



Proposed Pradhan Mantri Awas yojana Shimla pistore (Rudrapur),
Uttarakhand

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DETAILS PROJECT REPORT

Shimla Pistore District Rudrapur (Uttarakhand)




PAL ARCHITECT AND ENGINEER
COA No. CA/2018/96244
Case No. 0082 Date. 18/11/22
Tapovan Road Infront of PRD Ground
Near by IDBI Bank, Dehradun (U.K.)
Mob.: 7895872139, 9412143346

Architect Signature
PAE CONSTRUCTION INDIA (OPC)



PAE CONSTRUCTION INDIA (OPC) PVT. LTD.
(PAL ARCHITECT AND ENGINEER) CONVENT ROAD , NEAR SBI MAIN BRANCH DEHRADUN UK-248001
palarchitectandengineer@gmail.com , paeconstructionindia@gmail.com
7895872139 , 9412143346

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ABBREVIATIONS

A&OE	Administrative and Other Expenses	LIG	Low Income Group
AHP	Affordable Housing in Partnership	MD	Mission Directorate
AIP	Annual Implementation Plan	MoA	Memorandum of Agreement
BMTPC	Building Materials & Technology Promotion Council	MoHUPA	Ministry of Housing and Urban Poverty Alleviation
CDP	City Development Plan	MoU	Memorandum of Understanding
CLS	Credit linked subsidy	NA	Non Agricultural (NA)
CNA	Central Nodal Agencies	NBC	National Building Code
CPHEEO	Central Public Health and Environmental Engineering Organisation	NHB	National Housing Bank
CSMC	Central Sanctioning and Monitoring Committee	NOC	No Objection Certificate
DIPP	Department of Industrial Policy and Promotion	NPV	Net Present Value
DPR	Detailed Project Report	PLI	Primary Lending Institution
EMI	Equated Monthly Instalment	RWA	Residents' Welfare Association
EWS	Economically Weaker Section	SECC	Socio Economic and Caste Census
FAR	Floor Area Ratio	SFCPoA	Slum Free City Plan of Action
FSI	Floor Space Index	SLAC	State Level Appraisal Committee
HFA	Housing for All	SLNA	State level Nodal Agencies
HFAPoA	Housing for All Plan of Action	SLSMC	State Level Sanctioning and Monitoring Committee
HUDCO	Housing and Urban Development Corporation	TDR	Transfer of Development Rights
IEC	Information Education & Communication	TPQMA	Third Party Quality Monitoring Agency
IFD	Integrated Finance Division	ULB	Urban Local Body
IIT	Indian Institute of Technology	UT	Union Territory
IS	Indian Standard		



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Definations for the purpose of the mission

Affordable Housing Project:	Housing projects where 35% of the houses are constructed for EWS category
Beneficiary	A beneficiary family will comprise husband, wife and unmarried children. The beneficiary family should not own a pucca house (an all weather dwelling unit) either in his/her name or in the name of any member of his/her family in any part of India.
Carpet Area	Area enclosed within the walls, actual area to lay the carpet. This area does not include the thickness of the inner walls
Central Nodal Agencies	Nodal Agencies identified by Ministry for the purposes of implementation of Credit linked subsidy component of the mission
Economically Weaker Section (EWS):	EWS households are defined as households having an annual income up to Rs.3,00,000 (Rupees Three Lakhs). States/UTs shall have the flexibility to re-define the annual income criteria as per local conditions in consultation with the Centre.
EWS House	An all weather single unit or a unit in a multi-storeyed super structure having carpet area of upto 30 sq. m. with adequate basic civic services and infrastructure services like toilet, water, electricity etc. States can determine the area of EWS as per their local needs with information to Ministry
"Floor Area Ratio" (FAR)/FSI	The quotient obtained by dividing the total covered area (plinth area) on all the floors by the area of the plot: $FAR = \frac{\text{Total covered area on all the floors} \times 100}{\text{Plot area}}$ If States/Cities have some variations in this definition, State/City definitions will be accepted under the mission
Implementing Agencies	Implementing agencies are the agencies such as Urban Local Bodies, Development Authorities, Housing Boards etc. which are selected by State Government/SLSMC for implementing Housing for All Mission.
Low Income Group (LIG):	LIG households are defined as households having an annual income between Rs.3,00,001 (Rupees Three Lakhs One) up to Rs.6,00,000 (Rupees Six Lakhs). States/UTs shall have the flexibility to redefine the annual income criteria as per local conditions in consultation with the Centre.
Primary Lending Institutions (PLI)	Scheduled Commercial Banks, Housing Finance Companies, Regional Rural Banks (RRBs), State Cooperative Banks, Urban Cooperative Banks or any other institutions as may be identified by the Ministry
Slum	A compact area of at least 300 population or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities.
State Land Nodal Agencies (SLNAs)	Nodal Agency designated by the State Governments for implementing the Mission
Transfer of Development Rights (TDR)	TDR means making available certain amount of additional built up area in lieu of the area relinquished or surrendered by the owner of the land, so that he can use extra built up area himself in some other land.



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Background:

Shelter is a basic human need next only to food and clothing. At the end of the 10th Five Year Plan, the housing short age is estimated to be 24.7 million. However, urban areas in our country are also characterized by severe shortage of basic services like potable water, well laid out drainage system, sewerage network, sanitation facilities, electricity, roads and appropriate solid waste disposal. It is these shortages that constitute the rationale for policy focus on housing and basic services in urban areas. This policy intends to promote sustainable development of habitat in the country with a view to ensuring equitable supply of land, shelter and services at affordable prices to all sections of society. Given the magnitude of the housing shortage and budgetary constraints of both the Central and State Governments, it is amply clear that Public Sector efforts will not suffice in fulfilling the housing demand. In view of this scenario, the National Urban Housing and Habitat Policy, 2007 focuses the spotlight on multiple stake-holders namely, the Private Sector, the Cooperative Sector, the Industrial Sector for labour housing and the Services/Institutional Sector for employee housing. In this manner, the Policy will seek to promote various types of public-private partnerships for realizing the goal of Affordable Housing for All.

Housing Needs :

The magnitude of housing shortage was estimated by a Technical Group in the context of formulation of the 11th Five Year Plan. The Technical Group estimated the housing shortage at the end of the 10th Plan to be around 24.7 million for 67.4 million households. The Group further estimated that 99% of this shortage pertains To Economical Weaker Section (EWS) & Low Income Group (LIG) sectors. During the 11th Plan, the Group estimated that the total housing requirement (including backlog) will be to the tune of 26.53 million units for 75.01 million households. Whereas more than 23% of the urban population resides in slum (Census: 2001), a much higher proportion of the urban population of metropolitan cities lives in slums; it is estimated that 55% of the population of Mumbai lives in slums. It is of critical importance that the strategy of in-situ slum up gradation is adopted for preponderant proportion of the slum dwellers, since they provide valuable services to residents living close to their own dwelling places.

The Working Group on Urban Housing pertaining to the 11th Plan made different assumptions on unit cost of construction of houses in million plus cities and other urban areas for estimating the investment required for overcoming the housing shortage. The total estimated investment for meeting the housing requirement upto 2012 was estimated to be of the order of Rs.3,61,318.10 crores consisting of Rs.1,47,195 crores for mitigating housing shortage at the beginning of 11th Plan and Rs.2,14,123.10 crores for new additions

to be made during the 11th Plan period (this includes construction of pucca houses & upgradation of semi-pucca and kutcha housing units).



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Magnitude of Poverty:

Non-affordability of housing by economically weaker sections of society and low income families in urban areas is directly linked with the magnitude of urban poverty. Poverty in India has declined from 320.3 million in 1993- 94 to 301.7 million in 2004-05. While there has been a decline of 18 million persons in the total numbers of the poor in India, the National Sample Survey Organization (NSSO) reports that the number of the urban poor has risen by 4.4 million persons during the same period. One fourth of the country's total urban population, numbering 80.7 million persons is below the poverty line. The urban poor constitute 26.7% of the total poor in the country. The fact that the number of urban poor has risen is in stark contrast with rural poverty, where both the total number of rural poor and its incidence vis-à-vis the rural population has fallen. The urban poor have limited access to basic services. According to the 2001 census, there is a 9% deficiency in drinking water, 26% in toilets and 23% in drainage. It is quite understandable that most of this shortage pertains to Slums.

Scope of RAY RAY:

will provide the support to enable states to redevelop all existing slums in a holistic and integrated way and to create new affordable housing stock. The existing schemes of Affordable Housing in Partnership, and Interest Subsidy for Housing the Urban Poor (ISHUP), would be dovetailed into this scheme. No new projects under the BSUP and IHSDP scheme of the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) will be sanctioned once implementation of RAY scheme is taken up except to consume existing 11th Plan allocations that may be left uncommitted. However, projects sanctioned under the two schemes will continue to receive Central assistance as per the sanctions and the existing provision of the schemes.




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Pradhan Mantri Awas Yojana (PMAY)- Housing for all

The Hon'ble President of India has announced "By the time the Nation completes 75 years of its Independence, every family will have a pucca house with water connection, toilet facilities, 24x7 electricity supply and access.

" Hon'ble Prime Minister envisioned Housing for All by 2022 when the Nation completes 75 years of its Independence. In order to achieve this objective, Central Government has launched a comprehensive mission "Pradhan Mantri Awas Yojana – Housing for All (Urban)". Mission for urban area will be implemented during 2015-2022 and this Mission will provide central assistance to implementing agencies through States and UTs for providing houses to all eligible families/ beneficiaries by 2022.

The mission seeks to address the housing requirement of urban poor including slum dwellers through following programme verticals:

- Slum rehabilitation of Slum Dwellers with participation of private developers using land as a resource
- Promotion of Affordable Housing for weaker section through credit linked subsidy
- Affordable Housing in Partnership with Public & Private sectors
- Subsidy for beneficiary-led individual house construction /enhancement.

The Mission will support construction of EWS (Economically Weaker Section) houses upto 30 square meter carpet area. As per **PMAY EWS households** are defined as households having an annual income up to Rs. **3,00,000 (Rupees Three Lakhs)**. States/UTs will have flexibility in terms of determining the size of house and other facilities at the state level in consultation with the Ministry but without any enhanced financial assistance from Centre. According to PMAY guidelines, the minimum numbers of about 35% of the houses are constructed for EWS Category in such Affordable Housing project.

The PMAY mission will be implemented as **Centrally Sponsored Scheme (CSS)** except for the component of credit linked subsidy which will be implemented as a Central Sector Scheme. A beneficiary family will comprise husband, wife, unmarried sons and/or unmarried daughters. The beneficiary family should not own a pucca house either in his/her name or in the name of any member of his/her family in any part of India to be eligible to receive central assistance under the mission. The houses constructed/acquired with central assistance under the mission should be in the name of the beneficiary.



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Mandatory Conditions:

Availability of urban land is the biggest constraint in providing housing to all including weaker sections. Therefore, to ease administrative and regulatory bottlenecks, a set of Mandatory Conditions has been included in the Mission to facilitate growth of housing sector including affordable housing. For participating in the mission and to avail of financial assistance from Central Government, States/ UTs should agree to fulfil following Mandatory Conditions:-

- States/UTs to make suitable changes in the procedure and rules for obviating the need for separate Non Agricultural (NA) Permission if land already falls in the residential zone earmarked in Master Plan of city or area.
- States/UTs shall prepare/amend their Master Plans earmarking land for Affordable Housing.
- A System should be put in place to ensure single-window; time bound clearance for layout approval and building permissions at ULB level.
- States/UTs shall adopt the approach of deemed building permission and layout approval on the basis of pre- approved lay outs and building plans for EWS/LIG housing or exempt approval for houses below certain built up area or plot area.

States/UTs would either legislate or amend existing rental laws on the lines of

- model Tenancy Act being prepared by Ministry. States/UTs shall provide additional FAR/FSI/TDR and relaxed density norms for
- slum redevelopment and low cost housing, if required.




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Need for Pilot Projects:

Given that this is a path breaking approach being taken up by the Central, State and City governments, **there is a felt need to embark on a set of pilot projects with the aim of evolving, demonstrating and establishing models that can thereafter be scaled. A key objective of the programme would be to therefore incentivize innovation and encourage new approaches and solutions that can demonstrably improve the quality and quantity of shelter and services for the poor.**

Such innovation could encompass:

Projects with strong community participation i.e. Slum up gradation

- redevelopment projects initiated/spearheaded by the community; or with their demonstrable involvement and participation in design, planning and implementation.
- **Creation of Fresh Housing Stock and Transit Shelters.**
- State/UT Government and Implementing Agencies should encourage formation of associations of beneficiaries under the scheme like RWA etc. to take care of maintenance of houses being built under the mission
- New models of public-private partnerships whereby the private sector can be encouraged to take up affordable housing for the EWS/LIG
- Innovations in planning, demonstrating integrated livelihoods, shelter and services or convergence.
- Any other innovation for which the city feels it needs to design models and determine guidelines for larger application

With this intent the Ministry of Housing & Urban Poverty Alleviation, Government of India would encourage proposals and pilot projects from institutions/agencies as below:

The following institutions are eligible to apply for pilot projects under PMAY

- States
- Urban Local Bodies through the State Level Nodal Agencies (SLNA)
- Central Government Departments and Central Public Sector



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The PMAY mission will be implemented through four verticals giving option to beneficiaries, ULBs and State Governments. These four verticals are as below:



Application Modalities:

The application should consist of a Proposal containing a brief description of the project, the stage of slum free planning that the state is in. The proposal should clearly delineate the innovations and new models the project will be piloting in terms of its scope, objective, implementation strategies. It should also clearly bring out the envisaged outcomes; and implications for state wide or regional replicability. It is expected that the implementation of the pilot projects would catalyse an innovative and effective approach to the planning and implementation of the city plans for the PMAY scheme.

Pilot Project Detailed Project Report should clearly bring out:

- In-situ development projects, including infrastructure upgrading, replacement of kuccha structures with pucca structures, Incremental Housing, **Affordable Housing Projects**, **Transit Shelters** and Green field projects integrating shelter, services and livelihoods will be considered for pilots



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- Land/dwelling space to be assigned to the all slum households living in the concerned slum which will be in the form of ownership. A project which envisages grant of collective property rights would be eligible.
- Basic services including roads, water supply, sewerage, drainage, waste management and street lighting infrastructure have to be planned.
- Desirable services beyond basic services including: Fire safety plan; community Centre; local shopping complex.
- Pilot projects would need to demonstrate that the building bye laws and planning norms should not be a constraint to the slum upgrading exercise.
- Timelines to complete the project and implications for the Slum free City planning process under the PMAY scheme should be clearly laid out in the Pilot Project DPR to connect it to the Proposal.
- The DPR would be prepared as per the Delhi Schedule of Rates-2016 and would need to be submitted after approval of State Level Sanction and Monitoring Committee. For proposals pertaining to Central Government and Undertakings, DPR would be based on their respective schedule of rates.
- **In view of the above considerations Urban Housing & Urban Development Authority (UHDA), a "Development Authority or the Authority" in relation to the whole of the State Area shall be as the State Authority and in relation to any development area shall be the Local Development Authority (hereinafter referred to as the Local Authority) constituted and notified under section 4 of the Act : may be called the Uttarakhand Urban and Country Planning and Development (Amendment) Act, 2013 has prepared**



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Location, Geography and Climate

Uttarakhand was formed on the 9th November 2000 as the 27th State of India, when it was carved out of northern Uttar Pradesh. Located at the foothills of the Himalayan mountain ranges, it is largely a hilly State, having international boundaries with China (Tibet) in the north and Nepal in the east. On its north-west lies Himachal Pradesh, while on

The south is Uttar Pradesh. It is rich in natural resources especially water and forests with many glaciers, rivers, dense forests and snow-clad mountain peaks. Char-dhams, the four most sacred and revered Hindu temples of Badrinath, Kedarnath, Gangotri and Yamunotri are nestled in the mighty mountains. It's truly God's Land (Dev Bhoomi). Dehradun is the Capital of Uttarakhand. It is one of the most beautiful resorts in the sub mountain tracts of India, known for its scenic surroundings. The town lies in the Dun Valley, on the watershed of the Ganga and Yamuna rivers.

It is blessed with a rare bio-diversity, inter-alia 175 rare species of aromatic & medicinal plants are found in the State. It has almost all major climatic zones, making it amenable to a variety of commercial opportunities in horticulture, floriculture and agriculture. It has a vast tourism potential in adventure, leisure, and eco-tourism

About Shimla Pistore

Shimla Pistore:

Shimla Pistore village is located in Rudrapur block and Kichha tehsil of Udham Singh Nagar district. It comes under Shimla Pistore gram panchaya. It is located 7 KM towards East from District head quarters Rudrapur. 240 KM from State capital Dehradun Shimla Pistore is surrounded by Baheri Block towards South, Bilaspur Block towards west, Gadarpur Block towards west, Sitarganj Block towards East. Rudrapur, Kichha Nagla, Sitarganj are the near by Cities to Shimla Pistore. This Place is in the border of the Udam Singh Nagar District and Rampur District. Rampur District Bilaspur is west towards this place. It is near to the Uttar Pradesh State Border.

Education Facilities at Shimla Pistore village, Udham Singh Nagar District

Below are the educational facilities available at Shimla Pistore village in Udham Singh Nagar district. Indicates the number of Primary Schools, Middle Schools, Secondary Schools, Senior Secondary Schools and Colleges in and around Shimla Pistore village.

Primary Schools - Govt	1
Nearest Middle School Location	Lalpur, <5 kms
Nearest Sec. School Location	Lalpur, <5 kms
Nearest Sr. Sec School Location	Lalpur, <5 kms
Nearest Arts/ Sc. Degree College	Rudrapur, 5-10 kms
Nearest Engg. College	Pantnagar, 10+ kms
Nearest Medical College	Haldwani, 10+ kms
Nearest Polytechnic	Pantnagar, 10+ kms
Nearest Vocational/ ITI	Dineshpur, 10+ kms

Health Facilities at Shimla Pistore village, Udham Singh Nagar District

Below are the Health facilities available at Shimla Pistore village in Udham Singh Nagar district. Indicates the number of Community Health Centres, Primary Health Centres, Hospitals and Dispensary in and around Shimla Pistore village.

Nearest Comm. Health Centre	5-10 kms
Nearest Pr. Health Centre	5-10 kms
Nearest Maternity Centre	5-10 kms
Nearest Hospital - Allopathic	5-10 kms
Nearest Dispensary	5-10 kms
Nearest Mobile Clinic	5-10 kms
Nearest Family Welfare Centre	5-10 kms



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PMAY of Site Shimla Pistore District (Rudrapur) Uttarakhand - 263148

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Background of the Project

Shelter is a basic human need next only to food and clothing. However, urban areas in our country are also characterized by severe shortage of basic services like potable water, well laid out drainage system, sewerage network, sanitation facilities, electricity, roads and appropriate solid waste disposal. It is these shortages that constitute the rationale for policy focus on housing and basic services in urban areas. This policy intends to promote sustainable development of habitat in the country with a view to ensuring equitable supply of land, shelter and services at affordable prices to all sections of society. Given the magnitude of the housing shortage and budgetary constraints of both the Central and State Governments, it is amply clear that Public Sector efforts will not suffice in fulfilling the housing demand. In view of this scenario, Uttarakhand State government launched a scheme "Jan Awas Yojana" and Central Government has also launched a comprehensive mission "Pradhan Mantri Awas Yojana – Housing for All (Urban)". And in this connection, The Hon'ble President of India has also announced "By the time the Nation completes 75 years of its Independence, every family will have a pucca house with water connection, toilet facilities, 24x7 electricity supply and access."

Hon'ble Prime Minister envisioned Housing for All by 2022 when the Nation completes 75 years of its Independence. In order to achieve this objective, Central Government has launched a comprehensive mission "Pradhan Mantri Awas Yojana – Housing for All (Urban)". Mission for urban area will be implemented during 2015-2022 and this Mission will provide central assistance to implementing agencies through States and UTs for providing houses to all eligible families/ beneficiaries by 2022.

The mission seeks to address the housing requirement of urban poor including slum dwellers through following programme verticals:

- Slum rehabilitation of Slum Dwellers with participation of private developers using land as a resource
- Promotion of Affordable Housing for weaker section through credit linked subsidy
- Affordable Housing in Partnership with Public or Private Sectors.
- Subsidy for beneficiary-led individual house construction /enhancement.



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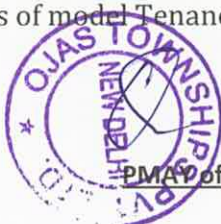
Defined as households having an annual income up to Rs. 3,00,000 (Rupees Three Lakhs). Uttarakhand state will have flexibility in terms of determining the size of house and other facilities at the state level in consultation with the Ministry but without any enhanced financial assistance from Centre. According to PMAY guidelines, the minimum numbers of about 35% of the houses are constructed for EWS Category as covered in the programme verticals mentioned above of such Affordable Housing project

The PMAY mission will be implemented as Centrally Sponsored Scheme (CSS) except for the component of credit linked subsidy which will be implemented as a Central Sector Scheme. A beneficiary family will comprise husband, wife, unmarried sons and/or unmarried daughters. The beneficiary family should not own a pucca house either in his/her name or in the name of any member of his/her family in any part of India to be eligible to receive central assistance under the mission. The houses constructed/acquired with central assistance under the mission should be in the name of the female head of the household or in the joint name of the male head of the household and his wife, and only in cases when there is no adult female member in the family, the house can be in the name of male member of the household.

Mandatory Conditions:

Availability of urban land is the biggest constraint in providing housing to all including weaker sections. Therefore, to ease administrative and regulatory bottlenecks, a set of Mandatory Conditions has been included in the Mission to facilitate growth of housing sector including affordable housing. For participating in the mission and to avail of financial assistance from Central Government, Uttarakhand State should agree to fulfil following Mandatory Conditions:-

- Uttarakhand state to make suitable changes in the procedure and rules for
- obviating the need for separate Non Agricultural (NA) Permission if land already falls in the residential zone earmarked in Master Plan of city or area.
- Uttarakhand state shall prepare/amend their Master Plans earmarking land for
- Affordable Housing.
- Uttarakhand state would either legislate or amend existing rental laws on the
- lines of model Tenancy Act being prepared by Ministry.



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PMAY of Site Shimla Pistore District (Rudrapur) Uttarakhand : 263148

Objectives:

The objectives of this project are:

- To provide affordable and liveable Shelter solution to Industrial Workers and— workers engaged in Construction projects/activities.
- To reduce temporary/permanent establishment of new slums lacking basic physical & social infrastructure.
- To provide alternative shelter to the slum dwellers who are not eligible for relocation houses and are likely to be displaced.
- To prevent unorganized growth in housing sector.

Project Concept:

It is proposed to construct Ground + Three storied building blocks along with civic amenities like Community Facilities, Open Spaces, Park/Garden, Local Shopping, Crèche, etc. with well-developed Infrastructure networks such as Roads, Drainage, Water Supply, Sewerage, Electrification, Rain Water Harvesting, Horticulture/Site Development, Street Light, Parking, Over Head Tank, Sewerage Treatment Plant, Substation, as well as planned circulation and other features. One such building will provide **8 unit & 16 units** at one floor and to provide **1344 units** at total 26 Tower of such type of buildings need to be built up. The main concept behind the formulation of this scheme is to provide not just shelter for the Economical weaker Section /Lower Income Group /migrating population but also a healthy and enabling urban environment, to help them to come out of their poverty level and

- To integrate the residential areas with social network of the entire complex.
- Sustainable improvement in overall quality of life of Weaker Class / Lower income Group/industrial labours/migrating population.
- Sustainable improvement in standards of health, education and community life and increased income-earning potential of Weaker Class / Lower income Group/ migrating population by providing a livelihood training centre.
- Strong, committed and broad-based formal and informal community-based groups, which participate actively in sustainable development activities established and functioning.



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Project Site , Location Google image & Key plan

Google Images



GOOGLE MAP LOCATION

PROPOSED
SITE



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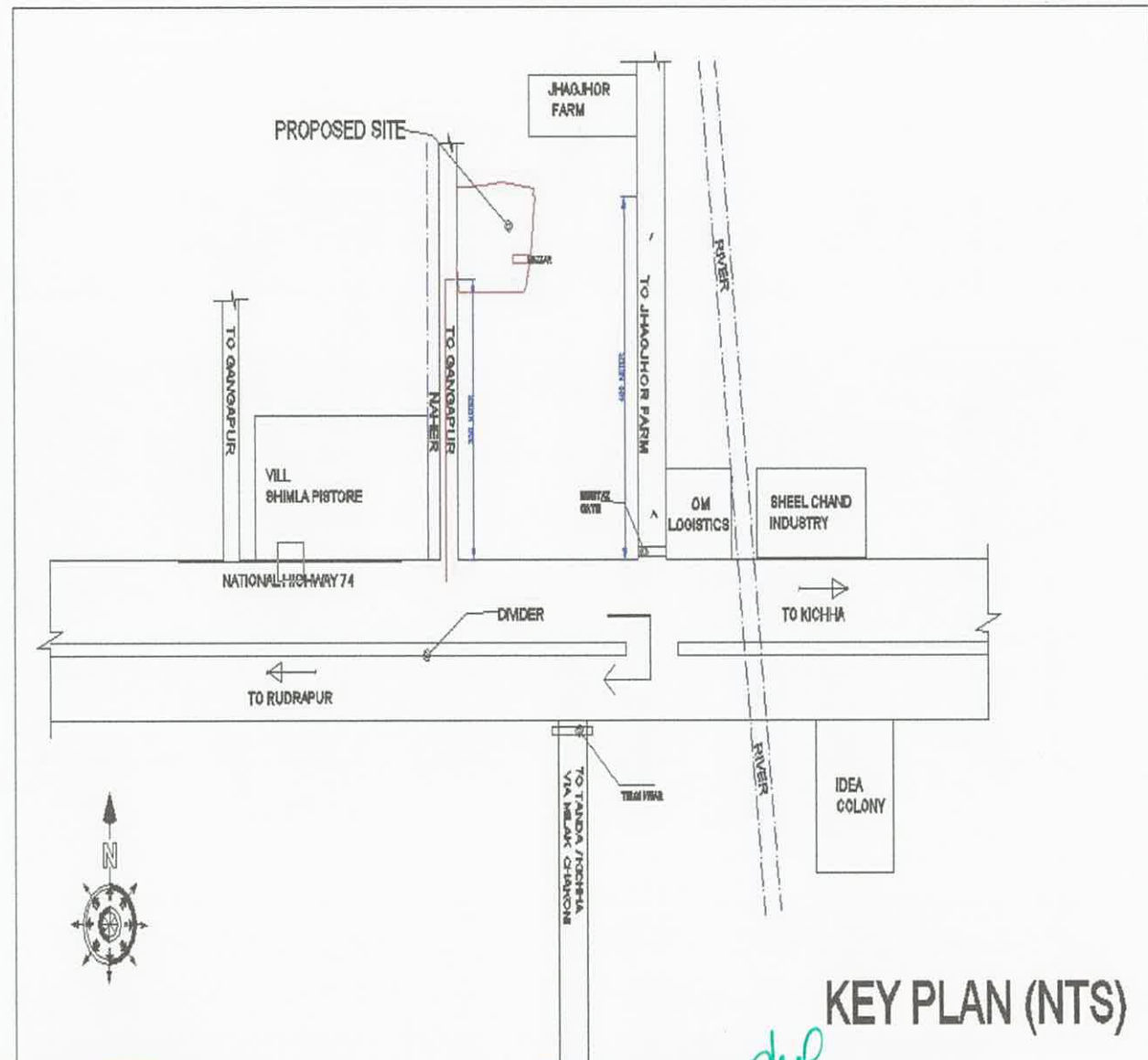
PMAY of Site Shimla Pistore District (Rudrapur) Uttarakhand : 263148



Proposed Pradhan Mantri Awas yojana Shimla pistore (Rudrapur).
Uttarakhand

18

Key Plan



KEY PLAN (NTS)



pal
PAL ARCHITECT AND ENGINEER
COA No. CA/2018/96244
Case No. *0082* Date: *18/11/22*
Tapovan Road Infront of PRD Ground
Near by IDBI Bank, Dehradun (U.K.)
Mob.: 7895872139, 9412143346

PMAY of Site Shimla Pistore District (Rudrapur) Uttarakhand : 263148

SPECIFICATIONS FOR EWS HOUSES - CONSTRUCTED UNDER PMAY

Sl. No	ITEM	SPECIFICATION
1.	Earthwork excavation	The earthwork excavation shall be done as per CPWD specification. The foundation shall rest on firm base
	Filling in trenches	Same excavated good earth soil is to be filled.
2.	Foundation(monolithi c cement concrete structure)	M-20 grade of concrete is used for all the RCC works
	Base concrete	1:4:8 grade, 10 cm thick below building foundations on hard strata.
	Plinth Filling	If excavated soil or part of excavated soil seems to be good for filling, same shall be refilled as per direction of engineer in charge
	RCC Footing/Raft/Piles	M-20 grade of concrete is used for 450mm thick raft using Self Compacting Concrete Design Mix.
	Plinth beam/grade slab	M 20 grade of concrete is used for all the works using Self Compacting Concrete Design Mix
3.	Super structure	
	a) Slabs	M 20 grade of concrete is used for all the works using Self Compacting Concrete Design Mix.
	b) Projections	M 20 grade of concrete is used for all the works using Self Compacting Concrete Design Mix
4.	Flooring	1.Everywhere in EWS unit is having ordinary Cement flooring including staircase etc. with Colour Pigment. 2.Industrial tiles flooring in parking areas.
5.	Skirting	Skirting in ordinary cement with neat punning in all rooms shall be to the height of 100mm.
6.	Kitchen platform and sink	Ordinary RCC Slab with neat cement punning and with provision for cut-out of Stainless Steel Sink.
	Putty	Putty on inner walls and ceiling.
7.	Finishing	Internal:- White washing on internal walls and ceiling External:- Water proofing cement paint
8.	Waterproofing	Toilets cement slurry mixed with water proofing treatment.
9.	Joinery	
	a) Windows	Angle iron frames and glazed shutters for windows and clerestory windows using 4 mm thick float glass panes with hillock wood.
	b) Doors	a) Angle Iron Frames and shutters – 25 mm thick flush door shutter, non-decorative type for rooms b) Angle Iron Frames and Steel shutters for block entrance & mummy of staircase. c) FRP frame and shutter for Bath and WC
10.	Doors & Window Fixtures and Fitting	Oxidised MS fittings
11.	Railings	MS railings



PAL ARCHITECT AND ENGINEER

COA No. CA/2018/96244

Case No. 0082 Date. 18/11/22

Tapovan Road Infront of PRD Ground

Near by IDBI Bank, Dehradun (U.K.)

Mob.: 7895872139, 9412143346

PMAY of Site Shimla Pistore District (Rudrapur) Uttarakhand : 263148

Public Health & Sanitary Works

Sl. No	ITEM	SPECIFICATION
1.	Water Supply	
	Internal Areas water supply pipe (inside the Block in shafts, terrace and rising main as per drawing and design)	Unplasticised-Rigid PVC rain water pipes conforming to IS :13592
	Bib-Cock	Long body CP Brass Bib-Cock.
	Control valves	CI Wheel Gun Metal Valve.
2.	Sewerage (Sanitary & Rain water)	
	Internal areas sanitary pipe (Inside the flats or inside the block and in all Bath, WC and kitchen)	Supplying, laying, jointing and testing of 110mm Dia. And 75 mm unplasticized Non-pressure Polyvinyl Chloride (PVC-U) Pipes.
	External Area	Stone Ware Pipes with all around concreting.
	Rain Water Drainage	Providing UPVC pipes of approved make for
	Pipe (inside the Block in shafts as per drawing and design)	4kg/Sq.Cms. of single socket pipe of ISI standard confirming to ISI 1352 with air tight joints, fixing with clamps and nails etc., complete for (Vent Shaft) WC Connection
3.	Sanitary Fittings	
	in W.C.	Indian type W.C. pan with 100 mm sand cast Iron P or S trap, 10 liter low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) .
	Floor Trap	Providing 76.2mm (3") Dia. NAHANY TRAP with Jali for UPVC/SWR for toilets and kitchen
	Gully Chambers	Providing and fixing square-mouth S.W. gully trap grade 'A' complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300x300 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 :
	Internal sanitary and collecting chambers	Sewage disposal from Indian type W.C. pan & waste water from kitchen with 100 mm PVC pipe & Bathroom with 75 mm diameter PVC pipe with fittings.



PMAY of Site Shimla Pistore District (Rudrapur) Uttarakhand 263148, 9412143346

PAL ARCHITECT AND ENGINEER

COA No. CA/2018/96244

Case No. 0082 Date: 18/11/22

Tapovan Road Infront of PRD Ground

Near by IDBI Bank, Dehradun (U.K.)

Uttarakhand 263148, 9412143346



**Proposed Pradhan Mantri Awas yojana Shimla pistore (Rudrapur),
Uttarakhand**

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Electrical Works:

Sl. No	ITEM	SPECIFICATION
1.	Point Wiring	Wiring for light point/ fan point/ exhaust fan point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed PVC conduit, with Piano type switch.
2.	Wiring for circuit / Submain	Wiring for circuit/ sub main wiring along with earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed PVC conduit as required 2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire 2 X 4 sq. mm + 1 X 4 sq. mm earth wire 2 X 6 sq. mm + 1 X 6 sq. mm earth wire
3.	PVC conduit	Supplying and fixing of following sizes of PVC conduit of along with accessories in surface/recess or cutting the wall and making good the same in case of recessed conduit as required. 20mm & 25mm dia with
4.	Switch and socket	Supplying and fixing following Piano Type switch/ socket on the switch box including connections 5/6 amps switch 15/16 amp switch 3 pin 5/6 amp socket outlet 3 pin 15/16 amp socket outlet
5	Fan regulator	Supplying and fixing stepped type electronic fan regulator
6	Switch box	Supplying and fixing of suitable size metal box with phenolic laminated sheet cover in front
7	Angle holder	Supplying and fixing brass batten/ angle holder including connection etc. as required.
8	MCCB	Providing and fixing MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, etc. as required.



PMAY of Site Shimla Pistore District (Rudrapur) Uttarakhand : 263148

PAL ARCHITECT AND ENGINEER

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Tapovan Road Infront of PRD Ground
Near by IDBI Bank, Dehradun (U.K.)

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Proposed Pradhan Mantri Awas yojana Shimla pistore (Rudrapur),
Uttarakhand

22

	For Internal Flat	
9.	MCB Enclosure	Supplying and fixing SPN Distribution Board with IP43 Protection (Metal Door) as per 13032 for all incoming and outgoing (With MCB/ RCCB/ Isolator)
	For Common Area Service	
10.	TPN Distribution Board	Following way TPN distribution boards 4 way Double door 6 way Double door 8 way Double door 12 way Double door
11.	MCB	Supplying and fixing 5 amps to 32 amps rating, 240/415 volts, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, Single pole Single pole and neutral Double pole Triple pole Triple pole and neutral
12.	Isolator	Supplying and fixing following rating, double pole, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required. 40 amps 63 amps


PAL ARCHITECT AND ENGINEER
COA No. CA/2018/96244
Case No. 6082 Date. 18/11/22
Tapovan Road Infront of PRD Ground
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Mob.: 7895872139, 9412143346



ABSTRACT OF PROPOSED PHYSICAL INFRASTRUCTURE

Buildings

- 1) Total 1344 units are provided under the scheme
- 2) 26 Tower are designed to accommodate 1344 units.
- 3) Ground + 3 storied building
- 4) Each building has 8 unit & 16 units on each floor.
- 5) Each unit has 1 Bedroom, Living Room, Kitchen, Bathroom and WC
- 6) Total no. of floors – 4
- 7) Total no of units per tower $8 \times 4 = 32$ units $16 \times 4 = 64$ units

Infrastructures

I. Storm Water Drainage

- Brick Masonry open Drain is proposed for collection of Rain Water

II. Roads and Pavers

- Internal concrete road of 7.0 mtr. and 4 mtr wide are proposed with 15 mtr. wide road as the main entry road.
- 600 mm thick factory made cement concrete inter locking paver blocks are proposed at open areas between buildings and other locations.

III. Compound Wall

- Brick Masonry Compound Wall

VII. Internal Water Supply and Sanitation Facilities

- WC's, Wash basins, Kitchen Sink, Urinal basins, water taps and all other necessary Water Supply & Sanitation facilities are proposed with proper fitting & fixtures at each floor of every building.

VIII. Internal Electrical Installations

- Sufficient nos. of electrical points for fans, Ceiling fans, call bell, light, chargers etc. are proposed in each room/corridors/stairs/baths/toilets/urinal/stores with metal box and proper wiring systems.

IX. Parking Facilities

- Sufficient Parking facilities for two Wheeler Vehicles are proposed.



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Case No. 0682 Date: 18/11/22
Tapovan Road Infront of PRD Ground
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Mob.: 7895872139, 9412143346



**Proposed Pradhan Mantri Awas yojana Shimla pistore (Rudrapur),
Uttarakhand**

24

PROJECT COST DETAILS

As per the Scheme Guidelines of Pradhan Mantri Awas Yojana Housing for all an single unit or a unit in multi-storied super structure of EWS type Houses with all adequate basic civic services and infrastructure services like Toilet, Water, Electricity etc. So, we have designed the typical EWS dwelling unit of approx. 23.00 square meters carpet area which will have 2 rooms (i.e., living room and one bed room), a kitchen, separate bath and WC and balcony.

Sl No.	Type	Nos. of Dwelling Units	Carpet Area of each unit	Super built up Area of each unit
1.	EWS	1344	23.24 sq.m	25.30 sq.m

Sl No	DESCRIPTION OF WORK	AMOUNT
1	Grand Total 16 Tower A TO H, J, K, W TO Z, Z1, Z2	662297261.2
2	Grand Total 10 Tower L TO N & P TO V	212014320.7
3	Grand Total other service	142403210.6
	Grand total project cost	101,67,14,793



del
PAL ARCHITECT AND ENGINEER
COA No. CA/2018/96244
Case No. 0002 Date. 18/11/22
Tapovan Road Infront of PRD Ground
Near by IDBI Bank, Dehradun (U.K.)
Mob.: 7895872139, 9412143346

(Architecture Drawing)

Pradhan Mantri Awas Vikas Yojna EWS

(SHIMLA PISTOR)

(Rudrapur, Uttarakhand)

Del
PAL ARCHITECT AND ENGINEER
COA No. CA/2018/96244
Case No. 0082..... Date 12/11/22...
Tapovan Road Infront of PRD Ground
Near by IDBI Bank, Dehradun (U.K.)
Mob.: 7895872139, 9412143346



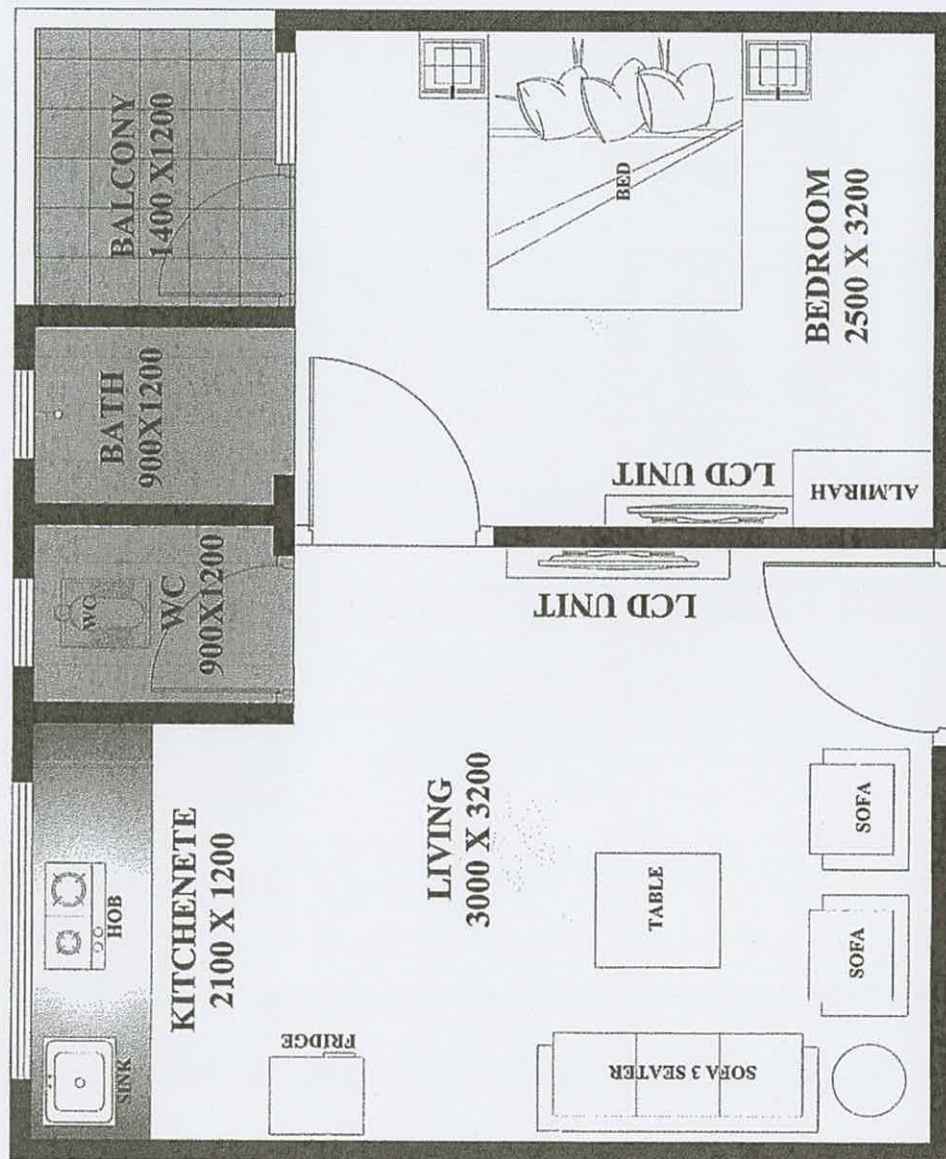






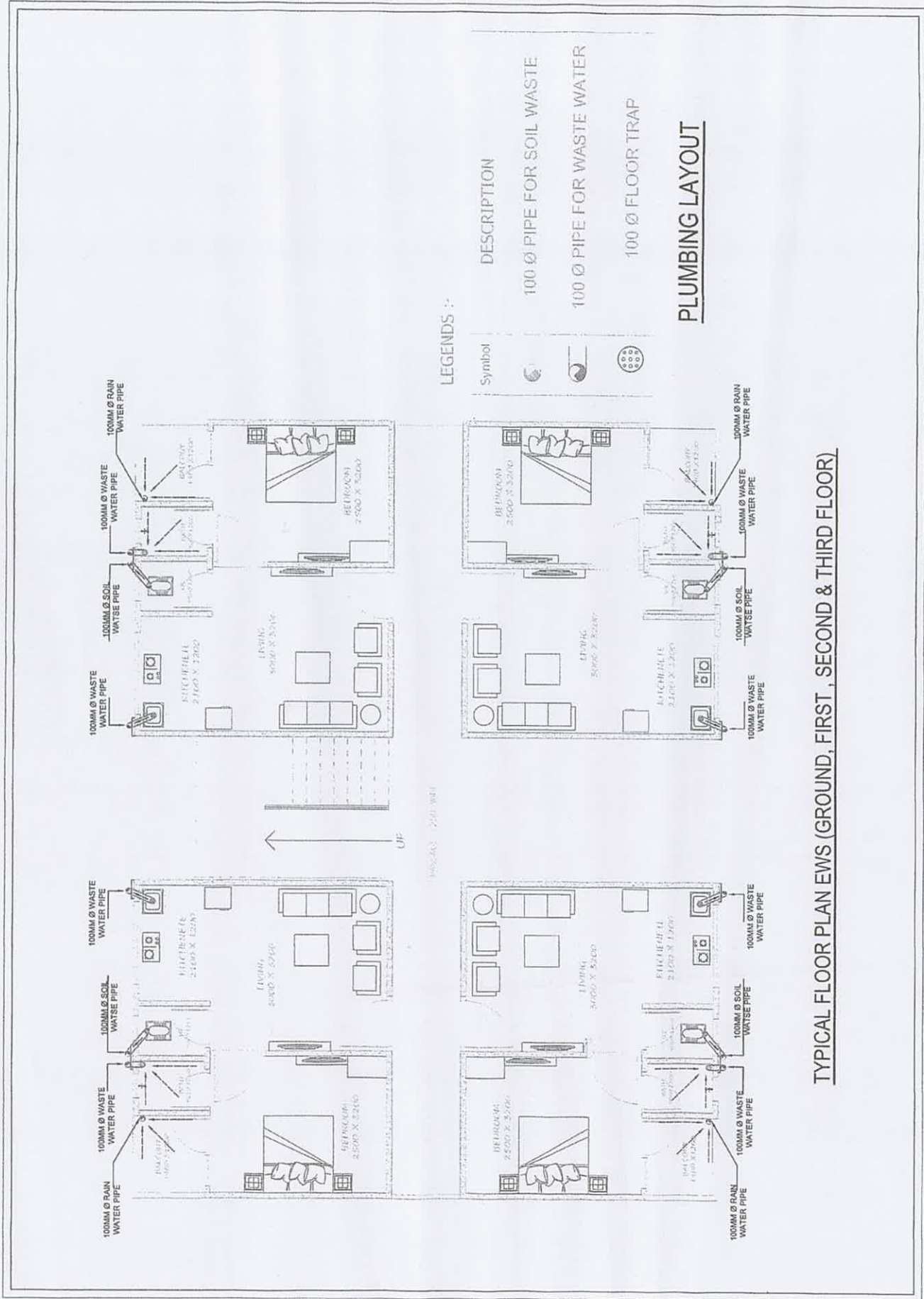




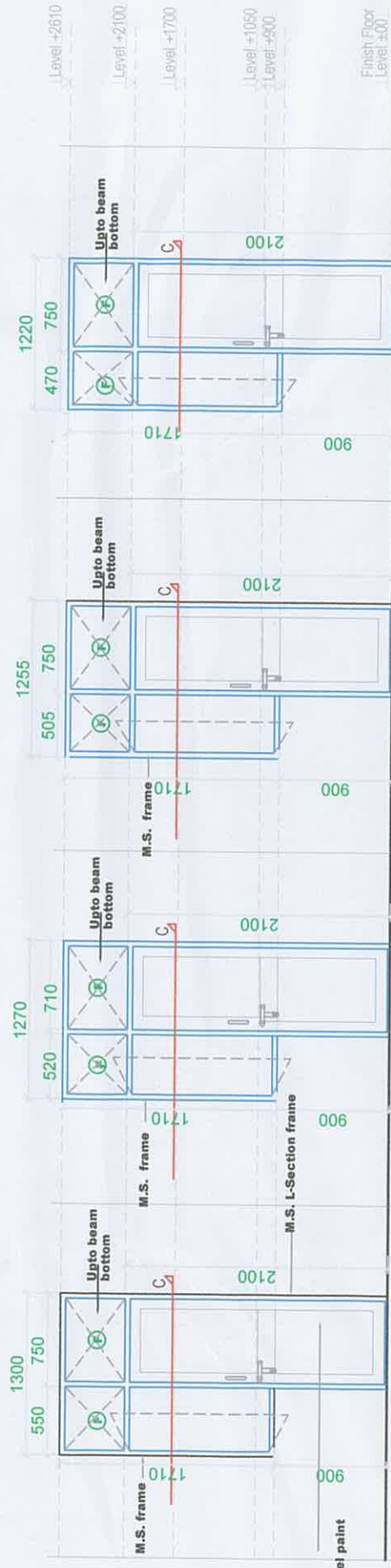


**PROPOSED
SINGLE
UNIT PLAN
FOR EWS**

TYPE OF UNIT	CARPET AREA OF SINGLE UNIT (IN SQMT)	WALL AREA (IN SQMT)	TOTAL BUILT-UP AREA (IN SQMT)
EWS	23.24	2.38	25.30



TYPICAL FLOOR PLAN EWS (GROUND, FIRST, SECOND & THIRD FLOOR)



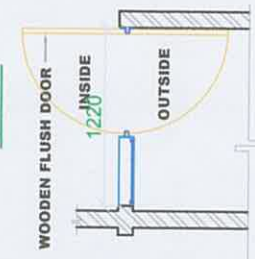
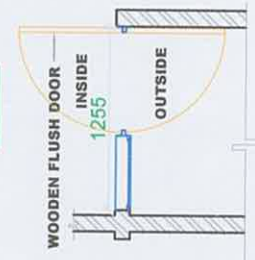
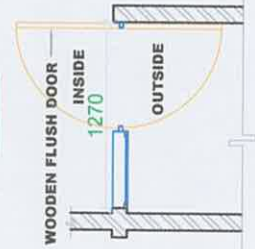
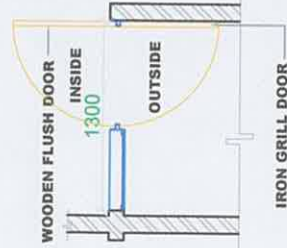
25mm thick
Flush door with
Synthetic enamel paint
on both sides.

ELEVATION (DW2)
10 UNIT

ELEVATION (DW3)
10 UNIT

ELEVATION (DW4)
10 UNIT

ELEVATION (DW5)
10 UNIT



PLAN (DW2)

PLAN (DW3)

PLAN (DW4)

PLAN (DW5)

Type	Opening Size	Frame Section	Location
DW2	1300 X 2100/1710	M.S. Section	Bed room/balcony
DW3	1270 X 2100/1710	M.S. Section	Bed room/balcony
DW4	1255X 2100/1710	M.S. Section	Bed room/balcony
DW5	1220 X 2100/1710	M.S. Section	Bed room/balcony

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NOTES

1. ALL DIMENSIONS ARE IN MM UNLESS SPECIFIED OTHERWISE.
2. ALL DIMENSIONS ARE TO BE READ ONLY AND NOT TO BE REVERSED.
3. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT SPECIFICATIONS, CONTRACT DOCUMENTS AND LANDSCAPE DRAWINGS.
4. ANY DISCREPANCIES IN THE DRAWINGS OR AT SITE SHOULD BE BROUGHT TO THE NOTICE OF THE ARCHITECT IMMEDIATELY.
5. FOR DETAILS REFER RELEVANT LARGE SCALE DETAIL DRAWINGS AS INDICATED.
6. REINFORCEMENT TO BE PROVIDED FOR SLABS IN ALL SHIFTS AND COUPTS EXCEPT LIFT SHAFTS & VENTILATION COUPTS.
7. MAINTENANCE WORK AROUND SERVICES SHAFTS AND COUPTS TO BE KEPT ON HOLD/ COORDINATED WITH SERVICES CONTRACTORS FOR INSTALLATION OF ALL SERVICES.
8. FLOOR FINISH FOR TILES SHALL BE 10MM, AND AT BALCONY IT SHALL BE 10MM, IN BALCONIES - 10MM, UNLESS SPECIFIED OTHERWISE.
9. ALL BALCONY WALLS TO BE 250 X 250 MM THE BLOCK WORK UNLESS OTHERWISE SPECIFIED AND ALL OPENINGS SIZES INDICATED ARE UNFINISHED BALCONY SIZES.
10. SLOPE OF FLOOR FINISH FOR BALCONY DRAINAGE/TILES SHALL BE 1:100 UNLESS NOTED OTHERWISE.
11. FOR FLOORING DETAIL REFER RESPECTIVE FLOORING DRAWINGS.

REV.	NO.	DATE	DESCRIPTION
1	11.11.2022	GFC (2 PRINTS)	

APPLICANT:

M/S OJAS TOWNSHIPS (P) LTD

PROJECT ARCHITECTS

GARG & ASSOCIATES

ARCHITECTS ENGINEERS PLANNERS

NEW DELHI-110001

PROJECT

PROPOSED PMV (EWS) AWASTHA YOUNA

SHILPA PISTORE, RUDRAPUR, UTTARAKHAND

Drawing Title

FLOORING DETAIL

Drawing Purpose

GOOD FOR CONSTRUCTION

Scale

1:100 (A2)

Date

APRIL, 2022

Checked by

Approved by

Drawn by

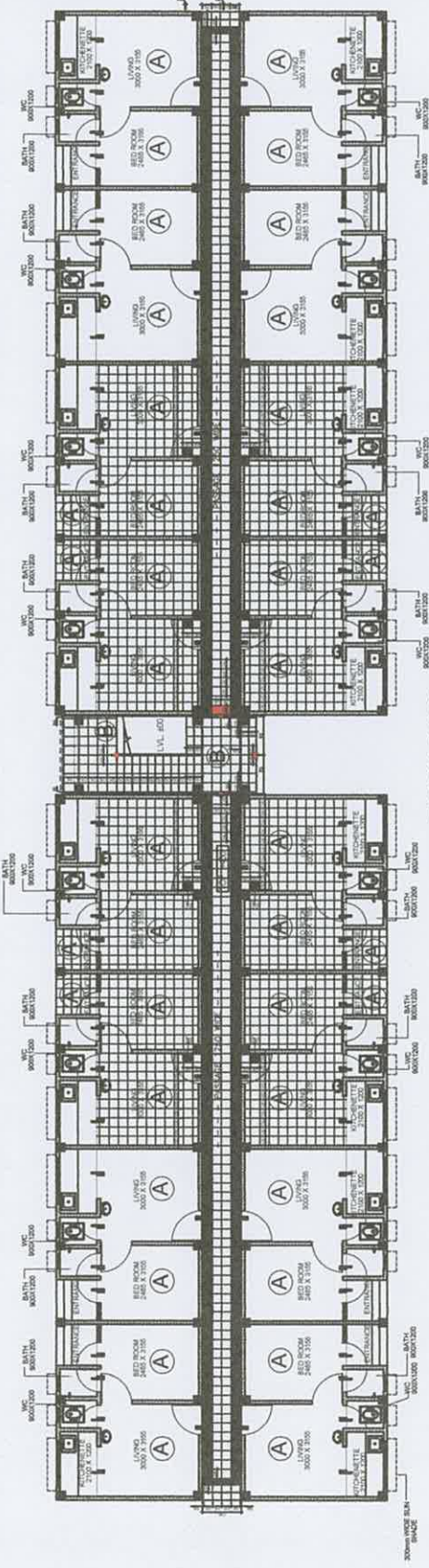
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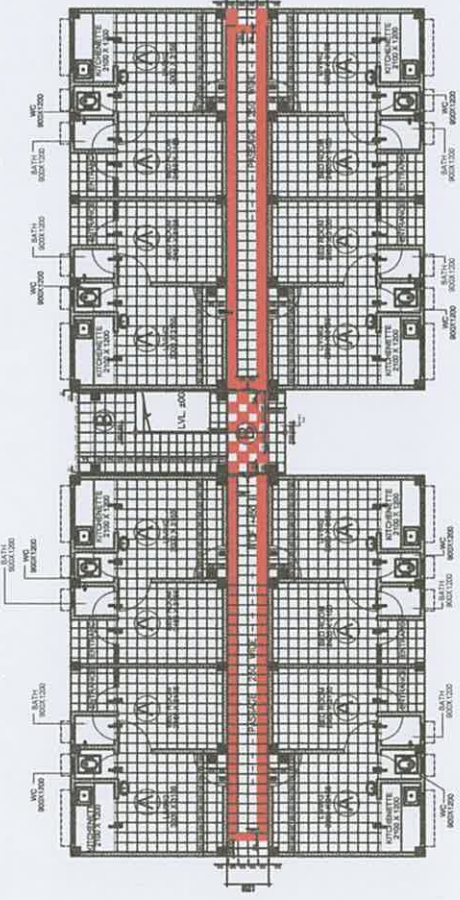
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Date of Issue

11.11.2022



TYPICAL FLOOR FLOORING PLAN (TOWER A, B, C, D, E, F, G, H, J, W, X, Y, Z, 1, 2)

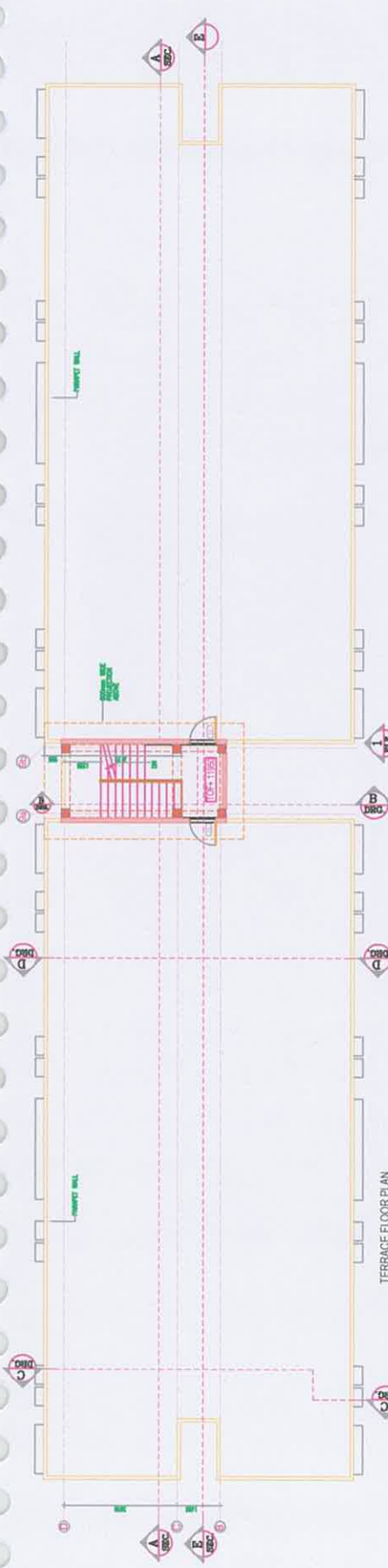


TYPICAL FLOOR FLOORING PLAN (TOWER L, M, N, P, Q, R, S, T, U, V)

LEGEND

A	MATTE FINISH CERAMIC FLOOR TILES & MATCHING SKIRTING UP TO 100MM ON WALLS (300MM X 300MM)
B	PRECAST CEMENT CONCRETE TILES (300MM X 300MM)

Job Number	Scale	North
	1:25 (A2)	
CAD file ref.	Date	Approved by
	APRIL 2022	
Drawn by	Checked by	File
RAWAT		B0
Drawing Number		Date of issue
PMAY/WDD-04		11.11.2022



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GARG & ASSOCIATES
ARCHITECTS

[illegible]

SHIMLA PISTONE, RUDRAPUR, UTTARANCHAL

FLOOR PLANS
UNIT - 16

GOOD FOR CONSTRUCTION

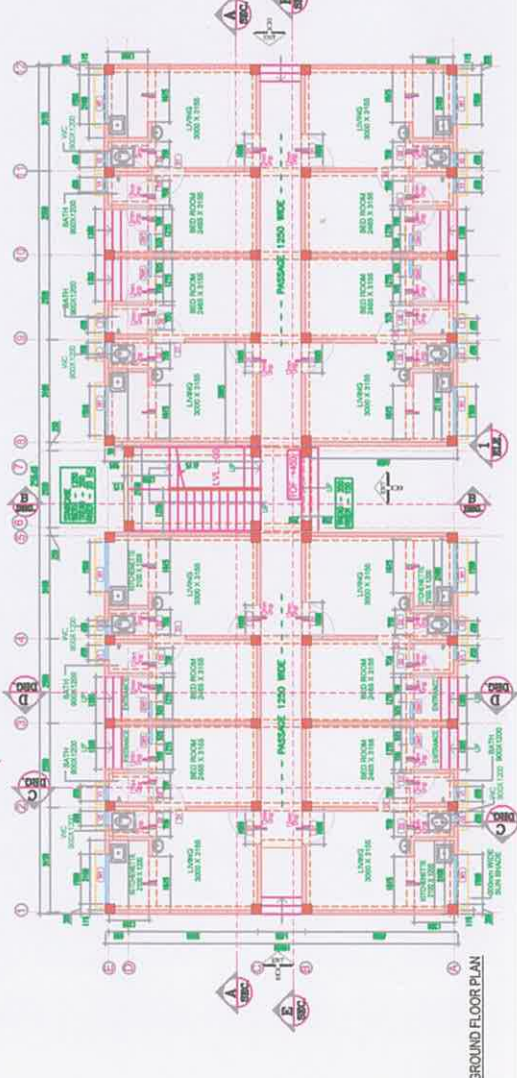
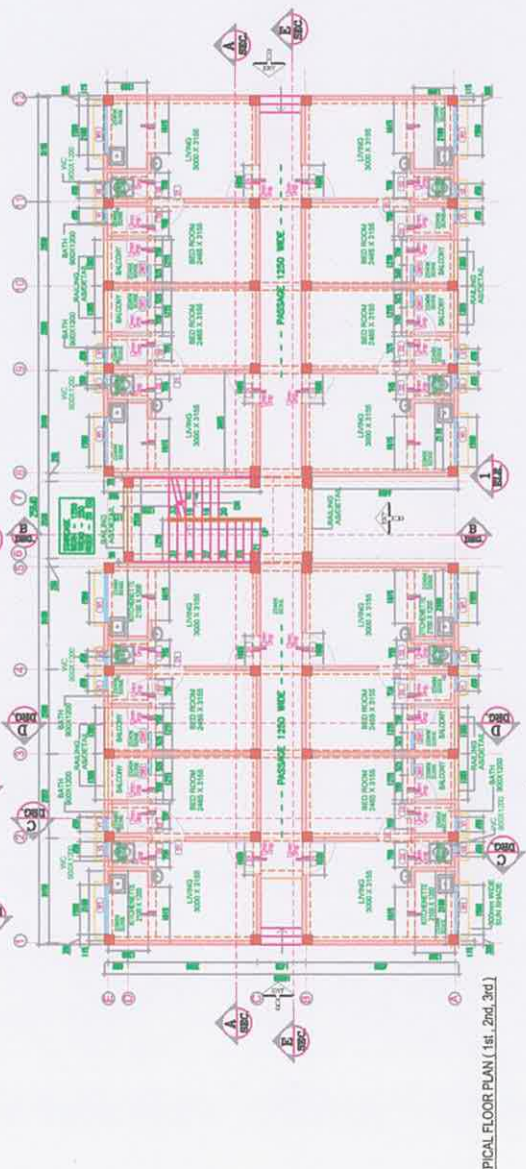
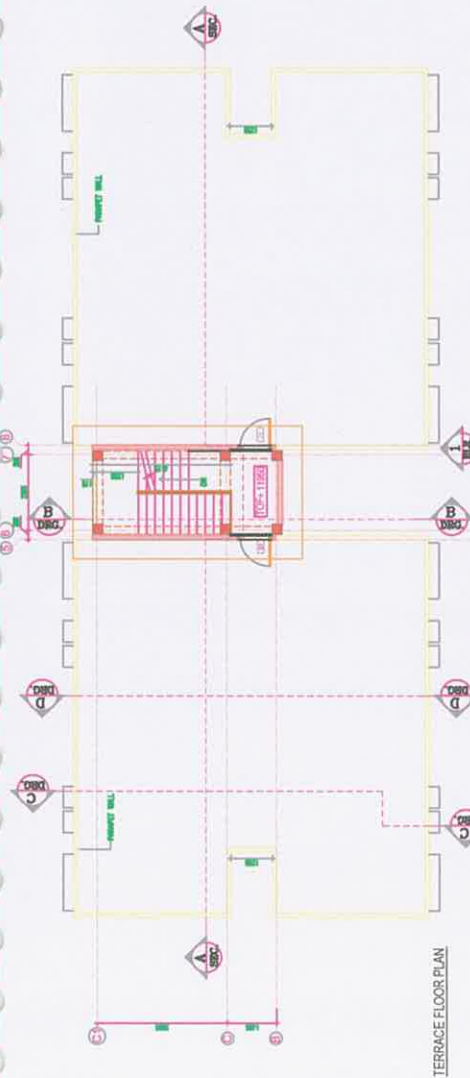
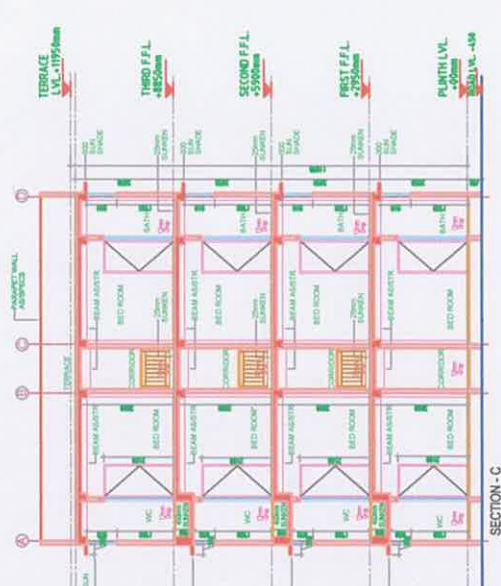
On the ref.	Date
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Approved by	Checked by	As used
		177-10-27

DATE OF ISSUE	11/11/2008
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THESE DAYS, WHEN THE POLICE ARE CALLED TO a crime scene, they find a trail of evidence that has been left behind by the perpetrator. The evidence is often in the form of a fingerprint, a hair, a bloodstain, or a piece of clothing. The police use this evidence to identify the suspect and to prove their case in court. The evidence is often in the form of a fingerprint, a hair, a bloodstain, or a piece of clothing. The police use this evidence to identify the suspect and to prove their case in court.

UNIT PLAN
SCALE: 1:50



(Structure Drawing)
Pradhan Mantri Awas Vikas Yojna EWS
(SHIMLA PISTOR)
(Rudrapur, Uttarakhand)




PAL ARCHITECT AND ENGINEER
COA No. CA/2018/96244
Case No. 0062 Date. 18/11/22..
Tapovan Road Infront of PRD Ground
Near by IDBI Bank, Dehradun (U.K.)
Mob.: 7895872139, 9412143346

NOTE :-
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2. ALL DIMENSIONS ARE IN M.M. UNLESS STATED OTHERWISE.

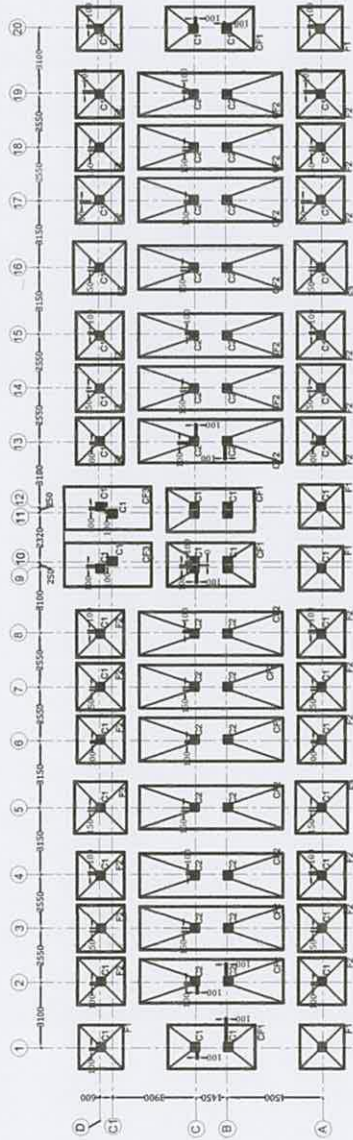
3. THE R.C.C. GRADE FOR FOUNDATION, COLUMN, BEAM, SLAB & WALL SHALL BE OF M 20
4. STEEL REINFORCEMENT BARS ARE TO BE HIGH YIELD (FE 500 GRADE) AS PER IS 1786: 2008 BEFORE USE IT SHOULD BE TESTED AND RECORDED.
5. THE QUALITY OF MATERIALS USED IN CONCRETE SHALL BE CHECKED REGULARLY AND LAB TEST SHALL BE DONE TO ENSURE THAT SPECIFICATIONS ARE MET.
6. THE CONCRETING SHALL BE DONE BY WEIGHT AND SITE RECORDS SHALL BE MAINTAINED.
7. REGULAR CUBE CASTING AND TESTING SHALL BE DONE AT SITE AND RECORD SHALL BE MAINTAINED.
8. P.C.C. SHALL BE OF GRADE M- 7.5 (1:4:8) 75 MM THICK IN FOUNDATION.
9. DEVELOPMENT LENGTH SHOULD BE MIN. 45d (WHERE d = DIA OF BAR)
10. CLEAR COVER OF 25 MM IN BEAM, 30 MM IN COLUMN AND 50 MM IN FOUNDATION.
11. ANY DIFFICULTY SHALL BE BROUGHT TO THE DESIGNER BEFORE TAKING ANY DECISION.
12. CLOSED LINKS SHALL BE PROVIDED OVER THE ENTIRE LENGTH OVER WHICH THE LONGITUDINAL BARS ARE SPICED SPACING OF THESE LINKS SHALL NOT EXCEED 150 MM IN BEAM AND 100 MM IN COLUMN.
13. LAP LENGTH SHALL NOT BE LESS THAN THE DEVELOPMENT LENGTH OF THE LARGEST LONGITUDINAL BAR IN TENSION.
14. LAP SPLICES SHALL NOT BE PROVIDED:
A) WITHIN A JOINT.
B) WITHIN A DISTANCE 2D FROM THE FACE OF COLUMN / BEAM
15. MORE THAN 50 % OF BARS SHALL NOT BE SPICED AT ANY ONE SECTION
16. STRUCTURE IS DESIGNED FOR A S.B.C. OF 7.5T/M2
17. ALL SLABS FROM GF TO FF TERRACE 110 MM THICK EXCEPT NOTED OTHERWISE

CONSULTANT

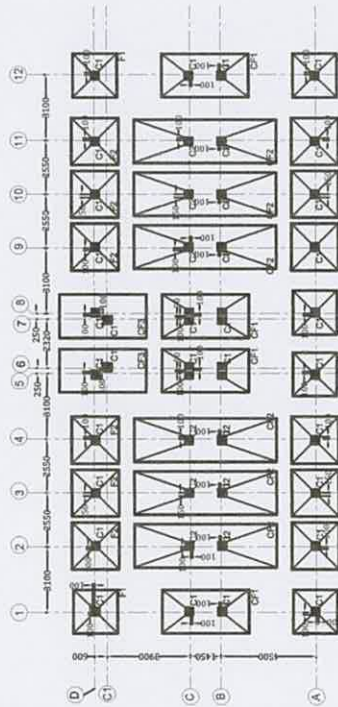
DESIGNED BY:

ER. HARIT VERMA
B.TECH (C.E.)
AM-IEI

M.V.P. CONSULTANT & ASSOCIATES
203, TARA PLACE NAINITAL ROAD
HALDOWANI
Email: consultantmvp@gmail.com



16 UNIT - COLUMN LAYOUT DIMENSIONS FROM GRID



8 UNIT - COLUMN LAYOUT DIMENSIONS FROM GRID

STRUCTURE ENGG. SIGN

REV. DATE

TITLE

DRG. NO.

PROJECT
PROPOSED EWS GROUP HOUSING
UNDER PRADHAN MANTRI
AWASHA YOJANA (MODEL 2)
SHIMLA PISTORE,
U.S. NAGAR, UTTARAKHAND

COLUMN LAYOUT PLAN

R4 19/09/2022

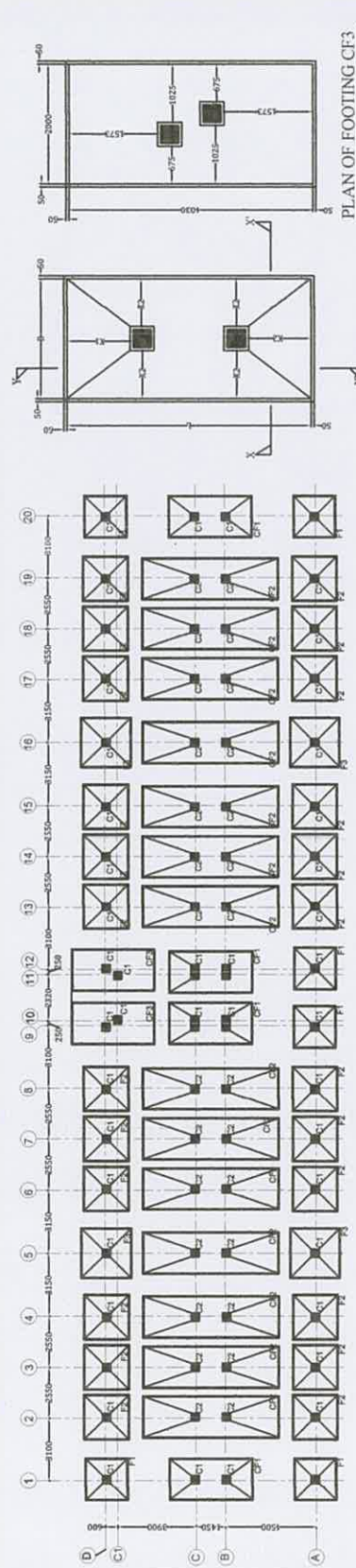
G.F.C

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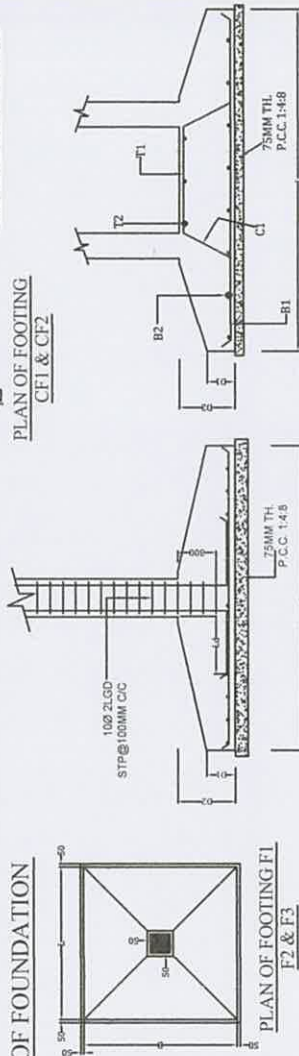
J.C. Bhatia
B.Tech. ECE
Authorized Structural Engineer (ASE)
Regd. No. DDH-UNQ-ASE-27019
203, Tarapole, Nainital Road, Haldwani
Dist: Nainital (Uttarakhand) Mo-937774179

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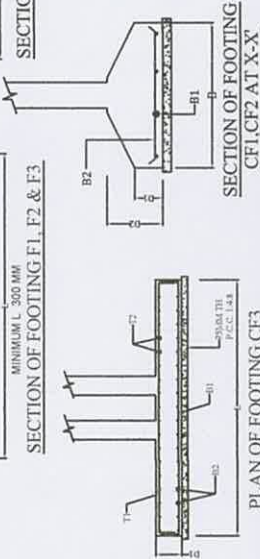
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B) WITHIN A DISTANCE 2D FROM THE FACE OF COLUMN / BEAM
15. MORE THAN 50% OF BARS SHALL NOT BE SPICED AT ANY ONE SECTION
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17. ALL SLABS FROM GF TO FF TERRACE 110 MM THICK EXCEPT NOTED OTHERWISE



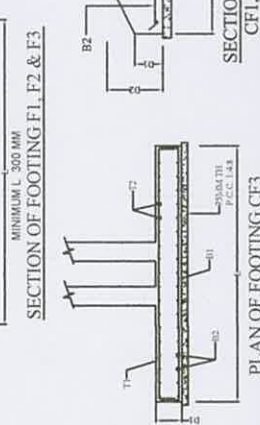
TRENCH PLAN OF FOUNDATION



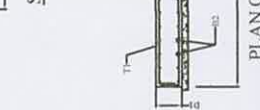
PLAN OF FOOTING F1, F2 & F3



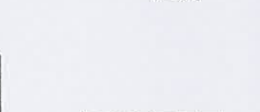
SECTION OF FOOTING F1, F2 & F3



PLAN OF FOOTING CF1, CF2 AT X-X'



SECTION OF FOOTING CF1, CF2 AT X-X'



PLAN OF FOOTING CF1, CF2 AT Y-Y'



SECTION OF FOOTING CF1, CF2 AT Y-Y'

SCHEDULE FOR ISOLATED FOOTING (M20 - FE 500)

FOOTING NAME	FOUNDATION DETAIL				FOUNDATION REINFORCEMENT			
	L X B	D1	D2	ALONG SHORT SPAN	ALONG LONG SPAN	T1	T2	B1
F1	2020 X 2020	150	300	120 @ 180 MM C/C	120 @ 200 MM C/C	4-120	120 250 MM C/C	4-120
F2	2160 X 2160	200	400	120 @ 180 MM C/C	120 @ 200 MM C/C	6-200	160 250 MM C/C	6-200
F3	2400 X 2400	200	400	120 @ 160 MM C/C	120 @ 180 MM C/C	6-160	160 200 MM C/C	6-160

SCHEDULE FOR COMBINED FOOTING (M20 - FE 500)

FOOTING NAME	FOUNDATION DETAIL				FOUNDATION REINFORCEMENT			
	L X B	D1	D2	X1 X2	T1	T2	B1	B2
CF1	4030 X 2000	150	300	1090	850	4-120	120 250 MM C/C	4-120
CF2	6650 X 2000	300	600	2400	850	6-200	160 250 MM C/C	6-200
CF3	4030 X 2000	400	-	AS PER DRG	6-160	160 200 MM C/C	10-160	160 200 MM C/C

NOTE: THE DEPTH OF FOUNDATION FROM N.G.L. SHALL BE 2000 MM

PROJECT

PROPOSED EWS GROUP HOUSING
UNDER PRADHAN MANTRI
AWAS Yojana (MODEL 2)
UNIT 16 SHIMLA PISTORE,
U.S. NAGAR, UTTARAKHAND

DRG. NO.

TITLE

PLAN & DETAIL OF
FOUNDATION

REV.

DATE

R4

19/09/2022

G.F.C

STRUCTURE ENGG. SIGN

J.C. Bhatia
Tech. FE 500 & Steel E, L&S-CLM-RC
Authorized Structural Engineer (ASE)
Regd. No. DCH-UPQ-1456-2019
202, Tarpalce, Noida Road, Noida
Date: Noida (Uttar Pradesh) No-93777414

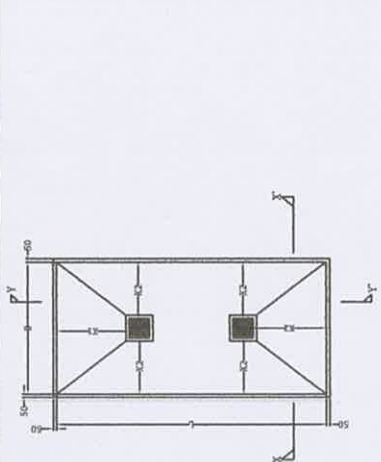
DESIGNED BY:

ER. HARIT VERMA
B.TECH (C.E.)
AM/IEI

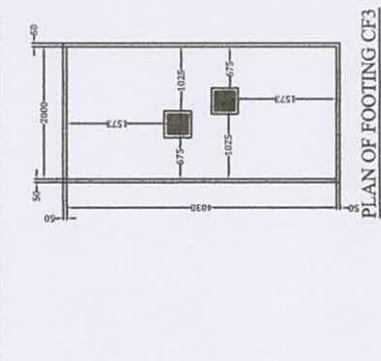
CONSULTANT

M.V.P. CONSULTANT & ASSOCIATES
203, TARA PLACE NAINITAL ROAD
HALDWANI
Email: consultantmvp@gmail.com

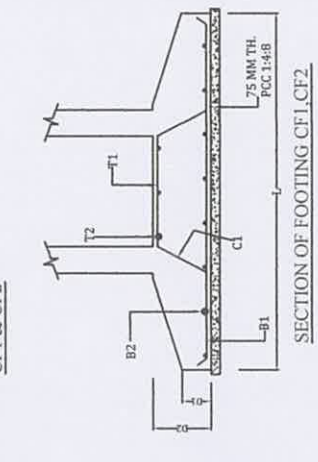
NOTE :-
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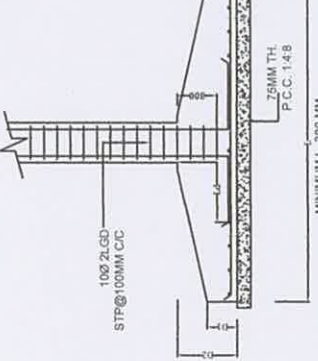
PLAN OF FOOTING CF1 & CF2



PLAN OF FOOTING CF3



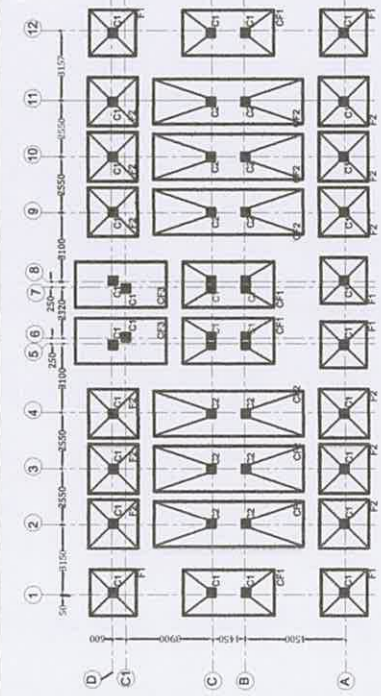
SECTION OF FOOTING CF1, CF2



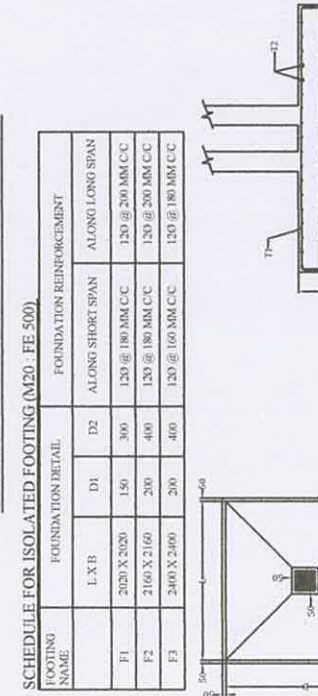
SECTION OF FOOTING F1, F2 & F3



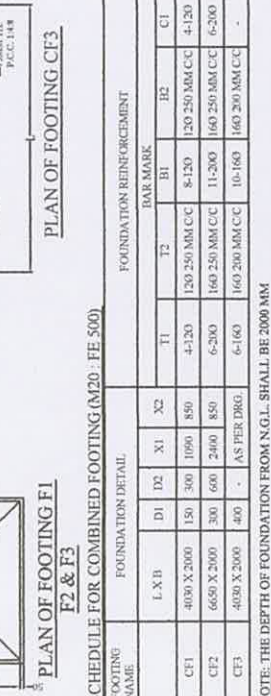
SECTION OF FOOTING CF1, CF2 AT X-X'



TRENCH PLAN OF FOUNDATION



PLAN OF FOOTING F1, F2 & F3



PLAN OF FOOTING CF3

SCHEDULE FOR ISOLATED FOOTING (M20 - FE 500)

FOOTING NAME	FOOTING DETAIL	FOUNDATION REINFORCEMENT
	L X B	D1 D2
F1	2020 X 2020	150 300
F2	2160 X 2160	200 400
F3	2400 X 2400	200 400

SCHEDULE FOR COMBINED FOOTING (M20 - FE 500)

FOOTING NAME	FOOTING DETAIL	FOUNDATION REINFORCEMENT
	L X B	D1 D2
CF1	4030 X 2000	150 300
CF2	6650 X 2000	300 600
CF3	4030 X 2000	400 -

NOTE: THE DEPTH OF FOUNDATION FROM N.G.L. SHALL BE 2000 MM

DESIGNED BY:
ER. HARIT VERMA
B.TECH (C.E.)
AM-JEI

CONSULTANT
M.V.P. CONSULTANT & ASSOCIATES
203, TARA PLACE NAINITAL ROAD
HALDWANI
Email: consultantmvp@gmail.com

STRUCTURE ENGG. SIGN
J.C. Bhatnagar
1. Tech. P.E. (MCA) Structure, U.P. (MCA) Encl. No. 1001/2014 (CFE 42918)
203, TARA PLACE NAINITAL ROAD HALDWANI
Dist. Nainital (Uttarakhand) Mo-9577714195

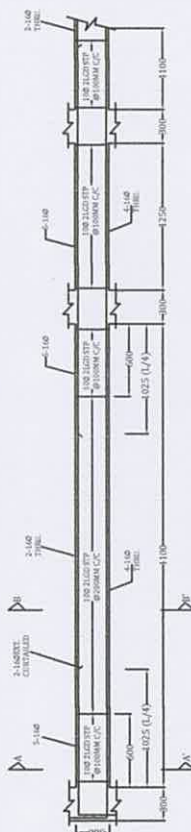
PROJECT
PROPOSED EWS GROUP HOUSING
UNDER PRADHAN MANTRI
AWASAYA YOJANA (MODEL 2)
UNIT 8 SHIMLA PISTORE,
U.S. NAGAR, UTTARAKHAND

DRG. NO. 1
TITLE
PLAN AND DETAIL OF
COLUMN AND
FOUNDATION

REV. DATE
R4 19/09/2022
G.F.C

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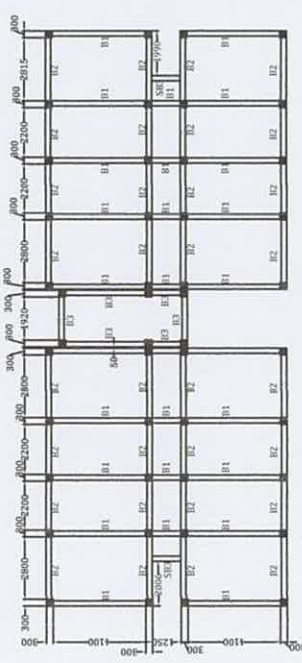


REINFORCEMENT DETAIL OF BEAM B1

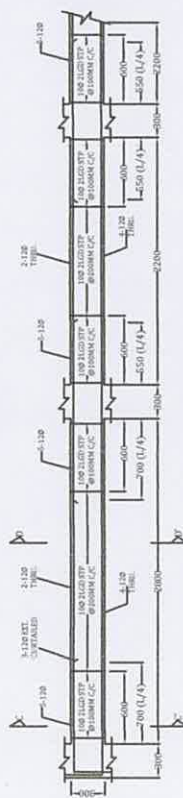


SCHEDULE FOR SLAB BEAM (TERRACE)

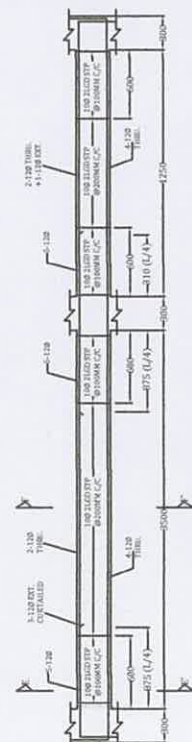
BEAM	WIDTH (B) (MM)	DEPTH (D) (MM)
B1	300	300
B2	300	300
B3	230	300



BEAM PLAN



REINFORCEMENT DETAIL OF BEAM B2



REINFORCEMENT DETAIL OF BEAM B3

STRUCTURE ENGG. SIGN

REV. DATE

TITLE

DRG. NO.

PROJECT

R4 19/09/2022

DETAIL OF TERRACE SLAB BEAM

5

PROPOSED EWS GROUP HOUSING
UNDER PRADHAN MANTRI
AWASIYA YOJANA (MODEL 2)
UNIT 8 SHIMLA PISTORE,
U.S. NAGAR, UTTARAKHAND

DESIGNED BY:

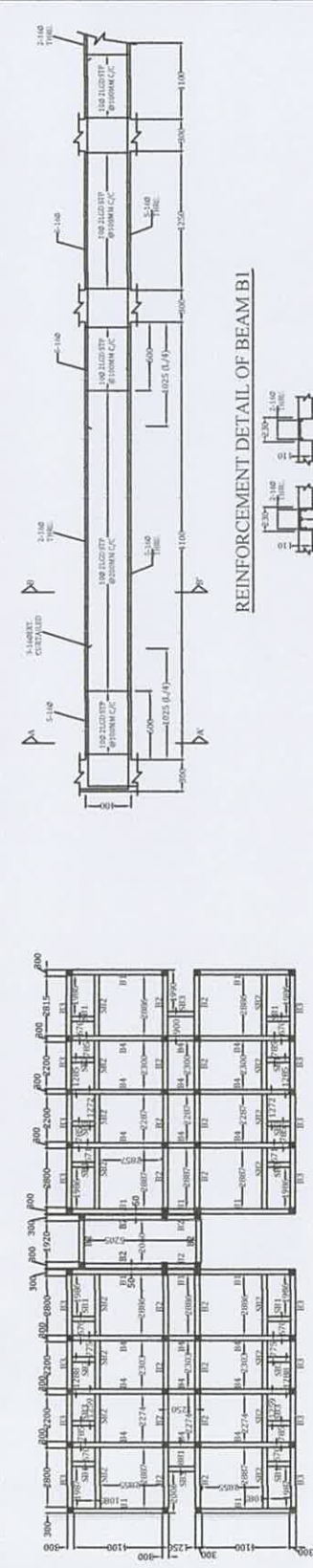
ER. HARIT VERMA
B.TECH (C.E.)
AM-JEI

CONSULTANT

M.V.P. CONSULTANT & ASSOCIATES
203, TARA PLACE NAINITAL ROAD
HALDWANI
Email: consultantmvpe@gmail.com

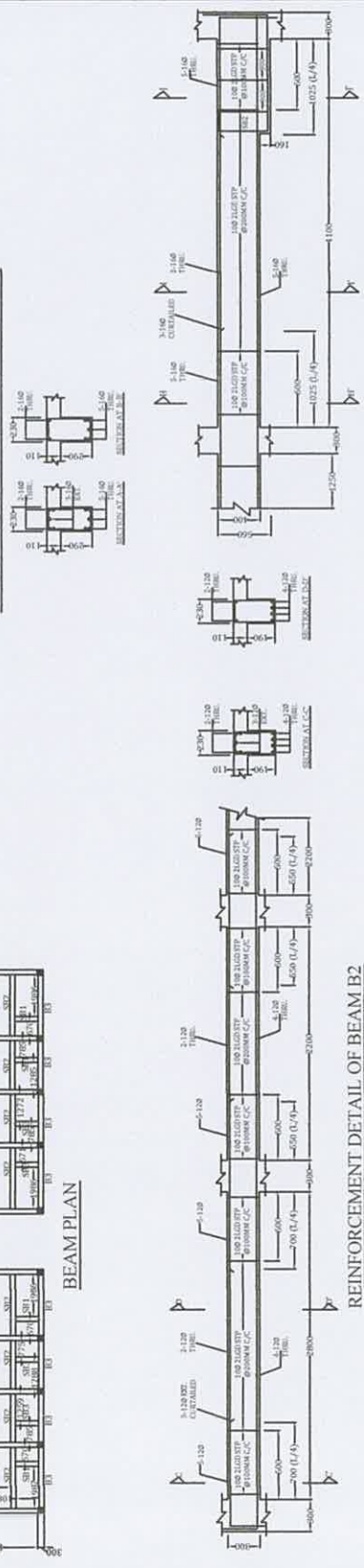
U.C. Bhatnagar
Tech. P.E. (M.Y.A. SECURE, UTTARAKHAND)
Regd. No. UOH-103-103-103-103-103
203, Tara Place, Nainital Road, Haldwani
Distt. Nainital (Uttarakhand) Mo-9537747414

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BEAM PLAN

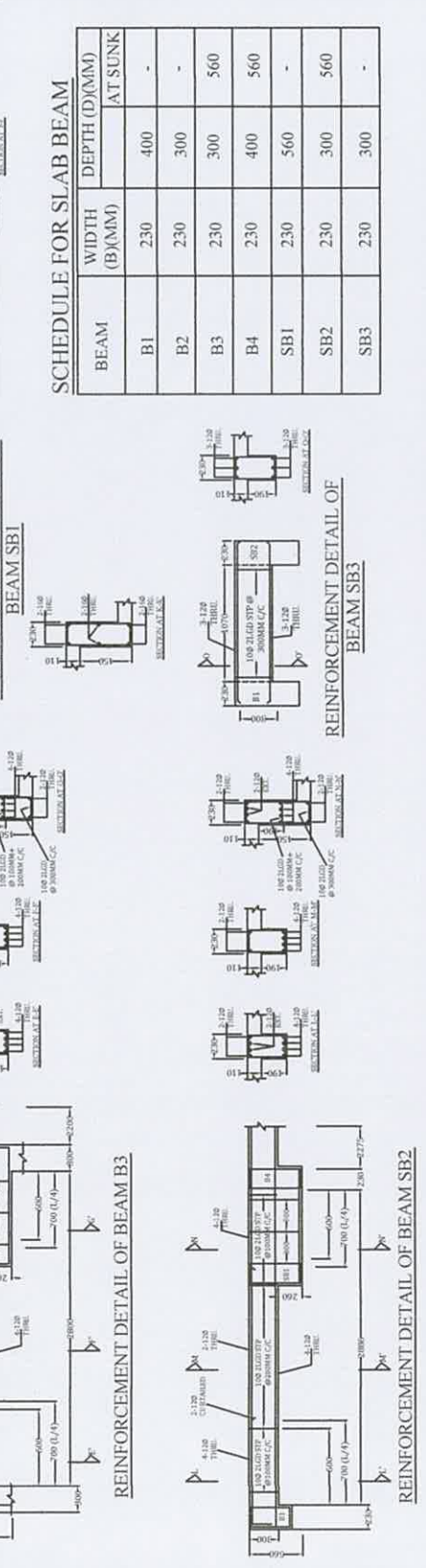
REINFORCEMENT DETAIL OF BEAM B1



REINFORCEMENT DETAIL OF BEAM B2

REINFORCEMENT DETAIL OF BEAM B4

REINFORCEMENT DETAIL OF BEAM SB1

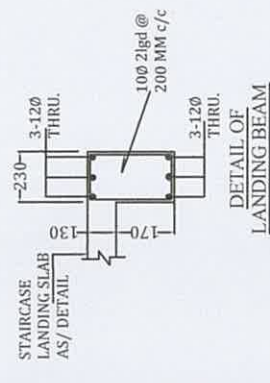


REINFORCEMENT DETAIL OF BEAM SB2

REINFORCEMENT DETAIL OF BEAM SB3

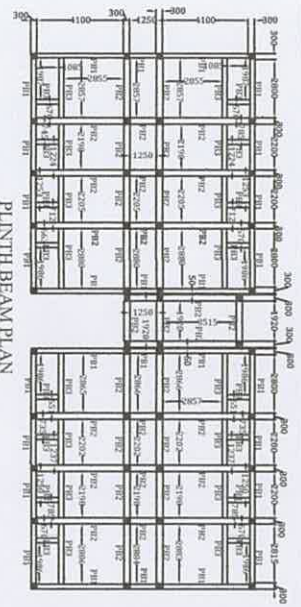
SCHEDULE FOR SLAB BEAM

BEAM	WIDTH (B) (MM)	DEPTH (D) (MM)	AT SUNK
B1	230	400	-
B2	230	300	-
B3	230	300	560
B4	230	400	560
SB1	230	560	-
SB2	230	300	560
SB3	230	300	-



DETAIL OF LANDING BEAM

PROJECT	PROPOSED EWS GROUP HOUSING UNDER PRADHAN MANTRI AWASYA YOJANA (MODEL 2) UNIT 8 SHIMLA PISTORE, U.S. NAGAR, UTTARAKHAND	DRG. NO.	3	TITLE	DETAIL OF TYP. FIRST, SECOND, THIRD FLOOR SLAB BEAM	REV.	DATE	19/09/2022	STRUCTURE ENGG. SIGN	 J.C. Bhatnagar 1, Teja Puri, 4A Street, L-142, L-143, Arc Addressed to: 110041, New Delhi-110041 201, Taramora, Noida Road, Noida Dist. Noida (Uttarakhand) Mo-9917774714	DESIGNED BY:	ER. HARIT VERMA B.TECH (C.E.) AM-IEI	CONSULTANT	M.V.P. CONSULTANT & ASSOCIATES 203, TARA PLACE NAINITAL ROAD HALDWANI Email: consultantmv@gmail.com

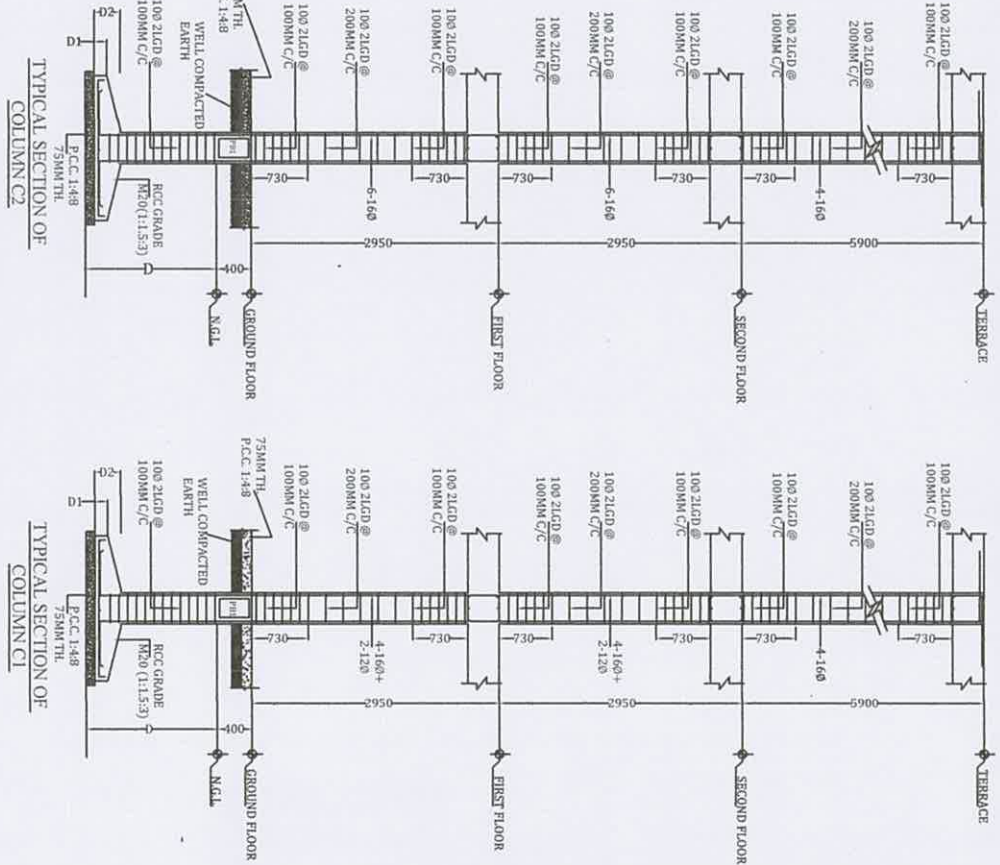
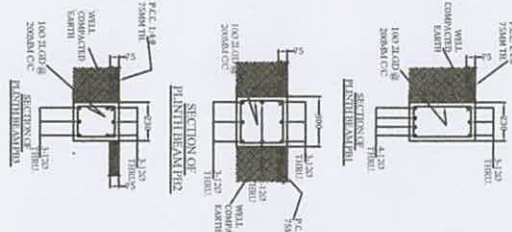


PLINTH BEAM PLAN

SCHEDULE FOR COLUMN DETAIL (M20 - FE 500)

COLUMN NAME	COLUMN DETAIL		REMARKS
	B X D (MM)	REINFORCEMENT DETAIL	
C1	300 X 300	FROM FOUNDATION TO SECOND FLOOR 100 2LG @ 100MM - 200MM C/C 160	
C2	300 X 300	FROM FOUNDATION TO TERRACE 100 2LG @ 100MM - 200MM C/C 160	

NOTE:
IF 80 2 LGD STIRRUPS ARE USED THEN SPACING SHALL BE
80 2LG @ 150MM C/C IN PLINTH BEAM AND 80 2LG @ 100+150MM C/C
(END & MID ZONE RESPECTIVELY) IN COLUMNS



PROJECT	DRG. NO.	TITLE	REV.	DATE
PROPOSED EWS GROUP HOUSING UNDER PRADHAN MANTRI AWASAYA YOJANA (MODEL 2) UNIT 8 SHIMLA PISTORE, U.S. NAGAR, UTTARAKHAND	2	PLINTH LEVEL PLAN AND DETAIL OF COLUMN AND THE BEAM	R4	19/09/2022
			G.F.C	

STRUCTURE ENG. SIGN	DATE
	19/09/2022

J.C. SHARMA
100, PATEL ROAD, LAKHTA, NAGAR,
SHIMLA, DISTRICT SHIMLA,
HARYANA, INDIA - 171001
Mob: 98100-12345, 98100-67890
Email: jcs@shimla.com

DESIGNED BY:	CONSULTANT
ER. HARIT VERMA B.TECH (C.E.) AM-IEI	M.V.P. CONSULTANT & ASSOCIATES 203, TARA PLACE MAIN TOL. ROAD HALDWANI Email: consultantmvpa@gmail.com

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(16 Tower No A To H ,J ,K ,W ,TO Z ,Z1,Z2)

Bill Of Quantity PMAY EWS

SHIMLA PISTOR

(RUDRAPUR)

(Uttrakhand)

(Civil Work)


PAL ARCHITECT AND ENGINEER
COA No. CA/2018/96244
Case No. 0082..... Date. 18/11/22.....
Tapovan Road Infront of PRD Ground
Near by IDBI Bank, Dehradun (U.K.)
Mob.: 7895872139, 9412143346



16 TOWER A TO H, J, K, W TO Z, Z1, Z2 BILL OF QUANTITY PMAY EWS SHIMLA PISTORE (RUDRAPUR) (UTTARAKHAND)

S.NO.	DSR - 21	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
EARTH WORK						
1	2.28	Surface dressing of the ground including removing vegetation and in equalities not exceeding 15 cm deep and disposal of rubbish, lead up to 50 m and lift up to 1.5 m.				
2	2.28.1	All kinds of soil	sqm	28343.78	28.15	797877.407
3	2.32	Clearing grass and removal of the rubbish up to a distance of 50 m outside the periphery of the area cleared.	sqm	5668.75	7.4	41948.75
4	2.6	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 lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in charge. 2.6.1 All kinds of soil				
5	2.6.1	All kinds of soil	cum	12609.68	205.45	2590658.756
6	2.36	Extra for levelling & neatly dressing of disposed soil completely as directed by Engineer-in-charge.	cum	1891.31	76.7	145063.477
		SUB TOTAL				3575548.39
CONCRETE WORK						
7	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
8	4.1.8	1:4:8 (1 Cement : 4 coarse sand (zone-III) derived from natural sources : 8 graded stone aggregate 40 mm nominal size derived from natural sources)	cum	1295.15	6326.1	8193183.658
9	4.20.1	4.20.1 All works upto plinth level :				
10	4.20.1.3	Concrete of M20 grade with minimum cement content of 270 kg /cum	cum	3116.12	8387.2	26135365.86
11	4.20.2	All works above plinth and upto floor V level				
12	4.20.2.3	Concrete of M20 grade with minimum cement content of 270 kg /cum	cum	6318.29	10010	63242923.76
		SUB TOTAL				97571473.27

PAL ARCHITECT AND ENGINEER

COA No. CA/2018/96244

Case No. 9082 Date 18/11/22

Tapovan Road Infront of PRD Ground

Near by IDBI Bank, Dehradun (U.K.)

Mob.: 7895872139, 9412143346



16 TOWER A TO H, J, K, W TO Z, Z1, Z2 BILL OF QUANTITY PMAY EWS SHIMLA PISTORE (RUDRAPUR) (UTTARAKHAND)

FORM WORK						
12	5.9	Centering and shuttering including strutting, propping etc. and removal of form for				
13	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete	sqm	10374.82	307.95	3194925.819
14	5.9.3	Suspended floors, roofs, landings, balconies and access platform	sqm	136390.73	766.55	104550314.1
16	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts	sqm	21168	657.75	13923252
17	5.9.7	Stairs, (excluding landings) except spiral-staircases	sqm	4430.037	657.75	2913856.837
SUB TOTAL						124582348.7
STEEL REINFORCEMENT						
18	5.22	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level				
19	5.22.6	Thermo-Mechanically Treated bars of grade Fe-500D or more	kg	1051404.63	89.65	94258425.08
SUB TOTAL						94258425.08


 PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. 2008/2 Date 18/11/2020
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346



16 TOWER A TO H, J, K, W TO Z, Z1, Z2 BILL OF QUANTITY PMAY EWS SHIMLA PISTORE (RUDRAPUR) (UTTARAKHAND)

S.NO.	DSR - 21	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
A.C.C BLOCK WORK						
20	6.38	Providing and laying autoclaved aerated cement blocks masonry with 100 mm thick AAC blocks in super structure above plinth level up to floor V level in cement mortar 1:4 (1 cement : 4 coarse sand). The rate includes providing and placing in position 2 Nos 6 mm dia M.S. bars at every third course of masonry work.	cum	5082.24	8890.8	45185179.39
SUB TOTAL						45185179.39
CLADDING WORK						
21	8.6	Mirror polishing on marble work/Granite work/stone work where ever required to give high gloss finish complete.	sqm	625.6	417.6	261250.56
22	8.9	Stone tile (polished) work for wall lining over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and cement slurry @ 3.3 kg/sqm including pointing in white cement complete				
SUB TOTAL						261250.56

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PAL ARCHITECT AND ENGINEER
COA No. CA/2018/96244
Case No. 2022..... Date 18/11/22....
Tapovan Road Infront of PRD Ground
Near by IDBI Bank, Dehradun (U.K.)
Mob.: 7895872139, 9412143346



16 TOWER A TO H, J, K, W TO Z, Z1, Z2 BILL OF QUANTITY PMAY EWS SHIMLA PISTORE (RUDRAPUR) (UTTARAKHAND)

S.NO.	DSR - 21	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
23	9.18	Providing and fixing Pre-laminated flat pressed 3 layer (medium density) particle board or graded wood particle board IS : 3087 marked, with one side decorative and other side balancing lamination Grade I, Type II exterior grade IS : 12823 marked, in shelves with screws and fittings wherever required, edges to be painted with polyurethane primer (fittings to be paid separately)				
24	9.18.2	25 mm thick	sqm	9139.2	1501	13717939.2
25	10.25	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.				
26	10.25.2	n gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	KG	250880	142.3	35700224
27	10.26	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer.				
	10.26.1	M.S. tube		10803.2	157.15	1697722.88
28	9.12	Extra for providing frosted glass panes 4 mm thick instead of ordinary float glass panes 4 mm thick in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).	SQM	2488.32	148.5	369515.52
		SUB TOTAL				51485401.6
FLOORING WORK						
29	11.37	Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), Jointing with grey cement slurry @ 3.3 kg/sqm including pointing the joints with white cement and matching pigment etc., complete.	SQM	34624	935.6	32394214.4
		SUB TOTAL				32394214.4



PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. 0082 Date: 18/11/22
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

16 TOWER A TO H, J, K, W TO Z, Z1, Z2 BILL OF QUANTITY PMAY EWS SHIMLA PISTORE (RUDRAPUR) (UTTARAKHAND)

S.NO.	DSR - 21	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
FINISHING WORK						
30	13.1	12 mm cement plaster of mix :				
31	13.1.2	1:6 (1 cement: 6 fine sand) Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	sqm	212816.84	294.85	62749045.27
32	13.8		sqm	212817	123.85	26357385.45
33	13.48	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :				
34	13.48.1	Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of Special primer applied @ 0.75 ltr /10 sqm	sqm	212817	158.95	33827262.15
33	13.47	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade:				
34	13.47.1	New work (Two or more coats applied @ 1.43 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)	sqm	21735.41	162.35	3528743.814
35	13.83	Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound) content less than 50 grams/ litre of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour				
36	13.83.2	Two coats	sqm	187301.052	121.55	22766442.87
		SUB TOTAL				149228879.6




PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. 0082 Date: 18/11/22
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

16 TOWER A TO H, J, K, W TO Z, Z1, Z2 BILL OF QUANTITY PMAY EWS SHIMLA PISTORE (RUDRAPUR) (UTTARAKHAND)

PLUMBING AND SANITARY INSTALLATIONS					
37	17.3	Plumbing and sanitary installation of 1024 EWS per floor 16 unit G+3 (64 Unit) total 16 tower			20832189.44
	17.3.1	Internal Electrical work of 1024 EWS per floor 16 unit G+3 (64 Unit) total 16 tower			41412352
WATER PROFING					
38	22.6	Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying:			
39	(a)	after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm.			
40	(b)	laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm.			
41	(c)	third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30 cm on parapet wall and tucked into groove in parapet all around			
42	(d)	fourth and final layer of brick tiling with cement mortar (which will be paid for separately.			
		For the purpose of measurement the entire treated surface will be measured.	2578.77	15	585.55
					1509998.774
GRAND TOTAL OF 16 Tower					662297261.2




PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. DD-82 Date: 8/11/22
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

16 TOWER A TO H & J, K, W TO Z, Z1, Z2 DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 16 UNIT G+3 (64 UNIT)

sno	DSR - Z1 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
2	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :										
	4.1.8	1:4:8 (1 Cement : 4 coarse sand (zone-III) derived from natural sources : 8 graded stone aggregate 40 mm nominal size derived from natural sources)										
		Foundation (F1) P.C.C		2.02	2.02	0.075	0.306	6	1.836			
		Foundation (F2) P.C.C		2.16	2.16	0.075	0.3449	24	8.398			
		Foundation (F3) P.C.C		2.4	2.4	0.075	0.432	4	1.728			
		Foundation (CF1) P.C.C		4.03	2	0.075	0.6	4	2.418			
		Foundation (CF2) P.C.C		6.65	2	0.075	0.997	14	13.965			
		Foundation (CF3) P.C.C		4.03	2	0.075	0.6	2	1.2			
		Sub Total							29.545	cum	6326.05	186903.147
		Plinth beam (PB1) P.C.C		164.1	0.3	0.075			3.692			
		Plinth beam (PB2) P.C.C		238.2	0.3	0.075			5.359			
		Plinth beam (PB3) P.C.C		164.1	0.3	0.075			3.692			
									12.743	cum	6326.05	80612.85
		Ground floor pcc		48.42	10.65	0.075			38.675	cum	6326.05	244659.98
		SUB TOTAL										512175.977




PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. 0082 Date 18/11/22
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

16 TOWER A TO H & J, K, W TO Z, Z1, Z2 DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 16 UNIT G+3 (64 UNIT)

sno	DSR - 21 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
3	4.20.1	4.20.1 All works upto plinth level :										
	4.20.1.3	Concrete of M20 grade with minimum cement content of 270 kg /cum										
		Foundation (F1) R.C.C		2.02	2.02	0.3	1.22	6	7.34			
		Foundation (F2) R.C.C		2.16	2.16	0.4	1.86	24	44.78			
		Foundation (F3) R.C.C		2.4	2.4	0.4	2.3	4	9.216			
		Foundation (CF1) R.C.C		4.03	2	0.3	2.418	4	9.672			
		Foundation (CF2) R.C.C		6.65	2	0.3	3.99	14	55.86			
		Foundation (CF3) R.C.C		4.03	2	0.4	3.224	2	6.448			
									133.316	cum	8387.15	1118141.29
		Plinth beam (PB1) R.C.C		164.1	0.23	0.4			15.09			
		Plinth beam (PB2) R.C.C		238.18	0.3	0.3			16.43			
		Plinth beam (PB3) R.C.C		164.1	0.23	0.3			11.32			
									42.84	cum	8387.15	359305.5
		Column (C1) R.C.C upto plinth beam level		0.3	0.3	2	0.2385	50	11.925			
		Column (C2) R.C.C upto plinth beam level		0.3	0.3	2	0.2385	28	6.678			
									18.603	cum	8387.15	156026.15
	4.20.2	All works above plinth and upto floor V level										
	4.20.2.3	Concrete of M20 grade with minimum cement content of 270 kg /cum										
		Column (C1) R.C.C upto terrace level		0.3	0.3	11.95	1.0755	50	53.775			
		Column (C2) R.C.C upto terrace level		0.3	0.3	11.95	1.0755	28	30.114			
									83.889	cum	10009.5	839686.94




PAL ARCHITECT AND ENGINEER
 COA No. SA/2018/96244
 Date: 18/11/22
 Case No. 8888888888888888
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

16 TOWER A TO H & J, K, W TO Z, Z1, Z2 DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 16 UNIT G+3 (64 UNIT)

sno	DSR - Z1 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
4	5.9	Centering and shuttering including strutting, propping etc. and removal of form for										
	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete										
		(F1)	2 side	2.02		0.45	1.818	6	10.908			
				2.02		0.45	1.818	6	10.908			
		(F2)	2 side	2.16		0.45	1.94	24	46.65			
				2.16		0.45	1.94	24	46.65			
		(F3)	2 side	2.4		0.45	2.16	4	8.64			
				2.4		0.45	2.16		8.64			
		(CF1)	2 side	4.03		0.45	3.627	4	14.508			
				2		0.45	1.8	4	7.2			
		(CF2)	2 side	6.65		0.45	5.985	14	83.79			
				2		0.45	1.8	14	25.2			
		(CF3)	2 side	4.03		0.45	5.427	2	10.854			
				2		0.45	0.9	2	1.8			
									275.748	sqm	307.95	84916.5966
		Plinth beam (PB1)		164.1		0.4	65.64	2	131.28			
		Plinth beam (PB2)	2 side	238.18		0.3	71.454	2	142.908			
		Plinth beam (PB3)		164.1		0.3	49.23	2	98.46			
									372.648	sqm	307.95	114756.952
	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts										
		C1 upto plinth beam level	4 side	0.3		2	2.4	50	120			
		C2 upto plinth beam level		0.3		2	2.4	28	67.2			
									187.2	sqm	804.25	150555.6
		C1 G+3 upto terrace level		0.3		11.95	14.34	50	717			
		C2 G+3 upto terrace level	4 side	0.3		11.95	14.34	28	401.52			
									1118.52	sqm	804.25	899569.71
		C1 upto terrace TO Mumty level	4 side	0.3		2.4	2.88	6	17.28	sqm	804.25	13897.44



PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. COE2 Date 18/11/22
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.P.)
 Mob.: 7895872139, 9412143331

16 TOWER A TO H & J, K, W TO Z, Z1, Z2 DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 16 UNIT G+3 (64 UNIT)

sno	DSR - 21 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
5	5.22	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level										
	5.22.6	Thermo-Mechanically Treated bars of grade Fe-500D or more										
		Foundation (F1) steel	12 mm	44.44			39.107	6	234.64			
		Foundation (F2) steel	12 mm	49.68			43.718	24	1049.24			
		Foundation (F3) steel	12 mm	69.9			61.512	4	246.048			
		Foundation (CF1) steel	08 mm	32.24			12.73	4	50.93			
			12 mm	48.24			42.45	4	169.8			
		Foundation (CF2) steel	20 mm	65.2			160.98	14	2253.82			
			16 mm	75			118.5	14	1659			
		Foundation (CF3) steel	16 mm	118			186.44	2	372.88			
									6036.358	kg	89.65	541158.77
		Column (C1) steel Steel upto plinth beam level	16 mm	10			15.8	50	790			
			12 mm	5			4.4	50	220			
			10 mm	16			9.76	50	488			
		Column (C2) steel Steel upto plinth beam level	16 mm	15			23.7	28	663.6			
			10 mm	5			4.4	28	123.2			
									2284.8	kg	89.65	204832.32
		Column (C1) steel Steel upto Terrace level G+3	16 mm	48			75.84	50	3792			
			12 mm	24			22	50	1100			
			10 mm	72			44	50	2200			
		Column (C2) steel Steel upto Terrace level G+3	16 mm	72			113.76	28	3185.28			
			10 mm	72			44	28	1232			
									11509.28	kg	89.65	1031806.95
		Column (C1) steel Steel upto Terrace to mumty level	16 mm				22.75	6	136.512			
			12 mm				4.224	6	25.344			
			10 mm				5.688	6	34.128			
									195.984	kg	89.65	17569.9656



PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. 6082 Date 18/11/22
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

16 TOWER A TO H & J, K, W TO Z, Z1, Z2 DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 16 UNIT G+3 (64 UNIT)

sno	DSR - 21 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
6	6.38	Providing and laying autoclaved aerated cement blocks masonry with 100 mm thick AAC blocks in super structure above plinth level up to floor V level in cement mortar 1:4 (1 cement : 4 coarse sand). The rate includes providing and placing in position 2 Nos 6 mm dia M.S. bars at every third course of masonry work.	4	2.8		2.65	29.68	16	474.88			
		WALL (G+3 building)	4	4.1		2.65	43.45	16	695.304			
			4	2.8		2.65	29.68	16	474.88			
			4	1.3		2.65	13.77	16	220.382			
			4	0.6		2.65	6.359	16	101.75			
			4	1		2.65	10.6	16	169.6			
			4	0.35		2.65	3.706	16	59.304			
			4	2.2		2.65	23.31	16	373.11			
			4	3		2.65	31.79	16	508.66			
			4	1.4		2.65	14.83	16	237.43			
			4	1.4		2.65	14.83	16	237.43			
			4	1.2		2.65	1.59	12.72	25.44			
		WALL							3578.17	SQM		
		(Door & window) Deduction no of unit 16 x 4 floor	D1	1		2.1	2.1	2	268.8			
			D2	0.75		2.1	1.575	2	201.6			
			DW1	0.75		2.1	1.575	1	201.6			
			DW1	0.6		1.2	0.72	1	46.08			
			W1	1.5		0.9	1.35	1	86.4			
			V1	0.45		0.4	0.18	2	11.52			
									816	SQM		
		wall							3578.17			
		Deduction							816			
									2762.17	SQM		
		wall			0.115		2762.17		317.64	cum	8890.8	2824073.71
		SUB TOTAL										2824073.71



PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. 00822 Date: 18/11/22
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

16 TOWER A TO H & J, K, W TO Z, Z1, Z2 DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 16 UNIT G+3 (64 UNIT)

sno	DSR - 21 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
7	9.18	Providing and fixing Pre-laminated flat pressed 3 layer (medium density) particle board or graded wood particle board IS : 3087 marked, with one side decorative and other side balancing lamination Grade I, Type II exterior grade IS : 12823 marked, in shelves with screws and fittings wherever required, edges to be painted with polyurethane primer (fittings to be paid separately)										
	9.18.2	25 mm thick										
		D1		1		2.1	2.1	2	4.2			
		D2		0.75		2.1	1.575	2	3.15			
		DW1		0.75		2.1	1.575	1	1.575			
									8.925			
		64 unit G+3					8.925	64	571.2	sqm	1501	857371.2
	10.25	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.										
	10.25.2	n gratings, frames, guard bar, ladder, railings, brackets, gates and similar works										
		Door chowkhats (16 UNIT)										
		D1					30	2	60			
		D2					30	2	60			
		DW1					45	1	45			
		W1					50	1	50			
		V1					15	2	30			
									245			
		64 UNIT G+3 FLOOR					245	64	15680	kg	142.3	2231264



PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96744
 Case No. 0022 Date: 18/11/22
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

16 TOWER A TO H & J, K, W TO Z, Z1, Z2 DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 16 UNIT G+3 (64 UNIT)

sno	DSR - 21 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
8	13.1	12 mm cement plaster of mix :										
	13.1.2	1:6 (1 cement: 6 fine sand)										
			wall	2.8		2.95	8.26	16	132.16			
			wall	4.1		2.95	12.095	16	193.52			
			wall	2.8		2.95	8.26	16	132.16			
			wall	1.3		2.95	3.835	16	61.36			
			wall	0.6		2.95	1.77	16	28.32			
			wall	1		2.95	2.95	16	47.2			
			wall	0.35		2.95	1.0325	16	16.52			
			wall	2.2		2.95	6.49	16	103.84			
			wall	3		2.95	8.85	16	141.6			
			wall	1.4		2.95	4.13	16	66.08			
			wall	1.4		2.95	4.13	16	66.08			
			wall	1.2		2.95	3.54	16	56.64			
		G.F, F.F, S.F, T.F ceiling		48.42		10.65	515.673	4	2062.69			
									3108.17			
		INNER WALL					3108.17	4	12432.68			
			D1	1		2.1	2.1	2	4.2			
			D2	0.75		2.1	1.575	2	3.15			
			DW1	0.75		2.1	1.575	1	1.575			
			DW1	0.6		1.2	0.72	1	0.72			
			W1	1.5		0.9	1.35	1	1.35			
			V1	0.45		0.4	0.18	2	0.36			
									11.355 SQM			
		(Door & window) Deduction no of unit 16 x 4 floor										
		INNER WALL					11.355	64	726.4			
		DEDUCTION							12432.7			
		TOTAL							726.4	SQM	294.85	3451602.56



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PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244 Date: 11/11/22
 Case No. 2022 Date: 11/11/22
 Upavan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob: 7895872139, 9412143346

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 PAL ARCHITECT AND ENGINEER
 CO. NO. CA/2018/96244
 CO. NO. 2082 Date. 18/11/22
 Case No. Road Infront of PRD Ground
 Tapovan Road Infront of PRD Ground (U.K.)
 Near by IDBI Bank, Dehradun 2413346
 Mob.: 7895872139, 9412143346

16 TOWER A TO H & J, K, W TO Z, Z1, Z2 DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 16 UNIT G+3 (64 UNIT)

sno	DSR - 21 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
9	11.37	Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), Jointing with grey cement slurry @ 3.3 kg/sqm including pointing the joints with white cement and matching pigment etc., complete.										
		Living Room	floor	3.27	3.002		9.8165	16	157.064			
			skirting	12.54	0.1		1.254	16	20.064			
		Kitchen	floor	2.101	1.2		2.521	16	40.336			
		toilet	skirting	6.602	0.1		0.6602	16	10.5632			
			floor	0.9	1.2		1.08	16	17.28			
			wall	0.9		1.52	1.368	16	21.88			
		Bed room	wall	1.2		1.52	1.824	16	29.18			
			floor	2.465	3.155		7.77	16	124.32			
		Entrance	skirting	11.2	0.1		1.12	16	17.92			
			floor	1.335	1.335		1.7822	16	28.515			
		Corridor	skirting	5.34	0.1		0.534	16	8.544			
			floor	48.42	1.25				60.525			
			skirting	48.42	0.1				4.842			
		G+3 floor					541.0332	4	2164.012	sqm	935.6	2024649.63
	8.6	Mirror polishing on marble work/Granite work/stone work where ever required to give high gloss finish complete.										
				0.3	1.5		0.45	20	7.2			
				2.06	1.25		2.575	1	2.575			
		G+3 Floor					9.775	4	39.1	sqm	417.6	16328.16
		Sub total										2040977.79




PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. ...00823... Date...18/11/22
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

16 TOWER A TO H & J, K, W TO Z, Z1, Z2 DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 16 UNIT G+3 (64 UNIT)

sno	DSR - 21 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
10	13.8	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.										
			wall	2.8		2.95	8.26	16	132.16			
			wall	4.1		2.95	12.095	16	193.52			
			wall	2.8		2.95	8.26	16	132.16			
			wall	1.3		2.95	3.835	16	61.36			
			wall	0.6		2.95	1.77	16	28.32			
			wall	1		2.95	2.95	16	47.2			
			wall	0.35		2.95	1.0325	16	16.52			
			wall	2.2		2.95	6.49	16	103.84			
			wall	3		2.95	8.85	16	141.6			
			wall	1.4		2.95	4.13	16	66.08			
			wall	1.4		2.95	4.13	16	66.08			
			wall	1.2		2.95	3.54	16	56.64			
		G.F, F.F, S.F, T.F. ceiling		48.42		10.65	515.673	4	2062.69			
									3108.17			
		INNER WALL					3108.17	4	12432.68			
			D1	1		2.1	2.1	2	4.2			
			D2	0.75		2.1	1.575	2	3.15			
			DW1	0.75		2.1	1.575	1	1.575			
			DW1	0.6		1.2	0.72	1	0.72			
			W1	1.5		0.9	1.35	1	1.35			
			V1	0.45		0.4	0.18	2	0.36			
									11.355	SQM		
		(Door & window) Deduction Per floor unit 16 (64 unit)					11.355	64	726.4			
		INNER WALL							12432.7			
		DEDUCTION							726.4			
		TOTAL							11706.3	SQM	123.85	1449825.26



PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Date: 18/11/22
 Case No. 2082
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

	OUTER WALL		4.361		2.95	12.865	16	205.8392		
			2.8		2.95	8.26	16	132.16		
	CORRIDOOR		10.65		2.95	31.4175	2	62.835		
								400.8342		
	G+3 FLOOR					400.815	4	1603.26		
	DEDUCTION									
		W1	1.5		0.9	1.35	16	21.6		
		DW1	0.75		2.1	1.575	16	25.2		
		DW1	0.6		1.2	0.72	16	11.52		
		V1	0.45		0.4	0.18	16	2.88		
								61.2		
	G+3 FLOOR					61.2	4	244.8		
	WALL							1603.26		
	DEDUCTION							244.8		
	TOTAL							1358.46	SQM	123.85
										168245.271
	PARAPET WALL									
			48.42		1	48.42	4	193.68		
			10.65		1	10.65	4	42.6		
								236.28	SQM	123.85
										29263.278
13.48	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :									
13.48.1	Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of Special primer applied @ 0.75 ltr /10 sqm									
		primer qty								
13.47	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade:									
13.47.1	New work (Two or more coats applied @ 1.43 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)									
		exterior paint qty								
								1358.46	SQM	162.35
										220545.981
13.83	Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound) content less than 50 grams/ litre of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour									
13.83.2	Two coats									
		interior paint qty								
		Sub total						11706.3		121.55
										1422900.77
										5404980.86



PAL ARCHITECT AND ENGINEER
 COAN, CA/2018/96244
 Date: 18/11/22
 Case No. 2006/2018
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

sno	DSR - 21 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
11	22.6	Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying:										
	(a)	after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm.										
	(b)	laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm.										
	(c)	third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30 cm on parapet wall and tucked into groove in parapet all around										
	(d)	fourth and final layer of brick tiling with cement mortar (which will be paid for separately.										
		For the purpose of measurement the entire treated surface will be measured.		1.915	1.315		2.518	16	40.29			
		G+3 Floor					40.29	4	161.166	sqm	585.55	94370.7513
		Sub total										94370.7513




PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Date: 15/11/22
 Case No. 0022
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

INTERNAL WORK

Pradhan Mantri Awas Vikas Yojna EWS

(SHIMLA PISTOR)

(Rudrapur, Uttarakhand)

Pal
PAL ARCHITECT AND ENGINEER
COA No. CA/2018/96244
Case No. *0082* Date *18/10/22*
Tapovan Road Infront of PRD Ground
Near by IDBI Bank, Dehradun (U.K.)
Mob.: 7895872139, 9412143346



DETAILED ESTIMATED FOR INTERNAL ELECTRICAL PER FLOOR 16 UNIT G+3 (64 UNIT)

S.NO	DSR -2022	ITEM DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	1.8	Wiring for light point /fanpoint/exhaust fan point with 1.5 sq.mm FRLS PVC insulated copper conductor single core in surface / recessed medium class pvc conduit , with piano type switch , phenolic laminated sheet, suitable size ,M.S box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.	Nos.	436	1221	532356
	1.8.1	Group A point				
	1.2	Wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, 2 way piano type switch, phenolic laminated sheet, suitable size MS box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.	Point	40	1835	73400
	1.3	Wiring of circuit / sub main wiring along with earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface / recessed medium class PVC conduit as required				
	1.7.2	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	Meter	1920	327	627840
	1.7.3	2 x 4 sq. mm. + 1 x 4 sq. mm. earth wire	Meter	960	428	410880
	1.7.4	2 x 6 sq. mm. + 1 x 6 sq. mm. earth wire	Meter	480	589	282720
	1.27	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc. as required.				
	1.27.1	1 or 2 Module (75 mmX75 mm)	Each	64	298	19072
	1.27.2	3 Module (100 mmX75 mm)	Each	256	327	83712
	1.23	Supplying and fixing following piano type switch/ socket on the existing switch box/ cover including connections etc. as required.				
		5/6 amps switch	Each	64	103	6592
		15/16 amp switch	Each	64	156	9984
		3 pin 5/6 amp socket outlet	Each	64	122	7808
		6 pin 15/16 amp socket outlet	Each	64	197	12608
		TV antenna socket outlet	Each	64	148	9472
		Bell Push	Each	64	140	8960
	1.38	Supplying and fixing call bell / buzzer suitable for single phase, 230 volts, complete as required.	Each	64	99	6336
	1.25	Supplying and fixing two module stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.	Each	64	369	23616
	1.32	Supplying and fixing brass batten/ angle holder including connection etc. as required.				

PAL ARCHITECT AND ENGINEER

Engr. A. N. Choudhary, 131

Case No. ... Date ...

Tapovan Road Infront of PRD Ground

Near by IDBI Bank, Dehradun (U.K.)

Mob.: 7895872139, 9412143346



		Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.					
	1.21.2	: 25 mm	Meter	384	145	55680	
		Distribution board					
2	2.3	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 Volts, on surface / recess complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCBO/Isolator)					
	2.3.1	6 way double door	Each	64	2206	14184	
	2.1	Supplying and fixing 5amps to 32 amps rating 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in existing MCB DB complete with connections, testing and commissioning etc. as required.					
	2.10.1	single pole	Each	192	256	49152	
	2.14	Supplying and fixing following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB) having sensitivity up to 30 milli ampere in the existing MCB DB complete with connections, testing commissioning etc. as required					
	2.14.2	40 amps	Each	64	2642	169088	
3	9.1	Supplying and making of end terminations with brass compression gland and AL/CU lugs for following size PVC insulated and PVC sheathed /XLPE Al Armored /Unarmored conductor cable of 1.1 kV grade as required					
	9.1.23	3.5C x 70 sq. mm (Al. Armored Cable)	Each	8	468	3744	
4	5.4	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing r	Each	8	7472	59776	
		2.7 meter long etc. with charcoal/ coke and salt as required.					
	5.7	Supplying and laying 6 SWG GI wire at 0.50 Meter below ground level for conductor earth electrode including connections / termination with GI thimble etc. as required.	meter	36	51	1836	
	5.15	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	meter	36	1162	41832	
		Providing and fixing of lightning conductor finial, made of 25mm dia 300mm long G.I tube ,having single prong at top, with 85mm dia 6mm thick G.I base plate including holes etc. complete as required.					
		Providing and fixing G.I tape 20mm x 3mm thick on parapet or surface of wall for lightning conductor complete as required.(for horizontal run)	Each	4	518	2072	
			meter	400	126	50400	
		Sub Total				2588272	



PAL ARCHITECT AND ENGINEER

COA No. CA/2018/96244

Case No. 0082 Date: 01/11/22

Tapovan Road Infront of PRD Ground

Near by IDBI Bank, Dehradun (U.K.)

Mob.: 7895872139, 9412143346

DETAILED ESTIMATE OF INTERNAL PLUMBING WORK 16 UNIT PER FLOOR G+3 64 UNITS						
S. No.	DSR 2021	DESCRIPTION OF WORK	UNIT	Qty	Rate (Rs)	Amount (Rs)
		Sanitary Fixtures				
1	17.1	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device(handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required :				
a)	17.1.1	White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests.	Each	64	5781.35	370006.4
	17.10	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good the walls wherever required :				
i	17.10.2	Kitchen sink without drain board				
	17.10.2.2	610x460 mm bowl depth 200 mm	Each	64	3337.85	213622.4
		Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.				
	17.28.2	Flexible pipe				
	17.28.2.1	32 mm dia	Each	64	104.35	1669.6
	18.51	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.				
a)	18.51.1	15 mm nominal bore	Each	192	594.75	114192
		WATER SUPPLY SYSTEM				
	18.7	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				
b)	18.7.2	20 mm nominal outer dia. Pipes.	metre	400	325.10	130040
c)	18.7.3	25 mm nominal outer dia. Pipes.	metre	112	408.55	45757.6
d)	18.7.4	32 mm nominal outer dia. Pipes.	metre	192	500.95	96182.4
e)	18.7.5	40 mm nominal outer dia. Pipes.	metre	48	674.35	32368.8



PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96214
 Case No. 0009 Date: 15/11/21
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

DETAILED ESTIMATE OF INTERNAL PLUMBING WORK 16 UNIT PER FLOOR G+3 (64 unit)						
S. No.	DSR 2021	DESCRIPTION OF WORK	UNIT	Qty	Rate (Rs)	Amount (Rs)
	18.8	Providing and fixing 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 work, including cutting chases and making good the walls etc.				
a)	18.8.1	15 mm nominal outer dia .Pipes.	Metre	96	441.15	42350
	18.8.2	20 mm nominal outer dia Pipes	metre	128	712.75	91232
	18.8.3	25 mm nominal outer dia Pipes	metre	16	626.05	10016.8
		Providing and fixing gun metal gate valve with CI wheel of approved quality (screwed end)				
	18.17.3	40 mm dia nominal bore	Each	32	707.30	22633.6
	18.17.5	65 mm dia nominal bore	Each	12	1490.70	17888.4
	18.18	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :				
b)	18.18.2	20 mm nominal bore	Each	64	397.45	25436.8
c)	18.18.3	25 mm nominal bore	Each	4	399.15	1596.6
	18.21	Providing and fixing uplasticised PVC connection pipe with brass unions :				
a)	18.21.1	30 cm length				
(i)	18.21.1.1	15 mm nominal bore	Each	64	74.80	1196.8
	18.33	Constructing masonry Chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1cement :2 coarse sand : 4 graded stone aggregate 20mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :				
a)	18.33.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	No.	4	10102.50	40410
	18.58	Providing and fixing PTMT grating of approved quality and colour.				
a)	18.58.1	Circular type.				
(ii)	18.58.1.2	125 mm nominal dia with 25 mm waste hole.	No.	128	45.25	5795.84

Mob.: 7895872139, 9412143346
 Near by IDBI Bank, Dehradun (U.K.)
 Tapovan Road Infront of PRD Ground
 Case No. 0052
 COA No. CA/2018/9624
 Date: 18/11/22
 PAL ARCHITECT AND ENGINEER



DETAILED ESTIMATE OF INTERNAL PLUMBING WORK 16 UNIT PER FLOOR G+3 (64 unit)						
S.No.	DSR 2021	DESCRIPTION OF WORK	UNIT	Qty	Rate (Rs)	Amount (Rs)
	12.43	Providing and fixing un plasticised -PVC pipe clips of approved design to un plasticised - PVC rain water pipes by means of 50x50x50 mm hard wood plugs, screwed with M.S. screws of required length, including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete.			309.5	39616
	12.43.2	110 mm	Each	128		
Total cost for single (G+3) tower						1302011.84


PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. 0082 Date. 10/11/22
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346



**10 TOWER L TO N & P TO V
BILL OF QUNTITY PMAY EWS
SHIMLA PISTOR
(RUDRAPUR ,UTTRAKHAND)**



Arif
PAL ARCHITECT AND ENGINEER
COA No. CA/2018/96244
Case No. *0082* Date *18/11/22*
Tapovan Road Infront of PRD Ground
Near by IDBI Bank, Dehradun (U.K.)
Mob.: 7895872139, 9412143346

(CIVIL WORK)

10 TOWER L TO N & P TO V BILL OF QUANTITY PMAY EWS SHIMALA PISTORE (RUDRAPUR) (UTTARAKHAND)

S.NO.	DSR - 21	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
1	2.28.1	All kinds of soil				
2	2.32	Clearing grass and removal of the rubbish up to a distance of 50 m outside the periphery of the area cleared.				
3	2.6	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 lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in charge. 2.6.1 All kinds of soil				
4	2.6.1	All kinds of soil	cum	3850	205.45	790982.5
5	2.36	Extra for levelling & neatly dressing of disposed soil completely as directed by Engineer-in-charge.	cum	570.572	76.7	43762.8724
		SUB TOTAL				834745.3724
CONCRETE WORK						
6	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
7	4.1.8	1:4:8 (1 Cement : 4 coarse sand (zone-III) derived from natural sources : 8 graded stone aggregate 40 mm nominal size derived from natural sources)	cum	395.25	6326.05	2500371.263
8	4.20.1	4.20.1 All works upto plinth level :				
9	4.20.1.3	Concrete of M20 grade with minimum cement content of 270 kg /cum	cum	993.9	8387.15	8335988.385
10	4.20.2	All works above plinth and upto floor V level				
11	4.20.2.3	Concrete of M20 grade with minimum cement content of 270 kg /cum	cum	2050.64	10009.5	20525881.08
		SUB TOTAL				31362240.73



PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. 0882 Date 12/11/22
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

10 TOWER L TO N & P TO V BILL OF QUANTITY PMAY EWS SHIMALA PISTORE (RUDRAPUR) (UTTARAKHAND)

S.NO.	DSR - 21	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
12	5.9	Centering and shuttering including strutting, propping etc. and removal of form for				
13	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete	sqm	3450.5	307.95	1062581.475
14	5.9.3	Suspended floors, roofs, landings, balconies and access platform	sqm	42610.3	766.55	32662925.47
15	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts	sqm	7870.38	657.75	5176742.445
16	5.9.7	Stairs, (excluding landings) except spiral-staircases	sqm	1630.63	657.75	1072546.883
		SUB TOTAL				39974796.27
STEEL REINFORCEMENT						
17	5.22	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level				
18	5.22.6	Thermo-Mechanically Treated bars of grade Fe-500D or more	kg	340280	89.65	30506102
		SUB TOTAL				30506102
A.C.C BLOCK WORK						
19	6.38	Providing and laying autoclaved aerated cement blocks masonry with 100 mm thick AAC blocks in super structure above plinth level up to floor V level in cement mortar 1:4 (1 cement : 4 coarse sand). The rate includes providing and placing in position 2 Nos 6 mm dia M.S. bars at every third course of masonry work.	cum	1602.5	8890.8	14247507
		SUB TOTAL				14247507
CLADDING WORK						
20	8.6	Mirror polishing on marble work/Granite work/stone work where ever required to give high gloss finish complete.		391	417.6	163281.6
		SUB TOTAL				163281.6



PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Date: 18/01/22
 Case No. 0002
 Infront of PRD Ground
 Road Infront of PRD Ground (U.K.)
 Nehradun 2246

10 TOWER L TO N & P TO V BILL OF QUANTITY PMAY EWS SHIMALA PISTORE (RUDRAPUR) (UTTARAKHAND)

S.NO.	DSR - 21	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
21	9.18	Providing and fixing Pre-laminated flat pressed 3 layer (medium density) particle board or graded wood particle board IS : 3087 marked, with one side decorative and other side balancing lamination Grade I, Type II exterior grade IS : 12823 marked, in shelves with screws and fittings wherever required, edges to be painted with polyurethane primer (fittings to be paid separately)				
22	9.18.2	25 mm thick	sqm	2850.6	1501	4278750.6
23	10.25	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.				
24	10.25.2	in gratings, frames, guard bar, ladder, railings, brackets, gates and similar works	KG	78400	142.3	11156320
25	10.26	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer.				
26	10.26.1	M.S. tube		3376	157.15	530538.4
27	9.12	Extra for providing frosted glass panes 4 mm thick instead of ordinary float glass panes 4 mm thick in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).	SQM	777.6	148.5	115473.6
SUB TOTAL						16081082.6



PAL ARCHITECT AND ENGINEER

COA No. SA/2018/96244

Case No. 0081 Date: 10/11/22

Tapovan Road Infront of PRD Ground

Near by IDBI Bank, Dehradun (U.K.)

Mob.: 7895872139, 9412143346

10 TOWER L TO N & P TO V BILL OF QUANTITY PMAY EWS SHIMALA PISTORE (RUDRAPUR) (UTTARAKHAND)

S.NO.	DSR - 21	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
29	11.37	Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), Jointing with grey cement slurry @ 3.3 kg/sqm including pointing the joints with white cement and matching pigment etc., complete.	SQM	10821	935.6	10124127.6
		SUB TOTAL				10124127.6
FINISHING WORK						
30	13.1	12 mm cement plaster of mix :				
31	13.1.2	1:6 (1 cement: 6 fine sand)	sqm	67975	294.85	20042428.75
32	13.8	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	sqm	67975	123.85	8418703.75
33	13.48	Finishing with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :				
34	13.48.1	Two or more coats applied on walls @ 1.25 ltr/10 sqm over and including one coat of Special primer applied @ 0.75 ltr /10 sqm	sqm	67955	158.95	10801447.25
35	13.47	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade:				
36	13.47.1	New work (Two or more coats applied @ 1.43 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)	sqm	8049.1	162.35	1306771.385



Case No. 0082 Date 18/11/22
 COA No. CA/2018/96244
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

37	13.83	Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound) content less than 50 grams/ litre of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour				
38	13.83.2	Two coats	sqm	58531	121.55	7114443.05
		SUB TOTAL				47683794.19




 PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Date: 18/11/22
 Case No. 8002
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

10 TOWER L TO N & P TO V BILL OF QUANTITY PMAY EWS SHIMALA PISTORE (RUDRAPUR) (UTTARAKHAND)

S.NO.	DSR - 21	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
39		Plumbing and sanitary installation of 320 EWS per floor 8 unit G+3 (32 Unit) 10 tower				7213075.6
ELECTRICAL WORK						
40		Internal Electrical work of 320 EWS per floor 8 unit G+3 (32 Unit) 10 tower				13352200
WATER PROFFING						
41	22.6	Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying:				
42	(a)	after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm.				
43	(b)	laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm.				
44	(c)	third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30 cm on parapet wall and tucked into groove in parapet all around				
45	(d)	fourth and final layer of brick tiling with cement mortar (which will be paid for separately.				
46		For the purpose of measurement the entire treated surface will be measured.	805	4	585.55	471367.75
Grand total amount of 10 Tower						212014320.7


PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Date: 18/11/22
 Case No. 088
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346



10 TOWER L TO N & P TO V DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 8 UNIT G+3 (32 UNIT)

sno	DSR - 21 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
1	2.6	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 lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in charge. 2.6.1 All kinds of soil										
	2.6.1	All kinds of soil										
		(F1)		2.02	2.02	2	8.1608	6	48.966			
		(F2)		2.16	2.16	2	9.33	12	111.96			
		(CF1)		4.03	2	2	16.12	2	32.24			
		(CF2)		6.65	2	2	26.6	6	159.6			
		(CF3)		4.03	2	2	16.12	2	32.24			
									385.006	CUM	205.45	79099.4827
	2.25	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, lead up to 50 m and lift upto 1.5 m.										
		(F1)		2.02	2.02	0.3	1.224	6	7.344			
		(F2)		2.16	2.16	0.3	1.399	12	16.796			
		(CF1)		4.03	2	0.3	2.418	2	4.836			
		(CF2)		6.65	2	0.3	3.99	6	23.94			
		(CF3)		4.03	2	0.3	2.418	2	4.836			
									57.752	CUM	253.95	14666.1204
		SUB TOTAL										93765.6031


PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. 0082 Date. 18/11/22
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

10 TOWER L TO N & P TO V DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 8 UNIT G+3 (32 UNIT)

sno	DSR - 21 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
2	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level										
	4.1.8	1:4:8 (1 Cement : 4 coarse sand (zone-III) derived from natural sources : 8 graded stone aggregate 40 mm nominal size derived from natural sources)										
		(F1) Foundation P.C.C		2.02	2.02	0.075	0.306	6	1.836			
		(F2) Foundation P.C.C		2.16	2.16	0.075	0.3499	12	4.199			
		(CF1) Foundation P.C.C		4.03	2	0.075	0.6045	2	1.209			
		(CF2) Foundation P.C.C		6.65	2	0.075	0.9975	6	5.985			
		(CF3) Foundation P.C.C		4.03	2	0.075	0.3022	2	0.6045			
		Sub Total							13.8335	cum	6326.05	186903.147
		Plinth beam (PB1) P.C.C		82.05	0.3	0.075			1.846			
		Plinth beam (PB2) P.C.C		119.1	0.3	0.075			2.67			
		Plinth beam (PB3) P.C.C		82.05	0.3	0.075			1.846			
									6.362	cum	6326.05	80612.85
		Ground floor pcc		24.21	10.65	0.075			19.33	cum	6326.05	122282.5465
		SUB TOTAL										389798.5435




PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. DD-82 Date 18/11/22
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

10 TOWER L TO N & P TO V DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 8 UNIT G+3 (32 UNIT)

sno	DSR - 21 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
3	4.20.1	4.20.1 All works upto plinth level :										
	4.20.1.3	Concrete of M20 grade with minimum cement content of 270 kg /cum										
		Foundation (F1) R.C.C		2.02	2.02	0.3	1.22	6	7.32			
		Foundation (F2) R.C.C		2.16	2.16	0.4	1.86	12	22.32			
		Foundation (CF1) R.C.C		4.03	2	0.3	2.418	2	4.836			
		Foundation (CF2) R.C.C		6.65	2	0.3	3.99	6	23.94			
		Foundation (CF3) R.C.C		4.03	2	0.4	3.224	2	6.448			
									64.864	cum	8387.15	544024.0976
		Plinth beam (PB1) R.C.C		82.05	0.23	0.4			7.5486			
		Plinth beam (PB2) R.C.C		119.1	0.3	0.3			10.719			
		Plinth beam (PB3) R.C.C		82.05	0.23	0.3			5.661			
									23.9286	cum	8387.15	200692.7575
		Column (C1) R.C.C upto plinth beam level		0.3	0.3	2	0.2385	34	8.126			
		Column (C2) R.C.C upto plinth beam level		0.3	0.3	2	0.2385	12	2.868			
									10.994	cum	8387.15	92208.3271
	4.20.2	All works above plinth and upto floor V level										
	4.20.2.3	Concrete of M20 grade with minimum cement content of 270 kg /cum										
		Column (C1) R.C.C upto terrace level		0.3	0.3	11.95	1.0755	34	36.58			
		Column (C2) R.C.C upto terrace level		0.3	0.3	11.95	1.0755	12	12.906			
									49.486	cum	10009.5	495330.117




PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Date: 18/11/22
 Case No. 0088
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

	Column (C1) R.C.C terrace to mummy		0.3	0.3	2.4	6	1.296	cum	10009.5	12611.97
	(B1)		18	0.23	0.4		1.656			
	(B2)		63	0.23	0.3		4.347			
	(B3)		46	0.23	0.3		3.174			
	(B4)		13	0.23	0.4		1.196			
	(SB1)		10.82	0.23	0.56		1.393			
	(SB2)		46	0.23	0.3		3.174			
	(SB3)		10.82	0.23	0.3		0.746			
	G.F		24.21	10.65	0.125		32.23			
	F.F		24.21	10.65	0.125		32.23			
	S.F		24.21	10.65	0.125		32.23			
	T.F		24.21	10.65	0.125		32.23			
	Staircase landing		1.03	1.25	0.125	4	0.644			
	20 Steps(0.5*20*1*0.15*0.145)		0.5	0.15	0.145	4	0.218			
	projection 4 floor		0.85	0.45	0.125	16	3.06			
	projection 4 floor		0.325	0.45	0.125	16	1.17			
	projection 4 floor		0.325	0.45	0.125	16	1.17			
	projection 4 floor		0.852	0.45	0.125	2	0.186			
	Kitchen Counter 4 floor		1.035	0.6	0.075	16	2.981			
	Mummy slab		2.955	2.23	0.125		0.824			
							154.859	cum	10009.5	1550061.161
	SUB TOTAL									2894928.43



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PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No.0282 Date: 18.11.22
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

10 TOWER L TO N & P TO V DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 8 UNIT G+3 (32 UNIT)

sno	DSR - 21 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
4	5.9	Centering and shuttering including strutting, propping etc. and removal of form for										
	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete										
		(F1)	2-Side	2.02		0.45	1.818	6	10.908			
				2.02		0.45	1.818	6	10.908			
		(F2)	2-Side	2.16		0.45	2.099	12	25.194			
				2.16		0.45	1.944	12	23.328			
		(CF1)	2-Side	4.03		0.45	3.627	2	7.254			
				2		0.45	3.627	2	7.254			
		(CF2)	2-Side	6.65		0.45	5.427	6	32.56			
				2		0.45	1.8	6	10.8			
		(CF3)	2-Side	4.03		0.45	3.627	2	7.254			
				2		0.45	3.627	2	7.254			
									142.714	sqm	307.95	43948.7763
		Plinth beam (PB1)	2 side	82.05		0.4	32.82	2	65.64			
		Plinth beam (PB2)		119.1		0.3	35.73	2	71.46			
		Plinth beam (PB3)		82.05		0.3	32.82	2	65.64			
									202.74	sqm	307.95	62433.783
	5.9.6	Columns, Pillars, Piers, Abutments, Posts and Struts										
		C1 upto plinth beam level	4 side	0.3		2	2.4	34	81.6			
		C2 upto plinth beam level	4 side	0.3		2	2.4	12	28.8			
									110.4	sqm	804.25	88789.2
		C1 G+3 upto terrace level	4 side	0.3		11.95	14.34	34	487.56			
		C2 G+3 upto terrace level	4 side	0.3		11.95	14.34	12	172.08			
									659.64	sqm	804.25	530515.47
		C1 upto terrace TO Mumty level	4 side	0.3		2.4	2.88	6	17.28	sqm	804.25	13897.44




PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. **8882** Date: **18/11/22**
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

10 TOWER L TO N & P TO V DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 8 UNIT G+3 (32 UNIT)

sno	DSR - 21 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
5	5.22	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level										
	5.22.6	Thermo-Mechanically Treated bars of grade Fe-500D or more										
		Foundation (F1) steel	12 mm	44.44			39.107	6	234.642			
		Foundation (F2) steel	12 mm	49.68			43.718	12	524.616			
		Foundation (CF1) steel	8 mm	32.24			12.73	2	25.46			
			12 mm	48.24			42.45	2	84.9			
		Foundation (CF2) steel	20 mm	65.2			160.98	6	965.88			
			16 mm	75			118.5	6	711			
		Foundation (CF3) steel	16 mm	118			186.44	2	372.88			
									2919.378	kg	89.65	261722.2377
		Column (C1) steel Steel upto plinth beam level	16 mm	10			15.8	34	537.2			
			12 mm	5			4.4	34	149.6			
			10 mm	16			9.76	34	331.84			
		Column (C2) steel Steel upto plinth beam level	16 mm	15			23.7	12	284.4			
			10 mm	5			4.4	12	52.8			
									1355.84	kg	89.65	121551.056
		Column (C1) steel Steel upto Terrace level G+3	16 mm	48			75.84	34	2578.56			
			12 mm	24			22	34	748			
			10 mm	72			44	34	1496			
		Column (C2) steel Steel upto Terrace level G+3	16 mm	72			113.76	12	1365.12			
			10 mm	72			44	12	528			
									6715.68	kg	89.65	602060.712
		Column (C1) steel Steel upto mummy level	16 mm				22.75	6	136.512			
			12 mm				4.224	6	25.344			
			10 mm				5.688	6	34.128			
									195.984	kg	89.65	17569.9656




PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. 0082 Date 18/11/22
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

10 TOWER L TO N & P TO V DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 8 UNIT G+3 (32 UNIT)

sno	DSR - 21 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
6	6.38	Providing and laying autoclaved aerated cement blocks masonry with 100 mm thick AAC blocks in super structure above plinth level up to floor V level in cement mortar 1:4 (1 cement : 4 coarse sand). The rate includes providing and placing in position 2 Nos 6 mm dia M.S. bars at every third course of masonry work. WALL (G+3 building)	4	2.8		2.65	29.68	8	237.44			
			4	4.1		2.65	43.45	8	347.6			
			4	2.8		2.65	29.68	8	237.44			
			4	1.3		2.65	13.77	8	110.16			
			4	0.6		2.65	6.359	8	50.872			
			4	1		2.65	10.6	8	84.8			
			4	0.35		2.65	3.706	8	29.648			
			4	2.2		2.65	23.31	8	186.48			
			4	3		2.65	31.79	8	254.32			
			4	1.4		2.65	14.83	8	118.64			
			4	1.4		2.65	14.83	8	118.64			
			4	1.2		2.65	12.72	2	25.44	SQM		
									1801.48			
			D1	1		2.1	2.1	2	134.4			
			D2	0.75		2.1	1.575	2	100.8			
			DW1	0.75		2.1	1.575	1	100.8			
			DW1	0.6		1.2	0.72	1	23.04			
			W1	1.5		0.9	1.35	1	43.2			
			V1	0.45		0.4	0.18	2	5.76			
									408	SQM		
		wall							1801.48			
		Deduction							408			
									1393.5	SQM		
					0.115		1393.5		160.25	cum	8890.8	1424750.7
		SUB TOTAL										1424750.7



PAL ARCHITECT AND ENGINEER

COA No. CA/2018/96244
 Case No. 0082 Date 18/11/22
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

10 TOWER L TO N & P TO V DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 8 UNIT G+3 (32 UNIT)

sno	DSR - 21 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
7	9.18	Providing and fixing Pre-laminated flat pressed 3 layer (medium density) particle board or graded wood particle board IS : 3087 marked, with one side decorative and other side balancing lamination Grade I, Type II exterior grade IS : 12823 marked, in shelves with screws and fittings wherever required, edges to be painted with polyurethane primer.										
			25 mm thick									
			D1	1	2.1		2.1	2	4.2			
			D2	0.75	2.1		1.575	2	3.15			
			DW1	0.75	2.1		1.575	1	1.575			
									8.925			
		32 unit G+3					8.925	32	285.6	sqm	1501	428685.6
	10.25	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.										
	10.25.2	n gratings, frames, guard bar, ladder, railings, brackets, gates and similar works										
		Door chowkhats (8 UNIT)										
		D1	8				30	2	60			
		D2	8				30	2	60			
		DW1	8				45	1	45			
		W1	8				50	1	50			
		V1	8				15	2	30			
		32 UNIT G+3 FLOOR							245			
							245	32	7840	kg	142.3	1115632




PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. 0086..... Date. 18/11/22.....
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

10 TOWER L TO N & P TO V DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 8 UNIT G+3 (32 UNIT)

sno	DSR - 21 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
8	13.1	12 mm cement plaster of mix :										
	13.1.2	1:6 (1 cement: 6 fine sand)										
			wall	2.8		2.95	8.26	8	66.08			
			wall	4.1		2.95	12.095	8	96.76			
			wall	2.8		2.95	8.26	8	66.08			
			wall	1.3		2.95	3.835	8	30.68			
			wall	0.6		2.95	1.77	8	14.16			
			wall	1		2.95	2.95	8	23.6			
			wall	0.35		2.95	1.0325	8	8.26			
			wall	2.2		2.95	6.49	8	51.92			
			wall	3		2.95	8.85	8	70.8			
			wall	1.4		2.95	4.13	8	33.04			
			wall	1.4		2.95	4.13	8	33.04			
			wall	1.2		2.95	3.54	8	28.32			
		G.F, F.F, S.F, T.F ceiling		24.21		10.65	257.83	4	1031.34			
									1554.08			
		INNER WALL					1554.08	4	6216.32			
			D1	1		2.1	2.1	2	4.2			
			D2	0.75		2.1	1.575	2	3.15			
			DW1	0.75		2.1	1.575	1	1.575			
			DW1	0.6		1.2	0.72	1	0.72			
			W1	1.5		0.9	1.35	1	1.35			
			V1	0.45		0.4	0.18	2	0.36	SQM		
									11.355			
		(Door & window) Deduction Per floor 8 unit (32 unit)					11.35	32	363.2			
		INNER WALL							6216.32			
		DEDUCTION							363.2			
		TOTAL							5853.1	SQM	294.85	1725786.535



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PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. 2082 Date: 8/11/22
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

10 TOWER L TO N & P TO V DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 8 UNIT G+3 (32 UNIT)

sno	DSR - 21 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
9	11.37	Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), Jointing with grey cement slurry @ 3.3 kg/sqm including pointing the joints with white cement and matching pigment etc., complete.										
			Living Room									
			floor	3.27	3.002		9.8165	8	78.532			
			skirting	12.54	0.1		1.254	8	10.032			
			floor	2.101	1.2		2.521	8	20.168			
			skirting	6.602	0.1		0.6602	8	5.2816			
			toilet	0.9	1.2		1.08	8	8.64			
			wall	0.9		1.52	1.368	8	10.944			
			wall	1.2		1.52	1.824	8	14.592			
			floor	2.465	3.155		7.77	8	62.16			
			skirting	11.2	0.1		1.12	8	8.96			
			Entrance	1.335	1.335		1.7822	8	14.2576			
			skirting	5.34	0.1		0.534	8	4.272			
			floor	24.21	1.25				30.2625			
			skirting	24.21	0.1				2.421			
									270.5227			
			G+3 floor				270.523	4	1082.092	sqm	935.6	1012405.275
	8.6	Mirror polishing on marble work/Granite work/stone work where ever required to give high gloss finish complete.										
				0.3	1.2		0.36	20	7.2			
				2.06	1.25		2.575	1	2.575			
							9.775	4	39.1	sqm	417.6	16328.16
		Sub total										1028733.435




PAL ARCHITECT AND ENGINEER
 COA No. CA/2013/96244
 Case No. 0082 Date 18/11/22
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

10 TOWER L TO N & P TO V DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 8 UNIT G+3 (32 UNIT)

sno	DSR - 21 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
10	13.8	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	wall	2.8		2.95	8.26	8	66.08			
			wall	4.1		2.95	12.095	8	96.76			
			wall	2.8		2.95	8.26	8	66.08			
			wall	1.3		2.95	3.835	8	30.68			
			wall	0.6		2.95	1.77	8	14.16			
			wall	1		2.95	2.95	8	23.6			
			wall	0.35		2.95	1.0325	8	8.26			
			wall	2.2		2.95	6.49	8	51.92			
			wall	3		2.95	8.85	8	70.8			
			wall	1.4		2.95	4.13	8	33.04			
			wall	1.4		2.95	4.13	8	33.04			
			wall	1.2		2.95	3.54	8	28.32			
		G.F, F.F, S.F, T.F ceiling		24.21		10.65	257.83	4	1031.34			
							1554.08		1554.08			
							1554.08	4	6216.32			
		INNER WALL										
			D1	1		2.1	2.1	2	4.2			
			D2	0.75		2.1	1.575	2	3.15			
			DW1	0.75		2.1	1.575	1	1.575			
			DW1	0.6		1.2	0.72	1	0.72			
			W1	1.5		0.9	1.35	1	1.35			
			V1	0.45		0.4	0.18	2	0.36	SQM		
									11.355			
		(Door & window) Deduction Per floor 8 unit (32 unit)					11.35	32	363.2			
		INNER WALL							6216.32			
		DEDUCTION							363.2			
		TOTAL							5853.1	SQM	123.85	724906.435
		OUTER WALL		4.361		2.95	12.864	8	102.912			
				2.8		2.95	8.26	8	66.08			
		CORRIDOOR		10.65		2.95	31.417	2	62.835			
									231.827			
		G+3 FLOOR					231.827	4	927.308			
		DEDUCTION	W1	1.5		0.9	1.35	8	10.8			
			DW1	0.75		2.1	1.575	8	12.6			
			DW1	0.6		1.2	0.72	8	5.76			
			V1	0.45		0.4	0.18	8	1.44			
									30.6			
		G+3 FLOOR					30.6	4	122.4			


PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Date: 18/11/22
 Case No. 223-2-.....
 Tapovan Road Infront of PRD Ground
 Near by IDB Bank, Demadun (U.K.)
 Mdb.: 7895872139, 9412143346



10 TOWER L TO N & P TO V DETAILED ESTIMATE OF CIVIL WORK PER FLOOR 8 UNIT G+3 (32 UNIT)

sno	DSR - 21 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
	22.6	Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying:										
	(a)	after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm.										
	(b)	laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm.										
	(c)	third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30 cm on parapet wall and tucked into groove in parapet all around										
	(d)	fourth and final layer of brick tiling with cement mortar (which will be paid for separately.										
		For the purpose of measurement the entire treated surface will be measured.		1.915	1.315		2.518	8	20.144			
		G+3 Floor					20.144	4	80.576	sqm	585.55	47181.2768

Deep

PAL ARCHITECT AND ENGINEER

COA No. CA/2018/96244

Case No. 0082 Date 18/11/22

Tapovan Road Infront of PRD Ground

Near by IDBI Bank, Dehradun (U.K.)

Mob.: 7895872139, 9412143346



INTERNAL WORK

**Pradhan Mantri Awas Yojna EWS
(SHIMLA PISTOR)
(Rudrapur, Uttrakhand)**



Deef
PAL ARCHITECT AND ENGINEER
COA No. CA/2018/96244
Case No. 0082 Date 18/11/2022
Tapovan Road Infront of PRD Ground
Near by IDBI Bank, Dehradun (U.K.)
Mob.: 7895872139, 9412143346

DETAILED ESTIMATED FOR INTERNAL ELECTRICAL PER FLOOR 8 UNIT G+3 (32 UNIT)

S.NO	DSR -2022	ITEM DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	1.8	Wiring for light point /fanpoint/exhaust fan point with 1.5 sq.mm FRLS PVC insulated copper conductor single core in surface / recessed medium class pvc conduit , with piano type switch , phenolic laminated sheet, suitable size ,M.S box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.				
	1.8.1	Group A point	Nos.	218	1221	266178
	1.2	Wiring for twin control light point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, 2 way piano type switch, phenolic laminated sheet, suitable size MS box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.	Point	20	1835	36700
	1.3	Wiring of circuit / sub main wiring along with earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface / recessed medium class PVC conduit as required				0
	1.7.2	2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	Meter	960	327	313920
	1.7.3	2 x 4 sq. mm. + 1 x 4 sq. mm. earth wire	Meter	480	428	205440
	1.7.4	2 x 6 sq. mm. + 1 x 6 sq. mm. earth wire	Meter	240	589	141360
	1.27	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc. as required.				0
	1.27.1	1 or 2 Module (75 mmX75 mm)	Each	32	298	9536
	1.27.2	3 Module (100 mmX75 mm)	Each	128	327	41856
	1.23	Supplying and fixing following piano type switch/ socket on the existing switch box/ cover including connections etc. as required.				0
		5/6 amps switch	Each	32	103	3296
		15/16 amp switch	Each	32	156	4992
		3 pin 5/6 amp socket outlet	Each	32	122	3904
		6 pin 15/16 amp socket outlet	Each	32	197	6304
		TV antenna socket outlet	Each	32	148	4736
		Bell Push	Each	32	140	4480
	1.38	Supplying and fixing call bell / buzzer suitable for single phase, 230 volts, complete as required.	Each	32	99	3168

PAL ARCHITECT AND ENGINEER
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	1.25	Supplying and fixing two module stepped type electronic fan regulator on the existing modular plate switch box including connections but excluding modular plate etc. as required.	Each	32	369	11808
	1.32	Supplying and fixing brass batten/ angle holder including connection etc. as required.	Each	96	131	12576
	1.21.2	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.	Meter	192	145	27840
		Distribution board				0
2	2.3	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 Volts, on surface / recess complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCBO/Isolator)				0
	2.3.1	6 way double door	Each	32	2206	70592
	2.1	Supplying and fixing 5amps to 32 amps rating 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in existing MCB DB complete with connections, testing and commissioning etc. as required.				0
	2.10.1	single pole	Each	96	256	24576
	2.14	Supplying and fixing following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB) having sensitivity up to 30 milli ampere in the existing MCB DB complete with connections, testing commissioning etc. as required				0
	2.14.2	40 amps	Each	32	2642	84544
3	9.1	Supplying and making of end terminations with brass compression gland and AL./CU. lugs for following size PVC insulated and PVC sheathed /XLPE Al Armored /Unarmored conductor cable of 1.1 kV grade as required				0
	9.1.23	3.5C x 70 sq. mm (Al. Armored Cable)	Each	4	468	1872
4	5.4	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of	Each	1	7472	7472
		2.7 meter long etc. with charcoal/ coke and salt as required.				0



PAL ARCHITECT AND ENGINEER

COA No. CA/2018/96244

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Near by IDBI Bank, Dehradun (U.K.)

5.7	Supplying and laying 6 SWG GI wire at 0.50 Meter below ground level for conductor earth electrode including connections / termination with GI thimble etc. as required.	meter	18	51	918
5.15	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	meter	18	1162	20916
	Providing and fixing of lightning conductor finial , made of 25mm dia 300mm long G.I tube ,having single prong at top, with 85mm dia 6mm thick G.I base plate including holes etc. complete as required.	Each	2	518	1036
	Providing and fixing G.I tape 20mm x 3mm thick on parapet or surface of wall for lightning conductor complete as required. (for horizontal run)	meter	200	126	25200
	Sub Total				1335220

Chief

PAL ARCHITECT AND ENGINEER

COA No. CA/2018/96244

Case No. 2082 Date 18/11/2022

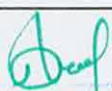
Tapovan Road Infront of PRD Ground

Near by IDBI Bank, Dehradun (U.K.)

Mob.: 7895872139, 9412143346



DETAILED ESTIMATE OF INTERNAL PLUMBING WORK PER FLOOR 8 UNIT						
G+3 32 UNITS						
S.No.	DSR 2021	DESCRIPTION OF WORK	UNIT	Qty	Rate (Rs)	Amount (Rs)
		Sanitary Fixtures				
1	17.1	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device(handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required :				
a)	17.1.1	White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests.	Each	32	5781.35	185003.2
	17.10	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good the walls wherever required :				
i	17.10.2	Kitchen sink without drain board				
	17.10.2.2	610x460 mm bowl depth 200 mm	Each	32	3337.85	106811.2
		Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.				
	17.28.2	Flexible pipe				
	17.28.2.1	32 mm dia	Each	32	104.35	3339.2
	18.51	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.				
a)	18.51.1	15 mm nominal bore	Each	96	594.75	57096
		WATER SUPPLY SYSTEM				
	18.7	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				
b)	18.7.2	20 mm nominal outer dia. Pipes.	metre	200	325.10	65020
c)	18.7.3	25 mm nominal outer dia. Pipes.	metre	56	408.55	22879.36
d)	18.7.4	32 mm nominal outer dia. Pipes.	metre	96	500.95	48091.2
e)	18.7.5	40 mm nominal outer dia. Pipes.	metre	24	674.35	16184.4


PAL ARCHITECT AND ENGINEER
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 Mob.: 7895872139, 9412143346



DETAILED ESTIMATE OF INTERNAL PLUMBING WORK PER FLOOR 8 UNIT						
G+3 (32 unit)						
S. No.	DSR 2021	DESCRIPTION OF WORK	UNIT	Qty	Rate (Rs)	Amount (Rs)
	18.8	Providing and fixing 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 work, including cutting chases and making good the walls etc.				
a)	18.8.1	15 mm nominal outer dia .Pipes.	Metre	48	441.15	21175
	18.8.2	20 mm nominal outer dia Pipes	metre	64	712.75	45616
	18.8.3	25 mm nominal outer dia Pipes	metre	8	626.05	50008.4
		Providing and fixing gun metal gate valve with CI wheel of approved quality (screwed end)				
	18.17.3	40 mm dia nominal bore	Each	16	707.30	11316.8
	18.17.5	65 mm dia nominal bore	Each	6	1490.70	8944.2
	18.18	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :				
b)	18.18.2	20 mm nominal bore	Each	32	397.45	12718.4
c)	18.18.3	25 mm nominal bore	Each	4	399.15	1596.6
	18.21	Providing and fixing uplasticised PVC connection pipe with brass unions :				
a)	18.21.1	30 cm length				
(i)	18.21.1.1	15 mm nominal bore	Each	32	74.80	2393.6
	18.33	Constructing masonry Chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1cement :2 coarse sand : 4 graded stone aggregate 20mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :				
a)	18.33.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	No.	4	10102.50	40410
	18.58	Providing and fixing PTMT grating of approved quality and colour.				
a)	18.58.1	Circular type.				
(ii)	18.58.1.2	125 mm nominal dia with 25 mm waste hole.	No.	64	45.25	

PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. 8082 Date 18/11/22
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 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346



DETAILED ESTIMATE OF INTERNAL PLUMBING WORK PER FLOOR 8 UNIT						
G+3 (32 unit)						
S. No.	DSR 2021	DESCRIPTION OF WORK	UNIT	Qty	Rate (Rs)	Amount (Rs)
	12.43	Providing and fixing un plasticised -PVC pipe clips of approved design to un plasticised - PVC rain water pipes by means of 50x50x50 mm hard wood plugs, screwed with M.S. screws of required length, including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete.			309.5	19808
	12.43.2	110 mm	Each	64		
Total cost for single (G+3) tower						721307.56


PAL ARCHITECT AND ENGINEER
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(Other services)

Bill of Quantity PMAY EWS (Uttarakhand)

- 1- External Sewrage System**
- 2- Extrnal Water Supply System**
- 3- Extrnal Drainage System**
- 4- C.C Paving Work Cost**
- 5- Boundry Wall Construction 734M**
- 6- Tube Wall Cost**
- 7- Main Entrance gate**
- 8- UG Tank And Pump room**
- 9- S.T.P Tank Construction**


PAL ARCHITECT AND ENGINEER
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DETAILED ESTIMATE OF EXTERNAL SEWERAGE SYSTEM

S.NO	DSR-2022	ITEM DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	2.1	EARTHWORK Excavation in trench in all kinds of soil of required width for pipes with working space including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5m including getting out the excavated soil, and then returning the soil as required, in layers not exceed 20cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, wherever required within the site area/boundary, item including shoring, strutting, dewatering (except sub-soil water) all complete as per direction of the Project manager at site.				
	2.10.1.2	Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	Rm	4968.5	417.35	2073603.475
	2.10.1.3	Pipes, cables etc. exceeding 300 mm dia but not exceeding 600 mm	Rm	56	651.55	36486.8
	2.11	Extra for excavating trenches for pipes, cables etc. in all kinds of soil for depth exceeding 1.5 m, but not exceeding 3 m. (Rate is over corresponding basic item for depth upto 1.5 metre).	Rm	1960	127	248920
	19.1	Providing, laying and jointing glazed stoneware pipes class SP-1 with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete :				
	19.1.3	200 mm diameter	Rm	3795	830.4	3151368
	19.1.4	250 mm diameter	Rm	456.2	1293.9	590277.18
	19.1.5	300 mm diameter	Rm	230.5	1774.5	409022.25
	19.2	Providing and laying cement concrete 1:5:10 (1 cement:5 coarse sand:10 graded stone aggregate 20 mm nominal size) all-round				
		S.W. Pipes including 150 mm thick bed concrete as per standard design:				
	19.2.3	200 mm dia	Rm	4968.5	830.4	4125842.4
	19.3	Providing and laying cement concrete 1:5:10 (1 cement:5 coarse sand:10 graded stone aggregate 20 mm nominal size) up to haunches of S.W. Pipes including 150 mm thick bed concrete as per standard design:				
	19.3.5	300 mm dia	Rm	168.5	1089.1	183513.35
	19.4	Providing and fixing square-mouth S.W. gully trap class SP-1 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 :				
	19.4.1	100x100 mm size P type				
	19.4.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	1682	2453.55	4126871.1



PAL ARCHITECT AND ENGINEER
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19.9	Constructing brick masonry circular type manhole 0.91 m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement : 4 coarse sand), inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size), and making necessary channel 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, all complete as per standard design				
19.9.1	0.91 m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560 mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg., fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately) :				
19.9.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	935	11886.45	11113830.75
19.11	Constructing brick masonry circular manhole 1.22 m internal dia at bottom and 0.56 m dia at top in cement mortar 1:4 (1 cement : 4 coarse sand) inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement foundation concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) and making necessary channel 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, all complete as per standard design :				
19.11.1	.68 m deep with SFRC Cover and frame (heavy duty HD 20 grade designation) 560 mm internal diameter conforming to I.S. 12592, total weight of cover and frame to be not less than 182 kg. fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately) :				
19.11.1.2	With Sewer bricks conforming IS : 4885	Each	154	22463.9	3459440.6


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		Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910, on 12 mm dia steel bar conforming to IS: 1786, having minimum cross section as 23 mmx25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	Each	1896	487.1	923541.6
	19.16	Extra depth for circular type manhole 0.91m internal dia (at bottom) beyond 0.91 m to 1.67 m	Meter	163	6693.95	1091113.85
	19.10.2	With Sewer bricks conforming IS : 4885				
	19.3	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 fine sand : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design:				
	19.30.1	Inside dimensions 455x610 mm and 45 cm deep for single pipe line :				
	19.30.1.1	With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	546	6431.3	3511489.8
		Sub Total				35045321.16




PAL ARCHITECT AND ENGINEER
 CO. NO. CA/2018/96244
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 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

DETAILED ESTIMATE OF EXTERNAL WATER SUPPLY SYSTEM

S.NO	DSR-2022	ITEM DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		EARTHWORK				
		Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m, 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, within a lead of 50 m :				
2.1		All kinds of soil				
2.10.1		Pipes, cables etc, not exceeding 80 mm dia.				
2.10.1.1		Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	Meter	1547	417.35	645640.45
		Sand filling				
		Providing and filling sand of grading zone V or coarser grade, allround the G.I. pipes in external work :				
18.41		100 mm diameter pipe				
18.41.9		150 mm diameter pipe				
18.41.10						
		Pipe work				
		Providing push-on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and the cost of rubber gasket				
18.7						
18.70.1		100 mm dia pipes		525	96.15	50478.75
18.70.2		150 mm dia pipes		525	156.05	81926.25
18.70.3		200 mm dia pipes		60	229.5	13770
		Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS : 8329 :				
18.72						
18.72.1		100 mm dia Ductile Iron Class K-7 pipes	Rm	629	1121.1	705171.9
18.72.2		150 mm dia Ductile Iron Class K-7 pipes	Rm	629	1601.3	1007217.7
18.72.3		200 mm dia Ductile Iron Class K-7 pipes	Rm	1048	1975.95	2070795.6
		Disinfecting C.I. water mains by flushing with water containing bleaching powder @ 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory.				
18.8						
18.80.2		100 mm diameter C.I. pipe	100 m	8.65	1996.5	17269.725
18.80.4		150 mm diameter C.I. pipe	100 m	8.65	2974.9	25732.885
18.80.5		200 mm diameter C.I. pipe	100 m	8.65	3954.45	34205.9925
		VALVES AND ACCESSORIES				



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18.31	Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately)					
18.31.1	100 mm diameter					
18.31.1.2	Class II	Each	20	4097.9		81958
18.31.3	150 mm diameter					
18.31.3.2	Class II	Each	9	13512.6		121613.4
18.31.4	200 mm diameter					
18.31.4.2	Class II	Each	5	27521.5		137607.5
18.59	Providing and fixing C.I. double acting air valve of approved quality with bolts, nuts, rubber insertions etc. complete (The tail pieces, tapers etc if required will be paid separately) :					
18.59.1	50 mm dia	each	5	5171.75		25858.75
18.59.2	80 mm dia	each	3	6255.45		18766.35
18.6	Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by Municipal Board complete with bolts, nuts, rubber insertions etc. (The tail pieces if required will be paid separately) :					
18.60.2	100 mm dia nominal bore	Each	5	4995.9		24979.5
18.60.3	150 mm dia nominal bore	Each	3	7357.35		22072.05
18.34	Constructing masonry chamber 2000mm x 1000mm x 1000mm with cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :	Each				
18.34.1	With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	Each	52	17577.9		914050.8
19.6	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :					
19.6.3	250 mm dia. R.C.C. pipe	meter	100	811.15		81115
19.6.4	300 mm dia. R.C.C. pipe	meter	100	902.05		90205
18.61	Providing and fixing C.I. dirt box strainer for bulk type water meter with nuts, bolts, rubber insertions etc. complete conforming to IS : 2373 :					
18.61.3	150 mm dia	each	5	8394.25		41971.25
	Sub Total					7134816.618

PAL ARCHITECT AND ENGINEER

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Tapovan Road Infront of PRD Ground

Near by IDBI Bank, Dehradun (U.K.)

Mob.: 7895872139, 9412143346



DETAILED ESTIMATE OF CIVIL WORKS OF EXTERNAL DRAINAGE SYSTEM

S.No.	DSR No.	DESCRIPTION	UNIT	QTY.	RATE (Rs)	AMOUNT(Rs)
	21	EARTH WORK				
1	2.8	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, within a lead of 50 m.				
	2.8.1	All kinds of soil	Cum	3325.00	286.85	953776.25
	a	Extra over item no. 1 for depth exceeding 1.5 m but not exceeding 3.0 m	cum	475.00	286.85	136253.75
2	2.25	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, lead up to 50 m and lift up to 1.5 m.	cum	631.75	253.95	160242.45
		CEMENT CONCRTE WORKS				
4	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
	4.1.4	1:2:4 (1 Cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 40 mm nominal size).	cum	133.00	7226.95	961184.35
	4.1.11	1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size).	cum	332.50	5660.45	1882099.62
5	6.4	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level in all shapes and sizes in :				
	6.4.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	2141.3	8288.35	17747843.85
6		Centering and shuttering including strutting, propping etc. and removal of form for :				
	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete.	Sqm	997.50	307.95	307180.125
	5.9.2	Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.	Sqm	13300.00	669.55	8905015
	13.4	12 mm cement plaster :				
	13.4.2	1:6 (1 cement : 6 coarse sand)	sqm	8179.50	294.35	2407635.82
	13.18	Neat cement punning	sqm	9310.00	67.80	631218

Total for Civil work

PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. 0082 Date. 18.11.21
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 Near by IDBI Bank, Dehradun (U.K.)
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DETAILED ESTIMATE OF CC ROAD & PAVING

sno	DSR - 21 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
12	2.27	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete.		6528		0.03	195.84	1	195.84	cum	2161.2	423249.408
	4.3	Centering and shuttering including strutting, propping etc. and removal of form work for :										
	4.3.1	Foundations, footings, bases for columns		1888		0.12	226.56	2	453.12	cum	307.95	139538.304
	16.1	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth with lead upto 50 metres.		18568				1	18568	sqm	180.5	3351524
	16.78	Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.										
	16.78.1	With material conforming to Grade-I (size range 75 mm to 0.075 mm) having CBR Value-30										
		P1		292.93		0.125		1	36.61625			
		P2		432.79		0.125		1	54.09875			
		P3		208.14		0.125		1	26.0175			
		P4		362.41		0.125		1	45.30125			
		P5		41.16		0.125		1	5.145			
		P6		363.26		0.125		1	45.4075			
		P7		39.03		0.125		1	4.87875			
		P8		498.9		0.125		1	62.3625			
		P9		182.62		0.125		1	22.8275			
		P10		443.54		0.125		1	55.4425			
		P11		110.13		0.125		1	13.76625			
		P12		121.65		0.125		1	15.20625			
		P13		329.33		0.125		1	41.16625			
		P14		140.75		0.125		1	17.59375			
									445.83	cum	2658.1	1185060.72



PAL ARCHITECT AND ENGINEER
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 Case No. 2822..... Date: 8/11/20.....
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16.75	Providing and laying C.C. pavement of mix M-25 with ready mixed concrete from batching plant. The ready mixed concrete shall be laid and finished with screed board vibrator, vacuum dewatering process and finally finished by floating, brooming with wire brush etc. complete as per specifications and directions of Engineer-in-charge. (The panel shuttering work shall be paid for separately).	18568	0.125	1	2321	cum	8277.55	19212193.6
	STEEL REINFORCEMENT							
5.22	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level							
5.22.6	Thermo-Mechanically Treated bars of grade Fe-500D or more.	30	1889	1	56670	kg	89.65	5080465.5
16.47	Painting runway/taxi track/apron marking with adequate nos of coats to give uniform finish with road marking paint of superior make as approved by the Engineer-in-charge, i/c cleaning the surface of all dirt, scales, oil, grease and other foreign material etc. and lining out complete.							
16.47.1	New work (Two or more coats)	2858	1	1	2858	sqm	158.5	452993
16.68	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with line sand etc. all complete as per the direction of Engineer-in-charge.							
	P1	292.93		1	292.93			
	P2	432.79		1	432.79			
	P3	208.14		1	208.14			
	P4	362.41		1	362.41			
	P5	41.16		1	41.16			
	P6	363.26		1	363.26			
	P7	39.03		1	39.03			
	P8	498.9		1	498.9			
	P9	182.62		1	182.62			
	P10	443.54		1	443.54			
	P11	110.13		1	110.13			
	P12	121.65		1	121.65			
	P13	329.33		1	329.33			
	P14	140.75		1	140.75			
	Sub Total				3566.64	sqm	951	3391874.64
								29845024.5



PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96844
 Case No. 20082 Date 18/11/22
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139

DETAILED ESTIMATE OF BOUNDARY WALL CIVIL CONSTRUCTION

sno	DSR - 21 CODE NO.	Description of work	Item	Measurement			Qty	No	Total Qty	Unit	Rate	Amount
				L	B	H						
12	2.6	ALL WORK FROM 30 M LENGTH 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 lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge.										
	2.6.1	All kinds of soil		30	0.9	0.75	20.25	1	20.25	CUM	205.45	4160.36
	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :										
	4.1.10	1:5:10 (1 cement : 5 coarse sand (zone-III) derived from natural sources : 10 graded stone aggregate 40 mm nominal size derived from natural sources)		30	0.9	0.15	4.05	1	4.05	CUM	6050.65	24505.13
	4.1.3	1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources)		30	0.46	0.05	0.69	1	0.69	CUM	7365.15	5081.95
	5.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. above plinth level up to floor five level, excluding cost of centering, shuttering, finishing and reinforcement :										
	5.2.2	1:1.5:3 (1 cement : 1.5 coarse sand(zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)		30	0.23	0.15	1.035	1	1.035	CUM	10185.05	10541.475
	5.22A	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.		1.035		120	124.2	1	124.2	KG	89.65	11134.53
	5.22A.6	Thermo-Mechanically Treated bars of grade Fe-500D or more										


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DETAILED ESTIMATE OF TUBE WELL

S.NO	DSR -2022	ITEM DESCRIPTION	UNIT	QTY	RATE	AMOUNT
		Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer-in-charge upto 90 metre depth below ground level				
	23.1	All types of soil				
	23.1.1	300 mm dia	metre	62	592.05	36707.1
	23.1.1.1	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, beyond 90 metre & upto 150 metre depth below ground level.				
	23.2	300 mm dia	metre	154	690.7	106367.8
	23.2.1.1	supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/plain ended casing pipes of required dia, conforming to IS: 4270, of reputed & approved make, including painted with outside surface with two coats of anticorrosive paint of approved brand and manufacture, including required hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer-in-charge.				
	23.1	200 mm nominal size dia having minimum wall thickness	metre	78.5	2082.1	163444.85
	23.10.3	5.40 mm				
		Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 plain slotted (having slot of size 1.6/3.2 mm) mild steel threaded and socketed/ plain bevel ended pipe (type A) of required dia, conforming to IS: 8110, of reputed and approved make, having wall thickness not less than 5.40 mm, including painted with outside surface with two coats of anticorrosive bitumestic paint of approved brand and manufacture, including hire & labour charges, fittings & accessories, all complete.				
	23.11	200 mm nominal size dia	metre	726	2194.85	159346.11
	23.11.3					



PAL ARCHITECT AND ENGINEER
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23.6	Supplying, filling, spreading & leveling gravels of size range 5 mm to 10 mm, in the recharge pit, over the existing layer of boulders, in required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	cum	5.69	1309	7448.21
23.12	Development of tube well in accordance with the approved plan for 11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by "V" notch method or any other approved method, measuring static level & draw down etc. by step draw down method, collecting water samples & getting tested in approved laboratory, i/c disinfection of tubewell, all complete, including hire & labour charges of air compressor, tools & accessories etc., all as per requirement and direction of Engineer-in-charge.	hour	45	916.8	41256
23.13	Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for borewell of:				
23.13.3	200 mm dia	each	1	280.95	280.95
23.14	Providing and fixing M.S. clamp of required dia to the top of casing/ housing pipe of tubewell as per IS: 2800 (part I), including necessary bolts & nuts of required size complete.				
23.14.3	200 mm clamp	each	1	1827	1827
23.15	Providing and fixing Bail plug/ Bottom plug of required dia to the bottom of pipe assembly of tubewell as per IS:2800 (part I).				
23.15.3	200 mm dia	each	1	308.55	308.55
	TOTAL Drill of Tube well civil + Electrical cost				
	Total 1 No Drilling of Tube wel				516986.57


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 Near by IDBI Bank, Dehradun (U.K.)
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DETAILED ESTIMATE OF MAIN GATE

S.NO	DSR-2022	ITEM DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	4.1	P/L cement concrete - all works upto plinth level : 1:5:10 (1 cement : 5 coarse sand derived from natural sources : 10 graded stone aggregate 40 mm nominal size derived from natural sources)	cum	25.12	6050.65	151992.328
	9.71	Providing and fixing IS : 12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :				
	9.71.2	100x60x2.50 mm	each	6	85.45	512.7
	10.16	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.				
	10.16.1	Hot finished welded type tubes	kg			
		HollowSSBOXsection 80x40x2mm	kg	76.8712		
		HollowSSBOXsection 40x20x1.5mm	kg	134.4244		
		TOTAL		211.2956	154.9	32729.68844
		Providing and fixing carbon steel galvanised (minimum coating 5 micron) dash fastener of 10 mm dia double threaded 6.8 grade (yieldstrength 480 N/mm2), counter sunk head, comprising of 10 m dia polyamide PA 6 grade sleeve, including drilling of hole in frame , concrete/ masonry, etc. as per direction of Engineer-in- charge.				
	10.27.2	10 x 80 mm	each	36	117.3	4222.8
		MAIN ENTRANCE GATE				
		Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
	4.1	1:5:10 (1 cement : 5 coarse sand (zone-III) derived from natural sources : 10 graded stone aggregate 40 mm nominal size derived from natural sources)	cum	0.072	6050.65	435.6468
	9.71	Providing and fixing IS : 12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :				
	9.71.2	100x60x2.50 mm	each	6	85.45	512.7
	10.16	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.				
	10.16.1	Hot finished welded type tubes				
		HollowSSBOXsection 80x40x2mm	kg	110.25	154.9	
		HollowSSBOXsection 40x20x1.5mm	kg	180.25	154.9	


PAL ARCHITECT AND ENGINEER
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				290.5	154.9	44998.45
		Providing and fixing carbon steel galvanised (minimum coating 5 micron) dash fastener of 10 mm dia double threaded 6.8 grade (yield strength 480 N/mm2), counter sunk head, comprising of 10 mm dia polyamide PA 6 grade sleeve, including drilling of hole in frame , concrete/ masonry, etc. as per direction of Engineer-in-charge.				
10.27						
10.27.2		10 x 80 mm	each	36	117.3	4222.8
		Total cost of 2 Main gate	each	2	239627.11	479254.22


PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. 0022 Date: 18/11/2018
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346



DETAILED ESTIMATE OF UNDER GROUND TANK AND PUMP ROOM

S.NO	DSR -2022	ITEM DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	2.6	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 lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge				
	2.6.1	All kinds of soil	cum	970.8	205.45	199450.86
		Extra over item no. 1 for depth exceeding 1.5 m but not exceeding 3.0 m	cum	780	205.45	160251
		Extra over item no. 1 for depth beyond 3.0 m.	cum	47	205.45	9656.15
	2.25	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, lead up to 50 m and lift upto 1.5 m.	cum	466.2	253.95	118391.49
	4.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level				
	4.1.3	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	5.46	7365.15	40213.719
	4.1.11	1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size).	cum	66.2	5660.45	374721.79
	5.33	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but , excluding the cost of centering, shuttering, finishing and reinforcement, including 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 Engineer-in-charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately).				
	5.33.1	All works up to plinth level.	cum	568.2	7997.3	4544065.86
		Centering and shuttering including strutting, propping etc. and removal of form for				
	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete.	Sqm	63	307.95	19400.85
	5.9.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	Sqm	1647	669.55	1102748.85
	5.9.3	Suspended floors, roofs, landings, balconies and access platform.	Sqm	462.5	766.55	354529.375
	5.22	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.				
	5.22A.6	Thermo-Mechanically Treated bars				
		Providing and fixing in recommended proportion admixtures as per IS code for water proofing concrete as per manufacturer specification and direction of Construction manager	Kg	58645.2	89.65	5257542.18
	22.4.1	Serrated with central bulb (225 mm wide, 8-11 mm thick)	m	86.3	285.6	24647.28



COA No. CA/2013/96244
Case No. 00.82 Date: 08/11/21
Tapovan Road Infront of PRD Ground
Near by IDBI Bank, Dehradun (U.K.)
Mob.: 7895872139, 9412143346

11.26	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :	sqm	44	0.1491	6.5604
22.14	25 mm thick				
	Grading roof for water proofing treatment with				
22.14.1	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	20.5	3.2	65.6
22.1	Providing and laying integral cement based treatment for water proofing on horizontal surface at all depth below ground level for under ground structures as directed by Engineer-in-Charge and consisting of : i) 1st layer of 22mm to 25mm thick approved and specified rough stone slab over a 25mm thick base of cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound conforming to IS:2645 in the recommended proportion over the leveling course (leveling course to be paid separately). Joints sealed and grouted with cement slurry mixed with water proofing compound. ii) 2nd layer of 25mm thick cement mortar 1:3 (1 cement: 3 coarse sand) mixed with water proofing compound in recommended proportions. iii) Finishing top with stone aggregate of 10mm to 12mm nominal size spreading @ 8 cu/m/sqm thoroughly embedded in the 2nd layer.				
22.1.1	Using rough kota stone sqm	Sqm	450	0.342	153.9
	Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25 mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20 mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20 mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge :				
22.2.1	Using rough Kota stone	sqm	250	0.443	110.75
6.3	Brick work with common burnt clay machine moulded perforated bricks of class designation 12.5 conforming to IS: 2222 in superstructure above plinth level up to floor five level in cement mortar 1:6 (1 cement : 6 coarse sand) :				
6.3.1	With F.P.S.(non modular) bricks	cum	18	8030.6	144550.8
13.4.2	1:6 (1 cement: 6 coarse sand)	sqm	612.2	294.35	180201.07
13.37	White washing with lime to give an even shade :				
13.37.1	New work (three or more coats)	sqm	215.3	32.45	6986.485
	Sub Total				12537694.57



Diary

PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. 882 Date: 28/11/22
 Tapovan Road Infront of PRD Ground
 Near by IDBI Bank, Dehradun (U.K.)
 Mob.: 7895872139, 9412143346

DETAILED ESTIMATE OF SEWAGE TREATMENT PLANT FOR CONSTRUCTION OF 1344 HOUSES

SRNO	DSR-21.	DESCRIPTION	UNIT	QTY.	RATE (Rs)	AMOUNT (Rs)
		EARTH WORK				
1	2.6	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 lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge.				
	2.6.1	All kinds of soil.	cum	932.40	205.45	191561.58
	a	Extra over item no. 1 for depth exceeding 1.5 m but not exceeding 3.0 m.	cum	941.63	205.45	193457.88
	b	Extra over item no. 1 for depth beyond 3.0 m.	cum	1255.50	205.45	257942.47
2	2.25	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, lead up to 50 m and lift up to 1.5 m.	cum	202.50	253.95	51424.875
		CEMENT CONCRTE WORKS				
4		Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
	4.1.11	1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size).	cum	94.16	6050.65	569729.04
5	5.5	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but, excluding the cost of centering, shuttering, finishing and reinforcement, including 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 Engineer-in-charge. (Note :- Cement content considered in this item is @ 330 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately).				
	5.33.1	All works up to plinth level.				
		using M20 grade instead	cum	652.60	8320.05	5429664
6		Centering and shuttering including strutting, propping etc. and removal of form for :				
	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete.	Sqm	59.20	307.95	18230.64
	5.9.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	Sqm	2320.00	669.55	1553356
	5.9.3	Suspended floors, roofs, landings, balconies and access platform.	Sqm	598.50	766.55	458780.175
7	5.22A.6	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level. Thermo-Mechanically Treated bars.	Kg	63578.00	89.65	5699767.7
8		Providing and fixing in recommended proportion admixtures as 50per IS code for water proofing concrete as per manufacturer specification and direction of Construction manager	Per bag of Kg of cement used in the mix			
8	22.4	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 :				
	22.4.1	Serrated with central bulb (225mm wide, 8-11mm thick).	M	234.00	285.60	66830.4

PAL ARCHITECT AND ENGINEER
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DETAILED ESTIMATE OF SEWAGE TREATMENT PLANT FOR CONSTRUCTION OF 1344 HOUSES

SR NO	DSR-21	DESCRIPTION	UNIT	QTY.	RATE (Rs)	AMOUNT (Rs)
9		Providing and fixing 500 mm dia CI manhole cover and frame (medium duty). Weight of cover not less than 58 Kg.				-
10	11.26	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) : 25 mm thick	sqm	178.70	1706.60	304969.42
11	22.14	Grading roof for water proofing treatment with				
12	22.14.1	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	8.94	3.20	28.608 -
13	22.1	Providing and laying integral cement based treatment for water proofing on horizontal surface at all depth below ground level for under ground structures as directed by Engineer-in-Charge and consisting of: i) 1st layer of 22mm to 25mm thick approved and specified rough stone slab over a 25mm thick base of cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound conforming to IS:2645 in the recommended proportion over the leveling course (leveling course to be paid separately). Joints sealed and grouted with cement slurry mixed with water proofing compound. ii) 2nd layer of 25mm thick cement mortar 1:3 (1 cement: 3 coarse sand) mixed with water proofing compound in recommended proportions. iii) Finishing top with stone aggregate of 10mm to 12mm nominal size spreading @ 8 cum/sqm thoroughly embedded in the 2nd layer.				
	22.1.1	Using rough kota stone.	Sqm	626.22	0.342	214.167
	22.2	Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25 mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20 mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20 mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge :				
	22.2.1	Using rough Kota stone	sqm	311.10	0.443	137.817
	22.23	Providing and applying integral crystalline slurry of hydrophilic in nature for waterproofing treatment to the RCC structures like retaining walls of the basement, water tanks, roof slabs, podiums, reservior, sewage & water treatment plant, tunnels/ subway and bridge deck etc., prepared by mixing in the ratio of 5 : 2 (5 parts integral crystalline slurry : 2 parts water) for vertical surfaces and 3 : 1 (3 parts integral crystalline slurry : 1 part water) for horizontal surfaces and applying the same from negative (internal) side with the help of synthetic fiber brush. 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 on negative side. The crystalline slurry 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 guaranteed for 10 years against any leakage.				

PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. 82 Date 18/11/22
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DETAILED ESTIMATE OF SEWAGE TREATMENT PLANT FOR CONSTRUCTION OF 1344 HOUSES

SR.NO	DSR-21	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
15	6.3	Brick work with common burnt clay machine moulded perforated bricks of class designation 12.5 conforming to IS: 2222 in superstructure above plinth level up to floor five level in cement mortar 1:6 (1 cement : 6 coarse sand) :				
	6.3.1	With F.P.S.(non modular) bricks.	CUM	13.56	8030.60	108894.93
	13.4	12 mm cement plaster of mix :				
16	13.4.2	1:6 (1 cement: 6 coarse sand)	Sqm	152.40	294.35	44858.94
17	13.37	White washing with lime to give an even shade :				
	13.37.1	New work (three or more coats)	One Square Metre	195.34	32.45	6338.78
TOTAL CIVIL WORK OF STP						14956187.42


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OTHER SERVICES				
1	External sewerage system			35045321.16
2	External water supply system			7134816.618
3	External Drainage system			34092449.21
4	C.C Paving work cost			29845024.5
5	Boundary wall construction 734 M			7795476.36
6	Tube well cost			516986.57
7	Main Entrance gate			479254.22
8	U.G Tank and Pump Room			12537694.57
9	S.T.P Construction			14956187.42
	other service			142403210.6

Grand Total 16 Tower A TO H, J, K, W TO Z, Z1, Z2

Grand Total 10 Tower L TO N & P TO V

Grand Total other service

Grand total project cost

662297261.2

212014320.7

142403210.6

1016714793

Praveen
 PAL ARCHITECT AND ENGINEER
 COA No. CA/2018/96244
 Case No. 822 Date: 18/11/24
 Tapovan Road Infront of PRD Ground
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