627.40	1.00	₹ 7,37,678.98
3.9.2	A 10.16	Steel work in built up tubular (round, square or rectangular hollow tubes etc) trusses etc., including cutting hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete					
	A 10.16.1	<i>Hot finished welded type tubes</i>					
			2,969.56	Kg	148.40	1.00	₹ 4,40,682.35
			<b>Total of Steel work:</b>				
<b>3.10</b>		<b>FALSE CEILING</b>					
3.10.1	A 12.45	Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S sheets and galvanised with zinc coating of 120 gms/sqm (both side inclusive) as per IS:277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flange of 27 mm and 37 mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50 mm long with 6 mm dia body, other flange.... with 25 mm long dry wall screws @230 mm interval, including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c, including jointing and finishing to a flush finish of tapered and square edges of the board with recommended jointing compound, jointing tapes... as per drawing, specification and direction of the Engineer-in-Charge but excluding the cost of painting with:					
	A 12.45.3	12.5 mm thick tapered edge Gypsum moisture resistant board					
			1,141.71	Sqm	1,318.60	1.00	15,05,458.81
	A 12.54	Providing and fixing G.I clip in Metal ceiling System of 600 x 600 mm module which includes providing and fixing "C" wall angle of size 20 x 30 x 20 mm made of 0.5 mm thick pre painted steel along the perimeter of the room with help of nylon sleeves and wooden screws at 300 mm c/c, ... all sections to be galvanised @120 gms/ sqm (both side inclusive), fixing with clip in tiles into spring T with:					

3.10.2	<b>A 12.54.2</b>	G.I Metal ceiling clip in plain Beveled edge Global white colour tiles of size 600 x 600, and 0.5 mm thick with 25 mm height; made of G.I sheet having galvanising of 100 gms/sqm (both sides inclusives) and 20 % perforation area with 1.8 mm dia holes and having NRC of 0.5, electro statically polyester powder coated of thickness 60 microns (minimum), including factory painted after bending and perforation.					
			123.73	Sqm	2,046.40	1.00	₹ 2,53,201.07
3.10.3	<b>A 12.35</b>	Providing and fixing thermal insulation of ceiling (under deck insulation) with Resin Bonded fibre glass wool conforming to IS: 8183. density 16 kg/m <sup>3</sup> , 50 mm thick, wrapped in 200 G virgin polythene bags placed over existing false ceiling and held in position by crisis-crossing G.I wire.					
			123.73	Sqm	262.20	1.00	₹ 32,442.01
			<b>Total of False ceiling:</b>				
							₹ 17,91,101.88
3.11		<b>ROOFING</b>					
3.11.1	<b>A 12.64</b>	Providing Zinc Aluminium Alloy Galvanized coloured trapezoidal profile steel (width 1120 mm) (DYNA, DURASHINE, BLUESCOPE etc.) complete (upto a pitch of 60 degrees) excluding the cost of purlins, rafters and trusses.					
	<b>A 12.64.2</b>	0.50 mm thick					
		Multipurpose Hall (measured from CAD drawing)	139.22	Sqm	1861.70	1.00	₹ 2,59,185.87
3.11.2	<b>A 12.65</b>	Providing Plain sheet ridges, gutter, valley fixed with polymer coated J or L hooks, bolts and nuts and Scres complete.					
	<b>A 12.65.2</b>	0.50 mm thick					
		Multipurpose Hall (measured from CAD drawing)	70.00	Meter	749.90	1.00	₹ 52,493.00
			<b>Total of Roofing:</b>				
							₹ 3,11,678.87
3.12		<b>PAINTING</b>					
3.12.1	<b>A 13.43</b>	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface:					
	<b>A 13.43.1</b>	Water thinnable cement primer	208.73	Sqm	54.20	1.00	₹ 11,313.04
3.12.2	<b>A 13.45</b>	Finishing walls with water proofing cement paint "snowcem - plus" of M/s snowcem India Ltd. Or equivalent of required shade:					
	<b>A 13.45.1</b>	New work (Two or more coat applied @ 3.84 kg/10 sqm)	208.73	Sqm	243.20	1.00	₹ 50,762.58
3.12.3	<b>A 13.26</b>	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	1,845.75	Sqm	183.60	1.00	₹ 3,38,879.68
3.12.4	<b>A 13.41</b>	Distempering with oil bounded washable distemper of approved brand and manufacture to give an even shade					
	<b>A 13.41.1</b>	New work (two or more coats) over and includung priming coat with cement primer.	1,845.75	Sqm	134.00	1.00	₹ 2,47,330.48
3.12.5	<b>A13.50</b>	Applying priming coat :					
	<b>A13.50.1</b>	With ready mixed pink or grey primer of approved brand and manufacture on wood work (hard and soft wood)					
		Wooden Doors	7.56	Sqm	53.00	1.00	₹ 400.68

	A13.62	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:					
3.12.6	A13.62.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture					
		Wooden Doors	7.56	Sqm	163.80	1.00	₹ 1,238.33
			<b>Total of Painting:</b>				₹ 6,49,924.80
			<b>Total Cost of Second Floor</b>				₹ 2,02,51,346.27

## DETAIL ESTIMATE-3

**Name of the Work:** Construction of Nagaland Innovation Hub for Startup at Chūmukedima**Item of the Work:** Second Floor

Item No	Schedule Number	Description of Item	No.	Part No.	Measurements				Unit	Rate	Multiplication factor (MF)	Amount in Rupees
					Length	Width	Depth	Quantity				
<b>3. SECOND FLOOR</b>												
3.1		<b>REINFORCED CONCRETE</b>										
3.1.1	A 5.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts, etc. upto floor five level excluding cost of centring, shuttering, finishing and reinforcement.										
	A 5.2.2	1 : 1.5 : 3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal										
		Columns above the Second floor level										
		C1	13		0.55	0.40	3.30	9.44				
		C2	37		0.45	0.40	3.30	21.98				
		C3	9		0.40	0.40	3.30	4.75				
		C4	4		0.20	0.30	3.30	0.79				
		Cc1	15		1.13		3.30	55.95				
		Cc2	5		0.64		3.30	10.49				
		SW3 (2000x 200 mm)on SWF	1		2.00	0.20	3.30	1.32				
		SW2 & SW4 (3350 x 200 mm)on SWF	2		3.35	0.20	3.30	4.42				
		SW1 & SW5 (1000 x 200 mm)on SWF	2		1.00	0.20	3.30	1.32				
A 5.3					Total				110.47	Cum	₹ 11,768.50	1.00
		Reinforced cement concrete work in beams, suspended floors, roofs having slope upto 15°, landings, balconies, shelves, chajjas, lintels, bands. plain window sills, staircases and spiral stair cases upto floor five level excluding the cost of centring, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement: 1.5 coarse sand: 3 graded stone aggregate 20 mm nominal size).										₹ 13,00,046.48
		Tie beams										
		B1	1		459.41	0.30	0.50	68.91				
		RB1	1		48.29	0.30	0.35	5.07				
		B2	1		274.54	0.30	0.60	49.42				
		B3	1		90.89	0.25	0.35	7.95				

3.1.2		CB	1		9.98	0.15	0.13	0.19			
		CB1	1		3.12	0.30	0.45	0.42			
	Staircase-1(measured from CAD drawing)-1.65 m	unit	nos.								
	Flight-1	2	1	1.65	0.67		2.21				
	Flight-2	2	1	1.65	0.67		2.21				
	Landing	2	1	2.72	0.15	0.00					
	Staircase-2(measured from CAD drawing)-1.50 m										
	Flight-1	1	1	1.50	0.67		1.01				
	Flight-2	1	1	1.50	0.67		1.01				
	Landing	1	1	2.25	0.15	0.00					
	lintels for openings										
	LB on D	3		1.45	0.15	0.15	0.10				
	LB on D2	3		1.00	0.15	0.15	0.07				
	LB on D3	2		0.90	0.15	0.15	0.04				
	LB on DT	4		0.75	0.15	0.15	0.07				
	Suspended Floor (Second Floor)		1		1,394.01	0.13	174.25				
	Ramp		1		66.00	0.125	8.25				
					Total		321.17	Cum	₹ 12,139.40	1.00	₹ 38,98,768.47
											Total of Reinforce Concrete: ₹ 51,98,814.96
3.2	STEEL										
A 5.22	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete .										
A 5.22.4	Hot rolled deform bars (Tor)	No.		No. of	length	Kg/m	Quantity				
	B1										
	20 mm #	1		6	460.97	2.470	6831.50				
	Extra 20 mm #	1		2	460.97	2.470	2277.17				
	Two legged lateral ties 8 mm # @ 150 mm C/C	1		3063	1.40	0.395	1688.83				
	RB1										
	16 mm #	1		8	49.54	1.570	622.22				
	Two legged lateral ties 8 mm # @ 150 mm C/C	1		322	1.20	0.395	152.09				
	B2										
	20 mm #	1		6	276.10	2.470	4091.86				
	16 mm #	1		4	275.79	1.570	1731.97				
	12 mm #	1		2	275.48	0.890	490.35				
	Two legged lateral ties 8 mm # @ 150 mm C/C	1		1830	1.20	0.395	864.67				
	B3										
	16 mm #	1		8	92.13	1.570	1157.19				
	Two legged lateral ties 8 mm # @ 150 mm C/C	1		606	1.20	0.395	286.24				
	CB										

	12 mm #	1	6	10.91	0.890	58.26			
	Two legged lateral ties 8 mm # @ 150 mm C/C	1	67	0.80	0.395	20.91			
	CB1								
	20 mm #	1	8	4.68	1.580	59.14			
	Extra 12 mm #	1	2	4.20	0.890	7.48			
	Two legged lateral ties 8 mm # @ 150 mm C/C	1	21	1.20	0.395	9.82			
	<i>Shear wall &amp; Columns at Second floor level</i>								
	<i>SW3 (2000x 200 mm) on SWF</i>								
3.2.1	Main bar, 12T @ 175 c/c	1	23	3.47	0.89	70.55			
	Distribution bar, 10T @ 200 c/c	1	33	2.14	0.62	43.78			
	<i>SW2 &amp; SW4 (3350 x 200 mm) on SWF</i>								
	Main bar, 12T @ 175 c/c	2	38	3.47	0.89	236.34			
	Distribution bar, 10T @ 200 c/c	2	33	3.49	0.62	142.81			
	<i>SW1 &amp; SW5 (1000 x 200 mm) on SWF</i>								
	Main bar, 12T @ 175 c/c	2	11	3.47	0.89	70.55			
	Distribution bar, 10T @ 200 c/c	2	33	1.14	0.62	46.65			
	C1								
	20 mm #	13	12	3.65	2.470	1407.19			
	One legged lateral ties 8 mm # @ 150 mm C/C	13	25	0.63	0.395	80.62			
	Two legged lateral ties 8 mm # @ 150 mm C/C	13	25	1.80	0.395	230.56			
	Two legged lateral ties 8 mm # @ 150 mm C/C	13	25	1.50	0.395	192.05			
	C2								
	16 mm #	37	6	3.65	1.580	1280.98			
	20 mm #	37	4	3.65	2.470	1335.03			
	One legged lateral ties 8 mm # @ 150 mm C/C	37	25	0.53	0.395	192.92			
	Two legged lateral ties 8 mm # @ 150 mm C/C	37	25	1.60	0.395	583.14			
	Two legged lateral ties 8 mm # @ 150 mm C/C	37	25	1.60	0.395	583.14			
	C3								
	16 mm #	9	8	3.65	1.580	415.45			
	Two legged lateral ties 8 mm # @ 150 mm C/C	9	25	0.48	0.395	42.48			
	Diamond legged lateral ties 8 mm # @ 150 mm C/C	9	25	1.30	0.395	115.18			
	C4								
	16 mm #	4	4	3.65	1.580	92.32			
	Two legged lateral ties 8 mm # @ 150 mm C/C	4	25	0.93	0.395	36.66			
	Cc1								
	20 mm #	15	8	3.65	2.470	1082.45			
	Two legged lateral ties 8 mm # @ 150 mm C/C	15	25	3.86	0.395	572.36			
	Cc2								
	16 mm #	5	8	3.65	1.580	230.81			

	Two legged lateral ties 8 mm # @ 150 mm C/C	5	25	3.86	0.395	190.79				
	<i>lintels for openings</i>									
	<i>LB on D</i>									
	12 mm #	3	4	1.95	0.890	20.83				
	Stirrups 8 mm # @ 150 mm C/C	3	14	0.30	0.395	4.91				
	<i>LB on D2</i>									
	12 mm #	3	4	1.50	0.890	16.02				
	Stirrups 8 mm # @ 150 mm C/C	3	11	0.30	0.395	3.86				
	<i>LB on D3</i>									
	12 mm #	2	4	1.40	0.890	9.97				
	Stirrups 8 mm # @ 150 mm C/C	2	10	0.30	0.395	2.42				
	<i>LB on DT</i>									
	12 mm #	4	4	1.25	0.890	17.80				
	Stirrups 8 mm # @ 150 mm C/C	4	9	0.30	0.395	4.37				
	<i>Second floor slab Surface area: 1394.01 Sq.m</i>									
	Top reinforcement of upper portion(transverse),10 mm @ 200 mm c/c	1	375	9.27	0.62	2157.34				
	Top reinforcement of upper portion(longitudinal),10 mm @ 200 mm c/c	1	375	9.53	0.62	2219.02				
	Distribution bars of upper portion(longitudinal),10 mm @ 200 mm c/c	1	94	37.84	0.62	2213.53				
	Distribution bars of upper portion(Transverse),10 mm @ 200 mm c/c	1	94	37.84	0.62	2213.53				
	Distribution bars of lower portion,10 mm @ 200 mm c/c	1	188	37.84	0.62	4403.59				
	Bottom reinforcement of lower portion,10 mm @ 200 mm c/c	1	188	37.84	0.62	4403.59				
	<i>Ramp slab Surface area: 66.00 Sq.m</i>									
	Top reinforcement of upper portion(transverse),10 mm @ 150 mm c/c	1	55	8.83	0.62	301.10				
	Bottom reinforcement of upper portion,10 mm @ 150 mm c/c	1	55	8.83	0.62	301.10				
	Top reinforcement of lower portion(transverse),10 mm @ 150 mm c/c	1	55	8.83	0.62	301.10				
	Bottom reinforcement of lower portion,10 mm @ 150 mm c/c	1	55	8.83	0.62	301.10				
	<i>Staircase-1(measured from CAD drawing)-1.65 m</i>	unit	nos.							
	Top reinforcement of upper portion(longitudinal direction), 12 mm Dia @ 150 mm c/c (Flight 1 & 2)	2	2	13	4.27	0.89	197.55			
	Distribution bar (reinforcement) of upper portion(Transverse direction), 10 mm Dia @ 150 mm c/c (Flight 1 & 2)	2	2	18	2.03	0.62	89.50			
	Main reinforcement of lower portion(Longitudinal direction), 12 mm Dia @ 150 mm c/c , (Flight 1 & 2)	2	2	13	5.45	0.889	252.04			
	Distribution bar (reinforcement) of lower portion(Transverse direction), 10 mm Dia @ 150 mm c/c (Flight 1 & 2)	2	2	28	2.03	0.62	139.29			
	Main reinforcement (Longitudinal direction), 12 mm Dia @ 150 mm c/c, (Landing)	1	1	26	2.18	0.889	50.48			
	Distribution bar (Transverse direction), 10 mm Dia @ 150 mm c/c, (Landing)	1	1	26	2.17	0.62	34.98			
	<i>Staircase-2(measured from CAD drawing)-1.50 m</i>									

	Top reinforcement of upper portion(longitudinal direction), 12 mm Dia @ 150 mm c/c (Flight 1 & 2)	1	2	11	4.27	0.89	83.58				
	Distribution bar (reinforcement) of upper portion(Transverse direction), 10 mm Dia @ 150 mm c/c (Flight 1 & 2)	1	2	18	1.73	0.62	38.14				
	Main reinforcement of lower portion(Longitudinal direction), 12 mm Dia @ 150 mm c/c , (Flight 1 & 2)	1	2	11	5.45	0.889	106.63				
	Distribution bar (reinforcement) of lower portion(Transverse direction), 10 mm Dia @ 150 mm c/c (Flight 1 & 2)	1	2	28	1.73	0.62	59.35				
	Main reinforcement (Longitudinal direction), 12 mm Dia @ 150 mm c/c, (Landing)	1	1	22	1.88	0.889	36.85				
	Distribution bar (Transverse direction), 10 mm Dia @ 150 mm c/c, (Landing)	1	1	22	1.87	0.62	25.51				
					Weight of steel bars		49633.58				
					14 kg of binding wire per tonne of		645.24				
					Total of Steel Reinforcement		50,278.81	Kg	₹ 90.10	1.00	₹ 45,30,120.97
									Total of Steel Reinforcement:		₹ 45,30,120.97
3.3	<b>SHUTTERING</b>										
A 5.9	Centring and shuttering including strutting, propping etc. and removal of form for:										
A 5.9.2	Walls (any thickness) including attached pilasters, butterresses, plinth and string courses etc.										
3.3.1	SW3 (2000x 200 mm)on SWF	1		4.28		3.30	14.11				
	SW2 & SW4 (3350 x 200 mm)on SWF	2		6.98		3.30	46.04				
	SW1 & SW5 (1000 x 200 mm)on SWF	2		2.28		3.30	15.02				
					Total		75.16	Sqm	₹ 544.10	1.00	₹ 40,893.20
A 5.9.3	Suspended floors, roofs, landings, balconies and access platform										
3.3.2	Suspended Floor (Second Floor)	1		1,394.01			1394.01				
	Ramp	1		66.00			66.00				
					Total		1,460.01	Sqm	₹ 612.90	1.00	₹ 8,94,840.13
A 5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.										
3.3.3	B1	1		459.41		1.35	620.20				
	RB1	1		48.29		1.05	50.71				
	B2	1		274.54		1.55	425.54				
	B3	1		90.89		1.00	90.89				
	CB	1		9.98		0.45	4.49				
	CB1	1		3.12		1.25	3.90				
	lintels for openings										
	LB on D	3		1.45		0.50	2.18				
	LB on D2	3		1.00		0.50	1.50				
	LB on D3	2		0.90		0.50	0.90				
	LB on DT	4		0.75		0.50	1.50				
					Total		1,201.79	Sqm	₹ 494.50	1.00	₹ 5,94,287.16

3.3.4	A 5.9.6	Columns, pillars, piers, abutments, posts and struts.									
		Columns at Second floor level									
			C1	13	1.90	3.30	81.51				
			C2	37	1.70	3.30	207.57				
			C3	9	1.60	3.30	47.52				
			C4	4	1.00	3.30	13.20				
			Cc1	15	2.26	3.30	111.91				
			Cc2	5	1.27	3.30	20.98				
					Total	482.69	Sqm	₹ 650.00	1.00	₹ 3,13,750.22	
3.3.5	A 5.9.7	Stairs, (excluding landings) except spiral-staircases.									
		Staircase-1.65 m	Set	Nos.							
		Stairs flight(4 m) & stringer(measured from CAD drawing)	2	2	4.00	1.80	28.80				
		Landings	2	1	1.80	1.80	6.48				
		Rise- 0.150 m	2	24	1.650	0.15	11.88				
		Staircase-1.5 m									
		Stairs flight(2.7 m) & stringer(measured from CAD drawing)	1	2	4.00	1.60	12.80				
		Stairs flight(2.65 m) & stringer(measured from CAD drawing)	1	1	1.60	1.60	2.56				
		Rise- 0.150 m	1	24	1.500	0.15	5.40				
					Total	67.92	Sqm	₹ 550.90	1.00	₹ 37,417.13	
3.3.6	A 5.9.16	Edges of slabs and breaks in floors and walls.									
	A 5.9.16.2	Above 20 cm wide									
		Ground Floor slab edges	1		535.17	0.175	93.65				
					Total	93.65	Sqm	₹ 654.80	1.00	₹ 61,325.13	
3.4		<b>BRICKWORK</b>									
3.4.1	A 6.4	Brick work with common burnt clay(non modular) bricks of class designation 7.5 in superstructure above plinth level upto floor V level in all shape and sizes in									
	A 6.4.2	Cement mortar 1:6 (1 cement : 6 Coarse sand)									
		External wall of 150 mm thick Wall	1		68.12	0.150	3.30	33.72			
		Internal wall of 150 mm thick Wall	1		82.16	0.150	3.30	40.67			
								Sum of the above	74.39		
		Deduction of opening									
			D	3	1.45	0.150	2.10	1.37			
			D2	3	1.00	0.150	2.10	0.95			
			D3	2	0.90	0.150	2.10	0.57			
			DT	4	0.75	0.150	2.10	0.95			
			V	1	1.50	0.150	0.60	0.14			
					Deduction			3.96			
					Total after deduction	70.42	Cum	₹ 10,492.90	1.00	₹ 7,38,961.07	

										<b>Total of Brick work:</b>	₹ 7,38,961.07
3.5		<b>WOOD WORK</b>									
	A 9.1	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia and length (hold fast lugs or dash fastener shall be paid									
3.5.1	A 9.1.3	Kiln seasoned and chemically treated Hollock wood	Set	Nos.							
			D3	2	1	0.90	0.10	0.13	0.02		
					2	0.13	0.10	2.10	0.11		
						<b>Total</b>			0.13	Cum	₹ 76,054.50
										1.00	₹ 9,696.95
3.5.2	A 9.5	Providing and fixing panalled or panalled and glazed shutters for doors, windows and clerestory windows fixing with butt hinges of required size with necessary screws, excluding panelling which will be paid for separately, all complete as per direction of the Engineer-in-charge. (Note:- Butt hinges and necessary screws shall									
	A 9.5.2	Kiln seasoned and chemically treated Hollock wood	Set								
	A 9.5.2.1	35 mm thick shutters									
			D3	2		0.90		2.10	3.78		
						<b>Total</b>			3.78	Sqm	₹ 2,400.10
										1.00	₹ 9,072.38
3.5.3	A 9.53	Providing 40 x 5 mm flat iron hold fasts 40 cm long including fixing to frame with 10mm diameter bolts, nuts and wooden plugs and embeddings in cement concrete block 30 x 10 x 15 cm 1:3:6 mix (1 cement :3 coarse sand :6 graded stone aggregate 20 mm nominal size).	Set	Nos.							
			D3	2	4				8		
						<b>Total</b>			8	Each	₹ 168.40
										1.00	₹ 1,347.20
3.5.4	A 9.71.1	Providing and fixing ISI :12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :	Set	Nos.							
		125 x 64 x 2.50 mm									
			D3	2	6				12		
						<b>Total</b>			12	Each	₹ 103.70
3.5.5	A 9.74	Providing and fixing bright finished brass tower bolts(barrel type) with necessary screws etc. complete :	Set	Nos.							
	A 9.74.1	250 mm x 10 mm									
			D3	2	6				12		
						<b>Total</b>			12	Each	₹ 426.30
3.5.6	A 9.88	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc.	Set	Nos.							
			D3	2	6				12		
						<b>Total</b>			12	Each	₹ 893.60
										1.00	₹ 10,723.20
	A 9.165	Providing and fixing bright/matt finished stainless steel handles of approved quality and make with necessary screws etc. all complete	Set	Nos.							

3.5.7	A 9.165.1	125 mm									
			D3	2	6			12			
						Total		12	Each	₹ 111.80	1.00
3.5.8	A 9.101	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete	Set	Nos.							
	A 9.101.1	Single rubber stopper									
			D3	2	6			12			
						Total		12	Each	₹ 37.60	1.00
3.5.9	A 9.83	Providing and fixing aluminium die cast body tubular type universal hydraulic door closer (having brand logo with ISI : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door weight upto 701 mm to 1000 mm) with double speed adjustment with necessary accessories and screws etc. complete.	Set	Nos.							
			D3	2	6			12			
						Total		12	Each	₹ 1,128.70	1.00
										Total of Wood work:	₹ 52,536.93
3.6	<b>ALUMINIUM WINDOWS, VENTILATION &amp; GLAZING CURTAIN WALL</b>										
	A 21.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropiate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixed with rawl plug and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junction, at top, bottom and sides with required PVC/ neoprene felt etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing/ panelling, C.P. brass/ satinless steel screws, all complete as per architectural drawing.(Glazing and panelling to be paid seperately)									
	A 21.1.1	For fixed portion	Product Brand: Jindal Aluminium Ltd.								
	A 21.1.1.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 microns)	Section name	No.	Length		Kg/m	Quantity			
		D (1500 mm x 2100 mm)-Double leaf									
		Frame - Single groove	19570	4	2.10		0.911	7.65			
		Frame Top & Side	19537	1	1.50		1.911	2.87			
		Bottom Frame	20619	1	1.50		0.974	1.46			
		Shutter top & bottom	20545	2	1.50		0.354	1.06			
		Shutter side (interlock)	20546	4	2.10		0.346	2.91			
		Clip	19352	4	2.10		0.097	0.81			
			19352	2	1.50		0.097	0.29			
			Sum of the above 1 unit					17.05			

3.6.1							
	D2 (1000 mm x 2100 mm)-Single leaf						
	Frame - Single groove	19570	2	2.10	0.911	3.83	
	Frame Top & Side	19537	1	1.00	1.911	1.91	
	Bottom Frame	20619	1	1.00	0.974	0.97	
	Shutter top & bottom	20545	2	1.00	0.354	0.71	
	Shutter side (interlock)	20546	2	2.10	0.346	1.45	
	Clip	19352	2	2.10	0.097	0.41	
		19352	2	1.00	0.097	0.19	
				Sum of the above 1 unit		9.47	
				Total (3 unit)		28.42	
	DT (750 mm x 2100 mm)-Single leaf						
	Frame - Single groove	19570	2	2.10	0.911	3.83	
	Frame Top & Side	19537	1	0.75	1.911	1.43	
	Bottom Frame	20619	1	0.75	0.974	0.73	
	Shutter top & bottom	20545	2	0.75	0.354	0.53	
	Shutter side (interlock)	20546	2	2.10	0.346	1.45	
	Clip	19352	2	2.10	0.097	0.41	
		19352	2	0.75	0.097	0.15	
				Sum of the above 1 unit		8.53	
				Total (4 unit)		34.11	
	Pivoted Ventillation						
	V(3755 mm x 600 mm)						
	Top Frame	20653	1	3.76	0.354	1.33	
	Bottom Frame	20653	1	3.76	0.354	1.33	
	Side Frame	20653	2	0.60	0.354	0.42	
	Shutter with Glass	20653	2	3.76	0.350	2.63	
		20653	2	0.60	0.350	0.42	
	Clip	19352	2	3.76	0.097	0.73	
		19352	2	0.60	0.097	0.12	
				Sum of the above 1 unit		6.98	
				Total (1 unit)		6.98	
	V1(3000 mm x 600 mm)						
	Top Frame	20653	1	3.00	0.354	1.06	
	Bottom Frame	20653	1	3.00	0.354	1.06	
	Side Frame	20653	2	0.60	0.354	0.42	
	Shutter with Glass	20653	2	3.00	0.350	2.10	
		20653	2	0.60	0.350	0.42	
	Clin	19352	2	3.00	0.097	0.58	

		19352	2	0.60	0.097	0.12	
		Sum of the above 1 unit			5.77		
		Total (1 unit)			5.77		
	V2(900 mm x 600 mm)						
	Top Frame	20653	1	0.90	0.354	0.32	
	Bottom Frame	20653	1	0.90	0.354	0.32	
	Side Frame	20653	2	0.60	0.354	0.42	
	Shutter with Glass	20653	2	0.90	0.350	0.63	
		20653	2	0.60	0.350	0.42	
	Clip	19352	2	0.90	0.097	0.17	
		19352	2	0.60	0.097	0.12	
		Sum of the above 1 unit			2.40		
		Total (2 unit)			4.81		
	DW2- (7245 mm x 3100 mm)						
	Frame- Single groove	19554	2	7.25	1.292	18.72	
		19527	6	3.10	0.881	16.39	
	Shutter-Top	20653	2	7.25	1.501	21.75	
	Shutter-Bottom	19503	2	7.25	1.511	21.89	
	Shutter-Vertical	19505	6	3.10	1.509	28.07	
	Glazing Clip	19352	2	7.25	0.097	1.41	
		19352	6	3.10	0.097	1.80	
		Sum of the above 1 unit			110.03		
		Total (4 unit)			440.11		
	Partition wall (PW2)-(4050 mm x 3100 mm)						
	Frame- Single groove	20088	4	4.05	0.274	3.98	
	Frame- Double groove	20089	4	3.10	0.316	4.29	
	Shutter-Bottom	19503	4	3.10	1.511	20.49	
	Shutter-Vertical	19505	4	4.05	1.509	24.45	
	Glazing Clip	19352	4	3.10	0.097	1.32	
		19352	4	4.05	0.097	1.57	
		Sum of the above 1 unit			56.09		
		Total (4 unit)			224.35		
	Partition wall (PW3)-(4400 mm x 3100 mm)						
	Frame- Single groove	20088	4	4.40	0.274	4.32	
	Frame- Double groove	20089	5	3.10	0.316	4.57	
	Shutter-Bottom	19503	5	3.10	1.511	21.86	
	Shutter-Vertical	19505	4	4.40	1.509	26.56	
	Glazing Clip	19352	5	3.10	0.097	1.40	
		19352	4	4.40	0.097	1.71	



3.6.3	DW(5900 mm x 3100 mm)	2	5.90	0.00	0.00				
	DW1(3520 mm x 3100 mm)	2	3.52	0.00	0.00				
	DW2(7245 mm x 3100 mm)	4	7.25	0.00	0.00				
	Partition wall (PW2)-(4050 mm x 3100 mm)	4	4.05	0.00	0.00				
	Partition wall (PW3)-(4400 mm x 3100 mm)	2	4.40	0.00	0.00				
	Partition wall (PW4)-(3700 mm x 3100 mm)	1	3.70	0.00	0.00				
	<i>Total</i>				5.13	Sqm	₹ 1,034.90	1.00	₹ 5,312.14
	A 21.3.2 With float glass panes of 5.5 mm thickness (weight not less than 12.5 Kg/sqm)								
	D (1500 mm x 2100 mm)-Double leaf	3	1.50	1.05	4.73				
	D2 (1000 mm x 2100 mm)-Single leaf	3	1.00	1.05	3.15				
3.6.4	DT (750 mm x 2100 mm)-Single leaf	4	0.75	1.05	3.15				
	V(3755 mm x 600 mm)	1	3.76	0.00	0.00				
	V1(3000 mm x 600 mm)	1	3.00	0.00	0.00				
	V2(900 mm x 600 mm)	2	0.90	0.00	0.00				
	DW(5900 mm x 3100 mm)	2	5.90	0.00	0.00				
	DW1(3520 mm x 3100 mm)	2	3.52	0.00	0.00				
	DW2(7245 mm x 3100 mm)	4	7.25	0.00	0.00				
	Partition wall (PW2)-(4050 mm x 3100 mm)	4	4.05	1.55	25.11				
	Partition wall (PW3)-(4400 mm x 3100 mm)	2	4.40	1.55	13.64				
	Partition wall (PW4)-(3700 mm x 3100 mm)	1	3.70	1.55	5.74				
	<i>Total</i>				55.51	Sqm	₹ 1,376.20	1.00	₹ 76,392.86
3.6.4	A 21.12 Providing and fixing aluminium tubular handle bar 32 mm outer dia. 3.0 mm thick & 2100 mm long with SS screws etc. complete								
	A 21.12.2 Powder coated minimum thickness 50 microns aluminium tubular handle bar			Nos.					
	D (1500 mm x 2100 mm)-Double leaf	3	4		12				
	D2 (1000 mm x 2100 mm)-Single leaf	3	2		6				
	DW(5900 mm x 3100 mm)	2	2		4				
	DW1(3520 mm x 3100 mm)	2	2		4				
	DW2(7245 mm x 3100 mm)	4	2		8				
	<i>Total</i>				34	Sqm	₹ 643.10	1.00	₹ 21,865.40
3.6.5	A 21.19 Filling the gap in between aluminium/stone/wood frame & adjacent RCC/Brick/Stone/ wood/ ceramic/ Gypsum work by providing weather/ structural non sag elastomeric PU sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-Charge complete, complying to ASTM-C 920,								
	A 21.19.2 Upto 10 mm depth and 10 mm width								
	D (1500 mm x 2100 mm)-Double leaf	3	6.35		19.05				
	D2 (1000 mm x 2100 mm)-Single leaf	3	5.35		16				
	DT (750 mm x 2100 mm)-Single leaf	4	4.85		19				
	V(3755 mm x 600 mm)	1	8.76		9				

	V1(3000 mm x 600 mm)	1	7.25		7			
	V2(900 mm x 600 mm)	2	3.05		6			
	DW(5900 mm x 3100 mm)	2	13.05		26			
	DW1(3520 mm x 3100 mm)	2	8.29		17			
	DW2(7245 mm x 3100 mm)	4	15.74		63			
	Partition wall (PW2)-(4050 mm x 3100 mm)	4	12.45		50			
	Partition wall (PW3)-(4400 mm x 3100 mm)	2	13.15		26			
	Partition wall (PW4)-(3700 mm x 3100 mm)	1	11.75		12			
			Total	270.10	Metre	₹ 183.60	1.00	₹ 49,590.36
3.6.6	A 21.11	Providing and fixing stainless steel (SS-304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-charge complete						
	A 21.11.4	510 x 19 mm	Nos.					
		V(3755 mm x 600 mm)	1	2	2			
		V1(3000 mm x 600 mm)	1	2	2			
		V2(900 mm x 600 mm)	2	2	4			
		DW(5900 mm x 3100 mm)	2	2	4			
		DW1(3520 mm x 3100 mm)	2	2	4			
		DW2(7245 mm x 3100 mm)	4	2	8			
			Total	24	Each	₹ 829.00	1.00	₹ 19,896.00
3.6.7	A 9.71	Providing and fixing ISI :12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :	Nos.					
	A 9.71.1	125 x 64 x 2.50 mm						
		D (1500 mm x 2100 mm)-Double leaf	3	8	24			
		D2 (1000 mm x 2100 mm)-Single leaf	3	4	12			
		DT (750 mm x 2100 mm)-Single leaf	4	4	16			
		V(3755 mm x 600 mm)	1	6	6			
		V1(3000 mm x 600 mm)	1	6	6			
		V2(900 mm x 600 mm)	2	4	8			
		DW(5900 mm x 3100 mm)	2	8	16			
		DW1(3520 mm x 3100 mm)	2	8	16			
		DW2(7245 mm x 3100 mm)	4	8	32			
		Partition wall (PW2)-(4050 mm x 3100 mm)	4	8	32			
		Partition wall (PW3)-(4400 mm x 3100 mm)	2	8	16			
		Partition wall (PW4)-(3700 mm x 3100 mm)	1	8	8			
			Total	192	each	₹ 103.70	1.00	₹ 19,910.40
	A 9.74	Providing and fixing bright finished brass tower bolts(barrel type) with necessary screws etc. complete :	Nos.					

	<b>A 9.74.1</b>	250 mm x 10 mm									
3.6.8		D (1500 mm x 2100 mm)-Double leaf	3	2		6					
		D2 (1000 mm x 2100 mm)-Single leaf	3	2		6					
		DT (750 mm x 2100 mm)-Single leaf	4	2		8					
		V(3755 mm x 600 mm)	1	2		2					
		V1(3000 mm x 600 mm)	1	2		2					
		V2(900 mm x 600 mm)	2	2		4					
		DW(5900 mm x 3100 mm)	2	2		4					
		DW1(3520 mm x 3100 mm)	2	2		4					
		DW2(7245 mm x 3100 mm)	4	2		8					
			<b>Total</b>			44	each	<b>₹ 426.30</b>	1	<b>₹ 18,757.20</b>	
3.6.9	<b>A 9.88</b>	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc.		Nos.							
		D (1500 mm x 2100 mm)-Double leaf	3	1		3					
		D2 (1000 mm x 2100 mm)-Single leaf	3	1		3					
		DW(5900 mm x 3100 mm)	2	1		2					
		DW1(3520 mm x 3100 mm)	2	1		2					
		DW2(7245 mm x 3100 mm)	4	1		4					
			<b>Total</b>			14	each	<b>₹ 893.60</b>	1	<b>₹ 12,510.40</b>	
3.6.10	<b>A 9.100</b>	Providing and fixing aluminium handles ISI marked anodised (anodic coating not less than grade AC 10 as per IS :1868 ) transparent or dyed to required color or shade with nuts and screws etc. complete.		Nos.							
	<b>A 9.100.1</b>	125 mm									
		DT (750 mm x 2100 mm)-Single leaf	4	2		8					
		V(3755 mm x 600 mm)	1	4		4					
		V1(3000 mm x 600 mm)	1	4		4					
		V2(900 mm x 600 mm)	2	2		4					
			<b>Total</b>			20	each	<b>₹ 66.50</b>	1	<b>₹ 1,330.00</b>	
3.6.11	<b>A 9.101</b>	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete		Nos.							
	<b>A 9.101.2</b>	Twin rubber stopper									
		D (1500 mm x 2100 mm)-Double leaf	3	2		6					
		D2 (1000 mm x 2100 mm)-Single leaf	3	1		3					
		DW(5900 mm x 3100 mm)	2	1		2					
		DW1(3520 mm x 3100 mm)	2	1		2					
		DW2(7245 mm x 3100 mm)	4	1		4					
			<b>Total</b>			17	each	<b>₹ 69.90</b>	1	<b>₹ 1,188.30</b>	
			<b>Total of Aluminium Windows, Ventilation &amp; Glazing Curtain Wall:</b>								<b>₹ 8,23,272.61</b>

3.7		<b>PLASTERING</b>											
3.7.1		<i>Exterior Plaster</i>											
	A 13.3	20 mm cement plaster of mix:											
	A 13.3.1	1:4 (1 cement : 4 coarse sand)		Sides									
		External wall	1	1	68.12		3.30	224.80					
					5 % extra for column & beam			11.24					
		Deduction of opening		Sides									
			D	3	1	1.45		2.10	9.14				
			D2	3	1	1.00		2.10	6.30				
			D3	2	1	0.90		2.10	3.78				
			DT	4	1	0.75		2.10	6.30				
			V	1	2	1.50		0.60	1.80				
					<i>Deduction</i>			27.32					
					<b>Total exterior plastering</b>			208.73	Sqm	₹ 348.00	1.00	₹ 72,637.25	
3.7.2		<i>Interior Plaster</i>											
	A 13.1	12 mm cement plaster of mix:											
	A 13.1.1	1:4 (1 cement : 4 fine sand)		Sides									
		External wall of 150 mm thick Wall	1	1	68.12		3.30	224.80					
		Internal wall of 150 mm thick Wall	1	2	82.16		3.30	542.22					
		Ceiling Surface area											
		Raw space (measured from CAD drawing)	1		466.70			466.70					
		Raw space (measured from CAD drawing)	1		405.16			405.16					
		Corridor (measured from CAD drawing)	1		185.58			185.58					
		Bridge (measured from CAD drawing)	1		46.33			46.33					
		His Toilet (measured from CAD drawing)	1		19.59			19.59					
		Her Toilet (measured from CAD drawing)	1		18.35			18.35					
					<i>Sum of the above</i>			1908.74					
					5 % extra for column & beam			95.44					
			D	3	2	1.45		2.10	18.27				
			D2	3	2	1.00		2.10	12.60				
			D3	2	2	0.90		2.10	7.56				
			DT	4	2	0.75		2.10	12.60				
			V	1	2	1.50		0.60	1.80				
					<i>Deduction</i>			52.83					
					<b>Total interior plastering</b>			1951.34	Sqm	₹ 250.30	1.00	₹ 4,88,421.00	
					<b>Total of Plastering :</b>					₹ 5,61,058.25			
3.8		<b>TILING &amp; CLADDING</b>											

3.8.1	A 8.31	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer), of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dados over 12 mm thick bed of Cement Mortar 1:3 (1 cement : coarse sand) and jointing with grey cement slurry @ 3.3kg per Sqm including pointing in white cement mixed with pigment of matching shade									
		His Toilet (measured from CAD drawing)	1	27.36	1.95	53.35					
		Her Toilet (measured from CAD drawing)	1	26.79	1.95	52.24					
			Total			105.59	Sqm	₹ 1,090.40	1.00	₹ 1,15,138.06	
3.8.2	A 11.20	Chequered precast cement concrete tiles 22 mm thick in footpath & courtyard jointed with neat cement slurry mixed with pigment to match the shade of tiles including rubbing and cleaning etc. complete on 20 mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand)									
		Light shade pigment with white cement									
	A 11.20.1	Ramp	1	66.00		66.00					
		Bridge (measured from CAD drawing)	1	46.33		46.33					
			5 % extra for skirting			5.62					
			Total			117.95	Sqm	₹ 1,398.60	1.00	₹ 1,64,959.97	
		Providing and laying Vitrified tiles in different sizes (thickness to be specified by the manufacturer), with water absorption less than 0.08% and conforming to IS:15622, of approved make, in all colours and shades, in skirting, riser of steps, over 20 mm thick bed of cement mortar 1:4 (1cement : 4 coarse sand), jointing with grey cement slurry @3.3 kg/sqm including grouting the joints with white cement and matching pigments etc..complete.									
3.8.3	A 11.41	Size of tiles 600 x 600 mm									
	A 11.41.2	Raw space (measured from CAD drawing)	1	466.70		466.70					
		Raw space (measured from CAD drawing)	1	405.16		405.16					
		Corridor (measured from CAD drawing)	1	185.58		185.58					
		Bridge (measured from CAD drawing)	1	46.33		46.33					
			Sum of the above			1103.77					
			5 % extra for skirting			55.19					
			Total			1158.96	Sqm	₹ 1,671.00	1.00	₹ 19,36,619.65	
	A 11.56	Providing and laying polished Granite Stone flooring in requires design and patterns, in linear as well as curvilinear portion of the building, all complete as per the Architectural drawings, with 18 mm thick stone slab over 20 mm (average) thick base of cement mortar 1:4 (1 cement: 4 coarse sand) laid and jointed with cement slurry and pointing with white cement slurry admixed with pigment of matching shade including rubbing, curing and polishing etc..all complete as specified and as									
		Polished Granite Stone slab Jet Black, Cherry Red, Elite Brown, Cat Eye or									

3.8.4	Staircase-1.65 m	Set	Nos.							
	Footstep riser	2	24	1.65		0.15	11.88			
	Footstep tread	2	23	1.65	0.30		22.77			
	Landing	2	1	1.65	1.65		5.45			
	Staircase-1.5 m									
	Footstep riser	1	24	1.50		0.15	5.40			
	Footstep tread	1	23	1.50	0.30		10.35			
	Landing	1	1	1.50	1.80		2.70			
				5 % extra for skirting			2.93			
				Total		61.47	Sqm	₹ 4,169.10	1.00	₹ 2,56,283.96
										<b>Total of Tiling &amp; Cladding:</b> ₹ 24,73,001.65
3.9	<b>STEEL WORK</b>									
A 10.28	Providing and fixing stainless steel (Grade 304) railing made of hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary accessories and stainless steel nuts and bolts complete, i/c fixing the railings with necessary accessories and stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the sided of waist slab with suitable arrangement as per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories)									
	Grade 304 Stainless steel(Sch-5S)	Set	Nos.	Length		Kg/m	Quantity			
	Staircase railing-1.65 m									
	Post : 73.0 mm(OD), wall thickness- 2.11 mm	2	12	1.00		3.69	88.56			
	Top rail : 88.9 mm(OD), wall thickness- 2.11 mm	2	1	8.60		4.51	77.57			
	Mid rail : 33.4 mm(OD), wall thickness- 1.65 mm	2	2	8.10		1.30	42.12			
	Bottom rail: 33.4 mm(OD), wall thickness- 1.65 mm	2	1	8.10		1.30	21.06			
	Staircase railing-1.5 m									
	Post : 73.0 mm(OD), wall thickness- 2.11 mm	1	24	1.00		3.69	88.56			
	Top rail : 88.9 mm(OD), wall thickness- 2.11 mm	1	2	7.95		4.51	71.71			
3.9.1	Mid rail : 33.4 mm(OD), wall thickness- 1.65 mm	1	4	7.45		1.30	38.74			
	Bottom rail: 33.4 mm(OD), wall thickness- 1.65 mm	1	2	7.45		1.30	19.37			
	Connecting Bridge									
	Post : 73.0 mm(OD), wall thickness- 2.11 mm	1	24	1.00		3.69	88.56			
	Top rail : 88.9 mm(OD), wall thickness- 2.11 mm	1	2	8.02		4.51	72.34			
	Mid rail : 33.4 mm(OD), wall thickness- 1.65 mm	1	4	7.52		1.30	39.10			
	Bottom rail: 33.4 mm(OD), wall thickness- 1.65 mm	1	2	7.52		1.30	19.55			
	Ramp railing									
	Post : 73.0 mm(OD), wall thickness- 2.11 mm	1	24	1.00		3.69	88.56			
	Top rail : 88.9 mm(OD), wall thickness- 2.11 mm	1	2	25.20		4.51	227.30			

	Mid rail : 33.4 mm(OD), wall thickness- 1.65 mm	1	4	24.70		1.30	128.44				
	Bottom rail: 33.4 mm(OD), wall thickness- 1.65 mm	1	2	24.70		1.30	64.22				
				<i>Total</i>			1175.77	Kg	₹ 627.40	1.00	₹ 7,37,678.98
A 10.16	Steel work in built up tubular (round, square or rectangular hollow tubes etc) trusses etc., including cutting hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped										
A 10.16.1	<i>Hot finished welded type tubes</i>										
	<i>Truss for Multipurpose hall</i>										
	<i>Truss T1</i>										
	Main rafter- CHS 80 NB(H): 4.85 mm thick, 10.1 Kg/m	2		9.50		10.10	191.90				
	Bottom Chord- CHS 80 NB(H): 4.85 mm thick, 10.1 Kg/m	2		7.46		10.10	150.69				
	King post- CHS 65 NB(H): 4.47 mm thick, 7.90 Kg/m	2		2.15		7.90	33.97				
	Struts- CHS 50 NB (H): 4.47 mm thick, 6.17 Kg/m	2		6.70		6.17	82.68				
	Ties- CHS 50 NB (H): 4.47 mm thick, 6.17 Kg/m	2		4.38		6.17	54.05				
	<i>Truss T2</i>										
	Main rafter- CHS 80 NB(H): 4.85 mm thick, 10.1 Kg/m	2		29.42		10.10	594.28				
	Bottom Chord- CHS 80 NB(H): 4.85 mm thick, 10.1 Kg/m	2		7.18		10.10	145.04				
	King post- CHS 65 NB(H): 4.47 mm thick, 7.90 Kg/m	2		3.12		7.90	49.30				
	Struts- CHS 50 NB (H): 4.47 mm thick, 6.17 Kg/m	2		16.56		6.17	204.35				
	Ties- CHS 50 NB (H): 4.47 mm thick, 6.17 Kg/m	2		14.92		6.17	184.11				
	<i>Truss T3</i>										
	Main rafter- CHS 80 NB(H): 4.85 mm thick, 10.1 Kg/m	1		46.98		10.10	474.50				
	Bottom Chord- CHS 80 NB(H): 4.85 mm thick, 10.1 Kg/m	1		7.18		10.10	72.52				
	King post- CHS 65 NB(H): 4.47 mm thick, 7.90 Kg/m	1		3.12		7.90	24.65				
	Struts- CHS 50 NB (H): 4.47 mm thick, 6.17 Kg/m	1		26.30		6.17	162.27				
	Ties- CHS 50 NB (H): 4.47 mm thick, 6.17 Kg/m	1		18.52		6.17	114.27				
	<i>Purlins &amp; runners</i>										
	Purlin- CHS 50 NB (H): 4.47 mm thick, 6.17 Kg/m	1		65.74		6.17	405.62				
	Runners- CHS 40 NB (H): 4.05 mm thick, 4.43 Kg/m	2		12.50		0.43	10.75				
	Runners- CHS 40 NB (H): 4.05 mm thick, 4.43 Kg/m	2		10.50		0.43	9.03				
	Runners- CHS 40 NB (H): 4.05 mm thick, 4.43 Kg/m	2		6.50		0.43	5.59				
				<i>Total of Trusses</i>			2,969.56	Kg	₹ 148.40	1.00	₹ 4,40,682.35
				<i>Total of Steel work:</i>							
3.10	<b>FALSE CEILING</b>										

3.10.1	A 12.45	Providing and fixing false ceiling at all height including providing and fixing of frame work made of special sections, power pressed from M.S sheets and galvanised with zinc coating of 120 gms/sqm (both side inclusive) as per IS:277 and consisting of angle cleats of size 25 mm wide x 1.6 mm thick with flange of 27 mm and 37 mm, at 1200 mm centre to centre, one flange fixed to the ceiling with dash fastener 12.5 mm dia x 50 mm long with 6 mm dia body, other flange.... with 25 mm long dry wall screws @230 mm interval, including fixing of gypsum board to ceiling section and perimeter channel with the help of dry wall screws of size 3.5 x 25 mm at 230 mm c/c, including jointing and finishing to a flush finish of tapered and square edges of the board with recommended jointing compound, jointing tapes... as per drawing, specification and direction of the Engineer-in-Charge but excluding the cost of painting with:									
		A 12.45.3 12.5 mm thick tapered edge Gypsum moisture resistant board									
		Raw space (measured from CAD drawing)	1	466.70		466.70					
		Raw space (measured from CAD drawing)	1	405.16		405.16					
		Corridor (measured from CAD drawing)	1	185.58		185.58					
		Bridge (measured from CAD drawing)	1	46.33		46.33					
		His Toilet (measured from CAD drawing)	1	19.59		19.59					
3.10.2	A 12.54	Providing and fixing G.I clip in Metal ceiling System of 600 x 600 mm module which includes providing and fixing "C" wall angle of size 20 x 30 x 20 mm made of 0.5 mm thick pre painted steel along the perimeter of the room with help of nylon sleeves and wooden screws at 300 mm c/c, .... all sections to be galvanised @120 gms/ sqm (both side inclusive), fixing with clip in tiles into spring T with:									
		G.I Metal ceiling clip in plain Beveled edge Global white colour tiles of size 600 x 600, and 0.5 mm thick with 25 mm height; made of G.I sheet having galvanising of 100 gms/sqm (both sides inclusive) and 20 % perforation area with 1.8 mm dia holes and having NRC of 0.5, electro statically polyester powder coated of thickness 60 microns (minimum), including factory painted after bending and perforation.									
		Ceiling Surface area									
		Multipurpose Hall (measured from CAD drawing)	1	123.73		123.73					
				Total		123.73	Sqm	₹ 2,046.40	1.00	₹ 2,53,201.07	

3.10.3	A 12.35	Providing and fixing thermal insulation of ceiling (under deck insulation) with Resin Bonded fibre glass wool conforming to IS: 8183. density 16 kg/m <sup>3</sup> , 50 mm thick, wrapped in 200 G virgin polythene bags placed over existing false ceiling and held in position by crisis-crossing G.I wire.									
		Ceiling Surface area									
		Multipurpose Hall (measured from CAD drawing)	1	123.73		123.73					
				Total	123.73	Sqm	₹ 262.20	1.00	₹ 32,442.01		
										Total of False ceiling:	₹ 17,91,101.88
3.11		ROOFING									
3.11.1	A 12.64	Providing Zinc Aluminium Alloy Galvanized coloured trapezoidal profile steel (width 1120 mm) (DYNA, DURASHINE, BLUESCOPE etc.) complete (upto a pitch of 60 degrees) excluding the cost of purlins, rafters and trusses.									
		0.50 mm thick									
		Multipurpose Hall (measured from CAD drawing)	1	139.22		139.22					
				Total	139.22	Sqm	₹ 1,861.70	1.00	₹ 2,59,185.87		
3.11.2	A 12.65	Providing Plain sheet ridges, gutter, valley fixed with polymer coated J or L hooks, bolts and nuts and Scres complete.									
		0.50 mm thick									
		Multipurpose Hall (measured from CAD drawing)	1	70.00		70.00					
				Total	70.00	Meter	₹ 749.90	1.00	₹ 52,493.00		
										Total of Roofing:	₹ 3,11,678.87
3.12		PAINTING									
3.12.1	A 13.43	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface:									
	A 13.43.1	Water thinnable cement primer	1		Sum of exterior plaster & interior plaster Surface	208.73	Sqm	₹ 54.20	1.00	₹ 11,313.04	
3.12.2	A 13.45	Finishing walls with water proofing cement paint "snowcem - plus" of M/s snowcem India Ltd. Or equivalent of required shade:									
		New work (Two or more coat applied @ 3.84 kg/10 sqm)	1		same area as exterior	208.73	Sqm	₹ 243.20	1.00	₹ 50,762.58	
3.12.3	A 13.26	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	1		Interior plaster- Toilet Cladding	1,845.75	Sqm	₹ 183.60	1.00	₹ 3,38,879.68	
3.12.4	A 13.41	Distempering with oil bounded washable distemper of approved brand and manufacture to give an even shade									
		New work (two or more coats) over and includding priming coat with cement primer.	1		Interior plaster- Toilet	1,845.75	Sqm	₹ 134.00	1.00	₹ 2,47,330.48	
3.12.5	A13.50	Applying priming coat :									
	A13.50.1	With ready mixed pink or grey primer of approved brand and manufacture on wood work (hard and soft wood)									
		Wooden Doors	1		Surface area on both sides of wooden Doors	7.56	Sqm	₹ 53.00	1.00	₹ 400.68	

3.12.6	A13.62	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:							
	A13.62.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture							
		Wooden Doors	1		Surface area on both sides of wooden Doors	7.56	Sqm	₹ 163.80	1.00
								₹ 6,49,924.80	₹ 2,02,51,346.27
<b>Total of Painting:</b>									
<b>Total Cost of Second Floor</b>									

Cost abstract - 4

Name of the Work: Construction of Nagaland Innovation Hub for Startup at Chūmukedima								
Item of the Work: Third Floor								
Item No	Schedule Number	Note:	Item No. refers to the serial item number of this estimate. Schedule Number refers to the corresponding item number in the Nagaland PWD Schedule of Rates, 2021					
			Description of Item	Quantity	Unit	Rate	Multiplication factor (MF)	Amount in Rupees
<b>4. THIRD FLOOR</b>								
4.1		<b>REINFORCED CONCRETE</b>						
4.1.1	A 5.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts, etc. upto floor five level excluding cost of centring, shuttering, finishing and reinforcement.						
	A 5.2.2	1 : 1.5 : 3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)						
				65.10	Cum	11,768.50	1.00	7,66,133.76
4.1.2	A 5.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope upto 15°, landings, balconies, shelves, chajjas, lintels, bands. plain window sills, staircases and spiral stair cases upto floor five level excluding the cost of centring, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement: 1.5 coarse sand: 3 graded stone aggregate 20 mm nominal size).						
				310.17	Cum	12,139.40	1.00	37,65,313.14
		<b>Total of Reinforce Concrete:</b>					<b>₹ 45,31,446.90</b>	
4.2		<b>STEEL</b>						
4.2.1	A 5.22	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete .						
	A 5.22.4	Hot rolled deform bars (Tor)						
				51,899.00	Kg	90.10	1.00	46,76,099.81
		<b>Total of Steel Reinforcement:</b>					<b>₹ 46,76,099.81</b>	
4.3		<b>SHUTTERING</b>						
4.3.1	A 5.9	Centring and shuttering including strutting, propping etc. and removal of form for:						
	A 5.9.2	Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.						
				45.94	Sqm	544.10	1.00	24,994.59
4.3.2	A 5.9.3	Suspended floors, roofs, landings, balconies and access platform						
				1,876.36	Sqm	612.90	1.00	11,50,021.04
4.3.3	A 5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.						
				1,229.62	Sqm	494.50	1.00	6,08,048.36
4.3.4	A 5.9.6	Columns, pillars, piers, abutments, posts and struts.						
				348.63	Sqm	650.00	1.00	2,26,609.50

4.3.5	A 5.9.16	Edges of slabs and breaks in floors and walls.					
	A 5.9.16.2	Above 20 cm wide					
			101.67	Sqm	654.80	1.00	66,573.35
			<b>Total of Shuttering:</b>				
4.4		<b>BRICKWORK</b>					<b>₹ 20,76,246.85</b>
4.4.1	A 6.4	Brick work with common burnt clay(non modular) bricks of class designation 7.5 in superstructure above plinth level upto floor V level in all shape and sizes in					
	A 6.4.2	Cement mortar 1:6 (1 cement : 6 Coarse sand)					
			45.27	Cum	10,492.90	1.00	4,75,013.58
			<b>Total of Brick work:</b>				
4.5		<b>WOOD WORK</b>					<b>₹ 4,75,013.58</b>
4.5.1	A 9.1	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia and length (hold fast lugs or dash fastener shall be paid for separately).					
	A 9.1.3	Kiln seasoned and chemically treated Hollock wood					
			0.13	Cum	76,054.50	1.00	9,696.95
4.5.2	A 9.5	Providing and fixing panalled or panalled and glazed shutters for doors, windows and clerestory windows fixing with butt hinges of required size with necessary screws, excluding panelling which will be paid for separately, all complete as per direction of the Engineer-in-charge. (Note:- Butt hinges and necessary screws shall be paid separately)					
	A 9.5.2	Kiln seasoned and chemically treated Hollock wood					
	A 9.5.2.1	35 mm thick shutters					
			3.78	Sqm	2,400.10	1.00	9,072.38
4.5.3	A 9.53	Providing 40 x 5 mm flat iron hold fasts 40 cm long including fixing to frame with 10mm diameter bolts, nuts and wooden plugs and embeddings in cement concrete block 30 x 10 x 15 cm 1:3:6 mix (1 cement :3 coarse sand :6 graded stone aggregate 20 mm nominal size).					
			8.00	Each	168.40	1.00	1,347.20
4.5.4	A 9.71.1	Providing and fixing ISI :12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :					
		125 x 64 x 2.50 mm					
			12.00	Each	103.70	1.00	1,244.40
4.5.5	A 9.74	Providing and fixing bright finished brass tower bolts(barrel type) with necessary screws etc. complete :					
	A 9.74.1	250 mm x 10 mm					
			12.00	Each	426.30	1.00	5,115.60
4.5.6	A 9.88	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete :					
			12.00	Each	893.60	1.00	10,723.20
4.5.7	A 9.165	Providing and fixing bright/matt finished stainless steel handles of approved quality and make with necessary screws etc. all complete					

	A 9.165.1	125 mm					
			12.00	Each	111.80	1.00	1,341.60
4.5.8	A 9.101	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete					
	A 9.101.1	Single rubber stopper	12.00	Each	37.60	1.00	451.20
4.5.9	A 9.83	Providing and fixing aluminium die cast body tubular type universal hydraulic door closer (having brand logo with ISI : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door weight upto 701 mm to 1000 mm) with double speed adjustment with necessary accessories and screws etc. complete.					
			12.00	Each	1,128.70	1.00	13,544.40
4.6	<b>ALUMINIUM WINDOWS, VENTILATION &amp; GLAZING CURTAIN WALL</b>				<b>Total of Wood work:</b>		<b>₹ 52,536.93</b>
4.6.1	A 21.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixed with rawl plug and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junction, at top, bottom and sides with required PVC/ neoprene felt etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing/ panelling, C.P. brass/ stainless steel screws, all complete as per architectural drawing.(Glazing and panelling to be paid separately)					
		A 21.1.1 For fixed portion					
		A 21.1.1.3 Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 microns)			564.98	Kg	510.70
					1.00		2,88,534.54
4.6.2	A 21.1.2	For shutters of doors, windows, ventilators including providing and fixing hinges/pivots and making provision for fixing of fitting wherever required including the cost of EPDM rubber/neoprene gasket required (Fitting shall be paid separately)					
		A 21.1.2.2 Powder coated aluminium (minimum thickness of powder costing 50 microns)			106.62	Sqm	584.40
4.6.3	A 21.3	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with PVC/ neoprene gasket etc. complete as per the architectural drawings (Cost of aluminium snap beading shall be paid in basic item)					
		A 21.3.1 With float glass panes of 4.00 mm thickness (weight not less than 10 Kg/sqm)			30.51	Sqm	1,034.90
					1.00		31,577.90
		A 21.3.2 With float glass panes of 5.5 mm thickness (weight not less than 12.5 Kg/sqm)			28.93	Sqm	1,376.20
4.6.4	A 21.12	Providing and fixing aluminium tubular handle bar 32 mm outer dia. 3.0 mm thick & 2100 mm long with SS screws etc. complete					
		A 21.12.2 Powder coated minimum thickness 50 microns aluminium tubular handle bar			24.00	Sqm	643.10
					1.00		15,434.40

4.6.5	A 21.19	Filling the gap in between aluminium/stone/wood frame & adjacent RCC/ Brick/Stone/ wood/ ceramic/ Gypsum work by providing weather/ structural non sag elastomeric PU sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-Charge complete, complying to ASTM-C 920, DIN 1854-F and ISO-11600..					
	A 21.19.2	Upto 10 mm depth and 10 mm width	200.57	Metre	183.60	0.00	36,824.65
4.5.6	A 21.11	Providing and fixing stainless steel (SS-304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-charge complete					
	A 21.11.4	510 x 19 mm	17.00	Each	829.00	0.00	14,093.00
4.5.7	A 9.71	Providing and fixing ISI :12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :					
	A 9.71.1	125 x 64 x 2.50 mm	150.00	each	103.70	1.00	15,555.00
4.5.8	A 9.74	Providing and fixing bright finished brass tower bolts(barrel type) with necessary screws etc. complete :					
	A 9.74.1	250 mm x 10 mm	50.00	each	426.30	1.00	21,315.00
4.5.9	A 9.88	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete :					
			10.00	each	893.60	1.00	8,936.00
4.5.10	A 9.100	Providing and fixing aluminium handles ISI marked anodised (anodic coating not less than grade AC 10 as per IS :1868 ) transparent or dyed to required color or shade with nuts and screws etc. complete.					
	A 9.100.1	125 mm	48.00	each	66.50	1.00	3,192.00
4.5.11	A 9.101	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete					
	A 9.101.2	Twin rubber stopper	12.00	each	69.90	1.00	838.80
							Aluminium Windows, Ventilation & Glazing Cu ₹ 5,38,417.42
4.6	<b>PLASTERING</b>						
4.6.1	<i>Exterior Plaster</i>						
	A 13.3	20 mm cement plaster of mix:					
	A 13.3.1	1:4 (1 cement : 4 coarse sand)					
			185.35	Sqm	348.00	1.00	64,503.41
	<i>Interior Plaster</i>						
	A 13.1	12 mm cement plaster of mix:					

4.6.2	A 13.1.1	1:4 (1 cement : 4 fine sand)					
			693.37	Sqm	250.30	1.00	1,73,550.73
			<b>Total of Plastering :</b>		<b>₹ 2,38,054.14</b>		
4.7	<b>TILING &amp; CLADDING</b>						
4.7.1	A 8.31	Providing and fixing 1 st quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer), of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dados over 12 mm thick bed of Cement Mortar 1:3 ( 1 cement : coarse sand) and jointing with grey cement slurry @ 3.3kg per Sqm including pointing in white cement mixed with pigment of matching shade complete					
4.7.2	A 12.55	Providing and fixing heat resistant Terrace Tiles(300x300x20 mm) with SRI (Solar refractive index)> 78, solar reflection> 0.70 and initial emittance> 0.75 on waterproof and slope surface of terrace, laid on 20 mm thick cement sand mortar in the ratio of 1:4 (1 cement : 4 coarse sand) and grouting the joints with mix of white cement and marble powder in the ratio of 1:1, including rubbing and polishing of the surface upto 3 cuts complete, including providing skirting upto 150 mm height along the parapet walls in the same manner:	73.98	Sqm	1,090.40	1.00	80,671.06
4.7.3	A 11.41	Providing and laying Vitrified tiles in different sizes (thickness to be specified by the manufacturer), with water absorbtion less than 0.08% and conforming to IS:15622, of approved make, in all colours and shades, in skirting, riser of steps, over 20 mm thick bed of cement mortar 1:4 (1cement : 4 coarse sand), jointing with grey cement slurry @3.3 kg/sqm including grouting the joints with white cement and matching pigments etc.,complete.	1,031.87	Sqm	1,566.80	1.00	16,16,740.77
	A 11.41.2	Size of tiles 600 x 600 mm	197.58	Sqm	1,671.00	1.00	3,30,153.67
			<b>Total of Tiling &amp; Cladding:</b>		<b>₹ 20,27,565.51</b>		
4.8	<b>STEEL WORK</b>						
4.8.1	A 10.28	Providing and fixing stainless steel (Grade 304) railing made of hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary accessories and stainless stel nuts and bolts complete, i/c fixing the railings with necessary accessories and stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the sided of waist slab with suitable arrangement as per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)	1,403.72	Kg	627.40	1.00	8,80,694.40
4.8.2	A 10.16	Steel work in built up tubular (round, square or rectangular hollow tubes etc) trusses etc., including cutting hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete					
	A 10.16.1	Hot finished welded type tubes	8,353.28	Kg	148.40	1.00	12,39,627.23

			<b>Total of Steel work:</b>		<b>₹ 21,20,321.63</b>		
<b>4.9</b>		<b>FALSE CEILING</b>					
	<b>A 12.54</b>	Providing and fixing G.I clip in Metal ceiling System of 600 x 600 mm module which includes providing and fixing "C" wall angle of size 20 x 30 x 20 mm made of 0.5 mm thick pre painted steel along the perimeter of the room with help of nylon sleeves and wooden screws at 300 mm c/c, .... all sections to be galvanised @120 gms/ sqm (both side inclusive), fixing with clip in tiles into spring T with:					
<b>4.9.1</b>	<b>A 12.54.2</b>	G.I Metal ceiling clip in plain Beveled edge Global white colour tiles of size 600 x 600, and 0.5 mm thick with 25 mm height; made of G.I sheet having galvanising of 100 gms/sqm (both sides inclusives) and 20 % perforation area with 1.8 mm dia holes and having NRC of 0.5, electro statically polyester powder coated of thickness 60 microns (minimum), including factory painted after bending and perforation.	226.11	Sqm	2,046.40	1.00	4,62,711.50
<b>4.9.2</b>	<b>A 12.35</b>	Providing and fixing thermal insulation of ceiling (under deck insulation) with Resin Bonded fibre glass wool conforming to IS: 8183. density 16 kg/m^3, 50 mm thick, wrapped in 200 G virgin polythene bags placed over existing false ceiling and held in position by crisis-crossing G.I wire.	226.11	Sqm	262.20	1.00	59,286.04
<b>4.10</b>		<b>ROOFING</b>	<b>Total of False ceiling:</b>		<b>₹ 5,21,997.55</b>		
<b>4.10.1</b>	<b>A 12.67</b>	Providing and fixing of 10 mm thick multiwall laxan polycarbonate sheet of approved IS quality to be done with specially designed aluminium profile section and EPDM rubber to make the entire system water tight, silicon sealants to be used complete with fitting and fixing in place excluding the cost of purlins, rafters and trusses	300.62	Sqm	3,319.40	1.00	9,97,878.03
<b>4.11</b>		<b>PAINTING</b>	<b>Total of Roofing:</b>		<b>₹ 9,97,878.03</b>		
<b>4.11.1</b>	<b>A 13.43</b>	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface:					
	<b>A 13.43.1</b>	Water thinnable cement primer	185.35	Sqm	54.20	1.00	10,046.22
<b>4.11.2</b>	<b>A 13.45</b>	Finishing walls with water proofing cement paint "snowcem - plus" of M/s snowcem India Ltd. Or equivalent of required shade:					
	<b>A 13.45.1</b>	New work (Two or more coat applied @ 3.84 kg/10 sqm)	185.35	Sqm	243.20	1.00	45,078.24
<b>4.11.3</b>	<b>A 13.26</b>	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	619.39	Sqm	183.60	1.00	1,13,719.61
<b>4.11.4</b>	<b>A 13.41</b>	Distempering with oil bounded washable distemper of approved brand and manufacture to give an even shade					
	<b>A 13.41.1</b>	New work (two or more coats) over and includung priming coat with cement primer.	619.39	Sqm	134.00	1.00	82,997.98
<b>4.11.5</b>	<b>A13.50</b>	Applying priming coat :					
	<b>A13.50.1</b>	With ready mixed pink or grey primer of approved brand and manufacture on wood work (hard and soft wood)	7.56	Sqm	53.00	1.00	400.68
		<i>Wooden Doors</i>					

4.11.6	A13.62	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:					
	A13.62.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture					
		Wooden Doors	7.56	Sqm	163.80	1.00	1,238.33
<b>Total of Painting:</b>						<b>₹ 2,53,481.06</b>	
<b>Total Cost of Third Floor</b>						<b>₹ 1,85,09,059.41</b>	

## DETAIL ESTIMATE-4

**Name of the Work:** Construction of Nagaland Innovation Hub for Startup at Chūmukedima**Item of the Work:** Third Floor

Item No	Schedule Number	Description of Item	No.	Part No.	Measurements				Unit	Rate	Multiplication factor (MF)	Amount in Rupees
					Length	Width	Depth	Quantity				
<b>4. THIRD FLOOR</b>												
4.1		<b>REINFORCED CONCRETE</b>										
4.1.1	A 5.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts, etc. upto floor five level excluding cost of centring, shuttering, finishing and reinforcement.										
		A 5.2.2 1 : 1.5 : 3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm										
	<i>Columns above the Second floor level</i>											
	C2	30		0.45	0.40	3.30	17.82					
	C2	20		0.45	0.40	1.50	5.40					
	C3	4		0.40	0.40	3.30	2.11					
	C3	9		0.40	0.40	1.50	2.16					
	C4	4		0.20	0.30	3.30	0.79					
	Cc1	14			1.13	1.50	23.74					
	Cc2	4			0.64	3.00	7.63					
	Cc2	1			0.64	1.50	0.95					
	SW3 (2000x 200 mm)on SWF	1		2.00	0.20	2.10	0.84					
	SW2 & SW4 (3350 x 200 mm)on SWF	2		3.35	0.20	2.10	2.81					
	SW1 & SW5 (1000 x 200 mm)on SWF	2		1.00	0.20	2.10	0.84					
	<i>Total</i>						65.10	Cum	₹ 11,768.50	1.00	₹ 7,66,133.76	
A 5.3	A 5.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope upto 15°, landings, balconies, shelves, chajjas, lintels, bands. plain window sills, staircases and spiral stair cases upto floor five level excluding the cost of centring, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement: 1.5 coarse sand: 3 graded stone aggregate 20 mm nominal size).										
		Tie beams										
		B1	1		435.76	0.30	0.50	65.36				

4.1.2	B2	1		274.54	0.30	0.60	49.42			
	CB	1		9.98	0.13	0.13	0.16			
	CB1	1		3.12	0.30	0.45	0.42			
	<i>Roof beams</i>									
	B3	1		193.39	0.30	0.35	20.31			
	<i>lintels for openings</i>									
	LB on D	1		1.45	0.15	0.15	0.03			
	LB on D2	4		1.00	0.15	0.15	0.09			
	LB on D3	2		0.90	0.15	0.15	0.04			
	LB on DT	4		0.75	0.15	0.15	0.07			
	LB on W1	1		1.20	0.15	0.15	0.03			
	Suspended Floor (Third Floor)	1		1,394.01	0.13	174.25				
	Suspended Floor (Roof Floor)	1		482.35	0.13	60.29				
	<i>Total</i>					310.17	Cum	₹ 12,139.40	1.00	₹ 37,65,313.14
	<i>Total of Reinforce Concrete:</i>									
4.2	<b>STEEL</b>									
A 5.22	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete .									
A 5.22.4	Hot rolled deform bars (Tor)	No.	No. of bar	length	Kg/m	Quantity				
	B1									
	20 mm #	1		6	437.32	2.470	6481.01			
	Extra 20 mm #	1		2	437.32	2.470	2160.34			
	Two legged lateral ties 8 mm # @ 150 mm C/C	1		2905	1.40	0.395	1601.89			
	B2									
	20 mm #	1		6	276.10	2.470	4091.86			
	16 mm #	1		4	275.79	1.570	1731.97			
	12 mm #	1		2	275.48	0.890	490.35			
	Two legged lateral ties 8 mm # @ 150 mm C/C	1		1830	1.20	0.395	864.67			
	CB									
	12 mm #	1		6	10.91	0.890	58.26			
	Two legged lateral ties 8 mm # @ 150 mm C/C	1		67	0.80	0.395	20.91			
	CB1									
	20 mm #	1		8	4.68	1.580	59.14			
	Extra 12 mm #	1		2	4.20	0.890	7.48			
	Two legged lateral ties 8 mm # @ 150 mm C/C	1		21	1.20	0.395	9.82			
	<i>Roof beams</i>									
	B3									
	16 mm #	1		8	194.64	1.570	2444.65			
	Two legged lateral ties 8 mm # @ 150 mm C/C	1		1289	1.20	0.395	609.08			

4.2.1	Shear wall & Columns at Second floor level							
	SW3 (2000x 200 mm) on SWF							
	Main bar, 12T @ 175 c/c	1		23	2.27	0.89	46.14	
	Distribution bar, 10T @ 200 c/c	1		21	2.14	0.62	27.86	
	SW2 & SW4 (3350 x 200 mm) on SWF							
	Main bar, 12T @ 175 c/c	2		38	2.27	0.89	154.56	
	Distribution bar, 10T @ 200 c/c	2		21	3.49	0.62	90.88	
	SW1 & SW5 (1000 x 200 mm) on SWF							
	Main bar, 12T @ 175 c/c	2		11	2.27	0.89	46.14	
	Distribution bar, 10T @ 200 c/c	2		21	1.14	0.62	29.69	
	C2							
	16 mm #	30		6	3.65	1.580	1038.63	
	20 mm #	30		4	3.65	2.470	1082.45	
	One legged lateral ties 8 mm # @ 150 mm C/C	30		25	0.53	0.395	156.42	
	Two legged lateral ties 8 mm # @ 150 mm C/C	30		25	1.60	0.395	472.82	
	Two legged lateral ties 8 mm # @ 150 mm C/C	30		25	1.60	0.395	472.82	
	C2							
	16 mm #	20		6	1.85	1.580	351.14	
	20 mm #	20		4	1.85	2.470	365.96	
	One legged lateral ties 8 mm # @ 150 mm C/C	20		13	0.53	0.395	54.23	
	Two legged lateral ties 8 mm # @ 150 mm C/C	20		13	1.60	0.395	163.91	
	Two legged lateral ties 8 mm # @ 150 mm C/C	20		13	1.60	0.395	163.91	
	C3							
	16 mm #	4		8	3.65	1.580	184.65	
	Two legged lateral ties 8 mm # @ 150 mm C/C	4		25	0.48	0.395	18.88	
	Diamond legged lateral ties 8 mm # @ 150 mm C/C	4		25	1.30	0.395	51.19	
	C3							
	16 mm #	9		8	3.35	1.580	381.32	
	Two legged lateral ties 8 mm # @ 150 mm C/C	9		13	0.48	0.395	22.09	
	Diamond legged lateral ties 8 mm # @ 150 mm C/C	9		13	1.30	0.395	59.89	
	C4							
	16 mm #	4		4	3.65	1.580	92.32	
	Two legged lateral ties 8 mm # @ 150 mm C/C	4		25	0.93	0.395	36.66	
	Cc1							
	20 mm #	14		8	1.85	2.470	512.34	
	Two legged lateral ties 8 mm # @ 150 mm C/C	14		13	3.86	0.395	277.78	
	Cc2							
	16 mm #	4		8	3.35	1.580	169.48	
	Two legged lateral ties 8 mm # @ 150 mm C/C	4		23	3.86	0.395	140.42	

Cc2							
16 mm #	1		8	2.45	1.580	30.99	
Two legged lateral ties 8 mm # @ 150 mm C/C	1		13	3.86	0.395	19.84	
<i>lintels for openings</i>							
<i>LB on D</i>							
12 mm #	1		4	1.95	0.890	6.94	
Stirrups 8 mm # @ 150 mm C/C	1		14	0.30	0.395	1.64	
<i>LB on D2</i>							
12 mm #	4		4	1.50	0.890	21.36	
Stirrups 8 mm # @ 150 mm C/C	4		11	0.30	0.395	5.14	
<i>LB on D3</i>							
12 mm #	2		4	1.40	0.890	9.97	
Stirrups 8 mm # @ 150 mm C/C	2		10	0.30	0.395	2.42	
<i>LB on DT</i>							
12 mm #	4		4	1.25	0.890	17.80	
Stirrups 8 mm # @ 150 mm C/C	4		9	0.30	0.395	4.37	
<i>Third floor slab Surface area: 1394.01 Sq.m</i>							
Top reinforcement of upper portion(transverse),10 mm @ 200 mm c/c	1		375	9.27	0.62	2157.34	
Top reinforcement of upper portion(longitudinal),10 mm @ 200 mm c/c	1		375	9.53	0.62	2219.02	
Distribution bars of upper portion(longitudinal),10 mm @ 200 mm c/c	1		94	37.84	0.62	2213.53	
Distribution bars of upper portion(Transverse),10 mm @ 200 mm c/c	1		94	37.84	0.62	2213.53	
Distribution bars of lower portion,10 mm @ 200 mm c/c	1		188	37.84	0.62	4403.59	
Bottom reinforcement of lower portion,10 mm @ 200 mm c/c	1		188	37.84	0.62	4403.59	
<i>Roof floor slab Surface area: 482.35 Sq.m</i>							
Top reinforcement of upper portion(transverse),10 mm @ 200 mm c/c	1		222	5.69	0.62	781.62	
Top reinforcement of upper portion(longitudinal),10 mm @ 200 mm c/c	1		222	5.69	0.62	781.62	
Distribution bars of upper portion(longitudinal),10 mm @ 200 mm c/c	1		56	22.46	0.62	778.42	
Distribution bars of upper portion(Transverse),10 mm @ 200 mm c/c	1		56	22.46	0.62	778.42	
Distribution bars of lower portion,10 mm @ 200 mm c/c	1		111	22.46	0.62	1542.91	
Bottom reinforcement of lower portion,10 mm @ 200 mm c/c	1		111	22.46	0.62	1542.91	
<i>Weight of steel bars</i>						51232.97	
<i>14 kg of binding wire per tonne of steel bars</i>						666.03	
<i>Total of Steel Reinforcement</i>						51,899.00	Kg
<i>Total of Steel Reinforcement:</i>						<b>₹ 90.10</b>	1.00
<b>₹ 46,76,099.81</b>							
4.3							
SHUTTERING							
A 5.9	Centring and shuttering including strutting, propping etc. and removal of form for:						
A 5.9.2	Walls (any thickness) including attached pilasters, butterresses, plinth and string courses etc.						

4.3.1		SW3 (2000x 200 mm)on SWF	1	4.28	2.10	8.98				
		SW2 & SW4 (3350 x 200 mm)on SWF	2	6.75	2.10	28.35				
		SW1 & SW5 (1000 x 200 mm)on SWF	2	2.05	2.10	8.61				
				<i>Total</i>			45.94	Sqm	₹ 544.10	1.00
4.3.2	A 5.9.3	Suspended floors, roofs, landings, balconies and access platform								
		Suspended Floor (Third Floor)	1	1,394.01		1394.01				
		Suspended Floor (Roof Floor)	1	482.35		482.35				
				<i>Total</i>			1,876.36	Sqm	₹ 612.90	1.00
4.3.3	A 5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.								
		Floor beams								
		B1	1	435.76	1.35	588.27				
		B2	1	274.54	1.55	425.54				
		CB	1	9.98	0.43	4.24				
		CB1	1	3.12	1.25	3.90				
		Roof beams								
			1	193.39	1.05	203.06				
		lintels for openings								
		LB on D	1	1.45	0.45	0.65				
		LB on D2	4	1.00	0.45	1.80				
		LB on D3	2	0.90	0.45	0.81				
		LB on DT	4	0.75	0.45	1.35				
				<i>Total</i>			1,229.62	Sqm	₹ 494.50	1.00
	A 5.9.6	Columns, pillars, piers, abutments, posts and struts.								
4.3.4		Columns above the Ground floor level								
		C2	30	1.80	3.30	178.20				
		C2	20	1.80	1.50	54.00				
		C3	4	1.70	3.30	22.44				
		C3	9	1.70	1.50	22.95				
		C4	4	1.10	3.30	14.52				
		Cc1	14	1.88	1.50	39.56				
		Cc2	4	1.41	3.00	16.96				
				<i>Total</i>			348.63	Sqm	₹ 650.00	1.00
	A 5.9.16	Edges of slabs and breaks in floors and walls.								
4.3.5	A 5.9.16.2	Above 20 cm wide								
		Ground Floor slab edges	1	580.97	0.175	101.67				
				<i>Total</i>			101.67	Sqm	₹ 654.80	1.00
				<i>Total of Shuttering:</i>					₹ 20,76,246.85	
4.4		BRICKWORK								

	<b>A 6.4</b>	Brick work with common burnt clay(non modular) bricks of class designation 7.5 in superstructure above plinth level upto floor V level in all shape and sizes in										
<b>4.4.1</b>	<b>A 6.4.2</b>	Cement mortar 1:6 (1 cement : 6 Coarse sand)										
		External wall of 150 mm thick Wall	1		60.23	0.150	3.30	29.81				
		Internal wall of 150 mm thick Wall	1		38.03	0.150	3.30	18.82				
					Sum of the above			48.63				
		Deduction of opening										
		<i>D</i>	1		1.45	0.150	2.10	0.46				
		<i>D2</i>	4		1.00	0.150	2.10	1.26				
		<i>D3</i>	2		0.90	0.150	2.10	0.57				
		<i>DT</i>	4		0.75	0.150	2.10	0.95				
		<i>V</i>	1		1.50	0.150	0.60	0.14				
					Deduction			3.36				
					Total after deduction			45.27	Cum	₹ 10,492.90	1.00	₹ 4,75,013.58
<b>4.5</b>	<b>WOOD WORK</b>											
<b>4.5.1</b>	<b>A 9.1</b>	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia and length (hold fast lugs or dash fastener shall be paid for separately).										
	<b>A 9.1.3</b>	Kiln seasoned and chemically treated Hollock wood	Set	Nos.								
			<i>D3</i>	2	1	0.90	0.10	0.13	0.02			
				2	2	0.13	0.10	2.10	0.11			
					Total			0.13	Cum	₹ 76,054.50	1.00	₹ 9,696.95
<b>4.5.2</b>	<b>A 9.5</b>	Providing and fixing panalled or panalled and glazed shutters for doors, windows and clerestory windows fixing with butt hinges of required size with necessary screws, excluding panelling which will be paid for separately, all complete as per direction of the Engineer-in-charge. (Note:- Butt hinges and necessary screws shall be paid separately)										
	<b>A 9.5.2</b>	Kiln seasoned and chemically treated Hollock wood	Set									
	<b>A 9.5.2.1</b>	35 mm thick shutters										
			<i>D3</i>	2		0.90	2.10	3.78				
					Total			3.78	Sqm	₹ 2,400.10	1.00	₹ 9,072.38

4.5.3	A 9.53	Providing 40 x 5 mm flat iron hold fasts 40 cm long including fixing to frame with 10mm diameter bolts, nuts and wooden plugs and embeddings in cement concrete block 30 x 10 x 15 cm 1:3:6 mix (1 cement :3 coarse sand :6 graded stone aggregate 20 mm nominal size).	Set	Nos.								
		D3	2	4				8				
					<i>Total</i>			8	Each	₹ 168.40	1.00	₹ 1,347.20
4.5.4	A 9.71.1	Providing and fixing ISI :12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :	Set	Nos.								
		125 x 64 x 2.50 mm										
		D3	2	6				12				
					<i>Total</i>			12	Each	₹ 103.70	1.00	₹ 1,244.40
4.5.5	A 9.74	Providing and fixing bright finished brass tower bolts(barrel type) with necessary screws etc. complete :	Set	Nos.								
	A 9.74.1	250 mm x 10 mm										
		D3	2	6				12				
					<i>Total</i>			12	Each	₹ 426.30	1.00	₹ 5,115.60
4.5.6	A 9.88	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary	Set	Nos.								
		D3	2	6				12				
					<i>Total</i>			12	Each	₹ 893.60	1.00	₹ 10,723.20
4.5.7	A 9.165	Providing and fixing bright/matt finished stainless steel handles of approved quality and make with necessary screws etc. all complete	Set	Nos.								
	A 9.165.1	125 mm										
		D3	2	6				12				
					<i>Total</i>			12	Each	₹ 111.80	1.00	₹ 1,341.60
4.5.8	A 9.101	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete	Set	Nos.								
	A 9.101.1	Single rubber stopper										
		D3	2	6				12				
					<i>Total</i>			12	Each	₹ 37.60	1.00	₹ 451.20
4.5.9	A 9.83	Providing and fixing aluminium die cast body tubular type universal hydraulic door closer (having brand logo with ISI : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door weight upto 701 mm to 1000 mm) with double speed adjustment with necessary accessories and screws etc. complete.	Set	Nos.								
		D3	2	6				12				

		Total	12	Each	₹ 1,128.70	1.00	₹ 13,544.40
		Total of Wood work:				₹ 52,536.93	
4.6	<b>ALUMINIUM WINDOWS, VENTILATION &amp; GLAZING CURTAIN WALL</b>						
A 21.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixed with rawl plug and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junction, at top, bottom and sides with required PVC/ neoprene felt etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing/ panelling, C.P. brass/ satinless steel screws, all complete as per architectural drawing.(Glazing and panelling to be paid separately)						
A 21.1.1	For fixed portion	Product Brand: Jindal Aluminium Ltd.					
A 21.1.1.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 microns)	Section name	No.	Length	Kg/m	Quantity	
	D (1500 mm x 2100 mm)-Double leaf						
	Frame - Single groove	19570	4	2.10	0.911	7.65	
	Frame Top & Side	19537	1	1.50	1.911	2.87	
	Bottom Frame	20619	1	1.50	0.974	1.46	
	Shutter top & bottom	20545	2	1.50	0.354	1.06	
	Shutter side (interlock)	20546	4	2.10	0.346	2.91	
	Clip	19352	4	2.10	0.097	0.81	
		19352	2	1.50	0.097	0.29	
		Sum of the above 1 unit				17.05	
		Total (2 unit)				34.11	
	D2 (1000 mm x 2100 mm)-Single leaf						
	Frame - Single groove	19570	2	2.10	0.911	3.83	
	Frame Top & Side	19537	1	1.00	1.911	1.91	
	Bottom Frame	20619	1	1.00	0.974	0.97	
	Shutter top & bottom	20545	2	1.00	0.354	0.71	
	Shutter side (interlock)	20546	2	2.10	0.346	1.45	
	Clip	19352	2	2.10	0.097	0.41	
		19352	2	1.00	0.097	0.19	
		Sum of the above 1 unit				9.47	
		Total (4 unit)				37.90	
	DT (750 mm x 2100 mm)-Single leaf						

4.6.1	Frame - Single groove	19570	2	2.10		0.911	3.83			
	Frame Top & Side	19537	1	0.75		1.911	1.43			
	Bottom Frame	20619	1	0.75		0.974	0.73			
	Shutter top & bottom	20545	2	0.75		0.354	0.53			
	Shutter side (interlock)	20546	2	2.10		0.346	1.45			
	Clip	19352	2	2.10		0.097	0.41			
		19352	2	0.75		0.097	0.15			
				Sum of the above 1 unit			8.53			
				Total (4 unit)			34.11			
	W1 (1800 mm x 2100 mm)									
	Frame Top & Side	20681	4	2.10		0.659	5.54			
		20681	1	1.80		0.659	1.19			
	Bottom Frame	20619	1	1.80		0.695	1.25			
	Shutter top & bottom	20545	2	1.80		0.354	1.27			
	Shutter side (interlock)	20546	6	2.10		0.346	4.36			
	Clip	19352	6	2.10		0.097	1.22			
		19352	2	1.80		0.097	0.35			
				Sum of the above 1 unit			15.18			
				Total (6 unit)			91.07			
	WK (1800 mm x 1500 mm)									
	Frame Top & Side	20681	3	1.50		0.659	2.97			
		20681	1	1.80		0.659	1.19			
	Bottom Frame	20619	1	1.80		0.695	1.25			
	Shutter top & bottom	20545	2	1.80		0.354	1.27			
	Shutter side (interlock)	20546	4	1.50		0.346	2.08			
	Clip	19352	4	1.50		0.097	0.58			
		19352	2	1.80		0.097	0.35			
				Sum of the above 1 unit			9.68			
	Pivoted Ventillation									
	V(3755 mm x 600 mm)									
	Top Frame	20653	1	3.76		0.354	1.33			
	Bottom Frame	20653	1	3.76		0.354	1.33			
	Side Frame	20653	2	0.60		0.354	0.42			
	Shutter with Glass	20653	2	3.76		0.350	2.63			
		20653	2	0.60		0.350	0.42			
	Clip	19352	2	3.76		0.097	0.73			
		19352	2	0.60		0.097	0.12			
				Sum of the above 1 unit			6.98			
				Total (1 unit)			6.98			

	V1(3000 mm x 600 mm)								
	Top Frame	20653	1	3.00	0.354	1.06			
	Bottom Frame	20653	1	3.00	0.354	1.06			
	Side Frame	20653	2	0.60	0.354	0.42			
	Shutter with Glass	20653	2	3.00	0.350	2.10			
		20653	2	0.60	0.350	0.42			
	Clip	19352	2	3.00	0.097	0.58			
		19352	2	0.60	0.097	0.12			
				Sum of the above 1 unit		5.77			
				Total (1 unit)		5.77			
	V2(900 mm x 600 mm)								
	Top Frame	20653	1	0.90	0.354	0.32			
	Bottom Frame	20653	1	0.90	0.354	0.32			
	Side Frame	20653	2	0.60	0.354	0.42			
	Shutter with Glass	20653	2	0.90	0.350	0.63			
		20653	2	0.60	0.350	0.42			
	Clip	19352	2	0.90	0.097	0.17			
		19352	2	0.60	0.097	0.12			
				Sum of the above 1 unit		2.40			
				Total (2 unit)		4.81			
	VS(2000 mm x 600 mm)								
	Top Frame	20653	1	2.00	0.354	0.71			
	Bottom Frame	20653	1	2.00	0.354	0.71			
	Side Frame	20653	2	0.60	0.354	0.42			
	Shutter with Glass	20653	2	2.00	0.350	1.40			
		20653	2	0.60	0.350	0.42			
	Clip	19352	2	2.00	0.097	0.39			
		19352	2	0.60	0.097	0.12			
				Sum of the above 1 unit		4.17			
				Total (2 unit)		8.33			
	DW2(7245 mm x 3100 mm)								
	Frame- Single groove	19554	2	7.25	1.292	18.72			
		19527	6	3.10	0.881	16.39			
	Shutter-Top	20653	2	7.25	1.501	21.75			
	Shutter-Bottom	19503	2	7.25	1.511	21.89			
	Shutter-Vertical	19505	6	3.10	1.509	28.07			
	Glazing Clip	19352	2	7.25	0.097	1.41			
		19352	6	3.10	0.097	1.80			
				Sum of the above 1 unit		110.03			

						Total (2 unit)	220.06				
		Partition wall (PW2)-(4050 mm x 3100 mm)									
		Frame- Single groove	20088	4	4.05	0.274	3.98				
		Frame- Double groove	20089	4	3.10	0.316	4.29				
		Shutter-Bottom	19503	4	3.10	1.511	20.49				
		Shutter-Vertical	19505	4	4.05	1.509	24.45				
		Glazing Clip	19352	4	3.10	0.097	1.32				
			19352	4	4.05	0.097	1.57				
					Sum of the above 1 unit		56.09				
					Total (1 unit)		56.09				
						Total	564.98	Kg	₹ 510.70	1	
										₹ 2,88,534.54	
4.6.2	A 21.1.2	For shutters of doors, windows, ventilators including providing and fixing hinges/pivots and making provision for fixing of fitting wherever required including the cost of EPDM rubber/neoprene gasket required (Fitting shall be paid seperately)									
	A 21.1.2.2	Powder coated aluminium (minimum thickness of powder costing 50									
		D (1500 mm x 2100 mm)-Double leaf		2	1.50	1.05	3.15				
		D2 (1000 mm x 2100 mm)-Single leaf		4	1.00	1.05	4.20				
		DT (750 mm x 2100 mm)-Single leaf		4	0.75	1.05	3.15				
		W1(1800 mm x 2100 mm)		6	1.80	0.00	0.00				
		WK (1800 mm x 1500 mm)		1	1.80	0.00	0.00				
		V(3755 mm x 600 mm)		1	3.76	0.00	0.00				
		V1(3000 mm x 600 mm)		1	3.00	0.00	0.00				
		V2(900 mm x 600 mm)		2	0.90	0.00	0.00				
		DW2(7245 mm x 3100 mm)		4	7.25	3.10	89.84				
		Partition wall (PW2)-(4050 mm x 3100 mm)		1	4.05	1.55	6.28				
A 21.3					Total		106.62	Sqm	₹ 584.40	1	₹ 62,306.10
	A 21.3	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with PVC/ neoprene gasket etc. complete as per the architectural drawings (Cost of aliminium snap beading shall be paid in basic item)									
	A 21.3.1	With float glass panes of 4.00 mm thickness (weight not less than 10									
		D (1500 mm x 2100 mm)-Double leaf		2	1.50	0.00	0.00				
		D2 (1000 mm x 2100 mm)-Single leaf		4	1.00	0.00	0.00				
		DT (750 mm x 2100 mm)-Single leaf		4	0.75	0.00	0.00				
		W1(1800 mm x 2100 mm)		6	1.80	2.10	22.68				
		WK (1800 mm x 1500 mm)		1	1.80	1.50	2.70				
		V(3755 mm x 600 mm)		1	3.76	0.60	2.25				
		V1(3000 mm x 600 mm)		1	3.00	0.60	1.80				

4.6.3	V2(900 mm x 600 mm)	2	0.90	0.60	1.08			
	DW2(7245 mm x 3100 mm)	4	7.25	0.00	0.00			
	Partition wall (PW2)-(4050 mm x 3100 mm)	1	4.05	0.00	0.00			
			<i>Total</i>		30.51	Sqm	₹ 1,034.90	1 ₹ 31,577.90
	A 21.3.2 With float glass panes of 5.5 mm thickness (weight not less than 12.5							
	D (1500 mm x 2100 mm)-Double leaf	2	1.50	1.05	3.15			
	D2 (1000 mm x 2100 mm)-Single leaf	4	1.00	1.05	4.20			
	DT (750 mm x 2100 mm)-Single leaf	4	0.75	1.05	3.15			
	W1(1800 mm x 2100 mm)	6	0.75	2.10	9.45			
	WK (1800 mm x 1500 mm)	1	1.80	1.50	2.70			
4.6.4	V(3755 mm x 600 mm)	1	3.76	0.00	0.00			
	V1(3000 mm x 600 mm)	1	3.00	0.00	0.00			
	V2(900 mm x 600 mm)	2	0.90	0.00	0.00			
	DW2(7245 mm x 3100 mm)	4	7.25	0.00	0.00			
	Partition wall (PW2)-(4050 mm x 3100 mm)	1	4.05	1.55	6.28			
			<i>Total</i>		28.93	Sqm	₹ 1,376.20	1 ₹ 39,810.03
	A 21.12 Providing and fixing aluminium tubular handle bar 32 mm outer dia. 3.0 mm thick & 2100 mm long with SS screws etc. complete							
	A 21.12.2 Powder coated minimum thickness 50 microns aluminium tubular handle bar		Nos.					
	D (1500 mm x 2100 mm)-Double leaf	2	4		8			
	D2 (1000 mm x 2100 mm)-Single leaf	4	2		8			
4.6.5	DW2(7245 mm x 3100 mm)	4	2		8			
			<i>Total</i>		24	Sqm	₹ 643.10	1 ₹ 15,434.40
	A 21.19 Filling the gap in between aluminium/stone/wood frame & adjacent RCC/ Brick/Stone/ wood/ ceramic/ Gypsum work by providing weather/ structural non sag elastomeric PU sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-Charge complete, complying to ASTM-C 920, DIN 1854-F and ISO-11600..							
	A 21.19.2 Upto 10 mm depth and 10 mm width							
	D (1500 mm x 2100 mm)-Double leaf	2	6.35		12.70			
	D2 (1000 mm x 2100 mm)-Single leaf	4	5.35		21			
	DT (750 mm x 2100 mm)-Single leaf	4	4.85		19			
	W1(1800 mm x 2100 mm)	6	6.95		42			
	WK (1800 mm x 1500 mm)	1	7.85		8			
	V(3755 mm x 600 mm)	1	8.76		9			

		Partition wall (PW2)-(4050 mm x 3100 mm)	1	12.45		12			
				Total		200.57	Metre	₹ 183.60	₹ 36,824.65
	A 21.11	Providing and fixing stainless steel (SS-304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-charge complete							
	A 21.11.4	510 x 19 mm		Nos.					
4.5.6		W1(1800 mm x 2100 mm)	6	0		0			
		WK (1800 mm x 1500 mm)	1	1		1			
		V(3755 mm x 600 mm)	1	2		2			
		V1(3000 mm x 600 mm)	1	2		2			
		V2(900 mm x 600 mm)	2	2		4			
		DW2(7245 mm x 3100 mm)	4	2		8			
				Total		17	Each	₹ 829.00	₹ 14,093.00
	A 9.71	Providing and fixing ISI :12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :		Nos.					
4.5.7	A 9.71.1	125 x 64 x 2.50 mm							
		D (1500 mm x 2100 mm)-Double leaf	2	8		16			
		D2 (1000 mm x 2100 mm)-Single leaf	4	4		16			
		DT (750 mm x 2100 mm)-Single leaf	4	4		16			
		W1(1800 mm x 2100 mm)	6	6		36			
		WK (1800 mm x 1500 mm)	1	6		6			
		V(3755 mm x 600 mm)	1	6		6			
		V1(3000 mm x 600 mm)	1	6		6			
		V2(900 mm x 600 mm)	2	4		8			
		DW2(7245 mm x 3100 mm)	4	8		32			
		Partition wall (PW2)-(4050 mm x 3100 mm)	1	8		8			
				Total		150	each	₹ 103.70	1 ₹ 15,555.00
	A 9.74	Providing and fixing bright finished brass tower bolts(barrel type) with necessary screws etc. complete :		Nos.					
4.5.8	A 9.74.1	250 mm x 10 mm							
		D (1500 mm x 2100 mm)-Double leaf	2	2		4			
		D2 (1000 mm x 2100 mm)-Single leaf	4	2		8			
		DT (750 mm x 2100 mm)-Single leaf	4	2		8			
		W1(1800 mm x 2100 mm)	6	2		12			
		WK (1800 mm x 1500 mm)	1	2		2			
		V(3755 mm x 600 mm)	1	2		2			
		V1(3000 mm x 600 mm)	1	2		2			
		V2(900 mm x 600 mm)	2	2		4			

		DW2(7245 mm x 3100 mm)	4	2		8			
					Total		50 each	₹ 426.30	1 ₹ 21,315.00
	A 9.88	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete :		Nos.					
4.5.9		D (1500 mm x 2100 mm)-Double leaf	2	1		2			
		D2 (1000 mm x 2100 mm)-Single leaf	4	1		4			
		DW2(7245 mm x 3100 mm)	4	1		4			
				Total		10 each	₹ 893.60	1 ₹ 8,936.00	
	A 9.100	Providing and fixing aluminium handles ISI marked anodised (anodic coating not less than grade AC 10 as per IS :1868 ) transparent or dyed to required color or shade with nuts and screws etc. complete.		Nos.					
	A 9.100.1	125 mm							
4.5.10		DT (750 mm x 2100 mm)-Single leaf	4	2		8			
		W1(1800 mm x 2100 mm)	6	4		24			
		WK (1800 mm x 1500 mm)	1	4		4			
		V(3755 mm x 600 mm)	1	4		4			
		V1(3000 mm x 600 mm)	1	4		4			
		V2(900 mm x 600 mm)	2	2		4			
				Total		48 each	₹ 66.50	1 ₹ 3,192.00	
	A 9.101	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete		Nos.					
4.5.11	A 9.101.2	Twin rubber stopper							
		D (1500 mm x 2100 mm)-Double leaf	2	2		4			
		D2 (1000 mm x 2100 mm)-Single leaf	4	1		4			
		DW2(7245 mm x 3100 mm)	4	1		4			
				Total		12 each	₹ 69.90	1 ₹ 838.80	
									Total of Aluminium Windows, Ventilation & Glazing Curtain Wall: ₹ 5,38,417.42
4.6		PLASTERING							
		<i>Exterior Plaster</i>							
	A 13.3	20 mm cement plaster of mix:							
	A 13.3.1	1:4 (1 cement : 4 coarse sand)		Sides					
		External wall	1	1	60.23	3.30	198.74		
					5 % extra for column & beam		9.94		
		Deduction of opening		Sides					
4.6.1			D	1	1	1.45	2.10	3.05	
			D2	4	1	1.00	2.10	8.40	

		D3	2	1	0.90		2.10	3.78				
		DT	4	1	0.75		2.10	6.30				
		V	1	2	1.50		0.60	1.80				
						Deduction		23.33				
						Total exterior plastering		185.35 Sqm	₹ 348.00	1.00	₹ 64,503.41	
	<i>Interior Plaster</i>											
A 13.1	12 mm cement plaster of mix:											
A 13.1.1	1:4 (1 cement : 4 fine sand)					Sides						
	External wall of 150 mm thick Wall	1	1	60.23		3.30	198.74					
	Internal wall of 150 mm thick Wall	1	2	38.03		3.30	250.97					
	Ceiling Surface area											
	Staircase ceiling (measured from CAD drawing)	1			33.52		33.52					
	Staircase ceiling (measured from CAD drawing)	1			31.67		31.67					
	Kitchen (measured from CAD drawing)	1			24.26		24.26					
	Pantry (measured from CAD drawing)	1			34.05		34.05					
	Café (measured from CAD drawing)	1			117.98		117.98					
	Corridor (measured from CAD drawing)	1			11.88		11.88					
						Sum of the above		703.07				
						5 % extra for column & beam		35.15				
		D	1	2	1.45		2.10	6.09				
		D2	4	2	1.00		2.10	16.80				
		D3	2	2	0.90		2.10	7.56				
		DT	4	2	0.75		2.10	12.60				
		V	1	2	1.50		0.60	1.80				
						Deduction		44.85				
						Total interior plastering		693.37 Sqm	₹ 250.30	1.00	₹ 1,73,550.73	
									Total of Plastering :		₹ 2,38,054.14	
4.7		TILING & CLADDING										
4.7.1	A 8.31	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer), of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dados over 12 mm thick bed of Cement Mortar 1:3 (1 cement : coarse sand) and jointing with grey cement slurry @ 3.3kg per Sqm including pointing in white cement mixed with pigment of matching shade complete										
		His Toilet (measured from CAD drawing)	1			19.59	1.95	38.20				
		Her Toilet (measured from CAD drawing)	1			18.35	1.95	35.78				

			Total	73.98	Sqm	₹ 1,090.40	1.00	₹ 80,671.06
4.7.2	A 12.55	Providing and fixing heat resistant Terrace Tiles(300x300x20 mm) with SRI (Solar refractive index)> 78, solar reflection> 0.70 and initial emittance> 0.75 on waterproof and slope surface of terrace, laid on 20 mm thick cement sand mortar in the ratio of 1:4 (1 cement : 4 coarse sand) and grouting the joints with mix of white cement and marble powder in the ratio of 1:1, including rubbing and polishing of the surface upto 3 cuts complete, including providing skirting upto 150 mm height along the parapet walls in the same manner:						
		Open roof floor surafce area (measured from CAD drawing)	1	978.45		978.45		
		Lift roof surafce area (measured from CAD drawing)	1	4.29		4.29		
				5 % extra for skirting		49.14		
				Total	1031.87	Sqm	₹ 1,566.80	1.00 ₹ 16,16,740.77
4.7.3	A 11.41	Providing and laying Vitrified tiles in different sizes (thickness to be specified by the manufacturer), with water absorbtion less than than 0.08% and conforming to IS:15622, of approved make, in all colours and shades, in skirting, riser of steps, over 20 mm thick bed of cement mortar 1:4 (1cement : 4 coarse sand), jointing with grey cement slurry @3.3 kg/sqm including grouting the joints with white cement and matching pigments etc.,complete.						
	A 11.41.2	Size of tiles 600 x 600 mm						
		Kitchen (measured from CAD drawing)	1	24.26		24.26		
		Pantry (measured from CAD drawing)	1	34.05		34.05		
		Café (measured from CAD drawing)	1	117.98		117.98		
		Corridor (measured from CAD drawing)	1	11.88		11.88		
				Sum of the above	188.17			
				5 % extra for skirting	9.41			
4.8				Total	197.58	Sqm	₹ 1,671.00	1.00 ₹ 3,30,153.67
							Total of Tiling & Cladding:	₹ 20,27,565.51
4.8	<b>STEEL WORK</b>							

4.8.1	A 10.28	Providing and fixing stainless steel (Grade 304) railing made of hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary accessories and stainless steel nuts and bolts complete, i/c fixing the railings with necessary accessories and stainless steel dash fasteners, stainless steel bolts etc., of required size, on the top of the floor or the sided of waist slab with suitable arrangement as per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.)									
		Grade 304 Stainless steel(Sch-5S)	Set	Nos.	Length		Kg/m	Quantity			
		Terrace railing									
		Post : 73.0 mm(OD), wall thickness- 2.11 mm	1	115	1.00		3.69	424.20			
		Top rail : 88.9 mm(OD), wall thickness- 2.11 mm	1	1	137.95		4.51	622.15			
		Mid rail : 33.4 mm(OD), wall thickness- 1.65 mm	1	1	137.45		1.30	178.69			
		Bottom rail: 33.4 mm(OD), wall thickness- 1.65 mm	1	1	137.45		1.30	178.69			
					Total		1403.72	Kg	₹ 627.40	1.00	₹ 8,80,694.40
4.8.2	A 10.16	Steel work in built up tubular (round, square or rectangular hollow tubes etc) trusses etc., including cutting hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete									
	A 10.16.1	Hot finished welded type tubes									
		Truss T4									
		Main rafter- CHS 80 NB(H): 4.85 mm thick, 10.1 Kg/m	8		44.28		10.10	3577.82			
		Bottom Chord- CHS 80 NB(H): 4.85 mm thick, 10.1 Kg/m	8		6.30		10.10	509.04			
		King post- CHS 65 NB(H): 4.47 mm thick, 7.90 Kg/m	2		3.12		7.90	49.22			
		Struts- CHS 50 NB (H): 4.47 mm thick, 6.17 Kg/m	8		25.93		6.17	1279.90			
		Ties- CHS 50 NB (H): 4.47 mm thick, 6.17 Kg/m	8		18.18		6.17	897.36			
		Purlins & runners									
		Purlin- CHS 50 NB (H): 4.47 mm thick, 6.17 Kg/m	8		7.87		6.17	388.46			
		Purlin- CHS 50 NB (H): 4.47 mm thick, 6.17 Kg/m	8		7.19		6.17	354.85			
		Purlin- CHS 50 NB (H): 4.47 mm thick, 6.17 Kg/m	8		6.32		6.17	311.96			
		Purlin- CHS 50 NB (H): 4.47 mm thick, 6.17 Kg/m	8		5.45		6.17	269.01			
		Purlin- CHS 50 NB (H): 4.47 mm thick, 6.17 Kg/m	8		4.58		6.17	226.07			
		Purlin- CHS 50 NB (H): 4.47 mm thick, 6.17 Kg/m	8		3.71		6.17	183.13			
		Purlin- CHS 50 NB (H): 4.47 mm thick, 6.17 Kg/m	8		2.84		6.17	140.18			
		Purlin- CHS 50 NB (H): 4.47 mm thick, 6.17 Kg/m	8		1.97		6.17	97.24			
		Purlin- CHS 50 NB (H): 4.47 mm thick, 6.17 Kg/m	8		1.10		6.17	54.30			
		Purlin- CHS 50 NB (H): 4.47 mm thick, 6.17 Kg/m	8		0.23		6.17	11.35			

	Runners- CHS 40 NB (H): 4.05 mm thick, 4.43 Kg/m	4	1.97	0.43	3.39				
			Total of Trusses	8,353.28	Kg	₹ 148.40	1.00	₹ 12,39,627.23	
						Total of Steel work:		₹ 21,20,321.63	
4.9	FALSE CEILING								
	A 12.54	Providing and fixing G.I clip in Metal ceiling System of 600 x 600 mm module which includes providing and fixing "C" wall angle of size 20 x 30 x 20 mm made of 0.5 mm thick pre painted steel along the perimeter of the room with help of nylon sleeves and wooden screws at 300 mm c/c, .... all sections to be galvanised @120 gms/ sqm (both side inclusive), fixing with clip in tiles into spring T with:							
4.9.1	A 12.54.2	G.I Metal ceiling clip in plain Beveled edge Global white colour tiles of size 600 x 600, and 0.5 mm thick with 25 mm height; made of G.I sheet having galvanising of 100 gms/sqm (both sides inclusives) and 20 % perforation area with 1.8 mm dia holes and having NRC of 0.5, electro statically polyester powder coated of thickness 60 microns (minimum), including factory painted after bending and perforation.							
	Ceiling Surface area								
	His Toilet (measured from CAD drawing)	1	19.59		19.59				
	Her Toilet (measured from CAD drawing)	1	18.35		18.35				
	Kitchen (measured from CAD drawing)	1	24.26		24.26				
	Pantry (measured from CAD drawing)	1	34.05		34.05				
	Café (measured from CAD drawing)	1	117.98		117.98				
	Corridor (measured from CAD drawing)	1	11.88		11.88				
			Total	226.11	Sqm	₹ 2,046.40	1.00	₹ 4,62,711.50	
	A 12.35	Providing and fixing thermal insulation of ceiling (under deck insulation) with Resin Bonded fibre glass wool conforming to IS: 8183. density 16 kg/m^3, 50 mm thick, wrapped in 200 G virgin polythene bags placed over existing false ceiling and held in position by crisis-crossing G.I wire.							
4.9.2	Ceiling Surface area								
	His Toilet (measured from CAD drawing)	1	19.59		19.59				
	Her Toilet (measured from CAD drawing)	1	18.35		18.35				
	Kitchen (measured from CAD drawing)	1	24.26		24.26				
	Pantry (measured from CAD drawing)	1	34.05		34.05				
	Café (measured from CAD drawing)	1	117.98		117.98				
	Corridor (measured from CAD drawing)	1	11.88		11.88				
			Total	226.11	Sqm	₹ 262.20	1.00	₹ 59,286.04	
						Total of False ceiling:		₹ 5,21,997.55	
4.10	ROOFING								

4.10.1	A 12.67	Providing and fixing of 10 mm thick multiwall laxan polycarbonate sheet of approved IS quality to be done with specially designed aluminium profile section and EPDM rubber to make the entire system water tight, silicon sealants to be used complete with fitting and fixing in place excluding the cost of purlins, rafters and trusses									
			Atrium roof (measured from CAD drawing)	1	300.62	300.62					
					Total	300.62	Sqm	₹ 3,319.40	1.00	₹ 9,97,878.03	
										Total of Roofing:	₹ 9,97,878.03
4.11	<b>PAINTING</b>										
4.11.1	A 13.43	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface:									
	A 13.43.1	Water thinnable cement primer	1		Sum of exterior plaster & interior plaster Surface area	185.35	Sqm	₹ 54.20	1.00	₹ 10,046.22	
4.11.2	A 13.45	Finishing walls with water proofing cement paint "snowcem - plus" of M/s snowcem India Ltd. Or equivalent of required shade:									
	A 13.45.1	New work (Two or more coat applied @ 3.84 kg/10 sqm)	1		same area as exterior	185.35	Sqm	₹ 243.20	1.00	₹ 45,078.24	
4.11.3	A 13.26	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete.	1		Interior plaster- Toilet Cladding	619.39	Sqm	₹ 183.60	1.00	₹ 1,13,719.61	
4.11.4	A 13.41	Distempering with oil bounded washable distemper of approved brand and manufacture to give an even shade									
	A 13.41.1	New work (two or more coats) over and includung priming coat with cement	1		Interior plaster- Toilet	619.39	Sqm	₹ 134.00	1.00	₹ 82,997.98	
4.11.5	A13.50	Applying priming coat :									
	A13.50.1	With ready mixed pink or grey primer of approved brand and manufacture on wood work (hard and soft wood)									
		Wooden Doors	1		Surface area on both sides of wooden Doors	7.56	Sqm	₹ 53.00	1.00	₹ 400.68	
4.11.6	A13.62	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:									
	A13.62.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture									
		Wooden Doors	1		Surface area on both sides of wooden Doors	7.56	Sqm	₹ 163.80	1.00	₹ 1,238.33	
					Total of Painting:			₹ 2,53,481.06			
					Total Cost of Third Floor			₹ 1,85,09,059.41			

**DETAILED ESTIMATE-5**

<b>Name of the Work:</b> Construction of Nagaland Innovation Hub for Startup at Chūmukedima <b>Item of the Work:</b> Sanitary Insallation and Internal Water Supply																				
<b>Note:</b> Item No. refers to the serial item number of this estimate. Schedule Number refers to the corresponding item number in the Nagaland PWD Schedule of Rates, 2021																				
Item No	Schedule Number	Description of Item	No.	Part No.	Measurements				Unit	Rate	Multiplication factor (MF)	Amount in Rupees								
					Length	Width	Depth	Quantity												
<b>5. SANITARY INSTALLATION &amp; INTERNAL WATER SUPPLY</b>																				
<b>A. SANITARY INSTALLATION</b>																				
5.1	A 17.10	Providing and fixing Salem Stainless Steel A ISI 304 (18/8) kitchen sink as per I.S. 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required																		
	A 17.10.1	Kitchen sink with drain board																		
	A 17.10.1.2	510 x1040 mm bowl depth 225 mm																		
		Third Floor	1	1				1												
				Total				1	Each	₹ 6,356.00	1.00	₹ 6,356.00								
5.2	A 17.7A	Providing and fixing wash basin with C.I. brackets, 15 mm C.P brass single hole basin mixer of approved quality and make, including painting of fittings and brackets, cutting and making good the walls wherever require:																		
		White Vitreous China basin size 550 X 400 mm with a pair of 15 mm C.P.brass single hole basin mixer																		
		Ground Floor	1	7				7												
		First Floor	1	4				4												
		Second Floor	1	4				4												
		Third Floor	1	4				4												
			Total				19	Each	₹ 4,317.60	1.00	₹ 82,034.40									
5.3	A 17.69	Providing and fixing PTMT Waste Coupling for wash basin and sink. of approved quality, colour and make (Prayag or equivalent)																		
	A 17.69.2	Waste coupling 38 mm of 83 mm length and 77 mm breadth, weighing not less than 60 gms.																		
		Ground Floor	1	7				7												
		First Floor	1	4				4												
		Second Floor	1	4				4												
		Third Floor	1	5				5												
			Total				20	Each	₹ 136.30	1.00	₹ 2,726.00									
	A 17.8	Providing and fixing white vitreous china pedestal for wash basin completely recessed at the back for the reception of pipes and fittings.																		

5.4	Ground Floor	1	7			7				
	First Floor	1	4			4				
	Second Floor	1	4			4				
	Third Floor	1	5			5				
					Total		20	Each	₹ 4,357.10	1.00 ₹ 87,142.00
5.5	A 17.70	Providing and fixing PTMT Bottle Trap for Wash basin and sink (Prayag or equivalent)								
	A 17.70.2	Bottle trap 38 mm single piece moulded with height of 270 mm, effective length of tail pipe 265 mm from the centre of the waste coupling 77 mm breadth with 25 mm minimum water seal, weighting not less than 270 gms.								
	Ground Floor	1	7			7				
	First Floor	1	4			4				
	Second Floor	1	4			4				
5.6	Third Floor	1	5			5				
					Total		20	Each	₹ 400.90	1.00 ₹ 8,018.00
	A 17.28	Providing and fixing P.V.C waste pipe for sink or wash basin including P.V.C. waste fitting complete.								
	A 17.28.2.2	Flexible pipe 40 mm dia								
	Ground Floor	1	7			7				
5.7	First Floor	1	4			4				
	Second Floor	1	4			4				
	Third Floor	1	5			5				
					Total		20	Each	₹ 53.90	1.00 ₹ 1,078.00
	A 17.68	Providing and fixing vitreous china dual purpose closet suitable for use as squatting pan or European type water closet (Anglo Indian W.C pan) with seat lid with C.P. brass hinges and rubber buffers, ; 10 litre low level flushing cistern with fitting and brackets, 40mm flush bend 20mm overflow pipe with specials of standard make and mosquito proof coupling of approved municipal design complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required.								
5.8	A 17.68.1	White vitreous china dual purpose WC pan with white solid plastic seat and lid with white vitreous china flushing cistern and C.P. flush bend.								
	Ground Floor	1	6			6				
	First Floor	1	4			4				
	Second Floor	1	4			4				
	Third Floor	1	4			4				
5.8					Total		18	Each	₹ 10,508.60	1.00 ₹ 1,89,154.80
	A 17.34.1	Providing and fixing toilet paper holder. C.P. brass								
	Ground Floor	1	8			8				
	First Floor	1	6			6				
	Second Floor	1	6			6				

		Third Floor	1	6			6				
					Total		26	Each	₹ 565.90	1.00	₹ 14,713.40
	A 17.32	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing.									
5.9	A 17.32.4	Rectangular shape 1500 x 450 mm									
		Ground Floor	1	7			7				
		First Floor	1	4			4				
		Second Floor	1	4			4				
		Third Floor	1	4			4				
					Total		19	Each	₹ 1,877.20	1.00	₹ 35,666.80
	A 17.73	Providng and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arangement of approved quality colour and make (Prayag or equivalent).									
5.10	A 17.73.2	600 mm long towel rail with total length of 645mm, width 78mm and effective height of 88mm, weighing not less than 190gms.									
		Ground Floor	1	3			3				
		First Floor	1	3			3				
		Second Floor	1	3			3				
		Third Floor	1	4			4				
					Total		13	Each	₹ 2,200.00	1.00	₹ 28,600.00
	A 17.74	Providing and fixing PTMT shelf 440 mm long, 124 mm width and 36 mm height of approved quality, colour and make, weighing not less than 300gms (Prayag or equivalent).									
5.11		Ground Floor	1	5			5				
		First Floor	1	2			2				
		Second Floor	1	2			2				
		Third Floor	1	2			2				
					Total		11	Each	₹ 2,253.90	1.00	₹ 24,792.90
	A 17.35	Providing and fixing soil, waste and vent pipes.									
5.12	A 17.35.1	100 mm dia.									
	A 17.35.1.1	Sand cast iron S&S pipe IS:1729									
		Ground Floor	1	6			6				
		First Floor	1	4			4				
		Second Floor	1	4			4				
		Third Floor	1	4			4				
					Total		18	Each	₹ 19,784.20	1.00	₹ 3,56,115.60
	A 17.36	Providing and filling the joints with spun yarn cement slurry and cement mortar 1:2 ( 1 cement :2 fine sand) in S.C. 1 /C. I. pipes									
	A 17.36.2	For 100 mm dia. Pipe									

5.13	Ground Floor	1	30			30				
	First Floor	1	20			20				
	Second Floor	1	20			20				
	Third Floor	1	20			20				
					Total		90	Each	₹ 133.10	1.00
5.14	A 17.37	Providing and fixing M.S. holder-bat clamps of approved design to Sand Cast iron/cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x10cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including cost of cutting holes and making good the wall etc.								
	A 17.37.1	For 100 mm dia. Pipe								
		Ground Floor	1	30			30			
		First Floor	1	20			20			
		Second Floor	1	20			20			
		Third Floor	1	20			20			
5.15	A 17.38	Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.								
	A 17.38.1	100 mm								
	A 17.38.1.1	Sand cast iron S&S pipe IS:1729								
		Ground Floor	1	7			7			
		First Floor	1	5			5			
5.16		Second Floor	1	5			5			
		Third Floor	1	5			5			
	A 17.42	Providing and fixing double equal plain junction of required degree.								
	A 17.42	100x100x100 mm								
	A 17.42.1.1	Sand cast iron S&S pipe IS:1729								
5.17		Ground Floor	1	8			8			
		First Floor	1	6			6			
		Second Floor	1	6			6			
		Third Floor	1	6			6			
					Total		26	Each	₹ 949.40	1.00
	A 17.29	Providing and fixing 100 mm sand cast Iron grating for gully trap.								
		Ground Floor	1	10			10			
		First Floor	1	8			8			
		Second Floor	1	8			8			
		Third Floor	1	8			8			
					Total		34	Each	₹ 38.50	1.00
									Total of Sanitary installation:	₹ 9,09,900.10

<b>B. INTERNAL WATER SUPPLY</b>												
		A 18.7	Providing and fixing chlorinated polyvinyl chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain and brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling and testing of joints complete as per direction of engineer-in-charge. <u>External work</u>									
5.18		A 18.7.3	25 mm nominal outer dia pipes									
			Underground water tank to water tank room	1	60			60				
			Ground Floor	1	30			30				
			First Floor	1	25			25				
			Second Floor	1	20			20				
			Third Floor	1	15			15				
						Total			150	Metre	₹ 324.90	1.00
												₹ 48,735.00
		A 18.8	Providing and fixing chlorinated polyvinyl chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain and brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of engineer-in-charge. Concealed work, including cutting chases and <u>making good the walls etc.</u>									
5.19			Concealed work, including cutting chases and making good the walls etc.									
		A 18.8.3	25 mm dia. nominal outer dia pipes									
			Ground Floor	1	57.9			57.90				
			First Floor	1	37.7			37.70				
			Second Floor	1	37.7			37.70				
			Third Floor	1	37.7			37.70				
						Total			171	Metre	₹ 437.10	1.00
												₹ 74,744.10
		A 18.50	Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms.									
		A 18.50.1	15 mm nominal bore									
5.20			Ground Floor	1	14			14				
			First Floor	1	8			8				
			Second Floor	1	8			8				
			Third Floor	1	8			8				
						Total			38	Each	₹ 711.60	1.00
												₹ 27,040.80
		A 18.16	Providing and fixing brass stop cock of approved quality									
		A 18.16.2	20 mm nominal bore									
5.21			Ground Floor	1	6			6				
			First Floor	1	4			4				
			Second Floor	1	4			4				

		Third Floor	1	4			4					
					Total		18	Each	₹ 375.40	1.00	₹ 6,757.20	
	A 18.18	Providing and fixing ball valve (brass) of approved quality high or low pressure, with plastic floats complete.										
	A 18.18.2	20 mm nominal bore										
5.22		Ground Floor	1	2			2					
		First Floor	1	2			2					
		Second Floor	1	2			2					
		Third Floor	1	2			2					
					Total		8	Each	₹ 444.40	1.00	₹ 3,555.20	
5.23	A 18.65	Providing and fixing PTMT Soap Dish Holder having length of 138 mm, breadth 102 mm. height of 75 mm with concealed fitting arrangements. weighing not less than 106 gms										
		Ground Floor	1	14			14					
		First Floor	1	8			8					
		Second Floor	1	8			8					
		Third Floor	1	8			8					
					Total		38	Each	₹ 150.00	1.00	₹ 5,700.00	
5.24	A 18.58	Providing and fixing PTMT grating of approved quality, colour.										
	A 18.58.1	Circular type										
	A 18.58.1.1	100 mm nominal dia										
		Ground Floor	1	4			4					
		First Floor	1	2			2					
		Second Floor	1	2			2					
		Third Floor	1	2			2					
					Total		10	Each	₹ 43.60	1.00	₹ 436.00	
5.25	A 18.48A	Providing and fixing rectangular high density polyethylene water storage loft tank with cover, conforming to ISI:12701, colour opaque white or as approved by Engineer-in-Charge. The rates includes making necessary holes for inlet, outlet and overflow pipes. The base support i/c fittings & fixtures for tank shall be paid separately.										
		2 Units of 2000 Litres capacity water tank	6	2000			12000					
					Total		12000	Litres	₹ 10.10	1.00	₹ 1,21,200.00	
5.26	A 18.77	Cutting holes upto 15 x 15 cm in R.C.C floors and roofs for passing drains pipe etc. and repairing the hole after insertion of drain pipe etc. with cement concrete 1:2:4 (1 cement:2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including finishing complete so as to make it leak proof.										
		Holes for drain pipes	1	20			20					
					Total		20	Each	₹ 320.10	1.00	₹ 6,402.00	
									Total of Internal Water Supply:		₹ 2,94,570.30	
									Total (Sanitary installation and internal water supply)		₹ 12,04,470.40	

DETAILED ESTIMATE-6

Name of the Work: Construction of Nagaland Innovation Hub for Startup at Chūmukedima														
Item of the Work: Septic tank														
Item No	Schedule Number	Description of Item	No.	Part No.	Measurements				Unit	Rate	Multiplication factor (MF)			
					Length	Width	Depth	Quantity						
<b>6. SEPTIC TANK</b>														
6.1	<b>EARTHWORK</b>													
6.1.1		Earth work in excavation in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.												
A 2.8.1	All kinds of soil.	Septic Tank	1		4.50	2.40	2.58	27.81						
		Inlet box	1		0.60	0.75	0.55	0.25						
		Soak Pit	1		1.35	1.35	1.65	3.01						
					<i>Total</i>			31.06	Cum	₹ 278.20	1.00			
											₹ 8,642.18			
A 2.26	Extra for every additional lift of 1.5 m or part thereof in:													
A 2.26.1	All kinds of soil.	Septic Tank	1		4.50	2.40	1.20	12.96	Cum	₹ 72.90	1.00			
6.2	<b>FOUNDATION</b>													
A 4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto the plinth level :													
A 4.1.5	1:3:6 (1 Cement : 3 coarse sand : 6 stone aggregate 20 mm)	Septic Tank	1		4.35	2.25	0.075	0.73						
		Inlet box	1		0.60	0.75	0.075	0.03						
		Soak Pit	1		1.20	1.20	0.075	0.11						
					<i>Total</i>			0.88	Cum	₹ 8,744.80	1.00			
											₹ 7,658.81			
A 11.1	Brick on edge flooring with bricks of class designation 7.5 on a bed of 12 mm cement mortar, including filling the joints with same mortar, with common burnt clay non-modular bricks :													
A 11.1.2	1:6 (1 cement : 6 coarse sand )	Septic Tank	1		4.25	2.10		8.93						
		Inlet box	1		0.45	0.75		0.34						
					<i>Total</i>			9.26	Sqm	₹ 1,220.90	1.00			
											₹ 11,308.59			

6.3		<b>STEEL</b>									
	A 5.22	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete .									
	A 5.22.4	Hot rolled deform bars (Tor)									
		<b>Septic Tank</b>	No. of set	No. of bar	Length		Kg/m	Quantity	Unit		
		<b>Cover Slab(one way slab, Ly/Lx≥2)</b>									
		Top reinforcement of upper portion(transverse),12 mm @ 100 mm c/c	1	44	2.96		0.89	114.69			
		Bottom reinforcement of upper portion(longitudinal),12 mm @ 100 mm c/c	1	22	5.21		0.89	102.06			
		Top reinforcement of lower portion,12 mm @ 100 mm c/c	1	22	5.11		0.89	100.10			
		Bottom reinforcement of lower portion,12 mm @ 100 mm c/c	1	44	2.96		0.89	114.69			
		<b>Bottom bed Slab(one way slab, Ly/Lx≥2)</b>									
		Top reinforcement of upper portion(transverse),12 mm @ 100 mm c/c	1	44	2.96		0.89	114.69			
		Bottom reinforcement of upper portion(longitudinal),12 mm @ 100 mm c/c	1	22	5.11		0.89	100.10			
		Top reinforcement of lower portion,12 mm @ 100 mm c/c	1	22	5.11		0.89	100.10			
		Bottom reinforcement of lower portion,12 mm @ 100 mm c/c	1	44	2.96		0.89	114.69			
6.3.1		<b>Soak pit</b>									
		<b>Cover Slab(Two way slab, Ly/Lx&lt;2)</b>									
		Top reinforcement of upper portion(transverse),12 mm @ 100 mm c/c	1	14	2.21		0.89	27.57			
		Bottom reinforcement of upper portion,12 mm @ 100 mm c/c	1	14	2.21		0.89	27.57			
		Lintel									
		12 mm #	2	4	2.96		0.889	21.07			
		Stirrups 8 mm # @ 100 mm C/C	2	31	0.50		0.395	12.00			
		Total of Steel reinforcement (in tonne)						949.35			
		Binding wire of 13 kg for each tonne of rod						12.34			
								Total of Steel Reinforcement:	961.69	Kg	₹ 90.10
									1.00		₹ 86,648.10
6.4		<b>SHUTTERING</b>									
	A 5.9	Centering and shuttering including strutting, propping etc. and removal of form for:									
	A 5.9.3	Suspended floors, roofs, landings, balconies and access platform									
6.4.1		<b>Septic Tank</b>									
		Slab Cover	1		4.25	2.10		8.93			
		Inlet box side bed cover	1		2.45		0.125	0.31			
								Total	9.23	Sqm	₹ 612.90
									1.00		₹ 5,657.83
6.4.2	A 5.9.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.									
		Lintel	1		2.10		0.50	1.05			
								Total	1.05	Sqm	₹ 494.50
									1.00		₹ 519.23
	A 5.9.16	Edges of slabs and breaks in floors and walls.									
	A 5.9.16.2	Above 20 cm wide									

6.4.3		Side of slab cover	1	12.75	0.150	1.91				
		Bottom side cover	1	12.75	0.125	1.59				
				<i>Total</i>			3.51	Sqm	₹ 654.80	1.00
6.5	<b>REINFORCE CONCRETE</b>									₹ 2,295.89
A 5.1	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centring, shuttering, finishing and reinforcement - ( All work upto plinth level )	No.		Length	Breath	Height	Quantity			
	A 5.1.2 1 : 1.5 : 3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)									
6.5.1	Septic Tank									
	Slab Cover	1	4.55	2.10	0.175	1.67				
	Bottom slab(bed)	1	4.55	2.10	0.150	1.43				
	Inlet box Bed	1	0.60	0.75	0.125	0.06				
	Lintel	1	2.10	0.15	0.150	0.05				
	Deduction for 450 x 450 mm square cover	3	0.45	0.45	0.125	0.08				
6.6			<i>Total</i>			3.13	Cum	₹ 10,432.80	1.00	₹ 32,685.31
	<b>BRICKWORK</b>									
A 6.1	Brick work with F.P.S. bricks of class designation 75 in foundation and plinth in:									
	A 6.1.1 Cement mortar 1:4 (1 cement : 4 fine sand)									
6.6.1	Septic Tank									
	Side wall	2	4.55	0.230	1.95	4.08				
	Shorter wall	2	1.49	0.230	1.95	1.34				
	Baffle wall	1	1.64	0.150	1.58	0.39				
		1	1.64	0.150	1.65	0.41				
	Inlet box	1	1.65	0.150	0.55	0.14				
6.7			<i>Total</i>			6.35	Cum	₹ 9,603.10	1.00	₹ 60,954.28
	<b>PLASTERING</b>									
A 13.7	20 mm cement plaster finished with a floating coat of neat cement of mix:									
	A 13.7.1 1:3 (1 Cement : 3 fine sand)									
6.7.1	Septic Tank		Sides							
	Side wall	2	1	4.55	1.95	17.75				
	Shorter wall	2	1	1.49	1.95	5.81				
	Baffle wall	1	2	1.64	1.58	5.17				
		1	2	1.64	1.65	5.41				
	Inlet box	1	1	1.65	0.55	0.91				
6.8			<i>Total</i>			35.04	Sqm	₹ 327.60	1.00	₹ 11,479.60
	<b>MANHOLE COVER</b>									

	<b>A 19.19</b>	Providing and fixing in position precast R.C.C manhole cover and frame of required shape and approved quality									
6.8.1	<b>A 19.19.1</b>	L D-2.5									
	<b>A 19.19.1.2</b>	Square shape 450 mm internal dimensions									
			3				3	Each	<b>₹ 1,326.60</b>	1.00	₹ 3,979.80
6.9		<b>SOAK PIT</b>									
6.9.1	<b>A 19.32</b>	Making soak pit 2.5 m diameter 3.0 metre deep with 45 x 45 cm dry brick honey comb shaft with bricks and S.W drain pipe 100 mm diameter, 1.8 m long complete as per standard design.									
	<b>A 19.32.1</b>	With common burnt clay F.P.S (non-modular) bricks of class designation 7.6	1				1	Each	<b>₹ 25,855.80</b>	1.00	₹ 25,855.80
			<b>Total of One Septic Tank</b>								<b>₹ 2,58,630.20</b>
			<b>Total of Three Septic Tank</b>								<b>₹ 7,75,890.59</b>

DETAILED ESTIMATE-7

<b>Name of the Work:</b> Construction of Nagaland Innovation Hub for Startup at Chūmukedima <b>Item of the Work:</b> Underground rain water harvesting tank												
<b>Note:</b>		Item No. refers to the serial item number of this estimate.										
		Schedule Number refers to the corresponding item number in the Nagaland PWD Schedule of Rates, 2021										
Item No	Schedule Number	Description of Item	No.	Part No.	Measurements				Unit	Rate	Multiplication factor (MF)	Amount in Rupees
<b>7. UNDERGROUND RAIN WATER HARVESTING TANK</b>												
7.1	<b>EARTHWORK</b>											
7.1.1	A 2.6	Earth work in excavation by mechanical means (Hydraulic excavator / manual means over an areas exceeding 30 cm in depth, 1.5 m in width or 10 sqm on plan) including getting out and disposal of excavated earth lead upto 50 m lift upto 1.5 m, as directed by the Engineer-in-charge.										
	A 2.6.1	All type of soil.										
		Earth cutting for water tank	1		6.60	3.60	3.65	86.72				
					<i>Total</i>			86.72	Cum	₹ 220.90	1.00	₹ 19,157.33
7.2	<b>FOUNDATION</b>											
7.2.1	A 4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto the plinth level :										
	A 4.1.5	1:3:6 (1 Cement : 3 coarse sand : 6 stone aggregate 20 mm)										
		Water Tank Flooring	1		6.6	3.6	0.075	1.78				
		Filteration Bottom floor	1		0.90	0.75	0.1	0.68				
					<i>Total</i>			1.78	Cum	₹ 8,744.80	1.00	₹ 15,583.23
7.2.2	A 11.1	Brick on edge flooring with bricks of class designation 7.5 on a bed of 12 mm cement mortar, including filling the joints with same mortar, with common burnt clay non-modular bricks :										
	A 11.1.2	1:6 (1 cement : 6 coarse sand )										
		Water Tank Flooring	1		6.60	3.60		23.76				
		Filteration Bottom floor	1		0.90	0.75		0.68				
					<i>Total</i>			24.44	Sqm	₹ 1,220.90	1.00	₹ 29,832.69
7.3	<b>REINFORCE CONCRETE</b>											
7.3.1	A 5.1	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centring, shuttering, finishing and reinforcement - ( All work upto plinth level )										
	A 5.1.2	1 : 1.5 : 3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)										
		Water Tank Flooring	1		6.40	3.40	0.25	5.44				

	<i>Longer Wall</i>	1	6.00	0.20	3.00	3.60					
	<i>Shorter wall</i>	1	3.00	0.20	3.00	1.80					
	<i>Deduction of opening</i>	1	0.45	0.45	0.20	0.04					
			<i>Total</i>			10.88	<i>Cum</i>	<b>₹ 10,432.80</b>	1.00	₹ 1,13,514.08	
7.3.2	A 5.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope upto 15°, landings, balconies, shelves, chajjas, lintels, bands. plain window sills, staircases and spiral stair cases upto floor five level excluding the cost of centring, shuttering, finishing and reinforcement with 1:1.5:3 (1 cement: 1.5 coarse sand: 3 graded stone aggregate 20 mm nominal size).									
		<i>Slab Cover</i>	1	6.40	3.40	0.20	4.35				
				<i>Total</i>			4.35	<i>Cum</i>	<b>₹ 12,139.40</b>	1.00	₹ 52,830.67
7.3.3	A 19.19	Providing and fixing in position precast R.C.C manhole cover and frame of required shape and approved quality									
	A 19.19.1	L D-2.5									
	A 19.19.1.2	Square shape 450 mm internal dimensions									
7.4	<b>STEEL</b>		2				2	<i>Each</i>	<b>₹ 1,326.60</b>	1.00	₹ 2,653.20
7.4.1	A 5.22	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete .									
	A 5.22.4	Hot rolled deform bars (Tor)	No.	No. of bar	length	Kg/m	Quantity	Unit			
		<i>Slab Cover</i>									
		Top reinforcement of upper portion(transverse),12 mm @ 150 mm c/c	1	87	1.01	0.89	78.12				
		Top reinforcement of upper portion(longitudinal),12 mm @ 150 mm c/c	1	47	1.76	0.89	73.93				
		Distribution bars of upper portion(longitudinal),12 mm @ 150 mm c/c	1	12	6.64	0.89	72.89				
		Distribution bars of upper portion(Transverse),12 mm @ 150 mm c/c	1	22	3.64	0.89	72.35				
		Distribution bars of lower portion,12 mm @ 150 mm c/c	1	18	6.57	0.89	105.25				
		Bottom reinforcement of lower portion,12 mm @ 150 mm c/c	1	44	3.57	0.89	138.74				
		<i>Longer wall</i>									
		Vertical reinforcement, 12 mm # @ 175 mm C/C	2	75	3.43	0.889	458.53				
		Shear reinforcement link, 12 mm # @ 225 mm C/C	2	36	6.76	0.889	436.13				
		one legged Shear reinforcement link, 10 mm	2	7	0.34	0.620	2.97				
		<i>Shorter wall</i>									
		Vertical reinforcement, 12 mm # @ 175 mm C/C	2	36	3.43	0.889	221.42				
		Shear reinforcement link, 12 mm # @ 225 mm C/C	2	36	3.36	0.889	216.77				
		one legged Shear reinforcement link, 10 mm	2	7	0.34	0.620	2.97				
		<i>Bottom slab</i>									
		Top reinforcement of upper portion(transverse),12 mm @ 150 mm c/c	1	87	1.01	0.89	78.12				
		Top reinforcement of upper portion(longitudinal),12 mm @ 150 mm c/c	1	47	1.76	0.89	73.93				

	Distribution bars of upper portion(longitudinal),12 mm @ 150 mm c/c	1	12	6.64	0.89	72.89				
	Distribution bars of upper portion(Transverse),12 mm @ 150 mm c/c	1	22	3.64	0.89	72.35				
	Distribution bars of lower portion,12 mm @ 150 mm c/c	1	18	6.57	0.89	105.25				
	Bottom reinforcement of lower portion,12 mm @ 150 mm c/c	1	44	3.57	0.89	138.74				
	<i>Total weight of steel bars</i>					2421.34				
	<i>13 kg of binding wire per tonne of steel bars</i>					31.48				
							<i>Total of Steel Reinforcement:</i>	2,452.82	Kg	₹ 90.10
										1.00 ₹ 2,20,998.97
7.5										
		<b>SHUTTERING</b>								
	A 5.9	Centring and shuttering including strutting, propping etc. and removal of form for:								
7.5.1	A 5.9.2	Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.								
		<i>Longer Wall</i>	1	12.00		3.00	36.00			
		<i>Shorter wall</i>	1	6.00		3.00	18.00			
						<i>Total</i>	54.00	Sqm	₹ 544.10	1.00 ₹ 29,381.40
7.5.2	A 5.9.3	Suspended floors, roofs, landings, balconies and access platform								
		Slab Cover	1	6.00	3.00		18.00			
						<i>Total</i>	18.00	Sqm	₹ 612.90	1.00 ₹ 11,032.20
7.6										
		<b>BRICKWORK</b>								
	A 6.1	Brick work with F.P.S. bricks of class designation 75 in foundation and plinth in:								
7.6.1	A 6.1.1	Cement mortar 1:4 (1 cement : 4 fine sand)								
		<i>In X-direction (longer wall side)</i>	1	6.40	0.125	3.00	2.40			
		<i>In Y-direction (shorter wall side)</i>	1	3.00	0.125	3.00	1.13			
						<i>Sum of the above</i>	3.53	Cum	₹ 9,603.10	1.00 ₹ 33,850.93
7.6.2	A 6.4	Brick work with common burnt clay(non modular) bricks of class designation 7.5 in superstructure above plinth level upto floor V level in all shape and sizes in								
	A 6.4.1	Cement mortar 1:6 (1 cement : 4 coarse sand)								
		<i>Filteration unit (125 mm thick Wall )</i>								
		Along X-direction	1	0.75	0.125	0.45	0.04			
		Along Y-direction	1	0.65	0.125	0.45	0.04			
						<i>Total after deduction</i>	0.08	Cum	₹ 10,802.40	1.00 ₹ 850.69
7.7										
		<b>PLASTERING</b>								
		<i>Exterior Plaster</i>								
7.7.1	A 13.3	20 mm Cement plaster of mix :								
	A 13.3.1	1:4 (1 Cement : 4 Fine sand)								
		<i>Filteration unit</i>			Sides					
		Along X-direction	1	2	0.75		0.45	0.68		
		Along Y-direction	1	1	0.90		0.45	0.41		
						<i>Total exterior plastering</i>	1.08	Sqm	₹ 348.00	1.00 ₹ 375.84
		<i>Interior Plaster</i>								

	<b>A 13.7</b>	12 mm Cement plaster finished with a floating coat of neat cement of mix :										
	<b>A 13.7.1</b>	1:4 (1 cement : 4 fine sand)										
		<i>Filteration unit</i>		Sides								
		Along X-direction	1	2	0.63		0.45	0.56				
		Along Y-direction	1	1	0.65		0.45	0.29				
		Floor plaster	1	1	0.65	0.625		0.41				
		<i>Wall height: 3 m</i>										
		<i>In X-direction (longer wall side)</i>	1	1	12.00		3.00	36.00				
		<i>In Y-direction (shorter wall side)</i>	1	1	6.00		3.00	18.00				
		Floor plaster	1	1	6.00	12.000		72.00				
						<i>Total interior plastering</i>		127.26	Sqm	<b>₹ 327.60</b>	1.00	<b>₹ 41,690.79</b>
<b>7.7.2</b>	<b>7.8</b>	<b>STEEL WORK</b>										
	<b>A 10.25</b>	Steel work welded in built up sections/framed work including cutting hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc.as required.										
	<b>7.8.1</b>	<b>A 10.25.2</b> In gratings, frames.ladders, railings, brackets, gates & similar works.										
		Ladder- .6 m width		No.	Length		Kg/m^2	Quantity				
		Thread : 65 mm(OD), wall thickness- 4.77 mm (Heavy)	9		1.35		4.77	57.96				
						<i>Total</i>		57.96	Kg	<b>₹ 142.80</b>	1.00	<b>₹ 8,276.05</b>
<b>7.9</b>		<b>PAINTING</b>										
	<b>A 13.50</b>	Applying priming coat :										
	<b>7.9.1</b>	<b>A 13.50.4</b> With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel work (second coat)					<i>Perimeter</i>					
		Thread ties : 65 mm(OD), wall thickness- 4.77 mm (Heavy)	9		1.35	0.41	4.96					
						<i>Total</i>		4.96	Sqm	<b>₹ 25.20</b>	1.00	<b>₹ 124.98</b>
	<b>7.9.2</b>	<b>A13.62</b> Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:										
		<b>A13.62.1</b> Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture					Surface area	4.96	Sqm	<b>₹ 163.80</b>	1.00	<b>₹ 812.39</b>
<b>7.10</b>		<b>RAINFALL PIPE</b>										
	<b>7.10.1</b>	<b>A 18.9</b> Providing and fixing chlorinated polyvinyl chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain and brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer-in-charge.										
		External work										
		<b>A 18.9.8</b> 75 mm nominal outer dia Pipes	1		95.00		95.00		Metre	<b>₹ 1,729.00</b>	1.00	<b>₹ 1,64,255.00</b>
						<i>Total (Underground Rain Water Harvesting Tank)</i>						<b>₹ 7,45,220.44</b>

**G. ANNEXURE-I*****Non-Schedule items***

**Name of the Work:** Construction of Nagaland Innovation Hub for Startup at Chümukedima

**Item of work:** Design, Supply, Installation, testing and commissioning of Elevator

Sl. No.	Description	Quantity	Rate	Amount (Inclusive of GST)
1	Design, Supply, Installation, testing and commissioning of Elevator (As per quotation enclosed)	1	₹ 37,52,400.00	₹ 37,52,400.00
2	Add 10 % for contractors profit and overhead charges on "Sl.No.1"			₹ 3,75,240.00
<b>Grand Total</b>				₹ 41,27,640.00
<b>Say</b>				₹ 41,28,000.00
(In words): Rupees Forty One Lakh Twenty Eight Thousand only				



Ref. No.: RW/CHU/006A/DP/063/2025-26

Date: 28/12/2024

To,

The Director

Diectorate of Information Technology & Communication (IT&C)s  
Kohima , Nagaland.

**Sub: Quotation for supply & installation of 1 No.(G+3) SS Automatic Door Lift with Machine Room at Nagaland Innovation Hub for Startup**

Dear Sir,

With reference to your verbal inquiry on the above, we take pleasure in quoting our competitive rate and enclose all the necessary documents pertaining along with your required configuration for your kind perusal and needful action.

In this context we would like to inform you that our equipment is 100% quality tested and spares are readily available to all major cities of the country, which will ultimately help you in maintaining your lift at a cheaper cost.

For any further information please feel free to contact us.

Thanking You.

Warm Regards.



**R.W Enterprise**

Add.: H.NO. 429, SHOP NO.1, TAJEN AO ROAD, DUNCAN BASTI, IMLI GHAS JUNCTION, DIMAPUR, NAGALAND, 797112

## Specifications of the lift:

<b>SI.</b>	<b>Particulars</b>	<b>Passenger Lift</b>
1	Capacity to lift	06 Passengers, 408 Kgs
2	Speed	0.65m/sec
3	Travel Height	G+3
4	Floor Rise about	12 m approx.
5	Stops	04 No's, all openings on the same side
6	Control	ACVVVF Micro Processor Controlled
7	Operation	Automatic
8	Power supply required	400/440 volts, 3 phase hertz alternating current
9	Light Supply	220V, 1 phase, 50 c/s, 2 core (SPN) cable, A.C
10	Traction Machine	5 HP Sharp (CE CERTIFIED)
11	Auxiliary	220V Single Phase.
12	Cabin finish	SS Automatic Cabin
13	Cabin Door	SS Automatic Door
14	Landing doors	SS Automatic Door
15	Drive	VVVF drive
16	False (Car) Ceiling	SS
17	Handrail on rear side	Yes
18	Car Size (Inside)	ISS
19	Shaft size	1500 MM x 1800 MM
20	Required Hoist way	BIS
21	Main Hoist Rope	13 mm x 3 ropes (Usha Martin)
22	Automatic Rescue device (ARD)	Yes, as per IS 14665 Standard
23	Door opening	750 mm x 2000 mm
24	Signal	Emergency alarm bell, Emergency Light, UP/DN. Indication at all landings, Luminous call indicator in car for signaling the attendant, Digital car in position indicator at all landings
25	Brake	Heavy duty electromagnetic.

**AMF (Automatic mains failure) will be workable with Lift Panel by Customer Generator**

**Price:**

Basic price of SS Auto door lift with Machine Room - Rs.31,80,000 /- Only.

GST 18% - Rs. 5,72,400/- Only.

**Grand Total - Rs. 37,52,400/- Only**

**In Words: Thirty Seven Lakhs Fifty-Two Thousand and Four Hundred Rupees Only/-**

**NOTE: THIS RATE MAY VARY AS PER THE YEAR OF INSTALLATION**

This price includes supply, erection, commissioning and delivery of the lifts at your site.

<b>MAIN ITEM LIST OF AUTO DOOR LIFT</b>		
<b>Sl. No.</b>	<b>NAME OF THE ITEM</b>	<b>MANUFACTURER</b>
1.	Guide Rail (Car + Counter)	Marze
2.	Auto Door Gate	Synergy
3.	Main Hoist Way Rope 15mm	Usha Marteen
4.	Governor Rope 10mm	Usha Marteen
5.	Traction machine unit	Sharp
6.	Gate Lock	Synergy
7.	Microprocessor Controller with V3F Drive, Resistance	Visesh Engineering, Fuji
8.	COP (Control Operating Pannel)	Visesh Engineering
9.	LOP (Landing Operating Pannel)	Visesh Engineering
10.	Reed Switch with Reed Bar	TVS
11.	Limit Switch with Limit Bar	CTMG
12.	Auto Sensor Set	WECO
13.	0.75mm Multi stand Wire	Param Flesh
14.	4mm Wire	Great White
15.	5 pair Telephone Cable	Great White
16.	Travelling Cable 12 Core	Rubicon
17.	Travelling Cable 4 Core	Rubicon
18.	Light, Fan, Buzzer, Hooter	Syska, Remex

## **Payment terms:**

1. 60% of the contract amount must be obtained within one month of the date of signing of contract before the materials are ready for dispatch from the factory.
2. 30 % of the contract amount on the date of delivery of the materials at the site.
3. 10% of the contract amount on the completion of the work before commissioning and handing it over to the client.



<b>H. ANNEXURE-II</b>				
<b>Non-Schedule items</b>				
<b>Name of the Work:</b> Construction of Nagaland Innovation Hub for Startup at Chūmukedima				
<b>Item of work:</b> Design, Supply & Installation of exterior cladding with Greenlam board, thickness:6 mm				
Sl. No.	Description	Quantity	Rate	Amount (Inclusive of GST)
1	Design, Supply, Installation, testing and commissioning of Elevator (As per quotation enclosed)	1	₹ 3,14,200.00	₹ 3,14,200.00
2	Add 10 % for contractors profit and overhead charges on "Sl.No.1"			₹ 31,420.00
<b>Grand Total</b>				₹ 3,45,620.00
<b>Say</b>				₹ 3,46,000.00
(In words): Rupees Three Lakh Forty Six Thousand only				


**CLADS**  
EXTERIOR GRADE COMPACT LAMINATE

DATE : 28/01/2025

To

Reff. No. GRLM/CLADS/21/25-26

**PRICE QUOTATION**

SLNO	PARTICULAR	CLAD SIZE	PRICE /SQFT	QTY	PRICE/PCS	TOTAL
1	<b>SOLID AND WOODGRAINS RANGE 6MM (DESIGN-9206/9201)</b>	<b>10 X 4.25</b>	<b>420</b>	<b>12</b>	<b>17850</b>	<b>214200</b>
2	<b>INSTALLATION INCLUDING ALUMINIUM CHANNEL</b>		200	500 Sqft		100000
	<b>TOTAL AMOUNT INCLUDING INSTALLATION</b>					<b>314200</b>
	<b>50 PCS RIVETS COMPLEMENTING HARDWARE WITH EACH BOARDS (FREE)</b>					

**T & c**

1. Price is inclusive GST. Transportation from Guwahati Godown to Site in client scope.
2. Price are Ex-godown Guwahati only.
3. Material Fitting & fixeing in Client scope
4. Validity of quotation 15days
5. DELIVERY TIME WILL BE 30DAYS FROM THE DATE OF PO AND PAYMENTS.
6. PAYMENT TERMS WILL BE 100% ADVANCE.
7. MATERIALS WILL BE BILL FROM OUR AUTHORISED DEALER ONLY. WILL INFORM DEALER DETAILS AND BANK DETAILS DURING PO.

**Specification:-**

- 1 Unbeatable ALL WEATHER warranty for 12 years
  - 2 Excellent light fastness property with 3 layers of UV protection.
  - 3 Use of exterior grade Décor paper imported from Europe
  - 4 Resists fough weather conditions. Can withstand extreme temperature conditions from -60 C to + 80 C
  - 5 Anti-Graffiti
  - 6 Chemical -Resistant
  - 7 Save upto 30% energy
  - 8 Leading choice of people in over 100 countries
  - 9 Dirt-Resistant and easy to clean
  - 10 Environment friendly green DNA with **no urea content**
  - 11 Fire-Retardent
- Complementing Hardware (Rivets) 50 pieces per sheet. STANDARD SIZE:- 4.25' X 10', THICKNESS- 12 6MM, FINISH- SUEDE

Best Regards,  
**AHITO SUMI**  
Area Manager  
GREENLAM INDUSTRIES LIMITED,  
GUWAHATI.

**Name of Work -" Construction of Nagaland Innovation Hub for Startup"****BILL OF QUANTITY INTERNAL ELECTRIFICATION WORKS****Ground Floor**

<b>Sl. No.</b>	<b>Description of Works</b>	<b>Unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Amount</b>
1	Wiring with 3/22 mm <sup>2</sup> PVC insulated copper in surface casing capping , providing and fixing piano type switch and all other assessories as required:				
	i) Light point Short	Pt	20.00	₹ 320.00	₹ 6,400.00
	ii) Light point Medium	Pt	30.00	₹ 430.00	₹ 12,900.00
2	iii) Light point Long	Pt	30.00	₹ 573.00	₹ 17,190.00
	Wiring for 3 pin 5 amp with 3/22 sq.mm PVC insulated copper cable in service casing capping				
3	i) Medium points	Pt	30.00	₹ 215.00	₹ 6,450.00
	Wiring for 3 pin 15 amp woth 4 sq.mm single core cable in surface conduit i.e providing and fixing 15 amp switch socket and earthing the third pin.				
	i) Medium points	Pt	20.00	₹ 767.00	₹ 15,340.00
4	ii) Long points	Pt	15.00	₹ 867.00	₹ 13,005.00
	Wiring for circuit/sub-mains with single core copper cable in casing recessed etc.				
	i) 1.5 sq.mm PVC Cable	Mtr	1000.00	₹ 56.00	₹ 56,000.00
5	ii) 2.5 sq.mm PVC Cable	Mtr	1500.00	₹ 65.00	₹ 97,500.00
	iii) 4 sq.mm PVC Cable	Mtr	2000.00	₹ 78.00	₹ 1,56,000.00
	iv) 6 sq.mm PVC Cable	Mtr	1500.00	₹ 97.00	₹ 1,45,500.00
	iv) 10 sq.mm PVC Cable	Mtr	1000.00	₹ 140.00	₹ 1,40,000.00
	Supplying & fixing i.e. drilling holes, connection etc as required				
5	i) Isolator 40 Amp, 2 Pole	Each	8.00	₹ 550.00	₹ 4,400.00
	ii) Isolator 63 Amp, 2 Pole	Each	8.00	₹ 1,170.00	₹ 9,360.00
	iii) M.C.B. 10 Amp	Each	20.00	₹ 240.00	₹ 4,800.00
	iv) M.C.B. 20 Amp	Each	30.00	₹ 320.00	₹ 9,600.00
	v) Busbar 100 A 4 Pole	Each	4.00	₹ 5,200.00	₹ 20,800.00
	vi) Busbar 200 A 4 Pole	Each	4.00	₹ 12,000.00	₹ 48,000.00
	vii) Kit Kat 100A	Each	2.00	₹ 1,036.64	₹ 2,073.28
	viii) Kit Kat 63A	Each	3.00	₹ 623.78	₹ 1,871.34
	ix) MCB Box 8 way D/door	Each	6.00	₹ 4,900.00	₹ 29,400.00
	x) MCB Box 12 way D/door	Each	8.00	₹ 5,800.00	₹ 46,400.00
	xi) 3-Ph Change Over Switch 300A	Each	1.00	₹ 36,000.00	₹ 36,000.00
	xii) Ceiling fan , Havells	Set	15.00	₹ 2,500.00	₹ 37,500.00
	xiii) 15W Ceiling LED lights	Each	45.00	₹ 1,800.00	₹ 81,000.00
	xiv) 15W Tube lights	Each	10.00	₹ 800.00	₹ 8,000.00
	xv) 70 W LED outdoor Downighter	Each	12.00	₹ 11,950.00	₹ 1,43,400.00

xvi) Exhaust fan with all accessories , etc as required	Each	10.00	₹ 2,500.00	₹ 25,000.00
xvii) Calling Bell	Each	5.00	₹ 1,200.00	₹ 6,000.00
xviii) 2.5 Split Tonne AC of Approved Make including Copper Piping	Each	6.00	₹ 63,250.00	₹ 3,79,500.00
6 Earthing with 2 nos of copper plate 2'x2'x3mm with 25x3mm copper strip with necessary enclosure on the tp using salt, charcoal, sand etc as reqd.	Set	3.00	₹ 7,500.00	₹ 22,500.00
7 LT AC Panel as per specification with 250A TPN MCCB as incomer, 2x200 A MCCB, 2x100A TP, 5x63A TP, 4x32A TP, 4x32A DP, 1x32A DP MCB	Each	1.00	₹ 4,62,500.00	₹ 4,62,500.00
8 Supplying with fitting and fixing panel mounting open execution 50KA 415V 50Hz 4P MCCB (Ics=Icu, adjustable Ir setting 0.5-1, neutral adjustable with earth fault protection and with rotary handle Without enclosure of the following capacity complete with making necessary connection as approved, specified and directed by the deptt. 50 KA 415V 50 Hz 4P MCCB (C&S, Indo Asian, HPL, V-Guard or equivalent make as approved by the 400A	Each	1.00	₹ 1,15,000.00	₹ 1,15,000.00
9 Supplying with fitting and fixing Four Pole 415V Front handle operated On Load Change over switch (IP-20 protection powder painted sheet steel enclosure fitted on angle iron frame of the following capacity complete with making necessary connection as approved, specified and directed by the deptt. C&S, Havells, Indo Asian, HPL, GECO make) 250A	Each	1.00	₹ 73,500.00	₹ 73,500.00
10 Supply, installation, testing and commissioning of diesel generating set three phase, water cooled with AMF control panel, 62.5 KVA, 415V.	Each	1.00	₹ 11,89,000.00	₹ 11,89,000.00
11 Supply of XLPE insulated power cable (conforming IS-7098 Part-I) 1100 Volt grade, 1 core/2 core/31/2 core/4 core ISI marked with alu. stranded /solid conductor 31/2 core armoured 185 sq. mm	Mtr	40.00	₹ 1,722.00	₹ 68,880.00
12 Laying of one number armoured / unarmoured power cable 1.1.KV grade of size exceeding 25sq. mm but not exceeding 180 sq. mm direct in ground including excavation in all soil/ murrum /soft rock, sand cushioning, protective covering and refilling the pit etc. as required	Mtr	40.00	₹ 230.00	₹ 9,200.00
13 Supplying and fixing crimping type alum. lugs as per I.S.S. specification suitable for following size of cable with alu./copper solid/stranded conductor evenly crimped with high/pressure tool and connected to switch gear/bus/M.C.C.B./M.C.B. etc. as required complete. 185 sq. mm	Each	8.00	₹ 980.00	₹ 7,840.00
14 Supply of ISI marked automatic transfer switches (ATS) of 4 pole, 415 V conforming to IEC: 60947-1 &IEC: 60947-6-1 with automatic inbuilt time delay with two earthing terminals if required. 200Amp (with enclosure)	Each	1.00	₹ 12,650.00	₹ 12,650.00
<b>Sub-Total</b>			<b>₹ 35,20,459.62</b>	
<b>GST @ 18%</b>			<b>₹ 6,33,682.73</b>	
<b>Total (A)</b>			<b>₹ 41,54,142.35</b>	

FIRST FLOOR						
Sl. No.	Description of Works	Unit	Qty	Rate	Amount	
1	Wiring with 3/22 mm <sup>2</sup> PVC insulated copper in surface casing capping , providing and fixing piano type switch and all other assessories as required:					
	i) Light point Short	Pt	30.00	₹ 320.00	₹ 9,600.00	
	ii) Light point Medium	Pt	50.00	₹ 430.00	₹ 21,500.00	
	iii) Light point Long	Pt	25.00	₹ 573.00	₹ 14,325.00	
2	Wiring for 3 pin 5 amp with 3/22 sq.mm PVC insulated copper cable in service casing capping					
	i) Medium points	Pt	48.00	₹ 215.00	₹ 10,320.00	
3	Wiring for 3 pin 15 amp woth 4 sq.mm single core cable in surface conduit i.e providing and fixing 15 amp switch socket and earthing the third pin.					
	i) Medium points	Pt	20.00	₹ 767.00	₹ 15,340.00	
	ii) Long points	Pt	30.00	₹ 867.00	₹ 26,010.00	
4	Wiring for circuit/sub-mains with single core copper cable in casing recessed etc.					
	i) 1.5 sq.mm PVC Cable	Mtr	1000.00	₹ 56.00	₹ 56,000.00	
	ii) 2.5 sq.mm PVC Cable	Mtr	1200.00	₹ 65.00	₹ 78,000.00	
	iii) 4 sq.mm PVC Cable	Mtr	1500.00	₹ 78.00	₹ 1,17,000.00	
	iv) 6 sq.mm PVC Cable	Mtr	1000.00	₹ 97.00	₹ 97,000.00	
	iv) 10 sq.mm PVC Cable	Mtr	800.00	₹ 140.00	₹ 1,12,000.00	
5	Supplying & fixing i.e. drilling holes, connection etc as required					
	i) Isolator 40 Amp, 2 Pole	Each	5.00	₹ 550.00	₹ 2,750.00	
	ii) Isolator 63 Amp, 2 Pole	Each	7.00	₹ 1,170.00	₹ 8,190.00	
	iii) M.C.B. 10 Amp	Each	15.00	₹ 240.00	₹ 3,600.00	
	iv) M.C.B. 20 Amp	Each	13.00	₹ 320.00	₹ 4,160.00	
	v) Busbar 100 A 4 Pole	Each	1.00	₹ 5,200.00	₹ 5,200.00	
	vi) MCB Box 8 way D/door	Each	2.00	₹ 4,900.00	₹ 9,800.00	
	vii) MCB Box 12 way D/door	Each	2.00	₹ 5,800.00	₹ 11,600.00	
	viii) 15W Ceiling LED lights	Each	60.00	₹ 1,800.00	₹ 1,08,000.00	
	ix) 36W Tube lights	Each	45.00	₹ 800.00	₹ 36,000.00	
	x) Ceiling fan , Havells	Set	35.00	₹ 2,500.00	₹ 87,500.00	
	xi) Exhaust fan with all accessories , etc as required	Each	15.00	₹ 2,500.00	₹ 37,500.00	
						Sub-Total
						₹ 8,71,395.00
						GST @ 18%
						₹ 1,56,851.10
						Total ( B )
						₹ 10,28,246.10

SECOND FLOOR						
Sl. No.	Description of Works	Unit	Qty	Rate	Amount	
1	Wiring with 3/22 mm <sup>2</sup> PVC insulated copper in surface casing capping , providing and fixing piano type switch and all other assessories as required:					
	i) Light point Short	Pt	25.00	₹ 320.00	₹ 8,000.00	
	ii) Light point Medium	Pt	40.00	₹ 430.00	₹ 17,200.00	
	iii) Light point Long	Pt	30.00	₹ 573.00	₹ 17,190.00	
2	Wiring for 3 pin 5 amp with 3/22 sq.mm PVC insulated copper cable in service casing capping					
	i) Medium points	Pt	40.00	₹ 215.00	₹ 8,600.00	
3	Wiring for 3 pin 15 amp woth 4 sq.mm single core cable in surface conduit i.e providing and fixing 15 amp switch socket and earthing the third pin.					
	i) Medium points	Pt	10.00	₹ 767.00	₹ 7,670.00	
	ii) Long points	Pt	15.00	₹ 867.00	₹ 13,005.00	
4	Wiring for circuit/sub-mains with single core copper cable in casing recessed etc.					
	i) 1.5 sq.mm PVC Cable	Mtr	1300.00	₹ 56.00	₹ 72,800.00	
	ii) 2.5 sq.mm PVC Cable	Mtr	1000.00	₹ 65.00	₹ 65,000.00	
	iii) 4 sq.mm PVC Cable	Mtr	1200.00	₹ 78.00	₹ 93,600.00	
	iv) 6 sq.mm PVC Cable	Mtr	1200.00	₹ 97.00	₹ 1,16,400.00	
	iv) 10 sq.mm PVC Cable	Mtr	800.00	₹ 140.00	₹ 1,12,000.00	
5	Supplying & fixing i.e. drilling holes, connection etc as required					
	i) Isolator 40 Amp, 2 Pole	Each	5.00	₹ 550.00	₹ 2,750.00	
	ii) Isolator 63 Amp, 2 Pole	Each	5.00	₹ 1,170.00	₹ 5,850.00	
	iii) M.C.B. 10 Amp	Each	15.00	₹ 240.00	₹ 3,600.00	
	iv) M.C.B. 20 Amp	Each	15.00	₹ 320.00	₹ 4,800.00	
	v) Busbar 100 A 4 Pole	Each	1.00	₹ 5,200.00	₹ 5,200.00	
	vi) MCB Box 8 way D/door	Each	2.00	₹ 4,900.00	₹ 9,800.00	
	vii) MCB Box 12 way D/door	Each	2.00	₹ 5,800.00	₹ 11,600.00	
	viii) 15W Ceiling LED lights	Each	60.00	₹ 1,800.00	₹ 1,08,000.00	
	ix) 36W Tube lights	Each	35.00	₹ 800.00	₹ 28,000.00	
	x) Ceiling fan , Havells	Set	30.00	₹ 2,500.00	₹ 75,000.00	
	xi) Exhaust fan with all accessories , etc as required	Each	20.00	₹ 2,500.00	₹ 50,000.00	
	xii) 2.5 Split Tonne AC of Approved Make including Copper Piping	Each	3.00	₹ 63,250.00	₹ 1,89,750.00	
				<b>Sub-Total</b>	<b>₹ 10,25,815.00</b>	
				<b>GST @ 18%</b>	<b>₹ 1,84,646.70</b>	
				<b>Total ( C )</b>	<b>₹ 12,10,461.70</b>	

**THIRD FLOOR**

<b>Sl. No.</b>	<b>Description of Works</b>	<b>Unit</b>	<b>Qty</b>	<b>Rate</b>	<b>Amount</b>
1	Wiring with 3/22 mm <sup>2</sup> PVC insulated copper in surface casing capping , providing and fixing piano type switch and all other assessories as required:				
	i) Light point Short	Pt	10.00	₹ 320.00	₹ 3,200.00
	ii) Light point Medium	Pt	15.00	₹ 430.00	₹ 6,450.00
	iii) Light point Long	Pt	10.00	₹ 573.00	₹ 5,730.00
2	Wiring for 3 pin 5 amp with 3/22 sq.mm PVC insulated copper cable in service casing capping				
	i) Medium points	Pt	8.00	₹ 215.00	₹ 1,720.00
3	Wiring for 3 pin 15 amp woth 4 sq.mm single core cable in surface conduit i.e providing and fixing 15 amp switch socket and earthing the third pin.				
	i) Medium points	Pt	4.00	₹ 767.00	₹ 3,068.00
	ii) Long points	Pt	5.00	₹ 867.00	₹ 4,335.00
4	Wiring for circuit/sub-mains with single core copper cable in casing recessed etc.				
	i) 1.5 sq.mm PVC Cable	Mtr	800.00	₹ 56.00	₹ 44,800.00
	ii) 2.5 sq.mm PVC Cable	Mtr	500.00	₹ 65.00	₹ 32,500.00
	iii) 4 sq.mm PVC Cable	Mtr	800.00	₹ 78.00	₹ 62,400.00
	iv) 6 sq.mm PVC Cable	Mtr	400.00	₹ 97.00	₹ 38,800.00
	iv) 10 sq.mm PVC Cable	Mtr	200.00	₹ 140.00	₹ 28,000.00
5	Supplying & fixing i.e. drilling holes, connection etc as required				
	i) Isolator 40 Amp, 2 Pole	Each	2.00	₹ 550.00	₹ 1,100.00
	ii) Isolator 63 Amp, 2 Pole	Each	2.00	₹ 1,170.00	₹ 2,340.00
	iii) M.C.B. 10 Amp	Each	6.00	₹ 240.00	₹ 1,440.00
	iv) M.C.B. 20 Amp	Each	6.00	₹ 320.00	₹ 1,920.00
	v) Busbar 100 A 4 Pole	Each	1.00	₹ 5,200.00	₹ 5,200.00
	vi) MCB Box 8 way D/door	Each	1.00	₹ 4,900.00	₹ 4,900.00
	vii) MCB Box 12 way D/door	Each	1.00	₹ 5,800.00	₹ 5,800.00
	viii) 15W Ceiling LED lights	Each	15.00	₹ 1,800.00	₹ 27,000.00
	ix) 36W Tube lights	Each	20.00	₹ 800.00	₹ 16,000.00
	x) Ceiling fan , Havells	Set	12.00	₹ 2,500.00	₹ 30,000.00
	xi) Exhaust fan with all accessories , etc as required	Each	6.00	₹ 2,500.00	₹ 15,000.00
				<b>Sub-Total</b>	<b>₹ 3,41,703.00</b>
				<b>GST @ 18%</b>	<b>₹ 61,506.54</b>
				<b>Total (D)</b>	<b>₹ 4,03,209.54</b>
				<b>TOTAL ELECTRIFICATION [Total (A)+ (Total (B)+ (Total (C)+(Total (D))]</b>	<b>₹ 67,96,059.69</b>
				<b>Say</b>	<b>₹ 67,96,060.00</b>

**ABSTRACT OF COST**

<b>NAME OF WORK:</b>	<i>External Electrification for Construction of 11/0.433 kV, 250 kVA Sub-Station, 11 kV HT line, 3 Ph 5 Wire LT line and Installation of Metering Equipments for the work "Construction of Nagaland Innovation Hub for Start up"</i>
<b>LOCATION OF WORK:</b>	<i>Chumoukedima, Nagaland.</i>

<b>Sl.No.</b>	<b>Particulars</b>	<b>Amount (Rs)</b>
1	Construction of 11/0.4 kV, 250 kVA Sub-Station	₹ 12,97,752.00
2	Construction of 11 kV HT line	₹ 13,35,142.00
3	Construction of 3 Phase 5 wire L.T line	₹ 10,01,495.00
4	Installation of Metering Equipment	₹ 84,645.00
<b>TOTAL</b>		<b>₹ 37,19,034.00</b>

Say Rs. 37,19,034.00 /-  
**(Rupees Thirty Seven Lakhs Nineteen Thousand Thirty Four) Only.**

## DETAILED ESTIMATE

**Name of work:-** Detailed Estimate for Construction of 11/0.4 kV, 250 kVA Sub-Station for the work "Construction of Nagaland Innovation Hub for Start up" at Chumoukedima

1	2	3	4	5	6
Sl.No.	Materials	Unit	Rate	Qty	Amount (4x5/1.18)
1	11/0.4 kV, 250 kVA DT (Cu Wound)	Each	768862.51	1	₹ 6,51,578.40
2	Steel Tubular SP-35 (Full Galvanised)	Each	22823.00	2	₹ 38,683.05
3	ACSR Weasel conductor	Km	50929.00	0.06	₹ 2,589.61
4	11KV H/W fittings complete set	Set	515.00	3	₹ 1,309.32
5	11 KV Disc Insulator	Each	1371.00	3	₹ 3,485.59
6	11 KV Pin insulator with G.I pin	Each	500.00	3	₹ 1,271.19
7	11 KV Gang switch complete	Set	27542.40	1	₹ 23,341.02
8	11 KV DO Set complete	Set	17327.25	1	₹ 14,684.11
9	11kV LA's 5 KA	Each	13230.00	3	₹ 33,635.59
10	M.S channel 75x40x6mm	Kg	174.00	109	₹ 16,072.88
11	Stay set (H.T) complete	Set	1759.34	2	₹ 2,981.93
12	Stay Wire 7/10 SWG	Kg	162.00	15	₹ 2,059.32
13	HT Guy Insulator (Porcelain)	Each	51.00	2	₹ 86.44
14	Single Clamp SP-35	Each	95.00	10	₹ 805.08
15	Double Clamp SP-35	Pair	124.00	8	₹ 840.68
16	M.S nuts & bolts 7"x5/8	Kg	282.00	3	₹ 716.95
17	M.S nuts & bolts 5"x5/8	Kg	282.00	5	₹ 1,194.92
18	M.S washer	Kg	180.00	0.5	₹ 76.27
19	Kit Kat fuse 400 Amp	Each	3172.42	3	₹ 8,065.47
20	Sub-Station Fencing		L/S		₹ 20,000.00
21	Earthing complete		L/S		₹ 20,000.00
<b>I. SUPPLY CHARGES</b>					
				<b>SUPPLY SUB-TOTAL (A)</b>	<b>₹ 8,43,477.83</b>

<b><u>II. ERECTION CHARGES</u></b>		
Add Storage @5% + Contingency @3%+ Transportation @5% = 13% on (A) -----	(1)	₹ 1,09,652.12
Add Labour Charge @ 15% on (A) -----	(2)	₹ 1,26,521.67
Job PCC 1:3:6 Excavation & Grouting of pole (0.65x0.65x1.8)m = 0.761 Cum @ Rs 6338 Per Cum -----	(3)	₹ 9,646.44
Job Excavation and Grouting of Stay Set with PCC 1:3:6 @ Rs 1000 Per Stay -----	(4)	₹ 2,000.00
Job Transformer pad (For DTs having 100kVA capacity & above) made of PCC 1:3:6 (1mx1mx1m=1 Cum per DT) @ Rs 6338 per Cum -----	(5)	₹ 6,338.00
<b>ERECTION SUB-TOTAL (1+2+3+4+5) ----- (B)</b>		₹ 2,54,158.23
<b><u>III. OTHER CHARGES</u></b>		
Add Departmental Charges @ 13% on [(A)+(B)] -----	(6)	₹ 0.00
Add GST (Supply & Erection) @18% on [(A)+(B)] -----	(7)	₹ 1,97,574.49
Add Labor CESS @1% on (B) -----	(8)	₹ 2,541.58
<b>Grand Total [(A)+(B)+(6)+(7)+(8)]</b>		₹ 12,97,752.13
<b>Say</b>		₹ 12,97,752.00
<i>Say (Twelve Lakhs Ninety Seven Thousand Seven Hundred Fifty Two) Only</i>		

## DETAILED ESTIMATE

**Name of work:-** Detailed Estimate for Construction of 11 kV HT Line for the work "Construction of Nagaland Innovation Hub for Start up" at Chumoukedima

**Route Length : 1.3 km**

1	2	3	4	5	6
Sl.No.	Materials	Unit	Rate	Qty	Amount (4x5/1.18)
1	Steel Tubular SP-35 (Full Galvanised)	Each	22823.00	22	₹ 4,25,513.56
2	ACSR Weasel conductor	Km	50929.00	3.9	₹ 1,68,324.66
3	11KV H/W fittings complete set	Set	515.00	48	₹ 20,949.15
4	11 KV Disc Insulator	Each	1371.00	48	₹ 55,769.49
5	11 KV Pin insulator with G.I pin	Each	500.00	42	₹ 17,796.61
6	M.S channel 75x40x6mm	Kg	174.00	190	₹ 28,016.95
7	M.S angle 40x40x3mm	Kg	174.00	80	₹ 11,796.61
8	Stay set (H.T) complete	Set	1759.34	16	₹ 23,855.46
9	Stay Wire 7/10 SWG	Kg	162.00	112	₹ 15,376.27
10	HT Guy Insulator (Porcelain)	Each	51.00	16	₹ 691.53
11	Single Clamp SP-35	Each	95.00	32	₹ 2,576.27
12	Double Clamp SP-35	Pair	124.00	52	₹ 5,464.41
13	M.S nuts & bolts 7"x5/8	Kg	282.00	17	₹ 4,062.71
14	M.S nuts & bolts 5"x5/8	Kg	282.00	23	₹ 5,496.61
15	M.S washer	Kg	180.00	4	₹ 610.17
<b>I. SUPPLY CHARGES</b>					
					<b>SUPPLY SUB-TOTAL (A)</b>
					<b>₹ 7,86,300.46</b>
<b>II. ERECTION CHARGES</b>					
Add Storage @5% + Contingency @3%+ Transportation @5% = 13% on (A) ----- (1)					₹ 1,02,219.06
Add Labour Charge @ 15% on (A) ----- (2)					₹ 1,17,945.07
Job PCC 1:3:6 Excavation & Grouting of pole (0.65x0.65x1.8)m = 0.761 Cum @ Rs 6338 Per Cum ----- (3)					₹ 1,06,110.80

Job Excavation and Grouting of Stay Set with PCC 1:3:6 @ Rs 1000 Per Stay -----	(4)	₹ 16,000.00
Job Transformer pad (For DTs having 100kVA capacity & above) made of PCC 1:3:6 (1mx1mx1m=1 Cum per DT) @ Rs 6338 per Cum -----	(5)	₹ 0.00
<b>ERECTION SUB-TOTAL (1+2+3+4+5) ----- (B)</b>		<b>₹ 3,42,274.92</b>
<b><u>III. OTHER CHARGES</u></b>		
Add Departmental Charges @ 13% on [(A)+(B)] -----	(6)	₹ 0.00
Add GST (Supply & Erection) @18% on [(A)+(B)] -----	(7)	₹ 2,03,143.57
Add Labor CESS @1% on (B) -----	(8)	₹ 3,422.75
<b>Grand Total [(A)+(B)+(6)+(7)+(8)]</b>		<b>₹ 13,35,141.70</b>
	<b>Say</b>	<b>₹ 13,35,142.00</b>
<i>Say (Thirteen Lakhs Thirty Five Thousand One Hundred Forty Two) Only</i>		

## DETAILED ESTIMATE

**Name of work:-** Detailed Estimate for Construction of 3 Phase 5 wire L.T line for the work "Construction of Nagaland Innovation Hub for Start up" at Chumoukedima

**Route Length = 0.7 Km**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>Sl.No.</b>	<b>Materials</b>	<b>Unit</b>	<b>Rate</b>	<b>Qnty</b>	<b>Amount (4x5/1.18)</b>
1	Steel Tubular SP-11 (Full Galvanised)	Each	14684.00	17	₹ 2,11,549.15
2	Stay Set (L.T) Complete	Set	1341.22	12	₹ 13,639.53
3	Stay Wire 7/12 SWG	Kg	160.65	72	₹ 9,802.37
4	LT Guy Insulator (Porcelain)	Each	20.00	12	₹ 203.39
5	AAC Ant Conductor	Km	64674.00	3.5	₹ 1,91,829.66
6	D'Clamp with Sh.Insulator 75X90 mm and Pin	Each	273.00	90	₹ 20,822.03
7	Sodium Vapor Street Light (150 W)	Set	8640.00	11	₹ 80,542.37
8	Special Bracket for SV Lamp	Each	5400.00	11	₹ 50,338.98
9	Double Clamp SP-11	Pair	124.00	12	₹ 1,261.02
10	M.S nuts & bolts 3"x1/2"	Kg	282.00	30	₹ 7,169.49
11	M.S washer	Kg	180.00	5	₹ 762.71
<b>I. SUPPLY CHARGES</b>					
<b>SUPPLY SUB-TOTAL (A)</b>					<b>₹ 5,87,920.71</b>
<b>II. ERECTION CHARGES</b>					
Add Storage @5% + Contingency @3%+ Transportation @5% = 13% on (A) ----- (1)					₹ 76,429.69
Add Labour Charge @ 15% on (A) ----- (2)					₹ 88,188.11
Job PCC 1:3:6 Excavation & Grouting of pole (0.65x0.65x1.8)m = 0.761 Cum @ Rs 6338 Per Cum ----- (3)					₹ 81,994.71
Job Excavation and Grouting of Stay Set with PCC 1:3:6 @ Rs 1000 Per Stay ----- (4)					₹ 12,000.00
Job Transformer pad (For DTs having 100kVA capacity & above) made of PCC 1:3:6 (1mx1mx1m=1 Cum per DT) @ Rs 6338 per Cum ----- (5)					₹ 0.00
<b>ERECTION SUB-TOTAL (1+2+3+4+5) ----- (B)</b>					<b>₹ 2,58,612.51</b>

<b><u>III. OTHER CHARGES</u></b>	
Add Departmental Charges @ 13% on [(A)+(B)] -----	(6) <b>₹ 0.00</b>
Add GST (Supply & Erection) @18% on [(A)+(B)] -----	(7) <b>₹ 1,52,375.98</b>
Add Labor CESS @1% on (B) -----	(8) <b>₹ 2,586.13</b>
<b>Grand Total [(A)+(B)+(6)+(7)+(8)]</b>	<b>₹ 10,01,495.32</b>
<b>Say</b>	<b>₹ 10,01,495.00</b>
<i>Say (Ten Lakhs One Thousand Four Hundred Ninety Five) Only</i>	

## DETAILED ESTIMATE

**Name of work:** Installation of Metering Equipment for the work "Construction of Nagaland Innovation Hub for Start up"

**Location:** Chumoukedima, Nagaland.

**Capacity:** 11/0.433 kV, 250 kVA

1 SL.No.	2 Description of materials	3 Unit	4 Rate	5 Qty	6 Amount (4x5/1.18)
1	AC 3 Ph 4 wire,5 Amp LT CT Operated fully static, AMR compatibility LT trivector energy meter of class 0.5S accuracy.	No	10920.00	1	₹ 9,254.24
2	3 Ph 4 wire LT CT 400/5 A	Set	17176.00	1	₹ 14,555.93
3	LT Power Cable, 3.5 Core, Aluminium Conductor XLPE Insulated PVC Inner Sheathed, Unarmoured of 300 Sqmm	Mtr	1748.88	20	₹ 29,642.03
4	Cable socket 300 Sq.mm (cu)	No	419.00	7	₹ 2,485.59
<b>I. SUPPLY CHARGES</b>					<b>SUPPLY SUB-TOTAL (A)</b> ₹ 55,937.80
<b>II. ERECTION CHARGES</b>					
Add Storage @5% + Contingency @3%+ Transportation @5% = 13% on (A) ----- (1)					₹ 7,271.91
Add Labour Charge @ 15% on (A) ----- (2)					₹ 8,390.67
Job PCC 1:3:6 Excavation & Grouting of pole (0.65x0.65x1.8)m = 0.761 Cum @ Rs 6338 Per Cum ----- (3)					₹ 0.00
Job Excavation and Grouting of Stay Set with PCC 1:3:6 @ Rs 1000 Per Stay ----- (4)					₹ 0.00
Job Transformer pad (For DTs having 100kVA capacity & above) made of PCC 1:3:6 (1mx1mx1m=1 Cum per DT) @ Rs 6338 per Cum ----- (5)					₹ 0.00
<b>ERECTION SUB-TOTAL (1+2+3+4+5) ----- (B)</b>					<b>₹ 15,662.58</b>
<b>III. OTHER CHARGES</b>					
Add Departmental Charges @ 13% on [(A)+(B)] ----- (6)					₹ 0.00
Add GST (Supply & Erection) @18% on [(A)+(B)] ----- (7)					₹ 12,888.07
Add Labor CESS @1% on (B) ----- (8)					₹ 156.63
<b>Grand Total [(A)+(B)+(6)+(7)+(8)]</b>					<b>₹ 84,645.07</b>
Say					₹ 84,645.00
<i>Say (Eighty Four Thousand Six Hundred Forty Five) Only</i>					

## FRONT ELEVATION



201

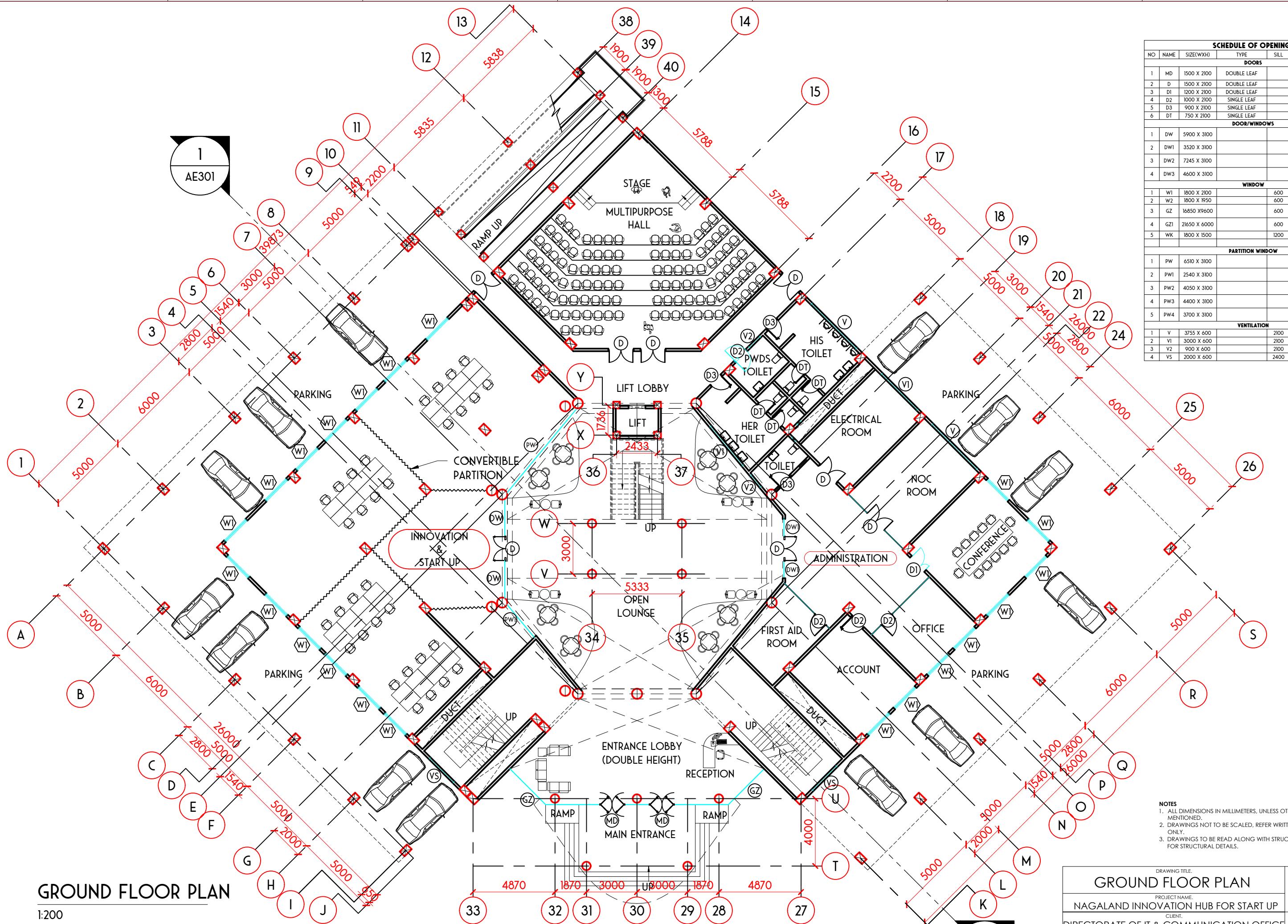
## BIRD'S EYE VIEW



SIDE VIEW



203



SCHEDULE OF OPENINGS						
NO	NAME	SIZE(WXH)	TYPE	SILL	LINTEL	REMARKS
1	MD	1500 X 2100	DOUBLE LEAF	2100		TOUGHENED GLASS
2	D	1500 X 2100	DOUBLE LEAF	2100		ALUMINUM
3	D1	1200 X 2100	DOUBLE LEAF	2100		ALUMINUM
4	D2	1000 X 2100	SINGLE LEAF	2100		ALUMINUM
5	D3	900 X 2100	SINGLE LEAF	2100		TIMBER
6	DT	750 X 2100	SINGLE LEAF	2100		WPC

DOOR/WINDOWS					
1	DW	5900 X 3100		BEAM BOTTOM	ALUMINUM
2	DWI	3520 X 3100		BEAM BOTTOM	
3	DW2	7245 X 3100		BEAM BOTTOM	
4	DW3	4600 X 3100		BEAM BOTTOM	

WINDOW					
1	WI	1800 X 2100		600	ALUMINUM
2	W2	1800 X 1950		600	ALUMINUM
3	GZ	16850 X 9600		600	BEAM BOTTOM ALUMINUM
4	GZ1	21650 X 6000		600	BEAM BOTTOM ALUMINUM
5	WK	1800 X 1500		1200	ALUMINUM

PARTITION WINDOW					
1	PW	6510 X 3100		BEAM BOTTOM	ALUMINUM
2	PW1	2540 X 3100		BEAM BOTTOM	
3	PW2	4050 X 3100		BEAM BOTTOM	
4	PW3	4400 X 3100		BEAM BOTTOM	
5	PW4	3700 X 3100		BEAM BOTTOM	

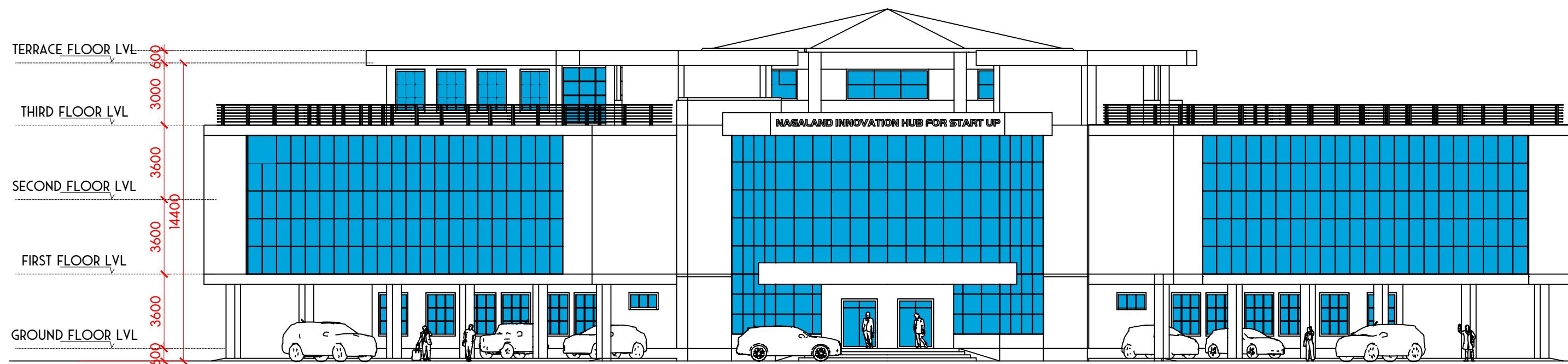
  

VENTILATION					
1	V	3755 X 600		2100	ALUMINUM
2	V1	3000 X 600		2100	
3	V2	900 X 600		2100	
4	VS	2000 X 600		2400	

NOTES

- ALL DIMENSIONS IN MILLIMETERS, UNLESS OTHERWISE MENTIONED.
- DRAWINGS NOT TO BE SCALED, REFER WRITTEN DIMENSIONS ONLY.
- DRAWINGS TO BE READ ALONG WITH STRUCTURAL DRAWINGS FOR STRUCTURAL DETAILS.

DRAWING TITLE: GROUND FLOOR PLAN			DRAWING NO. AE101
PROJECT NAME: NAGALAND INNOVATION HUB FOR START UP			
CLIENT: DIRECTORATE OF IT & COMMUNICATION OFFICE			
DATE: 21-01-2025	DRAWN BY: KN	CHECKED BY: RK	SCALE: 1:200
PROJECT NO: 2025-01	DRAWING TYPE: FLOOR PLANS	REVISION NO: R0	ORIENTATION:



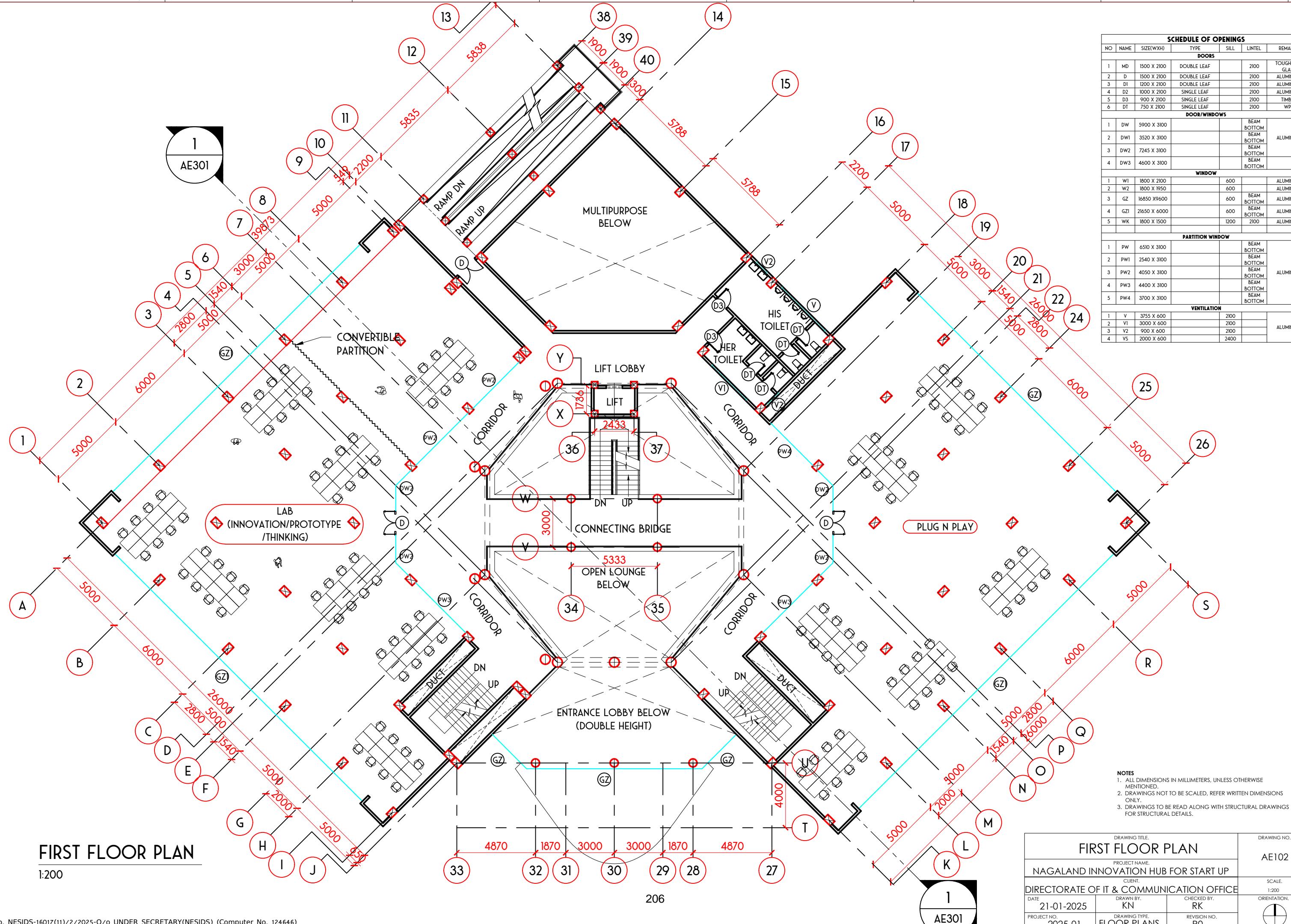
## FRONT ELEVATION

1:200

**NOTES**

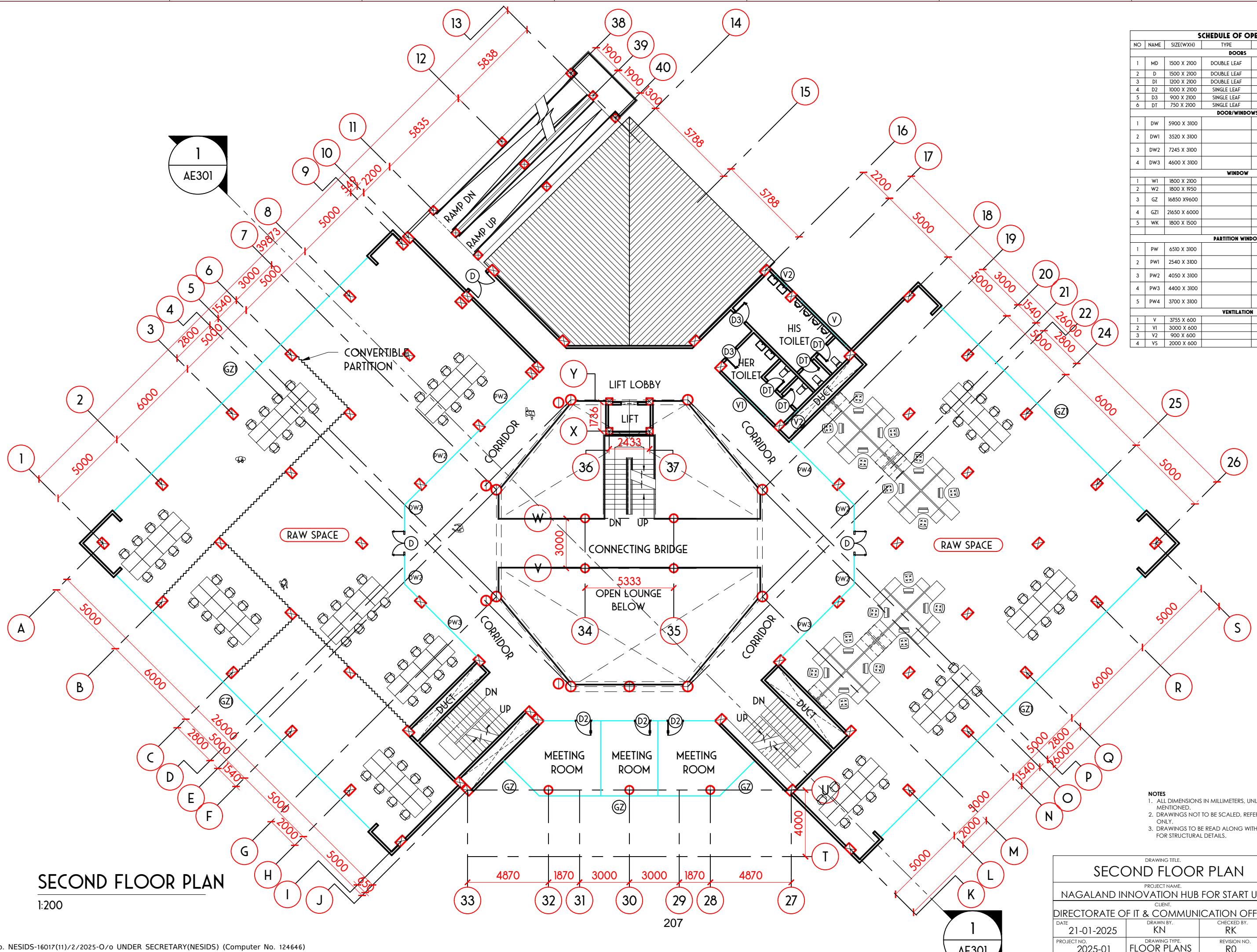
- ALL DIMENSIONS IN MILLIMETERS, UNLESS OTHERWISE MENTIONED.
- DRAWINGS NOT TO BE SCALED, REFER WRITTEN DIMENSIONS ONLY.
- DRAWINGS TO BE READ ALONG WITH STRUCTURAL DRAWINGS FOR STRUCTURAL DETAILS.

DRAWING TITLE:			DRAWING NO.
FRONT ELEVATION			AE201
PROJECT NAME:			SCALE:
NAGALAND INNOVATION HUB FOR START UP			1:200
CLIENT:			ORIENTATION:
DIRECTORATE OF IT & COMMUNICATION OFFICE			
DATE	DRAWN BY:	CHECKED BY:	
21-01-2025	KN	RK	
PROJECT NO.	DRAWING TYPE:	REVISION NO.	
2025-01	FLOOR PLANS	RO	



## SECOND FLOOR PLAN

1:200

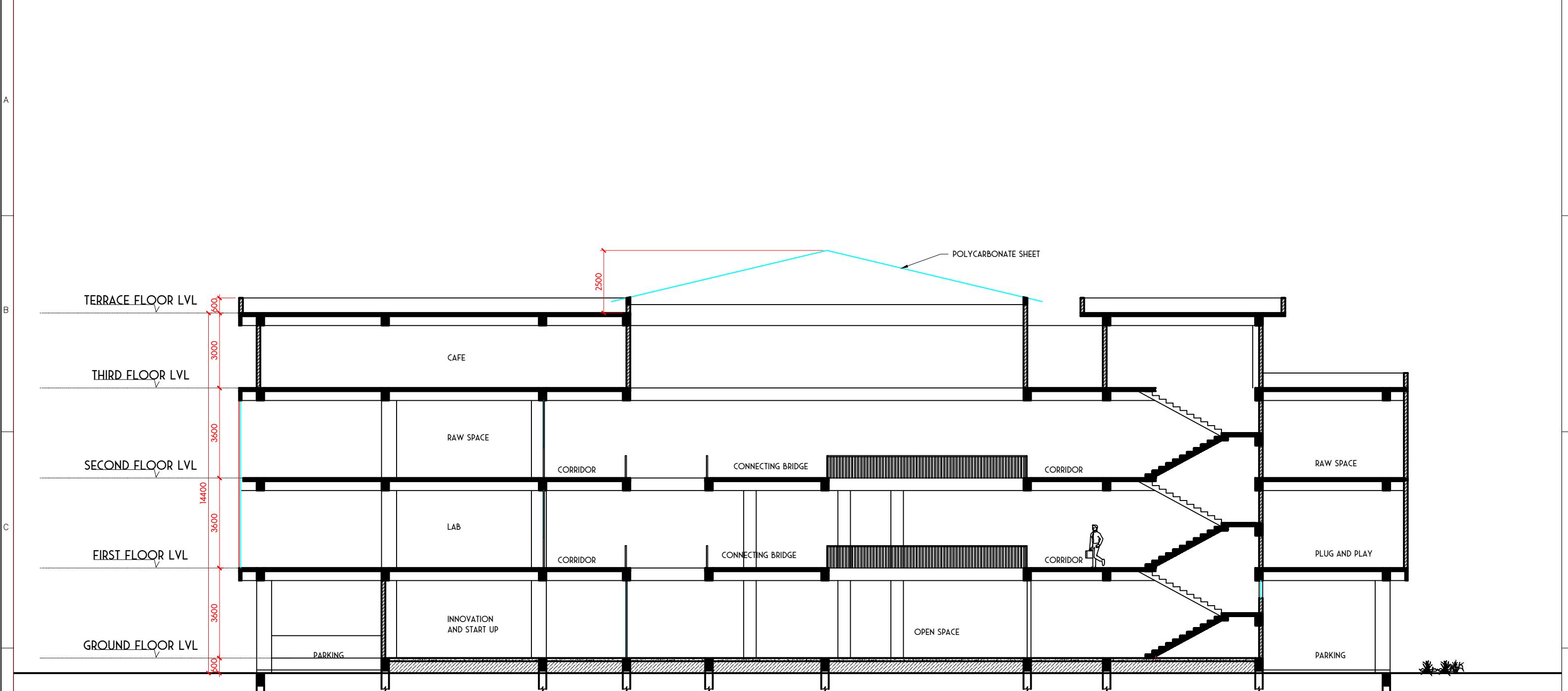


SCHEDULE OF OPENINGS						
No	Name	Size(WxH)	Type	Sill	Lintel	Remarks
<b>DOORS</b>						
1	MD	1500 X 2100	DOUBLE LEAF		2100	TOUGHENED GLASS
2	D	1500 X 2100	DOUBLE LEAF		2100	ALUMINIUM
3	D1	1200 X 2100	DOUBLE LEAF		2100	ALUMINIUM
4	D2	1000 X 2100	SINGLE LEAF		2100	ALUMINIUM
5	D3	900 X 2100	SINGLE LEAF		2100	TIMBER
6	DT	750 X 2100	SINGLE LEAF		2100	WPC
<b>DOOR/WINDOWS</b>						
1	DW	5900 X 3100			BEAM BOTTOM	
2	DW1	3520 X 3100			BEAM BOTTOM	ALUMINIUM
3	DW2	7245 X 3100			BEAM BOTTOM	
4	DW3	4600 X 3100			BEAM BOTTOM	
<b>WINDOW</b>						
1	W1	1800 X 2100		600		ALUMINIUM
2	W2	1800 X 1950		600		ALUMINIUM
3	GZ	16450 X 9600		600	BEAM BOTTOM	ALUMINIUM
4	GZ1	21650 X 6000		600	BEAM BOTTOM	ALUMINIUM
5	WK	1800 X 1500		1200	2100	ALUMINIUM
<b>PARTITION WINDOW</b>						
1	PW	6510 X 3100			BEAM BOTTOM	
2	PW1	2540 X 3100			BEAM BOTTOM	ALUMINIUM
3	PW2	4050 X 3100			BEAM BOTTOM	
4	PW3	4400 X 3100			BEAM BOTTOM	
5	PW4	3700 X 3100			BEAM BOTTOM	
<b>VENTILATION</b>						
1	V	3755 X 600		2100		
2	VI	3000 X 600		2100		ALUMINIUM
3	V2	900 X 600		2100		
4	VS	2000 X 600		2400		

**NOTES**

1. ALL DIMENSIONS IN MILLIMETERS, UNLESS OTHERWISE MENTIONED.
2. DRAWINGS NOT TO BE SCALED, REFER WRITTEN DIMENSIONS ONLY.
3. DRAWINGS TO BE READ ALONG WITH STRUCTURAL DRAWINGS FOR STRUCTURAL DETAILS.

DRAWING TITLE. <b>SECOND FLOOR PLAN</b>			DRAWING NO. <b>AE103</b>
PROJECT NAME. <b>NAGALAND INNOVATION HUB FOR START UP</b>			
CLIENT. <b>DIRECTORATE OF IT &amp; COMMUNICATION OFFICE</b>			
DATE <b>21-01-2025</b>	DRAWN BY. <b>KN</b>	CHECKED BY. <b>RK</b>	SCALE. <b>1:200</b>
PROJECT NO. <b>2025-01</b>	DRAWING TYPE. <b>FLOOR PLANS</b>	REVISION NO. <b>R0</b>	ORIENTATION. 

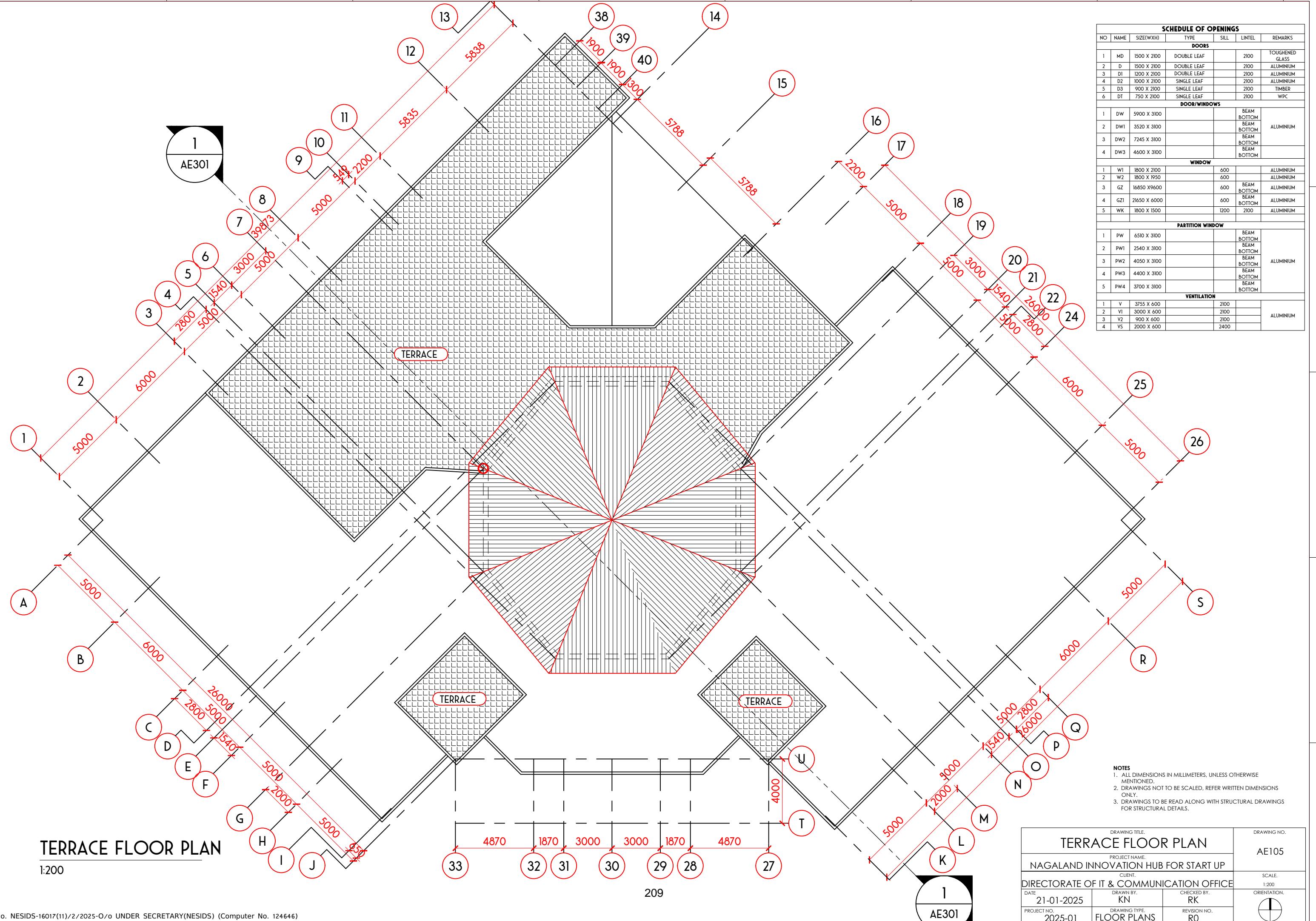


## SECTION A-A

SCALE 1:50

NOTES  
 1. ALL DIMENSIONS IN MILLIMETERS, UNLESS OTHERWISE MENTIONED.  
 2. DRAWINGS NOT TO BE SCALED, REFER WRITTEN DIMENSIONS ONLY.  
 3. DRAWINGS TO BE READ ALONG WITH STRUCTURAL DRAWINGS FOR STRUCTURAL DETAILS.

DRAWING TITLE: <b>SECTION A-A</b>			DRAWING NO. AE301
PROJECT NAME: <b>NAGALAND INNOVATION HUB FOR START UP</b>			SCALE. 1:50
CLIENT: <b>DIRECTORATE OF IT &amp; COMMUNICATION OFFICE</b>			ORIENTATION.
DATE 21-01-2025	DRAWN BY. KN	CHECKED BY. RK	
PROJECT NO. 2025-01	DRAWING TYPE. FLOOR PLANS	REVISION NO. R0	



## TERRACE FLOOR PL

---

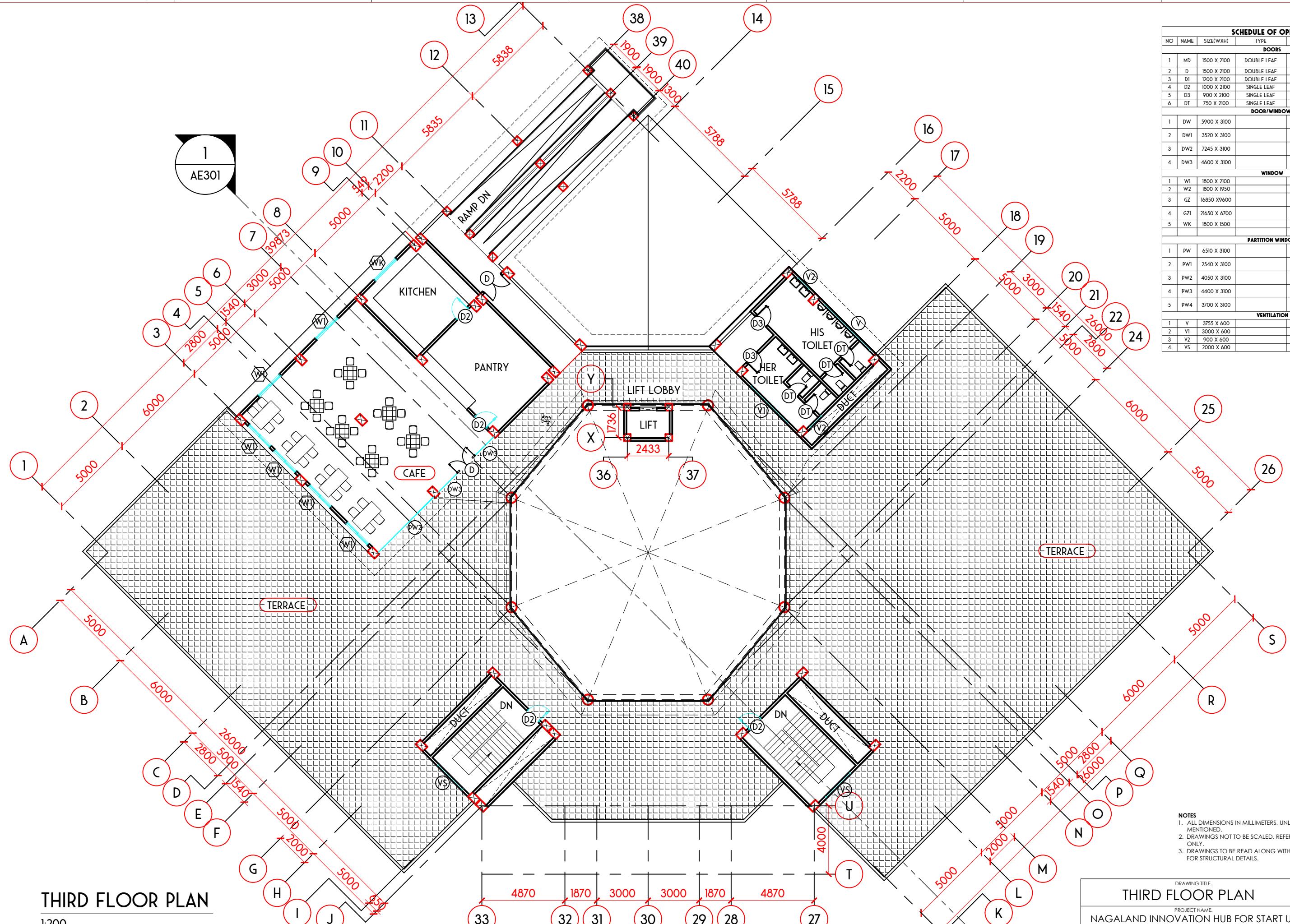
1:200

SCHEDULE OF OPENINGS					
NAME	SIZE(WxH)	TYPE	SILL	LINTEL	REMARKS
<b>DOORS</b>					
MD	1500 X 2100	DOUBLE LEAF		2100	TOUGHENED GLASS
D	1500 X 2100	DOUBLE LEAF		2100	ALUMINIUM
DI	1200 X 2100	DOUBLE LEAF		2100	ALUMINIUM
D2	1000 X 2100	SINGLE LEAF		2100	ALUMINIUM
D3	900 X 2100	SINGLE LEAF		2100	TIMBER
DT	750 X 2100	SINGLE LEAF		2100	WPC
<b>DOOR/WINDOWS</b>					
DW	5900 X 3100			BEAM BOTTOM	
DW1	3520 X 3100			BEAM BOTTOM	ALUMINIUM
DW2	7245 X 3100			BEAM BOTTOM	
DW3	4600 X 3100			BEAM BOTTOM	
<b>WINDOW</b>					
W1	1800 X 2100		600		ALUMINIUM
W2	1800 X 1950		600		ALUMINIUM
GZ	16850 X 9600		600	BEAM BOTTOM	ALUMINIUM
GZ1	21650 X 6000		600	BEAM BOTTOM	ALUMINIUM
WK	1800 X 1500		1200	2100	ALUMINIUM
<b>PARTITION WINDOW</b>					
PW	6510 X 3100			BEAM BOTTOM	
PW1	2540 X 3100			BEAM BOTTOM	ALUMINIUM
PW2	4050 X 3100			BEAM BOTTOM	
PW3	4400 X 3100			BEAM BOTTOM	
PW4	3700 X 3100			BEAM BOTTOM	
<b>VENTILATION</b>					
V	3755 X 600		2100		
V1	3000 X 600		2100		ALUMINIUM
V2	900 X 600		2100		
VS	2000 X 600		2400		

**NOTES**

1. ALL DIMENSIONS IN MILLIMETERS, UNLESS OTHERWISE MENTIONED.
2. DRAWINGS NOT TO BE SCALED, REFER WRITTEN DIMENSIONS ONLY.
3. DRAWINGS TO BE READ ALONG WITH STRUCTURAL DRAWINGS FOR STRUCTURAL DETAILS.

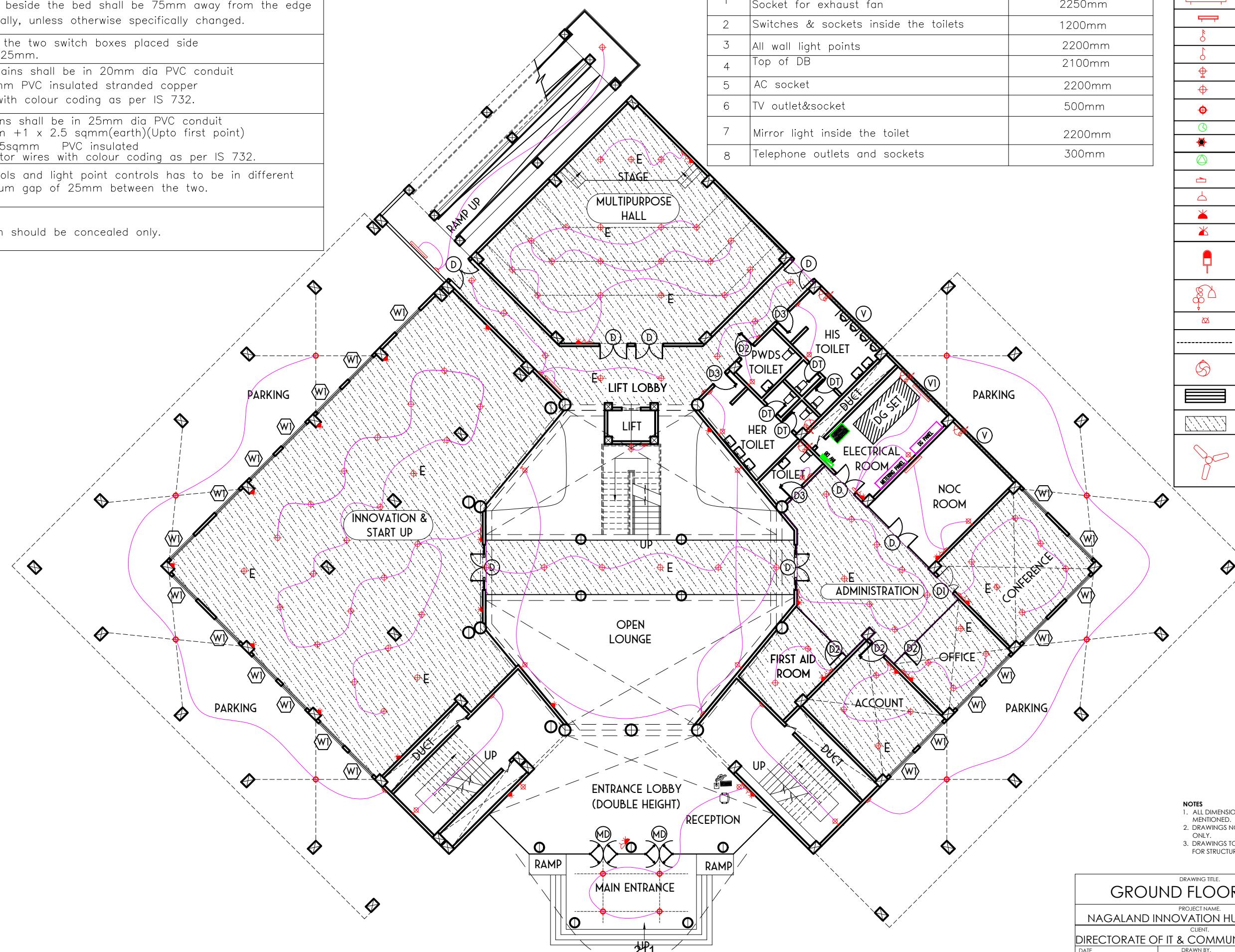
DRAWING TITLE. <b>TERRACE FLOOR PLAN</b>			DRAWING NO. <b>AE105</b>
PROJECT NAME. <b>NAGALAND INNOVATION HUB FOR START UP</b>			SCALE. 1:200
CLIENT. <b>RECTORATE OF IT &amp; COMMUNICATION OFFICE</b>			ORIENTATION. 
DATE <b>21-01-2025</b>	DRAWN BY. <b>KN</b>	CHECKED BY. <b>RK</b>	REVISION NO. <b>R0</b>
OBJECT NO. <b>2025-01</b>	DRAWING TYPE. <b>FLOOR PLANS</b>		



DRAWING TITLE: <b>THIRD FLOOR PLAN</b>			DRAWING NO. <b>AE104</b>
PROJECT NAME: <b>NAGALAND INNOVATION HUB FOR START UP</b>			
CLIENT: <b>DIRECTORATE OF IT &amp; COMMUNICATION OFFICE</b>			
DATE 21-01-2025	DRAWN BY KN	CHECKED BY RK	SCALE 1:200
PROJECT NO. 2025-01	DRAWING TYPE FLOOR PLANS	REVISION NO. R0	ORIENTATION N

## GENERAL NOTES:

- Any Switch box shown on the edge of the wall shall be 150mm away from the edge.
- The two way switch shown beside the door shall be 75mm away from the opened shutter of the door.
- The switch boxes beside the bed shall be 75mm away from the edge of the bed generally, unless otherwise specifically changed.
- The gap between the two switch boxes placed side by side shall be 25mm.
- Lighting circuit mains shall be in 20mm dia PVC conduit with 3 x 2.5 sqmm PVC insulated stranded copper conductor wires with colour coding as per IS 732.
- Power circuit mains shall be in 25mm dia PVC conduit with 2 x 4.0sqmm +1 x 2.5 sqmm(earth)(Upto first point) for looping 3X2.5sqmm PVC insulated stranded conductor wires with colour coding as per IS 732.
- Power point controls and light point controls has to be in different boxes with minimum gap of 25mm between the two.
- All conduits shown should be concealed only.



## MOUNTING HEIGHTS

SL.NO	DESCRIPTION	LEVEL FROM FFL (Reference to bottom)
1	Socket for exhaust fan	2250mm
2	Switches & sockets inside the toilets	1200mm
3	All wall light points	2200mm
4	Top of DB	2100mm
5	AC socket	2200mm
6	TV outlet&socket	500mm
7	Mirror light inside the toilet	2200mm
8	Telephone outlets and sockets	300mm

LEGEND	
SYMBOL	DESCRIPTION
	LIGHTING CIRCUIT
	EMERGENCY LIGHTING CIRCUIT
	TELEPHONE OUTLET
	1 X 40 W FLUORESCENT(WALL MOUNTED)
	5 capsule light x10W Mirror light
	TWO-WAY SWITCH
	SP SWITCH
	WALL-BRACKET
	CEILING LIGHT POINT(false ceiling)
	2x13W CEILING LIGHT POINT(without false ceiling indoor/outdoor)
	DROP LIGHT
	GROUND MOUNTED LUMINAIRE(outdoor)
	TV OUTLET
	SWITCH BOARD
	6A SOCKET
	16A SOCKET
	6/16A SOCKET
	FLOOD LIGHT
	EXHAUST FAN
	BULKHEAD FIXTURE
	ROPE LIGHT
	WALL MOUNTED FAN/AIR COOLER
	SPLIT AC
	FALSE CEILING
	CEILING FAN

NOTES

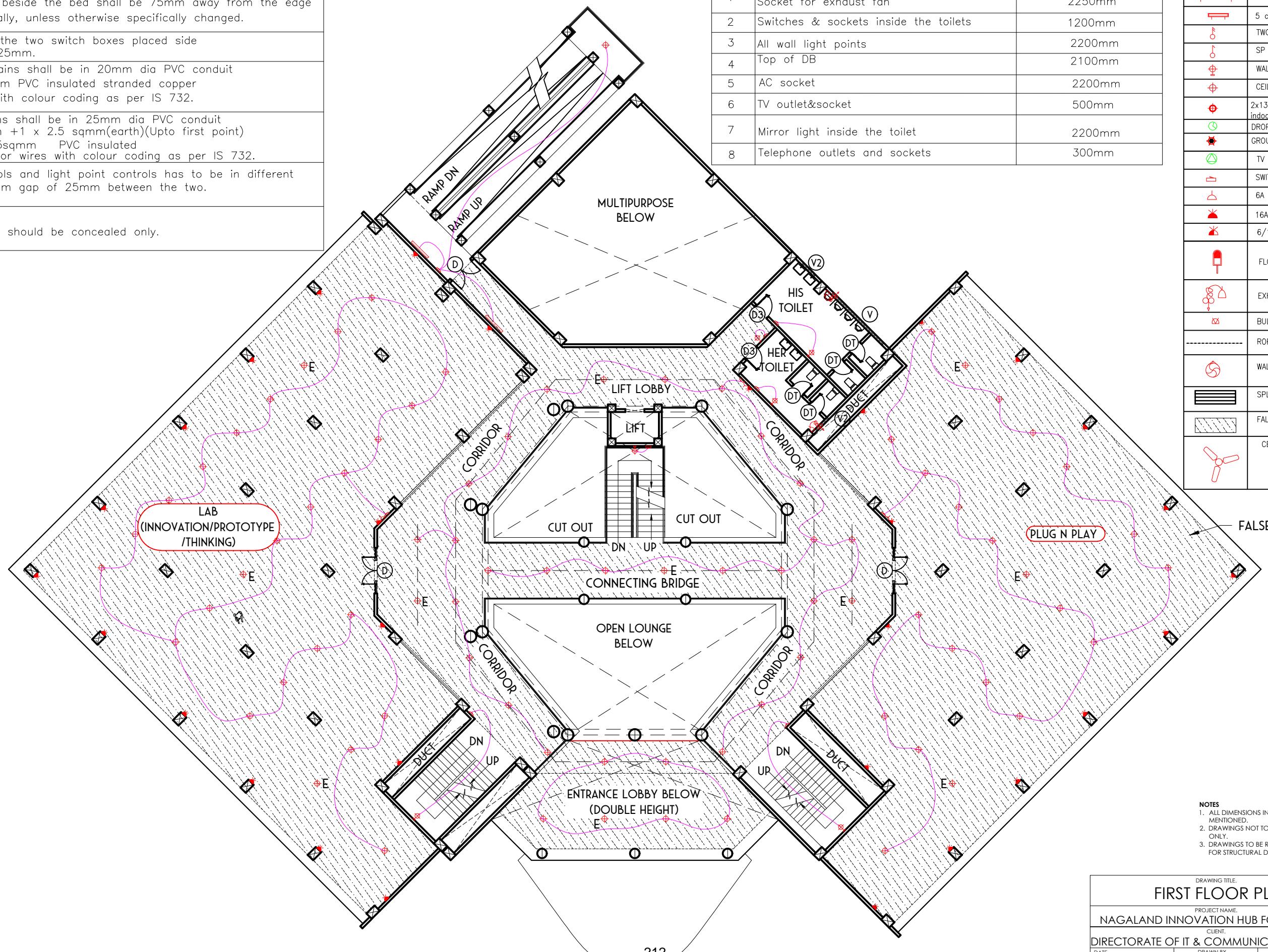
- ALL DIMENSIONS IN MILLIMETERS, UNLESS OTHERWISE MENTIONED.
- DRAWINGS NOT TO BE SCALED, REFER WRITTEN DIMENSIONS ONLY.
- DRAWINGS TO BE READ ALONG WITH STRUCTURAL DRAWINGS FOR STRUCTURAL DETAILS.

DRAWING TITLE. <b>GROUND FLOOR PLAN</b>		DRAWING NO. E0101
PROJECT NAME. <b>NAGALAND INNOVATION HUB FOR START UP</b>		
CLIENT. <b>DIRECTORATE OF IT &amp; COMMUNICATION OFFICE</b>		
DATE 21-01-2025	DRAWN BY. KN	CHECKED BY. RK
SCALE. 1:200	DRAWING TYPE. <b>FLOOR PLANS</b>	
PROJECT NO. 2025-01	REVISION NO. R0	ORIENTATION. 

GENERAL NOTES:	
1.	Any Switch box shown on the edge of the wall shall be 150mm away from the edge.
2.	The two way switch shown beside the door shall be 75mm away from the opened shutter of the door.
3.	The switch boxes beside the bed shall be 75mm away from the edge of the bed generally, unless otherwise specifically changed.
4.	The gap between the two switch boxes placed side by side shall be 25mm.
5.	Lighting circuit mains shall be in 20mm dia PVC conduit with 3 x 2.5 sqmm PVC insulated stranded copper conductor wires with colour coding as per IS 732.
6.	Power circuit mains shall be in 25mm dia PVC conduit with 2 x 4.0sqmm + 1 x 2.5 sqmm(earth)(Upto first point) for looping 3X2.5sqmm PVC insulated stranded conductor wires with colour coding as per IS 732.
7.	Power point controls and light point controls has to be in different boxes with minimum gap of 25mm between the two.
7.	All conduits shown should be concealed only.

MOUNTING HEIGHTS		
SL.NO	DESCRIPTION	LEVEL FROM FFL (Reference to bottom)
1	Socket for exhaust fan	2250mm
2	Switches & sockets inside the toilets	1200mm
3	All wall light points	2200mm
4	Top of DB	2100mm
5	AC socket	2200mm
6	TV outlet&socket	500mm
7	Mirror light inside the toilet	2200mm
8	Telephone outlets and sockets	300mm

LEGEND	
SYMBOL	DESCRIPTION
	LIGHTING CIRCUIT
	EMERGENCY LIGHTING CIRCUIT
	TELEPHONE OUTLET
	1 X 40 W FLUORESCENT(WALL MOUNTED)
	5 capsule light x10W Mirror light
	TWO-WAY SWITCH
	SP SWITCH
	WALL-BRACKET
	CEILING LIGHT POINT(false ceiling)
	2x13W CEILING LIGHT POINT(without false ceiling indoor/outdoor)
	DROP LIGHT
	GROUND MOUNTED LUMINAIRE(outdoor)
	TV OUTLET
	SWITCH BOARD
	6A SOCKET
	16A SOCKET
	6/16A SOCKET
	FLOOD LIGHT
	EXHAUST FAN
	BULKHEAD FIXTURE
	ROPE LIGHT
	WALL MOUNTED FAN/AIR COOLER
	SPLIT AC
	FALSE CEILING
	CEILING FAN



NOTES  
1. ALL DIMENSIONS IN MILLIMETERS, UNLESS OTHERWISE MENTIONED.  
2. DRAWINGS NOT TO BE SCALED, REFER WRITTEN DIMENSIONS ONLY.  
3. DRAWINGS TO BE READ ALONG WITH STRUCTURAL DRAWINGS FOR STRUCTURAL DETAILS.

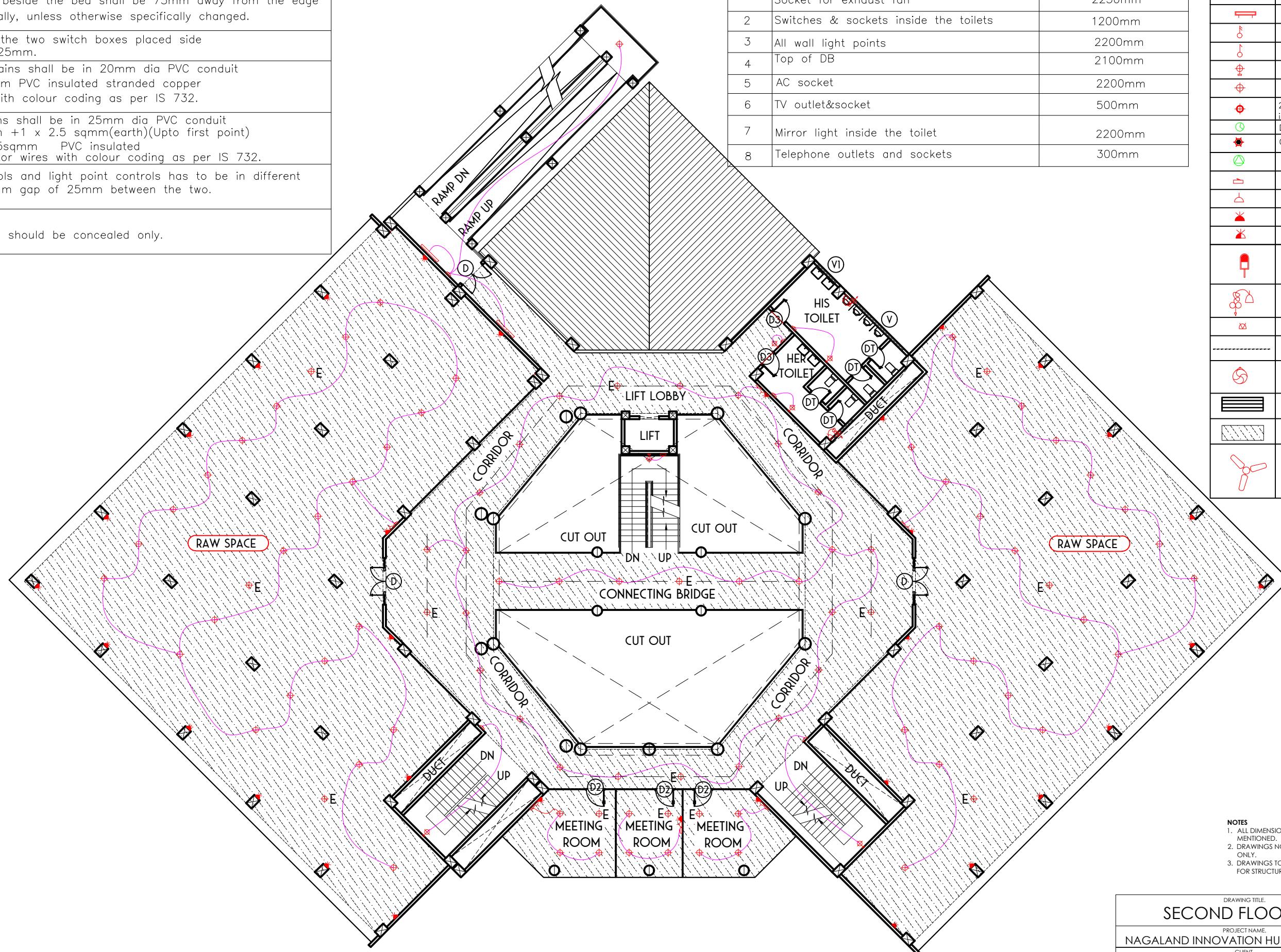
## GENERAL NOTES:

1. Any Switch box shown on the edge of the wall shall be 150mm away from the edge.
2. The two way switch shown beside the door shall be 75mm away from the opened shutter of the door.
3. The switch boxes beside the bed shall be 75mm away from the edge of the bed generally, unless otherwise specifically changed.
4. The gap between the two switch boxes placed side by side shall be 25mm.
5. Lighting circuit mains shall be in 20mm dia PVC conduit with 3 x 2.5 sqmm PVC insulated stranded copper conductor wires with colour coding as per IS 732.
6. Power circuit mains shall be in 25mm dia PVC conduit with 2 x 4.0sqmm + 1 x 2.5 sqmm(earth)(Upto first point) for looping 3X2.5sqmm PVC insulated stranded conductor wires with colour coding as per IS 732.
7. Power point controls and light point controls has to be in different boxes with minimum gap of 25mm between the two.
7. All conduits shown should be concealed only.

## MOUNTING HEIGHTS

SL.NO	DESCRIPTION	LEVEL FROM FFL (Reference to bottom)
1	Socket for exhaust fan	2250mm
2	Switches & sockets inside the toilets	1200mm
3	All wall light points	2200mm
4	Top of DB	2100mm
5	AC socket	2200mm
6	TV outlet&socket	500mm
7	Mirror light inside the toilet	2200mm
8	Telephone outlets and sockets	300mm

LEGEND	
SYMBOL	DESCRIPTION
	LIGHTING CIRCUIT
	EMERGENCY LIGHTING CIRCUIT
	TELEPHONE OUTLET
	1 X 40 W FLUORESCENT(WALL MOUNTED)
	5 capsule light x10W Mirror light
	TWO-WAY SWITCH
	SP SWITCH
	WALL-BRACKET
	CEILING LIGHT POINT(false ceiling)
	2x13W CEILING LIGHT POINT(without false ceiling indoor/outdoor)
	DROP LIGHT
	GROUND MOUNTED LUMINAIRE(outdoor)
	TV OUTLET
	SWITCH BOARD
	6A SOCKET
	16A SOCKET
	6/16A SOCKET
	FLOOD LIGHT
	EXHAUST FAN
	BULKHEAD FIXTURE
	ROPE LIGHT
	WALL MOUNTED FAN/AIR COOLER
	SPLIT AC
	FALSE CEILING
	CEILING FAN

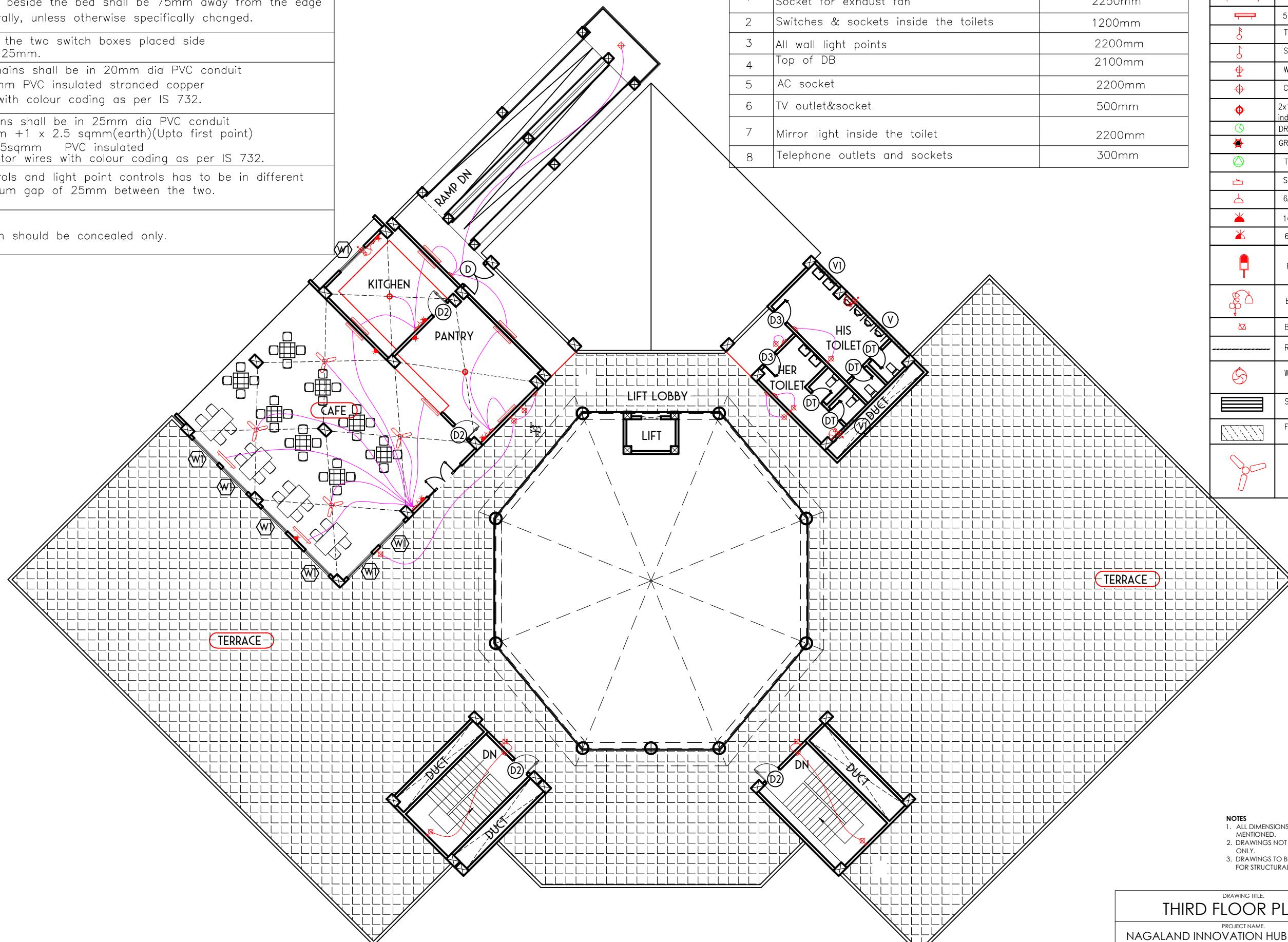


NOTES  
 1. ALL DIMENSIONS IN MILLIMETERS, UNLESS OTHERWISE MENTIONED.  
 2. DRAWINGS NOT TO BE SCALED, REFER WRITTEN DIMENSIONS ONLY.  
 3. DRAWINGS TO BE READ ALONG WITH STRUCTURAL DRAWINGS FOR STRUCTURAL DETAILS.

DRAWING TITLE: <b>SECOND FLOOR PLAN</b>		DRAWING NO. E0103
PROJECT NAME: NAGALAND INNOVATION HUB FOR START UP		
CLIENT: DIRECTORATE OF IT & COMMUNICATION OFFICE		
DATE 21-01-2025	DRAWN BY KN	CHECKED BY RK
SCALE 1:200	ORIENTATION.	
PROJECT NO. 2025-01	DRAWING TYPE: FLOOR PLANS	REVISION NO. R0

## GENERAL NOTES:

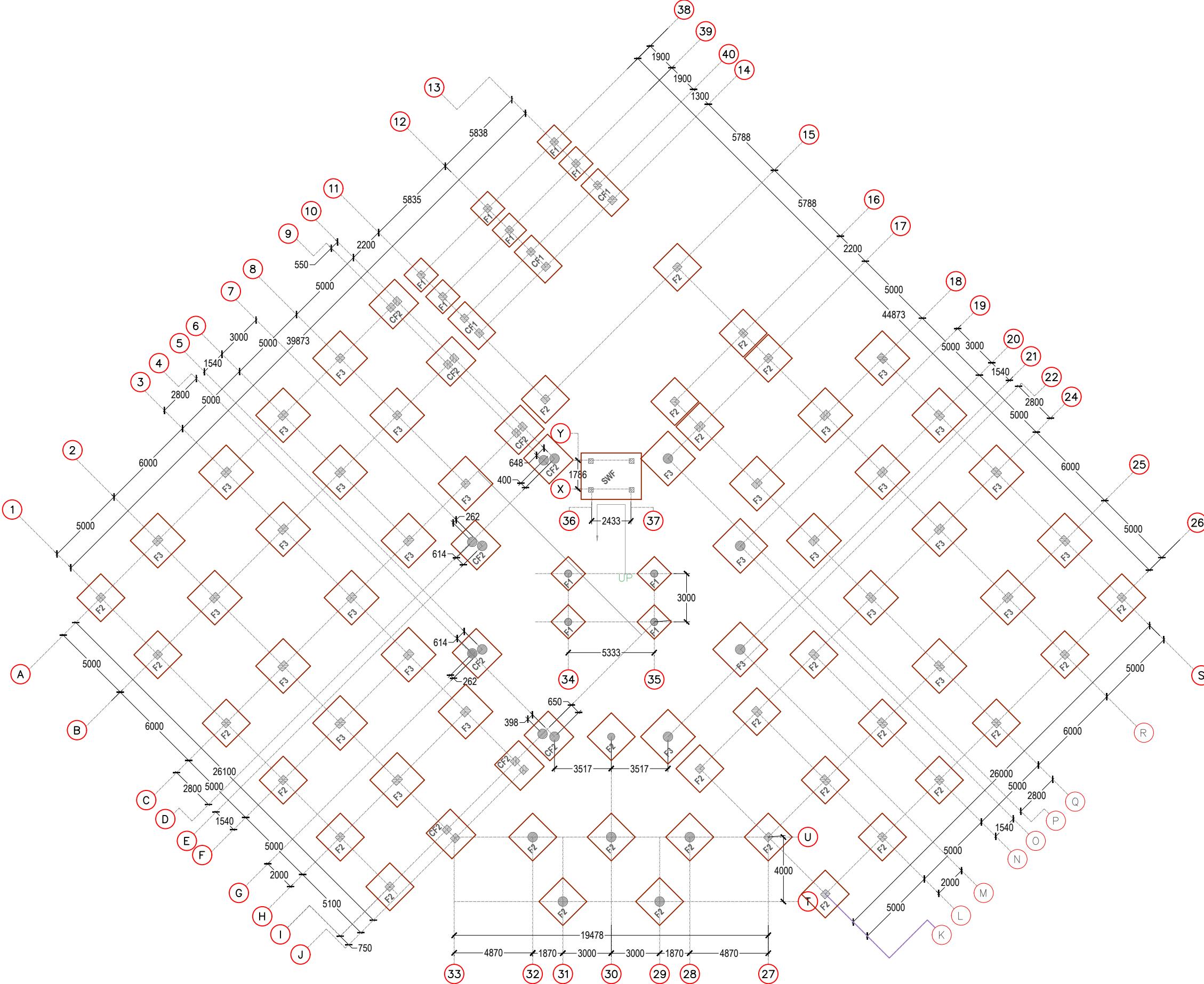
1. Any Switch box shown on the edge of the wall shall be 150mm away from the edge.
2. The two way switch shown beside the door shall be 75mm away from the opened shutter of the door.
3. The switch boxes beside the bed shall be 75mm away from the edge of the bed generally, unless otherwise specifically changed.
4. The gap between the two switch boxes placed side by side shall be 25mm.
5. Lighting circuit mains shall be in 20mm dia PVC conduit with 3 x 2.5 sqmm PVC insulated stranded copper conductor wires with colour coding as per IS 732.
6. Power circuit mains shall be in 25mm dia PVC conduit with 2 x 4.0sqmm +1 x 2.5 sqmm(earth)(Upto first point) for looping 3X2.5sqmm PVC insulated stranded conductor wires with colour coding as per IS 732.
7. Power point controls and light point controls has to be in different boxes with minimum gap of 25mm between the two.
7. All conduits shown should be concealed only.



**NOTES**

1. ALL DIMENSIONS IN MILLIMETERS, UNLESS OTHERWISE MENTIONED.
2. DRAWINGS NOT TO BE SCALED, REFER WRITTEN DIMENSIONS ONLY.
3. DRAWINGS TO BE READ ALONG WITH STRUCTURAL DRAWINGS FOR STRUCTURAL DETAILS.

<b>DRAWING TITLE:</b> <b>THIRD FLOOR PLAN</b>		<b>DRAWING NO.</b> E0104
<b>PROJECT NAME:</b> <b>NAGALAND INNOVATION HUB FOR START UP</b>		
<b>CLIENT:</b> <b>DIRECTORATE OF IT &amp; COMMUNICATION OFFICE</b>		
<b>DATE:</b> 21-01-2025	<b>DRAWN BY:</b> KN	<b>CHECKED BY:</b> RK
<b>PROJECT NO.</b> 2025-01	<b>DRAWING TYPE:</b> FLOOR PLANS	<b>REVISION NO.</b> R0
<b>SCALE:</b> 1:200		
<b>ORIENTATION:</b> N		



# **Construction of Nagaland Innovation Hub for Startup at Chūmukedima**

Foundation layout plan (Below 00.00 m level)  
Scale- 1:250

**::NOTE::**

1. Structural drawings shall be read in conjunction with relevant Architectural drawing.
  2. All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
  3. Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
  4. Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
  5. Lap length-50 Dia of minimum Dia bar.
  6. Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
  7. Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
  8. Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
  9. In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
  10. Stirrups in beams shall be closely spaced at supports than at the centre.
  11. As per IS 456:2000, minimum stripping time of formwork-
    - a. for columns, walls & beams: 16 to 24 hours
    - b. Soffit formwork to slabs: 3 days
    - c. Soffit formwork to beams: 7 days
    - d. Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
    - e. Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
  11. As per IS 456:2000, overlapping length should not be less than 75 mm -
    - a. For Column, 45D, where D is the diameter of the bar.
    - b. For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
    - c. For Slab, 60D , where D is the diameter of the bar.
  12. High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment .
  13. Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment .
  14. Do not scale. Follow written dimensions only.
  15. All dimensions are in millimeter (mm) unless otherwise

SHEET NO. - SD/ ISSUE DATE : 29/01/2024

APPROVED BY:

ALL COPYRIGHTS RESERVED

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws

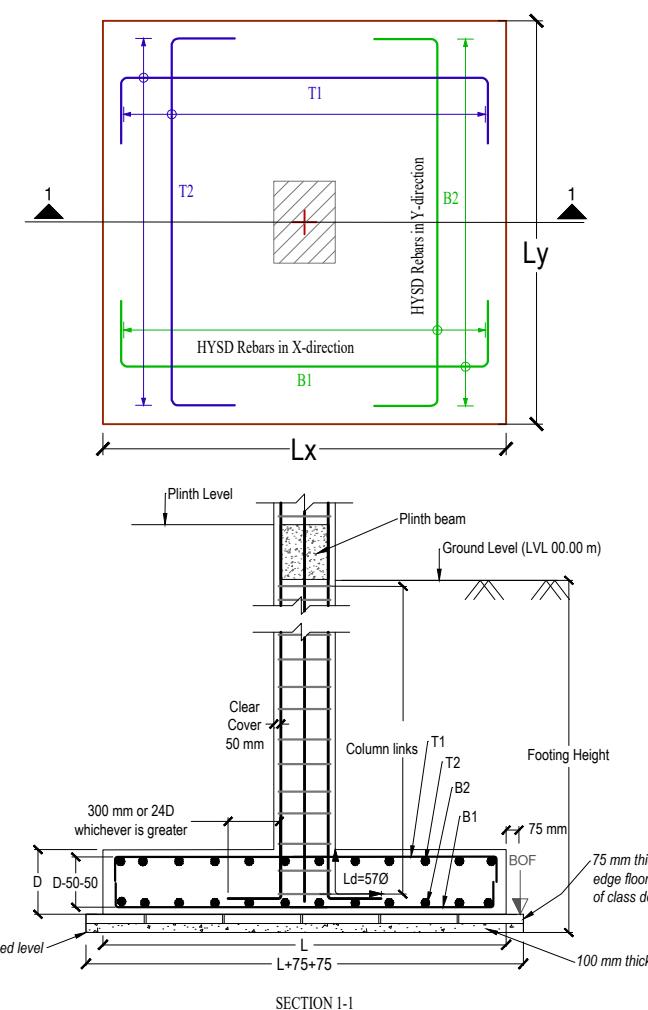


Fig.1 : SECTION PLAN &amp; ELEVATION OF TYPICALLY ISOLATED FOOTING DETAILED

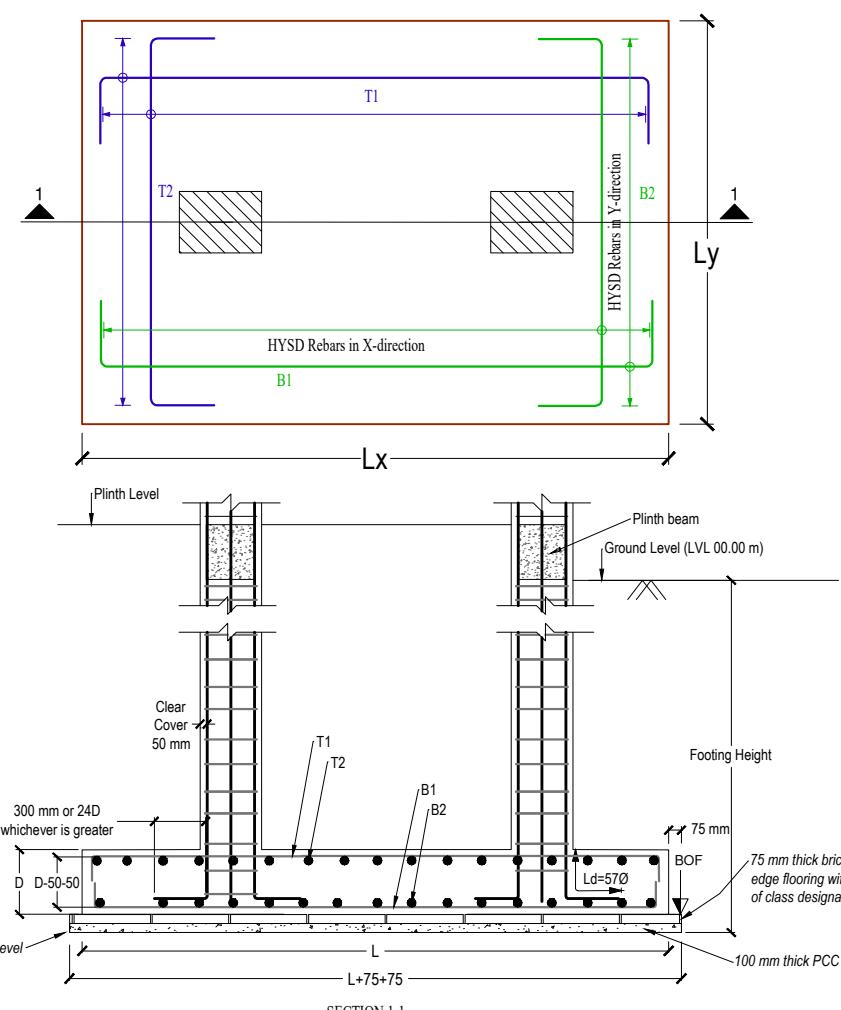
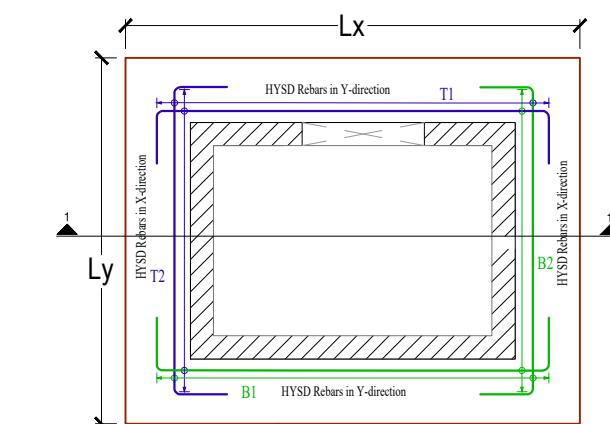


Fig.2 : SECTION PLAN &amp; ELEVATION OF TYPICALLY COMBINED FOOTING DETAILED



Shear wall Footing plan (SWF)

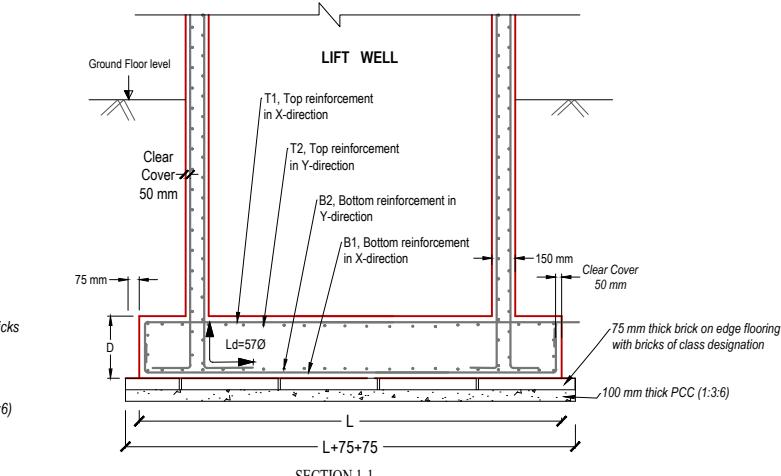


Fig.3 : TYPICAL SECTION SECTION PLAN &amp; ELEVATION OF LIFT SHEAR WALL

Not to Scale

## Construction of Nagaland Innovation Hub for Startup at Chumukedima

### Footing section plan & elevation

#### :: NOTE ::

- Structural drawings shall be read in conjunction with relevant Architectural drawing.
- All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
- Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
- Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
- Lap length-50 Dia of minimum Dia bar.
- Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
- Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
- Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
- In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
- Stirrups in beams shall be closely spaced at supports than at the centre.
- As per IS 456:2000, minimum stripping time of formwork-
  - for columns, walls & beams: 16 to 24 hours
  - Soffit formwork to slabs: 3 days
  - Soffit formwork to beams: 7 days
  - Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
  - Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
- As per IS 456:2000, overlapping length should not be less than 75 mm -
  - For Column, 45D, where D is the diameter of the bar.
  - For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
  - For Slab, 60D , where D is the diameter of the bar.
- High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment.
- Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment .
- Do not scale. Follow written dimensions only.
- All dimensions are in millimeter (mm) unless otherwise

SHEET NO. - SD/ ISSUE DATE : 29/01/2024

#### APPROVED BY:

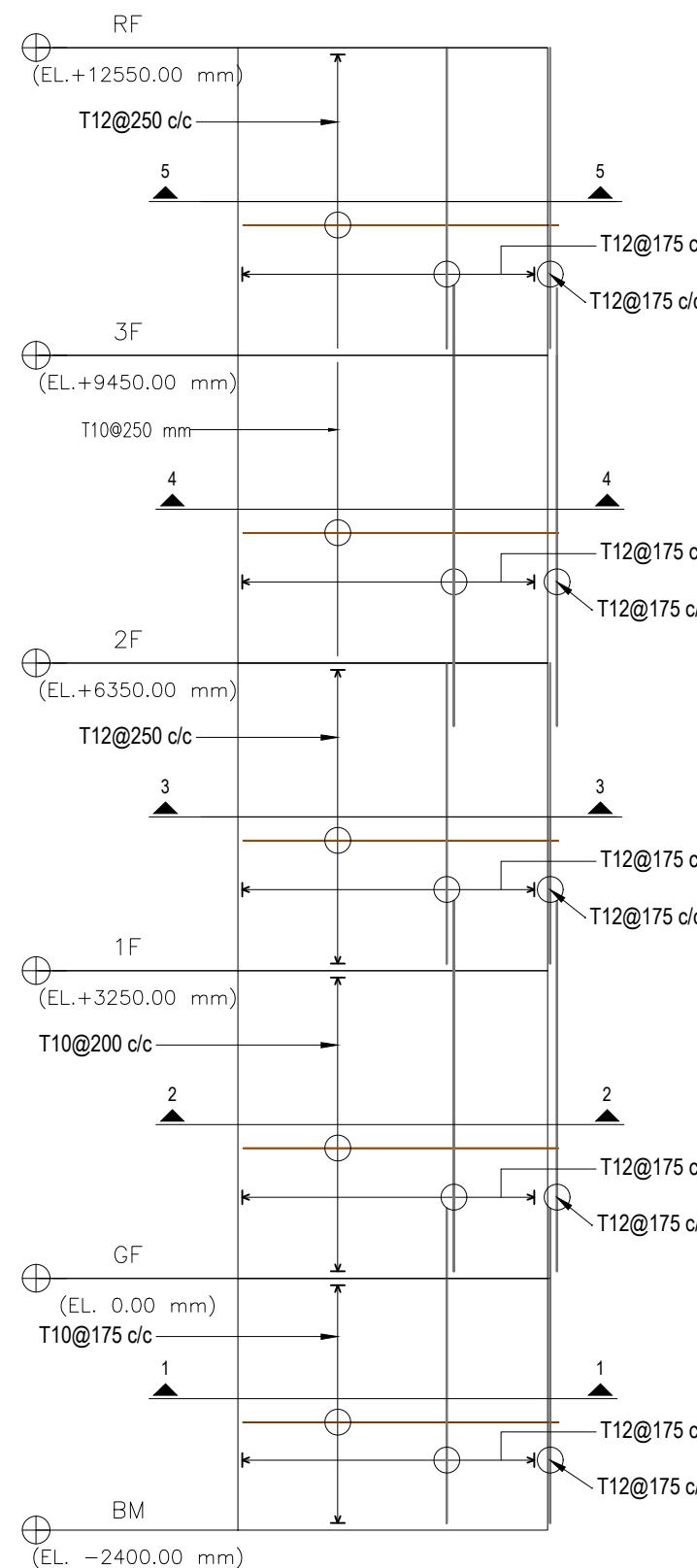
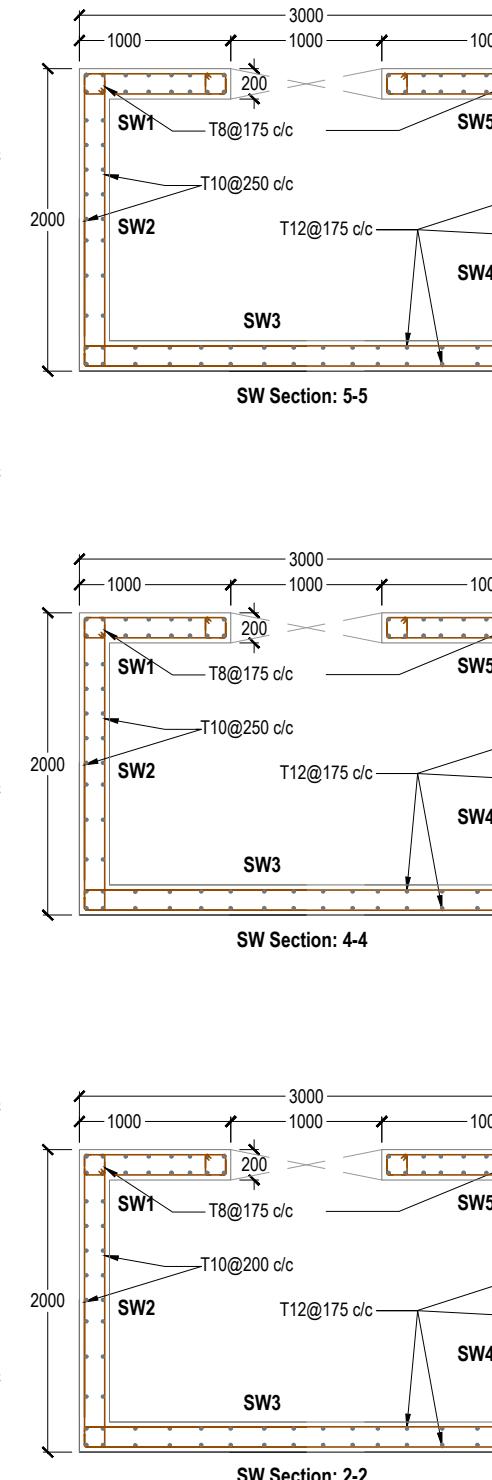
#### ALL COPYRIGHTS RESERVED

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws

### FOOTING SCHEDULE

Footing Marked	Lx [mm]	Ly [mm]	D [mm]	Footing height [mm]	Bottom Reinforcement		Top Reinforcement	
					X-direction	Y-direction	X-direction	Y-direction
F1	1500	1500	300	$\geq 1500$	8T12-200-B2	8T12-200-B1	8T10-200-T2	8T10-200T1
F2	2100	2100	450	$\geq 2400$	14T12-150-B2	14T12-150-B1	14T10-150-T2	14T10-150-T1
F3	2400	2400	500	$\geq 2400$	16T12-150-B2	16T12-150-B1	16T10-150-T2	16T10-150-T1
CF1	2700	1500	600	$\geq 2400$	15T12-200-B2	9T12-200-B1	15T10-200-T2	9T10-200-T1
CF2	2700	2250	600	$\geq 2400$	15T12-200-B2	14T12-200-B1	15T10-200-T2	14T10-200-T1
SWF	3750	2000	600	$\geq 3000$	20T12-200-B2	11T12-200-B1	20T10-200-T2	11T10-200-T1

**Construction of Nagaland Innovation Hub for Startup at Chumukedima**

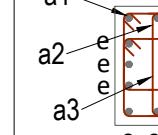
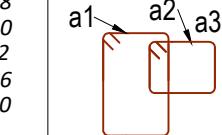
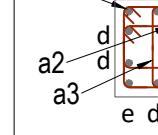
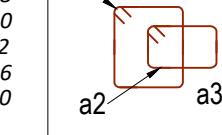
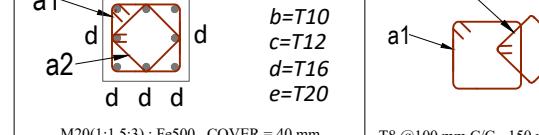
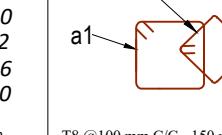
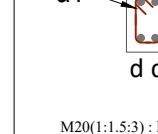
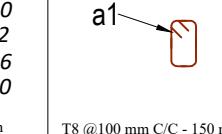
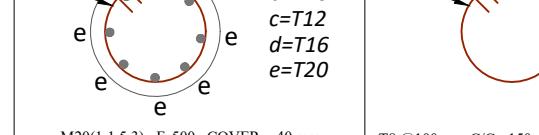
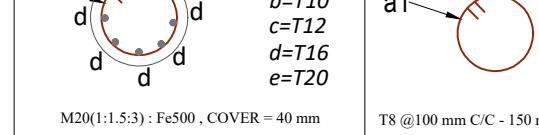
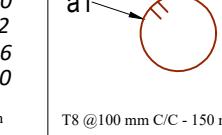
**SHEAR WALL SECTIONAL PLAN & ELEVATION****Not to Scale****Shear wall section plan & elevation****:: NOTE ::**

- Structural drawings shall be read in conjunction with relevant Architectural drawing.
- All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
- Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
- Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
- Lap length=50 Dia of minimum Dia bar.
- Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
- Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
- Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
- In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
- Stirrups in beams shall be closely spaced at supports than at the centre.
- As per IS 456:2000, minimum stripping time of formwork-
  - for columns, walls & beams: 16 to 24 hours
  - Soffit formwork to slabs: 3 days
  - Soffit formwork to beams: 7 days
  - Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
  - Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
- As per IS 456:2000, overlapping length should not be less than 75 mm -
  - For Column, 45D, where D is the diameter of the bar.
  - For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
  - For Slab, 60D , where D is the diameter of the bar.
- High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment .
- Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment .
- Do not scale. Follow written dimensions only.
- All dimensions are in millimeter (mm) unless otherwise

SHEET NO. - SD/ ISSUE DATE : 29/01/2024

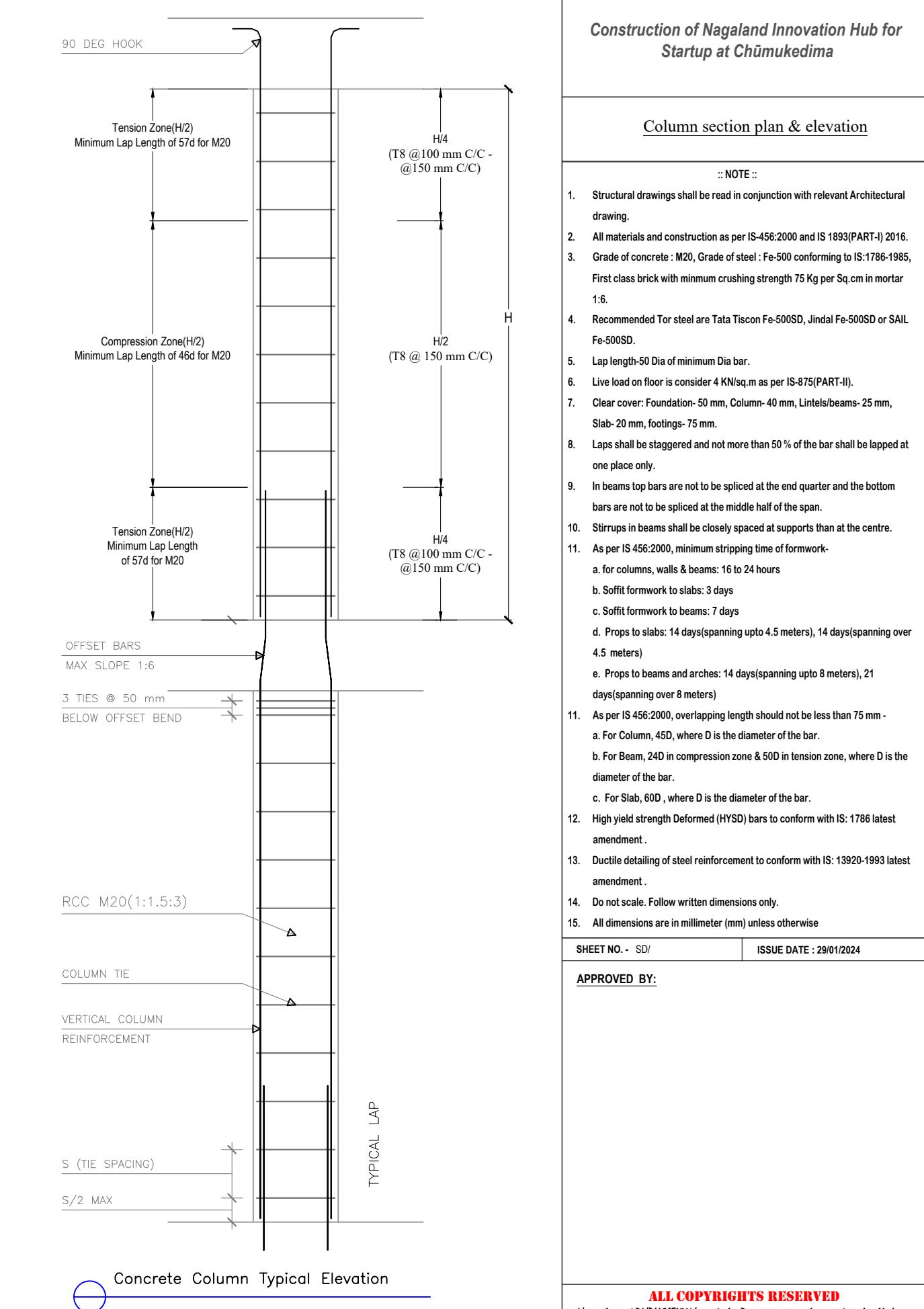
**APPROVED BY:****ALL COPYRIGHTS RESERVED**

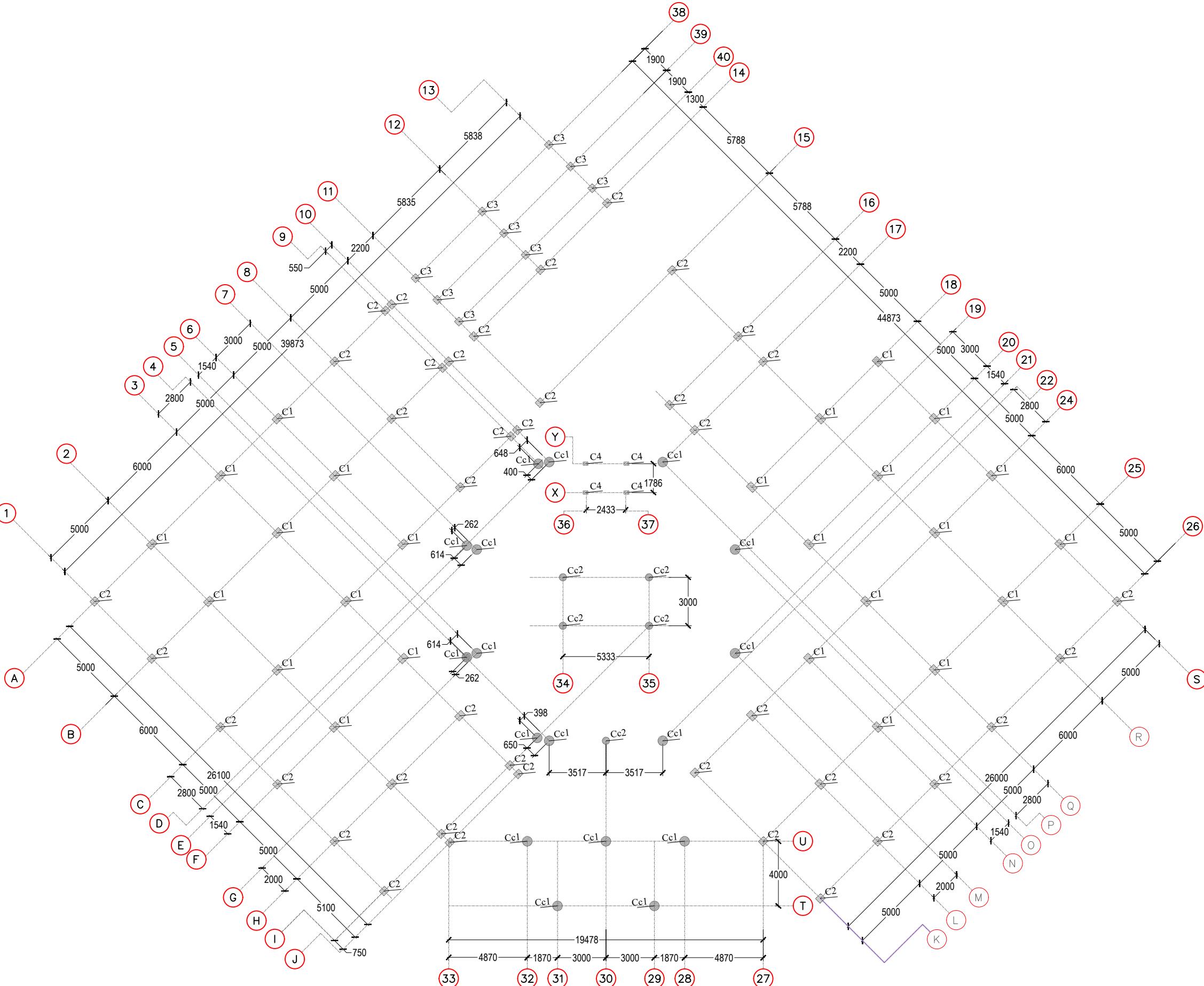
Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws

SCHEDULE OF COLUMN			
COLUMN MARKED	DIMENSION (l x b)	COLUMN CROSS-SECTION	LATERAL TIES
C1	400 mm X 550 mm	 M20(1:1.5:3) : Fe500 , COVER = 40 mm	 T8 @100 mm C/C - 150 mm C/C
C2	400 mm X 450 mm	 M20(1:1.5:3) : Fe500 , COVER = 40 mm	 T8 @100 mm C/C - 150 mm C/C
C3	400 mm X 400 mm	 M20(1:1.5:3) : Fe500 , COVER = 40 mm	 T8 @100 mm C/C - 150 mm C/C
C4	200 mm X 300 mm	 M20(1:1.5:3) : Fe500 , COVER = 40 mm	 T8 @100 mm C/C - 150 mm C/C
Cc1	Diameter: 600 mm	 M20(1:1.5:3) : Fe500 , COVER = 40 mm	 T8 @100 mm C/C - 150 mm C/C
Cc2	Diameter: 450 mm	 M20(1:1.5:3) : Fe500 , COVER = 40 mm	 T8 @100 mm C/C - 150 mm C/C

## Column Reinforcement Schedule

Column Mark	Column Size (in mm)	Column Reinforcement	Lateral Reinforcement (8Ø TMT)	
			Confining	Non-Confining
C1	400 X 550	12 - 20Ø	8Ø @ 75 - 100 C/C	8Ø @ 150 C/C
C2	400 X 450	6 - 16Ø, 4 - 20Ø	8Ø @ 75 - 100 C/C	8Ø @ 150 C/C
C3	400 X 400	8 - 16Ø	8Ø @ 75 - 100 C/C	8Ø @ 150 C/C
C4	200 X 300	4 - 16Ø	8Ø @ 75 - 100 C/C	8Ø @ 150 C/C
Cc1	Diameter- 600	8 - 20Ø	8Ø @ 75 - 100 C/C	8Ø @ 150 C/C
Cc2	Diameter- 450	8 - 16Ø	8Ø @ 75 - 100 C/C	8Ø @ 150 C/C





Column layout plan: Ground Floor (EL: 00.00 m level)

### Construction of Nagaland Innovation Hub for Startup at Chumukedima

Column layout plan: Ground Floor (EL: 00.00 m level)

## :: NOTE ::

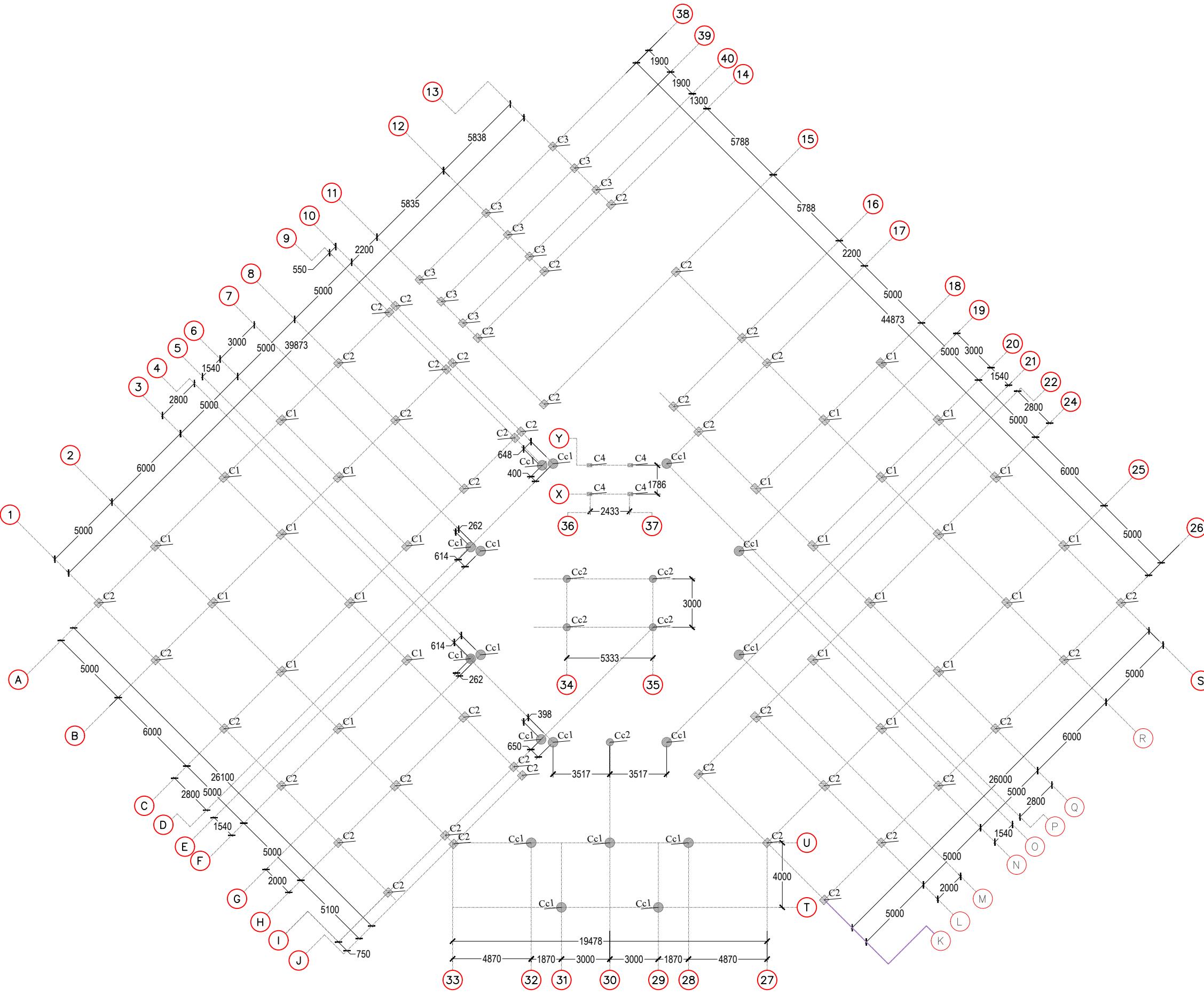
1. Structural drawings shall be read in conjunction with relevant Architectural drawing.
2. All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
3. Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
4. Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
5. Lap length=50 Dia of minimum Dia bar.
6. Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
7. Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
8. Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
9. In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
10. Stirrups in beams shall be closely spaced at supports than at the centre.
11. As per IS 456:2000, minimum stripping time of formwork-
  - a. for columns, walls & beams: 16 to 24 hours
  - b. Soffit formwork to slabs: 3 days
  - c. Soffit formwork to beams: 7 days
  - d. Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
  - e. Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
12. As per IS 456:2000, overlapping length should not be less than 75 mm -
  - a. For Column, 45D, where D is the diameter of the bar.
  - b. For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
  - c. For Slab, 60D , where D is the diameter of the bar.
13. High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment.
14. Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment.
15. Do not scale. Follow written dimensions only.
16. All dimensions are in millimeter (mm) unless otherwise

SHEET NO. - SD/ ISSUE DATE : 29/01/2024

APPROVED BY:

**ALL COPYRIGHTS RESERVED**

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws



### Construction of Nagaland Innovation Hub for Startup at Chumukedima

#### Column layout plan: First Floor

##### :: NOTE ::

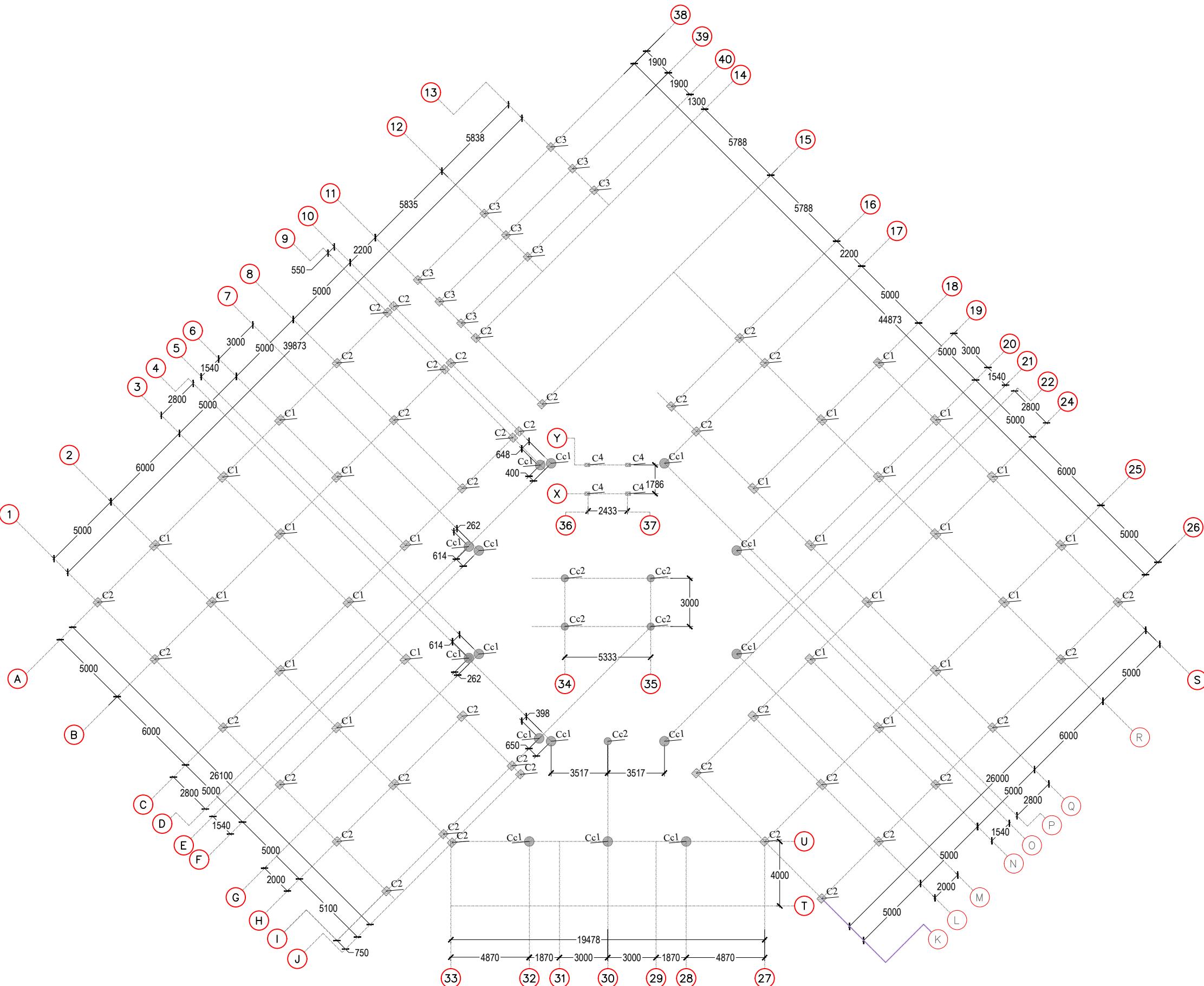
1. Structural drawings shall be read in conjunction with relevant Architectural drawing.
2. All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
3. Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
4. Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
5. Lap length=50 Dia of minimum Dia bar.
6. Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
7. Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
8. Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
9. In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
10. Stirrups in beams shall be closely spaced at supports than at the centre.
11. As per IS 456:2000, minimum stripping time of formwork-
  - a. for columns, walls & beams: 16 to 24 hours
  - b. Soffit formwork to slabs: 3 days
  - c. Soffit formwork to beams: 7 days
  - d. Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
  - e. Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
12. As per IS 456:2000, overlapping length should not be less than 75 mm -
  - a. For Column, 45D, where D is the diameter of the bar.
  - b. For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
  - c. For Slab, 60D , where D is the diameter of the bar.
13. High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment.
14. Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment.
15. Do not scale. Follow written dimensions only.
16. All dimensions are in millimeter (mm) unless otherwise

SHEET NO. - SD/ ISSUE DATE : 29/01/2024

APPROVED BY:

**ALL COPYRIGHTS RESERVED**

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws



**Construction of Nagaland Innovation Hub for Startup at Chumukedima**

Column layout plan: Second Floor

:: NOTE ::

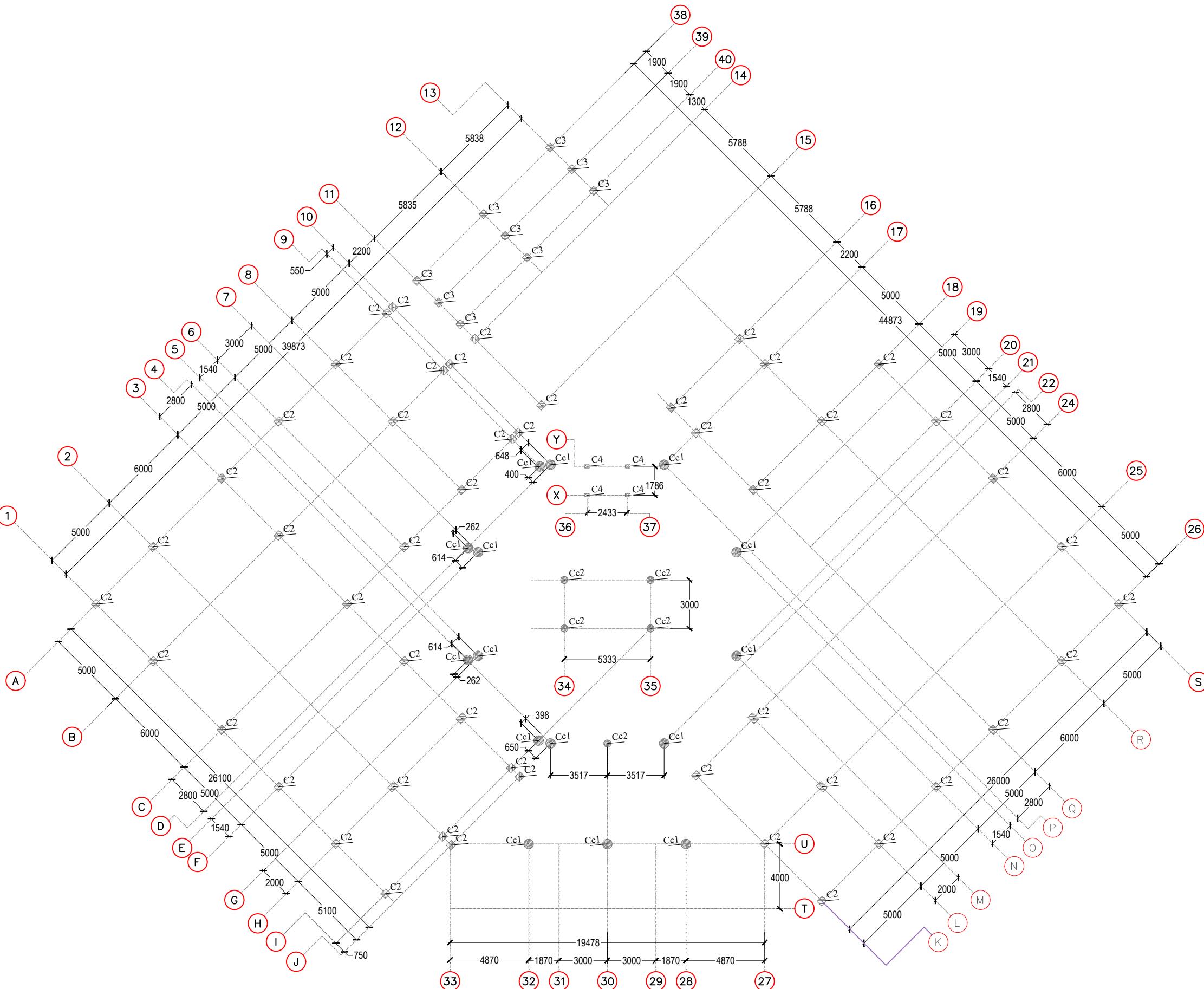
1. Structural drawings shall be read in conjunction with relevant Architectural drawing.
2. All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
3. Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
4. Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
5. Lap length=50 Dia of minimum Dia bar.
6. Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
7. Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
8. Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
9. In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
10. Stirrups in beams shall be closely spaced at supports than at the centre.
11. As per IS 456:2000, minimum stripping time of formwork-
  - a. for columns, walls & beams: 16 to 24 hours
  - b. Soffit formwork to slabs: 3 days
  - c. Soffit formwork to beams: 7 days
  - d. Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
  - e. Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
12. As per IS 456:2000, overlapping length should not be less than 75 mm -
  - a. For Column, 45D, where D is the diameter of the bar.
  - b. For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
  - c. For Slab, 60D , where D is the diameter of the bar.
13. High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment .
14. Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment .
15. Do not scale. Follow written dimensions only.
16. All dimensions are in millimeter (mm) unless otherwise

SHEET NO. - SD/ ISSUE DATE : 29/01/2024

APPROVED BY:

**ALL COPYRIGHTS RESERVED**

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws



**Construction of Nagaland Innovation Hub for Startup at Chumukedima**

Column layout plan: Third Floor

:: NOTE ::

1. Structural drawings shall be read in conjunction with relevant Architectural drawing.
2. All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
3. Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
4. Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
5. Lap length=50 Dia of minimum Dia bar.
6. Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
7. Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
8. Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
9. In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
10. Stirrups in beams shall be closely spaced at supports than at the centre.
11. As per IS 456:2000, minimum stripping time of formwork-
  - a. for columns, walls & beams: 16 to 24 hours
  - b. Soffit formwork to slabs: 3 days
  - c. Soffit formwork to beams: 7 days
  - d. Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
  - e. Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
12. As per IS 456:2000, overlapping length should not be less than 75 mm -
  - a. For Column, 45D, where D is the diameter of the bar.
  - b. For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
  - c. For Slab, 60D , where D is the diameter of the bar.
13. High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment .
14. Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment .
15. Do not scale. Follow written dimensions only.
16. All dimensions are in millimeter (mm) unless otherwise

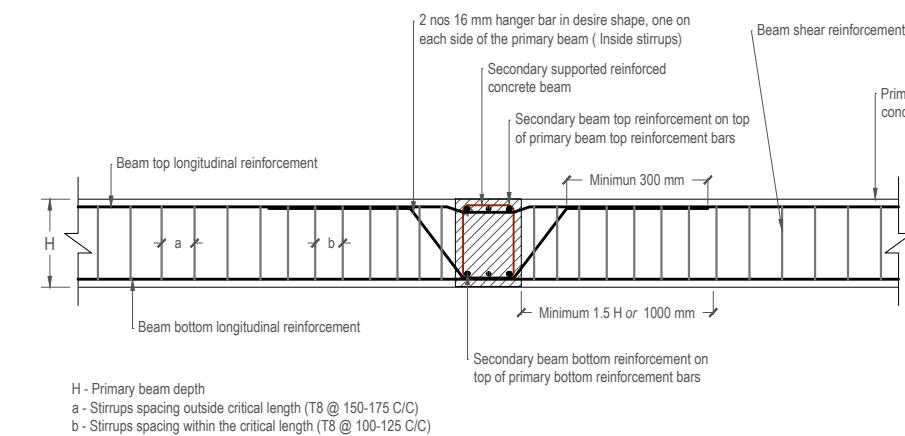
SHEET NO. - SD/ ISSUE DATE : 29/01/2024

APPROVED BY:

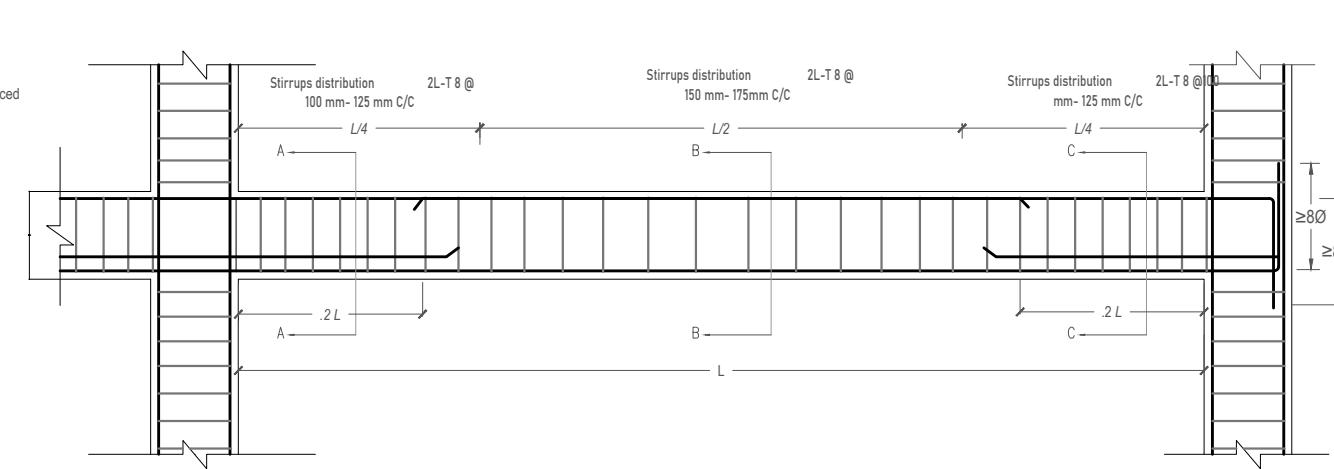
**ALL COPYRIGHTS RESERVED**

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws

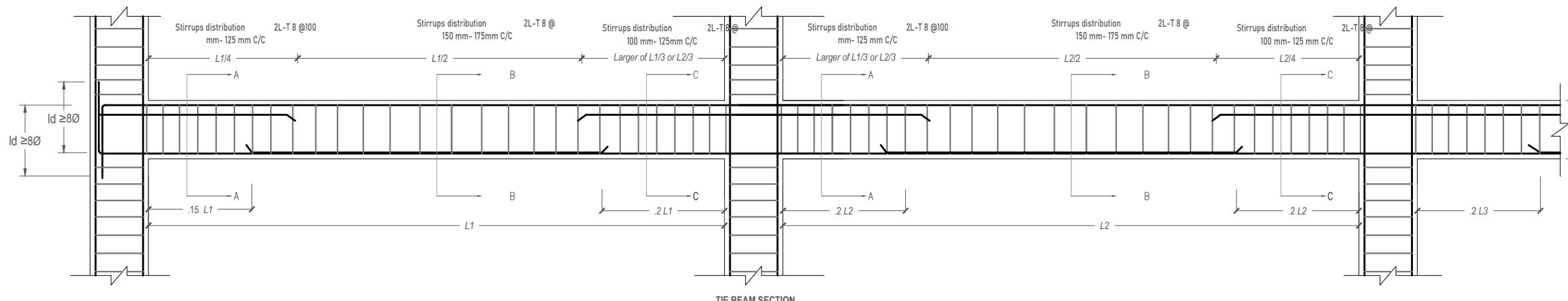
**Construction of Nagaland Innovation Hub for Startup at Chūmukedima**



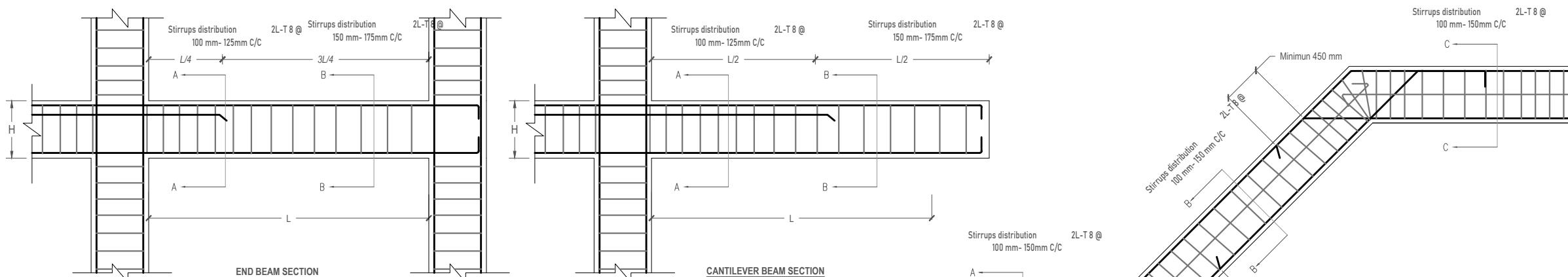
REINFORCED CONCRETE BEAM ON BEAM SUPPORT CROSS SECTION



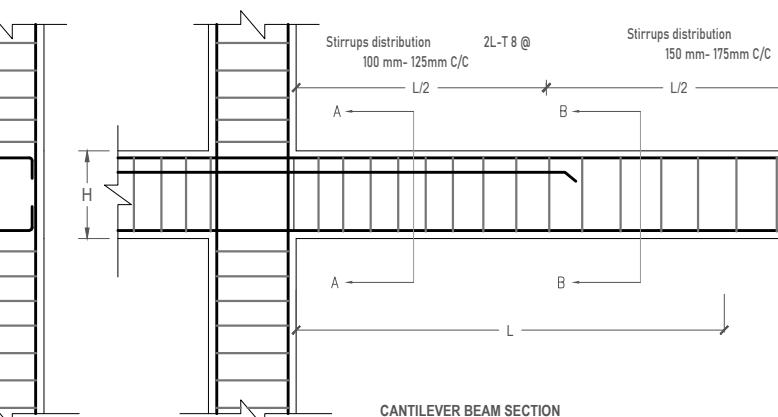
PLINTH BEAM SECTION



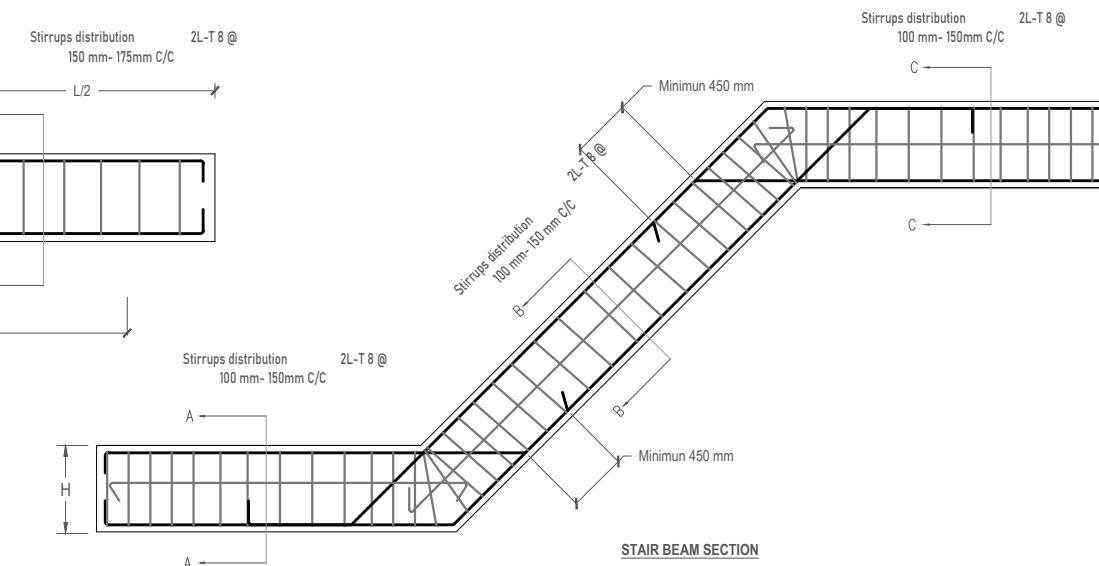
TIE BEAM SECTION



END BEAM SECTION



CANTILEVER BEAM SECTION



STAIR BEAM SECTION

**TYPICAL BEAM REINFORCEMENT DETAILS****TYPICAL BEAM REINFORCEMENT DETAILS****:: NOTE ::**

- Structural drawings shall be read in conjunction with relevant Architectural drawing.
- All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
- Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
- Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
- Lap length=50 Dia of minimum Dia bar.
- Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
- Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
- Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
- In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
- Stirrups in beams shall be closely spaced at supports than at the centre.
- As per IS 456:2000, minimum stripping time of formwork-
  - for columns, walls & beams: 16 to 24 hours
  - Soffit formwork to slabs: 3 days
  - Soffit formwork to beams: 7 days
  - Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
  - Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
- As per IS 456:2000, overlapping length should not be less than 75 mm -
  - For Column, 4D, where D is the diameter of the bar.
  - For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
  - For Slab, 60D , where D is the diameter of the bar.
- High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment.
- Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment .
- Do not scale. Follow written dimensions only.
- All dimensions are in millimeter (mm) unless otherwise

SHEET NO. - SD/

ISSUE DATE : 29/01/2024

**APPROVED BY:****ALL COPYRIGHTS RESERVED**

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws

SCHEDULE OF BEAM		
BEAM MARKED	SIZE (l x b)	BEAM CROSS-SECTION
PB1	300 mm X 450 mm	M20(1:1.5:3) : Fe500, COVER = 25 mm a=T8, b=T10, c=T12, d=T16, e=T20  At section A-A & C-C T1= e-e-e T2= e-e B1= e-e-e a=T8,100 -175 Near the Supports upto L/4  At section B-B T1= e-e-e B1= e-e-e B2= e-e-e a=T8,100 -175 At the Mid-Span along L/2
PB2	300 mm X 500 mm	M20(1:1.5:3) : Fe500, COVER = 25 mm a=T8, b=T10, c=T12, d=T16, e=T20  At section A-A & C-C T1= e-d-d-e T2= e-e M= c-c B1= e-d-d-e a=T8,100 -175 Near the Supports upto L/4  At the Mid-Span along L/2
PB3	300 mm X 350 mm	M20(1:1.5:3) : Fe500, COVER = 25 mm a=T8, b=T10, c=T12, d=T16, e=T20  At section A-A & C-C T1= d-d-d M= d-d B1= d-d-d a=T8,100 -175 Near the Supports upto L/4  At the Mid-Span along L/2
SB	300 mm X 350 mm	M20(1:1.5:3) : Fe500, COVER = 25 mm a=T8, b=T10, c=T12, d=T16, e=T20  At section A-A & C-C T1= d-d-d M= c-c B1= d-d-d a=T8,100 -175 Near the Supports upto L/4  At the Mid-Span along L/2
CB1	250 mm X 450 mm	M20(1:1.5:3) : Fe500, COVER = 25 mm a=T8, b=T10, c=T12, d=T16, e=T20  Section at L/2 from the fixed end T1= e-e-e T2= e-e M= c-c B1= e-e-e a=T8,100 -175 At all span

SCHEDULE OF BEAM		
BEAM MARKED	SIZE (l x b)	BEAM CROSS-SECTION
B1	300 mm X 500 mm	M20(1:1.5:3) : Fe500, COVER = 25 mm a=T8, b=T10, c=T12, d=T16, e=T20  At section A-A & C-C T1= e-e-e T2= e-e M= c-c B1= e-e-e a=T8,100 -175 Near the Supports upto L/4  At the Mid-Span along L/2
B2	300 mm X 600 mm	M20(1:1.5:3) : Fe500, COVER = 25 mm a=T8, b=T10, c=T12, d=T16, e=T20  At section A-A & C-C T1= e-e-e-e T2= e-e M= c-c B1= e-e-e-e a=T8,100 -175 Near the Supports upto L/4  At the Mid-Span along L/2
B3 or RB1	300 mm X 350 mm	M20(1:1.5:3) : Fe500, COVER = 25 mm a=T8, b=T10, c=T12, d=T16, e=T20  At section A-A & C-C T1= d-d-d M= d-d B1= d-d-d a=T8,100 -175 Near the Supports upto L/4  At the Mid-Span along L/2
CB	300 mm X 125 mm	M20(1:1.5:3) : Fe500, COVER = 25 mm a=T8, b=T10, c=T12, d=T16, e=T20  At all section T1= c-c-c B1= c-c-c a=T8,100 -175 At all span
LB	150 mm X 150 mm	M20(1:1.5:3) : Fe500, COVER = 25 mm a=T8, b=T10, c=T12, d=T16, e=T20  At all section T1= c-c B1= c-c a=T8,100 -175 At all span

Construction of Nagaland Innovation Hub for Startup at Chumukedima

### Cross Section of beam

:: NOTE ::

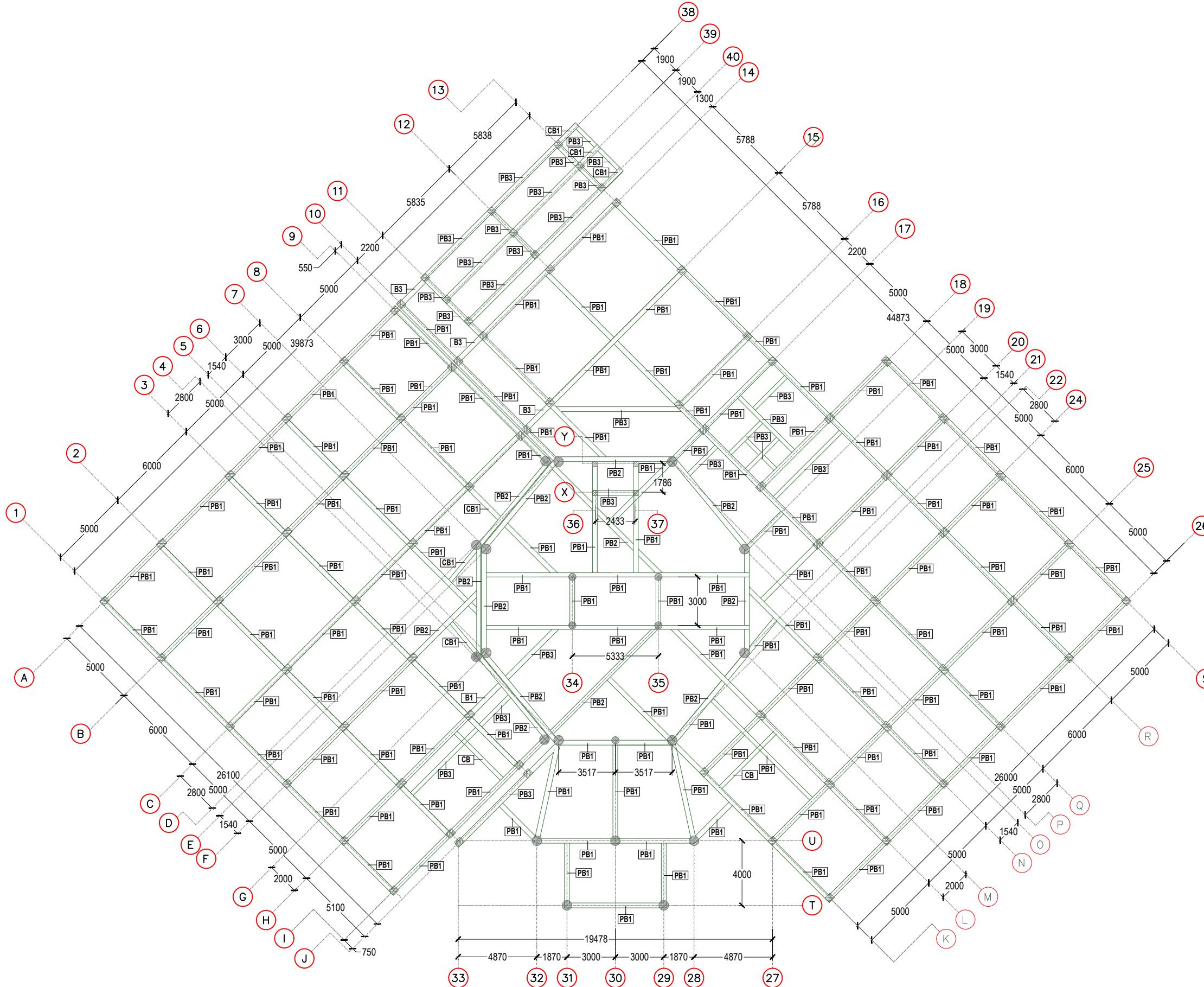
- Structural drawings shall be read in conjunction with relevant Architectural drawing.
- All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
- Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
- Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
- Lap length-50 Dia of minimum Dia bar.
- Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
- Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
- Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
- In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
- Stirrups in beams shall be closely spaced at supports than at the centre.
- As per IS 456:2000, minimum stripping time of formwork-  
 a. for columns, walls & beams: 16 to 24 hours  
 b. Soffit formwork to slabs: 3 days  
 c. Soffit formwork to beams: 7 days  
 d. Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)  
 e. Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
- As per IS 456:2000, overlapping length should not be less than 75 mm -  
 a. For Column, 45D, where D is the diameter of the bar.  
 b. For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.  
 c. For Slab, 60D , where D is the diameter of the bar.
- High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment .
- Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment .
- Do not scale. Follow written dimensions only.
- All dimensions are in millimeter (mm) unless otherwise

SHEET NO. - SD/ ISSUE DATE : 29/01/2024

APPROVED BY:

ALL COPYRIGHTS RESERVED

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws



### Construction of Nagaland Innovation Hub for Startup at Chumukedima

Beam layout plan: Ground Floor (EL: 00.00 m level)  
Scale:1:250

#### :: NOTE ::

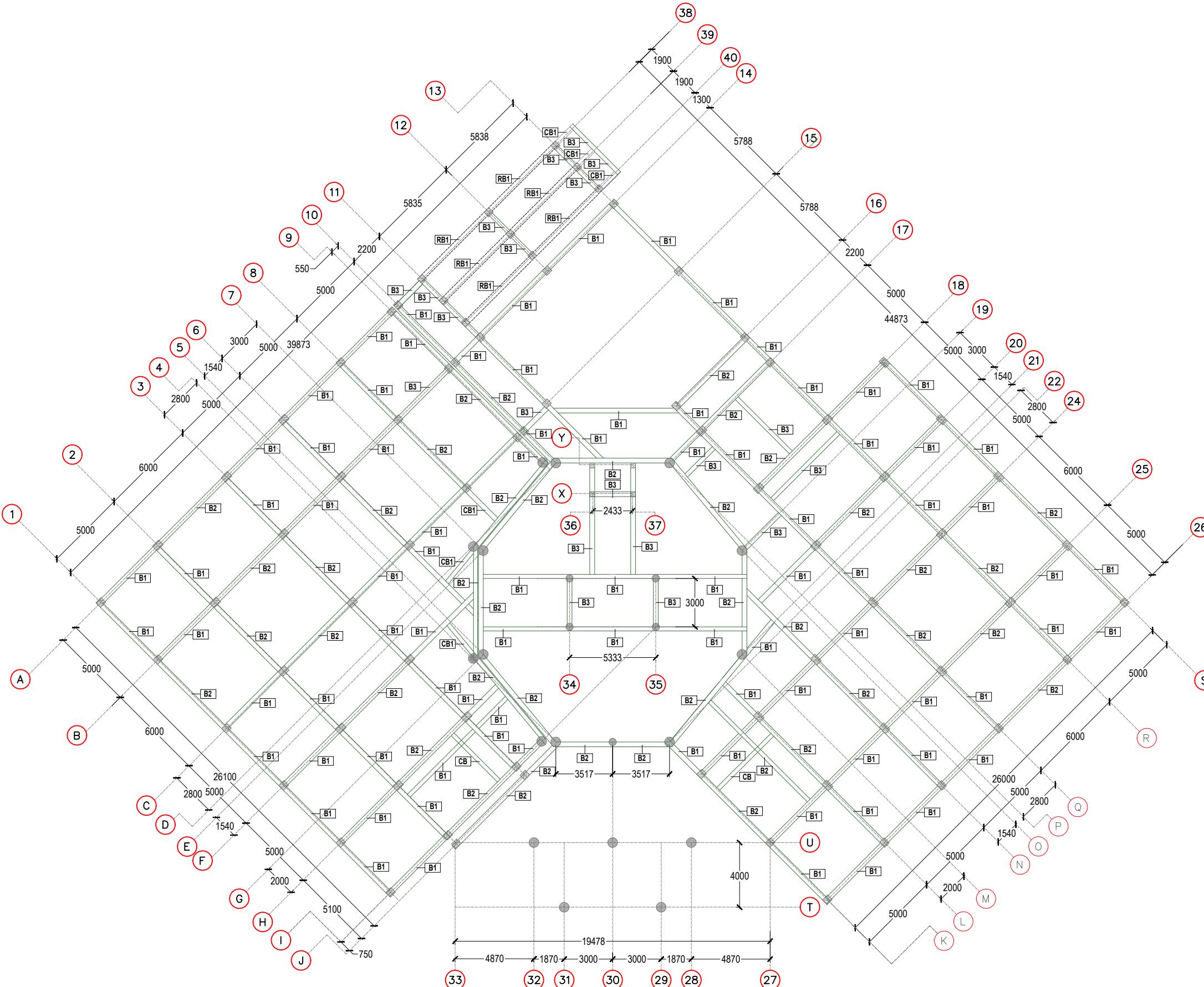
- Structural drawings shall be read in conjunction with relevant Architectural drawing.
- All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
- Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
- Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
- Lap length=50 Dia of minimum Dia bar.
- Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
- Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
- Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
- In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
- Stirrups in beams shall be closely spaced at supports than at the centre.
- As per IS 456:2000, minimum stripping time of formwork-
  - for columns, walls & beams: 16 to 24 hours
  - Soffit formwork to slabs: 3 days
  - Soffit formwork to beams: 7 days
  - Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
  - Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
- As per IS 456:2000, overlapping length should not be less than 75 mm -
  - For Column, 45D, where D is the diameter of the bar.
  - For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
  - For Slab, 60D , where D is the diameter of the bar.
- High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment.
- Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment .
- Do not scale. Follow written dimensions only.
- All dimensions are in millimeter (mm) unless otherwise

SHEET NO. - SD/ ISSUE DATE : 29/01/2024

APPROVED BY:

**ALL COPYRIGHTS RESERVED**

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws



### Construction of Nagaland Innovation Hub for Startup at Chumukedima

Beam layout plan: First Floor  
Scale-1:250

:: NOTE ::

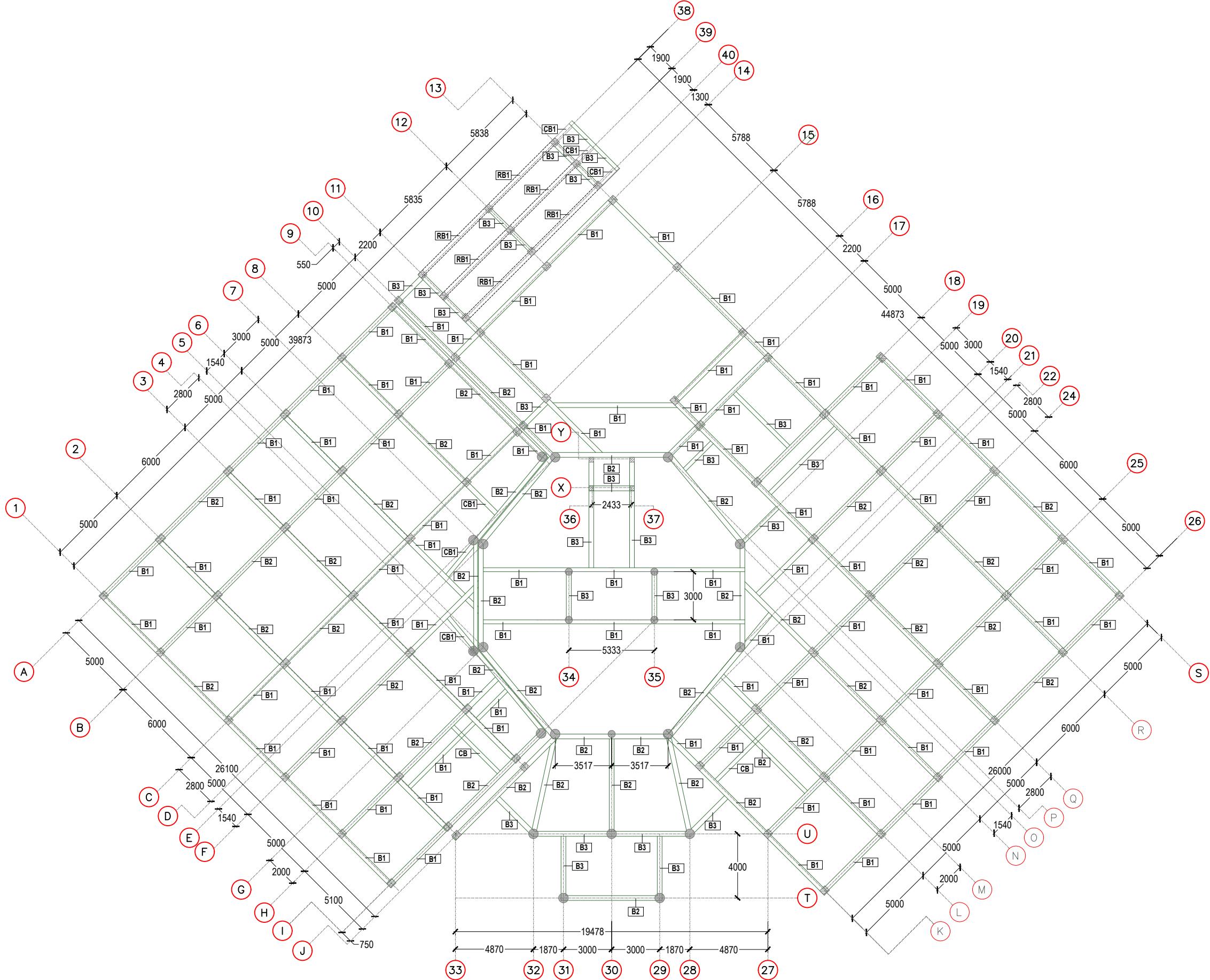
1. Structural drawings shall be read in conjunction with relevant Architectural drawing.
2. All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
3. Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
4. Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
5. Lap length=50 Dia of minimum Dia bar.
6. Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
7. Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
8. Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
9. In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
10. Stirrups in beams shall be closely spaced at supports than at the centre.
11. As per IS 456:2000, minimum stripping time of formwork-
  - a. for columns, walls & beams: 16 to 24 hours
  - b. Soffit formwork to slabs: 3 days
  - c. Soffit formwork to beams: 7 days
  - d. Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
  - e. Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
12. As per IS 456:2000, overlapping length should not be less than 75 mm -
  - a. For Column, 45D, where D is the diameter of the bar.
  - b. For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
  - c. For Slab, 60D , where D is the diameter of the bar.
13. High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment .
14. Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment .
15. Do not scale. Follow written dimensions only.
16. All dimensions are in millimeter (mm) unless otherwise

SHEET NO. - SD/ ISSUE DATE : 29/01/2024

APPROVED BY:

**ALL COPYRIGHTS RESERVED**

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws



## **Construction of Nagaland Innovation Hub for Startup at Chūmukedima**

Beam layout plan: Second Floor  
Scale 1:250

**:: NOTE ::**

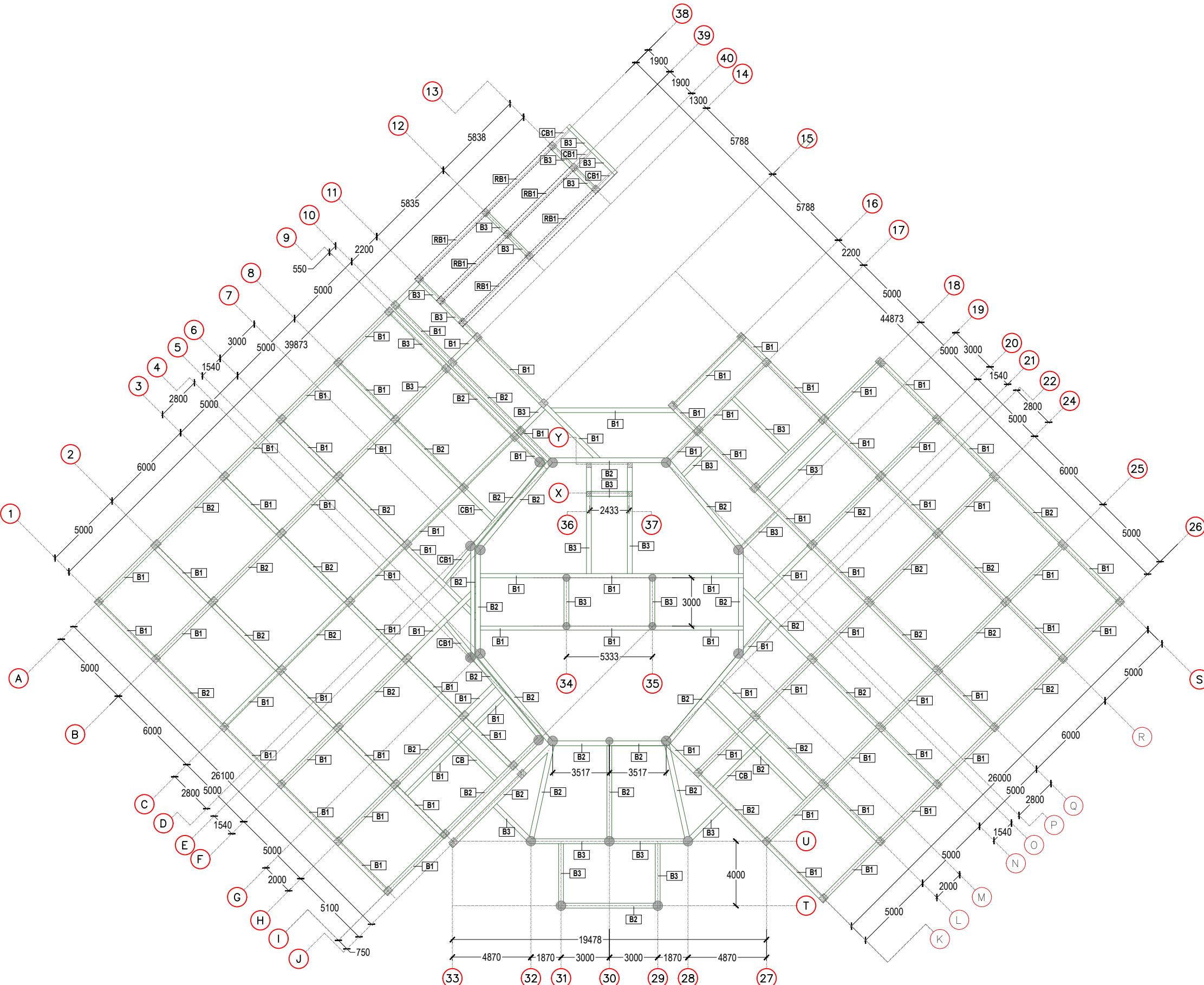
1. Structural drawings shall be read in conjunction with relevant Architectural drawing.
  2. All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
  3. Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
  4. Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
  5. Lap length-50 Dia of minimum Dia bar.
  6. Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
  7. Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
  8. Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
  9. In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
  10. Stirrups in beams shall be closely spaced at supports than at the centre.
  11. As per IS 456:2000, minimum stripping time of formwork-
    - a. for columns, walls & beams: 16 to 24 hours
    - b. Soffit formwork to slabs: 3 days
    - c. Soffit formwork to beams: 7 days
    - d. Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
    - e. Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
  11. As per IS 456:2000, overlapping length should not be less than 75 mm -
    - a. For Column, 45D, where D is the diameter of the bar.
    - b. For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
    - c. For Slab, 60D , where D is the diameter of the bar.
  12. High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment.
  13. Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment .
  14. Do not scale. Follow written dimensions only.
  15. All dimensions are in millimeter (mm) unless otherwise

SHEET NO. - SD/ ISSUE DATE : 29/01/2024

APPROVED BY:

ALL COPYRIGHTS RESERVED

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws



**Construction of Nagaland Innovation Hub for Startup at Chumukedima**

**Beam layout plan: Third Floor**  
Scale: 1:250

**:: NOTE ::**

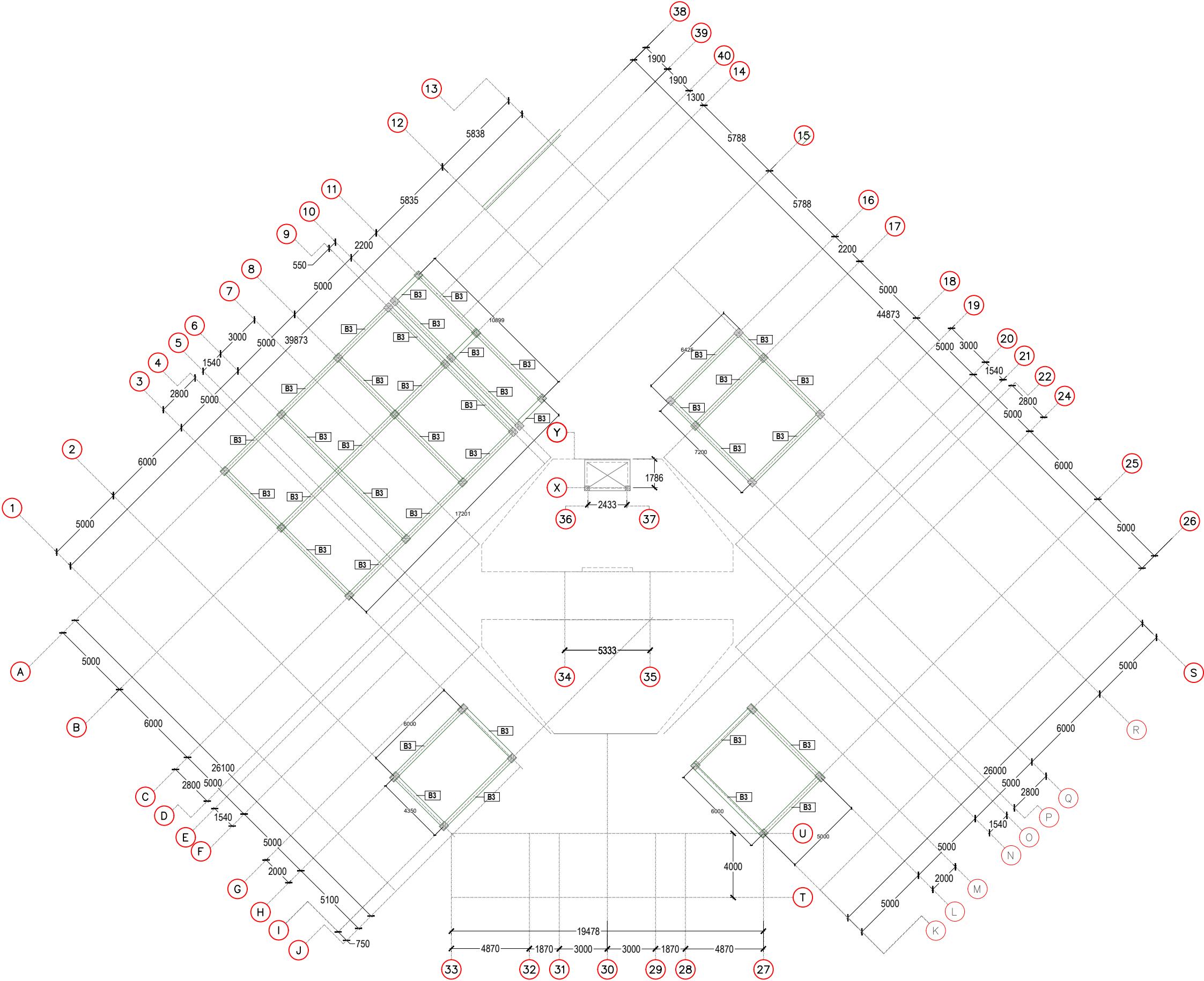
1. Structural drawings shall be read in conjunction with relevant Architectural drawing.
2. All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
3. Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
4. Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
5. Lap length=50 Dia of minimum Dia bar.
6. Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
7. Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
8. Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
9. In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
10. Stirrups in beams shall be closely spaced at supports than at the centre.
11. As per IS 456:2000, minimum stripping time of formwork-
  - a. for columns, walls & beams: 16 to 24 hours
  - b. Soffit formwork to slabs: 3 days
  - c. Soffit formwork to beams: 7 days
  - d. Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
  - e. Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
12. As per IS 456:2000, overlapping length should not be less than 75 mm -
  - a. For Column, 45D, where D is the diameter of the bar.
  - b. For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
  - c. For Slab, 60D , where D is the diameter of the bar.
13. High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment.
14. Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment.
15. Do not scale. Follow written dimensions only.
16. All dimensions are in millimeter (mm) unless otherwise

SHEET NO. - SD/ ISSUE DATE : 29/01/2024

**APPROVED BY:**

**ALL COPYRIGHTS RESERVED**

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws



# **Construction of Nagaland Innovation Hub for Startup at Chūmukedima**

## Beam layout plan: Roof Floor

:: NOTE ::

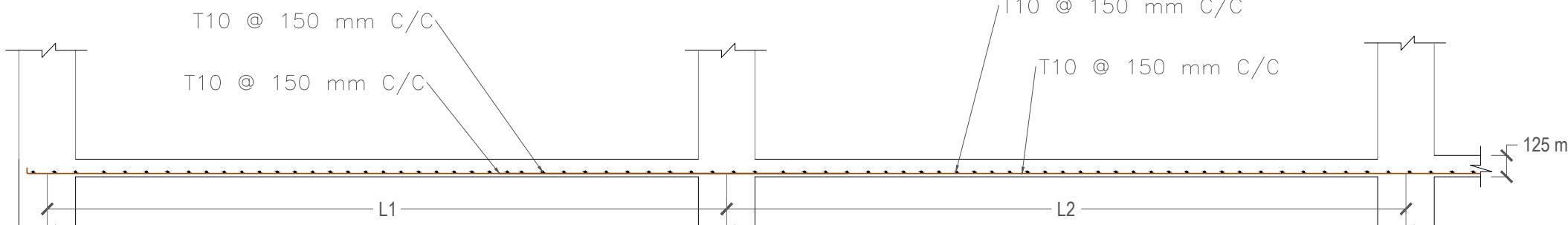
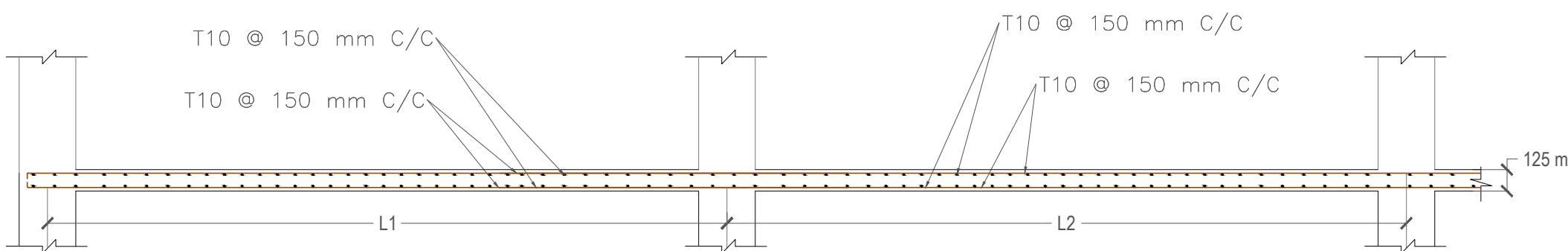
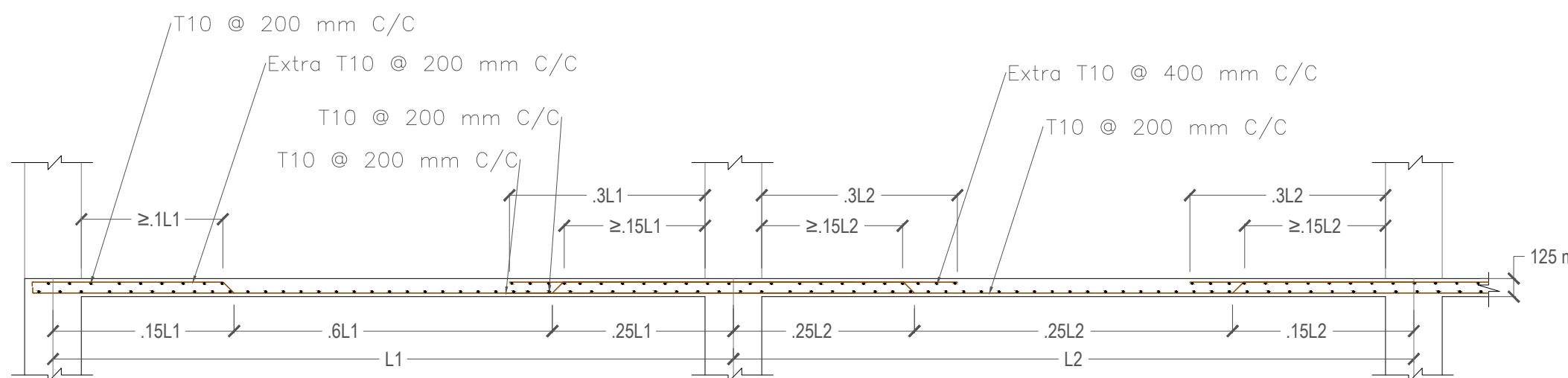
1. Structural drawings shall be read in conjunction with relevant Architectural drawing.
  2. All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
  3. Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
  4. Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
  5. Lap length-50 Dia of minimum Dia bar.
  6. Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
  7. Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
  8. Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
  9. In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
  10. Stirrups in beams shall be closely spaced at supports than at the centre.
  11. As per IS 456:2000, minimum stripping time of formwork-
    - a. for columns, walls & beams: 16 to 24 hours
    - b. Soffit formwork to slabs: 3 days
    - c. Soffit formwork to beams: 7 days
    - d. Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
    - e. Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
  11. As per IS 456:2000, overlapping length should not be less than 75 mm -
    - a. For Column, 45D, where D is the diameter of the bar.
    - b. For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
    - c. For Slab, 60D , where D is the diameter of the bar.
  12. High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment .
  13. Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment .
  14. Do not scale. Follow written dimensions only.
  15. All dimensions are in millimeter (mm) unless otherwise

SHEET NO. - SD/ ISSUE DATE : 29/01/2024

APPROVED BY:

**ALL COPYRIGHTS RESERVED**

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws

**Typical Slab section of Single Layer Mesh Slab(Ss)****Typical Slab section of Double Layer Mesh Slab(DS)****Typical Slab section of One Way Slab, S1(OWS) & Two Way Slab, S2 (TWS)**

**Construction of Nagaland Innovation Hub for Startup at Chumukedima**

**Slab Section**

**:: NOTE ::**

1. Structural drawings shall be read in conjunction with relevant Architectural drawing.
2. All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
3. Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
4. Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
5. Lap length-50 Dia of minimum Dia bar.
6. Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
7. Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
8. Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
9. In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
10. Stirrups in beams shall be closely spaced at supports than at the centre.
11. As per IS 456:2000, minimum stripping time of formwork-
  - a. for columns, walls & beams: 16 to 24 hours
  - b. Soffit formwork to slabs: 3 days
  - c. Soffit formwork to beams: 7 days
  - d. Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
  - e. Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
12. As per IS 456:2000, overlapping length should not be less than 75 mm -
  - a. For Column, 45D, where D is the diameter of the bar.
  - b. For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
  - c. For Slab, 60D , where D is the diameter of the bar.
13. High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment.
14. Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment.
15. Do not scale. Follow written dimensions only.

SHEET NO. - SD/ ISSUE DATE : 29/01/2024

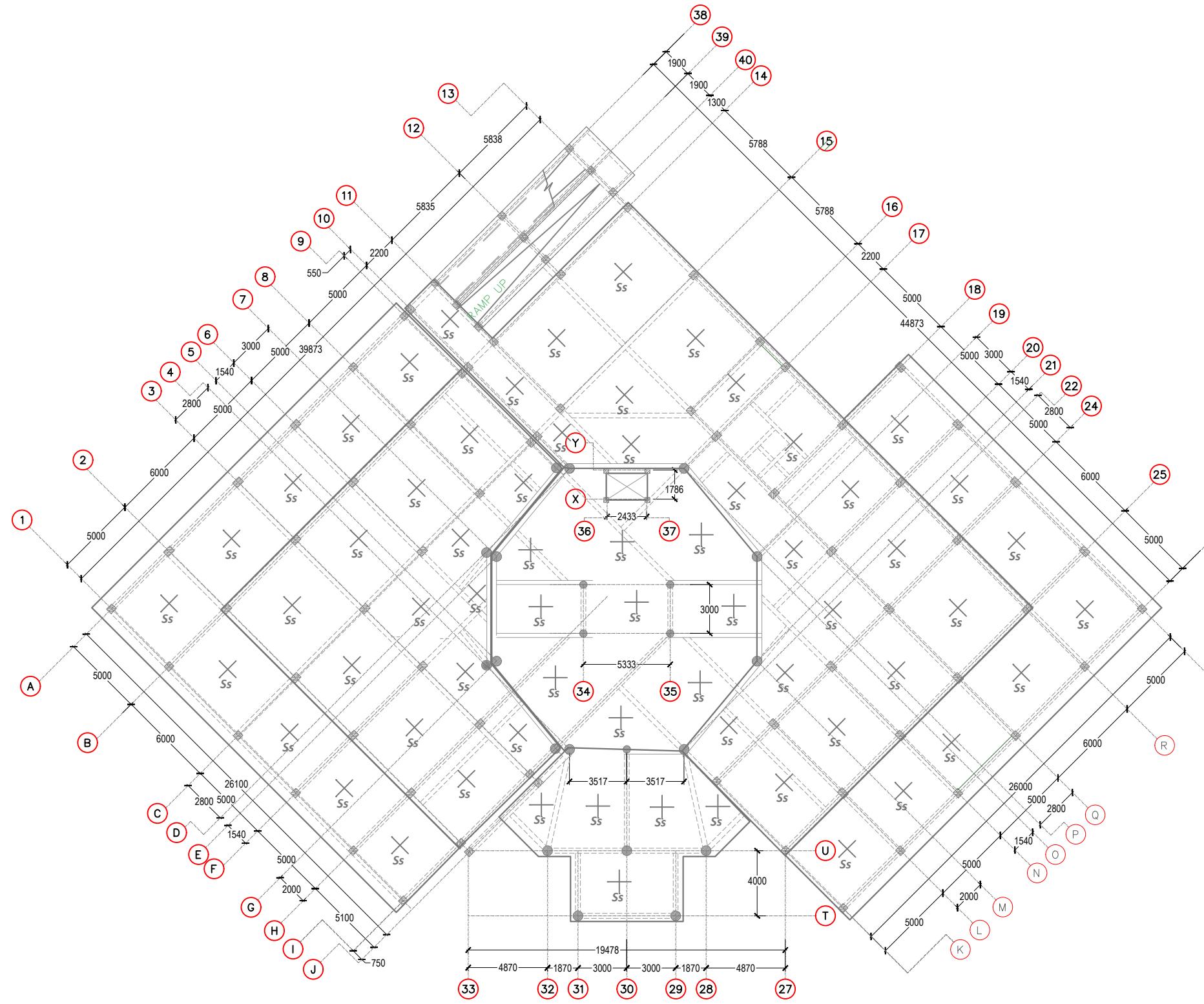
APPROVED BY:

**ALL COPYRIGHTS RESERVED**

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws

**SCHEDULE OF FLOOR SLAB**

Slab No.	Type of slab	Thickness	Shorter Span			Longer Span		
			Main bars	Extra top bars	Distribution bars	Main bars	Extra top bars	Distribution bars
S1	Single layer Mesh slab(SLMS)	125 mm	10Ø @ 150 c/c	-	10Ø @ 150 c/c	10Ø @ 150 c/c	-	10Ø @ 150 c/c
S2	One way slab (OWS)	125 mm	10Ø @ 200 c/c	10Ø @ 400 c/c	-	-	10Ø @ 200 c/c	10Ø @ 200 c/c
S3	Two way slab (TWS)	125 mm	10Ø @ 200 c/c	10Ø @ 400 c/c	10Ø @ 200 c/c	10Ø @ 200 c/c	10Ø @ 400 c/c	10Ø @ 200 c/c



## SCHEDULE OF FLOOR SLAB

Slab No.	Type of slab	Thickness	Shorter Span			Longer Span		
			Main bars	Extra top bars	Distribution bars	Main bars	Extra top bars	Distribution bars
S1	Single layer Mesh slab(SLMS)	125 mm	10Ø @ 150 c/c	—	10Ø @ 150 c/c	10Ø @ 150 c/c	—	10Ø @ 150 c/c
S2	One way slab (OWS)	125 mm	10Ø @ 200 c/c	10Ø @ 400 c/c	—	—	10Ø @ 200 c/c	10Ø @ 200 c/c
S3	Two way slab (TWS)	125 mm	10Ø @ 200 c/c	10Ø @ 400 c/c	10Ø @ 200 c/c	10Ø @ 200 c/c	10Ø @ 400 c/c	10Ø @ 200 c/c

# **Construction of Nagaland Innovation Hub for Startup at Chūmukedima**

Slab layout plan: Ground Floor (EL: +00.00 m level)

**:: NOTE ::**

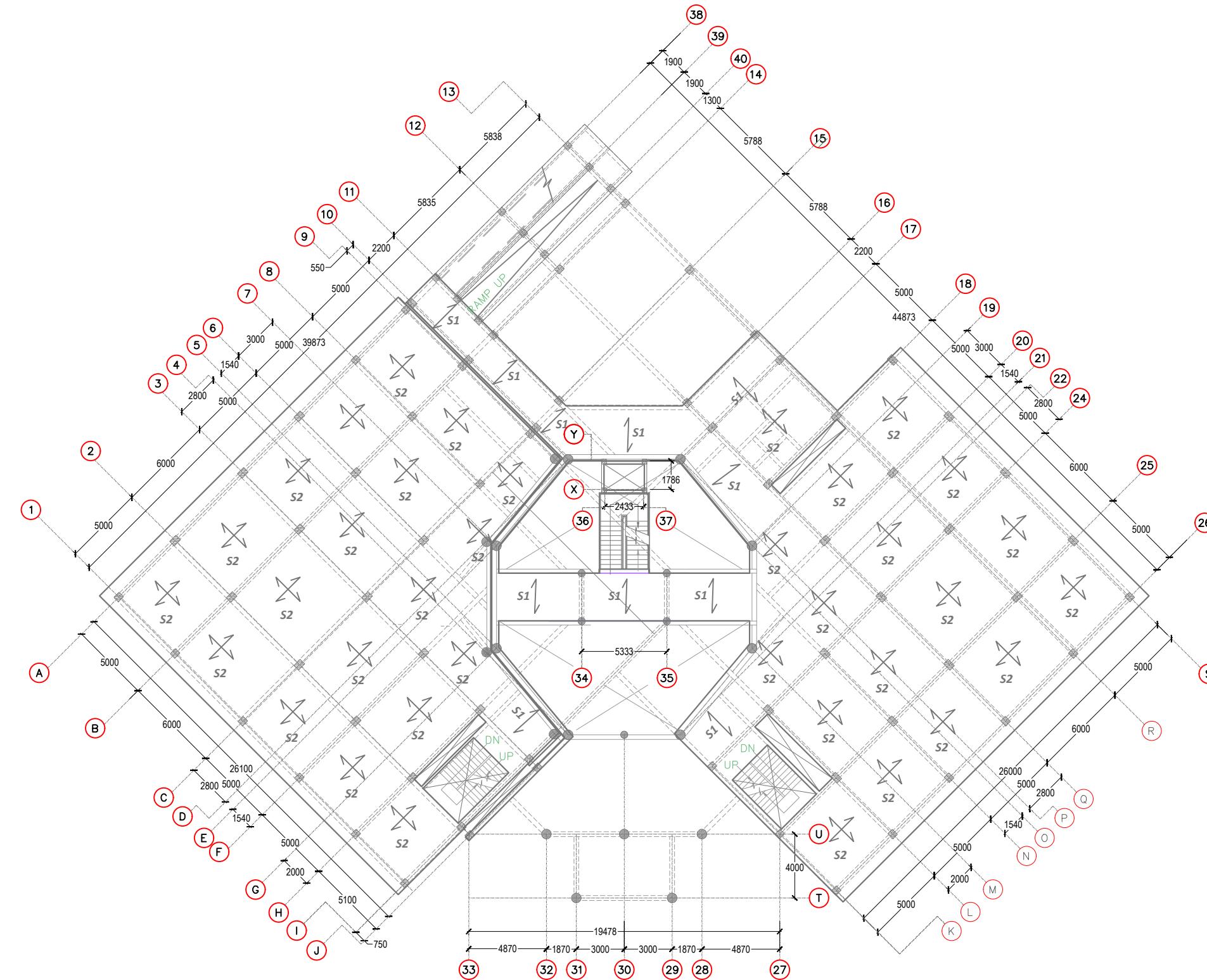
1. Structural drawings shall be read in conjunction with relevant Architectural drawing.
  2. All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
  3. Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
  4. Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
  5. Lap length-50 Dia of minimum Dia bar.
  6. Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
  7. Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
  8. Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
  9. In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
  10. Stirrups in beams shall be closely spaced at supports than at the centre.
  11. As per IS 456:2000, minimum stripping time of formwork-
    - a. for columns, walls & beams: 16 to 24 hours
    - b. Soffit formwork to slabs: 3 days
    - c. Soffit formwork to beams: 7 days
    - d. Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
    - e. Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
  11. As per IS 456:2000, overlapping length should not be less than 75 mm -
    - a. For Column, 45D, where D is the diameter of the bar.
    - b. For Beam, 24D in compression zone & 60D in tension zone, where D is the diameter of the bar.
    - c. For Slab, 60D , where D is the diameter of the bar.
  12. High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment .
  13. Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment .
  14. Do not scale. Follow written dimensions only.
  15. All dimensions are in millimeter (mm) unless otherwise

SHEET NO. - SD

APPROVED BY:

**ALL COPYRIGHTS RESERVED**

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws


**Construction of Nagaland Innovation Hub for Startup at Chumukedima**

Slab layout plan: First Floor  
Scale: 1:250

**:: NOTE ::**

1. Structural drawings shall be read in conjunction with relevant Architectural drawing.
2. All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
3. Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
4. Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
5. Lap length=50 Dia of minimum Dia bar.
6. Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
7. Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
8. Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
9. In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
10. Stirrups in beams shall be closely spaced at supports than at the centre.
11. As per IS 456:2000, minimum stripping time of formwork-
  - a. for columns, walls & beams: 16 to 24 hours
  - b. Soffit formwork to slabs: 3 days
  - c. Soffit formwork to beams: 7 days
  - d. Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
  - e. Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
12. As per IS 456:2000, overlapping length should not be less than 75 mm -
  - a. For Column, 4D, where D is the diameter of the bar.
  - b. For Beam, 2D in compression zone & 5D in tension zone, where D is the diameter of the bar.
  - c. For Slab, 6D , where D is the diameter of the bar.
13. High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment.
14. Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment.
15. Do not scale. Follow written dimensions only.
16. All dimensions are in millimeter (mm) unless otherwise

SHEET NO. - SD/ ISSUE DATE : 29/01/2024

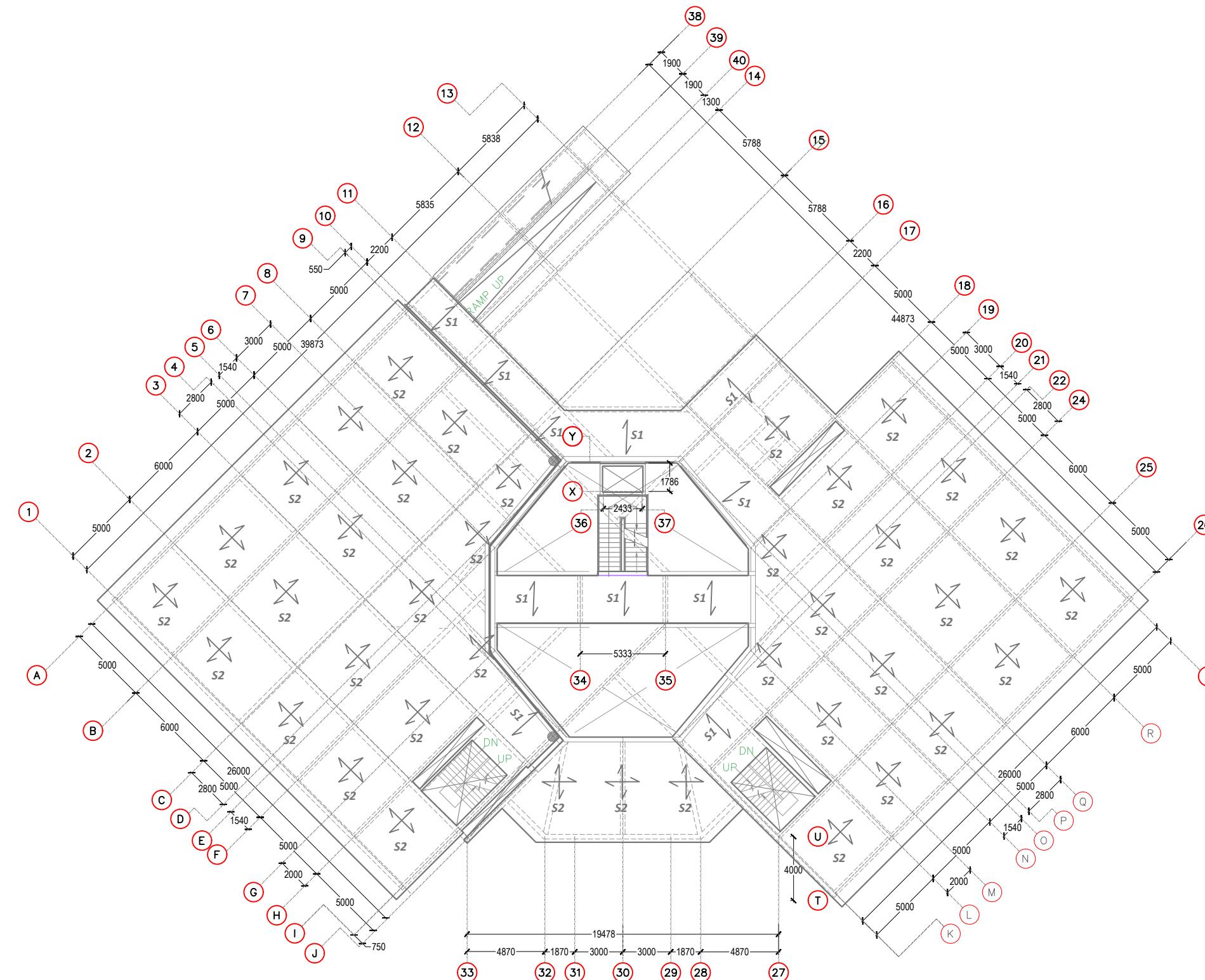
APPROVED BY:

**ALL COPYRIGHTS RESERVED**

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws

**SCHEDULE OF FLOOR SLAB**

Slab No.	Type of slab	Thickness	Shorter Span			Longer Span		
			Main bars	Extra top bars	Distribution bars	Main bars	Extra top bars	Distribution bars
S1	Single layer Mesh slab(SLMS)	125 mm	10Ø @ 150 c/c	—	10Ø @ 150 c/c	10Ø @ 150 c/c	—	10Ø @ 150 c/c
S2	One way slab (OWS)	125 mm	10Ø @ 200 c/c	10Ø @ 400 c/c	—	—	10Ø @ 200 c/c	10Ø @ 200 c/c
S3	Two way slab (TWS)	125 mm	10Ø @ 200 c/c	10Ø @ 400 c/c	10Ø @ 200 c/c	10Ø @ 200 c/c	10Ø @ 400 c/c	10Ø @ 200 c/c


**Construction of Nagaland Innovation Hub for Startup at Chumukedima**

 Slab layout plan: Second Floor  
Scale: 1:250

**:: NOTE ::**

1. Structural drawings shall be read in conjunction with relevant Architectural drawing.
2. All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
3. Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
4. Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
5. Lap length=50 Dia of minimum Dia bar.
6. Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
7. Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
8. Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
9. In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
10. Stirrups in beams shall be closely spaced at supports than at the centre.
11. As per IS 456:2000, minimum stripping time of formwork-
  - a. for columns, walls & beams: 16 to 24 hours
  - b. Soffit formwork to slabs: 3 days
  - c. Soffit formwork to beams: 7 days
  - d. Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
  - e. Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
12. As per IS 456:2000, overlapping length should not be less than 75 mm -
  - a. For Column, 45D, where D is the diameter of the bar.
  - b. For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
  - c. For Slab, 60D , where D is the diameter of the bar.
13. High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment.
14. Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment.
15. Do not scale. Follow written dimensions only.
16. All dimensions are in millimeter (mm) unless otherwise

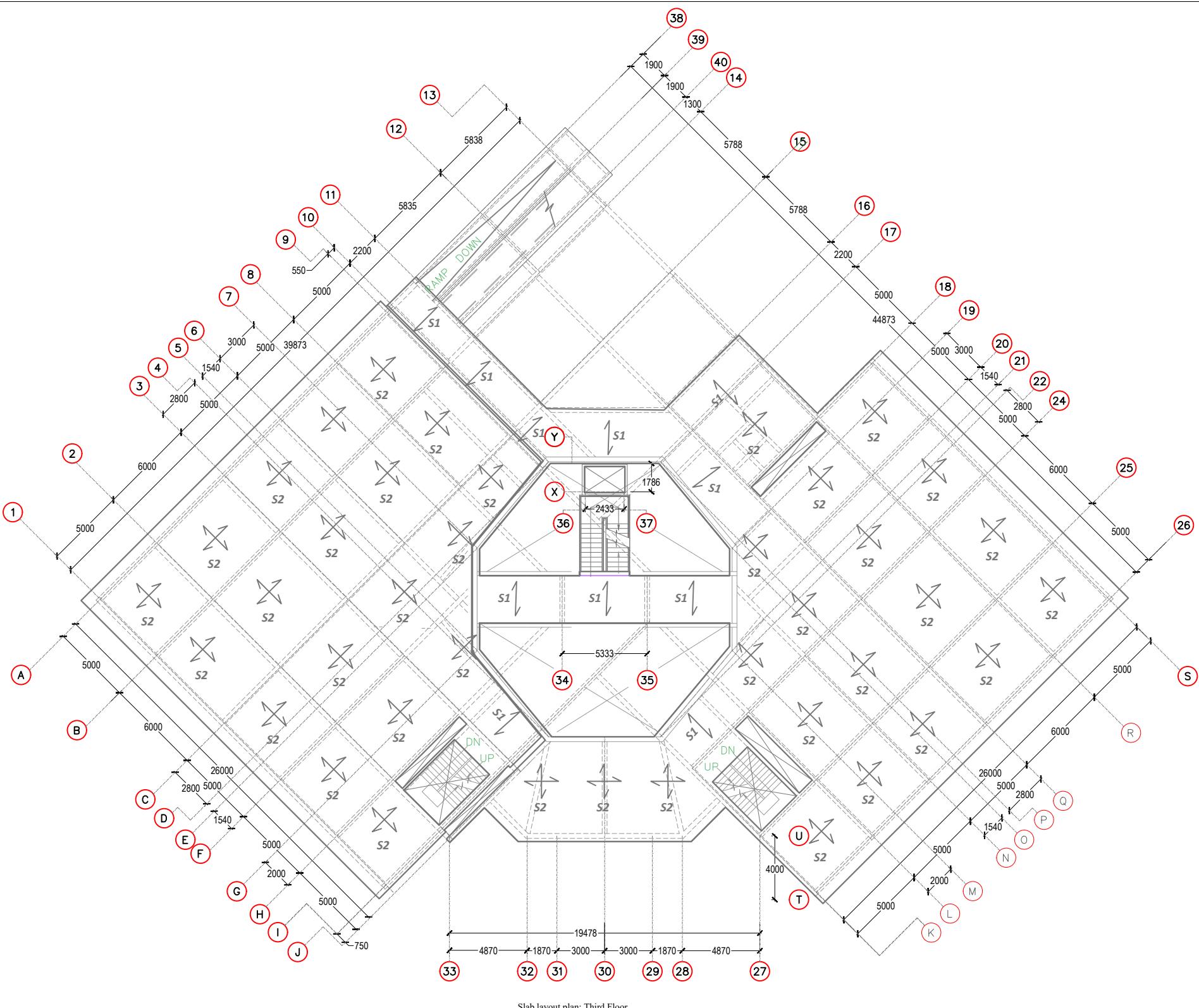
SHEET NO. - SD/ ISSUE DATE : 29/01/2024

**APPROVED BY:**
**ALL COPYRIGHTS RESERVED**

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws

**SCHEDULE OF FLOOR SLAB**

Slab No.	Type of slab	Thickness	Shorter Span			Longer Span		
			Main bars	Extra top bars	Distribution bars	Main bars	Extra top bars	Distribution bars
S1	Single layer Mesh slab(SLMS)	125 mm	10Ø @ 150 c/c	—	10Ø @ 150 c/c	10Ø @ 150 c/c	—	10Ø @ 150 c/c
S2	One way slab (OWS)	125 mm	10Ø @ 200 c/c	10Ø @ 400 c/c	—	—	10Ø @ 200 c/c	10Ø @ 200 c/c
S3	Two way slab (TWS)	125 mm	10Ø @ 200 c/c	10Ø @ 400 c/c	10Ø @ 200 c/c	10Ø @ 200 c/c	10Ø @ 400 c/c	10Ø @ 200 c/c


**Construction of Nagaland Innovation Hub for Startup at Chumukedima**

 Slab layout plan: Third Floor  
Scale: 1:250

**:: NOTE ::**

1. Structural drawings shall be read in conjunction with relevant Architectural drawing.
2. All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
3. Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
4. Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
5. Lap length=50 Dia of minimum Dia bar.
6. Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
7. Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
8. Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
9. In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
10. Stirrups in beams shall be closely spaced at supports than at the centre.
11. As per IS 456:2000, minimum stripping time of formwork-
  - a. for columns, walls & beams: 16 to 24 hours
  - b. Soffit formwork to slabs: 3 days
  - c. Soffit formwork to beams: 7 days
  - d. Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
  - e. Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
12. As per IS 456:2000, overlapping length should not be less than 75 mm -
  - a. For Column, 45D, where D is the diameter of the bar.
  - b. For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
  - c. For Slab, 60D , where D is the diameter of the bar.
13. High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment.
14. Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment.
15. Do not scale. Follow written dimensions only.
16. All dimensions are in millimeter (mm) unless otherwise

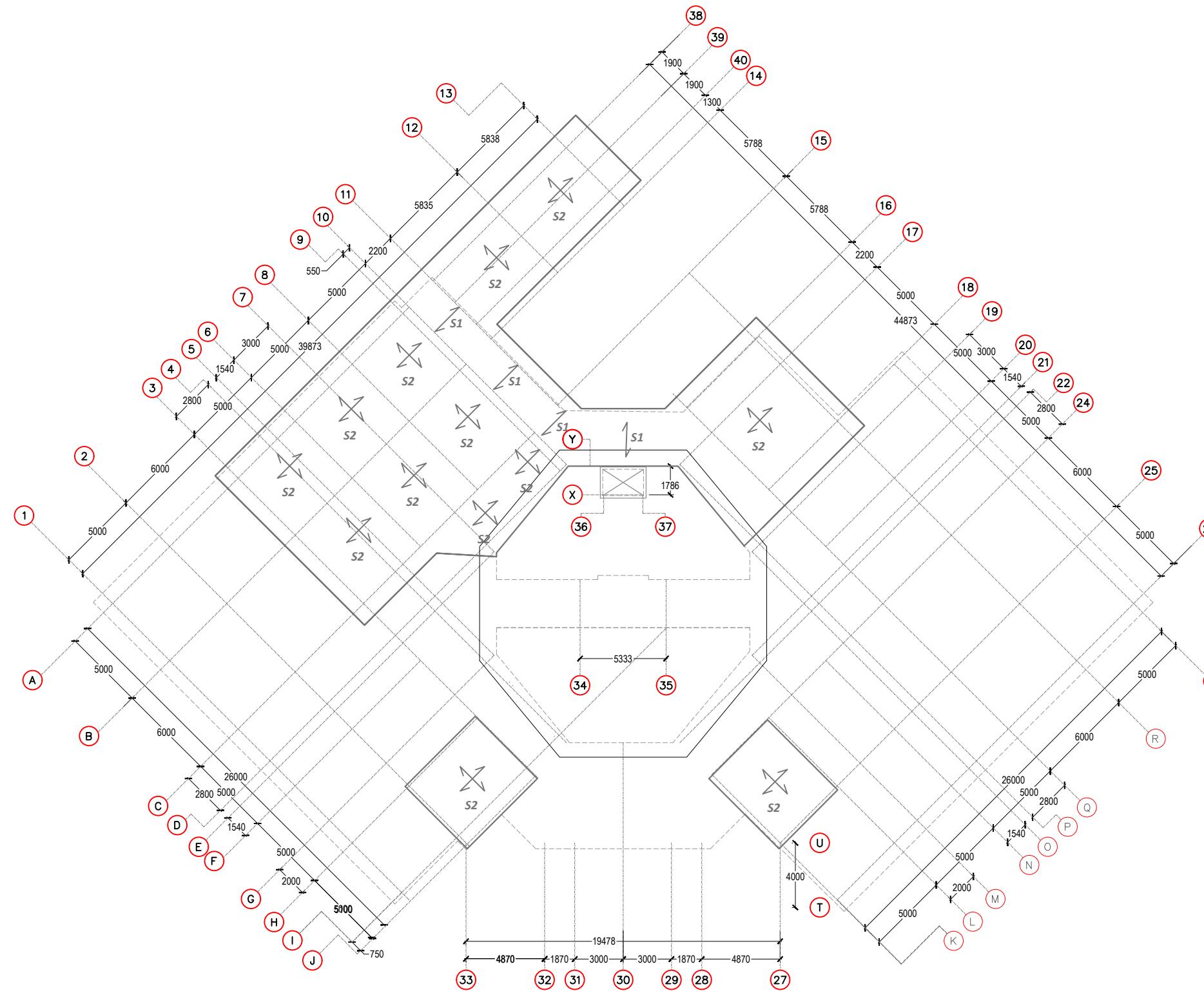
SHEET NO. - SD/ ISSUE DATE : 29/01/2024

**APPROVED BY:**
**ALL COPYRIGHTS RESERVED**

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws

**SCHEDULE OF FLOOR SLAB**

Slab No.	Type of slab	Thickness	Shorter Span			Longer Span		
			Main bars	Extra top bars	Distribution bars	Main bars	Extra top bars	Distribution bars
S1	Single layer Mesh slab(SLMS)	125 mm	10Ø @ 150 c/c	—	10Ø @ 150 c/c	10Ø @ 150 c/c	—	10Ø @ 150 c/c
S2	One way slab (OWS)	125 mm	10Ø @ 200 c/c	10Ø @ 400 c/c	—	—	10Ø @ 200 c/c	10Ø @ 200 c/c
S3	Two way slab (TWS)	125 mm	10Ø @ 200 c/c	10Ø @ 400 c/c	10Ø @ 200 c/c	10Ø @ 200 c/c	10Ø @ 400 c/c	10Ø @ 200 c/c



### Construction of Nagaland Innovation Hub for Startup at Chumukedima

Slab layout plan: Roof slab  
Scale: 1:250

#### :: NOTE ::

- Structural drawings shall be read in conjunction with relevant Architectural drawing.
- All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
- Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
- Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
- Lap length=50 Dia of minimum Dia bar.
- Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
- Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
- Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
- In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
- Stirrups in beams shall be closely spaced at supports than at the centre.
- As per IS 456:2000, minimum stripping time of formwork-
  - for columns, walls & beams: 16 to 24 hours
  - Soffit formwork to slabs: 3 days
  - Soffit formwork to beams: 7 days
  - Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
  - Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
- As per IS 456:2000, overlapping length should not be less than 75 mm -
  - For Column, 45D, where D is the diameter of the bar.
  - For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
  - For Slab, 60D , where D is the diameter of the bar.
- High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment.
- Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment.
- Do not scale. Follow written dimensions only.
- All dimensions are in millimeter (mm) unless otherwise

SHEET NO. - SD/ ISSUE DATE : 29/01/2024

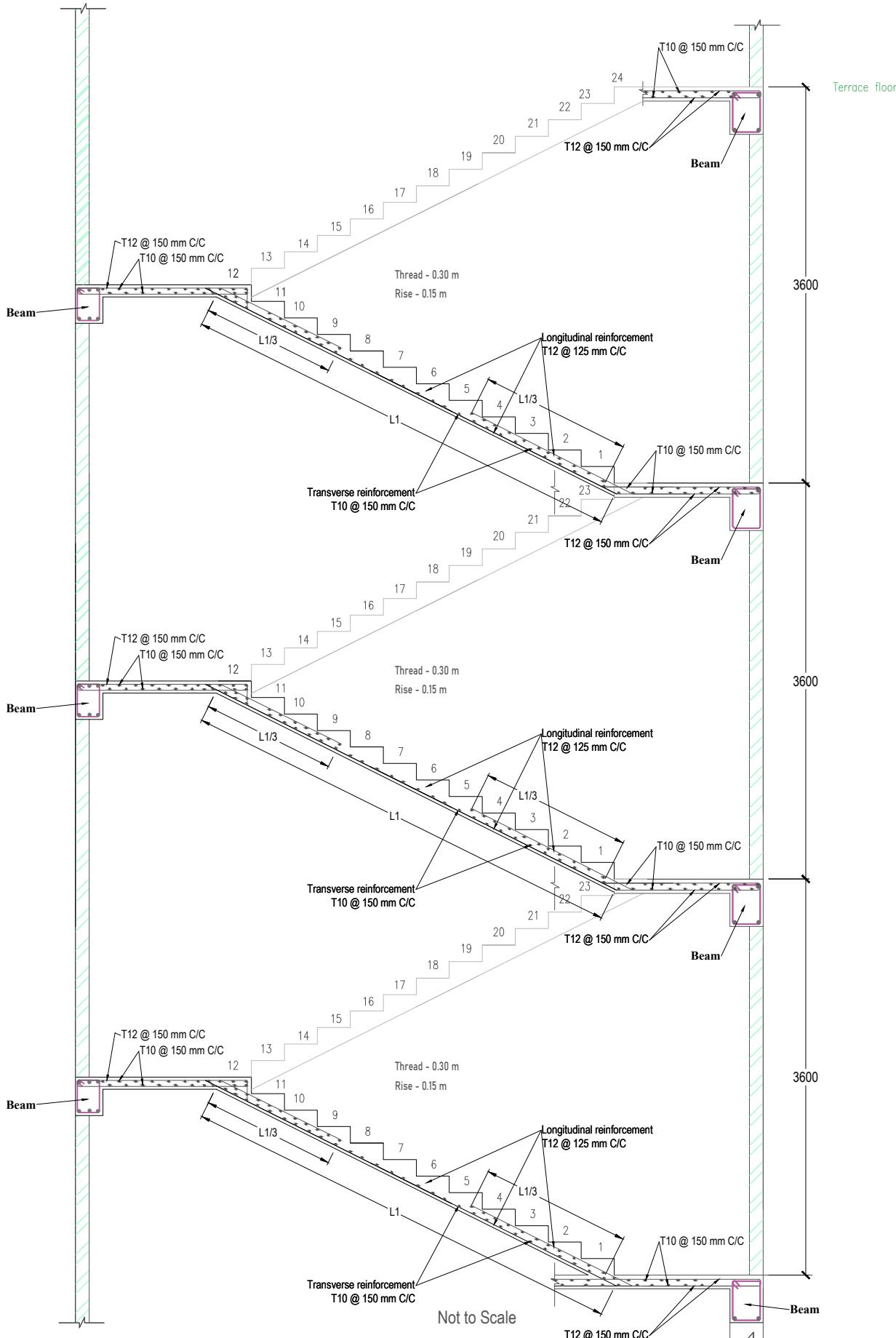
APPROVED BY:

**ALL COPYRIGHTS RESERVED**

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws

### SCHEDULE OF FLOOR SLAB

Slab No.	Type of slab	Thickness	Shorter Span			Longer Span		
			Main bars	Extra top bars	Distribution bars	Main bars	Extra top bars	Distribution bars
S1	Single layer Mesh slab(SLMS)	125 mm	10Ø @ 150 c/c	—	10Ø @ 150 c/c	10Ø @ 150 c/c	—	10Ø @ 150 c/c
S2	One way slab (OWS)	125 mm	10Ø @ 200 c/c	10Ø @ 400 c/c	—	—	10Ø @ 200 c/c	10Ø @ 200 c/c
S3	Two way slab (TWS)	125 mm	10Ø @ 200 c/c	10Ø @ 400 c/c	10Ø @ 200 c/c	10Ø @ 200 c/c	10Ø @ 400 c/c	10Ø @ 200 c/c



Typical Staircase Section

**Construction of Nagaland Innovation Hub for Startup at Chumukedima**

#### Typical Staircase Section

##### :: NOTE ::

1. Structural drawings shall be read in conjunction with relevant Architectural drawing.
2. All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
3. Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
4. Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
5. Lap length-50 Dia of minimum Dia bar.
6. Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
7. Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
8. Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
9. In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
10. Stirrups in beams shall be closely spaced at supports than at the centre.
11. As per IS 456:2000, minimum stripping time of formwork-
  - a. for columns, walls & beams: 16 to 24 hours
  - b. Soffit formwork to slabs: 3 days
  - c. Soffit formwork to beams: 7 days
  - d. Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
  - e. Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
12. As per IS 456:2000, overlapping length should not be less than 75 mm -
  - a. For Column, 45D, where D is the diameter of the bar.
  - b. For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
  - c. For Slab, 60D , where D is the diameter of the bar.
13. High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment.
14. Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment.
15. Do not scale. Follow written dimensions only.
16. All dimensions are in millimeter (mm) unless otherwise

SHEET NO. - SD/ ISSUE DATE : 29/01/2024

#### APPROVED BY:

#### ALL COPYRIGHTS RESERVED

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws

**Construction of Nagaland Innovation Hub for Startup at Chūmukedima**

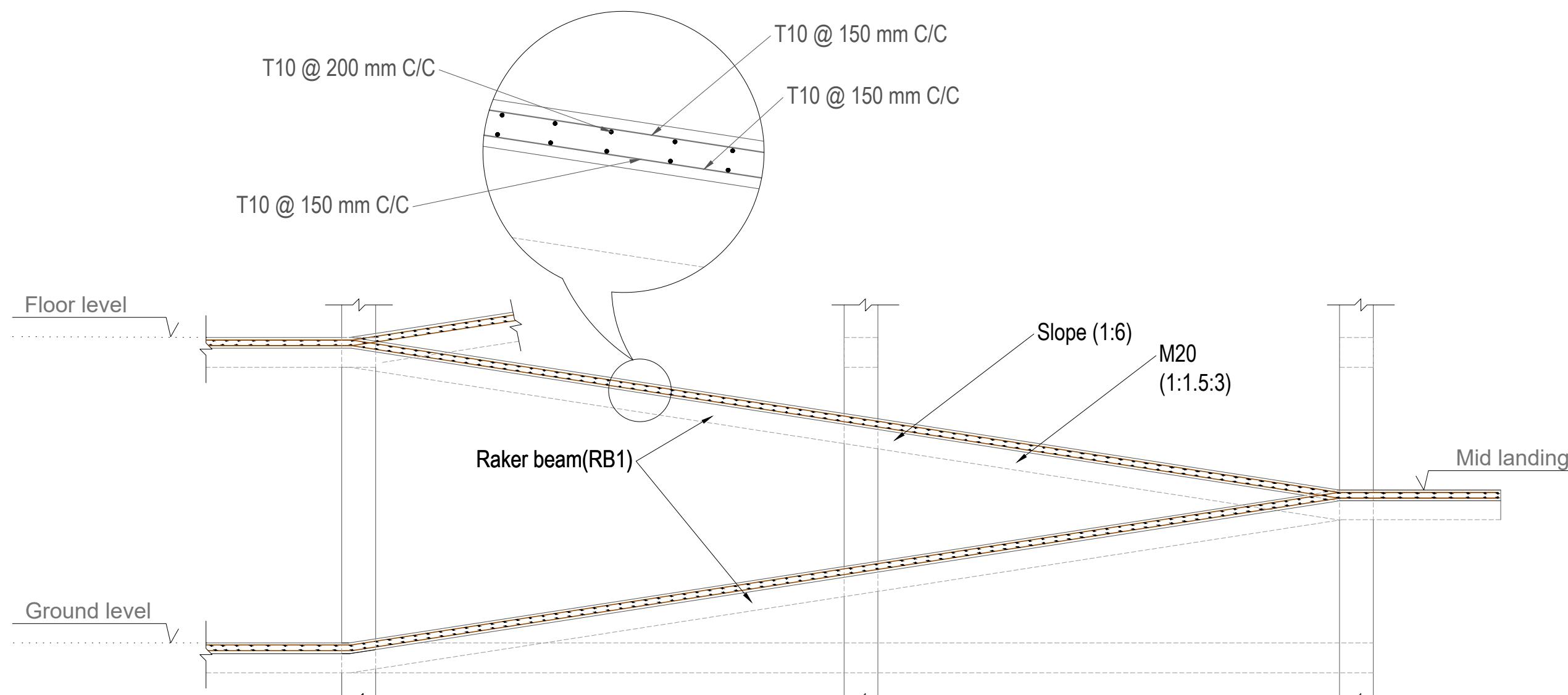
**Ramp Section**

**:: NOTE ::**

1. Structural drawings shall be read in conjunction with relevant Architectural drawing.
2. All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
3. Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
4. Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
5. Lap length-50 Dia of minimum Dia bar.
6. Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
7. Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
8. Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
9. In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
10. Stirrups in beams shall be closely spaced at supports than at the centre.
11. As per IS 456:2000, minimum stripping time of formwork-
  - a. for columns, walls & beams: 16 to 24 hours
  - b. Soffit formwork to slabs: 3 days
  - c. Soffit formwork to beams: 7 days
  - d. Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
  - e. Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
12. As per IS 456:2000, overlapping length should not be less than 75 mm -
  - a. For Column, 45D, where D is the diameter of the bar.
  - b. For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
  - c. For Slab, 60D , where D is the diameter of the bar.
13. High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment.
14. Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment.
15. Do not scale. Follow written dimensions only.

SHEET NO. - SD/ ISSUE DATE : 29/01/2024

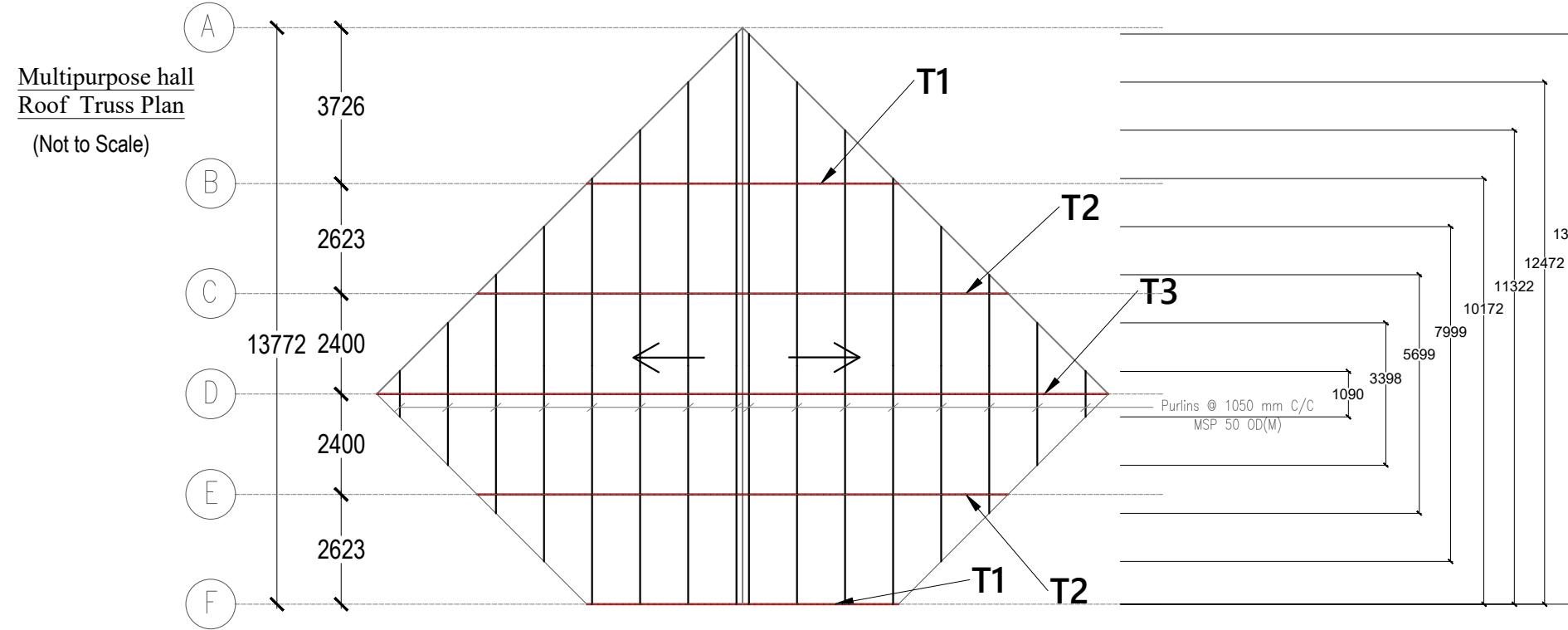
**APPROVED BY:**



**Ramp Section**

**ALL COPYRIGHTS RESERVED**

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws



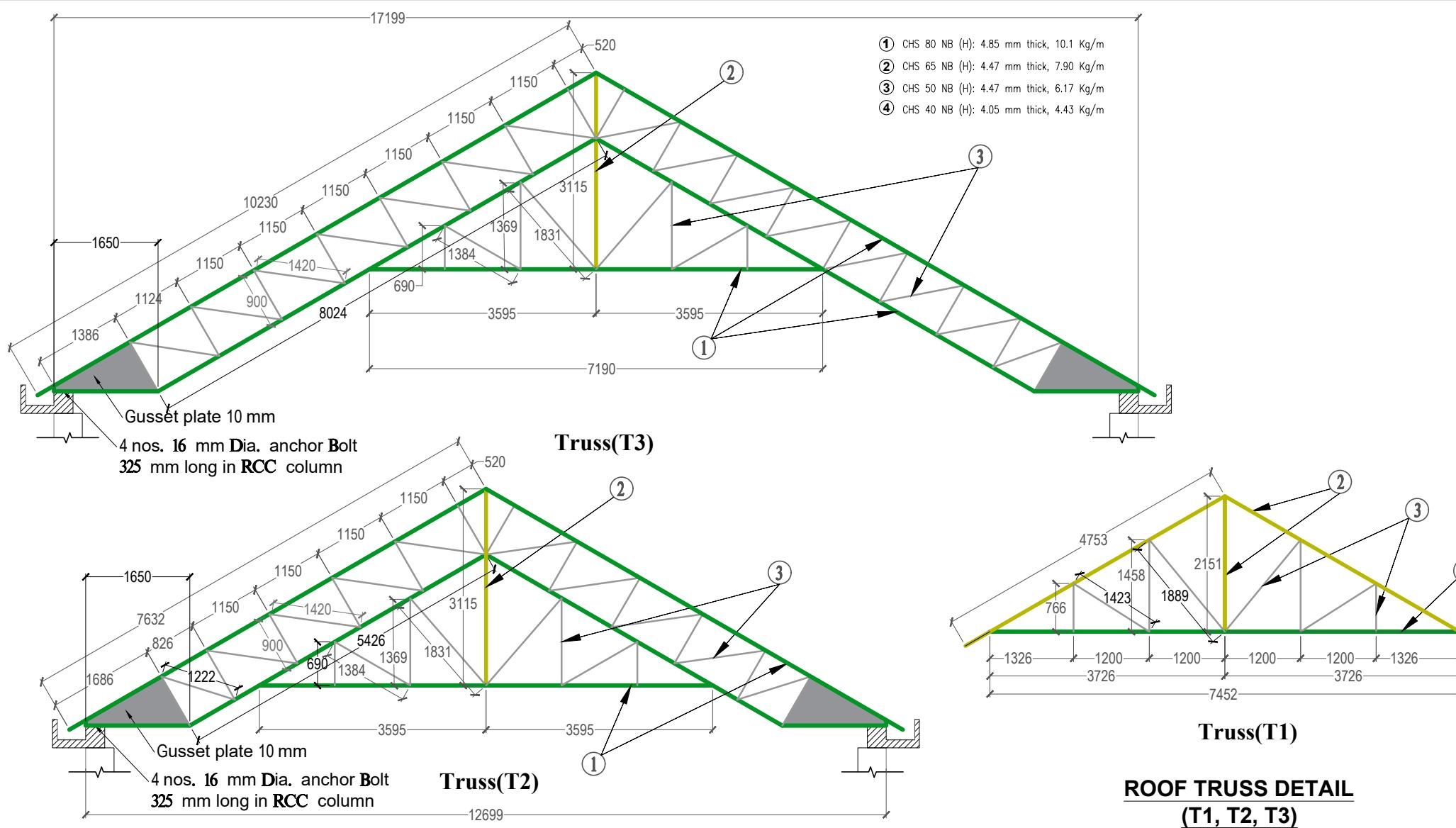
**Construction of Nagaland Innovation Hub for Startup at Chumukedima**

**Multipurpose hall  
Roof Truss Plan**  
(Not to Scale)

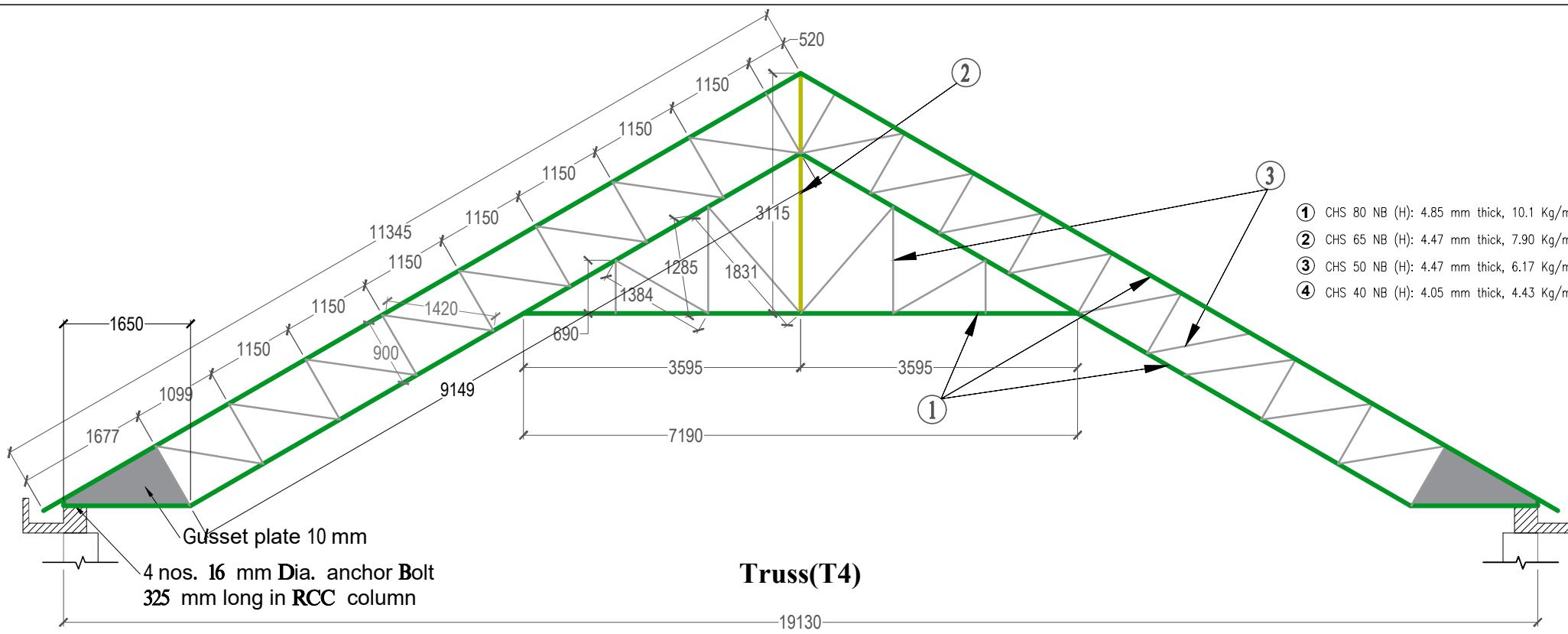
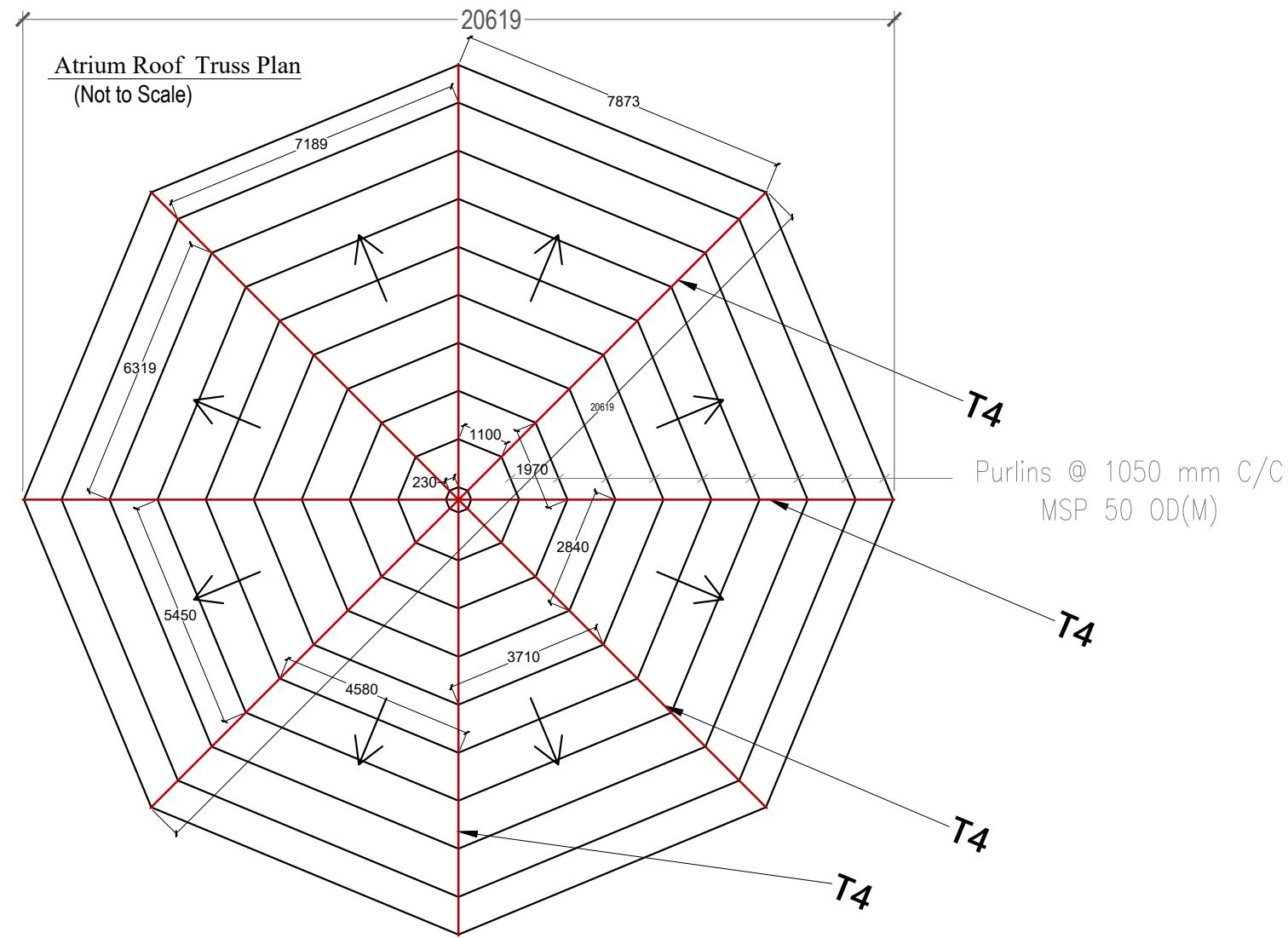
:: NOTE ::

1. Structural drawings shall be read in conjunction with relevant Architectural drawing.
2. All materials and construction as per IS-456:2000 and IS 1893(PART-I) 1986.
3. Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
4. Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
5. Lap length=50 Dia of minimum Dia bar.
6. Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
7. Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
8. Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
9. In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
10. Stirrups in beams shall be closely spaced at supports than at the centre.
11. As per IS 456:2000, minimum stripping time of formwork-
  - a. for columns, walls & beams: 16 to 24 hours
  - b. Soffit formwork to slabs: 3 days
  - c. Soffit formwork to beams: 7 days
  - d. Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
  - e. Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
12. As per IS 456:2000, overlapping length should not be less than 75 mm -
  - a. For Column, 45D, where D is the diameter of the bar.
  - b. For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
  - c. For Slab, 60D , where D is the diameter of the bar.
13. High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment.
14. Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment.
15. Do not scale. Follow written dimensions only.

SHEET NO. - SD/ ISSUE DATE : 29/01/2024

**APPROVED BY:****ALL COPYRIGHTS RESERVED**

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws



# **Construction of Nagaland Innovation Hub for Startup at Chūmukedima**

Atrium Roof Truss Plan  
(Not to Scale)

**:: NOTE ::**

1. Structural drawings shall be read in conjunction with relevant Architectural drawing.
  2. All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
  3. Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
  4. Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
  5. Lap length-50 Dia of minimum Dia bar.
  6. Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
  7. Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
  8. Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
  9. In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
  10. Stirrups in beams shall be closely spaced at supports than at the centre.
  11. As per IS 456:2000, minimum stripping time of formwork-
    - a. for columns, walls & beams: 16 to 24 hours
    - b. Soffit formwork to slabs: 3 days
    - c. Soffit formwork to beams: 7 days
    - d. Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
    - e. Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
  11. As per IS 456:2000, overlapping length should not be less than 75 mm -
    - a. For Column, 45D, where D is the diameter of the bar.
    - b. For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
    - c. For Slab, 60D , where D is the diameter of the bar.
  12. High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment .
  13. Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment .
  14. Do not scale. Follow written dimensions only.
  15. All dimensions are in millimeter (mm) unless otherwise

SHEET NO. - SD/ ISSUE DATE : 29/01/2024

**APPROVED BY:**

ALL COPYRIGHTS RESERVED

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws

**Construction of Nagaland Innovation Hub for Startup at Chumukedima**

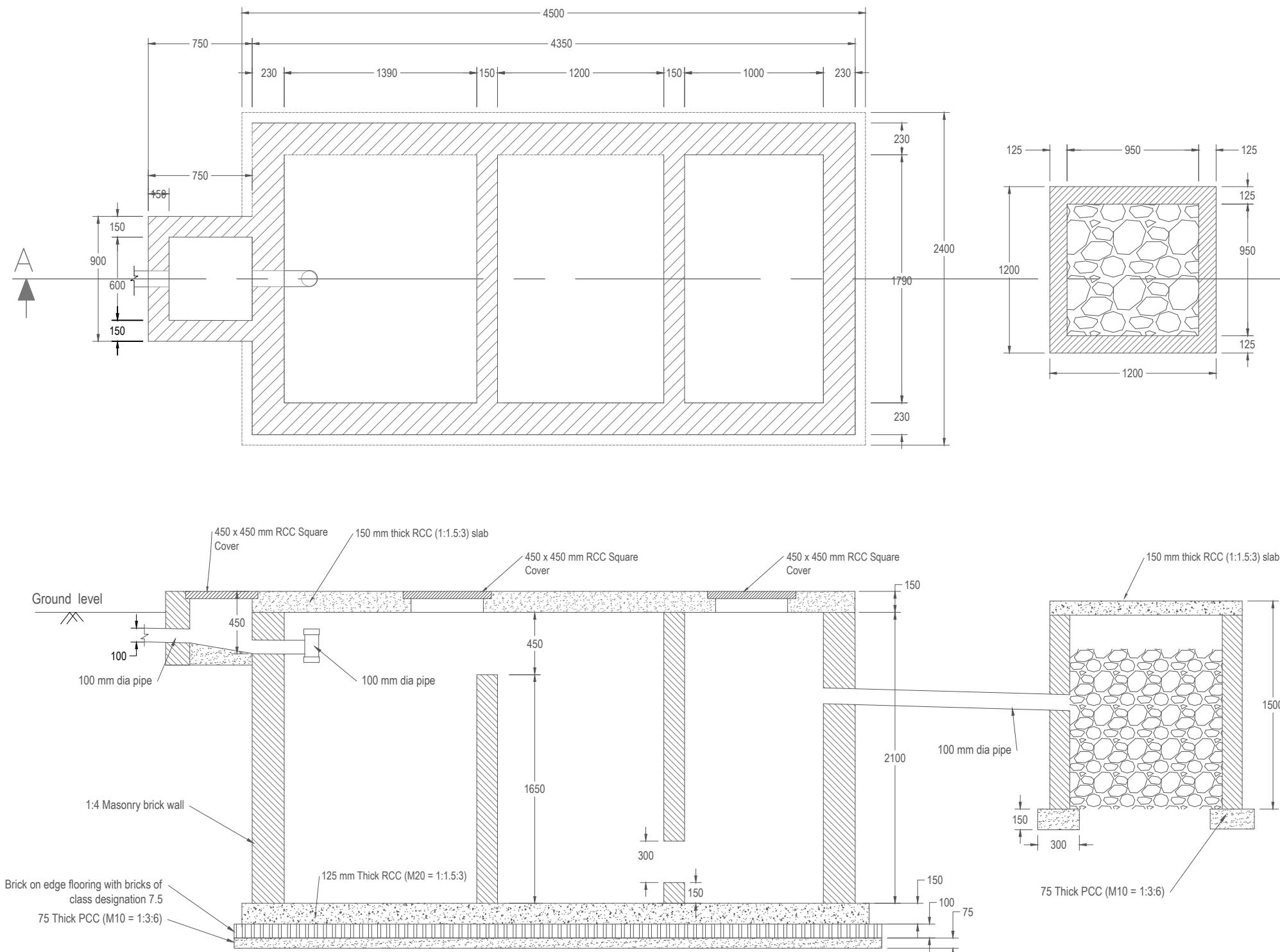
Septic tank plan

:: NOTE ::

1. Structural drawings shall be read in conjunction with relevant Architectural drawing.
2. All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
3. Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
4. Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
5. Lap length=50 Dia of minimum Dia bar.
6. Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
7. Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
8. Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
9. In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
10. Stirrups in beams shall be closely spaced at supports than at the centre.
11. As per IS 456:2000, minimum stripping time of formwork-
  - a. for columns, walls & beams: 16 to 24 hours
  - b. Soffit formwork to slabs: 3 days
  - c. Soffit formwork to beams: 7 days
  - d. Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
  - e. Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
12. As per IS 456:2000, overlapping length should not be less than 75 mm -
  - a. For Column, 45D, where D is the diameter of the bar.
  - b. For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
  - c. For Slab, 60D , where D is the diameter of the bar.
13. High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment.
14. Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment.
15. Do not scale. Follow written dimensions only.

SHEET NO. - SD/ ISSUE DATE : 29/01/2024

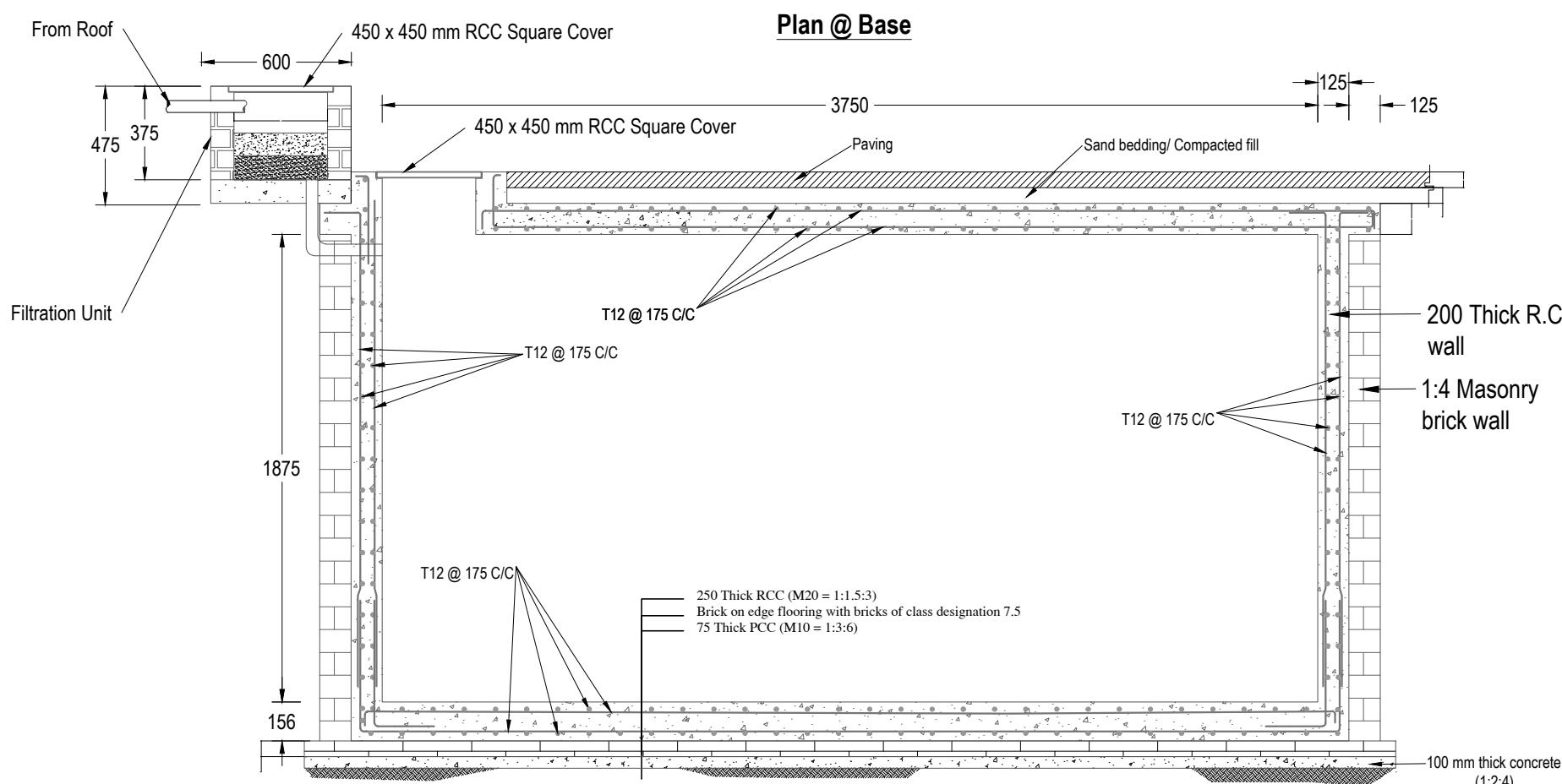
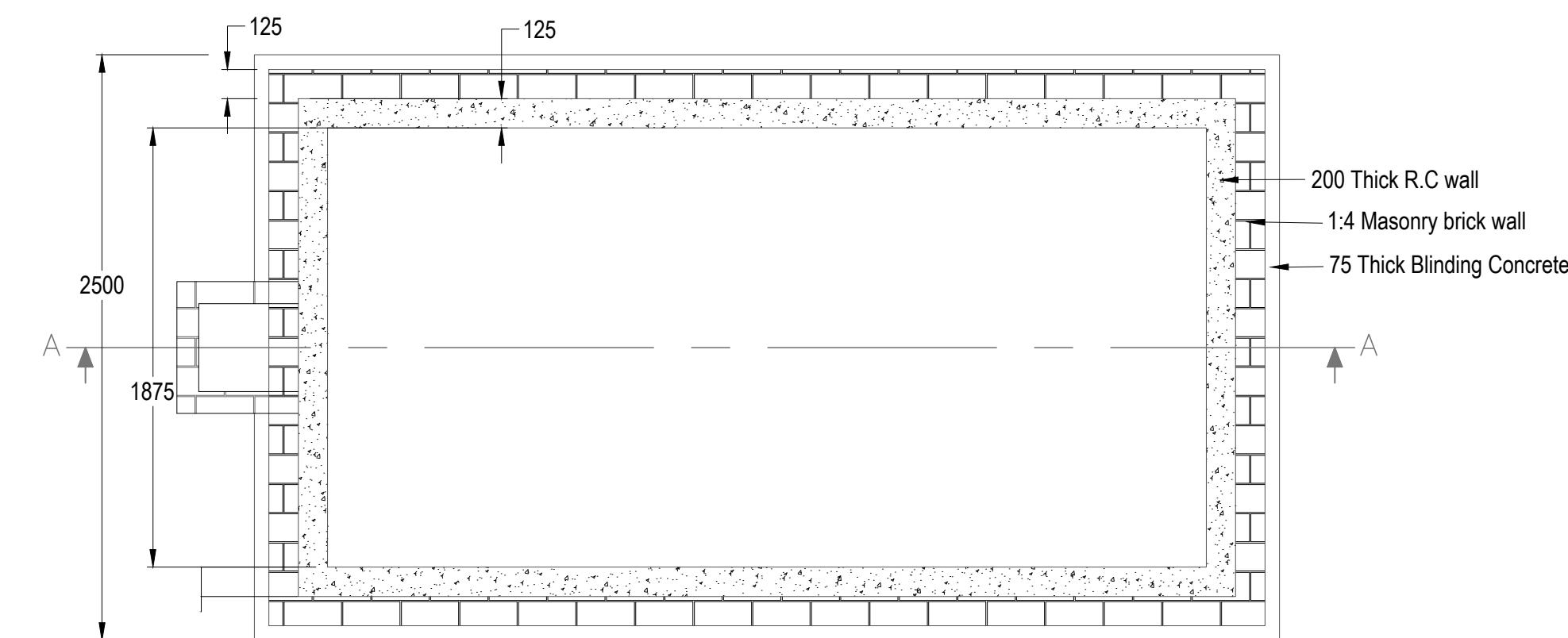
APPROVED BY:



Septic tank plan

**ALL COPYRIGHTS RESERVED**

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws



**UNDERGROUND RAIN WATER HARVESTING TANK  
(Not to Scale)**

**Construction of Nagaland Innovation Hub for Startup at Chumukedima**

**UNDERGROUND RAIN WATER HARVESTING TANK**

**:: NOTE ::**

1. Structural drawings shall be read in conjunction with relevant Architectural drawing.
2. All materials and construction as per IS-456:2000 and IS 1893(PART-I) 2016.
3. Grade of concrete : M20, Grade of steel : Fe-500 conforming to IS:1786-1985, First class brick with minimum crushing strength 75 Kg per Sq.cm in mortar 1:6.
4. Recommended Tor steel are Tata Tiscon Fe-500SD, Jindal Fe-500SD or SAIL Fe-500SD.
5. Lap length-50 Dia of minimum Dia bar.
6. Live load on floor is consider 4 KN/sq.m as per IS-875(PART-II).
7. Clear cover: Foundation- 50 mm, Column- 40 mm, Lintels/beams- 25 mm, Slab- 20 mm, footings- 75 mm.
8. Laps shall be staggered and not more than 50 % of the bar shall be lapped at one place only.
9. In beams top bars are not to be spliced at the end quarter and the bottom bars are not to be spliced at the middle half of the span.
10. Stirrups in beams shall be closely spaced at supports than at the centre.
11. As per IS 456:2000, minimum stripping time of formwork-
  - a. for columns, walls & beams: 16 to 24 hours
  - b. Soffit formwork to slabs: 3 days
  - c. Soffit formwork to beams: 7 days
  - d. Props to slabs: 14 days(spanning upto 4.5 meters), 14 days(spanning over 4.5 meters)
  - e. Props to beams and arches: 14 days(spanning upto 8 meters), 21 days(spanning over 8 meters)
12. As per IS 456:2000, overlapping length should not be less than 75 mm -
  - a. For Column, 45D, where D is the diameter of the bar.
  - b. For Beam, 24D in compression zone & 50D in tension zone, where D is the diameter of the bar.
  - c. For Slab, 60D , where D is the diameter of the bar.
13. High yield strength Deformed (HYSD) bars to conform with IS: 1786 latest amendment.
14. Ductile detailing of steel reinforcement to conform with IS: 13920-1993 latest amendment.
15. Do not scale. Follow written dimensions only.

SHEET NO. - SD/ ISSUE DATE : 29/01/2024

**APPROVED BY:**

**ALL COPYRIGHTS RESERVED**

Unauthorized DUPLICATION/use of this Drawing is a violation of applicable laws

## Annexure B

**Checklist for Project selection**  
**{Ref.Para 7.2.3 of the guidelines}**

SI No	Items	Remarks
1	<p>Concept Note, highlighting the following :-</p> <p>a. Rationale for the project, intended beneficiaries and its socio-economic benefits</p>	<p>The project aims to strengthen Nagaland's startup ecosystem by providing co-working spaces, mentorship, incubation, skilling, and innovation labs. <b>Targeted beneficiaries</b> include entrepreneurs, youth, women-led startups, and early-stage innovators. <b>Socio-economic benefits</b> include employment generation, self-reliance, and industrial growth.</p>
	<p>b. Alignment of proposed project with the focus areas indicated under the scheme guidelines.</p> <p>c. KPIs for monitoring the project</p>	<p>Aligns with <b>NESIDS-OTRI</b> objectives by supporting infrastructure, innovation, and entrepreneurship. Also integrates with <b>Startup India, Digital India, and Atal Innovation Mission</b>.</p> <ul style="list-style-type: none"> <li>- 20+ startups incubated/year</li> <li>- 500+ jobs created</li> <li>- 3+ hackathons/year</li> <li>- 10+ R&amp;D prototypes/year</li> </ul> <p>(Detailed in <b>Sections 10.1–10.3 of DPR</b>)</p>
	<p>d. SDG or other indices that the KPIs will impact and how</p> <p>e. Rough cost estimates as per latest SoR.</p>	<ul style="list-style-type: none"> <li>- SDG 4: Skill development via NIELIT/STPI collaborations</li> <li>- SDG 8: Employment generation</li> <li>- SDG 9: High-tech R&amp;D labs</li> <li>- SDG 17: Partnerships with AIM, MeitY, and global accelerators</li> </ul> <p>- <b>Total budget:</b> ₹20 crore  - <b>Civil works (62.04%):</b> ₹12.41 crore  - <b>IT/Non-IT works (37.96%):</b> ₹7.59 crore</p> <p>(Detailed in <b>Section 15</b>)</p>
2	Convergence Plan – Indicating how the proposed project converges with the other ongoing interventions of Government in the space	<ul style="list-style-type: none"> <li>- <b>NIELIT/STPI:</b> Skill training &amp; funding</li> <li>- <b>Atal Innovation Mission:</b> Mentorship and Infrastructure support, policy &amp; strategic guidance, Networking opportunities, capacity building etc.</li> <li>- <b>MeitY/DPIIT:</b> Mentorship &amp; Infrastructure support, policy &amp; strategic guidance, Networking opportunities, capacity building etc.</li> <li>- <b>Nagaland IT Policy</b></li> <li>- <b>Nagaland Industrial Policy</b></li> <li>- <b>Nagaland Startup Policy &amp; MSME schemes:</b> Complementary initiatives</li> </ul>
3	Prioritized list of Projects, duly approved by the Chief Secretary	The project was prioritized and granted in-principle approval in the 50th EMIC meeting held on 26.11.2024. Further approval of the vetted DPR from the State Level Empowered Committee (SLEC) is awaited.

## Annexure C

**Checklist for Project Sanction**  
**{Ref. Para 9.5 of the Guidelines}**

SI No	Items	Remarks
1	Approval of concept Note from MDoNER ( <i>Minutes of EMIC</i> )	During the 50th EMIC meeting held on 26.11.2024, the concept note on "Nagaland Innovation Hub for Startups" was recommended for in-principle approval vide Office Memo No. NESIDS/44/2024–Joint Director (BBP) dated 09.11.2024. ( <b>Copy enclosed</b> )
2	Compliance with the comments (if any) of the concerned line Ministry/Department and conditions specified by EMIC (if any) at the time of selection of project	It was deliberated that "the committee observed that NITI Aayog, MeitY and DPIIT have supported the proposal" as mentioned in the 50th EMIC Office Memo No. NESIDS/44/2024–Joint Director (BBP) dated 09.11.2024.
3	Endorsement on DPR by SLEC and submission of project proposal to MDoNER (minutes of SLEC to be enclosed)	DPR vetted by IIT Guwahati ( <b>copy enclosed</b> ); pending final endorsement by State Level Empowered Committee (SLEC).
4	Proposal submitted to MDoNER must indicate, inter alia, the following :	
A	Project Snapshot	<b>Nagaland Innovation Hub for Startups – ₹20Cr facility in Chumukedima (4.029 acres) for IT/ITeS.</b>
B	Expected beneficiaries and socio-economic impact	<b>Direct:</b> 20+ startups/year, 500+ jobs. <b>Indirect:</b> Economic diversification, reduced outmigration.
C	Alignment of proposed project with the focus areas indicated under the scheme guidelines	The project aligns with NESIDS-OTRI focus areas by promoting innovation, entrepreneurship, and skill development.
D	Timeline for implementation	<b>3-year phased rollout:</b> • Y1: Civil works • Y2: Tech setup • Y3: Operationalization.
E	Sustainability Plan	<b>Post-Y3 revenue model:</b> • 60% rentals • 20% training & consultancy fees • 20% grants.
F	Mechanism of O&M (during & after project completion)	<b>SPV-led management</b> with SLAC/SPMC oversight. IT&C Dept to cover interim O&M costs.
G	Cost estimates, clearly indicating the basis for unit costs	₹20Cr (₹12.41Cr civil works, ₹7.59Cr IT/non-IT) as per NPWD SoR 2021 ( <b>Section 15</b> ).
H	All sources of funding the project	<b>100% MDoNER grant</b> (NESIDS-OTRI). Future revenue from PPPs/CSR.
I	Location(s) of the project with geo-coordinates	<b>Chumukedima District</b> (Lat: 25.790124, Long: 93.731673). NH-29 proximity.
J	Satellite image/Photographs of project Site	Satellite imagery and land survey report enclosed in DPR Pages 21, 22, 23

K	Alignment with Gati Shakti Master Plan to demonstrate convergence	<p><b>Multi-Modal Connectivity :</b> Provides startups direct access to NH-29 (6.15 km), Dimapur Airport (14 km), and Dimapur Railway Station (19 km). (<b>Northeast Connectivity Plan (MoRTH)</b> and <b>Bharatmala Pariyojana</b> for seamless logistics).</p> <p><b>Economic Zones :</b> Strategic location near Dimapur Industrial Park and proposed Nagaland SEZ (Partners with DPIIT and <b>Assam-Nagaland Industrial Corridor</b> to boost cross-state investment etc).</p> <p><b>Digital Infrastructure :</b> Offers 5G-ready labs, high-speed internet (1 Gbps+), and cloud computing support (<b>MeitY's Digital Northeast 2024</b> and <b>STPI's OCTaNE</b> program for tech scalability).</p> <p><b>Logistics Efficiency :</b> Incubates startups developing SaaS for supply chain (Collaborates with <b>NITI Aayog's Logistics Master Plan</b> and <b>NE AgriTech Mission</b> etc)</p> <p><b>Employment Generation :</b> Creates 500+ jobs/year, curbing outmigration through local skill development (Aligns with MDNER's Skill Upgradation Scheme and NSDC's Northeast Hub)</p> <p>The Nagaland Innovation Hub is designed to integrate seamlessly with the PM Gati Shakti National Master Plan, leveraging its physical, digital, and economic networks. This project exemplifies transformative infrastructure development for the Northeast, positioning itself as a strategic innovation node in Gati Shakti's vision.</p> <p>By fostering tech-driven entrepreneurship and cross-border collaboration, the hub will catalyze Nagaland's emergence as a gateway for trade and innovation with Southeast Asia.</p>
L	Compliance with guidelines of concerned line Ministry/Department	The DPR has been vetted by IIT Guwahati and it complies with <b>MeitY Startup Hub</b> and <b>DPIIT</b> policies.
M	Output-Outcome framework with KPIs for monitoring the project	<p><b>KPIs:</b></p> <ul style="list-style-type: none"> <li>• 60+ startups incubated in 3 years</li> <li>• 3+ hackathons annually</li> <li>• 15+ workshop annually</li> <li>• Support 20+ startups per year through structured incubation programs</li> <li>• Create 500+ jobs</li> <li>• Conduct 5+ capacity building workshops per year</li> <li>• Funding raised by Startups</li> </ul> <p>(<b>Section 10 of the DPR Part-I</b>)</p>
N	Provision for project evaluation(s)	<b>Third-party audits planned annually (Section 241.3 of the DPR Part-II)</b>

5	Report of the institute of national repute on the techo-economic appraisal of DPR, along with the executive summary of the DPR	<b>Vetted by IIT Guwahati</b> , techno-economic appraisal is documented in the cover letter and DPR vetting certificate. Executive summary is available in <b>Section 1 of the DPR Part-I</b>
6	Statutory clearances, as applicable, such as : a. Forest & Environment  b. Town and Country Planning  c. Industries	<b>Enclosed:</b>  a. Forest & Environment Clearance ( <b>enclosed</b> )  b. No objection certificate from Deputy Commissioner, Chumoukedima, Nagaland ( <b>enclosed</b> )  c. Industries Dept NOC ( <b>enclosed</b> )
7	Certificates of the following : a. Availability of encumbrance-free land for the project b. Certification that costs proposed is as per the latest applicable Schedule of Rates  c. Non-duplication Certificate, duly endorsed to the concern line Department in the States, within whose purview the project falls	<b>Enclosed:</b> a. Encumbrance-free land certificate (DC Chumoukedima)  b. " <b>Technically approved DPR for the work construction of Nagaland Innovation Hub for Startup</b> " issued by the Office of the Chief Engineer, PWD (Housing), Government of Nagaland vide letter No. CE(H)/TB/NCCD/IT&C/INNOVATION HUB/2025 dated 20 <sup>th</sup> February 2025 ( <b>letter enclosed</b> )  c. Non-duplication certificate (IT&C Dept) ( <b>letter enclosed</b> )

  
 Director  
 Directorate of Information  
 Technology & Communication  
 Kohima : Nagaland

**Annexure D**

**Checklist for change in the scope of sanctioned Project  
{Ref Para 12.2 of the Guidelines}**

SI No	Item	Remarks
1	Reason for proposing change in scope, along with certification that the proposed change is within the scheme guidelines	No change has been proposed, the Detail Project Report (DPR) aligns with the concept note which was pre-vetted by NITI Aayog, MeitY and DPIIT and accordingly recommended in-principal approval during the 50 <sup>th</sup> EMIC meeting.
2	Revised Timelines for completion	NA
3	Change in the cost of project due to proposed change	NA
4	Vetting of revised cost by the institute of national repute that had previously appraised the project proposal	NA
5	Approval from SLEC on the change in scope	NA
6	Compliance with comments of concerned line Ministry/Department or EMIC received previously, if any	NA

  
 Director  
 Directorate of Information  
 Technology & Communication  
 Kohima : Nagaland