

## **DHARAMSHALA SMART CITY LIMITED**

**RFP Document**  
**For**  
**“Redevelopment of Refugee Market at**  
**Kotwali Bazar Dharamshala”**

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## **SECTION – 1: INVITATION TO BID (NOTICE INVITING TENDOR)**

## NOTICE INVITING TENDER (NIT)

REF No. REFUJEE Market/184/21-22/5119

Dated: 31/12/2021

DHARAMSHALA SMART CITY LIMITED (hereafter referred to as "AUTHORITY") invites online bids from the eligible bidders through [www.hptenders.gov.in](http://www.hptenders.gov.in) for **"AP-20.2 Redevelopment of Refugee Market at Kotwali Bazar Dharamshala"**

Detailed tender notice along with complete tender documents can be downloaded from the above website.

### BID INFORMATION


Sr. No.	Particulars	Information
1	RFP No	<b>DSCL/11/2021</b>
2	Scope of work	Redevelopment of Refugee Market at Kotwali Bazar Dharamshala
3	Location of Work	Kotwali Bazar.
4	Estimated Cost of the work	<b>₹ 3,76,91,852.00</b> <b>(Rs. Three Crore Seventy Six Lakhs Ninety one Thousand Eight Hundred and Fifty Two Only)</b>
5	Time of completion of the work	12 months from the date of signing the contract or 15 <sup>th</sup> day of issuance of Letter of Award whichever is earlier.
6	Defect Liability Period (DLP)	12 Months from the date of issuance of Completion Certificate.
7	Bid Validity	180 days.
8	Operation & Maintenance	NIL
9	Type of Contract	Item Rate Contract.
10	Date of issue of Tender documents online	31/12/2021 at 17:00 hrs.
11	Last date for sending pre-bid queries	10/01/2022 till 17:00 hrs. at <a href="mailto:dscltender@gmail.com">dscltender@gmail.com</a>
12	Date, Time & Place of Pre-bid Meeting	No Pre-bid meeting shall be held for this RFP. The replies to pre-bid queries will be uploaded on the e tendering portal.
13	Last date for Online Purchase of Tender Document.	21/01/2022 till 12:00 hrs.
14	Last date of Online Submission of Bids	21/01/2022 till 17:00 hrs.
15.	Last date of EMD + Hard Copy (Pre-Qualification and Technical Proposal) Submission of Bids.	22/01/2022 till 15:00hrs.



16.	Date & Time for Opening of Pre- Qualification and Technical Bid	22/01/2022 at 15:00 hrs.
17	Date & Time for Opening of Financial Bid	To be intimated later.
18	Tender document Fee	Rs.10,000/- (Rupees Ten Thousand only) to be paid only through Demand Draft (DD) in favor of "Dharamshala Smart City Limited"
19	Earnest Money Deposit (EMD)	₹ 7,54,000.00 (Rs. Seven Lakhs Fifty Four Thousand Only)
20	Security Deposit (Performance Bank Guarantee (PBG)	5% of the Contract Amount (by the successful bidder to be furnished within 15 days of issue of Letter of Acceptance)
21	Project Award Criteria	Through L1 (Lowest Financial Bid) Process

*For further details and general enquiries, prospective bidders may contact Managing Director Cum CEO, Dharamshala Smart City Limited, Old HIMUDA building, Cheelgadi, Distt. Kangra, PIN 176215, Himachal Pradesh during working hours before the last date and time of submission of tender document.*

*Any modification / corrigendum / Addendum made in Tender documents will be hoisted on website. Bidders are advised to visit the website regularly till the date of submission of bid.*

  
MANAGING DIRECTOR CUM CEO  
DHARAMSHALA SMART CITY LIMITED

## Disclaimer

The information contained in this Request for Proposal (RFP) document or subsequently provided to Bidders, whether verbally or in documentary or any other form by or on behalf of Dharamshala Smart City Limited or any of its employees or advisers, is provided to Bidders on the terms and conditions set out in this RFP document and such other terms and conditions subject to which such information is provided.

This RFP document is not an agreement or an offer to the prospective Bidders or any other person. The purpose of this RFP document is to provide interested parties with information that may be useful to them in the formulation of their proposals pursuant to this RFP document. This RFP document includes statements, which reflect various assumptions and assessments arrived in relation to the proposed assignment. Such assumptions, assessments and statements do not purpose to contain all the information that each Bidder may require. This RFP document may not be appropriate for all persons, and it is not possible for Department, its employees or advisers to consider the objectives, technical expertise and particular needs of each party who reads or uses this RFP document. The assumptions, assessments, statements and information contained in this RFP document, may not be complete, accurate, adequate or correct. Each Bidder should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments and information contained in this RFP document and obtain independent advice from appropriate sources.

Information provided in this RFP document to the Bidders may be on a wide range of matters, some of which may depend upon interpretation of law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. Dharamshala Smart City Limited accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on the law expressed herein.

Dharamshala Smart City Limited, its employees and advisers make no representation or warranty and shall have no liability to any person including any Bidder under any law, statute, rules or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this RFP document or otherwise, including the accuracy, adequacy, correctness, reliability or completeness of the RFP document and any assessment, assumption, statement or information contained therein or deemed to form part of this RFP document or arising in any way in this Selection Process. Dharamshala Smart City Limited also accepts no liability of any nature whether resulting from negligence or otherwise however caused arising from reliance of any Bidder upon the statements contained in this RFP document.



Dharamshala Smart City Limited may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumption contained in this RFP document.

The issue of this RFP document does not imply that DSCL is bound to select a Bidder or to appoint the Selected Bidder, as the case may be, for the proposed Assignment and Dharamshala Smart City Limited reserves the right to reject all or any of the Proposals without assigning any reasons whatsoever.

The Bidder shall bear all its costs associated with or relating to the preparation and submission of its proposal including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by Dharamshala Smart City Limited or any other costs incurred in connection with or relating to its Proposal. All such costs and expenses will remain with the Bidder and Dharamshala Smart City Limited shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by Bidder in preparation for submission of the Proposal, regardless of the conduct or outcome of the Selection Process.

## List of Abbreviations and Definitions

### List of Abbreviations

<b>ABD</b>	Area Based Development.
<b>AMC</b>	Annual Maintenance Contract.
<b>BEC</b>	Bid Evaluation Committee.
<b>BOQ</b>	Bill of Quantities.
<b>BSNL</b>	Bharat Sanchar Nigam Limited.
<b>CBSE</b>	Central Board of Secondary Education.
<b>CEO</b>	Chief Executive Officer.
<b>CH</b>	Chainage.
<b>D.C</b>	Deputy Commissioner.
<b>DMC</b>	Dharamshala Municipal Corporation.
<b>DSCL</b>	Dharamshala Smart City Limited.
<b>DPR</b>	Detail project Report.
<b>EIC</b>	Engineer in Charge.
<b>FR</b>	Feasibility report.
<b>HP</b>	Himachal Pradesh.
<b>HPSEB</b>	Himachal Pradesh State Electricity Board.
<b>INR</b>	Indian Rupees.
<b>IPH</b>	Irrigation and public health.
<b>MD</b>	Managing Director.
<b>MC</b>	Municipal Corporation.
<b>MS</b>	Mild Steel.
<b>NIT</b>	Notice Inviting Tender.
<b>PCP</b>	Pan-City Proposals.
<b>PIS</b>	Public Information System.
<b>PMC</b>	Project Management Consultants.
<b>PWD</b>	Public Work Department.
<b>RFP</b>	Request for proposal.
<b>RMC</b>	Regional Mountaineering Centre.
<b>SCP</b>	Smart City Proposal.
<b>SS</b>	Stainless Steel.
<b>SPV</b>	Special Purpose Vehicle.
<b>ICCC</b>	Integration Command and Control Center
<b>SLA</b>	Service Level Agreement

## Definitions:

In this "Bid / RFP Document" the following words and expression will have the meaning as herein defined where the context so admits

1. **"Affiliate"** shall mean a company that either directly or indirectly
  - a. controls or
  - b. is controlled by or
  - c. is under common control with
  - d. A Bidding Company and "control" means ownership by one company of at least twenty six percent (26%) of the voting rights of the other company.
2. **"ABD"** Shall mean Area Based Development in the Dharamshala Smart city proposals.
3. **"Authority"** shall refer to DSCL
4. **"B.I.S"** shall mean specifications of Bureau of Indian Standards (BIS);
5. **"Bid / Tender"** shall mean the Techno Commercial and Price Bid submitted by the Bidder along with all documents / credentials / attachments / annexure etc., in response to this RFP, in accordance with the terms and conditions hereof.
6. **"Bidder / Bidding Company"** shall mean Bidding Company submitting the Bid. Any reference to the Bidder includes Bidding Company / including its successors, executors and permitted assigns as the context may require;
7. **"Bid Deadline"** shall mean the last date and time for submission of Bid in response to this RFP as specified in Bid information Sheet;
8. **"Bid Capacity"** shall means capacity offered by the bidder in his Bid under invitation.
9. **"BOQ"** Bill of Quantity
10. **"Chartered Accountant"** shall mean a person practicing in India or a firm whereof all the partners practicing in India as a Chartered Accountant(s) within the meaning of the Chartered Accountants Act, 1949;
11. **"Competent Authority"** shall mean Managing Director cum CEO of DHARAMSHALA SMART CITY LIMITED himself and / or a person or group of persons nominated by Managing Director / CEO for the mentioned purpose herein;

12. **"Commencement Date"** shall be the 15<sup>th</sup> day of issue of the Letter of Award or the date of signing the contract whichever is earlier.
13. **"Commissioning"** means Successful operation of the Project / Works by the successful Bidder, for the purpose of carrying out Performance Test(s) as defined in RFP.
14. **"Company"** shall mean a body incorporated in India under the Companies Act, 1956 or Companies Act, 2013 including any amendment thereto;
15. **"Completion Date"** shall mean the end date for completion of works which will be the date of issuance of the completion certificate
16. **"Contract"** Agreement made between DSCL and the selected bidder on issue of Letter of Award.
17. **"Contract date"** Date of signing the contract
18. **"Contract Amount"** The total price quoted by the selected bidder & both the parties agreed upon.
19. **"DSCL"** Dharamshala Smart City Limited
20. **"DLP"** Defect Liability Period
21. **"Engineer" / "Engineer-in-Charge"** means the Engineer appointed by DSCL for the supervision and management of the Project
22. **"HPSEB"** means Himachal Pradesh State Electricity Board
23. **"PMC"** means Project Management Consultants
24. **"Price Bid"** shall mean the Bidder's quoted Price as per the Section - IV of this RFP;
25. **"RFP"** shall mean Request for Proposal (RFP) / Bid Document / Tender Document

### **Interpretations**

1. Words comprising the singular shall include the plural & vice versa.
2. An applicable law shall be construed as reference to such applicable law including its amendments or re-enactments from time to time.
3. A time of day shall save as otherwise provided in any agreement or document be construed as a reference to Indian Standard Time.
4. Different parts of this contract are to be taken as mutually explanatory and supplementary to each other and if there is any differentiation between or among the parts of this contract, they shall be interpreted in a harmonious manner so as to give effect to each part.
5. The table of contents and any headings or sub headings in the contract



has been inserted for case of reference only & shall not affect the interpretation of this agreement.

## **SECTION – 2: INSTRUCTIONS TO BIDDERS**



## 1. Instruction to Bidders

### 1.1 General Information and Guidelines

#### 1.1.1 Purpose

DHARAMSHALA SMART CITY LIMITED seeks the services of a reputed company, for **“Redevelopment of Refugee Market at Kotwali Bazar Dharamshala”** (hereinafter referred to as the “Project”). This document provides information to enable the bidders to understand the broad requirements to submit their Proposals. The detailed scope of work is provided in Section 2.1 of this RFP document.

#### 1.1.2 Project Information

- 1) DSCL has identified the existing MC Shops in Refugee Market which will be demolished and a new G+2 structure is proposed in the area. The project strives to cater to the people visiting Kotwali Bazar. The shopkeepers will be relocated to this complex as they have the existing MC Shops in Refugee market on long term lease.
- 2) The successful applicant shall be solely and exclusively responsible for the development of project and to provide the services which would be defined in the RFP.
- 3) The Project is required to be completed in a span of 12 months followed by the DLP period of 1 year for the project.
- 4) The successful applicant shall have right to use the specified area (which will be specified in the RFP document) in Dharamshala Municipal Corporation (DMC) area to construct a G+2 structure and other utilities in an optimum manner.
- 5) Land free of encumbrance shall be provided to the Developer for developing the Project components.
- 6) The Developer can form a Consortium. The Consortium may consist of not more than 2 parties with one lead member and a Consortium member. The developer needs to provide the details of firm wise activities that will be performed by the Consortium, as mentioned in section 1.1.4

#### 1.1.3 Scope of Bid

- 1) No Bidder shall submit more than one Bid for the Project. A Bidder bidding individually or as a member of a Joint Venture shall not be entitled to submit another Bid either individually or as a member of any Joint Venture, as the case may be.
- 2) The Selected Bidder(the “Contractor”), shall be responsible for the scope of work as described in the RFP document under and in

accordance with the provisions of the contract (the "Contract") to be entered into between the Contractor and the Authority in the form provided by the Authority as part of the Bidding Documents pursuant hereto.

- 3) The estimated cost of the Project (the "Estimated Project Cost") has been specified in the NIT above - the assessment of actual costs, however, will have to be made by the Bidders.
- 4) The Agreement sets forth the detailed terms and conditions for award of the project to the Contractor, including the scope of the Contractor's services and obligations.
- 5) The statements and explanations contained in this RFP are intended to provide a better understanding to the Bidders about the subject matter of this RFP and should not be construed or interpreted as limiting in any way or manner the scope of services and obligations of the Contractor set forth in the Agreement or the Authority's rights to amend, alter, change, supplement or clarify the scope of work, the work to be awarded pursuant to this RFP or the terms thereof or herein contained. Consequently, any omissions, conflicts or contradictions in the Bidding Documents including this RFP are to be noted, interpreted and applied appropriately to give effect to this intent, and no claims on that account shall be entertained by the Authority.
- 6) The Authority shall receive Bids pursuant to this RFP in accordance with the terms set forth in this RFP and other documents to be provided by the Authority pursuant to this RFP (collectively the "Bidding Documents"), and all Bids shall be prepared and submitted in accordance with Such terms on or before the Bid due date for submission of Bids (the "Bid Due Date").
- 7) The bidder shall install brand new equipment and the same shall be free from all defects and faults in material, workmanship, and manufacture and shall be of the highest grade and consistent with the established and accepted standards for materials of the type ordered and shall perform in full conformity with the IS codes and Technical Specifications as per clause 2.2.2
- 8) The bidder shall install brand new equipment and the same shall be free from all defects and faults in material, workmanship, and manufacture and shall be of the highest grade and consistent with the established and accepted standards for materials of the type ordered and shall perform in full conformity with the IS codes/CPWD/PWD specifications, manuals and drawings.
- 9) The Contractor shall be responsible for execution of work without any defects that may develop under the conditions provided by the Contractor and under use, arising from faulty materials, design or

workmanship such as corrosion of the equipment, inadequate contact protection, deficiencies in circuit design and or otherwise and shall rectify if any defects occur at his own cost when called upon to do so by the DSCL.

- 10) Third party inspection: The DSCL may appoint any approved government agency/Authority or any person for third party inspection of the work, on contractor's cost.
- 11) All labor, materials, tools plants, machinery, equipment, and any other things required for execution for work shall be arranged by the Bidder at his own cost.
- 12) All arrangements for establishment, watch & ward of stores and security of sites, appropriate vehicles for transportation etc. shall have to be made by the CONTRACTOR at his own cost and nothing extra on this account shall be paid.
- 13) On the completion of the work, the CONTRACTOR shall clear away and remove from the site all construction plants, temporary works, surplus material and rubbish of every kind and leave the site and works clean to the satisfaction of the Engineer-in-charge.
- 14) In view of the site location and their prevailing condition, it is mandatory on the Contractor to visit the site and make himself thoroughly familiar with the site conditions as per section 1.1.12, access and account for all possible difficulties and other requirements mentioned elsewhere in his bid prior to submission. When a contractor submits his bid for this work, it will be considered that he has quoted for this work with full and complete knowledge of the site and prevailing conditions, and no claim for additional compensation shall be entertained on this account.

#### **1.1.4 Consortium**

- i. The Bidder for participation in the Selection Process, may be a single entity or a group of entities (the "Consortium"), coming together to execute the project. The term 'Bidder' used herein would apply to both a single Entity and a Consortium.
- ii. The Successful Bidder at no given point of time, may assign or delegate its rights, duties or obligations under the Agreement/ Contract except with prior written consent of the Authority
- iii. No bidder applying individually, or as a member of a Consortium, as the case may be, can be a member of any other consortium bidding for the Project.
- iv. In the event the bidder is a Consortium, it shall, comply with the following additional requirements:
  - a) Number of members in a consortium shall not exceed 2 (Two) including the Lead Member

- b) The Members of the Consortium shall nominate one member as the Lead Member
- c) The Members of the Consortium shall be jointly and severally responsible for successful implementation of the Project throughout the terms of the contract.
- d) The Lead Member shall be authorized and shall be fully responsible for the accuracy and veracity of the representations and information submitted by the Consortium or its members respectively from time to time in the response to this RFP.
- e) The Members of the Consortium shall submit a Consortium Agreement set out in Annexure 1.4 *inter alia* consisting of the following:
  - Undertake that each of the members of the Consortium shall have an independent, definite and separate scope of work, allocated as per each member's field of expertise.
  - Commit to the profit and loss sharing ratio of each member.
  - Commit to the scope of work, rights, obligations and liabilities to be held by each member.
  - Provide a brief description of the roles and responsibilities of individual members; and clearly define the proposed administrative arrangements (organization chart) for the management and execution of the Project.
  - Include a statement to the effect that all the members of the Consortium shall be jointly and separately liable for all obligations in relation to the Contract until the completion of the Project in accordance with the Contract
- f) In case the Successful Bidder is a Consortium, then no change in the Lead member is permissible. Change of the other member in the Consortium can be done only under extreme circumstances such as non-performance of that member, insolvency or bankruptcy of that member, which shall be done only with the prior written approval of the AUTHORITY. Provided that in the event of any such approved change of Consortium member, the member (company) replacing outgoing Consortium member shall have same or higher financial, technical and legal qualifications as the outgoing member, and to the satisfaction of DHARAMSHALA SMART CITY LIMITED. In the event AUTHORITY does not grant approval for the change of the Consortium member (other than the Lead Member) or suitably qualified replacement member (companies) are not available/ found, the exit of such Consortium member shall constitute a breach of the Contract.
- g) All members of the consortium are required to follow the highest level of work ethics, if any member of the consortium has a Conflict of Interest

or indulges in Prohibited Practices; the whole Consortium is liable to be disqualified. Further, in the event any entity has been barred by the Central Government, any State Government, a statutory authority or a public sector undertaking, as the case may be, from participating in any project or bid, and the bar subsists as on the date of Last Date of Submission, it would not be eligible to submit a Proposal either by itself or as part of a Consortium.

- h) Bidder before entering in the MoU with agencies associated to him for execution of specialized component for execution of specialized component should be taken eg. For electrical works, the civil contractor needs to be enter with the electrical contractor of appropriate class having certificate of chief Electrical inspector of the state in appropriate category, similar for fire fighting works and ITworks.

#### **1.1.5 Sub-Contracting**

Sub-Contracting is not allowed for this RFP

#### **1.1.6 Completeness of Bid**

The bid should be complete in all respects. Failure to furnish all information required by the RFP document or submission of a proposal not substantially responsive to the RFP document in every respect will be at the bidder's risk and may result in rejection of its Bid and forfeiture of the EMD.

#### **1.1.7 Proposal Preparation Costs**

- 1 The bidder shall submit the bid at its cost and expense. AUTHORITY shall not be held responsible for any cost incurred by the bidder. Submission of a bid does not entitle the bidder to claim any cost and rights over AUTHORITY and AUTHORITY shall be at liberty to cancel any or all bids without giving any notice.
- 2 All materials submitted by the bidder shall be the absolute property of AUTHORITY and no copyright etc. shall be entertained by AUTHORITY.

#### **1.1.8 Pre-bid Meeting and Queries**

No Pre-bid meeting shall be held for this RFP. The replies to pre-bid queries will be uploaded on the e tendering portal.

#### **1.1.9 Amendment of RFP Document**

- 1 All the amendments made in the document would be published on the e-Tendering Portal only and shall be part of RFP.

- 2 The Bidders are advised to visit the e-tendering portal on regular basis to check for necessary updates. AUTHORITY also reserves the right to amend the dates mentioned in this RFP.

#### **1.1.10 Supplementary Information to the RFP**

If AUTHORITY deems it appropriate to revise any part of this RFP or to issue additional data to clarify an interpretation of provisions of this RFP, it may issue corrigendum(s) to this RFP. Any such corrigendum shall be deemed to be incorporated by this reference into this RFP.

#### **1.1.11 DHARAMSHALA SMART CITY LIMITED's Right to Terminate the Process**

AUTHORITY may terminate the RFP process at any time and without assigning any reason. AUTHORITY reserves the right to amend/ edit/ add/ delete any clause of this RFP Document. This will be informed to all and will become part of the RFP and information for the same would be published on the e-Tendering portal.

#### **1.1.12 Site Visit and Verification of Information**

- a) The Contractor shall be deemed to have visited and carefully examined the Project Site and it's surrounding to have satisfied himself to the nature and conditions of the means of transport and communications, whether by land or air, as available at present and as to possible interruptions thereto including the access and regress conditions for the Site. The Contractor is also deemed to have made enquiries, examined and satisfied himself as to the sites source for obtaining sand, stones, bricks and other materials, the sites for disposal of surplus materials and accommodation for depots, colonies, workshops and other infrastructure facilities as may be necessary for executing and completing the Works, as also the sub-soil water and variations thereof, storms, prevailing winds, climatic conditions and all other similar matters affecting the works including law & order.
- b) Any neglect or omission or failure on the part of the Contractor in obtaining necessary and reliable information upon the foregoing or any other matter affecting the Contract shall not relieve him from any risks or liabilities or the entire responsibility for the completion of the Works in accordance with the Contract.
- c) The Bidder are encouraged to visit and examine the site or sites and obtain for itself, at its own responsibility and risk, all information that may be necessary for submission of the bid and entering into the Contract. The costs of visiting the site or sites shall be at the Bidder's own expense.
- d) The location of the project is within the Municipal Corporation Limits of Dharamshala.

- e) Estimated quantities are provided in the Bill of quantities. Measured quantities as per execution on site shall be included in the payment certificate.

## 1.2 Key Requirements of the Bid

### 1.2.1 RFP Document/Tender Fee

RFP can be downloaded from the website <https://hptenders.gov.in/nicgep/app>. Tender Document Fee as per the Bid Information Sheet shall be paid through offline mode (Demand Draft. Tender Fees issued by any nationalized/ scheduled commercial bank in favor of "Managing Director-cum-CEO, DHARAMSHALA SMART CITY LIMITED", Dharamshala).

The tender document fee shall be non-refundable. Without the payment of tender fee the bids will be taken as incomplete and non-responsive and shall not be considered.

### 1.2.2 Earnest Money Deposit (EMD)

- 1 In terms of this RFP, a Bidder is required to submit EMD as per the Bid Information Sheet in the form of Fixed Deposit Receipt(s) in favor of "Managing Director-cum-CEO, DHARAMSHALA SMART CITY LIMITED", Dharamshala.
- 2 The EMD of unsuccessful bidders will be returned within 90 (ninety) days from the date of opening of the financial proposal. The Bid Security, for the amount mentioned above, of the Successful Bidder would be returned upon submission of Performance Bank Guarantee for an amount equal to 5% of Total Contract Value in the format provided in Annexure 8 of the RFP.
- 3 No interest will be paid by AUTHORITY on the EMD amount and EMD will be refunded to all the bidders (including the Successful Bidders) without any accrued interest on it.
- 4 Tender Document fee and EMD exempted for Micro small & Medium Enterprises (MSME) as per vide Clause No 10 ( Reduction in Transaction Cost) of MSME of office order dated 23/march/2020
- 5 The bid submitted without EMD, mentioned above, will be summarily rejected.
- 6 The EMD may be forfeited:

- a. If a bidder withdraws its bid or increases its quoted prices during the period of bid validity or its extended period, if any.
  - b. In case of a Successful Bidder, if the bidder fails to sign the contract in accordance with the terms and conditions or furnish the required Performance Security.
  - c. If during the bid process, a bidder indulges in any such deliberate act as would jeopardize or unnecessarily delay the process of bid evaluation and finalization.
  - d. If, during the bid process, any information is found false/ fraudulent/ *mala fide*, and then AUTHORITY shall reject the bid and, if necessary, initiate action.
  - e. If the Bidder does not accept the correction of the Bid Price, pursuant to Sub Clause 1.4.7.2
- 7 The decision of AUTHORITY regarding forfeiture of the EMD shall be final and binding upon bidders.

### 1.3 Instruction to Bidders

#### 1.3.1 Bid Submission Format

The entire Bid shall be submitted strictly as per the format specified in this RFP. Bids with any deviation from the prescribed format are liable for rejection.

#### 1.3.2 Bid Submission Instructions

##### 1.3.2.A Bid Submission Instructions

1. The complete **bidding process will be online (e-Tendering)**.
2. **Financial Bid** is required to be submitted **only in online mode**
3. Hard Copy submission of the Financial Bid is **NOT REQUIRED**.
4. Hard Copy submission of Prequalification cum Technical bid shall be in accordance with the instructions given in the Table below:

Particulars	Instructions
<b>SEALED ENVELOPE</b>	<b>PRE-QUALIFICATION CUM TECHNICAL BID</b>
Fee	Proof of payment/ submission of Tender Fee and EMD.
<b>Pre-Qualification</b>	The Pre-Qualification Proposal shall be prepared in accordance with the requirement specified in this RFP and the formats are prescribed in Annexure 1 of the RFP. Pre-Qualification Proposal should be submitted through Online bid submission process and also in Hard Copy as mentioned in the Bid Information Sheet.



<b>Technical Bid</b>	The Technical Proposal shall be prepared in accordance with the requirements specified in this RFP and the formats as prescribed in Annexure 2 of the RFP. Technical Proposal should be submitted through online bid submission process and also in Hard Copy as mentioned in the Bid Information Sheet.
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**1.3.2.B The following points shall be in consideration for submission of bids:**

- a. AUTHORITY shall not accept delivery of Bids in any manner other than that specified in this RFP. Bid delivered in any other manner shall be treated as defective, invalid and rejected.
- b. The Bidder is expected to price all the items and services sought in the RFP and proposed in the technical proposal. The Bid should be comprehensive and inclusive of all the services to be provided by the Bidder as per the scope of work and in accordance with the terms and conditions as set out in the Contract.
- c. AUTHORITY may seek clarifications from the Bidder regarding pre-qualification and technical qualification criterion in the bid document. Any of the clarifications by the Bidder on the technical proposal should not have any commercial implications. The Financial Bid submitted ONLINE by the Bidder should be inclusive of all the items in the technical bid and should incorporate all the clarifications provided by the Bidder on the technical proposal during the evaluation of the technical offer
- d. Technical Proposal shall not contain any financial information and shall be unconditional.
- e. If any Bidder does not qualify the pre-qualification criteria stated in Section 1.4.5 of this RFP, the technical and financial proposals of the Bidder shall not be opened in the e-Tendering system. Similarly, if the Bidder does not meet the technical evaluation criteria, the financial bid of the Bidder shall not be opened in the e-Tendering system.
- f. It is required that all the proposals submitted in response to this RFP should be unconditional in all respects, failing which AUTHORITY reserves the right to reject the proposal.

**1.3.3 Late Bid**

Bids received after the due date and the specified time (including the extended period if any) for any reason whatsoever, shall not be entertained and shall not be opened in the e-Tendering system.

**1.3.4 Bid Validity Period**

The validity of the bids submitted before deadline shall be till 180 days from the last date of submission of the bids.

### 1.3.5 Modification and Withdrawal of Bids

No bid shall be withdrawn in the interval between the deadline for submission of bids and the expiration of the validity period specified by the bidder on the bid form. Entire EMD shall be forfeited if any of the bidders withdraw their bid during the validity period.

### 1.3.6 Non-conforming Bids

A Bid may be construed as a non-conforming proposal and ineligible due to the following:

- a. If it does not comply with the requirements of this RFP
- b. If the Bid does not follow the format requested in this RFP or does not appear to address the particular requirements of AUTHORITY.

### 1.3.7 Language of Bids

The Bids should be submitted in English language only. If any supporting documents submitted are in any language other than English, then the translation of the same in English language is to be duly attested by the bidder and submitted with the bid, and English translation shall be validated at AUTHORITY's discretion.

### 1.3.8 Authentication of Bid

- a) Authorized person of the bidder who signs the bid shall obtain the authority letter from the bidder, which shall be submitted with the Bid. All pages of the bid and its annexure, etc. shall be signed and stamped by the person or persons signing the bid.
- b) The Bidder should submit a Power of Attorney as per the format set forth in Annexure 6, authorizing the signatory of the Bid to commit the Bidder.

### 1.3.9 Acknowledgement of Understanding of Terms

By submitting a Bid, each Bidder shall be deemed to acknowledge that he has carefully read all sections of this RFP, including all forms, schedules, annexures, corrigendum and addendums (if any) hereto, and has fully informed itself as to all existing conditions and limitations.

## 1.4 Evaluation Process

- a. AUTHORITY will constitute a Bid Evaluation Committee (BEC) to evaluate the responses of the bidders
- b. The BEC constituted by AUTHORITY shall evaluate the responses to the RFP and all supporting documents / documentary evidence. Inability to submit requisite supporting documents / documentary evidence, may lead to rejection.
- c. The decision of the BEC in the evaluation of responses to the RFP shall be final. No correspondence shall be entertained outside the process of negotiation/ discussion with the Committee.
- d. The BEC may ask for meetings with the Bidders to seek clarifications on their proposals and may visit Bidder's Site to validate the credentials/ citations claimed by the bidder.
- e. The BEC reserves the right to reject any or all proposals on the basis of any deviations.
- f. Each of the responses shall be evaluated as per the criteria and requirements specified in this RFP.
- g. Please note that BEC may seek inputs from their professional, external experts in the Bid evaluation process.

#### 1.4.1 Bid Opening

- a. Total transparency shall be observed and ensured while opening the Bids. All Bids shall be opened in the presence of Bidder's representatives who choose to attend the Bid opening sessions on the specified date, time and address.
- b. AUTHORITY reserves the rights at all times to postpone or cancel a scheduled Bid opening.
- c. Bid opening shall be conducted in 2 (Two) Stages;
  - Stage 1 - Tender Document fee and Bid Security/EMD, Pre-Qualification Proposal and Technical Proposal
  - Stage 2 - Financial Bid
- d. The venue, date and time for opening the Pre-qualification Proposal are mentioned in the RFP Bid Information Sheet. The date and time for opening the Financial Proposals would be communicated to the qualified bidders.
- e. The Financial Proposals of only those bidders will be opened who fulfill the Prequalification and Technical Evaluation criteria.
- f. The Bidder's representatives who are present shall sign a register evidencing their attendance. In the event of the specified date of Bid opening being declared a holiday for AUTHORITY, the bids shall be opened at the same time and location on the next working day. In addition to that, if the representative of the Bidder remains absent, AUTHORITY will continue process and open the bids of all the bidders

- g. During Bid opening, preliminary scrutiny of the Bid documents shall be made to determine whether they are complete, whether required EMD has been furnished, whether the Documents have been properly signed, and whether the bids are generally in order. Bids not conforming to such preliminary requirements shall be prima facie rejected. AUTHORITY has the right to reject the bid after due diligence is done.

#### 1.4.2 Evaluation of Pre-Qualification Proposals

- a) Authority shall open SEALED ENVELOPE marked "Pre-Qualification cum Technical Document" on Bid opening date.
- b) Response to the Pre-Qualification Requirements shall be evaluated in accordance with the requirements specified in this RFP and in the manner prescribed in clause 1.4.5 of the RFP. **Each of the Pre-Qualification condition mentioned in Section 1.4.5 of the RFP is MANDATORY.** In case the Bidder does not meet any one of the conditions, the bidder will be disqualified.
- c) The Pre-Qualification proposal must contain all the documents in compliance with instructions given in the Annexure 1.

#### 1.4.3 Evaluation of Technical Proposal

The evaluation of the Technical Proposals will be carried out in the following manner:

- a) Authority will review the technical bids of the short-listed bidders to determine whether the technical proposals are substantially responsive. Bids that are not substantially responsive are liable to be disqualified at AUTHORITY's discretion.
- b) Bidders' proposal will be evaluated as per the requirements and guidelines specified in the Annexure 2 and technical evaluation criteria as mentioned in Section 1.4.6 of the RFP.
- c) The Bidders are required to submit all required documentation in support of the evaluation criteria specified (e.g. Detailed Project citations and copy of work order, clients contact information for verification, and all other components) as required for technical evaluation.
- d) At any time during the Bid evaluation process, BEC may seek oral/ written clarifications from the Bidders. The BEC may seek inputs from their professional and technical experts in the evaluation process.
- e) Authority reserves the right to do a reference check of the past experience stated by the Bidder. Any feedback received during the reference check shall be taken into account during the technical evaluation process.

- f) The Financial Proposals of Bidders who do not qualify technically shall be not be opened in the e-Tendering system.
- g) AUTHORITY reserves the right to accept or reject any or all bids without giving any reasons thereof.
- h) AUTHORITY shall inform to the technically shortlisted Bidders about the date and venue of the opening of the financial proposals.

#### 1.4.4 Financial Proposal Evaluation

- a) All the technically qualified bidders will be notified to participate in online Financial Proposal opening process by Bid Evaluation Committee.
- b) Financial Proposals for the technically qualified bidders will then be opened online on the notified date and time and reviewed to determine whether the financial proposals are substantially responsive. Bids that are not substantially responsive are liable to be disqualified at AUTHORITY's discretion.
- c) Financial Proposals that are not meeting the condition mentioned in Annexure 3 shall be liable for rejection.
- d) Total Cost of Bid (TCB) shall be calculated based on the Bill of Quantities given in Annexure 3.2 of the RFP.
- e) If there is a discrepancy between words and figures, the amount in words shall prevail. For any calculation/ summation error etc. the bid shall be corrected as per Cl.1.4.7 or may be rejected as per the decision of the Bid Evaluation Committee.

#### 1.4.5 Pre-Qualification Criteria

The proposal failing to meet any of the below pre-qualification eligibility criteria shall be disqualified and will not be considered for technical evaluation process.

Sr. No	Basic Requirement	Specific Requirements	Documents Required
1	Legal Entity	The Bidder should be minimum Class II as per CPWD, Manual for Procurement of work clause 7.4.7. The Contractor should be registered under unified registration system in CPWD with a valid UIN or Equivalent Registration in any State Govt. Dept. Central Govt. Dept., other Govt. Dept. / undertaking of state/Central Govt. P.S.U.	Copies of valid PAN, GSTIN, and Valid registration certificate as per statutory requirement.
2	Financial Eligibility	The Bidder should have an average annual turnover of Rs.5.6 Crores In the last three audited financial years.	Certificate from The Statutory Auditor/Chartered accountant, Work

			order of projects completed in last 3 financial years
<b>3</b>	Solvency Certificate	Solvency for an amount of 40% of the estimated amount of tender.	Solvency Certificate from a Nationalized Bank or Scheduled Commercial bank not older than six months as on the date of submission of the bid.
<b>4</b>	Balance sheet	The Sole bidder or any member of the consortium should not have incurred loss in more than two years during the last five consecutive years' balance sheet	Certified and audited by Chartered Accountant
<b>5</b>	Blacklisting	The Sole Bidder or any member of the consortium should not be black listed by Central Government/any State Government/ Public Sector undertaking entity in India or similar agencies globally for unsatisfactory, Past performance, corrupt, fraudulent or any other unethical business practices as on date of submission of the proposal.	Undertaking by the authorized signatory as per the format given as <a href="#">Annexure 4</a>

(Sample Classification – Source CPWD Website)

Class	Tendering Limit	Class	Tendering Limit
<b>Class – I(Super)</b>	Rs 500 Crore	<b>Class –II</b>	Rs 5 Crore
<b>Class – I(AAA)</b>	Rs 200 Crore	<b>Class –III</b>	Rs 1.5 Crore
<b>Class – I(AA)</b>	Rs 100 Crore	<b>Class – IV</b>	Rs 60 Lakhs
<b>Class – I(A)</b>	Rs 50 Crore	<b>Class-V</b>	Rs 15 Lakhs
<b>Class – I</b>	Rs 20 Crore		

#### 1.4.6 Technical Evaluation Criteria

Technical proposals of only those firms, whose bids are found responsive, shall be opened for further evaluation. Technical proposals will be evaluated for their compliance of eligibility to various tender requirements.

- 1.4.6.1** Bidder/ Firm should have completed multistoried building works including RCC framed structure executed/completed with any Central/State Govt. Department / Public Sector Undertaking / Urban Local Bodies during last five financial years stating Name of work, Name of Department worked with, Cost of completion duly certified by the employer. The certificate to that effect has to be

obtained from an officer not below the rank of Executive Engineer/Project Manager concerned with the work.

Bidder before entering in the MoU with agencies associated to him for execution of specialized component for execution of specialized component should be taken eg. For electrical works, the civil contractor needs to be enter with the electrical contractor of appropriate class having certificate of chief Electrical inspector of the state in appropriate category, similar for fire fighting works and ITworks.

#### **1.4.6.2 The value of the Completed works shall be minimum**

##### **A- BUILDING WORKS INVOLVING RCC FRAMED STRUCTURE**

The Value of the works shall be minimum

a. Three contracts of each not less than 40% of the estimated cost of the project.

**OR**

b. Two contracts of each not less than 50% of the estimated cost of the project.

**OR**

c. One Contract of not less than 80% of the estimated cost of the project.

The value of executed works shall be brought to current price level by enhancing the actual value of work at simple rate of 7% per annum calculated from the date of completion to the last date of receipt of applications for tender.

To qualify for a contract for which bids are invited in the NIT, the bidder must demonstrate having experience and resources sufficient to meet the aggregate of the qualifying criteria. Sub-contractors' experience and resources shall not be taken into account in determining the bidder's compliance with the qualifying criteria except to the extent stated above.

#### **1.4.6.3 Bid Capacity**

Bidders who meet the minimum qualification criteria will be qualified only if their available bid capacity is more than the total bid value. The available bid capacity will be calculated as under:

**Assessed Available Bid Capacity = A x N x 2 - B,**

Where,

A = Maximum value of works executed in any one year during last Five years (at current price level)\*

N = Number of years prescribed for completion of the works for which bids are invited (period up to 6 months to one year be taken as one year)

	Last Five Years (Excluding current Year)	Amount of work Done in each Financial Year (Rs in Lakhs)
Total annual volume of civil engineering construction work executed and payments received in the last five years preceding the year in which bids are invited. (Attach /upload Certificate from Chartered Accountant)	Year- Year- Year- Year- Year-	

B = Value at current price level of existing commitments and ongoing works to be completed in the next 'N' years

\*Note: The value of executed works shall be brought to current price level by enhancing the actual value of work at simple rate of 7% per annum calculated from the date of completion to the last date of receipt of applications for tender.

The details of projects shall be furnished under Annexure 2.3 & 2.4.

The Bid Capacity shall be assessed by the bidder and declaration submitted as per Annexure 2.5 (Kindly complete the calculations in Annexure 2.5 as per data given above, to provide the bid capacity with the bid)

\*Note: The value of executed works shall be brought to current price level by enhancing the actual value of work at simple rate of 7% per annum calculated from the date of completion to the last date of receipt of applications for tender.

The details of projects shall be furnished under Annexure 2.3 & 2.4.

The Bid Capacity shall be assessed by the bidder and declaration submitted as per Annexure 2.5

#### 1.4.6.4 Manpower

##### CONSTRUCTION PERIOD

The Bidder should have sufficient number of Technical and Administrative staff required for proper execution of the contract during the construction period.

The following project staff should be available throughout the construction period. The applicant should submit the details as per Annexure 2.6.

SI	Designation	Nos. required	Qualification	Experience in similar projects
1	Project Manager	1	Degree in Civil Engineering	5 years
2	Project/ Site Engineer	1	Degree in Civil Engineering	3 years

#### 1.4.6.5 Contractors Plant & Equipment



- 1) The contractor will have to make his own arrangement for plants, Equipment, machineries to be used in the execution of this work well in time after award of the contract.
- 2) Concrete batching plant shall be installed/Hire within 10 Km Periphery from the Project work site & make the operational within 45 days from the date of commencement of work. In case of hired plants, the agreement / MoU between the parties with valid calibration certificates shall be produced.
- 3) Contractor shall carry out calibration of the plants & submit reports to DSCL within specified period.
- 4) The Contractor should own or should have assured ownership to the key items of equipment, in full working order, and must demonstrate that, based on known commitments; they will be available for use in the proposed contract

**NOTE:** Minimum Requirement of plant and Equipment has been mentioned in Annexure 2.6 B (List of Tools and Machinery)

#### **1.4.6.6 Disqualification**

The Financial offers of those bidders who do not qualify the technical evaluation shall not be opened and no claim in this regard shall be entertained.

Even though a bidder appears to meet the pre-qualifying criteria, he could be disqualified if he has:

- a. Made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements;
- b. Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures, etc.
- c. Submitted the RFP, which is not accompanied by the required documentation or is non-responsive.
- d. Failed to provide clarifications related thereto when asked by the technical committee.
- e. Where such firm has already submitted the bid.
- f. Is black listed / barred by GOI/State Gov't /State or Central PSU/ as on date. The company/firm shall on its letterhead submit an undertaking that it has not been blacklisted by GoI/State Gov't/State or Central PSU in last three years from the date of submission of bids for this RFP.

If any such information which would have entitled DSCL to reject or disqualify the bidder becomes known after the bidder has been qualified, DSCL reserves the right to cancel the qualification of the Bidder at any later stage.

#### 1.4.7 Financial Evaluation Criteria

##### 1.4.7.1 Bid to be substantially responsive

If a "Financial Bid" is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation

A substantially responsive "Financial Bid" is one which conforms to all the terms, conditions, and specifications of the Bidding documents, without material deviation or reservation. A material deviation or reservation is one

- (a) Which effects in any substantial way the scope, quality or performance of the Works;
- (b) Which limits in any substantial way, inconsistent with the Bidding documents, the Employer's right or the Bidder's obligations under the Contract; or
- (c) Whose rectification would affect unfairly the competitive position of the Bidders presenting substantially responsive Bids.

##### 1.4.7.2 Correction of Errors

"Financial Bids" determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:

- (a) Where there is a discrepancy between the rates in figures and in words, the rate in words will govern; and
- (b) Where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern the contract price.

The amount stated in the "Financial Bid" will be corrected by the Employer in accordance with the above procedure and the bid amount adjusted with the concurrence of the Bidder in the following manner.

- (c) If the Bid price increase as a result of these corrections, the amount as stated in the bid will be the 'bid price' and the increase will be treated as rebate;

(d) If the bid price decreases as a result of the corrections, the decreased amount will be treated as "bid price". Such adjusted bid price shall be considered as binding upon the Bidder.

If the Bidder does not accept the corrected amount the Bid will be rejected, and the Bid security and EMD may be forfeited in accordance with Sub-Clause 1.2.2-(5)

## **1.5 Award of Contract**

### **1.5.1 Award Criteria**

1. All the technically qualified bidders will be notified through email to participate in Financial Proposal opening process by the Bid Evaluation Committee.
2. The cost indicated in the Financial Proposal shall be deemed as final and reflecting the total cost of services and should be stated in INR only. Omissions, if any, in costing of any item shall not entitle the Bidder to be compensated and the liability to fulfill its obligations as per the Scope of Work and Technical Specifications within the total quoted price shall be that of the Bidder. The Bidder shall bear all taxes, GST, duties, fees, levies and other charges imposed under the Applicable Law as applicable.
3. The Bidder with the Lowest VALUE OF FINANCIAL BID (L1) will be declared as a successful bidder
4. If there is more than one bidder having the same value of the financial proposal, AUTHORITY reserves the right to finalize the Successful Bidder and that will be binding on all bidders

### **1.5.2 Letter of Acceptance (LoA)**

Prior to the expiration of the period of bid validity, the AUTHORITY will notify the Successful Bidder in writing or by fax or email, to be confirmed in writing by letter, that its bid has been accepted. LoA will constitute the formation of the contract. Upon the Successful Bidder's furnishing of Performance Bank Guarantee, AUTHORITY will promptly notify each unsuccessful bidder.

### **1.5.3 Signing of Contract**

AUTHORITY shall notify the Successful Bidder that its bid has been accepted by a Letter of Award on acceptance of the Performance Guarantee. The Successful Bidder shall enter into contract agreement with AUTHORITY within the time frame mentioned in the Letter of Award issued to the Successful Bidder by the AUTHORITY.

### **1.5.4 Failure to Agree With the Terms & Conditions of the RFP / Contract**

Failure of the Successful Bidder to agree with the Terms & Conditions of the RFP/ Contract shall constitute sufficient grounds for the annulment of the award, in which event AUTHORITY may invite for fresh RFP. The EMD shall be forfeited and the bidder will be blacklisted.

#### 1.5.5 DHARAMSHALA SMART CITY LIMITED's Right to accept any Bid and to reject any or All Bids

AUTHORITY reserves the right to accept or reject any Bid, and to annul the bidding process and reject any or all Bids at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for AUTHORITY's action.

### 1.6 Performance Bank Guarantee

- a) Within fifteen (15) working days from the date of issuance of Letter of Award, the Successful Bidder shall at his own expense submit unconditional and irrevocable Performance Bank Guarantee (PBG) for an amount equivalent to 5% of contract value to DSCL.
- b) The PBG shall be from a Nationalized Bank or a Scheduled Commercial Bank in the format prescribed in Annexure 8, payable on demand, for the due performance and fulfillment of the contract by the bidder.
- c) In case of a consortium the PBG shall be drawn mentioning the name of the consortium to whom the work is awarded in the PBG, by any of the consortium partners who is a registered company.
- d) In addition to paper based confirmation system, IT enabled confirmation system will be followed for which the Bank Guarantee will be subjected to.
- e) All charges whatsoever such as premium; commission etc. with respect to the PBG shall be borne by the Successful Bidder.
- f) The PBG may be discharged/returned by AUTHORITY upon being satisfied that there has been due performance of the obligations of the bidder under the contract. However, no interest shall be payable on the PBG.
- g) The PBG shall be valid initially up to 90 days beyond the date of completion of all contractual obligations of the contractor, including Defect Liability Period (DLP).
- h) In case the project is extended after the project schedule as mentioned in the RFP, the PBG shall be accordingly extended by the Successful Bidder till 90 days beyond the extended period.
- i) In the event of the Bidder being unable to service the contract for whatever reason AUTHORITY would invoke the PBG. Notwithstanding and without prejudice to any rights whatsoever of AUTHORITY under the contract in the matter, the proceeds of the PBG shall be payable to

AUTHORITY as compensation for any loss resulting from the bidder's failure to complete its obligations under the Contract. AUTHORITY shall notify the Bidder in writing of the exercise of its right to receive such compensation 14 (fourteen) days in advance, indicating the contractual obligation(s) for which the Bidder is in default.

- j) AUTHORITY shall also be entitled to make recoveries from the bidder's bills, PBG, or from any other amount due to him, the equivalent value of any payment made to him due to inadvertence, error, collusion, misconstruction or misstatement.
- k) On satisfactory performance and completion of the order in all respects and duly certified to this effect by AUTHORITY, Contract Completion Certificate shall be issued and the PBG would be returned to the Successful Bidder within the time mentioned in the contract.
- l) In case of unbalanced bids, authority reserves the right to ask for additional performance security from the bidder equivalent to 2% of the amount of unbalanced bid.

## **1.7 Defect Liability Period**

The Defect Liability Period shall be 12 months for the whole structure and for all components executed from the date of issuance of the Completion Certificate.

The Contractor shall remedy any and all loss or damage to work during the Defect Liability Period at the Contractor's cost, save and except to the extent that any such loss or damage shall have arisen on account of any default or neglect of the Dharamshala Smart City Limited or on account of a Force Majeure Event.

## **1.8 Insurance**

### **1.8.1 Insurance during Contract Period**

The Contractor shall effect and maintain at its own cost, from the Contract Date till the date of issue of the Completion Certificate, the Contractors All Risk (CAR) insurance of workers, Personals, Plant and Material for any loss or damage occurring on account of Force Majeure, Malicious Act, Accidental Damage, Explosion, Fire, Terrorism etc.

The insurance stated above shall cover the Authority and the Contractor against all loss or damage from any cause mentioned above.

### **1.8.2 Insurance for Contractor's Defects Liability**

The Contractor shall effect and maintain Contractors All Risk (CAR) insurance cover for the works from the date of issue of the Completion Certificate until the end of the Defect Liability Period for any loss or damage for which the Contractor

is liable and which arises from a cause occurring (as mentioned in clause 1.8.1) prior to the issue of the Completion Certificate.

The Contractor shall also maintain other insurances for maximum sums as may be required under the applicable Laws and in accordance with Good Industry Practice.

### **1.8.3 Insurance against injury to Persons and damage to Property**

The contractor is to be held responsible to make good all injuries, damages and repairs occasioned or rendered necessary to the same by fire or other causes and they hold the DSCL harmless for any claims for injuries to person or structural damage to property happening from any neglect, default, want of proper care or misconduct on the part of the contractor or any one in his employment during the execution of the work. Also no claim shall be entertained for loss due to earthquake, epidemic, or any other calamity whether natural or incidental damages so caused will have to be made good by the contractor at his own cost.

### **1.8.4 Insurance to be in Joint names**

The insurance under Cl.1.8.1 to 1.8.3 above shall be in the joint names of the Contractor and the Authority.

## **1.9 Warranty & Maintenance**

The completed project will be handed over to The Municipal Corporation, Dharamshala and the bidder shall comply with the Defect Liability Period as laid out in this RFP Document.

## **SECTION – 3: SPECIAL & GENERAL CONDITIONS FOR CONTRACT AND TECHNICAL SPECIFICATIONS**

## 2 Special Conditions of Contract and Technical Specifications

### 2.1 Scope of work

#### 2.1.1 Scope of Work

Refugee Market is located near densely populated residential neighborhood within the area of Kotwali bazaar. Land of refugee market is very valuable in terms of location, linkage and natural view. The proposal is to develop this area as a shopping mall with an iconic structure which gives a facelift to the Kotwali Bazaar Area. The Total Built-up area proposed is 693 sqm.

The basic features are:

- Basement/Lower ground floor: Parking (10 Cars)
- Ground floor: 2 Super markets (64.82sqm each.)
- First floor: 6 shops (average area 21sqm)
- Second floor: Rehabilitation area for existing shops (130sqm)
- Terrace : Food court
- Services: staircase + lift + male & female washroom in each floor.

#### **DISMANTLING AND DEMOLISHING WORK**

1. Demolishing stone rubble /Brick masonry manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material.
2. Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material
3. Demolishing cement concrete manually/ by mechanical means including disposal of material
4. Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc.
5. Dismantling steel work in built up sections in angles, tees, flats and channels including all gusset plates, bolts, nuts, cutting rivets, welding etc
6. Dismantling G.I roofing including ridges, hips, valleys and gutters etc.

#### **R.C.C WORKS**

1. Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying



2. Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying
3. Reinforced cement concrete work in vertical and horizontal fins individually or forming box louvers, fascias and eaves boards above plinth level up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement with 1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20mm nominal size).

### **STEEL REINFORCEMENT**

1. Providing Tor steel reinforcement of Grade Fe-550 for R.C.C. work including bending, binding and placing in position complete up to any level.

### **BLOCK WORK**

1. Providing and laying autoclaved aerated cement blocks masonry with 150mm/200/230mm/300 mm thick AAC blocks in super structure above plinth level up to any floor level with RCC band at sill level and lintel level with approved block laying polymer modified adhesive mortar all complete as per direction of Engineer-in-Charge.
2. Providing and fixing 12 mm thick frameless toughened glass Wall/door shutter of approved brand and manufacture, including providing and fixing required door fittings, all complete as per direction of Engineer-in-charge.
3. Providing and fixing double action hydraulic floor spring of approved brand and manufacture conforming to IS: 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight up to 125 kg, for doors, including cost of cutting floors, embedding in floors as required and making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc.
4. Filling the gap in between aluminium/ stone/ wood frame and 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 C920, DIN 18540-F & ISO 11600:-Upto 5 mm depth and 5 mm width
7. Supplying and fixing rolling shutters of 80x1.25 mm M.S. laths with 1.25 mm thick top cover of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at

- the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness
8. Providing and fixing ball bearing for rolling shutters complete all as per drawing and technical specification and as directed by Engineer-in-charge.
  9. Providing and Fixing factory made u-PVC door frame, made of u-PVC extruded sections, of size 65 mm x 55 mm with wall thickness 2.0 mm ( $\pm 0.2$  mm), corners of the door frame to be mitred cut and jointed with plastic brackets and stainless steel screws, reinforcing hinge side vertical of the frames with PVC profile of Size 28 mm x 30 mm having wall thickness 2 mm ( $\pm 0.2$  mm), including providing & fixing 3 no's of 125 mm long stainless steel hinges to the frame, fixing the frame with jamb with required number & size of anchor dash fasteners, all complete as per manufacturer's specification and direction of Engineer-in-charge
  10. 35 mm thick factory made Solid panel PVC Door shutter, made out of single piece extruded solid PVC profiles, 5 mm ( $\pm 0.2$  mm) thick, having styles & rails (except lock rail) of size 95 mm x 35 mm x 5 mm, out of which 75 mm shall be flat and 20 mm shall be tapered (on both side), having one side thickness of 15 mm integrally extruded on the hinge side of the profile for better screw holding power, including reinforcing with MS tube of size 40 mm X 20 mm x 1 mm, joints of styles & rails to be mitred cut & joint with the help of PVC solvent cement, self-driven self-tapping screws & M.S. rectangular pipes bracket of size 190 mm X 100 mm of cross section size 35 mm x 17 mm x 1 mm at each corner.
  11. windows/ ventilators comprising of uPVC multi-chambered frame and mullion (where ever required) extruded profiles duly reinforced with 1.60  $\pm 0.2$  mm thick galvanized mild steel section made from roll forming process of required length (shape & size according to uPVC profile), , uPVC extruded glazing beads of appropriate dimension, EPDM gasket, G.I fasteners 100 x 8 mm size for fixing frame to finished wall, plastic packers, plastic caps and necessary stainless steel screws etc. Profile of frame shall be mitred cut and fusion welded at all corners, mullion (if required) shall be also fusion welded including drilling of holes for fixing hardware's and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size and of approved quality, all complete as per approved drawing & direction of Engineer-in-Charge.
  12. Providing and fixing glazing in UPVC door, window, ventilator shutters and partitions etc. including all accessories required for installation glass complete as per the architectural drawings and the directions of engineer-

in-charge :--With float glass panes of 5 mm thickness (weight not less than 12.50 kg/ Sqm)

13. Providing fixing bright Stainless Steel tower bolts of size 250x10mm (barrel type) with screws etc. complete.
14. Providing fixing 125 mm long Stainless Steel D-handle for doors/windows with screws etc. complete.
15. Providing fixing 600 mm long Stainless Steel Pull Handle for glass doors including all accessories required complete all as per drawing and manufacturer specifications.

### **PLASTER WORK**

1. 15mm Cement plaster with Cement Mortar 1:6 (1Cement:6 Sand) in single coat on the rough side of brick/ concrete/stone walls for interior/ exterior plastering up to any floor level including arrises, internal rounded angles, chamfers and/or rounded angles not exceeding 80mm in girth and finished even and smooth.

### **FLOORING- TILES**

- 1) Providing and laying vitrified floor tiles in 600x600mm 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, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3 kg/ Sqm including grouting the joints with white cement and matching pigments etc.
2. Providing and laying antiskid ceramic floor tiles of 8-10mm.thick laid on a bed of 12mm. thick cement mortar 1:3 (1cement: 3 sand) finished with flush pointing in white cement. colour and size as per direction of Engineer-in-charge.
3. Providing and fixing digital HD Ceramic wall tiles of 6 mm thick with 12 mm thick cement mortar 1:3 (1 cement :3 sand) and jointed with cement slurry.

### **STEEL WORK**

1. Steel work welded in built-up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of red lead paint:-In beams joists channels ,angles , tee ,flats with connection plates or angle cleats as in main and cross beams, hip and jack rafters, purlins connected to common rafters and the like.
2. Painting two coats (excluding priming coat)on new steel and other metal surface under coat with ready mixed paint brushing to give an even shade including cleaning the foreign matter :-With ready mixed paint other than white
3. Providing and fixing 0.60mm thick pre-painted steel sheet in roofing with

- hot dipped metallic zinc coated sheet with top coat of regular modified polyester (RNP) organic coating of 20 microns over 5 microns primer coating to back coat of polyester of 5 microns over 5 microns primer coating i/c fixing with prepainted iron J or L hooks, bolts and nuts 6mm dia metre with prepainted limpet and rubber washers complete with all accessories' as required as per the direction of Engineer-in-charge.
4. Providing and fixing ridges or hips 60 cm overall with 0.60mm thick prepainted steel sheets in roofing with hot dipped metallic zinc coated sheets with top coat of regular modified polyester organic coating of 20 microns over 5 microns primer coating + back coat of polyester of 5 microns over 5 microns primer coating i/c fixing with prepainted iron J or L hooks, bolts & nuts 6mm dia & prepainted G.I. limpet and bitumen washers complete with all accessories as required as per the direction of Engineer in Charges.
  5. Providing and fixing M.S. BP Sheet 1.66mm to 20mm thick in eaves board /facia /soffits/ ceiling including cutting, fixing and welding to steel roof members and applying a coat of red lead primer complete as per the instruction of Engineer-in-charge (Base members of steel work shall be measured & paid separately)
  6. Providing and fixing polycarbonate transparent sheet 1.20mm thick in roofing with galvanised J or L hooks bolts and nuts with G.I. Limpe and bitumen rubber washer complete with all accessories as required as per direction of Engineer-in-Charge.
  7. 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 stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side 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.).
  8. 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).

### **PAVER BLOCKS**

1. Providing and laying 60 mm thick factory made chamfered edge Cement Concrete paver blocks of M-35 grade with approved colour design and pattern in footpath, parks, lawns, drive ways or light traffic parking etc, of required strength, thickness & size/ shape, made by table vibratory

method using PU mould, laid in required colour & pattern over 25mm thick cement mortar 1:4 (1 cement : 4 sand), compacting and proper embedding / laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand. Complete all as per direction of Engineer-in-Charge.

### **WATER PROOFING**

Providing and mixing integral crystalline admixture for waterproofing treatment to RCC structures like basement raft, retaining walls, reservoir, sewage & water treatment plant, tunnels / subway and bridge deck etc+D40.. at the time of transporting of concrete into the drum of the ready-mix truck , using integral crystalline admixture @0.80% (minimum to the weight of cement content per cubic meter of concrete) or higher as recommended by the manufacturer's specification in reinforced cement concrete at site of work. The material shall meet the requirements as specified in ACI-212-3R-2010 i.e. by reducing permeability of concrete by more than 90%, compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure. The crystalline admixture shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the Engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.

## **II. SCOPE OF WORK (Electrical Works):**

### **SCOPE OF WORK (Electrical Works in Redevelopment of MC Shops):**

Work under this section shall include the supplying, installation, testing and commissioning in perfect running conditions of the electrical installations for Redevelopment of Refugee Market at Kotwali Bazar.

These installations comprise, but are not limited to, the following chapters:

1. Main Distribution Boards (MDB)
2. Sub main Distribution Box
3. Complete electrical installations for all lighting, sockets, and power outlets

Lighting fixtures

4. The supply shall include all the equipment, accessories and other materials not enumerated in these specifications but found necessary for the completion and perfect functioning of the installations.

The Contractor shall prepare working/GFC drawings for the electrical system and take prior approval from DSCL Authorities before starting the installation work for electrical system Redevelopment of MC Shops Project in Dharamshala. Work shall be executed in a first-class work-manlike manner in accordance with these specifications, the drawings and notes

indicated therein, the instructions of the Engineer-in-charge, DSCL, the provisions of the Bill of Quantities delivered in place and tested to the full satisfaction of the Engineer-in-charge, DSCL.

The characteristics of the electric supply shall be as follows:

Low voltage network: 3 phase, 4 wire - 50Hz

: 1- Phase, 3Wire -50 Hz

415-440V between phases. And 1 phase, 3 wire -50HZ

230-240 V between phase and neutral with a solidly earthed neutral.

1. The necessary electric power for the needs of the project shall be supplied equipped by the local power authorities/HPSEBL/State Discom and Cost will be borne by contractor for construction period.
2. All embedded conduits in concrete or in floor paving screed shall be PVC conduits and all surface-mounted conduits shall be heavy duty rigid PVC conduit as per specifications & BoQ, unless otherwise mentioned.
3. All junctions, derivation and outlet boxes, shall be bakelite type or rigid PVC material as per specifications & BoQ.
4. All outlet boxes for switches and sockets shall be bakelite type or rigid PVC material as per specifications & BoQ.
5. All feeders shall be on cable trays in the ceiling as per specifications & BoQ.
6. All feeder and derivation light points shall also run in floor screed as per specifications & BoQ.
7. The location of conduits, cables, switchboards, cable trunking, etc. ... is shown on the drawings approximately, therefore the actual route of cables and conduits may differ from the plans according to the details or the building construction and the conditions of execution of the installation.
8. The Contractor shall supply and install at his expense all accessories & fittings and special fittings found necessary to overcome the interference and to apply the modifications on the route of cables and conduits that are found necessary during the work to the complete satisfaction of the Engineer-in-charge, DSCL.
9. The Switchgears should be installed correctly as per approved drawings. The switchgears specifications shall be as per approved drawings and BOQ.
10. All the feeder Panels Should Be Properly installed for Sub-main, main Electrical system as per approved drawings.
11. All the feeder panels, lighting points, socket points and all other electric points should be properly connected with Earthing protection system as per approved drawings.

**SCHEDULING:**

1. Scheduling of tests shall be as approved by the Engineer.

2. Schedule tests so that equipment can be energized immediately after completing the tests and approval of the reports.
3. Notify the Engineer two (2) weeks prior to testing.

**TEST AND ADJUSTING:**

1. After the wiring systems are completed, it shall be tested for all controls and defects. Any defects appearing shall be remedied before any apparatus, is installed.
2. Tests, both electrical and physical, shall be made of the various materials, equipment and installation comprising the electrical system.
3. After the entire installation has been completed all necessary adjustments shall be made until all Performance requirements are met.

**SUBMITTALS:**

1. The contractor shall submit the all manufacturer test reports of the supplying items/materials.
2. Product Data: submit manufacturer's data on electrical wires, cables, switchgears and all other material for electrical system which will use in interior + Exterior both.
3. Field Test Reports: indicating and interpreting test results relative to compliance with performance requirements of testing standards.
4. The Contractor has to arrange factory inspection by client with relevant tests of each items are to done prior to dispatch of materials. The Contractor will arrange all the facilities to conduct all the requisite tests/factory inspection of all the items/materials at the Manufacturer's site. He will also bear the expenditure of travelling, boarding & Lodging of two no. of Engineers of PMC and DSCL as nominated by DSCL for all the inspection period.
5. If required DSCL reserve the right waived of test of materials/items e.g. acceptance test, Routine test.

**QUALITY ASSURANCE:**

1. Regulatory Requirements: Comply with provisions of the statutory laws having jurisdiction and local codes of practice applicable to the job site/host country.
2. Conform to applicable codes and regulations regarding toxicity of combustion products of insulating materials.
3. Manufacturers: Firms regularly engaged in manufacture of electrical wire and cable products of type and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years.
4. IS/IEC Compliance: Comply with IS/IEC requirements as applicable to construction, insulation and color coding of electrical wires and cables.

5. NFPA Compliance: Comply with applicable NFPA requirements pertaining to cables and cable installations.

**SAFETY:**

The Contractor has to follow all necessary safety guidelines/directions issued by Government of Himachal Pradesh / Dharamshala Municipal Corporation/ Himachal Pradesh State Electricity Board (State DISCOM) from time to time.

1. The Contractor shall establish store and testing facility to ensure proper stock of spares and facilitate testing of all components of Electrical system.
2. All workmen, staff and engineers of Contractor shall ensure that all installation, operation and maintenance activities are carried out with full safety and by using all safety aids like helmets, gloves, earthing devices, testing gadgets. All electrical safety rules and regulations as per Indian Electricity act, Himachal Pradesh Government electric supply code and regulations, statutory inspection by electrical inspector etc., must be followed by the Contractor during the contract period.
3. The Contractor shall be responsible for all compensation / liability due to any injury or death of any personnel while performing duties related to the work under this contract. DSCL shall not be responsible in any such case and shall not be liable for any compensation in this regard.
4. All workmen, staff and engineers of Contractor should follow a proper dress code while on duty.

Contractor to submit for approval his testing procedure for each electrical system. Tests shall be conducted by contractor according to the approved testing procedure. All tests shall be conducted & recorded and submitted during Final hand over. The Contractor shall also co-ordinate for the main electrical supply Connection of Redevelopment of MC Shops Project in Dharamshala from HPSEBL/State Discom. All the necessary documentation for the Main Electrical Supply Connection shall be handled by the contractor; the fee of Main Electrical Supply Connection will bear by the DSCL or the owner of Redevelopment of MC Shops Project in Dharamshala. The contractor has Liaison with Himachal Pradesh State Electricity Board Ltd. (HPSEBL) for approval of technical specifications, materials, inspection, testing and calibration of energy meters, quality control, testing and commissioning of newly installed equipment's, total responsibility for the completeness of the project including erection testing and commissioning.

**AS BUILT DRAWING:**

Contractor has to hand over the As built Drawing duly signed and approved by DSCL/ State Discom for maintenance purpose at the time of completion and O & M.



**Electrical system shall be as per the applicable codes mentioned in the below table:**

- ✓ **Electrical system shall be provided as per the following applicable codes:**

SI No.	Code No.	Application Details
1	IS-10118 (Part I), 1982	Code of practice for selection, installation and Maintenance of switch gear & control gear.
2	IS-732, 1989 Rev.3	Electrical wiring system
3	IS-3043, 1987	Code of practice for ear thing
4	IS-13032, 1992(Rev.2)	MCB distribution boards for voltage up to and including 1000V AC
5	IS-12640, 1988	Residual current operated circuit breakers
6	IS-649, 1990 (Rev.-3)	P VC insulated cabled for working voltage up to and including 1100 V AC
7	IS- 9537 (Part-I), 1980	Conduits for electrical installations general requirements
8	IS-13118, 1991	Circuit breakers- general requirements
9	IS-13947 (Part-III), 1993	Air break switches for voltage not exceeding 1000VAC or 1800 V DC
10	IS-1248 (All parts), 1983, 1984,1993	Electrical direct acting instruments
11	IS-2147, 1962	Degree of protection provided by enclosures for LV switches gear and control gear.
12	National Electrical Code Part-4 Appendix	R Recommended values of illumination and limiting values of glare index-Industrial Building (parking space Indoor and outdoor)
13	IS 1255	For underground Cables
14	IS 2309:1989	Code of practice for the protection of buildings and allied structures against lighting

### **III. ICT SCOPE OF WORK IN REFUGEE MARKET**

Scope of the work is to provide Turnkey Solution that includes but is not limited to installation only. It should cover Design, Supply, Installation, Implementation, Commissioning, Training, providing user manual, providing 24 months Warranty for the total solution including all hardware, software, materials, services and support etc. Which should be providing an Integrated Video Surveillance System for DSCL. Work also includes all related work at controlling office at all the Locations. All necessary cabling / wiring / sockets and allied infrastructure conforming to respective quality / standard norms are also included in the scope of this job. Bidder shall be responsible for the following scope of services and shall be the Single Point of responsibility for the end user/client officials for the entire period of 2 years of warranty.

#### **Supply, Installation, Testing, Commissioning of the CCTV Surveillance System:**

Supply, install, operate, maintain and provide warranty & related support services for hardware and upgrade/update/enhancement for system software, as detailed out in technical specifications, including related software, etc. for a period of 2 years from the date of commissioning for all supplied items at DSCL Refugee Market site including additional material/hardware/software /services as may be required to be supplied without any additional cost.

The Bidder/System Integrator will need to provide a detailed implementation plan including the architecture diagram, strategy, approach, and delivery of materials.

#### **Integration of IT System**

Bidder shall be responsible for Supply, Installation, Testing, Commissioning of ICT System (CCTV Surveillance, Data Integration, Electrical Equipment, ICCS Integration etc.), adequate support should be available at all times during the Warranty Period of 2 years from the date of issuance of the completion certificate.

## 1. Dome/Bullet Cameras for Surveillance

Sr No	Parameters	Minimum Requirement Description	Compliance Yes/No	Remarks
1	Make			
2	Model			
3	Key Features:			
1.	Video Compression	H.265,H.264, MJPEG or better		
2.	Video Resolution	Minimum 3MP (2048 X 1536) or better		
3.	Frame rate	Min. 25 fps or better		
4.	Image Sensor	½.8" OR ¼" Progressive Scan CCD / CMOS		
5.	Lens	5mm ~ 50mm Integrated varifocal lens with Autofocus Motorized zoom, mm or better		
6.	Minimum Illumination	Colour: 0.5 lux, B/W: 0 lux with IR On		
7.	IR Range	80 meter or better		
8.	Day/Night Mode	Colour, Mono, Auto		
9.	S/N Ratio	≥ 50Db		
10.	Auto adjustment + Remote Control of Image settings	Colour, brightness, sharpness, contrast, white balance, exposure control, backlight compensation, Gain Control, Wide Dynamic Range		
11.	Protocol	HTTP, HTTPS, FTP, RTSP, RTP, TCP, UDP, RTCP, DHCP, UPnP, QoS, IPV4,IPV6, TCP/IP, TLS, TTLS, ICMP,		
12.	Security	Password Protection, IP Address filtering, User Access Log, HTTPS encryption		
13.	Operating conditions	As per Dharamshala city conditions		

14.	Protection & Casing	NEMA 4X / IP-66 rated and IK10 rated/ Shock and Vibration Resistance IEC 60068:2-6 and 2-27		
15.	Certification	UL/EN,CE,FCC, BIS, Cyber Security Certification		
16.	Local storage	Minimum 1 TB Memory card in a Memory card slot or better with ANR Feature, Bidder to provide 128GB SD Card. In the event of failure of connectivity to the central server the camera shall record video locally on the SD card automatically. After the connectivity is restored these recordings shall be automatically merged with the server recording such that no manual intervention is required to transfer the SD card based recordings to server.		
17.	Power Source	PoE, 12V		
18.	Standard Warranty	5 Year		
19	Edge Analytics	Motion detection, Camera Sabotage, Audio detection, Object counting, Object removal, Directional Motion		
20	Protection & Housing	Housing shall be Supplied and integrated by camera OEM; Shall be min IK10 rated , IP66 rated, NEMA 4X Shock and Vibration Resistance IEC 60068:2-6 and 2-27		
21	Certification	Certification:- CE,UL,EN, FCC, BIS, EN 55032, EN 50130-4		

		Cyber Security Certification: NDAA/UL Cyber security certificate.		
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## 2. NVR

Sr No	Minimum Requirement Description	Compliance Yes/No	Remarks
1	Make		
2	Model		
3	Key Features: Typically, the feeds from the cameras are stored in hard disk which is part of Network Video Recorder (NVR), the feeds from these cameras shall be stored in video management server (VMS) which shall be located in TSCCC. However, based on the timelines of both these projects it can be decided whether to store them in a NVR or VMS. For sake of entirety of solution we have considered NVR storage and the specifications of the same are as follows:		
4	Processor Dual-core embedded processor, Operating System Embedded LINUX/Windows		
5	IP Camera Input: 16 channel/8 channel		
6	Two-way Talk 1 channel Input, 1 channel Output, RCA		
7	User Interface GUI, Video Output 1 HDMI, 1 VGA		
8	Compression H.265/H.264		
9	Video Resolution 3840× 2160, 1920× 1080, 1280× 1024, 1280× 720, 1024× 768		
10	Motion Detection Zones: 396(22×18).		
11	Video Loss: Should be supported		
12	Alarm Input: 4 Channel, Low Level Effective, Green Terminal Interface		
13	Alarm Output: 2 Channel, NO/NC Programmable, Green Terminal Interface		
14	Hard Disk: 2 SATA III Port, Up to 12 TB		

15	Smart Phone: iPhone, iPad, Android Phone		
16	Trigger Events: Recording, PTZ, Tour, Alarm out, Video Push, Email, FTP, Snapshot, Buzzer & Screen tips		
17	Recording Mode: Manual, Schedule (Regular, Continuous), MD (Video detection: Motion Detection, Tampering, Video Loss), Stop		
18	Search Mode: Time/Date, Alarm, MD & Exact search (accurate to second), Smart search		
19	Playback: Play, Pause, Stop, Rewind, Fast play, Slow play, Next file, Previous file, Next camera, Previous camera, Full screen, Repeat, Shuffle, Backup selection, Digital zoom		
20	Backup Mode: USB Device/Network		
21	Interface Ports: 1 HDMI, 1 VGA, 2 USB Ports (1 USB2.0, 1 USB3.0)		
22	Record Interval: 1~120 min (default: 60 min), Pre-record: 1~30 sec, Post-record: 10~300 sec		
23	Ethernet: 1 RJ-45 port (10/100M/1000M), 16PoE Ports (IEEE802.3at/af)		
24	Protocols: HTTP, HTTPS, TCP/IP, IPv4/IPv6, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, FTP, IP Search, ONVIF 2.4, CGI Conformant 22. Power Supply: AC100V to 240V, @50 to 60 Hz		
25	Power Consumption NVR: <13.2W (Without HDD), PoE: Max 25.5w for single port, 130w in total		
26	Working Temp: -10 °C to +55°C		

### 3. Layer 2 Switch

S. No	Parameter	Specifications	Compliance Yes/No	Remarks
1	Port Density	16x1G Base-T and 2x1G SFP slots		

		PoE budget 240w		
2	Switching Capacity	Should support switching fabric of 36 Gbps Gbps or more		
3	Forwarding rate	Should support min forwarding rate of 18Mpps		
4	Layer 2 Features	Support 802.1D, 802.1S, 802.1w, Rate limit		
		Support 802.1X Security standards, 2096 Active VLAN's & MAC Table of 16K or more		
		Support 802.1Q VLAN encapsulation, IGMP v1,v2 and v3 snooping, MLD snooping, UDLD,		
5	Layer 3 Features	Should support Static routing, RIP,		
6	VLAN	Should Support 802.1Q Tagged VLAN, port based VLANs and Private VLAN		
		Should Support IEEE 802.1v, VLAN stacking, Q-in-Q, ITU-T G.8032 for ring protection		
7	Management	Switch needs to have a CLI, GUI, USB/SD Card interface		
		Must have support SNMP V1, V2 and V3, RMON		
		Support SNMPv6, Telnetv6 and SSHv6, DHCPv6 relay, DHCPv6 client, NTPv6 client and server, Single IP Management of 10 switches, PTP		
		Support NTP, SNTP,SDN Open Flow v1.3		

S8	Security	Should support ACLs, VLAN ACL's, MAC-based, web-based and IEEE 802.1x, RSPAN, FIPS 140/180 approved algorithms		
		Support DHCP snooping, IP source guard and Dynamic ARP Inspection (DAI), Support MAC address filtering and MAC address lock-down,		
9	Interoperability	For ease of integration all switches should be of same OEM, Safety: EN55024, UL, IPv6 Logo Ready		
11	Environment	Operating Temperature- -10 to +50		

#### 4. Layer 3 POE Switch

Sr No	Minimum Requirement Description	Compliance Yes/No	Remarks
1	Make		
2	Model		
3	Key Features:		
4	Port Density	24x1G SFP slots with 8x1G Combo Ports and 4x1G/10G slots Internal Redundant Power Supply Equipped	
5	Switching Capacity	Should support switching fabric of 288 Gbps or more	
6	Forwarding rate	Should support min forwarding rate of 200 Mpps	
7	Hardware redundancy &	Two or more Switches in stack should be capable to operate as	



	Resiliency	one logical L3 Virtual switch with synchronization of L3 & L2 (RIP, OSPF, BGP, PIM) protocols for higher availability with stacking bandwidth of 160 Gbps or more over geographical distant locations kms apart. Switch should be supplied with required stacking cables/modules		
8	Layer 2 Features	Support 802.1D, 802.1S, 802.1w, Rate limit. Support 802.1X Security standards, 4096 Active VLAN's & MAC Table of 32K or more Support 802.1Q VLAN encapsulation, IGMP v1,v2 and v3 snooping, MLD snooping, UDLD, Support IGMP Snooping and IGMP Querying		
9	Layer 3 Features	Should support Static routing, RIP, OSPF, BGP, PIM for IPv4 and IPv6		
10	VLAN	Should Support 802.1Q Tagged VLAN, port based VLANs and Private VLAN Should Support IEEE 802.1v, VLAN stacking, Q-in-Q, ITU-T G.8032 for ring protection		
11	Management	Switch needs to have a CLI, GUI, USB interface Must have support SNMP V1, V2 and V3, RMON,		

		Support SNMPv6, Telnetv6 and SSHv6, DHCPv6 relay, DHCPv6 client, NTPv6 client and server, Support NTP, SNTP, SDN open flow v1.3		
12	Security	Should support ACLs, VLAN ACL's, MAC-based, web-based and IEEE 802.1x, RSPAN, FIPS 140/180 approved algorithms, Support DHCP snooping, IP source guard and Dynamic ARP Inspection (DAI), Support MAC address filtering and MAC address lock-down,		
13	Interoperability	For ease of integration all switches should be of same OEM, UL, EN60950, EN55022, EN55024,OEM shall submit all the certificates		
14	Environment	Operating Temperature- -10 to +50 C		

## 5. Rack 6 U Wall Mount"

Sr No	Minimum Requirement Description	Compliance Yes/No	Remarks
1	Make		
2	Model		
3	Key Features:		
4	Usable Height 6U		
5	Features	<ul style="list-style-type: none"> <li>Adjustable 19" equipment mounting</li> </ul>	

		<p>verticals provide better mounting flexibility and maximizes the usable mounting space</p> <ul style="list-style-type: none"> <li>• Depth adjustable mounting slots</li> <li>• Precision engineering capabilities and best efficient software configuration product technology provide the best product quality and fastest delivery in the industry.</li> <li>• Top and bottom Panel with ventilation and cable entry facility</li> <li>• Provision to mount cooling fans on the top panel</li> <li>• Powder coated finish with pretreatment process meeting all industry standards</li> <li>• Grounding and Bonding Options. 100% assured compatibility with all equipment conforming to DIN 41494 (General industrial standard for equipment)</li> </ul>		
6	Rack Standers	Conforms to DIN 41494 or equivalent standard		
7	Construction:	Welded Frame		
8	Front Door	Lockable Toughened Glass Door		
9	Rear Door	Steel Perforated		
10	Basic Frame	Steel		
11	Equipment Mounting	DIN Standard Slots		
12	Mounting Angle	19" Mounting angles made of formed steel		
13	Standard Finish	Powder Coated		
14	Top and	Welded to Frame, Vented and Field Cable		

	Bottom Cover	entry exit cut outs		
15	Mounting Option	Castor wheels (Front 2 wheels with Break and rear without break) with Levelers		
16	Standard Color	Black or Grey		
17	Static Load	25 + kgs		

### 6. Rack 42U Floor Mount"

Sr No	Minimum Requirement Description	Compliance Yes/No	Remarks
1	Make		
2	Model		
3	Key Features:		
4	Usable Height 42U		
5	Features	<ul style="list-style-type: none"> <li>Adjustable 19" equipment mounting verticals provide the better mounting flexibility maximizing the usable mounting space.</li> <li>Depth adjustable mounting slots.</li> <li>Precision engineering capabilities and best efficient software configuration product technology provides the best product quality and fastest delivery in the industry</li> <li>Top and bottom Panel with ventilation and cable entry facility.</li> <li>Powder coated finish with pretreatment process meeting all industry standards.</li> <li>100% assured compatibility with all equipment conforming to DIN 41494. General industrial standard for</li> </ul>	

		equipment		
6	Rack Standers	Conforms to DIN 41494 or equivalent standard		
7	Construction:	Welded Frame		
8	Front Door	Lockable Toughened Glass Door		
9	Rear Door	Steel Perforated		
10	Basic Frame	Steel		
11	Equipment Mounting	DIN Standard 10mm Sq. Slots / Direct M6 Tap		
12	Mounting Angle	19" Mounting angles made of formed steel		
13	Standard Finish	Powder Coated		
14	Top and Bottom Cover	Welded to Frame, Vented and Field Cable entry exit cut outs		
15	Mounting Option	Castor wheels (Front 2 wheels with Break and rear without break) with Levelers		
16	Standard Color	Black or Grey		
17	Static Load	500+ kgs		
18	42U Network Enclosure	Frame-600X1000-STEEL. Casters Set of 4 Adjustable Levellers set of 4. Glass Door 42U 600. Hexagonal Perforated Door-42-600. Side Panels-1000-42U-Vented (Set of 2). Mounting Hardware-(Pack of 20). 1U Cantilever tray for Modem. 19"Earthing Kit Rack mountable. FHU with 4 FAN 360CFM. Power Distribution Unit - Two Number dual input Vertically Mounted 230 Volt PDU, 32AMPs with 25 power outputs with 25 (20		

		nos. Power outs of IEC 320 C13 Sockets & 5 nos. Power outs of 5/15 amps Sockets), Electronically controlled circuits for Surge & spike protection, LED readout for the total current being drawn from the channel, 32 amps MCB, 6 KVA isolated input to Ground & Output to ground (2 No. per Rack). Each rack power consumption is estimated to be 5 KVA set of 2.		
19		Vertical Cable Manager 1Ux42U set of 2.		
20		Horz. Cable Manager-1U-Loop Set of 2.		
21		With Standard Accessories like: • Doors & Side Panels • Power Distribution Units. • Cable		

## 7. Monitor -43 Inch

Sr No	Minimum Requirement Description	Compliance Yes/No	Remarks
1	Make		
2	Model		
3	Key Features:		
4	Screen Size (Diagonal)	42-inch (1065 mm)	
5	Aspect Ratio	16:9	
6	Panel Type	IPS Panel / Edge-LED	
7	Effective Display Area (W x H)	36.5" x 20.5" (928 x 522 mm)	
8	Resolution (H x V)	1920 x 1080 pixels	
9	Brightness	700 cd/m <sup>2</sup>	
10	Contrast Ratio	1300:1	

11	Dynamic Contrast Ratio	50,000:1		
12	Response Time (G to G)	8 ms		
13	Viewing Angle (Horizontal/Vertical)	178° / 178° (CR ≥ 10)		
14	Panel Life (Typical)	Approx. 60,000 hours		
15	Panel Surface Treatment	Anti-Glare (Haze 10%)		
16	Built in Speakers	20 W (10 W + 10 W)		
17	Orientation	Landscape / Portrait		
18	Digital Link	Yes		
19	Protective Glass	--		
20	Function Slot	SLOT 2.0		

## 8. Cat6 cable

Sr No	Minimum Requirement Description	Compliance Yes/No	Remarks
1	Make		
2	Model		
3	Key Features:		
4	CAT6 Twisted Pair Armoured Cable CAT6 Twisted Pair Armoured Cable-Cat 6 cable for transmission of high speed data, digital and analogue voice and video (RGB) signals on LANs. Supports Gigabit Ethernet (1000 baseT) standard. Operates at bandwidth of 250 MHz. This cable well exceeds the requirements of TIA/EIA-568-C. Applications Suitable for Burial Cables, Near Power Lines.		

<p>High EMI Interference surroundings. Construction Conductor-Solid Bare Electrolytic Grade Copper</p> <ul style="list-style-type: none"> <li>• Nominal Conductor Diameter -(23 AWG) 0.550 ± 0.015.</li> <li>• Insulation-Polyethylene</li> <li>• Colour Code:</li> <li>• Pair #1-Orange-White with Orange</li> <li>• Pair #2-Brown-White with Brown</li> <li>• Pair #3- Blue-White with Blue</li> <li>• Pair #4- Green-White with Green</li> <li>• Rip Cord-Yes</li> <li>• Inner Jacket – PVC</li> <li>• Thickness of Inner Jacket- 0.65 to 0.70 mm</li> <li>• Armoring-G.I. Wire</li> <li>• Size of Wire 0.90 ± 0.030mm</li> <li>• Sequential Marking at Every Meter</li> <li>• Temperature Rating -10 to +50 deg. C</li> <li>• Outer Jacket PE (Suitable for Burial)</li> <li>• Thickness of Outer Jacket 0.85 mm (Nom.)</li> <li>• Colour of Jacket Black</li> <li>• Approximate OD(approx.) 9.70 mm</li> <li>• HDPE Filler</li> <li>• LOW FREQUENCY ELECTRICAL PARAMETER</li> <li>Conductor Resistance (DC): 93.5 OHMS/1000MTR@20 Degree C. MAX.</li> <li>• Resistance Unbalance: 5%MAX</li> <li>• Mutual Capacitance: 5.6 nF/100 mtrs Max</li> <li>• Capacitance Unbalance Pair/Ground: 330PF/100M MAX</li> <li>• Propagation Delay Skew: 536 nS/100M</li> <li>• Normal Velocity of Propagation: 69%</li> <li>• Impedance: 100±15%OHMS</li> <li>• Worst Case cable skew: 45ns/100m</li> </ul>		
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- Generally confirming to EIA/TIA 568-C.2 and IEC/ISO 11801

### 9. Power cable 3CX 1.5 sq.mm

Sr No	Minimum Requirement Description	Compliance Yes/No	Remarks
1	Make		
2	Model		
3	Key Features:		
4	<p>Description Unit 3C X 1.5Sq. mm. Rated Voltage 1100V</p> <ul style="list-style-type: none"> <li>• CONDUCTOR - Material Plain annealed high conductivity Flexible copper conductor as per</li> <li>• Class 5 of IS 8130/2013 latest</li> <li>• Conductor Size Sq.mm 1.5</li> <li>• Max. D.C Cond. Resistance at 20 Deg. C. Ohm/km 13.3</li> <li>• INSULATION- Material PVC Type 'D'</li> <li>• Nominal Thickness in mm. mm 0.6</li> <li>• Core Identification Red, Black &amp; Yellow/Green•</li> <li>• Sheath Material Extruded PVC Type 'ST3' as per IS:5831/84</li> <li>• Nominal Thickness in mm. 0.9</li> <li>• Sheath Colour Black</li> <li>• Maximum Overall Diameter mm 9.4</li> <li>• Current rating Amps 16</li> <li>• Max. Conductor temp. under normal operating conditions -10°C - 50°C</li> <li>• Standards to which the cables confirm As per IS 8130/2013, IS 694/2010, etc. with latest up to date amendments</li> </ul>		

	<ul style="list-style-type: none"> <li>Recommended minimum bending radius in mm</li> <li>8 times the overall diameter of the cable</li> </ul> <p>Max. Tensile strength when pulled with pulling eye Kg- 23 Printing Brand 1100 V, NO.OF CORE X SQ.MM</p>		
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## 10. Desktop PC

Sr No	Minimum Requirement Description	Compliance Yes/No	Remarks
1	Make		
2	Model		
3	Key Features:		
4	<b>Processor (CPU):</b>	Intel Core i5 (sixth generation or newer) or equivalent	
5	Chipset	Intel original chipset Q150 or better	
6	<b>Operating System:</b>	Microsoft <u>Windows 10</u> x64 Genuine Windows 10 Professional (latest service pack) with following features: <ul style="list-style-type: none"> <li>Enterprise Mode Internet Explorer (EMIE)</li> <li>Remote Desktop</li> <li>Client Hyper-V</li> </ul>	
7	<b>Memory:</b>	8 GB (1x8GB) 2133 MHz Single/Dual Channel DDR4 SDRAM (Expandable to 32 GB or higher)	
8	<b>Storage:</b>	8 TB or higher SATA Hard Drive	
9	Graphic	Integrated Intel HD Graphics 530 or better	
10	External I/O Ports	4 or more USB 3.0 ports , 4 or more USB 2.0 ports, One VGA port, One RJ 45 Connector, One or more DVI/	

		HDMI/ Display Port, 1 Mic-in & 1 Headphone out (front); 1 Mic-in/Line-in & 1 Line-out (rear).		
11	Expansion Slots	One or more Full-Length PCI Slots, One or more PCI express x1 slots, One or more Full length PCI x16 slots		
12	Network Interface	Integrated 10/ 100/ 1000 on board Integrated Gigabit Ethernet network interface on system board		
13	Keyboard & Mouse	Wireless Key Board & Mouse		
14	<b>Monitor/Display:</b>	24" LCD monitor Widescreen Flat Panel Display with LED backlights, Resolution: 1920x1080 Pixels at 60 Hz, or better compatible with the desktop computer		
15	Security	Security Support for chassis padlocks or panel lock		
16	<b>Network Adapter:</b>	802.11ac 2.4/5 GHz wireless adapter		
17	Compliance and Certification	Computer manufacturer must be ISO 9001 and ISO 14001 certified. The make and model of the desktop computer must have UL, FCC and MS windows 10 Professional logo certification ROHS compliance		
18	<b>Other:</b>	Webcam, lock, external drive for backups		

### 1.1.1 UPS SYSTEM & BATTERY

S.No	Parameters	Specification	Compliance Yes/No	Remarks
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S.No	Parameters	Specification	Compliance Yes/No	Remarks
	Make			
	Model			
1	Phase	Single Phase		
2	Capacity	6000VA		
3	<b>Input</b>			
3.1	Nominal Voltage	208/220/230/240VAC		
3.2	Input Voltage	110-300VAC (Based on Load at 50%)		
		176-300VAC (Based on Load at 100%)		
3.3	Frequency range	46Hz-70Hz		
3.4	Power Factor	≤ 0.99@ nominal Voltage(100% Load)		
4	<b>Output</b>			
4.1	Output Voltage	208/220/230/240VAC		
4.2	Voltage Regulation	1% Batt. Mode)		
4.3	Frequency Range (Synchronized Range)	46Hz-54 Hz or 56Hz-64Hz		
4.4	Frequency Range (Batt. Mode)	50Hz or 60Hz ± 0.1Hz		
4.5	Current Crest Ratio	3:1		
4.6	Harmonic Distortion	≤3% THD (Linear Load)		
		≤5% THD (Non-linear Load)		
4.7	Waveform (Batt. Mode)	Pure sine wave		
5	<b>EFFICIENCY</b>			
5.1	AC Mode	92%		
5.2	Battery Mode	90%		
6	<b>Battery</b>			
6.1	Long-run Model	Battery Type	VRLA	
		Numbers	16	

S.No	Parameters	Specification	Compliance Yes/No	Remarks
	Charging Current	1A/2A/3A/4A/6A ± 10% (Selectable) for all models		
7	<b>Indicators</b>			
7.1	LCD	Load level, Battery level, AC mode, Battery mode, Bypass mode, and Fault indicators		
8	<b>Alarm</b>			
8.1	Battery Mode	Every 4 seconds		
8.2	Low Battery	Every second		
8.3	Overload	Twice every second		
8.4	Fault	Continuous sound		
9	<b>PHYSICAL</b>			
9.1	Dimension, D x W x H (mm)	369 x 190 x 318		
9.2	Net Weight (kgs)	12		
10	<b>ENVIRONMENT</b>			
10.1	Humidity	0-95% RH @ 0-50°C (non-condensing)		
10.2	Noise Level	55dBA @ 1 Meter		
11	<b>MANAGEMENT</b>			
11.1	Smart RS-232/USB	Supports Windows 2000/2003/XP/Vista/2008/7/8, Linux, Unix, and MAC		
11.2	SNMP Card Slot	Supports optional SNMP card for Power Management via SNMP manager/Web-browser		

### 2.1.2 Traffic Management and Safety during construction

1. The Contractor shall at all-time carry out work on the Site in a manner creating least interference to the flow of traffic in the approach roads while ensuring the satisfactory execution of the Project.
2. The Contractor shall take all necessary measures for the safety of site during construction and provide, erect and maintain such barricades, including signs, markings, flags, lights and flagmen as may be required for information and protection of traffic approaching or passing through the

- section of the road where the works have commenced.
3. Proper barricading of the Site for construction shall be done by the Contractor where ever deep excavations / foundation pits are made
  4. The contractor shall take all regards safety measures for works, workers, staff personals and the surrounding property & habitats at his own cost and arrangements.
  5. In case any operation connected with the works necessitates diversion, obstruction or closure of any road, waterway or any other right of way, the approval of respective competent authorities shall be obtained well in advance by the Contractor. In case the Contractor's operations obstruct access to adjacent properties, the Contractor shall be responsible to provide reasonable temporary access to the affected parties. In case the Contractor fails to provide adequate temporary facilities, this shall be deemed to be an Uncorrected Defect and the Employer shall have the right to engage a third party to correct the Defect and the cost of such correction will be deducted from the Contract Price.

### 2.1.3 Fire Prevention

The Contractor shall take all precautions necessary to ensure that no vegetation or property/ies along the line of the road outside the area of the permanent works is affected by fires arising from the execution of the Works. The Contractor shall obtain and follow any instructions of the competent authorities with respect to fire hazard when working in the vicinity of gas installations. Should a fire occur adjacent to the project road for any reason, the Contractor shall immediately suppress it. In the event of any other fire emergency in the vicinity of the Works the Contractor shall render assistance to the civil authorities to the best of his ability. Any scrub or plantation damaged by fire considered by the Employer to have been initiated by the Contractor's staff or labour shall be replanted and otherwise restored to the satisfaction of the Employer at the Contractor's expense.

### 2.1.4 Arrangement of Traffic during Construction

#### 2.1.4.A General

The Contractor shall at all times, carry out work on the City/Urban Road in a manner creating least interference to the flow of traffic while consistent with the satisfactory execution of the same. For all works involving improvements to the existing urban road, the Contractor shall, in accordance with the directives of the Engineer as well as the Traffic Police, provide and maintain, during execution of the work, a passage for traffic either along a part of the existing carriageway under improvement or along an alternative diversion route. Before taking up any construction, the Contractor shall prepare a Traffic Management Plan for each road and submit it to the Engineer for prior approval. This plan should include inter-racial:

A qualified safety officer with support staff to serve as a site safety team with required safety devices. Provision of traffic safety devices as per IRC: SP 55 with the following specifications:

1. Signage's of retro-reflective sheet of high intensity grade
2. Delineators in the form of cones/drums made of plastic/rubber having retro-reflective red and white bands, at a spacing of 5 m along with a reflective tape to be tied in between the gaps of cones/drums. A bulb preferably using solar energy is to be placed on the top of the cone/drum for delineation in the dark hours and night.
3. Barricades using iron sheet with adequate iron railing/frame painted with retro-reflective paint in the alternate yellow and black & white stripes. Warning lights at 5 m spacing shall be mounted on the barricades and kept lit in dark hours and night.
4. Road markings with hot applied thermoplastic paint with glass beads.
5. Safety measures for the workers engaged including personal protection equipment First aid and emergency response arrangements

#### **2.1.4.B Passage of Traffic along a Part of the Existing Carriageway under improvement**

1. For widening/strengthening existing carriageway where part width of the existing carriageway is proposed to be used for passage of traffic, treated shoulders shall be provided on the side on which work is not in progress. The treatment to the shoulder shall consist of providing at least 300 mm morum layer properly rolled and compacted in a width of at least 1.5 m and the surface shall be maintained throughout the period during which traffic uses the same to the satisfaction of the Engineer.
2. After obtaining permission of the Engineer, the treated shoulder shall be dismantled, the debris disposed of and the area cleared as per the direction of the Engineer.

#### **2.1.4.C Traffic Safety and Control**

1. The Contractor shall keep the roadway under construction open to traffic and pedestrian movement with proper drainage arrangement and smooth surface condition. Suitable ingress and egress shall be provided as necessary for all intersecting roads and for all abutting properties. Its purpose shall be to protect people from associated hazards and to prevent trespassing into the construction zone.
2. The Contractor shall take all necessary measures for the safety of traffic during construction and provide, erect and maintain Such barricades, including signs, marking, flags, lights, drums, traffic cones, delineators and flagmen as per the traffic management plan submitted by the Contractor and approved by the Engineer. An agreed phased programme for the diversion of traffic on the urban road shall be drawn up in prior consultation with the Engineer and the Traffic Police. The Contractor shall keep all signs in proper position, clean and legible at all times.
3. The barricades erected on either side of the carriageway/portion of the carriageway closed to traffic, shall be of strong design to resist violation, and painted with alternate black and white stripes. On each approach, at least two signs shall be put up, one close to the point

where transition of carriageway begins and the other 120 m away. The signs shall be of approved design and of reflective type, as directed by the Engineer. Two persons with red / green flag and whistle to be deputed at both ends of the barricades to regulate traffic. Red lanterns or warning lights of similar type shall be mounted on the barricades at night and kept lit throughout from sunset to sunrise.

4. At the points where traffic is to deviate from its normal path (whether on temporary diversion or part width of the carriageway) the channel for traffic shall be clearly marked with the aid of pavement markings, painted drums or a similar device to the directions of the Engineer. At night, the passage shall be delineated with lanterns or another suitable Lightsource. No material to project / spill beyond barricades.
5. This work item shall include all labour, equipment and services involved in the erection, maintenance, moving, adjusting, cleaning, relocating and storing of signs, barricades, drums, traffic cones and delineators furnished by the Contractor as well as all labour and equipment involved in the maintenance of traffic lanes and detours, for maintenance of traffic.

#### **2.1.4.D Maintenance of Diversions and Traffic Control Devices**

Signs, lights, barriers and other traffic control devices, as well as the riding surface of diversions shall be maintained in a satisfactory condition till Such time they are required and as directed by the Engineer. Such temporary ways shall be kept free of dust by frequent applications of water.

#### **2.1.5 Work in Monsoon and Dewatering**

The execution of the work may entail working in the monsoon also. The contractor must maintain labour force as may be required for the job and plan and execute the construction and erection according to the prescribed schedule. No special/ extra rate will be considered for such work in monsoon. The contractor's rate shall be considered inclusive of cost of dewatering required if any and no extra rate shall be payable on this account.

#### **2.1.6 Site Documents**

The following site documents shall mainly be maintained by the contractor at site:

1. Copy of contract documents and drawings.
2. Computerized bill format.
3. Site Order Book.
4. Material testing registers / Quality Inspection Reports.
5. Measurement books on computerized format.
6. Progress bar chart.
7. Sample approval register.
8. Hindrance Register.
9. Work Diary.
10. Deviation/variation order registers.
11. Cement consumption register.



12. Reinforcement registers. Concrete cube test register.
13. Slump test register.
14. Silt content and sand bulkage register.

### 2.1.7 Safety Guidelines

1. Proper and correct lifting methods shall be adopted.
2. All lifting tools, tackles and wire ropes etc. shall be of tested quality for safe working loads. Wire ropes shall be of sound construction without any splaying.
3. It is mandatory for all jobs done at a height of 2.5 M and more to use fall arrestor type safety belts & safety nets.
4. While carrying out work in confined areas, proper ventilations and lighting arrangement should be made by the contractor. Adequate precautions shall be taken while the work is in progress to ensure that naked light, fire, welding or any other hot work is not in progress in the vicinity of the area where painting is being carried out.
5. If the work is to be carried out at height, safety of the personnel is of utmost importance. Therefore, all necessary precautions must be taken by the contractor and he has to obtain work permit from authorized official of D\_SCL for working at height before start the work.
6. In addition to the above, contractor has to adhere to the following safety checklist:

#### 2.1.7.A CIVIL CONSTRUCTION WORKS

1. During excavation, the excavated earth must be dumped at a safe distance from the edge of excavation as directed by Engineer in Charge.
2. Safe cross walkways are to be provided along a continuous trenching for pipelines etc.
3. Hard hats (safety helmets), rubber boots, safety shoes, and hand gloves, etc. are required to be provided for supervising as well as other working personnel by the contractor.
4. Keep a watch on buried cables and underground systems. Ladders, gangways are to be provided at convenient places for carrying out required works. Ladders shall be firmly secured to ground, and rungs of the ladders shall be properly secured and safe.
5. Install Barricading as per relevant IS/BS code with the marking "Dharamshala Smart City Works".

### **2.1.7.B. ELECTRICAL WORKS**

1. All temporary electrical connections should be got done to conform to statutory regulations and a certificate obtained from the authorities. The connection and the wiring to be maintained by competent and licensed supervisors and wiremen. As far as possible, the cables are to be safely buried to ensure free access to equipment and machineries movements.
2. Hard hats (safety helmets) made out of insulating material to be used by personnel working in 'live' areas like substations, etc.
3. Safety boots, necessary hand-gloves as required, shall be used.
4. 'Earthing' of machineries and equipment shall be ensured. No open/ bare connections allowed. The arrangements should be checked periodically for damages to insulation and loose connections, etc and rectified so that the wiring becomes non-hazardous.
5. The areas of working during nights shall be properly illuminated with floodlights and hand- Hard hats (safety helmets), safety belts, eye goggles, face shields, safety boots, hand- gloves, respirators, etc as required/ directed shall be used.
6. Proper, correct and safe lifting methods shall be adopted
7. All lifting tools tackle and wires ropes etc shall be of tested quality for safe working loads. Wire ropes shall be of sound construction without any splaying.
8. Checks to be exercised for broken wires and core proportion in the main body of the wire ropes to be rejected. Manufacturer's guidelines/ standards instructions are to be followed for using wire ropes and slings with broken wires. Experience and common sense is of immense help.
9. Usage of hoisting belts/ safety belts is must for personnel working at higher elevations.
10. Only safe gangways / walkways shall be used for movement of personnel. Short cuts shall be avoided.
11. Check connections to headman anchors before hoisting.
12. All live wires to be crossed during hoisting shall be made dead near the vicinity of the area during hoisting/ rigging.
13. Avoid keeping the loads supported by hoisting equipment's for an unreasonable length of time.
14. Ropes, cables, and slings must be protected with pads or wooden blocks at sharp edges lamps as per the demand of the job.
15. Danger signals and safety tags in the live areas shall be demonstrated properly. All connections to be switched off after the working hours.
16. Isolation switches and main switches shall be accessible easily. Necessary precautions should be taken while excavating earthing pits.
17. All works shall be carried out in strict accordance to the norms, procedure and specifications issued and enforced by BIS in Relevant Indian Standard specifications and code of Practices with up-to-date amendments and

- revisions, latest edition of National building code and National electric code. In addition, the installation shall comply in all respects with the requirements of Indian. Electricity Act 2003 and Indian Electricity Rule 1956 with up to date amendments and revisions and special requirements if any of the H.P. State Electricity Board.
18. The contractor shall make his own arrangements for supply of water and electricity at his expense required for execution of work. The DSCL shall neither make any Such arrangements nor shall make any payments in this regard.
  19. The contractor has to construct at his own cost his site office for contractor staff and DSCL staff and store at site on a suitable place and location as permitted by DSCL. The DSCL shall not provide any place for storage of equipment's required for work. No amount shall be paid to the contractor in this regard.
  20. Proper upkeep and maintenance and safety of store and stocks of materials brought at site shall be the sole responsibility of the contractor. The materials got damaged due to negligence of its up keeping at site or due to mishandling shall have to be replaced by the contractor at his own cost. On discovery of such damages the DSCL shall recover the amount paid through the running bills to the contractor and shall only be reimbursed after the replacement of the same. The DSCL shall also not be responsible for theft of materials from site and the contractor has to replace all such materials at his own cost. No compensation whatsoever shall be payable to the contractor on above grounds.
  21. The contractor shall not be entitled to any compensation for any loss suffered by him on account of delay in commencement or execution for work whatever the cause of delay may be including delay arising out of other materials, supply of materials, transportation for any matter related with HP State Electricity Board. & Electrical Safety Department or any other reasons whatsoever, the DSCL shall not be liable for any claim in respect thereof.
  22. The contractor shall finalize the layout of work, physically at site, and get approved by HP State Electricity Board. Before placing orders for material. Approval of above layout by HP State Electricity Board shall be general and shall not absolve the contractor with responsibility of its correctness.
  23. The contractor shall within specified period from the date of issue of work order shall prepare all relevant drawings to be submitted to the applicable office of Electrical Inspector HP Govt or any other competent office for approval. All required sanctions and approvals from the above offices shall have to be obtained by the contractor within the above stipulated period at his own cost.
  24. Rate quoted shall be applicable for works at all height unless otherwise specified in the schedule of quantities.

25. The contractor shall submit the drawing in three sets to DSCL for this work duly approved by the Office of the electrical Inspector HP govt. and HP State Electricity Board. Within specified days from the date of letter of award. The approval of these drawing will be general and will not absolve the contractor of the Responsibility of the correctness of those drawings.
26. The contractor shall submit test reports of the equipment to be supplied and drawings for approval of the Engineer in Charge before supplying the equipment. The successful tenderer shall also submit the purchase bill of all items as required and directed at no cost.
27. (A) The contractor shall have to arrange all free of cost facilities for the inspection, Such as employ or material labour etc. and any fees payable to Government or any competent authority at his own cost. The contractor shall arrange to obtain all sanctions from the concerning office of HP State Electricity board and from the elect. Inspector Govt. of H.P. at his own cost. Any fees in respect of above work paid by the contractor shall not be reimbursed or refunded by the DSCL and no claim for compensation shall be entertained in this regard. Copy of all such sanctions has to be submitted to Engineer In charge DSCL.
28. (B) The contractor has to arrange factory inspection of all major items as required by Engineer in Charge at the manufacturer's works before dispatch of material. Date of inspection should be informed 15 days in advance to DSCL. The contractor has to get any equipment or complete installation checked and tested by any Government/ Semi Government/ Private authority Such as CPRI, BHEL, NABL laboratory, Testing department of HP State Electricity Board Co. Ltd. etc. at his own cost. He shall also provide free of cost all labour, material, equipment etc. for the purpose of above testing. The contractor shall not be entitled for any compensation on this ground. If required by Engineer in Charge contractor will have to arrange for third party inspection of entire installation done by him and he will have to rectify / repair / replace any defects pointed out by inspection agency.
29. (C) The consultant appointed by DSCL is authorized for following:
  - To visit the site from time to time to inspect the quality of work.
  - To issue working drawings with specifications to the contractor.
  - Technically guide the contractor if required.
  - To accompany DSCL officials for factory inspections of material if required.
30. The contractor shall be responsible for removal of all defects and shall make rectification in the work at his own cost if any at the time of handing over the installation without any claim for compensation.
31. It shall be the duty of the contractor to arrange all clearances from Electrical Inspector HP Govt, to coordinate and peruse the officers of HP State Electricity Board for periodical inspections during the currency of contract and final inspection of the work and get the complete installation

- electrically charged. No extra payment shall be made to the contractor in above account.
32. The contractor at his own cost and efforts shall arrange periodical inspection of work by various officers of HP State Electricity Board during course of execution of work and any instruction issued by the officers of HP State Electricity Board shall be communicated to DSCL in writing by the contractor and prior permission shall be taken from DSCL before its compliance.
33. The contractor should note that any delay / on the part of HP State Electricity Board on any account what so ever shall not be entertained as a reason for time extensions in case of delay in completion of the work covered under this entire contract. The tenderer should therefore be aware and should not that execution and timely completion of External Electrification work in full coordination with other development and construction works covered under the scope of contract shall be sole responsibility of successful tenderer.
34. The contractor has to quote his rates in strict accordance to the list of approved make of materials. The tenderer has to ensure before filling up the rates regarding their availability and period of delivery.
35. The contractor shall note that during the execution of works there is likelihood in change of layout, specification and change in quantities of items entered in the schedule of items for which the contractor has tendered his rates. The increase or decrease in the quantities of such items may be up to any extent and the tenderer shall not be entitled to any compensation for any loss suffered by him on account or procurement of additional quantities of such items due to such changes.
36. The contractor shall not be entitled to any compensation for any loss suffered by him on account of delay in commencement or execution of work whatever the cause of delay may be including delay arising out of other materials or any reasons whatever and the DSCL shall not be liable for any claim in respect thereof.
37. All dismantled material to be deposited at DSCL store by the contractor without any extra cost.
38. The contractor shall if required arrange for temporary mobile / trolley mounted distribution substations of required capacity to give supply to the areas being fed from the existing pole mounted transformer / transformers being removed. This will be necessary at the places where new transformer / CSS are to be installed at the same place from where pole mounted existing transformer / transformers are being removed. No extra payment shall be made for the temporary mobile / trolley substations and associated temporary HT and LT cabling done for charging the same. The contractor shall be responsible for all necessary statutory permissions required for this purpose.

### **2.1.7.C. GENERAL**

1. Safety starts from the individual on the job. Experience and common sense shall be generously used. In case of any doubt regarding safety, Engineer-in-Charge can be consulted.
2. Proper communication and alertness on the job is to be ensured.
3. Manholes and openings for ducts etc shall be kept properly covered.
4. Correct tools and tackles should be used for every work. Make shift tools and tackles will result in accidents.
5. Fire-fighting equipment shall be placed at designated locations and kept unobstructed.
6. Do not use loose clothing, neckties, and etc. while on the job.
7. Safety precautions recommended by the manufacturers/ vendors shall be strictly adhered to.
8. All machinery, tools and tackles shall be maintained properly, and clearly.

## **2.2 Technical Specifications**

### **2.2.1 GENERAL TECHNICAL SPECIFICATIONS**

- a) The General Technical Specifications comprise of the Standard Specifications of the Public Works Department, Govt. of Himachal Pradesh, MoRTH and CPWD Specifications, unless and otherwise specifically relaxed wholly or partly through a special clause in the Contract and relevant BIS codes of practice.
- b) Rates shall be inclusive of taxes including work contract tax, duties, GST, royalty etc and any other statutory deductions applicable such as labour cess.
- c) The special provision in detailed specifications or wording of any item shall gain precedence over corresponding contradictory provision (if any) in the standard specifications or P.W.D./C.P.W.D Hand Book where reference to such specifications is given without re-producing the details in contract.
- d) It is presumed that the Contractor has gone carefully through the Specification and Standard Data Book & P.W.D./C.P.W.D Hand Book and the Schedule of Rates of the HPPWD and studied the site conditions before arriving at rates quoted by him. Decision of the Engineer shall be final as regards interpretation of specifications.
- e) The contractor shall be responsible for making good the damages done to the existing property during construction by his men.
- f) If it is found necessary from safety point of view to test any part of the structure, the test shall be carried out by the contractor with the help of the Department at his own cost.
- g) The Contractor shall provide, maintain, furnish and remove on

- completion, temporary office on work site for the use of Project Engineer / Contractor's site office with exclusive facility for the Engineer's representative.
- h) General directions or detailed description of work, materials and all coverage of rates given in the specification are not necessary repeated in the Bill of Quantities. Reference is however, drawn to appropriate section clause(s) of the General specifications accordance with which the work is to be carried out.
  - i) In the absence of specific directions to the contrary, the rates and prices inserted in the terms are to be considered as the full inclusive rates and prices for the finished work described there-under and cover all labour, materials, wastage, temporary work, plant overhead charges and profits, as well as the general liabilities, obligations and risks arising out of the General Conditions of Contract.
  - j) The quantities set down against the item in the Bill of Quantities are only estimated quantities of each item of work included in the Contract and are not to be taken as a guarantee that the quantities schedule will be carried out or required or that they will not be exceeded.
  - k) All measurements will be made in accordance with the units indicated in the Bill of Quantities and read in conjunction with the General Conditions of Contract.
  - l) Tender drawings are provided in the drawings section of this RFP which may be modified according to the site conditions if required. Working drawings shall be produced by the contractor in line with the Tender drawings incorporating the site requirements prior to commencement of work, for approval by DSCL.
  - m) The contractor shall not, on account of such variation be entitled to any increase in rates over the ones quoted in the tender which are on measured quantity basis. The contractor has to make his own investigation before quoting for the work.
  - n) Protection of underground telephone cable and aerial telephone wires and poles, transmission towers, electrical cables and water supplying lines. During the execution of work, it is likely that the contractor may meet with telephone cable, electrical cables, water supply lines etc. it will therefore be the responsibility of the Contractor to protect them carefully. All such cases should be brought to the notice of the Engineer by the contractor and also to the concerned department. Any damage whatsoever done to these cables and pipe lines by the contractor shall be made good by him at his cost.

### **2.2.2 FOR Redevelopment of Refugee Market at Kotwali Bazar Dharamshala**

The structure shall be designed in accordance with the latest Indian Standard Codes and

- Shall be designed to resist wind and seismic forces as applicable in Dharamshala
  - Steel Structures shall be designed in accordance with the provision of IS 800-1984.
  - Structural steel shall conform to IS 842. Tubular section shall conform to IS 4923.
  - Architectural design norms as per NBC (National Building Code – 2005).
  - Structural Design norms as per NBC and BIS (Bureau of Indian Standards)
- A. CONTRACTOR shall provide permanent bench marks, flag tops and other reference points for the proper execution of work and these shall be preserved till the end of work. All such reference points shall be in relation to the levels and locations, given in the drawings.
- B. The CONTRACTOR shall give performance test of the entire installation(s) as per the standing specifications before the work is finally accepted and nothing extra whatsoever shall be payable to the CONTRACTOR for the test,
- C. The work shall be carried out in accordance with the DSCL approved working drawings and structural drawings. Before commencement of any item of work, the CONTRACTOR shall correlate all the relevant architectural and structural drawing issued for the work, nomenclature of items, specifications etc. and satisfy himself that the information available there from is complete and unambiguous. The figures & the written dimensions of the drawing shall supersede the measurement by scale. The discrepancy, if any, shall be brought to the notice of the Engineer-in-charge for immediate decision before execution of the work.
- D. The CONTRACTOR alone shall be responsible for any loss or damage occurring by the commencement of work on the basis of any erroneous and or incomplete information and no claim, whatsoever shall be entertained on this account.
- E. The CONTRACTOR shall conduct his work, so as not to interfere with or hinder the progress or completion of the work being performed by other CONTRACTOR`s) or by the Engineer-in-charge and shall as far as possible arrange his work and shall place and dispose of the materials being used or removed so as not to interfere with the operations of other CONTRACTOR or he shall arrange his work with that of the others in an acceptable and coordinated manner and shall perform it in proper sequence to the complete satisfaction of others.
- F. The rates of different items of work shall apply to all heights & depths unless otherwise specified.
- G. Site Electricians / Other Electrical Personnel: The CONTRACTOR shall engage qualified and competent electricians and other electrical personnel while working for safe execution of contract. The electricians and other electrical personnel must possess requisite certificate issued from competent authority. Using exposed naked loose joints, inserting of bare wire into socket, improper grounding for appliances, exposed circuits on work place etc. shall not be permitted. Rating of fuses and circuit breakers used for protection of circuit should be coordinated. Flexible cords with the conductor cross sectional area smaller than 1.5 mm should not be used.



Socket outlets, plugs and cable coupler should be of the water splash proof type, so minimum IP44 panel boards are required in construction sites. Overhead cabling should provide for a minimum ground clearance of at least 3.0 meters. The CONTRACTOR shall employ qualified, full time Electricians / Electrical Supervisors to maintain his temporary electrical installation. Use approved perimeter markings to isolate restricted areas from designated work areas and entryways. Erect them before work begins and maintain them for the duration of work. Approved perimeter marking must be Install red barrier tape printed with the words 'DANGER-HIGH VOLTAGE' approximately 1 to 1.5 meter above the floor or work surface or Install a barrier of yellow or orange synthetic rope 1 to 1.5 meter from the floor with standard danger signs. Any steps suggested by Engineer-in-charge should be- complied with by the CONTRACTOR.

- H. Welding and Cutting Gas cylinders in use should be kept upright on a custom-built stand or trolley fitted with a bracket to accommodate the hoses and equipment or otherwise secured. The metal cap should be kept in place to protect the valve when the cylinder is not connected for use. Non-return valve and Flashback arrester shall be fixed at both end of cylinder and torch Domestic LPG cylinders shall not be used for Gas welding and cutting purpose. DCP or CO2 type Fire Extinguisher not less than 5 kg shall be fixed at or near to welding process zone in an easily accessible location. Fire Extinguisher should confirm to IS 2190: 1992. Welding grounds and returns should be securely attached to the work by cable lugs, by clamps in the case of stranded conductors, or by bolts for strip conductors. The ground cable will not be attached to equipment or existing installations or apparatus.

**a) STEEL**

All finished steel shall be well and cleanly rolled to the dimensions and weight specified by BIS subject to permissible to tolerances as per IS: 1852. The finished materials shall be reasonable free from cracks, surface flaws laminations, rough and imperfect edges and all other harmful defects and shall be painted with anti-corrosive paint

Steel Sections, shall be free from excessive rust, scaling and pitting and shall be well protected. The decision of the Engineer-in-Charge regarding rejecting any steel section on account of any of the above defects shall be final and binding and shall be painted with anti-corrosive paint.

**b) FABRICATION**

Fabrication shall generally be done as specified in IS: 800.

In major works or where so specified, drawings giving complete information for the fabrication of the component parts of the structure including the location, type, size, length and details or fivers, bolts or welds, shall be prepared in advance of the actual fabrication and approved by the Engineer-in-Charge. The drawings shall indicate the shop and field rivets, bolts and welds. The steel members shall be distinctly marked or stenciled with paint with the identification marks as given in the shop drawings.

Great accuracy shall be observed in the fabrication of various members, so that these can be assembled without being unduly packed, strained or forced into

position and when built up, shall be true and free from twist, kinks, buckles or open joints

Wooden or metal sheet templates shall be made to correspond to each member, and position of rivet holes shall be marked accurately on them and holes drilled. The templates shall then be laid on the steel members, and holes for riveting and bolting marked on them. The ends of the steel members shall also be marked for cutting as per required dimensions. The base of steel columns and the positions of anchor bolts shall be carefully set out at the required location.

**c) ERECTION**

Steel work shall be hoisted and erected in position carefully, without any damage to itself other structures and equipment and injury to workmen. The method of hoisting and erection proposed to be adopted by the CONTRACTOR shall be got approved from the Engineer-in-charge in advance. The CONTRACTOR however shall be fully responsible for the work being carried out in a safe and proper manner without unduly stressing the various members and proper equipment such as derricks, lifting tackles, winches, ropes etc. shall be used.

**d) OVERALL DESIGN PARAMETERS**

- ✓ The codes and standards applicable for the design of the Project / Project facilities are given below

<b>Building Works and Electrical System</b>	<b>Road / Pedestrian Path Works</b>
I. Central public works (CPWD)	I. Indian Road Congress (IRC) codes and standards
II. Bureau of Indian Standards (BIS)	II. Relevant Building Byelaws (on Parking Space)
III. National Building Codes (NBC);	
iv. HPPWD Standards	

<b>Code</b>	<b>Application Details</b>
IS 456-2000	Plain and reinforced concrete-code of practice
IS 875	Code Of practice for design loads for buildings and structures
Part 1: 1987	dead loads- unit weights of building material and stored material
Part 2: 1987	Imposed loads
Part 3: 1987	Wind loads
IS 1893: 2002	Criteria for earthquake resistant design of structures
IS 13920: 1993	Code of practice for ductile detailing of reinforced concrete structures subjected to seismic forces
IS 800:1984 & 2007	Code of practice for general construction in steel
IS 3370 Part 1 TO 4	Code of practice for liquid retaining structures
IS 2911 Part 1 TO 4	Design & Construction of Pile Foundation
SP-24-2000	Explanatory Hand Book on Indian Standard
	Code of Practice for Plain and Reinforced Concrete
BS 8110: 1997	Plain and reinforced concrete-code of practice (British standard)
SP-16-2000(Design Aids for Reinforced Concrete)	Design Aids for Reinforced Concrete to IS 456.

SP-34-1987	Hand Book on Concrete Reinforcement and Detailing.
IS 1343:2012	Code of practice for pre-stressed concrete (First Revision)
Soil Report	

✓ **Electrical system shall be provided as per the following applicable codes:**

Sl No.	Code No.	Application Details
1	IS-10118 (Part I), 1982	Code of practice for selection, installation and Maintenance of switch gear & control gear.
2	IS-732, 1989 Rev.3	Electrical wiring system
3	IS-3043, 1987	Code of practice for ear thing
4	IS-13032, 1992(Rev.2)	MCB distribution boards for voltage up to and including 1000V AC
5	IS-12640, 1988	Residual current operated circuit breakers
6	IS-649, 1990 (Rev.-3)	P VC insulated cabled for working voltage up to and including 1100 V AC
7	IS- 9537 (Part-I), 1980	Conduits for electrical installations general requirements
8	IS-13118, 1991	Circuit breakers- general requirements
9	IS-13947 (Part-III), 1993	Air break switches for voltage not exceeding 1000VAC or 1800 V DC
10	IS-1248 (All parts), 1983, 1984,1993	Electrical direct acting instruments
11	IS-2147, 1962	Degree of protection provided by enclosures for LV switches gear and control gear.
12	National Electrical Code Part-4 Appendix	R Recommended values of illumination and limiting values of glare index-Industrial Building (parking space Indoor and outdoor)
13	IS 1255	For underground Cables
14	IS 2309:1989	Code of practice for the protection of buildings and allied structures against lighting

Where the aforesaid are silent on any aspect, the following standards in order of preference shall be adopted in consultation with the Engineer-in-charge, unless otherwise specified in this schedule:

- i) Euro norm standards En: 14010: 2003 for parking structure safety.
- ii) American National Standard Institute (ANSI)
- iii) International standards organization(ISO)
- iv) British Standards (BS)
- v) National Fire Protection Association of America (NFPAA)
- vi) American Society of testing materials (ASTM)
- vii) International Society for Measurement and Control (ISA)
- viii) ISO 9000
- ix) Kis & Jis Standards
- x) Americans with Disability Act Accessibility Guidelines
- xi) American Association of State Highway and Transport officials

(AASHTO)

- xii) American Society of Mechanical Engineers code on storage retrieval (S/R) machines and associated Equipment (ASME B30.13)
- xiii) National Mechanical code of America (NMC)
  - 1. Any other standard proposed by the Bidder and approved by the Owner /Architect.
  - 2. The BIDDER shall provide illuminated signage in accordance with NBC/ IRC/ Norms at suitable locations within the parking facility. The scheme for signage shall be finalized in consultation with the independent Engineer.
  - 3. The Bidder shall provide the fire safety arrangement as per National Building Codes/ DIS codes or any widely accepted international codes.

NOTE: - The above-mentioned specification / codes are indicative only; any other code / specification required for development for parking facility will be applicable even though not mentioned above.

The above technical specifications described are minimum tender conditions. No deviation will be accepted below the specified specification.

#### **2.2.2.1 TECHNICAL SPECIFICATION AS PER CPWD - 2019**

##### **a. SITE CLEARANCE**

Before the earth work is started, the area coming under cutting and filling shall be cleared of shrubs, rank vegetation, grass, brushwood, trees and saplings of girth up to 30cm measured at a height of one meter above ground level and rubbish removed up to a distance of 50 meters outside the periphery of the area under clearance. The roots of trees and saplings shall be removed to a depth of 60cm below ground level or 30 cm below formation level or 15 cm below sub grade level, whichever is lower, and the holes or hollows filled up with the earth, rammed and leveled.

The trees of girth above 30 cm measured at a height of one meter above ground shall be cut only after permission of the Engineer-in-Charge is obtained in writing. The roots of trees shall also be removed as specified. Payment for cutting such trees and removing the roots shall be made separately.

Existing structures and services such as old buildings, culverts, fencing, water supply pipe lines, sewers, power cables, communication cables, drainage pipes etc. within or adjacent to the area if required to be diverted/removed, shall be diverted/dismantled as per directions of the Engineer-in- Charge and payment for such diversion/dismantling works shall be made separately.

In case of archaeological monuments within or adjacent to the area, the contractor shall provide necessary fencing around such monuments as per the directions of the Engineer-in -Charge and protect the same properly during execution of works. Payment for providing fencing shall be made separately. Lead of 50 m mentioned in the 'Schedule of Quantities' is the average lead for the disposal of excavated earth within the site of work. The actual lead for the lead for the disposal of earth may be more or less than the 50 m for which no cost adjustment shall be made in the rates.

##### **b. EARTH WORK**

**LIST OF BUREAU OF INDIAN STANDARDS CODES for Earth Work**

S. No.	I.S. No.	Subject
1	IS 632	Gamma - BHC (Lindale) emulsifiable concentrates
2	IS 1200 (Pt 1)	Method of measurement of earth work
3	IS 1200 (Pt-27)	Method of measurement of earth work (by Mechanical Appliances )
4	IS 4081	Safety code for Blasting and related drilling operation
5	IS 4988 (Part IV)	Excavators
6	IS 6313 (pt-II)	Anti-Termite measures in buildings (pre - constructional)
7	IS 6313(pt.-III)	Anti-Termite Measures in Buildings for existing buildings
8	IS 6940	Methods of test for pesticides and their formulations
9	IS 8944	Chlorpyrifos emulsifiable concentrates
10	IS 8963	Chlorpyrifos - Technical specifications
11	IS 12138	Earth moving Equipment

The earthwork shall be classified under the following categories and measured separately for each category:

All kind of soils: Generally any strata, such as sand, gravel, loam, clay, mud, black cotton moorum, shingle, river or nallah bed boulders, siding of roads, paths etc. and hard core, macadam surface of any description (water bound, grouted tarmac etc.), lime concrete mud concrete and their mixtures which for excavation yields to application of picks, showels, jumper, sacrifiers, ripper and other manual digging implements.

Ordinary rock: Generally any rock which can be excavated by splitting with crow bars or picks and does not require blasting, wedging or similar means for excavation such as lime stone, sand stone, hard laterite, hard conglomerate and un-reinforced cement concrete below ground level.

If required light blasting may be resorted to for loosening the materials but this will not in any way entitle the material to be classified as 'Hard rock'.

Hard rock: Generally any rock or boulder for the excavation of which blasting is required such as quartzite, granite, basalt, reinforced cement concrete (reinforcement to be cut through but not separated from concrete) below ground level and the like.

Hard rock (blasting prohibited): Hard rock requiring blasting as described under (c) but where the blasting is prohibited for any reason and excavation has to be carried out by chiseling, wedging, use of rock hammers and cutters or any other agreed method.

**c. CONCRETE WORK**

**LIST OF BUREAU OF INDIAN STANDARDS CODES for Concrete Work**

S. No.	I. S. No.	Subject
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1.	IS 383	Specification for coarse and fine aggregate from natural sources for Concrete.
2.	IS 456	Plain and reinforced concrete - Code of practice
3.	IS 516	Method of test for strength of concrete
4.	IS 1199	Method of sampling and analysis of concrete
5.	IS 1200 (Part II)	Method of measurement of building and civil engineering work (concrete work)
6.	IS 1322	Specification for bitumen felt for water proofing and damp proofing.
7.	IS 1791	General requirements for batch type concrete mixers
8.	IS 2386	Method of test for aggregates for concrete (a) Part I - Particle size and shape (b) Part II - Estimation of deleterious materials and organic impurities (c) Part III - Specific gravity, density, voids absorption and bulking. (d) Part IV - Mechanical properties. (e) Part V - Soundness
9.	IS 2505	General requirements for concrete vibrators - immersion type.
10.	IS 2506	General requirements for concrete vibrators - screed board concrete vibrators
11.	IS 2645	Specification for integral water proofing compounds for cement mortar and concrete
12.	IS 3068	Specification for broken brick (burnt clay) coarse aggregate for use in Concrete.
13.	IS 3812	Specification for flyash for use as pozzolana and admixture in cement Mortar and concrete.
14.	IS 4656	Specification for form vibrators for concrete.
15.	IS 7861 (Part-I)	Code of practice for extreme weather concreting (Part-I) recommended Practice for hot weather concreting.
16.	IS 7861 (Part-II)	Code of practice for extreme weather concreting (Part-II) recommended.
17.	IS 9103	Specification for concrete admixtures

General: Aggregate most of which is retained on 4.75 mm IS Sieve and contains only as much fine material as is permitted in IS 383 for various sizes and grading is known as coarse aggregate. Coarse aggregate shall be specified as stone aggregate, gravel or brick aggregate and it shall be obtained from approved/ authorized sources.

Stone Aggregate: It shall consist of naturally occurring (uncrushed, crushed or broken) stones. It shall be hard, strong, dense, durable and clean. It shall be free from veins, adherent coating, and injurious amounts of disintegrated pieces,

alkali, vegetable matter and other deleterious substances. It shall be roughly cubical in shape. Flaky and elongated pieces shall be avoided. Aggregates from other than natural resources shall comply with the requirements of IS 383.

Gravel: It shall consist of naturally occurring (uncrushed, crushed or broken) river bed shingle or pit gravel. It shall be sound, hard and clean. It shall be free from flat particles of shale or similar laminated material, powdered clay, silt, loam, adherent coating, alkali, vegetable matter and other deleterious substances. Pit gravel shall be washed if it contains soil materials adhering to it. These shall conform to IS 383 unless otherwise specified.

Brick Aggregate: Brick aggregate shall be obtained by breaking well burnt or overburnt dense brick/ brick bats. They shall be homogeneous in texture, roughly cubical in shape and clean. They shall be free from unburnt clay particles. Soluble salt, silt, adherent coating of soil, vegetable matter and other deleterious substances. Such aggregate should not contain more than one percent of sulphates and should not absorb more than 10% of their own mass of water, when used in cement concrete. It shall conform to IS 306 unless otherwise specified.

Light weight aggregate such as sintered fly ash aggregate may also be used provided the Engineer-in-Charge is satisfied with the data on the proportion of concrete made with them.

Deleterious Material: Coarse aggregate shall not contain any deleterious material, such as pyrites, coal, lignite, mica, shale or similar laminated material, clay, alkali, soft fragments, sea shells and organic impurities in such quantity as to affect the strength or durability of the concrete. Coarse aggregate to be used for reinforced cement concrete. Coarse aggregate to be used for reinforced cement concrete shall not contain any material liable to attack the steel reinforcement. Aggregates which are chemically reactive with alkalis of cement shall not be used. The maximum quantity of deleterious material shall not be more than five percent of the weight of coarse aggregate when determined in accordance with IS 2386.

#### CEMENT CONCRETE Grades of Cement Concrete

The concrete shall be in grade designated as under:

Group	Grade Designation	Specified characteristic compressive strength of 150 mm Cube at 28 Days in N/m <sup>2</sup>
(1)	(2)	(3)
Ordinary Concrete	M10	10
	M15	15
	M20	20
Standard Concrete	M25	25
	M30	30
	M35	35
	M40	40
	M45	45
	M50	50
	M55	55

High Strength Concrete	M60	60
	M65	65
	M70	70
	M75	75
	M80	80
	M 85	85
	M 90	90
	M 95	95
	M 100	100

**Notes:**

1. In the designation of concrete mix M refers to the mix and the number to the specified compressive strength of 150 mm size cube at 28 days, expressed in N/mm
2. For concrete of compressive strength greater than M60, design parameters given in the standard may not be applicable and the values may be obtained from specialized literatures and experimental results.

**d. REINFORCED CEMENT CONCRETE WORK**

**LIST OF BUREAU OF INDIAN STANDARDS CODES used for RCC work**

Sl. No.	I.S. No.	Subject
1.	IS 226	Structural Steel
2.	IS 2285	Methods for chemical analysis of steel (Issues in various parts)
3.	IS 432 (Part I)	Specification for mild steel and medium tensile steel bars and hard drawn steel wire for concrete reinforcement part-I mild steel and medium tensile steel bars.
4.	IS 432 (Part II)	Specification for mild steel and medium tensile steel bars and hard drawn steel wire for concrete reinforcement – Part-II hard drawn steel wire.
5.	IS 456	Code of Practices for plain and Reinforced concrete.
6.	IS 516	Method of test for strength of concrete.
7.	IS 716	Specification for pentachlorophenol
8.	IS 1199	Method of sampling and analysis of concrete.
9.	IS 1200 (Part II)	Method of measurement of building and civil engineering work – concrete work
10.	IS 1200 (Part V)	Method of measurement of building and civil engineering work – concrete work (Part 5- Form work)
11.	IS 1566	Specification for hard drawn steel wire fabric for concrete requirement.
12.	IS 1599	Method for bend test
13.	IS 1343	Code of Practice for Prestressed Concrete
14.	IS 1387:1993	General requirements for the supply of metallurgical materials
15.	IS 14687	Guidelines for falsework for concrete structures
16.	IS 1608	Method for tensile testing of steel products
17.	IS 1786	Specification for high strength deformed steel and wires for concrete reinforcement.
18.	IS 1791	Specification for batch type concrete mixes
19.	IS 2502	Code of practice for bending and fixing of bars for concrete reinforcement.
20.	IS 2751	Recommended practice for welding of mild steel plain and



		deformed bars for reinforced construction.
21.	IS 4925	Batch plants specification for concrete batching and mixing plant
22.	IS 4926	Ready - Mixed Concrete
23.	IS 5522:2014	Specification for Indian Standard Stainless Steel sheet and strips for utensils
24.	IS 6523	Specification for precast reinforced concrete door, window frames
25.	IS 10262	Recommended guidelines for concrete mix design
26.	IS 13311 (Part I)	Indian standard for non-destructive testing of concrete. Method of test for ultrasonic pulse velocity
27.	IS 13311 (Part II)	Indian standard for non-destructive testing of concrete. Method of testing by rebound hammer.
28.	IS 14276:1995	Indian standard for Cement bonded particle boards
29.	IS 16172:2014	Specification for Reinforcement couplers for mechanical splices of bars in concrete

GENERAL Reinforced cement concrete work may be cast-in-situ or Precast as may be directed by Engineer-in-Charge according to the nature of work. Reinforced cement concrete work shall comprise of the following which may be paid separately or collectively as per the description of the item of work.

Form work (Centering and Shuttering)

Reinforcement

Concreting: (1- Cast-in-situ), (2 - Precast)

MATERIALS Water, cement, fine and coarse aggregate shall be as specified under respective clauses of chapter 03 mortars and chapter 04 concrete work as applicable.

Fly Ash admixed cement concrete (FACC) and fly ash Blended cements in Cement Concrete (PPCC) in RCC structures.

Fly ash Blended Cements conforming to IS 1489 (Part I) may be used in RCC structures as per guidelines given below:

General IS 456- 2000 Code of Practice for Plain and Reinforced Concrete (as amended up to date) shall be followed in regard to Concrete Mix Proportion and its production as under:

- (a) The concrete mix design shall be done as "Design Mix Concrete" as prescribed in clause-9 of IS 456 mentioned above.
- (b) Concrete shall be manufactured in accordance with clause 10 of above mentioned IS 456 covering quality assurance measures both technical and organizational, which shall also necessarily require a qualified Concrete Technologist to be available during manufacture of concrete for certification of quality of concrete.

Minimum M -25 grade of concrete shall be used in all structural elements made with RCC both in load bearing and framed structure.

The mechanical properties such as modulus of elasticity, tensile strength, creep and shrinkage of fly ash mixed concrete or concrete using fly ash blended cements (PPCs) are not likely to be significantly different and their values are to be taken same as those used for concrete made with OPC.

To control higher rate of carbonation in early ages of concrete both in fly ash admixed as well as PPC based concrete, water/binder ratio shall be kept as low as possible, which shall be closely monitored during concrete manufacture.

If necessitated due to low water/binder ratio, required workability shall be achieved by use of chloride free chemical admixtures conforming to IS 9103. The compatibility of chemical admixtures and super plasticizers with each set OPC, fly ash and /or PPC received from different sources shall be ensured by trials.

In environment subjected to aggressive chloride or sulphate attack in particular, use of fly ash admixed or PPC based concrete is recommended. In cases, where structural concrete is exposed to excessive magnesium sulphate, fly ash substitution/content shall be limited to 18% by weight. Special type of cement with low C3A content may also be alternatively used. Durability criteria like minimum binder content and maximum water /binder ratio also need to be given due consideration in such environment.

Wet curing period shall be enhanced to a minimum of 10 days or its equivalent. In hot & arid regions, the minimum curing period shall be 14 days or its equivalent.

### **Steel for Reinforcement**

The steel used for reinforcement shall be any of the following types:

- (a) Mild steel and medium tensile bars conforming to IS 432 (Part I)
- (b) High strength deformed steel bars conforming to IS 1786
- (c) Hard drawn steel wire fabric conforming to IS 1566
- (d) Structural steel conforming to Grade A of IS 2062
- (e) Thermo-mechanically treated (TMT) Bars.

### **e. STEEL WORK**

#### **LIST OF BUREAU OF INDIAN STANDARDS CODES used for Steel work**

Sl. No.	Code No.	Subject
1	IS 63	Whiting for paints and putty
2	IS 198	Varnish gold size
3	IS 228	Structural steel (Standard quality)
4	IS 277	Specification for galvanized steel sheets (Plain and corrugated)
5	IS 419	Putty for use on window frames
6	IS 800	Code of practice for use of structural steel in general in steel construction
7.	IS 806	Code of practice for use of steel Tubes in general building construction
8.	IS 808	Dimensions for Hot rolled steel beams, columns, channel and angle sections
9.	IS 812	Glossary of terms relating to welding and cutting metals
10	IS 813	Scheme of symbols for welding
11	IS 814	Covered electrodes for manual metal arc welding of carbon and carbon manganese steel
12	IS 816	Code of practice for use of metal arc welding for general construction in mild steel
13	IS 817	Code of practice for training and testing of metal arc welders
14	IS 818	Code of practice for safety and healthy requirements in electric and gas welding and cutting operations

15	IS 822	Code of procedure for inspection of welds
16	IS 823	Manual for metal arc welding in mild steel
17	IS 1038	Steel doors, windows and ventilators
18	IS 1081	Code of practice for fixing and glazing of metal (Steel and aluminium) doors, windows and ventilators
19	IS 1148	Hot rolled steel rivet bars (upto 40 mm diameters) for structural purposes
20	IS 1161	Steel tubes for structural purposes
21	IS 1182	Recommended practice for radiographic examination of fusion welded butt joints in steel plates
22	IS 1200- (Pt. VIII)	Method of measurements of steel work and iron works
23	IS 1363 Part I	Hexagon head bolts, screws, and nuts of product grade C (Hexagon Head bolt)
24	IS 1363 Part II	Hexagon Head Bolts, screws and nuts of product Grade 'C'
25	IS 1363 Part-III	Hexagon Head Bolts, screws and Nuts of product grade 'C'
26	IS 1367	Technical supply conditions for threaded steel fasteners
27	IS 1568	Wire cloth for general purposes
28	IS 1599	Method for bend test
29	IS 1608	Metallic materials - Tensile Testing at Ambient Temperature.
30	IS 1730	Dimensions for stainless steel plates, sheets strips and flats for general engineering purposes
31	IS 1821	Dimensions for clearance holes for bolts and screws
32	IS 1852	Rolling and cutting tolerance for hot rolled steel products
33	IS 1894	Method for tensile testing of steel tubes
34	IS 1977	Structural steel (ordinary quality)
35	IS 2062	Hot Rolled low, medium and high tensile structural steel
36	IS 2074	Ready mixed paint, air drying redoxide zinc chrome priming
37	IS 4351	Specification for steel door frames
38	IS 4454 (Part I)	Steel wires for mechanical springs. Cold drawn unalloyed steel wire.
39	IS 4711	Methods for sampling of steel pipes, tube and fittings.
40	IS 4736	Hot - dip zinc coating on mild steel tubes
41	IS 4923	Hollow Steel Sections for Structural Use - Specification
42	IS 6248	Metal rolling shutters and rolling grills
43	IS 6911:2017	Stainless steel plate, sheet and strip
44	IS 7452	Specification for hot rolled steel sections for doors, windows and ventilators.

#### **f. Brick Work**

##### **LIST OF BUREAU OF INDIAN STANDARDS CODES used for Brick work**

S. No.	IS. No.	Subject
1.	IS 269	Specification for Ordinary Portland cement (33 Grade)
2.	IS 383	Specification for coarse and fine aggregate
3.	IS 456	Plain and reinforced concrete - Code of practice
4.	IS 712	Specification for building limes.
5.	IS 1077	Common burnt clay building bricks.
6.	IS 1200 (Part 3)	Method of measurements of brick works

7.	IS 2212	Code of practice for brick work. (1st Revision)
8.	IS 2222	Specification for burnt clay perforated building bricks.
9.	IS 2645	Specification for integral water proofing compounds for cement mortar and concrete
10.	IS 2849	Specification for non load bearing gypsum partition blocks, (Solid and hollow types)
11.	IS 3346:1980	Method of the determination of thermal conductivity of thermal insulation materials
12.	IS 3495	Method of test for burnt clay building bricks.
13.	IS 3812	Specification for fly ash for use as pozzolana and admixture.
14.	IS 4082:1977	Stacking & storage of construction materials and components at site – Recommendations
15.	IS 4139	Specification of calcium silicate bricks
16.	IS 4885	Specification for sewer brick
17.	IS 5454	Methods of sampling of clay building bricks.
18.	IS 6441 (Part-1): 1972	Methods for test for Autoclaved Cellular concrete Products: Determination of unit weight or bulk density and moisture content
19.	IS 6441 (Part-2): 1972	Methods for test for Autoclaved Cellular concrete Products: Determination of dry shrinkage
20.	IS 6441 (Part-5): 1972	Methods for test for Autoclaved Cellular concrete Products: Determination of compressive strength
21.	IS 9103	Specification for concrete admixtures
22.	IS 12894	Pulverized fuel ash lime bricks specification,
23.	IS 13757	Specification of burnt clay fly ash bricks.

The brick may be modular or non-modular. Sizes for both types of bricks/tiles shall be as per While use of modular bricks/tiles is recommended, non-modular (FPS) bricks/tiles can also be used where so specified. Non-modular bricks/tiles of sizes other than the sizes mentioned in Table below may also be used where specified.

Type of Bricks/ Tiles	Nominal Size mm	Actual Size mm
Modular Bricks	200 × 100 × 100 mm	190 × 90 × 90 mm
Modular tile bricks	200 × 100 × 40 mm	190 × 90 × 40 mm
Non-modular tile bricks	229 × 114 × 44 mm	225 × 111 × 44 mm
Non-modular bricks	229 × 114 × 70 mm	225 × 111 × 70 mm

NOTE: - For Further Detail Technical Specification Please refer CPWD/PWD Work Specification Manual 2019

#### 2.2.2.2 Technical Specifications of Materials/ items for Electrical System.

All the materials/items which are proposed for the Refugee Market Building shall be as per their approved technical specifications in BOQ. The contractor shall use all standard and high class materials in the electrical system of the Refugee Market Building.

## **1. CONCEALED LED DOWN LIGHTER FOR REFUGEE MARKET BUILDING**

The work of supplying, installation, testing & Commissioning Concealed LED Down Lighter for Redevelopment of MC Shops Project in Dharamshala is in scope of contractor. Surface mounted LED down lighter with white powder coated aluminum housing with built-in potted electronic LED driver.

Delivers excellent illumination & comfort in high ceiling areas, Long life & photo biologically safe LED's, High performance electronic driver ensures zero maintenance, No harmful UV & IR radiations. Environment friendly as it does not contain Mercury, Instant light with low running temperatures **Operating temperature: -10 °C to +45 °C. Operating voltage range: 140 V – 270V, Average life L70B50: 50000 hours, Housing & Finish Spun aluminum housing & spun CRCA sheet steel mounting plate, white powder coated after phosphor chromate treatment.**

Light Source High efficiency long life LED package in integral module with **lumen efficacy of >130- 140 lm/W** and viewing angle of 110 - 120° to ensure better uniformity.

Reflector The circular housing white painted inside also act as reflector.

Optics High quality methacrylate opal diffuser & CRCA white powder coated outer ring to give glare free uniform light distribution. (For detailed photometric data, please refer **LM79 report & IES file**).

Electronic Driver Built-In Potted electronic LED driver with APFC, lower THD, Open Circuit Protection, Over Voltage Protection, Surge Voltage Protection & other safety test as per **IS 15885 Part-2/Sec 13, IEC60598-1.**

## **2. CABLING SYSTEM**

### **SCOPE**

The work of cabling for Refugee Market Building is in scope of contractor. In the sub-main system e.g. main feeder Panel to firefighting panel, main feeder panel to Sub Panels, & etc.

Cables shall be designed and manufactured so that damage will not result from transportation, installation and operation under all the climatic and operating conditions to which they may be subjected. Cables shall be suitable for laying conduits, vertical installation, ducts, trenches and trays or for direct burial in ground in both wet and dry locations. All materials used shall be new and shall conform to this specification and relevant Indian Standards. The cables shall be suitable for continuous and reliable service at maximum voltage of 1100 V and at a max. Conductor temp of 85°C.

### **SPECIFICATION OF CABLES**

The conductors shall be annealed, stranded high conductivity Aluminum/Copper high grade, HRPVC insulated, laid up extruded PVC (FRLS) inner sheathed, single galvanized round steel/Aluminum wire armored and overall jacketed with PVC (FRLS)

Sr.No.	Code	Technical Specifications	Bidder Compliance (Yes/No)	Remarks
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Sr.No.	Code	Technical Specifications	Bidder Compliance (Yes/No)	Remarks
1.	<b>IS-1554 Part-I</b>	PVC insulated cable for working voltage up to and including 1100 V		
2.	<b>IS-3961 Part-II &amp; V</b>	Recommended current ratings for cables		
3.	<b>IS-3975</b>	Mild steel wires and tapes for armoring of cables		
4.	<b>IS-4826</b>	Hot dipped galvanized coatings on round steel wires		
5.	<b>IS-5831</b>	PVC insulation and sheath of electric cables		
6.	<b>IS-6380</b>	Specification for Elastomeric insulation and sheathing of electrical cables.		
7.	<b>IS-8130</b>	Conductors for insulated electric cables and flexible chords		
8.	<b>IS-10418</b>	Drum for electric cables		
9.	<b>IS-10810</b>	Methods of test for cables		
10.	<b>IEC-287</b>	Calculation of the continuous current rating of cables (100 % load factor).		
11.	<b>IEC 332-1 &amp; 3</b>	Tests of Electric cables under fire conditions		
12.	<b>IEC-331</b>	Fire resistance characteristics of electrical cables		
13.	<b>IEC-754-1</b>	Tests on gases evolved during combustion of electrical cables.		
14.	<b>ASTM-D-2843</b>	Test method of density of smoke from the burning or decomposition of plastics		
15.	<b>ASTM-D-2863</b>	Test method for measuring the minimum oxygen Concentration to support candle like combustion of plastics (oxygen Index)		
16.	<b>IEEE: 383</b>	Standard for type test of Class-1E Electric cables, field		

Sr.No.	Code	Technical Specifications	Bidder Compliance (Yes/No)	Remarks
		splices and connections for Nuclear power generating stations.		
17.	SS-4241475	Swedish standard for cables testing of flame propagation characteristics		
18.	IEC-189	Low frequency cables and wires with PVC insulation and PVC sheath.		
	Part-I	General test and measuring methods.		
19.	NEWMA-WC-5	Thermoplastic insulated wires and distribution of electrical energy.		

### FRLS PVC PROPERTIES

FRLS PVC shall be following properties/characteristics.

1. The Oxygen index of cables shall be more than 30 % at 270°C + 20°C when tested in accordance with ASTM- D-2863.
2. Temperature index shall be more than 2500°C
3. Cables shall have smoke density of less than 50 % Max.
4. The Hydrochloric acid evolution shall be less than 17.5 %
5. Flammability test on finished cable

### CORE IDENTIFICATION

For 1 Core cable: Red, for 2 Core cables: Red and Black, for 3 Core cable: Red, Yellow, Blue, for 4 Core cables; Red, Yellow, Blue and Black. For cables more than 4 Core, as per NEMA-WC-5 meant for thermoplastic insulated wires and cables for transmission and distribution of electrical energy.

### CABLE SIZE AND LENGTHS

The size and quantity of cables are as given as per BOQ.

### CONSTRUCTIONAL FEATURES

#### CONDUCTOR

The conductors shall be of H2 or H4 grade Aluminum as per latest IS: 8130 and shall be circular shaped. The conductor strands shall be solid and free from any inequalities or defects.

The material of PVC insulated copper conductor shall be made from high conductivity copper rods complying IS: 613-1964 and its amendments. The conductors shall consist of tinned annealed copper. Wire before stranding shall be approximately circular in cross-section. Smooth, uniform in quality and free from scale, spills and other defects

#### INSULATION

Insulation shall be of extruded HR PVC material conforming to the latest IS-5831.

## **SHEATH**

### **Inner sheath**

The inner sheath of cable shall be FRLS ST-2 types as per IS-5831 and this should be extruded over the laid up core. The surface of the sheath shall be uniform, continuous and free from defects. Inner sheath shall be as per table- 3 of latest edition of IS-1554 Part-1. Filler material if used shall be non-hygroscopic, thermoplastic material and over this PVC/Plastic/Millar type shall be provided for binding the core. Thermoplastic material shall be softer than outer sheath.

### **Outer sheath**

The outer sheath of the cable shall be of FRLS PVC-ST-2 type and should be extruded uniformly over the armoring of cable. Sheath shall conform to IS-1554 Part-I and for dimensional requirement IS- 5831. Outer Sheath shall be black in colour. All markings i.e. year of manufacture, voltage grade shall be embossed on the outer sheath. Sequential no. marking shall be given in printed form at every meter of the cable.

## **ARMOUR**

The Armor used shall be galvanized round steel wire and shall conform the latest IS-3975. For single core Cable aluminum wire shall be used.

## **INSPECTION AND TESTING**

QA plan of suppliers shall be approved by purchaser. Manufacturing and quality control of procedure, record shall be properly maintained which shall be offered for review to purchaser's representative.

### **STAGE INSPECTION**

Supplier should carry out stage wise inspection as per approved quality control plan and the records shall be shown to DSCL, Engineer for review in case desired by QS Engineer.

### **FINAL TESTS**

The supplier shall conduct the final tests in the presence of purchaser's representative. Details of all the test are given below:

#### **• ACCEPTANCE TEST**

1. Tensile Test (IS:8130) (For Aluminum/copper)
2. Wrapping Test (IS:8130) (For Aluminum/copper)
3. Conductor Resistance Test (IS :8130)
4. Test for armour wires (IS:3975)
5. Test for thickness of insulation and sheath (IS:5381)
6. Physical test for insulation and outer sheath (IS: 5831)
7. Insulation Resistance Test (IS: 5831)
8. High voltage Test (Water Immersion Test) (IS:1554)
9. Critical Oxygen Index Test (ASTM-D 2863)
10. Temperature Index Test (ASTM-D-2863)
11. Acid Gas Generation Test (To determine percentage of hydrochloric acid released from the PVC jacket over the cable) (IEC-754-1)



12. Smoke generation test (ASTM-D-2843/77)
13. Flammability test for finished cables-IEC-332.
14. Flammability Test Class F-III Swedish SS-4241475

• **ROUTINE TEST**

1. Conductor Resistance Test (IS-8130)
2. High Voltage Test (IS-1554)
3. Measurement of insulation resistance on the complete supplied length of cable in all the drums.

**3. DWC HDPE CABLE DUCTS FOR REFUGEE MARKET BUILDING**

The high density polyethylene pipe having corrugation on outer wall and plain from inside shall conform to IS - 14930 Part 1 - 11 amended to date. The pipe shall be ISI marked. Manufacturer's test reports of anti-rodent test, toxic test of pipe from Govt. approved test house shall be required for acceptance of DWC HDPE ducts. The advantage of duct bank for laying of cable is the following:

- Increased safety
- Faster installation
- Exact pipe spacing
- Smaller trench size
- Conduit arrives in rebar cage
- Labels make installation simple
- Sturdy enough to walk on (unlike snap-together spacers)
- Road and other closures impacting the general public are shortened
- The following are the basic requirement of duct system:
  - Longer life and light weight
  - Easy to handle and install
  - Ability to take heavy loads
  - No sharp edges and flexible for taking bends
  - Chemically nonreactive
  - Rodent and terminate proof

**STANDARDS:**

The ducts shall be manufactured in compliance with the following standards:

Sl.No	Test	STANDARAD
1.	Joviality	IS 4984
2.	Reversion	IS 4984

3.	Tensile strength	ISO 6059/ASTM F 2160
4.	Elongation Test	ISO 6059
5.	Environmental stress	ASTM 1693
6.	Melt flow rate	ISO 1133
7.	Density of Raw material	ISO 1133
8.	Color pigment dispersion	ISO 4427/18553
9.	Impact strength	IS 12235 ( part 9)/ ASTM D 2444
10.	Outer diameter	ISO 11922

**Data sheet of 120 mm DWC HDPE DUCTS:**

Sl. No	Test	Test method	Specification
1.	Constructions	BSEN 61386 - 24 As per IS:14930 Part-2	Within the conduit system, there shall be no sharp edges, burrs or surface projections which are likely to damage insulated conductors or cables, or inflict injury on the installer or user."
2.	Outer Diameter	BSEN 61386 - 24 As per IS: 14930 Part-2	120 mm + 1.2 - 0.0 mm
3.	Inner Diameter	BSEN 61386 - 24 As per IS: 14930 Part-2	103 mm
4.	Inner Layer		The Inner layer shall be Silicone
5.	Compression Test	BSEN 61386 - 24 As Per IS:14930 Part-2	>450N @ 5% deflection. There shall be no crack allowing the ingress of light or water between the inside & the outside.

Sl. No	Test	Test method	Specification
6.	Impact test	BSEN 61386 - 24 As Per IS:14930 Part-2	There shall be no crack allowing the ingress of light or water between the inside & the outside when tested with 5Kg. Load, drop height of 570 mm@ -5 °C.
7.	Length		As per site requirement.
8.	Colour	As per TEC	Black / Orange or Suitable Colour Approved by DSCL, Dharamshala.
9.	Marking		The name and size of the duct manufacturer shall be embossed on the outer surface of the duct
10.	Bending Test	BEN 61386-24 As per IS: 14930 Part-2	Samples shall not flatten when bent to 90 degree to a radius of 2 meter at -5oC & at ambient temperature. Compliance shall be checked by passing a ball of dia. 95% to the minimum inner dia. of the sample
11.	Accessories	IP67-Water Ingress Test	Couplers with 'O' Ring as per IP 67 for protection from water and soil ingress
12.	ISO Certificate		ISO 9001,14001 &18001certified manufacturer for supply of ducts

#### **4. EARTHING PROTECTION SYSTEM**

Earthing system shall be installed as required by the approved working/GFC drawings, and as specified herein. Neutral conductors of the wiring system shall be grounded at the transformer secondaries and at the panel boards, the grounding connections shall be made as indicated on Drawings, and as required by the IS Code.

The Earthing System should be based on use of GI Chemical Earth Electrode (for corrosion resistance) and Ground Enhancement Material (to reduce Soil Resistivity). - It should be capable of providing any ohmic value as specified by the DSCL, by inter-connection of ground rods to form a Grid. - The system shall be totally maintenance free. There shall be no requirement to add water or any other chemical any time after initial installation. - The system shall provide constant low ohmic value for entire life cycle without any consideration for moisture or temperature conditions

### **EARTHING ELECTRODE SYSTEM/ CHEMICAL EARTHING**

1. In maintenance free Earthing GI Rod electrode shall be of 40 mm in diameter and 2-meter length. The rod shall be placed in an augured hole in the ground and then surrounded by ground enhancement material in either a dry form or pre mixed in slurry. Once set, ground enhancement material becomes hard and as such holds positively to the rod as well as surrounding ground. Earth rod offered shall have passed the required Test.
2. Ground enhancement material shall be as per IEEE-80 clause 14.5d. *The ground enhancement* material shall be permanent and not leach any chemicals in to the ground.
3. Minimum 30 Kg of ground enhancement material shall be provided for each earth electrode.
4. Inspection chamber shall be of 300 x 300 mm with concrete base CI manhole cover with frame painted with bit mastic paint.

### **TESTING AT SITE**

1. Testing of Earth Continuity Path: The earth continuity conductor including metal conduits and metallic envelopes of cable in all cases shall be tested for electric continuity and the electrical resistance of the same along with the Earthing lead but excluding any added resistance of earth leakage circuit breaker measured from the connection with the earth electrode to any point in the earth continuity conductor in the completed installation shall not exceed five ohms.

2. Earth Resistivity Test: Earth resistivity test shall be carried out in accordance with IS Code of Practice for Earthing IS 3043.

The Earthing pits grid system will be created by introducing an Earthing pit at Redevelopment of MC Shops Project in Dharamshala. In addition to above all the Sub – Main Panels, Main feeder Panel, Firefighting system, DG set and the other electrical equipment's will be thoroughly earthed to provide the maximum protection to the system as per relevant standards and specifications within Redevelopment of MC Shops Project in Dharamshala.

### **5. LIGHTING PROTECTION SYSTEM**

The Multi-Level parking building protection from lighting stroke shall also in the scope of contractor, for this protection contractor shall be install a lighting arrester equipment for the safety purpose of building from lighting stroke. The Lighting arrester shall be connected with Earthing as per approved drawing and IS code.

The supply and installation of electrical equipment specified herein are required for outdoor application. The successful tendered shall furnish all, but not limited to, equipment, materials and accessories and services specified herein to complete this work. The work shall have to be completed and operative in all details. Any item of work or material which may not have been specifically mentioned but incidental to or necessary for complete installations and operation shall be provided by the Contractor without any additional charge to the purchaser.

### **SERVICE CONDITIONS:**

Sr. No.	Description	Range/Remarks
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1.	Ambient air temperature	10°C to 45°C
2.	Altitude	Maximum up to 1000 M above MSL
3.	Relative Humidity	Approximately 97 %.
4.	Pollution degree	Degree 4 as per IS : 13947 (Part I) (i.e. the pollution generates persistent conductivity caused by conductive dust)

**OPERATING CONDITIONS:**

Sr. No.	Description	Range/Remarks
1.	Nominal system Voltage	415 V ( $\pm 10\%$ )
2.	Supply Frequency	50 Hz (-5% to +3%)
3.	Highest Fault Level	50 KA for 1 sec.
4.	System earthing	Effectively earthed

**Construction:**

The Lightning protection system of Refugee Market Building shall be in strict accordance with **IS-2309**.

**2.2.3 General Construction Work**

1. All sites shall be cleaned of the debris and be removed off the site at no extra cost.
2. Necessary site clearing, restoration and preparation of working surface.
3. All civil work shall be done in such a way that other activities in the premises are not affected.
4. Retaining structures are required to be provided for land development. Site specific working drawings to be submitted by contractor and approved by DSCL for each location as per the tender specification and BOQ.
5. The Contractor is required to provide and install a Project Information board on site including the name of the Project, the Employer, the Project

- Management Consultant, the Contractor, the date of Commencement, the duration and the 3D view of the of the project as approved by DSCL.
6. Site Office, batching plant, Quality Testing Laboratory, Site Laboratory unit will be setup by the contractor at its own cost

#### 2.2.4 Order of precedence, clarifications and interpretations:

When various specifications and codes referred to are at variance with each other, the following order of precedence will generally be accepted.

- a) Special conditions of contract, Item wise specifications in BOQ, revised specifications if provided and execution drawing notes etc.
- b) CPWD Specifications
- c) I.S. Codes of practice.
- d) Standard specification of the StatePWD Govt. ofHimachal Pradesh.
- e) In case of items for which specifications are not availableintheabovementionedspecificationsgoodsoundengineeringpracticeshallbefollowedandinsuch case specifications given by the employer /engineershall be final &binding on the contractor.

#### 2.2.5 Method of Measurement:

- a) The method of measurement and payment shall be as described under various items of the Bill of quantities.
- b) All works shall be carried out in line & level as shown on approved working drawings and as directed by Engineer.

### 2.3 Quality Assurance & Control

#### 2.3.1 Quality Assurance Plan

- a) The Contractor shall provide a Quality Assurance Plan (QAP) designed to document the processes and procedures for assuring quality throughout the course of Project complying to the CPWD Manual within 15 days from date of issuance of Letter of Award for the approval by DSCL. The approved quality assurance plan shall form part and parcel of this Contract.
- b) The Contractor shall submit the Request for Inspection (RFI) to the Engineer-in- Charge one day in advance before starting of any Concrete related work. In no case shall the Concrete work be started without submitting the RFI one day before the activity and without the prior

approval of Engineer-in- Charge.

- c) The Contractor has to prepare a quality control Register (QCR) and results of tests conducted shall be entered in the QCR on daily basis. The Junior Engineer of PMC, DSCL and Project manager of Contractor shall be responsible to conduct tests on daily basis. The results of the same shall be verified by the Engineers in charge, DSCL.
- d) In case of non-conformance to the quality control checks in accordance to the quality assurance plan for concrete related works, no payment shall be made to Contractor for non-conformance of Work.
- e) Defective work is liable to be rejected at any stage. The contractor on no account can refuse to rectify the defects merely on reasons that further work has been carried out. No payment shall be made for rectification.
- f) Contractor must carry out physical survey, existing Landscape survey, contour survey Site using Auto Level / Total Station before commencing the work in presence of DSCL / Engineer.
- g) Contractor is advised to carry out Soil Investigation Tests which shall be conducted for ascertaining the bearing capacity of the soil and other parameters required for the structural design of retaining structures. The sample for the tests needs to be collected in the presence of officials from DSCL and the test must be carried out in a laboratory accredited by NABL.
- h) For checking density of compacted substrata layer, field density tests shall be carried out as per the frequency approved in the Quality Assurance Plan.

### 2.3.2 Storage of materials

- a) Stacking and storage of construction material at site shall be in such a manner as to prevent deterioration or intrusion of foreign matter and to ensure the preservation of their quality, properties and fitness for the work.
- b) Suitable precautions shall be taken by the Contractor to protect the material against atmospheric actions, fire and other hazards.
- c) The materials likely to be carried away by wind shall be stored in suitable stores or with suitable barricades and where there is likely-hood of subsidence of soil, such heavy materials shall be stored on approved platforms.
- d) Steel shall be stored on wooden platforms so as to be protected from soil and dampness.

### 2.3.3 Concrete

Regular testing of concrete as per specifications at the specified frequency shall be conducted in the presence of DSCL/ authorised representative / Govt. approved laboratory wise valid NABL accreditation (**National Accreditation Board for Testing and Calibration Laboratories**) and reports submitted for approval of the work done.

### 2.3.4 List of approved make of materials

The source of material including the quarries shall be approved by DSCL/ Engineer/ consultant appointed by DSCL.

Sr. No	Details of Materials / Equipment	Manufacturer's Name
1	Cement (OPC-43 & 53Grade) & PPC 43 & 53 Grade)	Birla,ACC, L&T, Gujarat Ambuja, ,Birla, JK Cement, JP Rewa., Shree, J.K. Lakshmi, M/sBinani Cement,Ultra tech
2	TMT Tor Steel	SAIL, TISCO, RINL, JINDAL PANTHER of (JSPL)",Shyam Steel,JSW.
3	Structural Steel	SAIL,TISCO, RINL ,JSW, JSPL
4	Aluminum Sections	Jindal, Hindalco
5	Ceramic Tiles (Wall & Floor Tiles)	Johnson,Nitco,Kajaria,Orient,Soman y
6	Anti-termite chemical & Wood Preservatives	Thiodon, De-nocil, Bayer.VamOrganic,NOCIL,Hindustan Insecticides, Roffe Construction Chemicals
7	Paints (OBD, Emulsion paints, Synthetic enamel Paints)	ICI,Asian,Berger, Nerolac
8	Water Proof Cement Paints	Snowcem India Ltd., ICI, Asian



Sr. No	Details of Materials / Equipment	Manufacturer's Name
9	Red Oxide & Pink Primers	ICI, Asian, Berger, Nerolac
10	Precast Cement Concrete Pavers & Tiles	Ultra, Johnson, Dura crete, Atlantica
11	PVC Pipes (for Water Supply)	Finolex, Vectus, Astral
12	Electrical Items	Bajaj, Havell's, Philips, L&T, Schneider, Legrand or as per HPSOR 2009 or latest make/manufacturer list approved by HPPWD
13	Water Pumps and Motors	Kirloskar, KSB, Ujala, Crompton
14	Glazing/Glass	Saint Gobain, Indo asia, AIS Float
15	Aluminum hardware	Ipsa or Approved equivalent
18	Fasteners	Hilti, Fischer
19	Welding Rod	ESSAB Ferro Speedplus, D&H Norma
20	Lifts*	Kone India, Fujitec India, Otis Elevator Company, ThyssenKrupp Elevator India or Approved equivalent
21	Water closet/wash basin/urinal	Hindustan sanitaryware/parryware/neycer/cera
22	PVC/UPVC pipe	Supreme, Prince, Finolex
23	PVC water Tank	Sintex, Supreme, Vectus
24	Bathroom Accessories	Jaquar, Hindustan, Parryware, Neyeer

Sr. No	Details of Materials / Equipment	Manufacturer's Name
25	Water proofing compound	Acco proof, Pidilite, Cico, Impermo, Fosroc, Dr Fixit
26	Dewatering Pumps	KSB, Crompton, Shakti

These are among the known and better brands of lift makers InIndia, we recommend these, but no such list of approved brands is available.

- For all other materials for which the manufacturer is not pre-approved, the Contractor shall submit credentials of minimum three manufacturers for prior approval of DSCL/Engineer.
- The manufacturers in the above list may be substituted (if needed) with prior approval of DSCL.
- As per the Govt. of India amendment in General Financial Rule 2017, all bidders should comply to the guidelines issues by the Ministry of Finance Development of Expenditure F.No.6/18/2019-PPD dated 23<sup>rd</sup>July 2020 – Annexure-9

### 2.3.5 Project Staff

The Project Organization Chart with names and designation of staff deployed on site shall be submitted within 15 days of commencement of work and approval obtained from DSCL.

To ensure quality of work, the listed positions under Cl. 1.4.6.4 are mandatory to be made available throughout the construction period. The CV and the self-attested certificates shall also be submitted for the listed personnel.

Any replacement during the course of the project shall be approved by DSCL.

Additional staff shall be employed time to time as required.

## 2.4 Payment Certificates

### 2.4.1 Monthly Payment Certificates

Subject to Clause 3.2, the Contractor shall submit the monthly statement by the 5th day of the succeeding month in the printed forms in duplicate and in .xls format soft copy (both to be submitted with the application) at the office of the Engineer with a copy of the same to DSCL.

Within 15 (fifteen) days on receipt of the Monthly Statement for Works, the Engineer shall deliver to the DSCL, with a copy to the Contractor, an Interim Payment Certificate (IPC) stating the amount which, in the opinion of the Engineer, is payable to the contractor.

In case of DSCL/Engineer have queries related to various claims in the monthly statement or if it is not supported with necessary details, the DSCL/Engineer will return the same to the contractor for compliance. Contractor has to resubmit the monthly statement with compliance.

#### 2.4.2 Final Payment Certificate

- a. Within 60 (sixty) days after receiving the Completion Certificate the Contractor shall submit to the Engineer for consideration Final Payment Statement as per approved format by the DSCL/Engineer(the "Final Payment Statement") for Works, with supporting documents in duplicate and in .xls format soft copy (both to be submitted with the application) at the office of the Engineer with a copy of the same to DSCL.
- b. The Final Payment Statement shall show in detail :
  - i. The summary of Contractor's interim Payment claims for Works as submitted in accordance with contract;
  - ii. The amounts received from the DSCL against each claim; and
  - iii. Any further sums which the Contractor considers due to it from the DSCL.
- c. If the DSCL/Engineer disagrees with or cannot verify any part of the Final Payment Statement, the Contractor shall submit such further information as they may reasonably require. The Engineer shall deliver to the DSCL:
- d. Upon submission of the Final Payment Statement for Works, the Contractor shall give to the DSCL, with a copy to the Engineer, a written discharge confirming that the total of the Final Payment Statement represents full and final settlement of all monies due to the Contractor in respect of this Agreement for all work arising out of this Agreement, except for any monies due to either Party on account of any Defect. Provided that such discharge shall become effective only after the payment due has been made in accordance with the Final Payment Certificate issued.
- e. Within 60 (sixty) days after receipt of the Final Payment Statement for Works, and the written discharge, and there being no disputed items of claim, the Engineer shall deliver to the DSCL, with a copy to the Contractor, a final payment certificate (the "Final Payment Certificate") stating the amount which, in the opinion of the Engineer, is finally due under this Agreement or otherwise. For the avoidance of doubt, before issuing the Final Payment Certificate, the Engineer shall ascertain from the DSCL all amounts previously paid by the DSCL and for all sums to which the DSCL is entitled, the balance, if any, due from the DSCL to the Contractor or from the Contractor to the DSCL, as the case may be.

- f. Contractor should Remove the temporary structures, labor camps, & dispose surplus materials, debris etc. lying at work site within 30 days from receiving the Completion Certificate.

## 2.5 Time Period & Milestones

### 2.5.1 The Contract Period

The Contract period of 12 months shall be reckoned from the fifteenth day of issue of Letter of Award or the date of signing the contract, whichever is earlier, which date will be the commencement date to the Completion of the Defect Liability Period.

### 2.5.2 The Construction Period

The construction period shall be **12 calendar months** from 15 days from the award of work. The completion date shall be the date of completion of the works at the end of the construction period including any extensions granted there of subject to the condition under Cl.3.7.4.

### 2.5.3 The Defects Liability Period

- a) The Defect Liability Period (Maintenance Period) shall be **12 calendar months** for Civil, electrical equipment and IT/Smart Management equipment starting from the date of issuance of the Completion Certificate.
- b) The Contractor shall promptly repair or rectify all Defects and deficiencies observed by the Engineer during the Defects Liability Period within a period of 15 (fifteen) days from the date of notice issued by the Engineer, in this behalf, or within such reasonable period as may be determined by the Engineer at the request of the Contractor, in accordance with Good Construction Practice.
- c) The scope of work during the Defects Liability Period includes regular maintenance of the constructed facility including painting/polish finishes and electrical fittings in good condition.
- d) The costs of making good all these defects shall be borne solely by the Contractor and deemed to be included in the rates quoted by Contractor.
- e) If the contractor does not rectify the defect or make good the deficiency, the work should be got redone or rectified through another agency, or departmentally by employing skilled laborers, at the contractor's cost with 25% of the cost as penalty for non-performance. The amount shall be deducted from any monies due to the contractor or realization of any Bank guarantee.

### 2.5.4 The Project Milestones

No intermediate milestone is specified as per this RFP.

### 2.5.5 Liquidated Damages

In case of failure to complete the work/ supply in time the penalty shall be levied @ 0.50% per week or part thereof of the contract price subject to maximum of 10% of the total project cost.

If the total Penalty exceeds beyond 10%, it would be considered as non-conformance to the quality of Services and may lead to termination of the Contract and AUTHORITY may on their sole discretion cancel the order.

## 3 General Conditions of Contract (GCC)

### 3.1 Scope of Work

#### 3.1.1 Broad Scope of work

This Contract is for the execution of the Works by the Contractor for DSCL, as per the Scope of works and Technical Specification as set out in Section 2 and in accordance with the terms and conditions of this Contract.

The Contractor shall, during the term of this Contract, execute the Works and any other work, as may be required to fulfil its obligations under this Contract.

#### 3.1.2 Existing Utilities and roads

Notwithstanding anything to the contrary contained herein, the Contractor shall ensure that the respective entities owning the existing roads, right of way, level crossings, structures, or utilities on, under or above the Site are enabled by it to keep them in continuous satisfactory use, if necessary, by providing suitable temporary diversions with approval of DSCL and the controlling body of that road, right of way or utility.

#### 3.1.3 Shifting of Obstructing Utilities

The Contractor shall, in accordance with Applicable Laws cause shifting of utility (including electric lines, water pipes and telephone cables) to an approved location or alignment. The DSCL shall assist the Contractor in obtaining the Applicable Permits for the same. The actual cost of such shifting as approved and communicated by the entity owning the utility (IP&H/HPSEB/BSNL/any other) shall be borne by the Contractor and re-imbrued by DSCL to the Contractor.

### 3.1.4 Felling of Trees

The DSCL shall facilitate the Contractor in obtaining the Applicable Permits for felling of trees if such trees cause a Material Adverse Effect on the construction of the Work' as per applicable laws of MoEF & CC. The Parties here to agree that the felled trees shall be deemed to be owned by the owner of the premises and shall be disposed in such manner and subject to such conditions as the owner may in its sole discretion deem appropriate.

### 3.1.5 Drawings

Tender drawings are provided in the drawings section of this RFP which may be modified according to the site conditions if required. Working drawings shall be produced by the contractor in line with the Tender drawings incorporating the site requirements prior to commencement of work, for approval by DSCL.

### 3.1.6 Quality Assurance

#### **a. Inspection**

The DSCL/PMC and its authorized representative shall at all reasonable times:

- 1) have full access to all parts of the Site and to all Places from which natural Materials are being obtained for use in work; and
- 2) During production, manufacture and construction at the Site and at the Place of production, be entitled to examine, inspect, measure and test the Materials and workmanship, and to check the progress of manufacture of Materials.
- 3) All the equipment/Test apparatus related to quality control shall be provided by the contractor at the site

The Contractor shall give the DSCL/PMC and its authorised agents access, facilities and safety equipment for carrying out their obligations under this Agreement.

#### **b. Samples**

The Contractor shall submit the samples of Materials and relevant information to the DSCL/PMC for pre-construction review:

- 1) manufacturer's test reports
- 2) standard samples of manufactured Materials
- 3) samples of such other Materials as the DSCL/PMC may require

- 4) Test reports as per prescribed frequency in specifications

### **c. Quality Control, Tests and Inspection**

1. For determining that work conform to the Specifications and Standards, the Engineer shall require the Contractor to carry out or cause to be carried out tests, at such time and frequency and in such manner as specified in Specifications, and in accordance with Good Industry Practice for quality assurance.
2. During course of the execution if any other laboratory is approved by DSCL for third party testing, the contractor can send the material to that laboratory also.
3. In the event that results of any tests conducted establish any Defects or deficiencies in work, the Contractor shall carry out remedial measures and furnish a report to the Engineer in this behalf. The Engineer shall require the Contractor to carry out or cause to be carried out tests to determine that such remedial measures have brought work into compliance with the Specifications and Standards, and the procedure shall be repeated until such Works conform to the Specifications and Standards.
4. Inspection and acceptance of the work shall not relieve the Contractor from any of his responsibilities under this Contract.
5. After completion of all tests as per specifications, the whole work will be subject to a final inspection to ensure that work has been completed as per requirement. If any defects noticed in the work are attributable to Contractor these shall be attended by the Contractor at his own cost, as and when they are brought to his notice by the Engineer / DSCL. The DSCL shall have the right to have these defects rectified at the risk and cost of the Contractor, if he fails to attend to these defects immediately.
6. Site Laboratory is mandatory to be established by the contractor at site on his own cost, and the lab should be run with well experienced staff for the purpose of testing for quality of materials and finished construction, with the following essential equipment and any other equipment deemed necessary for the testing need of this project:

S. No.	Items	Qty
1	Hydraulic Compression Testing Machine, 100 tonnes capacity. Conform to the requirements of IS: 516-1959, IS :14858-2000 calibrated to an accuracy of $\pm 1\%$ indicated load within range.	1 No.
2	Cube moulds 150x150x150 mm size conforming to IS : 516-1959, IS : 10086-1982.	12 Nos.
3	Slump apparatus conforming to IS: 7320.	1 No.

4	Test sieve set IS : 460-1972, 30 cm dia frame of size 40mm, 20mm, 12.5mm and 10 mm and 20 cm dia frame of size 4.75mm, 3.35 mm, 2.36mm, 1.18mm, 600 micron, 300 micron, 150 micron, 90 micron and 75 micron.	One Set
5	Bulk density measure 3 and 15 litres capacity as per IS : 2386 (Part-III)- 1963.	One Each
6	Thickness and length gauge as per IS : 2386 (Part-I)- 1963.	One Each
7	15 cm dia aggregate crushing value apparatus as per IS : 2386 (Part-IV)- 1963.	1 No.
8	Graduated cylinder of glass 100, 250 and 1000 ml capacity.	3 Nos. each
9	Balances 1 kg, 5kg and 15 kg capacity.	One each
10	Electric oven, thermostatically controlled upto 200°C, chamber space about 40x40x40 cm.	1 No.
11	Concrete Test Hammer (rebound hammer) of impact energy 2.207 N.m (0.225 Kgm) as per IS : 1331 (Part-2)- 1992.	1 No.
12	Flat edge 10 cm dia glass cylinder with glass plate 2000 ml capacity.	1 No.
13	Miscellaneous items such as mixing trays, rice trays, karni etc.	One Set
14	Le-chatelier apparatus as per IS : 4031.	2 Nos.
15	Vicat apparatus as per IS : 4031	1 No.
16	Vibration machine with 6 moulds as per IS : 4031.	1 No.
17	Hot Plate	1 No.
18	Apparatus (HCl heat of solution method) for estimation of cement content of fresh concrete.	1 No.
19	Chemicals for water content determination of fresh concrete sodium chloride, nitric acid, nitrobenzene, ferric alum, silver nitrate, potassium thiocyanate, sodium hydroxide and HCl.	For 50 tests
20	Glass ware for testing of S.No. 19	One Set
21	Liquid Limit Apparatus	
22	Plastic Limit Apparatus	
23	Autolevel and Total Station	
24	Spirit Level	
25	Measuring Tapes	

### 3.1.7 Safety & Environment

#### a. Precautions To Avoid Any Nuisance To The Neighborhood/ Surrounding

All necessary precautions to be taken during the implementation of the project (during day or night) to avoid any nuisance or any harm to the neighborhood/surrounding areas of proposed construction site.

No complaint should be raised by the neighborhood /society dwellers/school authority during the development work by contractor or any of the persons directly or indirectly related to the site work.

In case of any such conditions the contractor shall be fully responsible for the consequences & settlement.



**b. Works at night**

Subject to any provisions to the contrary contained in the contract, no work shall be carried out after day hours without the prior permission of the Engineer-in-charge except when the work is unavoidable circumstances, absolutely necessary, for saving life or property or for the safety of the work, in which case, the contractor shall immediately inform the Engineer-in-charge or his representative, provided always that the provision of this clause shall not be applicable in the case of any work which it is customary to carry out by double or rotary shifts in which case sufficient advance notice shall be given of the intention to work at night to the Engineer-in-charge after making all requisite arrangements and management of areas, materials and equipment's, required under any emergency etc.

The contractor can carry on work after office hours, if so required, subject to provide undertaking in writing, for expediting the progress on the works or for any other reasons of technical safety.

Whenever any work is required to be carried out at night in the interest of structural safety or any other reason with authorized to supervise, adequate lighting and other arrangement shall be made in advance by the contractor for proper execution and supervision of such work.

The contractor shall not be however entitled to claim any extra payments for night work. The responsibilities of all kind shall be of contractor.

**c. Opportunities and facilities for other contractor's agencies etc.**

The Contractor shall, in accordance with the requirements of the Engineer's Representative afford all reasonable opportunities to any other Contractors employed by the Employer for carrying out their work and to their workmen and to the workmen of the Employer and of any other duly constituted authorities who may be employed in the execution on or near the site of any work not included in the Contract or of any contract which the Employer may enter into in connection with or ancillary to the works.

**d. Plant, Machinery & Job facility Area**

The contractor will have to make his own arrangement for storage of materials, plants, equipment's, machineries to be used in the execution of this work well in time after award of the contract, at his own cost.

The land for facilitating the works shall be arranged by the contractor and maintained and re-instated after the implementation as per Environment mitigation norms.

The contractor shall allow the DSCL/Engineer or any person authorized by the Engineer to access the site or any place where work in connection with

the contract is being carried out or intended to be carried out or to any place where materials or plant are being manufactured / fabricated/ assembled for the works.

**e. Environmental safeguards**

The Contractor shall take action of following points and note the stipulations as under as regards environmental safeguards as stipulated by the Ministry of Environment, Forests and Climate Change.

**f. Additional Conditions**

Following additional conditions shall be binding on contractor during execution of work.

Any damage caused to either private or public property, services, structures etc. shall be made good by Contractor without any extra cost to the employer

Contractor need to ensure proper and adequate traffic safety signboards, barricades, lighting at night shall be displayed during day and night to ensure that no accidents take Place.

Contractor has to fix a Project information board at the site location before the execution of construction work, the information board shall include:- Name of work, Name of Employer, Project Management consultant, Name of Contractor, Estimated cost of work, Date of Commencement, Date of Completion

## 3.2 Payment Terms

### 3.2.1 Monthly Payment Certificates

**a. The Contract Price :**

DSCL hereby agrees to pay to the Contractor for satisfactory discharge of its obligations under this Contract, an Item Rate amount of INR awarded. The Contract Price shall be the full and complete payment for the Contractor's performance of the obligations under this Contract and includes all costs necessary for execution of the Works.

The Contract Price shall be paid in accordance with and in the manner provided in SECTION 4: Bill of Quantities of the RFP.

The Contract Price shall be inclusive of all taxes and levies under applicable laws. For the avoidance of doubt, all the taxes and duties levied by the state government/ central government/ local bodies at the prevailing rates applicable on the date of Letter of Award shall be fully borne by the Contractor and shall not be reimbursed to it by DSCL on any account.

Any payment of the Contract Price or part thereof, made by DSCL, shall not be deemed to constitute acceptance by DSCL of the Works or any part(s) thereof and shall not relieve the Contractor of any of its obligations under this Contract.

**b. Monthly Statement**

DSCL shall make monthly payments to the Contractor as certified by the Engineer on completion of a stage, and valued in accordance to its item rates set out in the Bill of Quantities.

The Contractor shall submit the monthly statement for each month on or before the 5<sup>th</sup> day of the following month for all completed work of the stage of works executed during the month in accordance with the bill of quantities and any other Item of Work which has been approved as a variation by DSCL. The Engineer shall take or cause to be taken the requisite measurement for the purpose of having the same verified and the claim, so far as it is admissible, and shall issue the Interim payment Certificate within 15 (fifteen) days from the presentation of the monthly statement.

**c. Payment intermediate to monthly certificates**

No payment shall be made for any Works, intermediate to the monthly payments certificates.

**d. Right to Withhold**

The Engineer may refuse to approve any payment because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously approved and paid to such extent as may be necessary in the opinion of the Engineer to protect him from loss because:

- a) The Work is defective,
- b) Third party claims have been filed or there is reasonable evidence indicating probable filing of such claims,
- c) of the Contractor's failure to make payment properly to sub-contractor or for labour, materials or equipment,
- d) of damage to another Contractor, or to the property of others caused by the Contractor,
- e) of reasonable doubt that the Work cannot be completed for the unpaid balance of the Contract Price,
- f) of reasonable indication that the Work will not be completed within the Contract Period,
- g) of the Contractor's neglect or unsatisfactory prosecution of the Work

including failure to clean up.

- h) In case of disputed items, the disputed amount shall be withheld and shall be paid only after settlement of the dispute

Once the reasons that enable or require the Engineer to withhold such payments are removed, payment will be made for amounts withheld due to such reasons to the extent the Contractor is entitled to.

**e. Payment on reduced rates on account of items of Work not accepted by the Engineer**

The rates of the items of Work in the Bill of Quantities, shall be valid only when the item concerned is accepted as having been completed fully in accordance with the Technical Specifications. In case where the item of Work are not accepted as so complete by the Engineer, the payment may be made on account of such item at such reduced rates as it may be considered reasonable in the preparation of the payment certificate. The reason for application of such reduced rates shall be justified and recorded.

**f. Correction of Interim Payment Certificates**

The Engineer may by an Interim Payment Certificate make any correction or modification of any previous Interim Payment Certificate issued.

**g. Overpayment & Post payment Audit**

- i. The DSCL further reserves the right to enforce recovery of any over payment when detected
- ii. Whenever any claim for the payment of a sum to the DSCL arises out of or under this Contract against the contractor the same may be deducted from any sum then due or which at any time thereafter may become due to the contractor under this contract and failing that under any other contract with the DSCL or from any sum due to the contractor with DSCL, or from his retention money, or he shall pay the claim on demand.
- iii. The DSCL reserves the right to carry out post payment audit and technical examination of the final bill including all supporting vouchers, abstracts, etc.
- iv. If as a result of such audit and technical examination any over payment is discovered in respect of any work done by the Contractor or alleged to have been done by him under the contract, it shall be recovered by the DSCL from the contractor by way of all the means prescribed above.

**h. Royalty charges**

- The contractor hereby agree to pay royalty charges as per the prevailing rates at the time of procurement on consumed minerals in this work like rubble, metal, sand, murum etc. to revenue department, Govt. of Himachal Pradesh and hereby agree to produce receipts of payments of such royalty charges or N.O.C. from concerned revenue department to DSCL.
- In case the receipts of payments of such royalty charges or no-objection certificate from concerned revenue department is not produced by the Contractor, DSCL reserves the right to deduct from any money which is due to the Contractor on account of royalty charges and penalty if any, to the appropriate authorities, if said authority asks DSCL to recover Royalty Charges or otherwise.

### **3.2.2 Price Adjustment**

Price adjustment is not applicable in this contract/RFP.

### **3.2.3 Mobilisation Advance**

Mobilisation advance will not be provided in this RFP

### **3.2.4 Secured Advance against Material brought to Site**

Secured Advance against Material brought to Site (except ICT/IT equipment or any software) secured advance on the security of materials (which are not combustible, fragile or perishable in nature) brought to the site but not yet incorporated in the works will be made up to 75 (seventy-five) per cent of invoice value, or the 75 (seventy-five) per cent of the corresponding value of the materials determined on the basis of BOQ rates, whichever is less, subject to the condition that their quantities are not excessive and shall be used within a period of 90 (ninety) days and subject to other stipulations in the contract. The contractor will be required to sign an indenture bond, hypothecating the goods to the procuring entity, and also be responsible for their safe custody. Before the advance is released, the procuring entity may inspect the site to ensure that the Contractor has safeguarded the materials against pilferage and deterioration. It may be ensured that the contractor has not taken any loan/ limit from banks against hypothecation of the materials against which the secured advance is claimed. An undertaking in this regard may also be taken from the contractor. Generally, as per the provisions of the contracts, the contractors are required to submit proof of cost of materials and the delivery of material at site while claiming such advances. The stock register should be maintained from the commencement of the contract and, unless otherwise prescribed in the contracts, the stock, so

considered for advance, should generally be only paid stock (and not brought on credit). Where the materials are supplied from a captive source of the contractor, the reasonableness of the valuation of such materials may be ensured. The advance will be repaid from each succeeding running bill (periodic/ interim payment) to the extent materials for which advance has been previously paid have been incorporated into the works. In all cases, the repayment of the advance will be affected after expiry of a period of 120 days since payment of advance, whether the material is consumed in the work or not.

### **3.2.5 Release of Payments**

- a) Payments shall be made by the DSCL within 15 (Fifteen) days of receipt of the Interim Payment certificates issued by the Engineer on satisfactory quality inspection and verification by the AUTHORITY's Official on the conformity on the Goods/ Products/ Services/ Solutions supplied as per the agreed specifications.
- b) DSCL shall deduct payments against statutory deductions such as retention, TDS, GST/VAT, Cess etc. as per rules in force from time to time.
- c) The DSCL shall, pay to the Contractor the amount which is stated as being finally due in the Final Payment Certificate within 60 (Sixty) days of receipt of the same and in that event no further amount shall ever become due and payable to the contractor in respect of this contract save and except as indicated in the final payment certificate.
- d) Payment shall be made in Indian Rupees by RTGS/ NEFT on Bank in the name of the Contractor.
- e) All remittance charges shall be borne by the Contractor.
- f) Any liquidated damages, for delay and non-performance, as mentioned in this RFP document, shall be deducted from the due payments.
- g) Indirect taxes and levies and any statutory deductions as applicable, shall be deducted as per the prevalent rules and regulations.

### **3.2.6 Retention**

- a) Recovery of Retention Money will commence from the first Interim Payment Certificate (IPC) onwards @ 7% of value of work done from each Interim Payment Certificate limiting to 5% of the Contract Amount.
- b) Retention money will be refunded not later than 90 days on successful completion of the Defects Liability period.

### 3.2.7 Variations

#### 3.2.7.1 Change in quantities

- a) The Contractor is bound to carry out the items in the Bill of Quantities for quantity variation up to 30% (Thirty percent) excess provided that the change does not exceed 1% (One percent) of Initial Contract Price, at the BoQ rates.
- b) However, a new rate or price shall be appropriate for the excess quantity of item of work if it exceeds the 30% (except foundation related works) of the BoQ quantity and the excess amount exceeds 1% of the initial Contract Amount and shall be approved by the competent authority
- c) If any item of work is not required to be executed or the quantity is less than the quantity specified in the bidding documents due to change in circumstances, the bidder shall not be entitled for any claim or compensation.

#### 3.2.7.2 Extra items

- a) Items of work not expressly or impliedly described in the schedule, plans or specifications will be treated as "**Variations**". They will include only items of works which are highly necessary for the proper execution of the work and for its completion, but were not provided in the original contract.
- b) There shall be an order in writing to execute the extra item of work as a '**Variation Order**' from the Employer. Extra item can be additional, substituted, altered or new item depending on their relation to the original item.

#### 3.2.7.3 Payment for Variations

Rates for the extra item shall be worked out as below:

- (i) In the case of extra items, if accepted rate for an identical item is available in the contract the same shall be taken.
- (ii) In the case of extra items for which similar item exist in the contract, the rates shall be derived from the original item by appropriate adjustment of cost of affected components.
- (iii) In the case of extra items for which similar items do not exist in the contract and rate exist in the standard schedule of rates, the rates shall be arrived based on standard data rate prevalent at the time of ordering the extra item after applying the overall tender variation. However, no tender excess will be applied.
- (iv) In the case of extra items for which standard data is not available and that do not come in the category mentioned in (i), (ii) and (iii) above, the rates

shall be worked by the Engineer based on prevailing market rates giving due consideration to the analysis of rates and data furnished by the contractor.

#### **3.2.7.4 Total Variation Cost**

The overall value of all variation works shall be limited to 10% (Ten Percent) of the Initial Contract Price.

### **3.3 Liability and Indemnity and Confidentiality**

#### **3.3.1 Liability and Indemnity**

- a. The Contractor will indemnify, defend, save and hold harmless the DSCL and its officers, servants, agents, Government Instrumentalities and Government owned and/or controlled entities/enterprises, (the "DSCL Indemnified Persons") against any and all suits, proceedings, actions, demands and third party claims for any loss, damage, cost and expense of whatever kind and nature, whether arising out of any breach by the Contractor of any of its obligations under this Agreement or from any negligence under the Agreement, or tort or on any other ground whatsoever, except to the extent that any such suits, proceedings, actions, demands and claims have arisen due to any negligent act or omission, or breach or default of this Agreement on the part of the DSCL Indemnified Persons.
- b. The Contractor shall fully indemnify, hold harmless and defend the DSCL and the DSCL Indemnified Persons from and against any and all loss and/or damages arising out of or with respect to:
  - i. failure of the Contractor to comply with Applicable Laws and Applicable Permits;
  - ii. payment of taxes required to be made by the Contractor in respect of the income or other taxes of the Sub-contractors, suppliers and representatives; or
  - iii. Non-payment of amounts due as a result of Materials or services furnished to the Contractor or any of its Sub-contractors which are payable by the Contractor or any of its Sub-contractors.
  - iv. The Contractor shall fully indemnify, hold harmless and defend the DSCL Indemnified Persons from and against any and all suits, proceedings, actions, claims, demands, liabilities and damages which the DSCL Indemnified Persons may hereafter suffer or pay by reason of any demands, claims, suits or proceedings arising out of claims of infringement of any domestic or foreign patent rights, copyrights or other intellectual property, proprietary or confidentiality rights with



respect to any materials, information or process used by the Contractor or by the Sub-contractors in performing the Contractor's obligations or in any way incorporated in or related to the Project.

- v. If in any such suit, action, claim or proceedings, a temporary restraint order or preliminary injunction is granted, the Contractor shall make every reasonable effort, by giving a satisfactory bond or otherwise, to secure the revocation or suspension of the injunction or restraint order.
- vi. If, in any such suit, action, claim or proceedings, the Work, or any part thereof or comprised therein, is held to constitute an infringement and its use is permanently enjoined, the Contractor shall promptly make every reasonable effort to secure for the DSCL a license, at no cost to the DSCL, authorizing continued use of the infringing work.
- vii. If the Contractor is unable to secure such license within a reasonable time, the Contractor shall, at its own expense, and without impairing the Specifications and Standards, either replace the affected work, or part, or process thereof with non-infringing work or part or process, or modify the same so that it becomes non-infringing

### 3.3.2 Confidentiality

- a) AUTHORITY and the Successful Bidder shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following completion or termination of the Contract except information available on public domain.
- b) The Successful Bidder shall not use the documents, data, and other information received from AUTHORITY for any purpose other than the services required for the performance of the Contract.

## 3.4 Labour Laws and Welfare

### 3.4.1 Labour Laws to be complied by the Contractor

- a. Notwithstanding any provision as may find here below, Contractor without an exception and limitation shall be liable for complete adherence and responsibilities arising out of all the labour laws as may be in force or as may become effective from time to time. The contractor shall obtain a

valid license under the Contract Labour (R &A) Act 1970, and the Contract Labour (Regulation and Abolition) Central Rules 1971, before the commencement of the work, and continue to have a valid license until the completion of the work. The contractor shall also abide by the provisions of the Child Labour (Prohibition and Regulation) Act, 1986. The contractor shall also comply with the provisions of the building and other construction Workers (Regulation of Employment & Conditions of Service) Act, 1996 and the building and other Construction Workers Welfare Cess Act, 1996.

- b. The contractor shall ensure the registration of all eligible workers (inclusive of those of subcontractors and petty contractors) with construction workers welfare board.
- c. Any failure to fulfill these requirements shall attract the penal provisions of this contract arising out of the resultant non- execution of the work.
- d. No labour below the age of fourteen years shall be employed on the work.

#### 3.4.2 Payment of Wages

- a. The contractor shall pay to the labour employed by him either directly or through sub-contractors, wages not less than fair wages as defined in the Contractor's Labour Regulations or as per the provisions of the contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.
- b. The contractor shall, notwithstanding the provisions of any contract to the contrary, cause to be paid fair wage to labour indirectly engaged on the work, including any labour engaged by his sub-contractors in connection with the said work, as if the labour had been immediately employed by him.
- c. In respect of all labour directly or indirectly employed in the works for performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied with the Central Public Works Department contractor's Labour Regulations made by Government from time to time in regard to payment of wages, wages period, deductions from wages recovery of wages not paid and deductions un-authorized made, maintenance of wage books or wage slips, publication of scale of wages and other terms of employment, inspection and submission of periodical returns and all other matters of the like nature or as per the provisions of the Contract Labour (Regulation and Abolition) Act 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.

d. The Engineer-in-Charge concerned shall have the right to deduct from the money due to the contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers by reasons of non-fulfillment of the conditions of the contract for the benefit of the workers, non-payment of wages or of deductions made from his or their wages which are not justified by their terms of the contract or non-observance of the Regulations.

e. Under the provision of Minimum Wages (Central) Rules 1950, or statutory modification thereof, the contractor is bound to allow to the labors directly or indirectly employed in the works one day rest for 6 days continuous work and pay wages at the same rate as for duty. In the event of default, the Engineer-in-Charge shall have the right to deduct the sum or sums not paid on account of wages for weekly holidays to any labors and pay the same to the persons entitled thereto from any money due to the contractor by the Engineer-in-Charge concerned.

f. The contractor shall comply with the provisions of the following

- Payment of Wages Act, 1936.
- Minimum Wages Act, 1948,
- Employees Liability Act, 1938,
- Workmen's Compensation Act, 1923, Industrial Dispute Act, 1947
- Maternity Benefits the modifications thereof
- Or any other laws relating thereto and the rules made there under from time to time.

g. The contractor shall indemnify and keep indemnified DSCL against payment to be made under and for the observance of the laws aforesaid and the Contractor's Labour Regulation without prejudice to his right to claim indemnify from his sub-contractors.

h. The laws aforesaid shall be deemed to be a part of this contract and any breach thereof shall be deemed to be a breach of this contract

i. At the time of contract agreement if any revised/amended labour act are introduced by government then the revised labour act/wages will be applicable.

### **3.5 Force Majeure**

- a) The Contractor shall not be liable for termination for default if and to the extent that it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

- b) For purposes of this Clause, Force Majeure means an event or situation beyond the control of the Contractor that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Contractor. Such events may include, but not be limited to, acts of AUTHORITY in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes and natural calamities.
- c) If a Force Majeure situation arises, the Contractor shall promptly notify AUTHORITY in writing of such condition and the cause thereof. Unless otherwise directed by AUTHORITY in writing, the Contractor shall continue to perform its obligations under the Contract as far as it is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

### 3.6 Settlement of Disputes

1. Performance of the contract is governed by the terms and conditions of the contract, in case disputes arise between the parties regarding any matter under the contract, either Party of the contract may send a written Notice of Dispute to the other party. The Party receiving the Notice of Dispute will consider the Notice and respond to it in writing within 30 (thirty) days after the receipt. If that party fails to respond within 30 (thirty) days, or the dispute cannot be amicably settled within 60 (sixty) days following the response of that party, clause GCC 3.6(2) shall become applicable.
2. **Arbitration:**
  - a) In the case of dispute arising, upon or in relation to, or in connection with the contract between AUTHORITY and the Contractor, which has not been settled amicably, any party can refer the dispute for Arbitration under the (Indian) Arbitration and Conciliation Act, 1996(as amended up to date). Such disputes shall be referred to an Arbitral Tribunal consisting of three arbitrators, one each to be appointed by the AUTHORITY and the Contractor, the third arbitrator shall be chosen by the two arbitrators so appointed by the parties and shall act as Presiding Arbitrator. In case of failure of the two arbitrators, appointed by the parties to reach a consensus regarding the appointment of the third arbitrator within a period of 30 (thirty) days from the date of appointment of the two arbitrators, the Presiding arbitrator shall be appointed as per law. The Arbitration and Conciliation Act, 1996 and any statutory modification or re-enactment thereof, shall apply to these arbitration proceedings

- b) Arbitration proceedings shall be held in Dharamshala, Himachal Pradesh, India and the language of the arbitration proceedings and that of all documents and communications between the parties shall be English.
- c) The decision of the majority of arbitrators shall be final and binding upon both parties. The expenses of the arbitrators as determined by the arbitrators shall be shared equally by AUTHORITY and the Contractor. However, the expenses incurred by each party in connection to the preparation, presentation shall be borne by the party itself. All arbitration awards shall be in writing and shall state the reasons for the award.

### **3.7 Time of Completion**

#### **3.7.1 Construction Period**

The time of completion of the works for the implementation of the project as per the deliverable in Clause 2.5 shall be the period specified in the Special conditions of contract / Contract Data reckoned from the fifteenth day of issuance of the Letter of Award or from the date of signing of the contract agreement whichever is earlier.

#### **3.7.2 Construction Programme**

The Contractor shall submit a detailed construction programme/schedule in MS project software for the project implementation within 30 days of issuance of Letter of Award. The Programme shall be in the order in which he intends to carry out the work including the anticipated timing of procurement, deployment of resources and quantities involved. The Programme will be projected as Bar Chart presentation and S-curve with cash flow.

Contractor shall promptly give notice of probable future events or circumstance which may adversely affect the work. If at any time actual progress is too slow to achieve target Programme and/or progress has fallen behind the current Programme then the Engineer may instruct the contractor to submit revised Programme with plan to mitigate time loss.

#### **3.7.3 Progress Reports**

Monthly progress reports shall be submitted in two copies to the Authority showing the work executed against the schedule during the construction period of the project. The reports shall contain the following but not limited to these.

- a) The Executive summary
- b) Programme reflecting the progress

- c) S-Curve
- d) Deployment of Contractor's Staff
- e) Deployment of Machinery
- f) Weather Chart
- g) Photographs showing the progress
- h) Any other

The reports shall be submitted on or before the 5<sup>th</sup> day of the following month.

### **3.7.4 Extension of Time**

The work shall have to be completed within originally stipulated period as indicated in the contract. Time is essence of contract and failure to adhere to the time of completion shall attract liability for the contractor to pay Liquidated Damages as specified in Cl.2.5.5.

- a. However, it has been agreed between the parties that in event of any variation or change taking place affecting the time of completion, time adjustment shall be made by DSCL for which no additional cost will be payable. Such time extension shall ordinarily be for exceptionally adverse climatic conditions, enforceable shortage in availability of materials or any delay, impediment or prevention caused by or attributable to the DSCL.
- b. If the contractor shall desire an extensions of time for completion of work on the ground of his having been "UNAVOIDABLY" hindered or on compensation event(s) or on any other ground(s), he must apply giving all and complete details of such hindrances and/or compensation event(s) and/or other cause(s) in writing, to the DSCL with copy to the Engineer, positively within 15 (Fifteen) days of occurrence of such hindrance(s)/compensation event(s)/other cause(s) and seek specific extension of time (period from..... to..... ).
- c. Failure on the part of the contractor for not applying extension of time even within 30 days of the cause of such an hindrance, it shall be deemed that the contractor does not desire extension of time and that he has "Waived" his right if any to claim extension of time for such cause of hindrance
- d. If at any time during performance of the Contract, the Contractor encounters condition impeding timely delivery of the Services, the Contractor shall promptly notify AUTHORITY in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Contractor's notice, DSCL shall evaluate the situation and may at its discretion extend the time for performance in writing.

- e. Delay by the Contractor in the performance of its Delivery and Completion obligations shall render the bidder liable for disqualification for any further bids in DSCL and penalty levied as per Cl.3.10.1 unless an Extension of time is agreed mutually.

### **3.7.5 Defect Liability Period**

The Defects Liability period shall be for a period of 1 (One) year starting from the date of issuance of the completion certificate after completion of the entire scope of work.

### **3.8 Termination**

1. AUTHORITY may, without prejudice to any other remedy for breach of Contract, terminate this Contract in case of the occurrence of any of the events specified in paragraphs (1) to (10) of this GCC Clause 3.8. In such an occurrence, AUTHORITY shall give not less than 30 (thirty) days' written notice of termination to the Contractor.
2. If the Contractor does not remedy a failure in the performance of its obligations under the Contract, within 15 (fifteen) days after being notified or within any further period as AUTHORITY may have subsequently approved in writing.
3. If the Contractor becomes insolvent or goes into liquidation, or receiver is appointed whether compulsory or voluntary.
4. If, in the judgment of AUTHORITY, the Contractor has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
5. If, as the result of Force Majeure, the Contractor is unable to perform a material portion of the Services for a period of not less than 60 (sixty) days.
6. If the Contractor submits to the AUTHORITY a false statement which has a material effect on the rights, obligations or interests of AUTHORITY.
7. If the Contractor places itself in a position of conflict of interest or fails to disclose promptly any conflict of interest to AUTHORITY.
8. If the Contractor fails to provide the quality services as envisaged under this Contract, AUTHORITY may make judgment regarding the poor quality of services, the reasons for which shall be recorded in writing. AUTHORITY may decide to give one chance to the Successful Bidder to improve the quality of the services.
9. If the Contractor fails to comply with any final decision reached as a result of arbitration proceedings.

10. If AUTHORITY, in its sole discretion and for any reason whatsoever, decides to terminate this Contract.
11. In the event AUTHORITY terminates the Contract in whole or in part, pursuant to this GCC Clause 3.8, AUTHORITY may procure, upon such terms and in such manner as it deems appropriate, services similar to those undelivered or not performed, and the Contractor shall be liable to AUTHORITY for any additional costs for such similar services. However, the Contractor shall continue performance of the Contract to the extent not terminated.

### 3.9 Payment upon Termination

Upon termination of this Contract pursuant to GCC Clauses 3.8, the AUTHORITY shall make the following payments to the Contractor:

- a) If the Contract is terminated pursuant to GCC Clause 3.8 (10), remuneration for Services satisfactorily performed prior to the effective date of termination.
- b) If the agreement is terminated pursuant of GCC Clause 3.8 (1), (2), (3), (4), (5), (6), (7), (8) and (9), the Contractor shall not be entitled to receive any agreed payments upon termination of the contract. However, the AUTHORITY may consider making a payment for the part satisfactorily performed on the basis of *quantum merit* as assessed by it, if such part is of economic utility to the AUTHORITY. The AUTHORITY may also impose liquidated damages as per the terms of this RFP. The Contractor will be required to pay any such liquidated damages to AUTHORITY within 30 (thirty) days of termination date.

### 3.10 Liquidated Damages

- a. If contractor fails to comply with time for completion the contractor being given notice to make good the time fails to do so to the satisfaction of Engineer he shall be liable to pay LD/Delay Damages for the default.
- b. In case of failure to complete the work/ supply in time the penalty shall be levied at the rates given in the Special Conditions of Contract Cl.2.5.5 subject to maximum of 10% of the Total project cost.
- c. If the total Penalty exceeds beyond 10%, it would be considered as non-conformance to the quality of Services and may lead to termination of the Contract and AUTHORITY may on their sole discretion terminate the contract. These damages shall not release the contractor from its obligation to complete the job or from any duties or responsibilities which he may have



under the contract. The decision of MD cum CEO DSCL in this regard will be Final.

- d. These damages shall not release the contractor from its obligation to complete the job or from any duties or responsibilities which he may have under the contract.
- e. DSCL will deduct amount of liquidated damages from due payments to contractor.
- f. Amount shown against Milestones if any will be deducted on weekly basis on not achieving intermediate Milestones or non-completion of work within stipulated contract period or Extension of time granted by Employer for reasons other than contractor's default.
- g. The Liquidated damages shall be released without interest or charges if contractor achieves the last Milestone on or before completion of approved time limit including extension of time limit, if approved.
- h. If, before the Time of Completion of the whole of the Works or, if applicable, any section, a Taking – Over Certificate has been issued for any part of the Works or of a Section, the liquidated damages for delay in completion of the remainder of the Works or of that Section shall, for any period of delay after the date stated in such Taking-Over Certificate, and in the absence of alternative provisions in the Contract, be reduced in the proportion which the value of the part so certified bears to the value of the whole of the Works or section, as applicable. The provisions of this Sub-clause shall only apply to the rate of liquidated damages and shall not affect the limit thereof.

### **3.11 Other Conditions**

#### **3.11.1 Governing Law**

The Contract shall be governed by and interpreted in accordance with the laws of India.

The Contractor should comply with all applicable laws and rules of Government of India/ Government of Himachal Pradesh/Municipal Corporation Dharamshala/ Dharamshala Smart City Limited.

#### **Change in Laws and Regulations**

Unless otherwise specified in the Contract, if after the date of the Invitation for bids, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed that subsequently affects the Delivery Date and/or the Contract Price, then such Delivery Date and/or Contract Price shall be correspondingly increased or decreased, to the extent

that the Contractor has thereby been affected in the performance of any of its obligations under the Contract.

### **3.11.2 Employment rights**

The support executive(s)/ supervisor(s)/ staffs deployed by the Contractor shall not have right to demand for any type of permanent employment with AUTHORITY or its allied Offices.

### **3.11.3 Employer's right to alter**

MANAGING DIRECTOR CUM CEO, DHARAMSHALA SMART CITY LIMITED reserves the right to withdraw/ relax any of the terms and condition mentioned in the RFP, so as to overcome the problem encountered at a later stage for the smooth and timely execution of the project.

## **3.12 Risk Purchase**

In case the Contractor fails to deliver the project due to inadvertence, error, collusion, incompetency, termination, misconstruction or illicit withdrawal, the MANAGING DIRECTOR CUM CEO, DHARAMSHALA SMART CITY LIMITED reserves the right to procure the same or similar services from the alternate sources at risk, cost and responsibility of the Contractor

## **3.13 Security and Safety**

1. Bidder shall comply with the directions issued from time to time by the DSCL and the standards related to the security and safety, in so far as it applies to the provision of the Services.
2. Bidder shall upon reasonable request by the DSCL, or its nominee(s) participate in regular meetings when safety and information technology security matters are reviewed.

## **3.14 Dismantled materials arising out of Dismantlement**

1. The dismantled material will be handed over/shifted to the concerned owner/Department at the space/Store specified by the owner/department by the bidder at his/her own cost.



Request for Proposal for\_Redevelopment of  
Refugee Market at Kotwali Bazar Dharamshala



Dharamshala Smart City Ltd.

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## SECTION – 3 ANNEXURES

### Annexure 1- Guidelines for Pre-Qualification Proposal

#### Annexure 1.1 - Check-list for the Pre-Qualification Proposal

SrNo.	List Of Document	File Name	Submitted (Y/N)	Description
1.	Proof of Tender Fee and EMD submitted			
2.	Bid Covering Letter As per format provided at Annexure 1.2		Reference No: Date of Letter:	
3.	Bidders' Particulars As per format provided at Annexure 1.3		Name of bidder(s):	
4.	Power of Attorney in favor of Authorized signatory As per format provided at		Date of PoA: Name of Authorized	

	Annexure 6		Person:	
5.	Power of Attorney for Lead Member Annexure 6A			
6.	The Contractor should be registered under unified registration in CPWD with a valid UIN Equivalent Registration in any State Govt. Dept. Central Govt. Dept., other Govt. Dept. / undertaking of state/Central Govt. P.S.U.		Registration Number: Date of Incorporation:	
7.	Copy of Certificate from the Statutory Auditor for the last 3 (Three) financial years.		Year-wise Details Turnover	
8.	Declaration for Not blacklisted by Central/State Government/ PSU entity in India or similar agencies globally for unsatisfactory past performance, corrupt, fraudulent or any other unethical business practices as on date of submission of the proposal.		Reference No: Date of Letter:	
9.	Valid Copy of PAN		Ref No.	
10.	Valid copy of GSTIN registration		Ref No. Date	
11.	No Deviation Certificate Bidders' As per format provided at Annexure 1.7		Submitted on Company Letterhead	
12.	Certificate of Total Responsibility as per Annexure 1.5		Submitted on Company Letterhead	
13.	Turnover Certificate as per annexure 1.6			
14.	Consortium Agreement Annexure 1.4			
15.	Anti-Collision Certificate Annexure 2.7			

Annexure 1.2 - Pre-Qualification Cover Letter

(To be submitted on the letterhead of the bidder)

Date:

**To**  
**MANAGING DIRECTOR CUM CEO**  
**DHARAMSHALA SMART CITY LIMITED,**  
**Old Himuda Building, Chilgari Dharamshala,**  
**Himachal Pradesh, 176215**

**Subject: Bid for "Redevelopment of Refugee Market at Kotwali Bazar Dharamshala"**

**RFP Reference No: XX**

Dear Sir,

With reference to your invitation for bids for "**Redevelopment of Refugee Market at Kotwali Bazar Dharamshala**", we hereby submit our Prequalification Proposal, Technical Proposal, and Financial Proposal, for the same.

We hereby declare that:

- a. We hereby acknowledge and unconditionally accept that the Authority can at its absolute discretion apply whatever criteria it deems appropriate, not just limiting to those criteria set out in the RFP and related documents, in short listing of bidder for providing services.
- b. We have submitted EMD of INR [ ] in the form of [.....] and Tender fee of INR [ ] in the form of [.....]
- c. We hereby declare that all information and details furnished by us in the bid are true and correct, and all documents accompanying such application are true copies of their respective originals.
- d. We agree to abide by our offer for a period of 180 days from the date of opening of pre-qualification bid prescribed by **Authority** and that we shall remain bound by a communication of acceptance within that time.
- e. We have carefully read and understood the terms and conditions of the RFP and the conditions of the contract applicable to the RFP. We do hereby undertake to provision as per these terms and conditions.
- f. In the event of acceptance of our bid, we do hereby undertake:
  - i. To supply the products and commence services as stipulated in the RFP document

- ii. To undertake the project services for entire contract period from the date of signing of the contract as mentioned in the RFP document.
  - iii. We affirm that the prices quoted are inclusive of design, development, delivery, installation, commissioning, training, providing facility management and handholding support, and inclusive of all out of pocket expenses, taxes, levies discounts etc.
- g. We do hereby undertake, that, until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and notification of award of contract, shall constitute a binding contract between us.
- h. We understand that the **Authority** may cancel the bidding process at any time and that **Authority** is not bound to accept any bid that it may receive without incurring any liability towards the bidder.
- i. We fully understand and agree to comply that on verification, if any of the information provided in our bid is found to be misleading the selection process, we are liable to be dismissed from the selection process or termination of the contract during the project, if selected to do so

In case of any clarifications please contact \_\_\_\_\_ email at \_\_\_\_\_

Thanking you,  
Yours sincerely,

(Signature of the Bidder/ Lead Member)

Printed Name

Designation

**Seal**

Date:

Place:

Business Address:

**Annexure 1.3 - Format to share Particulars of the Bidder**

The Table below provides the format in which general information about the bidder must be furnished.

S No	Information	Details
1.	Name of bidder	
2.	Address and contact details of bidder	
3.	Firm Registration Number and Year of Registration	
4.	Web Site Address	
5.	Status of Company (Public Ltd., Pvt. Ltd., LLP etc.)	
6.	GST Registration No.	
7.	Permanent Account Number (PAN)	
8.	Revenue for the last 3 years (Year wise)	
9.	Name, Designation and Address of the contact person to whom all references shall be made regarding this RFP	
10.	Telephone number of contact person:	
11.	Mobile number of contact person:	
12.	Fax number of contact person:	
13.	E-mail address of contact person:	
14.	Organization chart with Name, designation and contact nos. of the management team to be attached	

Please submit the relevant proofs for all the details mentioned above along with your bid response

Authorized Signatory

Name & Designation

Seal



Annexure 1.4 - Consortium Agreement

**DRAFT MEMORANDUM OF UNDERSTANDING EXECUTED BY MEMBERS OF THE CONSORTIUM**

*[On Non-judicial stamp paper duly attested by notary public]*

This Memorandum of Understanding (MoU) entered into this day of [Date] [Month] [Year] at [Place] among \_\_\_\_\_ (hereinafter referred to as "\_\_\_\_\_") and having office at [Address], India, as Party of the First Part, \_\_\_\_\_ (hereinafter referred to as "\_\_\_\_\_") having office at [Address], as Party of the Second Part.

The parties are individually referred to as Party and collectively as Parties.

WHEREAS DHARAMSHALA SMART CITY LIMITED, has issued a Request for Proposal dated [Date] (RFP) from the applicants interested in **"Redevelopment of Refugee Market at Kotwali Bazar Dharamshala"**

AND WHEREAS the Parties have had discussions for formation of a Consortium for bidding for the said Project and have reached an understanding on the following points with respect to each of the Parties' rights and obligations towards each other and their working relationship.

BASIS THE MUTUAL UNDERSTANDING OF THE PARTIES, IT IS HEREBY AGREED AND DECLARED AS FOLLOWS:

- i. The purpose of this Agreement is to define the principles of collaboration among the Parties to:
  - a. Submit a response jointly to bid for the **"Redevelopment of Refugee Market at Kotwali Bazar Dharamshala"** as a Consortium.
  - b. Sign Contract in case of award.
  - c. Provide and perform the supplies and services which would be ordered by the Authority pursuant to the Contract.
- ii. This Agreement shall not be construed as establishing or giving effect to any legal entity such as, but not limited to, a company, a partnership, etc. It shall relate solely towards the Authority for **"Redevelopment of Refugee Market at Kotwali Bazar Dharamshala"** for and related execution works to be performed pursuant to the Contract and shall not extend to any other activities.
- iii. The Parties shall be jointly and severally responsible and bound towards the Authority for the performance of the works in accordance with the terms and conditions of the RFP document, and Contract.
- iv. ----- (Name of Party) shall act as Lead Member of the Consortium. As such, it shall act as the coordinator of the Party's combined activities and shall carry out the following functions:
  - a. To ensure the technical, commercial and administrative co-ordination of the work package
  - b. To lead the contract negotiations of the work package with the Authority.

- c. The Lead Member is authorized to receive instructions and incur liabilities for and on behalf of all Parties.
- d. In case of an award, act as channel of communication between the Authority and the Parties to execute the Contract
- v. That the Parties shall carry out all responsibilities in terms of the Project Agreement.
- vi. That the broad roles and the responsibilities of each Party as per each member's field of expertise at each stage of the bidding shall be as below:

Party A: \_\_\_\_\_

Party B: \_\_\_\_\_

- vii. That the proposed administrative arrangements (organization chart) for the management and execution of the Project shall be as follows:
- viii. That the profit and loss sharing ratio shall be \_\_\_\_\_
- ix. That the Parties agree that all the members of the Consortium shall be jointly and severally liable for all obligations in relation to the Contract until the completion of the Project in accordance with the Contract;
- x. Parties affirm that they shall implement the Project in good faith and shall take all necessary steps to see the Project through expeditiously.
- xi. That this MoU shall be governed in accordance with the laws of India and courts in Himachal Pradesh shall have exclusive jurisdiction to adjudicate disputes arising from the terms herein.

In witness whereof the Parties affirm that the information provided is accurate and true and have caused this MoU duly executed on the date and year above mentioned.

(Party of the first part)

(Party of the second part)

Witness:

**Annexure 1.5 Certificate for Total Responsibility  
(To be provided on the Company letter head)**

To,

The MD cum CEO,

Dharamshala Smart City LTD

Dharamshala (Himachal Pradesh)

Subject: Self Declaration for Total Responsibility in response to the RFP for  
**"Redevelopment of Refugee Market at Kotwali Bazar Dharamshala".**

▪

Ref: RFP No. <<.....>> dated << .....>>

Dear Sir,

This is to certify that we undertake the total responsibility for the defect free operation of the proposed solutions as per the requirement of the RFP for the duration mentioned in all the volumes of the RFP.

(Authorized Signatory)

Printed Name

Designation

**Seal**

Date:

Place:

Business Address:

**Annexure 1.6 Certificate for Turnover of All Bidders/Consortium Members**

*(This format will be applicable for all type of turnover certificates, regarding various types of works or quantities)*

*(To be provided on the Company letter head by the bidder or all consortium members with audited Financial Statement)*

To,  
The MD cum CEO,  
Dharamshala Smart City LTD  
Dharamshala (Himachal Pradesh)

**Subject: Request For Proposal for "Redevelopment of Refugee Market at Kotwali Bazar Dharamshala".**

**Ref: RFP No. <<.....>> dated << .....>>**

**Dear Sir,**

We have examined the books of accounts and other relevant records of <<Bidder >> along with registered address>>. Based on such examination and according to the information and explanation given to us, and to the best of our knowledge & belief, we hereby certify that the annual turnover and the net-worth for the last three audited financial years were as per details given below:

**Financial turnover:**

Name of Bidder/Consortium member	
Annual Turnover of the firm	FY 2016-17
	FY 2017-18
	FY 2018-19
	FY 2019-20
	FY 2020-21

I further certify that I am competent officer in my company to make this declaration. Yours sincerely,

(Authorized Signatory with Seal)

Printed Name

Designation

Date:

Place:

Business Address:

Phone:

Email Address

Annexure 1.7 Certificate for No deviation

*(To be provided on the Company letter head)*

Place  
Date

To,  
The MD cum CEO,  
Dharamshala Smart City LTD  
Dharamshala (Himachal Pradesh)

**Subject: Self Declaration for No Deviation in response to the Request for Development of "Redevelopment of Refugee Market at Kotwali Bazar Dharamshala" Ref: RFP No. <<.....>> dated << .....>>**

**Dear Sir,**

This is to certify that our offer is exactly in line with your tender enquiry/RFP (including amendments) no. \_\_\_\_\_ dated \_\_\_\_\_. This is to expressly certify that our offer contains no deviation either Technical (including but not limited to Scope of Work, Business Requirements Specification, Functional Requirements Specification, Hardware Specification and Technical Requirements Specification) or Commercial in either direct or indirect form.

(Authorized Signatory)

Printed Name

Designation

**Seal**

Date:

Place:

Business Address:

**Annexure 2. – Guidelines for Technical Proposal**

**Annexure 2.1 - Check-list for the documents to be included in the Technical Proposal**

<b>S No.</b>	<b>List of Documents</b>	<b>File Name</b>	<b>Submitted (Y/N)</b>	<b>Description</b>
1	Technical bid Covering Letter			Reference No: Date of Letter
2	Project citation report to support that the Bidder* have successfully completed works in last 5 (Five) financial years.			As per Annexure 2.3
3	Project citation report to support the ongoing/ awarded work of the Bidder*.			As per Annexure 2.4
4	Evaluation of the Bid capacity			as per Annexure 2.5
5	Manpower Schedule			As per Annexure 2.6

\* Bidder refers to Sole Bidder or either member of the consortium

Annexure 2.2. - Technical Bid Cover Letter

(To be submitted on the Letterhead of the bidder/ lead partner in case of co)

Date: dd/mm/yyyy

To

**MANAGING DIRECTOR CUM CEO**  
**DHARAMSHALA SMART CITY LIMITED**  
**Old Himuda Building, Chilgari,**  
**Dharamshala District Kangra**  
**Himachal Pradesh- 176215**

**Sub.:** Request for Proposal for **"Redevelopment of Refugee Market at Kotwali Bazar Dharamshala"**

RFP Reference No: XX

Dear Sir/ Ma'am,

Having examined the RFP, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to provide the professional services as required and outlined in the RFP for **"Redevelopment of Refugee Market at Kotwali Bazar Dharamshala"** (hereinafter referred to as "Project").

We attach hereto the technical response as required by the RFP, which constitutes our proposal. We undertake, if our proposal is accepted, to adhere to the implementation plan (Project schedule) for providing Professional Services in **"Redevelopment of Refugee Market at Kotwali Bazar Dharamshala"** put forward in RFP or such adjusted plan as may subsequently be mutually agreed between us and DHARAMSHALA SMART CITY LIMITED or its appointed representatives.

If our proposal is accepted, we will obtain a Performance Bank Guarantee issued by a nationalized bank in India, for a sum of equivalent to 5% of the contract value for the due performance of the contract.

We agree for unconditional acceptance of all the terms and conditions set out in the RFP document and also agree to abide by this tender response for a period of 180 (one hundred and eighty) days from the date of submission of bid and it shall remain binding upon us with full force and virtue, until within this period a formal contract is prepared and executed, this tender response, together with your written acceptance thereof in your notification of award, shall constitute a binding contract between us and DHARAMSHALA SMART CITY LIMITED.



We confirm that the information contained in this proposal or any part thereof, including its exhibits, schedules, and other documents and instruments delivered or to be delivered to DHARAMSHALA SMART CITY LIMITED is true, accurate, and complete. This proposal includes all information necessary to ensure that the statements therein do not in whole or in part mislead DHARAMSHALA SMART CITY LIMITED as to any material fact.

We agree that you are not bound to accept any tender response you may receive. We also agree that you reserve the right in absolute sense to reject all or any of the products/ services specified in the tender response.

It is hereby confirmed that I/We are entitled to act on behalf of our company/ corporation/ firm/ organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Date:  
(Signature)  
(Name)  
(In the capacity of )  
[Seal / Stamp of bidder]  
Witness Signature:  
Witness Name:  
Witness Address:

-----  
**CERTIFICATE AS TO AUTHORISED SIGNATORIES**

I \_\_\_\_\_, the Company Secretary of \_\_\_\_\_, certify that \_\_\_\_\_ who signed the above bid is authorized to do so and bind the company by authority of its board/ governing body.

Date:  
Signature:  
(Company Seal) (Name)



**Annexure 2.3. -PROJECT CITATION REPORT – COMPLETED WORKS**

**Statement showing the similar works completed in the last five years.**

Name of Work	Name of HP Govt. Dept. or any other state dept. or Central PSU's	Cost of Completion				Remarks (Indicate in % of completion of awarded components)
		Awarded amount	Completion Amount	Penalty if any and amount paid thereafter	Date of Completion	
1	2	3	4	5	6	7

**Note: - (1) Attested Copies of Work Order and Completion Certificates issued by not below the rank of Executive Engineer shall be attached.**

**(2) It is mandatory to furnish details in this format only.**

Authorized Signatory

Name & Designation

Seal

**Annexure 2.4. -PROJECT CITATION REPORT – ONGOING WORKS OR AWARDED WORKS OR ANY EXISTING COMMITMENTS**

Name of Work	Name of HP Govt. Division or State or Central PSU's where work is executed	Amount of work completed			Position of works in progress (indicate in% of Completion of awarded components)	Stipulated Date of completion	Remarks
		Awarded amount	Amount of work done up to last running bill	Penalty if any and amount paid thereafter			
1	2	3			4	5	6

**Note: - (1) Attested Copies of Work Order and Completion Certificates issued by not below the rank of Executive Engineer shall be attached.**

**(2) It is mandatory to furnish details in this format only.**

Authorized Signatory

Name & Designation

Seal

### Annexure 2.5-BID CAPACITY

Bidders who meet the minimum qualification criteria will be qualified only if their available bid capacity is more than the Estimated Amount.

The available bid capacity will be calculated as under:

$$\text{Available Bid Capacity} = A \times N \times 2 - B,$$

Where

'N' = No. of years prescribed for completion of the subject contract.

'A' = Maximum value of works executed in any one year during last Five years (at current price level)

'B' = Value at current price level of existing commitments and ongoing works to be completed in the next 'N' years

'X' = 2020 – Year of completion

#Note: The value of executed works shall be brought to current price level by enhancing the actual value of work at simple rate of 7% per annum calculated from the date of completion to the last date of receipt of applications for tender.

Kindly fill the values/ calculations in the format as per table given below:

Name of Department/ Client WithAddress	N = No. of years prescribed for completion of the subject contract	WC = Amount of works completed (Rs.)	Actual Year of Completion of Work	A = Maximum value of works executed in any one year during last Five years (at current price level)	B = Value at current price level of existing commitments and ongoing works to be completed in the next 'N' years	Assessed Available Bid Capacity $A \times N \times 2 - B$
				$=WC \times (1+7\%)^X$		$=A \times N \times 2 - B$

**Available Bid Capacity =**

Authorized Signatory

Name & Designation

Seal

### Annexure 2.6 A –Manpower

**Technical and Administrative Manpower proposed to be deployed for the project including the mandatory positions as per Cl. 1.4.6.4**

Sl	Name	Designation	Qualification	Experience in similar projects
1				
2				
3				
4				
5				
6				

Authorized Signatory

Name& Designation

Seal

### Annexure 2.6 B–List of Tools and Plants

**Construction Plant and Equipment proposed to be deployed for the project.**

Sl.	Plant and Equipment	Nos	Own/Hired
1.	Transit Mixer	2	
2.	Wheel Loader	1	
3.	Hydraulic Excavator(JCB)	2	
4.	Vibratory Compactor	4	
5.	Tractors	2	
6.	Tipper	2	
7.	Batching Plant	1	
8.	Dumpers	2	
9.	Concrete Placers	1	
10.	Diesel Generator	1	
11.	Pump and Motor	4	
12.	Dewatering Pumps	2	

- I) Ownership proof shall be attached
- II) Hired equipment may be considered on production of Hire Agreement along with proof of ownership of equipment

Signature

Name& Designation

Seal of Bidder

**Annexure 2.7 Format for Anti-Collusion Certificate**

*[Certificate should be provided by Lead Bidder on letter head]*

**Anti-Collusion Certificate**

(To be submitted by Sole Bidder as well as all members of Joint venture) We hereby certify and confirm that in the preparation and submission of our Bid for **Request For Proposal for "Redevelopment of Refugee Market at Kotwali Bazar Dharamshala"** and 1 (One) year of DLP period, in Himachal Pradesh against the RFP issued by DSCL, we have not acted in concert or in collusion with any other Bidder or other person(s) and also not done any act, deed or thing, which is or could be regarded as anti-competitive. We further confirm that we have not offered nor will offer any illegal gratification in cash or kind to any person or organization in connection with this Bid.

(Signature of the Bidder)

Printed Name

Designation Seal:

Date:

Place:

Office Address with contact details:

### Annexure 3-Guidelines for Financial Proposal

#### Annexure 3.1 - Financial Proposal Cover Letter

(To be submitted on the Letterhead of the bidder/ lead partner)

Date: dd/mm/yyyy

To

MANAGING DIRECTOR CUM CEO  
Dharamshala Smart City Limited  
**Old Himuda Building, Chilgari,  
Dharamshala District Kangra  
Himachal Pradesh- 176215**

**Subject: Bid for "Redevelopment of Refugee Market at Kotwali Bazar  
Dharamshala"**

#### **RFP Reference No: XX**

Dear Sir,

1. We, the undersigned bidder, having read and examined in detail, the Bidding Document, the receipt of which is hereby duly acknowledged, offer to supply/ work in conformity with the captioned bidding document.
2. We undertake that the prices are in conformity with the specifications prescribed. The quote/ price are inclusive of all cost likely to be incurred for executing this work. The prices are inclusive of all type of government taxes/ duties in the financial bid.
3. We undertake, if our bid is accepted, to deliver the goods and services in accordance with the deliverables schedule specified in section 3.2.1. of the RFP.
4. We undertake to successfully operationalize the Project as per scope of work mentioned in the RFP document.
5. We have examined and have no reservations to the Bidding Documents, including any corrigendum/ addendums issued by DHARAMSHALA SMART CITY LIMITED;
6. We understand that any additional hardware and software required to make the Project operational shall have to be provided by us.
7. We hereby declare that in case the contract is awarded to us, we shall submit the contract performance bank guarantee as prescribed in the RFP.
8. We agree to abide by this bid for a period of 180 days from the last date of bid submission and it shall remain binding upon us and may be accepted at any time before the expiry of that period.

9. Until a formal contract is prepared and executed, this bid, together with your written acceptance thereof and your notification of award shall constitute a binding Contract between us.
10. We hereby declare that our bid is made in good faith, without collusion or fraud and the information contained in the bid is true and correct to the best of our knowledge and belief.
11. We understand that you are not bound to accept the lowest or any bid you may receive. We agree to all the terms and conditions as mentioned in the RFP document and declare that we have not submitted any deviations in this regard.

In witness thereof, we submit this bid under and in accordance with the terms of the RFP document.

Date:

Yours faithfully,

Place:

(Signature of the Authorised signatory)

(Name and designation of the of the Authorised signatory)

Name and seal of bidder/ lead partner

**Annexure 4- Format for Declaration by the bidder for not being Blacklisted / Debarred**

(To be submitted on the Letterhead of the bidder/all Consortium Members)

Date: dd/mm/yyyy

To

**MANAGING DIRECTOR CUM CEO**  
**Dharamshala Smart City Limited**  
**Old Himuda Building, Chilgari,**  
**Dharamshala District Kangra**  
**Himachal Pradesh- 176215**

**Subject:** Declaration for not being debarred/ black-listed by Central Government/ any State Government/ Public Sector Undertaking in India or similar agencies globally as on the date of submission of the bid

**RFP Reference No: XX**

Dear Sir/ Ma'am,

I, authorized representative of \_\_\_\_\_, hereby solemnly confirm that the \_\_\_\_\_ ("Company") is not debarred/ black -listed by Central Government/ any State Government/ Public Sector Undertaking in India or similar agencies globally for unsatisfactory past performance, corrupt, fraudulent or any other unethical business practices or for any other reason as on last date of submission of the bid.

In the event of any deviation from the factual information/ declaration, DHARAMSHALA SMART CITY LIMITED reserves the right to reject the bid or terminate the Contract without any compensation to the Company.

Thanking you,  
Yours faithfully,

\_\_\_\_\_  
Signature of Authorized Signatory (with official seal)

Date:

Name:

Designation:

Address:

Telephone & Fax:

E-mail address:



Annexure 5 - Format of sending pre-bid queries

**RFP Reference No: XX**

**Bidder's Request For Clarification**

Name and complete official address of Organization submitting query/request for clarification			Telephone, Fax and E-mail of the organization Tel: Fax: Email:	
S.No.	Clause No.	Page No.	Content Of RFP Requiring Clarification	Change Requested/ Clarification required
1				
2				

Signature:

Name of the Authorized signatory:

Company seal:

Date and Stamped

Note: Bidders are requested to send the queries in PDF with Sign and Company Seal and also in MS Excel in the above format for making consolidation process easy.

**Annexure6- Power of Attorney**

(On a non-judicial stamp paper of appropriate value duly attested by notary public)

Know all men by these presents, we (name and address of the registered office of the Sole Applicant) do hereby constitute, appoint and authorize Mr./ Ms. \_\_\_\_\_ R/o \_\_\_\_\_ who is presently employed with us and holding the position of \_\_\_\_\_, to do in our name and on our behalf, all such acts, deeds and things, necessary in connection with or incidental to the bid for **"Redevelopment of Refugee Market at Kotwali Bazar Dharamshala"** (the "Project"), including signing and submission of all documents and providing information/ responses to DHARAMSHALA SMART CITY LIMITED and representing us in all matters in connection with our bid for the said Project.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

For (Signature)

(Name, Title and Address)

Accept

..... (Signature)

(Name, Title and Address of the Attorney)

Notes:

1. To be executed by the Applicant.
2. The mode of execution of Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.
3. Also, wherever required, the executant(s) should submit for verification the extract of the charter documents and documents such as a resolution/ Power of attorney in favour of the Person executing this Power of Attorney for the delegation of power hereunder on behalf of the bidder.

**ANNEXURE 6A POWER OF ATTORNEY FOR LEAD MEMBER BY THE CONSORTIUM MEMBER**

(On Non- Judicial Stamp Paper of appropriate Value to be purchased in the name of Consortium)

Know All Men By These Presents That We, the Members whose details are given hereunder..... have formed a Consortium and having our Registered Office(s)/ Head Office(s) at ..... (here in after called the 'Consortium' which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators and assigns) do hereby constitute, nominate and appoint M/s..... having its Registered/ Head Office at ..... as our duly constituted lawful Attorney (hereinafter called "Lead Member") to exercise all or any of the powers for and on behalf of the CONSORTIUM to participate in bid for **"Redevelopment of Refugee Market at Kotwali Bazar Dharamshala"** as per the Scope of Work stipulated therein for which bids have been invited by the DHARAMSHALA SMART CITY LIMITED, to undertake the following acts:

- (i) To submit proposal, participate and correspond in respect of the aforesaid Bid – Specification of DHARAMSHALA SMART CITY LIMITED on behalf of the "Consortium".
- (ii) To negotiate with DHARAMSHALA SMART CITY LIMITED the terms and conditions for award of the contract pursuant to the aforesaid bid and to sign the contract with the DHARAMSHALA SMART CITY LIMITED for and on behalf of the "CONSORTIUM".
- (iii) To do any other act or submit any document related to the above.
- (iv) To receive, accept and execute the contract for and on behalf of the "Consortium".
- (v) To submit the Performance Bank Guarantee in the prescribed format and as per terms of the Contract.

It is clearly understood that the Lead Member shall ensure performance of the Contract and if one or both the members fail to perform their respective portion of the Contract, the same shall be deemed to be a default by all the members.

It is expressly understood that this power of Attorney shall remain valid, binding and irrevocable till completion of the Contract period i.e., \_\_\_\_\_ from the date of execution of the Contract.

The Consortium hereby agrees and undertakes to ratify and confirm all the whatsoever the said Lead Member quotes in the bid, negotiates and signs the Contract with the DHARAMSHALA SMART CITY LIMITED and/ or proposes to act on behalf of the Consortium by virtue of this Power of Attorney and the same shall bind the Consortium members as if done by itself.

In Witness Whereof, the members constituting the Consortium as aforesaid have executed these present on this ..... day of .....Two Thousand Eighteen.

for and on behalf of the member of the  
Consortium

1.....

Accept

..... (Signature)

(Name, Title and Address of the Attorney)

Notes:

1. The mode of execution of Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.
2. Also, wherever required, the executant(s) should submit for verification the extract of the charter documents and documents such as a resolution / Power of attorney in favour of the Person executing this Power of Attorney for the delegation of power hereunder on behalf of the executant(s).

**Annexure7 - Format for Bank Guarantee for Mobilization Advance**

To,  
The MD cum CEO,  
Dharamshala Smart City LTD  
Old Himuda Building  
Chilgari  
Dharamshala 176215  
(Himachal Pradesh)

BG NO \_\_\_\_\_  
DATE \_\_\_\_\_  
Amount \_\_\_\_\_  
Expiry Date \_\_\_\_\_  
Claim expiry \_\_\_\_\_

Dear Sir,

BANK GUARANTEE- For "Setting up of 5 MTD capacity pre-segregated MSW feedstock based Biogas Plant in Dharamshala with Operation & Maintenance for 3 Years".

**WHEREAS**

1. In consideration of the **MD-cum-CEO, Dharamshala Smart City Limited (DSCL), Old HIMUDA Building, Cheelgadi, Dharamshala, Himachal Pradesh-176215** (hereinafter called 'DSCL' which expression shall include its successors and assigns) having agreed under the terms and conditions of Supply Contract/ Contract/ Sub-Contract No \_\_\_\_\_ dated \_\_\_\_\_ **and contract no** \_\_\_\_\_ **dt** \_\_\_\_\_ (hereinafter referred to as the said Supply Contract/ Contract/ Sub-Contract) made between DSCL and \_\_\_\_\_ (hereinafter called the Supplier/ Contractor/ Sub-Contractor) which expression shall include its successors and assigns to make at the request of the Supplier/ Contractor/ Sub-Contractor a lump sum advance of \_\_\_\_\_ (Rupees.

Only) for utilising it only for the purposes of the said Supply Contract/ Contract/ Sub-Contract on his furnishing a guarantee acceptable to DSCL.

2. We, \_\_\_\_\_, **constituted under the** \_\_\_\_\_ **act** \_\_\_\_\_ **and having its Corporate** \_\_\_\_\_ **centre/Head** \_\_\_\_\_ **office** \_\_\_\_\_ **at** \_\_\_\_\_ **and amongst other Places an Overseas Branch,** \_\_\_\_\_ do hereby guarantee the recovery of the said advance. If the Supplier/ Contractor/ Sub-Contractor fails to utilise the said advance for the purposes of the said Supply Contract/ Contract/ Sub-Contract, we, \_\_\_\_\_ Bank hereby unconditionally and irrevocably undertake to pay the DSCL on demand and without demur or protest to the extent of the said sum of upto ₹ \_\_\_\_\_/- (Rs. \_\_\_\_\_ only) any claim

made by DSCL on us against non-utilisation / misutilisation of the said advance and/or by reason of DSCL not being able to recover in full the sum of ₹ \_\_\_\_\_ (Rs. \_\_\_\_\_) only.

3. We \_\_\_\_\_ Bank further agree that DSCL shall be the sole judge of and as to whether the said Supplier/ Contractor/ Sub-Contractor has utilised or not utilised the said advance or any part thereof for the purposes of the said Supply Contract/ Contract/ Sub-Contract and/or as to whether the advance and the finding of the DSCL in this regard- shall be final and binding on us.
4. We, the [said Bank] further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Supply Contract/ Contract/ Sub-Contract (w.e.f. Date of Submission of this Bank Guarantee to the Final Go-Live of the Project) and till the said advance has been fully recovered and its claims satisfied or discharged and till DSCL certifies that the said advance has been fully recovered from the Supplier/ Contractor/ Sub-Contractor.
5. DSCL shall have the fullest liberty without affecting in any way the liability to the said Bank under this guarantee or indemnity from time to time to vary any of the terms and conditions of the said Supply Contract/ Contract/ Sub-Contract, or the advance or to extend time of performance by the said Supplier/ Contractor/ Sub-Contractor or to postpone for any time and from time to time any powers exercisable by it against the said Supplier/ Contractor/ Sub-Contractor and either to enforce or forbear from enforcing any of the terms and conditions governing the said Supply Contract/ Contract/ Sub-Contract or securities available to DSCL and the said Bank shall not be released from its liability under these presents by any exercise by DSCL of the liberty with reference to the matters aforesaid or by reason of time being given to the said Supplier/ Contractor/ Sub-Contractor or any other forbearance, act or omission on the part of the DSCL or any indulgence by DSCL to the said Supplier/ Contractor/ Sub-Contractor or of any other matter or thing whatsoever which under the law relating to sureties would but for this provision have the effect of so releasing the said Bank from its such liability.
6. The Bank hereby waives all rights at any time inconsistent with the terms of this guarantee/Undertaking and the obligations of the Bank in terms hereof shall not be anyway affected or suspended by reasons of any dispute or disputes having been raised by the Supplier/ Contractor/ Sub-Contractor (whether or not pending before any arbitrator, Tribunal or court) or any denial or liability by the Supplier/ Contractor/ Sub-Contractor stopping or preventing or purporting to stop or prevent any payment by the Bank to DSCL in terms hereof.

7. The amount stated in any notice of demand addressed by DSCL to Bank as liable to be paid to DSCL by the Supplier/ Contractor/ Sub-Contractor, shall be conclusive evidence of the amount so liable to be paid to DSCL by the Bank.
8. This guarantee/undertaking shall be in addition to any other guarantee or security whatsoever that DSCL may now or any time anywise may have in relation to the Supplier's/ Contractor's/ Sub-Contractor's obligations of liabilities under and/or in connection with the said Supply Contract/ Contract/ Sub-Contract, and DSCL shall have full authority to take recourse to or enforce this security in preference to any other guarantee or security which DSCL may have or obtain and there shall be no forbearance on the part of DSCL in enforcing or requiring enforcement of any other security and shall not have the effect of releasing the Bank from its full liability hereunder.
9. It shall not be necessary for DSCL to proceed against the said Supplier/ Contractor/ Sub Contractor before proceeding against the Bank and the guarantee herein contained shall be enforceable against the Bank notwithstanding any security which DSCL may have obtained or obtain from the Supplier/ Contractor/ Sub-Contractor, when proceedings are taken against the said Bank hereunder be outstanding or unrealized during its validity
10. We, \_\_\_\_\_ the said Bank further undertake that we shall pay forthwith the amount stated in the notice of demand without demur and protest notwithstanding any dispute/difference pending between the parties before the arbitrator Tribunal or Court and/or dispute is being referred to arbitrator.
11. We, the said Bank undertake not to revoke this Guarantee during its currency except with the consent of DSCL in writing and agree that any change in the Constitution of the said Supplier/ Contractor/ Sub-Contractor or the said Bank shall not discharge our liability hereunder.
12. This guarantee/undertaking shall be a continuing guarantee/undertaking and shall remain valid and irrevocable for all claims of DSCL and liabilities of the Supplier/ Contractor/ Sub-Contractor arising up to and until midnight of \_\_\_\_\_.
13. Notwithstanding anything contained herein above, our liability under this guarantee shall be restricted to ₹ \_\_\_\_\_/- (Rs. \_\_\_\_\_ only) and this guarantee shall remain in full force till \_\_\_\_\_ unless a claim is made on us within 3 months from the date of expiry of this guarantee i.e. before all the claims under this guarantee shall be forfeited and we shall be relieved of and discharged from our liabilities hereunder.

"This guarantee shall come into force simultaneously with the receipt of the **Stage-1 of the Mobilization Advance i.e. 2% of the contract value**, by the Supplier to its disposal in the applicant's current account no. \_\_\_\_\_ with \_\_\_\_\_"

"The Bank will periodically be advised of the quantum of advance money adjusted in the invoices and consequent reduction in BG liability which will be provided by purchaser and forwarded through supplier"

"Notwithstanding anything contrary contained in any law for the time being in force or banking practice, this guarantee shall not be assignable or transferable by the beneficiary. Notice or invocation by any person such as assignee, transferee or agent of beneficiary shall not be entertained by the Bank. Any invocation of guarantee can be made only by the beneficiary directly."

"Notwithstanding anything contained herein:

(a) our liability under this Bank Guarantee shall not exceed Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only);

(b) this Bank Guarantee shall be valid upto \_\_\_\_\_; (being the date of

expiry of the guarantee) and

(c) The beneficiary's right as well the Bank's liability under this Guarantee shall stand extinguished unless a written claim or demand is made under this Guarantee on or before [ ]

Dated.....day of \_\_\_\_\_, 2021

For and on behalf of Bank



**Annexure 8 – Format for Performance Bank Guarantee**

For Contract Performance Bank Guarantee

**Ref :** < --- >

Date: \_\_\_\_\_

Bank Guarantee No.: \_\_\_\_\_

To

**MANAGING DIRECTOR CUM CEO  
DHARAMSHALA SMART CITY LIMITED**

Dear Sir,

PERFORMANCE BANK GUARANTEE – For <Project Name>

WHEREAS

M/s. (name of Bidder), a company registered under the Companies Act, 1956/2013, having its registered and corporate office at (address of the Bidder), (hereinafter referred to as “our constituent”, which expression, unless excluded or repugnant to the context or meaning thereof, includes its successors and assigns), agreed to enter into a Contract dated ..... (Hereinafter,

Referred to as “Contract”) with you for **“Redevelopment of Refugee Market at Kotwali Bazar Dharamshala”**, in the said Contract.

We are aware of the fact that as per the terms of the Contract, M/s. (name of the bidder) is required to furnish an unconditional and irrevocable Bank Guarantee in your favour for an amount of 5% of the Total Contract Value, and guarantee the due performance by our constituent as per the Contract and do hereby agree and undertake to pay any and all amount due and payable under this bank guarantee, as security against breach/ default of the said Contract by our Constituent.

In consideration of the fact that our constituent is our valued customer and the fact that he has entered into the said Contract with you, we, (name and address of the bank), have agreed to issue this Performance Bank Guarantee.

Therefore, we (name and address of the bank) hereby unconditionally and irrevocably guarantee you as under:

In the event of our constituent committing any breach / default of the said Contract, and which has not been rectified by him, we hereby agree to pay you forthwith on demand such sum/s not exceeding the sum of 5% of the Total Contract Value i.e.,.....<in words> without any demur. Notwithstanding

anything to the contrary, as contained in the said Contract, we agree that your decision as to whether our constituent has made any such default(s) / breach(es), as aforesaid and the amount or amounts to which you are entitled by reasons thereof, subject to the terms and conditions of the said Contract, will be binding on us and we shall not be entitled to ask you to establish your claim or claims under this Performance Bank Guarantee, but will be paid by the same forthwith on your demand without any protest or demur.

This Performance Bank Guarantee shall continue and hold valid till 90 (Ninety) days after completion date, subject to the terms and conditions in the said Contract.

We bind ourselves to pay the above said amount at any point of time commencing from the date of the said Contract until 90 (Ninety) days after the completion date.

We further agree that the termination of the said Contract, for reasons solely attributable to our constituent, virtually empowers you to demand for the payment of the above said amount under this guarantee and we would honor the same without demur.

We hereby expressly waive all our rights: Requiring to pursue legal remedies against DHARAMSHALA SMART CITY LIMITED; and for notice of acceptance hereof any action taken or omitted in reliance hereon, of any defaults under the Contract and any resentment, demand, protest or any notice of any kind.

We, the Guarantor, as primary obligor and not merely Surety or Guarantor of collection, do hereby irrevocably and unconditionally give our guarantee and undertake to pay any amount you may claim (by one or more claims) up to but not exceeding the amount mentioned aforesaid during the period from and including the date of issue of this guarantee through the period.

We specifically confirm that no proof of any amount due to you under the Contract is required to be provided to us in connection with any demand by you for payment under this guarantee other than your written demand.

Any notice by way of demand or otherwise hereunder may be sent by special courier, telex, fax, registered post or other electronic media to our address, as aforesaid and if sent by post, it shall be deemed to have been given to us after the expiry of 48 hours when the same has been posted. If it is necessary to extend this guarantee on account of any reason whatsoever, we undertake to extend the period of this guarantee on the request of our constituent under intimation to you.

This Performance Bank Guarantee shall not be affected by any change in the constitution of our constituent nor shall it be affected by any change in our constitution or by any amalgamation or absorption thereof or therewith or reconstruction or winding up, but will ensure to the benefit of you and be available to and be enforceable by you during the period from and including the date of issue of this guarantee through the period.

Notwithstanding anything contained hereinabove, our liability under this Performance Guarantee is restricted to 5% of the Contract Value, and shall continue to exist, subject to the terms and conditions contained herein, unless a written claim is lodged on us on or before the aforesaid date of expiry of this guarantee.

We hereby confirm that we have the power/s to issue this Guarantee in your favor under the Memorandum and Articles of Association / Constitution of our bank and the undersigned is / are the recipient of authority by express delegation of power/s and has / have full power/s to execute this guarantee under the Power of Attorney issued by the bank in your favor.

We further agree that the exercise of any of your rights against our constituent to enforce or forbear to enforce or any other indulgence or facility, extended to our constituent to carry out the contractual obligations as per the said Contract, would not release our liability under this guarantee and that your right against us shall remain in full force and effect, notwithstanding any further arrangement that may be entered into between you and our constituent, during the entire currency of this guarantee.

Notwithstanding anything contained herein:

Our liability under this Performance Bank Guarantee shall not exceed 5% of the Total Contract Value. This Performance Bank Guarantee shall be valid only from the date of signing of Contract to 90 (Ninety) days after the completion of the defects liability period; and

We are liable to pay the guaranteed amount or part thereof under this Performance Bank Guarantee only and only if we receive a written claim or demand on or before 90 (Ninety) days after the completion date of the defect liability period.

Any payment made hereunder shall be free and clear of and without deduction for or on account of taxes, levies, imports, charges, duties, fees, deductions or withholding of any nature imposts. This Performance Bank Guarantee must be returned to the bank upon its expiry. If the bank does not receive the Performance Bank Guarantee within the above-mentioned period, subject to the terms and conditions contained herein, it shall be deemed to be automatically cancelled.

This guarantee shall be governed by and construed in accordance with the Indian Laws and we hereby submit to the exclusive jurisdiction of courts of Justice in India for the purpose of any suit or action or other proceedings arising out of this guarantee or the subject matter hereof brought by you may not be enforced in or by such court.

Dated ..... this ..... Day ..... 20....

Yours faithfully,

For and on behalf of the ..... Bank,

(Signature)

Designation

(Address of the Bank)

Note:

This guarantee will attract stamp duty as a security bond.

A duly certified copy of the requisite authority conferred on the official/s to execute the guarantee on behalf of the bank should be annexed to this guarantee for verification and retention thereof as documentary evidence in the matter.

Annexure 9 Ministry of Finance, Department of Expenditure Public Procurement  
Division

F.No.6/18/2019-PPD  
Ministry of Finance  
Department of Expenditure  
Public Procurement Division

161, North Block  
New Delhi  
23rd July, 2020

**Order ( Public Procurement No. 2)**

**Subject: Exclusion from restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017 –regarding.**

In Order (Public Procurement No. 1) dated 23rd July 2020, orders have been issued requiring registration of bidders from a country sharing a land border with India in order to be eligible to bid in public procurement.

2. Notwithstanding anything contained therein, it is hereby clarified that the said Order will not apply to bidders from those countries (even if sharing a land border with India) to which the Government of India has extended lines of credit or in which the Government of India is engaged in development projects.

3. Updated lists of countries to which lines of credit have been extended or in which development projects are undertaken are given in the website of the Ministry of External Affairs.



(Sanjay Prasad)  
Joint Secretary (PPD)

Email ID: [js.pfc2.doe@gov.in](mailto:js.pfc2.doe@gov.in)  
Telephone: 011-23093882

To,

- (1) Secretaries of All Ministries/ Departments of Government of India for information and necessary action. They are also requested to inform these provisions to all procuring entities.
- (2) Secretary, Department of Public Enterprises with a request to immediately reiterate these orders in respect of Public Enterprises.
- (3) Chief Secretaries/ Administrators of Union Territories/ National Capital Territory of Delhi

## 5. Contract Forms

This Section contains forms which, once completed, will form part of the Contract. The forms for Performance Security and Advance Payment Security, when required, shall only be completed by the Contractor after contract award.

- **Letter of Acceptance**
- **Contract Agreement**

## 6. Letter of Acceptance

[on letterhead paper of the Employer]

.....[date].....

To: .....[name and address of the Implementing Agency].....

Subject:.....[Notification of Award Contract No].....

This is to notify you that your RFP/Bid dated.....[insert date]..... for execution of the.....[insert name of the contract and identification number, as given in the PCC].....for the Accepted Contract Amount of.....[insert amount in numbers and words and name of currency], as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by DSCL.

You are requested to furnish the Performance Security within 15 days in accordance with the Conditions of Contract, using for that purpose the of the Performance Security Form included in Annexure 8. Contract Forms, of the Bidding Document.

Authorized  
Signature:.....

Name and Title of  
Signatory:.....

Name of  
Agency:.....

## 7. Contract Agreement

THIS AGREEMENT made the.....day of.....between.....**[name of the Employer]**.....(hereinafter "the Employer"), of the one part, and .....**[name of the Implementing Agency]**.....(hereinafter "the Implementing Agency"), of the other part:

WHEREAS the Employer desires that the Works known as "**Redevelopment of Refugee Market at Kotwali Bazar Dharamshala**", should be executed by the Implementing Agency, and has accepted a Bid by the Implementing Agency for the execution and completion of these Works and the remedying of any defects therein,

The Employer and the Implementing Agency agree as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.
  - (i) the Agreement
  - (ii) the Letter of Acceptance
  - (iii) the Letter of Award
  - (iv) the addenda Nos \_\_\_\_\_(if any)
  - (v) the Special Conditions of Contract
  - (vi) the General Conditions of Contract, including appendix;
  - (vii) the Specifications
  - (viii) the Drawings
  - (ix) Bill of Quantities
- (x) any other document **listed in the PCC** as forming part of the Contract,
3. In consideration of the payments to be made by the Employer to the Implementing Agency as specified in this Agreement, the Implementing Agency hereby covenants with the Employer to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.





Request for Proposal for Redevelopment of  
Refugee Market at Kotwali Bazar Dharamshala



Dharamshala Smart City Ltd.

- The Employer hereby covenants to pay the Implementing Agency in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of..... **[name of the borrowing country]**.....on the day, month and year specified above.

Signed by: \_\_\_\_\_

Signed by:

\_\_\_\_\_  
*For and on behalf of the Employer  
 Agency*

*for and on behalf of the Implementing*

In the  
 Presence of: \_\_\_\_\_

in the  
 presence of:

\_\_\_\_\_  
*Witness, Name, Signature, Address, Date*

*Witness, Name, Signature, Address, Date*

## **SECTION – 4 BILL OF QUANTITIES**

Financial Proposal Format & Instructions

**To be submitted on e-Tendering Portal only (i.e. [www.hptenders.gov.in](http://www.hptenders.gov.in))**

RFP Reference No: XX

**"Redevelopment of Refugee Market at Kotwali Bazar Dharamshala"**

**"BILL OF QUANTITIES"**

<b>PRICE SCHEDULE</b>						
<b>(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only )</b>						
<b>Sl. No.</b>	<b>Item Description</b>	<b>Quantity</b>	<b>Units</b>	<b>RATE In Figures To be entered by the Bidder in Rs. P</b>	<b>TOTAL AMOUNT With all Taxes in Rs. P</b>	<b>TOTAL AMOUNT In Words</b>
<b>1</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>13</b>	<b>53</b>	<b>55</b>
1	Demolishing stone rubble /Brick masonry manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material with all leads and lifts and as per direction of Engineer-in-charge : In Cement Mortar	356.56	Cum		0.00	INR Zero Only
2	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material with all leads and lifts and as per direction of Engineer-in-charge	151.84	Cum		0.00	INR Zero Only
3	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge.-Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	150.24	Cum		0.00	INR Zero Only

4	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking with all leads and lifts and as per direction of Engineer-in-charge	36.00	Each		0.00	INR Zero Only
5	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking with all leads and lifts and as per direction of Engineer-in-charge	34.00	Each		0.00	INR Zero Only
6	Dismantling steel work in built up sections in angles, tees, flats and channels including all gusset plates, bolts, nuts, cutting rivets, welding etc. including dismembering and stacking with all leads and lifts and as per direction of Engineer-in-charge	6075.00	Kg		0.00	INR Zero Only
7	Dismantling G.I roofing including ridges, hips, valleys and gutters etc., and stacking the material with all leads and lifts and as per direction of Engineer-in-charge	259.00	Sqm		0.00	INR Zero Only
8	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, all leads	302.08	Cum		0.00	INR Zero Only
9	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including getting out and disposal of excavated earth with all leads and lifts and as per direction of Engineer-in-charge	1155.80	Cum		0.00	INR Zero Only

10	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means 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 up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, with all leads and lifts and as per direction of Engineer-in-charge :-All kind of soil for RWH MH, Fire Tank & Pump Room	359.95	Cum		0.00	INR Zero Only
11	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, with all leads and lifts and as per direction of Engineer-in-charge	118.57	Cum		0.00	INR Zero Only
12	Disposal of excavated surplus earth lead up to with all leads and lifts and as per direction of Engineer-in-charge	1037.23	Cum		0.00	INR Zero Only
13	Random rubble masonry/polygonal rubble masonry of Cement Mortar 1:4(1 cement:4 sand) (uncoursed/brought to courses) with hard stones of approved quality in foundation and plinth/Retaining wall etc. including levelling up with cement concrete 1:6:12 (1 cement :6 sand : 12 graded stone aggregate 20mm nominal size) at plinth level in	48.47	Cum		0.00	INR Zero Only
14	Boulder filling dry hand packed tightly as in behind Retaining Structure & plinth filling Complete all as per drawing & technical specification and as directed by Engineer-in charge.	121.69	Cum		0.00	INR Zero Only

15	Providing and laying cement concrete 1:3:6(1cement : 3 sand : 6 graded stone aggregate 40 mm nominal size) and curing complete excluding cost of form work in: Foundation and plinth	46.80	Cum		<b>0.00</b>	INR Zero Only
16	Providing form work with steel plates 3.15mm.thick welded with angle iron in frame 30x30x5mm. so as to give a fair finish including centring, shuttering, strutting and propping etc. with wooden battens and ballies, height of propping and centring below supporting floor to ceiling and removal of the same for insitu-reinforced concrete & plain concrete work in: with all leads and lifts and as per direction of Engineer-in-charge					
16.1	Foundation, footings basis of columns etc. and mass concrete.	120.42	Sqm		<b>0.00</b>	INR Zero Only
16.2	Columns, pillars, posts and struts:-Circular or curved /Square in plan.	568.14	Sqm		<b>0.00</b>	INR Zero Only
16.3	Beams, cantilever, girders and lintels.:-Sides and Soffits of beams, beam haunching's, cantilever girders, bressummers and lintels not exceeding 1 Metre in depth:-in all heights from floor.	626.04	Sqm		<b>0.00</b>	INR Zero Only
16.4	Flat surfaces such as soffits of suspended floors, roofs, landings and the like:-Floors etc.upto 200mm. in thickness.	870.64	Sqm		<b>0.00</b>	INR Zero Only
16.5	Vertical surfaces such as walls (any thickness) partitions and the like including attached pillasters buttresses, plinth and string courses and the like.	679.87	Sqm		<b>0.00</b>	INR Zero Only
16.6	Stair cases with sloping or stepped soffits excluding landing.	304.42	Sqm		<b>0.00</b>	INR Zero Only
16.7	Vertical and horizontal fins individually or forming box louvers band, facias and eaves	120.00	Sqm		<b>0.00</b>	INR Zero Only

	boards					
16.8	Edges of slabs and breaks in floors and walls:-Under 20 cm wide	327.24	Rmt		0.00	INR Zero Only
17	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centring, shuttering finishing and reinforcement, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer-in-charge.:-All Works up to Plinth Level:- Foundation Footing, Base of Column etc. (Note :- Cement content considered in this item should no be less thank @ 330 kg/cum	315.31	Cum		0.00	INR Zero Only

18	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using cement content as per approved design mix, manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying , excluding the cost of centring, shuttering finishing and reinforcement, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate/retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer-in-charge.: -All Works Above Plinth Level(Note :- Cement content considered in this item should no be less than @ 330 kg/cum	384.18	Cum		0.00	INR Zero Only
19	Reinforced cement concrete work in vertical and horizontal fins individually or forming box louvers, facias and eaves boards above plinth level up to floor five level, excluding the cost of centering, shuttering, finishing and reinforcement with 1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20mm nominal size).	7.92	CUM		0.00	INR Zero Only
20	Providing Tor steel reinforcement of Grade Fe-550 for R.C.C. work including bending, binding and placing in position complete up to any level :	98622.45	Kg		0.00	INR Zero Only



21	Providing and laying autoclaved aerated cement blocks masonry with 150mm/200/230mm/300 mm thick AAC blocks in super structure above plinth level up to any floor level with RCC band at sill level and lintel level with approved block laying polymer modified adhesive mortar all complete as per direction of Engineer-in-Charge. (The payment of RCC band and reinforcement shall be made for separately).	105.38	Cum		0.00	INR Zero Only
22	Providing and fixing 12 mm thick frameless toughened glass Wall/door shutter of approved brand and manufacture, including providing and fixing required door fittings, all complete as per direction of Engineer-in-charge (Door handle, lock and stopper etc.to be paid separately).	796.66	Sqm		0.00	INR Zero Only
23	Providing and fixing double action hydraulic floor spring of approved brand and manufacture conforming to IS : 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight up to 125 kg, for doors, including cost of cutting floors, embedding in floors as required and making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-incharge.-With stainless steel cover plate minimum 1.25 mm thickness	3.00	each		0.00	INR Zero Only

24	Filling the gap in between aluminium/ stone/ wood frame and 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 C920, DIN 18540-F & ISO 11600:-Upto 5 mm depth and 5 mm width	655.60	Meter		0.00	INR Zero Only
25	Supplying and fixing rolling shutters of 80x1.25 mm M.S. laths with 1.25 mm thick top cover of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters.	63.90	Sqm		0.00	INR Zero Only
26	Providing and fixing ball bearing for rolling shutters complete all as per drawing and technical specification and as directed by Engineer-in-charge.	12.00	each		0.00	INR Zero Only

27	<p>Providing and Fixing factory made uPVC door frame, made of uPVC extruded sections, of size 65 mm x 55 mm with wall thickness 2.0 mm (<math>\pm 0.2</math> mm), corners of the door frame to be mitred cut and jointed with plastic brackets and stainless steel screws, reinforcing hinge side vertical of the frames with PVC profile of Size 28 mm x 30 mm having wall thickness 2 mm (<math>\pm 0.2</math> mm), including providing &amp; fixing 3 no's of 125 mm long stainless steel hinges to the frame, fixing the frame with jamb with required number &amp; size of anchor dash fasteners, all complete as per manufacturer's specification and direction of Engineer-in-charge.</p>	65.60	Rmt.		0.00	INR Zero Only
28	<p>35 mm thick factory made Solid panel PVC Door shutter, made out of single piece extruded solid PVC profiles, 5 mm (<math>\pm 0.2</math> mm) thick, having styles &amp; rails (except lock rail) of size 95 mm x 35 mm x 5 mm, out of which 75 mm shall be flat and 20 mm shall be tapered (on both side), having one side thickness of 15 mm integrally extruded on the hinge side of the profile for better screw holding power, including reinforcing with MS tube of size 40 mm X 20 mm x 1 mm, joints of styles &amp; rails to be mitred cut &amp; joint with the help of PVC solvent cement, self-driven self-tapping screws &amp; M.S. rectangular pipes bracket of size 190 mm X 100 mm of cross section size 35 mm x 17 mm x 1 mm at each corner. Single piece extruded 5 mm thick solid PVC Lock rail of size 115 mm x 35 mm, out of which 75 mm to be flat and 20 mm to be tapered</p>	21.42	Sqm		0.00	INR Zero Only

	<p>at both ends, having 15 mm solid core in middle of rail section integrally extruded, fixing the styles &amp; rails with the help of solvent and self-driven self-tapping screws of 125 mm x 11 mm, including providing 5 mm Single piece solid PVC extruded sheet inserted in the door as panel, all complete as per manufacturer's specification and direction of Engineer-in-charge.</p>					
29	<p>Providing and fixing factory made uPVC white colour fixed glazed windows/ ventilators comprising of uPVC multi-chambered frame and mullion (where ever required) extruded profiles duly reinforced with 1.60 ± 0.2 mm thick galvanized mild steel section made from roll forming process of required length (shape &amp; size according to uPVC profile), , uPVC extruded glazing beads of appropriate dimension, EPDM gasket, G.I fasteners 100 x 8 mm size for fixing frame to finished wall, plastic packers, plastic caps and necessary stainless steel screws etc. Profile of frame shall be mitred cut and fusion welded at all corners, mullion (if required) shall be also fusion welded including drilling of holes for fixing hardware's and drainage of water etc. After fixing frame the gap between frame and adjacent finished wall shall be filled with weather proof silicon sealant over backer rod of required size and of approved quality, all complete as per approved drawing &amp; direction of Engineer-in-Charge. (Single / double glass panes and silicon sealant shall be paid separately)</p>					

	Note: For uPVC frame, sash and mullion extruded profiles minus 5% tolerance in dimension i.e. in depth & width of profile shall be acceptable.					
29.1	Fixed window / ventilator made of (small series) frame 47 x 50 mm & mullion 47 x 68 mm both having wall thickness of 1.9 ± 0.2 mm and single glazing bead of appropriate dimension.	4.23	Sqm		0.00	INR Zero Only
30	Providing and fixing glazing in UPVC door, window, ventilator shutters and partitions etc. including all accessories required for installation glass complete as per the architectural drawings and the directions of engineer-in-charge :--With float glass panes of 5 mm thickness (weight not less than 12.50 kg/ Sqm)	4.23	Sqm		0.00	INR Zero Only
31	Providing fixing bright Stainless Steel tower bolts of size 250x10mm (barrel type) with screws etc. complete.	8.00	each		0.00	INR Zero Only
32	Providing fixing 125 mm long Stainless Steel D-handle for doors/windows with screws etc. complete.	22.00	Each		0.00	INR Zero Only
33	Providing fixing 600 mm long Stainless Steel Pull Handle for glass doors including all accessories required complete all as per drawing and manufacturer specifications.	8.00	Each		0.00	INR Zero Only
34	15mm Cement plaster with Cement Mortar 1:6 (1Cement:6 Sand) in single coat on the rough side of brick/ concrete/stone walls for interior/ exterior plastering up to any floor level including arrises, internal rounded angles, chamfers and/or rounded angles not exceeding 80mm in girth and finished even and smooth.	2083.56	Sqm		0.00	INR Zero Only

35	6mm Cement plaster to ceiling:-In Cement mortar 1:3(1 Cement:3 Sand) complete all as drawing and technical specification and as directed by Engineer-in-charge.	1063.24	Sqm		0.00	INR Zero Only
36	Applying Birla white wall care putty over plaster surface after thoroughly brushing the surface free from mortar drops, dust, loose materials and other foreign matters sand papered smooth to give final matter finish to the surface complete.	3147.00	Sqm		0.00	INR Zero Only
37	Applying priming with cement primer coat on new concrete / masonry / asbestos cement / plastered surfaces after and including preparing the surface by thoroughly cleaning oil,grease,dirt and other foreign matter and sand papering as required with :-Ready mixed Cement primer	3147.00	Sqm		0.00	INR Zero Only
38	Wall painting (two coats) with acrylic emulsion paint of approved brand and manufacture for interior grade on undecorated concrete/stone/plastered wall surfaces to give an even shade including t thoroughly brushing the surface free from mortar dropping and other foreign matter and sand papered smooth including applying of putty a required for metling the surface	3147.00	Sqm		0.00	INR Zero Only

39	Providing and fixing 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels.					
39.1	Granite of any colour and shade:-Area of slab up to 0.50 sqm	37.80	Sqm		0.00	INR Zero Only
39.2	Granite of any colour and shade:-Area of slab Over 0.50 sqm	566.91	Sqm		0.00	INR Zero Only
40	Providing and laying vitrified floor tiles in 600x600mm 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, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3 kg/ Sqm including grouting the joints with white cement and matching pigments etc., complete.	451.00	Sqm		0.00	INR Zero Only
41	Providing and laying antiskid ceramic floor tiles of 8-10mm.thick laid on a bed of 12mm. thick cement mortar 1:3 (1cement: 3 sand) finished with flush pointing in white cement. colour and size as per direction of Engineer-in-charge	71.54	Sqm		0.00	INR Zero Only

42	Providing and fixing digital HD Ceramic wall tiles of 6 mm thick with 12 mm thick cement mortar 1:3 (1 cement :3 sand) and jointed with cement slurry. colour and size as per direction of Engineer-in-charge	404.15	Sqm		0.00	INR Zero Only
43	Steel work welded in built-up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of red lead paint:-In beams joists channels ,angles , tee ,flats with connection plates or angle cleats as in main and cross beams,hip and jack rafters, purlins connected to common rafters and the like.	145.00	Qtl.		0.00	INR Zero Only
44	Painting two coats (excluding priming coat)on new steel and other metal surface under coat with ready mixed paint brushing to give an even shade including cleaning the foreign matter :-With ready mixed paint other than white	77.00	Sqm		0.00	INR Zero Only
45	Providing and fixing 0.60mm thick prepainted steel sheet in roofing with hot dipped metallic zinc coated sheet with top coat of regular modified polyester (RNP) organic coating of 20 microns over 5 microns primer coating to back coat of polyester of 5 microns over 5 microns primer coating i/c fixing with prepainted iron J or L hooks, bolts and nuts 6mm dia metre with prepainted limpet and rubber washers complete with all accessories' as required as per the direction of Engineer-in-charge.	375.00	Sqm		0.00	INR Zero Only



46	Providing and fixing ridges or hips 60 cm overall with 0.60mm thick prepainted steel sheets in roofing with hot dipped metallic zinc coated sheets with top coat of regular modified polyester organic coating of 20 microns over 5 microns primer coating + back coat of polyester of 5 microns over 5 microns primer coating i/c fixing with prepainted iron J or L hooks, bolts & nuts 6mm dia & prepainted G.I. limpet and bitumen washers complete with all accessories as required as per the direction of Engineer in Charges.	159.00	Rmt.		0.00	INR Zero Only
47	Providing and fixing M.S. BP Sheet 1.66mm to 20mm thick in eaves board /facia /soffits/ ceiling including cutting, fixing and welding to steel roof members and applying a coat of red lead primer complete as per the instruction of Engineer-in-charge (Base members of steel work shall be measured & paid separately)	71.54	Sqm		0.00	INR Zero Only
48	Providing and fixing polycarbonate transparent sheet 1.20mm thick in roofing with galvanised J or L hooks bolts and nuts with G.I. Limpe and bitumen rubber washer complete with all accessories as required as per direction of Engineer-in-Charge.	98.00	Sqm		0.00	INR Zero Only
49	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 stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners ,	1862.24	Kg		0.00	INR Zero Only

	stainless steel bolts etc., of required size, on the top of the floor or the side 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.).					
50	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).	56.06	Sqm		0.00	INR Zero Only
51	Providing and laying 60 mm thick factory made chamfered edge Cement Concrete paver blocks of M-35 grade with approved colour design and pattern in footpath, parks, lawns, drive ways or light traffic parking etc, of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required colour & pattern over 25mm thick cement mortar 1:4 (1 cement : 4 sand), compacting and proper embedding / laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand. complete all as per direction of Engineer-in-Charge.	346.64	Sqm		0.00	INR Zero Only

52	<p>Providing and mixing integral crystalline admixture for waterproofing treatment to RCC structures like basement raft, retaining walls, reservoir, sewage &amp; water treatment plant, tunnels / subway and bridge deck etc.. at the time of transporting of concrete into the drum of the ready-mix truck , using integral crystalline admixture @0.80% (minimum) to the weight of cement content per cubic meter of concrete) or higher as recommended by the manufacturer's specification in reinforced cement concrete at site of work. The material shall meet the requirements as specified in ACI-212-3R-2010 i.e. by reducing permeability of concrete by more than 90%, compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure. The crystalline admixture shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the Engineer-in-charge. The product performance shall carry guarantee for 10 years against any leakage.</p>	254.08	Kg		0.00	INR Zero Only
53	<p>Providing and Placing in position suitable PVC water stops conforming to IS:12200 for construction/ expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete :</p>	77.70	Rmt.		0.00	INR Zero Only

54	Excavating trenches of required width for pipes, cables, etc. including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to any level, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, any lead :-Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	190.00	Rmt.		0.00	INR Zero Only
55	Providing and fixing high pressure PVC Spigot and Socket, waste and ventilating pipe ISI Marked including fixing with approved adhesive complete.					
55.1	PVC Pipe 150 mm dia	190.00	Rmt.		0.00	INR Zero Only
55.2	PVC Pipe 110 mm dia	80.00	Rmt.		0.00	INR Zero Only
55.3	PVC Pipe 75 mm dia	70.00	Rmt.		0.00	INR Zero Only
56	Providing and fixing PVC Plain bend ISI Marked including fixing with approved adhesive complete :-					
56.1	PVC Plain bend 110 mm dia	17.00	Each		0.00	INR Zero Only
56.2	PVC Plain bend 75 mm dia	17.00	Each		0.00	INR Zero Only
57	Providing and fixing PVC door bend with oval access door, insertion rubber washer 3 mm thick bolts and nuts ISI marked complete including fixing with approved adhesive complete :-					
57.1	PVC Door bend 110 mm dia	15.00	Each		0.00	INR Zero Only
57.2	PVC Door bend 75 mm dia	15.00	Each		0.00	INR Zero Only

58	Providing and fixing PVC floor trap ISI Marked of self cleaning design including fixing with approved adhesive, cost of cutting and making good the walls and floor etc. complete	29.00	Each		<b>0.00</b>	INR Zero Only
59	Providing and fixing PVC Single Equal Branch with oval access door, ISI Marked insertion rubber washer 3 mm thick bolts and nuts complete including fixing with approved adhesive etc. complete					
59.1	110 mm dia	10.00	Each		<b>0.00</b>	INR Zero Only
59.2	75 mm dia	10.00	Each		<b>0.00</b>	INR Zero Only
60	Providing and fixing PVC Collar ISI Marked including fixing with approved adhesive complete :-					
60.1	150 mm dia	10.00	Each		<b>0.00</b>	INR Zero Only
60.2	110 mm dia	10.00	Each		<b>0.00</b>	INR Zero Only
60.3	75 mm dia	10.00	Each		<b>0.00</b>	INR Zero Only
61	Providing and fixing PVC Clamps ISI Marked of approved design with steel screw and rawal plug etc. Complete :-					
61.1	110 mm dia	30.00	Each		<b>0.00</b>	INR Zero Only
61.2	75 mm dia	30.00	Each		<b>0.00</b>	INR Zero Only
62	Providing and fixing square-mouth PVC gully trap complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design:	5.00	Each		<b>0.00</b>	INR Zero Only

63	<p>Constructing brick masonry manhole in cement mortar 1:4 ( 1 cement : 4 coarse sand ) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design : i/c carriage of material in all leads &amp; lifts and as per the direction of Engineer in Charge inside size 90x80 cm and 45 cm deep including SFRC cover with frame (Medium duty) 500mm dia internal dimensions, :With common burnt clay F.P.S. (non modular) bricks of class designation 7.5</p>	10.00	Each		0.00	INR Zero Only
64	<p>Providing and fixing white vitreous China extended wall mounting water closet of size 790x370x690 mm of approved shape including providing &amp; fixing white vitreous China cistern with dual flush fitting, of flushing capacity 3 litre/ 6 litre (adjustable to 4 litre/ 8 litres), including seat cover, and cistern fittings, nuts, bolts and gasket etc. complete.</p>	8.00	Each		0.00	INR Zero Only

65	Providing and fixing white vitreous China flat back small stall urinal of size 26.5 x 31.5 x 44 cm with white PVC automatic flushing cistern, with fittings, standard size C.P. brass flush pipe, spreaders with unions and clamps (all in C.P. brass) with waste fitting as per IS : 2556, C.I. trap with outlet grating and other couplings in C.P. brass, including painting of fittings and cutting and making good the walls and floors wherever required : Range of three half small urinals with 10 litre P.V.C. automatic flushing cistern	4.00	Each		0.00	INR Zero Only
66	Providing and fixing Health faucet ABS with rabbit cleaning system, flexible tube up to 1.25 mtr. long PVC Flexible tube & ABS wall hook to extended wall mounted type W.C. of quality and make as approved by Engineer - in - charge.	8.00	Each		0.00	INR Zero Only
67	Providing and fixing Oval Shape wash basin on R.C.C Slab, including 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, and making good the walls wherever require:-White Vitreous China oval shape Wash basin size 540x410 mm with 15 mm C.P. brass pillar taps	11.00	Each		0.00	INR Zero Only
68	Providing and fixing P.V.C. Flexible pipe waste pipe for sink or wash basin including:- P.V.C. waste fittings complete.:- 32 mm dia	11.00	Each		0.00	INR Zero Only
69	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC	50.00	Rmt.		0.00	INR Zero Only

	solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge:-32 mm nominal outer dia Pipes					
70	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings 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:-50 mm nominal outer dia Pipes	50.00	Rmt.		0.00	INR Zero Only
71	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & 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 testing of joints complete as per direction of Engineer in Charge. Internal work - Exposed on wall:-25 mm nominal outer dia Pipes	44.00	Rmt.		0.00	INR Zero Only
72	Providing and fixing 20 mm Nominal Outer dia pipe Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, i/c 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	77.00	Rmt.		0.00	INR Zero Only



	work, including cutting chases and making good the walls etc.					
73	Providing and fixing unplasticized PVC connection pipe with brass unions : 45 cm Long	27.00	Each		0.00	INR Zero Only
74	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931 :	15.00	Each		0.00	INR Zero Only
75	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931	25.00	Each		0.00	INR Zero Only
76	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, IS : 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	15000.00	per litre		0.00	INR Zero Only
77	Providing and fixing 600x450 mm bevelled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	11.00	Each		0.00	INR Zero Only
78	Providing and fixing C.P. Brass Towel rail complete with C.P. Brass brackets fixed to wooden plugs with C.P. Brass screws :600x20mm	11.00	Each		0.00	INR Zero Only
79	Providing and fixing 600mm x 120 mm glass shelf with C.P. Brass bracket and guard rail complete, fixed to wooden plugs with C.P. Brass screws.	11.00	Each		0.00	INR Zero Only
80	Providing and fixing chromium plated brass soap dish with C.P. Brass brackets fixed to wooden cleats with C.P. Brass screws :-	11.00	Each		0.00	INR Zero Only
81	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end)					

81.1	32 mm nominal bore	3.00	Each		<b>0.00</b>	INR Zero Only
81.2	25 mm nominal bore	3.00	Each		<b>0.00</b>	INR Zero Only
82	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 coarse sand), finished with a floating coat of neat cement and making necessary channels for the drain etc. complete :	1.00	Each		<b>0.00</b>	INR Zero Only
83	Providing and fixing URINAL PARTITION of size 1195x550mm with 12mm thick laminated panel including all Stainless steel accessories required for fitting this panel and complete all as per drawing and technical specification and as directed by Engineer-in-charge.	4.00	Each		<b>0.00</b>	INR Zero Only
84	Wiring for light point / fan point / exhaust fan / call bell point with 1.5 Sq. mm. PVC insulated heat resistant flame retardant (HRFR) and low smoke single core (flexible) copper conductor cable in surface/recessed PVC conduit with modular switch, modular plates, suitable G.I. box and earthing the light point with 1.5 Sq.mm. HRFRLS/PVC insulated single core copper conductor cable as required. Group-C	204.00	Point		<b>0.00</b>	INR Zero Only
85	Supplying and fixing following rating Modular switch /socket in the existing switch box / cover plate including connections etc. as required. S.P. 5/ 6 Amps one way Modular switch.	31.00	Each		<b>0.00</b>	INR Zero Only

86	Supplying and fixing following rating Modular switch / socket in the existing switch box / cover plate including connections etc. as required 5 pin, 5/ 6 Amps Modular socket outlet.	31.00	Each		0.00	INR Zero Only
87	Supplying and fixing G.I. Modular box of (140mm x78mmx50mm) size with modular plate and cover in recess including providing and fixing 6 pin 15/16 amps modular socket outlet and 15/16 amps, modular switch, connections etc. as required.	30.00	Each		0.00	INR Zero Only
88	Wiring for light plug with 2x1.5 Sq. mm. PVC insulated heat resistant flame retardant (HRFR) and low smoke single core (flexible) copper conductor cable in surface/recessed PVC conduit along with 1 No.1.5 Sq.mm. HRFRLS/PVC insulated single core copper conductor cable for earthing as required.	248.00	Meter		0.00	INR Zero Only
89	Wiring for power plug with 2x4 Sq. mm. PVC insulated heat resistant flame retardant (HRFR) and low smoke single core (flexible) copper conductor cable in surface/recessed PVC conduit along with 1 No.4 Sq.mm. HRFRLS/PVC insulated single core copper conductor cable for earthing as required.	155.00	Meter		0.00	INR Zero Only
90	Wiring for power plug with 4x4 Sq. mm. PVC insulated heat resistant flame retardant (HRFR) and low smoke single core (flexible) copper conductor cable in surface/recessed PVC conduit along with 2 No.4 Sq.mm. HRFRLS/PVC insulated single core copper conductor cable for earthing as required.	150.00	Meter		0.00	INR Zero Only

91	Supplying and fixing ceiling rose on the existing junction box / wooden block including connections etc. as required.	25.00	Each		0.00	INR Zero Only
92	Providing and fixing concealed LED Down Light with 24 Watt, complete with all accessories, connections, testing and commissioning etc. as required. As per direction of Engineer in Charge.	75.00	Each		0.00	INR Zero Only
93	Providing and fixing Hanging Pendant LED Light 220 -240 volt, 60 wattage maximum rating, including with all necessary fitting of Lighting , Complete all metrials as per direction of Engineer - in - charge .	18.00	Each		0.00	INR Zero Only
94	Providing and fixing concealed LED Down Light with 15 Watt, complete with all accessories, connections, testing and commissioning etc. as required.As per direction of Engineer in Charge.	14.00	Each		0.00	INR Zero Only
95	Providing, Installation, testing and commissioning of ceiling fan with regulator, including wiring the down rods of standard length (up to 30 cm) with 16/0.20 mm twin twisted flexible, cotton braided, copper cable, including providing and fixing phenolic laminated sheet cover on the fan box and earthing etc. as required:- Ceiling Fan 1200 mm sweep, Category-A	18.00	Each		0.00	INR Zero Only
96	Providing and installation of exhaust fan of following sizes in the existing opening, including making the hole to suit the size of the above fan, making good the damages, connections, testing and commissioning etc. as required:- Exhaust Fan, Heavy duty, 300 mm sweep	7.00	Each		0.00	INR Zero Only

97	Supplying and Erection of 4M Decorative Pole with Single Arm made up of MS Section of Dia 112mm and 60mm with Base Plate of 250 x 250 x 10mm. Pre-treatment through shot blasting and polishing method. Top coat of UV rays resistant exterior grade PU Paint. 40-45W LED Hanging type Post Top shall be IP66 protected made up of Aluminium with polycarbonate diffuser. Pole should be PU painted (Polyurethane Paint) with suitable colour including carriage of materials with all lead and lifts. Materials as approved by " DSCL" & As per direction of Engineer-in - Charge	5.00	Each		0.00	INR Zero Only
98	Providing foundation for Proposed Street Light with RCC M20 including excavation in all types of soil, back filling , dewatering etc. complete as per drawing & specifications.					
98.1	Earth work in excavation of foundation of structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material.	4.64	Cum		0.00	INR Zero Only
98.2	Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregate 40 mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days with carriage of materials for all leads and lifts as per "DSCL".	0.15	Cum		0.00	INR Zero Only
98.3	Supplying, fitting and placing HYSD bar (Fe 500) reinforcement in sub-structure complete as per drawing and	0.23	mt		0.00	INR Zero Only

	Technical Specifications including carriage of materials for all leads and lifts as per "DSCL".					
98.4	Reinforced Cement Concrete (RCC Grade M20) in Open Foundation complete as per Drawing and Technical Specifications including carriage of materials for all leads and lifts as per "DSCL".	1.95	Cum		0.00	INR Zero Only
99	Supplying and installing following size of perforated painted with powder coating M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders etc as required. 200 mm width X 50 mm depth X 1.6 mm thickness	30.00	Meter		0.00	INR Zero Only
100	Supplying and fixing of following sizes of PVC conduit along with the accessories in surface / recess including cutting the wall and making good the same in case of recessed conduit as required:- 50 mm. dia	30.00	Meter		0.00	INR Zero Only
101	Supplying and fixing of following sizes of PVC conduit along with the accessories in surface / recess including cutting the wall and making good the same in case of recessed conduit as required:- 32 mm. dia	48.00	Meter		0.00	INR Zero Only
102	Supplying and laying of following size DWC HDPE pipe ISI marked along with all accessories like socket, bend, couplers etc. conforming to IS 14930, Part II complete with fitting and cutting, jointing etc.direct in ground (75 cm below ground level) including excavation and refilling the	75.00	Meter		0.00	INR Zero Only

	trench but excluding sand cushioning and protective covering etc. , complete as required. 120 mm dia (OD-17 mm & ID-103 mm nominal)					
103	Providing, laying and fixing of one No. aluminium conductor, PVC insulated and PVC sheathed, armoured/XLPE power cable, working voltage 1100 volts grade on surface etc. of the required size:- Armoured cable 50 sq. mm (3.5 core)	75.00	R.Mtr .		0.00	INR Zero Only
104	Providing, laying and fixing of one No. aluminium conductor, PVC insulated and PVC sheathed, armoured/XLPE power cable, working voltage 1100 volts grade on surface etc. of the required size:- Armoured cable 25 sq. mm (3.5 core)	60.00	R.Mtr .		0.00	INR Zero Only
105	Providing, laying and fixing of one No. aluminium conductor, PVC insulated and PVC sheathed, armoured/XLPE power cable, working voltage 1100 volts grade on surface etc. of the required size:- Armoured cable 10 sq. mm (4 core)	137.00	R.Mtr .		0.00	INR Zero Only
106	Supplying and drawing following size of PVC insulated, heat resistant, flame retardant (HRFR) and low smoke single core (flexible) copper conductor cable in existing surface / recessed, Steel/PVC conduit as required.PVC insulated HRFR LS Copper conductor 10.0 Sq. mm. 3 Core x 10.0 Sq. mm.	85.00	Mete r		0.00	INR Zero Only

107	Supplying and erection of following depth sheet metal cubical pedestal of suitable dimensions with plus-minus 5 cm variation, made from 1.6 mm thick M.S. sheet duly fabricated in a segregated manner for housing of switch fuse units, by welding each compartment on five sides & front side hinged, complete with locking arrangement, with sufficient No. vertical and horizontal intermediate switchgear housing compartments. The cubical pedestal shall have cable entry box at one or two sides, with epoxy powder coated approved paint and bonding to the existing earth etc. The same shall be erected in the 1:2:4 cement concrete plat-form of suitable dimensions 15 cm high from ground level and 45 cm thick. The cubical pedestal shall be 15 cm from the top of cement concrete plat-form:- 450 mm deep (nominal)	1.25	Sq. mtr. of face area		0.00	INR Zero Only
108	Supplying and fixing sheet metal bus-bar chamber suitable for 100 Amp. 415 volts capacity with 4 No. copper strip bus-bars each of length 450mm & cross-sectional area (25.4mmx3.17mm), enclosure made from 1.6 mm thick M.S. sheet having overall dimensions (530mmx400mmx150mm) nominal with all accessories including connections, earthing the body etc. as required:-	1.00	Each		0.00	INR Zero Only
109	Supplying and fixing following rating, four pole, 415 volts, Isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required. 100 Amps. Cat-A.	2.00	Each		0.00	INR Zero Only



110	Supplying and fixing following rating, four pole (three phase & neutral) 415 volts, residual current circuit breaker (RCCB), having a sensitivity current up to 300 miliampers in the existing MCB DB complete with connections, testing and commissioning etc. as required. :- 100 Amps. Cat-A.	1.00	Each		0.00	INR Zero Only
111	Supplying and fixing of following way triple pole and neutral, sheet steel MCB distribution board, 415 volts, on surface / recess, with provision for 4-pole MCB/Isolator/RCCB/RCBO as incomer and SP MCBs as outgoing, complete with tinned copper bus- bar, wire-set, neutral link, earth bar, din-bar, detachable gland plate, cable, identification labels interconnections, phosphatized and powder painted, including earthing etc. as required:- Double door-4 way (8+12),horizontal type	5.00	Each		0.00	INR Zero Only
112	Supplying and fixing following rating, four pole, 415 volts, Isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required. 63 Amps. Cat-A.	6.00	Each		0.00	INR Zero Only
113	Supplying and fixing following rating, four pole (three phase & neutral) 415 volts, residual current circuit breaker (RCCB), having a sensitivity current up to 300 miliampers in the existing MCB DB complete with connections, testing and commissioning etc. as required. :- 63 Amps. Cat-A.	23.00	Each		0.00	INR Zero Only
114	Supplying and erection of 6 amps. to 32 amps. rating, 10 KA breaking capacity, 240 volts, 'C' curves, miniature circuit breaker of following poles in the existing MCB DB complete	168.00	Each		0.00	INR Zero Only

	with connections etc. as required:-Single pole. Cat-A.					
115	Supplying and fixing of following way, single pole and neutral sheet steel MCB distribution board, 240 volts, on surface / recess, complete with tinned copper bus- bar, wire-set, neutral link, earth bar, din-bar, detachable gland plate, blanking plate, cable, identification labels interconnections, phosphatized and powder painted, including earthing etc. as required:- Double door-8 way	11.00	Each		0.00	INR Zero Only
116	Supplying, Installation, Testing & Commissioning of GI earthing / grounding protection system for Electrical system in Building including all these following materials ; { 1. GI earthing rod 40 X 2 Mtr, 2. chemical bag (15kg) in 2 nos, 3.Advance Maintenance free gel chemical (5 Ltr.), 4.GI wire 8 Sq mm, 5. Inspection Cover (300 X 300), 6.Installation & Commissioning charges , 7.Shipping Charges}, Labour Charges & Materials as approved by " DSCL" & As per direction of 'Engineer in Charge"..	6.00	Set		0.00	INR Zero Only
117	Providing and fixing of 25mm x 5 mm GI strip on surface or in recess for earthing connections etc. as required.	50.00	Meter		0.00	INR Zero Only
118	Supplying and erection of three piece non linear resistor type lightning arrestor suitable for 3 wire, 11 KV overhead lines with rated voltage 9 KV (rms) with a nominal discharge current rating of 5 KA and complete with galvanised clamping arrangement, G.I. bolts, nuts, washers etc. as required. Materials as approved by " DSCL" & As per direction of	1.00	Set		0.00	INR Zero Only

	'Engineer in Charge".					
119	Supplying, Installation, Testing & Commissioning of Surge Protection Device 4 Pole for the Surge Protection of Electrical System including with the all special fittings as required.	2.00	Each		0.00	INR Zero Only
120	<b>SUB HEAD-C FIRE FIGHTING WORKS</b>					
121	Supply, Installation, testing and commissioning of Electric driven Main Fire Pump suitable for automatic operation and consisting of following, complete in all respects, as required :Horizontal type, multistage, centrifugal, Horizontal End Suction Long Coupled pump of cast iron body & bronze impeller with stainless steel shaft, mechanical seal conforming to IS 1520. Suitable HP Squirrel cage induction motor, TEFC, synchronous speed 3000 RPM, suitable for operation on 415 volts, 3 phase 50 Hz, AC supply with IP 55 protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS-325.Epoxy coated common base plate for mounting pump and motor fabricated of mild steel channel as per manufacturer's recommendation with required no. of heavy duty Anti Vibration pads, coupling, coupling guard, foundation bolts etc. as required. Fire Pumps should be BMS compatible & EF class.Pump shall be capable of handling not less than 150% of rated capacity at a head not less than 65 % of rated head. The shut off head shall not exceed 120% of rated head. HP of motor should be 20% more than the calculated HP. Flexible Coupling and coupling guard for direct coupling of pump and motor.2280 lpm at 70 m Head (For Hydrant System), Elect Load of Motor - 25 KW(Approx) Note: *The head of the pump is selected in a manner so as to give a minimum 3.5kgf/cm2 pressure at the highest/farthest point.	1.00	Set		0.00	INR Zero Only

122	<p>Supply, Installation, testing and commissioning of diesel engine driven main fire pump suitable for automatic operation and consisting of following, complete in all respects, as required : (Diesel Driven Pump) Horizontal End Suction Long Coupled, multistage, centrifugal pump of cast of iron body and bronze impeller with stainless steel shaft, mechanical seal conforming to IS 1520. Suitable HP, 2900 RPM water cooled with radiator, diesel engine conforming to relevant IS standard complete with auto starting mechanism, 12 /24 volts electric starting equipment, diesel tank, exhaust pipe extended upto 10 m outside pump house duly insulated with 50 mm thick glass wool with 1.0 mm thick aluminium sheet cladding, residential silencer, instruments and protection as per standard specification, stop solenoid for auto stop in the event of fault with audio indications, painted with post office red colour etc. as required. M.S fabricated, common base plate, coupling, coupling guard, foundation bolts etc. as required. Suitable cement concrete foundation duly plastered and with anti vibration pads. Fire Pumps should be BMS compatible &amp; EF class. 2280 lpm at 70 m Head 24 volts 180 AH lead acid battery (12 volts - 2 Nos) Detail of Engine as described above, Note: *The head of the pump is selected in a manner so as to give a minimum 3.5kgf/cm<sup>2</sup> pressure at the highest/farthest point.</p>	1.00	Set		0.00	INR Zero Only
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123	Supply, Installation, testing and commissioning of electric driven pressurisation pump suitable for automatic operation and consisting of following, complete in all respects, as required : (Jockey Pump) Horizontal End Suction Long Coupled, multistage, centrifugal pump of cast iron body and bronze impeller with stainless steel shaft, mechanical seal conforming to IS : 1520.Suitable HP squirrel cage induction motor TEFC type suitable for operation on 415 volts, 3 phase 50 Hz AC supply with IP 55 class of protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS : 325.M.S.fabricated Common base plate, coupling, coupling guard, foundation bolts etc. as required.Fire Pumps should be BMS compatible & EF class.180 lpm at 70 m Head for Hydrant System ,Elect Load of Motor - 5KW (Approx)	1.00	Set		0.00	INR Zero Only
124	Supply, Installation, Testing and Commissioning of Electric driven Terrace pump suitable for automatic operation and consisting of following: complete in all respect as required.a) Horizontal Type, single stage, centrifugal pump of cast iron body and bronze impeller with stainless steel shaft, mechanical seal and flow of 450 lpm at 40m of 10 KW, head conforming to IS standards. b) Squirrel cage induction motor with suitable HP with synchronous speed 3000 RPM, Suitable for operation on 415 volts, 3 phase 50 Hz. AC with IP 55 protection for enclosure, horizontal foot mounted type with Class-F insulation, Conforming to IS standards.c) Common Base plat for Pump and motor and coupling, coupling guard, vibration pad, cables and other accessories as required for complete installation of pump set.	1.00	Set		0.00	INR Zero Only

125	<p>Fabrication, supply, Installation testing &amp; commissioning of Electrical control panel of cubical construction, floor mounted type, fabricated out of 2mm thick CRCA sheet, compartmentalized with hinged lockable doors, dust and vermin proof, powder coated of approved shade after 7 tank treatment process, cable alley, inter-connection with suitable size copper conductor cable/solid copper strip, having switchgears and accessories, mountings and internal wiring, earth terminals, numbering etc. complete in all respect, suitable for main fire pump, pressurization pump &amp; diesel pump set complete as per CPWD specification with following in coming and Outgoings, suitable for operation on 415V, 3 phase, 50Hz Ac Supply with enclosure protection class IP 42 as required : Electrical panel should be use for BMS compatible pump &amp; EF class. Incomings: Suitable Incoming current of 400A, 4 Pole MCCB, Ics=100% Icu Rating, Digital Voltmeter 0-500V with selector switch, Ammeter (0-500 A) with selector switch &amp; CTs etc., LED type RYB phase indicating lamps, ON, OFF, trip indicating lamps, Set of Copper Bus Bar 800Amps Outgoings: ( Note : All outgoing feeders for pumps should have digital Ammeter with selector switches, and LED type ON, OFF, trip indicating lamps), Main Fire Pump:- 1Nos fully automatic Star/Delta starter suitable for</p>	1.00	Set		0.00	INR Zero Only
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<p>pump with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation, ON/OFF indications with 2A SP MCB back up - 1 set, 2Nos of 250 Amp TP+NL MCCB of 36 KA breaking capacity with heavy duty solid detachable neutral link (for 2 Nos. Soft Starter Feeder for 112 KW) with ON/Off indication with 2A SP MCB back up. Also provide manual bypass arrangement comprising, DOL starter with 200A contactor with 2NO &amp; 2NC auxiliary contacts. Over load relay of rating 135-225 A within built single phasing preventer and Ammeter of range 0 - 225 A &amp; 2Nos of associated CT's of rating 250/5A of accuracy CL - I, 5VA burden. Also provide soft starter for each feeder as required. (Fire hydrant &amp; Sprinkler pump), Jockey Pump:- 63 Amp, 36kA TPN MCCB, Ics=100% Icu, with Suitable HP fully automatic DOL starter with overload protection, current sensing type single phase preventor complete with all accessories and internal wiring required for automatic operation, selector switch for local/remote, auto/manual/OFF operation. - 1 set, DIESEL ENGINE CONTROL:- Control for diesel engine comprising - Automatic/Manual sector switch &amp; 3 attempts starting device, timers and relays as required, push buttons, start/stop in manual mode,</p>					
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<p>Indicating lamp for high/ Low Lub. Oil pressure, High Water Temp and Engine on indication, Battery with Battery charger suitable for 12V/24 V DC with boost and trickle selector switch, 0-30 V DC volt meter, and 0-20 A DC Ammeter, All standard relays and accessories for automatic operation of diesel engine, System Controller, Designing, Supply, Installation Testing and commissioning of system controller to control operation of main electric fire pump, diesel pump, Pressurization pump, Terrace pump in sequence as per specification consisting of relays, timers. Sensors, annunciation window for fault indication, complete as per specification, TERRACE PUMP:- Supplying, Installation, Testing and Commissioning of Control Panel suitable for automatic operation of firefighting pump consisting (Terrace pump):- (a) Necessary cabling, wiring, earthing from panel to individual equipment shall be included in the quoted price.(b) Facility for more selections i.e auto or manual.(c) Protection failure and control cabling.(d) interlocking of pressure switch with pumps, Major component of panel are as under :63A FP MCB with soft starter, single phasing preventor, With push button, On, off, trip indication lamp, space heater with thermostat, cooling exhaust fan</p>					
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126	Supplying and fixing of fire brigade connection of cast iron body with gun metal male instantaneous inlet couplings complete 150 mm butterfly valve, Flanges etc with cap and chain as reqd. for suitable dia MS pipe connection conforming to IS 904 as required :4 way-150 mm dia M.S. Pipe	1.00	Each		0.00	INR Zero Only
127	Providing and fixing fire brigade suction hose coupling (draw out connection) with nut for female coupling as per IS-902 complete with 100mm dia. Suction pipe and foot valve (to be connected to static tank) complete as required and as per enclosed specification.	1.00	Each		0.00	INR Zero Only
128	Providing & fixing of pressure switch in M.S. pipe line including connection etc. as required.	1.00	Each		0.00	INR Zero Only
129	Supplying and fixing single headed internal hydrant valve with instantaneous Stainless Steel coupling of 63 mm dia with cast iron wheel ISI marked conforming to IS 5290 (Type -A) with blank Gunmetal/Stainless Steel cap and chain as required :- Single headed Stainless steel/GM	5.00	Each		0.00	INR Zero Only
130	Supplying & fixing 63 mm dia short branch pipe with 20 mm nominal internal diameter size nozzle conforming to IS 903 suitable for instantaneous connection to interconnect hose pipe coupling as required :-Stainless Steel (Grade 304)/GM	5.00	Each		0.00	INR Zero Only
131	Supplying and fixing 63 mm dia, 15 m long RRL hose pipe with 63 mm dia male and female couplings duly bound with GI wire, rivets etc. conforming to IS 636 (type-A) as required :-Stainless Steel (Grade 304)/GM	10.00	Each		0.00	INR Zero Only

132	<p>Supplying and fixing first-aid Hose Reel compact type with MS construction spray painted in post office red, conforming to IS 884 complete with the following as required.</p> <p>20 mm nominal internal dia water hose thermoplastic (Textile reinforced) type -2 as per IS: 12585.</p> <p>20 mm nominal internal dia gun metal globe valve &amp; nozzle.</p> <p>Drum and brackets for fixing the equipments on wall.</p> <p>Connections from riser with 25 mm dia stop gun metal valve &amp; M.S. Pipe and socket &amp; flanges.</p>	10.00	Each		0.00	INR Zero Only
133	<p>Providing and fixing stainless steel standard fireman's axe with heavy insulated rubber handle tested to 20000 volts as per IS : 926 complete.</p>	6.00	Each		0.00	INR Zero Only
134	<p>Providing &amp; fixing of MS fire Hose cabinet outdoor type of size 0.90 Mx 0.60 Mx 0.50 M made of 6mm thick MS sheet with 6mm thick glazed glass doors i/c necessary locking arrangement suitable to accomodate 2nos 15m long hoses, one no branch pipe, etc. and mounted on 400 mm height agle . The cabinet shall be painted with red colour shade No. 536 of IS: 5 externally &amp; white internally complete in all respects for internal hydrant and as per enclosed specification.</p>	6.00	Each		0.00	INR Zero Only
135	<p><b>PIPES &amp; VALVES</b> Providing, laying, testing &amp; commissioning of 'C' class heavy duty MS pipe conforming to IS 3589/IS 1239 including Welding, fittings like elbows, tees, flanges, tapers, nuts bolts, gaskets etc. and fixing the pipe on the wall/ceiling with suitable clamp/support frame and painting with two or more coats of synthetic enamel paint of required shade complete as required. NOTE : Pipe upto dia 50 mm should be threaded/Socket weld forge fitting.</p>					

135.1	25mm Dia	5.00	Mtr.		0.00	INR Zero Only
135.2	32mm dia	5.00	Mtr.		0.00	INR Zero Only
135.3	40mm dia	5.00	Mtr.		0.00	INR Zero Only
135.4	50mm dia	5.00	Mtr.		0.00	INR Zero Only
135.5	65mm dia	5.00	Mtr.		0.00	INR Zero Only
135.6	80mm dia	40.00	Mtr.		0.00	INR Zero Only
135.7	100mm dia	40.00	Mtr.		0.00	INR Zero Only
135.8	150mm dia	15.00	Mtr.		0.00	INR Zero Only
135.9	200mm dia (Wall Thicknes 6.3 mm)	45.00	Mtr.		0.00	INR Zero Only
136	Laying, testing & commissioning of 4 mm thick tape over 'C' class heavy duty MS pipe 150 mm Dia including pipes to be laid underground in 1 mtr below from ground and holiday test check as per IS:10221 complete as required as per approved.:-	5.00	Mtr.		0.00	INR Zero Only
137	Supplying, fixing, testing and commissioning of butterfly valve of PN 1.6 rating with gunmetal seat duly ISI marked complete with nuts, bolts, washers, gaskets conforming to IS 13095 of following sizes as required :					
137.1	200 mm dia (Gear Operated)	2.00	Each		0.00	INR Zero Only
137.2	150mm dia.	5.00	Each		0.00	INR Zero Only
137.3	100mm dia.	2.00	Each		0.00	INR Zero Only
137.4	80mm dia.	1.00	Each		0.00	INR Zero Only
137.5	65 mm dia.	1.00	Each		0.00	INR Zero Only
138	Providing, installation, testing and commissioning of non-return valve of following sizes confirming to IS: 5312 complete with rubber gasket, GI bolts, nuts, washers etc.as required :					
138.1	200mm dia	1.00	Each		0.00	INR Zero Only
138.2	150 mm dia.	2.00	Each		0.00	INR Zero Only
138.	65 mm dia.	1.00	Each		0.00	INR Zero

3						Only
139	Providing, fixing, testing and commissioning forged brass ball valve full bore type with steel handle and teflon seat tested for 20 kg/cm <sup>2</sup> .					
139.1	25 mm nominal bore	1.00	Each		0.00	INR Zero Only
139.2	50 mm nominal bore	1.00	Each		0.00	INR Zero Only
140	Providing, installation, testing and commissioning of stainless steel Y-strainer fabricated out of 1.6 mm thick stainless steel, Grade 304, sheet with 3 mm dia holes with stainless steel flange.					
140.1	200 mm dia.	2.00	Each		0.00	INR Zero Only
140.2	80 mm dia.	1.00	Each		0.00	INR Zero Only
141	Providing & fixing of 25mm dia. gunmetal air release valve with all fittings and forged ball valve on header complete as required and as per enclosed specification rated for (0-15 Kg/Cm <sup>2</sup> ) pressure rating.	3.00	Each		0.00	INR Zero Only
142	Providing and fixing 150mm Dia Pressure gauge (0-15 Kg/Cm <sup>2</sup> ) complete with shut off valve duly calibrated before installation complete as required & as per enclosed specification.	4.00	Each		0.00	INR Zero Only
143	Providing, fixing, testing & commissioning of MS air cushion tank 6mm thick MS plate, 250 mm in diameter and 1.2 m in height with dished ends fabricated from 8mm thick MS plate with Air release valve with stop cock, flanged inlet connection and drain arrangement with 25mm dia valve, pressure gauge with gun metal stop cock complete with all accessories as required and conforming to IS 4736-1968.	1.00	Each		0.00	INR Zero Only

144	Providing, fixing, testing & commissioning of precharged double flanged vertical MS air vessel fabricated from 10 mm thick MS plate with dished ends fabricated from 10 mm thick MS plate common for pumps at drop of pressure including 50 / 80 mm dia inlet with isolating valve duly painted from inside and outside complete as required with Air release valve with stop cock, flanged inlet connection and drain arrangement with 25mm dia valve, pressure gauge with gun metal stop cock complete with all accessories as required and conforming to IS 4736-1968.					
144.1	Pressure Vessel for Fire Pump room Recommended dia. : 450 mm Height of shell : 2000mm Working pressure : 10 Kg/Sq.cm Test Pressure : 15 Kg/Sq.cm	1.00	Set		0.00	INR Zero Only
144.2	For Terrace Pump Recommended dia. : 250 mm Height of shell : 1.2mm Working pressure : 10 Kg/Sq.cm Test Pressure : 15 Kg/Sq.cm	1.00	Set		0.00	INR Zero Only
145	Providing & fixing of Safety valve complete as per direction of Engineer incharge.-:25 mm dia	1.00	Each		0.00	INR Zero Only
146	Providing and fixing reinforced neoprene rubber vibration eliminators/expansion joints (to provide relief from stresses at pipe flanges) suitable for upto 20 kg/cm <sup>2</sup> pressure, complete as per specification.					
146.1	150mm dia.	4.00	Each		0.00	INR Zero Only
146.2	80mm dia.	2.00	Each		0.00	INR Zero Only
146.3	65 mm dia.	1.00	Each		0.00	INR Zero Only
147	Providing and fixing cable for Pump to MCC Panel including necessary support clamps at ceiling level and connection legs complete in all respects.					
147.1	3Cx4 sqmm PVC Armoured Cu Wire	50.00	Rm		0.00	INR Zero Only
147.	3Cx50 sqmm PVC XLPE armoured Cu	50.00	Rm		0.00	INR Zero

2	Cable					Only
147.3	3Cx1.5 sqmm PVC Armoured Cu Wire	50.00	Rm		0.00	INR Zero Only
148	Providing and fixing GI Earthing strip of Size 25 x 6mm for higher size motors and MCC panels to be connected in as approved manner to the general earthing system complete.	50.00	Rm		0.00	INR Zero Only
149	Supply of Perforated GI Cable Tray (1.6 mm thickness) for Pump Room					
149.1	300 mm (50 mm depth)	50.00	Metre		0.00	INR Zero Only
149.2	150 mm (50 mm depth)	50.00	Metre		0.00	INR Zero Only
150	Supply, installation, testing and commissioning ISI marked (IS:15683) Fire Extinguisher, Carbon-di-oxide type capacity 4.5 Kg. Flat base including valve, discharge hose of not less than 10 mm dia, 1M long and complete in all respects including initial fill with CO2 gas conforming to IS:307-1966 and wall suspension bracket as required as per specifications.	12.00	Each		0.00	INR Zero Only
151	Supply, installation, testing and commissioning of 6kg ABC (Powder Type) Fire Extinguisher. Mild Steel Cylinders ISI marked fitted with pressure indicating gauge, internal tube, squeeze lever type valve fully charged with ABC 90 powder (Mono Ammonium Phosphate) pressured by Nitrogen complete in all respects including wall suspension bracket and conforming to IS:15683 as required as per specifications.	12.00	Each		0.00	INR Zero Only
152	Supplying & installation of MS structure for above ground piping support or any other .	700.00	Kg		0.00	INR Zero Only
153	Providing, fixing AUTO GLOW photo luminescent Signage's as per IS standard in Block / Small Letters on rigid sheet with necessary wall or Ceiling fittings as Specified Sizes: In case of Fire, do not use lift, use staircase: 8" x 8"	6.00	Each		0.00	INR Zero Only
154	Providing, fixing AUTO GLOW photo luminescent Signage's as per IS standard in Block / Small Letters on rigid sheet with necessary wall or Ceiling fittings as Specified Sizes: Fire Equipment: 4" x 12"	6.00	Each		0.00	INR Zero Only

155	Providing, fixing AUTO GLOW photo luminescent Signage's as per IS standard in Block / Small Letters on rigid sheet with necessary wall or Ceiling fittings as Specified Sizes: Fire Exit: 4" x 12"	6.00	Each		0.00	INR Zero Only
156	Supplying, installation , testing & Commissioning of Mini Motor Siren Supply Voltage: 220V Ideal Audible Range: 200-400 Mtrs( for Main Building to make alert the building users in fire & emergency time e.t.c), as per direction of Engineer in charge.	1.00	Each		0.00	INR Zero Only
157	Wiring for light point / fan point / exhaust fan / call bell point with 1.5 Sq. mm. PVC insulated heat resistant flame retardant (HRFR) and low smoke single core (flexible) copper conductor cable in surface/recessed PVC conduit with modular switch, modular plates, suitable G.I. box and earthing the light point with 1.5 Sq.mm. HRFR/LS/PVC insulated single core copper conductor cable as required. Group-C	2.00	Point		0.00	INR Zero Only
158	Supplying, Installation, Testing & Commissioning of CCTV Camera Dome or Bullet type for Indoor Surveillance with 2 year Licence including all accessories, as per Technical specification.	10.00	Each		0.00	INR Zero Only
159	Supplying, Installation, Testing & Commissioning Supply instalation,Testing and Commissioning of Server based NVR with HDD Storage 30 days as required as per Technical specification.	1.00	Each		0.00	INR Zero Only
160	Supplying, Installation, Testing & Commissioning of L2 Type 16 Port 250 range Poe switch with 2 sfp port including 6 port liu lodaed with patch code and 1 Gig SFP with all accessories as per as per Technical specification.	1.00	Each		0.00	INR Zero Only
161	Supplying, Installation, Testing & Commissioning of L3 switch with 26 sfp and 8 combi port including 24 port LIU loaded with patch code and 9 nos 1 Gig SFP with all accessories as per Technical specification.	1.00	Each		0.00	INR Zero Only

162	Supplying, Installation, Testing & Commissioning of 6U wall mount rack including all special fittings and complete in all respects as per Technical specification.	2.00	Each		0.00	INR Zero Only
163	Supplying, Installation, Testing & Commissioning of Miscellaneous Accessories, Rack up-to 42 U or APSR, RJ 45 connectors, interfaces, Patch Cords, HDMI/VGA cable (min 4-5 meters) with connectors at both side, Jacks, Plugs, tags, identifiers, fixtures, clamps, screws, nut - bolts etc. all special fittings and complete in all respects as per Technical specification.	1.00	Each		0.00	INR Zero Only
164	Supplying, Installation, Testing & Commissioning of of Monitor 42" with all accessories as per Technical specification.	1.00	Each		0.00	INR Zero Only
165	Supplying, Installation, Testing & Commissioning of Networking Cat6 Cable including all necessary special fittings and complete in all respects as required as per Technical specification.	1000.00	Meter		0.00	INR Zero Only
166	Supply installation ,testing and commissioning of Supplying and drawing following sizes of FRLS PVC insulated copper conductor, 3 x 1.5 sq. mm as per Technical specification.	200.00	Meter		0.00	INR Zero Only
167	Supplying, Installation, Testing & Commissioning of Desktop/PC- Intel Core i5 (sixth generation or newer) or equivalent as required as per Technical specification.	1.00	Each		0.00	INR Zero Only
168	Supplying, Installation, Testing & Commissioning of UPS - 2 KVA rating including all necessary special fittings and complete in all respects as per Technical specification.	1.00	Each		0.00	INR Zero Only

**(Total Amount in words: Rupees ..... only)**

**Instructions:**

- DHARAMSHALA SMART CITY LIMITED does not guarantee the quantity for the particular line items given above. The actual quantity for the given items may vary. The payment shall be made based on unit cost quoted for the particular item on actual work/ item is undertaken/ supplied.
- All items provided should be under Insurance. The Insurance should be for entire duration of the Project including operation and maintenance period

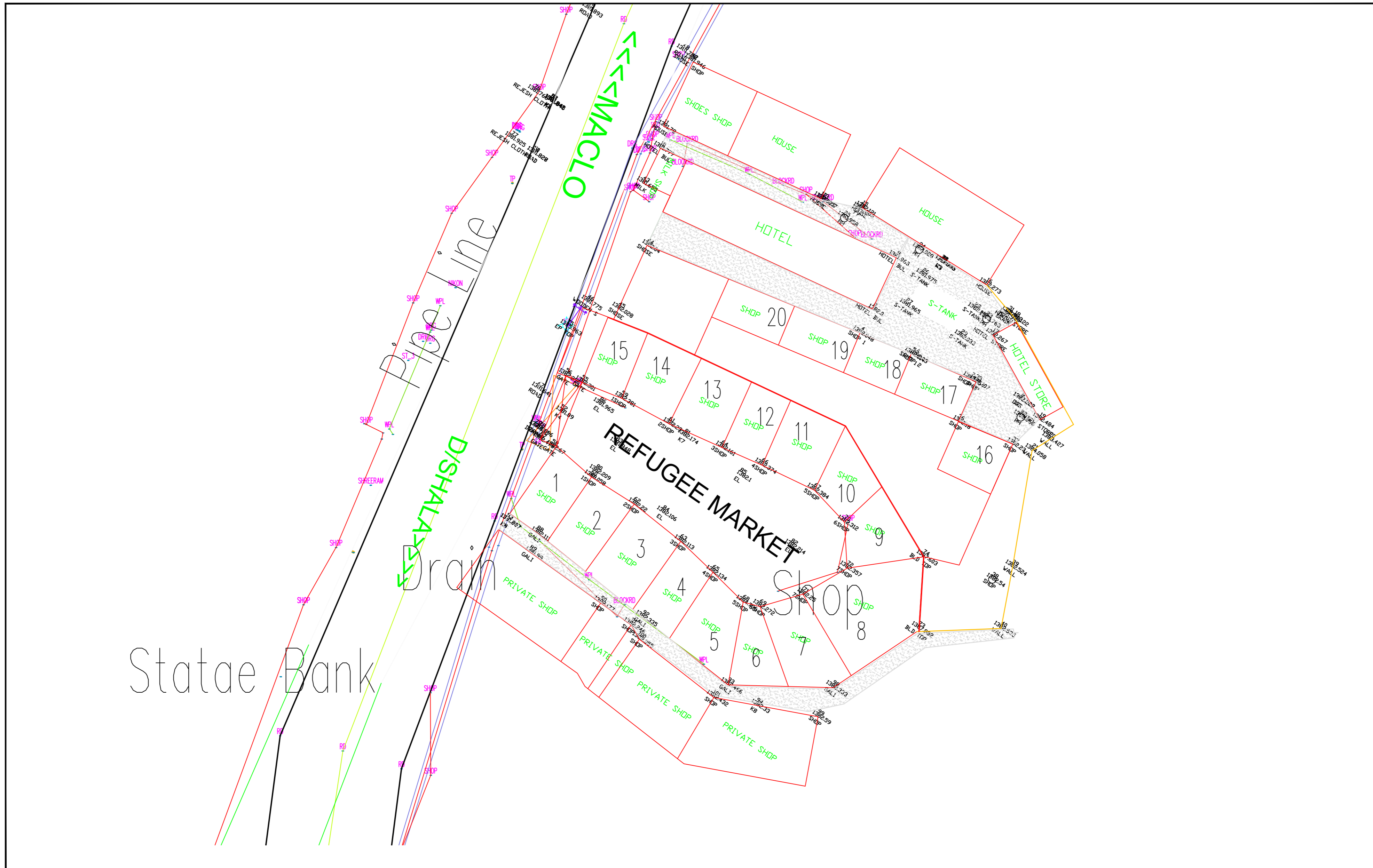


- and comprehensive covering damages for Theft, Fire, Natural Calamities, Riots and Terrorists activities etc as per clause 1.9.
- c) All the prices are to be entered in Indian Rupees only in figures and words.
  - d) DHARAMSHALA SMART CITY LIMITED reserves the right to ask the Bidder to submit proof of payment against any of the taxes, duties, levies indicated.
  - e) Rates to be quoted in considering that all the items and services to be provided at the locations provided by DHARAMSHALA SMART CITY LIMITED.
  - f) The rates quoted shall include all Taxes including GST, Duties and Levies. Standard deductions will be made in the invoices as per the prevailing practice.
  - g) The rate shall be quoted inclusive of all leads and lifts and other incidentals for the completion of each item of work. Cost of any dewatering, slush removal, shoring and strutting, removal of stumps and placing concrete in/under water is deemed to be included in the respective items. No additional cost will be allowed in this regard.
  - h) The contractor has to arrange suitable dumping site for unserviceable material, excess earth and debris at his own risk and cost.
  - i) All useful materials will have to be dealt with as per Clause 3.14.
  - j) The bidder should refer the RFP document for details on the technical requirements of the items of work and the benchmark specifications for the items mentioned in the financial formats.
  - k) Any component/ fixtures/ ancillary/ adjunct to the specified item shall be deemed to have been included in the unit rates quoted above.

## **SECTION – 5: DRAWINGS**

LIST OF DRAWINGS

S. NO.	ARCHITECTURE DRAWINGS	DRAWING NO.	NO. OF SHEET
1	SURVEY DRAWING OF REFUGEE MARKET	AGICL-DSCL-RMSC-SV-001	1
1.1	BASEMENT PLAN	AGICL-DSCL-ARCH-RMSC-001	1
1.2	UPPER GROUND FLOOR	AGICL-DSCL-ARCH-RMSC-002	1
1.3	FIRST FLOOR PLAN	AGICL-DSCL-ARCH-RMSC-003	1
1.4	2ND FLOOR PLAN	AGICL-DSCL-ARCH-RMSC-004	1
1.5	ROOF PLAN	AGICL-DSCL-ARCH-RMSC-005	1
1.6	SECTION Y-Y	AGICL-DSCL-ARCH-RMSC-006	1
<b>STRUCTURE DRAWINGS</b>			
2	LAYOUT OF RAFT & SECTIONAL DETAILS	AGICL-DSCL-CV-ST-RM-001	1
2.1	LAYOUT OF COLUMN & SECTIONAL DETAILS	AGICL-DSCL-CV-ST-RM-002	1
2.2	LAYOUT OF GROUND FLOOR BEAM & SLAB REINFORCEMENT	AGICL-DSCL-CV-ST-RM-003	1
2.3	BEAM SECTIONAL DETAILS OF GROUND FLOOR	AGICL-DSCL-CV-ST-RM-004	1
2.4	BEAM LAYOUT OF FIRST FLOOR & SLAB REINFORCEMENT	AGICL-DSCL-CV-ST-RM-005	1
2.5	BEAM SECTIONAL DETAILS OF FIRST FLOOR	AGICL-DSCL-CV-ST-RM-006	1
2.6	BEAM LAYOUT OF 2ND FLOOR & SLAB REINFORCEMENT	AGICL-DSCL-CV-ST-RM-007	1
2.7	BEAM SECTIONAL DETAILS OF 2ND FLOOR	AGICL-DSCL-CV-ST-RM-008	1
2.8	LAYOUT OF ROOF BEAM & SECTIONAL DETAILS	AGICL-DSCL-CV-ST-RM-009	1
2.9	ROOF TRUSS SECTIONAL DETAILS	AGICL-DSCL-CV-ST-RM-010	1
3.0	PLAN OF STAIRCASE	AGICL-DSCL-CV-ST-RM-011	1
3.1	SECTION OF STAIRCASE & REINFORCEMENT DETAIL	AGICL-DSCL-CV-ST-RM-012	1



DATE	REV	DESCRIPTION OF REVISIONS	BY

**CLIENT:**



Step Forward to a Smart Neighbourhood  
**Divine Dharamshala**  
 SMART CITY PROPOSAL  
**Dharamshala Smart City Ltd. (DSCL)**

**PROJECT MANAGEMENT CONSULTANT:**



**ELP**  
 CONSULTING ENGINEERS

**IN JOINT VENTURE WITH**



**almondz**  
 the infrastructure specialist

**PROJECT:**

**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

**STATUS**

APPROVED BY:	AKS
CHECKED BY:	R.S
DESIGNED BY:	R.S
DRAWING BY:	A.S

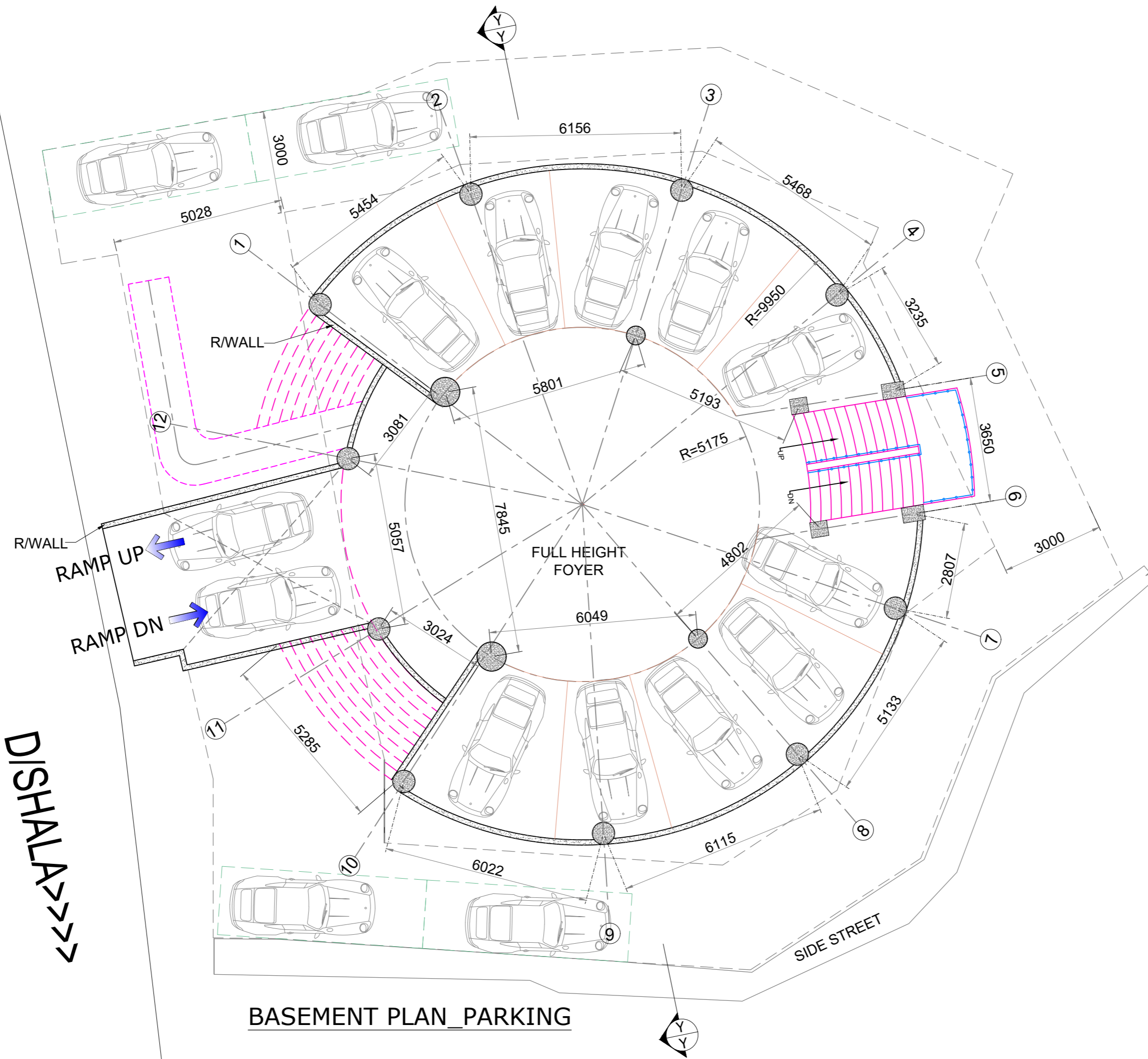
**DRAWING TITLE :**

**SURVEY DRAWING OF REFUGEE MARKET**

DATE:	DRG. NO.	REV.
DEC-2021	AGICL-DSCL-RMSC-SV-001	

MACLO

DISHALA



BASEMENT PLAN\_PARKING

ACTUAL PLOT AREA = 626 SQ.M PERMISSIBLE FAR = 1.75 PERMISSIBLE BUILT UP AREA = 626X1.75= 1096 SQ.M PERMISSIBLE HEIGHT = 21 M.
DEDUCTIONS: CENTRAL FOYER = 31.17 SQ.M ENTRY LOBBY = 19.45 SQ.M WASH RM & STAIR = 27 SQ.M GROUND WASH ROOM AREA = 13 SQ.M
TOTAL BUILTUP AREA = (GF.+ 1ST F.+ 2ND F.) AREA = 256.13 + 223.16+ 214.13 = 693 SQM. PROPOSED FAR = 693/626 =1.10 REQUIRED NO OF PARKING = 693 x $\frac{1.5}{100}$ = 10 NO.

1. ALL DIMENSIONS ARE IN METERS.
2. PLEASE DO NOT SCALE. WORK TO DIMENSIONS ONLY.
3. THESE DRAWINGS ARE INDICATIVE ONLY FOR TENDER PURPOSE ONLY AND MINOR DISCREPANCIES CAN BE CHANGED AS/ CONDITION

06/12/2021 - 5:10pm  
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DATE	REV	DESCRIPTION OF REVISIONS	BY

**CLIENT:**



Step Forward to a Smart Neighbourhood  
**Dharamshala Smart City Ltd. (DSCL)**

**PROJECT MANAGEMENT CONSULTANT:**

**IN JOINT VENTURE WITH**  
 the infrastructure specialist

**PROJECT:**

**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

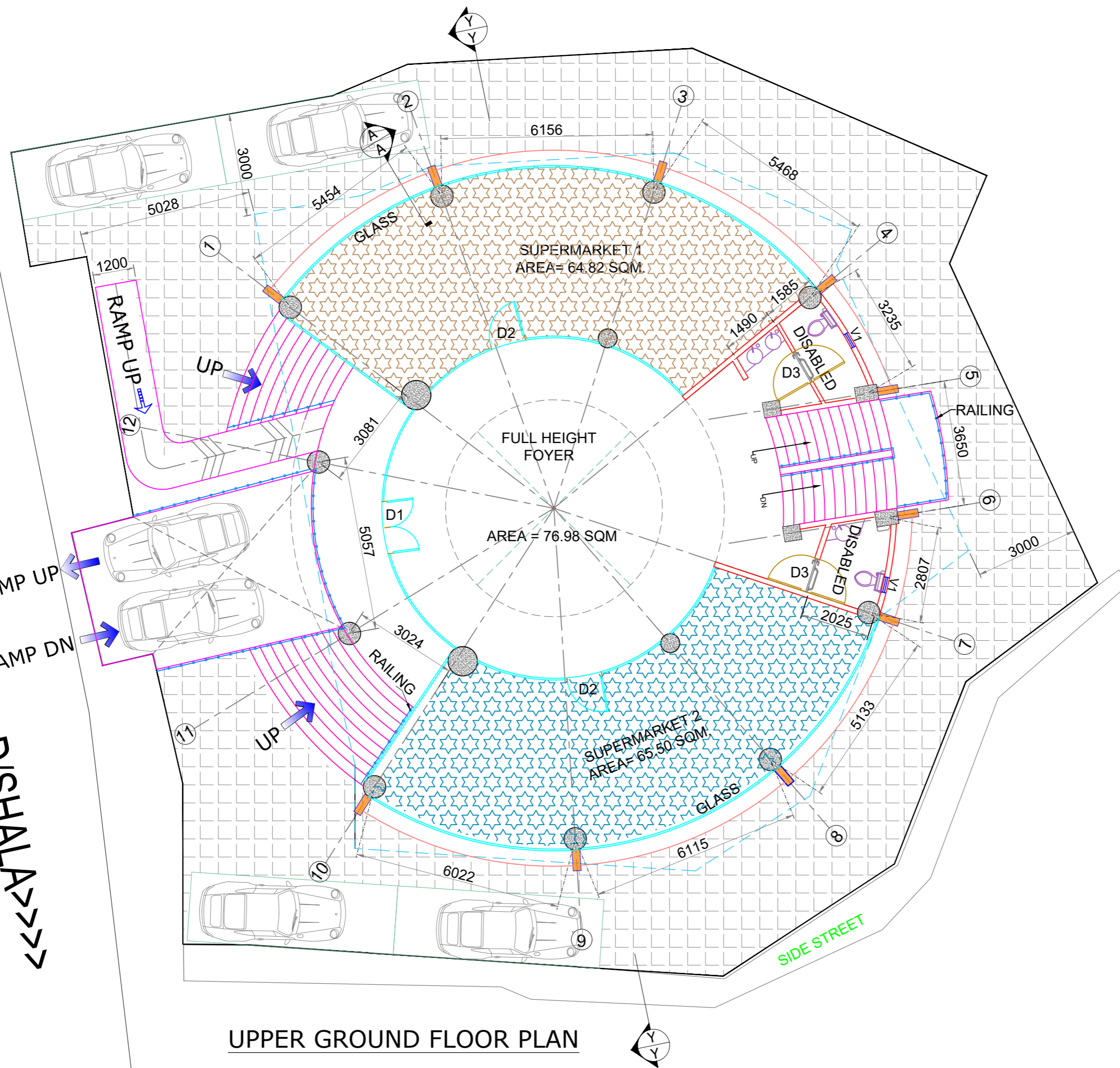
**STATUS:** TENDER DRAWING

**SCALE:** 1:100

Approved By:	DSCL	<b>DRAWING TITLE :</b>			
Lead Architect	Raza, M.				
Urban Designer	Raza, M.				
Ast. Architect	D.K				
<b>DATE:</b>	01-12-2021	<b>DRG. NO.</b>	AGICL-DSCL-ARCH-RMSC-001	<b>REV.</b>	<b>R0</b>

MACLO

DISHALA



UPPER GROUND FLOOR PLAN

DOOR / WINDOW SCHEDULE						
S.N.	MRKD	W x L	LINTEL	SILL	DESCRIPTION	REMARK
1.	D1	1500 x 2400	2400	-	DOUBLE LEAF DOOR	GLASS
2.	D2	1000 x 2100	2100	-	SINGLE LEAF DOOR	GLASS
3.	D3	900 x 2100	2100	-	SINGLE LEAF DOOR	WOODEN
4.	D4	750 x 1200	2100	-	SINGLE LEAF DOOR	
5.	V1	450 x 450	---	2400	OPENABLE GLAZING GLASS	
6.	RS	AS/ PLAN	3000		MS LATH SECTION ROLLING SHUTTER	

ACTUAL PLOT AREA = 626 SQ.M  
 PERMISSIBLE FAR = 1.75  
 PERMISSIBLE BUILT UP AREA = 626X1.75= 1096 SQ.M  
 PERMISSIBLE HEIGHT = 21 M.

DEDUCTIONS:  
 CENTRAL FOYER = 31.17 SQ.M  
 ENTRY LOBBY = 19.45 SQ.M  
 WASH RM & STAIR = 27 SQ.M  
 GROUND WASH ROOM AREA = 13 SQ.M

TOTAL BUILTUP AREA =  
 (GF.+ 1ST F.+ 2ND F.) AREA  
 = 256.13 + 223.16+ 214.13 = 693 SQM.  
 PROPOSED FAR = 693/626 = 1.10  
 REQUIRED NO OF PARKING = 693 x  $\frac{1}{100}$  = 10 NO.

1. ALL DIMENSIONS ARE IN METERS.
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DATE	REV	DESCRIPTION OF REVISIONS	BY

CLIENT:



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 SMART CITY PROPOSAL  
 Dharamshala Smart City Ltd. (DSCL)

PROJECT MANAGEMENT CONSULTANT:



IN JOINT VENTURE WITH  
 almondz the infrastructure specialist

PROJECT:

REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.

STATUS: TENDER DRAWING

SCALE: 1:100

Approved By: DSCL

Lead Architect: Raza, M.

Urban Designer: Raza, M.

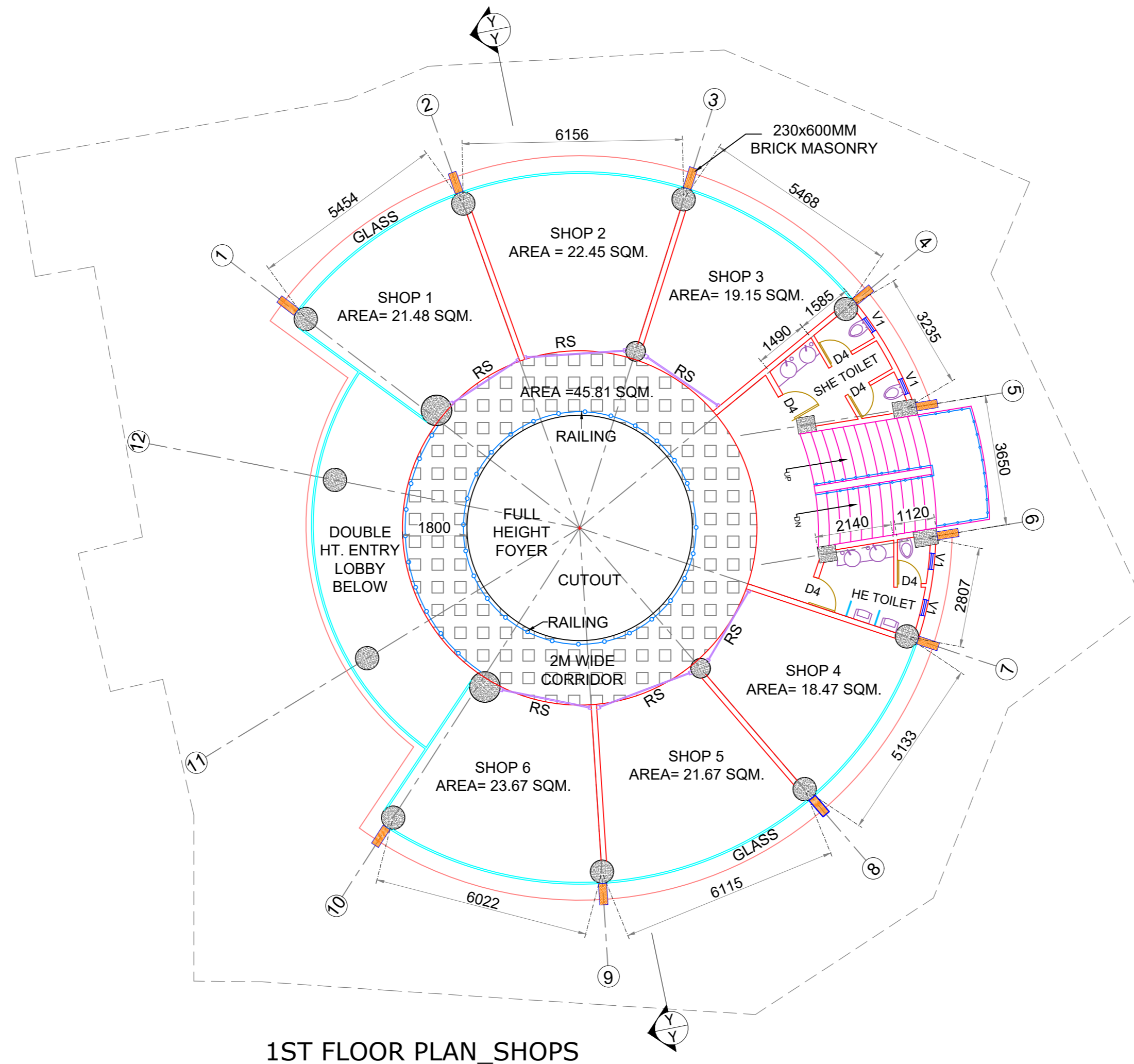
Ast. Architect: D.K

DRAWING TITLE: UPPER GROUND FLOOR

DATE: 01-12-2021

DRG. NO. AGICL-DSCL-ARCH-RMSC-002

REV. R0



1ST FLOOR PLAN\_SHOPS

1. ALL DIMENSIONS ARE IN METERS.
2. PLEASE DO NOT SCALE. WORK TO DIMENSIONS ONLY.
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DATE	REV	DESCRIPTION OF REVISIONS	BY

**CLIENT:**



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**Dharamshala Smart City Ltd. (DSCL)**

**PROJECT MANAGEMENT CONSULTANT:**



**ILF CONSULTING ENGINEERS**  
**almondz**  
*the infrastructure specialist*

**PROJECT:**

**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

**STATUS:** TENDER DRAWING

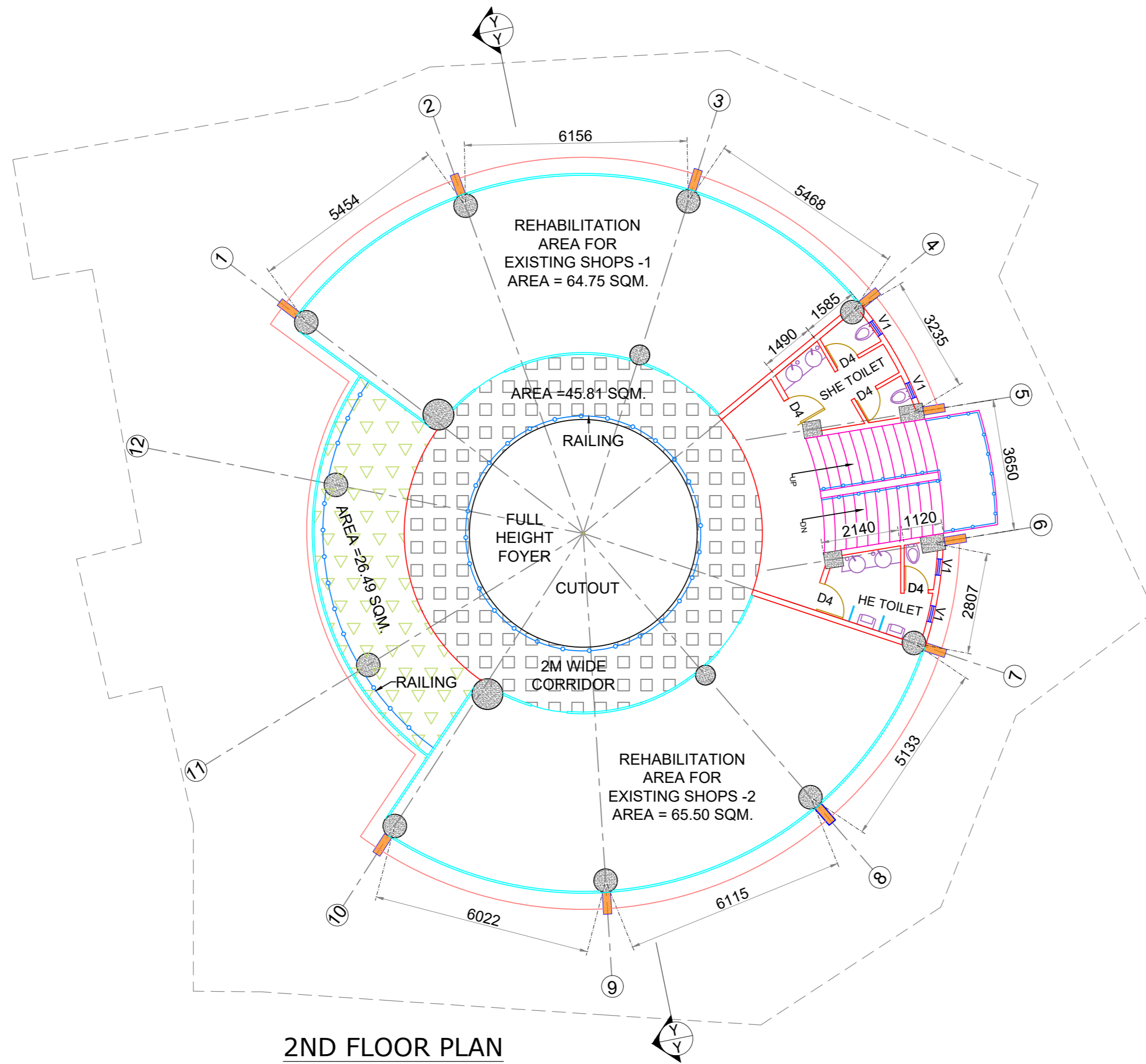
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Approved By:	DSCL
Lead Architect	Raza, M.
Urban Designer	Raza, M.
Ast. Architect	D.K

<b>DRAWING TITLE :</b>	
FIRST FLOOR PLAN	
<b>DRG. NO.</b>	AGICL-DSCL-ARCH-RMSC-003
<b>DATE:</b>	01-12-2021
<b>REV.</b>	<b>R0</b>

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2ND FLOOR PLAN

1. ALL DIMENSIONS ARE IN METERS.
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DATE	REV	DESCRIPTION OF REVISIONS	BY

**CLIENT:**



**Dharamshala Smart City Ltd. (DSCL)**

**PROJECT MANAGEMENT CONSULTANT:**




**ILF CONSULTING ENGINEERS** IN JOINT VENTURE WITH **ALMONDZ** the infrastructure specialist

**PROJECT:**

**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

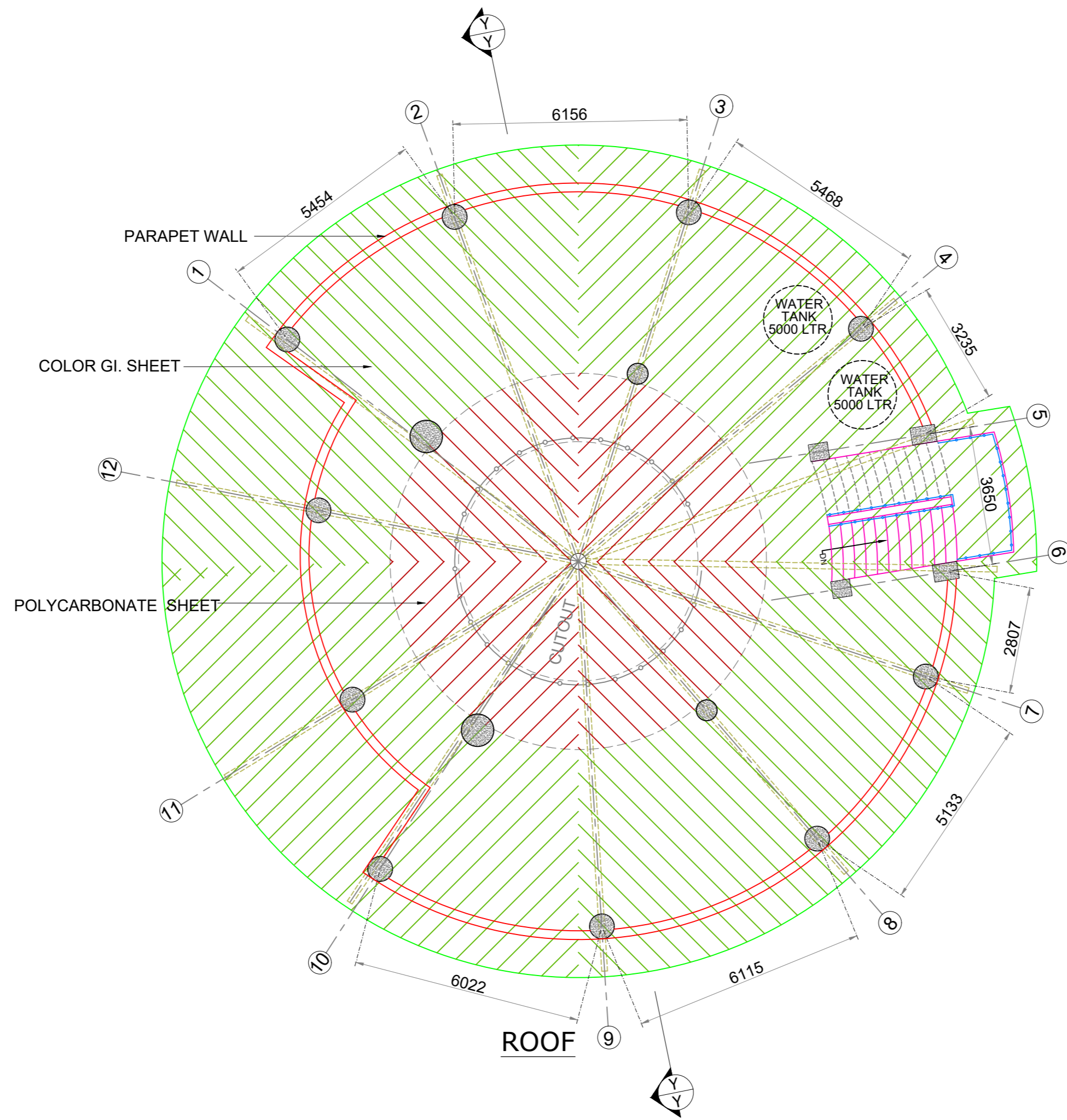
**STATUS:** TENDER DRAWING

**SCALE:** 1:100

Approved By:	DSCL
Lead Architect	Raza, M.
Urban Designer	Raza, M.
Ast. Architect	D.K

<b>DRAWING TITLE :</b>	
2ND FLOOR PLAN	
DATE:	DRG. NO.
01-12-2021	AGICL-DSCL-ARCH-RMSC-004
REV.	RO





1. ALL DIMENSIONS ARE IN METERS.
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**CLIENT:**




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SMART CITY PROPOSAL  
**Dharamshala Smart City Ltd. (DSCL)**

**PROJECT MANAGEMENT CONSULTANT:**



**IN JOINT VENTURE WITH**



**PROJECT:**

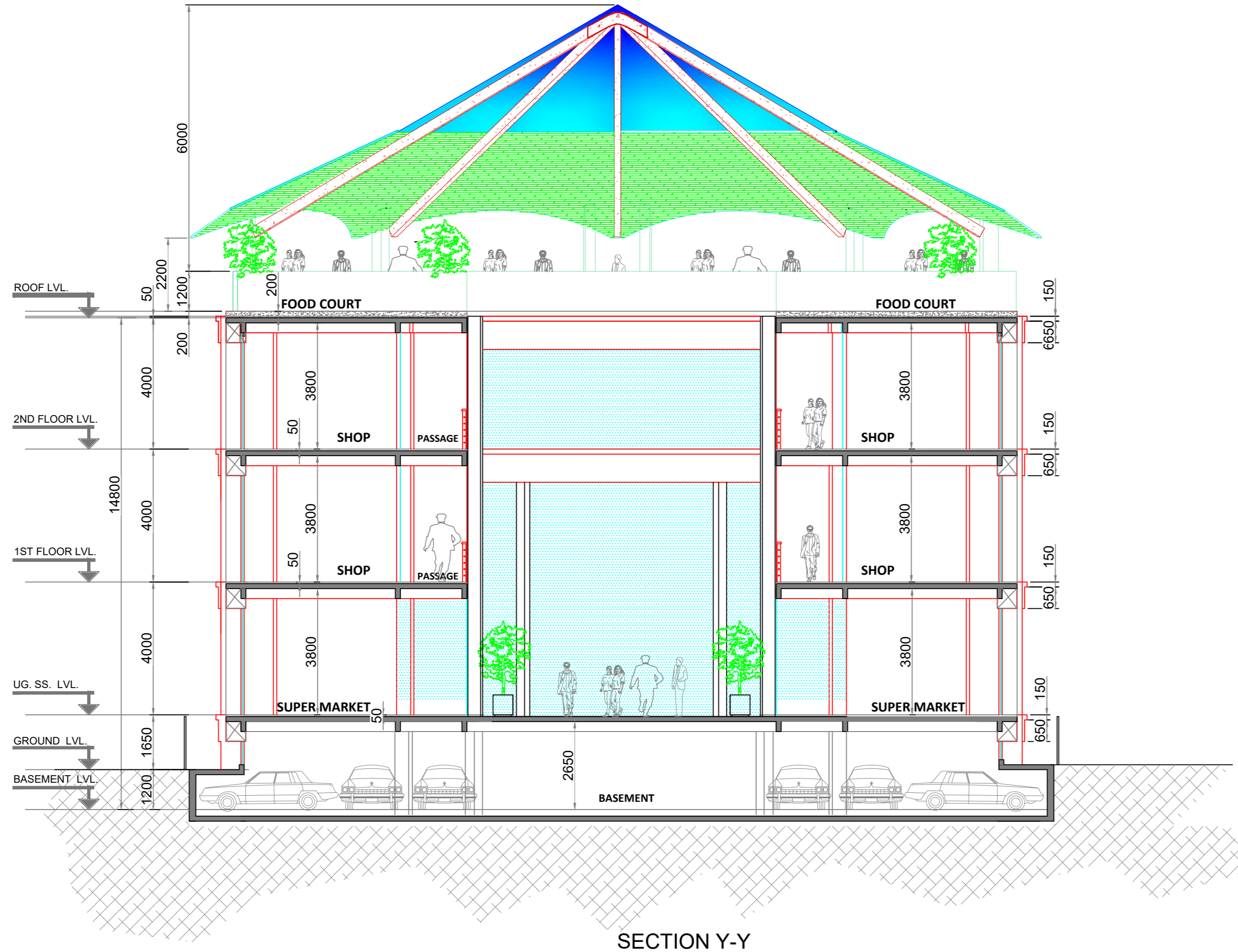
**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

**STATUS:** TENDER DRAWING

**SCALE:** 1:100

Approved By:	DSCL
Lead Architect	Raza, M.
Urban Designer	Raza, M.
Ast. Architect	D.K

<b>DRAWING TITLE :</b>	
ROOF PLAN	
DATE:	01-12-2021
DRG. NO.	AGICL-DSCL-ARCH-RMSC-005
REV.	<b>RO</b>



SECTION Y-Y

1. ALL DIMENSIONS ARE IN METERS.
2. PLEASE DO NOT SCALE. WORK TO DIMENSIONS ONLY.
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DATE	REV	DESCRIPTION OF REVISIONS	BY

**CLIENT:**




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Dharamshala Smart City Ltd. (DSCL)

**PROJECT MANAGEMENT CONSULTANT:**



**IN JOINT VENTURE WITH**



**PROJECT:**

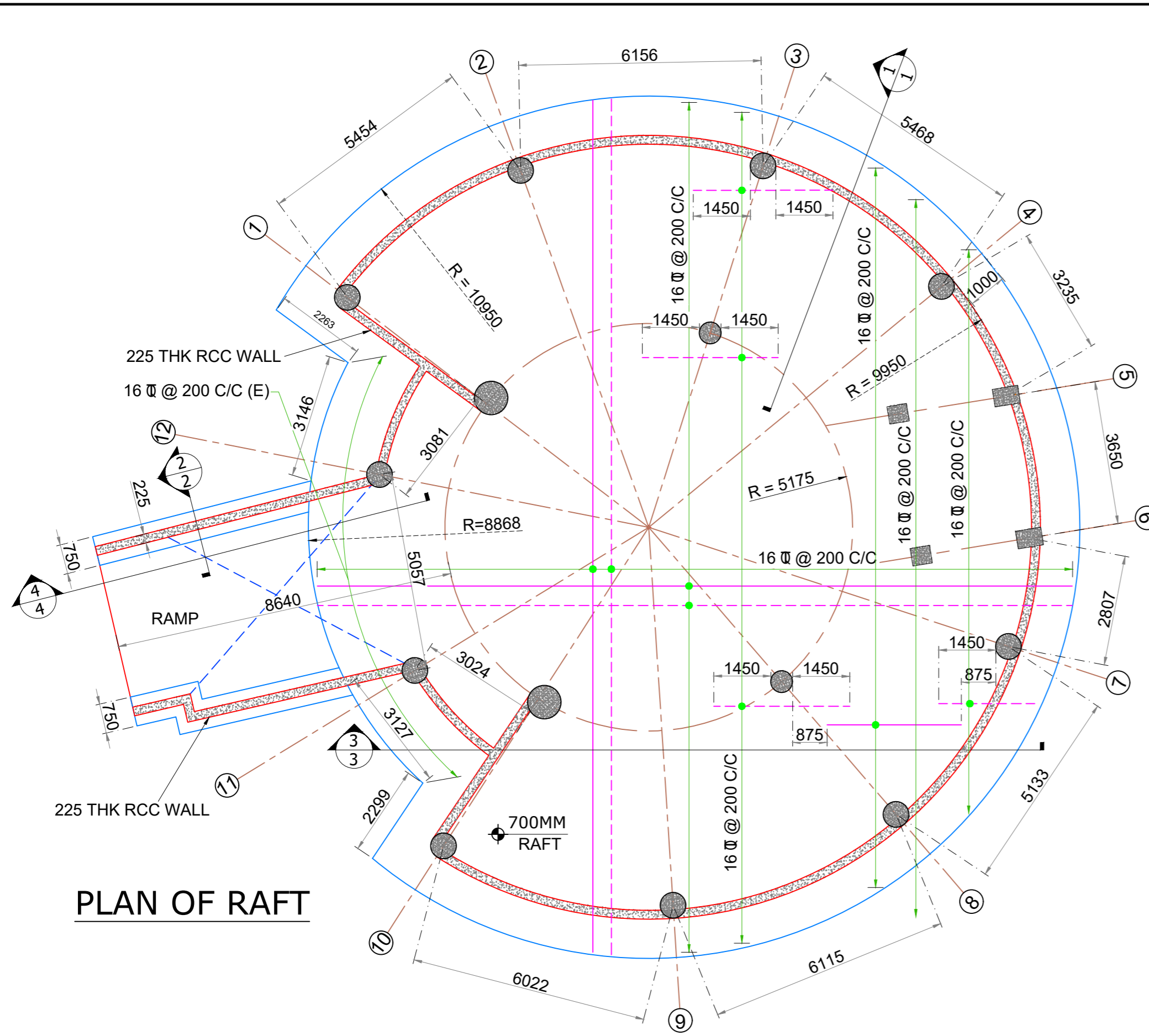
**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

**STATUS:** TENDER DRAWING

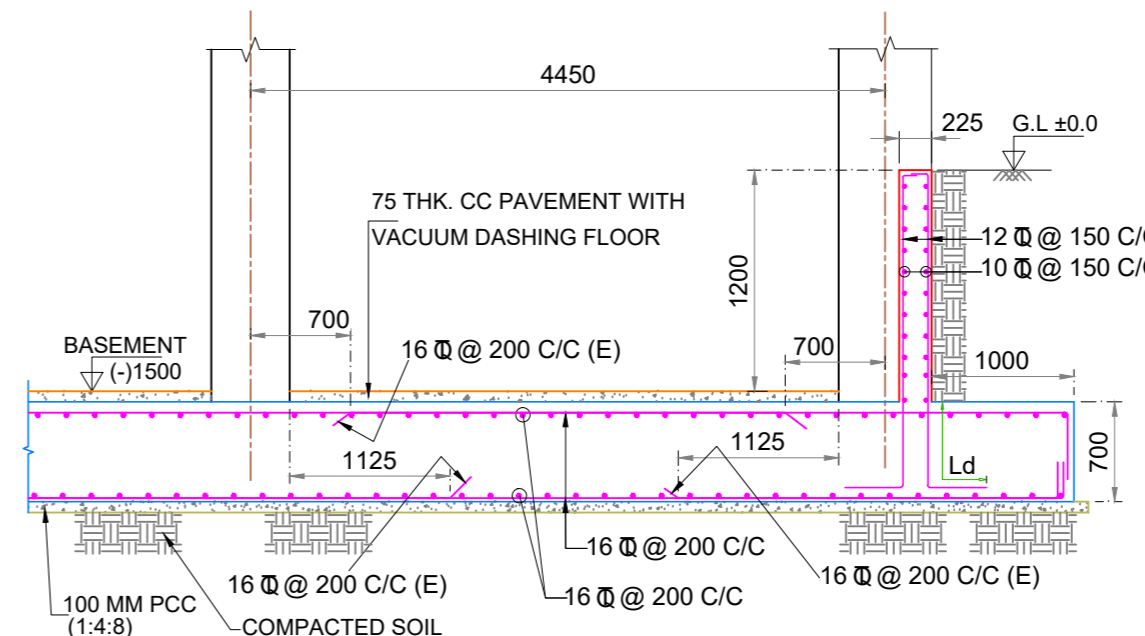
**SCALE:** 1:100

Approved By:	DSCL
Lead Architect	Raza, M.
Urban Designer	Raza, M.
Ast. Architect	D.K

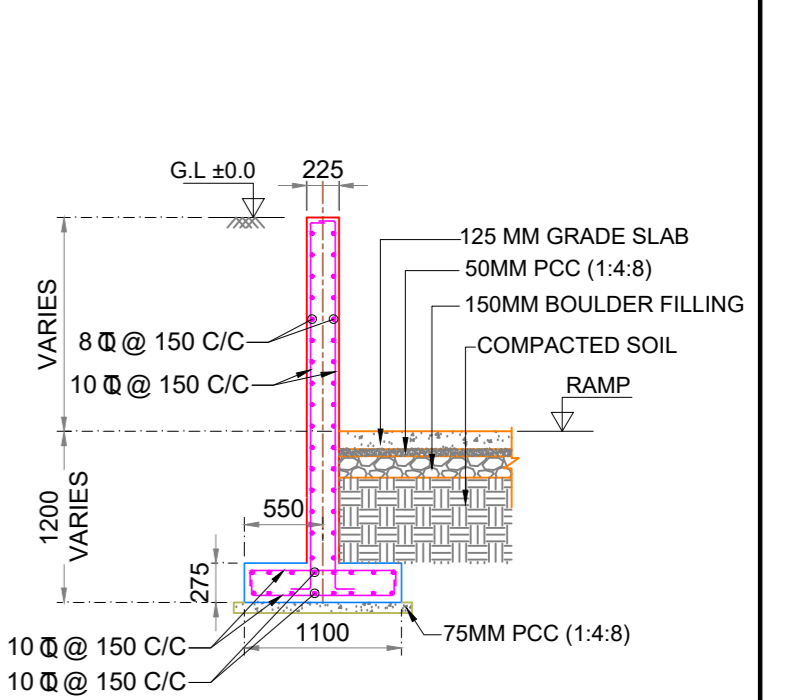
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SECTION Y-Y	
DRG. NO.	AGICL-DSCL-ARCH-RMSC-006
DATE:	01-12-2021
REV.	00



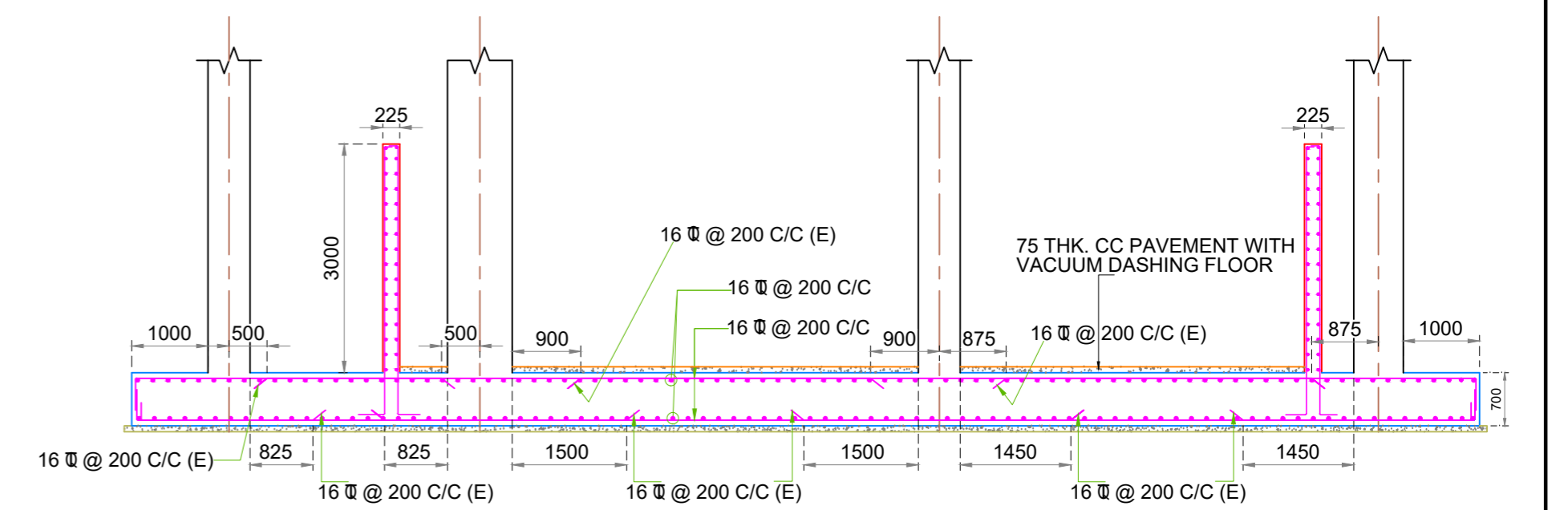
PLAN OF RAFT



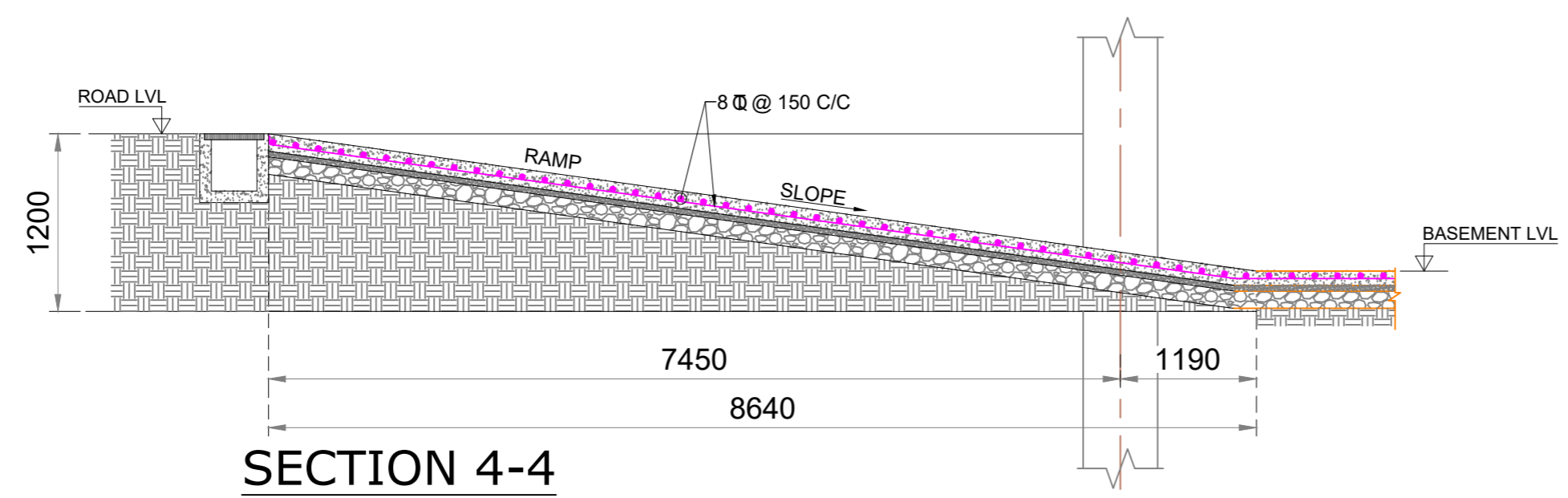
SECTION 1-1



SECTION 2-2



SECTION 3-3



SECTION 4-4

- GENERAL NOTES**
1. ALL DIMENSIONS ARE IN MILLIMETERS AND ELEVATIONS ARE IN METERS.
  2. PLEASE DO NOT SCALE. WORK TO DIMENSIONS ONLY.
  3. ALL STRUCTURAL DRAWINGS ARE TO BE FOLLOWED IN CONJUNCTION WITH ARCHITECT DRAWINGS. ANY DISCREPANCY SHALL BE GOT CLARIFIED BEFORE EXECUTION.
  4. ALL RCC SHALL BE OF CONTROLLED GRADE M30 IN ACCORDANCE WITH IS:456 UNLESS NOTED OTHERWISE.
  5. ALL REINFORCEMENT SHALL BE HIGH YIELD STRENGTH DEFORMED BAR OF GRADE Fe550D CONFORMING TO IS:1786.
  6. LAP LENGTH SHALL BE 50 TIMES THE DIAMETER OF SMALLER BAR BEING LAPPED.
  7. COVER TO REINFORCEMENT:-  
a) RAFT BOTTOM = 75 MM b) RAFT TOP, SIDE = 50 MM  
c) RCC WALL = 40 MM
  8. DEVELOPMENT LENGTH SHALL BE 50 TIMES THE DIAMETER OF BAR.
  10. ALL REINFORCEMENT LAPPINGS SHOULD BE STAGGERED.
  11. ASSUMED SAFE BEARING CAPACITY AT -2.0M FROM NGL IS 12.1T/M<sup>2</sup>.

**LEGEND**

B/W	—	BOTH WAYS
C/C	—	CENTER TO CENTER
CL	—	CENTER LINE
(E)	—	EXTRA
Ld	—	DEVELOPMENT LENGTH
FGL	—	FINISHED GROUND LEVEL
REINF	—	REINFORCEMENT
TYP	—	TYPICAL

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DATE	REV	DESCRIPTION OF REVISIONS	BY

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Divine Dharamshala  
 Step Forward to a Smart Neighbourhood  
 SMART CITY PROPOSAL

**DHARAMSHALA SMART CITY LTD. (DSCL)**

**PROJECT MANAGEMENT CONSULTANT:**



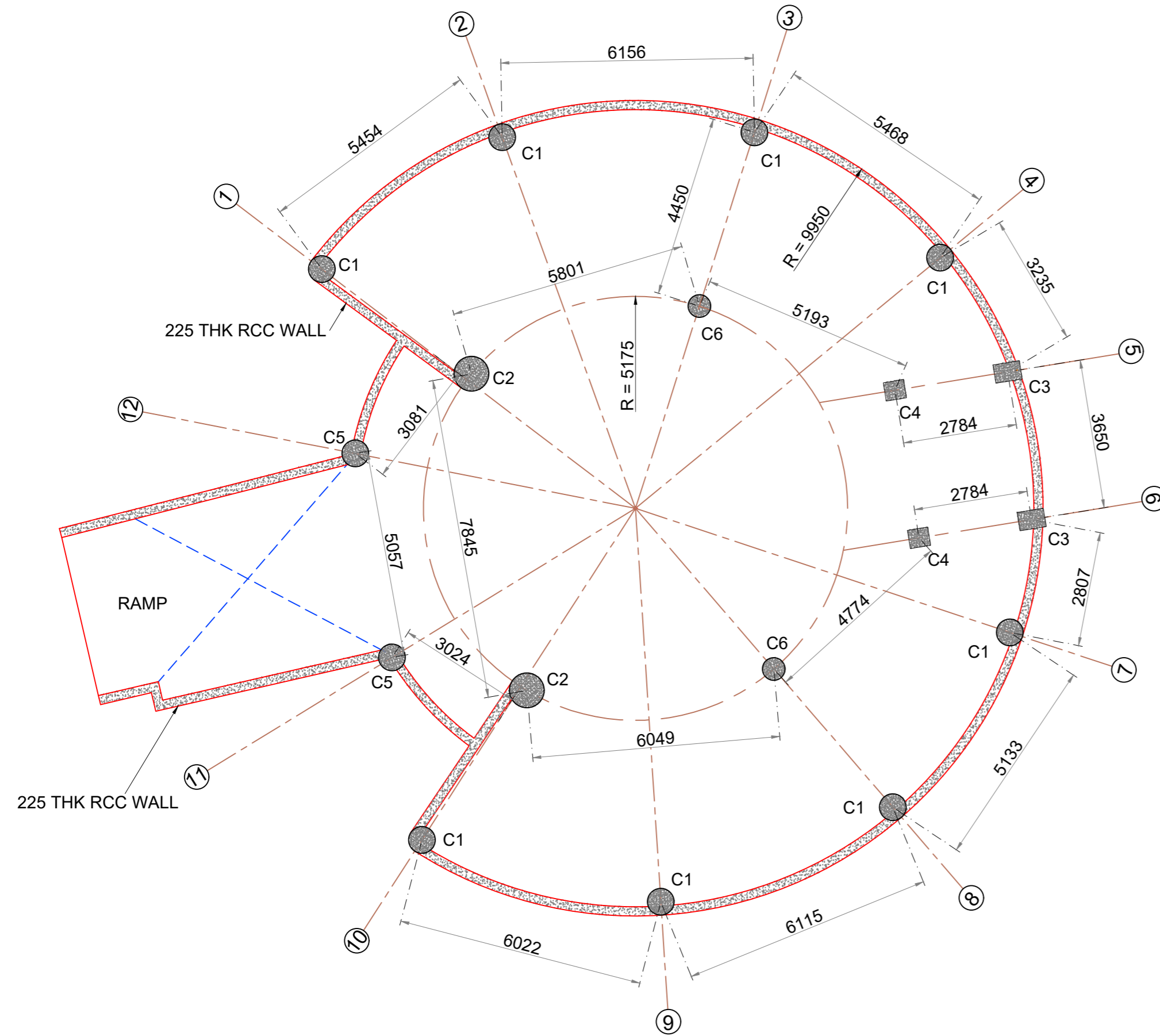

ILF CONSULTING ENGINEERS  
 IN JOINT VENTURE WITH  
 almondz the infrastructure specialist

**PROJECT:**  
**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

APPROVED BY:	A.S.
CHECKED BY:	S.A.
DESIGNED BY:	S.A.
DRAWN BY:	D.K.

**TITLE:**  
 LAYOUT OF RAFT & SECTIONAL DETAILS

<b>STATUS:</b> TENDER DRAWING	<b>SCALE:</b> A2 1:100	<b>DATE:</b> 2-12-2021	<b>DRG. NO.:</b> AGICL-DSCL-CV-ST-RM-001	<b>REV.:</b> R0
			SH. 1	



LAYOUT OF COLUMN

COLUMN SCHEDULE									
SL NOS	COLUMN MKD	COL. NOS	COLUMN SIZES	FOUNDATION TO UPPER GROUND LVL	UPPER GROUND TO SECOND LVL	SECOND LVL TO ROOF LVL	TIES SET	REMARKS	
1	C1	8	650Ø				a 8		
2	C2	2	850Ø				a 8		
3	C3	2	650 x 500				a, b, c, d 8		
4	C4	2	600 x 450				a, b, c, d 8		
5	C5	2	650Ø				a 8		
6	C6	2	550Ø				a 8		

LEGEND

- B/W — BOTH WAYS
- C/C — CENTER TO CENTER
- CL — CENTER LINE
- (E) — EXTRA
- Ld — DEVELOPMENT LENGTH
- FGL — FINISHED GROUND LEVEL
- REINF — REINFORCEMENT
- TYP — TYPICAL

GENERAL NOTES

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4. ALL RCC SHALL BE OF CONTROLLED GRADE M30 IN ACCORDANCE WITH IS:456 UNLESS NOTED OTHERWISE.
5. ALL REINFORCEMENT SHALL BE HIGH YIELD STRENGTH DEFORMED BAR OF GRADE Fe550D CONFORMING TO IS:1786.
6. LAP LENGTH SHALL BE 50 TIMES THE DIAMETER OF SMALLER BAR BEING LAPPED.
7. COVER TO REINFORCEMENT:-  
a) COLUMN = 40 MM
8. DEVELOPMENT LENGTH SHALL BE 50 TIMES THE DIAMETER OF BAR.
10. ALL REINFORCEMENT LAPPINGS SHOULD BE STAGGERED.
11. SAFE BEARING CAPACITY AT -2.0M FROM NGL IS 12.1T/M².

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CLIENT:

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 SMART CITY PROPOSAL

DHARAMSHALA SMART CITY LTD. (DSCL)

PROJECT MANAGEMENT CONSULTANT:

ILF CONSULTING ENGINEERS  
 IN JOINT VENTURE WITH  
 almondz the infrastructure specialist

PROJECT:

**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

APPROVED BY: A.S.  
 CHECKED BY: S.A.  
 DESIGNED BY: S.A.  
 DRAWN BY: D.K.

STATUS: TENDER DRAWING

SCALE: A2 1:100

DATE: 2-12-2021

TITLE:

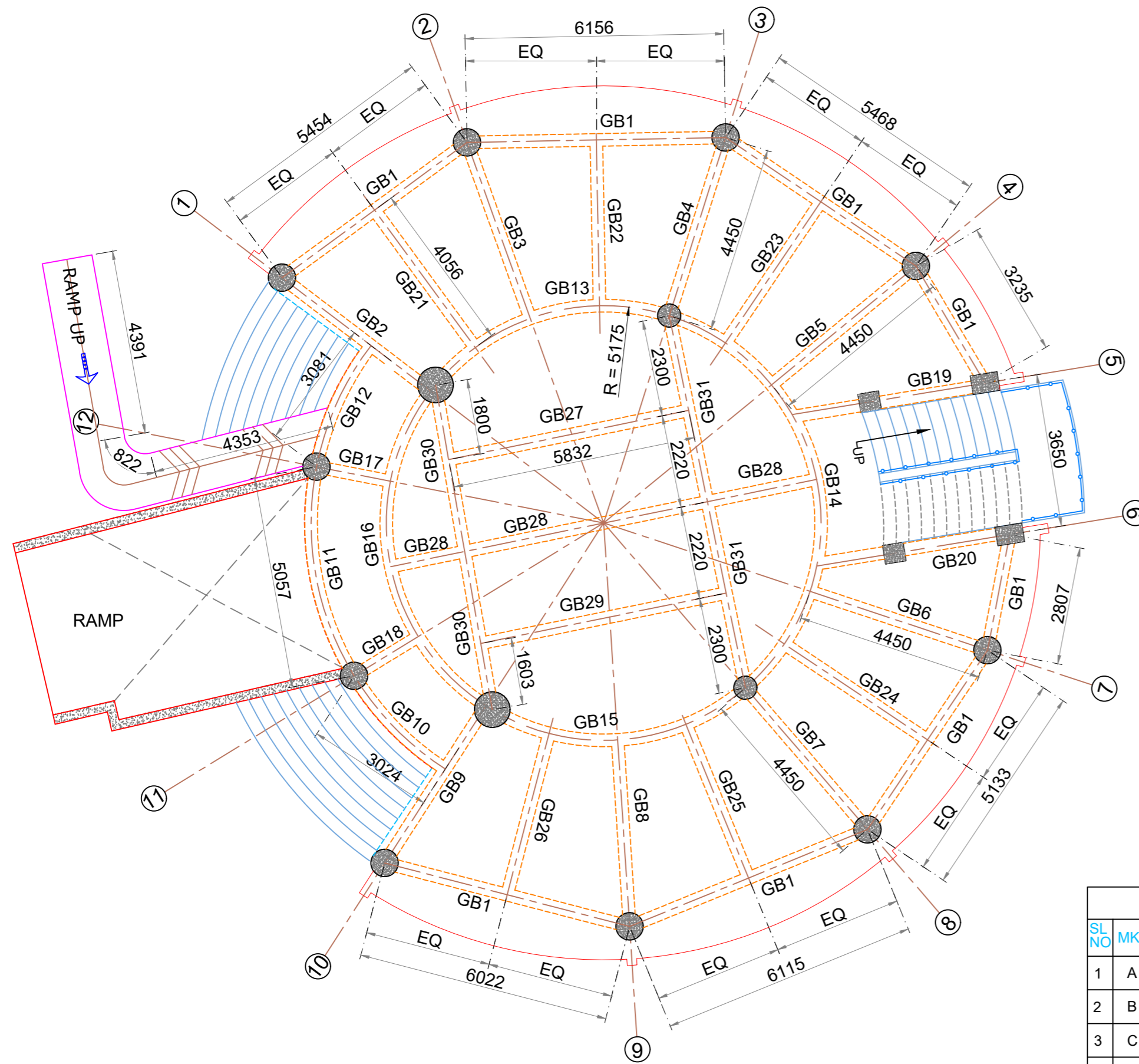
LAYOUT OF COLUMN & SECTIONAL DETAILS

DRG. NO. AGICL-DSCL-CV-ST-RM-002  
 SH. 1

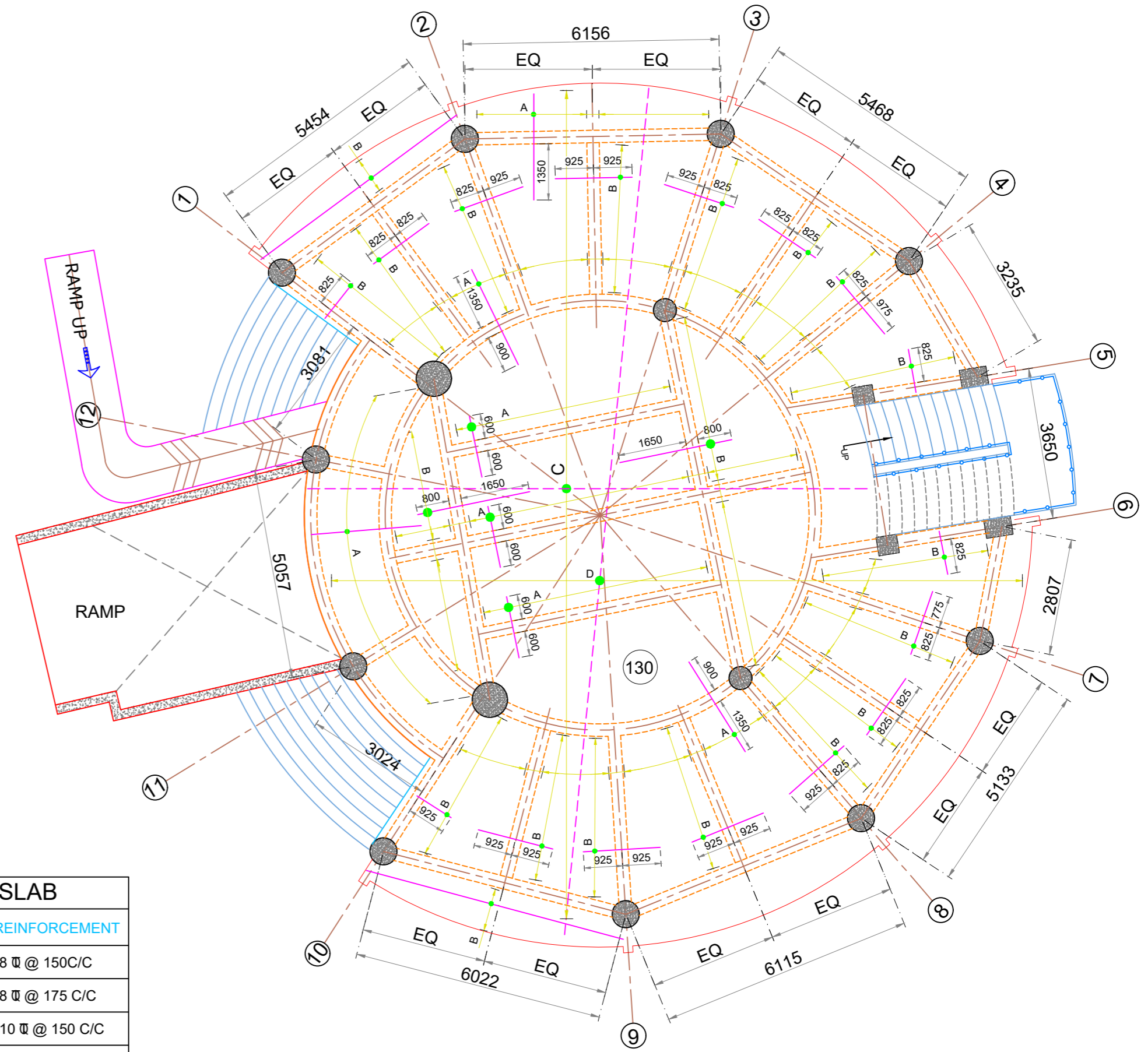
REV. R0

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PRODUCED BY AN AUTODESK STUDENT VERSION



LAYOUT OF GROUND FLOOR  
(SLAB THICKNESS 130MM)



SLAB REINFORCEMENT OF GROUND FLOOR  
(SLAB THICKNESS 130MM)

SLAB		
SL NO	MKD	REINFORCEMENT
1	A	8 @ 150C/C
2	B	8 @ 175 C/C
3	C	10 @ 150 C/C
4	D	10 @ 175 C/C

**GENERAL NOTES**

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- ALL RCC SHALL BE OF CONTROLLED GRADE M30 IN ACCORDANCE WITH IS:456 UNLESS NOTED OTHERWISE.
- ALL REINFORCEMENT SHALL BE HIGH YIELD STRENGTH DEFORMED BAR OF GRADE Fe550D CONFORMING TO IS:1786.
- LAP LENGTH SHALL BE 50 TIMES THE DIAMETER OF SMALLER BAR BEING LAPPED.
- COVER TO REINFORCEMENT:-  
a) BEAM = 25 MM b) SLAB = 25 MM
- DEVELOPMENT LENGTH SHALL BE 50 TIMES THE DIAMETER OF BAR.
- ALL REINFORCEMENT LAPPINGS SHOULD BE STAGGERED.

07/12/2021 - 11:49am  
PATH: C:\Users\vip\AppData\Local\Temp\AcPublish...11200\REFUGEE MARKET\_STRUCTURE\_(05-12-2021).dwg

DATE	REV	DESCRIPTION OF REVISIONS	BY

CLIENT:



Divine Dharamshala  
Step Forward to a Smart Neighbourhood  
SMART CITY PROPOSAL

DHARAMSHALA SMART CITY LTD. (DSCL)

PROJECT MANAGEMENT CONSULTANT:




ILF CONSULTING ENGINEERS

IN JOINT VENTURE WITH  
almondz  
the infrastructure specialist

PROJECT:

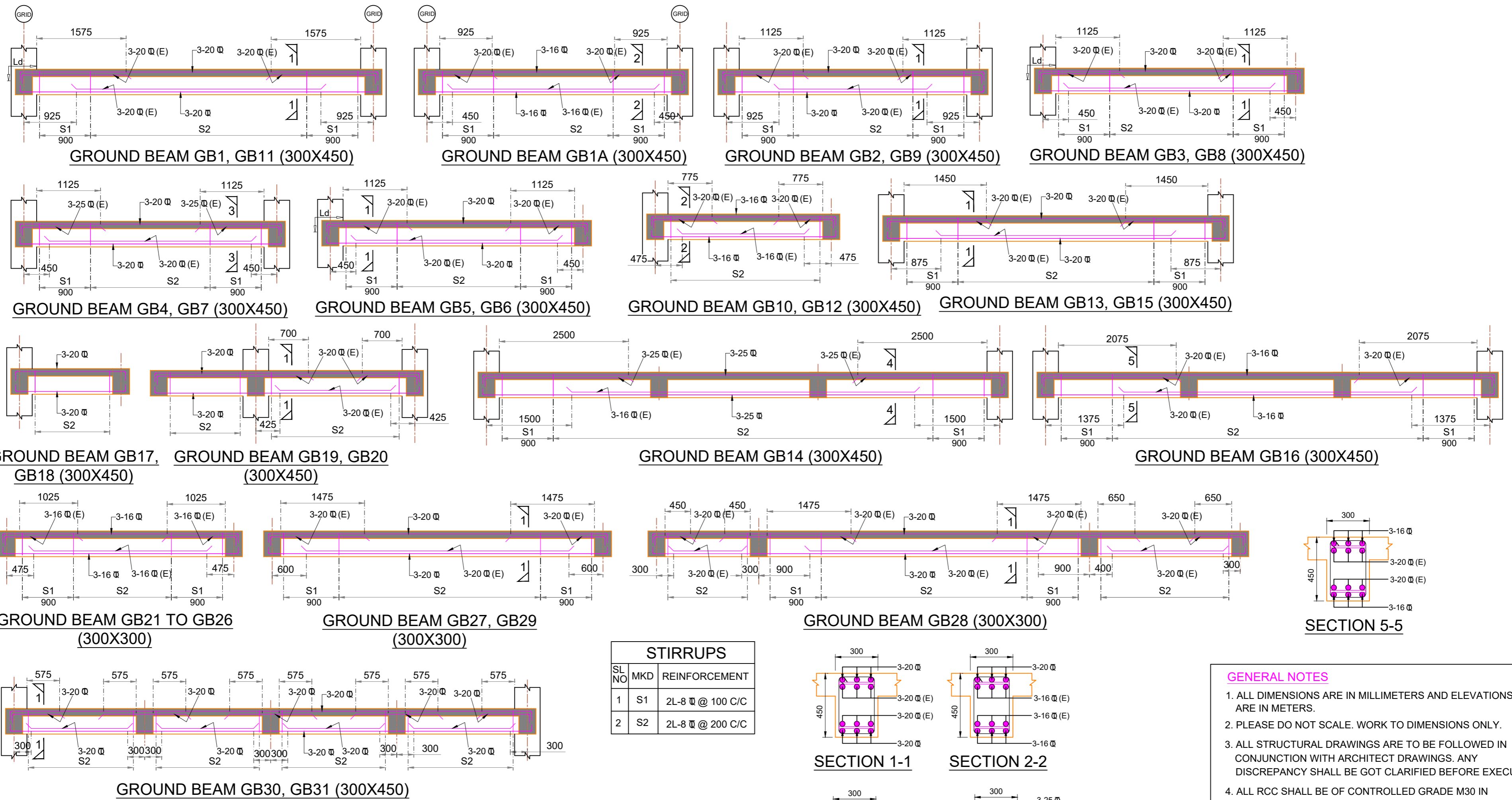
**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

APPROVED BY:	A.S
CHECKED BY:	S.A
DESIGNED BY:	S.A
DRAWN BY:	D.K

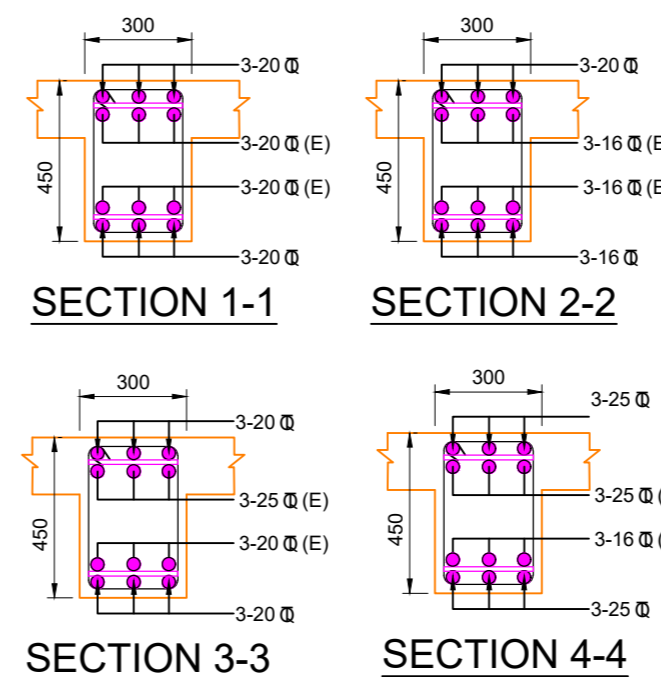
TITLE:

LAYOUT OF GROUND FLOOR  
BEAM & SLAB REINFORCEMENT

STATUS	TENDER DRAWING	SCALE: A2	A3	DATE:	2-12-2021	DRG. NO.	AGICL-DSCL-CV-ST-RM-003	REV.	RO
		1:100							



STIRRUPS		
SL NO	MKD	REINFORCEMENT
1	S1	2L-8 @ 100 C/C
2	S2	2L-8 @ 200 C/C



**GENERAL NOTES**

- ALL DIMENSIONS ARE IN MILLIMETERS AND ELEVATIONS ARE IN METERS.
- PLEASE DO NOT SCALE. WORK TO DIMENSIONS ONLY.
- ALL STRUCTURAL DRAWINGS ARE TO BE FOLLOWED IN CONJUNCTION WITH ARCHITECT DRAWINGS. ANY DISCREPANCY SHALL BE GOT CLARIFIED BEFORE EXECUTION.
- ALL RCC SHALL BE OF CONTROLLED GRADE M30 IN ACCORDANCE WITH IS:456 UNLESS NOTED OTHERWISE.
- ALL REINFORCEMENT SHALL BE HIGH YIELD STRENGTH DEFORMED BAR OF GRADE Fe550D CONFORMING TO IS:1786.
- LAP LENGTH SHALL BE 50 TIMES THE DIAMETER OF SMALLER BAR BEING LAPPED.
- COVER TO REINFORCEMENT:-
  - BEAM = 25 MM
- DEVELOPMENT LENGTH SHALL BE 50 TIMES THE DIAMETER OF BAR.
- ALL REINFORCEMENT LAPPINGS SHOULD BE STAGGERED.

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PRODUCED BY AN AUTODESK STUDENT VERSION

07/12/2021 - 11:49am  
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DATE	REV	DESCRIPTION OF REVISIONS	BY

CLIENT:



Divine Dharamshala  
 Step Forward to a Smart Neighbourhood  
 SMART CITY PROPOSAL

DHARAMSHALA SMART CITY LTD. (DSCL)

PROJECT MANAGEMENT CONSULTANT:



ILF CONSULTING ENGINEERS  
 IN JOINT VENTURE WITH  
 almondz the infrastructure specialist

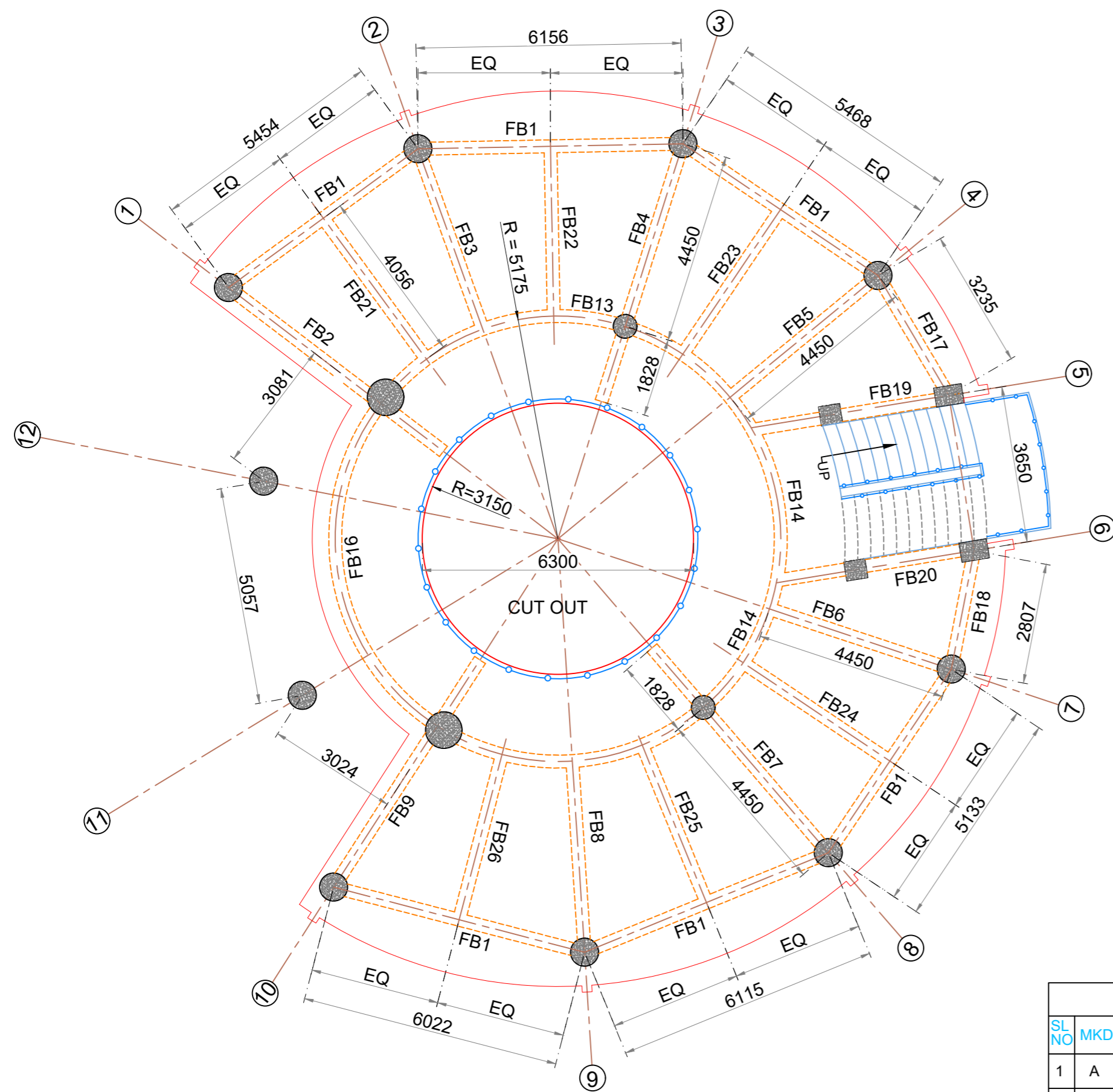
PROJECT:

**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

STATUS: TENDER DRAWING

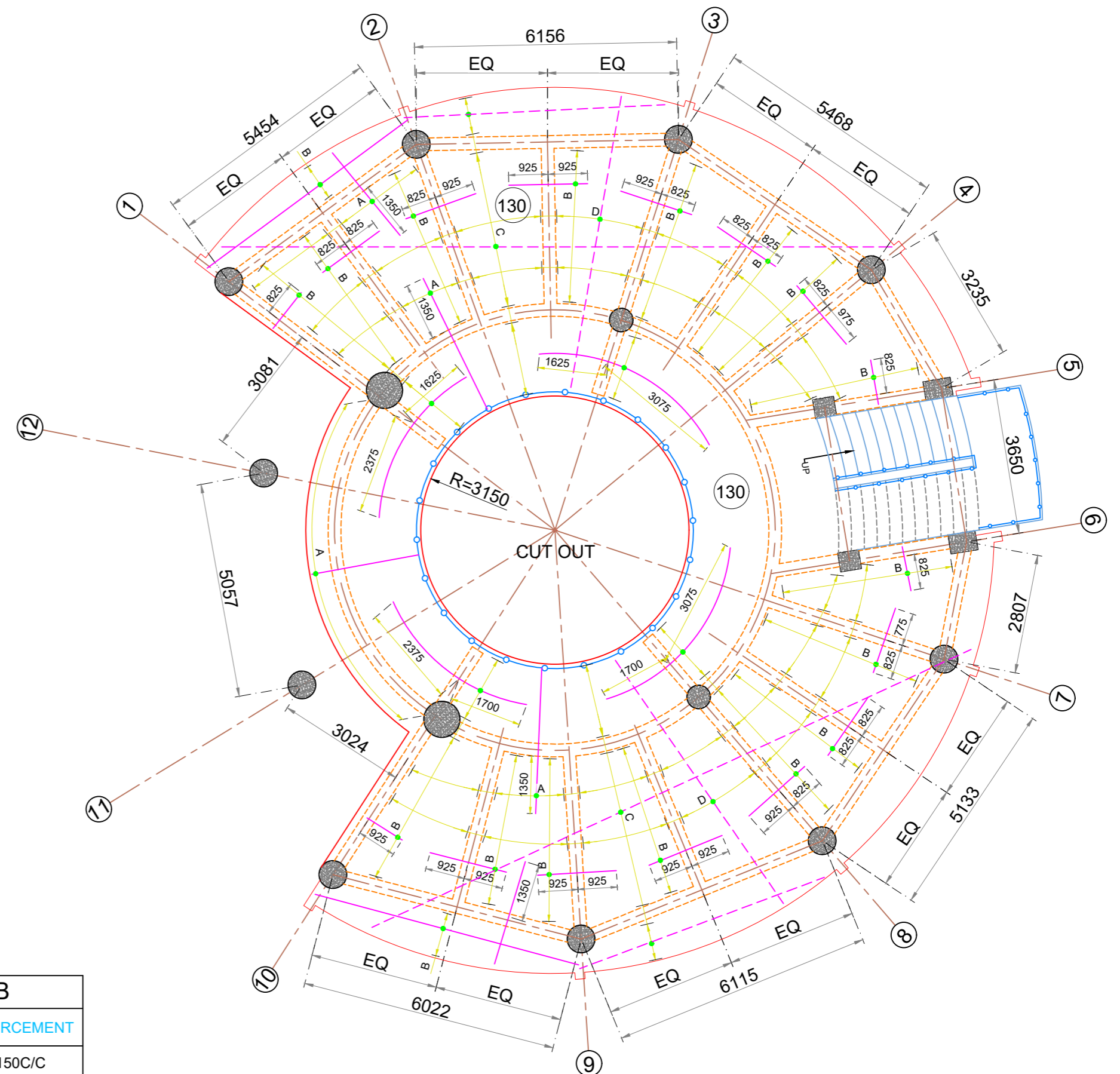
APPROVED BY:	A.S.
CHECKED BY:	S.A.
DESIGNED BY:	S.A.
DRAWN BY:	D.K.
DATE:	2-12-2021

TITLE:	BEAM SECTIONAL DETAILS OF GROUND FLOOR	
DRG. NO.	AGICL-DSCL-CV-ST-RM-004	REV. R0
SCALE:	A2 1:100	A3
SH.	1	



LAYOUT OF FIRST FLOOR  
(SLAB THICKNESS 130MM)

SLAB		
SL NO	MKD	REINFORCEMENT
1	A	8 @ 150 C/C
2	B	8 @ 175 C/C
3	C	10 @ 150 C/C
4	D	10 @ 175 C/C



SLAB REINFORCEMENT OF FIRST FLOOR  
(SLAB THICKNESS 130MM)

**GENERAL NOTES**

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- LAP LENGTH SHALL BE 50 TIMES THE DIAMETER OF SMALLER BAR BEING LAPPED.
- COVER TO REINFORCEMENT:-  
a) BEAM = 25 MM b) SLAB = 25 MM
- DEVELOPMENT LENGTH SHALL BE 50 TIMES THE DIAMETER OF BAR.
- ALL REINFORCEMENT LAPPINGS SHOULD BE STAGGERED.

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DATE	REV	DESCRIPTION OF REVISIONS	BY

CLIENT:



Divine Dharamshala  
Step Forward to a Smart Neighbourhood  
SMART CITY PROPOSAL

DHARAMSHALA SMART CITY LTD. (DSCL)

PROJECT MANAGEMENT CONSULTANT:




ILF CONSULTING ENGINEERS  
IN JOINT VENTURE WITH  
almondz the infrastructure specialist

PROJECT:

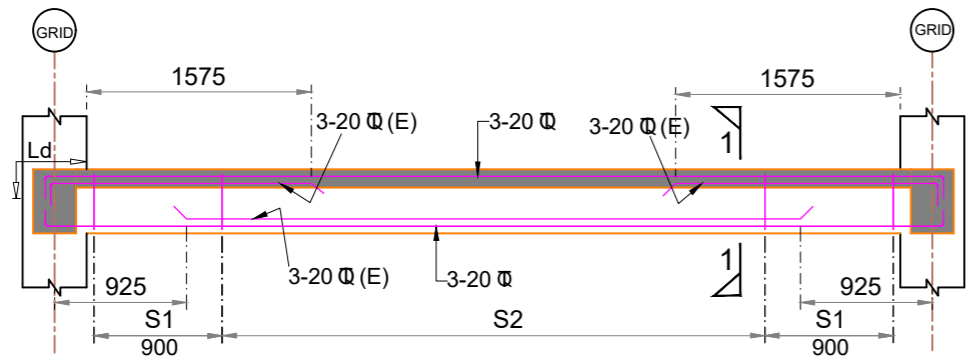
**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

APPROVED BY:	A.S.
CHECKED BY:	S.A.
DESIGNED BY:	S.A.
DRAWN BY:	D.K.

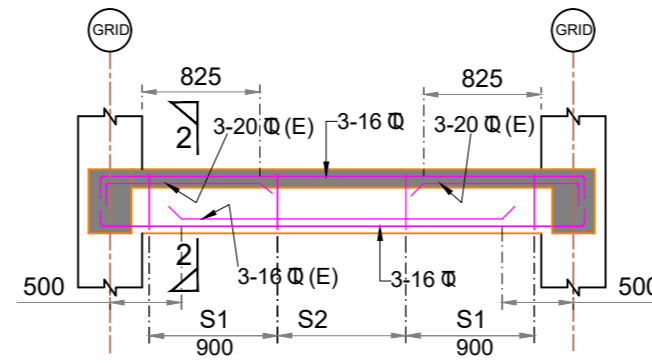
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**BEAM LAYOUT OF FIRST FLOOR & SLAB REINFORCEMENT**

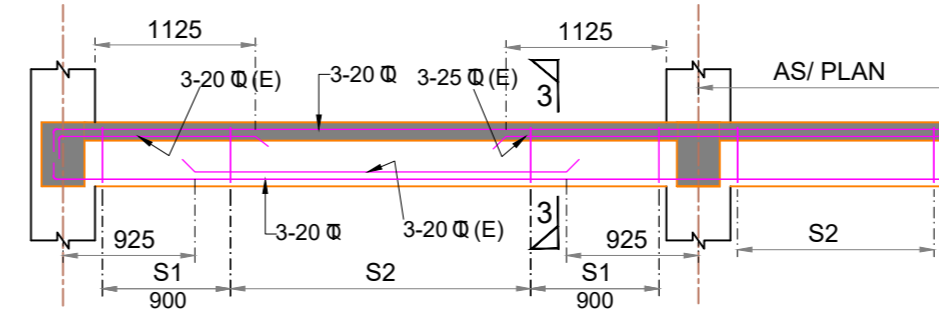
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								SH. 1		



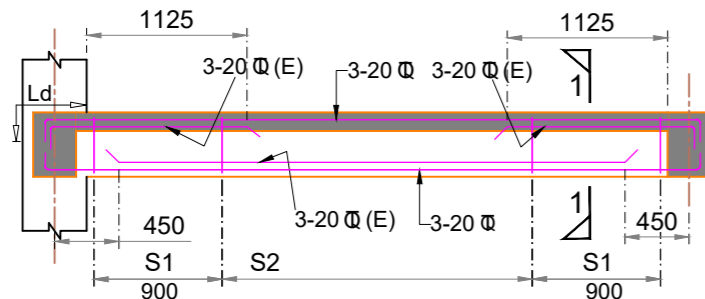
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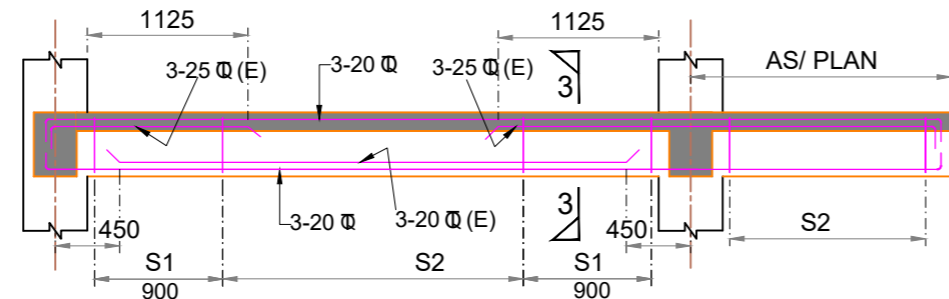
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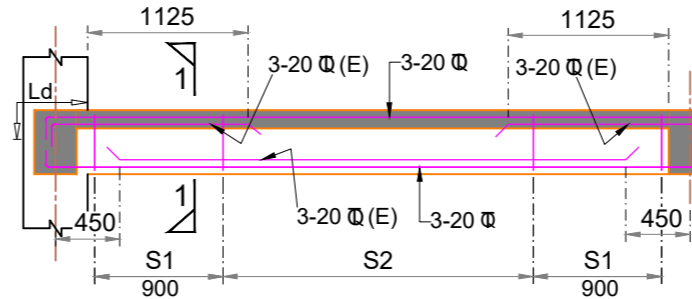
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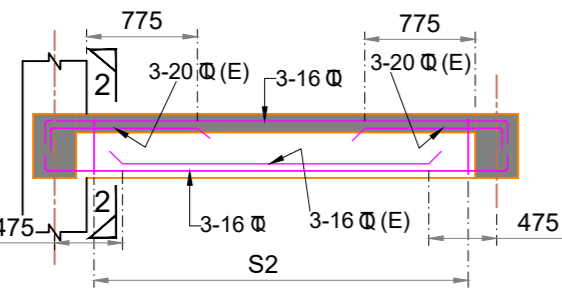
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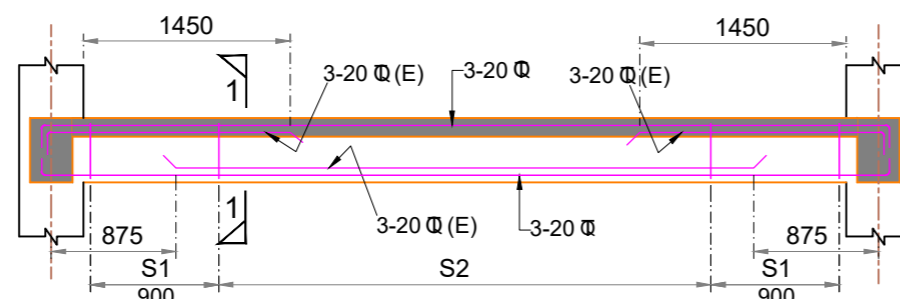
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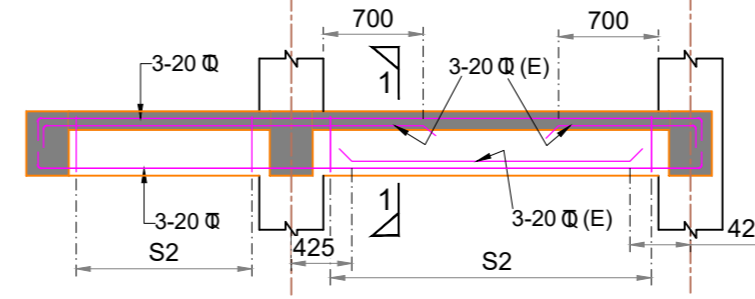
FIRST BEAM FB5, FB6 (300X450)



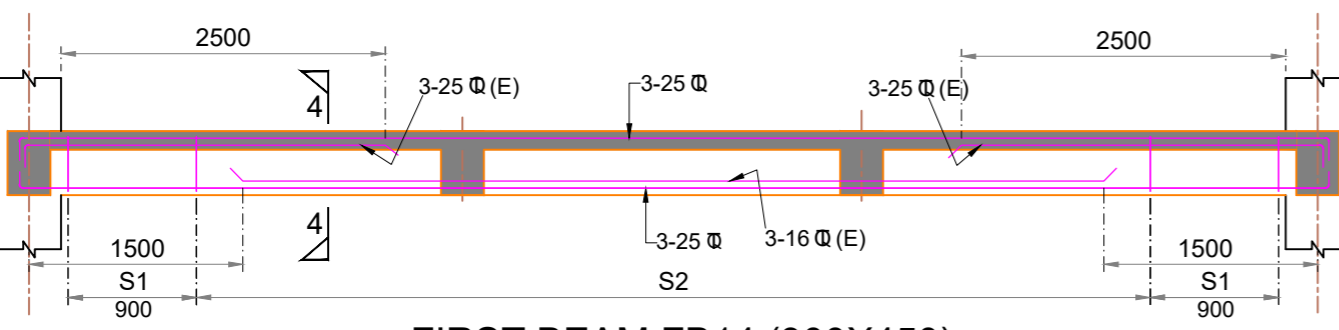
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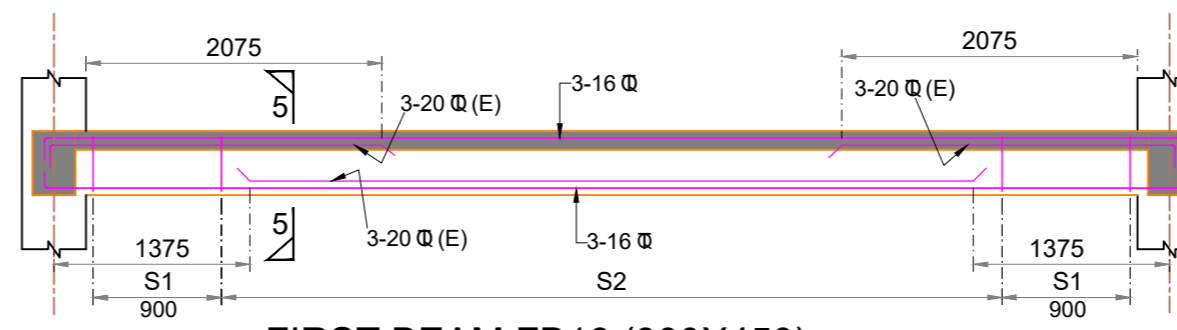
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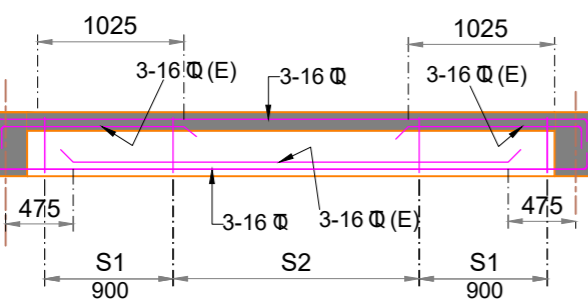
FIRST BEAM FB19, FB20 (300X450)



FIRST BEAM FB14 (300X450)

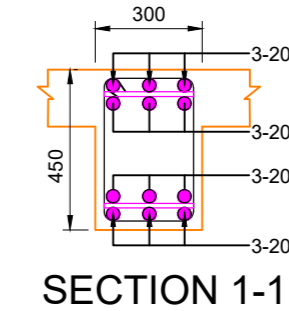


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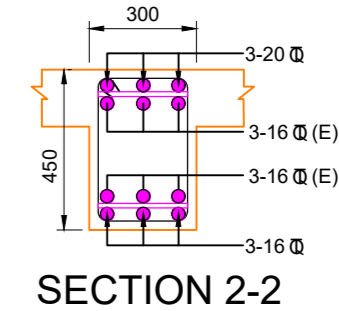


FIRST BEAM FB21 TO FB26 (300X300)

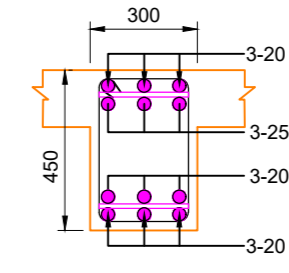
STIRRUPS		
SL NO	MKD	REINFORCEMENT
1	S1	2L-8 @ 100 C/C
2	S2	2L-8 @ 200 C/C



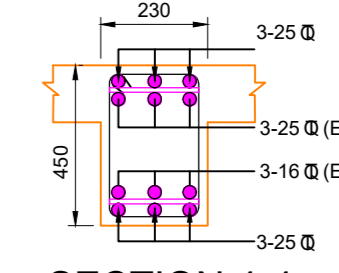
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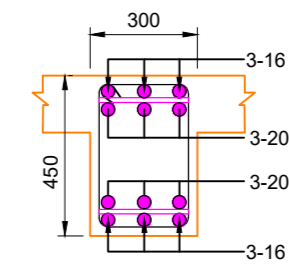
SECTION 2-2



SECTION 3-3



SECTION 4-4



SECTION 5-5

**GENERAL NOTES**

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- COVER TO REINFORCEMENT:-  
a) BEAM = 25 MM
- DEVELOPMENT LENGTH SHALL BE 50 TIMES THE DIAMETER OF BAR.
- ALL REINFORCEMENT LAPPINGS SHOULD BE STAGGERED.

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DATE	REV	DESCRIPTION OF REVISIONS	BY

CLIENT:



Divine Dharamshala  
Step Forward to a Smart Neighbourhood  
SMART CITY PROPOSAL

DHARAMSHALA SMART CITY LTD. (DSCL)

PROJECT MANAGEMENT CONSULTANT:




ILF CONSULTING ENGINEERS

IN JOINT VENTURE WITH  
almondz the infrastructure specialist

PROJECT:  
**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

STATUS: **TENDER DRAWING**

APPROVED BY:	A.S.
CHECKED BY:	S.A.
DESIGNED BY:	S.A.
DRAWN BY:	D.K.

SCALE: **A2 1:100**

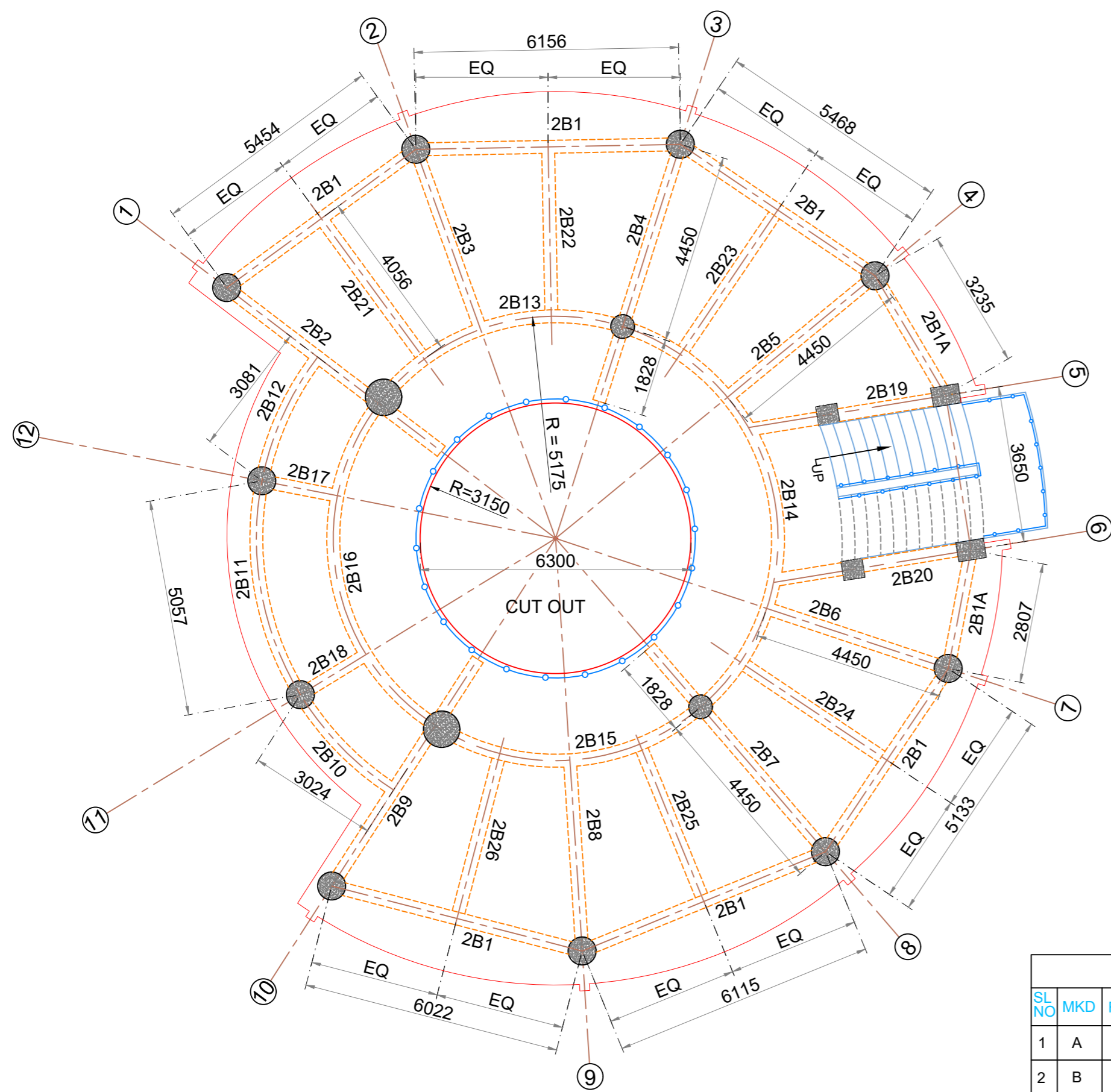
DATE: **2-12-2021**

TITLE:  
**BEAM SECTIONAL DETAILS OF FIRST FLOOR**

DRG. NO. **AGICL-DSCL-CV-ST-RM-006**  
SH. 1

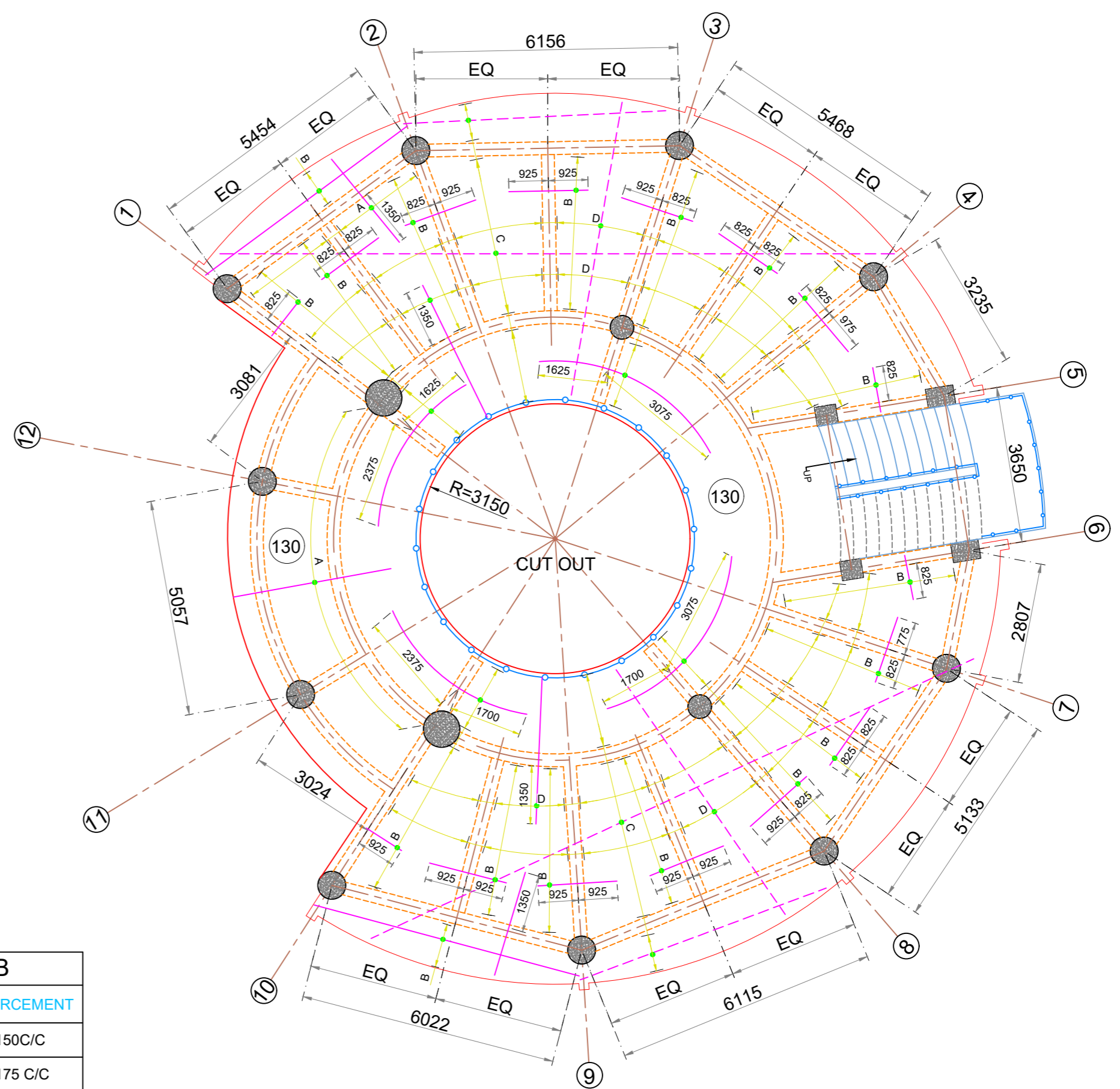
REV. **R0**





LAYOUT OF 2ND FLOOR  
(SLAB THICKNESS 130MM)

SLAB		
SL NO	MKD	REINFORCEMENT
1	A	8 @ 150 C/C
2	B	8 @ 175 C/C
3	C	10 @ 150 C/C
4	D	10 @ 175 C/C



SLAB REINFORCEMENT OF 2ND FLOOR & ROOF  
(SLAB THICKNESS 130MM)

**GENERAL NOTES**

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DATE	REV	DESCRIPTION OF REVISIONS	BY

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Step Forward to a Smart Neighbourhood  
SMART CITY PROPOSAL

DHARAMSHALA SMART CITY LTD. (DSCL)

PROJECT MANAGEMENT CONSULTANT:




ILF CONSULTING ENGINEERS

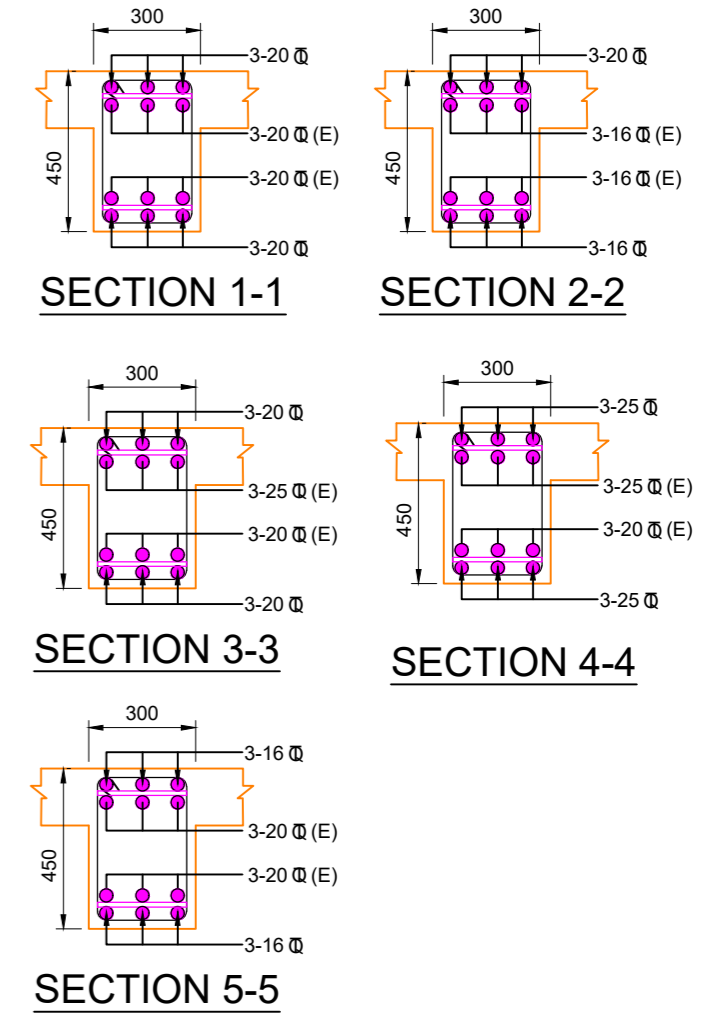
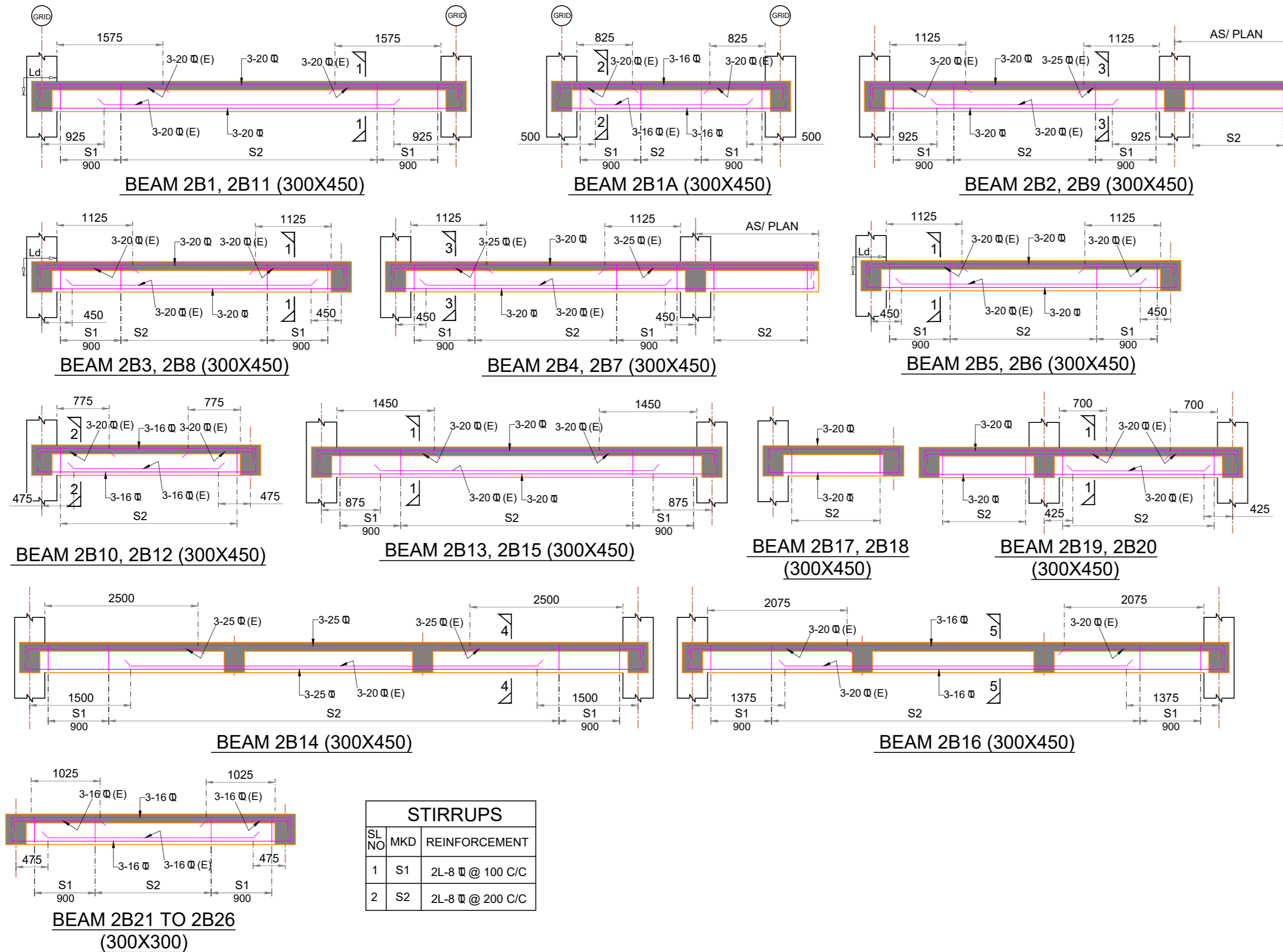
IN JOINT VENTURE WITH  
almondz  
the infrastructure specialist

PROJECT:  
**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

APPROVED BY: A.S.  
CHECKED BY: S.A.  
DESIGNED BY: S.A.  
DRAWN BY: D.K.

TITLE:  
**BEAM LAYOUT OF 2ND FLOOR & SLAB REINFORCEMENT**

STATUS: TENDER DRAWING	SCALE: A2 1:100	A3	DATE: 2-12-2021	DRG. NO. AGICL-DSCL-CV-ST-RM-007	REV. R0
				SH. 1	



- GENERAL NOTES**
1. ALL DIMENSIONS ARE IN MILLIMETERS AND ELEVATIONS ARE IN METERS.
  2. PLEASE DO NOT SCALE. WORK TO DIMENSIONS ONLY.
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  7. COVER TO REINFORCEMENT:-  
a) BEAM = 25 MM
  8. DEVELOPMENT LENGTH SHALL BE 50 TIMES THE DIAMETER OF BAR.
  10. ALL REINFORCEMENT LAPPINGS SHOULD BE STAGGERED.

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DATE	REV	DESCRIPTION OF REVISIONS	BY

**CLIENT:**



**DHARAMSHALA SMART CITY LTD. (DSCL)**

**PROJECT MANAGEMENT CONSULTANT:**




**ALMONDZ**  
the infrastructure specialist

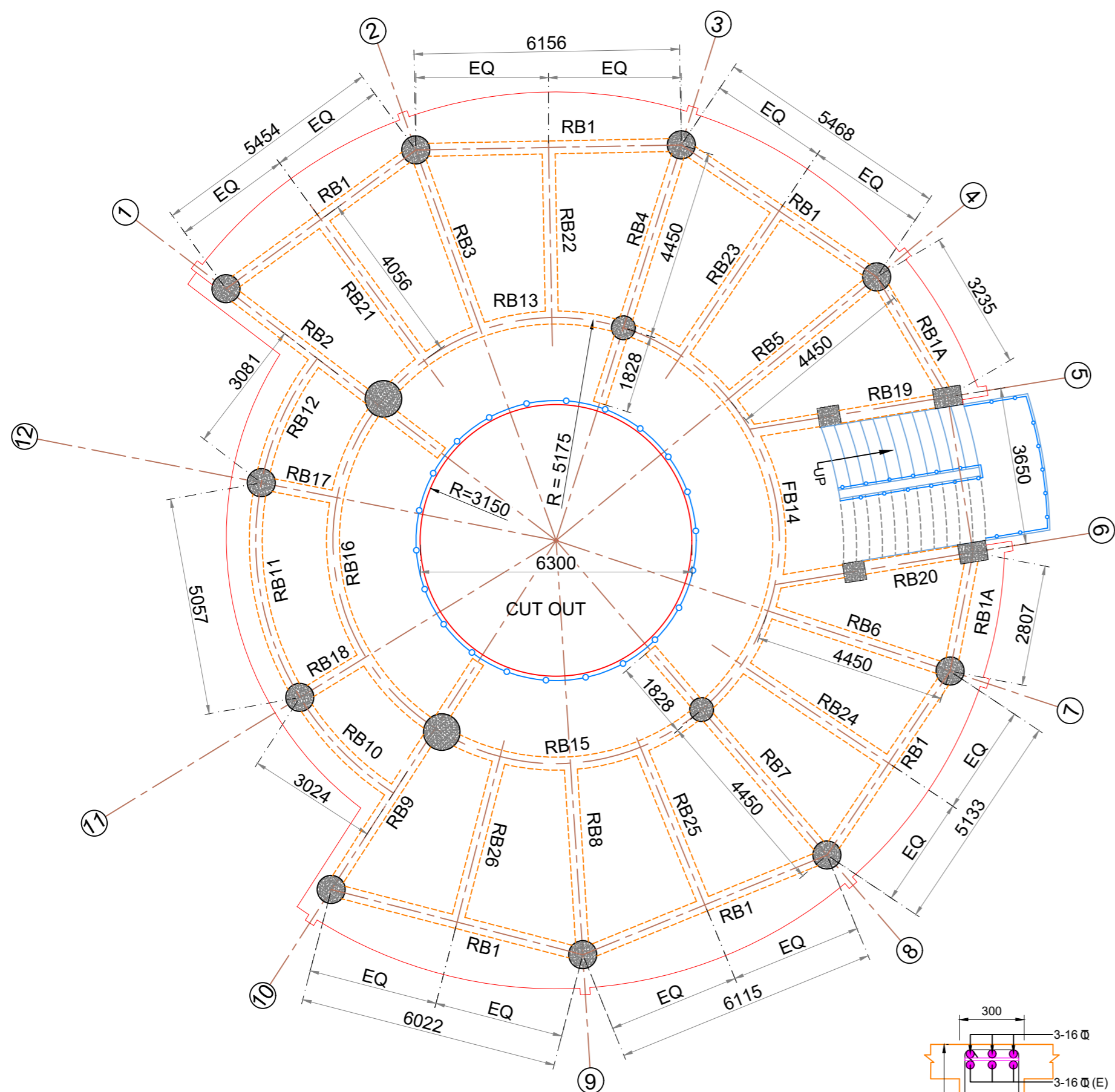
**PROJECT:**

**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

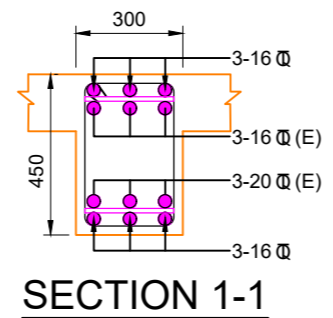
**STATUS:** TENDER DRAWING

APPROVED BY:	A.S.
CHECKED BY:	S.A.
DESIGNED BY:	S.A.
DRAWN BY:	D.K.

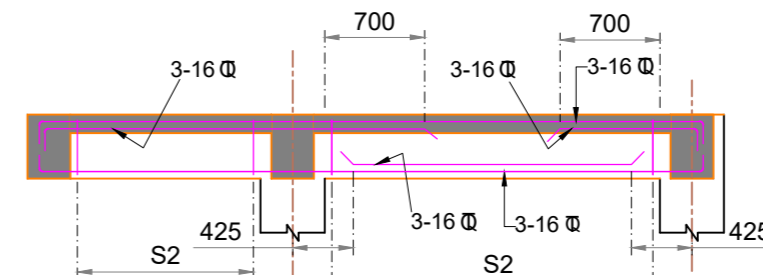
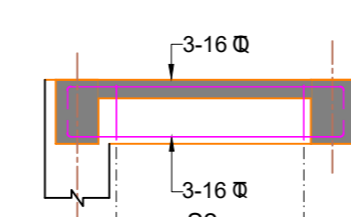
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<b>DRG. NO.</b>	AGICL-DSCL-CV-ST-RM-008
<b>DATE:</b>	2-12-2021
<b>SCALE:</b>	A2 1:100 A3
<b>REV.</b>	R0
<b>SH.</b>	1



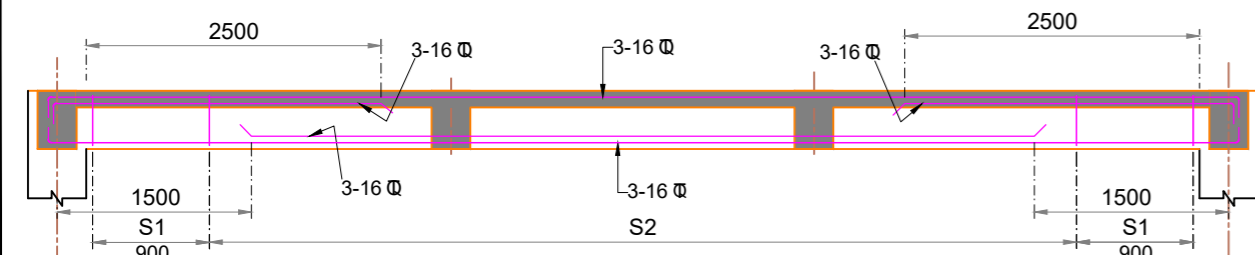
LAYOUT OF ROOF  
(SLAB THICKNESS 130MM)



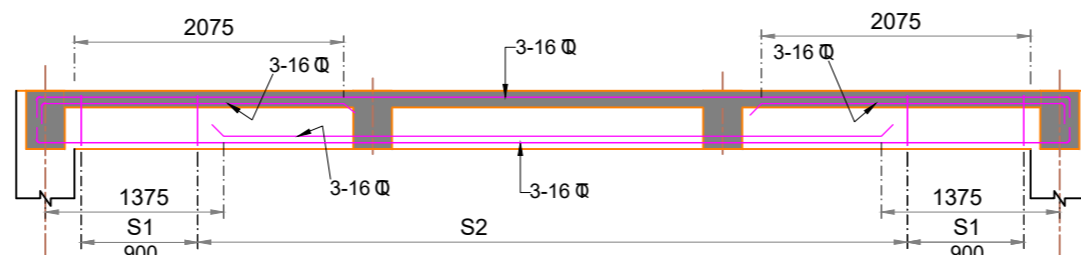
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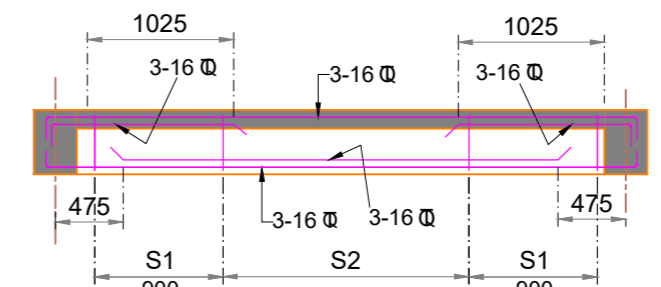
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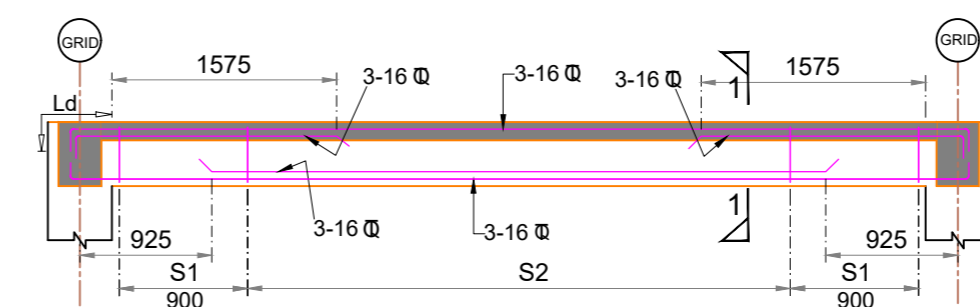
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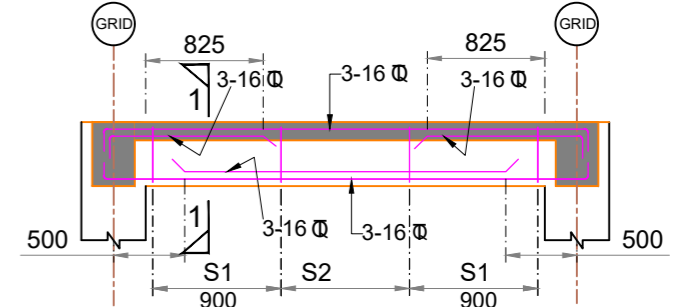
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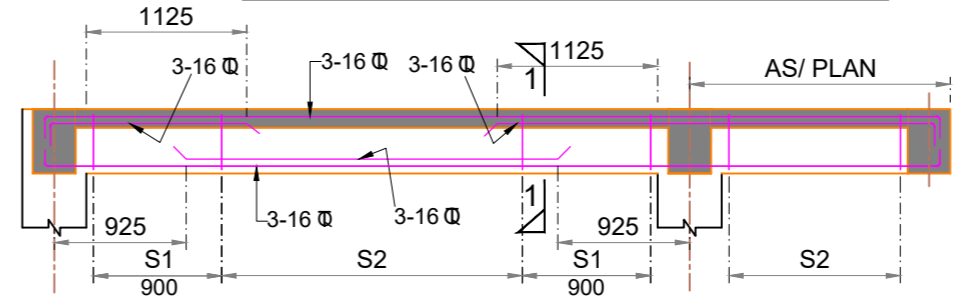
ROOF BEAM RB21 TO RB26 (300X450)



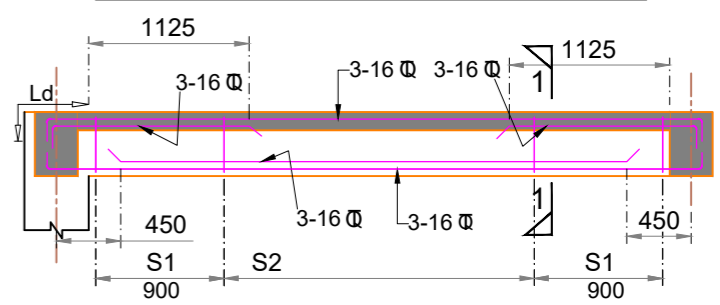
ROOF BEAM RB1, RB11 (300X450)



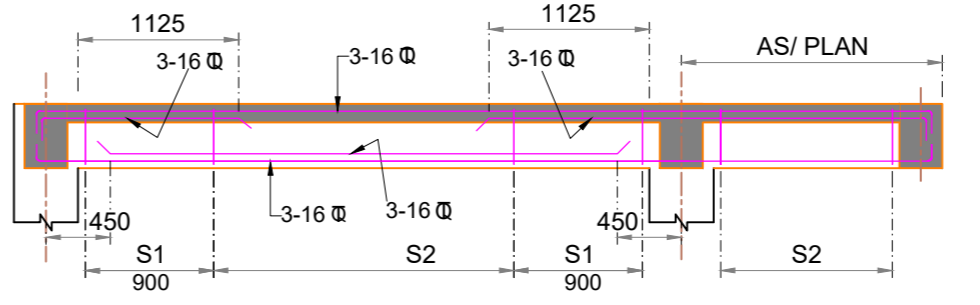
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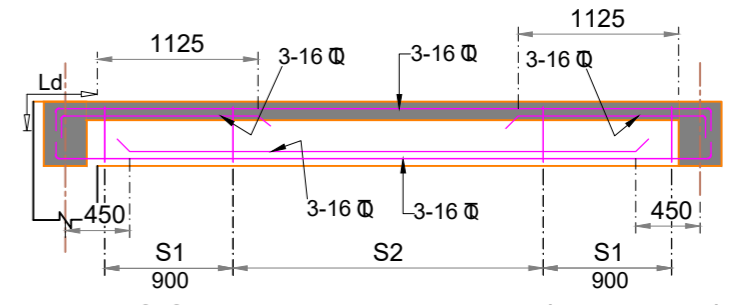
ROOF BEAM RB2, RB9 (300X450)



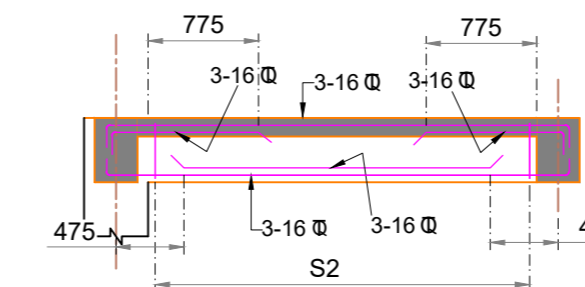
ROOF BEAM RB3, RB8 (300X450)



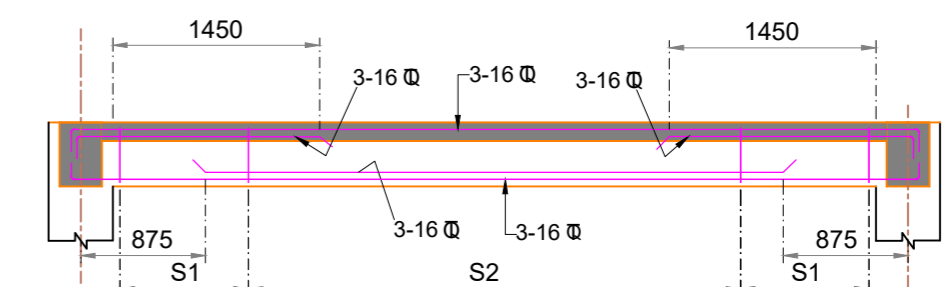
ROOF BEAM RB4, RB7 (300X450)



ROOF BEAM RB5, RB6 (300X450)



ROOF BEAM RB10, RB12 (300X450)



ROOF BEAM RB13, RB15 (300X450)

STIRRUPS		
SL NO	MKD	REINFORCEMENT
1	S1	2L-8 @ 100 C/C
2	S2	2L-8 @ 200 C/C

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07/12/2021 - 11:50am  
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DATE	REV	DESCRIPTION OF REVISIONS	BY

CLIENT:



Divine Dharamshala  
Step Forward to a Smart Neighbourhood  
SMART CITY PROPOSAL

DHARAMSHALA SMART CITY LTD. (DSCL)

PROJECT MANAGEMENT CONSULTANT:




ILF CONSULTING ENGINEERS

IN JOINT VENTURE WITH  
almondz the infrastructure specialist

PROJECT:

**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

APPROVED BY: A.S.  
CHECKED BY: S.A.  
DESIGNED BY: S.A.  
DRAWN BY: D.K.

STATUS: TENDER DRAWING

SCALE: A2 1:100

DATE: 2-12-2021

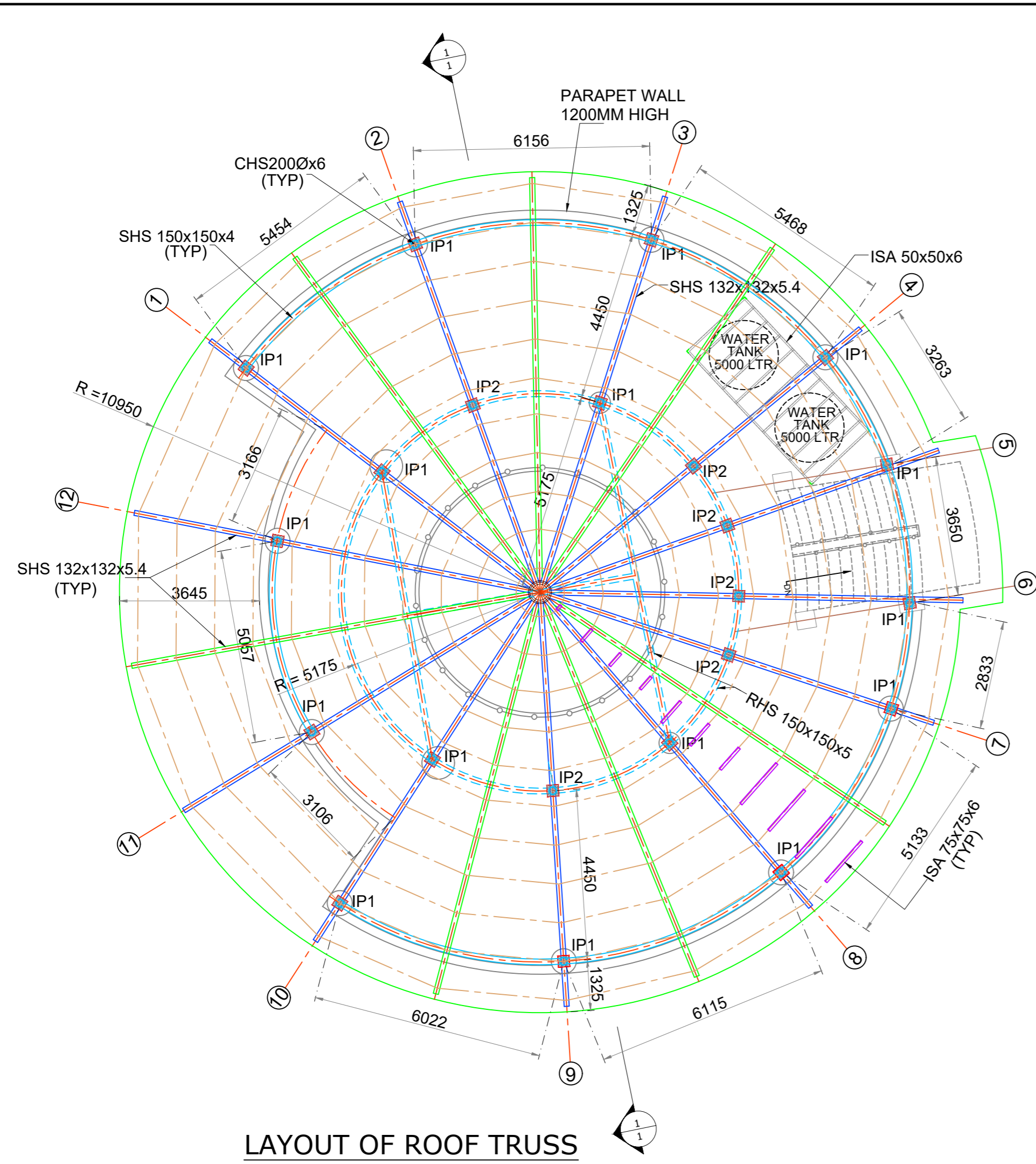
TITLE:

LAYOUT OF ROOF BEAM & SECTIONAL DETAILS

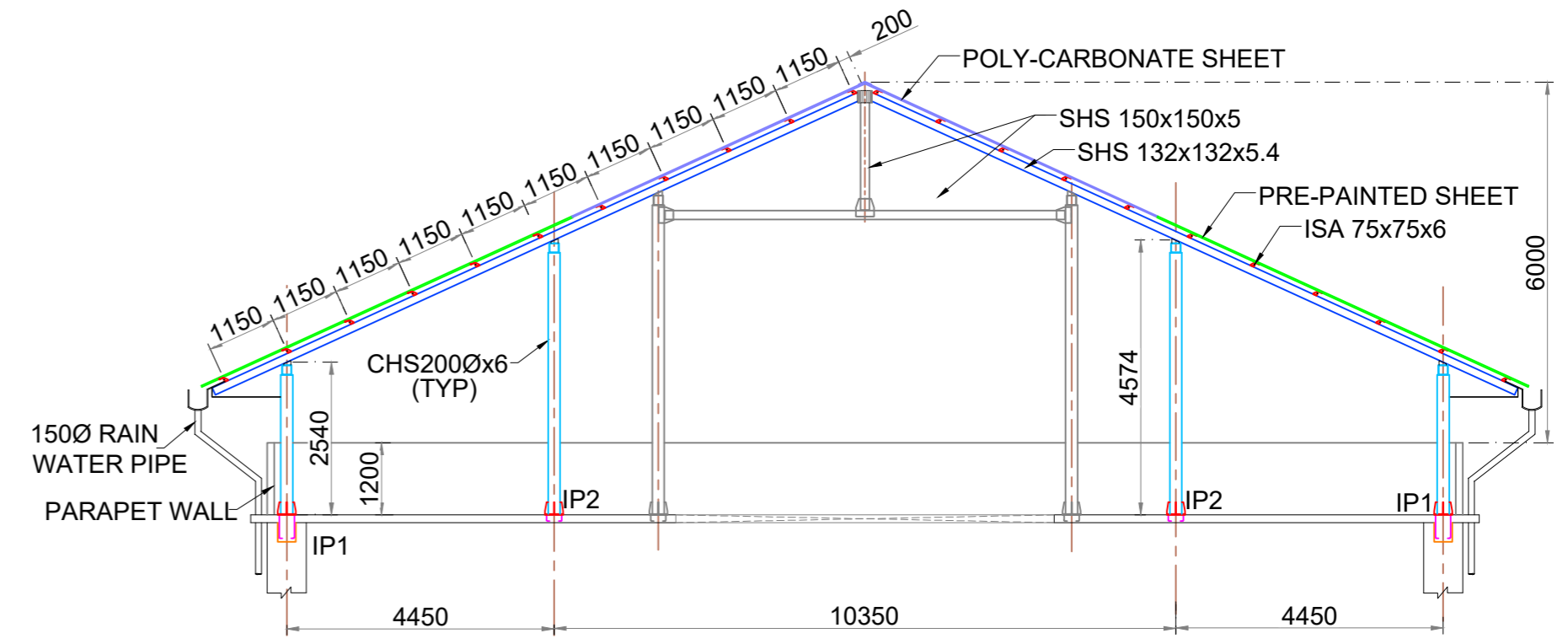
DRG. NO. AGICL-DSCL-CV-ST-RM-009

REV. R0

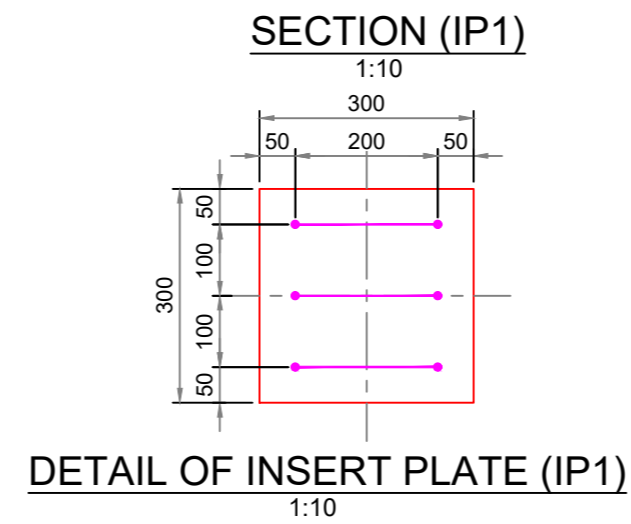
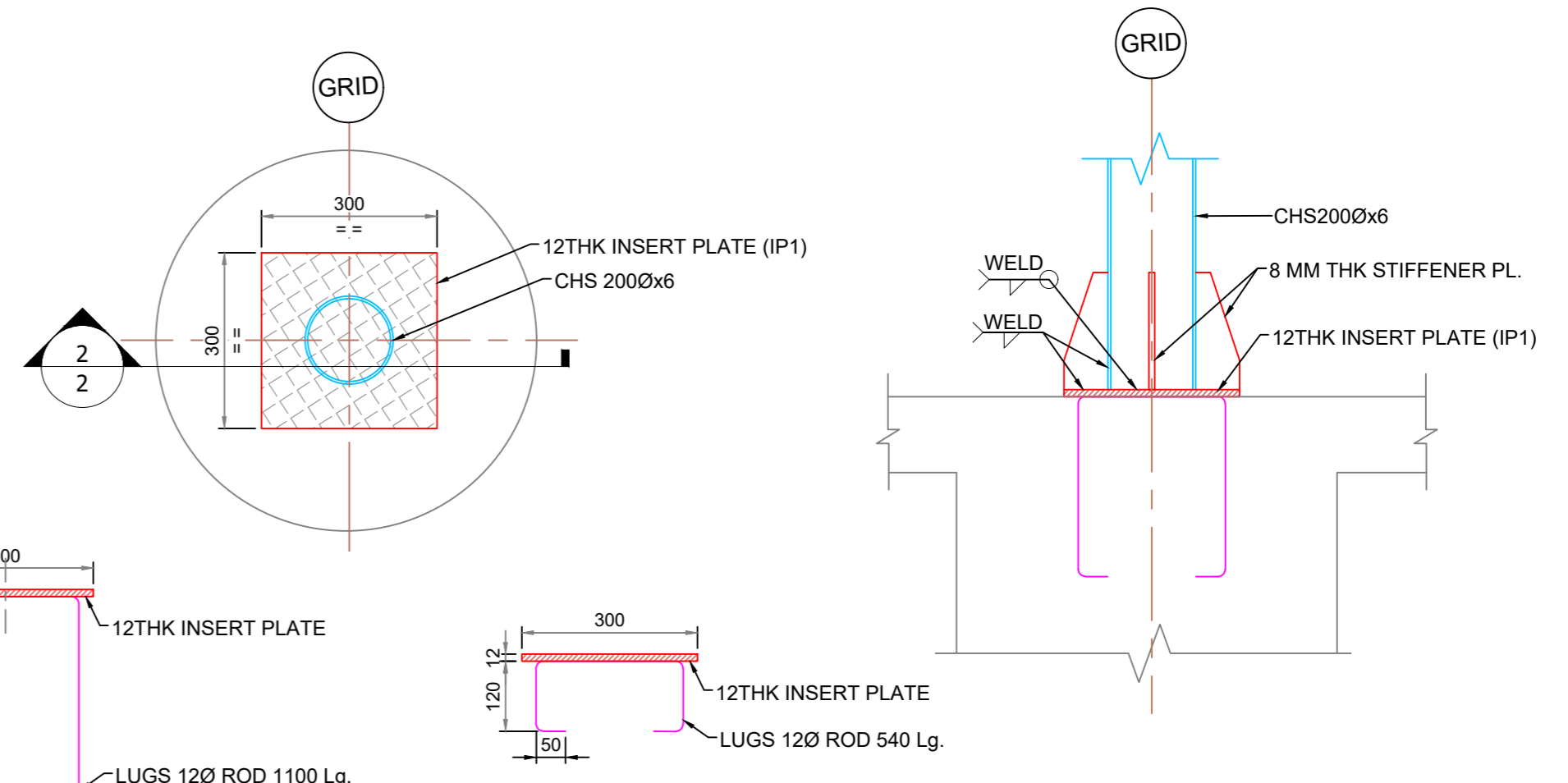
SH. 1



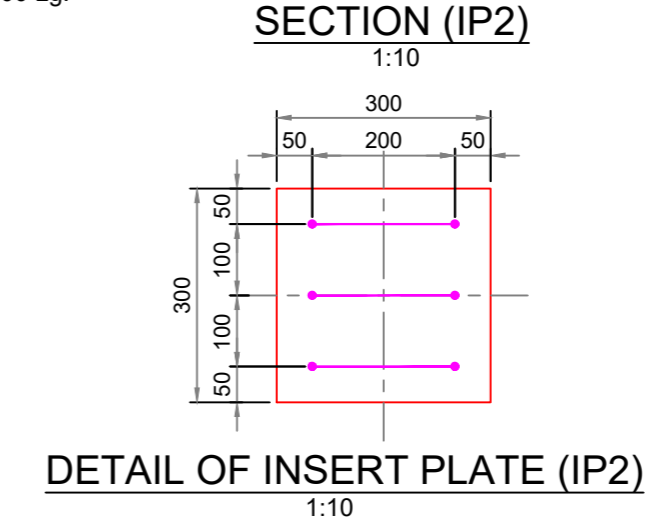
LAYOUT OF ROOF TRUSS



SECTION 1-1



DETAIL OF INSERT PLATE (IP1)



DETAIL OF INSERT PLATE (IP2)

- GENERAL NOTES**
1. ALL DIMENSIONS ARE IN MILLIMETERS AND ELEVATIONS ARE IN METERS
  2. ALL STEEL SHALL CONFORM TO IS: 2062
  3. ALL STEEL FABRICATIONS SHALL CONFORM TO IS:800-1984
  4. ALL WELDS SHALL CONFORM TO IS:816
  5. ALL WELDING ELECTRODES SHALL CONFORM TO IS:814
  6. ALL FILLET WELDS SHALL BE MIN. 6MM THK.
  7. ALL CONTACT FACES SHALL BE FILLET WELDED U.N.O.
  8. ALL BOLTED CONNECTIONS SHALL HAVE ONE WASHER OF M.S. PLATE AS PER IS:226. OR EQUIVALENT
  9. ALL GUSSET PLATE SHALL BE MINIMUM 10 MM THK UNLESS MENTIONED OTHERWISE.
  10. DETAIL FABRICATION DRAWING HAS TO BE PREPARED BY THE CONTRACTOR BEFORE PROCEEDING.
  11. STRUCTURAL STEEL GRADE fy 250 FOR ALL.

PRODUCED BY AN AUTODESK STUDENT VERSION

PRODUCED BY AN AUTODESK STUDENT VERSION

07/12/2021 - 11:50am  
 PATH: C:\Users\vip\AppData\Local\Temp\AcPublish...11200\REFUGEE MARKET\_STRUCTURE\_(05-12-2021).dwg

DATE	REV	DESCRIPTION OF REVISIONS	BY

**CLIENT:**  
  
 DHARAMSHALA SMART CITY LTD. (DSCL)

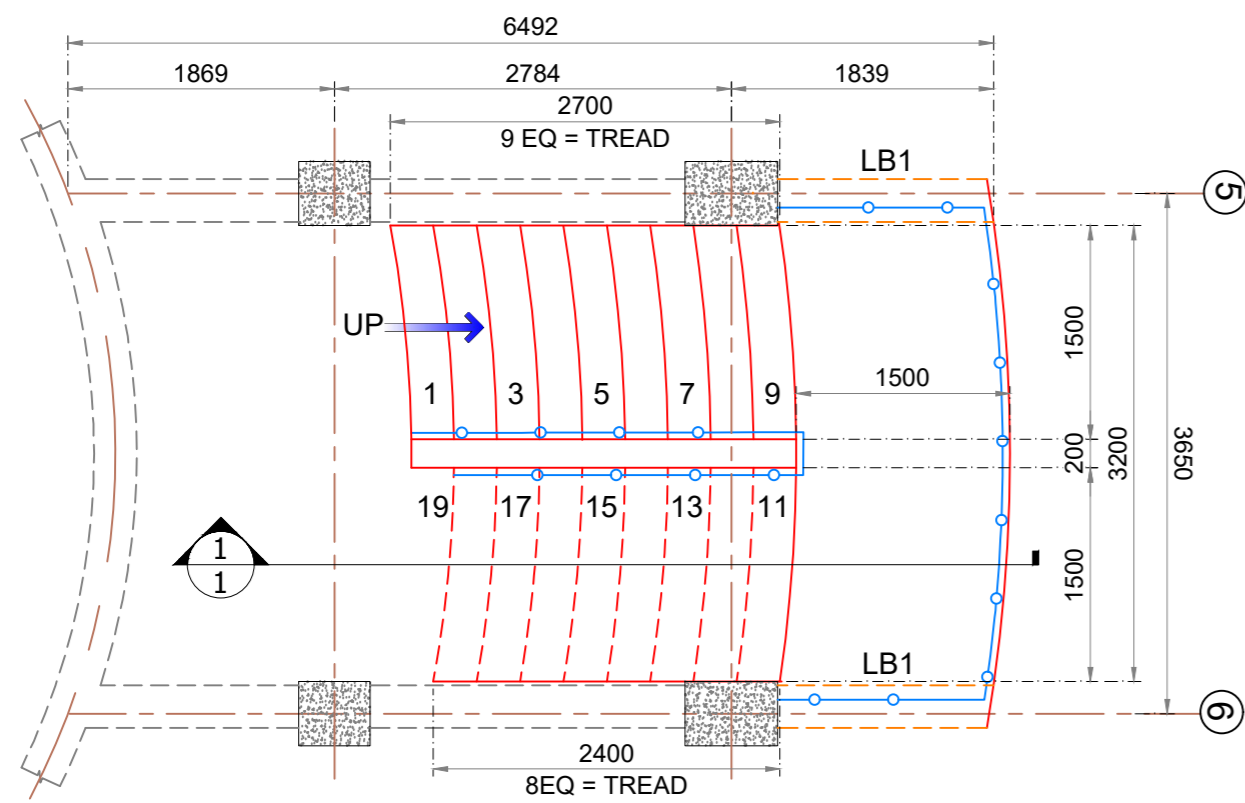
**PROJECT MANAGEMENT CONSULTANT:**  
  
 IN JOINT VENTURE WITH almondz

**PROJECT:**  
 REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.

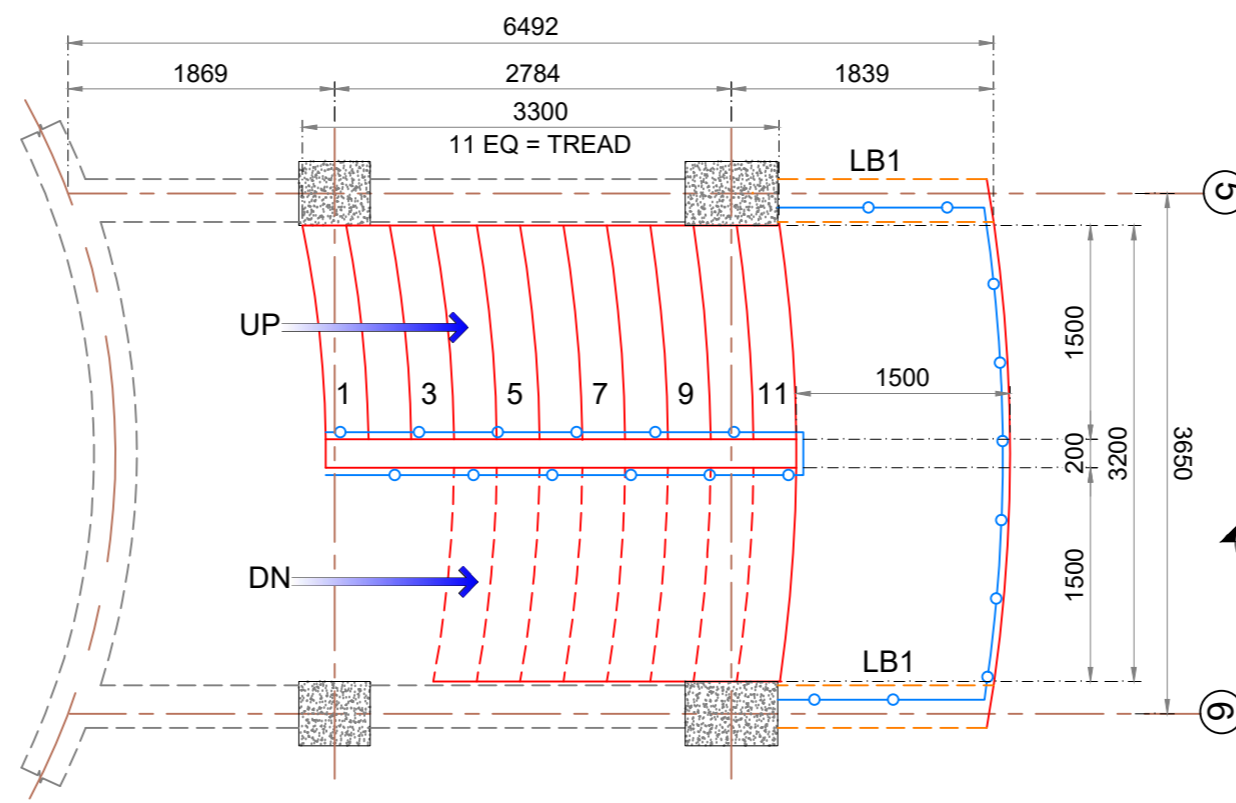
APPROVED BY:	A.S.
CHECKED BY:	S.A.
DESIGNED BY:	S.A.
DRAWN BY:	D.K.

**TITLE:**  
 ROOF TRUSS SECTIONAL DETAILS

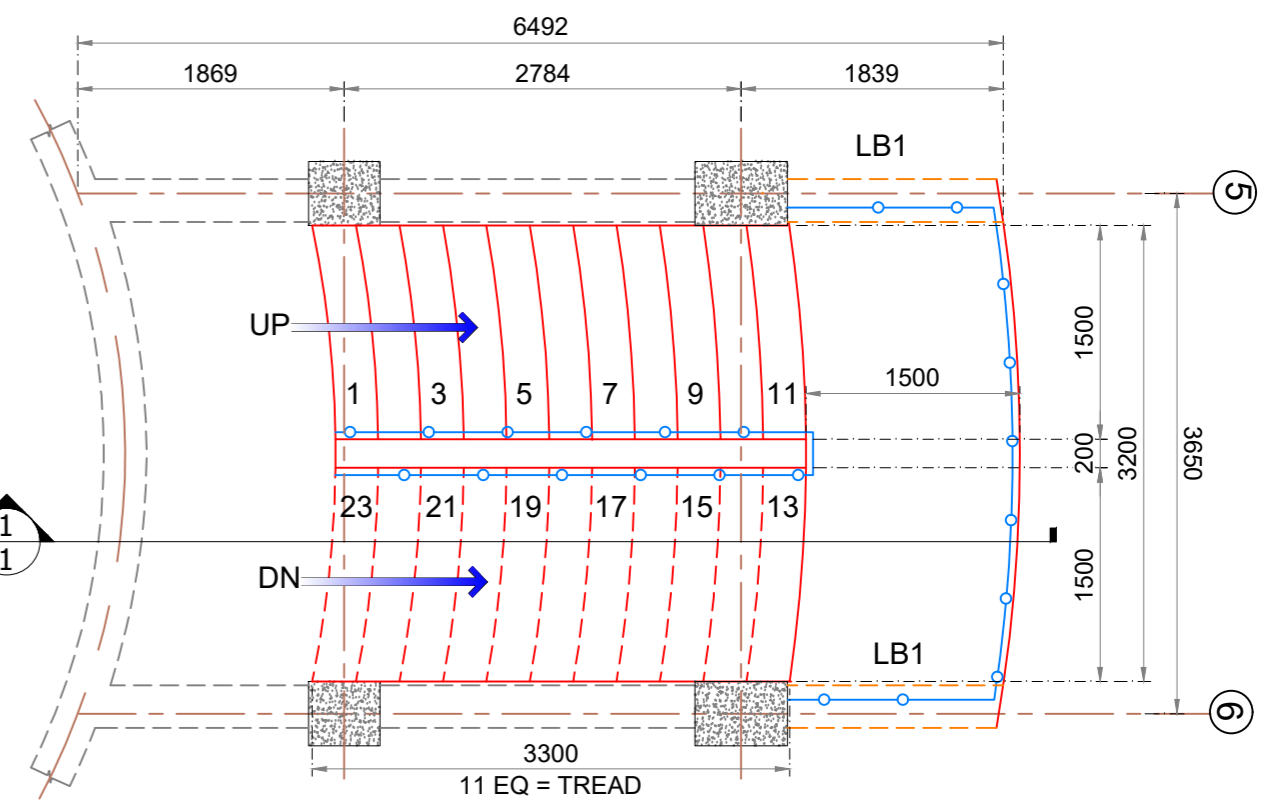
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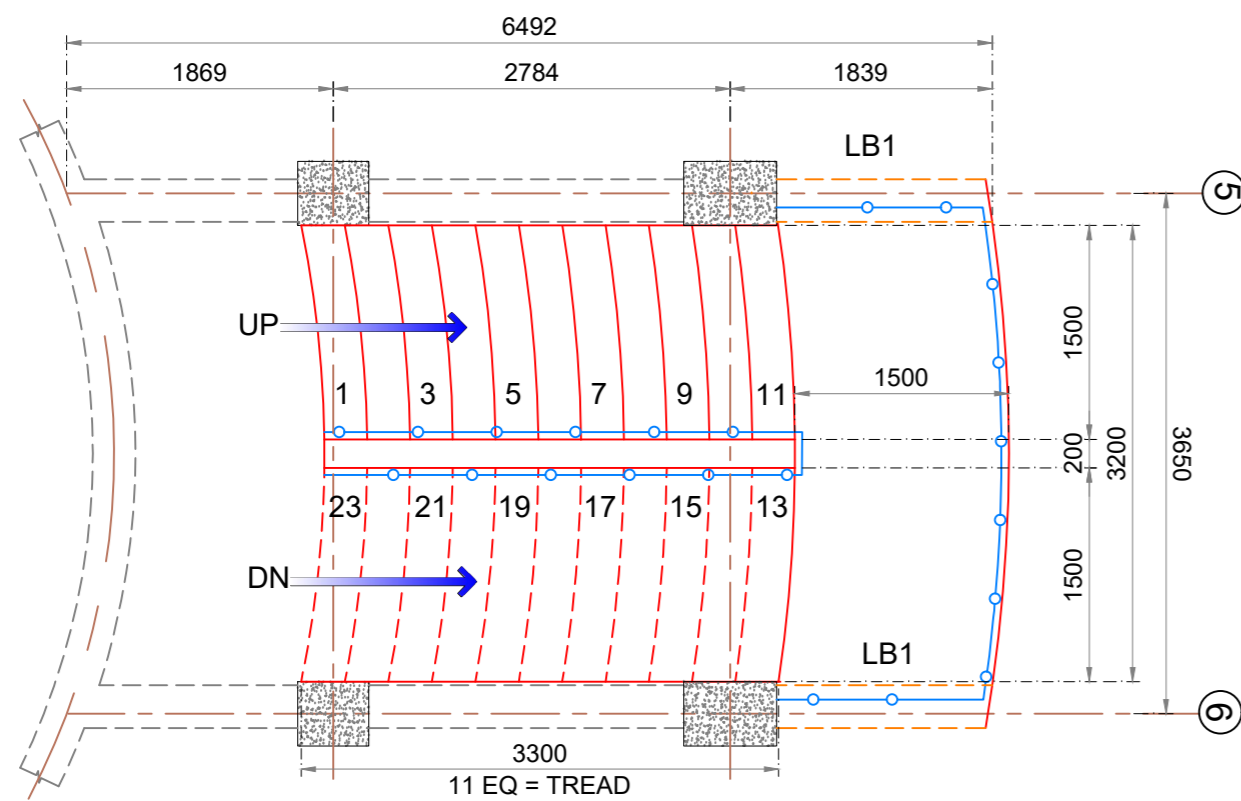
STAIRCASE BASEMENT TO GROUND FLOOR



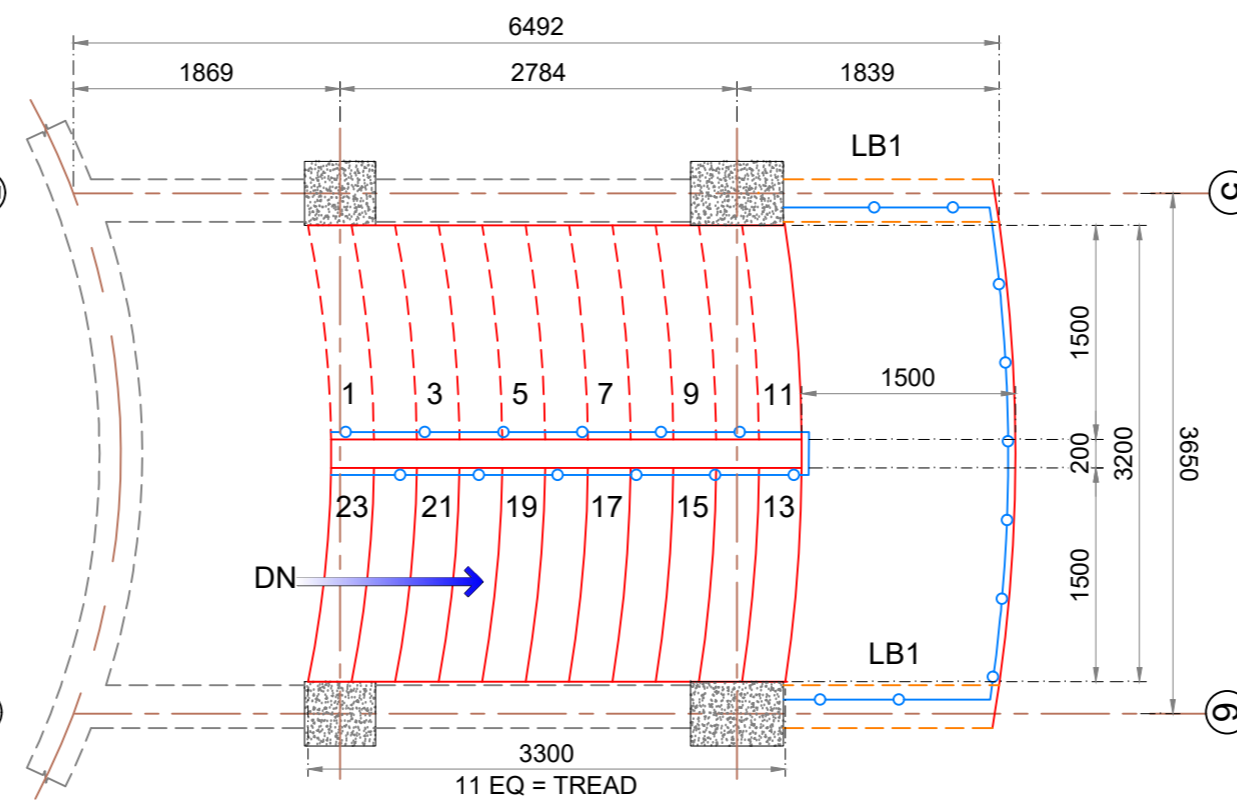
STAIRCASE GROUND FLOOR TO FIRST FLOOR



STAIRCASE FIRST FLOOR TO 2ND FLOOR



STAIRCASE 2RD FLOOR TO ROOF



STAIRCASE OF ROOF

**GENERAL NOTES**

- ALL DIMENSIONS ARE IN MILLIMETERS AND ELEVATIONS ARE IN METERS.
- PLEASE DO NOT SCALE. WORK TO DIMENSIONS ONLY.
- ALL STRUCTURAL DRAWINGS ARE TO BE FOLLOWED IN CONJUNCTION WITH ARCHITECT DRAWINGS. ANY DISCREPANCY SHALL BE GOT CLARIFIED BEFORE EXECUTION.
- ALL RCC SHALL BE OF CONTROLLED GRADE M30 IN ACCORDANCE WITH IS:456 UNLESS NOTED OTHERWISE.
- ALL REINFORCEMENT SHALL BE HIGH YIELD STRENGTH DEFORMED BAR OF GRADE Fe550D CONFORMING TO IS:1786.
- LAP LENGTH SHALL BE 50 TIMES THE DIAMETER OF SMALLER BAR BEING LAPPED.
- COVER TO REINFORCEMENT:-  
a) BEAM = 25 MM b) SLAB = 25 MM
- DEVELOPMENT LENGTH SHALL BE 50 TIMES THE DIAMETER OF BAR.
- ALL REINFORCEMENT LAPPINGS SHOULD BE STAGGERED.

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DATE	REV	DESCRIPTION OF REVISIONS	BY

**CLIENT:**



Divine Dharamshala  
 Step Forward to a Smart Neighbourhood  
 SMART CITY PROPOSAL

**DHARAMSHALA SMART CITY LTD. (DSCL)**

**PROJECT MANAGEMENT CONSULTANT:**




ILF CONSULTING ENGINEERS  
 IN JOINT VENTURE WITH  
 almondz the infrastructure specialist

**PROJECT:**

**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

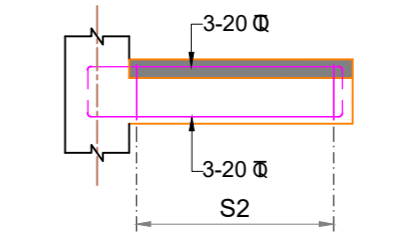
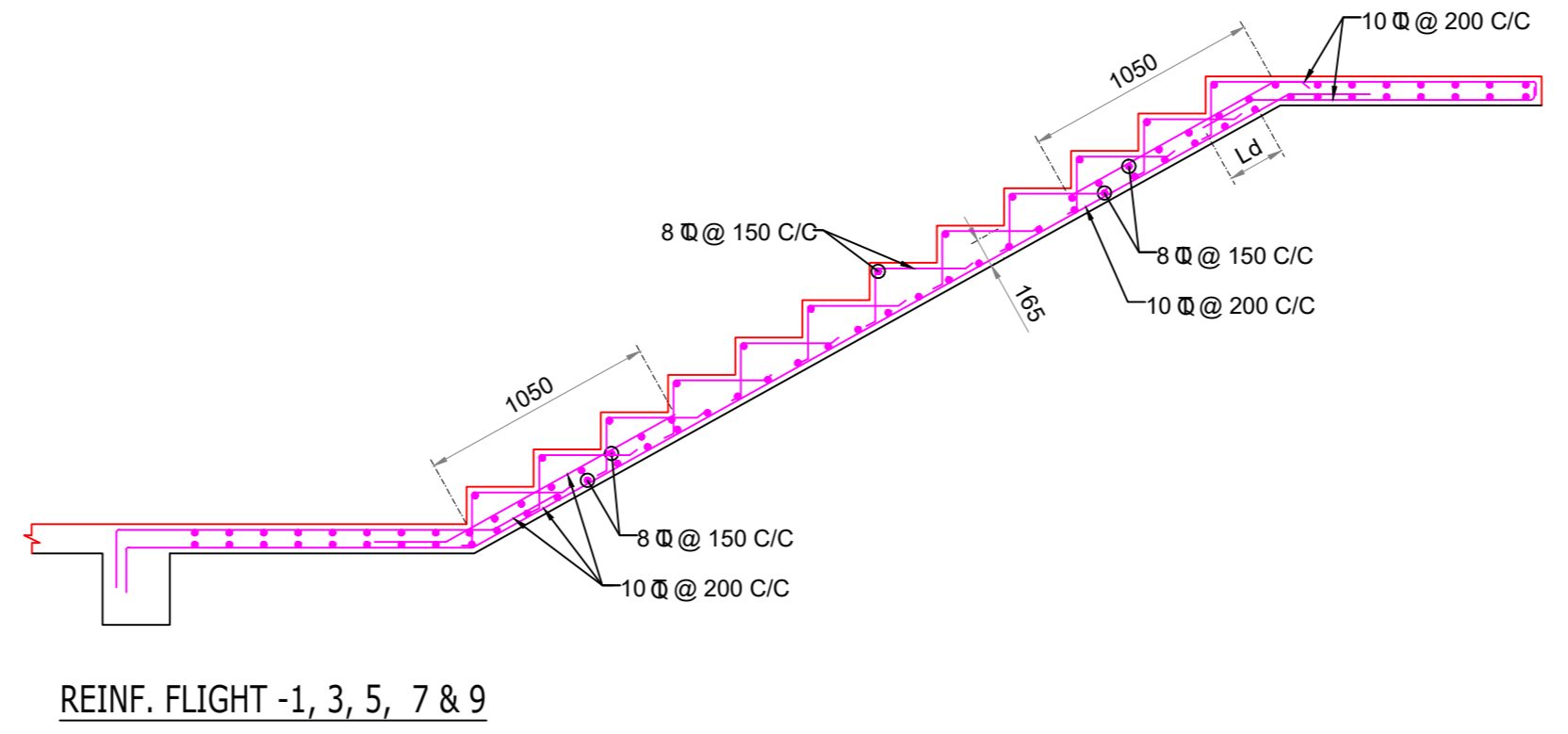
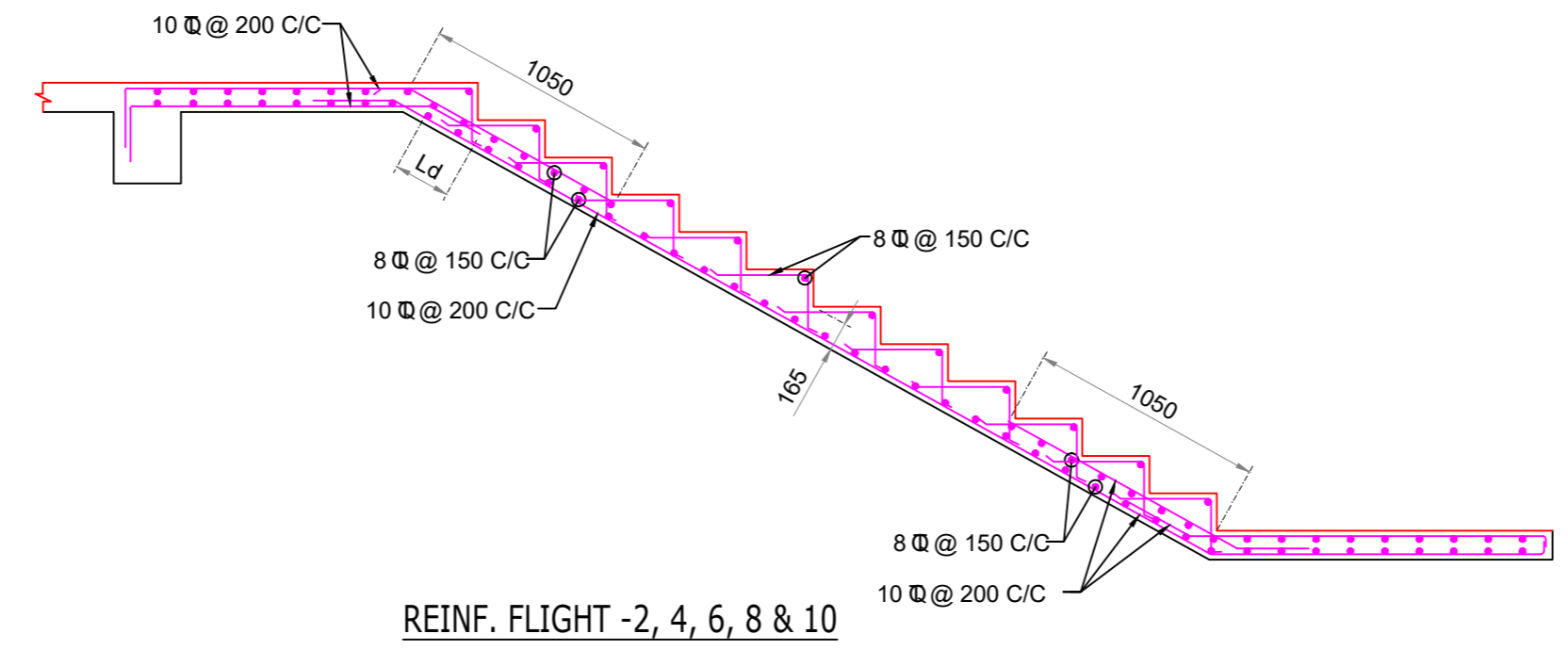
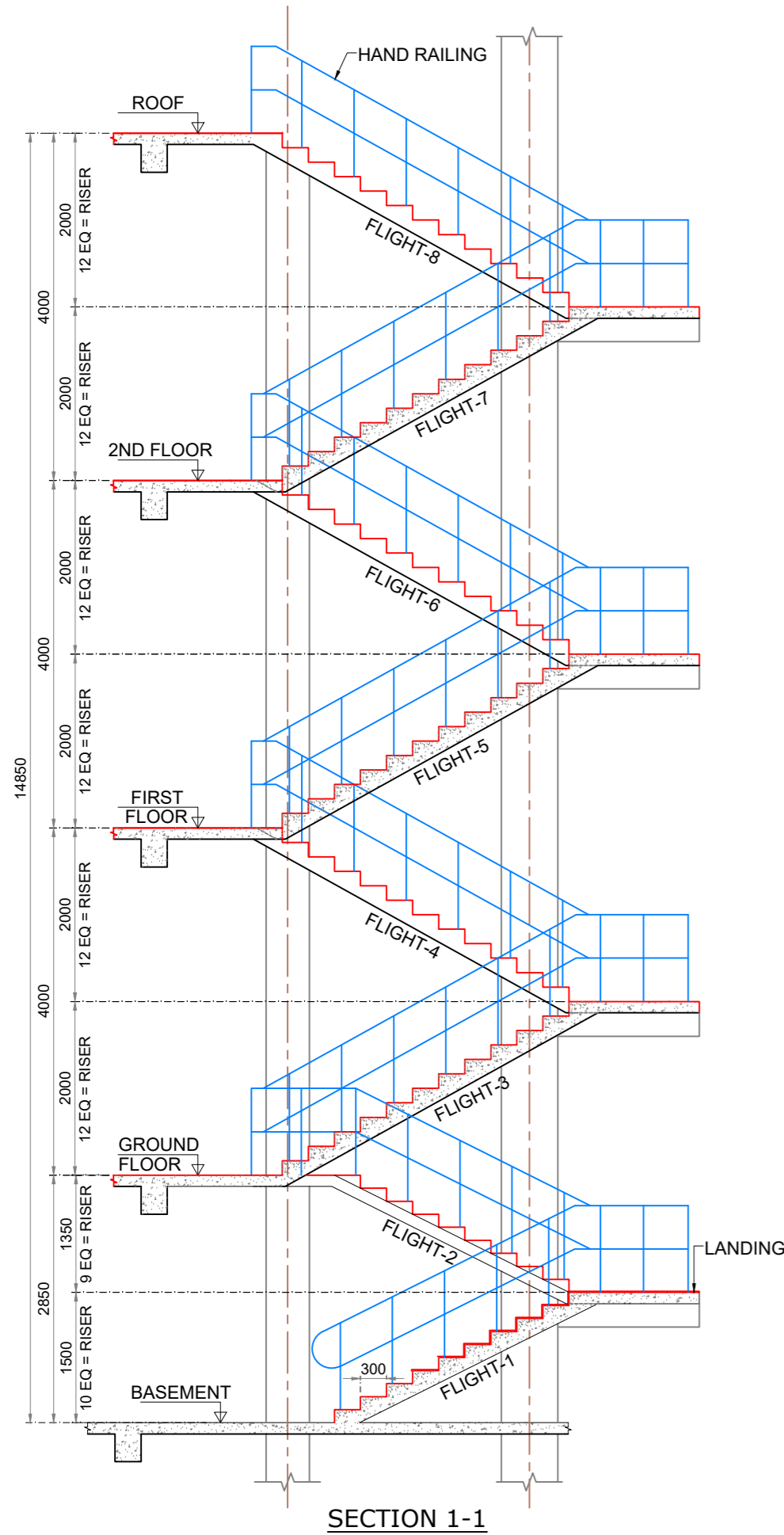
**STATUS:** TENDER DRAWING

APPROVED BY:	A.S.
CHECKED BY:	S.A.
DESIGNED BY:	S.A.
DRAWN BY:	D.K.

<b>TITLE:</b>	
PLAN OF STAIRCASE	
DRG. NO.	AGICL-DSCL-CV-ST-RM-011
SCALE:	A2 1:100 A3
DATE:	2-12-2021
REV.	R0
SH.	1

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PRODUCED BY AN AUTODESK STUDENT VERSION



BEAM LB1(300X400)

STIRRUPS		
SL NO	MKD	REINFORCEMENT
1	S1	2L-8 @ 100 C/C
2	S2	2L-8 @ 200 C/C

- GENERAL NOTES**
- ALL DIMENSIONS ARE IN MILLIMETERS AND ELEVATIONS ARE IN METERS.
  - PLEASE DO NOT SCALE. WORK TO DIMENSIONS ONLY.
  - ALL STRUCTURAL DRAWINGS ARE TO BE FOLLOWED IN CONJUNCTION WITH ARCHITECT DRAWINGS. ANY DISCREPANCY SHALL BE GOT CLARIFIED BEFORE EXECUTION.
  - ALL RCC SHALL BE OF CONTROLLED GRADE M30 IN ACCORDANCE WITH IS:456 UNLESS NOTED OTHERWISE.
  - ALL REINFORCEMENT SHALL BE HIGH YIELD STRENGTH DEFORMED BAR OF GRADE Fe550D CONFORMING TO IS:1786.
  - LAP LENGTH SHALL BE 50 TIMES THE DIAMETER OF SMALLER BAR BEING LAPPED.
  - COVER TO REINFORCEMENT:-  
a) BEAM = 25 MM b) STAIR = 25 MM
  - DEVELOPMENT LENGTH SHALL BE 50 TIMES THE DIAMETER OF BAR.
  - ALL REINFORCEMENT LAPPINGS SHOULD BE STAGGERED.

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DATE	REV	DESCRIPTION OF REVISIONS	BY



CLIENT:



Divine Dharamshala  
 Step Forward to a Smart Neighbourhood  
 SMART CITY PROPOSAL

DHARAMSHALA SMART CITY LTD. (DSCL)

PROJECT MANAGEMENT CONSULTANT:

ILF CONSULTING ENGINEERS  
 IN JOINT VENTURE WITH  
 almondz the infrastructure specialist

PROJECT:  
**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

APPROVED BY:	A.S
CHECKED BY:	S.A
DESIGNED BY:	S.A
DRAWN BY:	D.K

TITLE:  
**SECTION OF STAIRCASE & REINFORCEMENT DETAIL**

STATUS: <b>TENDER DRAWING</b>	SCALE: <b>A2 1:100</b>	A3	DATE: <b>2-12-2021</b>	DRG. NO. <b>AGICL-DSCL-CV-ST-RM-012</b>	REV. <b>R0</b>
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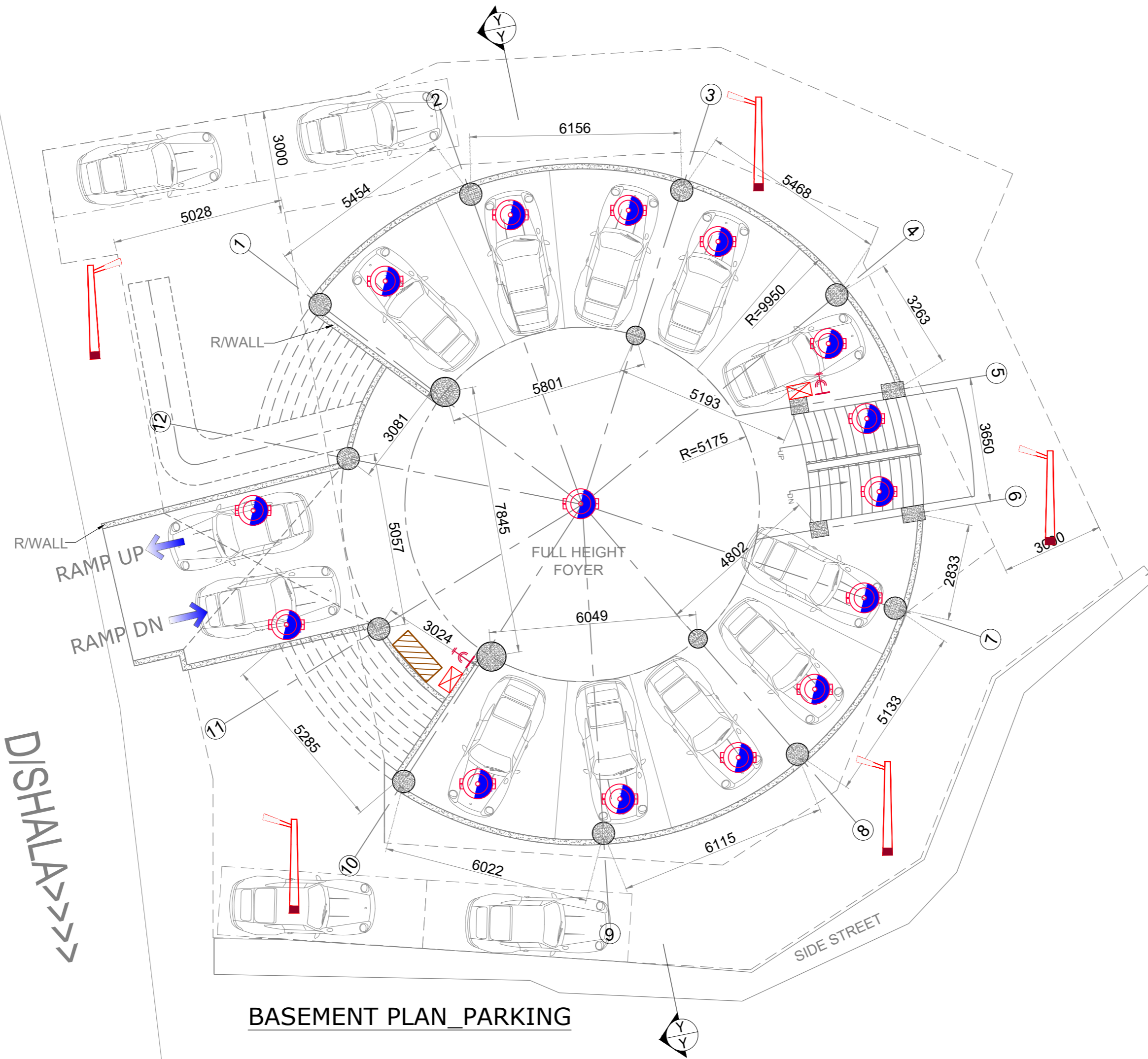
# **ELECTRICAL DRAWINGS**

	<b>LIST OF DRAWINGS</b>	<b>DRAWING NO.</b>	<b>NO. OF SHEET</b>
	<b>LAYOUT DRAWING ELECTRICAL</b>		
1.1	ELECTRICAL LAYOUT AT BASEMENT PLAN	<b>DRG. NO. AGICL-DSCL-RMSC-ELE-001</b>	1
1.2	ELECTRICAL LAYOUT AT UPPER GROUND FLOOR	<b>DRG. NO. AGICL-DSCL-RMSC-ELE-002</b>	1
1.3	ELECTRICAL LAYOUT AT FIRST FLOOR PLAN	<b>DRG. NO. AGICL-DSCL-RMSC-ELE-003</b>	1
1.4	ELECTRICAL LAYOUT AT SECOND FLOOR PLAN	<b>DRG. NO. AGICL-DSCL-RMSC-ELE-004</b>	1
1.5	ELECTRICAL LAYOUT AT ROOF PLAN	<b>DRG. NO. AGICL-DSCL-RMSC-ELE-005</b>	1
1.6	ELECTRICAL KEY DIAGRAM	<b>DRG. NO. AGICL-DSCL-RMSC-ELE-006</b>	1
	<b>LAYOUT DRAWING FIRE FIGHTING</b>		
1.1	LAYOUT OF FIRE FIGHTING AT BASEMENT PLAN	<b>DRG. NO. AGICL-DSCL-RMSC-FF-001</b>	1
1.2	LAYOUT OF FIRE FIGHTING AT GROUND FLOOR PLAN	<b>DRG. NO. AGICL-DSCL-RMSC-FF-002</b>	1
1.3	LAYOUT OF FIRE FIGHTING AT FIRST FLOOR PLAN	<b>DRG. NO. AGICL-DSCL-RMSC-FF-003</b>	1
1.4	LAYOUT OF FIRE FIGHTING AT SECOND FLOOR PLAN	<b>DRG. NO. AGICL-DSCL-RMSC-FF-004</b>	1
1.5	LAYOUT OF FIRE FIGHTING AT ROOF PLAN	<b>DRG. NO. AGICL-DSCL-RMSC-FF-005</b>	1
1.6	LAYOUT OF WATER TANK, PUMPING ROOM & PIPING SYSTEM FOR FIRE FIGHTING	<b>DRG. NO. AGICL-DSCL-RMSC-FF-006</b>	1



MACLO

DISHALA



LEGEND:-		
S.N.	SYMBOL	DESCRIPTION OF SYMBOL
1		CONCEALED LED LIGHT 24W
2		CONCEALED LED LIGHT 15W
3		EXHAUST FAN
4		15AMP POWER PLUG POINT
5		SWITCH BOARD WITH 5AMP POWER SOCKET
6		DISTRIBUTION BOX
7		DECORATIVE POLE INCLUDING 40-45W LED LUMINARY
8		CEILING FAN
9		HANGING LIGHT
10		LIGHT POINT FOR DISPLAY BOARD

BASEMENT PLAN\_PARKING

06/12/2021 - 10:34am  
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DATE	REV	DESCRIPTION OF REVISIONS	BY

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 SMART CITY PROPOSAL  
 Dharamshala Smart City Ltd. (DSCL)

**PROJECT MANAGEMENT CONSULTANT:**



ILF CONSULTING ENGINEERS  
 IN JOINT VENTURE WITH  
 almondz the infrastructure specialist

**PROJECT:**

REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.

**STATUS:** TENDER DRAWING

**SCALE:** 1:100

APPROVED BY:	AKS
CHECKED BY:	P.G
DESIGNED BY:	P.G
DRAWING BY:	A.S

**DRAWING TITLE :**

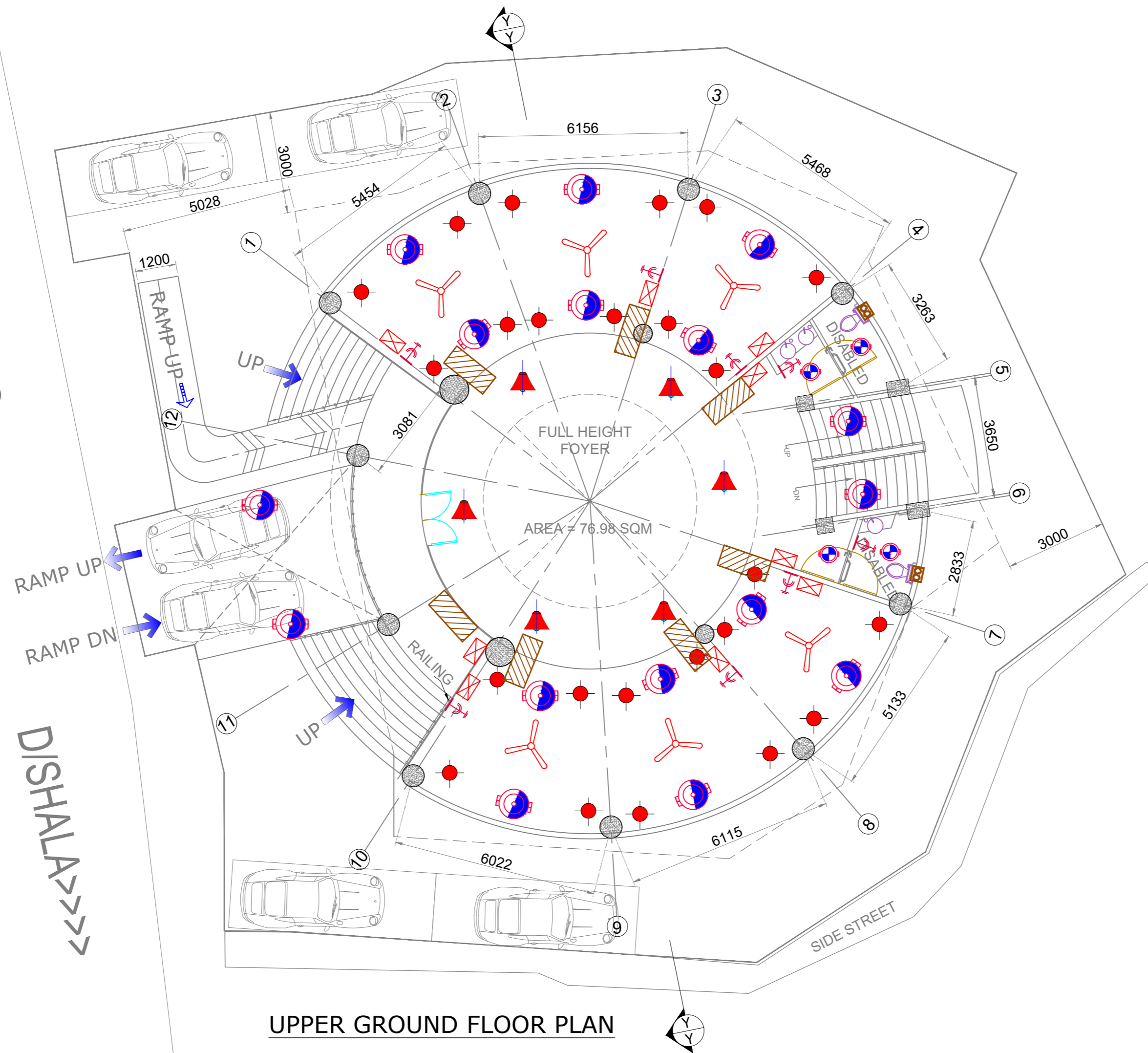
ELECTRICAL LAYOUT AT BASEMENT PLAN

**DRG. NO.** AGICL-DSCL-RMSC-ELE-001

**REV.** R0

MACLO

DISHALA



LEGEND:-		
S.N.	SYMBOL	DESCRIPTION OF SYMBOL
1		CONCEALED LED LIGHT 24W
2		CONCEALED LED LIGHT 15W
3		EXHAUST FAN
4		15AMP POWER PLUG POINT
5		SWITCH BOARD WITH 5AMP POWER SOCKET
6		DISTRIBUTION BOX
7		DECORATIVE POLE INCLUDING 40-45W LED LUMINARY
8		CEILING FAN
9		HANGING LIGHT
10		LIGHT POINT FOR DISPLAY BOARD

UPPER GROUND FLOOR PLAN

06/12/2021 - 10:34am  
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DATE	REV	DESCRIPTION OF REVISIONS	BY

**CLIENT:**



Divine Dharamshala  
 Step Forward to a Smart Neighbourhood  
 SMART CITY PROPOSAL  
 Dharamshala Smart City Ltd. (DSCL)

**PROJECT MANAGEMENT CONSULTANT:**



ILF CONSULTING ENGINEERS  
 IN JOINT VENTURE WITH  
 almondz the infrastructure specialist

**PROJECT:**

REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.

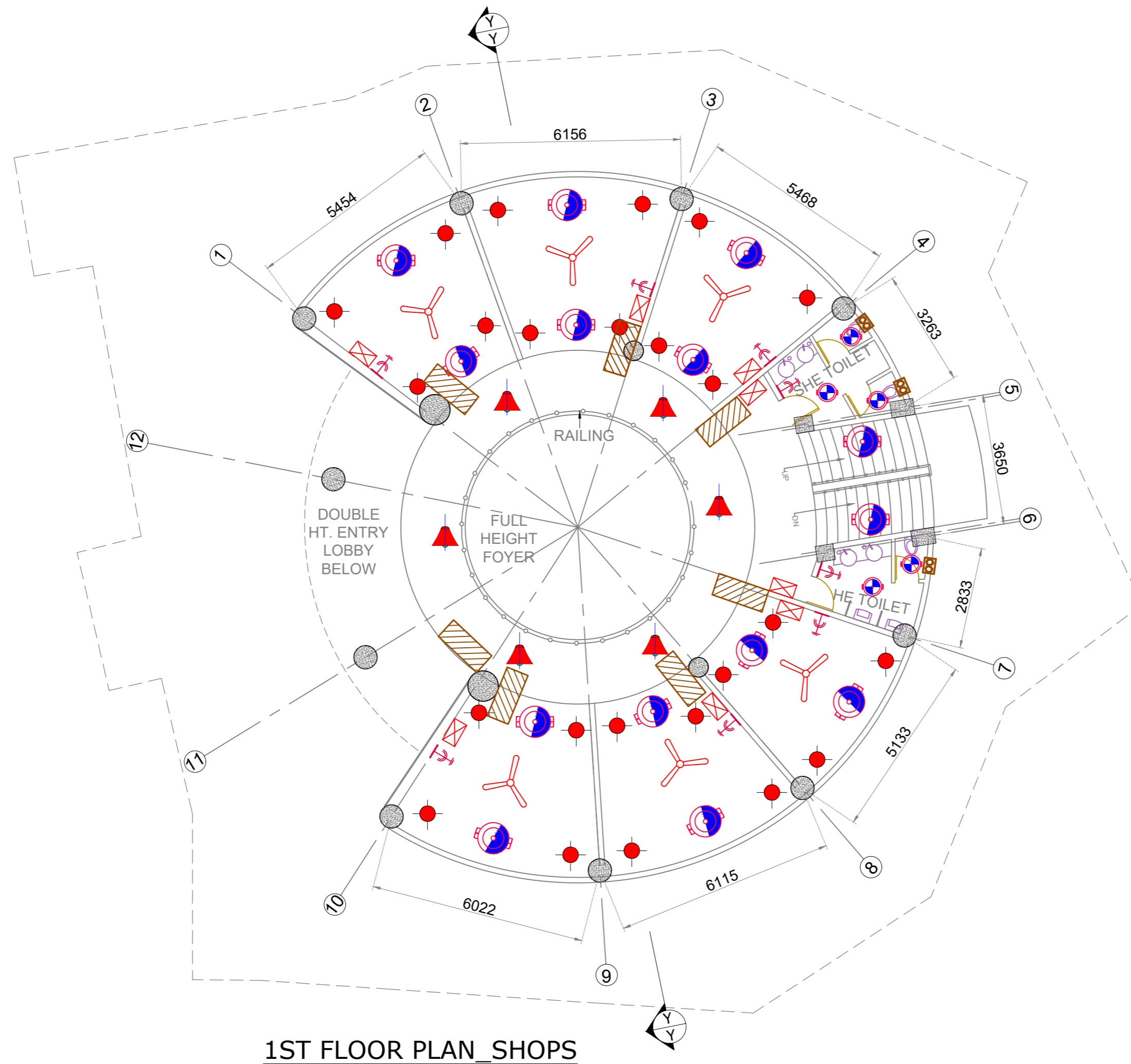
**STATUS:** TENDER DRAWING

**APPROVED BY:** AKS  
**CHECKED BY:** P.G  
**DESIGNED BY:** P.G  
**DRAWING BY:** A.S

**DRAWING TITLE :**

ELECTRICAL LAYOUT AT UPPER GROUND FLOOR

**DATE:** DEC-2021  
**DRG. NO.:** AGICL-DSCL-RMSC-ELE-002  
**REV.:** R0



1ST FLOOR PLAN\_SHOPS

LEGEND:-		
S.N.	SYMBOL	DESCRIPTION OF SYMBOL
1		CONCEALED LED LIGHT 24W
2		CONCEALED LED LIGHT 15W
3		EXHAUST FAN
4		15AMP POWER PLUG POINT
5		SWITCH BOARD WITH 5AMP POWER SOCKET
6		DISTRIBUTION BOX
7		DECORATIVE POLE INCLUDING 40-45W LED LUMINARY
8		CEILING FAN
9		HANGING LIGHT
10		LIGHT POINT FOR DISPLAY BOARD

06/12/2021 - 10:34am  
PATH: C:\Users\vip1\AppData\Local\Temp\AcPublish\15716\RUFGEE MARKET ELECTRICAL\_OPTION -2 (5.12.21).dwg

DATE	REV	DESCRIPTION OF REVISIONS	BY

**CLIENT:**



**Dharamshala Smart City Ltd. (DSCL)**

**PROJECT MANAGEMENT CONSULTANT:**




**ILF CONSULTING ENGINEERS** IN JOINT VENTURE WITH **almondz** the infrastructure specialist

**PROJECT:**

**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

APPROVED BY:	AKS
CHECKED BY:	P.G
DESIGNED BY:	P.G
DRAWING BY:	A.S

**DRAWING TITLE :**

**ELECTRICAL LAYOUT AT FIRST FLOOR PLAN**

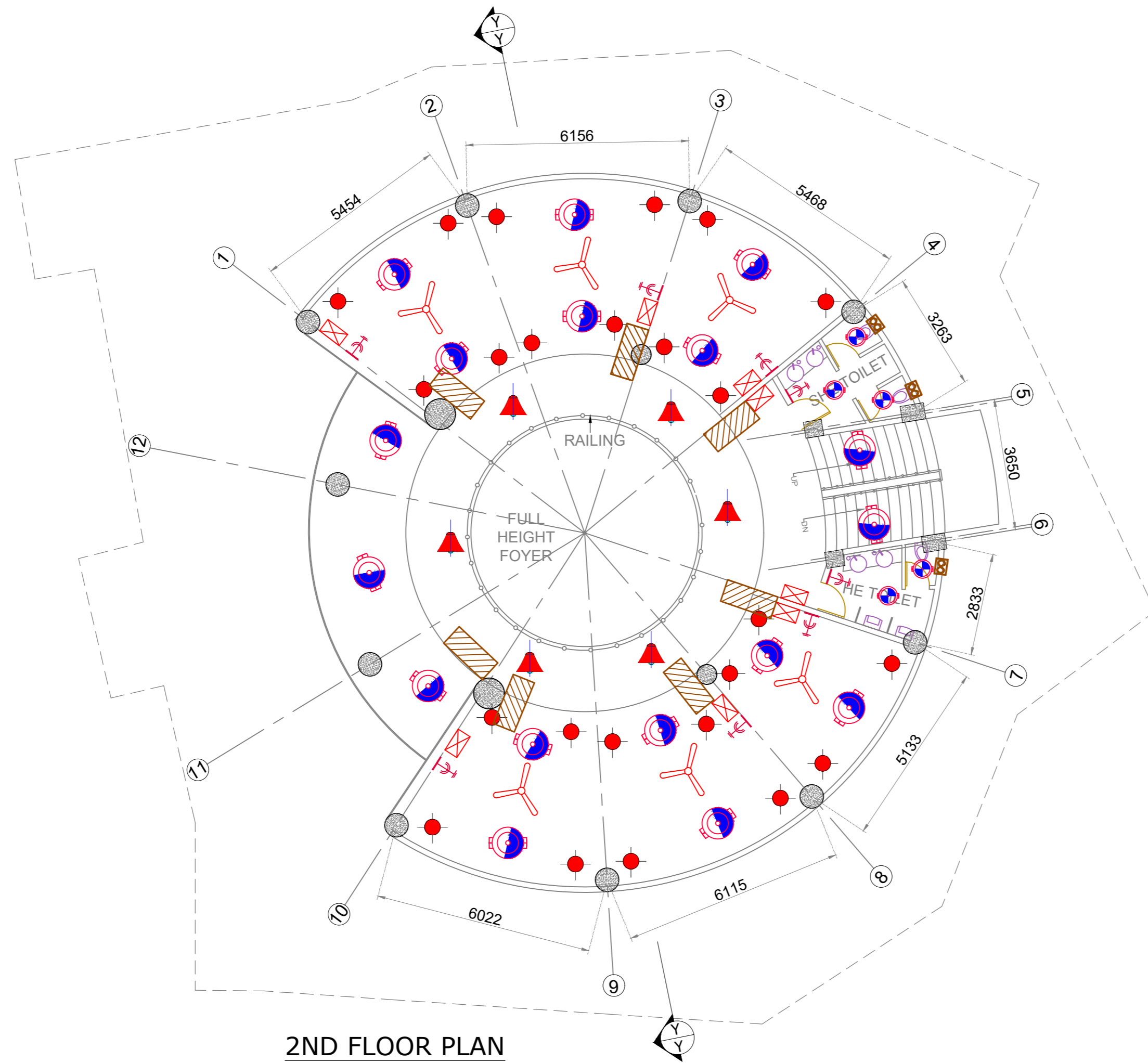
**STATUS** TENDER DRAWING

**SCALE:** 1:100

**DATE:** DEC-2021

**DRG. NO.** AGICL-DSCL-RMSC-ELE-003

**REV.** R0



2ND FLOOR PLAN

LEGEND:-		
S.N.	SYMBOL	DESCRIPTION OF SYMBOL
1		CONCEALED LED LIGHT 24W
2		CONCEALED LED LIGHT 15W
3		EXHAUST FAN
4		15AMP POWER PLUG POINT
5		SWITCH BOARD WITH 5AMP POWER SOCKET
6		DISTRIBUTION BOX
7		DECORATIVE POLE INCLUDING 40-45W LED LUMINARY
8		CEILING FAN
9		HANGING LIGHT
10		LIGHT POINT FOR DISPLAY BOARD

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DATE	REV	DESCRIPTION OF REVISIONS	BY

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SMART CITY PROPOSAL  
Dharamshala Smart City Ltd. (DSCL)

**PROJECT MANAGEMENT CONSULTANT:**



ILF CONSULTING ENGINEERS  
IN JOINT VENTURE WITH  
almondz the infrastructure specialist

**PROJECT:**

REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.

**STATUS:** TENDER DRAWING

APPROVED BY: AKS  
CHECKED BY: P.G  
DESIGNED BY: P.G  
DRAWING BY: A.S

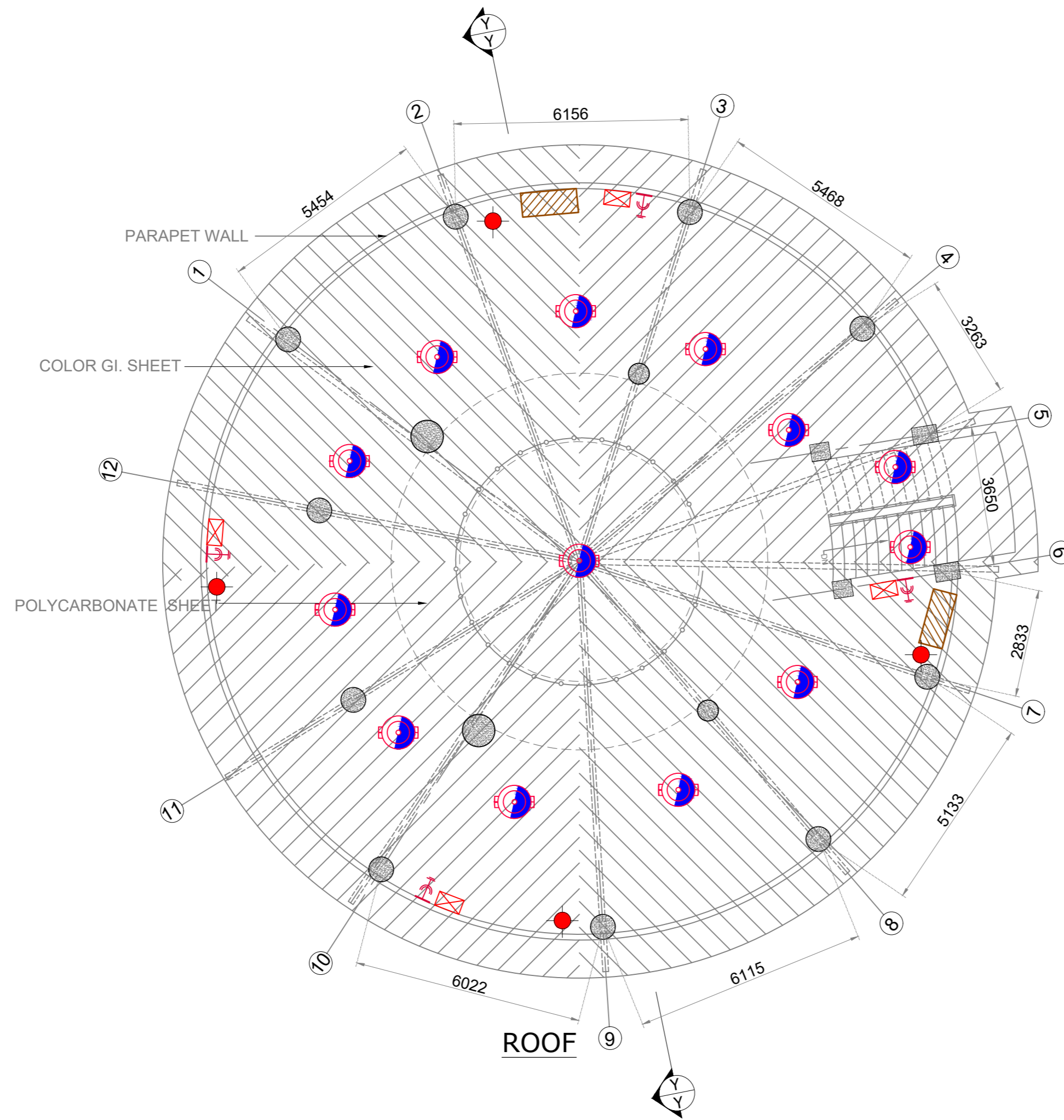
DATE: DEC-2021

**DRAWING TITLE :**

ELECTRICAL LAYOUT AT SECOND FLOOR PLAN

DRG. NO. AGICL-DSCL-RMSC-ELE-004

REV. **RO**



LEGEND:-		
S.N.	SYMBOL	DESCRIPTION OF SYMBOL
1		CONCEALED LED LIGHT 24W
2		CONCEALED LED LIGHT 15W
3		EXHAUST FAN
4		15AMP POWER PLUG POINT
5		SWITCH BOARD WITH 5AMP POWER SOCKET
6		DISTRIBUTION BOX
7		DECORATIVE POLE INCLUDING 40-45W LED LUMINARY
8		CEILING FAN
9		HANGING LIGHT
10		LIGHT POINT FOR DISPLAY BOARD

06/12/2021 - 10:34am  
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DATE	REV	DESCRIPTION OF REVISIONS	BY

**CLIENT:**



**Dharamshala Smart City Ltd. (DSCL)**

**PROJECT MANAGEMENT CONSULTANT:**

**ILF CONSULTING ENGINEERS** *IN JOINT VENTURE WITH* **almondz** *the infrastructure specialist*

**PROJECT:**

**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

**STATUS:** TENDER DRAWING

**APPROVED BY:** AKS

**CHECKED BY:** P.G

**DESIGNED BY:** P.G

**DRAWING BY:** A.S

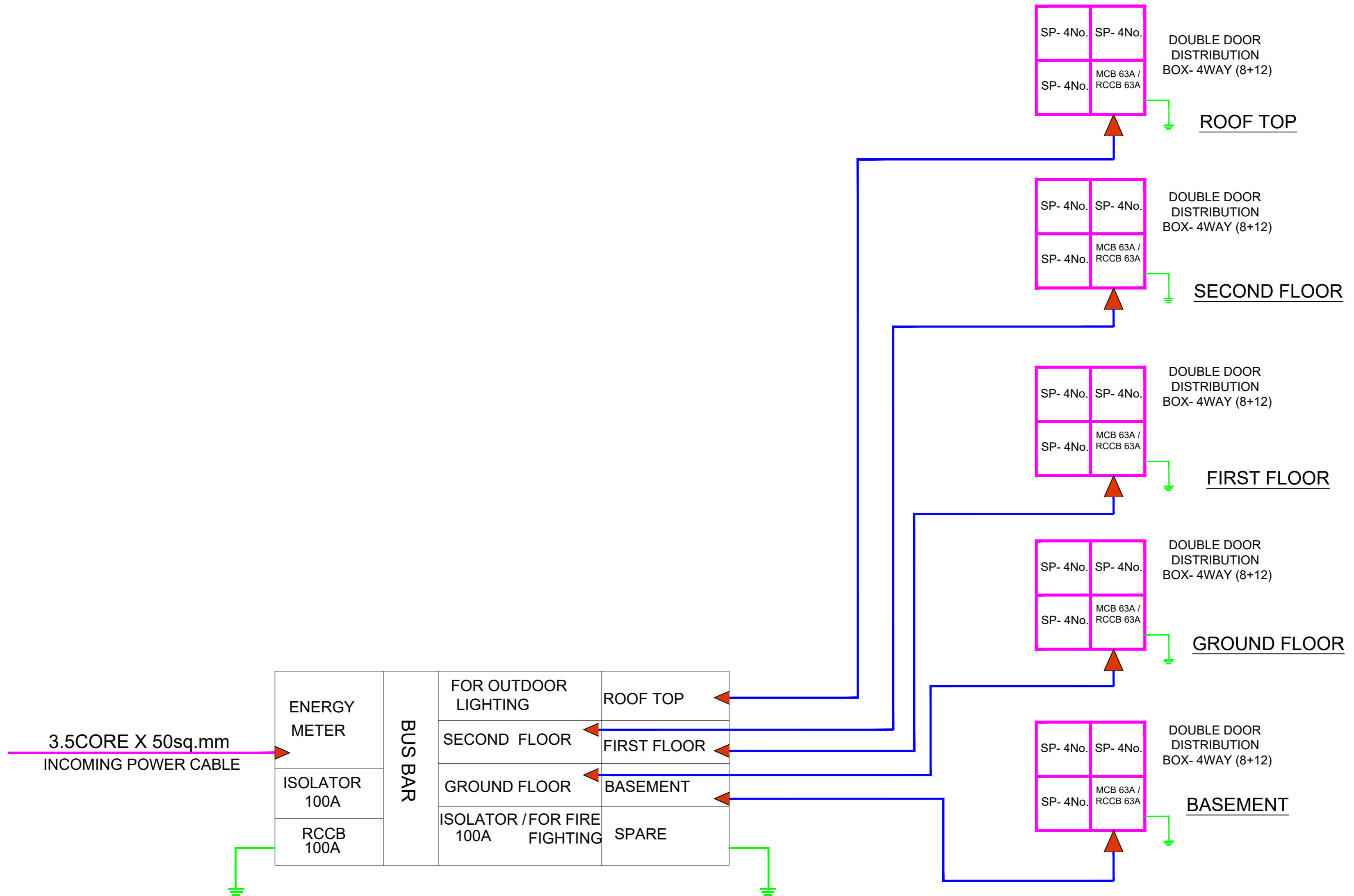
**DATE:** DEC-2021

**DRAWING TITLE :**

**ELECTRICAL LAYOUT AT ROOF PLAN**

**DRG. NO.** AGICL-DSCL-RMSC-ELE-005

**REV.** **RO**



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DATE	REV	DESCRIPTION OF REVISIONS	BY

**CLIENT:**



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 SMART CITY PROPOSAL  
 Dharamshala Smart City Ltd. (DSCL)

**PROJECT MANAGEMENT CONSULTANT:**



ILF CONSULTING ENGINEERS  
 IN JOINT VENTURE WITH  
 almondz the infrastructure specialist

**PROJECT:**

REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.

**STATUS:** TENDER DRAWING

**APPROVED BY:** AKS  
**CHECKED BY:** P.G  
**DESIGNED BY:** P.G  
**DRAWING BY:** A.S

**DATE:** DEC-2021

**DRAWING TITLE :**

ELECTRICAL KEY DIAGRAM

**DRG. NO.** AGICL-DSCL-RMSC-ELE-006  
**REV.** R0

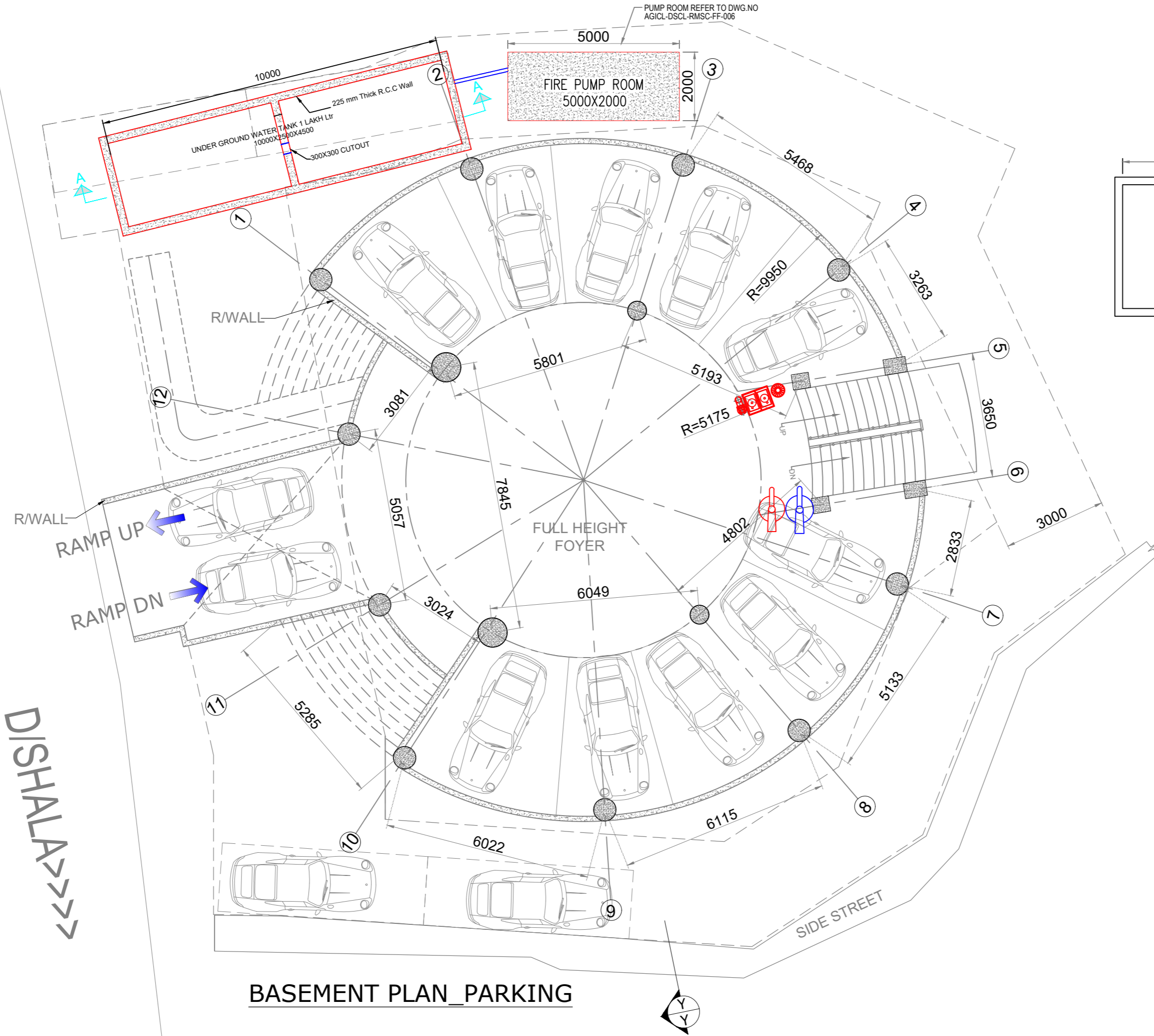
# **FIRE FIGHTING**

FOR REFUGEE MARKET BUILDING

FOR REFUGEE MARKET BUILDING

MACLO

DISHALA



LEGEND

	HYDRANT VALVE (HV)
	HOSE REEL (HR)
	HOSE BOX (HB)
	FIRE EXTINGUISHER CO2 4.5KG (F.X.)
	FIRE EXTINGUISHER ABC 6KG (F.X.)
	4 WAY FIRE BRIGADE INLET VALVE (FBI)
	STRAINER (STR)
	BUTTERFLY VALVE (BFV)
	BALL VALVE (BV)
	RUBBER EXPANSION

BASEMENT PLAN\_PARKING

DATE	REV	DESCRIPTION OF REVISIONS	BY

CLIENT:

Step Forward to a Smart Neighbourhood  
SMART CITY PROPOSAL  
Dharamshala Smart City Ltd. (DSCL)

PROJECT MANAGEMENT CONSULTANT:

IN JOINT VENTURE WITH

PROJECT:

REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.

STATUS: TENDER DRAWING

APPROVED BY:	AKS
CHECKED BY:	P.G
DESIGNED BY:	P.G
DRAWING BY:	A.S

DRAWING TITLE:

LAYOUT OF FIRE FIGHTING AT BASEMENT PLAN

DRG. NO. AGICL-DSCL-RMSC-FF-001

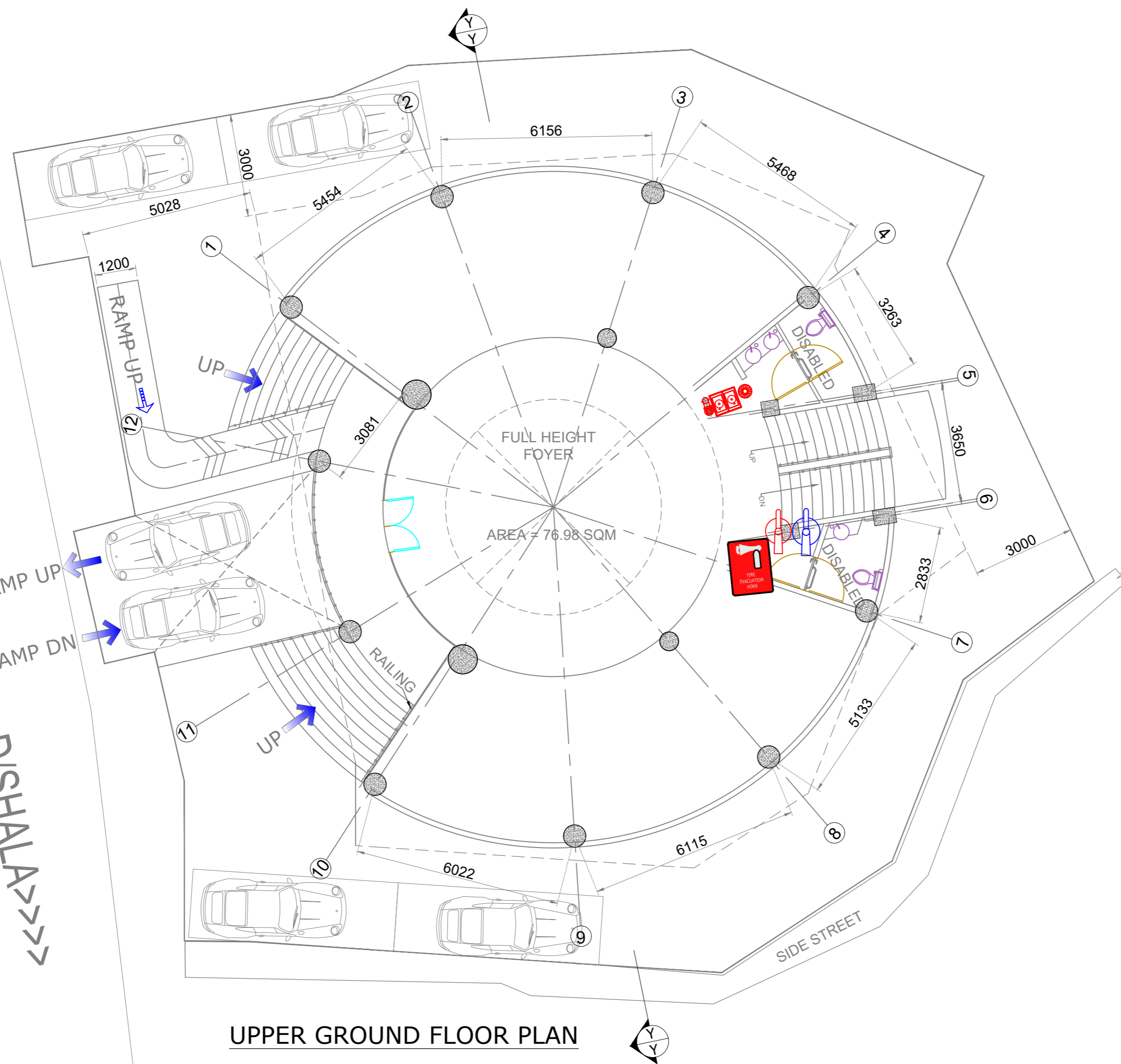
DATE: DEC-2021

REV. R0



MACLO

DISHALA



LEGEND	
	HYDRANT VALVE (HV)
	HOSE REEL (HR)
	HOSE BOX (HB)
	FIRE EXTINGUISHER CO2 4.5KG (F.X.)
	FIRE EXTINGUISHER ABC 6KG (F.X.)
	4 WAY FIRE BRIGADE INLET VALVE (FBI)
	STRAINER (STR)
	BUTTERFLY VALVE (BFV)
	BALL VALVE (BV)
	RUBBER EXPANSION

UPPER GROUND FLOOR PLAN

DATE	REV	DESCRIPTION OF REVISIONS	BY

**CLIENT:**



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**Dharamshala Smart City Ltd. (DSCL)**

**PROJECT MANAGEMENT CONSULTANT:**




IN JOINT VENTURE WITH

**PROJECT:**

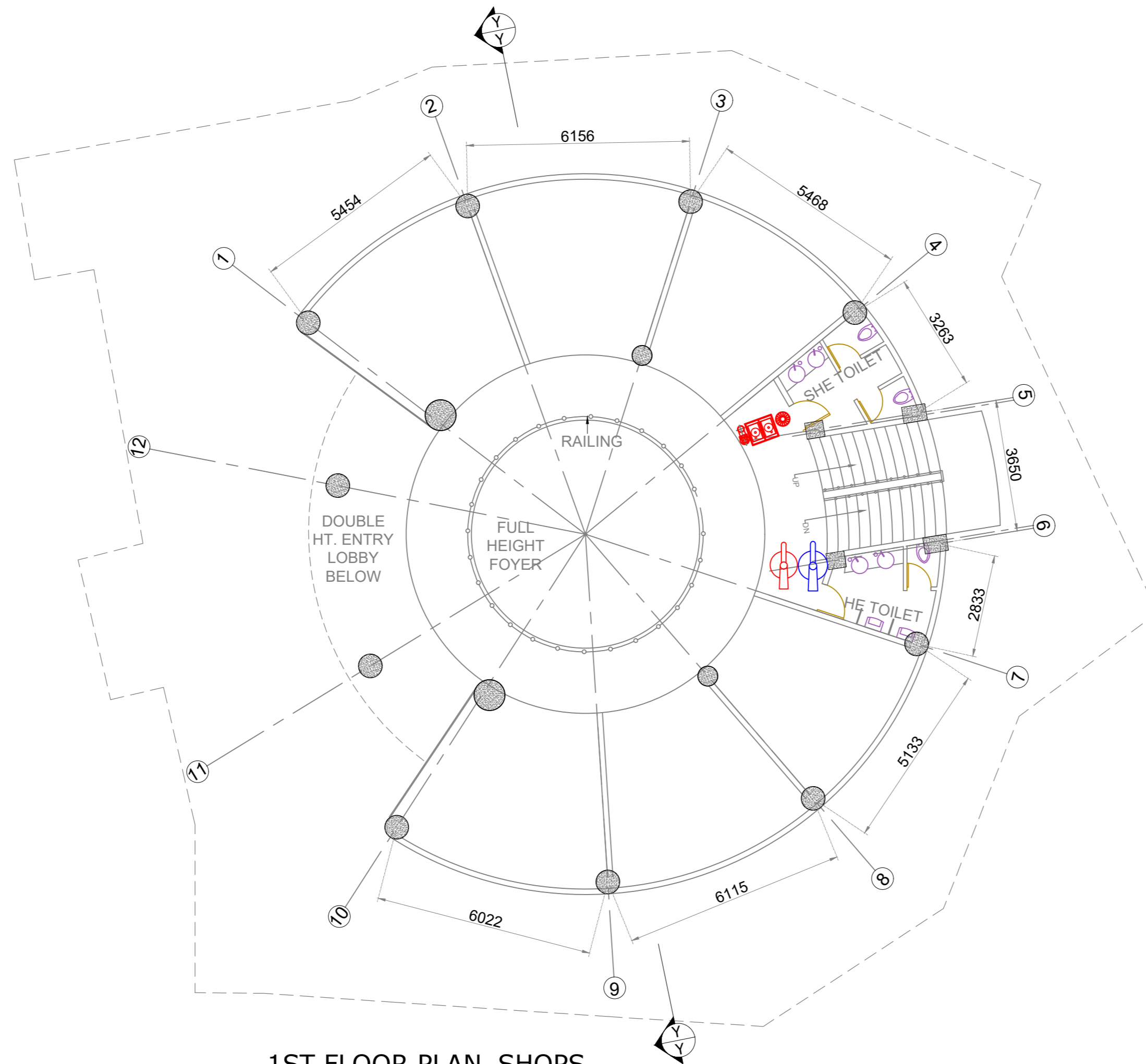
**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

APPROVED BY:	AKS
CHECKED BY:	P.G
DESIGNED BY:	P.G
DRAWING BY:	A.S

**DRAWING TITLE :**

LAYOUT OF FIRE FIGHTING AT GROUND FLOOR PLAN

<b>STATUS</b>	TENDER DRAWING	<b>SCALE:</b>	1:100	<b>DATE:</b>	DEC-2021	<b>DRG. NO.</b>	AGICL-DSCL-RMSC-FF-002	<b>REV.</b>	RO
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LEGEND	
	HYDRANT VALVE (HV)
	HOSE REEL (HR)
	HOSE BOX (HB)
	FIRE EXTINGUISHER CO2 4.5KG (F.X.)
	FIRE EXTINGUISHER ABC 6KG (F.X.)
	4 WAY FIRE BRIGADE INLET VALVE (FBI)
	STRAINER (STR)
	BUTTERFLY VALVE (BFV)
	BALL VALVE (BV)
	RUBBER EXPANSION

1ST FLOOR PLAN\_SHOPS

DATE	REV	DESCRIPTION OF REVISIONS	BY

**CLIENT:**



Step Forward to a Smart Neighbourhood  
**Divine Dharamshala**  
 SMART CITY PROPOSAL  
**Dharamshala Smart City Ltd. (DSCL)**

**PROJECT MANAGEMENT CONSULTANT:**




**ILF** CONSULTING ENGINEERS  
**almondz** the infrastructure specialist  
 IN JOINT VENTURE WITH

**PROJECT:**

**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

**STATUS:** TENDER DRAWING

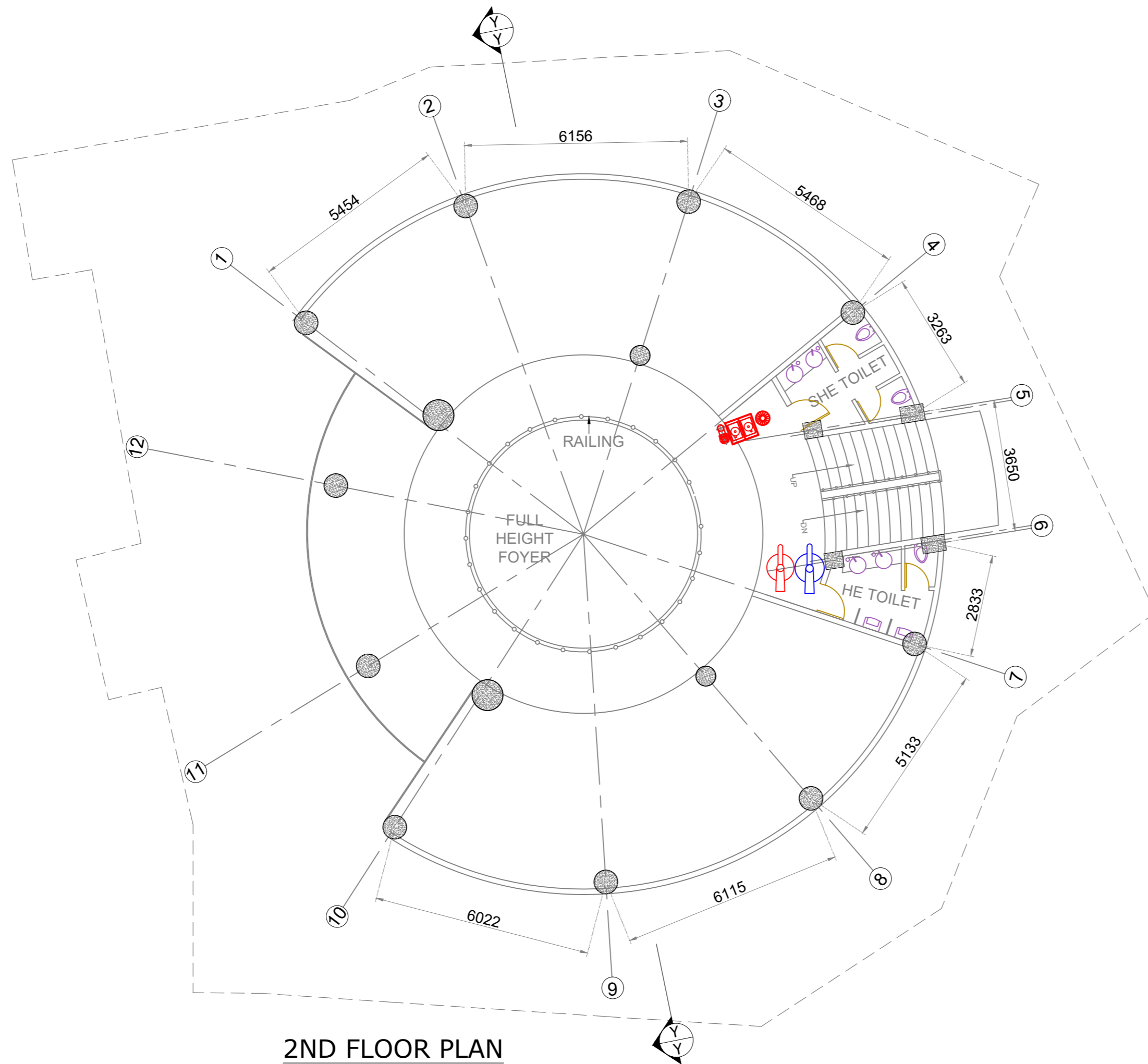
APPROVED BY: AKS  
 CHECKED BY: P.G  
 DESIGNED BY: P.G  
 DRAWING BY: A.S

SCALE: 1:100  
 DATE: DEC-2021

**DRAWING TITLE :**

LAYOUT OF FIRE FIGHTING AT FIRST FLOOR PLAN

DRG. NO. AGICL-DSCL-RMSC-FF-003  
 REV. **RO**



2ND FLOOR PLAN

LEGEND	
	HYDRANT VALVE (HV)
	HOSE REEL (HR)
	HOSE BOX (HB)
	FIRE EXTINGUISHER CO2 4.5KG (F.X.)
	FIRE EXTINGUISHER ABC 6KG (F.X.)
	4 WAY FIRE BRIGADE INLET VALVE (FBI)
	STRAINER (STR)
	BUTTERFLY VALVE (BFV)
	BALL VALVE (BV)
	RUBBER EXPANSION

DATE	REV	DESCRIPTION OF REVISIONS	BY

**CLIENT:**



Step Forward to a Smart Neighbourhood  
SMART CITY PROPOSAL  
**Dharamshala Smart City Ltd. (DSCL)**

**PROJECT MANAGEMENT CONSULTANT:**




IN JOINT VENTURE WITH  
the infrastructure specialist

**PROJECT:**

**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

**STATUS:** TENDER DRAWING

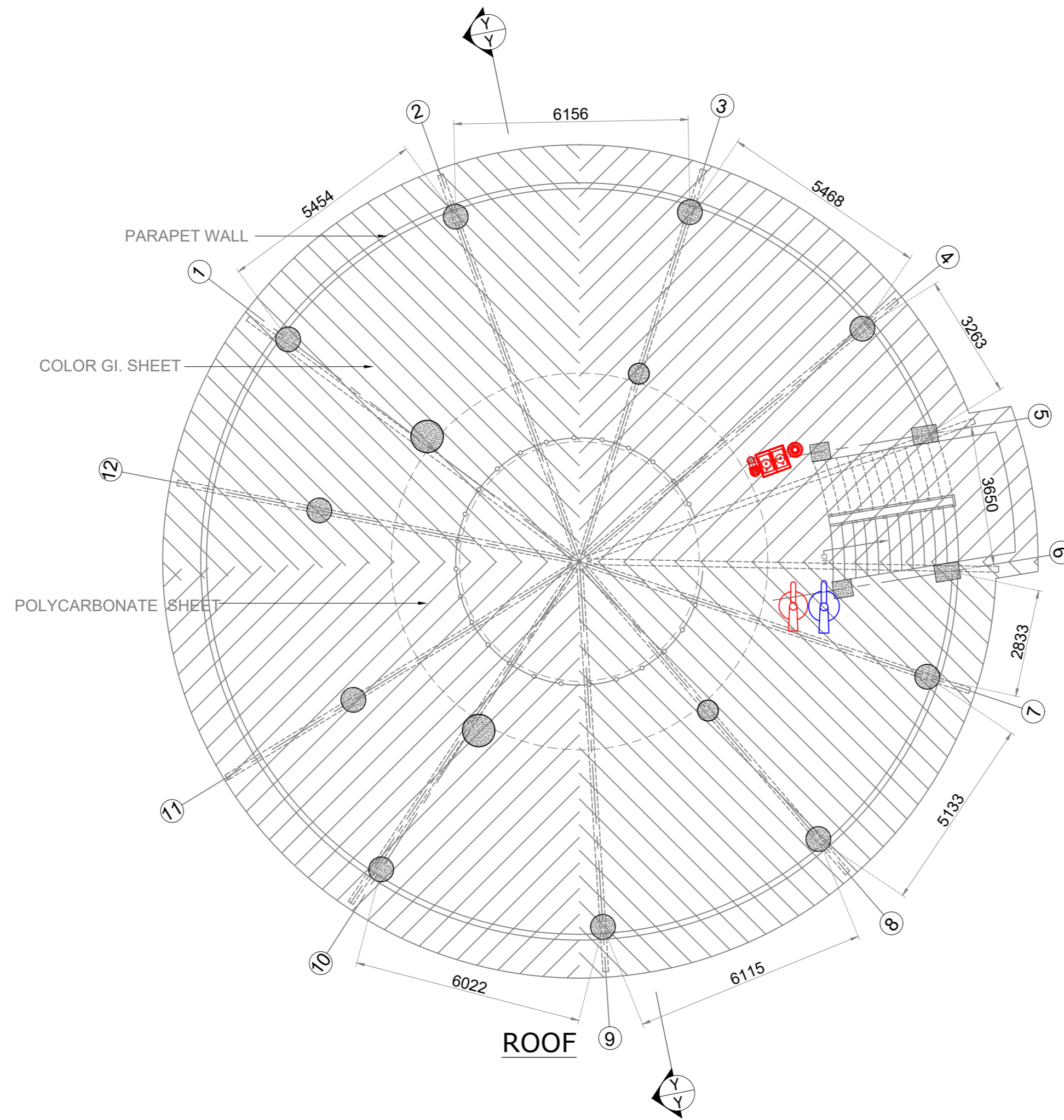
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CHECKED BY:	P.G
DESIGNED BY:	P.G
DRAWING BY:	A.S

**DRAWING TITLE :**

LAYOUT OF FIRE FIGHTING AT SECOND FLOOR PLAN

DRG. NO. AGICL-DSCL-RMSC-FF-004

REV. **RO**



LEGEND	
	HYDRANT VALVE (HV)
	HOSE REEL (HR)
	HOSE BOX (HB)
	FIRE EXTINGUISHER CO2 4.5KG (F.X.)
	FIRE EXTINGUISHER ABC 6KG (F.X.)
	4 WAY FIRE BRIGADE INLET VALVE (FBI)
	STRAINER (STR)
	BUTTERFLY VALVE (BFV)
	BALL VALVE (BV)
	RUBBER EXPANSION



DATE	REV	DESCRIPTION OF REVISIONS	BY

**CLIENT:**



Step Forward to a Smart Neighbourhood  
**Divine Dharamshala**  
 SMART CITY PROPOSAL  
**Dharamshala Smart City Ltd. (DSCL)**

**PROJECT MANAGEMENT CONSULTANT:**

**FLP** CONSULTING ENGINEERS  
**almondz** the infrastructure specialist  
 IN JOINT VENTURE WITH

**PROJECT:**

**REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.**

**STATUS:** TENDER DRAWING

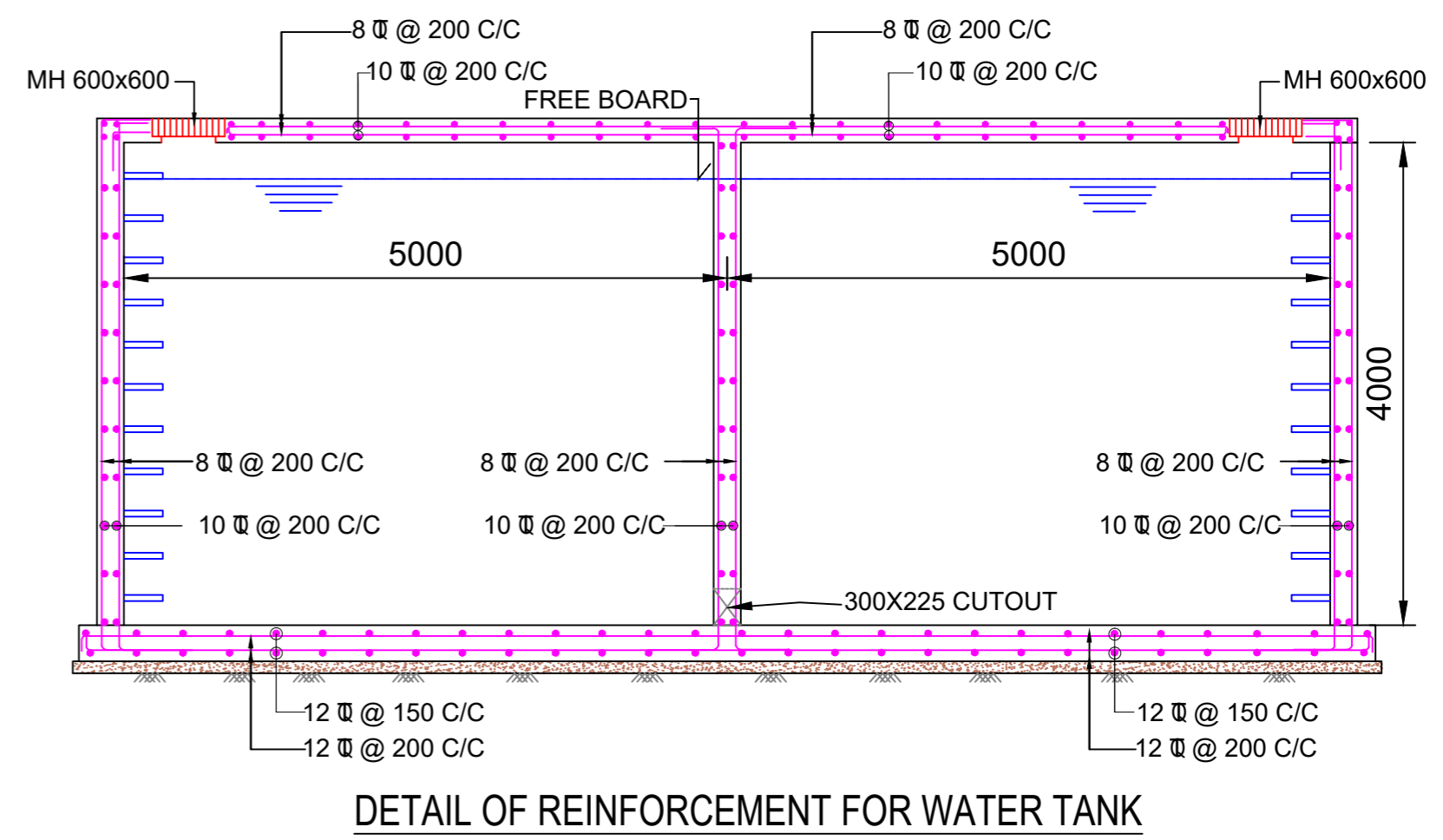
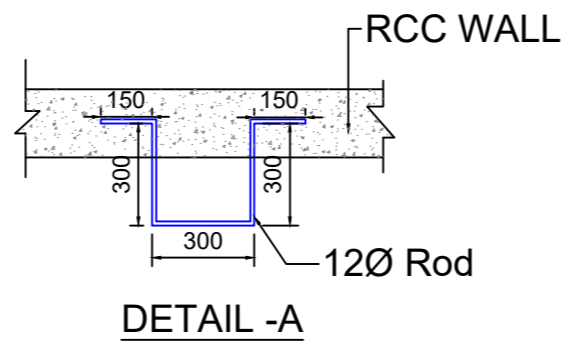
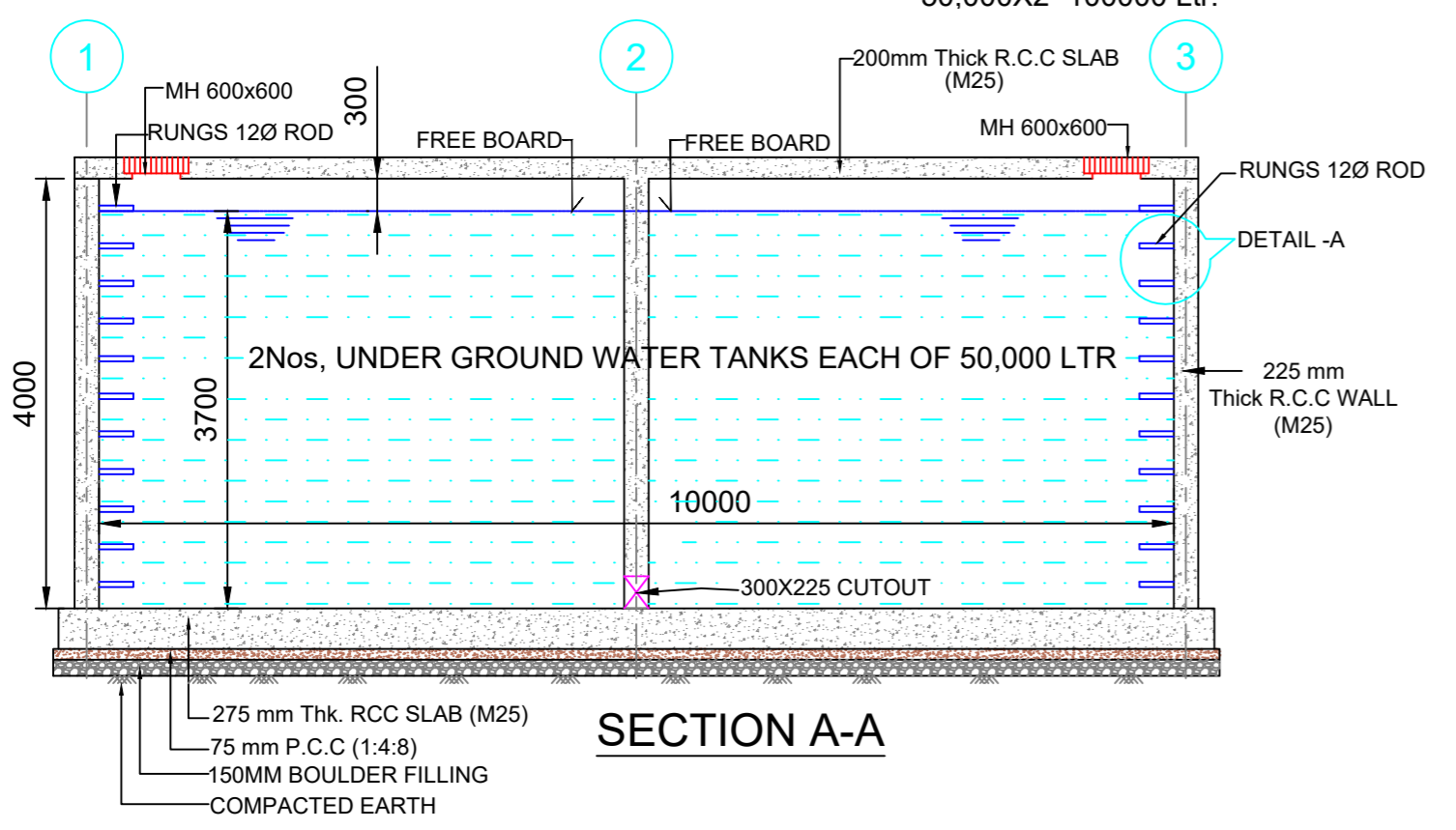
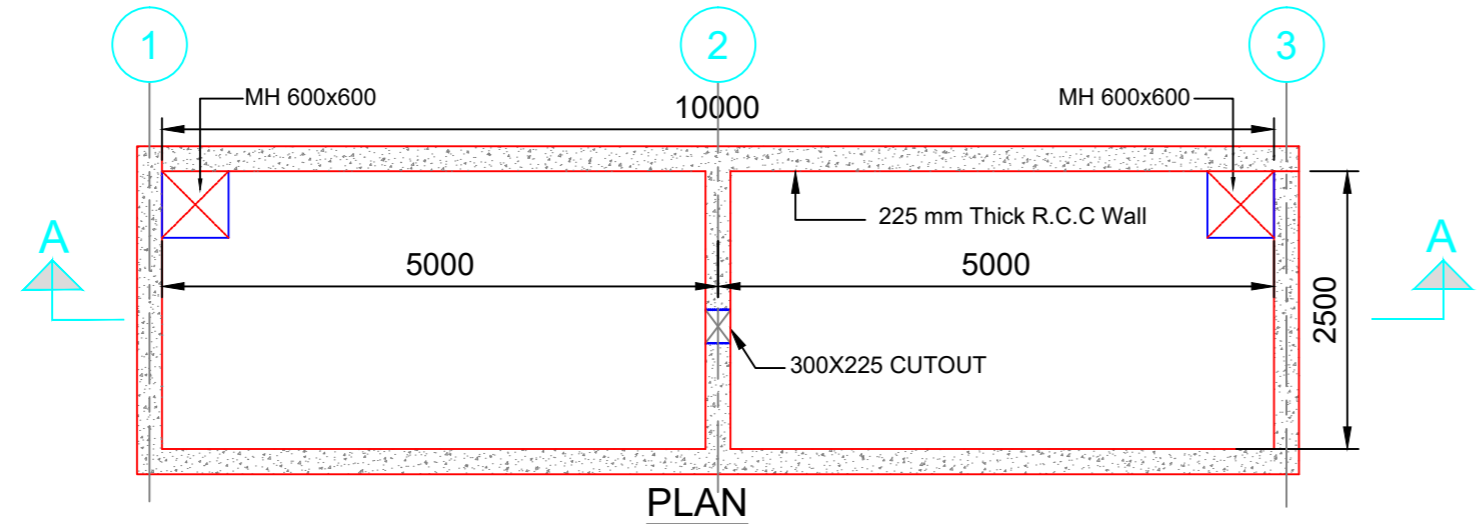
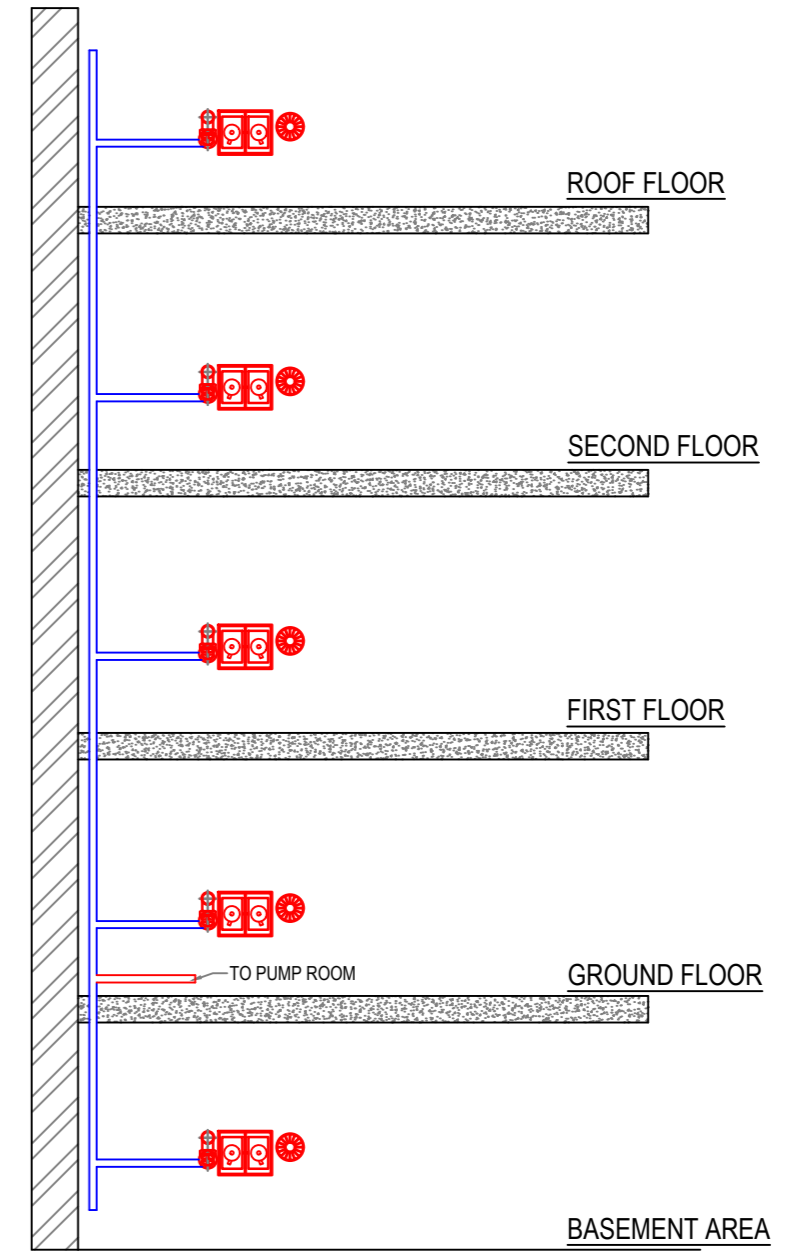
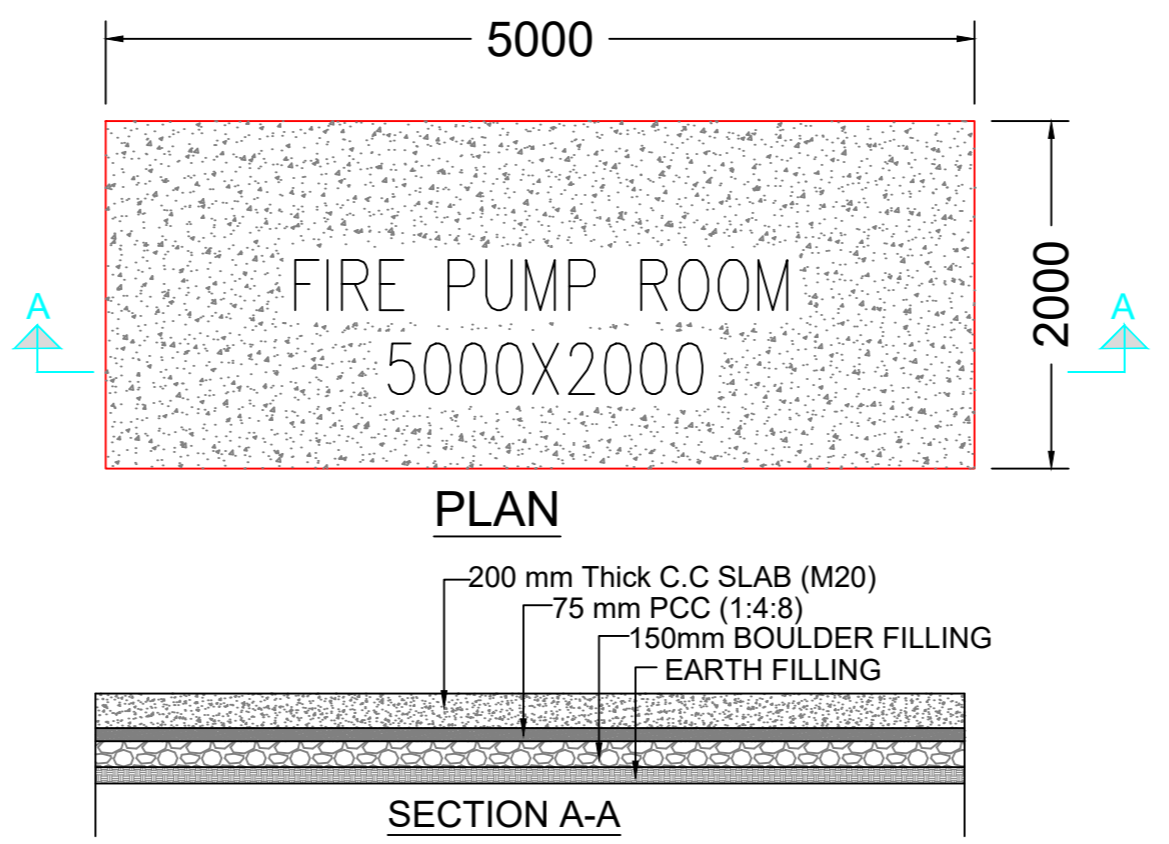
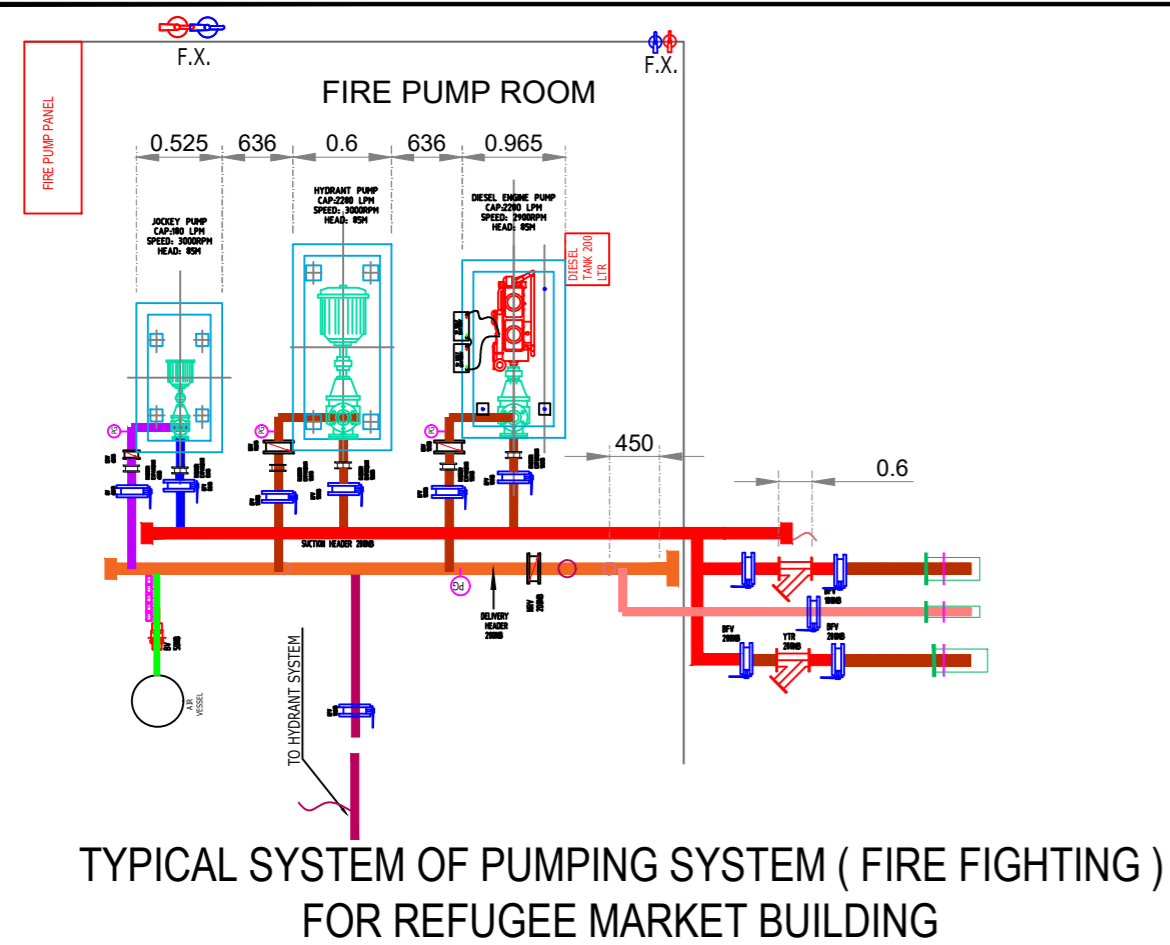
**APPROVED BY:** AKS  
**CHECKED BY:** P.G  
**DESIGNED BY:** P.G  
**DRAWING BY:** A.S

**SCALE:** 1:100  
**DATE:** DEC-2021

**DRAWING TITLE :**

LAYOUT OF FIRE FIGHTING AT ROOF PLAN

**DRG. NO.** AGICL-DSCL-RMSC-FF-005  
**REV.** R0



DATE	REV	DESCRIPTION OF REVISIONS	BY

**CLIENT:**

Divine Dharamshala  
Step Forward to a Smart Neighbourhood  
SMART CITY PROPOSAL  
Dharamshala Smart City Ltd. (DSCL)

**PROJECT MANAGEMENT CONSULTANT:**

ELF CONSULTING ENGINEERS

**IN JOINT VENTURE WITH**

almondz  
the infrastructure specialist

**PROJECT:**

REFUGEE MARKET SHOPPING COMPLEX, KOTWALI BAZAAR, DHARAMSHALA.

**STATUS:** TENDER DRAWING

**APPROVED BY:** AKS

**CHECKED BY:** S.A

**DESIGNED BY:** S.A

**DRAWING BY:** A.S

**SCALE:** NTS

**DATE:** DEC-2021

**DRAWING TITLE :**

LAYOUT OF WATER TANK, PUMPING ROOM & PIPING SYSTEM FOR FIRE FIGHTING

**DRG. NO.** AGICL-DSCL-RMSC-FF-006

**REV.** R0