



GOVERNMENT OF MAHARASHTRA



75
आज़ादी का
अमृत महोत्सव

SWACHH BHARAT MISSION (URBAN 2.0)

DETAILED PROJECT REPORT

FOR MUNICIPAL SOLID WASTE MANAGEMENT FOR
LATUR MUNICIPAL CORPORATION
DISTRICT- LATUR
(DIVISION- AURANGABAD)



PREPARED FOR,
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LIST OF ABBREVIATIONS

CPHEEO- Central Public Health & Environmental Engineering Organization

D2D – Door to door

DPR – Detailed Project Report

GI – Galvanized Iron

GPC – Generation per Capita

HH – Households

ISWM – Integrated Solid Waste Management

MoUD – Ministry of Urban Development

MRF – Material Recovery Facility

MSW – Municipal Solid Waste

NGO – Non-Government Organization

O&M – Operations and Maintenance

SBM – Swachh Bharat Mission

SLF – Sanitary Land Fill

SMM – Swachh Maharashtra Mission

SWM – Solid Waste Management

TPD-Tons per day

ULB – Urban local Body

LMC- Latur Municipal Corporation

DISCLAIMER

The scope of this document is to present the draft report of the city development plan for the Latur city. Our conclusions are based upon information drawn from research of the relevant region, discussions with the respective Urban Local Body (ULB), Stakeholder Consultations and our very own industry knowledge.

In terms of Strengths, Weaknesses, Opportunities and Threats (SWOT) contained in this document, they represent only one perspective of our understanding and our interactions with various stakeholders of the City. Further, the vision and the SWOT would be evolved in subsequent stages during the course of the preparation of the City Development Plan of the City. We have neither carried out an audit or due diligence of the City nor a viability assessment of the assets of the ULB.

In the course of our assignment, we were provided with both written and verbal information. Nothing has come to our attention to cause us to believe that the facts and the data provided by the ULBs are not true or correct. However, no responsibility is assumed for the authenticity of the information furnished by the ULB. It is believed to be reliable and has not been independently verified by consultants.

No investigation of the title of the tangible and intangible assets has been made and the ULB's claim to the assets has been assumed to be valid. No consideration has been given to liens or encumbrances, which exist against the assets. Therefore, matters of a legal nature relating to the title of the assets have not been considered.

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EXECUTIVE SUMMARY

Management of Municipal Solid Wastes is of growing concern to the general public at large, local authorities and business communities in cities and towns across India. The problem is exacerbating in urban areas due to rapid strides in population growth, coupled with an economic boom that encourages the consumption of goods and, hence, wastes generation. As per Census 2011, the urban population accounts for 31.16 percent of the total Indian population.

The Urban Local Bodies (ULBs), viz. municipalities and municipal corporations, are responsible for providing SWM services in the urban areas. In most of the urban areas, insufficient funds, use of obsolete/ inefficient technologies, lack of public awareness/training, and improper infrastructure have resulted in a state of poor SWM.

EFFORTS TAKEN UNDER SBM 1.0

Following list of works had been taken up under SBM 1.0 for the treatment and disposal of MSW for the city:

Table 1: Works under SBM 1.0

Sr.No.	Particular	Amount in Rs.
1	Ghanta Gadi, 84 nos.	52500000
2	Handcarts, 94 nos.	902400
3	Refuse Compactor, 5 no's	9765420
4	Tipper 3 ton @ 2 nos.	2135000
5	Tipping Area	23291084
6	Curing Platform	8942830
7	Road	7495953
8	Leachate Holding & Evaporation tank	873644
9	Processing Plant, 150 TPR	39200000
10	Plastic Bailing Machine, 5 nos.	1600000
11	Shed for Storage of Compost	9819004
12	Processing Shed	5110502
13	Drainage Works	1782334
14	Office	201969
15	Rest room for workers	161881
16	Weigh bridge room	161233
17	Toilet	183007
18	Fire extinguisher, 20 no.	86880
19	Weigh bridge 1 Nos	571825

20	Back hoe loader for processing and Disposal 6 no's	11971524
21	Water tanker for processing and Disposal 2 no's	3122144
22	Portable water pump with captive engine 2 no	80043
23	Sanitary Landfill	29829952
24	MRF 4 nos. within the city	2897762
25	MRF at dumpsite	1895494
26	Biomining 1.5 Lakh Cum	69705000
27	Biogas Plant	42000000
28	Public awareness programmes	10000000
	Total	336286885

(Source: SWM DPR 1.0)

The cost approved for various above-mentioned works of solid waste management under SBM 1.0 in 2018 was around Rs. 336286885

POPULATION PROJECTION

This DPR provides population projections using various methods given below. The design year considered for SBM 2.0 works is 2027.

Table 2: Population Projection for 5 years

Year	Arithmetical Method	Incremental Increase Method	Average Ar in & in in
2022	507621	535130	521376
2027	550510	600049	575280
2032	593399	670923	632161
2037	636288	747751	692019
2042	679176	830533	754855

WASTE CHARACTERIZATION

Table 3: Current Waste Characterization

Sr No.	Waste Composition Parameters	Parameter	Waste Composition	Average Percentage	Waste in MT
1	Dry Waste TPD for Material Recovery Facility	Plastic, Plastic bags etc	24.02	9.18	17.71
2		Paper waste		6.05	11.67
3		Glass & metals		0.25	0.48
4		Leather, rubber & synthetics		0.18	0.35
5		Tetra packs and laminated plastics		1.81	3.49

6		Clothes and rags		6.55	12.64
7	Wet Waste TPD for Composting	Food waste / organic	62.99	56.85	109.67
8		Horticulture waste & wood		6.14	11.84
9	Inert etc TPD for SLF	Miscellaneous, inert, ash, Soil, Silt	13.00	13.00	25.08
10		Total	100.01	100.01	192.93

Table 4: Proposed Waste Characterization for 2027

Year	2022	2027
City Population	521376	575280
Total MSW Qty, TPD	192.91	212.85
Wet waste. TPD @ 63% for composting	121.53	134.1
Dry waste, TPD @ 24% for material recovery	46.3	51.08
Inert etc, TPD @ 13 % sent for SLF	25.08	27.67
Density of fresh waste	0.5 Mt/Cum	
Density of Old/ Legacy waste	1 Mt/Cum	

GAP ANALYSIS**Current Gaps in Treatment and Disposal:**

Currently all the waste collected is only partially processed at the landfill site without prior segregation, leading to the remaining waste lying there as it is. This is mainly due to the administrative issues with the vendor. The entire solid waste management system must be gradually up scaled to meet the future needs of the town. The system must be planned for the increased quantum of waste which have to be handled properly. The procedures for its operation and maintenance must be prepared and operationalized.

Current Gaps in Capacity Building for ULBs:

The employees need training for implementation of measures such as use of new equipment and vehicles.

- Overall awareness is required for SWM Rules 2016 to all the employees and staff for its implementation.
- Formalization of informal sector like Rag pickers.
- Waste treatment and marketability of by-product and compost. .

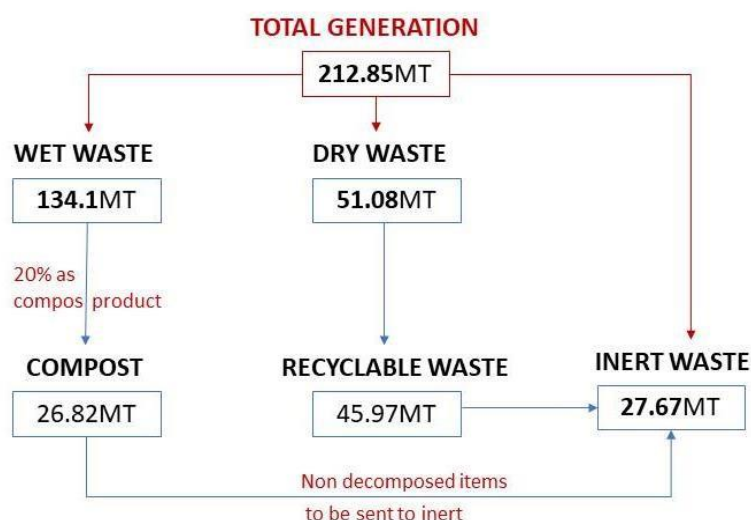
SUGGESTED STRATEGIES IMPROVEMENT WORKS UNDER SBM 2.0

With this scenario, GMC has taken a significant decision to take strategic steps in resolving the issue of municipal waste management through this DPR with reference to the suggested frame work and norms/ guidelines set by with Govt. of India's goals as per **NUSP 2008, SWM rules, CPHEEO**

manuals (including cost recovery mechanisms), O&M practices and Service level Benchmark advisories released by MoUD and Manual on Municipal Solid Waste Management, 2016.

- Adapting scientific methods of waste treatment and disposal aiming at 100% treatment of waste
- Recycling the segregated waste to maximum extent to develop cyclic economy
- Aiming at 100% disposal of waste by facilitating required infrastructure OR develop an infrastructure to achieve 100% safe and scientific disposal of the waste as per SWM Rules 2000.

Figure 1: Mass Balance Diagram



SUMMARY OF PROPOSALS

Wet Waste: Shredding and stabilization of waste followed by screening and decomposition by windrow method is suggested for treating the existing wet waste.

Dry Waste: Material Recovery Facility (MRF) unit is proposed so as to facilitate segregation of dry/non-biodegradable waste.

Table 5: Summary of Proposed Works under SBM 2.0

Particulars	Dry Waste	Wet Waste	Inert/Other
Existing waste treatment			
Current Generation in MT	46.30 MT	121.53 MT	25.08 MT
Proposed Generation in MT in 2027	51.08 MT	134.10 MT	27.67 MT
Proposed strategies of waste treatment			

Method of Treatment	Shed for Screening Machine, MRF shed with partition, MRF Unit with conveyor Belt	Windrow Shed with platform, Compost Curing Shed, Screening Machine, Shredding Machine	Sanitary Landfill and C & D Waste Processing Shed
Expected product/ Byproduct/ Residue	Disposing recyclable materials in market	Fine Compost/ Manure	Landfill (05 years)
	22.71 MT	31.17 MT	66622.42 MT
Site Infrastructure	Tipping Shed, Rest Room		
Biomining	196727.27 MT		
Vehicles	Refused Compactors, Jetting Machine with Suction on		
	Vehicles, Backhoe Loader (3DX Type), Auto tippers		

FUNDING PATTERN

As per City Solid Waste Action Plan (C-SWAP), the approved cost for the city of Latur is Rs. 1731.31 Lakhs. As per **GR.No- स्वमअ-2022/प्र.क्र.73/नभव 34 (As per MoHUA Approved CSWAP)** since Latur is a D class Municipal Corporation hence the following funding pattern will be followed:

Table 6: Funding Pattern for SWM

Sr. No.	Particulars	In Percent (%)	In INR Lakhs
A.	Central Share	33%	571.3323
B.	State Share	37%	640.5847
C.	ULB Share	30%	519.393

Source: **GR.No- स्वमअ-2022/प्र.क्र.73/नभव 34 (As per MoHUA Approved CSWAP)**

REVENUE FROM SALES PRODUCTS

Various revenue streams for the proposed MSW project are expected to be as follows:

Table 7: Revenue generation from waste

Sr. No.	Year	2022	2027
1	Waste generation in MTPD	224.19	247.37
2	Total revenue generated per annum from sell of plastic (Rs lakh INR)	187.8	207.22
3	Total revenue generated per annum from sell of compost (Rs lakh INR)	15.66	170.65
4	Annual revenue (INR Lakhs)	342.46	377.86

Note: The revenue generation figures are based on projections and are subject to prevailing market rate variations.

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

Chapter 1

INTRODUCTION

1. INTRODUCTION

1.1 DEFINITION OF MSWM

Waste disposal is one of the major problems being faced over the world and India is no exception. Management of Solid Waste, though an essential service, is given low priority. This, coupled with lack of financial resources, institutional weaknesses, improper choice of technology & rapid urbanization, whose ramifications are more pronounced with uncontrolled growth rate of population, has made this service far from satisfactory, thus creating serious environmental and health problems.

Management of Municipal Solid Waste (MSW) is one of the basic obligatory duties of the Urban Local Bodies. Based on the recommendations of the committee set up by the Apex Court in that PIL, the Government of India has framed Municipal Solid Waste Rules, 2016 under the Environment Protection Act, 1986. The rules cover the entire gamut of the activities of the waste management and cast responsibilities upon the state Government and Urban Local Bodies to upgrade the solid waste management system in compliance with these rules at earliest.

1.2 INITIATIVES TO IMPROVE MSWM IN INDIA – SWACHH BHARAT MISSION (SBM)

In recent years, the Government of India has taken several initiatives to improve existing SWM practices in the country. *Swachh Bharat Mission* (SBM) was launched on 2nd of October, 2014 with a vision to achieve a clean India as a tribute to the father of the nation, Mahatma Gandhi, on his 150th birth anniversary, in 2019. SBM is being implemented by the Ministry of Urban Development (M/o UD) and by the Ministry of Drinking Water and Sanitation (M/o DWS) for urban and rural areas with a given set of guidelines for improved sanitary services and capacity building initiatives.

Municipal Solid Waste Management (MSWM) a major component of the SBM (urban) “refers to a systematic process that comprises of waste segregation and storage at source, primary collection, secondary storage, transportation, secondary segregation, resource recovery, processing, treatment, and final disposal of solid waste.”

Under the provisions of SWM, the local bodies are to prepare Detailed Project Reports in consultation with the state government based on the identified needs of the City Sanitation Plans. Provision also mentions clustering of smaller cities for attracting Private investment. The DPRs should be prepared in lines with Govt. of India’s goals outlined in the NUSP 2008, SWM rules, advisories, CPHEEO manuals (including cost recovery mechanisms), O&M practices and Service level Benchmark advisories released by MoHUA and Manual on Municipal Solid Waste Management, 2000.

1.3 SCOPE OF WORK

The broad scope of work for the project includes development of technical and economically viable solid waste management plan along with the design of collection, transportation, treatment disposal infrastructure. The outline of scope of work for the overall project includes the following activities.

- a. Collection & compilation of data
- b. Interaction with ULB, local stakeholders and obtaining preliminary information c. Submission of draft DPR
- d. Presentation of the plans and receiving comments and inputs.
- e. Submission of final DPR

1.4 NATIONAL GREEN TRIBUNAL RECOMMENDATIONS

Action Plan for Management of Municipal Solid Waste (MSW)

CPCB has framed and notified the “Action Plan for Management of Municipal Solid Waste (MSW)” in compliance with the National Green Tribunal order dated 5th Feb-2015 in the matter of OA No. 199 of 2014. The Action Plan emphasizes on strengthening the planning exercise at national, state as well as city level by improvising through the waste management value chain. In addition to that, The Plan suggested the concept of regional cluster approach as well as technology options on the basis of quantum of MSW generation which has been re-produced below in nutshell.

The Regional Cluster approach is based on the concept of discouraging setting up of individual waste processing and disposal facilities leading to mushrooming of innumerable facilities which are difficult to monitor and sustain. The approach requires a detailed survey of the study area and identification of location for regional facility with adequate size of land free from public objections. An indicative distance of say up to 50 km for each local body may be feasible based on local condition, fixing of criteria by the local body to transport the waste for common disposal point without causing public nuisance and traffic hurdles.

However, alternate options can be worked out for smaller local bodies. Common facility should be ‘integrated’ with facilities for sorting, compost, RDF and energy plant and followed by inert recycling/re-use. Only a fraction of inert waste should go for land-filling.

The Action Plan has outlined indicative plan based on the quantum of waste generated in the cluster. The indicative plans have been given for towns in four ranges of waste generation.

Table 8: Indicative Plans for Municipal Solid Waste Management

Range	Plan
>500 TPD	Modernization/ mechanization of waste storage and transportation facilities Privatization/ contract with 'operators' for collection of waste from various sources and its transportation Seeking support of Private entrepreneurship in setting up of waste processing and disposal facility
Between 100-500 TPD	Modernization/ mechanization of waste storage and transportation facilities Privatization/ contract with 'operators' for collection of waste from various sources and its transportation Seeking support of Private entrepreneurship in setting up of waste processing and disposal facility
Less than 100 TPD	Proper system for waste collection, storage and transportation considering the local situation Aerobic composting ·Such towns can be the member of Cluster/Regional facility
Less than 50 TPD	Technological solutions which could be managed without high skill operations ·Proper collection of waste and motivating citizens for segregation of waste Composting.

1.5 PROJECT FORMULATION JUSTIFICATION (NEED FOR THE PROJECT)

Latur Municipal Corporation (LMC) is looking for improving efficiencies in solid waste management (SWM) practices focusing on improving efficiency of collection, transportation and processing of the municipal waste generated in the city. This report brings out the present situation of solid waste management at Latur and gives a detailed project report (DPR) for efficient Collection and Transport systems for improving the same.

The project activity aims at-

- Establishing effective waste collection mechanism with a view point to maintain the 100% collection of the solid waste generated in the municipal area followed by efficient waste transportation, processing and disposal in a sustainable manner.
- Maximum Segregation of waste at the household level.
- Involving people in the process and creating awareness amongst the masses for the same.

1.6 VISION- SBM 2.0

With a holistic vision of vision of creating a “Garbage Free” Urban India, SBM 2.0 aims at ensuring segregation of waste at source, process waste in segregated fractions, recovering the resources and recycling them to the maximum extent and minimize landfilling to 20% or less

(including reject material coming out of processing). Cities must be seen to be clean 360

degrees, duly remediating the legacy dumpsites. Further, Cities with nonconforming air quality need to replace the common manual street sweeping with air quality friendly mechanical sweeping and process the C&D wastes as well.¹

1.7 OBJECTIVES- SBM 2.0

In SBM 1.0, in 2017-18, a detailed report for municipal solid waste management (MSW DPR) was prepared addressing the short fall in service management as well as infrastructure gaps. The Estimated cost of proposed interventions was around 3.14 Cr. sanctioned in January 2018.

In lieu with the sanctioned DPR, various works were taken up and completed since 2018. The broad scope of work for the said DPR under SBM 2.0 is mainly pertaining to the suggested works in CSWAP by respective ULB.

The key Objectives are:

- All households and premises segregate their waste into “wet waste” (from kitchen and gardens) and “dry waste” (including paper, glass, plastic, and domestic hazardous waste and sanitary waste wrapped separately);
- 100% door to door collection of segregated waste from each household/ premise;
- 100% scientific management of all fractions of waste, including safe disposal in scientific landfills;
- All legacy dumpsites remediated and converted into green zones;
- All used water including faecal sludge, especially in smaller cities are safely contained, transported, processed and disposed so that no untreated faecal sludge and used water pollutes the ground or water bodies.

The mission components for funding² are:

- Setting up of waste processing facilities such as MRFs, transfer stations, composting plants, bio methanation plants, RDF processing facilities, plastic waste processing

¹ <https://SBM-images3107.s3.ap-south-1.amazonaws.com/861098610956.pdf>

² <https://SBMurban.org/storage/app/media/pdf/swachh-bharat-2.pdf>

facilities, waste to electricity, sanitary landfill, etc.

- Procuring mechanized sweeping equipment and setting up processing facilities for effective management of Construction and Demolition (C&D) waste
- Bio-remediation/ capping of all legacy dumpsites in all ULBs.

As a first step in fulfilling the vision, ULBs will prepare the CSWAP duly identifying the projected waste generation, segregation as wet and dry process flow of municipal solid waste management waste, the available processing capacity and the gap thereof. The CSWAP should also capture the gaps in dumpsite remediation, mechanical sweeping and C&D waste processing facilities. Funds will be available for addressing the assessed gaps.

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Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

Chapter 2

LATUR CITY PROFILE

2. LATUR CITY PROFILE

2.1 HISTORY AND IMPORTANCE OF THE PROJECT TOWN

Latur is a Municipal Corporation located at latitude- 18°24'0"N and longitude- 76°33'36"E. Latur is situated on the eastern end of the region between the Manjara and Tawarja valleys and is thus surrounded on the north and the east by the very fertile valley of the Manjara river, and on the south by that of river Tawarja. The climate of the city is generally dry except for the monsoon season. It has an average elevation of 515 meters and an average rain fall of 755.7 mm. Maximum temperatures in Latur is 43.3°C and minimum temperature is 11. 3°C. The city is a tourist hub surrounded by Monuments, including the Kharosa caves.

Table 9: Salient features of Latur

City	Latur
District	Latur
Geographic Location	latitude- 18°24'0"N and longitude- 76°33'36"E
Civic status	Municipal Corporation-Class 'D'
Population	4,13,266 (2011)

Source: (LMC)

2.2 POPULATION

As per Census of India, population of Latur in 2011 was 4,13,266. The sex ratio of Latur city is 928 females per 1000 males. In education, Literacy rate of Latur city is 77.26%, Male literacy is around 84.39 % while female literacy rate is 69.63 %.

2.3 POPULATION PROJECTIONS

Any MSW management system is aimed at reducing the amount of waste being disposed while maximizing resource conservation and resource efficiency. Based on the assessment of waste quantity & characteristics, local needs & conditions, an appropriate technological intervention is proposed to facilitate the community for a specific design life. As per the MSW Guidelines, solid waste management facility proposed for a town or a city shall facilitate the town for a minimum period of 20-25 years. Therefore, even after having recent/current population of a town or a city it is important to forecast population and its rate of growth for the design life.

Estimation of population takes into consideration factors governing character & location of town, present status & its possible expansion, establishment of commercial, educational, industrial, social and administrative areas in the surrounding. Floating population is also a matter of consideration while forecasting the population. The most reliable information on population of the ULB is obtained from ULB itself and Census.

It is an important step in order to bridge the supply demand gap and also to estimate the future requirement of the urban infrastructure. The population of town has been projected up to year 2042 using statistical methods based on population trends in the previous years.

Of the various methods available, this DPR provides population projections using various methods given below

Table 10: Summary of Latur population as per census

S. No.	Year	Population
1	1971	70156
2	1981	111986
3	1991	197408
4	2001	299985
5	2011	413266

Sr. No.	Census Year	Population	Increase in population	Incremental Increase in population	Geometrical mean
1	2	3	4	5	6
1	1971	70156			
2	1981	111986	41830		0.59624
3	1991	197408	85422	43592	0.76279
4	2001	299985	102577	17155	0.51962
5	2011	413266	113281	10704	0.37762
Average			85777.5	23817	0.56407

Table 11: Population Projection

Year	Arithmetical method	Incremental increase method	Average ar in & in in
2022	507621	535130	521376
2023	516199	547637	531918
2024	524777	560383	542580
2025	533355	573367	553361
2026	541932	586589	564261
2027	550510	600049	575280
2028	559088	613748	586418
2029	567666	627684	597675
2030	576243	641859	609051

2031	584821	656272	620547
2032	593399	670923	632161
2033	601977	685812	643894
2034	610554	700940	655747
2035	619132	716305	667719
2036	627710	731909	679809
2037	636288	747751	692019
2038	644865	763831	704348
2039	653443	780149	716796
2040	662021	796706	729363
2041	670599	813501	742050
2042	679176	830533	754855

Accordingly, waste generation rates are estimated considering the following.

- Past decadal population based on Census surveys
- Projected populations for the design period
- Existing MSW generation quantities
- Existing per-capita waste
-

2.4 POPULATION DENSITY

The population was 4, 13,266 in 2011 as per Census. The total area of the city is 53.3 sq.km and the projected population for 2027 is 5, 75,280. The density of population in the city according to 2011 is 7754 persons per Sq.km.

2.5 FLOATING POPULATION

The floating population of 20,664 per day has been considered (5% of the total population).

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Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

Chapter 3

STATUS OF EXISTING SOLID WASTE MANAGEMENT IN THE CITY

3. STATUS OF EXISTING SOLID WASTE MANAGEMENT OF THE CITY

Following chapter discusses about the existing solid waste management practices in the town highlighting existing demand gaps in infrastructure, management issues and suggested strategies with phasing plan.

The value chain for solid waste starts with generation of solid waste, which is collected and is further transported to dumping ground. Though the infrastructure is available for treatment, it is not functional due to contractual disputes. Therefore; the waste is not treated and directly disposed-off at dumping ground. Based on this value chain, the following section discusses about each phase/ sector of solid waste management in detail.

Following diagram and photographic evidences illustrates value chain for solid waste management.

3.1 WASTE GENERATION IN LATUR

A survey was conducted to understand how much waste is generated per household. Solid Waste Management is an obligatory function of the Urban Local Bodies. However, this service is poorly performed by most of the ULBs resulting in problems of public health, sanitation and environmental degradation. Municipal solid waste in a typical town of India is mixed in nature, consisting of around 70-80% residential waste. Other waste generation sources are commercial units, markets, hotels & restaurants, institutions including schools, colleges, offices, street sweepings, drain silt and green area including park, gardens.

The major sources of generation of municipal solid waste in Latur are:

- a. Households
- b. Markets for fresh vegetables & fruits, agriculture, meat and chicken
- c. Parks & open spaces
- d. Temples
- e. Shops and commercial establishments
- f. Others

3.2 QUANTIFICATION AND CHARACTERIZATION OF WASTE

3.2.1 Sampling criteria

The quantitative and qualitative assessment of waste in the city, especially its physical and chemical properties are essential for determining the future technological options for its treatment and disposal. The findings from this study will feed into the process and facilitate taking future decisions, especially in terms of selection of the technology.

The waste quantitative and qualitative study is divided in two parts:

A. Quantification of waste: This comprise of following activities:

- Identification of different areas of the city, like High Income Group (HIG), Middle Income Group (MIG), Low Income Group (LIG), Slums, Commercial and Institutional areas, Vegetable and mutton, fish and chicken market etc in consultation with ULB Officials
- Waste to be quantified for 2 days for estimating per household waste generation. This study has been carried out by distributing polythene bags to different households and collecting the same next day.
- The other way is to collect the waste in coordination with municipal authorities in a dedicated auto tipper and weighing the same on a weigh bridge.
- Once the waste is collected from twenty household or so, the same to segregate in different components, viz. Recyclables (Plastic, metal & glass), and Inert and Organic material. Fresh weight to be taken on the site and representative samples to be taken for laboratory analysis.
- Separate Physical & Chemical Analysis to be performed for the cities as given in Tables below.

B. Qualitative Analysis:

Once the quantitative analysis is carried out for the waste from different areas, representative samples are to be taken for qualitative and chemical analysis in laboratory. Following steps are defined for sampling and further chemical analysis:

- Taking about 100 Kg of waste from each sector, such as HIG, MIG, and LIG etc. and collecting about 10Kg of sample by quartering and coning method as SWM Manual.
- The waste to be taken to laboratory with proper 'Chain of Custody' for further processing and analysis. The parameters for physical and chemical analysis are given in table below.

A. Physical Assessment

Physical components of waste like compostable, clothes, paper, plastics, sponges, polythene bags, glass and inert material shall be identified. This physical assessment is carried out at site itself. The below table define the parameters studied.

Table 12: Physical Parameters and methodologies for Assessment

S.R. No.	Parameter	Unit	HIG	MIG	LIG/Slum	Commercial	Dumpsite	Vegetable market
1	Plastic, Plastic bags etc	%	7.7	7.2	6.4	28.4	8	7.4
2	Paper waste	%	5.7	4.7	3.8	19.6	2.8	4
3	Glass & metals	%	0.29	0.2	0.13	0.73	0.18	0.15
4	Leather, rubber & synthetics	%	0.22	0.17	0.12	0.38	0.45	0.14
5	Tetra packs and laminated plastics	%	2.6	1.7	0.8	4.8	0.38	0.32
6	Clothes and rags	%	6.50	7.20	6.10	6.9	0.7	1.7
7	Food waste/ organic	%	63.6	60.23	58.26	22.10	21.36	71.90
8	Horticulture waste & wood	%	5.30	5.35	5.43	11.5	10.80	8.60
9	Miscellaneous, inert, ash, soil, silt	%	8.09	13.24	18.96	5.6	55.10	5.38
	Total		100	100	100	100	100	100

(Source: Primary survey by quartering and coning Chemical Assessment)

B. Chemical Assessment

After physical assessment, the samples shall be stored in a zip locked bag and sent to laboratory for analysis. All the analysis is carried out within 24 hours of sample collection. The parameters selected for chemical analysis are given below. The chemical composition of waste is conducted. The results of the findings are as below.

Table 13: Chemical Characterization Parameters

S.No.	Parameter	Unit	HIG	MIG	LIG / Slum	Commercial	Dumpsite	Vegetable market
1	Moisture	%	35.17	29.77	32.14	34.61	24.21	23.07
2	Ash Content	%	23.02	22.45	18.49	22.09	28.94	59.64
3	Total volatile content (LOI)	%	23.89	21.12	23.07	24.51	16.58	32.39
4	Total Organic Carbon (TOC)	%	12.46	15.35	15.24	16.94	22.56	23.48

5	Calorific value	cal/gm	1280.	1192.	1044.	1863.0	1196.0	832.0
6	C/N Ratio	-	18.32	21.03	13.85	21.18	13.19	17.26
7	Total Nitrogen	mg/kg	0.68	0.73	1.10	0.80	1.71	1.36
8	Total Phosphates as P ₂ O ₅	mg/kg	0.64	0.65	0.73	0.69	0.60	3.73
9	Total Potassium as K ₂ O	mg/kg	1.9	3.0	1.2	0.7	1.34	0.95
10	Arsenic (As)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
11	Nickel (Ni)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
12	Zinc (Zn)	mg/kg	13.20	12.40	14.75	15.54	16.30	2.89
13	Cadmium (Cd)	mg/kg	1.98	1.1	0.9	3.38	1.89	2.32
14	Copper (Cu)	mg/kg	12.3	11.3	10.12	16.7	8.5	9.7
15	Chromium (Cr+6)	mg/kg	BDL	BDL	BDL	BDL	BDL	BDL
16	Lead (Pb)	mg/kg	3.48	1.72	1.1	2.4	2.8	0.19
17	Mercury (Hg)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Source: Lab Report

3.2.2 Physiochemical characteristic of MSW

The composition of the waste becomes crucial to decide an efficient SWM system. To understand the waste character disposed in the land fill in Latur, an analysis of the composition of the fresh waste was conducted for 2 days. 4 samples were selected and analysed for 2 consecutive days by using the quartering technique.

40 kg of fresh waste was selected randomly by the waste carrying vehicles for conducting the quartering technique. About 10 kg of waste from the selected 40 kg of waste was selected for conducting waste composition analysis. The selected 10 kg sample was segregated with the help of rag pickers and each segregated material is weighed.

The particulars of waste composition and analysis conducted are presented below based on the analysis conducted at the dumping site. The table below gives the average waste composition of selected samples.

3.3 AVERAGE WASTE COMPOSITION:

It has been assessed that 10% waste in the town is generated from HIG, 50% from MIG, 25% from weaker section of society, 10% from commercial and shops and 5 % from Vegetable markets and horticulture. The average waste composition in Latur has been found out as under:

Table 14: Waste Composition

S No.	Waste Composition Parameters	Parameter	Waste Composition	Average Percentage	Waste in MT
1	Dry Waste TPD for Material Recovery Facility	Plastic, Plastic bags etc	24.02	9.18	17.71
2		Paper waste		6.05	11.67
3		Glass & metals		0.25	0.48
4		Leather, rubber & synthetics		0.18	0.35
5		Tetra packs and laminated plastics		1.81	3.49
6		Clothes and rags		6.55	12.64
7	Wet Waste TPD for Composting	Food waste / organic	62.99	56.85	109.67
8		Horticulture waste & wood		6.14	11.84
9	Inert etc TPD for SLF	Miscellaneous, inert, ash, Soil, Silt	13.00	13.00	25.08
10		Total	100.01	100.01	192.93

Source: Primary survey by quartering and coning Chemical Assessment

3.4 PROJECTIONS FOR MUNICIPAL SOLID WASTE (MSW) GENERATION

As per our field study comprising of surveys and testing and analysis and discussion with different stakeholders, the estimated current waste generation in Latur is around **192.91 TPD** from all sources. The waste generation rate is about **370 grams/ capita/ day**. The waste generation estimate and its projection is important step for long term waste management strategy and planning for the city. Therefore, the waste generation estimate for Latur is carried out in similar way as of population projection.

The future waste generation estimates as per the manual on SWM page no 42, point no. 1.4.3.3 have been made with the following assumptions:

Table 15: Population and waste projection of Latur

Year	2022	2027	2032	2037	2042
City Population	521376	575280	632161	692019	754855
Total MSW Qty, TPD	192.91	212.85	233.90	256.05	279.30
Wet waste, TPD @ 63% for composting	121.53	134.10	147.36	161.31	175.96
Dry waste, TPD @ 24% for material recovery	46.30	51.08	56.14	61.45	67.03
Inert etc., TPD @ 13% sent for SLF	25.08	27.67	30.41	33.29	36.31

Source: Census-2011 and Primary Survey by quartering and coning (Assuming GPC: **370**)

3.5 EXISTING INFRASTRUCTURE FOR SWM

3.5.1 Waste Collection System

According to ULB 60% Door to Door collection has started in the city and there is no segregation of waste. Waste from households is thrown along the roadside and open places which is being collected by the tractor trolley. The waste from houses and commercial markets is directly dumped at open places in the city. Then the waste is collected from the different points and open places throw Tractor trolleys. There is no transfer station in the city.

3.5.2 Waste Transportation System

Solid waste is transported in ghantagadi vehicles with segregation facility for wet and dry waste. 84 ghantagadi are used to transport the waste from houses and bins to dumpsite.

3.5.3 Waste Processing System

a. Recyclable Waste

Segregation of recyclable waste is generally not practised in the city. Most of the recyclable waste is generally found mixed with garbage on the streets, and at the dumpsite from where part of this waste is segregated by rag pickers.

b. Bio-Degradable Waste

Bio-degradable waste constitutes the organic waste that can be decomposed to produce rich quality manure and soil conditioner. There are two compost pits available at dumpsite, but not in working condition.

c. Non-Biodegradable Waste

This consists of recyclable and non-recyclable waste. Higher amount of this waste was found on roadside, drains and on dumpsite during our survey. From the total waste collected, recyclable material such as plastic, glass, metal and rubber are segregated by the rag picker communities and is sold to retailers for further recycling.

d. Construction & Demolition Waste

The amount of C&D Waste is not significant. This waste is collected by the ULB if found openly dumped and if generated by an individual owing to construction or any demolition activity. At present, this waste finds its way into the low-lying areas. There is no separate system as such.

e. Any Other Waste (domestic hazardous, sanitary waste)

Bio-medical waste is being collected by the M/S Superb Hygiene Disposal Nanded.

3.6 EXISTING INFRASTRUCTURE FOR SWM

3.6.1 Manpower

Presently LMC has 440 sanitation workers, 157 drivers and 200 helpers on contract basis.

3.6.2 Equipment/ Vehicles

Solid waste is transported in ghantagadi vehicles with segregation facility for wet and dry waste. 84 ghantagadi are used to transport the waste from houses and bins to dumpsite.

Figure 2: Existing vehicles on site



3.6.3 Equipment Repair facility

There is no separate facility in terms of workshop or shed for repairing works. It is generally done by contractor in private servicing centre.

3.6.4 Wet waste processing facility

Presently the wet waste is processed by composting method for which windrow compost without shed are available on dumping site.

Figure 3: Existing compost pits on site



Figure 4: Existing windrow composting



3.6.5 Dry waste processing facility

As of now the dry waste is manually segregated and recyclable material is stacked in respective sheds/ compartments by private operator using Material recovery facility (MRF) unit. There are 3 decentralized sites for dry waste processing.

Figure 5: Dry waste processing at other Decentralized site



Figure 6: Dry waste processing at Sant Ghadge Baba Decentralized site



Figure 7: Existing MRF Processing shed



Figure 8: Existing machinery on site



Figure 9: New construction work on site



Figure 10: New shed for storage



Figure 12: Existing infrastructure on site



Figure 13: Existing Legacy Waste on site

Figure 14: Existing dumping ground



Figure 14.1: Existing Raod Images





At present, all the waste generated from the city is openly dumped at the dumping site (Gut no.30) which is 8 km from city centre on Varvanti Arvi Road, near Railway Station. The area of this site is 9.8 Hectare.

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Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

Chapter 4

PROPOSALS & COST ESTIMATES

4. PROPOSALS & COST ESTIMATES

4.1 SEGREGATION

The proposed segregation plan draws its reference from the MSW Rules 2016 and CPHEEO Manual which state that there has to be compulsory segregation of waste at the source into wet or biodegradable waste and dry or recyclables to achieve maximum recovery of resources with separate provision for domestic hazardous waste, sanitary waste.

4.1.1 Methods for segregation at source

Waste generators shall not throw any solid waste in their neighbourhood, on the street, open spaces, and vacant plots or into drains;

At household level, kitchen waste or biodegradable waste, non-bio degradable non-toxic waste and domestic hazardous waste must be stored separately in green, white and black coloured bins respectively;

To facilitate segregation at source, bins shall be initially procured by Latur Municipal Corporation for the first time for residential units where door to door service is proposed. Subsequent purchase of bins for primary storage shall be done by the individual generators;

- Non-residential units such as hotels, restaurants, shops, institutions etc. shall purchase bins on their own expense;
- In general, biodegradable waste accounts for approximately 2/3rd of the total waste stream. Therefore 3 types of bins shall be required by every household. All citizens of the society including their commercial establishments shall arrange bins through their own resources.
- It is proposed that 2 bins shall be distributed only to the slums and weaker sections of the society to segregate the waste. This shall be done through CSR activity under Swachh Maharashtra Mission.

4.1.2 Vegetable & Fruit Markets

There are 2 markets (1 vegetable and fruit market, 1 fish market and meat market) and one weekly market and 1 Krishi utpann bazaar samiti. These contribute 7% of the total waste generated in the city. As per SWM rules 2016, it is recommended to provide covered four wheeled, HDPE, injection or roto molded, international standard, UV tested bins/containers placed along the roadside to facilitate easy handling and transfer of waste to the disposal site. The size of the container should be adequate to hold the waste, that is normally generated in 24 hours with 200% spare capacity to meet unforeseen delay in clearance or unanticipated shock loads. It is proposed to place collection bins or community bins of along the roadside in these markets to facilitate easy handling and transfer of waste to municipal collection system.

4.1.3 Bulk generators: Hotels & Restaurants, Shops, Offices, Institutions etc.

As per MSW rules, 2016 requirements, bulk generators have to arrange themselves for 4wheeled, HDPE, injection or roto molded, international standard, UV tested bins or metal bins of at least 240 l capacity, with separate bins for wet & dry waste and handover recyclable material to either the authorized waste pickers or the authorized recyclers.

Since, most of the bulk generators in the city fall under the category of less than 5000 sqm area, their responsibility would be mainly to store the waste in a segregated manner (3 bin system), with separate provision for sanitary waste and bio medical waste, if any, which shall be collected by the designated staff of ULB on daily basis.

4.1.4 Marriage Halls, Community Halls, and others

1. Not to throw any solid waste in their neighbourhood, on the streets, open spaces and vacant lands, into the drains or water bodies.
2. The facilities with less than 5000 sq. m area, organising an event or gathering of >100 persons, shall make own arrangements of storing the waste in the adequately sized, suitably coloured bins and the waste shall be handed over to waste collector or agency as specified by the local body.
3. RWA's, market associations, hotels, restaurants and all gated communities & institutions with more than 5,000 sqm area, in partnership with the local body shall ensure segregation of waste at source and facilitate collection of segregated waste in separate streams, handover recyclable material to either the authorized waste pickers or the authorised recyclers. The bio-degradable waste shall be processed, treated and disposed of through composting or bio methanation within the premises as far as possible. The residual waste shall be given to the waste collectors or agency as directed by the local body.
4. Street food vendors: As per the MSW Rules, 2016, no street food vendor is allowed to throw any waste on the street, pavement or open spaces. They should keep adequate size, suitably coloured bin or bags (green for wet waste and white for dry waste) for the storage of waste that generates during street vending activity. These bags are to be handed over to the waste collector assigned by the ULB on daily basis.

4.1.5 Construction & Demolition (C&D) waste

1. Not to deposit construction waste or debris on the streets, foot paths, pavements, open spaces, water bodies etc.
2. Store the waste within the premises or with permission of the authorities just outside the premises without obstructing the traffic preferably in a container if available through the local body or private contractors, as per MSW rules, 2016.

Currently, the C & D waste of the towns is getting mixed with the municipal waste which is significantly increasing the inert content of MSW. It should be handled and managed separately by the bulk generators.

4.1.6 Floating Population

The city has agriculture based economic profile hence the floating population in the city is not very high. Further, people commute within the city for daily needs, commercial activities, shopping and, for entertainment. Thus, on the basis of MoUD norms, around 5% of city's population has been considered as floating population.

Additionally, it is proposed to install 100 litres capacity litter bins at the market places and in areas expected with high foot-falls e.g., railway stations, bus stops, markets, religious places, etc. Litter bins shall be installed at a spacing of 500m on either side of all the main roads as well as at public places to facilitate easy disposal of trash. The collection should be segregated into wet and dry waste. Litter bins are proposed for the city along the roads in the commercial area of the city.

4.1.7 Street sweeping and drain cleaning

The street sweepings are expected to contain lot of soil waste. Hence, a separate system of street sweeping is suggested comprising daily sweeping by the sanitary workers to collect the street waste in wheelbarrows. It is proposed to remove the drain silt once every fortnight in the wheelbarrows, to be collected by a dedicated tractor trolley for direct transfer to the landfill. The existing vehicles available with the ULB shall be utilized for this purpose.

4.2 COLLECTION & TRANSPORTATION

The mechanism for door-to-door collection of waste is proposed through a combination of motorized vehicles and handcarts/ cycle rickshaws. The waste collection & transportation vehicles shall be either dedicated vehicles or with separate compartments for dry and wet waste. Since, the proposed site for development of integrated SWM (ISWM) facility is 10 km from one end of the city, the auto tippers can directly take up the waste to the processing site.

However, for the waste collected by the handcarts/ cycle rickshaws from the slums shall be stored in the community bins. Additionally, litter bins for market area and other strategic locations all across the city are recommended to avoid any kind of waste littering in the city.

4.2.1 Type of vehicles proposed

The collection of segregated waste from the households, other than slums, will be carried out by motorized waste collection vehicles i.e. auto-tippers of capacity 2.5 cum to facilitate segregated waste collection from the households as well as commercial units, covering around 1500 households per auto-tipper including commercial establishments

From the slum areas comprising 15% of the population, waste collection shall be done by containerized handcarts on daily basis. The waste thus collected shall be transferred to the auto tipper and shall be transfers to the disposal site.

Vehicle	No. of trips to be made per day
Auto 4-wheeler with 2.5 cum capacity, separate compartment for wet and dry waste, covering 1500 household as well as commercial units	2
Containerized Handcarts	2
Gloves, Boots, Uniforms, safety masks	For all SWM workers

Table 16: No. of vehicles required for collection and Transportation

Collection through <i>Ghantagadis</i> includes waste from Households + hotel commercial							
Sr. No.	Year	Total residential waste collected (tons)	Waste collected per trip (MT)	Trips per vehicle /day	Number of vehicles	Required Manpower per vehicle	
						Driver	Helper
1	2022	224.19	1.5	2	84	84	84
2	2027	247.37	1.5	2	84	84	84
3	2032	271.83	1.5	3	84	84	84
4	2037	297.57	1.5	3	84	84	84
5	2042	324.59	1.5	3	84	84	84

As of now the ULB has 84 Auto tippers available for waste collection, hence no additional vehicle is required till 2027. Since 3 existing auto tippers are nonfunctional hence 3 new auto tippers are proposed.

4.2.2 Manpower at processing site

For the purpose of processing, treatment and disposal along with operating vehicles and equipment, manpower will be required on the processing site. Following table shows the manpower required accordingly.

Table 17: Requirement of manpower at processing site

MAN POWER FOR PROCESSING ON SITE		
SR.NO	DESCRIPTION	NO.
1	Workers for composting	4
2	Workers for Material Recovery Facility (MRF)	8
3	Watchman	1
4	Site supervisor	1
5	TOTAL	14

4.3 ACTION PLAN TO PROMOTE “REDUCE, RE-USE AND RE-CYCLE (R-R-R)” OF WASTE REDUCE:

Everyone is concerned with the growing problems of waste disposal in urban areas with the scarce availability of land for processing and disposal of waste and environmental remediation measures becoming ever more expensive. It is therefore necessary to not only think about effective ways and means to seriously consider how to avoid or reduce the generation of waste in the first place and to consider ways to re-use and recycle the waste, so that the least quantity of waste needs to be processed and disposed of.

While the quantity of food waste generated per capita has remained almost static, the quantity of packaging waste material and non-bio-degradable waste is going up alarmingly every year. This increases the burden on local bodies to deal with the problem of non-biodegradable and non-recyclable components of waste landing up at processing and disposal sites.

The following measures are therefore proposed to be taken to Reduce, Reuse and Recycling of waste by all concerned:

- All manufacturers producing a variety of domestic and non-domestic products, food as well as non-food should be persuaded to seriously endeavour to use re-usable packaging materials so that after the delivery of goods, the packaging materials could be collected back and used over and over again. They could also consider minimizing or avoiding use of unnecessary packaging materials by innovative methods.
- Incentives and product discount should be given to consumers for the return of packaging or bottling materials in good condition, to the waste producers or retailers to promote re- use.
- The cost of packed articles and article without the packaging material could be kept different with a choice to the consumers to take the article without the packaging materials at low cost.

Re-use:

One person's waste can be useful material for others. Efforts should therefore be made to encourage collection of such re-usable material through waste collectors, waste producers, NGOs and private sector instead of allowing reusable waste to land up on the disposal sites. Bottles, cans, tins, drums and cartoons can be reused.

Re-Cycling:

In the era of excessive packaging materials being used, a lot of recyclable waste material is generated. All-out efforts are necessary to retrieve recyclable material from the households, shops and establishments and fed to the recycling industries through intermediaries such as waste purchasers, waste collectors/NGOs, etc.

4.3.1 WET WASTE

It is proposed to provide platform where wet waste will be stabilised and treated through windrow method of composting. The waste will be kept for 15 days on the windrow platform where volume will be reduced by evaporation. Primary impurities and mixed waste will be easily removed manually.

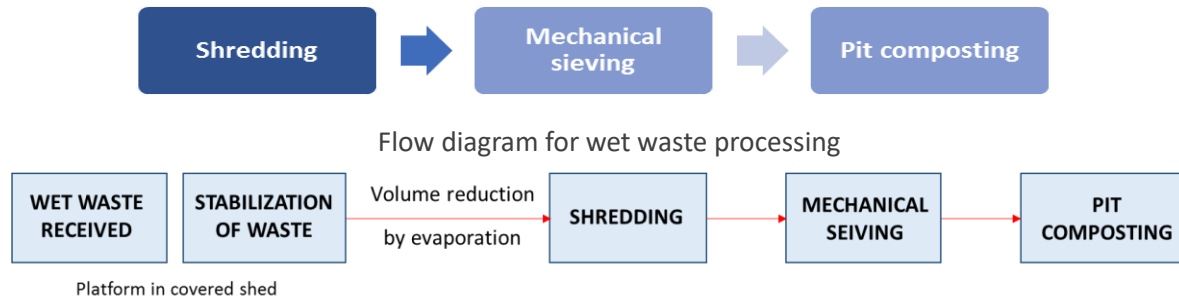


Table 18: Windrow calculations

WINDROW CALCULATION		
Wet waste in 2027	134.10	m
Wet waste in 2027	268.20	cum
For 5 days	1340.98	cum
for 15 days	4022.93	
height of windrow	2	cum
one side of windrow	3	
length of windrow	223.50	
for 15 days no of windrows required	3.00	
L of windrow	229.50	m
B of windrow shed	21	m
H of windrow shed	1.2	m

Hence a windrow platform of **62x21** is proposed.

Figure 1: Schematic sketch of wet waste shed with 3 activities

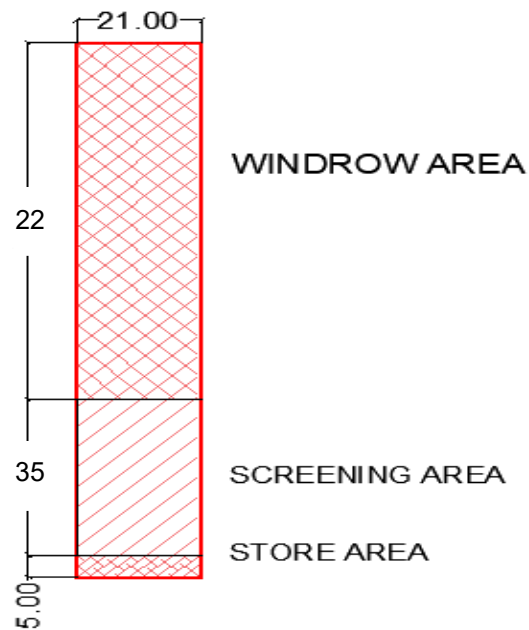
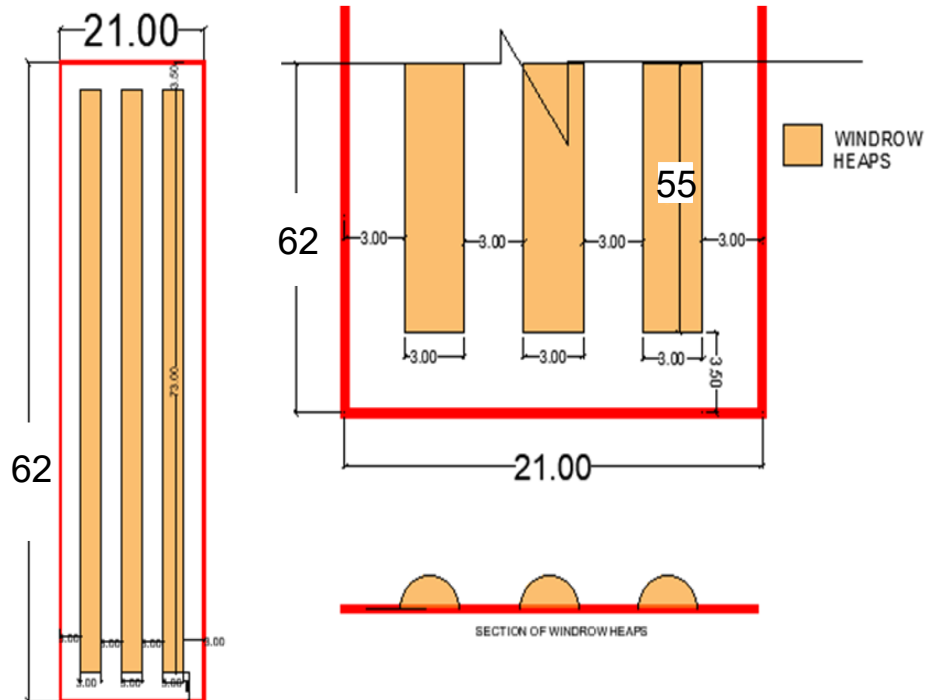


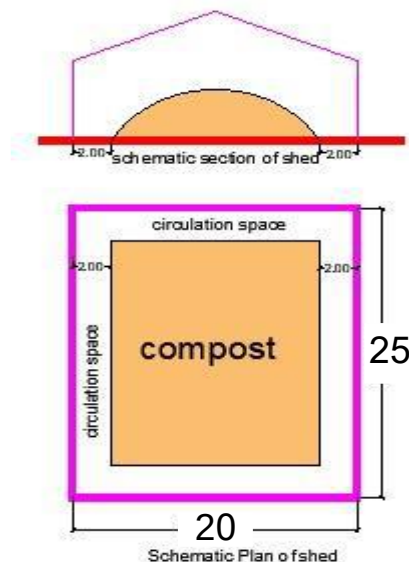
Figure 2: Schematic sketch of windrow area in shed for wet waste



Apart from a wet waste composting a shed a compost curing shed (2 Nos) of 25m X 20m is proposed. Generation of daily wet waste in 2027 shall be 134.1 TPD. Around 20% of the waste is

converted into refined compost. Hence, around 26.82 cum of compost shall be generated per day. Considering storage capacity of 15 days of compost, storage shed for 402.3 cum of compost will be required. Considering the height of compost heap up to 2 m, and circulation space of 2 metres around all 4 sides of heap, a shed of 25x20 m is proposed.

Figure 3: Schematic Sketch for Compost curing shed



Apart from a wet a Cement Concrete Road with both side drain is constructed as per ULB requirement to reaching on solid waste site with Lenth 1525 m & Width 4 m .

4.3.2 DRY WASTE

Dry and non-biodegradable waste will be taken to mechanical conveyer belt for segregation and bailing. The segregated material will be stored and stacked in separate compartments and will be disposed as per market links.

As of now waste is segregated and stacked.



There is no existing shed for dry waste processing & machinery keeping purpose , hence we propose 3 Screening Machine Shed with size (10 x 15) m , 4 Material Recovery Facility Shed with Size (18 x 15) m proposed .

Apart from 1 Rest room with attached toilet (11.73 x 3.5) m Proposed for rest Purposed .

4.3.2.A TIPPING SHED:

Currently there is no tipping shed on site where the waste can be received before segregation. Hence a tipping shed (3 Nos) of 25 m X 20 m is proposed for receiving waste (both wet and dry)

since no 100 % segregation is observed. This shed has the capacity of carrying waste for 5 days a week.

Table 18.1: Tipping shed calculations

TIPPING SHED CALCULATION		
Total waste in 2027	212.85	m
Total waste in 2027	425.70	cum
For 5 days	2128.5	cum
L of tipping shed	25	m
B of tipping shed	20	m
H of tipping shed	4.5	m

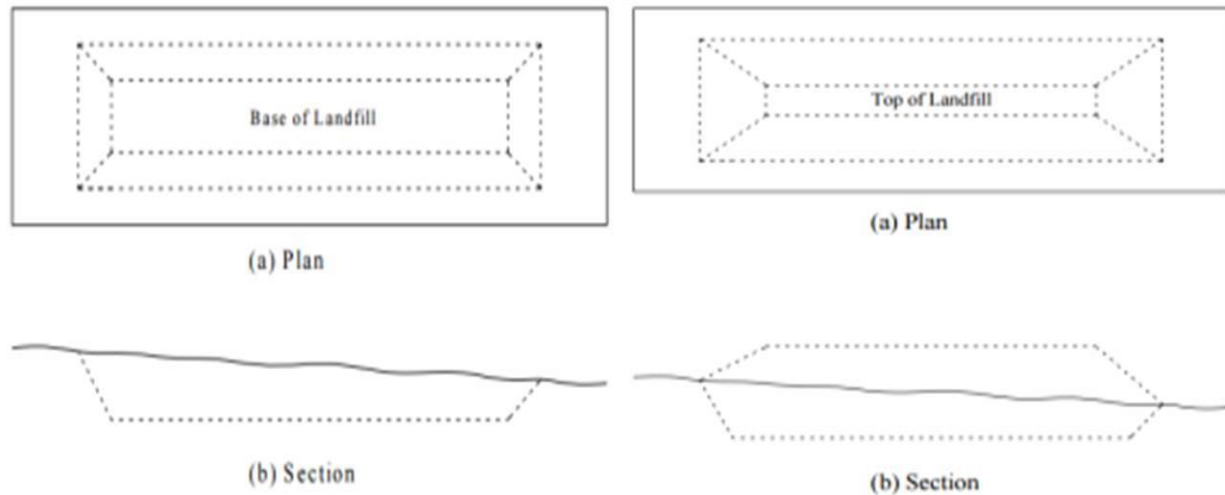
4.3.3 OTHER INERT WASTE

The untreated component of wet waste which is generally in the form of lumps will be taken to inert along with other material from MRF.



4.3.4 Landfill

As of now a simple landfill is proposed and being facilitated on dumping ground. Sanitary landfills are facilities for final disposal of Municipal Solid Waste on land, designed and constructed with the objective of minimizing impacts to the environment. The Solid Waste Management Rules 2016 provide comprehensive regulations on the siting, design and operation of sanitary landfills. "Landfilling shall be restricted to non-biodegradable, inert waste and other waste that are not suitable either for recycling or for biological processing. Landfilling shall also be carried out for residues of waste processing facilities as well as pre-processing rejects from waste processing facilities. Landfilling of mixed waste shall be avoided unless the same is found unsuitable for waste processing. Under unavoidable circumstances or till installation of alternate facilities, landfilling shall be done following proper norms. For small town it is decided to keep the inert waste on a hard bas platform until a regional or common landfill is developed in the area.

Figure 15: Conceptual design of landfill**4.3.5 Conceptual design of landfill**

- Landfill site will have fencing or will be hedged by brick wall from front side and sire fencing from other sides and provided with proper gate to monitor incoming vehicles or other modes of transportation.
- The landfill site will be well protected to prevent entry of unauthorized persons and stray animals.
- Approach and other roads for free movement of vehicles and other machinery will exist at the landfill site.
- The landfill site will have waste inspection facility to monitor waste brought in for landfill, office facility for record keeping and shelter for keeping equipment and machinery including pollution monitoring equipment.
- Provision like fire protection equipment and other facilities as required will be provided.
- Provision of Watchman Cabin and utilities such as drinking water, toilet, bathing facilities for workers and lighting arrangement for easy landfill operations when carried out in night hours will be provided.
- Safety provision including health inspections of workers at landfill site will be periodically made.

- Tree plantation will be done from all the sides of the landfill site will be periodically made.
- Approach road from city to landfill site will be provided, which will be suitable for working for all the 12 months of the year.
- Suitable lighting arrangement will be made on land fill site.

4.3.6 Types of waste to be land filled

The following types of waste will be land filled

- Mixed waste - Waste that is not suitable for processing.
- Pre-processing and post-processing rejects from waste processing sites.

Green waste such as garden waste, grass and tree clipping, recyclables will be salvaged and reused or recovered. Construction and Demolition Waste will be land filled separately on the landfill so that if required will be mined for future use. This will be used as daily cover at MSW landfills.

4.3.7 For disposal, the MSW rules provided are as follows:

"Land filling will be restricted to non-biodegradable, inert waste and other waste which are not suitable either for recycling or for biological processing facilities as well as pre-processing rejects from waste processing facilities. Land filling of mixed waste will be avoided unless the same is found unsuitable for waste processing. Under unavoidable circumstances or till installation of alternate facilities, land filling will be done following proper norms."

As of Now Existing Sanitary Available on site with good condition & is sufficient for storage of inert waste generated upto 2027 hence , provision of sanitary landfill not done in dpr .

4.4 COST ESTIMATES

4.4.1 Collection and transportation

Since the ULB is having sufficient vehicles there is no proposal of additional vehicle.

4.4.2 O & M of Collection and transportation

Table 21: Annual O & M Expenses for collection

A. MAN POWER FOR COLLECTION AND TRANSPORTATION						
SR.NO.	DESCRIPTION	NO.	DAILY WAGES PER PERSON	DAILY WAGES	MONTHLY EXPENSES	YEARLY EXPENSES
1	Drivers for door-to-door collection	84	451	37884	1136520	13638240
2	Helpers for door-to-door collection	84	432	36288	1088640	13063680

3	TOTAL	2225160	2,67,01,920
A		SAY	267 Lacs

Table 22: Annual Fuel Expenses

B. FUEL COST FOR VEHICLES FOR COLLECTION AND TRANSPORTATION						
SR.NO.	DESCRIPTION	NO.	DAILY WAGES PER PERSON	DAILY WAGES	MONTHLY EXPENSES	YEARLY EXPENSES
1	Ghantagadi	84	5	94.42	39656.4	14474586
2	Compactor	4	5	94.42	1888.4	689266
3	TOTAL				41544.8	15163852
					SAY	32.74 LACS

(Existing 84 Auto-tippers)

Table 23: Total O & M expenditure

C. TOTAL O & M ANNUAL EXPENDITURE	Lakhs
Cost of Fuel + Cost of Manpower (A+B)	418.66
Add 10% of Annual Maintenance Contract of vehicles	41.87
Total O & M Cost	460.52
Tipping fee per metric ton per day= Total O&M expenditure/ Waste generation/365 (INR)	SAY Rs. 660/MT

Table 24: Annual O & M Expenses for processing

SR. NO.	DESCRIPTION	NO.	DAILY WAGES PER PERSON	DAILY WAGES	MONTHLY EXPENSES	YEARLY EXPENSES
1	Workers for composting	4	432	1728	51,840	6,22,080
2	Workers for Material Recovery Facility (MRF)	8	432	4320	1,29,600	15,55,200
3	Watchman	1	432	864	25,920	3,11,040
4	Site supervisor	1	451	451	13,530	1,62,360
5	TOTAL	14				26,50,680

SAY 26.50 Lakhs

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

Chapter 5

IEC and AWARENESS GENERATION

5. IEC AND AWARENESS GENERATION

People's participation in the context of present-day urban scene is no longer a 'liberal ideal', it is a compelling necessity. People will be involved in clean city program in several ways ranging from awareness creation and mobilization people's action to provision of infrastructure and service.

5.1 ESSENTIAL STEPS OF PUBLIC PARTICIPATION

Participation by the whole community for the solid waste management is essential to bring about changes in the management with respect to segregation of waste at source, recovery of reusable and recyclable and storage of the waste prior to collection.

1. Why involve the community?

Experience has shown that involvement of people in decisions that affect them helps the members of a community to feel more responsible towards a communal facility provided by municipal body. It is important to note that the beneficiaries of civic service i.e. people will be as much involved as possible in decision that affect them e.g. location of communal garbage bin in a locality. Many times, it will not be possible to find the ideal location in a locality but if the local residents are able to arrive at common acceptable location, they will feel it is their own decision and then the garbage container / place will have better and efficient usage and clean surroundings.

The efficient service level is to do with the frequency of a collection system and the method used, and a related factor is the timing of the collection service. If it is possible to involve the people in a locality in decisions on these issues, it is likely that residents will be more prepared to cooperate with the collection system introduced by a municipal body.

Segregation of waste is the first step in encouraging people to handle their own waste and even dispose it off through environment friendly means, such as vermi compost or ordinary composting. Vermi composting process is currently adopted by many municipal bodies to dispose of house hold waste at building / residential colony / community / area levels.

2. Links with the community

The whole solid waste collection system requires active participation by the residents who receive the service; often this involves putting the garbage into specific types of containers and leaving it at a specified place, perhaps at a specified time. Close links between the municipal collection workers and the residents help to develop such co-operation. The community will also be involved in supervising the municipal service, reporting if collection is delayed or missed. If a community is aware of the collection service, and they know the workers are responsible they are more likely to cooperate with the system. Working at source separation of certain waste for recycling would

benefit the rag pickers who collect and sell the recyclable materials which would indirectly benefit the municipal body by reducing the quantity of the waste.

The success of SWM depends on building meaningful partnership with the stakeholders. Active involvement of the following community groups is essential especially in primary collection:

- Resident Welfare Associations
- Hotel owners Association
- Hospital owners' association
- Merchants' union
- Dairy owners' association
- Builders (Building Contractors) Association

The ULB may organize the above groups through a series of interactive meetings with the office bearers before a phased programme for community awareness is launched.

NGOs can provide support in:

- Awareness creation programmes
- In developing pilot programmes
- In organizing door – to – door collection systems
- In setting up local processing units

Community awareness programme have to focus on:

- Awareness of the perils of the present practice, their role in keeping the surroundings clean.
- Not to litter on streets
- Storage of waste at source in two bins in a segregated manner
- Primary collection from doorstep
- Popularizing 4R strategy – Reduce, Reuse, Recycle, Recovery
- Discourage use of plastics
- Developing methodology for reaching schools to create awareness among children

3. Target Groups (Stake Holders)

Different stake holders including Councillors, housing societies, NGO groups, house wives, shop keepers, school children, hawkers, construction agencies citizens etc., need to be identified who could be involved in the process. Each will be invited group by group to explain their role and appoint volunteers respectively.

5.1.1 Garbage management and environment education at school level.

Dayal committee (1995) recommended the importance of environmental education at school level by stating that "Integrated environment education will be provided to school children". It is

essential to emphasize on greater civic sense in the school education system especially at the pre-primary and primary levels, handling of one's own garbage and inculcating an awareness regarding the preservation of the clean surroundings and environment. This is one of the most significant approaches in which social awareness will be developed towards clean city concept and attitudinal changes brought about in the young generation regarding their responsibility to the city garbage handling that is generated by the people / community.

Education being an inseparable part of our social system, it is necessary to inculcate and create awareness amongst students regarding these practices, for which it is necessary to involve educational institutions. For this purpose, Student Plastic Collecting Program has been initiated. Each student will be given a card with place for 100 stamps. Every time a student collects and deposits 1kg of plastic, he/she would be given one stamp. Students who hence collect 100 stamps would be given awards in the form of stationary useful in school. Students would thus eagerly collect plastic from home which would reduce the amount of plastic in the waste generated; thus, helping in segregation. The plastic hence collected would be given to cement and other factories by the municipality. The school would appoint one girl and one boy from every class and one teacher for the school as "*Swachhta doot*" who would responsibly monitor all these proceedings and would at the same time take care of cleanliness and segregation of waste at household and school level.

Also, students would be given a chance to assess their parents for segregating waste at home and based on these marks suitable awards would be given to deserving parents.

At the same time, every school needs to take care of the following

- a) The school and its premises need to be kept clean
- b) Especially, toilets need to be used and maintained well.
- c) Awareness needs to be created amongst students for keeping the premises clean and of not spitting on roads.
- d) Students need to inform their family members about segregation of waste at home.

The schools following all the above programs successfully would be felicitated and awarded by the municipality.

5.1.2 Community contract system

Many cities in India are experimenting with community contract system in solid waste management. Hence a group of women are given street sweeping or garbage collection contract. Such community-based scheme operates in a variety way, some relying on NGO's or CBOs to provide management oversight and control. Experience has shown that community contracting will provide a satisfactory service at lower cost with supervision is provided by the community itself, overheads are low corruption is most absent.

5.1.3 Child to child in solid waste management

The concept of Child-to-Child programme assumes importance in relation to the solid waste management in cities. Child to Child approach is one of the most successful and important models in clean city programme. The motivation to provide health and sanitation education to school children arises from understanding that appropriate knowledge will prevent common diseases. If children are given proper direction towards behaviour that is conducive to healthy living, they will influence their surrounding thereby enhancing the health and cleanliness of their surroundings thereby enhancing the health and cleanliness of their immediate families and communities. Hence, children will be viewed as recipients and transmission of healthy and clean city concept in urban centres. The original idea of C-to-C programme i.e., elder child to younger child has gradually expanded to child to his peer, child to their family and child to their environment and community. The child who is the integral part of their community is being used as an agent of change in their own community or surroundings to propagate idea of proper garbage disposal and clean environment.

5.1.4 Senior citizens

Involvement of senior citizens in garbage collection and disposal and clean surroundings is one of the emerging approaches in waste management in urban centres. Working along with the Municipal Officers, these senior citizens will initiate actions at local level.

5.1.5 Women's self-help group

A woman is the main caretaker of every family. Hence it is her responsibility to take care that her house and the surrounding premises is clean. Accordingly, an action plan has been made as follows whose responsibility has been given to every woman in the self-help group.

- a) Women from self-help group should take care that no waste from their houses is thrown on roads or into open drains
- b) Women throwing waste on roads or into drains would be informed to the municipality.
- c) Every woman from the self-help has to ensure that her house, surrounding premises and the connecting roads are kept clean.
- d) Every woman from the self-help group would use paper / eco-friendly bags instead of plastic bags.
- e) There should be a toilet in the house of every woman in the self-help group.
- f) Every woman from the self-help group has to segregate dry and wet waste every day and hand it over to the *ghantagadi*.

Three best self-help groups following the above practices would be awarded by the municipality.

5.1.6 Banks and credit societies

To make Latur city community bin and plastic free, an action plan has been devised as follows. The responsibility of the same has been assigned to the authorities of banks and credit societies.

- a) Banks and credit societies have to keep their premises and their toilets clean.
- b) The waste generated at these institutions needs to be segregated and handed over to the *Ghantagadis* accordingly.
- c) Banks and credit societies need to take notice of whether applicants for loan have toilet facilities at their home. Applicants having toilet facility should be given priority in disbursements of loans. Applicants not having toilet facilities should be encourage to first creating toilet facility and they should be given loan at low interest for the construction of the same.
- d) To be able to segregate waste at household level, every bank through its SRS Fund should contribute up to 2000 buckets and credit society's up to 1000 buckets with stickers of their respective names on the same. It would help banks and credit societies to advertise at the household level.

5.1.7 Social Institutions

To make Latur city clean, green and beautiful is the responsibility of the Latur municipality. Social institutions active in each of these areas would be appointed for the cleanliness of their locality and would be monitored every month by the municipality.

- a) Every member of the social institutions has to ensure awareness regarding cleanliness amongst the citizens of Latur.
- b) Every member of the social institutions has to encourage people to segregate waste into dry and wet at their household level. The social institutions need to appoint 1 volunteer per 50 families to ensure waste segregation at household level. These volunteers would be registered at the municipality as **"Swachhta Doot"** and would be given charge to take care of individual localities.
- c) No member of any social institution should use plastic bags or sell any material covered in plastic. They should use only paper/eco-friendly bags for shopping.
- d) These members should ensure cleanliness in their localities and ensure that the public toilets in their locality are also kept clean.

- e) Social institutions need to publicly gather and clean their roads, ward and river bed.
- f) Social institutions need to make people aware of not spitting on roads or in public places and ensure the same.

5.1.8 Industrialists

To make Latur city community bin and plastic free, an action plan has been devised as follows. The responsibility of the same has also been assigned to the owners and authorities of different industries.

- a) Industrialists need to create awareness amongst the employees in their firms and also amongst general public regarding management of solid waste.
- b) Industrialists should not use plastic in their industries nor should use plastic for packing any products of their industries.
- c) Industrialists should take responsibility of certain areas in the cities along with the river bed and take the responsibility of maintaining and keeping it clean.

5.1.9 Complaints and supervision

Although complaints are rarely appreciated, they do provide a way of involving the community in supervising operations and maintaining standards. Citizens will also be encouraged to report complaints regarding garbage handling. The involvement of residents, shopkeepers and others will be valuable in stopping illegal dumping of loads of waste.

5.1.10 Meeting, Workshops and demonstration drives planned on continuous basis.

Prime objective of the activities under the programme is creation of public awareness for their responsibility under the MSW Rules 2015 and explain them contents of the Bye-law frames and also the Municipal Corporations plan for improving the services.

It is necessary to organize the public awareness programme zone and target group wise consultation with the corporation.

This will be one day duration workshop to explain the service users the proposed approach of the integrated solid waste management in the city and the role of the service users, citizens and outsiders.

The programme will be organized on an average 20 days in a year for all Prabhags in succession and target group wise. Target group stake holders; Councillors, housing societies, NGO groups, house wives, shop keepers, school children, hawkers, construction agencies citizen etc. will be invited group by group.

The literature, posters and other reading material desired for the programme will be repaired and distributed. As explained earlier the public awareness will encompass all the aspects of the compliance under the Rules. Major items will be-

- Separate collection of biodegradable and recyclable waste at source for all the generators.
- Generator's participation and close cooperation in door-to-door collection.
- Public participation in prevention of littering and presentation of deposition of garbage, debris and other households in drains and on public roads and places
- Encouragement in use of litter bins and keeping them clean
- Encouraging citizens for using on demand services of debris and green waste collection.
- Encouragement of decentralized waste processing at generators end by forming citizens groups for reducing, reusing and recycling the biodegradable and recyclable components and hand over debris and processing residue to the Corporation for final disposal.

Measuring results of PA programmes and corrective action.

The efforts will be formally evaluated as per the items on two items which are included in evaluation with CT & T work. Table below gives format of extract.

Table 25: Measuring results of PA programmes and corrective action

Item	Achieved Quantity	Quantity Desired	Points Assigned	Points Obtained	Instruction for Payment
Public Awareness Programme - Cumulative scheduled and conducted (No. achieved/ desired no.)					
Consultants visit cumulative (No. achieved/ desired no.)					

5.1.11 Organization for awareness and enforcement

Internal efforts by SWM unit: Awareness creation for waste disposal, as per Rule 2015 for all staff of SWM cell is also mandatory. Staff has to ensure that citizens are following rule 2015 while working. Officers have to make a schedule and arrange awareness programme for citizens and ensure good presence of citizens. Officers will be meet different sections of society for interaction and proper implementation.

External expertise of Consultant: A consultant knowledgeable and experienced in organizing and conducting public awareness programme and carrying out such work successfully for the past five years will be engaged for this work.

He / she will plan, organize and conduct the awareness programmes and initiate citizen's group's formation to continue such programmes periodically and help LMC in monitoring the results.

The programme will be a continuous feature with innovations in approach as the level of response of the users / beneficiaries' changes.

Public Awareness on Privatization: The service provider or Municipal Corporation will deploy a knowledgeable consultant or NGO working in the area of MSWM services since the public awareness is a job demanding skills of communication, motivation and convincing to accept the idea of an integrated and streamlined approach to the solid waste management. It is necessary to organize the public awareness programme zone and target group wise consultation with the Corporation. This will be one day duration workshop to explain the service users the proposed approach of the integrated solid waste management in the city and the role of the service users, citizens and outsiders.

Issue of the awareness & enforcement literature Instructions for cooperation and action on defaulters. These are many activities of individuals that create a nuisance to the public. Several well planned and implemented projects by ULB will be reduced to a sorry state just by misuse and disregard of the public. The most common cases of public nuisance are cause due to cases of open defecation, defacement, littering etc. The rate of public nuisance in an area also related to the social and culturally expected norms of the city or area.

The first step towards this is always through generating a public awareness regarding the importance of cleanliness and stopping of public nuisance. It is neither to expect that all the citizens will learn or except the changes immediately. It is observed that usually about 10% of the population quickly understands the environmental and practical need for maintaining cleanliness and hence starts co-operating. It is possible to convenience another 30-40% of the population over a period through proper and sustains awareness campaign and involvement of community. The balance will not budge unless stringent enforcing.

This is where the second step of controlling comes in once a minimum critical mass has been created it will be the right time to strictly enforce a pineal system for erring citizens. A few instances of charging administrative charges will force people to fall in line. The best practice tried in this regard for public places is to establish separate nuisance detection squads.

Nuisance detection squads: The municipal Corporation act norms have a clause that provides for each municipal corporation to evolve its own by laws for nuisance detection. The ULB will thus create by laws that designate the formation of a nuisance detection squad and its role and responsibility. Additional for the squad to have policing rights. Special powers need to be created through the police act of the state / city. These will give the squad the right to stop a person from

creating a public nuisance of catch the person in the act and levy a monetary charge. The monetary charge will be in terms of administrative charge i.e. in lieu of the expenses required for cleaning the nuisance created by the individual.

The squad will ideally be formed with ex-serviceman, ex-police staff, etc. A legal agreement will be entered into with each of them to avoid subsequent problems. Another option is to use women's group. In some cases, municipal staff has been used for this purpose.

The squad will be give pre-printed and numbered receipts of fixed denominations (of say Rs. 10.50 and 200) to use as receipts for charging the defaulters. Only the same of the defaulting generators will be entered while issuing the same.

A part / full remuneration of the squad members will be linked to the fines collected. For the scheme to be successful each of the squads will consists of 2/3 persons and given a uniform and identify cards so that they are taken seriously. The members of the squared will be encouraged to carry a mobile phone. A vehicle will be taken on rent to give greater mobility to the squad / supervisor. A closed co-ordination with the city police will be useful so that the squad will register. FIR in case the erring citizens refuse to pay the administrative charge. The jurisdiction of the squad will be rotated once every 3 months to avoided compliancy.

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
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Chapter 6

O & M ASPECTS

6. O & M ASPECTS AND ENVIRONMENTAL MANAGEMENT SYSTEM

6.1 MANAGEMENT INFORMATION SYSTEM

It is proposed to equip and provide every vehicle engaged in collection and transportation system with geo spatial information system i.e. GPS units which will provide detail data of route, stoppage points, overall trip generations and total running of vehicles per day. It will help to analyse the efficiency of the service delivery and extent of service coverage. Also, monitoring the overall team will be easy.

6.2 COMPLAINT HANDLING SYSTEM

Presently, in sanitation department of the ULB, a register is maintained which keeps records of all the complaints registered by individual in a written format. Apart from this, it is suggested that the ULB should make it mandatory to every contractor (if outsourced) maintain a separate register for every zone (or every auto tipper/ tricycle) in order to take signature of residents periodically.

Also, it is suggested that ULB should develop a web application and portal where citizens can send photographs or pictures of garbage/ solid waste littering along roads, public spaces, or overflowing community bins.

At every location where community bins are proposed (like market places, mandi, commercial areas, etc.) it is essential to install a flex board giving detail contact information of the contractor, supervisor/ mukadam and SI whom people can contact immediately for cleaning/ emptying the bins or containers.

6.3 ELEMENTS OF A COMPLAINT REDRESSAL SYSTEM

Typical elements of a complaint redressal system include the following:

1. Complaint management system: A computerised central complaint management system should be networked and the complaints could be recorded through a register. A grievance redressal officer from the MSWM department or cell at senior level should be responsible for recording and monitoring the complaints and also for taking necessary actions for redressal.
2. Medium of complaint registration: Multiple channels or a combination of different channels may be adopted for receiving complaints, e.g., phone calls to a centralised customer service or complaint number, SMS messages to notified mobile numbers, automated generated complaints sent to commissioners for their records, walk-in complaint registration, and online complaint registration.
3. Complaint registration and recording system: This system should assign a unique ID to each complaint generated; record contact details of the complainant; record details of the physical

location (zone, ward, area) relevant to the complaint; assign the complaint to the concerned official in the MSWM department or cell; record the stipulated time within which the complaint shall be redressed; provide an acknowledgement receipt to the complainant with all the above details, in case the complaint is registered manually or online; and Provide a complaint reference number with an SMS of registration to telephone-based complainants.

4. Resolution certificate: Field officers, after resolving the complaint, should take resolution certificate from the complainant and subsequently inform the complaint cell. The complaint shall thereafter be treated as resolved.

5. Complaint resolution and feedback: The designated official for complaint resolution in the MSWM department or cell shall be made aware of received complaints on a daily basis. Feedback could be taken through telephone, internet, SMS.

6. Pending complaints: Complaints which are not resolved in stipulated time shall be deemed pending. The reason for the pending complaint should be recorded and the designated officer and the complainant should be duly informed. Such pending complaints should automatically be escalated to higher officials for monitoring and directions.

7. Reporting and complaint analysis: A daily status report of complaint redressal should be prepared by an officer and submitted to the higher officer-in-charge for further directions. The complaint management system should generate periodic, area-wise reports on number of complaints received, nature of complaints, time taken for resolution, etc. The report should highlight the critical issues such as most frequently received complaints, frequently delayed responses, repetition of complaints (if any), time for resolution of complaints, etc. The weekly analysis of all complaints received should be reported to the Head of Municipal Corporation. Status of the complaints should be put in public domain and updated on a daily basis for ensuring transparency of the system.

6.3.1 Environmental Health and Safety Aspect

While providing any sort of sanitation management facility, environmental concern is of utmost priority. It is essential to take care that no compromise or act of neglect is observed while providing solid waste management service in the city.

ULB is should consider following things-

- Periodical training and awareness generation of sanitation staff (including contracted staff) in order to convey the possible environmental hazards during service management.
- Periodical cleaning of natural resources like river, natural drains, storm water drains, road side gutters in order to avoid contamination as well as clogging of water.

- Explaining hazards of manual handling of waste at all stages of waste management and ways to reduce the human contact to maximum extent.
- Instructions for transporting all the waste in covered or closed vehicles, especially special care to be taken while carrying wet waste from hotels, fish markets, slaughter houses, etc. where leachate is formed.
- Providing adequate safety equipment like gum boots, masks, gloves, helmet, apparels, trowels, brooms, etc. to every worker.

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Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

Chapter 7

FUNDING PATTERN

7. FUNDING PATTERN

As per City Solid Waste Action Plan (C-SWAP), the approved cost for the city of Latur is Rs.

1731.31 Lakhs. **GR.No- स्वमअ-2022/प्र.क्र.73/नभेव 34** (As per MoHUA approved (C-SWAP)) since Latur is a D class Municipal Corporation. Hence the funding pattern for the proposed works in DPR is as follows.

Table 18: Funding Pattern for SWM

Sr. No.	Particulars	In Percent (%)	In INR Lakhs
A.	Central Share	33%	571.3323
B.	State Share	37%	640.5847
C.	ULB Share	30%	519.393

Source: **GR.No- स्वमअ-2022/प्र.क्र.73/नभेव 34** (As per MoHUA approved (C-SWAP))

7.1 OTHER SOURCES OF FINANCING

Grants from 15th Finance commission (FC)

Presently, LMC is receiving a major portion of funds from 15th finance commission. Since any ULB can utilize 50% of the received grants for undertaking various capital as well as operational works related to city level solid waste management, it can be seen as a notable source of funding. The table below shows the grants received to LMC for last two years under 15th FC. Up to 50% of grant received by 15th Finance Commission can be used to manage Municipal Solid Waste.

Corporate Social Responsibility (CSR)

More funds can be explored under the CSR. As CSR are needed to be explored hence not been considered under the funding options. The term "Corporate Social Responsibility (CSR)" can be referred as corporate initiative to assess and take responsibility for the company's effects on the environment and impact on social welfare. The term generally applies to company's efforts that go beyond what may be required by regulators or environmental protection groups.

Government has developed a framework through CSR policy in line with Section 135 of the Companies Act 2013, Companies (Corporate Social Responsibility Policy) Rules, 2014 by which a company can-

- Establishing a guideline for compliance with the provisions of Regulations to dedicate a percentage of Company's profits for social projects.

- Ensuring the implementation of CSR initiatives in letter and spirit through appropriate procedures and reporting
- Creating opportunities for employees to participate in socially responsible initiatives.

Thus, CSR can now a day's seen as one of the components for mobilizing funds for various works in social cause. Many industries are coming up to provide financial assistance to the cities and help bridging the gap in financial deficit experienced by the ULBs while managing city level services.

7.2 TOTAL REVENUES GENERATED

However, in initial years, the ULB may not be able to recover 100% user fee from households. Therefore, state Govt / ULB may make up the deficit from other sources in initial years.

7.2.1 Revenue from Sale of Products

Various revenue streams for the proposed MSW project are expected to be as follows:

Sale of compost: On an average around 20% of compost is expected to be produced in the composting facility on daily basis which could be sold at the price of Rs 1500 per ton. Table below provides year wise production of compost, recyclables from the processing facility for the ULB.

Table 19: Revenue from sale of products

Sr. No.	Year	2022	2027	2032	2037	2042
1	Waste generation in MTPD	224.19	247.37	271.83	297.57	324.59
2	Total recyclable plastic waste (9.18%)	20.58	22.71	24.95	27.32	29.80
	(Tons per day)					
3	Rate of Plastic per MT in Rs.	2500	2500	2500	2500	2500
4	Total revenue generated per annum from sell of plastic (Rs lakh INR)	187.80	207.22	227.70	249.27	271.90
5	Compost generated from wet waste (20%) (Tons per day)	28.25	31.17	34.25	37.49	40.90
6	Cost of compost Per MT in Rs.	1500	1500	1500	1500	1500
7	Total revenue generated per annum from sell of compost (Rs lakh INR)	154.66	170.65	187.52	205.28	223.92
8	Annual revenue (INR Lakhs)	342.46	377.86	415.23	454.54	495.82
	(4+7)					

Note: The revenue generation figures are based on projections and are subject to prevailing market rate variations

7.2.2 Proposed Tariff Charges

Currently, there is no user fee in the city for providing solid waste management services. In order to mobilise financial resources for SWM project especially for waste treatment & disposal, it is important to levy some kind of user fee on the public to recover the ULB expenses against SWM related works.

Proposed Tariff Charges

- Domestic – non-slum 30
- Domestic – Slum/ Weaker section 20
- Commercial – Small 75
- Commercial – Large 150

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

Chapter 8

RECAPITULATION SHEET

8. RECAPITULATION SHEET

Sr. No.	Particulars	Unit	Existing capacity available	Proposed Capacity in SBM 2.0	Proposed Amount in Rs. in SBM 2.0
A	Wet Waste (Windrow Platform)				
1	Civil Works- Windrow shed with platform - (62x21)M	TPD	-	135	12996129.78
2	Civil Works-Compost curing shed - (25x20x4.5)M - (2 Nos)	TPD	-	110	14393001.27
3	Machinery- Wet Waste Shredder Machine - (03 Nos) (MJP SWM SOR 2023-24: Item No: 1b)	TPD	-	25	2250000.00
4	Machinery- Screening Machine with Belt Conveyor - (03 Nos) (MJP SWM SOR 2023-24 : Item No: 12b)	TPD	-	16	4924437.00
5	Machinery- Compost Sieve (4 MM) - (05 Nos) (MJP SWM SOR 2023-24 : Item No: 9a)	Kg/hr	-	500	660000.00
6	Squeezer for Wet Waste - (3 Nos)(As per MJP SWM SOR 2023-24 : Item No : 13a)	-	-	-	1650000.00
7	a) CEMENT CONCRETE ROAD - (L - 1525 M, W- 4 M)	M	-	1525 M	18409894.67
	b) TWO SIDE GUTTER (Length Each 1525 M)	M	-	1525 M	8866865.76
	Sub Total A (A1+A2+A3+A4+A5+A6+A7a+7b)				64150328.49
B	Dry Waste (MRF Plant)				
1	Civil Works- Shed for Screening machine (10x15)M- 3 Nos	TPD	-	52	8323011.77
2	Civil Works- MRF Sorting Shed with partition (18x15)M - 4 Nos	TPD	-	52	16933405.66

Sr. No.	Particulars	Unit	Existing capacity available	Proposed Capacity in SBM 2.0	Proposed Amount in Rs. in SBM 2.0
3	Civil Works- Tipping Shed (25x20x4.5) - 3 Nos	TPD	-	52	16052621.60
4	Civil Works - Rest Room With Attached Toilets (3.5x11.73) M	-	-	-	1703932.79
5	Machinery - Platic Shredder Machine (04 nos) (MJP SWM SOR 2023-24 : Item No: 10a)	TPD	-	4	2605108.00
6	Machinery - Automated MRF Sorting System + RDF Facility (03 nos) (MJP SWM SOR 2023-24: Item No: 8b)	TPD	-	20	22880064.00
7	Machinery - Horizontal Beller Machine (04 Nos) (MJP SWM SOR - 2023-24: Item No: 11a)	-	-	-	3389832.00
8	Machinery - Plastic Dust Remover Machine (04 Nos) (MJPSWM SOR - 2023-24 : Item No: 5b)	TPD	-	0.5	2203388.00
9	Machinery - Segregation Conveyor with Seating Facility & Bins - (03 Nos) (MJP SWM SOR 2023-24: Item No: 2d)	TPD	-	10	3864408.00
	Sub Total B (B1+B2+B3+B4+B5+B6+B7+B8+B9)				77955771.82
C	Total Project Basic Cost (A+B)				142106100.31
D	MJP Fee (1% of C)				1421061.00
E	PMC Fees (2.4 % of C)				3410546.41

Sr. No.	Particulars	Unit	Existing capacity available	Proposed Capacity in SBM 2.0	Proposed Amount in Rs. in SBM 2.0
F	GST				
1	Civil Works (18% of (A1+A2+8a+8b+B1+B2+B3+B4))	-	-	-	17582195.40
2	Plant Machinery (18% of (A3+A4+A5+A6+A7+B5+B6+B7+B8+B9))	-	-	-	7996902.66
3	PMC Fees (18% of F)	-	-	-	613898.35
	Total GST (F1+F2+F3)				26192996.41
TC-1	Total Project Cost Of Solid Waste Management (C+D+E+F)				173130704.13
TPC	TOTAL PROJECT COST (TC-1)				173130705.00

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

ESTIMATES

LATUR MUNICIPAL CORPORATION
DISTRICT - LATUR, DIVISION - AURANGABAD
(62M X 21 M) WINDROW PLATFORM

ABSTRACT

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
1	Item no 1				
	Excavation for foundation in earth, soil of all types, sand, gravel and soft murum, including removing the excavated material up to a distance of 50 m. beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift upto 1.5 m.) By Mechanical Means	41.98	Cu.m.	217.14	9114.66
	PWD S.S.R. 2022-23, Item No. 21.02				
	As Per Attached RA Item No.-1				
2	Item no 2				
	Excavation for foundation in Hard murum including removing the excavated material upto a distance of 50 metres beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift from 1.5 to 3.0m.) By Mechanical Means	51.30	Cu.m.	238.12	12215.71
	PWD SOR 2022-23, Item No 21.06				
	As Per Attached RA Item No.-2				
3	Item No.-3				
	Excavation for foundation in Soft rock and old cement or lime masonry foundations including removing the excavated material upto a distance of 50 metres beyond the building area and stacking as directed, including dewatering, preparing the bed for the foundation and necessary back filling with available earth/murum, ramming ,watering including shoring and strutting etc. complete. (Lift from 1.5m To 3.0 m.) By Mechanical Means				
	PWD SOR 2022-23, item no 21.14	16.20	Cu.m.	450.02	7290.34
	As Per Attached RA Item No.- 3				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
4	Item No.-4				
	Excavation for foundation in Hard rock by chiselling, wedging, line drilling, etc. including trimming and levelling the bed, removing the excavated material upto a distance of 50 metres beyond the building area stacking as directed, dewatering and back filling with available earth/ murum watering, ramming etc. complete. (Lift upto 1.5 m). By Mechanical Means				
	PWD SOR 2022-23, item no 21.20	10.80	Cu.m.	1371.04	14807.26
	As Per Attached RA Item No.- 4				
5	Item no 5				
	Providing dry/ trap/ granite/ quartzite/ gneiss rubble stone soling 15 cm to 20 cm thick including hand packing and compacting etc. complete.	318.27	Cu.m.	1810.19	576135.53
	PWD S.S.R. 2022-23, Item No. 21.38				
	As Per Attached RA Item No.-14				
6	Item no 6				
	Providing and laying Cast in situ/Ready Mix cement concrete in M15 of trap/ granite/quartzite/gneiss metal for foundation / steps including steel centering, formwork, laying/pumping, compacting, roughening them if special finish is to be provided, finishing uneven and honeycombed surface and curing etc. complete. The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface, only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed.),with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)	137.43	Cu.m.	7655.53	1052114.63
	PWD S.S.R. 2022-23, Item No. 24.04				
	As Per Attached RA Item No.-6				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
7	Item no 7				
	Providing and fixing in position after hoisting, precast 1:2 cement mortar reinforcement Jali 50mm thick of approved design cement mortar 1:3 and curing complete (including 6mm diameter mild steel bar reinforcement)	1375.60	Sqm	982.91	1352095.12
	PWD S.S.R. 2022-23, Item No. 26.46				
	As Per Attached RA Item No.-52				
8	Item no 8				
	Providing and laying in situ/ Ready Mix cement concrete M-20 of trap/granite/quartzite/ gneiss metal for R.C.C. work in foundations like raft, strip foundations, grillage and footings of R.C.C. columns and steel stanchions etc. including bailing out water, formwork, laying/ pumping cover blocks, compaction and curing roughening the surface if special finish is to be provided, (Excluding reinforcement and structural steel) etc. complete, with fully automatic microprocessor based PLC with SCADA enabled Reversible Drum Type mixer/ concrete Batch Mix plant (Pan mixer) etc. complete, with fine aggregate (Natural Sand/ Crushed Sand V.S.I. Grade finely washed etc.)				
	PWD S.S.R. 2022-23, Item No. 25.11	21.89	Cu.m.	8403.46	183934.85
	As Per Attached RA Item No.-7				
9	Item no 9				
	Providing and laying cast in situ/ Ready Mix cement concrete M-20 of trap/ granite/ quartzite/ gneiss metal for R.C.C. columns as per detailed designs and drawing or as directed including centering, formwork, cover blocks, laying/ pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete, (Excluding reinforcement and structural steel) with fully automatic microprocessor based PLC with SCADA enabled Reversible Drum Type mixer/ concrete Batch Mix plant (Pan mixer) etc. complete with fine aggregate (Natural Sand/ Crushed Sand V.S.I. Grade finely washed etc.)	6.99	Cu.m.	15409.73	107744.81
	PWD S.S.R. 2022-23, Item No. 25.31				
	As Per Attached RA Item No.-8				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
10	Item no 10				
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap / granite/quartzite/ gneiss metal for R.C.C. beams and lintels as per detailed designs and drawings or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction and roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)	15.42	Cu.m.	13821.54	213148.90
	PWD S.S.R. 2022-23, Item No. 25.50				
	As Per Attached RA Item No.-9				
11	Item no 11				
	Providing uncoursed rubble masonry of trap / granite / quartzite / gneiss stones in cement mortar 1:6 in foundation and plinth of inner walls / in plinth of external walls including bailing out water manually ,striking joints on un exposed faces and watering etc.complete.	4.05	Cu.m.	6364.71	25777.07
	PWD S.S.R. 2022-23, Item No. 28.01				
	As Per Attached RA Item No.-55				
12	Item no 12				
	Providing flush grooved pointing with cement mortar 1:3 for stone masonry work including scaffolding and curing etc. complete.	9.00	sq. m.	190.92	1718.26
	PWD S.S.R. 2022-23, Item No. 32.17				
	As Per Attached RA Item No.-56				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
13	Item no 13				
	Providing and laying in situ cement concrete M -30 with tremix treatment for 200 mm harge thickness for Concrete Road is including laying plastic sheet for 125 micron thickness with groove cutting of 4 mm wide and 20 mm deep with necessary refilling with bitumen (excluding reinforcement) with coarse and fine aggregate (natural sand/ VSI grade finely washed crushed sand) etc. complete with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete.	271.44	Cu.m.	9812.26	2663440.77
	PWD S.S.R. 2022-23, Item No. 5.22				
	As Per Attached RA Item No.- 77				
14	Item no 14				
	Providing and fixing in position TMT - FE - 500 bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintels pardis, copings, fins, arches etc. as per detailed designs, drawings and schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.	12.58	MT	94098.45	1183758.46
	PWD S.S.R. 2022-23, Item No. 26.33				
	As Per Attached RA Item No.-12				
15	Item no 15				
	Providing sand faced plaster externally In cement mortar using approved screened sand, in all positions includ-ing base coat of 15mm thick in C.M. 1:4 using waterproofing compound at 1 kg.per cement bag curing the same for not less than 2 days and keeping the surface of the base coat rough to receive the sand faced treatment 6 to 8mm thick in C.M. 1:4 finishing the surface by taking out grains and curing for fourteen days scaf-folding etc.complete.	74.70	Sq.m.	704.72	52642.55
	PWD S.S.R. 2022-23, Item No. 32.11				
	As Per Attached RA Item No.-21				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
16	Item no 16				
	Providing and applying two coats of water proof cement paint of approved manufacture and of approved colour to the plastered surfaces including scaffolding if necessary, cleaning and preparing the surface, watering for two days etc. complete.	83.70	Sqm	82.87	6936.30
	PWD S.S.R. 2022-23, Item No. 35.13				
	As Per Attached RA Item No.-57				
17	Item no 17				
	Structural steel work -Providing structural steel work in single stanchions com-posed of R.S.J. Channel etc. with caps, bases, mild steel plated, angle brackets, cleats, gusset plates, anchor bolts etc. as per detailed designs and drawings or as directed including cutting, fabrication, hoisting, erecting fixing in position, making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it two. coats of oil painting complete etc. Spec. No.: Bd.C.6 Page No. 277(FOR STEEL COLUMNS)	7.91	MT.	102811.44	813404.81
	PWD S.S.R. 2022-23, Item No. 23.03				
	As Per Attached RA Item No.-58				
18	Item no 18				
	Providing and fabricating structural steel work in rolled sections like joists, channels, angles, tees etc. as per detailed designs and drawing or as directed by Engineer-in-charge including cutting, fabrication, hoisting & erecting fixing in position with connecting plates, braces etc. and one coat of anticorrosive paint and over it two coat of oil paintings of approved quality and shade complete. Spec. No.: Bd.C.2 Page No. 275 (FOR ROOFING MEMBER)	5.77	MT.	106834.36	616626.54
	PWD S.S.R. 2022-23, Item No. 23.01				
	As Per Attached RA Item No.-59				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
19	Item no 19				
	Trusses-Providing structural steel work in trusses, other similar trussed purlins and members with all bracing, gusset plates etc. as per detailed designs and drawings or as directed including cutting, fabricating, hoisting, erecting fixing in position, Making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it 2 coats of oil painting approved quality and shade etc. complete.	15.43	MT.	125312.49	1934099.85
	PWD S.S.R. 2022-23, Item No. 23.04				
	As Per Attached RA Item No.-60				
20	Item no 20				
	Providing and fixing colour coated Zincolume (R) AZ150 (min 150 gms/sq.mt. total on each side) profiled sheets for roofing. The feed material is manufactured out of nominal 0.45 mm Base Metal Thickness (BMT) (0.5 mm TCT), Hi-strength steel with min.550 MPa yield strength, metallic hot dip coated with Aluminium-Zinc alloy (55% aluminium 43.4% zinc 1.6% silicon) with COLORBOND (R) steel quality super durable polyester paint coat (with inorganic pigment). The paint shall have a total coating thickness of nominal 35 um, comprising of nominal 25 um exterior coat on top surface and nominal 10 um reverse coat on back surface. Profile sheet shall have nom. 950-1050 mm effective cover width and nominal 25-30 mm deep ribs with subtle square fluting in the five pan at nominal 180-250 mm center- to-center. The end rib shall be designed for anti-capillary groove. and return leg. The feed material should have coil manufacturers product details marked a regular interval. Including fasteners with min. fastened with min. 25 um Zinc-Tin alloy coated, Hex head, self-drilling screw etc. complete. (weight of profile 4.52 Kilogram/ One Square Metre)	1485.54	Sqm.	1230.48	1827922.80
	PWD S.S.R. 2022-23, Item No. 38.34				
	As Per Attached RA Item No.-61				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
21	Item no 21				
	Providing and fixing plain zinc sheeting of 0.80 mm thick (22 B.W.G.) over the ridge hip or valley to galvanized iron sheet roofing including all fastening and bolt galvanised ironscrews and bolts, lead and bitumen washers etc. complete.(Weight of 6.8 Kilogram/sq.m.).	37.44	Sq. M.	1194.81	44733.72
	PWD S.S.R. 2022-23, Item No. 38.05				
	As Per Attached RA Item No.-62				
22	Item no 22				
	Point wiring in for light/fan/bell in 20 mm metal conduit with 1.5 sq.mm (2+1E) FRLSH grade copper wire, flush type switch, earthing and required accessories as per specification No: WG-PW/SW	22.00	points	898.80	19773.60
	Electrical Mech SOR 2022-2023, item no -1-7-1 ,page no 11				
	As Per Attached RA Item No.-30				
23	Item no 23				
	Supplying & erecting inverter LED batten 10W tube light fitting with polycarbonate housing, heat sink, integrated HF electronic driver, Min. 2600 mAh Lithium ion Battery with charging time of 8-10 Hours and backup time of Min. 3 hrs. with minimum 25% of initial Watts having luminous efficacy of 100 lumen/watt, CRI>80, CCT of 6500K and THD<=20% having useful life of minimum 25000 hrs. with overheating protection with 2 years warranty.	20.00	Nos	699.30	13986.00
	PWD ELECTRICAL CSR 2022-2023, item no -2-1-21, page no 25				
	As Per Attached RA Item No.-29				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
24	Item no 24				
	Providing and fixing Road junction / Information sign board of size 0.90 m x 0.60 m. prepared on 16 gauge M.S. sheet with angle iron frame of size 35 x 35 x 5 mm including painting with one coat of zinc chromate stoving primer and two coats each of green / white background and backside gray stove enamelled, bonded with red retroreflective sheet Engineering grade, border / letters / numeral / arrows, coated with non peelable crystal clear protective coat retaining 100% reflection including two angle iron post of size 50 x 50x 5 mm of 3.65 m. long inflated at bottom drilled on top and painted in white and black bands of 30cm. with 4 Nos. high strength G.I. bolts and nuts of size 10 mm dia. and 20mm long sheet and angle iron post in one piece without joints including all taxes, conveying, fixing round with cement concrete 1:4:8 block of 60cmx 60cmx 75cm size as directed by Engineer-in- charge etc. complete. Mild Steel Board with Engineering Grade.				
	PWD SOR 2022-23, item no 6.47	1.00	No	7881.14	7881.14
	As Per Attached RA Item No.- 65				
25	Item no 25				
	Design & Approval Chrges for Concrete , Reinforcement & structural steel 2%			0.02	254826.07
	TOTAL				12996129.78

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

LATUR MUNICIPAL CORPORATION
DISTRICT - LATUR, DIVISION - AURANGABAD
(62M X 21 M) WINDROW PLATFORM

MEASUREMENTS

Item No	Description	No	Length	Width	Depth	Qty	Unit
1	Item no 1						
	Excavation for foundation in earth, soil of all types, sand, gravel and soft murum, including removing the excavated material up to a distance of 50 m. beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift upto 1.5 m.) By Mechanical Means						
	For Column Footing	38	1.50	1.50	0.40	34.20	Cu.m.
	Plinth Beam (longer side)	30	2.61	0.23	0.20	3.60	Cu.m.
	Plinth Beam (shorter side)	8	3.65	0.23	0.20	1.34	Cu.m.
	Ramp	4	4.50	0.45	0.35	2.84	Cu.m.
		Total Excavation Quantity				41.98	Cu.m.
2	Item no 2						
	Excavation for foundation in Hard murum including removing the excavated material upto a distance of 50 metres beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift from 1.5 to 3.0m.) By Mechanical Means						
	Hard murum	38	1.50	1.50	0.60	51.30	Cu.m.
3	Item No.-3						
	Excavation for foundation in Soft rock and old cement or lime masonry foundations including removing the excavated material upto a distance of 50 metres beyond the building area and stacking as directed, including dewatering, preparing the bed for the foundation and necessary back filling with available earth/murum, ramming ,watering including shoring and strutting etc. complete. (Lift from 1.5m To 3.0 m.) By Mechanical Means						
	For Column Footing	24	1.50	1.50	0.30	16.20	Cu.m.

Item No	Description	No	Length	Width	Depth	Qty	Unit
4	Item No.-4						
	Excavation for foundation in Hard rock by chiselling, wedging, line drilling, etc. including trimming and levelling the bed, removing the excavated material upto a distance of 50 metres beyond the building area stacking as directed, dewatering and back filling with available earth/ murum watering, ramming etc. complete. (Lift upto 1.5 m). By Mechanical Means						
	For Column Footing	24	1.50	1.50	0.2	10.80	Cu.m.
5	Item no 5						
	Providing dry/ trap/ granite/ quartzite/ gneiss rubble stone soling 15 cm to 20 cm thick including hand packing and compacting etc. complete.						
	below column	38	1.30	1.30	0.30	19.27	Cu.m.
	below flooring	1	61.54	20.54	0.23	290.73	Cu.m.
	for ramp	2	4.00	4.50	0.23	8.28	Cu.m.
					Total	318.27	Cu.m.
6	Item no 6						
	Providing and laying Cast in situ/Ready Mix cement concrete in M15 of trap/ granite/quartzite/gneiss metal for foundation / steps including steel centering, formwork, laying/pumping, compacting, roughening them if special finish is to be provided, finishing uneven and honeycombed surface and curing etc. complete. The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface, only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed.),with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)						
	below column	38	1.30	1.30	0.10	6.42	Cu.m.
	below flooring	1	62.00	21.00	0.10	130.20	Cu.m.
	for ramp	4	4.50	0.45	0.10	0.81	Cu.m.
					Total	137.43	Cu.m.
7	Item no 7						
	Providing and fixing in position after hoisting, precast 1:2 cement mortar reinforcement Jali 50mm thick of approved design cement mortar 1:3 and curing complete (including 6mm diameter mild steel bar reinforcement)						
	Reinforcement Jali for Floor	1	62.00	21.00		1302.00	Sq.m
	Reinforcement Jali for ramp	4	4.00	4.60		73.60	Sq.m
					Total	1375.60	Sq.m

Item No	Description	No	Length	Width	Depth	Qty	Unit
8	Item no 8						
	Providing and laying in situ/ Ready Mix cement concrete M-20 of trap/granite/quartzite/ gneiss metal for R.C.C. work in foundations like raft, strip foundations, grillage and footings of R.C.C. columns and steel stanchions etc. including bailing out water, formwork, laying/ pumping cover blocks, compaction and curing roughening the surface if special finish is to be provided, (Excluding reinforcement and structural steel) etc. complete, with fully automatic microprocessor based PLC with SCADA enabled Reversible Drum Type mixer/ concrete Batch Mix plant (Pan mixer) etc. complete, with fine aggregate (Natural Sand/ Crushed Sand V.S.I. Grade finely washed etc.)						
	Footing	38	1.20	1.20	0.40	21.89	Cu.m.
9	Item no 9						
	Providing and laying cast in situ/ Ready Mix cement concrete M-20 of trap/ granite/ quartzite/ gneiss metal for R.C.C. columns as per detailed designs and drawing or as directed including centering, formwork, cover blocks, laying/ pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete, (Excluding reinforcement and structural steel) with fully automatic microprocessor based PLC with SCADA enabled Reversible Drum Type mixer/ concrete Batch Mix plant (Pan mixer) etc. complete with fine aggregate (Natural Sand/ Crushed Sand V.S.I. Grade finely washed etc.)						
	RCC COLUMN upto Plinth Level	38	0.40	0.40	1.15	6.99	Cu.m.
10	Item no 10						
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap / granite/quartzite/ gneiss metal for R.C.C. beams and lintels as per detailed designs and drawings or as directed including steel centering, formwork, cover blocks, laying/pumping, compactionand roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)						
	R.C.C. Plinth beam						
	along Shorter Side	8	4.75	0.23	0.45	3.93	Cu.m.
	along Longer Side	30	3.70	0.23	0.45	11.49	Cu.m.
					Total	15.42	Cu.m.

Item No	Description	No	Length	Width	Depth	Qty	Unit
11	Item no 11						
	Providing uncoursed rubble masonry of trap / granite / quartzite / gneiss stones in cement mortar 1:6 in foundation and plinth of inner walls / in plinth of external walls including bailing out water manually ,striking joints on un exposed faces and watering etc.complete.						
	for Ramp(.45+0/2=.25=avg ht)	8	4.50	0.45	0.25	4.05	Cu.m.
12	Item no 12						
	Providing flush grooved pointing with cement mortar 1:3 for stone masonry work including scaffolding and curing etc. complete.						
	for pointing	8	4.50		0.25	9.00	Sq. m.
13	Item no 13						
	Providing and laying in situ cement concrete M -30 with tremix treatment for 200 mm harge thickness for Concrete Road is including laying plastic sheet for 125 micron thickness with groove cutting of 4 mm wide and 20 mm deep with necessary refilling with bitumen (excluding reinforcement) with coarse and fine aggregate (natural sand/ VSI grade finely washed crushed sand) etc. complete with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete.						
	Floor slab	1	62.00	21.00	0.20	260.40	Cu.m.
	Ramp top slab	4	4.00	4.60	0.15	11.04	Cu.m.
					Total	271.44	Cu.m.
14	Item no 14						
	Providing and fixing in position TMT - FE - 500 bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintels pardis, copings, fins, arches etc. as per detailed designs, drawings and schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.						
	100 Kg per cubic meter of concrete QUANTITY-		44.30	100.00	kg/cum	4.4302	MT
	FOR TREMIX CONCRETE		271.44	30.00	kg/cum	8.1432	MT
					Total	12.58	MT
	`						

Item No	Description	No	Length	Width	Depth	Qty	Unit
15	Item no 15						
	Providing sand faced plaster externally In cement mortar using approved screened sand, in all positions includ-ing base coat of 15mm thick in C.M. 1:4 using waterproofing compound at 1 kg.per cement bag curing the same for not less than 2 days and keeping the surface of the base coat rough to receive the sand faced treatment 6 to 8mm thick in C.M. 1:4 finishing the surface by taking out grains and curing for fourteen days scaf-folding etc.complete.						
	for plinth	1	166.00		0.45	74.70	Sq.m.
16	Item no 16						
	Providing and applying two coats of water proof cement paint of approved manufacture and of approved colour to the plastered surfaces including scaffolding if necessary, cleaning and preparing the surface, watering for two days etc. complete.						
	as per item no 12					74.70	
	as per item no 9					9.00	
					Total	83.70	Sqm
17	Item no 17						
	Structural steel work -Providing structural steel work in single stanchions com-posed of R.S.J. Channel etc. with caps, bases, mild steel plated, angle brackets, cleats, gusset plates, anchor bolts etc. as per detailed designs and drawings or as directed including cutting, fabrication, hoisting, erecting fixing in position, making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it two. coats of oil painting complete etc. Spec. No.: Bd.C.6 Page No. 277 (FOR STEEL COLUMNS)						
a	Steel Columns of ISMB300@44.2 Kg/m= $(44.2/1000)=.0442$ MT	32			4.50	6.36	MT.
b	Anchor Bolt(20 kg)					0.02	MT.
c	Base Plate BOTTOM	32	0.0025	7854		0.62	MT.
d	Base Plate TOP	32	0.0012	7854		0.31	MT.
e	Stiffener Plate(10 mm Thick)(per column 8 stiffener required)	256	0.20	0.15	0.01	0.60	MT.
					Total	7.91	MT.

Item No	Description	No	Length	Width	Depth	Qty	Unit
18	Item no 18						
	Providing and fabricating structural steel work in rolled sections like joists, channels, angles, tees etc. as per detailed designs and drawing or as directed by Engineer-in-charge including cutting, fabrication, hoisting & erecting fixing in position with connecting plates, braces etc. and one coat of anticorrosive paint and over it two coat of oil paintings of approved quality and shade complete. Spec. No.: Bd.C.2 Page No. 275 (FOR ROOFING MEMBER)						
a	Roofing Member of ISMB150@14.9kg/m		166.00			2.47	MT.
	62*2+21*2=166.0 m						
b	Angle section 50 x 50 x 5 @ 3.8 kg/m For Roofing(purlins) spacing 1.8 m	14	62.00			3.30	MT.
	10.68/1.8=6*2+2=14						
					Total	5.77	MT.
19	Item no 19						
	Trusses -Providing structural steel work in trusses, other similar trussed purlins and members with all bracing, gusset plates etc. as per detailed designs and drawings or as directed including cutting, fabricating, hoisting, erecting fixing in position, Making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it 2 coats of oil painting approved quality and shade etc. complete.						
	trusses-Use 100x100x6mm Angle @9.2 kg/ rmt		1525.12		9.20	14031.10	KG
	$((21*2)+(10.68*2)+(0.3*2)+(0.6*2)+(1*2)+(1.3*2)+(1.6*2)+(1.77*2)+(1.85*2)+(2.01*2)+(2.18*2)+(2.37*2)+(2*1))*16=1525.12$						
	10% extra for item fitting					1403.11	KG
					GROSS	15.43	MT.

Item No	Description	No	Length	Width	Depth	Qty	Unit
20	Item no 20						
	Providing and fixing colour coated Zincalume (R) AZ150 (min 150 gms/sq.mt. total on each side) profiled sheets for roofing. The feed material is manufactured out of nominal 0.45 mm Base Metal Thickness (BMT) (0.5 mm TCT), Hi-strength steel with min.550 MPa yield strength, metallic hot dip coated with Aluminium-Zinc alloy (55% aluminium 43.4% zinc 1.6% silicon) with COLORBOND (R) steel quality super durable polyester paint coat (with inorganic pigment). The paint shall have a total coating thickness of nominal 35 um, comprising of nominal 25 um exterior coat on top surface and nominal 10 um reverse coat on back surface. Profile sheet shall have nom. 950-1050 mm effective cover width and nominal 25-30 mm deep ribs with subtle square fluting in the five pan at nominal 180-250 mm center- to-center. The end rib shall be designed for anti-capillary groove. and return leg. The feed material should have coil manufacturers product details marked a regular interval. Including fasteners with min. fastened with min. 25 um Zinc-Tin alloy coated, Hex head, self-drilling screw etc. complete. (weight of profile 4.52 Kilogram/ One Square Metre)						
	Roofing	2	62.40	11.00		1372.80	Sq. M.
	for triangular portion of truss	4	0.50	10.50	2.00	42.00	Sq. M.
	add 5% extra for lapping					70.74	Sq. M.
					GROSS	1485.54	Sq. M.
21	Item no 21						
	Providing and fixing plain zinc sheeting of 0.80 mm thick (22 B.W.G.) over the ridge hip or valley to galvanized iron sheet roofing including all fastening and bolt galvanised ironscrews and bolts, lead and bitumen washers etc. complete.(Weight of 6.8 Kilogram/sq.m.).						
		1	62.40	0.60		37.44	Sq. M.
22	Item no 22						
	Point wiring in for light/fan/bell in 20 mm metal conduit with 1.5 sq.mm (2+1E) FRLSH grade copper wire, flush type switch, earthing and required accessories as per specification No: WG-PW/SW						
	Assume					22	point

Item No	Description	No	Length	Width	Depth	Qty	Unit
23	Item no 23						
	Supplying & erecting inverter LED batten 10W tube light fitting with polycarbonate housing, heat sink, integrated HF electronic driver, Min. 2600 mAh Lithium ion Battery with charging time of 8-10 Hours and backup time of Min. 3 hrs. with minimum 25% of initial Watts having luminous efficacy of 100 lumen/watt, CRI>80, CCT of 6500K and THD<=20% having useful life of minimum 25000 hrs. with overheating protection with 2 years warranty.						
						20	Nos
24	Item no 24						
	Providing and fixing Road junction / Information sign board of size 0.90 m x 0.60 m. prepared on 16 gauge M.S. sheet with angle iron frame of size 35 x 35 x 5 mm including painting with one coat of zinc cromate stoving primer and two coats each of green / white background and backside gray stove enamelled, bonded with red retroreflective sheet Engineering grade, border / letters / numeral / arrows, coated with non pealable crystal clear protective coat retaining 100% reflection including two angle iron post of size 50 x 50x 5 mm of 3.65 m. long inflated at bottom drilled on top and painted in white and black bands of 30cm. with 4 Nos. high strength G.I. bolts and nuts of size 10 mm dia. and 20mm long sheet and angle iron post in one piece without joints including all taxes, conveying, fixinging round with cement concrete 1:4:8 block of 60cmx 60cmx 75cm size as directed by Engineer-in- charge etc. complete. Mild Steel Board with Engineering Grade.						
		1				1.00	No
25	Item no 25						
	Design & Approval Charges for Concrete , Reinforcement & Structural Steel as 2%						

LATUR MUNICIPAL CORPORATION
DISTRICT - LATUR, DIVISION - AURANGABAD
SHED FOR COMPOST CURING (25M X 20M)
ABSTRACT

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
1	Item no 1				
	Excavation for foundation in earth, soil of all types, sand, gravel and soft murum, including removing the excavated material up to a distance of 50 m. beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift upto 1.5 m.) By Mechanical Means	23.77	Cu.m	217.14	5160.60
	PWD S.S.R. 2022-23, Item No. 21.02				
	As Per Attached RA Item No.-1				
2	Item no 2				
	Excavation for foundation in Hard murum including removing the excavated material upto a distance of 50 metres beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift from 1.5 to 3.0m.) By Mechanical Means	29.70	Cu.m.	238.12	7072.25
	PWD SOR 2022-23, Item No 21.06				
	As Per Attached RA Item No.-2				
3	Item No.-3				
	Excavation for foundation in Soft rock and old cement or lime masonry foundations including removing the excavated material upto a distance of 50 metres beyond the building area and stacking as directed, including dewatering, preparing the bed for the foundation and necessary back filling with available earth/murum, ramming ,watering including shoring and strutting etc. complete. (Lift from 1.5m To 3.0 m.) By Mechanical Means				
	PWD SOR 2022-23, item no 21.14	5.40	Cu.m.	450.02	2430.11
	As Per Attached RA Item No.- 3				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
4	Item No.-4				
	Excavation for foundation in Hard rock by chiselling, wedging, line drilling, etc. including trimming and levelling the bed, removing the excavated material upto a distance of 50 metres beyond the building area stacking as directed, dewatering and back filling with available earth/ murum watering, ramming etc. complete. (Lift upto 1.5 m). By Mechanical Means				
	PWD SOR 2022-23, item no 21.20	3.60	Cu.m.	1371.04	4935.75
	As Per Attached RA Item No.- 4				
5	Item no 5				
	Providing dry/ trap/ granite/ quartzite/ gneiss rubble stone soling 15 cm to 20 cm thick including hand packing and compacting etc. complete.	125.58	Cu.m.	1810.19	227326.86
	PWD S.S.R. 2022-23, Item No. 21.38				
	As Per Attached RA Item No.-14				
6	Item no 6				
	Providing and laying Cast in situ/Ready Mix cement concrete in M15 of trap/ granite/quartzite/gneiss metal for foundation / steps including steel centering, formwork, laying/pumping, compacting, roughening them if special finish is to be provided, finishing uneven and honeycombed surface and curing etc. complete. The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface, only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed.),with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)	54.12	Cu.m.	7655.53	414340.19
	PWD S.S.R. 2022-23, Item No. 24.04				
	As Per Attached RA Item No.-6				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
7	Item no 7				
	Providing and fixing in position after hoisting, precast 1:2 cement mortar reinforcement Jali 50mm thick of approved design cement mortar 1:3 and curing complete (including 6mm diameter mild steel bar reinforcement)	518.40	Sqm	982.91	509542.10
	PWD S.S.R. 2022-23, Item No. 26.46				
	As Per Attached RA Item No.-52				
8	Item no 8				
	Providing and laying in situ/ Ready Mix cement concrete M-20 of trap/granite/quartzite/ gneiss metal for R.C.C. work in foundations like raft, strip foundations, grillage and footings of R.C.C. columns and steel stanchions etc. including bailing out water, formwork, laying/ pumping cover blocks, compaction and curing roughening the surface if special finish is to be provided, (Excluding reinforcement and structural steel) etc. complete, with fully automatic microprocessor based PLC with SCADA enabled Reversible Drum Type mixer/ concrete Batch Mix plant (Pan mixer) etc. complete, with fine aggregate (Natural Sand/ Crushed Sand V.S.I. Grade finely washed etc.)	12.67	Cum	8403.46	106488.60
	PWD S.S.R. 2022-23, Item No. 25.11				
	As Per Attached RA Item No.-7				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
9	Item no 9				
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap /granite/quartzite/ gneiss metal for R.C.C. columns as per detailed designs and drawing or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete.(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)				
	PWD S.S.R. 2022-23, Item No. 25.31	4.05	Cu.m.	15409.73	62378.58
	As Per Attached RA Item No.-8				
10	Item no 10				
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap / granite/quartzite/ gneiss metal for R.C.C. beams and lintels as per detailed designs and drawings or as directed including steel centering, formwork, cover blocks, laying/pumping, compactionand roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)	8.23	Cu.m.	13821.54	113784.32
	PWD S.S.R. 2022-23, Item No. 25.50				
	As Per Attached RA Item No.-9				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
11	Item no 11				
	Providing and laying in situ cement concrete M -30 with tremix treatment for 200 mm harge thickness for Concrete Road is including laying plastic sheet for 125 micron thickness with groove cutting of 4 mm wide and 20 mm deep with necessary refilling with bitumen (excluding reinforcement) with coarse and fine aggregate (natural sand/ VSI grade finely washed crushed sand) etc. complete with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete.	102.76	Cu.m.	9812.26	1008308.18
	PWD S.S.R. 2022-23, Item No. 5.22				
	As Per Attached RA Item No.- 77				
12	Item no 12				
	Providing and fixing in position TMT - FE - 500 bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintels pardis, copings, fins, arches etc. as per detailed designs, drawings and schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.				
	PWD S.S.R. 2022-23, Item No. 26.33	5.58	MT	94098.45	525069.33
	As Per Attached RA Item No.-12				
13	Item no 13				
	Providing uncoursed rubble masonry of trap / granite / quartzite / gneiss stones in cement mortar 1:6 in foundation and plinth of inner walls / in plinth of external walls including bailing out water manually ,striking joints on un exposed faces and watering etc.complete.				
	PWD S.S.R. 2022-23, Item No. 28.01	1.01	Cu.m.	6364.71	6444.27
	As Per Attached RA Item No.-55				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
14	Item no 14				
	Providing flush grooved pointing with cement mortar 1:3 for stone masonry work including scaffolding and curing etc. complete.				
	PWD S.S.R. 2022-23, Item No. 32.17	2.25	Sq. m.	190.92	429.57
	As Per Attached RA Item No.-56				
15	Item no 15				
	Providing second class Burnt Brick masonry with conventional/I.S. type bricks in cement mortar 1:6 in superstructure in-cluding striking joints, raking out joints, watering and scaffolding etc complete.				
	PWD SOR 2022-23, Item No 27.05	29.67	CU.M.	8826.13	261871.42
	As Per Attached RA Item No.-16				
16	Item no 16				
	Providing sand faced plaster externally In cement mortar using approved screened sand, in all positions includ-ing base coat of 15mm thick in C.M. 1:4 using waterproofing compound at 1 kg.per cement bag curing the same for not less than 2 days and keeping the surface of the base coat rough to receive the sand faced treatment 6 to 8mm thick in C.M. 1:4 finishing the surface by taking out grains and curing for fourteen days scaf-folding etc.complete.				
	PWD SOR 2022-23, Item No 32.11	328.17	Sqm	704.72	231268.71
	As Per Attached RA Item No.-21				
17	Item no 17				
	Providing and applying two coats of water proof cement paint of approved manufacture and of approved colour to the plastered surfaces including scaffolding if necessary, cleaning and preparing the surface, watering for two days etc. complete.	369.12	Sqm	82.87	30589.45
	PWD S.S.R. 2022-23, Item No. 35.13				
	As Per Attached RA Item No.-57				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
18	Item no 18				
	Structural steel work -Providing structural steel work in single stanchions com-posed of R.S.J. Channel etc. with caps, bases, mild steel plated, angle brackets, cleats, gusset plates, anchor bolts etc. as per detailed designs and drawings or as directed including cutting, fabrication, hoisting, erecting fixing in position, making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it two. coats of oil painting complete etc. Spec. No.: Bd.C.6 Page No. 277(FOR STEEL COLUMNS)	5.03	MT.	102811.44	516792.89
	PWD S.S.R. 2022-23, Item No. 23.03				
	As Per Attached RA Item No.-58				
19	Item no 19				
	Providing and fabricating structural steel work in rolled sections like joists, channels, angles, tees etc. as per detailed designs and drawing or as directed by Engineer-in-charge including cutting, fabrication, hoisting & erecting fixing in position with connecting plates, braces etc. and one coat of anticorrosive paint and over it two coat of oil paintings of approved quality and shade complete. Spec. No.: Bd.C.2 Page No. 275 (FOR ROOFING MEMBER)	4.65	MT.	106834.36	497271.19
	PWD S.S.R. 2022-23, Item No. 23.01				
	As Per Attached RA Item No.-59				
20	Item no 20				
	Trusses-Providing structural steel work in trusses, other similar trussed purlins and members with all bracing, gusset plates etc. as per detailed designs and drawings or as directed including cutting, fabricating, hoisting, erecting fixing in position, Making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it 2 coats of oil painting approved quality and shade etc. complete.	7.47	MT.	125312.49	936614.03
	PWD S.S.R. 2022-23, Item No. 23.04				
	As Per Attached RA Item No.-60				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
21	Item no 21				
	Providing and fixing colour coated Zinalume (R) AZ150 (min 150 gms/sq.mt. total on each side) profiled sheets for roofing. The feed material is manufactured out of nominal 0.45 mm Base Metal Thickness (BMT) (0.5 mm TCT), Hi-strength steel with min.550 MPa yield strength, metallic hot dip coated with Aluminium-Zinc alloy (55% aluminium 43.4% zinc 1.6% silicon) with COLORBOND (R) steel quality super durable polyester paint coat (with inorganic pigment). The paint shall have a total coating thickness of nominal 35 um, comprising of nominal 25 um exterior coat on top surface and nominal 10 um reverse coat on back surface. Profile sheet shall have nom. 950-1050 mm effective cover width and nominal 25-30 mm deep ribs with subtle square fluting in the five pan at nominal 180-250 mm center- to-center. The end rib shall be designed for anti-capillary groove. and return leg. The feed material should have coil manufacturers product details marked a regular interval. Including fasteners with min. fastened with min. 25 um Zinc-Tin alloy coated, Hex head, self-drilling screw etc. complete. (weight of profile 4.52 Kilogram/ One Square Metre)	1008.04	Sqm.	1230.48	1240370.04
	PWD S.S.R. 2022-23, Item No. 38.34				
	As Per Attached RA Item No.-61				
22	Item no 22				
	Providing and fixing plain zinc sheeting of 0.80 mm thick (22 B.W.G.) over the ridge hip or valley to galvanized iron sheet roofing including all fastening and bolt galvanised ironscrews and bolts, lead and bitumen washers etc. complete.(Weight of 6.8 Kilogram/sq.m.).	15.24	Sq. M.	1194.81	18208.92
	PWD S.S.R. 2022-23, Item No. 38.05				
	As Per Attached RA Item No.-62				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
23	Item no 23				
	Point wiring in for light/fan/bell in 20 mm metal conduit with 1.5 sq.mm (2+1E) FRLSH grade copper wire, flush type switch, earthing and required accessories as per specification No: WG-PW/SW	16.00	points	898.80	14380.80
	Electrical Mech SOR 2022-2023, item no -1-7-1 ,page no 11				
	As Per Attached RA Item No.-30				
24	Item no 24				
	Supplying & erecting inverter LED batten 10W tube light fitting with polycarbonate housing, heat sink, integrated HF electronic driver, Min. 2600 mAh Lithium ion Battery with charging time of 8-10 Hours and backup time of Min. 3 hrs. with minimum 25% of initial Watts having luminous efficacy of 100 lumen/watt, CRI>80, CCT of 6500K and THD<=20% having useful life of minimum 25000 hrs. with overheating protection with 2 years warranty.	12.00	Nos	699.30	8391.60
	PWD ELECTRICAL CSR 2022-2023, item no -2-1-21, page no 25				
	As Per Attached RA Item No.-29				
25	Item no 25				
	Providing and fixing welded mesh of 11 gauge wires having mesh size 50 mm x 25 mm including M.S Angle frame of size 35 mm x 35 mm x5 mm in position with oil painting 3 coats etc. complete				
	PWD S.S.R. 2022-23, Item No. 39.79	43.20	Sqm.	2774.61	119862.94
	As Per Attached RA Item No.-63				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
26	Item no 26				
	Providing and fixing rolling shutter fabricated from steel laths of minimum thickness 0.9 mm with lock plate of 3.15 mm thickness reinforced with 35 x 35 x 5 mm angle section fitted with sliding bolts and handles for both sides, deep M.S. channel section of depth and thickness not less than 65 mm and 3.15 mm respectively with hold fast arrangements, M.S. Bracket plate 300 x 300 x 3.15 mm minimum size and shape with square bar, suspension shaft of minimum 32 mm diameter, hood cover of M.S. sheet not less than 0.9 mm thickness and of any size at top and safety devices including mechanical gear operation arrangement consisting of worm gear wheels and worms of high grade cast iron or mild steel and one coat of red lead primer etc. complete. (I.S. 62481979) (With mechanical gear)	32.00	Sqm.	5568.09	178178.94
	PWD S.S.R. 2022-23, Item No. 39.25				
	As Per Attached RA Item No.- 64				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
27	Item no 27				
	Providing and fixing Road junction / Information sign board of size 0.90 m x 0.60 m. prepared on 16 gauge M.S. sheet with angle iron frame of size 35 x 35 x 5 mm including painting with one coat of zinc cromate stoving primer and two coats each of green / white background and backside gray stove enamelled, bonded with red retroreflective sheet Engineering grade, border / letters / numeral / arrows, coated with non pealable crystal clear protective coat retaining 100% reflection including two angle iron post of size 50 x 50x 5 mm of 3.65 m. long inflated at bottom drilled on top and painted in white and black bands of 30cm. with 4 Nos. high strength G.I. bolts and nuts of size 10 mm dia. and 20mm long sheet and angle iron post in one piece without joints including all taxes, conveying, fixinging round with cement concrete 1:4:8 block of 60cmx 60cmx 75cm size as directed by Engineer-in- charge etc. complete. Mild Steel Board with Engineering Grade.				
	PWD SOR 2022-23, item no 6.47	1.00	No	7881.14	7881.14
	As Per Attached RA Item No.- 65				
28	Item no 28				
	Design & Approval Charges for Concrete , Reinforcement & Structural Steel as 2%			0.02	141107.86
	TOTAL				7196500.64
	TOTAL 2 Nos				14393001.27

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

LATUR MUNICIPAL CORPORATION
DISTRICT - LATUR, DIVISION - AURANGABAD
SHED FOR COMPOST CURING (25M X 20M)

MEASUREMENTS

Item No	Description	No	Length	Width	Depth	Qty	Unit
1	Item no 1						
	Excavation for foundation in earth, soil of all types, sand, gravel and soft murum , including removing the excavated material up to a distance of 50 m. beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift upto 1.5 m.) By Mechanical Means						
	For Column Footing	22	1.50	1.50	0.40	19.80	Cu.m.
	Plinth Beam (longer side)	14	2.01	0.23	0.20	1.30	Cu.m.
	Plinth Beam (shorter side)	8	3.40	0.23	0.20	1.25	Cu.m.
	Ramp	2	4.50	0.45	0.35	1.42	Cu.m.
		Total Excavation Quantity				23.77	Cu.m.
2	Item no 2						
	Excavation for foundation in Hard murum including removing the excavated material upto a distance of 50 metres beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift from 1.5 to 3.0m.) By Mechanical Means						
	Hard murum	22	1.50	1.50	0.60	29.70	Cu.m.
3	Item No.-3						
	Excavation for foundation in Soft rock and old cement or lime masonry foundations including removing the excavated material upto a distance of 50 metres beyond the building area and stacking as directed, including dewatering, preparing the bed for the foundation and necessary back filling with available earth/murum, ramming ,watering including shoring and strutting etc. complete. (Lift from 1.5m To 3.0 m.) By Mechanical Means						
	For Column Footing	8	1.50	1.50	0.30	5.40	Cu.m.

Item No	Description	No	Length	Width	Depth	Qty	Unit
4	Item No.-4						
	Excavation for foundation in Hard rock by chiselling, wedging, line drilling, etc. including trimming and levelling the bed, removing the excavated material upto a distance of 50 metres beyond the building area stacking as directed, dewatering and back filling with available earth/ murum watering, ramming etc. complete. (Lift upto 1.5 m). By Mechanical Means						
	For Column Footing	8	1.50	1.50	0.2	3.60	Cu.m.
5	Item no 5						
	Providing dry/ trap/ granite/ quartzite/ gneiss rubble stone soling 15 cm to 20 cm thick including hand packing and compacting etc. complete.						
	below column	22	1.30	1.30	0.30	11.15	Cu.m.
	below flooring	1	24.54	19.54	0.23	110.29	Cu.m.
	for ramp	1	4.50	4.00	0.23	4.14	Cu.m.
					Total	125.58	Cu.m.
6	Item no 6						
	Providing and laying Cast in situ/Ready Mix cement concrete in M15 of trap/ granite/quartzite/gneiss metal for foundation / steps including steel centering, formwork, laying/pumping, compacting, roughening them if special finish is to be provided, finishing uneven and honeycombed surface and curing etc. complete. The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface, only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed.),with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)						
	below column	22	1.30	1.30	0.10	3.72	Cu.m.
	below flooring	1	25.00	20.00	0.10	50.00	Cu.m.
	for ramp	2	4.50	0.45	0.10	0.41	Cu.m.
					Total	54.12	Cu.m.
7	Item no 7						
	Providing and fixing in position after hoisting, precast 1:2 cement mortar reinforcement Jali 50mm thick of approved design cement mortar 1:3 and curing complete (including 6mm diameter mild steel bar reinforcement)						
	Reinforcement Jali for Floor	1	25.00	20.00		500.00	Sq.m
	Reinforcement Jali for Ramp	1	4.00	4.60		18.40	Sq.m
					Total	518.40	Sq.m

Item No	Description	No	Length	Width	Depth	Qty	Unit
8	Item no 8						
	Providing and laying in situ/ Ready Mix cement concrete M-20 of trap/granite/quartzite/ gneiss metal for R.C.C. work in foundations like raft, strip foundations, grillage and footings of R.C.C. columns and steel stanchions etc. including bailing out water, formwork, laying/ pumping cover blocks, compaction and curing roughening the surface if special finish is to be provided, (Excluding reinforcement and structural steel) etc. complete, with fully automatic microprocessor based PLC with SCADA enabled Reversible Drum Type mixer/ concrete Batch Mix plant (Pan mixer) etc. complete, with fine aggregate (Natural Sand/ Crushed Sand V.S.I. Grade finely washed etc.)						
	Footing	22	1.20	1.20	0.40	12.67	Cu.m.
9	Item no 9						
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap /granite/quartzite/ gneiss metal for R.C.C. columns as per detailed designs and drawing or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete.(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)						
	Column stub upto plinth level	22	0.40	0.40	1.15	4.05	Cu.m.
					Total	4.05	Cu.m.
10	Item no 10						
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap / granite/quartzite/ gneiss metal for R.C.C. beams and lintels as per detailed designs and drawings or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction and roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)						
	R.C.C. Plinth beam-						
	along Shorter Side	8	4.50	0.23	0.45	3.73	Cu.m.
	along longer Side	14	3.11	0.23	0.45	4.51	Cu.m.
					Total	8.23	Cu.m.
11	Item no 11						

Item No	Description	No	Length	Width	Depth	Qty	Unit
	Providing and laying in situ cement concrete M -30 with tremix treatment for 200 mm harge thickness for Concrete Road is including laying plastic sheet for 125 micron thickness with groove cutting of 4 mm wide and 20 mm deep with necessary refilling with bitumen (excluding reinforcement) with coarse and fine aggregate (natural sand/ VSI grade finely washed crushed sand) etc. complete with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete.						
	Floor slab	1	25.00	20.00	0.20	100.00	Cu.m.
	Ramp top slab	1	4.00	4.60	0.15	2.76	Cu.m.
					Total	102.76	Cu.m.
12	Item no 12						
	Providing and fixing in position TMT - FE - 500 bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintels pardis, copings, fins, arches etc. as per detailed designs, drawings and schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.						
	100 Kg per cubic meter of concrete QUANTITY-		24.95	100.00	kg/cum	2.4952	MT
	FOR TREMIX CONCRETE		102.76	30.00	kg/cum	3.0828	MT
					Total	5.58	MT
13	Item no 13						
	Providing uncoursed rubble masonry of trap / granite / quartzite / gneiss stones in cement mortar 1:6 in foundation and plinth of inner walls / in plinth of external walls including bailing out water manually ,striking joints on un exposed faces and watering etc.complete.						
	Ramp side walls (0.45+0/2=0.25=avg ht)	2	4.50	0.45	0.25	1.01	Cu.m.
14	Item no 14						
	Providing flush grooved pointing with cement mortar 1:3 for stone masonry work including scaffolding and curing etc. complete.						
	pointing	2	4.50		0.25	2.25	Sq. m.

Item No	Description	No	Length	Width	Depth	Qty	Unit
15	Item no 15						
	Providing second class Burnt Brick masonry with conventional/I.S. type bricks in cement mortar 1:6 in superstructure including striking joints, raking out joints, watering and scaffolding etc complete.						
	long wall shed	2	25.00	0.23	1.50	17.25	CU.M.
	short wall shed	1	36.00	0.23	1.50	12.42	CU.M.
					Total	29.67	CU.M.
16	Item no 16						
	Providing sand faced plaster externally In cement mortar using approved screened sand, in all positions including base coat of 15mm thick in C.M. 1:4 using waterproofing compound at 1 kg.per cement bag curing the same for not less than 2 days and keeping the surface of the base coat rough to receive the sand faced treatment 6 to 8mm thick in C.M. 1:4 finishing the surface by taking out grains and curing for fourteen days scaffolding etc.complete.						
	OTER SIDE						
	Long wall	2	25.00		1.50	75.00	Sqm
	short wall	1	36.00		1.50	54.00	Sqm
	INSIDE						
	Long wall	2	24.54		1.50	73.62	Sqm
	short wall	2	35.31		1.50	105.93	Sqm
	BB top	1	85.31	0.23		19.62	Sqm
	$25*2+(20-0.46)+(16-0.23)=85.31$						
					Total	328.17	Sqm
17	Item no 17						
	Providing and applying two coats of water proof cement paint of approved manufacture and of approved colour to the plastered surfaces including scaffolding if necessary, cleaning and preparing the surface, watering for two days etc. complete.						
	FOR PLINTH	2	25		0.45	22.5	Sqm
		2	20		0.45	18	Sqm
	FOR RAMP	2	4.50		0.25	2.25	Sqm
	BB MASONRY as per plaster item					328.17	Sqm
						370.92	Sqm
	DEDUCTION						
	RAMP	1	4.00		0.45	1.80	Sqm
					Total	369.12	Sq.m
18	Item no 18						

Item No	Description	No	Length	Width	Depth	Qty	Unit
	Structural steel work -Providing structural steel work in single stanchions composed of R.S.J. Channel etc. with caps, bases, mild steel plated, angle brackets, cleats, gusset plates, anchor bolts etc. as per detailed designs and drawings or as directed including cutting, fabrication, hoisting, erecting fixing in position, making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it two. coats of oil painting complete etc. Spec. No.: Bd.C.6 Page No. 277 (FOR STEEL COLUMNS)						
a	Steel Columns of ISMB300@44.2 Kg/m= $(44.2/1000)=.0442$ MT	16			6.00	4.24	MT.
b	Anchor Bolt(20 kg)					0.02	MT.
c	Base Plate BOTTOM	16	0.35	0.35	0.02	0.31	MT.
d	Base Plate TOP	16	0.35	0.35	0.01	0.15	MT.
e	Stiffener Plate(10 mm Thick)(per column 8 stiffener required)	128	0.20	0.15	0.01	0.30	MT.
					Total	5.03	MT.
19	Item no 19						
	Providing and fabricating structural steel work in rolled sections like joists, channels, angles, tees etc. as per detailed designs and drawing or as directed by Engineer-in-charge including cutting, fabrication, hoisting & erecting fixing in position with connecting plates, braces etc. and one coat of anticorrosive paint and over it two coat of oil paintings of approved quality and shade complete. Spec. No.: Bd.C.2 Page No. 275 (FOR ROOFING MEMBER)						
a	Roofing Member of ISMB150@14.9kg/m		90.00			1.34	MT.
	25*2+20*2=90 M						
b	Vertical Angle section 40 x 40 x 4 @ 2.4 kg/m (for Supporting Zincalume Sheets for Enclosure) spacing 1.286M	69			4.50	0.75	MT.
	nos= $(90-4)/1.286=67+2=69$, ht=6-1.5 m bb=4.50 m						
c	Horizontal Angle section 40 x 40 x 4 @ 2.4 kg/m spacing 1.286M	6.00	86			1.24	MT.
	nos= $(6-1.5)/1.286=3.4+2=6$, ht=50+16+20 =86 m						
d	Angle section 50 x 50 x 5 @ 3.8 kg/m For Roofing(purlins) spacing 1.8M	14	25.00			1.33	MT.

Item No	Description	No	Length	Width	Depth	Qty	Unit
	nos.= $10.19/1.8=5.66*2+2=14$						
					Total	4.65	MT.
20	Item no 20						
	Trusses -Providing structural steel work in trusses, other similar trussed purlins and members with all bracing, gusset plates etc. as per detailed designs and drawings or as directed including cutting, fabricating, hoisting, erecting fixing in position, Making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it 2 coats of oil painting approved quality and shade etc. complete.						
	trusses-Use 100x100x6 mm Angle @9.2 kg/rmt.techdata book pg 36		738.56		9.20	6794.75	KG
	$((20*2)+(10.19*2)+(0.34*2)+(1.7*2)+(0.67*2)+(1.8*2)+(1*2)+(1.95*2)+(1.34*2)+(2.14*2)+(1.67*2)+(2.36*2)+(2*1))*8=738.56$						
	10% extra for item fitting					679.48	KG
					GROSS	7.47	MT.

Item No	Description	No	Length	Width	Depth	Qty	Unit
21	Item no 21						
	Providing and fixing colour coated Zincalume (R) AZ150 (min 150 gms/sq.mt. total on each side) profiled sheets for roofing. The feed material is manufactured out of nominal 0.45 mm Base Metal Thickness (BMT) (0.5 mm TCT), Hi-strength steel with min.550 MPa yield strength, metallic hot dip coated with Aluminium-Zinc alloy (55% aluminium 43.4% zinc 1.6% silicon) with COLORBOND (R) steel quality super durable polyester paint coat (with inorganic pigment). The paint shall have a total coating thickness of nominal 35 um, comprising of nominal 25 um exterior coat on top surface and nominal 10 um reverse coat on back surface. Profile sheet shall have nom. 950-1050 mm effective cover width and nominal 25-30 mm deep ribs with subtle square fluting in the five pan at nominal 180-250 mm center- to-center. The end rib shall be designed for anti-capillary groove. and return leg. The feed material should have coil manufacturers product details marked a regular interval. Including fasteners with min. fastened with min. 25 um Zinc-Tin alloy coated, Hex head, self-drilling screw etc. complete. (weight of profile 4.52 Kilogram/ One Square Metre)						
	Roofing	2	25.40	11.00		558.80	Sq. M.
	Enclosure for sides						
	longer	2	25.00		3.60	180.00	Sq. M.
	shorter	1	36.00		3.60	129.60	Sq. M.
	above shutter	1	4.00		2.00	8.00	Sq. M.
	for triangular portion of truss	4	0.50	10.00	2.00	40.00	Sq. M.
	add 10 % extra for lapping					91.64	
					GROSS	1008.04	Sq. M.
22	Item no 22						
	Providing and fixing plain zinc sheeting of 0.80 mm thick (22 B.W.G.) over the ridge hip or valley to galvanized iron sheet roofing including all fastening and bolt galvanised ironscrews and bolts, lead and bitumen washers etc. complete.(Weight of 6.8 Kilogram/sq.m.).						
		1	25.40	0.60		15.24	Sq. M.
23	Item no 23						
	Point wiring in for light/fan/bell in 20 mm metal conduit with 1.5 sq.mm (2+1E) FRLSH grade copper wire, flush type switch, earthing and required accessories as per specification No: WG-PW/SW						
	Assume					16	point

Item No	Description	No	Length	Width	Depth	Qty	Unit
24	Item no 24						
	Supplying & erecting inverter LED batten 10W tube light fitting with polycarbonate housing, heat sink, integrated HF electronic driver, Min. 2600 mAh Lithium ion Battery with charging time of 8-10 Hours and backup time of Min. 3 hrs. with minimum 25% of initial Watts having luminous efficacy of 100 lumen/watt, CRI>80, CCT of 6500K and THD<=20% having useful life of minimum 25000 hrs. with overheating protection with 2 years warranty.						
						12	Nos
25	Item no 25						
	Providing and fixing welded mesh of 11 gauge wires having mesh size 50 mm x 25 mm including M.S Angle frame of size 35 mm x 35 mm x5 mm in position with oil painting 3 coats etc. complete						
	for ventilation purpose						
	below roofing member	2	24		0.6	28.8	Sq. M.
	above bb wall	2	24		0.3	14.4	Sq. M.
						43.2	Sq. M.
26	Item no 26						
	Providing and fixing rolling shutter fabricated from steel laths of minimum thickness 0.9 mm with lock plate of 3.15 mm thickness reinforced with 35 x 35 x 5 mm angle section fitted with sliding bolts and handles for both sides, deep M.S. channel section of depth and thickness not less than 65 mm and 3.15 mm respectively with hold fast arrangements, M.S. Bracket plate 300 x 300 x 3.15 mm minimum size and shape with square bar, suspension shaft of minimum 32 mm diameter, hood cover of M.S. sheet not less than 0.9 mm thickness and of any size at top and safety devices including mechanical gear operation arrangement consisting of worm gear wheels and worms of high grade cast iron or mild steel and one coat of red lead primer etc. complete. (I.S. 62481979) (With mechanical gear)						
	Entrance shutter at ramp	2	4	4		32	Sq. M.

Item No	Description	No	Length	Width	Depth	Qty	Unit
27	Item no 27						
	Providing and fixing Road junction / Information sign board of size 0.90 m x 0.60 m. prepared on 16 gauge M.S. sheet with angle iron frame of size 35 x 35 x 5 mm including painting with one coat of zinc cromate stoving primer and two coats each of green / white background and backside gray stove enamelled, bonded with red retroreflective sheet Engineering grade, border / letters / numeral / arrows, coated with non pealable crystal clear protective coat retaining 100% reflection including two angle iron post of size 50 x 50x 5 mm of 3.65 m. long inflated at bottom drilled on top and painted in white and black bands of 30cm. with 4 Nos. high strength G.I. bolts and nuts of size 10 mm dia. and 20mm long sheet and angle iron post in one piece without joints including all taxes, conveying, fixinging round with cement concrete 1:4:8 block of 60cmx 60cmx 75cm size as directed by Engineer-in-charge etc. complete. Mild Steel Board with Engineering Grade.						
		1				1.00	No
28	Item no 28						
	Design & Approval Charges for Concrete , Reinforcement & Structural Steel as 2%						

Sub work – Wet Waste Shredder Machine – 3 Nos

LATUR MUNICIPAL CORPORATION (DISTRICT- LATUR)				
Name of Work: Wet Waste Shredder Machine – 3 Nos				
Cost Analysis of quotes				
Qty	Description	Rate	Unit	Amount
3	Designing .Providing.Erecting, Testing Commisining of Wet Waste shredder Machine Capacity Upto 25 TPD, Daily Capacity - 3200 Kg/Hr or more ,Motor/Power- 25 HP - 40 HP , Input Of waste - Segregated Organic Waste Type of Shredder Shaft- - Double or Equivalent Shaft ,Overall Machine Size - Minimum L1000 mm X W800 mm or Above ,Cutting Chamber Size - Minimum 600 X 430 mm or Above Cutting Chamber – Alloy Steel ,Waste Reduction Size - Minimum 5 mm or Above. Machine Height - Suitable As per Site, Type Feeding – Manual Type of Cutting Blade - EN-8 orEquivalent ,Number of Blades - Min. 32 or Above .Blade Diameter - Min. 100 mm or Above, Type of Machine - Stationery/Mobile,Motor Brand - CG/ ABB/ Rossi / Nord / Simens or Equivalent,Motor Type – Geared Motor or Equivalent, Shaft Type - HEX or Equivalent,Motor Output in RPM -- Max. 20 or Equivalent.Power Supply - 3 Phase 440/50 Hz,Machine Category – JAW Crusher,Gear Box - Yes, Complete set, Control Panel - Yes, Complete set,Over load Protection - Yes,Reversal Mechanism -Yes etc. as per detailed specification.	750000	No	255000.00
	MJP SWM DSR 2023-24, Item No 1b, Pg. No. 1			
			Total Rs.	2250000.00

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

Sub work - Screening Machine With Belt Conveyor – 3 Nos

LATUR MUNICIPAL CORPORATION (DISTRICT- LATUR)				
Name of Work: Screening Machine with Belt Conveyor -3 Nos				
Cost Analysis of quotes				
Qty	Description	Rate	Unit	Amount
3	Screening Machine with Belt Conveyor: Providing, erecting & giving trial test of components of screening machine with belt conveyor of capacity 16 TPD. It consists screening machine and conveyor belt of following specifications including transportation, loading, unloading, one year guarantee with third party	1641479.00	No	4924437.00
	A) Screen Machine; Capacity 16 TPD			
	Material to be screened: Compost (Converted from Garbage)			
	Overall Dimensions: Screen Diameter: Dia 1200 mm; Length: 4500 mm			
	Material of Construction: 1.6 mm thick screen with 24 mm perforation			
	Reinforcement Section: 10 mm thick flat rings and 5 mm thickened shells			
	Drive: 3.00 HP geared motor of desired O/PRPM			
	Supporting Structure: Fabricated form Channel			
	Electrical Control: Consisted with fuse less protection, with emergency switch and VFD for setting of desired RPM for screen			
	Finishing and painting: Entire machine			
	B) Belt Conveyor; Capacity 16 TPD			
	Type: Three Equal roll trough belt			
	Material to be handled: Compost (Converted			
	Center/ Centre Length: 9.5 Mt			
	Belt Width: 600 mm			
	Conveyor frame: Channel 100X50			
	Drive/ Trail Drum: Dia 320 mm with Dia 50 mm			
	Carrying / Return Idler: Dia 76 mm with Bearings & Seal at both side			
	Drive all equipment's: 3.00 HP, Geared Motor of			

Qty	Description	Rate	Unit	Amount
	Supporting Structure: Fabricated from Channel			
	Take up: Screw type take up for			
	Electrical Control: Consisted with fuse less			
	Finishing and painting: Entire machine exposed surface is ground and to be painted with enamel paint of customer desired shade.			
	MJP DSR 2023-24, Item No 12 b, Pg. No. 12/17			
			Total Amount (₹)	4924437.00

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

Sub work – Compost Sieve (4 MM) - 5 Nos

LATUR MUNICIPAL CORPORATION (DISTRICT- LATUR)				
Name of Work: Compost Sieve (4MM) - 5 Nos				
Cost Analysis of quotes				
Qty	Description	Unit	Rate	Amount
5	Compost Sieve (4mm) Motor Driven MOC: Mild Steel (500 kg/hr) Designing, Providing, Erecting, testing & Commissioning of Compost Sieve (4mm) Motor Driven MOC: Mild Steel (500 Kg/hr) for finished Compost MS Dimension (Approx) 2500mm (L)x 685 mm(W)x1200 (H) Dimensions of Sieve 600 mm (Dia) X 1800 (L) Type Motor driven input compost speed 20 RPM Power Supply 440/ 50 HZ Sieve Size 4-5 mm Motor Rossi/Nord/Siemens Motor Rating 1 H input Hopper Yes Output Collection Tray Yes Sieve MOC Mild Steel Stand MOC MS Powder Coated Hopper MOC Mild Steel Output Collection Tray MOC Mild Steel Rev/FWd Switch Yes etc as per detailed specification.	No.	132000.00	660000.00
	MJP DSR 2023-24, Item No 9a, Pg. No. 10/17	Total Amount (₹)		660000.00

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

Sub work – Squeezer for Wet Waste – 3 Nos

LATUR MUNICIPAL CORPORATION (DISTRICT- LATUR)				
Name of Work: Squeezer for Wet waste – 3 Nos				
Cost Analysis of quotes				
Qty	Description	Unit	Rate	Amount
3	Squeezer for wet waste : - Designing .Providing.Erecting. Testing & Commisinlng of Squeezer for wet waste with size of 2500mm (L) X 300mm (W) X 1500mm (HH), moc OF CONE SS 304, MOC of Sieve SS 304, Outside Housing Material MS with Motor of 3 HP etc as per detailed Specification .	No.	550000.00	1650000.00
	MJP DSR 2023-24, Item No 13 a, Pg. No. 13/17	Total Amount (₹)		1650000.00

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

LATUR MUNICIPAL CORPORATION
DISTRICT - LATUR; DIVISION - AURANGABAD
CONCRETE ROAD(1525 m length , 4 m wide)
Abstract

Item No.	Description of Item	Quantity	Unit	Rate in Rs.	Amount
1	Item No 1				
	Excavation for roadway in earth, soil of all sorts, sand, gravel or soft murum including dressing section to the required grade, camber and side slopes and conveying the excavated materials with all lift upto a lead of 50m. and spreading for embankment or stacking as directed.	1830	Cum	124.83	2,28,440.73
	SOR PWD 2022-23, pg no 26, 2.11				
	Add 5% For Municipal Corporation				
	As Per Attached RA Item No.- 79				
2	Item No 2				
	Excavation for roadway in hard murum and boulder including dressing section to the required grade, camber and side slopes and conveying the excavated materials with all lifts upto a lead of 50m. and spreading for embankment or stacking as directed.	1830	Cum	145.81	2,66,834.13
	SOR PWD 2022-23, pg no 26, 2.13				
	Add 5% For Municipal Corporation				
	As Per Attached RA Item No.- 80				
3	Item No 3				
	Spreading hard murum/ soft murum/ gravel or kankar for side width complete	1220	Cum	82.87	1,01,102.62
	PWD SOR 2022-23, Item No. 2.3, Pg-28				
	Add 5% For Municipal Corporation				
	As Per Attached RA Item No.- 81				

Item No.	Description of Item	Quantity	Unit	Rate in Rs.	Amount
4	Item No 4				
	Construction of granular sub-base by providing close graded material, spreading in uniform layers with motor grader/ Paver on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401 -- By Mix in Place Method and Grading - III Material	915	Cum	1892.40	17,31,542.34
	SOR PWD 2022-23, 3.06				
	Add 5% For Municipal Corporation				
	As Per Attached RA Item No.- 82				
5	Item No 5				
	RIGID PAVEMENT-Construction of dry lean cement concrete Sub- base over a prepared sub-grade with coarse and fine aggregate (natural sand/ VSI grade finely washed crushed sand) conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm, , cement content not to be less than 150 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant/ Weigh batch mixer, transported to site with all leads and lifts, laid with a paver with electronic sensor /by suitable means as approved by Engineer-in-charge , compacting with vibratory roller, finishing, curing and including preparation of sub-grade surface if required etc. complete.				
	SOR PWD 2022-23, 5.13, Pg-50	610	Cum	3838.29	23,41,357.51
	Add 5% For Municipal Corporation				
	As Per Attached RA Item No.- 83				
6	Item No 6				

Item No.	Description of Item	Quantity	Unit	Rate in Rs.	Amount
	Providing and laying in-situ M40 Grade unreinforced plain cement concrete pavement over a prepared subbase with 43 grade cement ,coarse and fine aggregate (natural sand VSI grade finelywashedcrushed sand)				
	SOR PWD 2022-23, 5.04, Pg-45	1220	Cum	9066.42	1,10,61,037.74
	Add 5% For Municipal Corporation				
	As Per Attached RA Item No.- 84				
7	Item No 7				
	Providing and fixing in position TMT - FE - 500 bar reinforcement of various diameters forR.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintels pardis, copings, fins, arches etc. as per detailed designs, drawings and schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.				
	Total concrete quantity (10 Kg per Cum)	12.2	MT	94098.45	11,48,001.05
	PWD SOR 2022-23, Item No 26.33				
	Add 5% For Municipal Corporation				
	As Per Attached RA Item No.-12				
8	Item No 8				
	Cutting transverse contraction joints 3 to 4 mm wide and depth 60mm. .in concret eslab using concrete cutting machine with diamond studded saw within 48 hours of casting of bay/slab etc.complete including subsequent widening of the groove 8to10 mm.wide at top having depth of 15 mm. as directed by Engineer incharge.				

Item No.	Description of Item	Quantity	Unit	Rate in Rs.	Amount
	SOR PWD 2022-23, 5.17, Pg-51	13717	Rmt	79.72	10,93,574.11
	Add 5% For Municipal Corporation				
	As Per Attached RA Item No.- 85				
9	Item No 9				
	Providing to contraction joints polysuphide sealent (Pouring grade)confirming to BS: 5212-1989 into sawed groove widened at top for sealent reservoir of specified size and shape as per detailed drawing including fixing Polyethy lene foam back errdof required diameter (appraox. 25% larger than the initial 3m One Metric Tonne o4 mm. joint) over laid with bond breaking tape as per detailed drawing. Item includes cleaning the joints with water jet /air compressor and allowing joint to be come thoroughly dry before sealent is applied and applying primer. (A) Contraction and longitudinal joints (15 mm. deep x 8 mm.wide)				
	SOR PWD 2022-23, 5.18, Pg-51	308	Rmt	259.10	79,803.72
	Add 5% For Municipal Corporation				
	As Per Attached RA Item No.- 86				
10	Item No 10				
	Road Marking with Hot Applied Thermo plastic Compound with Reflectorizing Glass Beads on Bituminous Surface-Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorizing glassbeads @ 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes complete.				

Item No.	Description of Item	Quantity	Unit	Rate in Rs.	Amount
	SOR PWD 2022-23, 6.12 a, Pg-56	686.25	Sq.m	506.67	3,47,700.23
	Add 5% For Municipal Corporation				
	As Per Attached RA Item No.- 87				
11	Item No 11				
	Providing and fixing board displaying information,such as 'Name of work,Tender cost, Name of Contractor,Work completion and liability period etc',having rectangular shape of 1.20m x 0.90m size made out18 gauge(1.25mm) thick mild steel sheet painted with one coat of Zinc chromatestoving primer and two coats of enamel paint on front side and greystove enamel on back side and border/messages/symbols etc.with approved colour shade paint complete,on M.S.angle of size35x35x3m mframe with properly cross braced M.S.angles of size35mm x 35mm x 3mm duly painted including Two M.S. angle iron postsof size65mm x 65mm x 6mm,3.65m long painted with alternate blackand white bands of 25cmwidth including all fixtures etc.and fixing the boards in1:4:8 concrete block of size 60 cmx 60 cmx 75 cm including, excavation, refilling, transportation, and labour etc complete. Spec. No. As directed by				
	Sign Board	1	No	10500.49	10,500.49
	SOR PWD 2022-23, 6.36 , Pg-71				
	Add 5% For Municipal Corporation				
	As Per Attached RA Item No.- 88				
				Total	1,84,09,894.67

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

LATUR MUNICIPAL CORPORATION
DISTRICT - LATUR; DIVISION - AURANGABAD
CONCRETE ROAD(1525 m length , 4 m wide)
Measurement

Item No.	Description of Item	No.	Length	Width	Depth	Quantity	Unit
1	Item No 1						
	Excavation for roadway in earth, soil of all sorts, sand, gravel or soft murum including dressing section to the required grade, camber and side slopes and conveying the excavated materials with all lift upto a lead of 50m. and spreading for embankment or stacking as directed.						
		1	1525	4	0.3	1830	Cum
2	Item No 2						
	Excavation for roadway in hard murum and boulder including dressing section to the required grade, camber and side slopes and conveying the excavated materials with all lifts upto a lead of 50m. and spreading for embankment or stacking as directed.						
		1	1525	4	0.3	1830	Cum
3	Item No 3						
	Spreading hard murum/ soft murrum/ gravel or kankar for side width complete						
	Hard Murum	1	1525	4	0.2	1220	Cum
4	Item No 4						
	Construction of granular sub-base by providing close graded material, spreading in uniform layers with motor grader/ Paver on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401 -- By Mix in Place Method and Grading - III Material						
	GSB	1	1525	4	0.15	915	Cum

Item No.	Description of Item	No.	Length	Width	Depth	Quantity	Unit
5	Item No 5						
	RIGID PAVEMENT -Construction of dry lean cement concrete Sub- base over a prepared sub-grade with coarse and fine aggregate (natural sand/ VSI grade finely washed crushed sand) conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm, , cement content not to be less than 150 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant/ Weigh batch mixer, transported to site with all leads and lifts, laid with a paver with electronic sensor /by suitable means as approved by Engineer-in-charge , compacting with vibratory roller, finishing, curing and including preparation of sub-grade surface if required etc. complete.						
	RIGID PAVEMENT	1	1525	4	0.10	610	Cum
6	Item No 6						
	Providing and laying in-situ M40 Grade unreinforced plain cement concrete pavement over a prepared subbase with 43 grade cement ,coarse and fine aggregate (natural sand VSI grade finelywashedcrushed sand) conforming to IS383, using fineandcoarse aggregates combinedgradation as per Table 600-3ofMORTHSpecification 2013, mixed in abatching and mixing plant/ non tilting mixer and Weigh batcher as per approved mix design, admixtures, transporting to site, spreading, laying with approved make paver,compacted and finished in a continuous operation, finishing to lines and grades as directed by Engineer-in-charge and curing by curing compound/ by providing cement vata in cement Mortar1:8 @ 0.6mX0.6m centre to centre,admeasuring 80mm at bottom and40mm at top with depth of 75 mm and maintaining the same throughout curing period by any other method approved by Engineer-in-charge.						
	Concrete Surface Pavement	1	1525	4	0.2	1220	Cum
7	Item No 7						
	Providing and fixing in position TMT - FE - 500 bar reinforcement of various diameters forR.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintels pardis, copings, fins, arches etc. as per detailed designs, drawings and schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.						
	Total concrete quantity (10 Kg per Cum)	1	1220.00	0.01		12.20	MT

Item No.	Description of Item	No.	Length	Width	Depth	Quantity	Unit
8	Item No 8						
	Cutting transverse contraction joints 3 to 4 mm wide and depth 60mm. .in concret eslab using concrete cutting machine with diamond studded saw within 48 hours of casting of bay/slab etc.complete including subsequent widening of the groove 8to10 mm.wide at top having depth of 15 mm. as directed by Engineer incharge.						
	Groove Cutting Transverse (1x1)	1523	4			6092	Rmt
	Groove Cutting Longitudinal	5	1525			7625	Rmt
					Total	13717	Rmt
9	Item No 9						
	Providing to contraction joints polysuphide sealent (Pouring grade)confirming to BS: 5212-1989 into sawed groove widened at top for sealent reservoir of specified size and shape as per detailed drawing including fixing Polyethy lene foam back errodo of required diameter (apparox. 25% larger than the initial 3m One Metric Tonne o4 mm. joint) over laid with bond breaking tape as per detailed drawing. Item includes cleaning the joints with water jet /air compressor and allowing joint to be come thoroughly dry before sealent is applied and applying primer. (A) Contraction and longitudinal joints (15 mm. deep x 8 mm.wide)						
	At 20 M C/C Contraction Joint Provided	77	4			308	Rmt
10	Item No 10						
	Road Marking with Hot Applied Thermo plastic Compound with Reflectorizing Glass Beads on Bituminous Surface-Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorizing glassbeads @ 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes complete.						
	Edge Side	2	1525	0.15		457.5	Sq.m
	Center	1	1525	0.15		228.75	Sq.m
						686.25	Sq.m

Item No.	Description of Item	No.	Length	Width	Depth	Quantity	Unit
11	Item No 11						
	Providing and fixing board displaying information,such as 'Name of work,Tender cost, Name of Contractor,Work completion and liability period etc',having rectangular shape of 1.20m x 0.90m size made out18 gauge(1.25mm) thick mild steel sheet painted with one coat of Zinc chromatestoving primer and two coats of enamel paint on front side and greystove enamel on back side and border/messages/symbols etc.with approved colour shade paint complete,on M.S.angle of size35x35x3m mframe with properly cross braced M.S.angles of size35mm x 35mm x 3mm duly painted including Two M.S. angle iron postsof size65mm x 65mm x 6mm,3.65m long painted with alternate blackand white bands of 25cmwidth including all fixtures etc.and fixing the boards in1:4:8 concrete block of size 60 cmx 60 cmx 75 cm including, excavation, refilling, transportation, and labour etc complete. Spec. No. As directed by Engineer in Charge						
	Sign Board	1				1	No

LATUR MUNICIPAL CORPORATION
DISTRICT - LATUR; DIVISION - AURANGABAD
DRAIN(1525 m length)-Both SIDE

Abstract

Item No.	Description of Item	Quantity	Unit	Rate in Rs.	Amount
1	Item No 1				
	Excavation for road way in earth, soil of all sorts, sand,gravel or soft murum including dressing section to the required grade, camber and side slopes and conveying the excavated materials with all lift upto a lead of 50m. and spreading for embankment or stacking as directed.	976	Cum	217.14	2,11,931.57
	PWD SOR 2022-23, Item No 21.02				
	As Per Attached RA Item No.- 79				
2	Item No 2				
	Excavation for roadway in hard murum and boulder including dressing section to the required grade, camber and side slopes and conveying the excavated materials with all lifts upto a lead of 50m.and spreading for embankment or stacking as directed.	732	Cum	145.81	1,06,733.65
	SOR PWD 2022-23, pg no 26, 2.13				
	As Per Attached RA Item No.- 80				
3	Item No 3				
	Providing and laying Cast in situ/Ready Mix cement concrete in M15 of trap/ granite/quartzite/gneiss metal for foundation / steps including steel centering, formwork, laying/pumping, compacting, roughening them if special finish is to be provided, finishing uneven and honeycombed surface and curing etc. complete. The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface, only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed.),with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)	244	Cum	7655.53	18,67,949.03
	PWD SOR 2022-23, Item No 24.04				
	As Per Attached RA Item No.-6				

Item No.	Description of Item	Quantity	Unit	Rate in Rs.	Amount
4	Item No 4				
	Providing and laying in situ/ Ready Mix cement concrete M-20 of trap/granite/quartzite/ gneiss metal for R.C.C. work in foundations like raft, strip foundations, grillage and footings of R.C.C. columns and steel stanchions etc. including bailing out water, formwork, laying/ pumping cover blocks, compaction and curing roughening the surface if special finish is to be provided, (Excluding reinforcement and structural steel) etc. complete, with fully automatic microprocessor based PLC with SCADA enabled Reversible Drum Type mixer/ concrete Batch Mix plant (Pan mixer) etc. complete, with fine aggregate (Natural Sand/ Crushed Sand V.S.I. Grade finely washed etc.)				
	PWD SOR 2022-23, Item No 25.11	244	Cum	8403.46	20,50,443.36
	As Per Attached RA Item No.-7				
5	Item No 5				
	Providing and laying Cast in situ/Ready Mix cement concrete in M-20 of trap/ granite/ quartzite/ gneiss metal for R.C.C. pardi of required thickness including steel centering, formwork, cover blocks, laying/pumping, compacting , curing , finishing and rougheningthem if special finish is to be provided and curing complete.(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)				
	SOR PWD 2022-23, 5.22	228.75	Cum	17281.14	39,53,061.55
	As Per Attached RA Item No.- 69				

Item No.	Description of Item	Quantity	Unit	Rate in Rs.	Amount
6	Item No 6				
	Providing and fixing in position TMT - FE - 500 bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintels, piers, copings, fins, arches etc. as per detailed designs, drawings and schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.				
	TMT - Fe-500/Fe-415 Total concrete quantity (15 Kg per Cum)	7.09125	MT	94098.45	6,67,275.61
	SOR PWD 2022-23 26.33				
	As Per Attached RA Item No.-12				
7	Item No 7				
	Providing and fixing 80mm dia A.C. / P.V.C. Pipe weep holes at 1.5Mc/c stagger including cost of all materials and labour involved with all lead sandlifts, etc. complete.				
	MJP SSR 2023-24, Sec- M, Pg No 291	41	RMT	231.00	9471.00
				Total	88,66,865.76

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

LATUR MUNICIPAL CORPORATION
DISTRICT - LATUR; DIVISION - AURANGABAD
DRAIN(1525 m length)-Both SIDE

Measurement

Item No.	Description of Item	No.	Length	Width	Depth	Quantity	Unit
1	Item No 1						
	Excavation for road way in earth, soil of all sorts, sand,gravel or soft murum including dressing section to the required grade, camber and side slopes and conveying the excavated materials with all lift upto lead of 50m. and spreading for embankment or stacking as directed.						
		2	1525	0.8	0.4	976	Cum
2	Item No 2						
	Excavation for roadway in hard murum and boulder including dressing section to the required grade, camber and side slopes and conveying the excavated materials with all lifts upto a lead of 50m.and spreading for embankment or stacking as directed.						
	Hard Murum	2	1525	0.8	0.3	732	Cum
3	Item No 3						
	Providing and laying Cast in situ/Ready Mix cement concrete in M15 of trap/ granite/quartzite/gneiss metal for foundation / steps including steel centering, formwork, laying/pumping, compacting, roughening them if special finish is to be provided, finishing uneven and honeycombed surface and curing etc. complete. The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface, only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed.),with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)						
	PCC	2	1525	0.8	0.10	244	Cum
4	Item No 4						
	Providing and laying in situ/ Ready Mix cement concrete M-20 of trap/granite/quartzite/ gneiss metal for R.C.C. work in foundations like raft, strip foundations, grillage and footings of R.C.C. columns and steel stanchions etc. including bailing out water, formwork, laying/ pumping cover blocks, compaction and curing roughening the surface if special finish is to be provided, (Excluding reinforcement and structural steel) etc. complete, with fully automatic microprocessor based PLC with SCADA enabled Reversible Drum Type mixer/ concrete Batch Mix plant (Pan mixer) etc. complete, with fine aggregate (Natural Sand/ Crushed Sand V.S.I. Grade finely washed etc.)						
	Raft	2	1525	0.8	0.10	244	Cum

Item No.	Description of Item	No.	Length	Width	Depth	Quantity	Unit
5	Item No 5						
	Providing and laying Cast in situ/Ready Mix cement concrete in M-20 of trap/ granite/ quartzite/ gneiss metal for R.C.C. pardi of required thickness including steel centering, formwork, cover blocks, laying/pumping, compacting , curing , finishing and rougheningthem if special finish is to be provided and curing complete.(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)						
	rcc walls	2	1525	0.15	0.5	228.75	Cum
6	Item No 6						
	Providing and fixing in position TMT - FE - 500 bar reinforcement of various diameters forR.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintels pardis, copings, fins, arches etc. as per detailed designs, drawings and schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.						
	Total concrete quantity (15 Kg per Cum)	1	472.75	0.015		7.091	MT
7	Item No 7						
	Providing and fixing 80mm diaA.C. / P.V.C. Pipe weep holes at 1.5Mc/c staggere including cost of all materials and labour involved with all lead sandlifts , etc. complete.						
	A.C/80 MM / 90 MM PVC Dia.	2	101.67			41	RMT

LATUR MUNICIPAL CORPORATION
DISTRICT - LATUR, DIVISION - AURANGABAD
SHED FOR SCREENING MACHINE (10X15) - 3 No's

ABSTRACT

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
1	Item no 1				
	Excavation for foundation in earth, soil of all types, sand, gravel and soft murum, including removing the excavated material up to a distance of 50 m. beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift upto 1.5 m.) By Mechanical Means	13.62	Cu.m	217.14	2956.60
	PWD SOR 2022-23, Item No 21.02				
	As Per Attached RA Item No.-1				
2	Item no 2				
	Excavation for foundation in Hard murum including removing the excavated material upto a distance of 50 metres beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift from 1.5 to 3.0m.) By Mechanical Means	16.20	Cu.m	238.12	3857.59
	PWD SOR 2022-23, Item No 21.06				
	As Per Attached RA Item No.-2				
3	Item No.-3				
	Excavation for foundation in Soft rock and old cement or lime masonry foundations including removing the excavated material upto a distance of 50 metres beyond the building area and stacking as directed, including dewatering, preparing the bed for the foundation and necessary back filling with available earth/murum, ramming, watering including shoring and strutting etc. complete. (Lift from 1.5m To 3.0 m.) By Mechanical Means				
	PWD SOR 2022-23, item no 21.14	8.10	Cu.m	450.02	3645.17
	As Per Attached RA Item No.- 3				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
4	Item No.-4				
	Excavation for foundation in Hard rock by chiselling, wedging, line drilling, etc. including trimming and levelling the bed, removing the excavated material upto a distance of 50 metres beyond the building area stacking as directed, dewatering and back filling with available earth/ murum watering, ramming etc. complete. (Lift upto 1.5 m). By Mechanical Means				
	PWD SOR 2022-23, item no 21.20	5.40	Cu.m	1371.04	7403.63
	As Per Attached RA Item No.- 4				
5	Item no 5				
	Providing dry/ trap/ granite/ quartzite/ gneiss rubble stone soling 15 cm to 20 cm thick including hand packing and compacting etc. complete.Bd.A. 12 Page One Number 264	42.13	Cu.m.	1810.19	76259.14
	PWD SOR 2022-23, Item No 21.38				
	As Per Attached RA Item No.-14				
6	Item no 6				
	Providing and laying Cast in situ/Ready Mix cement concrete in M15 of trap/ granite/quartzite/gneiss metal for foundation / steps including steel centering, formwork, laying/pumping, compacting, roughening them if special finish is to be provided, finishing uneven and honeycombed surface and curing etc. complete. The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface, only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed.),with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)	16.30	Cu.m.	7655.53	124816.97
	PWD SOR 2022-23, Item No 24.04				
	As Per Attached RA Item No.-6				
7	Item no 7				
	Providing and fixing in position after hoisting, precast 1:2 cement mortar reinforcement Jali 50mm thick of approved design cement mortar 1:3 and curing complete (including 6mm diameter mild steel bar reinforcement)	168.40	Sqm	982.91	165522.55
	PWD SOR 2022-23, Item No 26.46				
	As Per Attached RA Item No.-52				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
8	Item no 8				
	Providing and laying in situ/ Ready Mix cement concrete M-20 of trap/granite/quartzite/ gneiss metal for R.C.C. work in foundations like raft, strip foundations, grillage and footings of R.C.C. columns and steel stanchions etc. including bailing out water, formwork, laying/ pumping cover blocks, compaction and curing roughening the surface if special finish is to be provided, (Excluding reinforcement and structural steel) etc. complete, with fully automatic microprocessor based PLC with SCADA enabled Reversible Drum Type mixer/ concrete Batch Mix plant (Pan mixer) etc. complete, with fine aggregate (Natural Sand/ Crushed Sand V.S.I. Grade finely washed etc.)	6.91	Cu.m.	8403.46	58084.69
	PWD SOR 2022-23, Item No 25.11				
	As Per Attached RA Item No.-7				
9	Item no 9				
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap /granite/quartzite/ gneiss metal for R.C.C. columns as per detailed designs and drawing or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete.(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)				
	PWD SOR 2022-23, Item No 25.31	2.21	Cu.m.	15409.73	34024.68
	As Per Attached RA Item No.-8				
	.				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
10	Item no 10				
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap / granite/quartzite/ gneiss metal for R.C.C. beams and lintels as per detailed designs and drawings or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction and roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)	4.51	Cu.m.	13821.54	62371.09
	PWD SOR 2022-23, Item No 25.50				
	As Per Attached RA Item No.-9				
11	Item no 11				
	Providing and laying in situ cement concrete M -30 with tremix treatment for 200 mm harge thickness for Concrete Road is including laying plastic sheet for 125 micron thickness with groove cutting of 4 mm wide and 20 mm deep with necessary refilling with bitumen (excluding reinforcement) with coarse and fine aggregate (natural sand/ VSI grade finely washed crushed sand) etc. complete with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete.	32.76	Cu.m.	9812.26	321449.75
	PWD SOR 2022-23, Item No 5.22				
	As Per Attached RA Item No.- 77				
12	Item no 12				
	Providing and fixing in position TMT - FE - 500 bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintels pardis, copings, fins, arches etc. as per detailed designs, drawings and schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.				
	PWD SOR 2022-23, Item No 26.33	2.02	MT	94098.45	190078.86
	As Per Attached RA Item No.-12				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
13	Item no 13				
	Providing uncoursed rubble masonry of trap / granite / quartzite / gneiss stones in cement mortar 1:6 in foundation and plinth of inner walls / in plinth of external walls including bailing out water manually ,striking joints on un exposed faces and watering etc.complete.				
	PWD SOR 2022-23, Item No 28.01	1.01	Cu.m.	6364.71	6444.27
	As Per Attached RA Item No.-55				
14	Item no 14				
	Providing flush grooved pointing with cement mortar 1:3 for stone masonry work including scaffolding and curing etc. complete.				
	PWD SOR 2022-23, Item No 32.17	2.25	Sq. m.	190.92	429.57
	As Per Attached RA Item No.-56				
15	Item no 15				
	Providing second class Burnt Brick masonry with conventional/I.S. type bricks in cement mortar 1:6 in superstructure in-cluding striking joints, raking out joints, watering and scaffolding etc complete.				
	PWD SOR 2022-23, Item No 27.05	15.87	CU.M.	8826.13	140070.76
	As Per Attached RA Item No.-15				
16	Item no 16				
	Providing sand faced plaster externally In cement mortar using approved screened sand, in all positions includ-ing base coat of 15mm thick in C.M. 1:4 using waterproofing compound at 1 kg.per cement bag curing the same for not less than 2 days and keeping the surface of the base coat rough to receive the sand faced treatment 6 to 8mm thick in C.M. 1:4 finishing the surface by taking out grains and curing for fourteen days scaf-folding etc.complete.				
	PWD SOR 2022-23, Item No 32.11	146.01	Sqm	704.72	102893.49
	As Per Attached RA Item No.-21				
17	Item no 17				
	Providing and applying two coats of water proof cement paint of approved manufacture and of approved colour to the plastered surfaces including scaffolding if necessary, cleaning and preparing the surface, watering for two days etc. complete.	168.96	Sq. m.	82.87	14001.58
	PWD SOR 2022-23, Item No 35.13				
	As Per Attached RA Item No.-57				
18	Item no 18				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
	Structural steel work -Providing structural steel work in single stanchions com-posed of R.S.J. Channel etc. with caps, bases, mild steel plated, angle brackets, cleats, gusset plates, anchor bolts etc. as per detailed designs and drawings or as directed including cutting, fabrication, hoisting, erecting fixing in position, making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it two. coats of oil painting complete etc. Spec. No.: Bd.C.6 Page No. 277(FOR STEEL COLUMNS)	3.15	MT.	102811.44	323766.64
	PWD SOR 2022-23, Item No 23.03				
	As Per Attached RA Item No.-58				
19	Item no 19				
	Providing and fabricating structural steel work in rolled sections like joists, channels, angles, tees etc. as per detailed designs and drawing or as directed by Engineer-in-charge including cutting, fabrication, hoisting & erecting fixing in position with connecting plates, braces etc. and one coat of anticorrosive paint and over it two coat of oil paintings of approved quality and shade complete. Spec. No.: Bd.C.2 Page No. 275 (FOR ROOFING MEMBER)	2.11	MT.	106834.36	225035.89
	PWD SOR 2022-23, Item No 23.01				
	As Per Attached RA Item No.-59				
20	Item no 20				
	Trusses-Providing structural steel work in trusses, other similar trussed purlins and members with all bracing, gusset plates etc. as per detailed designs and drawings or as directed including cutting, fabricating, hoisting, erecting fixing in position, Making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it 2 coats of oil painting approved quality and shade etc. complete.	1.33	MT.	125312.49	166830.35
	PWD SOR 2022-23, Item No 23.04				
	As Per Attached RA Item No.-60				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
21	Item no 21				
	Providing and fixing colour coated Zincolume (R) AZ150 (min 150 gms/sq.mt. total on each side) profiled sheets for roofing. The feed material is manufactured out of nominal 0.45 mm Base Metal Thickness (BMT) (0.5 mm TCT), Hi-strength steel with min.550 MPa yield strength, metallic hot dip coated with Aluminium-Zinc alloy (55% aluminium 43.4% zinc 1.6% silicon) with COLORBOND (R) steel quality super durable polyester paint coat (with inorganic pigment). The paint shall have a total coating thickness of nominal 35 um, comprising of nominal 25 um exterior coat on top surface and nominal 10 um reverse coat on back surface. Profile sheet shall have nom. 950-1050 mm effective cover width and nominal 25-30 mm deep ribs with subtle square fluting in the five pan at nominal 180-250 mm center- to-center. The end rib shall be designed for anti-capillary groove. and return leg. The feed material should have coil manufacturers product details marked a regular interval. Including fasteners with min. fastened with min. 25 um Zinc-Tin alloy coated, Hex head, self-drilling screw etc. complete. (weight of profile 4.52 Kilogram/ One Square Metre)	397.32	Sqm.	1230.48	488893.12
	PWD SOR 2022-23, Item No 38.34				
	As Per Attached RA Item No.-61				
22	Item no 22				
	Providing and fixing plain zinc sheeting of 0.80 mm thick (22 B.W.G.) over the ridge hip or valley to galvanized iron sheet roofing including all fastening and bolt galvanised ironscrews and bolts, lead and bitumen washers etc. complete.(Weight of 6.8 Kilogram/sq.m.).	9.24	Sqm.	1194.81	11040.05
	PWD SOR 2022-23, Item No 38.05				
	As Per Attached RA Item No.-62				
23	Item no 23				
	Point wiring in for light/fan/bell in 20 mm metal conduit with 1.5 sq.mm (2+1E) FRLSH grade copper wire, flush type switch, earthing and required accessories as per specification No: WG-PW/SW	18.00	points	898.80	16178.40
	Electrical Mech SOR 2022-2023, item no -1-7-1 ,page no 11				
	As Per Attached RA Item No.-30				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
24	Item no 24				
	Supplying & erecting inverter LED batten 10W tube light fitting with polycarbonate housing, heat sink, integrated HF electronic driver, Min. 2600 mAh Lithium ion Battery with charging time of 8-10 Hours and backup time of Min. 3 hrs. with minimum 25% of initial Watts having luminous efficacy of 100 lumen/watt, CRI>80, CCT of 6500K and THD<=20% having useful life of minimum 25000 hrs. with overheating protection with 2 years warranty.	10.00	Nos	699.30	6993.00
	PWD ELECTRICAL CSR 2022-2023, item no -2-1-21, page no 25				
	As Per Attached RA Item No.-29				
25	Item no 25				
	Providing and fixing welded mesh of 11 gauge wires having mesh size 50 mm x 25 mm including M.S Angle frame of size 35 mm x 35 mm x5 mm in position with oil painting 3 coats etc. complete	25.20	Sq. M.	2774.61	69920.05
	PWD SOR 2022-23, Item No 39.79				
	As Per Attached RA Item No.-63				
26	Item no 26				
	Providing and fixing rolling shutter fabricated from steel laths of minimum thickness 0.9 mm with lock plate of 3.15 mm thickness reinforced with 35 x 35 x 5 mm angle section fitted with sliding bolts and handles for both sides, deep M.S. channel section of depth and thickness not less than 65 mm and 3.15 mm respectively with hold fast arrangements, M.S. Bracket plate 300 x 300 x 3.15 mm minimum size and shape with square bar, suspension shaft of minimum 32 mm diameter, hood cover of M.S. sheet not less than 0.9 mm thickness and of any size at top and safety devices including mechanical gear operation arrangement consisting of worm gear wheels and worms of high grade cast iron or mild steel and one coat of red lead primer etc. complete. (I.S. 62481979) (With mechanical gear)	16.00	Sq. M.	5568.09	89089.47
	PWD SOR 2022-23, Item No 39.25				
	As Per Attached RA Item No.- 64				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
27	Item no 27				
	Providing and fixing Road junction / Information sign board of size 0.90 m x 0.60 m. prepared on 16 gauge M.S. sheet with angle iron frame of size 35 x 35 x 5 mm including painting with one coat of zinc cromate stoving primer and two coats each of green / white background and backside gray stove enamelled, bonded with red retroreflective sheet Engineering grade, border / letters / numeral / arrows, coated with non pealable crystal clear protective coat retaining 100% reflection including two angle iron post of size 50 x 50x 5 mm of 3.65 m. long inflated at bottom drilled on top and painted in white and black bands of 30cm. with 4 Nos. high strength G.I. bolts and nuts of size 10 mm dia. and 20mm long sheet and angle iron post in one piece without joints including all taxes, conveying, fixing round with cement concrete 1:4:8 block of 60cmx 60cmx 75cm size as directed by Engineer-in-charge etc. complete. Mild Steel Board with Engineering Grade.				
	PWD SOR 2022-23, item no 6.47	1.00	No	7881.14	7881.14
	As Per Attached RA Item No.- 65				
28	Item no 28				
	Design & Approval Charges for Concrete , Reinforcement & Structural Steel as 2%			0.02	54398.77
	TOTAL				2774337.26
		TOTAL 3 Nos			8323011.77

LATUR MUNICIPAL CORPORATION
DISTRICT - LATUR, DIVISION - AURANGABAD
SHED FOR SCREENING MACHINE (10X15) - 3 No's
MEASUREMENTS

Item No	Description	No	Length	Width	Depth	Qty	Unit
1	Item no 1						
	Excavation for foundation in earth, soil of all types, sand, gravel and soft murum, including removing the excavated material up to a distance of 50 m. beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift upto 1.5 m.) By Mechanical Means						
	For Column Footing	12	1.50	1.50	0.40	10.80	Cu.m.
	Plinth Beam (longer side)	8	2.15	0.23	0.20	0.79	Cu.m.
	Plinth Beam (shorter side)	4	3.30	0.23	0.20	0.61	Cu.m.
	Ramp	2	4.50	0.45	0.35	1.42	Cu.m.
		Total Excavation Quantity				13.62	Cu.m.
2	Item no 2						
	Excavation for foundation in Hard murum including removing the excavated material upto a distance of 50 metres beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift from 1.5 to 3.0m.) By Mechanical Means						
	Hard murum	12	1.50	1.50	0.60	16.20	Cu.m.
3	Item No.-3						
	Excavation for foundation in Soft rock and old cement or lime masonry foundations including removing the excavated material upto a distance of 50 metres beyond the building area and stacking as directed, including dewatering, preparing the bed for the foundation and necessary back filling with available earth/murum, ramming ,watering including shoring and strutting etc. complete. (Lift from 1.5m To 3.0 m.) By Mechanical Means						
	Hard murum	12	1.50	1.50	0.30	8.10	Cu.m.

Item No	Description	No	Length	Width	Depth	Qty	Unit
4	Item No.-4						
	Excavation for foundation in Hard rock by chiselling, wedging, line drilling, etc. including trimming and levelling the bed, removing the excavated material upto a distance of 50 metres beyond the building area stacking as directed, dewatering and back filling with available earth/ murum watering, ramming etc. complete. (Lift upto 1.5 m). By Mechanical Means						
	Hard murum	12	1.50	1.50	0.2	5.40	Cu.m.
5	Item no 5						
	Providing dry/ trap/ granite/ quartzite/ gneiss rubble stone soling 15 cm to 20 cm thick including hand packing and compacting etc. complete. Bd.A. 12 Page One Number 264						
	below column	12	1.30	1.30	0.30	6.08	Cu.m.
	below flooring	1	14.54	9.54	0.23	31.90	Cu.m.
	for ramp	1	4.50	4.00	0.23	4.14	Cu.m.
					Total	42.13	Cu.m.
6	Item no 6						
	Providing and laying Cast in situ/Ready Mix cement concrete in M15 of trap/ granite/quartzite/gneiss metal for foundation / steps including steel centering, formwork, laying/pumping, compacting, roughening them if special finish is to be provided, finishing uneven and honeycombed surface and curing etc. complete. The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface, only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed.), with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)						
	below column	12	1.30	1.30	0.10	2.03	Cu.m.
	below flooring	1	14.54	9.54	0.10	13.87	Cu.m.
	for ramp	2	4.50	0.45	0.10	0.41	Cu.m.
					Total	16.30	Cu.m.
7	Item no 7						
	Providing and fixing in position after hoisting, precast 1:2 cement mortar reinforcement Jali 50mm thick of approved design cement mortar 1:3 and curing complete (including 6mm diameter mild steel bar reinforcement)						
	Reinforcement Jali for Floor	1	15.00	10.00		150.00	Sq.m
	Reinforcement Jali for Ramp	1	4.00	4.60		18.40	Sq.m
					Total	168.40	Sq.m
8	Item no 8						

Item No	Description	No	Length	Width	Depth	Qty	Unit
	Providing and laying in situ/ Ready Mix cement concrete M-20 of trap/granite/quartzite/ gneiss metal for R.C.C. work in foundations like raft, strip foundations, grillage and footings of R.C.C. columns and steel stanchions etc. including bailing out water, formwork, laying/ pumping cover blocks, compaction and curing roughening the surface if special finish is to be provided, (Excluding reinforcement and structural steel) etc. complete, with fully automatic microprocessor based PLC with SCADA enabled Reversible Drum Type mixer/ concrete Batch Mix plant (Pan mixer) etc. complete, with fine aggregate (Natural Sand/ Crushed Sand V.S.I. Grade finely washed etc.)						
	Footing	12	1.20	1.20	0.40	6.91	Cu.m.
9	Item no 9						
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap /granite/quartzite/ gneiss metal for R.C.C. columns as per detailed designs and drawing or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete.(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)						
	Column stub upto plinth level	12	0.40	0.40	1.15	2.21	Cu.m.
10	Item no 10						
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap / granite/quartzite/ gneiss metal for R.C.C. beams and lintels as per detailed designs and drawings or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction and roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)						
	R.C.C. Plinth beam-						
	along Shorter Side	4	4.40	0.23	0.45	1.82	Cu.m.
	along Longer Side	8	3.25	0.23	0.45	2.69	Cu.m.
					Total	4.51	Cu.m.

Item No	Description	No	Length	Width	Depth	Qty	Unit
11	Item no 11						
	Providing and laying in situ cement concrete M -30 with tremix treatment for 200 mm harge thickness for Concrete Road is including laying plastic sheet for 125 micron thickness with groove cutting of 4 mm wide and 20 mm deep with necessary refilling with bitumen (excluding reinforcement) with coarse and fine aggregate (natural sand/ VSI grade finely washed crushed sand) etc. complete with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete.						
	Floor slab	1	15.00	10.00	0.20	30.00	Cu.m.
	Ramp top slab	1	4.00	4.60	0.15	2.76	Cu.m.
					Total	32.76	Cu.m.
12	Item no 12						
	Providing and fixing in position TMT - FE - 500 bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintels pardis, copings, fins, arches etc. as per detailed designs, drawings and schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.						
	100 Kg per cubic meter of concrete QUANTITY-		13.63	100.00	kg/cum	1.3633	MT
	FOR TREMIX CONCRETE		32.76	20.00	kg/cum	0.6552	MT
					Total	2.02	MT
13	Item no 13						
	Providing uncoursed rubble masonry of trap / granite / quartzite / gneiss stones in cement mortar 1:6 in foundation and plinth of inner walls / in plinth of external walls including bailing out water manually ,striking joints on un exposed faces and watering etc.complete.						
	Ramp side walls ($0.45+0/2=0.25$ =avg ht)	2	4.50	0.45	0.25	1.01	Cu.m.
14	Item no 14						
	Providing flush grooved pointing with cement mortar 1:3 for stone masonry work including scaffolding and curing etc. complete.						
	for pointing	2	4.50		0.25	2.25	Sq. m.

Item No	Description	No	Length	Width	Depth	Qty	Unit
15	Item no 15						
	Providing second class Burnt Brick masonry with conventional/I.S. type bricks in cement mortar 1:6 in superstructure including striking joints, raking out joints, watering and scaffolding etc complete.						
	long wall shed	2	15.00	0.23	1.50	10.35	CU.M.
	short wall shed	1	16.00	0.23	1.50	5.52	CU.M.
					Total	15.87	CU.M.
16	Item no 16						
	Providing sand faced plaster externally In cement mortar using approved screened sand, in all positions including base coat of 15mm thick in C.M. 1:4 using waterproofing compound at 1 kg.per cement bag curing the same for not less than 2 days and keeping the surface of the base coat rough to receive the sand faced treatment 6 to 8mm thick in C.M. 1:4 finishing the surface by taking out grains and curing for fourteen days scaffolding etc.complete.						
	OTER SIDE						
	Long wall	2	15.00		1.50	45.00	Sqm
	short wall	1	16.00		1.50	24.00	Sqm
	INSIDE						
	Long wall	2	14.54		1.50	43.62	Sqm
	short wall	1	15.31		1.50	22.97	Sqm
	BB top	1	45.31	0.23		10.42	Sqm
	$15*2+(16-0.46-0.23)=45.31$						
					total	146.01	Sqm
17	Item no 17						
	Providing and applying two coats of water proof cement paint of approved manufacture and of approved colour to the plastered surfaces including scaffolding if necessary, cleaning and preparing the surface, watering for two days etc. complete.						
	FOR PLINTH	2	15		0.45	13.5	Sq. m.
		2	10		0.45	9	Sq. m.
	FOR RAMP	2	4.50		0.25	2.25	Sq. m.
	BB MASONRY as per plaster item					146.01	Sq. m.
						170.76	
	DEDUCTION						
	RAMP	1	4.00		0.45	1.80	Sq. m.
					Total	168.96	Sq. m.
18	Item no 18						

Item No	Description	No	Length	Width	Depth	Qty	Unit
	Structural steel work -Providing structural steel work in single stanchions com-posed of R.S.J. Channel etc. with caps, bases, mild steel plated, angle brackets, cleats, gusset plates, anchor bolts etc. as per detailed designs and drawings or as directed including cutting, fabrication, hoisting, erecting fixing in position, making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it two. coats of oil painting complete etc. Spec. No.: Bd.C.6 Page No. 277 (FOR STEEL COLUMNS)						
a	Steel Columns of ISMB300@44.2 Kg/m= $(44.2/1000)=.0442$ MT	10			6.00	2.65	MT.
b	Anchor Bolt(20 kg)					0.02	MT.
c	Base Plate BOTTOM	10	0.35	0.35	0.02	0.19	MT.
d	Base Plate TOP	10	0.35	0.35	0.01	0.10	MT.
e	Stiffener Plate(10 mm Thick)(per column 8 stiffener required)	80	0.20	0.15	0.01	0.19	MT.
					Total	3.15	MT.
19	Item no 19						
	Providing and fabricating structural steel work in rolled sections like joists, channels, angles, tees etc. as per detailed designs and drawing or as directed by Engineer-in-charge including cutting, fabrication, hoisting & erecting fixing in position with connecting plates, braces etc. and one coat of anticorrosive paint and over it two coat of oil paintings of approved quality and shade complete. Spec. No.: Bd.C.2 Page No. 275 (FOR ROOFING MEMBER)						
a	Roofing Member of ISMB150@14.9kg/m		50.00			0.75	MT.
	$15*2+10*2=50$ m						
b	Vertical Angle section 40 x 40 x 4 @ 2.4 kg/m (for Supporting Zincalume Sheets for Enclosure) spacing 1.286M	38			4.50	0.41	MT.
	nos= $(50-4)/1.286=36+2=38$, ht=6-1.5 m bb=4.50 m						
c	Horizontal Angle section 40 x 40 x 4 @ 2.4 kg/m spacing 1.286M	5	46			0.55	MT.
d	Angle section 50 x 50 x 5 @3.8 kg/m For Roofing(purlins) spacing 1.8M	7	15.00			0.40	MT.
					Total	2.11	MT.
20	Item no 20						

Item No	Description	No	Length	Width	Depth	Qty	Unit
	Trusses -Providing structural steel work in trusses, other similar trussed purlins and members with all bracing, gusset plates etc. as per detailed designs and drawings or as directed including cutting, fabricating, hoisting, erecting fixing in position, Making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it 2 coats of oil painting approved quality and shade etc. complete.						
	Use 60x60x6 mm Angle@5.42 kg/rmt.techdata book pg 36		223.30		5.42	1210.29	KG
	$((10*2)+(5.38*2)+(0.67*2)+(1.8*2)+(1.34*2)+(2.14*2)+(2*1))*5=223.30$						
	10% extra for item fitting					121.03	KG
				GROSS		1.33	MT.
21	Item no 21						
	Providing and fixing colour coated Zincalume (R) AZ150 (min 150 gms/sq.mt. total on each side) profiled sheets for roofing. The feed material is manufactured out of nominal 0.45 mm Base Metal Thickness (BMT) (0.5 mm TCT), Hi-strength steel with min.550 MPa yield strength, metallic hot dip coated with Aluminium-Zinc alloy (55% aluminium 43.4% zinc 1.6% silicon) with COLORBOND (R) steel quality super durable polyester paint coat (with inorganic pigment). The paint shall have a total coating thickness of nominal 35 um, comprising of nominal 25 um exterior coat on top surface and nominal 10 um reverse coat on back surface. Profile sheet shall have nom. 950-1050 mm effective cover width and nominal 25-30 mm deep ribs with subtle square fluting in the five pan at nominal 180-250 mm center- to-center. The end rib shall be designed for anti-capillary groove. and return leg. The feed material should have coil manufacturers product details marked a regular interval. Including fasteners with min. fastened with min. 25 um Zinc-Tin alloy coated, Hex head, self-drilling screw etc. complete. (weight of profile 4.52 Kilogram/ One Square Metre)						
	Roofing	2	15.40	6.00		184.80	Sq. M.
	Enclosure for sides						
	longer side	2	15.00		3.60	108.00	Sq. M.
	shorter side	1	16.00		3.60	57.60	Sq. M.
	above entrance	1	4.00		2.00	8.00	Sq. M.
	for triangular portion of truss	4	0.50	5.00	2.00	20.00	Sq. M.
	Add 5 % extra for lapping					18.92	
				GROSS		397.32	Sq. M.
22	Item no 22						
	Providing and fixing plain zinc sheeting of 0.80 mm thick (22 B.W.G.) over the ridge hip or valley to galvanized iron sheet roofing including all fastening and bolt galvanised ironscrews and bolts, lead and bitumen washers etc. complete.(Weight of 6.8 Kilogram/sq.m.).						
		1	15.40	0.60		9.24	Sq. M.

Item No	Description	No	Length	Width	Depth	Qty	Unit
23	Item no 23						
	Point wiring in for light/fan/bell in 20 mm metal conduit with 1.5 sq.mm (2+1E) FRLSH grade copper wire, flush type switch, earthing and required accessories as per specification No: WG-PW/SW						
	Assume					18	point
24	Item no 24						
	Supplying & erecting inverter LED batten 10W tube light fitting with polycarbonate housing, heat sink, integrated HF electronic driver, Min. 2600 mAh Lithium ion Battery with charging time of 8-10 Hours and backup time of Min. 3 hrs. with minimum 25% of initial Watts having luminous efficacy of 100 lumen/watt, CRI>80, CCT of 6500K and THD<=20% having useful life of minimum 25000 hrs. with overheating protection with 2 years warranty.						
						10	Nos
25	Item no 25						
	Providing and fixing welded mesh of 11 gauge wires having mesh size 50 mm x 25 mm including M.S Angle frame of size 35 mm x 35 mm x5 mm in position with oil painting 3 coats etc. complete						
	for ventilation purpose						
	below roofing member	2	14		0.6	16.8	Sq. M.
	above bb wall	2	14		0.3	8.4	Sq. M.
					Total	25.2	Sq. M.

Item No	Description	No	Length	Width	Depth	Qty	Unit
26	Item no 26						
	Providing and fixing rolling shutter fabricated from steel laths of minimum thickness 0.9 mm with lock plate of 3.15 mm thickness reinforced with 35 x 35 x 5 mm angle section fitted with sliding bolts and handles for both sides, deep M.S. channel section of depth and thickness not less than 65 mm and 3.15 mm respectively with hold fast arrangements, M.S. Bracket plate 300 x 300 x 3.15 mm minimum size and shape with square bar, suspension shaft of minimum 32 mm diameter, hood cover of M.S. sheet not less than 0.9 mm thickness and of any size at top and safety devices including mechanical gear operation arrangement consisting of worm gear wheels and worms of high grade cast iron or mild steel and one coat of red lead primer etc. complete. (I.S. 62481979) (With mechanical gear)						
	Entrance shutter at ramp	1	4	4		16	Sq. M.
27	Item no 27						
	Providing and fixing Road junction / Information sign board of size 0.90 m x 0.60 m. prepared on 16 gauge M.S. sheet with angle iron frame of size 35 x 35 x 5 mm including painting with one coat of zinc cromate stoving primer and two coats each of green / white background and backside gray stove enamelled, bonded with red retroreflective sheet Engineering grade, border / letters / numeral / arrows, coated with non pealable crystal clear protective coat retaining 100% reflection including two angle iron post of size 50 x 50x 5 mm of 3.65 m. long inflated at bottom drilled on top and painted in white and black bands of 30cm. with 4 Nos. high strength G.I. bolts and nuts of size 10 mm dia. and 20mm long sheet and angle iron post in one piece without joints including all taxes, conveying, fixinging round with cement concrete 1:4:8 block of 60cmx 60cmx 75cm size as directed by Engineer-in- charge etc. complete. Mild Steel Board with Engineering Grade.						
						1.00	No
28	Item no 28						
	Design & Approval Charges for Concrete , Reinforcement & Structural Steel as 2%						

LATUR MUNICIPAL CORPORATION
DISTRICT - LATUR, DIVISION - AURANGABAD
(18M X 15M) MRF SHED (SIDE HT-6M & CENTRAL HT-8M with partition)
ABSTRACT

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
1	Item no 1				
	Excavation for foundation in earth, soil of all types, sand, gravel and soft murum, including removing the excavated material up to a distance of 50 m. beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift upto 1.5 m.) By Mechanical Means	12.90	Cu.m	217.14	2800.15
	PWD S.S.R. 2022-23, Item No. 21.02				
	As Per Attached RA Item No.-1				
2	Item no 2				
	Excavation for foundation in Hard murum including removing the excavated material upto a distance of 50 metres beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift from 1.5 to 3.0m.) By Mechanical Means	12.10	Cu.m.	238.12	2880.34
	PWD SOR 2022-23, Item No 21.06				
	As Per Attached RA Item No.-2				
3	Item No.-3				
	Excavation for foundation in Soft rock and old cement or lime masonry foundations including removing the excavated material upto a distance of 50 metres beyond the building area and stacking as directed, including dewatering, preparing the bed for the foundation and necessary back filling with available earth/murum, ramming ,watering including shoring and strutting etc. complete. (Lift from 1.5m To 3.0 m.) By Mechanical Means				
	PWD SOR 2022-23, item no 21.14	6.05	Cu.m.	450.02	2721.73
	As Per Attached RA Item No.- 3				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
4	Item No.-4				
	Excavation for foundation in Hard rock by chiselling, wedging, line drilling, etc. including trimming and levelling the bed, removing the excavated material upto a distance of 50 metres beyond the building area stacking as directed, dewatering and back filling with available earth/ murum watering, ramming etc. complete. (Lift upto 1.5 m). By Mechanical Means				
	PWD SOR 2022-23, item no 21.20	4.03	Cu.m.	1371.04	5528.05
	As Per Attached RA Item No.- 4				
5	Item no 5				
	Providing dry/ trap/ granite/ quartzite/ gneiss rubble stone soling 15 cm to 20 cm thick including hand packing and compacting etc. complete.Bd.A. 12 Page One Number 264	72.99	Cu.m.	1810.19	132117.30
	PWD S.S.R. 2022-23, Item No. 21.38				
	As Per Attached RA Item No.-14				
6	Item no 6				
	Providing and laying Cast in situ/Ready Mix cement concrete in M15 of trap/ granite/quartzite/gneiss metal for foundation / steps including steel centering, formwork, laying/pumping, compacting, roughening them if special finish is to be provided, finishing uneven and honeycombed surface and curing etc. complete. The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface, only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed.),with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)	29.83	Cu.m.	7655.53	228333.80
	PWD S.S.R. 2022-23, Item No. 24.04				
	As Per Attached RA Item No.-6				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
7	Item no 7				
	Providing and fixing in position after hoisting, precast 1:2 cement mortar reinforcement Jali 50mm thick of approved design cement mortar 1:3 and curing complete (including 6mm diameter mild steel bar reinforcement)	306.80	Sq. m.	982.91	301557.71
	PWD S.S.R. 2022-23, Item No. 26.46				
	As Per Attached RA Item No.-52				
8	Item no 8				
	Providing and laying in situ/ Ready Mix cement concrete M-20 of trap/granite/quartzite/ gneiss metal for R.C.C. work in foundations like raft, strip foundations, grillage and footings of R.C.C. columns and steel stanchions etc. including bailing out water, formwork, laying/ pumping cover blocks, compaction and curing roughening the surface if special finish is to be provided, (Excluding reinforcement and structural steel) etc. complete, with fully automatic microprocessor based PLC with SCADA enabled Reversible Drum Type mixer/ concrete Batch Mix plant (Pan mixer) etc. complete, with fine aggregate (Natural Sand/ Crushed Sand V.S.I. Grade finely washed etc.)	5.60	Cu.m.	8403.46	47059.36
	PWD S.S.R. 2022-23, Item No. 25.11				
	As Per Attached RA Item No.-7				
9	Item no 9				
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap /granite/quartzite/ gneiss metal for R.C.C. columns as per detailed designs and drawing or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete.(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)				
	PWD S.S.R. 2022-23, Item No. 25.31	2.58	Cu.m.	15409.73	39695.46
	As Per Attached RA Item No.-8				
10	Item no 10				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap / granite/quartzite/ gneiss metal for R.C.C. beams and lintels as per detailed designs and drawings or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction and roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)	6.09	Cu.m.	13821.54	84143.75
	PWD S.S.R. 2022-23, Item No. 25.50				
	As Per Attached RA Item No.-9				
11	Item no 11				
	Providing and laying in situ cement concrete M -30 with tremix treatment for 200 mm harge thickness for Concrete Road is including laying plastic sheet for 125 micron thickness with groove cutting of 4 mm wide and 20 mm deep with necessary refilling with bitumen (excluding reinforcement) with coarse and fine aggregate (natural sand/ VSI grade finely washed crushed sand) etc. complete with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete.	59.52	Cu.m	9812.26	584025.92
	PWD S.S.R. 2022-23, Item No. 5.22				
	As Per Attached RA Item No.- 77				
12	Item no 12				
	Providing and fixing in position TMT - FE - 500 bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintels pardis, copings, fins, arches etc. as per detailed designs, drawings and schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.				
	PWD S.S.R. 2022-23, Item No. 26.33	3.22	MT	94098.45	302997.00
	As Per Attached RA Item No.-12				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
13	Item no 13				
	Providing uncoursed rubble masonry of trap / granite / quartzite / gneiss stones in cement mortar 1:6 in foundation and plinth of inner walls / in plinth of external walls including bailing out water manually ,striking joints on un exposed faces and watering etc.complete.				
	PWD S.S.R. 2022-23, Item No. 28.01	2.03	Cu.m.	6364.71	12888.54
	As Per Attached RA Item No.-55				
14	Item no 14				
	Providing flush grooved pointing with cement mortar 1:3 for stone masonry work including scaffolding and curing etc. complete.				
	PWD S.S.R. 2022-23, Item No. 32.17	4.50	Sq. m.	190.92	859.13
	As Per Attached RA Item No.-56				
15	Item no 15				
	Providing second class Burnt Brick masonry with conventional/I.S. type bricks in cement mortar 1:6 in superstructure in-cluding striking joints, raking out joints, watering and scaffolding etc complete.				
	PWD SOR 2022-23, Item No 27.05	19.693	CU.M.	8826.13	173809.54
	As Per Attached RA Item No.-15				
16	Item no 16				
	Providing sand faced plaster externally In cement mortar using approved screened sand, in all positions includ-ing base coat of 15mm thick in C.M. 1:4 using waterproofing compound at 1 kg.per cement bag curing the same for not less than 2 days and keeping the surface of the base coat rough to receive the sand faced treatment 6 to 8mm thick in C.M. 1:4 finishing the surface by taking out grains and curing for fourteen days scaf-folding etc.complete.	197.748	Sqm	704.72	139357.15
	PWD S.S.R. 2022-23, Item No. 32.11				
	As Per Attached RA Item No.-21				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
17	Item no 17				
	Providing and applying two coats of water proof cement paint of approved manufacture and of approved colour to the plastered surfaces including scaffolding if necessary, cleaning and preparing the surface, watering for two days etc. complete.	224.75	Sq. m.	82.87	18625.12
	PWD S.S.R. 2022-23, Item No. 35.13				
	As Per Attached RA Item No.-57				
18	Item no 18				
	Structural steel work -Providing structural steel work in single stanchions com-posed of R.S.J. Channel etc. with caps, bases, mild steel plated, angle brackets, cleats, gusset plates, anchor bolts etc. as per detailed designs and drawings or as directed including cutting, fabrication, hoisting, erecting fixing in position, making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it two. coats of oil painting complete etc. Spec. No.: Bd.C.6 Page No. 277(FOR STEEL COLUMNS)	3.15	MT.	102811.44	323766.64
	PWD S.S.R. 2022-23, Item No. 23.03				
	As Per Attached RA Item No.-58				
19	Item no 19				
	Providing and fabricating structural steel work in rolled sections like joists, channels, angles, tees etc. as per detailed designs and drawing or as directed by Engineer-in-charge including cutting, fabrication, hoisting & erecting fixing in position with connecting plates, braces etc. and one coat of anticorrosive paint and over it two coat of oil paintings of approved quality and shade complete. Spec. No.: Bd.C.2 Page No. 275 (FOR ROOFING MEMBER)	3.18	MT.	106834.36	339284.55
	PWD S.S.R. 2022-23, Item No. 23.01				
	As Per Attached RA Item No.-59				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
20	Item no 20				
	Trusses-Providing structural steel work in trusses, other similar trussed purlins and members with all bracing, gusset plates etc. as per detailed designs and drawings or as directed including cutting, fabricating, hoisting, erecting fixing in position, Making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it 2 coats of oil painting approved quality and shade etc. complete.	2.48	MT.	125312.49	310914.83
	PWD S.S.R. 2022-23, Item No. 23.04				
	As Per Attached RA Item No.-60				
21	Item no 21				
	Providing and fixing colour coated Zincolume (R) AZ150 (min 150 gms/sq.mt. total on each side) profiled sheets for roofing. The feed material is manufactured out of nominal 0.45 mm Base Metal Thickness (BMT) (0.5 mm TCT), Hi-strength steel with min.550 MPa yield strength, metallic hot dip coated with Aluminium-Zinc alloy (55% aluminium 43.4% zinc 1.6% silicon) with COLORBOND (R) steel quality super durable polyester paint coat (with inorganic pigment). The paint shall have a total coating thickness of nominal 35 um, comprising of nominal 25 um exterior coat on top surface and nominal 10 um reverse coat on back surface. Profile sheet shall have nom. 950-1050 mm effective cover width and nominal 25-30 mm deep ribs with subtle square fluting in the five pan at nominal 180-250 mm center- to-center. The end rib shall be designed for anti-capillary groove. and return leg. The feed material should have coil manufacturers product details marked a regular interval. Including fasteners with min. fastened with min. 25 um Zinc-Tin alloy coated, Hex head, self-drilling screw etc. complete. (weight of profile 4.52 Kilogram/ One Square Metre)	642.07	Sq.M.	1230.48	790052.37
	PWD S.S.R. 2022-23, Item No. 38.34				
	As Per Attached RA Item No.-61				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
22	Item no 22				
	Providing and fixing plain zinc sheeting of 0.80 mm thick (22 B.W.G.) over the ridge hip or valley to galvanized iron sheet roofing including all fastening and bolt galvanised ironscrews and bolts, lead and bitumen washers etc. complete.(Weight of 6.8 Kilogram/sq.m.).	11.04	Sq. M.	1194.81	13,190.71
	PWD S.S.R. 2022-23, Item No. 38.05				
	As Per Attached RA Item No.-62				
23	Item no 23				
	Point wiring for light/bell/exhaust fan in 20 mm FRLS grade HMS PVC conduit with 1.5 sq.mm (2+1E) FRLSH grade copper wire, modular type switch, earthing and required accessories as per specification No: WG- PW/SW.	16.00	points	898.80	14380.80
	SOR PWD Electrical 2022-23, pg no 12, 1-7-12				
	As Per Attached RA Item No.-30				
24	Item no 24				
	Supplying & erecting inverter LED batten 10W tube light fitting with polycarbonate housing, heat sink, integrated HF electronic driver, Min. 2600 mAh Lithium ion Battery with charging time of 8-10 Hours and backup time of Min. 3 hrs. with minimum 25% of initial Watts having luminous efficacy of 100 lumen/watt, CRI>80, CCT of 6500K and THD<=20% having useful life of minimum 25000 hrs. with overheating protection with 2 years warranty.	12.00	point	699.30	8391.60
	PWD ELECTRICAL CSR 2022-2023, item no -2-1-21, page no 25				
	As Per Attached RA Item No.-29				
25	Item no 25				
	Providing and fixing welded mesh of 11 gauge wires having mesh size 50 mm x 25 mm including M.S Angle frame of size 35 mm x 35 mm x5 mm in position with oil painting 3 coats etc. complete	30.6	Sq.M.	2774.61	84902.91
	PWD S.S.R. 2022-23, Item No. 39.79				
	As Per Attached RA Item No.-63				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
26	Item no 26				
	Providing and fixing rolling shutter fabricated from steel laths of minimum thickness 0.9 mm with lock plate of 3.15 mm thickness reinforced with 35 x 35 x 5 mm angle section fitted with sliding bolts and handles for both sides, deep M.S. channel section of depth and thickness not less than 65 mm and 3.15 mm respectively with hold fast arrangements, M.S. Bracket plate 300 x 300 x 3.15 mm minimum size and shape with square bar, suspension shaft of minimum 32 mm diameter, hood cover of M.S. sheet not less than 0.9 mm thickness and of any size at top and safety devices including mechanical gear operation arrangement consisting of worm gear wheels and worms of high grade cast iron or mild steel and one coat of red lead primer etc. complete. (I.S. 62481979) (With mechanical gear)	32.00	Sq.M.	5568.09	178178.94
	PWD S.S.R. 2022-23, Item No. 39.25				
	As Per Attached RA Item No.- 64				
27	Item no 27				
	Providing and fixing Road junction / Information sign board of size 0.90 m x 0.60 m. prepared on 16 gauge M.S. sheet with angle iron frame of size 35 x 35 x 5 mm including painting with one coat of zinc cromate stoving primer and two coats each of green / white background and backside gray stove enamelled, bonded with red retroreflective sheet Engineering grade, border / letters / numeral / arrows, coated with non pealable crystal clear protective coat retaining 100% reflection including two angle iron post of size 50 x 50x 5 mm of 3.65 m. long inflated at bottom drilled on top and painted in white and black bands of 30cm. with 4 Nos. high strength G.I. bolts and nuts of size 10 mm dia. and 20mm long sheet and angle iron post in one piece without joints including all taxes, conveying, fixinging round with cement concrete 1:4:8 block of 60cmx 60cmx 75cm size as directed by Engineer-in-charge etc. complete. Mild Steel Board with Engineering Grade.				
	PWD SOR 2022-23, item no 6.47	1.00	No	7881.14	7881.14
	As Per Attached RA Item No.- 65				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
28	Item no 28				
	Design & Approval Charges for Concrete , Reinforcement & Structural Steel as 2%			0.02	83006.89
	TOTAL				4233351.42
	TOTAL 4 Nos				16933405.66

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

LATUR MUNICIPAL CORPORATION
DISTRICT - LATUR, DIVISION - AURANGABAD
(18M X 15M) MRF SHED (SIDE HT-6M & CENTRAL HT-8M with partition)
MEASURMENTS

Item No	Description	No	Length	Width	Depth	Qty	Unit
1	Item no 1						
	Excavation for foundation in earth, soil of all types, sand, gravel and soft murum, including removing the excavated material up to a distance of 50 m. beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift upto 1.5 m.) By Mechanical Means						
	For Column Footing	14	1.20	1.20	0.40	8.06	Cu.m.
	Plinth Beam (longer side)	8	2.90	0.23	0.20	1.07	Cu.m.
	Plinth Beam (shorter side)	6	3.37	0.23	0.20	0.93	Cu.m.
	Ramp	4	4.50	0.45	0.35	2.84	Cu.m.
		Total Excavation Quantity				12.90	Cu.m.
2	Item no 2						
	Excavation for foundation in Hard murum including removing the excavated material upto a distance of 50 metres beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift from 1.5 to 3.0m.) By Mechanical Means						
	Hard murum	14	1.20	1.20	0.60	12.10	Cu.m.
3	Item No.-3						
	Excavation for foundation in Soft rock and old cement or lime masonry foundations including removing the excavated material upto a distance of 50 metres beyond the building area and stacking as directed, including dewatering, preparing the bed for the foundation and necessary back filling with available earth/murum, ramming, watering including shoring and strutting etc. complete. (Lift from 1.5m To 3.0 m.) By Mechanical Means						
	For Column Footing	14	1.2	1.20	0.30	6.05	Cu.m.
4	Item No.-4						
	Excavation for foundation in Hard rock by chiselling, wedging, line drilling, etc. including trimming and levelling the bed, removing the excavated material upto a distance of 50 metres beyond the building area stacking as directed, dewatering and back filling with available earth/murum watering, ramming etc. complete. (Lift upto 1.5 m). By Mechanical Means						
	For Column Footing	14	1.2	1.2	0.2	4.03	Cu.m.

Item No	Description	No	Length	Width	Depth	Qty	Unit
5	Item no 5						
	Providing dry/ trap/ granite/ quartzite/ gneiss rubble stone soling 15 cm to 20 cm thick including hand packing and compacting etc. complete.Bd.A. 12 Page One Number 264						
	below column	14	1.20	1.20	0.30	6.05	Cu.m.
	below flooring	1	17.54	14.54	0.23	58.66	Cu.m.
	for ramp	2	4.50	4.00	0.23	8.28	Cu.m.
					Total	72.99	Cu.m.
6	Item no 6						
	Providing and laying Cast in situ/Ready Mix cement concrete in M15 of trap/ granite/quartzite/gneiss metal for foundation / steps including steel centering, formwork, laying/pumping, compacting, roughening them if special finish is to be provided, finishing uneven and honeycombed surface and curing etc. complete. The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface, only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed.),with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)						
	below column	14	1.20	1.20	0.10	2.02	Cu.m.
	below flooring	1	18.00	15.00	0.10	27.00	Cu.m.
	for ramp	4	4.50	0.45	0.10	0.81	Cu.m.
					Total	29.83	Cu.m.
7	Item no 7						
	Providing and fixing in position after hoisting, precast 1:2 cement mortar reinforcement Jali 50mm thick of approved design cement mortar 1:3 and curing complete (including 6mm diameter mild steel bar reinforcement)						
	Reinforcement Jali for Floor	1	18.00	15.00		270.00	Sq.m
	Reinforcement Jali for Ramp	2	4.00	4.60		36.80	Sq.m
					Total	306.80	Sq.m

Item No	Description	No	Length	Width	Depth	Qty	Unit
8	Item no 8						
	Providing and laying in situ/ Ready Mix cement concrete M-20 of trap/granite/quartzite/ gneiss metal for R.C.C. work in foundations like raft, strip foundations, grillage and footings of R.C.C. columns and steel stanchions etc. including bailing out water, formwork, laying/ pumping cover blocks, compaction and curing roughening the surface if special finish is to be provided, (Excluding reinforcement and structural steel) etc. complete, with fully automatic microprocessor based PLC with SCADA enabled Reversible Drum Type mixer/ concrete Batch Mix plant (Pan mixer) etc. complete, with fine aggregate (Natural Sand/ Crushed Sand V.S.I. Grade finely washed etc.)						
	Footing	14	1.00	1.00	0.40	5.60	Cu.m.
9	Item no 9						
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap /granite/quartzite/ gneiss metal for R.C.C. columns as per detailed designs and drawing or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete.(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)						
	Column stub upto plinth level	14	0.40	0.40	1.15	2.58	Cu.m.
					Total	2.58	Cu.m.
10	Item no 10						
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap / granite/quartzite/ gneiss metal for R.C.C. beams and lintels as per detailed designs and drawings or as directed including steel centering, formwork, cover blocks, laying/pumping, compactionand roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)						
	R.C.C. Plinth beam-						
	along Shorter Side	6	4.47	0.23	0.45	2.78	Cu.m.
	along Longer Side	8	4.00	0.23	0.45	3.31	Cu.m.
					Total	6.09	Cu.m.

Item No	Description	No	Length	Width	Depth	Qty	Unit
11	Item no 11						
	Providing and laying in situ cement concrete M -30 with tremix treatment for 200 mm harge thickness for Concrete Road is including laying plastic sheet for 125 micron thickness with groove cutting of 4 mm wide and 20 mm deep with necessary refilling with bitumen (excluding reinforcement) with coarse and fine aggregate (natural sand/ VSI grade finely washed crushed sand) etc. complete with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete.						
	Floor slab	1	18.00	15.00	0.20	54.00	Cu.m
	Ramp top slab	2	4.00	4.60	0.15	5.52	Cu.m
					Total	59.52	Cu.m
12	Item no 12						
	Providing and fixing in position TMT - FE - 500 bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintels pardis, copings, fins, arches etc. as per detailed designs, drawings and schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.						
	100 Kg per cubic meter of concrete QUANTITY-		14.26	100.00	kg/cum	1.4264	MT
	FOR TREMIX CONCRETE		59.52	30.00	kg/cum	1.7856	MT
					Total	3.22	MT
13	Item no 13						
	Providing uncoursed rubble masonry of trap / granite / quartzite / gneiss stones in cement mortar 1:6 in foundation and plinth of inner walls / in plinth of external walls including bailing out water manually ,striking joints on un exposed faces and watering etc.complete.						
	Ramp side walls ($0.45+0/2=0.25$ =avg ht)	4	4.50	0.45	0.25	2.03	Cu.m.
14	Item no 14						
	Providing flush grooved pointing with cement mortar 1:3 for stone masonry work including scaffolding and curing etc. complete.						
	for pointing	4	4.50		0.25	4.50	Sq. m.

Item No	Description	No	Length	Width	Depth	Qty	Unit
15	Item no 15						
	Providing second class Burnt Brick masonry with conventional/I.S. type bricks in cement mortar 1:6 in superstructure in-cluding striking joints, raking out joints, watering and scaffolding etc complete.						
	long wall shed	2	18.00	0.23	1.50	12.42	CU.M.
	short wall shed	1	10.54	0.23	1.50	3.64	CU.M.
	short wall shed	1	10.54	0.23	1.50	3.64	CU.M.
					Total	19.69	CU.M.
16	Item no 16						
	Providing sand faced plaster externally In cement mortar using approved screened sand, in all positions includ-ing base coat of 15mm thick in C.M. 1:4 using waterproofing compound at 1 kg.per cement bag curing the same for not less than 2 days and keeping the surface of the base coat rough to receive the sand faced treatment 6 to 8mm thick in C.M. 1:4 finishing the surface by taking out grains and curing for fourteen days scaf-folding etc.complete.						
	OTER SIDE						
	Long wall	2	18.00		1.50	54.00	Sqm
	short wall	2	11.00		1.50	33.00	Sqm
	INSIDE						
	Long wall	2	17.54		1.50	52.62	Sqm
	short wall	2	14.54		1.50	43.62	Sqm
	RAMP wall side face	4	0.23		1.50	1.38	Sqm
	BB top	1	57.08	0.23		13.13	Sqm
	$18*2+(11-0.46)*2=57.08$						
					Total	197.75	Sqm
17	Item no 17						
	Providing and applying two coats of water proof cement paint of approved manufacture and of approved colour to the plastered surfaces including scaffolding if necessary, cleaning and preparing the surface, watering for two days etc. complete.						
	FOR PLINTH	2	18		0.45	16.2	Sqm
		2	11		0.45	9.9	Sqm
	FOR RAMP	4	4.50		0.25	4.5	Sqm
	BB MASONRY as per plaster item					197.75	Sqm
						228.35	Sqm
	DEDUCTION						
	RAMP	2	4.00		0.45	3.60	Sqm
					Total	224.75	Sq.m

Item No	Description	No	Length	Width	Depth	Qty	Unit
18	Item no 18						
	Structural steel work -Providing structural steel work in single stanchions com-posed of R.S.J. Channel etc. with caps, bases, mild steel plated, angle brackets, cleats, gusset plates, anchor bolts etc. as per detailed designs and drawings or as directed including cutting, fabrication, hoisting, erecting fixing in position, making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it two. coats of oil painting complete etc. Spec. No.: Bd.C.6 Page No. 277 (FOR STEEL COLUMNS)						
a	Steel Columns of ISMB300@44.2 Kg/m= $(44.2/1000)=0.0442$ MT	10			6.00	2.65	MT.
b	Anchor Bolt(20 kg)					0.02	MT.
c	Base Plate BOTTOM	10	0.35	0.35	0.02	0.19	MT.
d	Base Plate TOP	10	0.35	0.35	0.01	0.10	MT.
e	Stiffener Plate(10 mm Thick)(per column 8 stiffener required)	80	0.20	0.15	0.01	0.19	MT.
					Total	3.15	MT.
19	Item no 19						
	Providing and fabricating structural steel work in rolled sections like joists, channels, angles, tees etc. as per detailed designs and drawing or as directed by Engineer-in-charge including cutting, fabrication, hoisting & erecting fixing in position with connecting plates, braces etc. and one coat of anticorrosive paint and over it two coat of oil paintings of approved quality and shade complete. Spec. No.: Bd.C.2 Page No. 275 (FOR ROOFING MEMBER)						
a	Roofing Member of ISMB150@14.9kg/m=0.0149 mt		66.00			0.98	MT.
	18*2+15*2=66 m						
b	Vertical Angle section 40 x 40 x 4 @ 2.4 kg/m (for Supporting Zincalume Sheets for Enclosure) spacing 1.286M	48			4.50	0.52	MT.
	nos= $(66-4-4)/1.286=45.1+2=48$, ht=6-1.5 m bb=4.50 m						
c	Horizontal Angle section 40 x 40 x 4 @ 2.4 kg/m spacing 1.286M	6.00	58			0.84	MT.
	nos= $(6-1.5)/1.286=3.4+2=6$, ht=11+11+18+18 =58 m						
d	Angle section 50 x 50 x 5 @ 3.8 kg/m For Roofing(purlins) spacing 1.8M	10	18.00			0.68	MT.
	nos.= $7.76/1.8=4.3*2+2=10$						
	For partition						
	Vertical Support	5	3.00		2.30	0.08	MT.
	Horizontal Support	5	2.00		3.00	0.07	MT.
					Total	3.18	MT.

Item No	Description	No	Length	Width	Depth	Qty	Unit
20	Item no 20						
	Trusses -Providing structural steel work in trusses, other similar trussed purlins and members with all bracing, gusset plates etc. as per detailed designs and drawings or as directed including cutting, fabricating, hoisting, erecting fixing in position, Making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it 2 coats of oil painting approved quality and shade etc. complete.						
	trusses-Use 75x75x6 mm Angle @6.8 kg/rmt.techdata book pg 36		331.70	6.80		2255.56	KG
	$((15*2)+(7.76*2)+(0.5*2)+(0.99*2)+(1.49*2)+(2.39*2)+(2.11*2)+(1.93*2)+(2*1))*5=331.70$						
	10% extra for item fitting					225.56	KG
					GROSS	2.48	MT.
21	Item no 21						
	Providing and fixing colour coated Zincalume (R) AZ150 (min 150 gms/sq.mt. total on each side) profiled sheets for roofing. The feed material is manufactured out of nominal 0.45 mm Base Metal Thickness (BMT) (0.5 mm TCT), Hi-strength steel with min.550 MPa yield strength, metallic hot dip coated with Aluminium-Zinc alloy (55% aluminium 43.4% zinc 1.6% silicon) with COLORBOND (R) steel quality super durable polyester paint coat (with inorganic pigment). The paint shall have a total coating thickness of nominal 35 um, comprising of nominal 25 um exterior coat on top surface and nominal 10 um reverse coat on back surface. Profile sheet shall have nom. 950-1050 mm effective cover width and nominal 25-30 mm deep ribs with subtle square fluting in the five pan at nominal 180-250 mm center- to-center. The end rib shall be designed for anti-capillary groove. and return leg. The feed material should have coil manufacturers product details marked a regular interval. Including fasteners with min. fastened with min. 25 um Zinc-Tin alloy coated, Hex head, self-drilling screw etc. complete. (weight of profile 4.52 Kilogram/ One Square Metre)						
	Roofing	2	18.40	8.00		294.40	Sq. M.
	Enclosure for sides						
	longer side	2	18.00		3.60	129.60	Sq. M.
	shorter side	1	22.00		3.60	79.20	Sq. M.
	above entrance	2	4.00		2.00	16.00	Sq. M.
	for triangular portion of truss	4	0.50	7.50	2.00	30.00	Sq. M.
	partition of 3M on one longer side	5	3.00		2.30	34.50	Sq. M.
	add 10 % extra for lapping					58.37	Sq. M.
					GROSS	642.07	Sq. M.

Item No	Description	No	Length	Width	Depth	Qty	Unit
22	Item no 22						
	Providing and fixing plain zinc sheeting of 0.80 mm thick (22 B.W.G.) over the ridge hip or valley to galvanized iron sheet roofing including all fastening and bolt galvanised ironscrews and bolts, lead and bitumen washers etc. complete.(Weight of 6.8 Kilogram/sq.m.).						
		1	18.40	0.60		11.04	Sq. M.
23	Item no 23						
	Point wiring for light/bell/exhaust fan in 20 mm FRLS grade HMS PVC conduit with 1.5 sq.mm (2+1E) FRLSH grade copper wire, modular type switch, earthing and required accessories as per specification No: WG- PW/SW.						
	Assume					16	point
24	Item no 24						
	Supplying & erecting inverter LED batten 10W tube light fitting with polycarbonate housing, heat sink, integrated HF electronic driver, Min. 2600 mAh Lithium ion Battery with charging time of 8-10 Hours and backup time of Min. 3 hrs. with minimum 25% of initial Watts having luminous efficacy of 100 lumen/watt, CRI>80, CCT of 6500K and THD<=20% having useful life of minimum 25000 hrs. with overheating protection with 2 years warranty.						
	Assume					12	point
25	Item no 25						
	Providing and fixing welded mesh of 11 gauge wires having mesh size 50 mm x 25 mm including M.S Angle frame of size 35 mm x 35 mm x5 mm in position with oil painting 3 coats etc. complete						
	for ventilation purpose						
	below roofing member	2	17		0.6	20.4	Sq. M.
	above bb wall	2	17		0.3	10.2	Sq. M.
					Total	30.6	Sq. M.
26	Item no 26						
	Providing and fixing rolling shutter fabricated from steel laths of minimum thickness 0.9 mm with lock plate of 3.15 mm thickness reinforced with 35 x 35 x 5 mm angle section fitted with sliding bolts and handles for both sides, deep M.S. channel section of depth and thickness not less than 65 mm and 3.15 mm respectively with hold fast arrangements, M.S. Bracket plate 300 x 300 x 3.15 mm minimum size and shape with square bar, suspension shaft of minimum 32 mm diameter, hood cover of M.S. sheet not less than 0.9 mm thickness and of any size at top and safety devices including mechanical gear operation arrangement consisting of worm gear wheels and worms of high grade cast iron or mild steel and one coat of red lead primer etc. complete. (I.S. 62481979) (With mechanical gear)						
	Entrance shutter at ramp	2	4	4		32	Sq. M.

Item No	Description	No	Length	Width	Depth	Qty	Unit
27	Item no 27						
	Providing and fixing Road junction / Information sign board of size 0.90 m x 0.60 m. prepared on 16 gauge M.S. sheet with angle iron frame of size 35 x 35 x 5 mm including painting with one coat of zinc cromate stoving primer and two coats each of green / white background and backside gray stove enamelled, bonded with red retroreflective sheet Engineering grade, border / letters / numeral / arrows, coated with non pealable crystal clear protective coat retaining 100% reflection including two angle iron post of size 50 x 50x 5 mm of 3.65 m. long inflated at bottom drilled on top and painted in white and black bands of 30cm. with 4 Nos. high strength G.I. bolts and nuts of size 10 mm dia. and 20mm long sheet and angle iron post in one piece without joints including all taxes, conveying, fixing round with cement concrete 1:4:8 block of 60cmx 60cmx 75cm size as directed by Engineer-in- charge etc. complete. Mild Steel Board with Engineering Grade.						
		1				1.00	No
28	Item no 28						
	Design & Approval Charges for Concrete , Reinforcement & Structural Steel as 2%						

LATUR MUNICIPAL CORPORATION
DISTRICT - LATUR, DIVISION - AURANGABAD
(25M X 20M) TIPPING SHED

ABSTRACT

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
1	Item no 1				
	Excavation for foundation in earth, soil of all types, sand, gravel and soft murum, including removing the excavated material up to a distance of 50 m. beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift upto 1.5 m.) By Mechanical Means	23.77	Cu.m.	217.14	5160.60
	PWD SOR 2022-23, Item No 21.02				
	As Per Attached RA Item No.-1				
2	Item no 2				
	Excavation for foundation in Hard murum including removing the excavated material upto a distance of 50 metres beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift from 1.5 to 3.0m.) By Mechanical Means	29.70	Cu.m.	238.12	7072.25
	PWD SOR 2022-23, Item No 21.06				
	As Per Attached RA Item No.-2				
3	Item No.-3				
	Excavation for foundation in Soft rock and old cement or lime masonry foundations including removing the excavated material upto a distance of 50 metres beyond the building area and stacking as directed, including dewatering, preparing the bed for the foundation and necessary back filling with available earth/murum, ramming ,watering including shoring and strutting etc. complete. (Lift from 1.5m To 3.0 m.) By Mechanical Means				
	PWD SOR 2022-23, item no 21.14	14.85	Cu.m.	450.02	6682.81
	As Per Attached RA Item No.- 3				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
4	Item No.-4				
	Excavation for foundation in Hard rock by chiselling, wedging, line drilling, etc. including trimming and levelling the bed, removing the excavated material upto a distance of 50 metres beyond the building area stacking as directed, dewatering and back filling with available earth/ murum watering, ramming etc. complete. (Lift upto 1.5 m). By Mechanical Means				
	PWD SOR 2022-23, item no 21.20	9.90	Cu.m.	1371.04	13573.33
	As Per Attached RA Item No.- 4				
5	Item no 5				
	Providing dry/ trap/ granite/ quartzite/ gneiss rubble stone soling 15 cm to 20 cm thick including hand packing and compacting etc. complete.	125.58	Cu.m.	1810.19	227326.86
	PWD SOR 2022-23, Item No 21.38				
	As Per Attached RA Item No.-14				
6	Item no 6				
	Providing and laying Cast in situ/Ready Mix cement concrete in M15 of trap/ granite/quartzite/gneiss metal for foundation / steps including steel centering, formwork, laying/pumping, compacting, roughening them if special finish is to be provided, finishing uneven and honeycombed surface and curing etc. complete. The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface, only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed.),with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)	54.12	Cu.m.	7655.53	414340.19
	PWD SOR 2022-23, Item No 24.04				
	As Per Attached RA Item No.-6				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
7	Item no 7				
	Providing and fixing in position after hoisting, precast 1:2 cement mortar reinforcement Jali 50mm thick of approved design cement mortar 1:3 and curing complete (including 6mm diameter mild steel bar reinforcement)	518.40	Sq.m.	982.91	509542.10
	PWD SOR 2022-23, Item No 26.46				
	As Per Attached RA Item No.-52				
8	Item no 8				
	Providing and laying in situ/ Ready Mix cement concrete M-20 of trap/granite/quartzite/ gneiss metal for R.C.C. work in foundations like raft, strip foundations, grillage and footings of R.C.C. columns and steel stanchions etc. including bailing out water, formwork, laying/ pumping cover blocks, compaction and curing roughening the surface if special finish is to be provided, (Excluding reinforcement and structural steel) etc. complete, with fully automatic microprocessor based PLC with SCADA enabled Reversible Drum Type mixer/ concrete Batch Mix plant (Pan mixer) etc. complete, with fine aggregate (Natural Sand/ Crushed Sand V.S.I. Grade finely washed etc.)	12.67	Cu.m.	8403.46	106488.60
	PWD SOR 2022-23, Item No 25.11				
	As Per Attached RA Item No.-7				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
9	Item no 9				
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap /granite/quartzite/ gneiss metal for R.C.C. columns as per detailed designs and drawing or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete.(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)				
	PWD SOR 2022-23, Item No 25.31	4.05	Cu.m.	15409.73	62378.58
	As Per Attached RA Item No.-8				
10	Item no 10				
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap / granite/quartzite/ gneiss metal for R.C.C. beams and lintels as per detailed designs and drawings or as directed including steel centering, formwork, cover blocks, laying/pumping, compactionand roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)	8.23	Cu.m.	13821.54	113784.32
	PWD SOR 2022-23, Item No 25.50				
	As Per Attached RA Item No.-9				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
11	Item no 11				
	Providing and laying in situ cement concrete M - 30 with tremix treatment for 200 mm harge thickness for Concrete Road is including laying plastic sheet for 125 micron thickness with groove cutting of 4 mm wide and 20 mm deep with necessary refilling with bitumen (excluding reinforcement) with coarse and fine aggregate (natural sand/ VSI grade finely washed crushed sand) etc. complete with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete.	102.76	Cu.m.	9812.26	1008308.18
	PWD SOR 2022-23, Item No 5.22				
	As Per Attached RA Item No.- 77				
12	Item no 12				
	Providing and fixing in position TMT - FE - 500 bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintels, piers, copings, fins, arches etc. as per detailed designs, drawings and schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.				
	PWD SOR 2022-23, Item No 26.33	5.58	MT	94098.45	525069.33
	As Per Attached RA Item No.-12				
13	Item no 13				
	Providing uncoursed rubble masonry of trap / granite / quartzite / gneiss stones in cement mortar 1:6 in foundation and plinth of inner walls / in plinth of external walls including bailing out water manually ,striking joints on un exposed faces and watering etc.complete.				
	PWD SOR 2022-23, Item No 28.01	1.01	Cu.m.	6364.71	6444.27
	As Per Attached RA Item No.-55				
14	Item no 14				
	Providing flush grooved pointing with cement mortar 1:3 for stone masonry work including scaffolding and curing etc. complete.				
	PWD SOR 2022-23, Item No 32.17	2.25	Sq. m.	190.92	429.57
	As Per Attached RA Item No.-56				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
15	Item no 15				
	Providing and applying two coats of water proof cement paint of approved manufacture and of approved colour to the plastered surfaces including scaffolding if necessary, cleaning and preparing the surface, watering for two days etc. complete.	40.95	Sq. m.	82.87	3393.57
	PWD SOR 2022-23, Item No 35.13				
	As Per Attached RA Item No.-57				
16	Item no 16				
	Structural steel work -Providing structural steel work in single stanchions com-posed of R.S.J. Channel etc. with caps, bases, mild steel plated, angle brackets, cleats, gusset plates, anchor bolts etc. as per detailed designs and drawings or as directed including cutting, fabrication, hoisting, erecting fixing in position, making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it two. coats of oil painting complete etc. Spec. No.: Bd.C.6 Page No. 277(FOR STEEL COLUMNS)	3.97	MT.	102811.44	407730.52
	PWD SOR 2022-23, Item No 23.03				
	As Per Attached RA Item No.-58				
17	Item no 17				
	Providing and fabricating structural steel work in rolled sections like joists, channels, angles, tees etc. as per detailed designs and drawing or as directed by Engineer-in-charge including cutting, fabrication, hoisting & erecting fixing in position with connecting plates, braces etc. and one coat of anticorrosive paint and over it two coat of oil paintings of approved quality and shade complete. Spec. No.: Bd.C.2 Page No. 275 (FOR ROOFING MEMBER)	2.58	MT.	106834.36	275205.30
	PWD SOR 2022-23, Item No 23.01				
	As Per Attached RA Item No.-59				
18	Item no 18				
	Trusses-Providing structural steel work in trusses, other similar trussed purlins and members with all bracing, gusset plates etc. as per detailed designs and drawings or as directed including cutting, fabricating, hoisting, erecting fixing in position, Making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it 2 coats of oil painting approved quality and shade etc. complete.	5.86	MT.	125312.49	733708.04
	PWD SOR 2022-23, Item No 23.04				
	As Per Attached RA Item No.-60				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
19	Item no 19				
	Providing and fixing colour coated Zincolume (R) AZ150 (min 150 gms/sq.mt. total on each side) profiled sheets for roofing. The feed material is manufactured out of nominal 0.45 mm Base Metal Thickness (BMT) (0.5 mm TCT), Hi-strength steel with min.550 MPa yield strength, metallic hot dip coated with Aluminium-Zinc alloy (55% aluminium 43.4% zinc 1.6% silicon) with COLORBOND (R) steel quality super durable polyester paint coat (with inorganic pigment). The paint shall have a total coating thickness of nominal 35 um, comprising of nominal 25 um exterior coat on top surface and nominal 10 um reverse coat on back surface. Profile sheet shall have nom. 950-1050 mm effective cover width and nominal 25-30 mm deep ribs with subtle square fluting in the five pan at nominal 180-250 mm center- to-center. The end rib shall be designed for anti-capillary groove. and return leg. The feed material should have coil manufacturers product details marked a regular interval. Including fasteners with min. fastened with min. 25 um Zinc-Tin alloy coated, Hex head, self-drilling screw etc. complete. (weight of profile 4.52 Kilogram/ One Square Metre)	628.74	Sq.m.	1230.48	773650.11
	PWD SOR 2022-23, Item No 38.34				
	As Per Attached RA Item No.-61				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
20	Item no 20				
	Providing and fixing plain zinc sheeting of 0.80 mm thick (22 B.W.G.) over the ridge hip or valley to galvanized iron sheet roofing including all fastening and bolt galvanised iron screws and bolts, lead and bitumen washers etc. complete.(Weight of 6.8 Kilogram/sq.m.).	15.24	Sq.m.	1194.81	18208.92
	PWD SOR 2022-23, Item No 38.05				
	As Per Attached RA Item No.-62				
21	Item no 21				
	Point wiring in for light/fan/bell in 20 mm metal conduit with 1.5 sq.mm (2+1E) FRLSH grade copper wire, flush type switch, earthing and required accessories as per specification No: WG-PW/SW	14.00	points	898.80	12583.20
	Electrical Mech SOR 2022-2023, item no -1-7-1 ,page no 11				
	As Per Attached RA Item No.-30				
22	Item no 22				
	Supplying & erecting inverter LED batten 10W tube light fitting with polycarbonate housing, heat sink, integrated HF electronic driver, Min. 2600 mAh Lithium ion Battery with charging time of 8-10 Hours and backup time of Min. 3 hrs. with minimum 25% of initial Watts having luminous efficacy of 100 lumen/watt, CRI>80, CCT of 6500K and THD<=20% having useful life of minimum 25000 hrs. with overheating protection with 2 years warranty.	10.00	Nos	699.30	6993.00
	PWD ELECTRICAL CSR 2022-2023, item no -2-1-21, page no 25				
	As Per Attached RA Item No.-29				

Sr. No.	DESCRIPTION	QUANTITY	Unit	Rate	Total
23	Item no 23				
	Providing and fixing Road junction / Information sign board of size 0.90 m x 0.60 m. prepared on 16 gauge M.S. sheet with angle iron frame of size 35 x 35 x 5 mm including painting with one coat of zinc cromate stoving primer and two coats each of green / white background and backside gray stove enamelled, bonded with red retroreflective sheet Engineering grade, border / letters / numeral / arrows, coated with non pealable crystal clear protective coat retaining 100% reflection including two angle iron post of size 50 x 50x 5 mm of 3.65 m. long inflated at bottom drilled on top and painted in white and black bands of 30cm. with 4 Nos. high strength G.I. bolts and nuts of size 10 mm dia. and 20mm long sheet and angle iron post in one piece without joints including all taxes, conveying, fixing round with cement concrete 1:4:8 block of 60cmx 60cmx 75cm size as directed by Engineer-in- charge etc. complete. Mild Steel Board with Engineering Grade.				
	PWD SOR 2022-23, item no 6.47	1.00	No	7881.14	7881.14
	As Per Attached RA Item No.- 65				
24	Item no 24				
	Design & Approval Charges for Concrete , Reinforcement & Structural Steel as 2%			0.02	104919.10
				TOTAL	5350873.87
				TOTAL 3 Nos	16052621.60

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

LATUR MUNICIPAL CORPORATION
DISTRICT - LATUR, DIVISION - AURANGABAD
(25M X 20M) TIPPING SHED
MEASURMENTS

Item No	Description	No	Length	Width	Depth	Qty	Unit
1	Item no 1						
	Excavation for foundation in earth, soil of all types, sand, gravel and soft murum, including removing the excavated material up to a distance of 50 m. beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift upto 1.5 m.) By Mechanical Means						
	For Column Footing	22	1.50	1.50	0.40	19.80	Cu.m.
	Plinth Beam (longer side)	14	2.01	0.23	0.20	1.30	Cu.m.
	Plinth Beam (shorter side)	8	3.40	0.23	0.20	1.25	Cu.m.
	Ramp	2	4.50	0.45	0.35	1.42	Cu.m.
		Total Excavation Quantity				23.77	Cu.m.
2	Item no 2						
	Excavation for foundation in Hard murum including removing the excavated material upto a distance of 50 metres beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift from 1.5 to 3.0m.) By Mechanical Means						
	Hard murum	22	1.50	1.50	0.60	29.70	Cu.m.
3	Item No.-3						
	Excavation for foundation in Soft rock and old cement or lime masonry foundations including removing the excavated material upto a distance of 50 metres beyond the building area and stacking as directed, including dewatering, preparing the bed for the foundation and necessary back filling with available earth/murum, ramming ,watering including shoring and strutting etc. complete. (Lift from 1.5m To 3.0 m.) By Mechanical Means						
	For Column Footing	22	1.50	1.50	0.30	14.85	Cu.m.
4	Item No.-4						
	Excavation for foundation in Hard rock by chiselling, wedging, line drilling, etc. including trimming and levelling the bed, removing the excavated material upto a distance of 50 metres beyond the building area stacking as directed, dewatering and back filling with available earth/ murum watering, ramming etc. complete. (Lift upto 1.5 m). By Mechanical Means						
	For Column Footing	22	1.50	1.50	0.20	9.90	Cu.m.
5	Item no 5						
	Providing dry/ trap/ granite/ quartzite/ gneiss rubble stone soling 15 cm to 20 cm thick including hand packing and compacting etc. complete.						
	below column	22	1.30	1.30	0.30	11.15	Cu.m.
	below flooring	1	24.54	19.54	0.23	110.29	Cu.m.

Item No	Description	No	Length	Width	Depth	Qty	Unit
	for ramp	1	4.50	4.00	0.23	4.14	Cu.m.
					Total	125.58	Cu.m.
6	Item no 6						
	Providing and laying Cast in situ/Ready Mix cement concrete in M15 of trap/ granite/quartzite/gneiss metal for foundation / steps including steel centering, formwork, laying/pumping, compacting, roughening them if special finish is to be provided, finishing uneven and honeycombed surface and curing etc. complete. The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface, only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed.),with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)						
	below column	22	1.30	1.30	0.10	3.72	Cu.m.
	below flooring	1	25.00	20.00	0.10	50.00	Cu.m.
	for ramp	2	4.50	0.45	0.10	0.41	Cu.m.
					Total	54.12	Cu.m.
7	Item no 7						
	Providing and fixing in position after hoisting, precast 1:2 cement mortar reinforcement Jali 50mm thick of approved design cement mortar 1:3 and curing complete (including 6mm diameter mild steel bar reinforcement)						
	Reinforcement Jali for PCC	1	25.00	20.00		500.00	Sq.m
	Reinforcement Jali for Ramp	1	4.00	4.60		18.40	Sq.m
					Total	518.40	Sq.m
8	Item no 8						
	Providing and laying in situ/ Ready Mix cement concrete M-20 of trap/granite/quartzite/ gneiss metal for R.C.C. work in foundations like raft, strip foundations, grillage and footings of R.C.C. columns and steel stanchions etc. including bailing out water, formwork, laying/ pumping cover blocks, compaction and curing roughening the surface if special finish is to be provided, (Excluding reinforcement and structural steel) etc. complete, with fully automatic microprocessor based PLC with SCADA enabled Reversible Drum Type mixer/ concrete Batch Mix plant (Pan mixer) etc. complete, with fine aggregate (Natural Sand/ Crushed Sand V.S.I. Grade finely washed etc.)						
	Footing	22	1.20	1.20	0.40	12.67	Cu.m.
9	Item no 9						

Item No	Description	No	Length	Width	Depth	Qty	Unit
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap /granite/quartzite/ gneiss metal for R.C.C. columns as per detailed designs and drawing or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete.(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)						
	Column stub upto plinth level	22	0.40	0.40	1.15	4.05	Cu.m.
					Total	4.05	Cu.m.
10	Item no 10						
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap / granite/quartzite/ gneiss metal for R.C.C. beams and lintels as per detailed designs and drawings or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction and roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)						
	R.C.C. Plinth beam-						
	along shorter side	8	4.50	0.23	0.45	3.73	Cu.m.
	along longer side	14	3.11	0.23	0.45	4.51	Cu.m.
					Total	8.23	Cu.m.
11	Item no 11						
	Providing and laying in situ cement concrete M -30 with tremix treatment for 200 mm harge thickness for Concrete Road is including laying plastic sheet for 125 micron thickness with groove cutting of 4 mm wide and 20 mm deep with necessary refilling with bitumen (excluding reinforcement) with coarse and fine aggregate (natural sand/ VSI grade finely washed crushed sand) etc. complete with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete.						
	Floor slab	1	25.00	20.00	0.20	100.00	Cu.m.
	Ramp top slab	1	4.00	4.60	0.15	2.76	Cu.m.
					Total	102.76	Cu.m.

Item No	Description	No	Length	Width	Depth	Qty	Unit
12	Item no 12						
	Providing and fixing in position TMT - FE - 500 bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintels, parades, copings, fins, arches etc. as per detailed designs, drawings and schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.						
	100 Kg per cubic meter of concrete QUANTITY-		24.95	100.00	kg/cum	2.4952	MT
	FOR TREMIX CONCRETE		102.76	30.00	kg/cum	3.0828	MT
					Total	5.58	MT
13	Item no 13						
	Providing uncoursed rubble masonry of trap / granite / quartzite / gneiss stones in cement mortar 1:6 in foundation and plinth of inner walls / in plinth of external walls including bailing out water manually, striking joints on un exposed faces and watering etc. complete.						
	Ramp side wall (0.45+0/2=0.25=avg ht)	2	4.50	0.45	0.25	1.01	Cu.m.
14	Item no 14						
	Providing flush grooved pointing with cement mortar 1:3 for stone masonry work including scaffolding and curing etc. complete.						
	Ramp side wall (0.45+0/2=0.25=avg ht)	2	4.50		0.25	2.25	Sq. m.
15	Item no 15						
	Providing and applying two coats of water proof cement paint of approved manufacture and of approved colour to the plastered surfaces including scaffolding if necessary, cleaning and preparing the surface, watering for two days etc. complete.						
	FOR PLINTH	2	25		0.45	22.5	Sq.m.
		2	20		0.45	18	Sq.m.
	FOR RAMP	2	4.50		0.25	2.25	Sq.m.
						42.75	Sq.m.
	DEDUCTION						
	RAMP	1	4.00		0.45	1.80	Sq.m.
					Total	40.95	Sq.m.

Item No	Description	No	Length	Width	Depth	Qty	Unit
16	Item no 16						
	Structural steel work -Providing structural steel work in single stanchions com-posed of R.S.J. Channel etc. with caps, bases, mild steel plated, angle brackets, cleats, gusset plates, anchor bolts etc. as per detailed designs and drawings or as directed including cutting, fabrication, hoisting, erecting fixing in position, making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it two. coats of oil painting complete etc. Spec. No.: Bd.C.6 Page No. 277 (FOR STEEL COLUMNS)						
a	Steel Columns of ISMB300@44.2 Kg/m=(44.2/1000)=.0442MT	16			4.50	3.1824	MT.
b	Anchor Bolt(20 kg)					0.02	MT.
c	Base Plate BOTTOM	16	0.35	0.35	0.02	0.31	MT.
d	Base Plate TOP	16	0.35	0.35	0.01	0.15	MT.
e	Stiffener Plate(10 mm Thick)(per column 8 stiffener required)	128	0.20	0.15	0.01	0.30	MT.
					Total	3.97	MT.
17	Item no 17						
	Providing and fabricating structural steel work in rolled sections like joists, channels, angles, tees etc. as per detailed designs and drawing or as directed by Engineer-in-charge including cutting, fabrication, hoisting & erecting fixing in position with connecting plates, braces etc. and one coat of anticorrosive paint and over it two coat of oil paintings of approved quality and shade complete. Spec. No.: Bd.C.2 Page No. 275 (FOR ROOFING MEMBER)						
a	Roofing Member of ISMB150@14.9kg/m		90.00			1.34	MT.
	25*2+20*2=90 M						
b	Angle section 50 x 50 x 5 @3.8 kg/m For Roofing(purlins) spacing 1.8M	13	25.00			1.24	MT.
	nos.= 10.19/1.8=6*2+1=13						
					Total	2.58	MT.

Item No	Description	No	Length	Width	Depth	Qty	Unit
18	Item no 18						
	Trusses -Providing structural steel work in trusses, other similar trussed purlins and members with all bracing, gusset plates etc. as per detailed designs and drawings or as directed including cutting, fabricating, hoisting, erecting fixing in position, Making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it 2 coats of oil painting approved quality and shade etc. complete.						
	trusses-Use 100x100x6 mm Angle @9.2 kg/rmt.techdata book pg 36		578.56		9.20	5322.75	KG
	$((20)+(10.19*2)+(0.34*2)+(1.7*2)+(0.67*2)+(1.8*2)+(1*2)+(1.95*2)+(1.34*2)+(2.14*2)+(1.67*2)+(2.36*2)+(2*1))*8=578.56$						
	10% extra for item fitting					532.28	KG
					GROSS	5.86	MT.
19	Item no 19						
	Providing and fixing colour coated Zincalume (R) AZ150 (min 150 gms/sq.mt. total on each side) profiled sheets for roofing. The feed material is manufactured out of nominal 0.45 mm Base Metal Thickness (BMT) (0.5 mm TCT), Hi-strength steel with min.550 MPa yield strength, metallic hot dip coated with Aluminium-Zinc alloy (55% aluminium 43.4% zinc 1.6% silicon) with COLORBOND (R) steel quality super durable polyester paint coat (with inorganic pigment). The paint shall have a total coating thickness of nominal 35 um, comprising of nominal 25 um exterior coat on top surface and nominal 10 um reverse coat on back surface. Profile sheet shall have nom. 950-1050 mm effective cover width and nominal 25-30 mm deep ribs with subtle square fluting in the five pan at nominal 180-250 mm center-to-center. The end rib shall be designed for anti-capillary groove. and return leg. The feed material should have coil manufacturers product details marked a regular interval. Including fasteners with min. fastened with min. 25 um Zinc-Tin alloy coated, Hex head, self-drilling screw etc. complete. (weight of profile 4.52 Kilogram/ One Square Metre)						
	For Roofing	2	25.40	11.00		558.80	Sq. M.
	For triangular portion of truss	4	0.50	10.00	2.00	40.00	Sq. M.
	Add 5 % extra for lapping					29.94	Sq. M.
					GROSS	628.74	Sq. M.
20	Item no 20						
	Providing and fixing plain zinc sheeting of 0.80 mm thick (22 B.W.G.) over the ridge hip or valley to galvanized iron sheet roofing including all fastening and bolt galvanised iron screws and bolts, lead and bitumen washers etc. complete.(Weight of 6.8 Kilogram/sq.m.).						
		1	25.40	0.60		15.24	Sq. M.
21	Item no 21						
	Point wiring in for light/fan/bell in 20 mm metal conduit with 1.5 sq.mm (2+1E) FRLSH grade copper wire, flush type switch, earthing and required accessories as per specification No: WG-PW/SW						

Item No	Description	No	Length	Width	Depth	Qty	Unit
	Assume					14	point
22	Item no 22						
	Supplying & erecting inverter LED batten 10W tube light fitting with polycarbonate housing, heat sink, integrated HF electronic driver, Min. 2600 mAh Lithium ion Battery with charging time of 8-10 Hours and backup time of Min. 3 hrs. with minimum 25% of initial Watts having luminous efficacy of 100 lumen/watt, CRI>80, CCT of 6500K and THD<=20% having useful life of minimum 25000 hrs. with overheating protection with 2 years warranty.						
	Assume					10	Nos
23	Item no 23						
	Providing and fixing Road junction / Information sign board of size 0.90 m x 0.60 m. prepared on 16 gauge M.S. sheet with angle iron frame of size 35 x 35 x 5 mm including painting with one coat of zinc cromate stoving primer and two coats each of green / white background and backside gray stove enamelled, bonded with red retroreflective sheet Engineering grade, border / letters / numeral / arrows, coated with non pealable crystal clear protective coat retaining 100% reflection including two angle iron post of size 50 x 50x 5 mm of 3.65 m. long inflated at bottom drilled on top and painted in white and black bands of 30cm. with 4 Nos. high strength G.I. bolts and nuts of size 10 mm dia. and 20mm long sheet and angle iron post in one piece without joints including all taxes, conveying, fixing round with cement concrete 1:4:8 block of 60cmx 60cmx 75cm size as directed by Engineer-in-charge etc. complete. Mild Steel Board with Engineering Grade.						
						1.00	No
24	Item no 24						
	Design & Approval Charges for Concrete , Reinforcement & Structural Steel as 2%						

LATUR MUNICIPAL CORPORATION
DISTRICT - LATUR, DIVISION - AURANGABAD
REST ROOM with ATTACHED TOILETS
ABSTRACT

Item no	Item of work	Quantity	Unit	Rate	Amount
1	Item No.-1				
	Excavation for foundation in earth, soil of all types, sand, gravel and soft murum, including removing the excavated material up to a distance of 50 m. beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift upto 1.5 m.) By Mechanical Means				
	PWD SOR 2022-23, Item No 21.02	10.68	Cu.m.	217.14	2319.85
	As Per Attached RA Item No.-1				
2	Item No.-2				
	Excavation for foundation in Hard murum including removing the excavated material upto a distance of 50 metres beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift from 0 to 1.5m.) By Mechanical Means				
	PWD SOR 2022-23, Item No 21.06	13.50	Cu.m.	238.12	3214.66
	As Per Attached RA Item No.-2				
3	Item No.-3				
	Excavation for foundation in Soft rock and old cement or lime masonry foundations including removing the excavated material upto a distance of 50 metres beyond the building area and stacking as directed, including dewatering, preparing the bed for the foundation and necessary back filling with available earth/murum, ramming ,watering including shoring and strutting etc. complete. By Mechanical Means				
	PWD SOR 2022-23, item no 21.14	6.75	Cu.m.	450.02	3037.64
	As Per Attached RA Item No.- 3				

Item no	Item of work	Quantity	Unit	Rate	Amount
4	Item No.-4				
	Excavation for foundation in Hard rock by chiselling, wedging, line drilling, etc. including trimming and levelling the bed, removing the excavated material upto a distance of 50 metres beyond the building area stacking as directed, dewatering and back filling with available earth/ murum watering, ramming etc. complete. . By Mechanical Means				
	PWD SOR 2022-23, item no 21.20	4.50	Cu.m.	1371.04	6169.69
	As Per Attached RA Item No.- 4				
5	Item No.-5				
	Providing dry/ trap/ granite/ quartzite/ gneiss rubble stone soling 15 cm to 20 cm thick including hand packing and compacting etc. complete				
	PWD SOR 2022-23, Item No 21.38	14.44	cum	1810.19	26139.16
	As Per Attached RA Item No.-14				
6	Item No.-6				
	Filling in plinth and floors with approved excavated material in 15cm. to 20cm. Layers including watering and compacting etc. complete.				
	PWD SOR 2022-23, Item No 21.36	10.06	cum	125.88	1266.35
	As Per Attached RA Item No.-13				
7	Item No.-7				
	Providing and laying Cast in situ/Ready Mix cement concrete in M-15 of trap/ granite/ quartzite/ gneiss metal for foundation and bedding including bailing out water, Steel centering, formwork, laying/pumping, compacting, roughening them if special finish is to be provided, finishing if required and curing complete, with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)				
	PWD SOR 2022-23, Item No 24.04	10.33	Cu.m.	7655.5	79073.96
	As Per Attached RA Item No.-6				

Item no	Item of work	Quantity	Unit	Rate	Amount
8	Item No.-8				
	Providing and laying in situ/ Ready Mix cement concrete M-20 of trap/granite/quartzite/ gneiss metal for R.C.C. work in foundations like raft, strip foundations, grillage and footings of R.C.C. columns and steel stanchions etc. including bailing out water, formwork, laying/ pumping cover blocks, compaction and curing roughening the surface if special finish is to be provided, (Excluding reinforcement and structural steel) etc. complete, with fully automatic microprocessor based PLC with SCADA enabled Reversible Drum Type mixer/ concrete Batch Mix plant (Pan mixer) etc. complete, with fine aggregate (Natural Sand/ Crushed Sand V.S.I. Grade finely washed etc.)				
	PWD SOR 2022-23, Item No 25.11	6.48	Cu.m.	8403.5	54454.40
	As Per Attached RA Item No.-7				
9	Item No.-9				
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap / granite/quartzite/ gneiss metal for R.C.C. columns as per detailed designs and drawing or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete.(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)				
	PWD SOR 2022-23, Item No 25.31	3.33	Cu.m.	15409.7	51314.39
	As Per Attached RA Item No.-8				

Item no	Item of work	Quantity	Unit	Rate	Amount
10	Item No.-10				
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap / granite/quartzite/ gneiss metal for R.C.C. beams and lintels as per detailed designs and drawings or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction and roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)				
	PWD SOR 2022-23, Item No 25.50	6.33	cum	13821.54	87490.36
	As Per Attached RA Item No.-9				
11	Item No.-11				
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap/ granite/ quartzite/ gneiss metal for R.C.C. chajja as per detailed design and drawings including steel centering, formwork, cover blocks, laying/pumping, compacting and roughening the surface if special finish is to be provided and curing complete. (Excluding reinforcement and structural steel). with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)				
	PWD SOR 2022-23, Item No 26.05	0.68	cum	15566.03	10584.90
	As Per Attached RA Item No.-10				

Item no	Item of work	Quantity	Unit	Rate	Amount
12	Item No.-12				
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap/ granite / quartzite/ gneiss metal for R.C.C. slabs and landings as per detailed designs and drawings including steel centering, formwork, cover blocks, laying/pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete,(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)				
	PWD SOR 2022-23, Item No 25.70	23.41	cum	15577.57	364670.85
	As Per Attached RA Item No.-11				
13	Item No.-13				
	Providing and fixing in position TMT - FE - 500 bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintels pardis, copings, fins, arches etc. as per detailed designs, drawings and schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.				
	PWD SOR 2022-23, Item No 26.33	2.40	M.T.	94098.45	225836.27
	As Per Attached RA Item No.-12				
14	Item No.-14				
	Providing second class Burnt Brick masonry with conventional/ I.S. type bricks in cement mortar 1:6 in plinth as backing in composite masonry including bailing out water manually, striking joints, raking out joints and watering etc Complete.				
	PWD SOR 2022-23, Item No 27.01	1.96	cum	8826.13	17299.22
	As Per Attached RA Item No.-16				

Item no	Item of work	Quantity	Unit	Rate	Amount
15	Item No.-15				
	Providing second class Burnt Brick masonry with conventional/I.S. type bricks in cement mortar 1:6 in superstructure in-cluding striking joints, raking out joints, watering and scaffolding comp.				
	PWD SOR 2022-23, Item No 27.05	17.93	Cu.m.	8826.13	158275.54
	As Per Attached RA Item No.-15				
16	Item No.-16				
	Providing internal cement plaster 20 mm thick in a two coat in cement mortar 1:4 without neeru finish to concrete, brick surfaces in all positions including scaffolding providing groove at joint of Burnt brick masonry and concrete members if necessary,curing etc. complete.				
	PWD SOR 2022-23, Item No 32.07	155.33	Sq.m.	435.1	67588.20
	As Per Attached RA Item No.-22				
17	Item No.-17				
	Providing sand faced plaster externally In cement mortar using approved screened sand, in all positions includ-ing base coat of 15mm thick in C.M. 1:4 using waterproofing compound at 1 kg.per cement bag curing the same for not less than 2 days and keeping the surface of the base coat rough to receive the sand faced treatment 6 to 8mm thick in C.M. 1:4 finishing the surface by taking out grains and curing for fourteen days scaf-folding etc.complete.				
	PWD SOR 2022-23, Item No 32.11	132.07	sqm	704.72	93073.01
	As Per Attached RA Item No.-21				
18	Item No.-18				
	Providing neeru finish to plastered surfaces in all positions including scaffolding and curing etc. complete.				
	PWD SOR 2022-23, Item No 32.15	155.33	Sq.m.	68.19	10591.18
	As Per Attached RA Item No.-23				

Item no	Item of work	Quantity	Unit	Rate	Amount
19	Item No.-19				
	Providing and applying white-wash in two coats on old / new plastered or masonry surfaces and asbestos cement sheets including scaffolding and preparing the surface by brushing and brooming down etc. complete.				
	PWD SOR 2022-23, Item No 36.03	155.33	Sq.m.	12.59	1955.29
	As Per Attached RA Item No.-24				
20	Item No.-20				
	Providing and applying washable oil bound distemper of approved colour & shade to old & new surfaces in two coats including scaffolding preparing the surfaces,preparing the surfaces. (excluding the primer coat) complete.				
	PWD SOR 2022-23, Item No 36.11	155.33	Sq.m.	50.35	7821.18
	As Per Attached RA Item No.-25				
21	Item No.-21				
	Providing and applying two coats of water proof cement paint of approved manufacture and of approved colour to the plastered surfaces including scaffolding if necessary, cleaning and preparing the surface, watering for two days etc. complete.				
	PWD SOR 2022-23, Item No 35.13	132.07	Sq.m.	82.87	10944.86
	As Per Attached RA Item No.-31				
22	Item No.-22				
	Providing and applying two coats of exterior acraylic emulsion paint confirming to corresponding I.S. of approved manufacture and of approved colour to the plastered surfaces including cleaning ,preparing the plaster surface, applying primer coat ,scaffolding if necessary , and watering the surface for two days etc complete.				
	PWD SOR 2022-23, Item No 32.15	132.07	Sq.m.	273.79	36159.59
	As Per Attached RA Item No.-26				

Item no	Item of work	Quantity	Unit	Rate	Amount
23	Item No.-23				
	Providing and fixing frame with / without ventilator of size as specified with Country non teak wood for doors and windows including chamfering, rounding, rebating, ironholdfast of size 300mm x 40mm x 5mm with oil painting, etc. complete.				
	PWD SOR 2022-23, Item No 39.02	0.11	cum	112360.49	12026.63
	As Per Attached RA Item No.-42				
24	Item No.-24				
	Providing and fixing solid core flush door shutter commercial in single leaf 32mm thick without ventilator commercial type of exterior grade as per detailed drawing including wrought iron hold fast, iron oxidised fixtures and fastenings and handles on both sides and finishing with oil painting 3 coats complete.				
	PWD SOR 2022-23, Item No 39.09	2.52	Sq.m.	3229.87	8139.27
	As Per Attached RA Item No.-18				
25	Item No.-25				
	Providing and Fixing 30 MM thick BOTH SIDE PRELAMINATED SOLID PANEL PVC DOOR SHUTTER consisting of frame made out of M.S tubes of 19 guage thickness and, size 19 x 19 mm for styles and 15 x15 mm for the top and bottom rails, M.S frameshall have a coat of metel primer of approved make and manufacture. M.S frame shall be covered with heat mouled PVC 'C' channel made from 5 mm (+/0.25) thick prelaminated sheet of density 600 Kilogram/cbm ,of size 30mm thickness 70mm width out of which 50mm shall be flat and 20mm shall be tapered in 45° angle on either side forming stiles ; and 5 mm thick ,95 mm wide PVC sheet out of which 75 mm shall be falt and 20 mm shall be tapered in 45 on the inner side to form top and bottom rail and 115 mm wide PVC sheet out of which 75 mm shall be falt and 20 mm shall be tapered on both sides to form lock rail.Top,bottom and lock rail shall be provided either side of the panel. An additional 5 mm (+/0.25) thick PVC strip of 20 mm width is to be stuck on the bottom side of the ' c ' channel prelaminated paneling of 5 mm (+/0.25) thick PVC sheet to be fitted inside the M.S. frame welded/ sealed to the styles and rails with 5 mm (+/0.25) x 30 mm PVC sheet beading on either side and joined together with solvent cement adhesive etc ,10 mm				
	PWD SOR 2022-23, Item No 39.47	3.36	Sqm	6868.85	23079.34
	As Per Attached RA Item No.-43				
26	Item No.-26				

Item no	Item of work	Quantity	Unit	Rate	Amount
	Providing and fixing mild steel grill work for windows, ventilators etc. 20 Kilogram/ One Square Metre as per drawing including fixtures, necessary welding and painting with one coats of anticorrosive paint and two coats of oil painting complete.				
	PWD SOR 2022-23, Item No 40.01	7.23	Sq.m.	2146.99	15522.72
	As Per Attached RA Item No.-19				
27	Item No.-27				
	Providing and fixing in position. (as per I.S.1868 / 1982) Aluminium sliding window of two tracks with rectangular pipe having overall dimension 63.50 x 38.10 x 1.02mm at weight0.547 Kilogram/One Running Metre. and window frame bottom track section 61.85 x31.75 x 1.20 mm at weight 0.695 Kilogram/One Running Metre. Top and side track section 61.85 x 31.75 x1.30 mm at weight 0.659 Kilogram/One Running Metre. The shutter should be of bearing bottom 40 x 18 x 1.25 mm at weight 0.417 Kilogram/One Running Metre. Inter locking section 40 x 18 x 1.10 mm at weight 0.469 Kilogram/One Running Metre. And handle section 40 x 18 x1.25 mm at weight 0.417 Kilogram/One Running Metre. and top section 40 x 18 x 1.25 mm at weight 0.417 Kilogram/Running metre. As per detailed drawings and as directed by Engineer in charge with all necessary Aluminium sections fixtures and fastenings such as roller bearing in nylon casting and self locking catch fitted in vertical section of shutter including 5 mm thick plain glass with all required screws and nuts etc, complete. With powder coating with box				
	PWD SOR 2022-23, Item No 39.40	6.75	Sq.m.	5102.34	34440.77
	As Per Attached RA Item No.-20				

Item no	Item of work	Quantity	Unit	Rate	Amount
28	Item No.-28				
	Providing and fixing in position powder coated aluminium louvered windows / ventilator of various sizes with powder coating as per detailed drawing and specifications including aluminium frames 80 x 38 mm x 1.22 mm box type, 5 mm thick sheet glass louvers, of approved quality etc. complete.				
	PWD SOR 2022-23, Item No 39.68	0.48	Sq.m.	3636.88	1745.70
	As Per Attached RA Item No.-44				
29	Item No.-29				
	Providing and fixing H.D.P container one piece moulded water tank made out of high density polythylene and built corrugated inclusive of delivery up to destination hoisting and fixing of accessories such as inlet,outlet overflow pipe inclusive of all tanks capacity between 200 to 1000 liters				
	PWD SOR 2022-23, Item No 42.53	2000.00	Litre	14.69	29372.00
	As Per Attached RA Item No.-49				
30	Item No.-30				
	Providing and fixing 15 mm. dia Ball cock medium type with PVC float including sockets and necessary fittings and tested as per municipal requirement etc. complete.				
	PWD SOR 2023-24, Item No 42.37	1.0	Nos	510.86	510.86
	As Per Attached RA Item No.-48				
31	Item No.-31				
	Providing and fixing screw down for 25 mm dia. wheeled stop tap of brass including necessary sockets/union nut complete.				
	PWD SOR 2022-23, Item No 41.45	2.0	Nos	921.02	1842.04
	As Per Attached RA Item No.-50				
32	Item No.-32				
	Providing and laying in trenches 15 mm dia. CPVC pipe including necessary excavation, fittings. Refilling trenches etc. complete Including removing existing pipe line if necessary and conveying and stacking the same in PWD chowky or as directed etc. complete.				
	PWD SOR 2022-23, Item No 42.61	30.0	m	286.38	8591.31
	As Per Attached RA Item No.-36				

Item no	Item of work	Quantity	Unit	Rate	Amount
33	Item No.-33				
	Providing and laying in trenches 25 mm dai. CPVC pipe including necessary excavation, fittings. Refilling trenches etc. complete. Including removing existing pipe line if necessary and conveying and stacking the same in PWD chowky or as directed etc. complete.				
	PWD SOR 2022-23, Item No 42.63	15.0	m	443.73	6655.91
	As Per Attached RA Item No.-37				
34	Item No.-34				
	Providing and fixing 100 mm dia stabiliser pipe/ P.V.C. soil vent/waste pipe and with necessary fixtures and fitting such as bends, tees, single junctions, slotted vent, clamps etc.complete				
	PWD SOR 2022-23, Item No 42.52	20.0	m	826.61	16532.24
	As Per Attached RA Item No.-38				
35	Item No.-35				
	Providing and fixing white glazed earthenware Wash Hand Basin of 45cm x 30cm size including cold water pillar tap/cold and hot water pillar tap brackets, rubber plugs and brass chain, stop tap and necessary pipe connection including P.V.C. waste pipe and trap up to the outside face of the wall. Making good the damaged surface, testing etc. complete				
	PWD SOR 2022-23, Item No 41.64	2.0	Nos	6031.75	12063.50
	As Per Attached RA Item No.-34				
36	Item No.-36				
	Providing and fixing Anglo Indian type white glazed earthenware water closet pan with trap with UPVC seat and lid with chromium plated brass hinges and rubber buffers including UPVC and vent pipe up to the outside face of wall with flushing cistern and necessary fittings including cutting and making good to the walls and floors testing etc. complete.(prior approval of sample and brand by Ex. Engineer is necessary before use)				
	PWD SOR 2022-23, Item No 43.23	2.0	Nos	6816.40	13632.80
	As Per Attached RA Item No.-33				
37	Item No.-37				
	Providing and fixing white glazed earthenware lipped flat back/corner type Urinal with PVC 5 liters flushing cistern with fittings, inlet pipe with stop tap, brackets for fixing the cistern, 32 mm diameter P.V.C. flush pipe with fitting including lead soil pipe, lead trap and soil pipe connection up to the outside face of wall.				
	PWD SOR 2022-23, Item No 41.60	1.0	No	5022.61	5022.61
	As Per Attached RA Item No.-35				

Item no	Item of work	Quantity	Unit	Rate	Amount
38	Item No.-38				
	Providing and fixing push cock (Self closing tap) symet type of 15 mm dia. including necessary socket, testing etc. complete.				
	PWD SOR 2022-23, Item No 41.54	3.0	Nos	476.25	1428.74
	As Per Attached RA Item No.-45				
39	Item No.-39				
	Providing and fixing 10 cm PVC nahani trap with grating etc. complete.				
	PWD SOR 2022-23, Item No 42.67	3.0	Nos	565.41	1696.23
	As Per Attached RA Item No.-46				
40	Item No.-40				
	Providing and fixing 15 mm diameter PVC Aqua kraft type of approved make super bib tap with flange including all accessories etc complete				
	PWD SOR 2022-23, Item No 43.35	4.0	Nos	463.66	1854.63
	As Per Attached RA Item No.-47				
41	Item No.-41				
	Providing and laying vitrified mirror / glossy finish tiles decorative type having size 590 mm to 605 mm x 590 mm to 605 mm of 8 to 10 mm thickness and confirming to IS. 15622-2006 (group Bla) of approved make, shade and pattern for flooring in required position laid on a bed of 1:4 cement mortar including neat cement float, filling joints, curing and clearing etc. complete.				
	PWD SOR 2022-23, Item No 33.40	32.3	Sq.m.	1262.20	40781.68
	As Per Attached RA Item No.-27				

Item no	Item of work	Quantity	Unit	Rate	Amount
42	Item No 42				
	Providing and laying vitrified matt finish tiles having size 590 mm to 605 mm x to 605 mm of 8 to 10 mm thickness and confirming IS. 15622-2006 (Group Bla) of approved make, shade and pattern for dado and skirting in required position fixed in 1:4 cement mortar including neat cement float, filling joints, curing and cleaning etc. complete.				
	PWD SOR 2022-23, Item No 33.43	40.3	Sq.m.	1784.60	71830.22
	As Per Attached RA Item No.-39				
43	Item No.-43				
	Providing and fixing black kadappa stone as shelves 25mm. thick machine polished, extending the polish upto 20 cm width on lowerside, rounding corners, laying in position jointing with bedding cement mortar 1:4 proportion curing etc etc. complete.				
	PWD SOR 2022-23, Item No 33.23	3.1	Sq.m.	1308.36	4055.90
	As Per Attached RA Item No.-41				
44	Item No.-44				
	Supplying & erecting inverter LED batten 10W tube light fitting with polycarbonate housing, heat sink, integrated HF electronic driver, Min. 2600 mAh Lithium ion Battery with charging time of 8-10 Hours and backup time of Min. 3 hrs. with minimum 25% of initial Watts having luminous efficacy of 100 lumen/watt, CRI>80, CCT of 6500K and THD<=20% having useful life of minimum 25000 hrs. with overheating protection with 2 years warranty.				
	PWD ELECTRICAL CSR 2022-2023, item no -2-1-21, page no 25	7.0	NO	699.30	4895.10
	As Per Attached RA Item No.-29				
45	Item No.-45				
	Point wiring in for light/fan/bell in 20 mm metal conduit with 1.5 sq.mm (2+1E) FRLSH grade copper wire, flush type switch, earthing and required accessories as per specification No: WG-PW/SW				
	Electrical Mech SOR 2022-2023, item no -1-7-1 ,page no 11	20.0	Point	898.80	17976.00
	As Per Attached RA Item No.-30				

Item no	Item of work	Quantity	Unit	Rate	Amount
46	Item No.-46				
	Providing and fixing hume pipe septic tank 900mm diameter with vent pipe and cap including necessary (including excavation and laying)	1.0	No	17545.57	17545.57
	PWD SOR 2022-23, Item No 42.18				
	As Per Attached RA Item No.-51				
47	Item No.-47				
	Design & Approval Charges for Concrete , Reinforcement & Structural Steel as 2%		0.02		33410.45
				Total Rs.	1703932.79
				Say in Lakh	17.04

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

LATUR MUNICIPAL CORPORATION
DISTRICT - LATUR, DIVISION - AURANGABAD
REST ROOM with ATTACHED TOILETS
MEASUREMENTS

S.No	Item of work	No.	L	B	H	Qty.	Unit
1	Item No.-1						
	Excavation for foundation in earth, soil of all types, sand, gravel and soft murum , including removing the excavated material up to a distance of 50 m. beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift upto 1.5 m.) By Mechanical Means						
	below column (soft soil)	10	1.50	1.50	0.40	9.00	Cu.m.
	below steps	1	2	0.8	0.2	0.32	Cu.m.
	below plinth beam (shorter)	3	3.16	0.25	0.15	0.36	Cu.m.
	below plinth beam (longer)1	2	12.19	0.25	0.15	0.91	Cu.m.
	WC partition PB	1	2.5	0.25	0.15	0.09	Cu.m.
				Total Qty.		10.68	Cu.m.
2	Item No.-2						
	Excavation for foundation in Hard murum including removing the excavated material upto a distance of 50 metres beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift from 0 to 1.5m.) By Mechanical Means						
	For Column	10	1.50	1.50	0.60	13.50	Cu.m.
				Total Qty.		13.50	Cu.m.
3	Item No.-3						
	Excavation for foundation in Soft rock and old cement or lime masonry foundations including removing the excavated material upto a distance of 50 metres beyond the building area and stacking as directed, including dewatering, preparing the bed for the foundation and necessary back filling with available earth/murum, ramming ,watering including shoring and strutting etc. complete. By Mechanical Means						
		10	1.5	1.50	0.30	6.75	Cu.m.
4	Item No.-4						
	Excavation for foundation in Hard rock by chiselling, wedging, line drilling, etc. including trimming and levelling the bed, removing the excavated material upto a distance of 50 metres beyond the building area stacking as directed, dewatering and back filling with available earth/ murum watering, ramming etc. complete. . By Mechanical Means						
		10	1.5	1.5	0.2	4.5	Cu.m.

S.No	Item of work	No.	L	B	H	Qty.	Unit
5	Item No.-5						
	Providing dry/ trap/ granite/ quartzite/ gneiss rubble stone soling 15 cm to 20 cm thick including hand packing and compacting etc. complete						
	below floor	1	11.50	3.50	0.23	9.26	cum
	below column	10	1.50	1.50	0.23	5.18	cum
				Total Qty.		14.44	cum
6	Item No.-6						
	Filling in plinth and floors with approved excavated material in 15cm. to 20cm. Layers including watering and compacting etc. complete.						
	plinth filling (from approved available material)	1	11.50	3.50	0.25	10.06	cum
				Total Qty.		10.06	cum
7	Item No.-7						
	Providing and laying Cast in situ/Ready Mix cement concrete in M-15 of trap/ granite/ quartzite/ gneiss metal for foundation and bedding including bailing out water, Steel centering, formwork, laying/pumping, compacting, roughening them if special finish is to be provided, finishing if required and curing complete, with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)						
	For Column	10	1.50	1.50	0.15	3.38	Cu.m.
	For Floor bed	1	11.50	3.50	0.15	6.04	Cu.m.
	below plinth beam (shorter)	3	3.16	0.25	0.1	0.24	Cu.m.
	below plinth beam (longer)1	2	12.19	0.25	0.1	0.61	Cu.m.
	WC partition PB	1	2.5	0.25	0.1	0.06	Cu.m.
				Total Qty.		10.33	Cu.m.
8	Item No.-8						
	Providing and laying in situ/ Ready Mix cement concrete M-20 of trap/granite/quartzite/ gneiss metal for R.C.C. work in foundations like raft, strip foundations, grillage and footings of R.C.C. columns and steel stanchions etc. including bailing out water, formwork, laying/ pumping cover blocks, compaction and curing roughening the surface if special finish is to be provided, (Excluding reinforcement and structural steel) etc. complete, with fully automatic microprocessor based PLC with SCADA enabled Reversible Drum Type mixer/ concrete Batch Mix plant (Pan mixer) etc. complete, with fine aggregate (Natural Sand/ Crushed Sand V.S.I. Grade finely washed etc.)						
	a) Column Footing	10	1.20	1.20	0.45	6.48	Cu.m.
				Total Qty.		6.48	Cu.m.

S.No	Item of work	No.	L	B	H	Qty.	Unit
9	Item No.-9						
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap / granite/quartzite/ gneiss metal for R.C.C. columns as per detailed designs and drawing or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete.(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)						
	b) Column						
	UPTO Bottom of plinth beam	10	0.23	0.40	1.02	0.94	Cu.m.
	Above plinth to bottom of roof beam	10	0.23	0.40	2.60	2.39	Cu.m.
					Total Qty.	3.33	Cu.m.
10	Item No.-10						
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap / granite/quartzite/ gneiss metal for R.C.C. beams and lintels as per detailed designs and drawings or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction and roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)						
	c) Plinth Beam						
	plinth beam (shorter)	3	3.16	0.23	0.40	0.87	Cu.m.
	plinth beam (longer)1	2	12.19	0.23	0.40	2.24	Cu.m.
	WC partition PB	1	2.5	0.23	0.40	0.23	Cu.m.
	2) Roof Beam-						
	beam (shorter)	3	3.16	0.23	0.28	0.61	Cu.m.
	beam (longer)1	2	12.19	0.23	0.28	1.57	Cu.m.
	WC partition roof beam	1	2.5	0.23	0.28	0.16	Cu.m.

S.No	Item of work	No.	L	B	H	Qty.	Unit
	3) Lintels -						
	3) Lintel over wc Door 1	2	1.10	0.23	0.25	0.13	cum
	3) Lintel over main Door 2	1	1.50	0.23	0.25	0.09	cum
	4) Lintel over Window	5	1.20	0.23	0.25	0.35	cum
	5) Lintel above ventilator	2	0.70	0.23	0.25	0.08	cum
					Total Qty.	6.33	cum
11	Item No.-11						
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap/ granite/ quartzite/ gneiss metal for R.C.C. chajja as per detailed design and drawings including steel centering, formwork, cover blocks, laying/pumping, compacting and roughening the surface if special finish is to be provided and curing complete. (Excluding reinforcement and structural steel). with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)						
	d) Chajja						
	1) Chajja for window	5	1.20	0.60	0.15	0.54	cum
	2) Chajja for Door	1	1.50	0.60	0.15	0.14	cum
					Total Qty.	0.68	cum
12	Item No.-12						
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap/ granite / quartzite/ gneiss metal for R.C.C. slabs and landings as per detailed designs and drawings including steel centering, formwork, cover blocks, laying/pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete,(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)						
	e) Roof Slab	1	12.59	4.36	0.120	6.59	cum
					Total Qty.	6.59	cum
					Total Qty.	23.41	cum

S.No	Item of work	No.	L	B	H	Qty.	Unit
13	Item No.-13						
	Providing and fixing in position TMT - FE - 500 bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintels, pardis, copings, fins, arches etc. as per detailed designs, drawings and schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.						
		1	23.41	100	kg/Cum	2.340	M.T.
					Total Qty.	2.40	M.T.
14	Item No.-14						
	Providing second class Burnt Brick masonry with conventional/ I.S. type bricks in cement mortar 1:6 in plinth as backing in composite masonry including bailing out water manually, striking joints, raking out joints and watering etc Complete.						
	for Plinth-						
	shorter side	3	3.16	0.23	0.35	0.76	cum
	longer side	2	12.19	0.23	0.35	1.96	cum
	WC partition wall	1	2.5	0.23	0.35	0.20	cum
					Total Qty.	2.92	cum
15	Item No.-15						
	Providing second class Burnt Brick masonry with conventional/I.S. type bricks in cement mortar 1:6 in superstructure including striking joints, raking out joints, watering and scaffolding comp.						
	BB 1 (shorter)	3	3.96	0.23	2.60	7.10	Cu.m.
	BB (longer)1	2	12.19	0.23	2.60	14.58	Cu.m.
	WC partition	1	2.5	0.23	2.60	1.50	Cu.m.
	for steps						
	bottom step1	1	2	0.80	0.15	0.24	Cu.m.
	2	1	2	0.60	0.15	0.18	Cu.m.
	3	1	2	0.40	0.15	0.12	Cu.m.
	4	1	2	0.20	0.15	0.06	Cu.m.
					Total Qty.	23.78	Cu.m.
	Deduction						
	main Door	1	1.20	0.23	2.10	0.58	Cu.m.
	Door (Toilets)	2	0.80	0.23	2.10	0.77	Cu.m.
	window	5	0.90	0.23	1.50	1.55	Cu.m.
	window lintel	5	1.20	0.23	0.25	0.35	Cu.m.
	door lintel	1	1.50	0.23	0.25	0.09	Cu.m.
	for ventilator	2	0.4	0.23	0.6	0.1104	Cu.m.
	cloumn	10	0.23	0.4	2.6	2.392	Cu.m.
					Total Qty.	5.84	Cu.m.
					Total Net Qty.	17.93	Cu.m.

S.No	Item of work	No.	L	B	H	Qty.	Unit
16	Item No.-16						
	Providing internal cement plaster 20 mm thick in a two coat in cement mortar 1:4 without neeru finish to concrete, brick surfaces in all positions including scaffolding providing groove at joint of Burnt brick masonry and concrete members if necessary,curing etc. complete.						
	Internal Plaster						
	shorter wall	4	3.50	3.00		42.00	Sq.m.
	longer wall	2	11.73	3.00		70.38	Sq.m.
	wc partition wall	2	2.50	3.00		15.00	Sq.m.
	Ceiling	1	11.73	3.50		41.06	Sq.m.
					Total Qty.	168.44	Sq.m.
	Deduction						
	door main	1	1.20		2.10	2.52	Sq.m.
	door(Toilets)	2	0.8		2.1	3.36	Sq.m.
	window	5	0.90		1.50	6.75	Sq.m.
	ventilator	2	0.4		0.6	0.48	Sq.m.
					Total Qty.	13.11	Sq.m.
					Total Net Qty.	155.33	Sq.m.
17	Item No.-17						
	Providing sand faced plaster externally In cement mortar using approved screened sand, in all positions includ-ing base coat of 15mm thick in C.M. 1:4 using waterproofing compound at 1 kg.per cement bag curing the same for not less than 2 days and keeping the surface of the base coat rough to receive the sand faced treatment 6 to 8mm thick in C.M. 1:4 finishing the surface by taking out grains and curing for fourteen days scaf-folding etc.complete.						
	External Plaster-						
	Long wall outer 1	2	12.19		3.87	94.35	sqm
	short wall outer	2	3.96		3.87	30.65	sqm
	Slab projection	1	32.30	0.20		6.46	sqm
	For Window Chajja	5	1.20	0.60		3.60	sqm
	window chajja patti	5	2.40		0.15	1.80	sqm
	For door chajja bottom	1	1.50	0.60		0.90	sqm
	door chajja patti	1	2.40		0.15	0.36	sqm
	for steps-						
	riser	5	2.00		0.15	1.50	sqm
	tread	4	2.00	0.20		1.60	sqm
	side face of steps	2	0.50	0.80	0.75	0.60	sqm
					Total Qty.	141.82	sqm

S.No	Item of work	No.	L	B	H	Qty.	Unit
	Deduction						
	door(Rest Room)	1	1.20		2.10	2.52	sqm
	window	5	0.90		1.50	6.75	sqm
	ventilator	2	0.4		0.6	0.48	sqm
				Total Qty.		9.75	sqm
				Total Net Qty.		132.07	sqm
18	Item No.-18						
	Providing neeru finish to plastered surfaces in all positions including scaffolding and curing etc. complete.						
	As Per Internal Plaster Quantity			Total Qty.		155.33	Sq.m.
19	Item No.-19						
	Providing and applying white-wash in two coats on old / new plastered or masonry surfaces and asbestos cement sheets including scaffolding and preparing the surface by brushing and brooming down etc. complete.						
	As Per Internal Plaster Quantity			Total Qty.		155.33	Sq.m.
20	Item No.-20						
	Providing and applying washable oil bound distemper of approved colour & shade to old & new surfaces in two coats including scaffolding preparing the surfaces,preparing the surfaces. (excluding the primer coat) complete.						
	As Per Internal Plaster Quantity			Total Qty.		155.33	Sq.m.
21	Item No.-21						
	Providing and applying two coats of water proof cement paint of approved manufacture and of approved colour to the plastered surfaces including scaffolding if necessary, cleaning and preparing the surface, watering for two days etc. complete.						
	As Per External Plaster Quantity					132.07	Sq.m.
22	Item No.-22						
	Providing and applying two coats of exterior acraylic emulsion paint confirming to corresponding I.S. of approved manufacture and of approved colour to the plastered surfaces including cleaning ,preparing the plaster surface, applying primer coat ,scaffolding if necessary , and watering the surface for two days etc complete.						
	As Per External Plaster Quantity			Total Qty.		132.07	Sq.m.

S.No	Item of work	No.	L	B	H	Qty.	Unit
23	Item No.-23						
	Providing and fixing frame with / without ventilator of size as specified with Country non teak wood for doors and windows including chamfering, rounding, rebating, ironholdfast of size 300mm x 40mm x 5mm with oil painting, etc. complete.						
	door frame (90x75 mm)						
	Rest Room						
	vertical leg	2	2.1	0.09	0.075	0.0284	cum
	horizontal leg-3" in	1	1.3524	0.09	0.075	0.0091	cum
	Toilet						
	vertical leg	4	2.1	0.09	0.075	0.0567	Cu.m.
	horizontal leg-3" in	2	0.9524	0.09	0.075	0.012857	Cu.m.
					Total	0.1070	cum
24	Item No.-24						
	Providing and fixing solid core flush door shutter commercial in single leaf 32mm thick without ventilator commercial type of exterior grade as per detailed drawing including wrought iron hold fast, iron oxidised fixtures and fastenings and handles on both sides and finishing with oil painting 3 coats complete.						
	door main	1	1.20		2.10	2.52	Sq.m.
					Total Qty.	2.52	Sq.m.
25	Item No.-25						
	Providing and Fixing 30 MM thick BOTH SIDE PRELAMINATED SOLID PANEL PVC DOOR SHUTTER consisting of frame made out of M.S tubes of 19 guage thickness and, size 19 x 19 mm for styles and 15 x15 mm for the top and bottom rails, M.S frameshall have a coat of metel primer of approved make and manufacture. M.S frame shall be covered with heat mouled PVC 'C' channel made from 5 mm (+/0.25) thick prelaminated sheet of density 600 Kilogram/cbm ,of size 30mm thickness 70mm width out of which 50mm shall be flat and 20mm shall be tapered in 45° angle on either side forming stiles ; and 5 mm thick ,95 mm wide PVC sheet out of which 75 mm shall be falt and 20 mm shall be tapered in 45 on the inner side to form top and bottom rail and 115 mm wide PVC sheet out of which 75 mm shall be falt and 20 mm shall be tapered on both sides to form lock rail.Top,bottom and lock rail shall be provided either side of the panel. An additional 5 mm (+/0.25) thick PVC strip of 20 mm width is to be stuck on the bottom side of the ' c ' channel prelaminated paneling of 5 mm (+/0.25) thick PVC sheet to be fitted inside the M.S. frame welded/ sealed to the styles and rails with 5 mm (+/0.25) x 30 mm PVC sheet beading on either side and joined together with solvent cement adhesive etc ,10 mm thickness (5 mm (+/0.25) x 2 nos) 20 mm wide cross PVC sheet as gap insert for the rail and bottom rail. Door to be fixed to frames with 3 nos M.S.powder coated but hinges of size 100 mm x 25MM x 2mm using 32 mm long steelscrews drilled suitable to pass through both the walls of the M.S tube. Other hardwares						

S.No	Item of work	No.	L	B	H	Qty.	Unit
	door (Toilets)	2	0.8		2.1	3.36	Sqm
26	Item No.-26						
	Providing and fixing mild steel grill work for windows , ventilators etc. 20 Kilogram/ One Square Metre as per drawing including fixtures, necessary welding and painting with one coats of anticorrosive paint and two coats of oil painting complete.						
	window	5	0.9		1.50	6.75	Sq.m.
	ventilator	2	0.4		0.6	0.48	Sq.m.
					Total Qty.	7.23	Sq.m.
27	Item No.-27						
	Providing and fixing in position. (as per I.S.1868 / 1982) Aluminium sliding window of two tracks with rectangular pipe having overall dimension 63.50 x 38.10 x 1.02mm at weight 0.547 Kilogram/One Running Metre. and window frame bottom track section 61.85 x 31.75 x 1.20 mm at weight 0.695 Kilogram/One Running Metre. Top and side track section 61.85 x 31.75 x 1.30 mm at weight 0.659 Kilogram/One Running Metre. The shutter should be of bearing bottom 40 x 18 x 1.25 mm at weight 0.417 Kilogram/One Running Metre. Inter locking section 40 x 18 x 1.10 mm at weight 0.469 Kilogram/One Running Metre. And handle section 40 x 18 x 1.25 mm at weight 0.417 Kilogram/One Running Metre. and top section 40 x 18 x 1.25 mm at weight 0.417 Kilogram/Running metre. As per detailed drawings and as directed by Engineer in charge with all necessary Aluminium sections fixtures and fastenings such as roller bearing in nylon casting and self locking catch fitted in vertical section of shutter including 5 mm thick plain glass with all required screws and nuts etc, complete. With powder coating with box						
	window	5	0.90		1.50	6.75	Sq.m.
					Total Qty.	6.75	Sq.m.
28	Item No.-28						
	Providing and fixing in position powder coated aluminium louvered windows / ventilator of various sizes with powder coating as per detailed drawing and specifications including aluminium frames 80 x 38 mm x 1.22 mm box type, 5 mm thick sheet glass louvers, of approved quality etc. complete.						
	ventilator	2	0.4		0.6	0.48	Sq.m.
29	Item No.-29						
	Providing and fixing H.D.P container one piece moulded water tank made out of high density polythylene and built corrugated inclusive of delivery up to destination hoisting and fixing of accessories such as inlet, outlet overflow pipe inclusive of all tanks capacity between 200 to 1000 liters						
		1	2000			2000	Litre

S.No	Item of work	No.	L	B	H	Qty.	Unit
30	Item No.-30						
	Providing and fixing 15 mm. dia Ball cock medium type with PVC float including sockets and necessary fittings and tested as per municipal requirement etc. complete.						
	for tank	1				1	Nos
31	Item No.-31						
	Providing and fixing screw down for 25 mm dia. wheeled stop tap of brass including necessary sockets/union nut complete.						
	for tannk outlet and inlet	2				2	Nos
32	Item No.-32						
	Providing and laying in trenches 15 mm dai. CPVC pipe including necessary excavation, fittings. Refilling trenches etc. complete Including removing existing pipe line if necessary and conveying and stacking the same in PWD chowky or as directed etc. complete.						
	for wash basin and toilet tap					30	m
33	Item No.-33						
	Providing and laying in trenches 25 mm dai. CPVC pipe including necessary excavation, fittings. Refilling trenches etc. complete. Including removing existing pipe line if necessary and conveying and stacking the same in PWD chowky or as directed etc. complete.						
	outlet and inlet					15	m
34	Item No.-34						
	Providing and fixing 100 mm dia stabiliser pipe/ P.V.C. soil vent/waste pipe and with necessary fixtures and fitting such as bends, tees, single junctions, slotted vent, clamps etc.complete						
	for waste water pipe from wash basin and urinal					20	m
35	Item No.-35						
	Providing and fixing white glazed earthenware Wash Hand Basin of 45cm x 30cm size including cold water pillar tap/cold and hot water pillar tap brackets, rubber plugsand brass chain, stop tap and necessary pipe connection including P.V.C. waste pipe andtrap up to the outside face of the wall. Making good the damaged surface, testing etc. complete						
		1				2.00	Nos

S.No	Item of work	No.	L	B	H	Qty.	Unit
36	Item No.-36						
	Providing and fixing Anglo Indian type white glazed earthenware water closet pan with trap with UPVC seat and lid with chromium plated brass hinges and rubber buffers including UPVC and vent pipe up to the outside face of wall with flushing cistern and necessary fittings including cutting and making good to the walls and floors testing etc. complete.(prior approval of sample and brand by Ex. Engineer is necessary before use)						
		2				2.00	Nos
37	Item No.-37						
	Providing and fixing white glazed earthenware lipped flat back/ corner type Urinal with PVC 5 liters flushing cistern with fittings, inlet pipe with stop tap, brackets for fixing the cistern, 32 mm diameter P.V.C. flush pipe with fitting including lead soil pipe, lead trap and soil pipe connection up to the outside face of wall.						
		1				1.00	No
38	Item No.-38						
	Providing and fixing push cock (Self closing tap) symet type of 15 mm dia. including necessary socket, testing etc. complete.						
	FOR BASIN AND URINAL	3				3	Nos
39	Item No.-39						
	Providing and fixing 10 cm PVC nahani trap with grating etc. complete.						
		3				3	Nos
40	Item No.-40						
	Providing and fixing 15 mm diameter PVC Aqua kraft type of approved make super bib tap with flange including all accessories etc complete						
		4				4	Nos
41	Item No.-41						
	Providing and laying vitrified mirror / glossy finish tiles decorative type having size 590 mm to 605 mm x 590 mm to 605 mm of 8 to 10 mm thickness and confirming to IS. 15622-2006 (group Bla) of approved make, shade and pattern for flooring in required position laid on a bed of 1:4 cement mortar including neat cement float, filling joints, curing and clearing etc. complete.						
	For Flooring (Rest Room)	1	9.23	3.50		32.31	Sq.m.
					Total Qty.	32.31	Sq.m.

S.No	Item of work	No.	L	B	H	Qty.	Unit
42	Item No 42						
	Providing and laying vitified matt finish tiles having size 590 mm to 605 mm x to 605 mm of 8 to 10 mm thickness and confirming IS. 15622-2006 (Group Bla) of approved make, shade and pattern for dado and skirting in required position fixed in 1:4 cement mortar including neat cement float, filling joints, curing and cleaning etc. complete.						
	floor	1	2.5	3.5		8.75	Sq.m.
	for dado	2	8.3		2.1	34.86	Sq.m.
	for wash basin	1	0.8		0.6	0.48	Sq.m.
					Total	44.09	Sq.m.
	Deduction						Sq.m.
	door	2	0.8		2.1	3.36	Sq.m.
	ventilator	2	0.4		0.6	0.48	Sq.m.
					Deductions	3.84	Sq.m.
					Net quantity	40.25	Sq.m.
43	Item No.-43						
	Providing and fixing black kadappa stone as shelves 25mm. thick machine polished, extending the polish upto 20 cm width on lowerside, rounding corners, laying in position jointing with bedding cement mortar 1:4 proportion curing etc etc. complete.						
	For Steps (riser)	5	2.00		0.15	1.50	Sq.m.
	For Steps (tread)	4	2.00	0.20		1.60	Sq.m.
					Total Qty.	3.10	Sq.m.
44	Item No.-44						
	Supplying & erecting inverter LED batten 10W tube light fitting with polycarbonate housing, heat sink, integrated HF electronic driver, Min. 2600 mAh Lithium ion Battery with charging time of 8-10 Hours and backup time of Min. 3 hrs. with minimum 25% of initial Watts having luminous efficacy of 100 lumen/watt, CRI>80, CCT of 6500K and THD<=20% having useful life of minimum 25000 hrs. with overheating protection with 2 years warranty.						
						7.00	NO
45	Item No.-45						
	Point wiring in for light/fan/bell in 20 mm metal conduit with 1.5 sq.mm (2+1E) FRLSH grade copper wire, flush type switch, earthing and required accessories as per specification No: WG-PW/SW						
						20.00	Point

S.No	Item of work	No.	L	B	H	Qty.	Unit
46	Item No.-46						
	Providing and fixing hume pipe septic tank 900mm diameter with vent pipe and cap including necessary (including excavation and laying)						
		1				1	No
47	Item No.-47						
	Design & Approval Charges for Concrete , Reinforcement & Structural Steel as 2%						

Sub work – Plastic Shredder Machine - 4 TPD Capacity – 4 Nos

LATUR MUNICIPAL CORPORATION (DISTRICT- LATUR)				
Name of Work: Plastic Shredder Machine 4 TPD Capacity – 4 Nos				
Cost Analysis quotes				
Qty	Description	Unit	Rate	Amount
4	Plastic Shredder Machine Capacity 4 TPD. Dimension – 700(W) X 1050(B) X 1500 (H), Motor -5 HP 1440 rpm. Blade Material, Output Size = 20 mm , MOC - 3 mm MS Sheet and CI Pulley	No.	651277.00	2605108.00
	MJP DSR 2023-24, Item No 10 a, Pg. No. 10/17	Total Amount (₹)		2605108.0

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

Sub work-Automated MRF Sorting System + RDF Facility – 3 Nos

LATUR MUNICIPAL CORPORATION (DISTRICT- LATUR)				
Name of Work: Automated MRF Sorting System+ RDF Facility- 3 Nos				
Cost Analysis of quotes				
Qty	Item Description	Unit	Rate	Amount
	Automated MRF Sorting System for up to 20-25 TPD			
3	Designing, Providing, Erecting, Testing & Commissioning of MRF 20 TPD+ RDF Facility as per detailed specification. a) Capacity of a ballistic separator specification 1.5 mt X W 1.6 mt, No of paddles 9 nos, Length of paddles-2000 mm, Adjustable Angle- 11-20, Perforation- 3 mm & 25 mm, Frame Channel 100x50, Power- 5HP+5HP, Speed- 190-200 rpm, Cap- 20 MT/day, VFD- Delta/ABB/ or equivalent b) Feeding Conveyor (Throughing Type) W700mm X B8000mm X H2000 mm, Frame- 2 mm Thk MS Panel, Head pulley- Dia 220 mm with lagging with shaft dia 50mm (Bearing Size) Same. Tall pulley without lagging, Rubber Belt- 4 ply,M24, 8mm thk Hopper- L1000XH700, 2mm Thk MS Sheet with angle frame, Power: 3 HP c) Rejection Oversize Conveyor (Incline Type) W700mmX B8000mmX H2550 mm , Head Pulley- Dia 220 mm with lagging & shaft dia 50 mm (Bearing Size), Farme- 2mm THK MS Panel, Head Pulley- Dia 220 mm with lagging, Rubber Belt- 4 Ply, M24, 8mm thk, Power: 3 Hp, Sorting 6 station includes sitting and connected bins. e) Prefabricated RDF Compartment & ladder Pre- fabricated Room Size L40 ftX W12 ft in	No	7626688.0	22880064.00
	MJP DSR 2023-24, Item No 8b, Pg. No. 9/17	Total Amount		22880064.00

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

Sub work – Horizontal Beller Machine – 4 Nos

LATUR MUNICIPAL CORPORATION (DISTRICT- LATUR)				
Name of Work: Horizontal Beller Machine – 4 Nos				
Cost Analysis of quotes				
Qty	Description	Unit	Rate	Amount
4	<u>Horizontal Beller Machine</u> Designing .Providing.Erecting. Testing & Commisinlng of Horizontal Beller Machine for MSWwaste Material:- MS Type Hydraulic Dimension:-1300X000X800mm Motor:-15HP Max Force:-0-75 Tonne Oil Tanke-350 Ltr Working Pressure 210 Dar Dail Size(WXIIXL):- 12X16X45 etc. as per detailed specification.	No.	847458.00	3389832.00
	MJP DSR 2023-24, Item No 11a, Pg. No. 10/17	Total Amount (₹)		3389832.00

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(1)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

Sub work – Plastic Dust Remover Machine (Fataka Machine) Capacity – 0.5 TPH

LATUR MUNICIPAL CORPORATION (DISTRICT- LATUR)				
Name of Work: Plastic Dust Remover Machine (Fataka Machine)				
Cost Analysis of quotes				
Qty	Description	Unit	Rate	Amount
4	Designing,Providing,Erecting,Testing & Commisioning of Dust Remover Machine (Fataka Machine) capacity outot 0.5 TPH and Operantlon Made of Semi- Automatic/Automatic or equivalent also with Motor Capacity Min 5 HP or more with Perforated cover thickness In mm I6mm round rod and Drum Diameter of machine 500 mm, perforated casing Drum cover diameter in mm 720mm and Drum length In mm 2500 (mm).Overall Size (mm] 3000 x 1200 x 1350. Materla used Mild Steel and Machine Weight 700.750 kg with Working; area 700- 1000 sq.ft.etc. as per detailed specification.	No	550847.00	2203388.00
	MJP SWM DSR 2023-24, Item No 5b, Pg.No. 17			
		Total (Rs)		2203388.00

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

Sub work – Segregation Conveyor with Seating Facility & Bins for 10 TPD Dry Waste – 3 Nos

LATUR MUNICIPAL CORPORATION (DISTRICT- LATUR)				
Name of Work: Segregation Conveyor With Seating Facility and Bins - 3 Nos				
Cost Analysis of quotes				
Qty	Description	Unit	Rate	Amount
3	Squeezer for wet waste : - Designing .Providing.Erecting. Testing & Commisinlng of Squeezer for wet waste with size of 2500mm (L) X 300mm (W) X 1500mm (HH), moc OF CONE SS 304, MOC of Sieve SS 304, Outside Housing Material MS with Motor of 3 HP etc as per detailed Specification .	No.	1288136.3	3864408.00
	MJP DSR 2023-24, Item No 2d, Pg. No. 3/17	Total Amount (₹)		3864408.00

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

LATUR MUNICIPAL CORPORATION
DISTRICT - LATUR, DIVISION - AURANGABAD
RATE ANALYSIS

Item no	Item of work		Rate	Unit
1	Item No.-1			
	Excavation for foundation in earth, soil of all types, sand, gravel and soft murum , including removing the excavated material up to a distance of 50 m. beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift upto 1.5 m.) By Mechanical Means			
	PWD SOR 2022-23, Item No 21.02			
		Basic Rate	207.00	Per Cum
		Deduct 2% for labour amenities & cess	4.14	
		Total	202.86	
		Add 5% for Municipal corporation	10.14	
		Add 2% for labour amenities & cess	4.14	
		Total	217.14	Per Cum
2	Item No.-2			
	Excavation for foundation in Hard murum including removing the excavated material upto a distance of 50 metres beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. By Mechanical Means			
	PWD SOR 2022-23, Item No 21.06			
	Lift from 0 TO 1.5 m.	Basic Rate	227.00	Per Cum
		Deduct 2% for labour amenities & cess	4.54	
		Total	222.46	
		Add 5% for Municipal corporation	11.12	
		Add 2% for labour amenities & cess	4.54	
		Total	238.12	Per Cum
	Lift from 1.5 TO 3 m.	Basic Rate	284.00	Per Cum
		Deduct 2% for labour amenities & cess	5.68	
		Total	278.32	
		Add 5% for Municipal corporation	13.92	
		Add 2% for labour amenities & cess	5.68	
		Total	297.92	Per Cum
3	Item No.- 3			
	Excavation for foundation in Soft rock and old cement or lime masonry foundations including removing the excavated material upto a distance of 50 metres beyond the building area and stacking as directed, including dewatering, preparing the bed for the foundation and necessary back filling with available earth/murum, ramming ,watering including shoring and strutting etc. complete. By Mechanical Means			
	Lift from 0 TO 1.5 m.	Basic Rate	429.00	Per Cum
	PWD SOR 2022-23, item no 21.14	Deduct 2% for labour amenities & cess	8.58	
		Total	420.42	
		Add 4% for Municipal area	21.02	
		Add 5% for Municipal corporation	8.58	
		Total	450.02	Per Cum
	Lift from 1.5 to 3 m.)	Basic Rate	524.00	Per Cum
	PWD SOR 2022-23, item no 21.16	Deduct 2% for labour amenities & cess	10.48	
		Total	513.52	
		Add 5% for Municipal corporation	25.68	
		Add 2% for labour amenities & cess	10.48	
		Total	549.68	Per Cum
	(Lift from 3 m To 4.50 m)			
	PWD SOR 2022-23, item no 21.16	Basic Rate	628.80	Per Cum
		Deduct 2% for labour amenities & cess	12.58	
		Total	616.22	
		Add 5% for Municipal corporation	30.81	
		Add 2% for labour amenities & cess	12.58	
		Total	659.61	Per Cum

Item no	Item of work		Rate	Unit
4	Item No.- 4			
	Excavation for foundation in Hard rock by chiselling, wedging, line drilling, etc. including trimming and levelling the bed, removing the excavated material upto a distance of 50 metres beyond the building area stacking as directed, dewatering and back filling with available earth/ murum watering, ramming etc. complete. . By Mechanical Means			
	PWD SOR 2022-23, item no 21.20			
	(Lift upto 1.5 m)	Basic Rate	1307.00	Per Cum
		Deduct 2% for labour amenities & cess	26.14	
		Total	1280.86	
		Add 5% for Municipal corporation	64.04	
		Add 2% for labour amenities & cess	26.14	
		Total	1371.04	Per Cum
	Lift from 1.5 to 3 m.)	Basic Rate	1437.70	Per Cum
		Deduct 2% for labour amenities & cess	28.75	
		Total	1408.95	
		Add 5% for Municipal corporation	0.00	
		Add 2% for labour amenities & cess	28.75	
		Total	1437.70	Per Cum
5	Item No.- 5			
	Providing and laying Cast in situ/Ready Mix cement concrete in M-10 of trap/ granite/ quartzite/ gneiss metal for foundation and bedding including bailing out water, Steel centering, formwork, laying/ pumping, compacting, roughening them if special finish is to be provided, finishing if required and curing complete, with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Natural Sand / Crushed sand VSI Grade finely washed etc)			
	PWD SOR 2022-23, Item No 24.01, Page-215			
		Basic Rate	5830.00	Per Cum
		Deduct 2% for labour amenities & cess	116.60	
		Deduct royalty of sand 0.47x237.37	111.56	
		total	5601.84	
	lead= pg no. 588	Add Cr. Metal lead charges=0.94*LC	385.92	
	lead= km	Add sand lead charges=0.47*LC	727.64	
		add cement lead charges=0.15*LC	0.00	
		total	6715.39	
		Add 5% for Municipal corporation	335.77	
		Add 2% for labour amenities & cess	116.60	
		Total	7167.76	Per Cum
6	Item No.-6			
	Providing and laying Cast in situ/Ready Mix cement concrete in M-15 of trap/ granite/ quartzite/ gneiss metal for foundation and bedding including bailing out water, Steel centering, formwork, laying/pumping, compacting, roughening them if special finish is to be provided, finishing if required and curing complete, with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)			
	PWD SOR 2022-23, Item No 24.04			
		Basic Rate	6359.00	Per Cum
		Deduct 2% for labour amenities & cess	127.18	
		Deduct royalty of sand 0.44x237.37	104.44	
		total	6127.38	
	lead= pg no. 588	Add Cr. Metal lead charges=0.88*LC	361.28	
	lead= km	Add sand lead charges=0.44*LC	681.19	
		add cement lead charges=(6*0.035)*LC	0.00	
		total	7169.86	
		Add 5% for Municipal corporation	358.49	
		Add 2% for labour amenities & cess	127.18	
		Total	7655.53	Per Cum
7	Item No.-7			
	Providing and laying in situ/ Ready Mix cement concrete M-20 of trap/granite/quartzite/ gneiss metal for R.C.C. work in foundations like raft, strip foundations, grillage and footings of R.C.C. columns and steel stanchions etc. including bailing out water, formwork, laying/ pumping cover blocks, compaction and curing roughening the surface if special finish is to be provided, (Excluding reinforcement and structural steel) etc. complete, with fully automatic microprocessor based PLC with SCADA enabled Reversible Drum Type mixer/ concrete Batch Mix plant (Pan mixer) etc. complete, with fine aggregate (Natural Sand/ Crushed Sand V.S.I. Grade finely washed etc.)			
	PWD SOR 2022-23, Item No 25.11			
		Basic Rate	7104.00	Per Cum
		Deduct 2% for labour amenities & cess	142.08	
		Deduct royalty of sand 0.425x237.37	100.88	
		total	6861.04	

Item no	Item of work		Rate	Unit
		Add Cr. Metal lead charges=0.85*LC	348.97	
		Add sand lead charges=0.425*LC	657.97	
		add cement lead charges=0.25*LC	0.00	
		total	7867.98	
		Add 5% for Municipal corporation	393.40	
		Add 2% for labour amenities & cess	142.08	
		Total	8403.46	Per Cum
8	Item No.-8			
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap / granite/quartzite/ gneiss metal for R.C.C. columns as per detailed designs and drawing or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete.(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)			
	PWD SOR 2022-23, Item No 25.31			
		Basic Rate	13783.00	Per Cum
		Deduct 2% for labour amenities & cess	275.66	
		Deduct royalty of sand 0.425x237.37	100.88	
		total	13406.46	
	lead= pg no. 588	Add Cr. Metal lead charges=0.85*LC	348.97	
	lead= km	Add sand lead charges=0.425*LC	657.97	
		add cement lead charges=0.25*LC	0.00	
		total	14413.40	
		Add 5% for Municipal corporation	720.67	
		Add 2% for labour amenities & cess	275.66	
		Total	15409.73	Per Cum
9	Item No.-9			
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap / granite/quartzite/ gneiss metal for R.C.C. beams and lintels as per detailed designs and drawings or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction and roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)			
	PWD SOR 2022-23, Item No 25.50			
		Basic Rate	12269.00	Per Cum
		Deduct 2% for labour amenities & cess	245.38	
		Deduct royalty of sand 0.425x237.37	100.88	
		total	11922.74	
		Add Cr. Metal lead charges=0.85*LC	348.97	
		Add sand lead charges=0.425*LC	657.97	
		total	12929.68	
		Add 5% for Municipal corporation	646.48	
		Add 2% for labour amenities & cess	245.38	
		Total	13821.54	Per Cum
10	Item No.-10			
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap/ granite/ quartzite/ gneiss metal for R.C.C. chajja as per detailed design and drawings including steel centering, formwork, cover blocks, laying/pumping, compacting and roughening the surface if special finish is to be provided and curing complete. (Excluding reinforcement and structural steel). with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)			
	PWD SOR 2022-23, Item No 26.05			
		Basic Rate	13932.00	Per Cum
		Deduct 2% for labour amenities & cess	278.64	
		Deduct royalty of sand 0.425x237.37	100.88	
		total	13552.48	
	lead= pg no. 588	Add Cr. Metal lead charges=0.85*LC	348.97	
	lead= km	Add sand lead charges=0.425*LC	657.97	
		total	14559.42	
		Add 5% for Municipal corporation	727.97	
		Add 2% for labour amenities & cess	278.64	
		Total	15566.03	Per Cum

Item no	Item of work		Rate	Unit
11	Item No.-11			
	Providing and laying Cast in situ/Ready Mix cement concrete M-20 of trap/ granite / quartzite/ gneiss metal for R.C.C. slabs and landings as per detailed designs and drawings including steel centering, formwork, cover blocks, laying/pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete.(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)			
	PWD SOR 2022-23, Item No 25.70			
		Basic Rate	13943.00	Per Cum
		Deduct 2% for labour amenities & cess	278.86	
		Deduct royalty of sand 0.425x237.37	100.88	
		total	13563.26	
	lead= pg no. 588	Add Cr. Metal lead charges=0.85*LC	348.97	
	lead= km	Add sand lead charges=0.425*LC	657.97	
		total	14570.20	
		Add 5% for Municipal corporation	728.51	
		Add 2% for labour amenities & cess	278.86	
		Total	15577.57	Per Cum
12	Item No.-12			
	Providing and fixing in position TMT - FE - 500 bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintels pardis, copings, fins, arches etc. as per detailed designs, drawings and schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete.			
	PWD SOR 2022-23, Item No 26.33			
		Basic Rate	89703.00	M.T.
		Deduct 2% for labour amenities & cess	1794.06	
		Total	87908.94	
		Add 5% for Municipal corporation	4395.45	
		Add 2% for labour amenities & cess	1794.06	
		Total	94098.45	M.T.
13	Item No.-13			
	Filling in plinth and floors with approved excavated material in 15cm. to 20cm. Layers including watering and compacting etc. complete.			
	PWD SOR 2022-23, Item No 21.36			
		Basic Rate	120.00	Cu.m.
		Deduct 2% for labour amenities & cess	2.40	
		Total	117.60	
		Add 5% for Municipal corporation	5.88	
		Add 2% for labour amenities & cess	2.40	
		Total	125.88	Cu.m.
14	Item No.-14			
	Providing dry/ trap/ granite/ quartzite/ gneiss rubble stone soling 15 cm to 20 cm thick including hand packing and compacting etc. complete			
	PWD SOR 2022-23, Item No 21.38			
		Basic Rate	1382.00	Cu.m.
		Deduct 2% for labour amenities & cess	27.64	
		Deduct royalty of rubble 1.2x216.18	259.42	
		Total	1094.94	
		Add rubble Lead charges=1.2*LC	602.72	
		Add 5% for Municipal corporation	84.88	
		Add 2% for labour amenities & cess	27.64	
		Total	1810.19	Cu.m.
15	Item No.-15			
	Providing second class Burnt Brick masonry with conventional/I.S. type bricks in cement mortar 1:6 in superstructure in-cluding striking joints, raking out joints, watering and scaffolding etc complete.			
	PWD SOR 2022-23, Item No 27.05			
		Basic Rate	7994.00	Cu.m.
		Deduct 2% for labour amenities & cess	159.88	
		Deduct royalty of sand 0.32x 237.37	75.96	
		Total	7758.16	
		Add sand Lead charges=0.32*LC	495.41	
		add cement lead charges =(1.58*0.035)	0.00	
		Add bricks Lead charges=475*0.19*0.09*0.09	0.00	
		Add 5% for Municipal corporation	412.68	

Item no	Item of work		Rate	Unit
		Add 2% for labour amenities & cess	159.88	
		Total	8826.13	Cu.m.
16	Item No.-16			
	Providing second class Burnt Brick masonry with conventional/ I.S. type bricks in cement mortar 1:6 in plinth as backing in composite masonry including bailing out water manually, striking joints, raking out joints and watering etc Complete.			
	PWD SOR 2022-23, Item No 27.01			
		Basic Rate	7994.00	Cu.m.
		Deduct 2% for labour amenities & cess	159.88	
		Deduct royalty of sand 0.32x 237.37	75.96	
		Total	7758.16	
		Add sand Lead charges=0.32*LC	495.41	
		add cement lead charges =(1.58*0.035)	0.00	
		Add bricks Lead charges=475*0.19*0.09*0.09	0.00	
		Add 5% for Municipal corporation	412.68	
		Add 2% for labour amenities & cess	159.88	
		Total	8826.13	Cu.m.
17	Item No.-17			
	Providing and fixing frame with / without ventilator of size as specified with Country non teak wood for doors and windows including chamfering, rounding, rebating, ironholdfast of size 300mm x 40mm x 5mm with oil painting, etc. complete.			
	PWD SOR 2022-23, Item No 39.02			
		Basic Rate	107112.00	Cu.m.
		Deduct 2% for labour amenities & cess	2142.24	
		Total	104969.76	
		Add 5% for Municipal corporation	5248.49	
		Add 2% for labour amenities & cess	2142.24	
		Total	112360.49	Cu.m.
18	Item No.-18			
	Providing and fixing solid core flush door shutter commercial in single leaf 32mm thick without ventilator commercial type of exterior grade as per detailed drawing including wrought iron hold fast, iron oxidised fixtures and fastenings and handles on both sides and finishing with oil painting 3 coats complete.			
	PWD SOR 2022-23, Item No 39.09			
		Basic Rate	3079.00	Sq.m.
		Deduct 2% for labour amenities & cess	61.58	
		Total	3017.42	
		Add 5% for Municipal corporation	150.87	
		Add 2% for labour amenities & cess	61.58	
		Total	3229.87	Sq.m.
19	Item No.-19			
	Providing and fixing mild steel grill work for windows, ventilators etc. 20 Kilogram/ One Square Metre as per drawing including fixtures, necessary welding and painting with one coats of anticorrosive paint and two coats of oil painting complete.			
	PWD SOR 2022-23, Item No 40.01			
		Basic Rate	2097.00	Sq.m.
		Deduct 2% for labour amenities & cess	41.94	
		Total	2055.06	
		Add 5% for Municipal corporation	102.75	
		Add 2% for labour amenities & cess	41.94	
		Total	2199.75	Sq.m.
20	Item No.-20			
	Providing and fixing in position. (as per I.S.1868 / 1982) Aluminium sliding window of two tracks with rectangular pipe having overall dimension 63.50 x 38.10 x 1.02mm at weight0.547 Kilogram/One Running Metre. and window frame bottom track section 61.85 x31.75 x 1.20 mm at weight 0.695 Kilogram/One Running Metre. Top and side track section 61.85 x 31.75 x1.30 mm at weight 0.659 Kilogram/One Running Metre. The shutter should be of bearing bottom 40 x 18 x 1.25 mm at weight 0.417 Kilogram/One Running Metre. Inter locking section 40 x 18 x 1.10 mm at weight 0.469 Kilogram/One Running Metre. And handle section 40 x 18 x1.25 mm at weight 0.417 Kilogram/One Running Metre. and top section 40 x 18 x 1.25 mm at weight 0.417 Kilogram/Running metre. As per detailed drawings and as directed by Engineer in charge with all necessary Aluminium sections fixtures and fastenings such as roller bearing in nylon casting and self locking catch fitted in vertical section of shutter including 5 mm thick plain glass with all required screws and nuts etc, complete. With powder coating with box			
	PWD SOR 2022-23, Item No 39.40			
		Basic Rate	4864.00	Sq.m.
		Deduct 2% for labour amenities & cess	97.28	

Item no	Item of work		Rate	Unit
		Total	4766.72	
		Add 5% for Municipal corporation	238.34	
		Add 2% for labour amenities & cess	97.28	
		Total	5102.34	Sq.m.
21	Item No.-21			
	Providing sand faced plaster externally In cement mortar using approved screened sand, in all positions includ-ing base coat of 15mm thick in C.M. 1:4 using waterproofing compound at 1 kg.per cement bag curing the same for not less than 2 days and keeping the surface of the base coat rough to receive the sand faced treatment 6 to 8mm thick in C.M. 1:4 finishing the surface by taking out grains and curing for fourteen days scaf-folding etc.complete.			
	PWD SOR 2022-23, Item No 32.11			
		Basic Rate	639.00	Sq.m.
		Deduct 2% for labour amenities & cess	12.78	
		Deduct royalty of sand 0.025x 237.37	5.93	
		Total	620.29	
		Add sand Lead charges=0.025*LC	38.70	
		add cement lead charges =(0.17*0.035)	0.00	
		Add 5% for Municipal corporation	32.95	
		Add 2% for labour amenities & cess	12.78	
		Total	704.72	Sq.m.
22	Item No.-22			
	Providing internal cement plaster 20 mm thick in a two coat in cement mortar 1:4 without neeru finish to concrete, brick surfaces in all positions including scaffolding providing groove at joint of Burnt brick masonry and concrete members if necessary,curing etc. complete.			
	PWD SOR 2022-23, Item No 32.07			
		Basic Rate	382.00	Sq.m.
		Deduct 2% for labour amenities & cess	7.64	
		Deduct royalty of sand 0.025x 237.37	5.93	cr.sand
		Total	368.43	
		Add sand Lead charges=0.025*LC	38.70	
		add cement lead charges =(0.17*0.035)	0.00	
		Add 5% for Municipal corporation	20.36	
		Add 2% for labour amenities & cess	7.64	
		Total	435.13	Sq.m.
23	Item No.-23			
	Providing neeru finish to plastered surfaces in all positions including scaffolding and curing etc. complete.			
	PWD SOR 2022-23, Item No 32.15			
		Basic Rate	65.00	Sq.m.
		Deduct 2% for labour amenities & cess	1.30	
		Total	63.70	
		Add 5% for Municipal corporation	3.19	
		Add 2% for labour amenities & cess	1.30	
		Total	68.19	Sq.m.
24	Item No.-24			
	Providing and applying white-wash in one coat on old / new plastered or masonry surfaces and asbestos cement sheets including scaffolding and preparing the surface by brushing and brooming down etc. complete.			
	PWD SOR 2022-23, Item No 36.03			
		Basic Rate	12.00	Sq.m.
		Deduct 2% for labour amenities & cess	0.24	
		Total	11.76	
		Add 5% for Municipal corporation	0.59	
		Add 2% for labour amenities & cess	0.24	
		Total	12.59	Sq.m.
25	Item No.-25			
	Providing and applying washable oil bound distemper of approved colour & shade to old & new surfaces in two coats including scaffolding preparing the surfaces,preparing the surfaces. (excluding the primer coat) complete.			
	PWD SOR 2022-23, Item No 36.11			
		Basic Rate	48.00	Sq.m.
		Deduct 2% for labour amenities & cess	0.96	
		Total	47.04	
		Add 5% for Municipal corporation	2.35	
		Add 2% for labour amenities & cess	0.96	
		Total	50.35	Sq.m.
26	Item No.-26			

Item no	Item of work		Rate	Unit
	Providing and applying two coats of exterior acrylic emulsion paint confirming to corresponding I.S. of approved manufacture and of approved colour to the plastered surfaces including cleaning ,preparing the plaster surface, applying primer coat ,scaffolding if necessary , and watering the surface for two days etc complete.			
	PWD SOR 2022-23, Item No 35.25			
		Basic Rate	261.00	Sq.m.
		Deduct 2% for labour amenities & cess	5.22	
		Total	255.78	
		Add 5% for Municipal corporation	12.79	
		Add 2% for labour amenities & cess	5.22	
		Total	273.79	Sq.m.
27	Item No.-27			
	Providing and laying vittrified mirror / glossy finish tiles decorative type having size 590 mm to 605 mm x 590 mm to 605 mm of 8 to 10 mm thickness and confirming to IS. 15622-2006 (group Bla) of approved make, shade and pattern for flooring in required position laid on a bed of 1:4 cement mortar including neat cement float, filling joints, curing and clearing etc. complete.			
	PWD SOR 2022-23, Item No 33.40			
		Basic Rate	1177.00	Sq.m.
		Deduct 2% for labour amenities & cess	23.54	
		Deduct royalty of sand 0.02x 237.37	4.75	
		Total	1148.71	
		Add sand Lead charges=0.02*LC	30.96	
		add cement lead charges =(0.19*0.035)	0.00	
		Add 5% for Municipal corporation	58.98	
		Add 2% for labour amenities & cess	23.54	
		Total	1262.20	Sq.m.
28	Item No.-28			
	Providing and fixing black kadappa stone as shelves 25mm. thick machine polished, extending the polish upto 20 cm width on lowerside, rounding corners, laying in position jointing with bedding cement mortar 1:4 proportion curing etc etc. complete.			
	PWD SOR 2022-23, Item No 33.23			
		Basic Rate	1221.00	Sq.m.
		Deduct 2% for labour amenities & cess	24.42	
		Deduct royalty of sand 0.02x 237.37	4.75	
		Total	1191.83	
		Add sand Lead charges=0.02*LC	30.96	
		add cement lead charges =(0.04*0.035)	0.00	
		Add 5% for Municipal corporation	61.14	
		Add 2% for labour amenities & cess	24.42	
		Total	1308.36	Sq.m.
29	Item No.-29			
	Supplying & erecting inverter LED batten 10W tube light fitting with polycarbonate housing, heat sink, integrated HF electronic driver, Min. 2600 mAh Lithium ion Battery with charging time of 8-10 Hours and backup time of Min. 3 hrs. with minimum 25% of initial Watts having luminous efficacy of 100 lumen/watt, CRI>80, CCT of 6500K and THD<=20% having useful life of minimum 25000 hrs. with overheating protection with 2 years warranty.			
	PWD ELECTRICAL CSR 2022-2023, item no -2-1-21, page no 25		699.30	No
30	Item No.-30			
	Point wiring in for light/fan/bell in 20 mm metal conduit with 1.5 sq.mm (2+1E) FRLSH grade copper wire, flush type switch, earthing and required accessories as per specification No: WG-PW/SW			
	Electrical Mech SOR 2022-2023, item no -1-7-1 ,page no 11		856.00	POINT
	Add 5% for Municipal corporation		898.80	POINT
31	Item No.-31			
	Providing and applying two coats of water proof cement paint of approved manufacture and of approved colour to the plastered surfaces including scaffolding if necessary, cleaning and preparing the surface, watering for two days etc. complete.			
	PWD SOR 2022-23, Item No 35.13			
		Basic Rate	79.00	SQ.M.
		Deduct 2% for labour amenities & cess	1.58	
		Total	77.42	
		Add 5% for Municipal corporation	3.87	
		Add 2% for labour amenities & cess	1.58	
		Total	82.87	SQ.M.

Item no	Item of work		Rate	Unit
32	Item No.-32			
	Providing and laying vitrified matt finish tiles having size 590 mm to 605 mm x to 605 mm of 8 to 10 mm thickness and confirming IS. 15622-2006 (Group Bla) of approved make, shade and pattern for flooring in required position laid on a bed of 1:4 cement mortar including neat cement float, filling joints, curing and cleaning etc. complete.			
	PWD SOR 2022-23, Item No 33.42			
		Basic Rate	1600.00	Sq.m.
		Deduct 2% for labour amenities & cess	32.00	
		Deduct royalty of sand 0.02x 237.37	4.75	
		Total	1563.25	
		Add sand Lead charges=0.02*LC	30.96	
		add cement lead charges =(0.19*0.035)	0.00	
		Add 5% for Municipal corporation	79.71	
		Add 2% for labour amenities & cess	32.00	
		Total	1705.93	Sq.m.
33	Item No.-33			
	Providing and fixing Anglo Indian type white glazed earthenware water closet pan with trap with UPVC seat and lid with chromium plated brass hinges and rubber buffers including UPVC and vent pipe up to the outside face of wall with flushing cistern and necessary fittings including cutting and making good to the walls and floors testing etc. complete.(prior approval of sample and brand by Ex. Engineer is necessary before use)			
	PWD SOR 2022-23, Item No 43.23			
		Basic Rate	6498.00	No
		Deduct 2% for labour amenities & cess	129.96	
		Total	6368.04	
		Add 5% for Municipal corporation	318.40	
		Add 2% for labour amenities & cess	129.96	
		Total	6816.40	No
34	Item No.-34			
	Providing and fixing white glazed earthenware Wash Hand Basin of 45cm x 30cm size including cold water pillar tap/cold and hot water pillar tap brackets, rubber plugs and brass chain, stop tap and necessary pipe connection including P.V.C. waste pipe and trap up to the outside face of the wall. Making good the damaged surface, testing etc. complete			
	PWD SOR 2022-23, Item No 41.64			
		Basic Rate	5750.00	No
		Deduct 2% for labour amenities & cess	115.00	
		Total	5635.00	
		Add 5% for Municipal corporation	281.75	
		Add 2% for labour amenities & cess	115.00	
		Total	6031.75	No
35	Item No.-35			
	Providing and fixing white glazed earthenware lipped flat back/corner type Urinal with PVC 5 liters flushing cistern with fittings , inlet pipe with stop tap, brackets for fixing the cistern, 32 mm diameter P.V.C. flush pipe with fitting including lead soil pipe, lead trap and soil pipe connection up to the outside face of wall.			
	PWD SOR 2022-23, Item No 41.60			
		Basic Rate	4788.00	No
		Deduct 2% for labour amenities & cess	95.76	
		Total	4692.24	
		Add 5% for Municipal corporation	234.61	
		Add 2% for labour amenities & cess	95.76	
		Total	5022.61	No
36	Item No.-36			
	Providing and laying in trenches 15 mm dai. CPVC pipe including necessary excavation, fittings. Refilling trenches etc. complete Including removing existing pipe line if necessary and conveying and stacking the same in PWD chowky or as directed etc. complete.			
	PWD SOR 2022-23, Item No 42.61			
		Basic Rate	273.00	RMT
		Deduct 2% for labour amenities & cess	5.46	
		Total	267.54	
		Add 5% for Municipal corporation	13.38	
		Add 2% for labour amenities & cess	5.46	
		Total	286.38	RMT
37	Item No.-37			
	Providing and laying in trenches 25 mm dai. CPVC pipe including necessary excavation, fittings. Refilling trenches etc. complete. Including removing existing pipe line if necessary and conveying and stacking the same in PWD chowky or as directed etc. complete.			

Item no	Item of work		Rate	Unit
	PWD SOR 2022-23, Item No 42.63			
		Basic Rate	423.00	RMT
		Deduct 2% for labour amenities & cess	8.46	
		Total	414.54	
		Add 5% for Municipal corporation	20.73	
		Add 2% for labour amenities & cess	8.46	
		Total	443.73	RMT
38	Item No.-38			
	Providing and fixing 100 mm dia stabiliser pipe/ P.V.C. soil vent/waste pipe and with necessary fixtures and fitting such as bends, tees, single junctions, slotted vent, clamps etc.complete			
	PWD SOR 2022-23, Item No 42.52			
		Basic Rate	788.00	rmt
		Deduct 2% for labour amenities & cess	15.76	
		Total	772.24	
		Add 5% for Municipal corporation	38.61	
		Add 2% for labour amenities & cess	15.76	
		Total	826.61	rmt
39	Item No.-39			
	Providing and laying vitrified matt finish tiles having size 590 mm to 605 mm x to 605 mm of 8 to 10 mm thickness and confirming IS. 15622-2006 (Group Bla) of approved make, shade and pattern for dado and skirting in required position fixed in 1:4 cement mortar including neat cement float, filling joints, curing and cleaning etc. complete.			
	PWD SOR 2022-23, Item No 33.43			
		Basic Rate	1675.00	Sq.m.
		Deduct 2% for labour amenities & cess	33.50	
		Deduct royalty of sand 0.02x 237.37	4.75	
		Total	1636.75	
		Add sand Lead charges=0.02*LC	30.96	
		add cement lead charges =(0.185*0.035)	0.00	
		Add 5% for Municipal corporation	83.39	
		Add 2% for labour amenities & cess	33.50	
		Total	1784.60	Sq.m.
40	Item No.-40			
	Providing sills of polished Kadappa stone 25mm to 30mm thick, on a bed of 1:4 cement mortar including cement float, filling joints with slurry, curing polishing and cleaning etc.complete.			
	PWD SOR 2022-23, Item No 33.20			
		Basic Rate	1084.00	Sq.m.
		Deduct 2% for labour amenities & cess	21.68	
		Deduct royalty of sand 0.005x 237.37	1.19	
		Total	1061.13	
		Add sand Lead charges=0.005*LC	7.74	
		add cement lead charges =(0.01*0.035)	0.00	
		Add 5% for Municipal corporation	53.44	
		Add 2% for labour amenities & cess	21.68	
		Total	1144.00	Sq.m.
41	Item No.-41			
	Providing and fixing black kadappa stone as shelves 25mm. thick machine polished, extending the polish upto 20 cm width on lowerside, rounding corners, laying in position jointing with bedding cement mortar 1:4 proportion curing etc etc. complete.			
	PWD SOR 2022-23, Item No 33.23			
		Basic Rate	1221.00	Sq.m.
		Deduct 2% for labour amenities & cess	24.42	
		Deduct royalty of sand 0.02x 237.37	4.75	
		Total	1191.83	
		Add sand Lead charges=0.02*LC	30.96	
		add cement lead charges =(0.04*0.035)	0.00	
		Add 5% for Municipal corporation	61.14	
		Add 2% for labour amenities & cess	24.42	
		Total	1308.36	Sq.m.
42	Item No.-42			
	Providing and fixing frame with / without ventilator of size as specified with Country non teak wood for doors and windows including chamfering, rounding, rebating, ironholdfast of size 300mm x 40mm x 5mm with oil painting, etc. complete.			
	PWD SOR 2022-23, Item No 39.02			
		Basic Rate	107112.00	Cu.m.
		Deduct 2% for labour amenities & cess	2142.24	

Item no	Item of work		Rate	Unit
		Total	104969.76	
		Add 5% for Municipal corporation	5248.49	
		Add 2% for labour amenities & cess	2142.24	
		Total	112360.49	Cu.m.
43	Item No.-43			
	Providing and Fixing 30 MM thick BOTH SIDE PRELAMINATED SOLID PANEL PVC DOOR SHUTTER consisting of frame made out of M.S tubes of 19 guage thickness and, size 19 x 19 mm for styles and 15 x15 mm for the top and bottom rails, M.S frames shall have a coat of metal primer of approved make and manufacture. M.S frame shall be covered with heat moulded PVC 'C' channel made from 5 mm (+/-0.25) thick prelaminated sheet of density 600 Kilogram/cbm, of size 30mm thickness 70mm width out of which 50mm shall be flat and 20mm shall be tapered in 45° angle on either side forming stiles; and 5 mm thick, 95 mm wide PVC sheet out of which 75 mm shall be flat and 20 mm shall be tapered in 45° on the inner side to form top and bottom rail and 115 mm wide PVC sheet out of which 75 mm shall be flat and 20 mm shall be tapered on both sides to form lock rail. Top, bottom and lock rail shall be provided either side of the panel. An additional 5 mm (+/-0.25) thick PVC strip of 20 mm width is to be stuck on the bottom side of the 'c' channel prelaminated paneling of 5 mm (+/-0.25) thick PVC sheet to be fitted inside the M.S. frame welded/ sealed to the styles and rails with 5 mm (+/-0.25) x 30 mm PVC sheet beading on either side and joined together with solvent cement adhesive etc, 10 mm thickness (5 mm (+/-0.25) x 2 nos) 20 mm wide cross PVC sheet as gap insert for the rail and bottom rail. Door to be fixed to frames with 3 nos M.S. powder coated but hinges of size 100 mm x 25MM x 2mm using 32 mm long steel screws drilled suitable to pass through both the walls of the M.S tube. Other hardware			
	PWD SOR 2022-23, Item No 39.47			
		Basic Rate	6548.00	sq.m.
		Deduct 2% for labour amenities & cess	130.96	
		Total	6417.04	
		Add 5% for Municipal corporation	320.85	
		Add 2% for labour amenities & cess	130.96	
		Total	6868.85	sq.m.
44	Item No.-44			
	Providing and fixing in position powder coated aluminium louvered windows / ventilator of various sizes with powder coating as per detailed drawing and specifications including aluminium frames 80 x 38 mm x 1.22 mm box type, 5 mm thick sheet glass louvers, of approved quality etc. complete.			
	PWD SOR 2022-23, Item No 39.68			
		Basic Rate	3467.00	sq.m.
		Deduct 2% for labour amenities & cess	69.34	
		Total	3397.66	
		Add 5% for Municipal corporation	169.88	
		Add 2% for labour amenities & cess	69.34	
		Total	3636.88	sq.m.
45	Item No.-45			
	Providing and fixing push cock (Self closing tap) symet type of 15 mm dia. including necessary socket, testing etc. complete.			
	PWD SOR 2022-23, Item No 41.54			
		Basic Rate	454.00	No
		Deduct 2% for labour amenities & cess	9.08	
		Total	444.92	
		Add 5% for Municipal corporation	22.25	
		Add 2% for labour amenities & cess	9.08	
		Total	476.25	No
46	Item No.-46			
	Providing and fixing 10 cm PVC nahani trap with grating etc. complete.			
	PWD SOR 2022-23, Item No 42.67			
		Basic Rate	539.00	No
		Deduct 2% for labour amenities & cess	10.78	
		Total	528.22	
		Add 5% for Municipal corporation	26.41	
		Add 2% for labour amenities & cess	10.78	
		Total	565.41	No
47	Item No.-47			
	Providing and fixing 15 mm diameter PVC Aqua kraft type of approved make super bib tap with flange including all accessories etc complete			
	PWD SOR 2022-23, Item No 43.35			
		Basic Rate	442.00	No
		Deduct 2% for labour amenities & cess	8.84	
		Total	433.16	
		Add 5% for Municipal corporation	21.66	

Item no	Item of work		Rate	Unit
		Add 2% for labour amenities & cess	8.84	
		Total	463.66	No
48	Item No.-48			
	Providing and fixing 15 mm. dia Ball cock medium type with PVC float including sockets and necessary fittings and tested as per municipal requirement etc. complete.			
	PWD SOR 2022-23, Item No 42.37			
		Basic Rate	487.00	No
		Deduct 2% for labour amenities & cess	9.74	
		Total	477.26	
		Add 5% for Municipal corporation	23.86	
		Add 2% for labour amenities & cess	9.74	
		Total	510.86	No
49	Item No.-49			
	Providing and fixing H.D.P container one piece moulded water tank made out of high density polythylene and built corrugated inclusive of delivery up to destination hoisting and fixing of accessories such as inlet,outlet overflow pipe inclusive of all tanks capacity between 200 to 1000 liters			
	PWD SOR 2022-23, Item No 42.53			
		Basic Rate	14.00	one litre
		Deduct 2% for labour amenities & cess	0.28	
		Total	13.72	
		Add 5% for Municipal corporation	0.69	
		Add 2% for labour amenities & cess	0.28	
		Total	14.69	one litre
50	Item No.-50			
	Providing and fixing screw down for 25 mm dia. wheeled stop tap of brass including necessary sockets/union nut complete.			
	PWD SOR 2022-23, Item No 41.45			
		Basic Rate	878.00	No
		Deduct 2% for labour amenities & cess	17.56	
		Total	860.44	
		Add 5% for Municipal corporation	43.02	
		Add 2% for labour amenities & cess	17.56	
		Total	921.02	No
51	Item No.-51			
	Providing and fixing hume pipe septic tank 900mm diameter with vent pipe and cap including necessary (including excavation and laying)			
	PWD SOR 2022-23, Item No 42.18			
		Basic Rate	16726.00	No
		Deduct 2% for labour amenities & cess	334.52	
		Total	16391.48	
		Add 5% for Municipal corporation	819.57	
		Add 2% for labour amenities & cess	334.52	
		Total	17545.57	No
52	Item No.-52			
	Providing and fixing in position after hoisting, precast 1:2 cement mortar reinforcement Jali 50mm thick of approved design cement mortar 1:3 and curing complete (including 6mm diameter mild steel bar reinforcement)			
	PWD SOR 2022-23, Item No 26.46			
		Basic Rate	937.00	SQ.M.
		Deduct 2% for labour amenities & cess	18.74	
		Total	918.26	
		Add 5% for Municipal corporation	45.91	
		Add 2% for labour amenities & cess	18.74	
		Total	982.91	SQ.M.
53	Item No.-53			
	Providing and laying in situ cement concrete M30 with tremix treatment for 200 mm thickness for flooring with groove cutting of 4mm wide and 20mm deep with necessary refilling with bitumen etc. complete.			
	PWD SOR 2022-23, Item No 33.31			
		Basic Rate	1464.00	Sq.m.
		Deduct 2% for labour amenities & cess	29.28	
		Deduct royalty of sand 0.425x 237.37	100.88	
		Total	1333.84	
		Add sand Lead charges=0.425*LC	657.97	
		add cement lead charges =(8*0.035)	0.00	

Item no	Item of work		Rate	Unit
		Add 5% for Municipal corporation	99.59	
		Add 2% for labour amenities & cess	29.28	
		Total	2120.68	Sq.m.
54	Item No.-54			
	Providing and laying cement concrete flooring 40mm thick with M20 cement concrete laid to proper level and slope in alternate bays, including compaction, filling joints, marking lines to give appearance of tiles of 30cm x 30cm or other size laid diagonally/square etc. finishing smooth (with extra cement) in any colour as directed and Curing etc. complete. With Crushed sand VSI Grade			
	PWD SOR 2022-23, Item No 33.11			
		Basic Rate	537.00	Sq.m.
		Deduct 2% for labour amenities & cess	10.74	
		Deduct royalty of sand 0.425x 237.37	100.88	
		Total	425.38	
		Add sand Lead charges=0.425*LC	657.97	
		add cement lead charges =(7*0.035)	0.00	
		Add 5% for Municipal corporation	54.17	
		Add 2% for labour amenities & cess	10.74	
		Total	1148.26	Sq.m.
55	Item No.-55			
	Providing uncoursed rubble masonry of trap / granite / quartzite / gneiss stones in cement mortar 1:6 in foundation and plinth of inner walls / in plinth of external walls including bailing out water manually ,striking joints on un exposed faces and watering etc.complete.			
	PWD SOR 2022-23, Item No 28.01			
		Basic Rate	5025.00	CU.M.
		Deduct 2% for labour amenities & cess	100.50	
		Deduct royalty of sand 0.35x 237.37	83.08	
		Total	4841.42	
		Add sand Lead charges=0.35*LC	541.86	
		add cement lead charges =(1.7*0.035)	0.00	
		ADD soling =1.16*LC	582.63	
		Add 5% for Municipal corporation	298.30	
		Add 2% for labour amenities & cess	100.50	
		Total	6364.71	CU.M.
56	Item No.-56			
	Providing flush grooved pointing with cement mortar 1:3 for stone masonry work including scaffolding and curing etc. complete.			
	PWD SOR 2022-23, Item No 32.17			
		Basic Rate	182.00	Sq.m.
		Deduct 2% for labour amenities & cess	3.64	
		Total	178.36	
		Add 5% for Municipal corporation	8.92	
		Add 2% for labour amenities & cess	3.64	
		Total	190.92	Sq.m.
57	Item No.-57			
	Providing and applying two coats of water proof cement paint of approved manufacture and of approved colour to the plastered surfaces including scaffolding if necessary, cleaning and preparing the surface, watering for two days etc. complete.			
	PWD SOR 2022-23, Item No 35.13			
		Basic Rate	79.00	Sq.m.
		Deduct 2% for labour amenities & cess	1.58	
		Total	77.42	
		Add 5% for Municipal corporation	3.87	
		Add 2% for labour amenities & cess	1.58	
		Total	82.87	Sq.m.
58	Item No.-58			
	Structural steel work -Providing structural steel work in single stanchions com-posed of R.S.J. Channel etc. with caps, bases, mild steel plated, angle brackets, cleats, gusset plates, anchor bolts etc. as per detailed designs and drawings or as directed including cutting, fabrication, hoisting, erecting fixing in position, making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it two. coats of oil painting complete etc. Spec. No.: Bd.C.6 Page No. 277(FOR STEEL COLUMNS)			
	PWD SOR 2022-23, Item No 23.03			
		Basic Rate	98009.00	MT
		Deduct 2% for labour amenities & cess	1960.18	
		Total	96048.82	
		Add lead charges for steel	0.00	

Item no	Item of work		Rate	Unit
		Add 5% for Municipal corporation	4802.44	
		Add 2% for labour amenities & cess	1960.18	
		Total	102811.44	MT
59	Item No.-59			
	Providing and fabricating structural steel work in rolled sections like joists, channels, angles, tees etc. as per detailed designs and drawing or as directed by Engineer-in-charge including cutting, fabrication, hoisting & erecting fixing in position with connecting plates, braces etc. and one coat of anticorrosive paint and over it two coat of oil paintings of approved quality and shade complete. Spec. No.: Bd.C.2 Page No. 275 (FOR ROOFING MEMBER)			
	PWD SOR 2022-23, Item No 23.01			
		Basic Rate	101844.00	MT
		Deduct 2% for labour amenities & cess	2036.88	
		Total	99807.12	
		Add lead charges for steel	0.00	
		Add 5% for Municipal corporation	4990.36	
		Add 2% for labour amenities & cess	2036.88	
		Total	106834.36	MT
60	Item No.-60			
	Trusses -Providing structural steel work in trusses, other similar trussed purlins and members with all bracing, gusset plates etc. as per detailed designs and drawings or as directed including cutting, fabricating, hoisting, erecting fixing in position, Making riveted/ bolted/ welded connection and one coat of anticorrosive paint and over it 2 coats of oil painting approved quality and shade etc. complete.			
	PWD SOR 2022-23, Item No 23.04			
		Basic Rate	119459.00	MT
		Deduct 2% for labour amenities & cess	2389.18	
		Total	117069.82	
		Add lead charges for steel	0.00	
		Add 5% for Municipal corporation	5853.49	
		Add 2% for labour amenities & cess	2389.18	
		Total	125312.49	MT
61	Item No.-61			
	Providing and fixing colour coated Zincalume (R) AZ150 (min 150 gms/sq.mt. total on each side) profiled sheets for roofing. The feed material is manufactured out of nominal 0.45 mm Base Metal Thickness (BMT) (0.5 mm TCT), Hi-strength steel with min.550 MPa yield strength, metallic hot dip coated with Aluminium-Zinc alloy (55% aluminium 43.4% zinc 1.6% silicon) with COLORBOND (R) steel quality super durable polyester paint coat (with inorganic pigment). The paint shall have a total coating thickness of nominal 35 um, comprising of nominal 25 um exterior coat on top surface and nominal 10 um reverse coat on back surface. Profile sheet shall have nom. 950-1050 mm effective cover width and nominal 25-30 mm deep ribs with subtle square fluting in the five pan at nominal 180-250 mm center- to-center. The end rib shall be designed for anti-capillary groove. and return leg. The feed material should have coil manufacturers product details marked a regular interval. Including fasteners with min. fastened with min. 25 um Zinc-Tin alloy coated, Hex head, self-drilling screw etc. complete. (weight of profile 4.52 Kilogram/ One Square Metre)			
	PWD SOR 2022-23, Item No 38.34			
		Basic Rate	1173.00	Sq.m.
		Deduct 2% for labour amenities & cess	23.46	
		Total	1149.54	
		Add 5% for Municipal corporation	57.48	
		Add 2% for labour amenities & cess	23.46	
		Total	1230.48	Sq.m.
62	Item No.-62			
	Providing and fixing plain zinc sheeting of 0.80 mm thick (22 B.W.G.) over the ridge hip or valley to galvanized iron sheet roofing including all fastening and bolt galvanised iron screws and bolts, lead and bitumen washers etc. complete.(Weight of 6.8 Kilogram/sq.m.).			
	PWD SOR 2022-23, Item No 38.05			
		Basic Rate	1139.00	Sq.m.
		Deduct 2% for labour amenities & cess	22.78	
		Total	1116.22	
		Add 5% for Municipal corporation	55.81	
		Add 2% for labour amenities & cess	22.78	
		Total	1194.81	Sq.m.
63	Item No.-63			
	Providing and fixing welded mesh of 11 gauge wires having mesh size 50 mm x 25 mm including M.S Angle frame of size 35 mm x 35 mm x5 mm in position with oil painting 3 coats etc. complete			
	PWD SOR 2022-23, Item No 39.79			
		Basic Rate	2645.00	Sq.m.
		Deduct 2% for labour amenities & cess	52.90	

Item no	Item of work		Rate	Unit
		Total	2592.10	
		Add 5% for Municipal corporation	129.61	
		Add 2% for labour amenities & cess	52.90	
		Total	2774.61	Sq.m.
64	Item No.- 64			
	Providing and fixing rolling shutter fabricated from steel laths of minimum thickness 0.9 mm with lock plate of 3.15 mm thickness reinforced with 35 x 35 x 5 mm angle section fitted with sliding bolts and handles for both sides, deep M.S. channel section of depth and thickness not less than 65 mm and 3.15 mm respectively with hold fast arrangements, M.S. Bracket plate 300 x 300 x 3.15 mm minimum size and shape with square bar, suspension shaft of minimum 32 mm diameter, hood cover of M.S. sheet not less than 0.9 mm thickness and of any size at top and safety devices including mechanical gear operation arrangement consisting of worm gear wheels and worms of high grade cast iron or mild steel and one coat of red lead primer etc. complete. (I.S. 62481979) (With mechanical gear)			
	PWD SOR 2022-23, Item No 39.25			
		Basic Rate	5308.00	Sq.m.
		Deduct 2% for labour amenities & cess	106.16	
		Total	5201.84	
		Add 5% for Municipal corporation	260.09	
		Add 2% for labour amenities & cess	106.16	
		Total	5568.09	Sq.m.
65	Item No.- 65			
	Providing and fixing Road junction / Information sign board of size 0.90 m x 0.60 m. prepared on 16 gauge M.S. sheet with angle iron frame of size 35 x 35 x 5 mm including painting with one coat of zinc cromate stoving primer and two coats each of green / white background and backside gray stove enamelled, bonded with red retroreflective sheet Engineering grade, border / letters / numeral / arrows, coated with non peelable crystal clear protective coat retaining 100% reflection including two angle iron post of size 50 x 50 x 5 mm of 3.65 m. long inflated at bottom drilled on top and painted in white and black bands of 30cm. with 4 Nos. high strength G.I. bolts and nuts of size 10 mm dia. and 20mm long sheet and angle iron post in one piece without joints including all taxes, conveying, fixing round with cement concrete 1:4:8 block of 60cmx 60cmx 75cm size as directed by Engineer-in- charge etc. complete. Mild Steel Board with Engineering Grade.			
	PWD SOR 2022-23, item no 6.47			
		Basic Rate	7513.00	No
		Deduct 2% for labour amenities & cess	150.26	
		Total	7362.74	
		Add 5% for Municipal corporation	368.14	
		Add 2% for labour amenities & cess	150.26	
		Total	7881.14	No
66	Item No.- 66			
	Providing earth work in embankment with approved materials obtained from other sources upto lead of 50m. including all lifts, laying in layers of 20cm. to 30cm. thickness breaking clods, dressing to the required lines, curves, grades & section, watering and compaction with vibratory roller with V-Sat attachment to achieve not less than 97 % o standard proctor density etc. complete (Material obtained from Other sources)			
	PWD SOR 2022-23, Item No 2.28			
	SUB GRADE PREPARATION 100 MM	Basic Rate	757.00	CU.M.
		Deduct 2% for labour amenities & cess	15.14	
		Deduct royalty of rubble 1.0x216.18	216.18	
		Total	525.68	
		add earth lead charges	356.53	
		Add 5% for Municipal corporation	44.11	
		Add 2% for labour amenities & cess	15.14	
		Total	941.46	CU.M.
67	Item No.- 67			
	For embankment from available excavated material ,Spreading hard murum/ soft murrum/ gravel or kankar for side width complete			
	PWD SOR 2022-23, Item No 2.30			
	Embankment earthwork	Basic Rate	79.00	CU.M.
		Deduct 2% for labour amenities & cess	1.58	
		Total	77.42	
		Add 5% for Municipal corporation	3.87	
		Add 2% for labour amenities & cess	1.58	
		Total	82.87	CU.M.
68	Item No.- 68			
	Providing and fixing mild steel grill gate with angle iron frame 65mm x 65mm x 10mm with iron bars at 150mm C/C and diagonal flats as per the detailed drawing including hinges, pivot block locking arrangement, welding riveting and oil painting of three coats of approved shade Weight of gate 35 Kilogram/Smt.			

Item no	Item of work		Rate	Unit
	PWD SOR 2022-23 Item No 44.10			
		Basic Rate	3190.00	SQ.M.
		Deduct 2% for labour amenities & cess	63.80	
		Total	3126.20	
		Add 5% for Municipal corporation	156.31	
		Add 2% for labour amenities & cess	63.80	
		Total	3346.31	SQ.M.
69	Item No.- 69			
	providing and laying Cast in situ/Ready Mix cement concrete in M-20 of trap/ granite/ quartzite/ gneiss metal for R.C.C. pardi of required thickness including steel centering, formwork, cover blocks, laying/pumping, compacting , curing , finishing and rougheningthem if special finish is to be provided and curing complete.(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)			
	PWD SOR 2022-23 Item No 26.17			
		Basic Rate	15567.00	Per Cum
		Deduct 2% for labour amenities & cess	311.34	
		Deduct royalty of sand 0.425x237.37	100.88	
		total	15154.78	
		Add Cr. Metal lead charges=0.85*LC	348.97	
		Add sand lead charges=0.425*LC	657.97	
		add cement lead charges=0.25*LC	0.00	
		total	16161.72	
		Add 5% for Municipal corporation	808.09	
		Add 2% for labour amenities & cess	311.34	
		Total	17281.14	Per Cum
70.0	Item No.- 70			
	Providing and fixing 75 mm dia stabiliser pipe/ P.V.C. soil vent/waste pipe and with necessary fixtures and fitting such as bends, tees, single junctions, slotted vent, clamps etc.complete			
	SOR PWD 2022-23, pg no 291, 42.51/52			
	75 mm			
		Basic Rate	607.00	rmt
		Deduct 2% for labour amenities & cess	12.14	
		Total	594.86	
		Add 5% for Municipal corporation	23.79	
		Add 2% for labour amenities & cess	12.14	
		Total	630.79	rmt
71	Item No.- 71			
	Providing internal cement plaster 12mm thick in single coat in cement mortar 1:4 without neeru finish to concrete or brick surfaces, in all positions including scaffolding and curing etc. complete			
	PWD SOR 2022-23, item no 32.07			
		Basic Rate	278.00	Sq.m.
		Deduct 2% for labour amenities & cess	5.56	
		Deduct royalty of sand 0.015x 237.37	3.56	
		Total	268.88	
		Add sand Lead charges=0.015*LC	23.22	
		add cement lead charges =(0.11*0.035)	0.00	
		Add 5% for Municipal corporation	14.61	
		Add 2% for labour amenities & cess	5.56	
		Total	312.27	Sq.m.
72	Item No.- 72			
	Providing fine cement finish 1.5 mm thick over green plaster surface including scaffolding curing etc. complete			
	PWD SOR 2022-23, item no 32.21			
		Basic Rate	72.00	SQ.M.
		Deduct 2% for labour amenities & cess	1.44	
		Total	70.56	
		Add 5% for Municipal corporation	3.53	
		Add 2% for labour amenities & cess	1.44	
		Total	75.53	SQ.M.
73	Item No.- 73			
	Providing and fixing 450mm x 550mm size superior type Belgium mirror with 16mm dia. nickel plated towel rod etc. complete			
	PWD SOR 2022-23, item no 42.20			
		Basic Rate	861.00	no
		Deduct 2% for labour amenities & cess	17.22	

Item no	Item of work		Rate	Unit
		Total	843.78	
		Add 5% for Municipal corporation	42.19	
		Add 2% for labour amenities & cess	17.22	
		Total	903.19	no
74	Item No.- 74			
	Providing and fixing in position UPVC ultra violet stabilized 110 mm outer diameter cowl dome conforming to I.S.-4985 including making joints with solvent cement etc. complete			
	PWD SOR 2022-23, item no 43.25			
		Basic Rate	169.00	no
		Deduct 2% for labour amenities & cess	3.38	
		Total	165.62	
		Add 5% for Municipal corporation	8.28	
		Add 2% for labour amenities & cess	3.38	
		Total	177.28	no
75	Item No.- 75			
	Providing and fixing 45 cm wide mild steel ladder of 40mm x 6 mm mild steel flat stringers and steps of 18 mm dia. mild steel bar for water tank including fixing it in (1:2:4) M-15 cement concrete block 60cm x 30cm x 30cm and painting the ladder complete. (AntiCorossive Paint)			
	PWD SOR 2022-23, item no 41.56	Basic Rate	1128.00	rmt
		Deduct 2% for labour amenities & cess	22.56	
		Total	1105.44	
		Add 5% for Municipal corporation	55.27	
		Add 2% for labour amenities & cess	22.56	
		Total	1183.27	rmt
76	Item No.- 76			
	Providing and fixing machine cut mirror polished 18 mm to 20 mm thick telephone black granite / Amba White / Cat bary brown / RBI red / Ocean Brown granite stone partition with full moulding the edges etc. complete . Both side polish.			
	PWD SOR 2022-23, Item No 33.36			
		Basic Rate	4019.00	SQ.M.
		Deduct 2% for labour amenities & cess	80.38	
		Total	3938.62	
		Add 5% for Municipal corporation	196.93	
		Add 2% for labour amenities & cess	80.38	
		Total	4215.93	SQ.M.
77	Item No.- 77			
	Providing and laying in situ cement concrete M -30 with tremix treatment for 200 mm harge thickness for Concrete Road is including laying plastic sheet for 125 micron thickness with groove cutting of 4 mm wide and 20 mm deep with necessary refilling with bitumen (excluding reinforcement) with coarse and fine aggregate (natural sand/ VSI grade finely washed crushed sand) etc. complete with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete.			
	PWD SOR 2022-23 Item No 5.22			
		Basic Rate	8447.00	Per Cum
		Deduct 2% for labour amenities & cess	168.94	
		Deduct royalty of sand 0.425x237.37	100.88	
		total	8177.18	
		Add Cr. Metal lead charges=0.85*LC	348.97	
		Add sand lead charges=0.425*LC	657.97	
		add cement lead charges=(8*0.035)*LC	0.00	
		total	9184.12	
		Add 5% for Municipal corporation	459.21	
		Add 2% for labour amenities & cess	168.94	
		Total	9812.26	Per Cum
78	Item No.- 78			
	Filling in plinth and floors with contractors material/brought from outside and approved by Engineer incharge in layers of 15 cm to 20 cm including watering and compaction etc.complete.			
	PWD SOR 2022-23, Item No. 21.37			
		Basic Rate	795.00	Cu.m.
		Deduct 2% for labour amenities & cess	15.90	
		Total	779.10	
		add MURUM lead charges =(1*LC)	356.53	
		Add 5% for Municipal corporation	56.78	
		Add 2% for labour amenities & cess	15.90	
		Total	1208.31	Cu.m.

Item no	Item of work		Rate	Unit
	FOR ROAD RA			
79	Item No.- 79			
	Excavation for road way in earth, soil of all sorts, sand,gravel or soft murum including dressing section to the required grade, camber and side slopes and conveying the excavated materials with all lift upto a lead of 50m. and spreading for embankment or stacking as directed.			
	SOR PWD 2022-23, pg no 26, 2.11	Basic Rate	119.00	Per Cum
	Add 5% For Municipal Corporation	Deduct 2% for labour amenities & cess	2.38	
		Total	116.62	
		Add 5% for Municipal corporation	5.83	
		Add 2% for labour amenities & cess	2.38	
		Total	124.83	Per Cum
80	Item No.- 80			
	Excavation for roadway in hard murum and boulder including dressing section to the required grade, camber and side slopes and conveying the excavated materials with all lifts upto a lead of 50m. and spreading for embankment or stacking as directed.			
	SOR PWD 2022-23, pg no 26, 2.13	Basic Rate	139.00	Per Cum
	Add 5% For Municipal Corporation	Deduct 2% for labour amenities & cess	2.78	
		Total	136.22	
		Add 5% for Municipal corporation	6.81	
		Add 2% for labour amenities & cess	2.78	
		Total	145.81	Per Cum
81	Item No.- 81			
	Spreading hard murum/ soft murrum/ gravel or kankar for side width complete			
	PWD SOR 2022-23, Item No. 2.3, Pg-28			
		Basic Rate	79.00	Cu.m.
		Deduct 2% for labour amenities & cess	1.58	
		Total	77.42	
		add MURUM lead charges =(1*LC)	0.00	
		Add 5% for Municipal corporation	3.87	
		Add 2% for labour amenities & cess	1.58	
		Total	82.87	Cu.m.
82	Item No.- 82			
	Construction of granular sub-base by providing close graded material, spreading in uniform layers with motor grader/ Paver on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401 -- By Mix in Place Method and Grading - III Material			
	SOR PWD 2022-23, 3.06			
		Basic Rate	1804.00	Cu.m.
		Deduct 2% for labour amenities & cess	36.08	
		Total	1767.92	
		add MURUM lead charges =(1*LC)	0.00	
		Add 5% for Municipal corporation	88.40	
		Add 2% for labour amenities & cess	36.08	
		Total	1892.40	Cu.m.
83	Item No.- 83			
	RIGID PAVEMENT -Construction of dry lean cement concrete Sub- base over a prepared sub-grade with coarse and fine aggregate (natural sand/ VSI grade finely washed crushed sand) conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm, , cement content not to be less than 150 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant/ Weigh batch mixer, transported to site with all leads and lifts, laid with a paver with electronic sensor /by suitable means as approved by Engineer-in- charge , compacting with vibratory roller, finishing, curing and including preparation of sub-grade surface if required etc. complete.			
	SOR PWD 2022-23, 5.13, Pg-50			
		Basic Rate	3659.00	Cu.m.
		Deduct 2% for labour amenities & cess	73.18	
		Total	3585.82	
		add MURUM lead charges =(1*LC)	0.00	
		Add 5% for Municipal corporation	179.29	
		Add 2% for labour amenities & cess	73.18	
		Total	3838.29	Cu.m.

Item no	Item of work		Rate	Unit
84	Item No.- 84			
	Providing and laying in-situ M40 Grade unreinforced plain cement concrete pavement over a prepared subbase with 43 grade cement ,coarse and fine aggregate (natural sand VSI grade finelywashedcrushed sand) conforming to IS383, using fineandcoarse aggregates combinedgradation as per Table 600-3ofMORTHSpecification 2013, mixed in abatching and mixing plant/ non tilting mixer and Weigh batcher as per approved mix design, admixtures, transporting to site, spreading, laying with approved make paver,compacted and finished in a continuous operation, finishing to lines and grades as directed by Engineer-in-charge and curing by curing compound/ by providing cement vata in cement Mortar1:8 @ 0.6mX0.6m centre to centre,admeasuring 80mm at bottom and40mm at top with depth of 75 mm and maintaining the same throughout curing period by any other method approved by Engineer-in-charge.			
	SOR PWD 2022-23, 5.04, Pg-45	Basic Rate	7736.00	Per Cum
		Deduct 2% for labour amenities & cess	154.72	
		Deduct royalty of sand 0.425x237.37	100.88	
		total	7480.40	
		Add Cr. Metal lead charges=0.85*LC	348.97	
		Add sand lead charges=0.425*LC	657.97	
		add cement lead charges=(8*0.035)*LC	0.00	
		total	8487.34	
		Add 5% for Municipal corporation	424.37	
		Add 2% for labour amenities & cess	154.72	
		Total	9066.42	Per Cum
85	Item No.- 85			
	Cutting transverse contraction joints 3 to 4 mm wide and depth 60mm. in concret eslab using concrete cutting machine with diamond studded saw within 48 hours of casting of bay/slab etc.complete including subsequent widening of the groove 8to10 mm.wide at top having depth of 15 mm. as directed by Engineer incharge.			
	PWD SOR 2022-23, 5.17, Pg-51	Basic Rate	76.00	Rmt
		Deduct 2% for labour amenities & cess	1.52	
		Deduct royalty of sand 0.425x237.37	0.00	
		total	74.48	
		Add Cr. Metal lead charges=0.85*LC	0.00	
		Add sand lead charges=0.425*LC	0.00	
		add cement lead charges=(8*0.035)*LC	0.00	
		total	74.48	
		Add 5% for Municipal corporation	3.72	
		Add 2% for labour amenities & cess	1.52	
		Total	79.72	Rmt
86	Item No.- 86			
	Providing to contraction joints polysuphide sealent (Pouring grade)confirming to BS: 5212-1989 into sawed groove widened at top for sealent reservoir of specified size and shape as per detailed drawing including fixing Polyethy lene foam back errodoof required diameter (appraox. 25% larger than the initial 3m One Metric Tonne o4 mm. joint) over laid with bond breaking tape as per detailed drawing. Item includes cleaning the joints with water jet /air compressor and allowing joint to be come thoroughly dry before sealent is applied and applying primer. (A) Contraction and longitudinal joints (15 mm. deep x 8 mm.wide)			
	PWD SOR 2022-23, 5.18, Pg-51	Basic Rate	247.00	Rmt
		Deduct 2% for labour amenities & cess	4.94	
		Deduct royalty of sand 0.425x237.37	0.00	
		total	242.06	
		Add Cr. Metal lead charges=0.85*LC	0.00	
		Add sand lead charges=0.425*LC	0.00	
		add cement lead charges=(8*0.035)*LC	0.00	
		total	242.06	
		Add 5% for Municipal corporation	12.10	
		Add 2% for labour amenities & cess	4.94	
		Total	259.10	Rmt
87	Item No.- 87			
	Road Marking with Hot Applied Thermo plastic Compound with Reflectorizing Glass Beads on Bituminous Surface-Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorizing glassbeads @ 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes complete.			
	PWD SOR 2022-23, 6.12 a, Pg-56	Basic Rate	483.00	Rmt
		Deduct 2% for labour amenities & cess	9.66	
		Deduct royalty of sand 0.425x237.37	0.00	
		total	473.34	
		Add Cr. Metal lead charges=0.85*LC	0.00	
		Add sand lead charges=0.425*LC	0.00	
		add cement lead charges=(8*0.035)*LC	0.00	
		total	473.34	

Item no	Item of work		Rate	Unit
		Add 5% for Municipal corporation	23.67	
		Add 2% for labour amenities & cess	9.66	
		Total	506.67	Rmt
88	Item No.- 88			
	Providing and fixing board displaying information,such as 'Name of work,Tender cost, Name of Contractor,Work completion and liability period etc',having rectangular shape of 1.20m x 0.90m size made out18 gauge(1.25mm) thick mild steel sheet painted with one coat of Zinc chromatestoving primer and two coats of enamel paint on front side and greystove enamel on back side and border/messages/symbols etc.with approved colour shade paint complete,on M.S.angle of size35x35x3m mframe with properly cross braced M.S.angles of size35mm x 35mm x 3mm duly painted including Two M.S. angle iron postsof size65mm x 65mm x 6mm,3.65m long painted with alternate blackand white bands of 25cmwidth including all fixtures etc.and fixing the boards in1:4:8 concrete block of size 60 cmx 60 cmx 75 cm including, excavation, refilling, transportation, and labour etc complete. Spec. No. As directed by Engineer in Charge			
		Basic Rate	10010.00	No
		Deduct 2% for labour amenities & cess	200.20	
		Total	9809.80	
		Add 5% for Municipal corporation	490.49	
		Add 2% for labour amenities & cess	200.20	
		Total	10500.49	No

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

LATUR MUNICIPAL CORPORATION
DISTRICT - LATUR, DIVISION - AURANGABAD
RATE ANALYSIS for Lead Distance

Sr. No.	Description	Lead Distance	Lead Charges	Intial Lead Distance	Intial Lead Charges	Final Lead Distance	Final Lead Charges per Cum	Rate	Unit		
		Km	In Rs.	Km	In Rs.	Km	In Rs.	In Rs.			
1	Sand GANGAKHED	100	1548.17	0	0	100	1548.17	1548.17	Per Cum	PWD SOR 2022-23 STATEMENT C1	
2	Metal (below 40mm)	15	410.55	0	0	15	410.55	410.55	Per Cum		
3	Cement	0	0.00	0	0	0	0.00	0.00	Per Cum		
4	Steel	0	0.00	0	0	0	0.00	0.00	Per M.T.		
Sr No.	Description	Basic Rate (PWD DSR 2022-23)	LEAD CHARGE FOR STEEL (MT)	Cum lead charges for sand		Cum lead charges for aggregates		Cum lead charges for cement		Total Rate/Cum	References
				Factor	Total	Factor	Total	Factor	Total		
1	PCC M-100	5830		0.47	727.64	0.94	385.92	0.15	0.00	6943.56	SOR PWD 2022-23, Item No- 24.01
2	PCC M-150	6359		0.445	688.94	0.89	365.39	0.21	0.00	7413.33	SOR PWD 2022-23, Item No- 24.04
3	RCC Footing M-200	7104		0.425	657.97	0.85	348.97	0.25	0.00	8110.94	SOR PWD 2022-23, Item No- 25.11
4	RCC Wall M-200	15567		0.425	657.97	0.85	348.97	0.25	0.00	16573.94	SOR PWD 2022-23, Item No- 26.17
5	RCC Column M-200	13783		0.425	657.97	0.85	348.97	0.25	0.00	14789.94	SOR PWD 2022-23, Item No- 25.31
6	RCC Beam M-200	12269		0.425	657.97	0.85	348.97	0.25	0.00	13275.94	SOR PWD 2022-23, Item No- 25.50
7	RCC SLAB M 200	13943		0.425	657.97	0.85	348.97	0.25	0.00	14949.94	SOR PWD 2022-23, Item No- 25.70
8	RCC CHAJJA M-200	13932		0.425	657.97	0.85	348.97	0.25	0.00	14938.94	SOR PWD 2022-23, Item No- 26.05
9	Rolled Section	101844	0.0							101844.00	SOR PWD 2022-23, Item No- 23.01
10	Truss	119459	0.0							119459.00	SOR PWD 2022-23, Item No- 23.04
11	Steel Column Sections	98009	0.0							98009.00	SOR PWD 2022-23, Item No- 23.03
12	STEEL FE 500	89703	0.0							89703.00	SOR PWD 2022-23, Item No- 26.33
13	40 MM thick M20	537		0.425	657.97	0.33	135.48	0.25	0.00	1330.45	SOR PWD 2022-23, Item No-33.11
14	M-30 Tremix concrete	1464		0.425	657.97	0.85	348.97	0.28	0.00	2470.94	SOR PWD 2022-23, Item No- 33.31

Consultant

C.S.I

Environmental Engineer

City Engineer

**Deputy
Commissioner(I)**

**Samarth
Engineers,
Pune**

**Latur Municipal
Corporation**

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Corporation**

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Municipal
Corporation**

**Latur Municipal
Corporation**

LATUR MUNICIPAL CORPORATION DISTRICT - LATUR, DIVISION - AURANGABAD RATE ANALYSIS for Lead Distance																								
Sr. No.	Description	Lead Distance	Lead Charges	Initial Lead Distance	Initial Lead Charges	Final Lead Distance	Final Lead Charges per Cum	Rate	Unit															
PWD		Km	In Rs.	Km	In Rs.	Km	In Rs.	In Rs.																
1	Sand GANGAKHED	100	1548.17	0	0	100	1548.17	1548.17	Per Cum															
2	Metal (below 40mm)	15	410.55	0	0	15	410.55	410.55	Per Cum															
3	Cement	0	0.00	0	0	0	0.00	0.00	Per Cum															
4	Steel	0	0.00	0	0	0	0.00	0.00	Per M.T.															
5	Excavated rock soling	15	502.27	0	0	15	502.27	502.27	Per Cum															
6	Bricks	0	0.00	0	0	0	0.00	0	Per Cum															
7	Murum	12	356.53	0	0	12	356.53	356.53	Per Cum															
8	Tiles	0	0.00	0	0	0	0.00	0	Per Sqm															
Sr. No.	Description Of Item	PWD 2022-23	CSR Rate	Rate after adding for lift	Unit	Quantity					Rate of Lead Charges as per lead statement					Lead Charges					Total Extra Cost For Lead (17 to 21)	Total Item Rate (5+22)	Say Rs.	
						Sand	CEMENT	No. Of Bricks per cum	SOLING	Murum	SOLING	CEMENT	Sand	Bricks	Murum	Sand	Cement	Bricks per cum	SOLING	Murum				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1	Rubble stone soling- 15 cm to 20 cm thick including	PWD SOR 2022-23, Item No 21.38	1382	1382	Cu.m.	0	0	0	1.20	0	502.27	0.00	1548.17	0	356.53	0	0.00	0	602.72	0	602.72	1984.72	1985	
2	Rubble stone soling-80MM SIZE	PWD SOR 2022-23, Item No 21.40	1454	1454	Cu.m.	0	0	0	1.15	0						0	0.00	0	577.61	0	577.61	2031.61	2032	
3	Brick Masonary 1:6 for plinth	PWD SOR 2022-23, Item No 27.05	7994	7994	Cu.m.	0.32	0.0553	0.73103	0	0						495.41	0.00	0	0	0	495.41	8489.41	8490	
4	Brick Masonary 1:6 for super structure lift 0.0m to 3.80	PWD SOR 2022-23, Item No 27.05	7994	7994	Cu.m.	0.32	0.0553	0.73103	0	0						495.41	0.00	0	0	0	495.41	8489.41	8490	
5	Plaster 12 mm thk Internal 1:4	PWD SOR 2022-23 256/ 32.04	278	278	Sqm	0.015	0.00385	0	0	0						23.22	0.00	0	0	0	23.22	301.22	302	
6	Plaster 15 mm thk EXTERNAL 1:4	PWD SOR 2022-23, Item No 32.11	639	639	Sqm	0.025	0.00595	0	0	0						38.70	0.00	0	0	0	38.70	677.70	678	
7	Plaster 20 mm thk Internal 1:4 lift 0.00 m to 3.80 m	PWD SOR 2022-23 256/32.07	382	382	Sqm	0.025	0.00595	0	0	0						38.70	0.00	0	0	0	38.70	420.70	421	
8	UCR Masonary	PWD SOR 2022-23, Item No 28.01	5025	5025	Cu.m.	0.35	0.0595	0	1.16	0						541.86	0.00	0	582.633	0	1124.49	6149.49	6150	
9	flooring tiles(vitrified mirror/glossy finish tiles) for flooring	PWD SOR 2022-23, Item No 33.40	1177	1177	Sqm	0.02	0.00665	0	0	0						30.963	0.00	0	0	0	30.9634	1207.96	1208	
10	vitrified mirror/matt finish for passage	PWD SOR 2022-23, Item No 33.42	1600	1600	Sqm	0.02	0.00665	0	0	0						30.963	0.00	0	0	0	30.9634	1630.96	1631	
11	vitrified mirror/matt finish for dado	PWD SOR 2022-23, Item No 33.43	1675	1675	Sqm	0.02	0.006475	0	0	0						30.963	0.00	0	0	0	30.9634	1705.96	1706	
12	Black Kadappa stone	PWD SOR 2022-23, Item No 33.23	1221	1221	Sqm	0.02	0.0014	0	0	0						30.963	0.00	0	0	0	30.9634	1251.96	1252	
13	Polished Kadappa stone (urinals)	PWD SOR 2022-23, Item No 33.20	1084	1084	Sqm	0.005	0.00035	0	0	0						7.7409	0.00	0	0	0	7.74085	1091.74	1092	
14	Murum brought from outside	PWD SOR 2022-23, Item No 21.37	795	795	Cu.m.	0	0	0	0	1						0	0.00	0	0	356.53	356.53	1151.53	1152	

Consultant

C.S.I

Environmental Engineer

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Corporation**

LATUR MUNICIPAL CORPORATION DISTRICT - LATUR, DIVISION - AURANGABAD Royalty Charges							
Item No	Description of Items	Estimated		Material			Amount (Rs)of Royalty
		Quantity	Unit	Material	standard consumption	Quantity	sand=237.37/cum other materials=216.18/cum
	Dry trap rubble stone soling	1,515.94	Cu.m.	Rubble	1	1,515.94	327716.42
	M-10 bedding concrete	0.00	Cu.m.	sand	0.47		
	M-15	647.56	Cu.m.	sand	0.44	284.93	67633.03
	M-20 Foundation RCC concrete/column/beam/slab/Chajja	334.53	Cu.m.	sand	0.425	142.18	33748.27
	BBM in CM 1:6 in superstructure/plinth	248.44	Cu.m.	sand	0.32	79.50	18871.48
	Plaster 15 mm /20 mm 1:4	2445.42	sq.m	sand	0.025	61.14	14511.72
	UCR Masonary	21.26	Cu.m.	sand	0.35	7.44	1766.48
	flooring	13.50	sq.m	sand	0.02	0.27	64.09
						0	0.00
	Murum brought from outside		Cu.m.	murum	1		
			TOTAL			Rs.	464311.49
			Say			Rs.	464312.00

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

LEAD CHART

SR.NO.	MATERIAL	LOCATION OF QUARRY	LEAD IN KM.	LEAD CHARGES	INITIAL LEAD CHARGES	NET LEAD CHARGES.
1	80MM METAL/METAL	Chincholirao SQ	15.00	393.44	0.00	393.44
2	METAL 40MM & ABOVE	Chincholirao SQ	15.00	393.44	0.00	393.44
3	MURUM-HARD	Chincholirao	12.00	356.53	0.00	356.53
4	MURUM-SOFT	Chincholirao	12.00	356.53	0.00	356.53
5	RUBBLE	Chincholirao SQ	15.00	340.69	0.00	340.69
6	CHIPS/METAL BELOW 40MM	Chincholirao SQ	15.00	410.55	0.00	410.55
7	CEMENT/STEEL	Latur/Local	0.00	0.00	0.00	0.00
8	SAND	Godavari/Gangakhed	100.00	1548.17	0.00	1548.17
9	CR METAL/METAL BELOW 40MM	Chincholirao SQ	15.00	410.55	0.00	410.55
10	SOLING	Chincholirao SQ	15.00	502.27	0.00	502.27
11	STEEL	Latur	0.00	0.00	0.00	0.00

**SECTIONAL ENGINEER
MUNICIPAL
CORPORATION LATUR**

SWACHH BHARAT MISSION (URBAN 2.0)																							
LATUR MUNICIPAL CORPORATION																							
DISTRICT - LATUR, DIVISION - AURANGABAD																							
TRIAL PITS RESULT FOR WINDROW PLATFORM (62X21)																							
NO OF TRIAL PITS TAKEN=4																							
<table border="1"> <tr><td>Soil, Soft Murum</td></tr> <tr><td>Hard Murum & Boulders</td></tr> <tr><td>Soft Rock</td></tr> <tr><td>Hard Rock</td></tr> </table>	Soil, Soft Murum	Hard Murum & Boulders	Soft Rock	Hard Rock	↑ 1.5m ↓	1	0.40		1	0.38		1	0.39	1	0.43								
	Soil, Soft Murum																						
	Hard Murum & Boulders																						
	Soft Rock																						
Hard Rock																							
2	0.60		2	0.62		2	0.61	2	0.57														
3	0.30		3	0.31		3	0.32	3	0.27														
4	0.20		4	0.19		4	0.18	4	0.23														
											<table border="1"> <tr> <th>Total Avg</th> <th>Final Avg</th> </tr> <tr> <td>1.60</td> <td>0.40</td> </tr> <tr> <td>2.40</td> <td>0.60</td> </tr> <tr> <td>1.20</td> <td>0.30</td> </tr> <tr> <td>0.80</td> <td>0.20</td> </tr> <tr> <td colspan="2">AVERAGE</td> </tr> </table>	Total Avg	Final Avg	1.60	0.40	2.40	0.60	1.20	0.30	0.80	0.20	AVERAGE	
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**Latur Municipal
Corporation**

SWACHH BHARAT MISSION (URBAN 2.0)																																													
LATUR MUNICIPAL CORPORATION																																													
DISTRICT - LATUR, DIVISION - AURANGABAD																																													
TRIAL PITS RESULT FOR SHED FOR COMPOST CURING (25MX20M)																																													
NO OF TRIAL PITS TAKEN=4																																													
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Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

SWACHH BHARAT MISSION (URBAN 2.0) LATUR MUNICIPAL CORPORATION DISTRICT - LATUR, DIVISION - AURANGABAD									
TRIAL PITS RESULT FOR SHED FOR CEMENT CONCRETE ROAD (L-1525 M, W-4 M)									
NO OF TRIAL PITS TAKEN=4									
Soil, Soft Murum	↑	1	0.30	1	0.33	1	0.28	1	0.29
	0.6	2	0.30	2	0.27	2	0.32	2	0.31
								Total Avg	Final Avg
								1.20	0.30
								1.20	0.30
								AVERAGE	

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

SWACHH BHARAT MISSION (URBAN 2.0)									
LATUR MUNICIPAL CORPORATION									
DISTRICT - LATUR, DIVISION - AURANGABAD									
TRIAL PITS RESULT FOR SHED FOR DRAIN									
NO OF TRIAL PITS TAKEN=4									
Soil, Soft Murum	↑	1	0.40	1	0.38	1	0.39	1	0.43
		0.6	2	0.30	2	0.32	2	0.31	2

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

SWACHH BHARAT MISSION (URBAN 2.0)																																																	
LATUR MUNICIPAL CORPORATION																																																	
DISTRICT - LATUR, DIVISION - AURANGABAD																																																	
TRIAL PITS RESULTS FOR SCREENING MACHINE SHED - 3Nos (10M X 15M)																																																	
NO OF TRIAL PITS TAKEN= 4																																																	
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SWACHH BHARAT MISSION (URBAN 2.0)																																													
LATUR MUNICIPAL CORPORATION																																													
DISTRICT - LATUR, DIVISION - AURANGABAD																																													
TRIAL PITS RESULT FOR MRF SHED WITH PARTITION - 4 Nos (18M X 15M)																																													
NO OF TRIAL PITS TAKEN=4																																													
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						<table><tr><th>Total Avg</th><th>Final Avg</th></tr><tr><td>1.60</td><td>0.40</td></tr><tr><td>2.40</td><td>0.60</td></tr><tr><td>1.20</td><td>0.30</td></tr><tr><td>0.80</td><td>0.20</td></tr><tr><td colspan="2">AVERAGE</td></tr></table>	Total Avg	Final Avg	1.60	0.40	2.40	0.60	1.20	0.30	0.80	0.20	AVERAGE																												
Total Avg	Final Avg																																												
1.60	0.40																																												
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AVERAGE																																													

SWACHH BHARAT MISSION (URBAN 2.0) LATUR MUNICIPAL CORPORATION DISTRICT - LATUR, DIVISION - AURANGABAD

LATUR MUNICIPAL CORPORATION
DISTRICT - LATUR, DIVISION - AURANGABAD

DISTRICT - LATUR, DIVISION - AURANGABAD

TRIAL PITS RESULTS FOR TIPPING SHED - 3 Nos (25M X 20M)

NO OF TRIAL PITS TAKEN= 4

Soil, Soft Murum		1	0.40
Hard Murum & Boulders		2	0.60
Soft Rock		3	0.30
Hard Rock		4	0.20

1	0.38
2	0.62
3	0.31
4	0.19

1	0.39
2	0.61
3	0.32
4	0.18

1	0.43
2	0.57
3	0.27
4	0.23

Soil, Soft Murum		1	0.40
Hard Murum & Boulders		2	0.60
Soft Rock		3	0.30
Hard Rock		4	0.20

1	0.38
2	0.62
3	0.31
4	0.19

1	0.39
2	0.61
3	0.32
4	0.18

1	0.43
2	0.57
3	0.27
4	0.23

Soil, Soft Murum		1	0.40
Hard Murum & Boulders		2	0.60
Soft Rock		3	0.30
Hard Rock		4	0.20

1	0.38
2	0.62
3	0.31
4	0.19

1	0.39
2	0.61
3	0.32
4	0.18

1	0.43
2	0.57
3	0.27
4	0.23

Soil, Soft Murum		1	0.40
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Soft Rock		3	0.30
Hard Rock		4	0.20

1	0.38
2	0.62
3	0.31
4	0.19

1	0.39
2	0.61
3	0.32
4	0.18

1	0.43
2	0.57
3	0.27
4	0.23

Soil, Soft Murum		1	0.40
Hard Murum & Boulders		2	0.60
Soft Rock		3	0.30
Hard Rock		4	0.20

1	0.38
2	0.62
3	0.31
4	0.19

1	0.39
2	0.61
3	0.32
4	0.18

1	0.43
2	0.57
3	0.27
4	0.23

Total Avg	Final Avg
1.60	0.40
2.40	0.60
1.20	0.30
0.80	0.20
AVERAGE	

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

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Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

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Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

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Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation
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Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation
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Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation
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Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation
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Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation
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SWACHH BHARAT MISSION (URBAN 2.0) LATUR MUNICIPAL CORPORATION DISTRICT - LATUR, DIVISION - AURANGABAD									
TRIAL PITS RESULTS FOR REST ROOM WITH ATTACHED TOILET (3.5M X 11.73M)									
NO OF TRIAL PITS TAKEN= 4									
Soil, Soft Murum	↑	1	0.40	1	0.39	1	0.38	1	0.43
Hard Murum & Boulders		2	0.60	2	0.61	2	0.62	2	0.57
Soft Rock	1.50 m	3	0.30	3	0.31	3	0.30	3	0.29
Hard Rock	↓	4	0.20	4	0.19	4	0.20	4	0.21
								Total Avg	Final Avg
								1.60	0.40
								2.40	0.60
								1.20	0.30
								0.80	0.20
								AVERAGE	

Consultant	C.S.I	Environmental Engineer	City Engineer	Deputy Commissioner(I)
Samarth Engineers, Pune	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation	Latur Municipal Corporation

ANNEXURE

SISPL LAB
TEST REPORT

No. 502419-29

Page 1 of 2

ULR : TC71942203310809P

SAMPLE DATA

Sample	Dumpsite garbage waste, Latur, Latur		
Sender	Samarth Engineers Pune		
Container	1 no(s) 1.25 kg Plastic Container, 1 kg sample 1 no(s) 1.25 kg Plastic Container, 1 kg sample 1 no(s) 1.25 kg Plastic Container, 1 kg sample 1 no(s) 1.25 kg Plastic Container, 1 kg sample	Collected on	06-June-23 at 10:00
		Received at lab on	06- June-23 at 12:00
		Testing completed	21-June-23
		Test results issued	30-June-23

TEST DATA: WASTE CHARACTERISATION

Sr.	Test	Unit	Result	Test Method/ Limits
1	Moisture	%	24.21	50.00
2	Ash Content	%	28.94	50.00
3	Total volatile content (LOI)	%	16.58	50.00
4	Total Organic Carbon (TOC)	%	22.56	50.00
5	Calorific value	cal/g m	1196.0	1000.00
6	C/N Ratio	-	13.19	50.00
7	Total Nitrogen	mg/k g	1.71	5.00
8	Total Phosphate es as P2O5	mg/k g	0.60	5.00
9	Total Potassium as K2O	mg/k g	1.34	50.00
10	Arsenic (As)	mg/k g	<0.1	< 2.0
11	Nickel (Ni)	mg/k g	<0.1	< 2.0
12	Zinc (Zn)	mg/k g	16.30	8.0
13	Cadmium (Cd)	mg/k g	1.89	Cadmium
14	Copper (Cu)	mg/k g	8.5	4.00
15	Chromium (Cr+6)	mg/k g	BDL	Chromium
16	Lead (Pb)	mg/k g	2.8	4.0
17	Mercury (Hg)	mg/k g	<0.1	< 2.0

END OF NABL TEST DATA. OPINIONS, INTERPRETATIONS & REMARKS are at the end of this Test Report.

OPINIONS, INTERPRETATIONS & REMARKS

- The above analysis results pertain only to 'as received' sample and without prejudice to its source or
- The contents of this Test Report shall not be reproduced in part or in full in such a way that it will distort
- The sampling is done by Polytest Laboratories as per procedure PL.WI.705.
- The uncertainty value of test results is available upon request for the tests covered under our current scope of NABL accreditation.
- # The Test Method is not covered under our current scope of NABL accreditation.



Authorized by

Signature Not Verified
Digitally signed by Date: 2022.05.12 14:07:22 +05:30
Location: pune

SISPL LAB TEST REPORT

No. **502419-29**

Page 2 of 2

TEST DATA: WASTE CHARACTERISATION (PHYSICAL)

Sr.	Test	Unit	Result	Test Method/ Limits
1	Plastic, Plastic bags etc	%	9.18	-
2	Paper waste	%	6.05	-
3	Glass & metals	%	0.25	-
4	Leather, rubber & synthetics	%	0.18	-
5	Tetra packs and laminated plastics	%	1.81	-
6	Clothes and rags	%	6.55	-
7	Food waste / organic	%	56.85	-
8	Horticulture waste & wood	%	6.14	-
9	Miscellaneous, inert, ash, Soil, Silt	%	13.00	-

Samples Taken	18	Nos.
Average Weight	370	GPC



Authorized by

Signature Not Verified
Digitally signed by Date: 2022.05.12 14:07:22 +05:30
Location: pune

केंद्र शासनाच्या स्वच्छ भारत अभियान (नागरी)
२.० च्या धर्तीवर राज्यात स्वच्छ महाराष्ट्र
अभियान (नागरी) २.० राबविण्याबाबत.

महाराष्ट्र शासन
नगर विकास विभाग,
शासन निर्णय क्रमांक-स्वमअ-२०२२/प्र.क्र.७३/नवि ३४
हुतात्मा राजगुरु चौक, मादाम कामा मार्ग,
मंत्रालय, मुंबई ४०००३२
दिनांक :- १५ जुलै, २०२२

वाचा :-

केंद्र शासनाच्या “स्वच्छ भारत अभियान” (नागरी) २.० करिता दि. २५ ऑक्टोबर, २०२१ रोजी निर्गमित मार्गदर्शक सूचना.

प्रस्तावना :-

देशातील सर्व शहरामध्ये व ग्रामीण भागात स्वच्छता व शौचालय सुविधा उपलब्ध करून देण्यासाठी “स्वच्छ भारत अभियान” दि. ०२ ऑक्टोबर, २०१४ ते दि. ०२ ऑक्टोबर, २०१९ या कालावधीमध्ये केंद्र शासनाद्वारे राबविण्यात आले आहे. सदर अभियान महाराष्ट्र राज्यात दि. १५ मे, २०१५ च्या शासन निर्णयान्वये राबविण्यास राज्य शासनाने मान्यता दिली. त्यानुसार हे अभियान यशस्वीरित्या राबविण्यात आले आहे.

०२. सन २०११ च्या जनगणनेनुसार राज्याची नागरी लोकसंख्या ५,०८,२७,५३१ (राज्याच्या एकूण लोकसंख्येच्या ४५.२३%) इतकी आहे. तर, नागरी भागातील एकूण कुटुंबांची संख्या १,०८,१३,९२८ इतकी आहे. केंद्र शासनाच्या “स्वच्छ भारत अभियानाच्या” धर्तीवर राज्यातील सर्व शहरे हागणदारी मुक्त करणे, आरोग्यदायी स्वच्छतेच्या सवयीतील बदल सुनिश्चित करून घन कचऱ्याचे शास्त्रोक्त पद्धतीने व्यवस्थापन करण्याच्या उद्देशाने राज्य शासनाने “स्वच्छ महाराष्ट्र अभियानाची” शासन निर्णय, नगर विकास विभाग, दिनांक १५ मे, २०१५ अन्वये सुरुवात केली. या अभियानांतर्गत महाराष्ट्रात ७,१३,७१८ वैयक्तिक घरगुती शौचालये व १,६०,२८० इतकी सामुदायीक / सार्वजनिक शौचालय सिट्स बांधण्यात आली आहेत. त्यामुळे ऑक्टोबर २०१७ मध्ये संपूर्ण नागरी महाराष्ट्र हागणदारी मुक्त (ODF) तसेच मार्च २०२१ पर्यंत १७३ शहरे ODF+, २१२ शहरे ODF++ झाल्याचे घोषित करण्यात आले आहे. राज्यातील नागरी स्थानिक स्वराज्य संस्थांमधून दररोज निर्माण होणाऱ्या कचरा घरोघरी जावून ओल्या व सुक्या स्वरूपात विलगीकृत करून गोळा केला जातो व या कचऱ्यावर प्रक्रिया केली जाते.

३. “स्वच्छ भारत अभियानात” सातत्य राखण्याच्या दृष्टीने व संपूर्ण नागरी भारत कचरा मुक्त करण्याच्या दृष्टीने वैयक्तिक, सामुदायिक व सार्वजनिक शौचालयांकरिताच्या गुंतवणुकीमध्ये सातत्य राखणे, वापरलेले पाणी व मैला यांची प्रक्रिया, विल्हेवाट व पुनर्वापर करणे, सर्व प्रकारच्या घनकचऱ्याचे व्यवस्थापन करणे व जुना साठलेला कचरा, प्लास्टिक कचरा, बांधकाम व पाडकाम कचरा इत्यादींची विल्हेवाट लावणे व व्यवस्थापन करणे, याकरिता आर्थिक मदत करणे इत्यादी गरजा विचारात घेऊन केंद्र शासनाच्या गृहनिर्माण तथा नागरी कार्यमंत्रालयाद्वारे “स्वच्छ भारत अभियान नागरी २.०” चा प्रारंभ करण्यात आला आहे. सदर अभियान दिनांक ०२ ऑक्टोबर, २०२१

ते दिनांक ०१ ऑक्टोबर, २०२६ पर्यंत राबविले जाणार आहे. या अभियानाचा मुख्य उद्देश “कचरा मुक्त शहरे” हा आहे.

केंद्र शासनाने निर्गमित केलेल्या मार्गदर्शक सूचनांनुसार “स्वच्छ भारत अभियान (नागरी) २.०” च्या धर्तीवर राज्यातील सर्व वैधानिकरित्या स्थापित झालेल्या नागरी स्थानिक स्वराज्य संस्थांमध्ये “स्वच्छ महाराष्ट्र अभियान (नागरी) २.०” हे अभियान राबविण्याची बाब शासनाच्या विचाराधीन होती.

शासन निर्णय:-

“स्वच्छ भारत अभियान (नागरी) २.०” देशामध्ये एक अभियान म्हणून राबविण्यासाठीच्या मार्गदर्शक सूचना केंद्र शासनाच्या गृहनिर्माण तथा नागरी कार्य मंत्रालयाद्वारे (MoHUA) दि.२५ ऑक्टोबर, २०२१ रोजी प्रसिध्द केल्या आहेत. यानुसार देशातील सर्व वैधानिकरित्या स्थापित झालेल्या नागरी स्थानिक स्वराज्य संस्थांमध्ये अभियानाची अंमलबजावणी करणे आवश्यक आहे. या धर्तीवर राज्यामध्ये “स्वच्छ महाराष्ट्र अभियान (नागरी) २.०” हे एक अभियान राबविण्यास शासन मान्यता देण्यात येत आहे.

२. अभियानाचे ध्येय धोरण:- “कचरामुक्त” नागरी भारताचे अंतिम उद्दिष्ट साध्य करण्याकरिता “स्वच्छ महाराष्ट्र अभियान (नागरी) २.०” मधील घटकांच्या अंमलबजावणीसाठी यापूर्वी हाती घेतलेल्या “स्वच्छ भारत अभियान” मधील अनुभव तसेच केंद्र शासनाच्या गृहनिर्माण तथा नागरी कार्य मंत्रालयाद्वारे (MoHUA) दि. २५ ऑक्टोबर, २०२१ रोजी प्रसिध्द केलेल्या कार्यान्वयीन मार्गदर्शक सूचना (Operational Guidelines) यांचा आधार घेण्यात येत आहे. यानुसार “स्वच्छ महाराष्ट्र अभियान (नागरी) २.०” या अभियानातर्गत सर्व शहरांसाठी “कचरा मुक्त शहराचा” दर्जा प्राप्त करण्याचा दृष्टीकोन समोर ठेऊन खालील उद्दिष्टे साध्य करण्यात यावीत:-

i. शाश्वत घन कचरा व्यवस्थापन (Sustainable Solid Waste Management)

- सार्वजनिक ठिकाणाची स्वच्छता आणि आरोग्य सुनिश्चित करण्याबरोबरच घन कचरा व्यवस्थापनाच्या १००% शास्त्रोक्त प्रक्रियेसह सर्व शहरे स्वच्छ आणि कचरा मुक्त करणे.
- घनकचरा व्यवस्थापन करताना होणारे वायू प्रदूषण कमी करणे.
- एकल-वापर प्लास्टिकच्या (Single Use Plastic) वापरात टप्पाटप्प्याने कपात करणे.

ii. शाश्वत स्वच्छता (Sustainable Sanitation).

- या घटकाचा उद्देश सर्व वैधानिकरित्या स्थापित झालेल्या नागरी स्थानिक स्वराज्य संस्थांमध्ये हागणदारी मुक्त दर्जा कायम ठेवणे.

iii. शाश्वत स्वच्छता आणि वापरलेल्या पाण्यावर प्रक्रिया (Sustainable sanitation and treatment of used water)

- वापरलेले पाणी जलस्रोतांमध्ये सोडण्यापूर्वी त्यावर प्रक्रिया करणे आणि प्रक्रिया केलेल्या पाण्याचा जास्तीत जास्त पुनर्वापर करणे.

- भूयारी गटार आणि सेप्टिक टाक्यांमध्ये धोकादायक पद्धतीने मानवी प्रवेश बंद करण्यात यावे.
- भूयारी गटार आणि सेप्टिक टाक्यांची संपूर्ण यांत्रिकीकृत यंत्रणेद्वारे स्वच्छता करण्यात येऊन हाताने मैला हाताळण्याच्या पद्धतीची शाश्वत समाप्ती करणे.
- iv. **लोक सहभाग (लोकचळवळ)** आणि “स्वच्छ” वर्तनाचे संस्थात्मकीकरण करण्यासाठी मोठ्या प्रमाणावर नागरिकांपर्यंत पोहोचण्याबरोबरच जागरूकता निर्माण करणे.
- v. अभियानाची उद्दिष्टे साध्य करण्यासाठी कार्यक्रमात्मक हस्तक्षेपांची प्रभावी अंमलबजावणी करण्यासाठी **संस्थात्मक क्षमता निर्माण** करणे.

३. **स्वच्छ महाराष्ट्र अभियान (नागरी) २.० चे धोरण व मार्गदर्शक तत्त्वे**

कचरामुक्त नागरी भारताचे अंतिम उद्दिष्टे साध्य करण्याकरीता स्वच्छ भारत अभियान (नागरी) २.० मधील घटकांची अंमलबजावणी करण्यासाठी स्वच्छ भारत अभियानाच्या अनुभवा आधारे खालील मार्गदर्शक तत्त्वे आणि धोरणे यांचा स्वीकार करण्यात येत आहे.

३.१ **स्वच्छता मानके:**

- अभियानाचे दर्जात्मक परिणाम मिळणेकरिता केंद्र शासनाच्या गृहनिर्माण तथा शहरी कार्य मंत्रालयाने अनेक प्रमाणित कार्यपद्धती (Protocol) तयार केले आहेत. ज्यात ODF, ODF+, ODF++, Water+ आणि कचरा मुक्त शहरांसाठीचे स्टार मानांकन यांचा समावेश आहे.
- ही प्रमाणित कार्यपद्धती, शहरे आणि शहर प्रतिनिधींसाठी मार्गदर्शक दस्तऐवज म्हणून काम करत असल्याने यापुढेही ही कार्यपद्धती चालूच राहतील.

३.२ **स्पर्धात्मकतेवर भर-**

- सर्व नागरिकांना स्वच्छता आणि कचरा व्यवस्थापन सेवा प्रदान करणे, प्रशासनास गतिमान व सक्षम करण्याकरिता देखरेख करण्यासाठीची स्पर्धात्मक चौकट अंमलबजावणीला गती देण्यास मदत करते. यामुळे शहरांचे वार्षिक मानांकन स्वच्छ सर्वेक्षणाद्वारे सुरू ठेवले जाईल.

३.३ **क्षमता बांधणी:**

- अभियानाचे शाश्वत परिणाम साधण्यासाठी प्रशासनामध्ये संस्थात्मक आणि व्यक्तिगत क्षमता निर्माण करण्यासाठी ई-लर्निंग आणि इतर माध्यमातून तसेच स्वच्छता आणि कचरा व्यवस्थापन क्षेत्रात कौशल्य विकासावर भर देणे याद्वारे क्षमता बांधणी केली जाईल.

३.४ **भागीदारी/सहभाग:**

- अभियान अंमलबजावणीमध्ये सर्व विकास, ज्ञान, क्षेत्रीय व औद्योगिक घटकांचा सहभाग व समावेश केला जाईल.

३.५ लोक सहभाग:-

- (अ) सर्वश्रेणी व स्तरातील नागरिकांना अभियानाच्या केंद्रस्थानी आणणे (उदा.महिला आणि गृहिणी, विद्यार्थी आणि तरुण, ज्येष्ठ नागरिक आणि सेवानिवृत्त कर्मचारी, धार्मिक नेते, समाज माध्यमांना प्रभावित करणाऱ्या व्यक्ती, नामांकित व्यक्ती (सेलिब्रिटी) आणि ब्रँड अ‍ॅम्बेसेडर, स्वयंसहायतागट, बाजार आणि इतर उद्योग संघटना, रेसिडेंट वेल्फेअर असोसिएशन (RWA) मधून निवडून आलेले प्रतिनिधी इ., नियोजन ते देखभाल व दुरुस्ती (O&M) या प्रणालीमध्ये महिला नेतृत्वाला प्रोत्साहन देण्यात यावे.
- (आ) नागरी स्थानिक स्वराज्य संस्था या सर्व शहरी आर्थिकदृष्ट्या दुर्बल (विशेषतः झोपडपट्टीत राहणारे) आणि इतर असुरक्षित गट यांच्या स्वच्छता आणि कचरा व्यवस्थापन गरजांवर विशेष लक्ष केंद्रित करावे.
- (इ) पुर्नप्रक्रिया (Recycle) करणारे आणि स्कॅप व्यावसायिक यांचा घनकचरा व्यवस्थापन पुर्नप्रक्रिया शृंखलेमध्ये समावेश करावा.
- (ई) स्वच्छता कामगारांची सुरक्षितता आणि कल्याण सुनिश्चित करणे, ज्यामध्ये:-
- साफसफाई कार्याच्या यांत्रिकीकरणाद्वारे भूयारी गटार आणि सेप्टिक टाकीच्या स्वच्छतेसाठी धोकादायक पद्धतीने मानवी प्रवेश बंद करणे, स्वच्छता कामगारांना संरक्षणात्मक उपकरणे/पीपीई किटची तरतूद करणे इ.
 - सेप्टिक टँक स्वच्छ करण्याबाबत नागरिकांना त्यांच्या विनंती /तक्रारी आणि सूचना नोंदवता याव्यात यासाठी हेल्पलाइन क्रमांक निश्चित करणे;
 - जबाबदार स्वच्छता प्राधिकरण (Responsible Sanitation Authority) आणि सर्व शहरांना समाविष्ट करणारे स्वच्छता प्रतिसाद युनिट (Sanitation Response Unit) अनिवार्यपणे स्थापित करणे.

३.६ डिजिटल सक्षमीकरण :

- अभियान अधिक डिजिटल आणि पेपरलेस बनविण्यासाठी, मालमत्तांचे वास्तवकालीन संनियंत्रण (रिअल-टाइम मॉनिटरिंग) सक्षम करण्यासाठी, त्यांचा पूर्ण क्षमतेचा वापर सुनिश्चित करण्यासाठी माहिती प्रसार व तंत्रज्ञान आधारित संनियंत्रणाद्वारे अधिक तीव्रतेने लक्ष केंद्रित केले जाईल. प्रकल्पांच्या अंमलबजावणीच्या टप्प्यात कार्यक्षमतेच्या मापदंडांवर वास्तवकालीन डेटा मिळण्यासाठी डिजिटल साधने वापर करणे सर्व शहरांकरिता अनिवार्य असेल.

३.७ सामाजिक उपक्रमांसाठी तंत्रज्ञान व नव कल्पनांना प्रोत्साहन :

- स्वच्छता आणि घन कचरा व्यवस्थापनामध्ये लघु आणि खाजगी उद्योजक व स्टार्ट-अपद्वारे स्थानिक पातळीवरील नवनवीन, किफायतशीर उपाय आणि व्यवसाय नमुन्यांचा अवलंब करण्यास अभियान प्रोत्साहन देईल. याद्वारे "आत्मनिर्भर भारत" आणि "मेक इन इंडिया" या शासनाच्या धोरणाला पुढे नेण्यासाठी संशोधन व

विकासामध्ये (R&D) गुंतवणूक करणे, तांत्रिक समस्या सोडवणे आणि GeM पोर्टलमध्ये समावेश करण्यासाठीच्या आवश्यक सुविधांचा समावेश करावा.

३.८ नियोजनावर भर :

➤ आंतरविश्लेषण (Gap Analysis) वर आधारित खालील कृती योजना तयार करणे आवश्यक आहे.

अ) शहर घनकचरा व्यवस्थापन कृती आराखडा (CSWAP- City Solid Waste Action Plan)

ब) स्वच्छता व सांडपाणी आणि सेप्टेज व्यवस्थापनासाठी शहर स्वच्छता कृती आराखडा (CSAP - City Sanitation Action Plan)

क) कचरामुक्त शहरांच्या निर्मितीसाठी एकत्रित कृती योजना.

३.९ कार्यात्मक परिणाम आणि त्यांच्यावरील देखरेख यावर विशेष भर :

➤ परिणाम-आधारित निधी वितरण (Progress Based Fund Disbursement) हे अभियानाचे वैशिष्ट्य आहे. केंद्राच्या हिश्याच्या निधीचा पहिला आणि दुसरा हप्ता राज्ये/केंद्रशासित प्रदेशांना त्यांच्या आणि शहरांच्याद्वारे विनिर्दिष्ट उद्दिष्टे/परिणाम साध्य करण्याच्या अधीन राहून वितरीत केला जाईल.

३.१० शहरी-ग्रामीण अभिसरण :

➤ सामायिक कचरा प्रक्रिया सुविधांचा कार्यक्षमतेने वापर करण्याकरीता संलग्न शहरे (ULBs) आणि ग्रामीण भागातील गटांना सामायिक (क्लस्टर) आधारावर पायाभूत सुविधा प्रकल्प हाती घेता येतील.

३.११ प्रोत्साहनात्मक वातावरण निर्मिती-

अ) राज्ये/केंद्रशासित प्रदेश आणि शहरे त्यांच्या निविदा तयार करण्यासाठी वापर करू शकतील असे नमुना RFP तयार करणे.

ब) राज्ये/शहरांची GeM पोर्टलद्वारे खरेदी सुलभ करणे.

क) राज्ये/शहरांमध्ये स्टार्ट-अप इकोसिस्टम/सार्वजनिक खाजगी भागीदारीला प्रोत्साहन देणे:

स्वच्छ भारत अभियान (नागरी) २.० अंतर्गत विविध आवश्यक घटकांकरिता सार्वजनिक खाजगी भागीदारी (PPP) तत्वावरील प्रकल्पांद्वारे निधी उपलब्ध करणे व शहरी पायाभूत सुविधांमध्ये खाजगी भांडवल आमंत्रित करण्यास प्राधान्य देण्यात आले आहे.

३.१२ योग्य परिणाम साध्य करण्यासाठी १५ व्या वित्त आयोगाच्या अनुदानाचा (बंधित व अबंधित) लाभ घेणे.

राज्ये/केंद्र शासित प्रदेश आणि शहरांनी अभियानाच्या परिणामांची पूर्तता करण्यासाठी स्वच्छ भारत अभियान २.० (नागरी) करिता प्राप्त होणाऱ्या निधी व्यतिरिक्त १५ व्या वित्त आयोगाच्या अनुदानाचा लाभ घेता येईल.

३.१३ राष्ट्रीय अभियाने आणि राष्ट्रीय प्राधान्यक्रम यांच्याशी संलग्नता :

स्वच्छ भारत अभियान (नागरी) २.०, त्याच्या अंमलबजावणीच्या घटकांद्वारे राष्ट्रीय प्राधान्यक्रमाचे विषय, राष्ट्रीय अभियान आणि राष्ट्रीय कार्यक्रम यांच्याशी जुळवून घेण्याचा प्रयत्न करेल. यात प्रामुख्याने पुढील बाबींचा समावेश असेल.

- राष्ट्रीय स्वच्छ हवा कार्यक्रम (National Clean Air Programme -NCAP) यानुसार बांधकाम व पाडकाम कचरा (C&D Waste) व्यवस्थापनाद्वारे धुलीकण कमी करणे.
- स्टार्ट-अप इंडिया व मेक इन इंडियाला प्रोत्साहन देण्यावर भर देणे.
- डिजिटल इंडिया, राष्ट्रीय नागरी डिजिटल मिशन (NUDM), स्मार्ट सिटीज मिशन यांच्याशी संलग्नता राखणे.
- स्किल इंडिया योजनेतून कौशल्य विकासाद्वारे क्षमता वृद्धी करणे.
- नमामि गंगे, Sustainable Alternative Towards Affordable Transportation (SATAT), सफाई कामगार व सफाई मित्र यांची सुरक्षितता, कल्याण व त्यांचे जीवनमान उंचावणे.
- या अभियानाचा भर सर्व सरकारी कार्यालये, कामाच्या जागा आणि परिसर यांनी स्वच्छता मानकांचे आणि कचरामुक्त धोरणांचे पालन करावे यावर राहिल.

४. अभियानाचे घटक व त्यांचे आर्थिक निकष-

४.१ शाश्वत घन कचरा व्यवस्थापन -

उद्देश: या घटकाचा उद्देश शहरांच्या घन कचऱ्यावर १००% शास्त्रोक्त प्रक्रिया करून सर्व शहरे स्वच्छ आणि कचरा मुक्त करणे हा आहे. या अंतर्गत निधी प्राप्ती करिता खालील घटक पात्र असतील:-

- i. एमआरएफ (MRF-Material Recovery Facility), कचरा वाहतूक स्थानके (ट्रान्सफर स्टेशन), खतनिर्मिती (कंपोस्ट) प्रकल्प, बायोगॅस प्रकल्प (बायो-मिथेनेशन), RDF (Refuse derived fuel) प्रक्रिया सुविधा, प्लास्टिक कचरा प्रक्रिया सुविधा केंद्र, कचऱ्यातून वीज निर्मिती प्रकल्प, शास्त्रोक्त भू-भराव उभारणी (सॅनिटरी लॅंडफिल) इ. सारख्या कचरा प्रक्रिया सुविधांची स्थापना करणे.
- ii. यांत्रिक झाडू (स्वीपिंग मशिन) उपकरणे खरेदी करणे आणि बांधकाम व पाडकाम कचऱ्याचे (Construction & Demolition Waste) प्रभावी व्यवस्थापन करण्यासाठी प्रक्रियेची सुविधा उभारणे. या घटकामध्ये महाराष्ट्रातील २४ शहरांचा समावेश करण्यात येत आहे.
- iii. सर्व शहरांमधील साठलेल्या जुन्या कचऱ्याच्या ठिकाणांचे बायोमायनिंग/कॅपिंग करणे.

निधीविषयक धोरण-

- अ) प्रत्येक शहराचा घनकचरा व्यवस्थापन कृती आराखडा (CSWAP) तयार करून तो राज्यस्तरीय तांत्रिक समिती (SLTC) द्वारे मान्यता प्राप्त करणे आवश्यक राहणार आहे. याचा उद्देश प्रत्येक शहरांने किमान ३ स्टार मानांकन दर्जा प्राप्त करणे असा आहे. या कृती आराखड्यातील आंतर-विश्लेषण (Gap Analysis) नुसार या घटकांतर्गत नमूद बाबींकरिता शहरांनी सविस्तर प्रकल्प अहवाल तयार करावा.

- आ) प्राथमिक संकलन आणि वाहतूक (C&T) प्रणाली उभारण्याच्या खर्चासाठी (विद्यमान प्रणालीच्या आधुनिकीकरणासह) केंद्र सरकारचा कोणताही निधी उपलब्ध होणार नाही.
- इ) नवीन “ब” वर्ग नगरपरिषदा, “क” वर्ग नगरपरिषदा व नगरपंचायतीसाठी घनकचरा संकलन व वहन व्यवस्थेकरीता राज्य शासन व नागरी स्थानिक स्वराज्य संस्था यांनी ९०:१० या प्रमाणात खर्च करावा.
- ई) घनकचरा व्यवस्थापन या घटकांतर्गत प्रकल्पांकरिताचा निधी ४० टक्के, ४० टक्के व २० टक्के याप्रमाणे तीन टप्प्यात दिला जाईल.

४.२ शाश्वत स्वच्छता (Sustainable Sanitation).

उद्देश: या घटकाचा उद्देश सर्व वैधानिकरित्या स्थापित झालेल्या नागरी स्थानिक स्वराज्य संस्थांमध्ये हागणदारी मुक्त दर्जा कायम ठेवणे असा असून या अंतर्गत निधी प्राप्तीसाठी खालील घटक पात्र असतील.

i) वैयक्तिक घरगुती शौचालय (IHHL) बांधणे :-

या घटकानुसार नविन स्वतंत्र कुटुंबे, स्थलांतरीत कुटुंबे, सामुदायिक शौचालयांचा वापर करणारी कुटुंबे व अस्वच्छ शौचालये असणारी कुटुंबे लाभार्थी असतील. योजनेमधील लाभार्थी अधिकृत/अनधिकृत वसाहतीमध्ये राहत असतील अथवा अधिसूचित केलेल्या /अधिसूचित न केलेल्या झोपडपट्टीमध्ये राहत असतील तरी त्यांना शौचालयाची सुविधा उपलब्ध करून द्यावयाची आहे. पूर्वीच्या स्वच्छ भारत अभियानांनुसार लाभ घेतलेले लाभार्थी या अभियानात पात्र असणार नाहीत.

स्वच्छ भारत अभियान-२.० (मार्गदर्शक सूचना क्रमांक ४.५ नुसार) वैयक्तिक घरगुती शौचालय (IHHL) करिता वैयक्तिक शौचालयाची अंदाजे किंमत रु. ३०,०००/- इतकी विचारात घेतली आहे. बृहन्मुंबई महानगरपालिका वगळून इतर नागरी स्थानिक स्वराज्य संस्थाकरीता केंद्र शासनाचा व राज्य शासनाचा निधी अनुक्रमे रु. ४०००/- व रु. ८,०००/- इतका निर्धारित करण्यात आला आहे. तसेच बृहन्मुंबई महानगरपालिका क्षेत्राकरीता केंद्र शासनाचा व राज्य शासनाचा निधी अनुक्रमे रु. ४,०००/- व रु. १,०००/- इतका निर्धारित करण्यात आला आहे.

ii) सामुदायिक शौचालय, सार्वजनिक शौचालय व मुत्रालय बांधकाम:-

स्थानिक स्वराज्य संस्थेने आपल्या शहरातील उघडयावर शौच अथवा लघवी केली जाणारी सर्व मुख्य ठिकाणे (हॉटस्पॉट्स) लक्षात घेऊन त्यानुसार पुरेशा प्रमाणात सामुदायिक व सार्वजनिक शौचालये व मुत्रालये (सहज अंतरावरील) उभारणीसाठी तरतूद करावी.

वैयक्तीक शौचालय नसणाऱ्या प्रत्येक कुटुंबासाठी सामुदायिक शौचालय (CA) तसेच सार्वजनिक ठिकाणापासून किमान ५०० मीटर अंतराच्या आत स्वच्छ, कार्यरत व वापरासाठी खुले सार्वजनिक शौचालय व मुत्रालय (PT & Urinal) असावेत.

ऐतिहासिक/ धार्मिक/ पर्यटन स्थळे अशा महत्वपूर्ण ठिकाणी आवश्यकतेनुसार अतिरिक्त सार्वजनिक शौचालयांची तरतूद करण्यात यावी. अशी महत्वपूर्ण ठिकाणची शौचालये केंद्र शासनाच्या मार्गदर्शक सुचनांनुसार सुविधांनी परिपूर्ण असावीत.

सर्व सामूदायिक व सार्वजनिक शौचालये व मुत्रालये यांच्या बांधकामाकरिता प्रत्येक शहराचा शहर स्वच्छता कृती आराखडा (CSAP) आंतर विश्लेषणासह (Gap Analysis) राज्यस्तरीय तांत्रिक समितीकडून (SLTC) मान्यताप्राप्त असणे आवश्यक आहे.

निधीविषयक धोरण :-

केंद्र शासनाने सामूदायिक व सार्वजनिक शौचालयाचा प्रति सीट खर्च रु. १,५०,०००/- या प्रमाणे व धार्मिक/ऐतिहासिक/पर्यटन स्थळावरील महत्वपूर्ण ठिकाणी प्रति सीट खर्च रु. २,५०,०००/- या प्रमाणे निर्धारित/अंदाजित केला आहे. तसेच मुत्रालयाचा प्रति सीट निर्धारित/अंदाजित खर्च रु. ३२,०००/- याप्रमाणे आहे. अशा प्रकारे बांधण्यात येणाऱ्या सामूदायिक व सार्वजनिक शौचालय व मुत्रालयांचा देखभाल व दुरुस्तीचा किमान ५ वर्षांचा करार केलेला असावा.

४.३ वापरलेल्या पाण्याचे व्यवस्थापन:

उद्दिष्ट: या घटकाचा उद्देश प्रक्रिया न केलेला मल/मलगाळ किंवा वापरलेले पाणी पर्यावरणात सोडले जाणार नाही याची सुनिश्चिती करण्यासाठी आणि सर्व वापरलेले पाणी (सीवरेज आणि सेप्टेज, ग्रे वॉटर आणि ब्लॅक वॉटर सह) हे सुरक्षितरित्या बंदिस्तपणे, वाहतूक आणि प्रक्रिया केले जाईल तसेच १ लाखापेक्षा कमी लोकसंख्या असलेल्या सर्व शहरांमध्ये प्रक्रिया केलेल्या पाण्याचा जास्तीत जास्त पुनर्वापर केला जाईल हा आहे. या अंतर्गत खालील घटक निधीसाठी पात्र असतील:

- सर्व सेप्टिक टाक्या नियतकालीन स्वच्छ (डिस्लजिंग) करणे कामी उपकरणांची खरेदी करणे.
- नाला अडवणे आणि वळवणे (Interception & Diversion)
- वापरलेल्या पाण्याच्या प्रक्रियेसाठी सांडपाणी प्रक्रिया प्रकल्प (STP)/सांडपाणी प्रक्रिया प्रकल्पासह मलजल प्रक्रिया प्रकल्प (FSTP) बांधणे.

केंद्रीय मार्गदर्शक सूचनानुसार शहराने शहर स्वच्छता कृती आराखडा (CSAP) बनवावा. त्यानुसार, आंतरविश्लेषण (Gap Analysis) करून मार्गदर्शक सूचनानुसार भूयारी गटार जाळ्यासह संपूर्ण वापरलेल्या पाण्यावर प्रक्रिया केली जाईल असा आपला सविस्तर प्रकल्प अहवाल तयार करणे आवश्यक असेल.

४.३.१ पाण्याचे पुर्नचक्रीकरण व पुर्नवापर :

शहराने खालील बाबींसाठी प्रक्रिया केलेल्या वापरलेल्या पाण्याचा स्वतःसाठी किंवा विक्रीसाठी वापर करावा.

- शौचालय, बागकाम, पिण्याच्या पाणी वापराव्यतिरिक्त इत्यादी वापरासाठी
- शेतीकरिता
- फलोत्पादनाकरिता
- औद्योगिक वापराकरिता
- नागरी स्थानिक स्वराज्य संस्थेच्या बांधकाम वापराकरिता, धूलिकण कमी करण्यासाठी, रस्त्यावर पाणी शिंपडण्यासाठी इत्यादी.

निधी विषयक धोरण :-

या घटकांतर्गत १ लाखांपेक्षा कमी लोकसंख्या असलेली सर्व शहरे किमान ODF++ व यापैकी ५०% शहरे किमान Water+ होतील, या उद्देशाकरिता निधी प्राप्तीसाठी पात्र असतील.

नाला अडवणे आणि वळवणे (Interception & Diversion) व वापरलेल्या पाण्याच्या प्रक्रियेसाठी सांडपाणी प्रक्रिया प्रकल्प (STP)/ सांडपाणी प्रक्रिया प्रकल्पासह मलजल प्रक्रिया प्रकल्प (FSTP) बांधणे या उद्दीष्टाकरिता १ लाखाहून कमी लोकसंख्येच्या शहरास ५०% इतका केंद्र शासनाचा निधी अनुज्ञेय राहील.

१ लाखापेक्षा कमी लोकसंख्या असलेल्या शहरांमध्ये कोअर सॅनिटेशन झोन (CSZ) मधील मलजल वाहिन्यांच्या कामाचा खर्च हा “ब” वर्ग नगरपरिषदेकरीता राज्याचा हिस्सा ८०% आणि संबंधित नगरपरिषदेचा हिस्सा २०% असेल तर “क” वर्ग नगरपरिषद/ नगरपंचायतीकरीता राज्याचा हिस्सा ९०% आणि संबंधित नगरपरिषद/ नगरपंचायती हिस्सा १०% असेल.

४.४ माहिती शिक्षण प्रसार व जनजागृती/नागरीकांच्या सवयींमधील बदल

(Information Education Communication/Behaviour Change Communication) :

उद्देश: या घटकांचा उद्देश “कचरामुक्त” शहरांचे ध्येय साध्य करण्याकरिता लोकचळवळ तीव्र करणे आणि स्वच्छ वर्तन आणि संबंधित कृती संस्थात्मक करण्यासाठी मोठ्या प्रमाणावर नागरिकांपर्यंत पोहोचून जागरूकता निर्मिती सुनिश्चित करणे हा आहे.

निधीविषयक धोरण:-

केंद्र शासनाच्या मार्गदर्शक सूचनांनुसार या घटकांतर्गत केंद्र व राज्याच्या निधीचे प्रमाण ६०: ४० निर्धारित केला जाईल. राज्याने प्राप्त रकमे पैकी किमान ५०% रक्कम शहरांना द्यावी.

४.५ क्षमता बांधणी (Capacity Building)-

या घटकाचा उद्देश अभियानाची उद्दिष्टे साध्य करणे व कार्यक्रमात्मक हस्तक्षेप प्रभावीपणे अंमलात आणणेकरिता संस्थात्मक क्षमता निर्माण करणे हा आहे. शाश्वत परिणाम साधण्यासाठी आणि शहरांना अभियानाशी जोडण्याकरिता खालील माध्यमातून क्षमता बांधणी केली जाईल:

अ) तांत्रिक तसेच प्रशासनाच्या पैलूंमध्ये संस्थात्मक आणि वैयक्तिक क्षमता निर्माण करण्यासाठी ई-लर्निंग आणि इतर सिद्ध व्यासपीठांचे बळकटीकरण करणे.

ब) स्वच्छता आणि कचरा व्यवस्थापन क्षेत्रात कौशल्य विकासावर भर देणे.

या घटकांतर्गत राज्य स्तरावर कार्यक्रम व्यवस्थापन कक्ष (PMU) गठीत करण्यास तसेच मनुष्यबळ प्रशिक्षणासाठी राज्य स्तरीय तांत्रिक संस्था नेमण्यास मान्यता देण्यात येत आहे.

राज्य व शहरांच्या स्तरावर माहिती, प्रसार व तंत्रज्ञान उपक्रमांसाठी विक्रेते/ संस्थांची निश्चिती करणे, आंतरविश्लेषण करणे (Gap analysis), सामाजिक लेखापरीक्षण

(Social Audit) करणे, भेटी (exposure visits) आयोजित करणे, तरुण व्यावसायिक व उद्योजक यांच्या सेवा भाडे तत्वावर घेणे अथवा त्यांची नेमणूक करणे, तरुणांना स्वच्छ महाराष्ट्र २.० अभियानाशी जोडणे व तळागाळातील क्षमता बांधणीसाठी स्वयंसेवी संस्थां NGOs/CBOs/CSOs यांची नेमणूक या घटकांतर्गत करण्यात येईल.

या घटकांतर्गत क्षमता बांधणी करण्याकरिता शहर स्तरावर प्रशासकीय अधिकारी, तांत्रिक व आरोग्य अधिकारी आणि स्वच्छता कर्मचारी व सफाईमित्र या सर्वांना प्रशिक्षण देणे व त्यांचा कौशल्य विकास घडवून आणावा. यासाठी शाळा, महाविद्यालये, NCC/ NSS/ NYK, कौशल्य विकास संस्थांचा समावेश करण्यात यावा. तसेच स्वच्छता व घनकचरा व्यवस्थापन क्षेत्रातील उत्कृष्टता केंद्रांची (Centre of Excellence) स्थापना करण्यात यावी.

निधी बाबत धोरण :-

या घटकांतर्गत केंद्र:राज्य निधीचे प्रमाण ६०:४० या प्रमाणे असेल. राज्याच्या उच्चाधिकार समितीने राज्याच्या क्षमता बांधणी आराखड्यास मान्यता दिल्याप्रमाणे प्राप्त होणाऱ्या निधी पैकी किमान ५०% निधी शहरांना उपलब्ध करून द्यावा.

५. स्वच्छ महाराष्ट्र अभियान (नागरी) २.० निधी स्रोत :-

“स्वच्छ महाराष्ट्र अभियान (नागरी) २.०” च्या विविध घटकांच्या अंमलबजावणीकरिता केंद्र शासन व राज्य शासनाच्या निधी व्यतिरिक्त नागरी स्थानिक स्वराज्य संस्थांकरीता स्वतःच्या निधी व्यतिरिक्त अन्य स्रोत पुढील प्रमाणे आहेत:

- १) खाजगी- सार्वजनिक भागीदारी तत्वावरील निधी (Public Private Partnership Fund)
 - २) लाभार्थ्यांचा सहभाग (Beneficiary Share)
 - ३) वापरकर्ता शुल्क (Users Charges)
 - ४) कॉर्पोरेट सामाजिक जबाबदारी (Corporate Social Responsibility)
 - ५) खाजगी क्षेत्र सहभाग
 - ६) बाह्य सहाय्य (External Assistance)
 - ७) इतर सहाय्य
- नागरी स्थानिक स्वराज्य संस्थाना स्वच्छ महाराष्ट्र अभियान २.० अंतर्गत प्रकल्प किंमतीपैकी स्वहिस्स्याची रक्कम वित्तीय संस्थांकडून कर्ज घेऊन उभारता येईल.
 - या अभियानात सहभागी होणाऱ्या व आर्थिक दृष्ट्या सक्षम नसणाऱ्या नागरी स्थानिक स्वराज्य संस्थांना प्रकल्प उभारणीकरिता आवश्यक असल्यास तांत्रिक व आर्थिक सहाय्य (Techno-Financial assistance) शासनामार्फत देण्यात येईल, अशा प्रकल्पांचे प्रस्ताव नागरी स्वराज्य संस्थांनी शासनास मंजूरीस्तव सादर करावे.
 - स्वच्छ महाराष्ट्र अभियान २.० प्रकल्पातील घनकचरा व्यवस्थापन व मलनिस्सारण या घटकांकरिता भूसंपादनासाठी अर्थसहाय्य आवश्यक असल्यास राज्य शासनाने नागरी स्थानिक संस्थांना स्वतंत्रपणे अर्थसहाय्य करावे.

६. निधी वितरणाशी संबंधित अन्य महत्वाच्या बाबी-

अ) वैयक्तिक शौचालय, सामुहिक शौचालय, सार्वजनिक शौचालय आणि मुत्रालयांना देण्यात येणारा निधी हा एकत्रितपणे केंद्र शासनाकडून राज्य शासनाला दिला जाणार

असून राज्य शासनाच्या मान्यतेने आवश्यकतेप्रमाणे निधीचा आपसात बदल करता येईल.

ब) राज्यस्तरीय तांत्रिक समितीस (SLTC) राज्यास मिळणाऱ्या वैयक्तिक शौचालय, सामुदायिक शौचालय, सार्वजनिक शौचालय व मुत्रालयाकरिताच्या निधीच्या अधीन राहून उद्दिष्टे पुनर्निर्धारित करण्याची मुभा देण्यात आली आहे.

क) या अभियाना अंतर्गत केवळ नवीन प्रकल्प विचारात घेतले जातील आणि कोणत्याही प्रकारच्या प्रकल्पाची व्दिरुक्ती (Duplication) होणार नाही याची दक्षता घ्यावी.

ड) सविस्तर प्रकल्प अहवाल तयार करताना या करीता प्रकल्पाच्या किंमतीमध्ये सविस्तर प्रकल्प अहवाल निर्मिती, संनियंत्रण व तांत्रिक मान्यता फी अंतर्भूत करण्यात यावी.

७. अभियानाकरीता पूर्व- प्रवेश अटीं-

केंद्र शासनाच्या गृहनिर्माण तथा नागरी कार्य मंत्रालयाद्वारे (MoHUA) प्रसिध्द केलेल्या मार्गदर्शक सूचनांनुसार स्वच्छ भारत अभियान- २.० मध्ये सहभाग घेण्यासाठी राज्याने आणि शहरांनी खालील पूर्व -प्रवेश अटींची पूर्तता करणे आवश्यक आहे.

१. १५ व्या वित्तीय आयोगाच्या शिफारशीप्रमाणे मालमत्ताकराची आकारणी बाजार मुल्याप्रमाणे नियमितपणे करणे.
२. वापरकर्ता शुल्काची (Users Charges) आकारणी करून नियमितपणे त्यात वाढ करून ती वसूल करणे.
३. सर्व नागरी स्थानिक स्वराज्य संस्थांनी सार्वजनिक वित्तीय व्यवस्थापन प्रणाली (P.F.M.S) चा वापर करणे आवश्यक आहे. स्वच्छ भारत अभियान (नागरी) २.० अंतर्गत केंद्र शासनाकडून निधी मिळण्यासाठी सर्व प्रकारचे व्यवहार हे DBT/EAT प्रणालीद्वारेच करणे आवश्यक राहणार आहे. या अनुषंगाने निधी वितरणाची कार्यपद्धती केंद्रीय वित्त विभागाचे कार्यालयीन परिपत्रक क्रमांक १ (१३) P.F.M.S / F.C.D. २०:२०, दिनांक २३ मार्च, २०२१ किंवा वेळोवेळी दिले जाणाऱ्या निदेशाप्रमाणे केली जावी.

८. स्वच्छ भारत अभियान (नागरी) २.० साठी संस्थात्मक रचना पुढील प्रमाणे असेल:

❖ केंद्रस्तर:-

केंद्र शासनाच्या मार्गदर्शक सूचनांमधील प्रकरण ३ मध्ये याबाबत सविस्तर सूचना देण्यात आल्या आहेत. त्यानुसार, केंद्र शासनाच्या स्तरावर सचिव, नगर विकास मंत्रालय यांच्या अध्यक्षतेखाली “राष्ट्रीय सल्लागार आणि आढावा समिती” (NARC) असेल. तसेच नगर विकास मंत्रालयामध्ये राष्ट्रीय अभियान संचालनालय (National Mission Directorate) असेल.

❖ राज्यस्तरीय प्रशासकीय संरचना :

अ) राज्य उच्चाधिकार समिती (SHPC):-

केंद्र शासनाच्या मार्गदर्शक सूचनांमधील प्रकरण ३ मधील ३.२.१ मध्ये नमूद केल्यानुसार स्वच्छ भारत अभियान (नागरी) २.० च्या व्यवस्थापनासाठी पुढीलप्रमाणे राज्य उच्चाधिकार समिती गठित करण्यास मान्यता देण्यात येत आहे.

१) मा.मुख्य सचिव	अध्यक्ष
२) अपर मुख्य सचिव /प्रधान सचिव, नवि-२ (नगर विकास विभाग)	सदस्य
३) सचिव / प्रधानसचिव/ अपर मुख्य सचिव (पाणी पुरवठा व स्वच्छता)	सदस्य
४) सचिव / प्रधानसचिव /अपर मुख्य सचिव (वित्त)	सदस्य
५) सचिव / प्रधान सचिव/ अपर मुख्य सचिव (गृहनिर्माण)	सदस्य
६) सचिव / प्रधान सचिव/ अपर मुख्य सचिव (पर्यावरण व वातावरणीय बदल)	सदस्य
७) अध्यक्ष (महाराष्ट्र राज्य प्रदुषण मंडळ)	सदस्य
८) केंद्र शासनाच्या गृहनिर्माण तथा नागरी कार्य मंत्रालयाचा प्रतिनिधी	सदस्य
९) राज्य अभियान संचालक स्वच्छ भारत अभियान (ग्रामीण)	सदस्य
१०) राज्य अभियान संचालक स्वच्छ महाराष्ट्र अभियान (नागरी) संचालनालय	सदस्य सचिव

राज्य उच्चाधिकार समिती आवश्यकतेनुसार एखादया सदस्याचा समावेश समितीमध्ये करू शकेल. राज्य उच्चाधिकार समितीची कार्यकक्षा व भूमिका केंद्र शासनाच्या मार्गदर्शक सुचनांनुसार असेल. उच्चाधिकार समितीची बैठक वर्षातून किमान २ किंवा अधिक वेळा घेण्यात यावी.

• **राज्य उच्चाधिकार समितीची कार्यकक्षा व भूमिका :**

राज्य उच्चाधिकार समितीची भूमिका मुख्यत्वे धोरणात्मक असेल. तसेच खालील बाबींमध्ये ती नियामकाची भूमिका बजावेल.

i. **नियोजन :**

- स्वच्छ भारत अभियान (नागरी) २.० ची उद्दिष्टे साध्य करण्याकरिता सर्व समावेशन योजनेस मान्यता देणे.
- निधी प्रवाहाबाबतचे अल्प, मध्यम व दीर्घकालीन धोरण ठरविणे
- अतिरिक्त संशोधनाचे नियोजन करणे.
- शहरे व संलग्न ग्रामीण भागाच्या सामायिक पायाभूत सुविधा प्रकल्प उभारणी करिता क्लस्टरची निवड करणे.
- आवश्यक पायाभूत सुविधा उभारण्या करिता अडथळा मुक्त जमीन उपलब्धतेसाठी नियोजन करणे.

ii. **प्रकल्प अंमलबजावणीतील प्रगतीचा आढावा घेणे**

- राज्याच्या शहरी व ग्रामीण भागात स्वच्छता व घनकचरा व्यवस्थापन कृतीचे अभिसरण सुनिश्चित करणे आणि या करिता आंतर-विभागीय समन्वय निर्माण करणे.
- प्रकल्प अंमलबजावणीचा स्वतंत्र आढावा व संनियंत्रण.
- वितरीत निधीचे वेळेत लेखापरिक्षण करून घेणे तसेच लेखापरिक्षण व अन्य अहवालानुसार कृती अहवालांचा आढावा घेणे.

iii. **भागधारकांची क्षमता वृद्धी करणे.**

- शहराला वापरलेले पाणी व्यवस्थापनासाठी मदत करू शकतील अशा सहकार्य करणाऱ्या संस्थांची क्षमतावृद्धी करणे.

- अभियानांतर्गत घेण्यात आलेले क्षमतावृद्धी, माहिती, शिक्षण आणि प्रसार, व जनजागृती उपक्रमांचा आढावा घेणे.
- अभियानाच्या कार्यक्षम अंमलबजावणीसाठी संबंधित इतर कोणतीही बाब विचारार्थ घेणे अथवा राष्ट्रीय स्वच्छ भारत अभियान संचालनालयाने संदर्भीत केलेल्या बाबी विचारार्थ घेणे.

ब) राज्यस्तरीय तांत्रिक समिती (SLTC):-

स्वच्छ भारत अभियानाच्या (नागरी) २.० च्या अंमलबजावणीच्या अनुषंगाने प्रकल्पांना मान्यता देणे व त्यांचा वेळोवेळी आढावा घेण्यासाठी व संनियंत्रण करण्यासाठी अपर मुख्य सचिव/प्रधान सचिव, (नवि-२) नगर विकास विभाग यांच्या अध्यक्षतेखाली पुढील प्रमाणे राज्यस्तरीय तांत्रिक समिती गठित करण्यास मान्यता देण्यात येत आहे.

१) अपर मुख्य सचिव /प्रधान सचिव, नवि-२, (नगर विकास विभाग)	अध्यक्ष
२) सचिव / प्रधान सचिव / अपर मुख्य सचिव (पाणी पुरवठा व स्वच्छता विभाग)	सदस्य
३) सचिव / प्रधान सचिव/ अपर मुख्य सचिव (वित्त)	सदस्य
४) सचिव / प्रधान सचिव / अपर मुख्य सचिव (पर्यावरण व वातावरणीय बदल)	सदस्य
५) महाराष्ट्र राज्य प्रदुषण मंडळाचा प्रतिनिधी	सदस्य
६) केंद्र शासनाच्या गृहनिर्माण तथा नागरी कार्य मंत्रालयाचा प्रतिनिधी	सदस्य
७) राज्य सहयोगी संस्थांचे (Parastatal entities) प्रतिनिधी	सदस्य
८) राज्य अभियान संचालक, स्वच्छ महाराष्ट्र अभियान (नागरी) संचालनालय	संयोजक

समिती आवश्यकतेनुसार इतर कोणत्याही सदस्याचा समावेश समितीमध्ये करू शकेल. राज्यस्तरीय तांत्रिक समितीची कार्यक्षमता/भूमिका केंद्र शासनाच्या मार्गदर्शक सूचनानुसार असेल.

i. राज्यस्तरीय तांत्रिक समितीची कार्यक्षमता /भूमिका :

- शहरांना ODF+, ODF++, Water + व ३ स्टार मानांकित बनवण्याकरिता राज्याचा वर्ष निहाय कालबद्ध कृती आराखडा तयार करणे.
- शहरांना शहर घनकचरा व्यवस्थापन कृती आराखडा (CSWAP- City Solid Waste Action Plan) व शहर स्वच्छता कृती आराखडा (CSAP-City Sanitation Action Plan) बनवण्याकरिता मदत करणे.
- सविस्तर प्रकल्प अहवाल (DPR) तयार करण्याकरिता माहिती तंत्रज्ञानावर आधारित साधने व उपाय यांचा वापर करणे.
- स्वच्छता, घनकचरा व्यवस्थापन, वापरलेले पाणी व्यवस्थापन, माहिती, शिक्षण व प्रसार (IEC) व क्षमता वृद्धी याबाबत शहरांनी प्रस्तावित केलेले सविस्तर प्रकल्प अहवाल (DPR) व प्रकल्पांचा आढावा घेणे.
- मंजूर प्रकल्पांचे प्रस्ताव निधी वितरणासाठी प्रकल्प ट्रॅकींग सिस्टिमवर (PTS) अपलोड करण्यास मान्यता देणे.

केंद्र शासनाच्या मार्गदर्शक सूचनांनुसार राज्यस्तरीय तांत्रिक समितीची (SLTC) ची बैठक तीन (३) महिन्यातून किमान एकदा किंवा अधिक वेळा (शहरांच्या प्रस्ताव प्राप्तीनुसार) घेण्यात यावी.

क) राज्य नागरी अभियान संचालनालय :

केंद्र शासनाच्या मार्गदर्शक सूचनांमधील प्रकरण ३ मधील ३.२.३ मध्ये नमूद केल्यानुसार, स्वच्छ भारत अभियान (नागरी) २.० साठी अभियान संचालनालय स्थापन करणे आवश्यक आहे. यापूर्वी स्वच्छ महाराष्ट्र अभियान (नागरी) च्या अंमलबजावणी करीता नगर विकास विभाग, शासन निर्णय क्रमांक स्वभाअ-२०१५/प्र.क्र.२३/नवि-३४, दिनांक २४ एप्रिल, २०१५ व्दारे स्थापन करण्यात आलेल्या राज्य अभियान (नागरी) संचालनालयास स्वच्छ महाराष्ट्र अभियान (नागरी) २.० च्या अंमलबजावणीकरीता अभियान कालावधीसाठी कार्यरत राहण्यास मान्यता देण्यात येत आहे.

या संचालनालयाचे प्रमुख राज्य अभियान संचालक असतील. त्यांच्या वेतन व भत्तेपोटी होणारा आवर्ती खर्च यापूर्वी प्रमाणेच राज्य शासनाच्या निधीमधून करण्यात येईल.

i. राज्य अभियान संचालकांच्या कामाचे स्वरूप:

- नागरी स्थानिक स्वराज्य संस्थास्तरावर प्रकल्पाचे नियोजन, मान्यता, अंमलबजावणी इत्यादी करण्यासाठी राज्याकरीता समान संरचना (Uniform Structure) निश्चित करणे.
- शहरांच्या शहर घनकचरा व्यवस्थापन कृती आराखडा (CSWAP- City Solid Waste Action Plan) व शहर स्वच्छता कृती आराखडा (CSAP-City Sanitation Action Plan) चा आढावा घेणे.
- शहरांच्या प्रकल्पानुसार राज्यस्तरावरील एकत्रित भौतिक व आर्थिक उद्दिष्टे निर्धारित करणारी योजना राज्यस्तरीय तांत्रिक समिती (SLTC) ला सादर करणे.
- अतिरिक्त संसाधनांच्या वापरासाठी नियोजन करणे.
- सविस्तर प्रकल्प अहवाल तयार करण्यासाठी माहिती व तंत्रज्ञानाची साधने विकसीत करणे.
- राज्य उच्चाधिकार समितीच्या मार्गदर्शनाखाली निधीचे लघु, मध्यम आणि दीर्घकालीन नियोजन करणे.
- अभियानांतर्गत प्रकल्पांसाठी निधी वितरित करणेकरिता (हप्त्यांप्रमाणे) शिफारस करणे.
- स्वच्छता विषयक बाबींकरिता आवश्यकतेनुसार राज्याच्या आंतरविभागामध्ये समन्वय साधणे.
- वितरीत केलेल्या निधीचे वेळेवर लेखापरिक्षण करणे आणि त्यावर कार्यवाही करणे.
- प्रकल्पांच्या त्रयस्थ पाहणी आणि देखरेखकरीता संस्थांचे पॅनल तयार करणे.
- शहरांकडून प्राप्त सविस्तर प्रकल्प आराखड्याची तांत्रिक छाननी करणे व याबाबत अपर मुख्य सचिव /प्रधान सचिव, नगर विकास विभागाच्या अध्यक्षतेखालील राज्यस्तरीय तांत्रिक समितीची (SLTC) च्या बैठकीचे संयोजन करणे.
- उच्चाधिकार समितीच्या बैठकीची विषयसूची (अजेंडा) तयार करण्यासाठी अपर मुख्य सचिव/प्रधान सचिव, नगर विकास विभाग यांना सहाय्य करणे, इत्यादी.

- अन्य कुठल्याही बाबी ज्यामुळे अभियानाचे काम सुरळीतपणे पार पाडले जाईल किंवा केंद्रीय अभियान संचालक यांनी निर्देशित केलेले अन्य कोणतेही बाबीबाबत कार्यवाही करणे.

ii. राज्य अभियान संचालनालयाचे स्वरूप व रचना-

- अ) स्वच्छ भारत अभियान (नागरी) मध्ये निर्माण केलेले अभियान संचालक यांचे पद यापूर्वी मंजूर केले असल्यामुळे त्यांचा कालावधी स्वच्छ भारत अभियान (नागरी) २.० संपेपर्यंत वाढविण्यात येत आहे.
- ब) अभियानामधील नमूद विविध घटकांची राज्यातील ४०० हून अधिक सर्व वैधानिकरित्या स्थापित झालेल्या नागरी स्थानिक स्वराज्य संस्थांमध्ये अंमलबजावणी करावयाची असल्याने राज्य अभियान संचालक हे स्वच्छ भारत अभियान (नागरी) प्रमाणेच, मुख्याधिकारी संवर्गातील वरिष्ठ अधिकारी (किमान निवडश्रेणी दर्जाचे) असतील.

राज्य अभियान संचालकांना व्यापक जबाबदाऱ्या पार पाडण्याकरीता मदत करण्यासाठी पुढील पदांची आवश्यकता आहे.

i. उपायुक्त (मुख्याधिकारी संवर्गातील गट-अ अधिकारी)	१ पद
ii. सहाय्यक आयुक्त (मुख्याधिकारी संवर्गातील गट-ब अधिकारी)	२ पदे
iii. लेखाधिकारी- नगरपरिषद कर्मचारी संवर्ग (गट -क)	१ पद
iv. तांत्रिक तज्ञ	४ पदे
v. डाटा एंन्ट्री ऑपरेटर	४ पदे
vi. लघुलेखक	१ पद
vii. शिपाई	१ पद

सदर उपायुक्त, सहाय्यक आयुक्त व लेखाधिकारी- नगरपरिषद कर्मचारी संवर्ग (गट-क) यांच्या सेवा नगरपरिषद प्रशासन संचालनालयातील अधिकाऱ्यांमधून उसनवारी तत्त्वाने उपलब्ध करून घेतल्या जातील. त्यांच्या नियुक्तीचा कालावधी अभियान संपेपर्यंत असेल. तसेच तांत्रिक तज्ञ, डाटा एंन्ट्री ऑपरेटर, लघुलेखक व शिपाई यांची नियुक्ती कंत्राटी तत्वावर करण्यात यावी. यावरील खर्च क्षमता बांधणी घटकामधून भागविण्यात यावा.

iii. राज्यस्तरीय प्रकल्प व्यवस्थापन कक्ष (Project Management Unit)

केंद्र शासनाच्या मार्गदर्शक सूचनांमधील प्रकरण ३ मध्ये दर्शविल्याप्रमाणे राज्य अभियान संचालकास मदत करण्यासाठी पुढीलप्रमाणे राज्यस्तरीय प्रकल्प व्यवस्थापन कक्षाची (PMU) स्थापना करण्यास मान्यता देण्यात येत आहे. या कक्षाची संरचना पुढील प्रमाणे असेल:-

i. घनकचरा व्यवस्थापन तज्ञ (Solid Waste Management Expert)	१ पद
ii. वापरलेले पाणी तज्ञ (Waste Water Expert)	१ पद
iii. खरेदी/ निविदा विशेषज्ञ (Procurement Specialist)	१ पद
iv. क्षमता बांधणी विशेषज्ञ (CB Specialist)	१ पद
v. माहिती, शिक्षण व प्रसार विशेषज्ञ (IEC Specialist)	१ पद

vi. देखरेख व मूल्यमापन विशेषज्ञ (M&E Specialist)	१ पद
vii. माहिती व तंत्रज्ञान विशेषज्ञ (IT Specialist)	१ पद
viii. दस्तऐवजीकरण विशेषज्ञ (Documentation Specialist)	१ पद
ix. आवश्यकतेनुसार अतिरिक्त विशेषज्ञ (Additional Specialist)	१ पद

स्वच्छ भारत अभियान (नागरी) २.० च्या मार्गदर्शक सूचनानुसार अभियानाची अंमलबजावणी करण्याकरिता राज्याच्या आवश्यकतेनुसार या कक्षामधील तज्ञांची कंत्राटी तत्वावर नियुक्ती करण्यात येईल. याकरीता त्यांची शैक्षणिक अर्हता व अनुभव निश्चित करणे, मानधन व भत्ते इत्यादी बाबी अपर मुख्य सचिव/ प्रधान सचिव (नवि-२), नगरविकास विभाग हे निर्धारित करतील. या कंत्राटी तज्ञांचे मानधन व भत्ते केंद्र शासनाकडून स्वच्छ भारत अभियान (नागरी) २.० अंतर्गत क्षमता बांधणी आणि आस्थापना व कार्यालयीन खर्च या घटकासाठी उपलब्ध होणाऱ्या तरतूदीमधून भागविण्यात यावा.

ड) विभागीय स्तर :

स्वच्छ भारत अभियान (नागरी) २.० ची अंमलबजावणी राज्यातील सर्व शहरांमध्ये प्रभावीपणे करण्यासाठी तसेच स्वच्छ सर्वेक्षण, हागणदारीमुक्त शहरांचा दर्जा व कचरामुक्त शहरांकरिताचे स्टार मानांकन याबाबत शहरांना तांत्रिक मदत करण्याकरिता राज्य अभियान संचालनालयाप्रमाणेच “विभागीय स्तरीय प्रकल्प व्यवस्थापन कक्ष” स्थापन करण्यास मान्यता देण्यात येत आहे. या कक्षाची संरचना पुढील प्रमाणे असेल.

- i. सहआयुक्त, नगरपरिषद प्रशासन, विभागीय आयुक्त कार्यालय (कक्ष प्रमुख)
- ii. सहायक आयुक्त (गट - ब)
- iii. कंत्राटी तत्वावरील तांत्रिक तज्ञ

अभियान संचालनालयामार्फत या कक्षामधील तज्ञांची (प्रति विभाग १ याप्रमाणे एकूण ६ पदे) कंत्राटी तत्वावर नियुक्ती करणे, त्यांची शैक्षणिक अर्हता, अनुभव, मानधन, भत्ते व अनुषंगीक बाबी अपर मुख्य सचिव/प्रधान सचिव (नवि-२), नगरविकास विभाग यांच्या मान्यतेने निर्धारित करण्यात येतील. या कंत्राटी तज्ञांचे मानधन व भत्ते क्षमता बांधणी आणि आस्थापना व कार्यालयीन खर्च या घटकाकरीता उपलब्ध होणाऱ्या तरतूदीमधून भागविण्यात येईल.

इ. जिल्हा स्तर:

- I. स्वच्छ भारत अभियान (नागरी) २.० च्या मार्गदर्शक सूचनांनुसार राज्यातील प्रत्येक जिल्ह्याकरीता जिल्हाधिकारी यांच्या अध्यक्षतेखाली जिल्हास्तरीय समिती स्थापन करण्यास मान्यता देण्यात येत आहे. सदर समिती स्वच्छ भारत अभियान (नागरी) व स्वच्छ भारत अभियान (ग्रामीण) च्या समन्वयासाठी जबाबदार असेल.
- II. या अभियानाची जिल्ह्यातील नागरी क्षेत्रात प्रभावी अंमलबजावणी व संनियंत्रणाकरिता तसेच अभियानांतर्गत नमूद उद्दिष्टे साध्य करण्याकरिता विभागीय स्तराप्रमाणेच जिल्हास्तरावर देखील खालीलप्रमाणे “जिल्हास्तरीय प्रकल्प व्यवस्थापन कक्ष” स्थापन करण्यास मान्यता देण्यात येत आहे. या कक्षाची संरचना पुढील प्रमाणे असेल.
 - i. सहआयुक्त (जिल्हा प्रशासन अधिकारी), नगरपरिषद प्रशासन, जिल्हाधिकारी कार्यालय (कक्ष प्रमुख)

ii. मुख्याधिकारी (जिल्हाधिकारीद्वारे नियुक्त)

iii. कंत्राटी तत्वावरील तांत्रिक तज्ञ (जिल्हास्तर)

जिल्हा स्तरावरील प्रकल्प व्यवस्थापन कक्षाची जिल्ह्यातील सर्व शहरांमध्ये अभियानाची प्रभावीपणे अंमलबजावणी करणे तसेच स्वच्छ सर्वेक्षण, हागणदारीमुक्त शहरांचा दर्जा व कचरामुक्त शहरांकरिताचे स्टार मानांकन याबाबत शहरांना तांत्रिक मदत करणे ही प्रमुख जबाबदारी असेल.

अभियान संचालनालयामार्फत या कक्षामधील तज्ञांची (प्रति जिल्हा १ याप्रमाणे) कंत्राटी तत्वावर नियुक्ती करणे, त्यांची शैक्षणिक अर्हता, अनुभव, मानधन, भत्ते व अनुषंगीक बाबी अपर मुख्य सचिव/ प्रधान सचिव (नवि-२), नगरविकास विभाग यांच्या मान्यतेने निर्धारित करण्यात येतील. या कंत्राटी तज्ञांचे मानधन व भत्ते स्वच्छ भारत अभियान (नागरी) २.० अंतर्गत क्षमता बांधणी आणि आस्थापना व कार्यालयीन खर्च या घटकाकरीता उपलब्ध होणाऱ्या तरतूदीमधून भागविण्यात यावा.

ई. नागरी स्थानिक स्वराज्य संस्था स्तर:

अभियानाची जबाबदारी पार पाडण्यासाठी महानगरपालिका / नगरपरिषद / नगरपंचायत स्तरावर आयुक्त/मुख्याधिकारी यांच्या अध्यक्षतेखाली “शहर अभियान व्यवस्थापन कक्ष” स्थापन करण्यास मान्यता देण्यात येत आहे.

स्वच्छ भारत अभियान (नागरी) २.० च्या केंद्र शासनाच्या मार्गदर्शक सूचनांनुसार नागरी स्थानिक स्वराज्य संस्था स्तरावर महानगरपालिका आयुक्त/मुख्याधिकारी हे प्रमुख प्रशासकीय अधिकारी म्हणून अभियानातील सर्व घटकांच्या अंमलबजावणीकरीता जबाबदार असतील. अभियानातील घटकांची अंमलबजावणी सुरळीत व सुव्यवस्थितपणे पार पाडण्याची जबाबदारी त्यांच्यावर असेल.

➤ आयुक्त/मुख्याधिकारी यांच्या जबाबदाऱ्या खालील प्रमाणे असतील:

- त्यांच्या कर्मचाऱ्यांच्या क्षमता बांधणीची व्यवस्था करणे.
- आंतर-विश्लेषण (Gap Analysis) करून शहर घनकचरा व्यवस्थापन कृती आराखडा (CSWAP) आणि शहर स्वच्छता कृती आराखडा (CSAP) तयार करणे
- सविस्तर प्रकल्प अहवाल (DPR) तयार करणे
- प्रस्तावांना राज्य उच्चाधिकार समिती (HPC) व राज्यस्तरीय तांत्रिक समिती (SLTC) ची मान्यता घेणे व प्रकल्पांकरीता निधी वितरणासाठी राज्याशी समन्वय साधणे.
- प्रकल्पाची अंमलबजावणी विहीत मुदतीत पूर्ण करून तो शाश्वत व कार्यान्वयन होण्यासाठी सातत्याने संनियंत्रण करणे.
- प्रकल्प आर्थिकदृष्ट्या शाश्वत राहण्यासाठी वापरकर्ता शुल्क वसूल करणे.
- जनजागृती व नागरिकांचा सहभाग.
- तयार झालेली मालमत्ता सक्षमपणे कार्यान्वीत राहण्यासाठी नियमित आढावा व सक्षम संनियंत्रणाकरीता शहरातील निवडक नागरीकांच्या प्रतिनिधींचा समावेश असलेली शहर स्वच्छता समिती स्थापन करणे.

९. स्वच्छ महाराष्ट्र अभियान (नागरी) २.० या अभियानाकरिता वित्तीय आकृतीबंध :

केद्र पुरस्कृत स्वच्छ भारत अभियान (नागरी) २.० अंतर्गत राज्य स्तरावर हाती घेण्यात येत असलेल्या स्वच्छ महाराष्ट्र अभियान (नागरी) २.० करिता सामुदायिक शौचालये, सार्वजनिक शौचालये, मुत्रालये, वापरलेल्या पाण्याचे व्यवस्थापन व घन कचरा व्यवस्थापन या घटकांकरिता खालीलप्रमाणे वित्तीय आकृतीबंधास मान्यता देण्यात येत आहे:

अ.क्र.	नागरी स्थानिक स्वराज्य संस्थेचा प्रकार	केंद्र हिस्सा (%)	राज्य हिस्सा (%)	नागरी स्थानिक स्वराज्य संस्थेचा हिस्सा (%)
अ	१ “अ+”, “अ” वर्ग व “ब” वर्ग महानगरपालिका	२५	३५	४०
	२ “क” वर्ग महानगरपालिका	२५	४५	३०
	३ “ड” वर्ग महानगरपालिका	३३	३७	३०
	४ “अ” वर्ग नगरपरिषदा	३३	५२	१५
	५ “ब” वर्ग नगरपरिषदा	५०	४०	१०
	६ “क” वर्ग नगरपरिषदा व नगरपंचायती	५०	४५	०५
ब	७ “ब” वर्ग नगरपरिषदासाठी मलजल वाहिनीकरीता	०	८०	२०
	८ “क” वर्ग नगरपरिषदा व नगरपंचायतीसाठी मलजल वाहिनीकरीता	०	९०	१०
	९ नवीन “ब” वर्ग नगरपरिषदा, “क” वर्ग नगरपरिषदा व नगरपंचायतीसाठी घनकचरा संकलन व वहन व्यवस्थेकरीता	०	९०	१०

- वैयक्तिक शौचालयाकरीता केंद्र शासनाचे रुपये ४,०००/- प्रती शौचालय इतके अनुदान प्राप्त होणार असून, राज्य शासनाचे स्वच्छ महाराष्ट्र अभियान (नागरी) प्रमाणे बृहन्मुंबई महानगरपालिकाकरीता रु. १,०००/- प्रती शौचालय इतके आणि उर्वरित सर्व नागरी स्थानिक स्वराज्य संस्थांना रुपये ८,०००/- प्रती शौचालय इतके अनुदान अनुज्ञेय राहिल.
- १ लाखापेक्षा कमी लोकसंख्या असलेल्या शहरांच्या कोअर सॅनिटेशन झोन (CSZ) मधील मलजल वाहिन्यांकरीता खर्चामधील नागरी स्थानिक स्वराज्य संस्थांचा हिस्सा १५ व्या वित्त आयोगाच्या बंधित अनुदानातून (tied grant) करावयाचा आहे.
- या अभियानात सहभागी होणाऱ्या सर्व नागरी स्थानिक स्वराज्य संस्थांनी त्यांच्या शहरातील सांडपाण्यावर प्रक्रिया करणे बंधनकारक असेल या सांडपाण्यावर प्रक्रियाकरून पाण्याचा पर्याप्त पूर्णवापर करावा व त्यानंतरच हे पाणी नदी किंवा नाल्यामध्ये सोडण्यात यावे.

१०. सदर अभियानाकरीता केंद्र शासनाद्वारे रु. ३७५८.५० कोटी इतका निधी उपलब्ध करून देण्यात येणार आहे. उपरोक्त नमूद वित्तीय आकृतीबंधानुसार राज्य हिस्स्यापोटी अंदाजे रु. ६५६६.८० कोटी इतके आर्थिक दायित्व अपेक्षित असून शहरांनी/नागरी स्थानिक स्वराज्य संस्थांनी त्यांच्या हिस्स्यापोटी अंदाजे रु. २०८४.०१ कोटी इतका निधी उभारणे आवश्यक असेल. यानुसार या अभियानाची एकूण किंमत अंदाजे रु. १२,४०९.३१ कोटी इतकी असेल. या वित्तीय आकृतीबंधास व अनुषंगीक खर्चास मान्यता देण्यात येत आहे.

११. केंद्र शासनाच्या मार्गदर्शक सूचनामधील परिशिष्ट १० मध्ये नमूद केल्यानुसार निर्धारित केलेल्या वित्तीय मर्यादेपेक्षा प्रकल्पाची किंमत अतिरिक्त होणार नाही, याची दक्षता संबंधीत नागरी स्थानिक स्वराज्य संस्थांनी घ्यावी. वित्तीय मर्यादेपेक्षा प्रकल्पाची किंमत जास्त झाल्यास त्यापोटी होणारा अतिरिक्त खर्च संबंधीत नागरी स्थानिक स्वराज्य संस्थेने उचलणे बंधनकारक राहील.

१२. स्वच्छ महाराष्ट्र अभियान (नागरी) २.० या अभियानाच्या अंमलबजावणीसाठी केंद्र व राज्य स्तरावर अभियान कालावधी पर्यंत खालील लेखाशीर्षांतर्गत निधीची आवश्यकता व उपलब्धतेनुसार तरतूद करण्यात यावी.

- १) मागणी क्र. एफ- २, मुख्य लेखाशीर्ष- २२१७, नगरविकास, (८०) सर्वसाधारण, १९१, महानगरपालिकांना सहाय्य, (००)(७६) स्वच्छ भारत अभियानांतर्गत महानगरपालिकांना सहाय्य (केंद्र हिस्सा), ३१, सहायक अनुदाने (वेतनेतर), (२२१७९७५२) योजनांतर्गत
- २) मागणी क्र. एफ- २, मुख्य लेखाशीर्ष- २२१७, नगरविकास, (८०) सर्वसाधारण १९२, नगरपरिषदांना सहाय्य, (००) (१४) स्वच्छ भारत अभियानांतर्गत नगरपरिषदांना सहाय्य (केंद्र हिस्सा), ३१, सहायक अनुदाने (वेतनेतर), (२२१७९७७९) योजनांतर्गत
- ३) मागणी क्र. एफ- २, मुख्य लेखाशीर्ष- २२१७, नगरविकास, (८०) सर्वसाधारण १९३, नगरपंचायतींना सहाय्य, (००) (०३) स्वच्छ भारत अभियानांतर्गत नगरपंचायतींना सहाय्य (केंद्र हिस्सा), ३१, सहायक अनुदाने (वेतनेतर), (२२१७ ९७९७) योजनांतर्गत
- ४) मागणी क्र. एफ- २, मुख्य लेखाशीर्ष- २२१७, नगरविकास, (८०) सर्वसाधारण १९१, महानगरपालिकांना सहाय्य, (००) (७७) स्वच्छ भारत अभियानांतर्गत महानगरपालिकांना सहाय्य(राज्य हिस्सा), ३१, सहायक अनुदाने (वेतनेतर), (२२१७९७६१) योजनांतर्गत
- ५) मागणी क्र. एफ- २, मुख्य लेखाशीर्ष- २२१७, नगरविकास, (८०) सर्वसाधारण १९२, नगरपरिषदांना सहाय्य, (००)(१५) स्वच्छ भारत अभियानांतर्गत नगरपरिषदांना सहाय्य (राज्य हिस्सा), ३१, सहायक अनुदाने (वेतनेतर), (२२१७९७८८) योजनांतर्गत
- ६) मागणी क्र. एफ- २, मुख्य लेखाशीर्ष- २२१७, नगरविकास, (८०) सर्वसाधारण १९३, नगरपंचायतींना सहाय्य, (००)(०४)स्वच्छ भारत अभियानांतर्गत नगरपंचायतींना सहाय्य (राज्य हिस्सा), ३१, सहायक अनुदाने (वेतनेतर), (२२१७९८०३) योजनांतर्गत
- ७) मागणी क्र. एफ- २, (०१) स्वच्छ महाराष्ट्र अभियान (नागरी), (०१) (०१) स्वच्छ महाराष्ट्र अभियानांतर्गत (नागरी) राज्य अभियान संचालनालयाचे वेतन व भत्ते (अनिवार्य), ०१. वेतन, ०६. दूरध्वनी, वीज व पाणी शुल्क, १०. कंत्राटीसेवा, ११. देशांतर्गत प्रवास खर्च, १२. विदेश प्रवास खर्च, १३. कार्यालयीन खर्च, १४. भाडेपट्टी व कर, १७. संगणक खर्च, (२२१७९८४१) योजनेतर

१३. सदरचा शासन निर्णय नियोजन विभाग व वित्त विभाग यांच्या अनौपचारिक संदर्भ क्रमांक अनुक्रमे अनै.सं.क्र. १८/१४४४ दिनांक ३.६.२०२२ व जा.क्र १६२६३, व्यय-३ दिनांक १६.६.२०२२

अन्वये प्राप्त अभिप्रायांचा विचार करून व राज्य मंत्रिमंडळाने दिनांक १४ जुलै, २०२२ रोजी घेतलेल्या निर्णयाच्या अनुषंगाने निर्गमित करण्यात येत आहे.

१४. सदर शासन निर्णय महाराष्ट्र शासनाच्या www.maharashtra.gov.in या संकेतस्थळावर उपलब्ध करण्यात आला असून त्याचा सांकेतांक क्रमांक २०२२०७१५१७४३१०७३२५ असा आहे. हा आदेश डिजिटल स्वाक्षरीने साक्षंकित करून काढण्यात येत आहे.

महाराष्ट्राचे राज्यपाल यांच्या आदेशानुसार व नावाने.

**Ajit Sahebrao
Palwe**

Digitally signed by Ajit Sahebrao Palwe
DN: c=IN, o=Government of Maharashtra,
ou=Urban Development Department,
postalCode=400032, st=Maharashtra,
2.5.4.20=bcc5dbdaa52955626b8257f1105a8a62dd
bd1337948a428b4e4c992e5d3bf423,
serialNumber=eec7a4defed4a9827acaa40b255e8
8289e62111c82bcd7dd2fe58860768930, cn=Ajit
Sahebrao Palwe
Date: 2022.07.15 20:18:01 +05'30'

(अजित पालवे)

कक्ष अधिकारी, महाराष्ट्र शासन

प्रत,

१. मा. राज्यपाल यांचे प्रधान सचिव, राजभवन, मुंबई
२. मा. मुख्यमंत्री यांचे प्रधान सचिव, मंत्रालय, मुंबई.
३. मा. उप मुख्यमंत्री यांचे प्रधान सचिव, मंत्रालय, मुंबई.
४. मा. मुख्य सचिव, मंत्रालय, मुंबई.
५. अप्पर मुख्य सचिव, वित्त विभाग, मंत्रालय, मुंबई.
६. प्रधान सचिव, नियोजन विभाग, मंत्रालय, मुंबई.
७. प्रधान सचिव, पाणी पुरवठा व स्वच्छता, मंत्रालय, मुंबई
८. प्रधान सचिव, ग्राम विकास विभाग, मंत्रालय, मुंबई.
९. प्रधान सचिव, सामाजिक न्याय व विशेष सहाय्य विभाग, मंत्रालय, मुंबई.
१०. प्रधान सचिव (नगर विकास-१), मंत्रालय, मुंबई.
११. प्रधान सचिव (नगर विकास-२), मंत्रालय, मुंबई.
१२. आयुक्त तथा संचालक, नगर परिषद प्रशासन संचालनालय, वरली, मुंबई.
१३. महासंचालक, माहिती व जनसंपर्क विभाग, मंत्रालय, मुंबई.
१४. महालेखाकार (लेखा व अनुज्ञेयता)-१, मुंबई.
१५. महालेखाकार (लेखा व अनुज्ञेयता)-२, नागपूर.
१६. विभागीय आयुक्त (सर्व).
१७. जिल्हाधिकारी (सर्व).
१८. उप सचिव (अर्थसंकल्प), नगर विकास विभाग, मंत्रालय, मुंबई.
१९. राज्य अभियान संचालक, स्वच्छ महाराष्ट्र अभियान संचालनालय, मुंबई
२०. आयुक्त, महानगरपालिका (सर्व).
२१. मुख्याधिकारी, नगरपरिषदा/ नगर पंचायती (सर्व).
२२. निवडनस्ती (नवि-३४).



महाराष्ट्र शासन राजपत्र

असाधारण भाग चार-ब

वर्ष ५, अंक ८६]

सोमवार, जुलै १, २०१९/आषाढ १०, शके १९४१

[पृष्ठे ३६, किंमत : रुपये १.००

असाधारण क्रमांक २०३

प्राधिकृत प्रकाशन

महाराष्ट्र शासनाने महाराष्ट्र अधिनियमांन्वये तयार केलेले
(भाग एक, एक-अ आणि एक-ल यांमध्ये प्रसिद्ध केलेले नियम व आदेश यांव्यतिरिक्त) नियम व आदेश.

नगरविकास विभाग

मादाम कामा मार्ग, हुतात्मा राजगुरु चौक,
मंत्रालय, मुंबई ४०० ०३२, दिनांक १ जुलै २०१९

अधिसूचना

महाराष्ट्र नगरपरिषद, नगरपंचायत व औद्योगिक वसाहती अधिनियम, १९६५.

क्रमांक एसडब्ल्यूएम/२०१८/सीआर १२६ (२)/नवि-३४.—ज्याअर्थी महाराष्ट्र नगरपरिषद, नगरपंचायत व औद्योगिक वसाहती अधिनियम, १९६५ (द्वानंतर "सदर अधिनियम" असा उल्लेख केला आहे) मधील कलम ३१२ (अ) अन्वये प्राप्त अधिकाराच्या अनुषंगाने नगरविकास विभागाचा दिनांक १९ डिसेंबर २०१८ रोजीचा शासन अधिसूचना क्रमांक एसडब्ल्यूएम/२०१८/सीआर १२६ (२) / नवि-३४, महाराष्ट्र शासनाच्या दिनांक १९ डिसेंबर २०१८ रोजीच्या राजपत्रात प्रसिद्ध करण्यात आला आहे. महाराष्ट्र शासनाने, सदर उपविधीची राज्यातील नगरपरिषद व नगरपंचायतींमध्ये अंमलबजावणी करण्याच्या प्रस्तावावर सदर शासन अधिसूचना महाराष्ट्र शासनाच्या राजपत्रात प्रसिद्ध केल्याच्या दिनांकापासून १५ दिवसांचे आत आक्षेप व सूचना मागविल्या होत्या.

आणि ज्याअर्थी सदर शासन निर्णयाच्या अनुषंगाने नमूद कालावधी मध्ये शासनाला एक आक्षेप व सूचना प्राप्त झाली आहे.

त्याअर्थी सदर आक्षेप व सूचनांचा विचार केल्यावर महाराष्ट्र शासन सदर उपविधींना अंतिम स्वरूप देत असून सदर अधिनियमाच्या कलम ३१२ (अ) अन्वये प्राप्त व ह्या बाबतीत प्राप्त अन्य अधिकारांच्या अनुषंगाने महाराष्ट्र शासन महाराष्ट्र राज्यातील नगरपरिषदा व नगरपंचायतींमध्ये सदर उपविधींची अंमलबजावणी करण्याचे निर्देश देत आहे.

१. थोडक्यात नाव व सुरुवात :—(१) जशी बाब असेल त्यानुसार, सदर उपविधी "नगरपरिषद / नगरपंचायती यांच्यासाठी घनकचरा (व्यवस्थापन व हाताळणी), स्वच्छता व आरोग्य उपविधी" म्हणून ओळखले जातील व ते सदर अधिसूचनेच्या दिनांकापासून अंमलात येतील.

अनुसूची-१

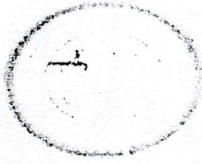
भाग अ: उपयोगकर्ता शुल्क

घरे व आस्थापनांच्या मधून कचरा संकलन करण्यासाठीचे दर / उपयोगकर्ता शुल्क खालीलप्रमाणे आहेत:—

क्र.	वर्गवारी	नगर परिषद (अ व ब वर्ग)	नगर परिषद (क वर्ग) / नगर पंचायत
	घन कचरा निर्मिती १०० किलोग्राम पेक्षा कमी		
१	प्रति घर	३०	१५
	व्यावसायिक आस्थापना		
२	दुकाने, दवाखाने इत्यादी	४५	३०
३	शोरूम (उपकरणे / फर्निचर / ऑटोमोबाइल / इलेक्ट्रॉनिक्स इ.)	८०	६०
४	गोदामे	८०	६०
५	उपहारगृहे व हॉटेल्स	८०	६०
६	राहण्याची व जेवणाची व्यवस्था असणारी हॉटेल्स	१००	८०
	रुग्णालये		
७	पन्नास खाटांपेक्षा कमी	८०	६०
८	पन्नास खाटांपेक्षा जास्त	१२०	९०
	संस्था		
९	शैक्षणिक संस्था, वसतिगृहे	६०	४५
१०	धार्मिक संस्था	६०	४५
११	शासकीय / निमशासकीय कार्यालये	६०	४५
१२	विवाह कार्यालये / मनोरंजन सभागृहे / एक पडदा चित्रपटगृहे	५००	३००
१३	खरेदी केंद्रे / बहुपडदा चित्रपटगृहे	१०००	५००
१४	फेरीवाले	३०	१५
१५	पर्यटन स्थळी घोड्याची लोद	३००	२००
१६	हंगामी दुकाने किंवा आनंद मेळा / सत्संग / खाद्य महोत्सव / फटाक्याचे दुकान	स्थानिक स्वराज्य संस्थांनी मासिक शुल्क न आकारता एक वेळ शुल्क निर्धारित करावे	

टीप: उपरोक्त दर हे सर्व नगरपरिषदा व नगर पंचायती मध्ये लागू असतील.

- सदर अधिसूचना जारी होण्याच्या अगोदर एखादी नगर परिषद किंवा नगर पंचायत उपरोक्त शुल्कापेक्षा जास्त दराने उपयोगकर्ता शुल्क आकारत असल्यास सदर नगर परिषद किंवा नगर पंचायत यांनी अशा दराने आकारणी करावी. उपरोक्त दर हे दरवर्षी ५% वाढविण्यात यावेत.
- सोबत जोडलेले दारोदारी किंवा बिंदूवार कचरा संकलन करण्याचे शुल्क हे प्रत्येक प्रभाग / विभागातील प्राधिकृत व्यक्ती / संस्था करतील. विहित दर हे नगर परिषद / नगर पंचायतीच्या वतीने रीतसर प्रसिद्ध करण्यात यावेत व कचरा व्यवस्थापन वाहनावर सुद्धा प्रदर्शित करण्यात यावेत. प्राधिकृत संस्था / व्यक्ती हे कचरा व्यवस्थापन वाहनावर सुद्धा सोबत जोडलेले दारोदारी किंवा बिंदूवार कचरा संकलन करण्याचे शुल्क हे प्रत्येक प्रभाग / विभागातील प्राधिकृत व्यक्ती / संस्था यांचे नाव लिहितील.
- कोणताही कचरा हाताने हाताळला जाणार नाही. पण अपवादात्मक परिस्थितीत जर कचरा हाताने हाताळणे व मानवी श्रमाचा वापर करून उचलणे आवश्यक असल्यास अशा परिस्थितीत मानवी श्रमांचा वापर हा सर्व प्रकारची विहित काळजी व खबरदारी व संरक्षक व वैयक्तिक सुरक्षा उपकरणे वापरून करण्यात यावा.



Maharashtra Jeevan Pradhikaran

Central Planning, Designing & Monitoring Cell

Area: Urban & Rural Planning, Ground Floor,

10, Mahatma Jyoti Bapu Road, East - 400 001

Phone: 022-25320203 (0)

E-mail: cpdm@mpj.gov.in

secpdmr@gmail.com

No. MJ/SECPDM/SWM/383/18

DT: 09/07/2018

To,
The Mission Director,
Swachh Maharashtra Mission,
Maharashtra Urban Development Mission,
Mumbai

Sub: Uniformity of Biomining rates across the state.

Ref: SMM office letter No.SMD/SMMU/SWM/474/17-18, dt. 12.4.2018.

With reference to the above subject, this office has worked out the rates of Biomining for the year 2018-19. The MJP DSR are different for each region depending upon their local rates of labour, materials and machineries. The rates of Biomining for all regions are as follows.

(In Rupees)							
S. No.	Particulars	Pune	Amravti	Nagpur	A'bad	Nashik	Kokan
1.	Manual	395	384	384	384	383	411
2.	Machine below 25 cum	424	416	414	415	417	436
3.	Machine below 25-50 cum	439	430	438	435	435	457
4.	Machine below 51-100 cum	434	425	433	430	430	452
5.	Machine above 100 cum	429	420	428	425	425	447

The rates of labour and hiring charge of machineries varies for each region therefore the rates of biomining are different for each region. There is 3.04 to 4.2% variance in the rates of items and completed Biomining rates.

This is for information and further necessary action.

(P. Velarasu)
Member Secretary

**Government of Maharashtra
Urban Development Department
Maharashtra Urban Development Mission Directorate
Swachh Maharashtra Mission (U) 2.0**

Apeejay House, 4th floor, 3 Dinshaw Vaccha Road, Near KC College, Churchgate, Mumbai 400 020

Email: director.smau@gmail.com

MUDM/SMM/790/2022-23

Date: 29-November-2023

To,
The Member Secretary
Maharashtra Jeevan Pradhikarn (MJP)
4th Floor, Express Tower, Nariom Point
Mumbai – 400 021

Sub: Request to expedite the issuance of technical sanctions for solid waste management and used water management DPRs under Swachh Maharashtra Mission (U) 2.0.

Ref: 1) Government Circular: स्वमअ २०२२ / प्र क्र ६(शिकाना)/नवि ३४ Dated 14 February 2023

Dear Sir,

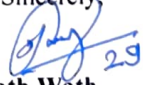
Urban Development Department- II has authorized Maharashtra Jeevan Pradhikaran vide Governmental Circular under reference dated 14th Feb 2023 for issuing technical sanctions for solid waste management and used water management DPRs under Swachh Maharashtra Mission (U) 2.0.

As on 29th Nov 2023, 140 DPRs for Solid Waste Management (SWM) and 31 DPRs for Used Water Management (UWM) are submitted to MJP for Technical Sanction. The district-wise list of SWM and UWM DPRs submitted for Technical Sanctions are enclosed herewith as Annexure A and B respectively.

Technical Sanction Charges at the rate (One) 1% of Sanctioned Project Cost will be paid to MJP once the Central Share of SBM (U) 2.0 project funds received by the State.

You are requested to give the Technical Sanction for DPRs submitted to MJP at the earliest. We further expect needful co-operation for onward DPR approvals to be submitted by ULBs under SBM (U) 2.0.

Yours Sincerely,


Navnath Wath

Deputy Secretary and State Mission Director
Swachh Maharashtra Mission (U)

Annexures – As Above

Copy to:

1. The Principal Secretary, Urban Development Department-II, Mantralaya, Mumbai.

Annexure – I : Solid Waste Management DPRs (141) Submitted to MJP for Technical Sanction.

Sr no	Division	District	ULB name
1	Amaravati	Akola	Balapur
2			Barshi taklii
3		Amravati	Achalpur
4			Morshi
5			Chandur railway
6			Anjangaon surji
7			Dattapur dhamangaon
8			Shendurjanaghat
9			Teosa
10			Dharni
11		Buldana	Buldana
12			Khamgaon
13		Washim	Manora
14		Yavatmal	Digras
15			Ner
16			Pusad
17	Ch. Sambhajinagar	Ch. Sambhajinagar	Paithan
18			Vaijapur
19		Beed	Phulambri
20			Ashti_b
21		Hingoli	Hingoli
22			Kalamnuri
23			Basmat
24			Aundha
25			Sengaon
26		Jalna	Ambad
27			Bhokardan
28			Badnapur
29		Latur	Udgir
30			Ahmedpur
31			Nilanga
32			Chakur
33			Deoni
34			Renapur
35			Shirur anantpal
36		Nanded waghala	Kinwat
37			Hadgaon
38			Deglur
39			Mudkhed
40			Kandhar
41			Dharmabad
42			Biloli
43			Kundalwadi
44			Loha
45			Peth umri_n
46			Bhokar

Sr no	Division	District	ULB name
47			Mukhed
48			Mahur
49			Himayatnagar
50			Ardharpur
51			Naigaon
52		Osmanabad	Osmanabad
53			Umarga
54			Bhum
55			Paranda
56			Kalamb_o
57			Vashi
58	Kokan	Palghar	Dahanu
59			Mokhada
60			Wada (np)
61		Raigadh	Karjat_r
62			Khopoli
63			Roha ashtami
64			Pen
65			Matheran
66		Ratnagiri	Rajapur
67			Devrukh
68		Sindhudurga	Vengurla
69			Kasai dodamarg
70		Thane	Kalyan dombivali
71			Murbad
72	Nagpur	Bhandara	Pauni
73			Sakoli
74			Tumsar
75			Lakhani
76		Chandrapur	Chimur
77			Mul
78			Ballarpur
79			Warora
80			Nagbhid
81			Sindewahi
82			Saoli
83		Gadchiroli	Chamorsi
84		Gondiya	Gondiya
85			Tirora
86			Goregaon
87			Deori_g
88		Nagpur	Katol
89			Savner
90			Kanhan-pipri
91			Mohpa
92			Narkhed
93			Hingana
94		Wardha	Wardha

Sr no	Division	District	ULB name
95	Nashik		Hinganghat
96			Deoli_w
97			Arvi
98			Pulgaon
99		Ahmadnagar	Deolali pravara
100			Shrigonda
101			Rahta pimplas
102			Shevgaon
103			Rahuri
104			Pathardi
105			Jamkhed
106			Sangamner
107			Nevasa
108			Parner
109			Shirdi
110		Nandurbar	Nandurbar
111			Nawapur
112			Talode
113			Shahada
114		Nashik	Dhadgaon wadfalya
115			Chandwad
116			Sinnar
117			Kalwan
118	Pune	Kolhapur	Vadgaon
119			Gadhinglaj
120			Murgud
121			Panhala
122			Hupari (np)
123			Shirol (np)
124			Hatkangale (np)
125			Ajara (np)
126		Pune	Junnar
127			Bhor
128			Talegaon dabhade
129			Alandi
130		Sangli	Tasgaon
131			Khanapur_m
132		Satara	Malkapur_s
133			Patan_mh
134		Solapur	Barshi
135			Akkalkot
136			Kurduvadi
137			Karmala
138			Mohol
139			Dudhani
140			Madha
141			Angar

Annexure – II : Used Water Management DPRs (31) Submitted to MJP for Technical Sanction.

Sr.No	Division	District	Name of city
1	Aurangabad	Nanded Waghala	Bhokar
2	Aurangabad	Nanded Waghala	Loha
3	Aurangabad	Nanded Waghala	Himayatnagar
4	Aurangabad	Hingoli	Basmat
5	Aurangabad	Beed	Georai
6	Aurangabad	Latur	Ahmedpur
7	Amravati	Buldana	Sindkhed Raja
8	Amravati	Amravati	Anjangaon Surji
9	Amravati	Amravati	Chandur Baazar
10	Amravati	Amravati	Dattapur Dhamangaon
11	Konkan	Raigadh	Mangaon
12	Nashik	Jalgaon	Savda
13	Nashik	Jalgaon	Raver
14	Nashik	Jalgaon	Erandol
15	Nashik	Jalgaon	Parola
16	Nashik	Jalgaon	Shendurni (Np)
17	Nashik	Nashik	Kalwan
18	Nagpur	Nagpur	Wanadongri
19	Nagpur	Bhandara	Tumsar
20	Nagpur	Chandrapur	Nagbhid
21	Pune	Pune	Chakan
22	Pune	Solapur	Akkalkot
23	Pune	Solapur	Maindargi
24	Pune	Solapur	Malshiras
25	Pune	Satara	Lonand
26	Pune	Kolhapur	Gadhinglaj
27	Pune	Kolhapur	Shirol (Np)
28	Pune	Sangli	Vita
29	Pune	Solapur	Akluj
30	Pune	Solapur	Anagar
31	Pune	Solapur	Natepute

गाव नमुना सात (अधिकार अभिलेख पत्रक)

[महाराष्ट्र जमीन महसूल अधिकार अभिलेख आणि नोंदवह्या (तयार करणे व सुस्थितीत ठेवणे) नियम, १९७१ यातील नियम ३, ५, ६ आणि ७]

गाव :- वरवंटी (560162)

ULPIN : 26228646454

तालुका :- लातूर

जिल्हा :- लातूर

गट क्रमांक व उपविभाग : 30



26228646454

भू-धारणा पद्धती : भोगवटादार वर्ग - 2

शेताचे स्थानिक नाव :

क्षेत्र, एकक व आकारणी	खाते क्र.	भोगवटादाराचे नांव	क्षेत्र	आकार	पो.ख.	फे.फा.	कुळ, खंड व इतर अधिकार
क्षेत्राचे एकक :- हे.आर.चौ.मी. (अ) लागवड योग्य क्षेत्र	[343]	[महसूल सत्कार]				(1)	कुळाचे नाव व खंड
मिरासत बागायत	330	नगर परिषद लातूर			4.04.00	(402)	इतर अधिकार ससम प्राधिकाऱ्यांच्या पूर्वे परवानगी शिवाय इस्तांतरास बंदी - गृह निर्माण संस्था/औद्योगिक आस्थापना/शैक्षणिक संस्था यांना वाटप जमीन
(ब) पोट-खराब क्षेत्र (लागवड अयोग्य)	8640	लाहोटी तंत्रनिकेतन विद्यालय पेन्सील नोंद			5.00.00	(1)	इतर सु.प.आ.पं.हरंगुळ सु.बांचे (28) नियरानी देण्यात आली आहे (28)
वर्ग (अ) 9.48.00	8641	समजानभुमी पेन्सील नोंद			0.44.00	(1)	
वर्ग (ब) 9.48.00							
एकूण पो.ख. 9.48.00							
एकूण क्षेत्र (अ+ब) 9.48.00							
आकारणी 0.00							
कुडी किंवा विशेष आकारणी							
							प्रलंबित केरकार : नाही.
							शेवटचा केरकार क्रमांक : 6247 व दिनांक : 02/03/2020
जुने केरकार क्र. (1) X (402) X (4694) X (4905) X (6247)							सीमा आणि भूमापन चिन्हे :

सूचना : या संकेतस्थळावर दर्शविलेली माहिती ही कोणत्याही शासकीय अथवा कायदेशीर बाबींसाठी वापरता येणार नाही.

गाव नमुना बारा (पिकांची नोंदवही)

[महाराष्ट्र जमीन महसूल अधिकार अभिलेख आणि नोंदवह्या (तयार करणे व सुस्थितीत ठेवणे) नियम, १९७१ यातील नियम २९]

गाव :- वरवंटी (560162)

तालुका :- लातूर

जिल्हा :- लातूर

गट क्रमांक व उपविभाग : 30

			पिकाखालील क्षेत्राचा तपशील					लागवडीसाठी उपलब्ध नसलेली जमीन		शेरा
वर्ष	हंगाम	खाता क्रमांक	पिकाचा प्रकार	पिकाचे नाव	जल सिंचित	अजल सिंचित	जल सिंचनाचे साधन	स्वरूप	क्षेत्र	
(१)	(२)	(३)	(४)	(५)	(६)	(७)	(८)	(९)	(१०)	(११)
					हे.आर. चौ.मी	हे.आर. चौ.मी			हे.आर. चौ.मी	
2021-22	संपूर्ण वर्ष	सर्व खाते						विनशेती पड	9.4800	

टीप : * सदरची नोंद मोबाइल अप द्वारे घेणेत आलेली आहे

सूचना : या संकेतस्थळावर दर्शविलेली माहिती ही कोणत्याही शासकीय अथवा कायदेशीर बाबींसाठी वापरता येणार नाही.

ULB Code	ULB Name	Dist	Division
802840	LATUR (802840)	LATUR	CH. SAMBAJINAGAR

Category	HPC Approved CSWAP					MOHUA Approved CSWAP				
	Quantity (in TPD)	Total Cost (in Rs.)	Central Share (in Rs)	State Share (in Rs.)	ULB Share (in Rs.)	Quantity (in TPD)	Total Cost (in Rs.)	Central Share (in Rs)	State Share (in Rs.)	ULB Share (in Rs.)
Wet Waste Plant - Compost (@ Rs. 11.5 lakh /TPD)	93	10,64,55,757	3,51,30,400	3,93,88,630	3,19,36,727	95.00	10,92,50,000	3,60,52,500	4,04,22,500	3,27,75,000
Wet Waste Plant - Bio Gas (@ Rs. 18 lakh /TPD)	-	-	-	-	-	-	-	-	-	-
Dry Waste Plant – MRF (@ Rs. 8.5 lakh /TPD)	35	2,99,14,436	98,71,764	1,10,68,341	89,74,331	60.00	5,10,00,000	1,68,30,000	1,88,70,000	1,53,00,000
Dry Waste Plant – MRF cum RDF (@ Rs. 8.5 lakh /TPD)	-	-	-	-	-	-	-	-	-	-
Dry Waste Plant – WtE (@ Rs. 18 lakh /TPD)	-	-	-	-	-	-	-	-	-	-
Transfer Station (@ Rs. 4.5 lakh /TPD)	-	-	-	-	-	-	-	-	-	-
Scientific Landfill (@ Rs. 6.5 lakh /TPD)	53.32	3,46,58,821	1,14,37,411	1,28,23,764	1,03,97,646	19.82	1,28,81,000	42,50,730	47,65,970	38,64,300
Module-1 Solid Waste Management		17,10,29,015	5,64,39,575	6,32,80,735	5,13,08,704		17,31,31,000	5,71,33,230	6,40,58,470	5,19,39,300
Module-2 Legacy Waste Remediation	2,04,000	11,22,00,000	3,70,26,000	4,15,14,000	3,36,60,000	2,04,000	8,67,00,000	2,86,11,000	3,20,79,000	2,60,10,000
Module-3- C&D Plant (@ Rs. 6 lakh /TPD)	-	-	-	-	-	-	-	-	-	-
Module-4-Mechanical Road Sweeper (@ Rs. 55 lakh /Unit)	8	4,40,00,000	1,45,20,000	1,62,80,000	1,32,00,000	7	3,85,00,000	1,27,05,000	1,42,45,000	1,15,50,000
Total in Rs.		32,72,29,015	10,79,85,575	12,10,74,735	9,81,68,704		29,83,31,000	9,84,49,230	11,03,82,470	8,94,99,300

Consultant

Samarth
Engineers,
Pune

C.S.I

Latur Municipal
Corporation

Environmental Engineer

Latur Municipal
Corporation

City Engineer

Latur
Municipal
Corporation

**Deputy
Commissioner (I)**

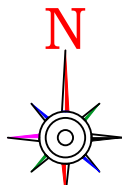
Latur Municipal
Corporation

DRAWINGS

DRAWING INDEX

Sr. No	Description	Page No
1	Dumping Site LAYOUT PLAN	276
2	Windrow Shed With Platform - (62 X 21) M	277-278
3	Compost Curing Shed - (25 X 20) M - 2 Nos	279-280
4	Cement Concrete Road - (L-1525 M , W- 4 M)	281-282
5	Screening Machine Shed - (10 X 15) M - 3 Nos	283-284
6	MRF Sorting Shed With Partition - (18 X 15) M - 4 Nos	285-286
7	Tipping Shed - (25 X 20 X 4.5) M - 3 Nos	287-288
8	Rest room with attached Toilets (3.5 x 11.73) M	289

DUMPING SITE LAYOUT - LATUR CITY



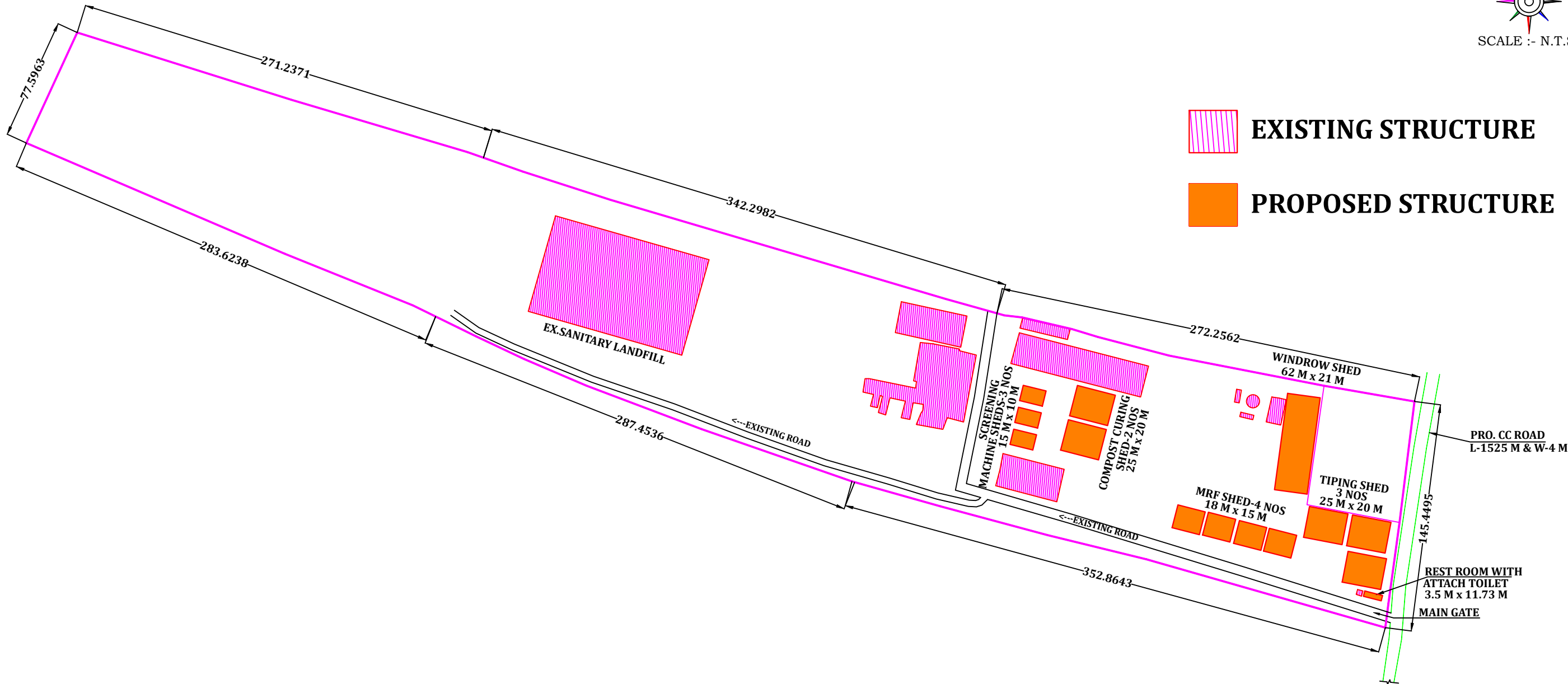
SCALE :- N.T.S



EXISTING STRUCTURE



PROPOSED STRUCTURE



- NOTES :
- 1. ALL DIMENSION ARE IN METER.
 - 2. DO NOT SCALED OUT DIMENSION FROM DRAWING.
 - 3. THIS DRAWING IS ONLY FOR TENDER PURPOSE.

GOVERNMENT OF MAHARASHTRA
LATUR MUNICIPAL CORPORATION ,
DISTRICT:-LATUR, DIVISION:-AURANGABAD

NAME OF THE
DRAWING:-
DUMPING SITE LAYOUT - LATUR CITY

CONSULTANTS
S
SAMARTH ENGINEERS
Flat No. 201, "A" Wing, Suraj Mahal Apartment,
Opp.Subudh Hospital,
Near Shivaji Statue, Kothrud, Pune - 411038
Email: samarthengineers999@gmail.com

CONSULTANT
SAMARTH ENGINEERS PUNE

WATER SUPPLY & SANITATION ENGINEER
LATUR MUNICIPAL CORPORATION

DEPUTY COMMISSIONER
LATUR MUNICIPAL CORPORATION

SCALE :- N.T.S		DRAWN BY :-	SHELKE DINESH			
1						
DWG. NO.	CHECKED BY :-	JR. ENGG.	SUB DIV. ENGG.	EXECUTIVE ENGG.	SUPTD. ENGG.	CHIEF ENGINEER

3D perspective view of the roof structure. The diagram shows the ridge, plinth level, and various dimensions. Key dimensions include 10.68M, 62, 21, 6.5, and 8.5. Labels include "ZINCALUME SHEET (P)A2150", "ROOFING MEMBER OF 10MB150@14.9KG/M", "PLINTH LEVEL", and "RIDGE".

Foundation Plan diagram showing a rectangular layout with dimensions 61.6m by 21m. The plan includes a grid of columns (C1 to C24) and beams (B1 to B24). A central area is labeled "MS angle 100X100X6 @9.2kg/m". Dimensions are given in meters: 61.6 (total width), 21 (total depth), 4.85 (beam width), and 5.25 (column width). A 1.2m offset is shown at the bottom right corner.

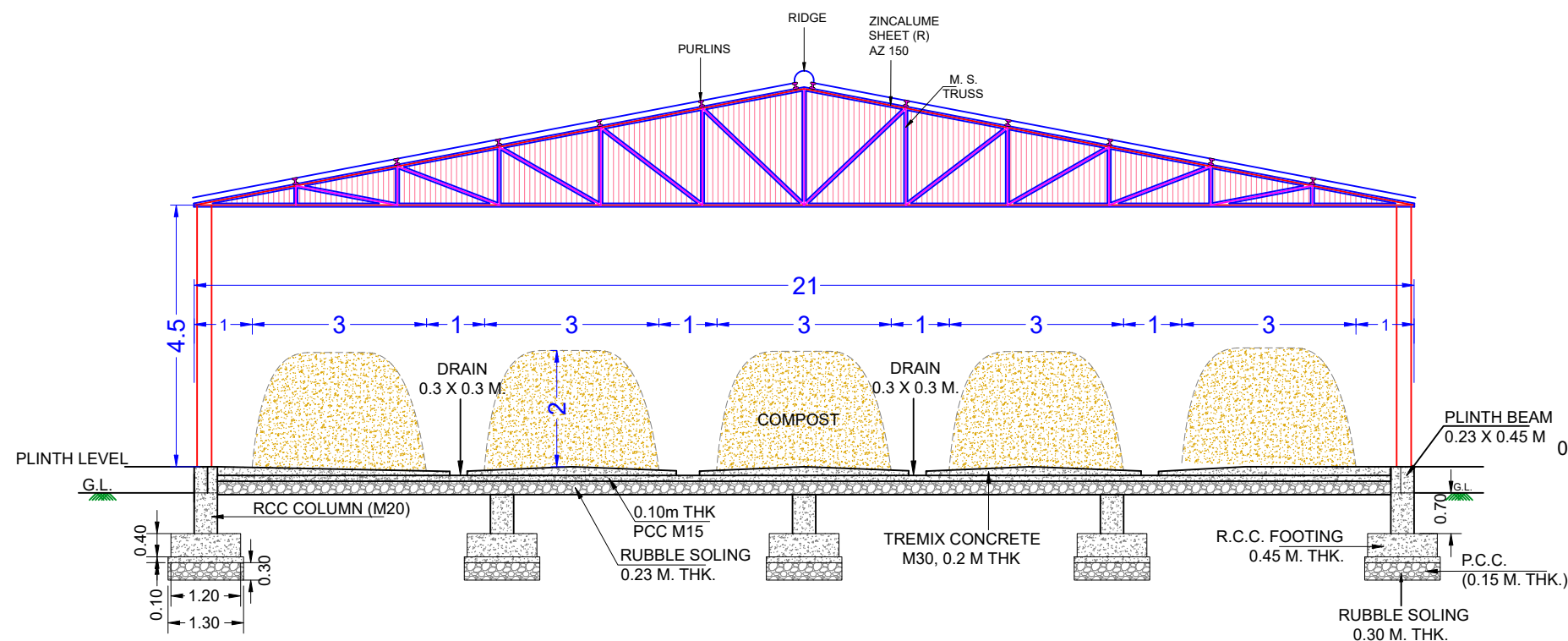
[illegible]

LEGENDS :-

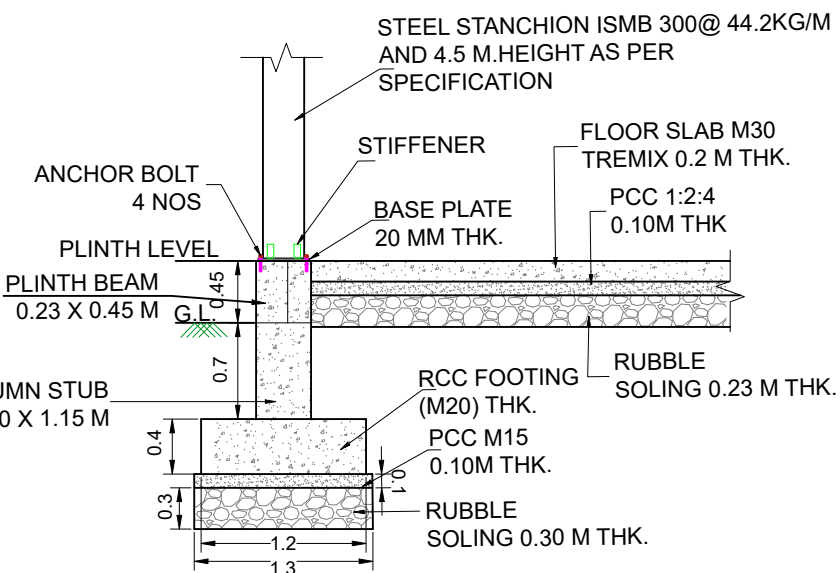
- Ms angle (Truss) 100X100X6 mm thick @ 9.2 kg/m-16 Nos
- ⊠ RCC Column (M20) 0.4 X 0.4 M - 38 Nos
- ⊠ Steel Column ISMB 300 @ 44.2 kg/m- 32 NOS
- Roofing member ISMB150 @ 14.9. kg/m
- ▨ Zincalume Sheet (R) AZ 150
- ⌞ Angle section for roof purlins 50x50x5 @ 3.8 kg/m @ 1.8m spacing-14 Nos
- Portal Frame of ISMB300 @ 44.2 kg/m

[illegible]

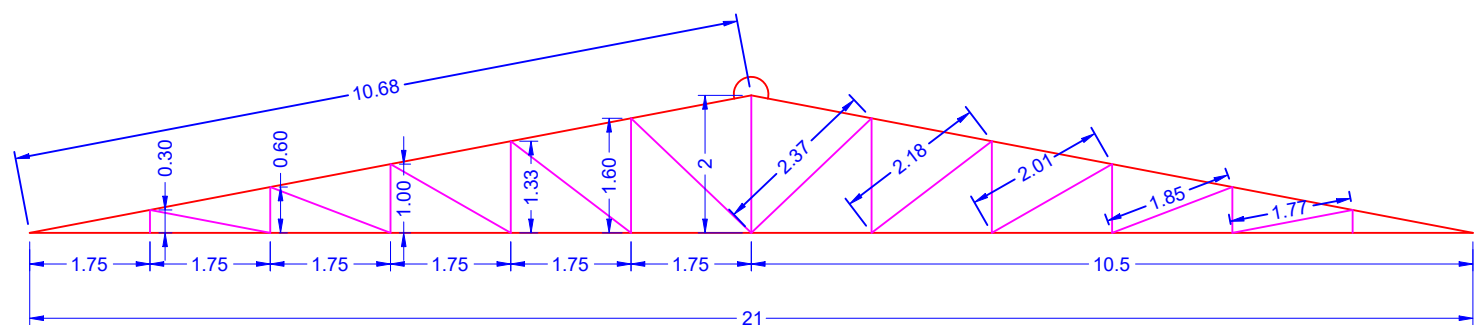
**WINDROW PLATFORM WITH SHED (62 X 21)
LATUR MUNICIPAL CORPORATION, DISTRICT :- LATUR**



SECTION OF A-A



SECTION B-B'



DETAILS OF TRUSS

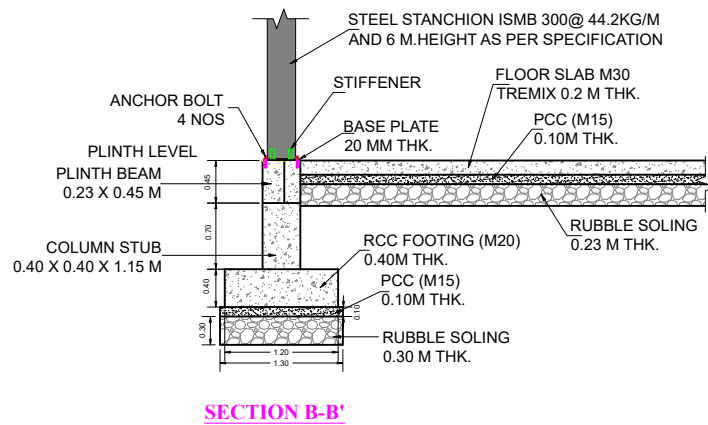
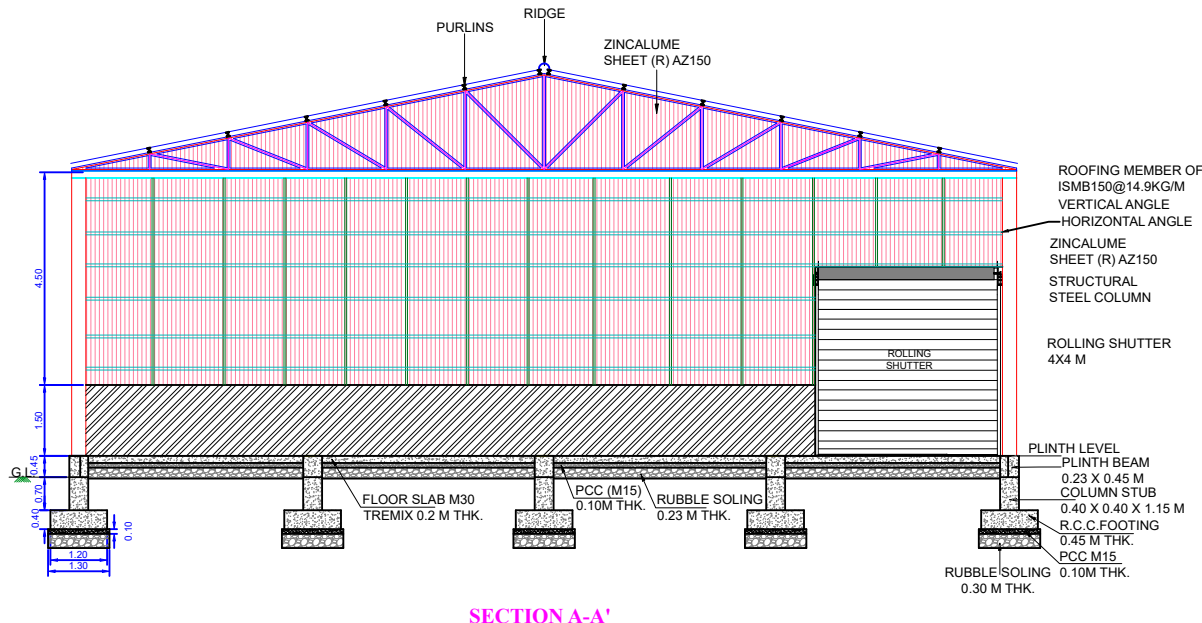
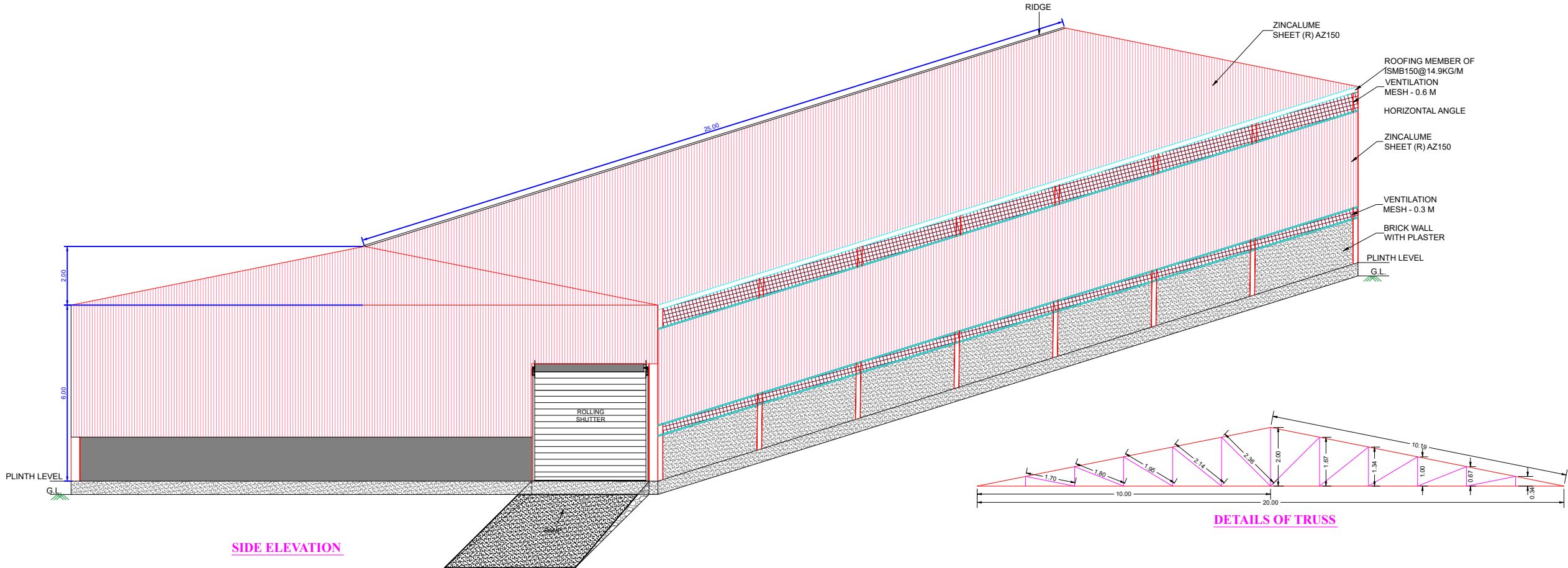
NOTES : 1. ALL DIMENSION ARE IN METER. 2. DO NOT SCALED OUT DIMENSION FROM DRAWING. 3. THIS DRAWING IS ONLY FOR TENDER PURPOSE.						
GOVERNMENT OF MAHARASHTRA LATUR MUNICIPAL CORPORATION DISTRICT -LATUR, DIVISION-AURANGABAD						
NAME OF THE DRAWING:- WINDROW PLATFORM SHED						
CONSULTANTS SAMARTH ENGINEERS Flat No. 201, 'A' Wing, Suraj Mahal Apartment, Opp.Subudh Hospital, Near Shivaji Statue, Kothrud, Pune - 411038 Email: samarthengineers999@gmail.com						
SCALE :- N.T.S						
DRAWN BY :- SHELKE DINESH						
2/2						
DWG. NO.	CHECKED BY :-	JR. ENGG.	SUB DIV. ENGG.	EXECUTIVE ENGG.	SUPTD. ENGG.	CHIEF ENGINEER

CONSULTANT
SAMARTH ENGINEERS PUNE

WATER SUPPLY & SANITATION ENGINEER
LATUR MUNICIPAL CORPORATION

DEPUTY COMMISSIONER
LATUR MUNICIPAL CORPORATION

COMPOST CURING SHED - 2 Nos (25 X 20)
LATUR MUNICIPAL CORPORATION , DISTRICT :- LATUR



- LEGENDS :-**

 -  MS TRUSS 100X100X6 @ 9.2 kg/m - 8 Nos
 -  Roofing Member ISMB150 @ 14.9. kg/m
 -  RCC Column (M20) 0.4 X 0.4 M - 22 Nos
 -  Steel Column of ISMB300 @44.2 kg/m - 16 Nos
 -  Portal Frame of ISMB300 @44.2 kg/m
 -  Angle section for roof purlins 50x50x5 @ 3.8 kg/m @1.8m spacing - 14 Nos
 -  Vertical Angle section 40x40x4 @ 2.4 kg/m for supporting Zincalume sheet (69 Nos @ 1.286 m c/c spacing, Ht 4.5.0 m each)
 -  Horizontal Angle section 40x40x4 @ 2.4 kg/m for supporting Zincalume sheet (Running Length 50m) - 6 Nos
 -  Zincalume Sheet (R) AZ150
 -  Rolling Shutter 4.0 X 4.0 M
 -  Ventilation Mesh 50 X 25 MM

NOTES :

1. ALL DIMENSION ARE IN METER.
2. DO NOT SCALED OUT DIMENSION FROM DRAWING.
3. THIS DRAWING IS ONLY FOR TENDER PURPOSE.

**GOVERNMENT OF MAHARASHTRA
LATUR MUNICIPAL CORPORATION ,
DISTRICT:-LATUR, DIVISION:-AURANGABAD**

NAME OF THE: **COMPOST CURING SHED**
DRAWING:- **(25 X 20)**

CONSULTANTS **SAMARTH ENGINEERS**
 Flat No. 201, "A" Wing, Suraj Mahal Apartment,
 Opp. Subudh Hospital,
 Near Shivaji Statue, Kothrud, Pune - 411038
 Email: samarthengineers999@gmail.com

SCALE :- N.T.S	DRAWN BY :-	SHELKE DINESH
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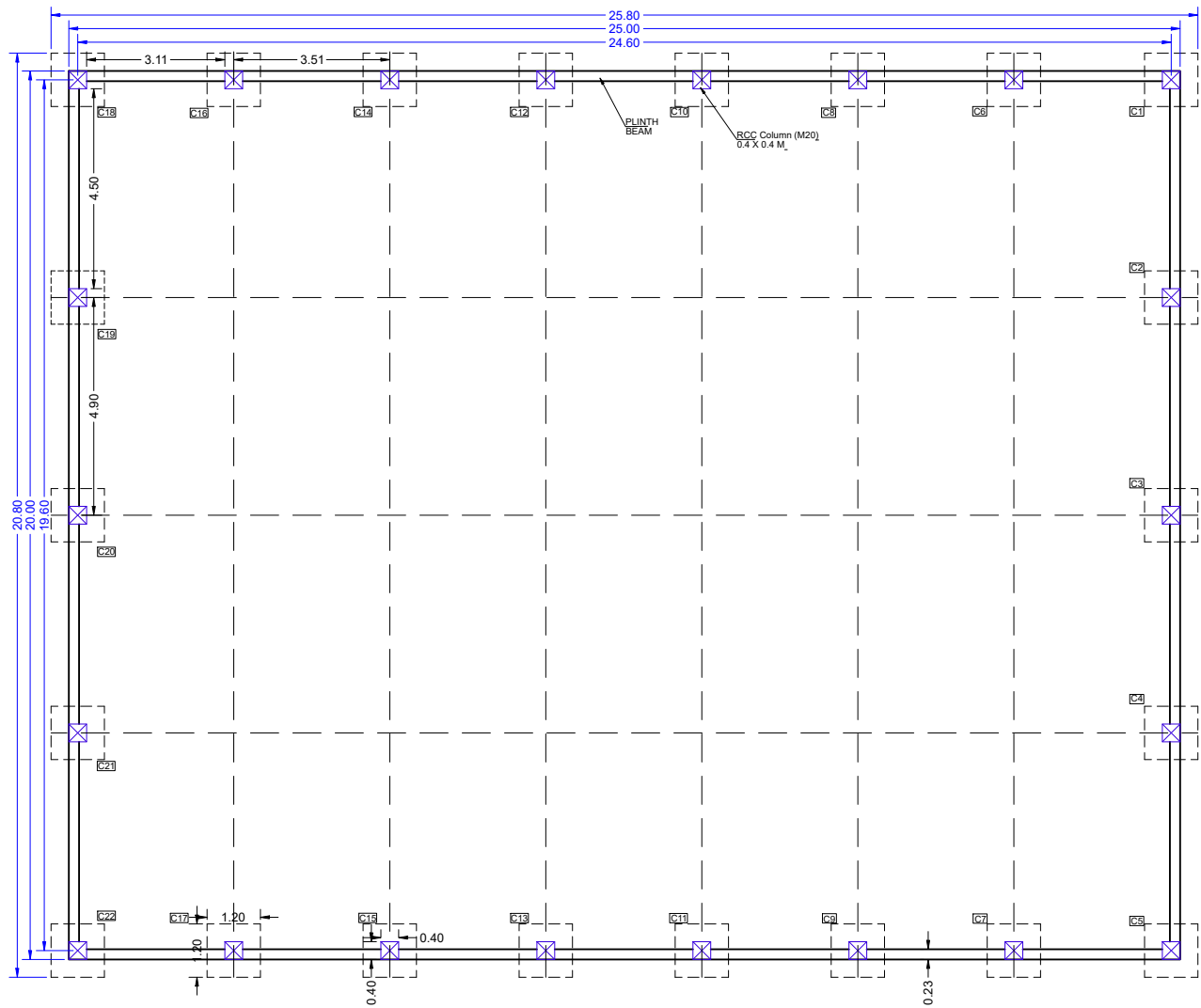
3/1						
DWG. NO.	CHECKED BY :-	JR. ENGG.	SUB DIV. ENGG.	EXECUTIVE ENGG.	SUPTD. ENGG.	CI

CONSULTANT
SAMARTH ENGINEERS, PUNE

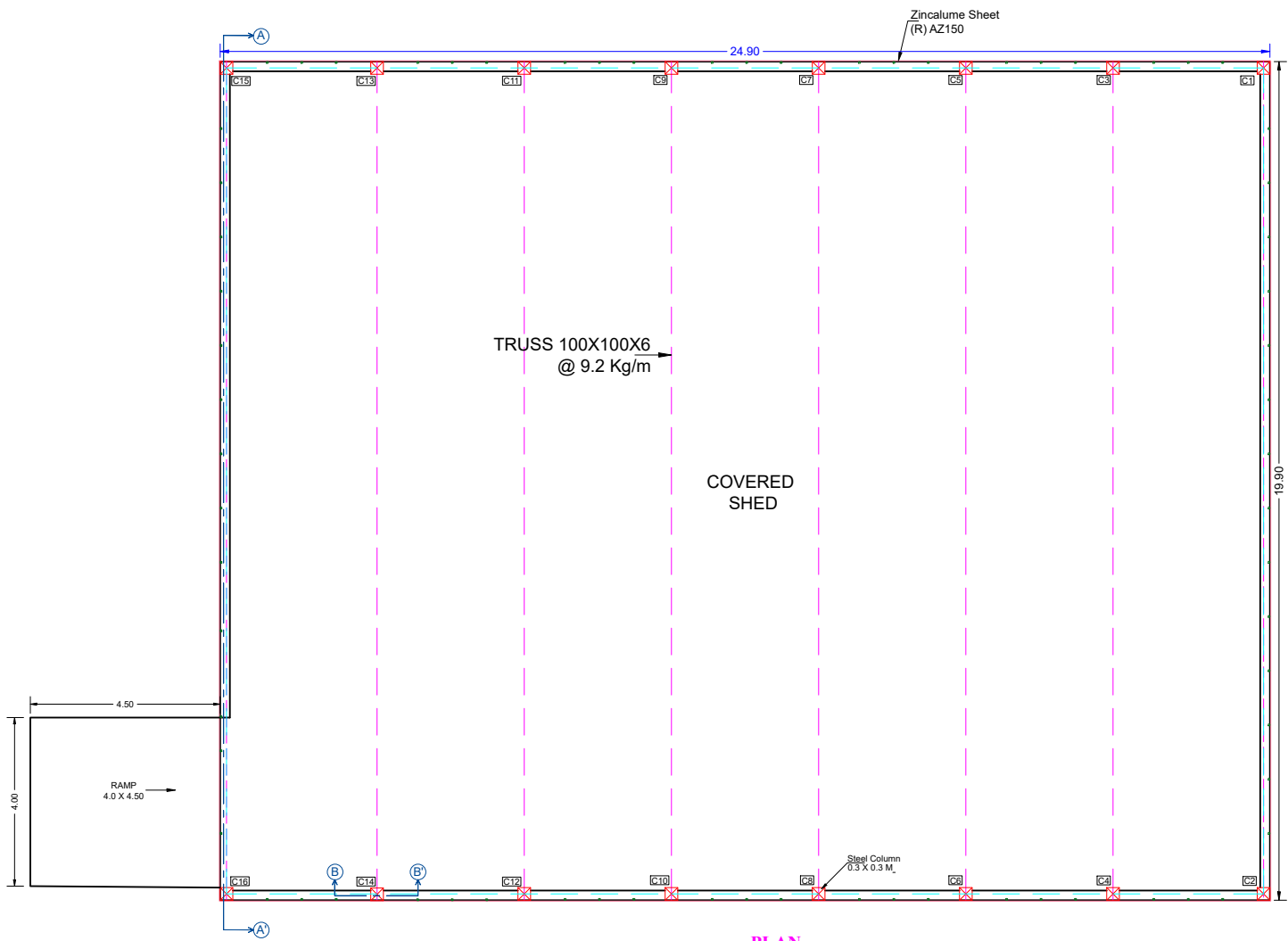
WATER SUPPLY & SANITATION ENGINEER
LATUR MUNICIPAL CORPORATION

**DEPUTY COMMISSIONER
LATUR MUNICIPAL CORPORATION**

COMPOST CURING SHED - 2 Nos (25 X 20)
LATUR MUNICIPAL CORPORATION , DISTRICT :- LATUR



FOUNDATION PLAN



PLAN

- NOTES :
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 2. DO NOT SCALED OUT DIMENSION FROM DRAWING.
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GOVERNMENT OF MAHARASHTRA
LATUR MUNICIPAL CORPORATION ,
DISTRICT:-LATUR, DIVISION:-AURANGABAD

NAME OF THE DRAWING:- COMPOST CURING SHED - 2 Nos (25 X 20)

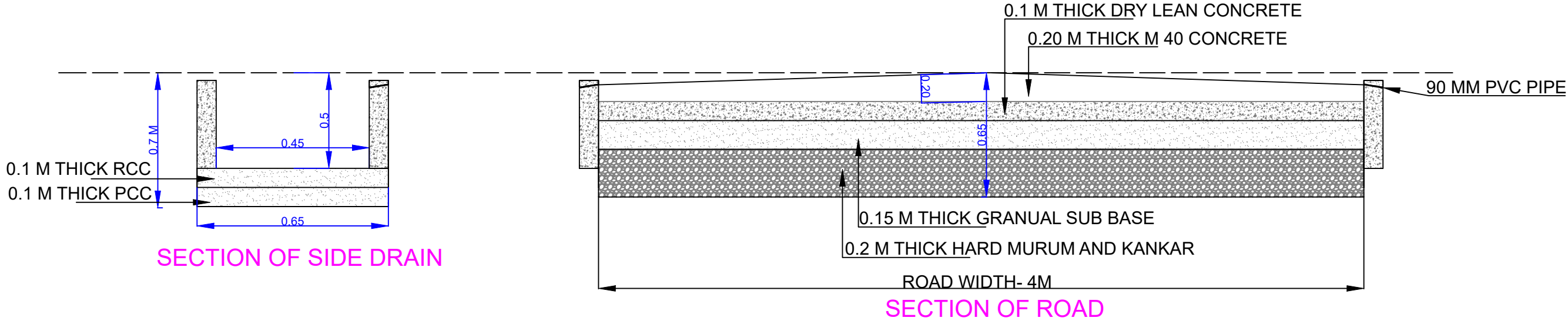
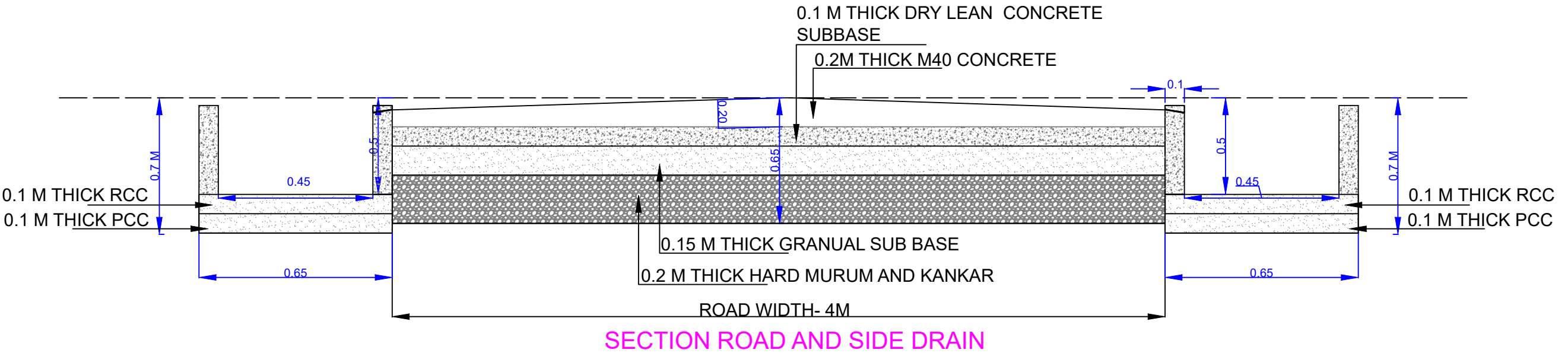
CONSULTANTS. SAMARTH ENGINEERS
Flat No. 201, "A" Wing, Suraj Mahal Apartment,
Opp.Subudh Hospital,
Near Shivaji Statue, Kothrud, Pune - 411038
Email: samarthengineers999@gmail.com

SCALE :- N.T.S DRAWN BY :- SHELKE DINESH

3/2					
DWG. NO.	CHECKED BY :-	JR. ENGG.	SUB DIV. ENGG.	EXECUTIVE ENGG.	SUPTD. ENGG.

CHIEF ENGINEER

CC ROAD 1525 M LENGTH WITH BOTH SIDE DRAIN
LATUR MUNICIPAL CORPORATION ,DISTRICT:-LATUR



- NOTES :
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GOVERNMENT OF MAHARASHTRA
LATUR MUNICIPAL CORPORATION ,
DISTRICT:-LATUR, DIVISION:-AURANGABAD

NAME OF THE
DRAWING:-

CC ROAD 1525 M LENGTH WITH BOTH SIDE DRAIN

CONSULTANTS

SAMARTH ENGINEERS



Flat No. 201, "A" Wing, Suraj Mahal Apartment,
Opp.Subudh Hospital,
Near Shivaji Statue, Kothrud, Pune - 411038
Email: samarthengineers999@gmail.com

SCALE :- 2000

DRAWN BY :- SHELKE DINESH

4.1

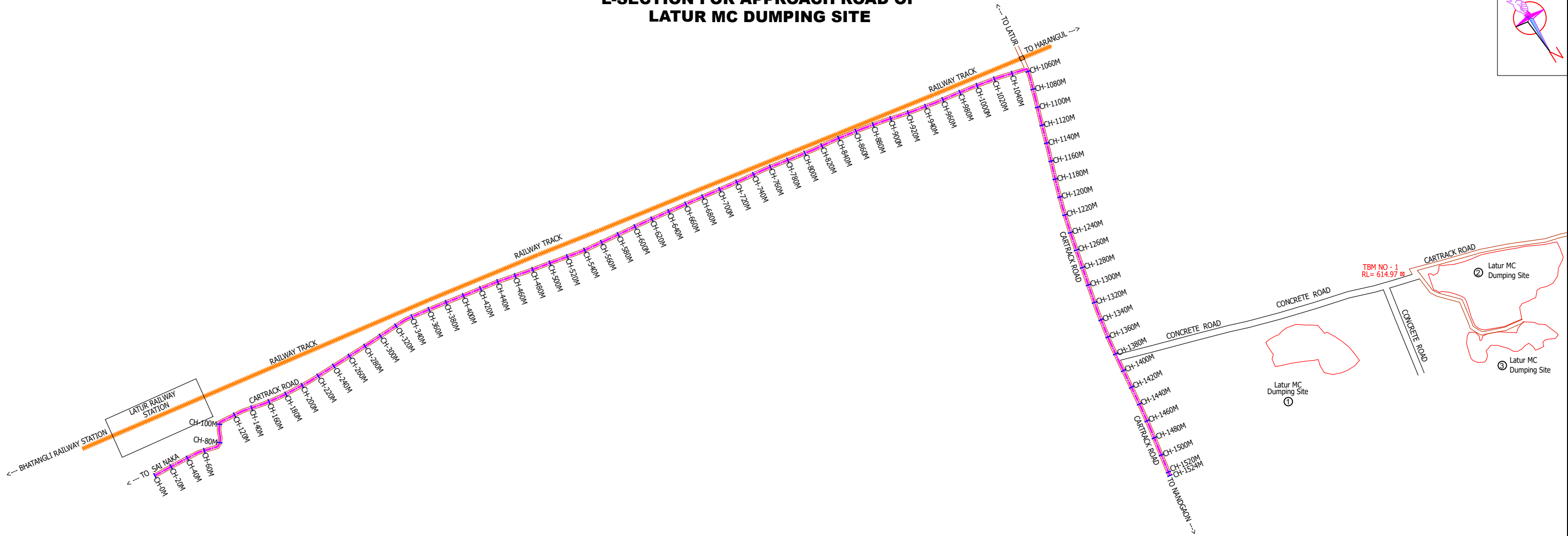
CONSULTANT
SAMARTH ENGINEERS PUNE

WATER SUPPLY & SANITATION ENGINEER
LATUR MUNICIPAL CORPORATION

DEPUTY COMMISSIONER
LATUR MUNICIPAL CORPORATION

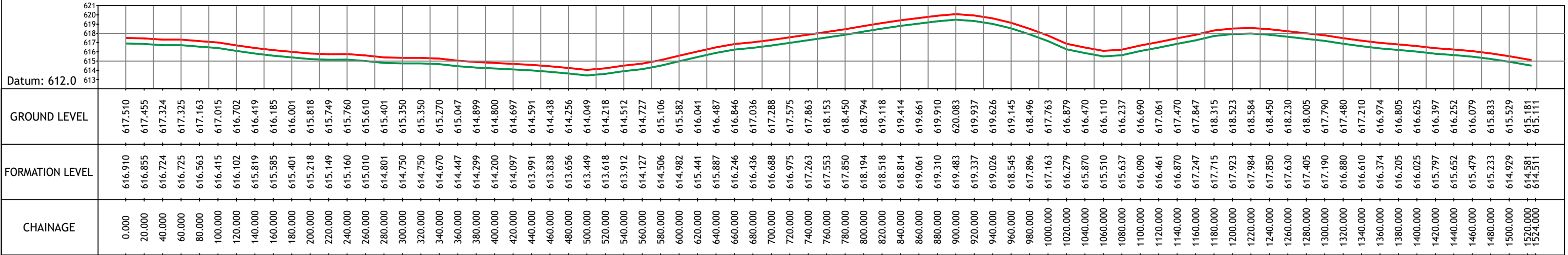
DWG. NO. CHECKED BY :- JR. ENGG. SUB DIV. ENGG. EXECUTIVE ENGG. SUPTD. ENGG. CHIEF ENGINEER

L-SECTION FOR APPROACH ROAD OF
LATUR MC DUMPING SITE



PLAN
SCALE :- 1:3000

GROUND LEVEL	
FORMATION LEVEL	



L/S FOR APPROACH ROAD OF LATUR MC DUMPING SITE[0.000 - 1524.000]
[Hor Scale - 1 in 3000 : Ver Scale - 1 in 300]

CONSULTANT
SAMARTH ENGINEERS PUNE

WATER SUPPLY & SANITATION ENGINEER
LATUR MUNICIPAL CORPORATION

DEPUTY COMMISSIONER
LATUR MUNICIPAL CORPORATION

GOVERNMENT OF MAHARASHTRA
LATUR MUNICIPAL CORPORATION ,
DISTRICT:- LATUR , DIVISION:- AURANGABAD

NAME OF THE DRAWING:- **L-SECTION FOR APPROACH ROAD OF LATUR MC DUMPING SITE**

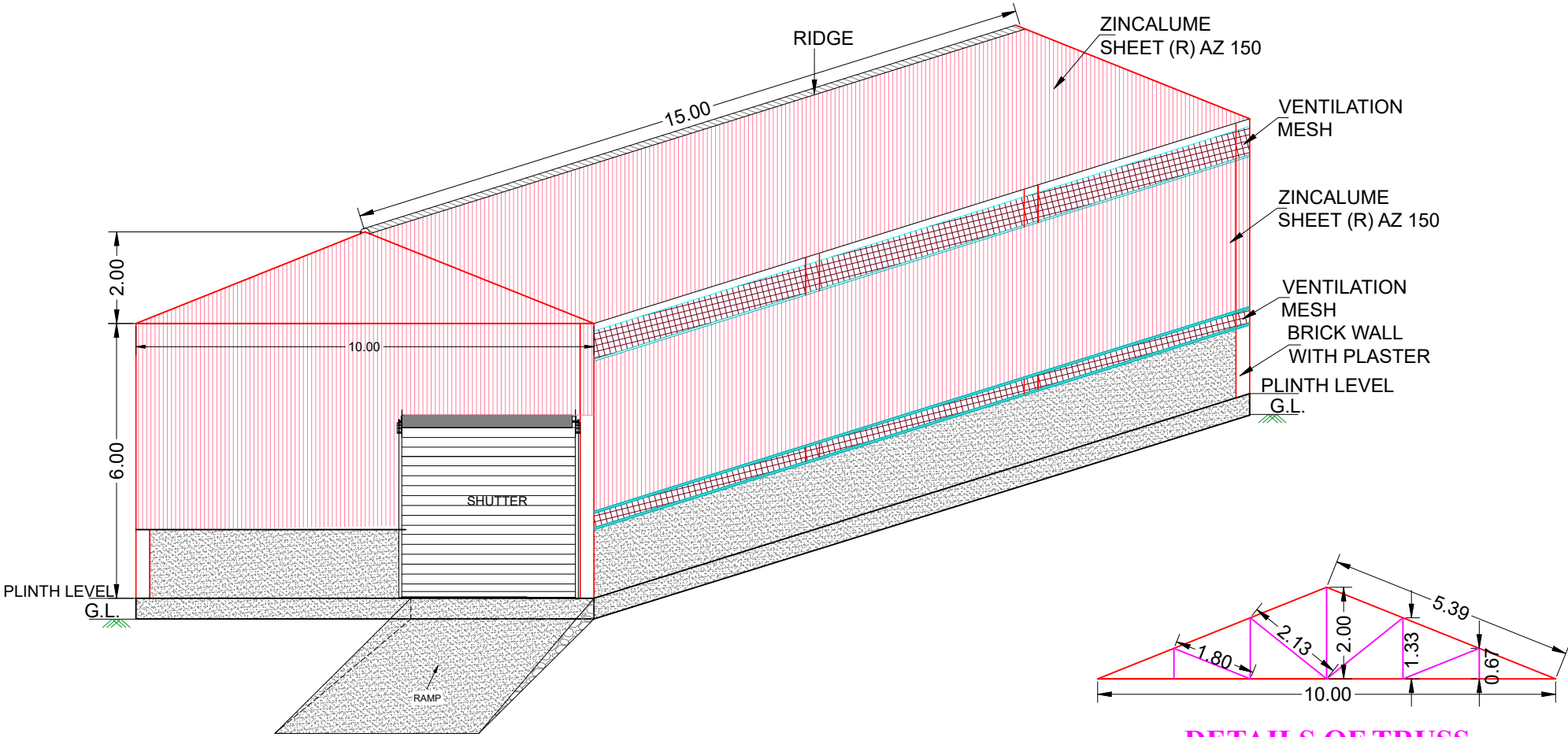
CONSULTANTS: **SAMARTH ENGINEERS**
Flat No. 201, 'A' Wing, Suraj Mahal Apartment,
Opp.Subudh Hospital,
Near Shivaji Statue, Kothrud, Pune - 411038
Email: samarthengineers999@gmail.com

SCALE :- Hor-3000 Ver-300

4.2

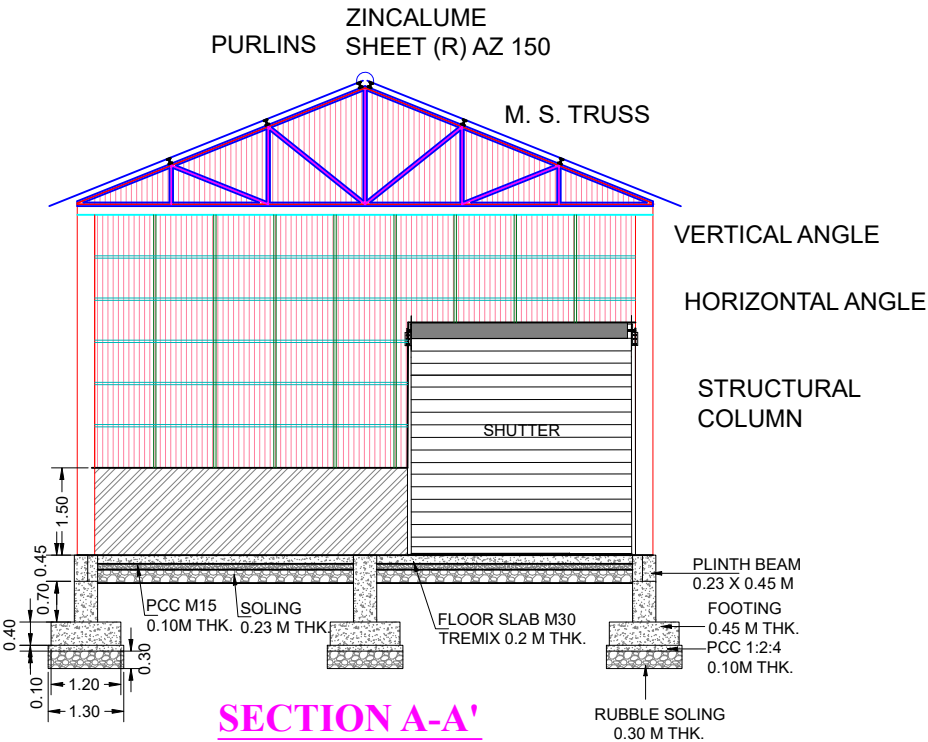
DWG. NO. CHECKED BY:- JR. ENGG. SUB DIV ENGG. EXECUTIVE ENGG. SUPTD. ENGG. CHIEF ENGINEER

SHED FOR SCREENING MACHINE - 3 Nos (15 X 10)
LATUR MUNICIPAL CORPORATION , DISTRICT :- LATUR

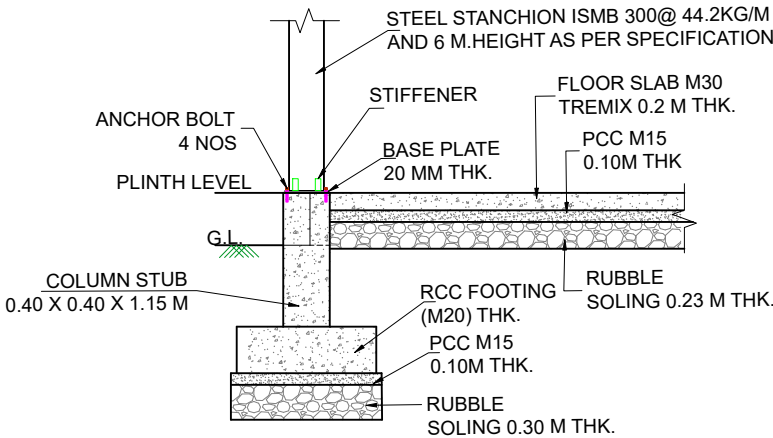


ELEVATION

DETAILS OF TRUSS



SECTION A-A'



SECTION B-B'

LEGENDS :-

MS TRUSS 60X60X6 @ 5.4 Kg/m - 5 Nos
Roofing Member ISMB150 @14.9. kg/m
RCC Column (M20) 0.4 X 0.4 M - 12 Nos
Steel Column of ISMB300 @44.2 kg/m - 10 Nos
Portal Frame of ISMB300 @44.2 kg/m
Angle section for roof purlins 50x50x5 @ 3.8 kg/m @1.8m spacing - 7 Nos
Vertical Angle section 40x40x4 @ 2.4 kg/m for supporting Zincalume sheet (38 Nos @ 1.286 m c/c spacing, Ht 4.5.0 m each)
Horizontal Angle section 40x40x4 @ 2.4 kg/m for supporting Zincalume sheet (Running Length 50m) - 5 Nos
Zincalume Sheet (R) AZ150
Rolling Shutter 4.0 X 4.0 M
Ventilation Mesh 50 X 25 MM

- NOTES :
1. ALL DIMENSION ARE IN METER.
 2. DO NOT SCALED OUT DIMENSION FROM DRAWING.
 3. THIS DRAWING IS ONLY FOR TENDER PURPOSE.

GOVERNMENT OF MAHARASHTRA
LATUR MUNICIPAL CORPORATION ,
DISTRICT- LATUR, DIVISION:- AURANGABAD

NAME OF THE
DRAWING:-
SHED FOR SCREENING MACHINE

CONSULTANTS
S
SAMARTH ENGINEERS
Flat No. 201, "A" Wing, Suraj Mahal Apartment,
Opp.Subudh Hospital,
Near Shivaji Statue, Kothrud, Pune - 411038
Email: samarthengineers999@gmail.com

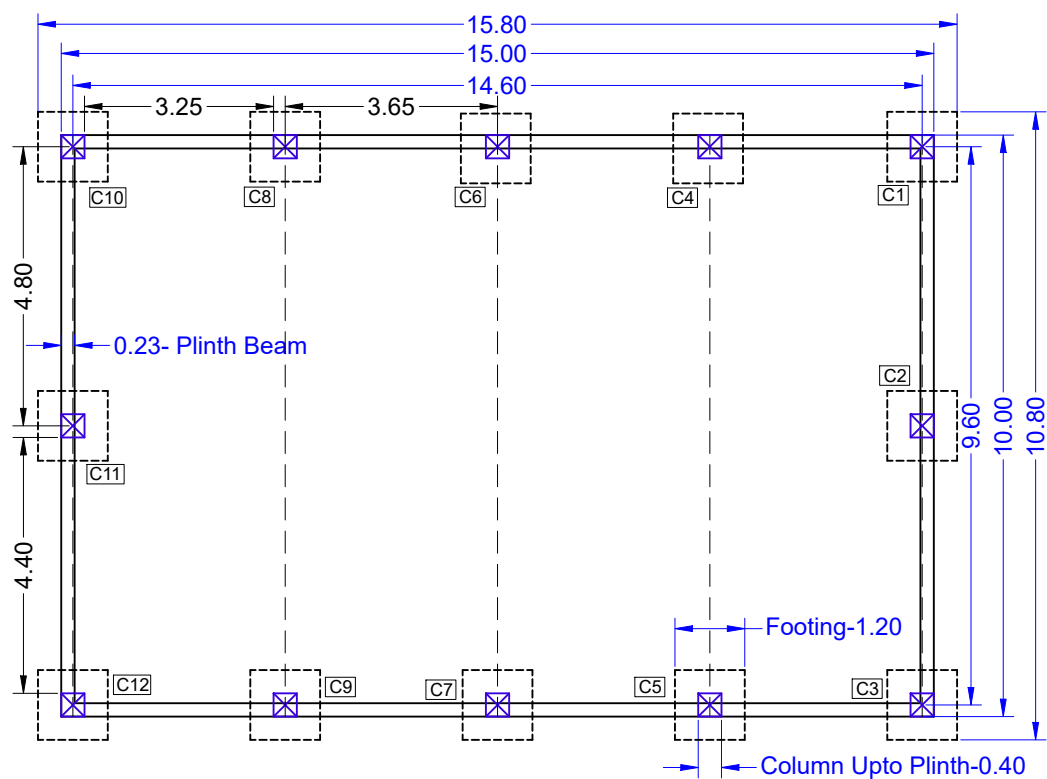
SCALE :- N.T.S	DRAWN BY :-	SHELKE DINESH				
5/1						
DWG. NO.	CHECKED BY :-	JR. ENGG.	SUB DIV. ENGG.	EXECUTIVE ENGG.	SUPTD. ENGG.	CHIEF ENGINEER

CONSULTANT
SAMARTH ENGINEER'S, PUNE

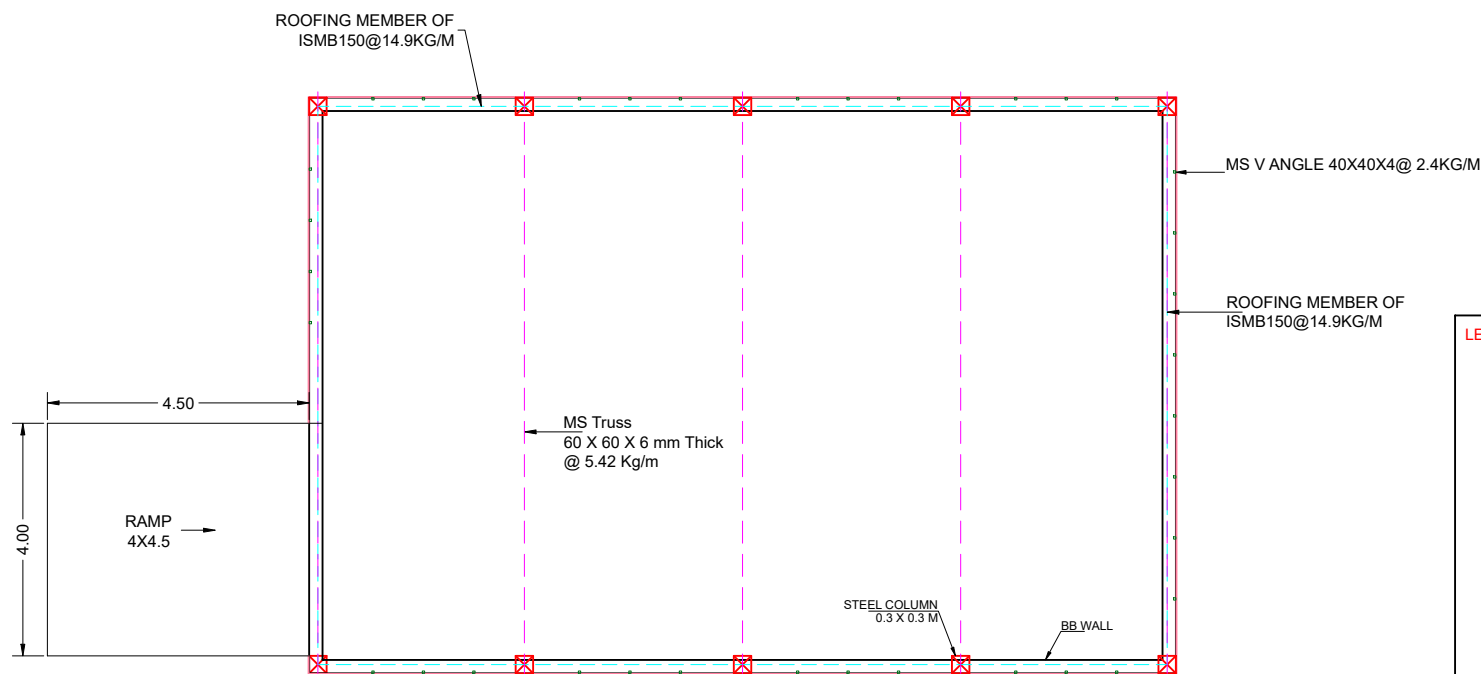
WATER SUPPLY & SANITATION ENGINEER
LATUR MUNICIPAL CORPORATION

DEPUTY COMMISSIONER
LATUR MUNICIPAL CORPORATION

SHED FOR SCREENING MACHINE - 3 Nos (15 X 10)
LATUR MUNICIPAL CORPORATION , DISTRICT :- LATUR



FOUNDATION PLAN



PLAN

LEGENDS :-	
	MS TRUSS 60X60X6 @ 5.4 Kg/m - 5 Nos
	Roofing Member ISMB150 @ 14.9. kg/m
	RCC Column (M20) 0.4 X 0.4 M - 12 Nos
	Steel Column of ISMB300 @44.2 kg/m - 10 Nos
	Portal Frame of ISMB300 @44.2 kg/m
	Angle section for roof purlins 50x50x5 @ 3.8 kg/m @ 1.8m spacing - 7 Nos
	Vertical Angle section 40x40x4 @ 2.4 kg/m for supporting Zinalume sheet (38 Nos @ 1.286 m c/c spacing, Ht 4.5.0 m each)
	Horizontal Angle section 40x40x4 @ 2.4 kg/m for supporting Zinalume sheet (Running Length 50m) - 5 Nos
	Zinalume Sheet (R) AZ150
	Rolling Shutter 4.0 X 4.0 M
	Ventilation Mesh 50 X 25 MM

- NOTES :**
1. ALL DIMENSION ARE IN METER.
2. DO NOT SCALED OUT DIMENSION FROM DRAWING.
3. THIS DRAWING IS ONLY FOR TENDER PURPOSE.

GOVERNMENT OF MAHARASHTRA
LATUR MUNICIPAL CORPORATION ,
DISTRICT- LATUR, DIVISION:- AURANGABAD

NAME OF THE DRAWING:-
SHED FOR SCREENING MACHINE - 3 Nos

CONSULTANTS
**SAMARTH ENGINEERS**
Flat No. 201, "A" Wing, Suraj Mahal Apartment,
Opp.Subudh Hospital,
Near Shivaji Statue, Kothrud, Pune - 411038
Email: samarthengineers999@gmail.com

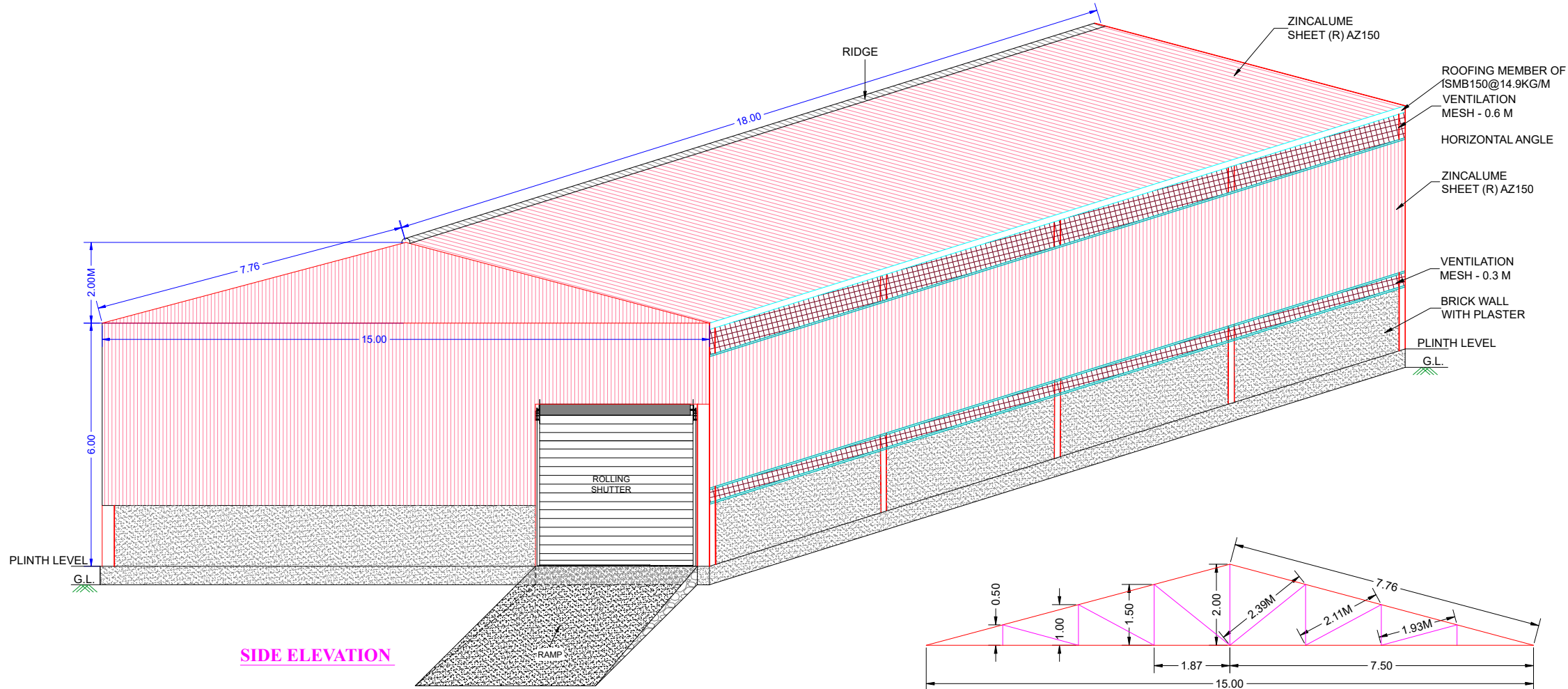
SCALE :- N.T.S		DRAWN BY :-	SHELKE DINESH			
5/2						
DWG. NO.	CHECKED BY :-	JR. ENGG.	SUB DIV. ENGG.	EXECUTIVE ENGG.	SUPTD. ENGG.	CHIEF ENGINEER

CONSULTANT
SAMARTH ENGINEER'S,
PUNE

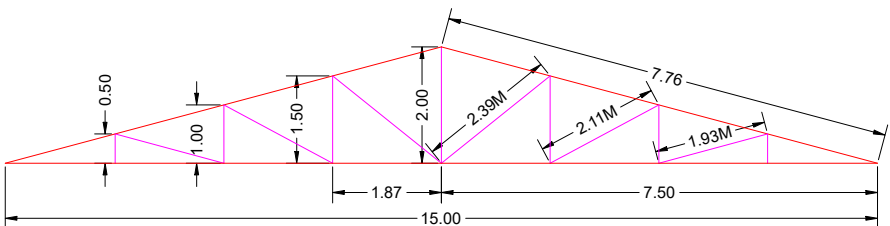
WATER SUPPLY & SANITATION ENGINEER
LATUR MUNICIPAL CORPORATION

DEPUTY COMMISSIONER
LATUR MUNICIPAL CORPORATION

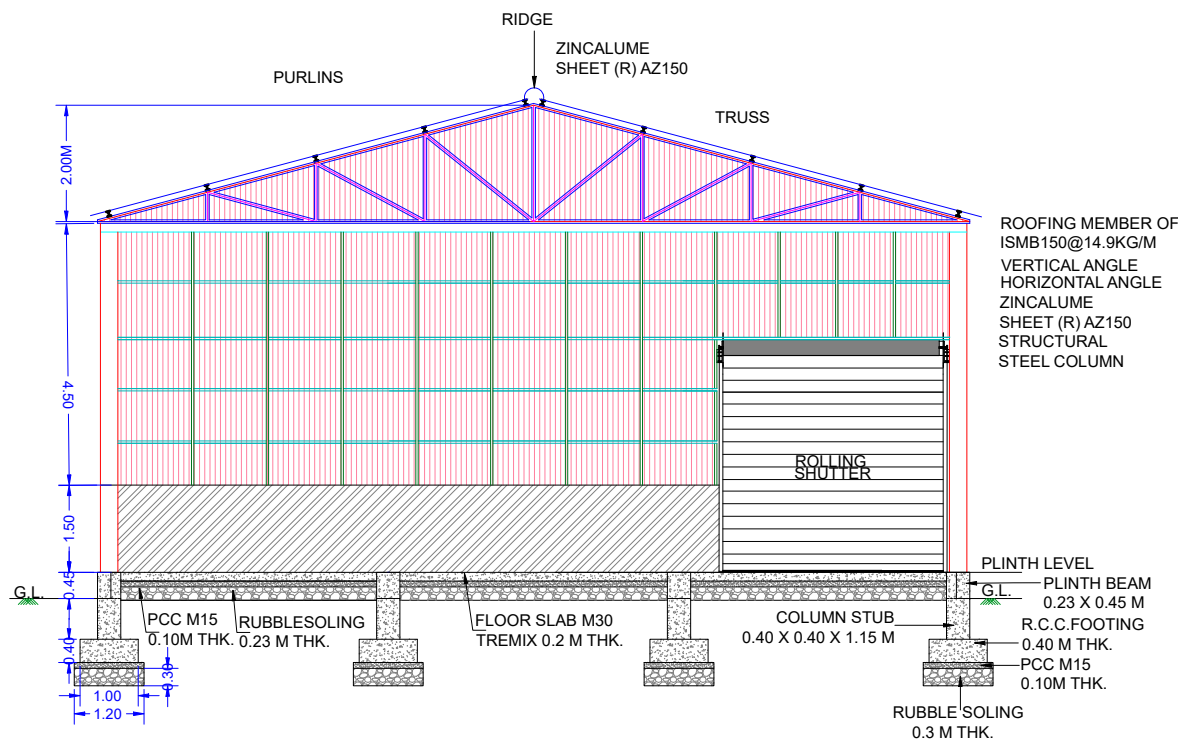
**MRF SHED WITH PARTITION - 4 Nos (18 X 15 M)
LATUR MUNICIPAL CORPORATION , DISTRICT :- LATUR**



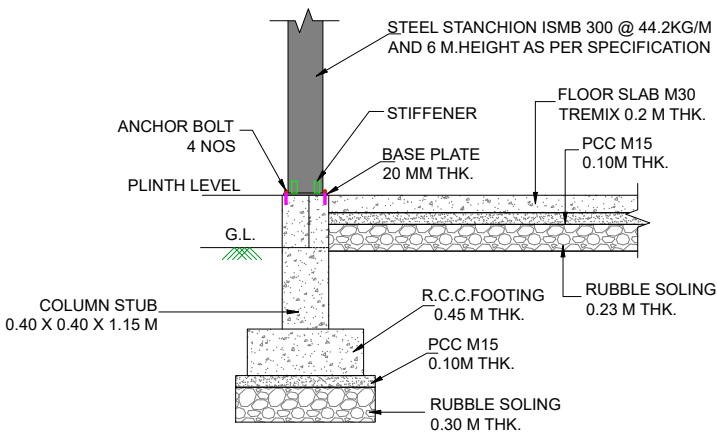
SIDE ELEVATION



DETAILS OF TRUSS



SECTION A-A'



SECTION B-B'

- LEGENDS :-**
- MS TRUSS 75X75X6 @ 6.8 Kg/m - 5 Nos
 - Roofing Member ISMB150 @ 14.9. kg/m
 - RCC Column (M20) 0.4 X 0.4 M - 14 Nos
 - Steel Column of ISMB300 @44.2 kg/m -10Nos
 - Portal Frame of ISMB300 @44.2 kg/m
 - Angle section for roof purlins 50x50x5 @ 3.8 kg/m @ 1.8m spacing - 10 Nos
 - Vertical Angle section 40x40x4 @ 2.4 kg/m for supporting Zincalume sheet (48 Nos @ 1.286 m c/c spacing, Ht 4.5.0 m each)
 - Horizontal Angle section 40x40x4 @ 2.4 kg/m for supporting Zincalume sheet (Running Length 50m) - 6 Nos
 - Zincalume Sheet (R) AZ150
 - Rolling Shutter 4.0 X 4.0 M
 - Ventilation Mesh 50 X 25 MM

- NOTES :**
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 2. DO NOT SCALED OUT DIMENSION FROM DRAWING.
 3. THIS DRAWING IS ONLY FOR TENDER PURPOSE.

**GOVERNMENT OF MAHARASHTRA
LATUR MUNICIPAL CORPORATION ,
DISTRICT:- LATUR , DIVISION:- AURANGABAD**

NAME OF THE DRAWING:- MRF SHED - 4 Nos (18 X 15 M)

CONSULTANTS
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Near Shivaji Statue, Kothrud, Pune - 411038
Email: samarthengineers999@gmail.com

SCALE :- N.T.S **DRAWN BY :- SHELKE DINESH**

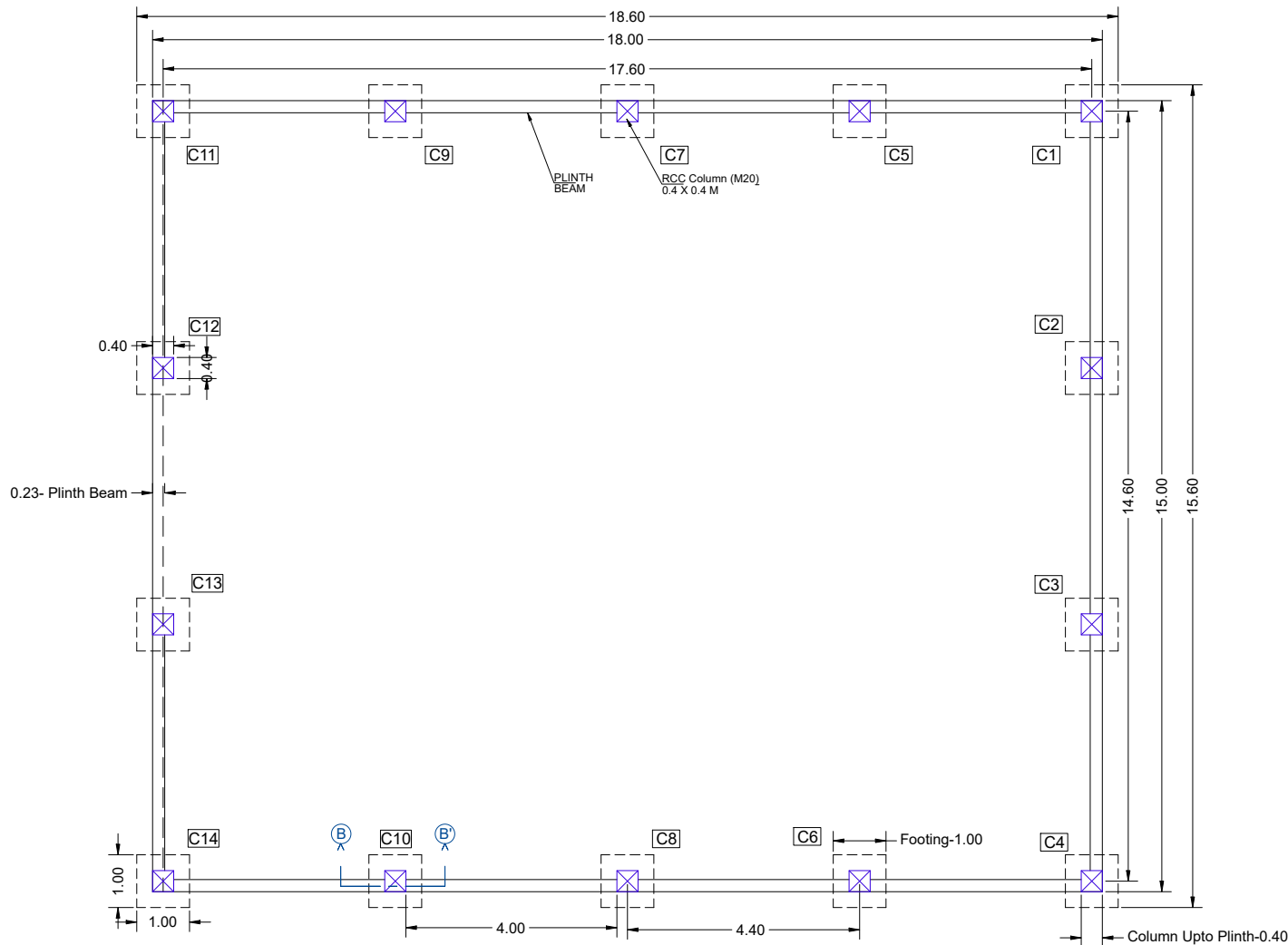
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DWG. NO.	CHECKED BY :-	JR. ENGG.	SUB DIV. ENGG.	EXECUTIVE ENGG.	SUPTD. ENGG.	CHIEF ENGINEER

**CONSULTANT
SAMARTH ENGINEERS, PUNE**

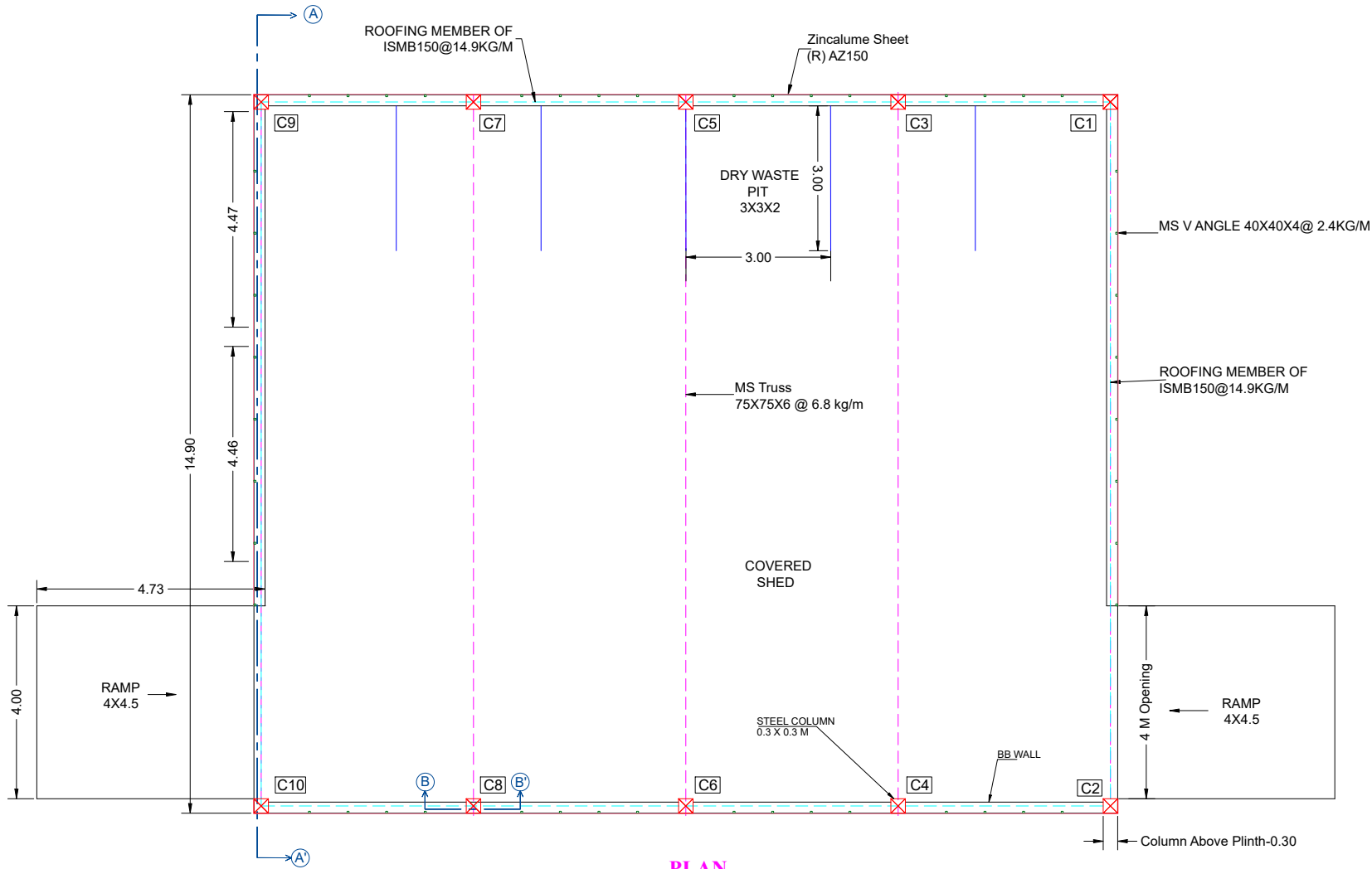
**WATER SUPPLY & SANITATION ENGINEER
LATUR MUNICIPAL CORPORATION**

**DEPUTY COMMISSIONER
LATUR MUNICIPAL CORPORATION**

MRF SHED WITH PARTITION - 4 Nos (18 X 15 M)
LATUR MUNICIPAL CORPORATION , DISTRICT :- LATUR



FOUNDATION PLAN



PLAN

NOTES :

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GOVERNMENT OF MAHARASHTRA
LATUR MUNICIPAL CORPORATION ,
DISTRICT:- LATUR , DIVISION:- AURANGABAD

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SCALE :- N.T.S **DRAWN BY :- SHELKE DINESH**

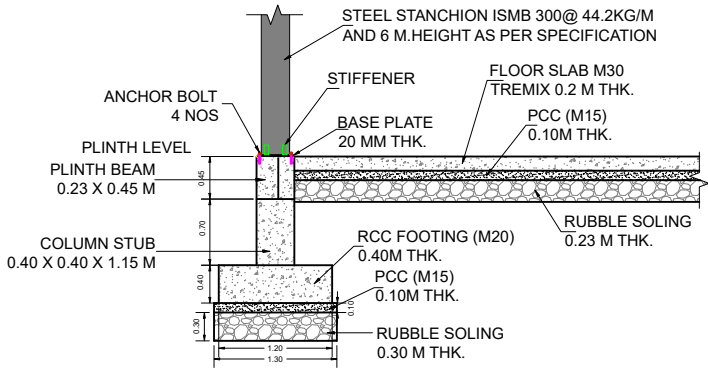
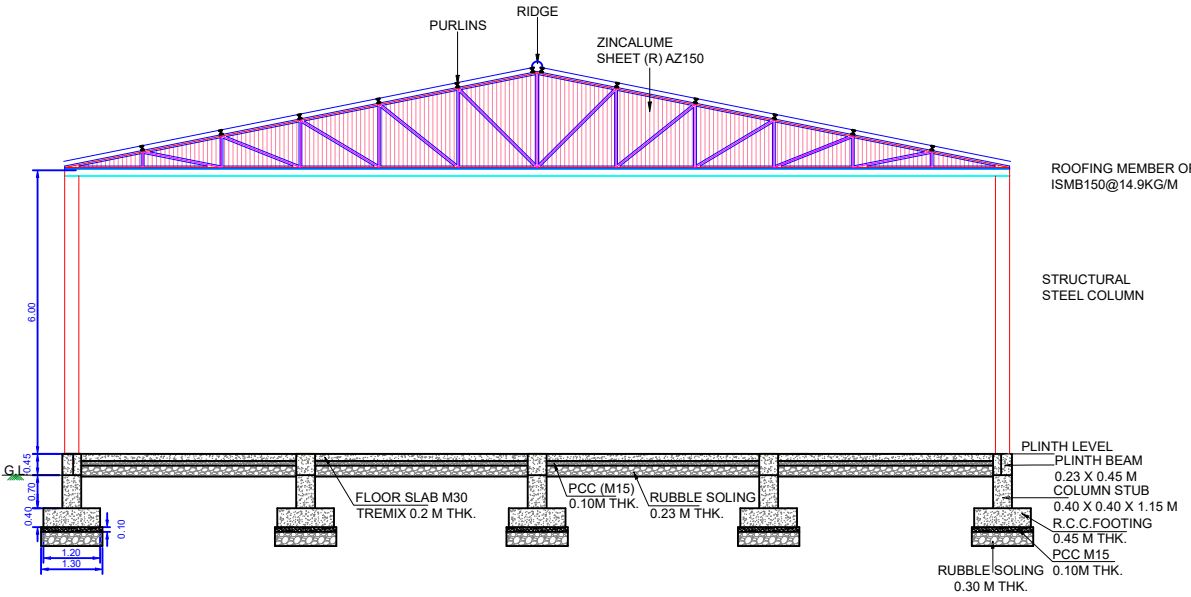
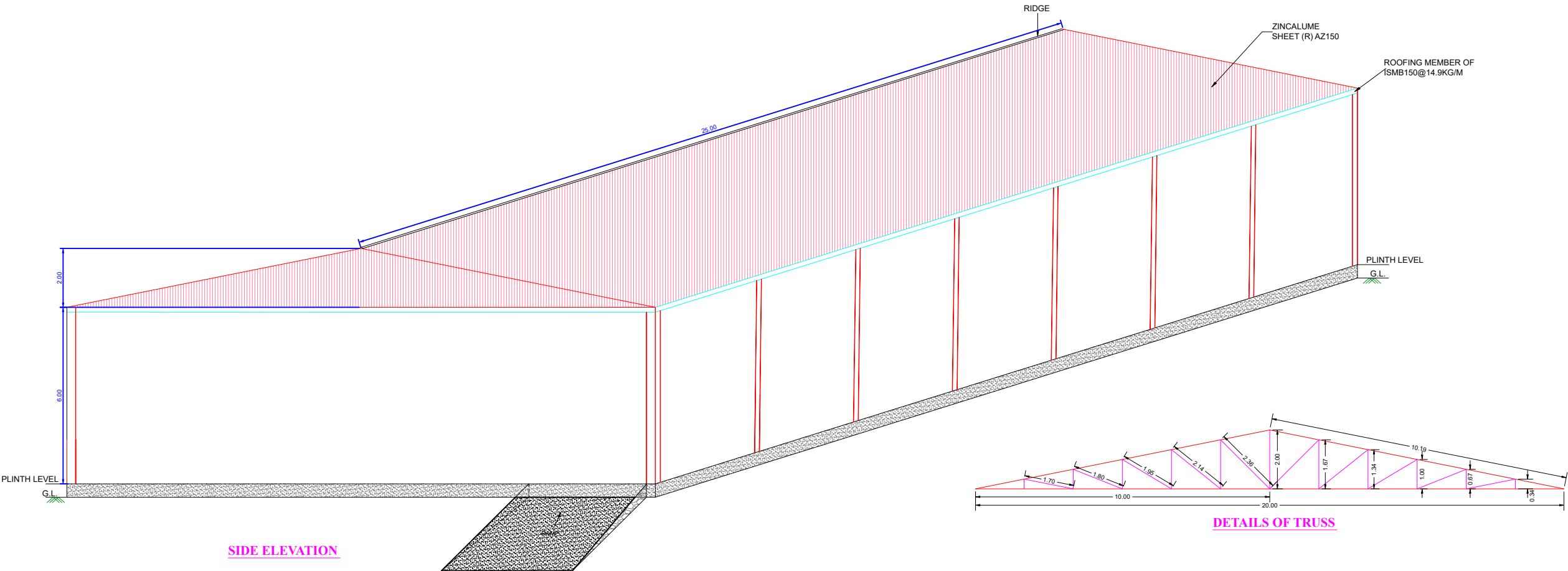
6/2						
DWG. NO.	CHECKED BY :-	JR. ENGG.	SUB DIV. ENGG.	EXECUTIVE ENGG.	SUPTD. ENGG.	CHIEF ENGINEER

CONSULTANT
SAMARTH ENGINEERS

WATER SUPPLY & SANITATION ENGINEER
LATUR MUNICIPAL CORPORATION

DEPUTY COMMISSIONER
LATUR MUNICIPAL CORPORATION

TIPPING SHED - 3 Nos (25 X 20)
LATUR MUNICIPAL CORPORATION , DISTRICT :- LATUR



LEGENDS :-

MS TRUSS 100X100X6 @ 9.2 Kg/m - 8 Nos
Roofing Member ISMB150 @ 14.9. kg/m
RCC Column (M20) 0.4 X 0.4 M - 22 Nos
Steel Column of ISMB300 @44.2 kg/m - 16 Nos
Portal Frame of ISMB300 @44.2 kg/m
Angle section for roof purlins 50x50x5 @ 3.8 kg/m @1.8m spacing - 14 Nos
Vertical Angle section 40x40x4 @ 2.4 kg/m for supporting Zincalume sheet (69 Nos @ 1.286 m c/c spacing, Ht 4.5.0 m each)
Horizontal Angle section 40x40x4 @ 2.4 kg/m for supporting Zincalume sheet (Running Length 50m) - 6 Nos
Zincalume Sheet (R) AZ150
Rolling Shutter 4.0 X 4.0 M
Ventilation Mesh 50 X 25 MM

- NOTES :
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 - DO NOT SCALED OUT DIMENSION FROM DRAWING.
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GOVERNMENT OF MAHARASHTRA
LATUR MUNICIPAL CORPORATION ,
DISTRICT:-LATUR, DIVISION:-AURANGABAD

NAME OF THE DRAWING:- TIPPING SHED - 3 Nos (25 X 20)

CONSULTANTS SAMARTH ENGINEERS
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Email: samarthengineers999@gmail.com

SCALE :- N.T.S DRAWN BY :- SHEKHE DINESH

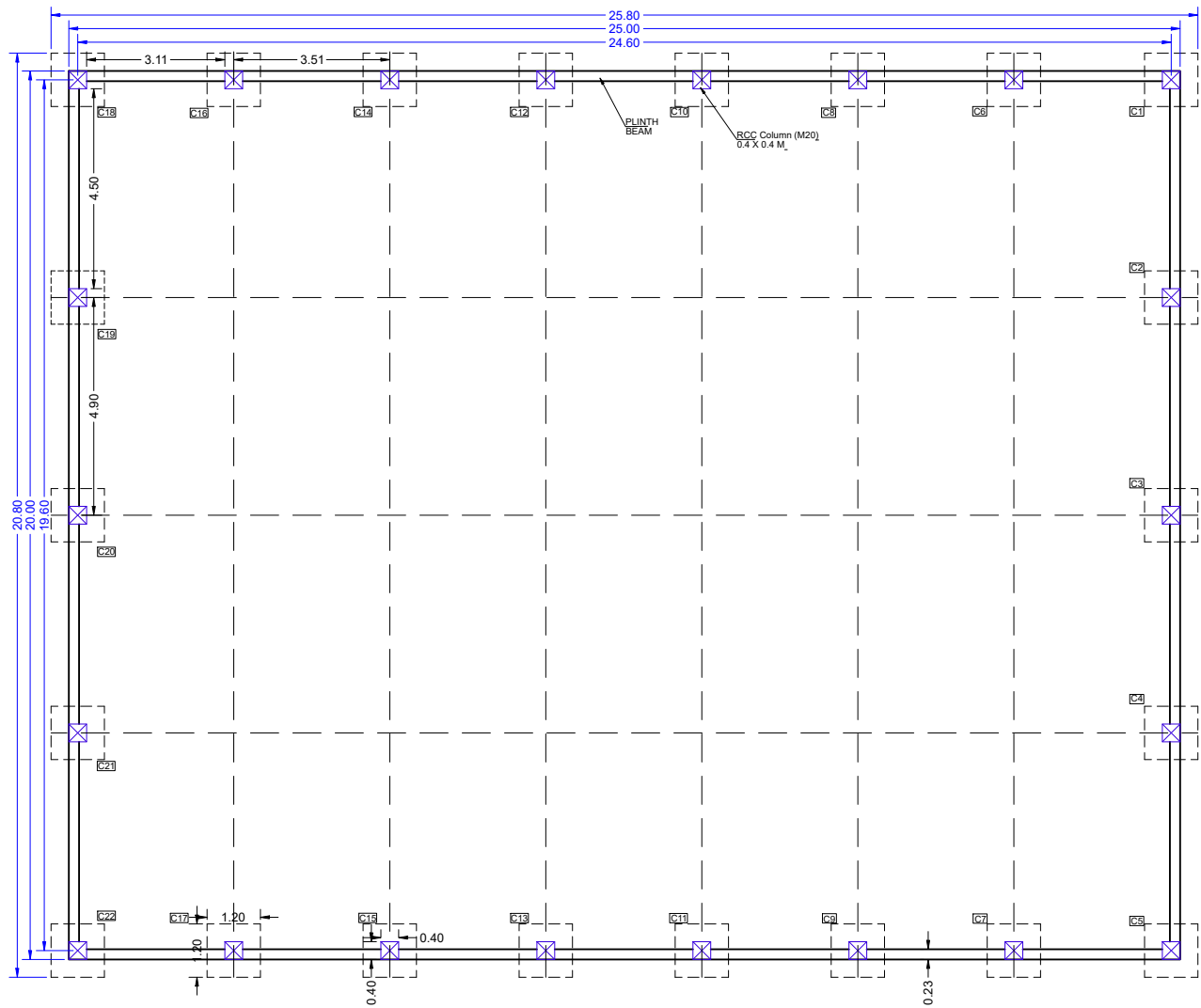
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DWG. NO.	CHECKED BY :-	JR. ENGG.	SUB DIV. ENGG.	EXECUTIVE ENGG.	SUPTD. ENGG.

CONSULTANT
SAMARTH ENGINEERS, PUNE

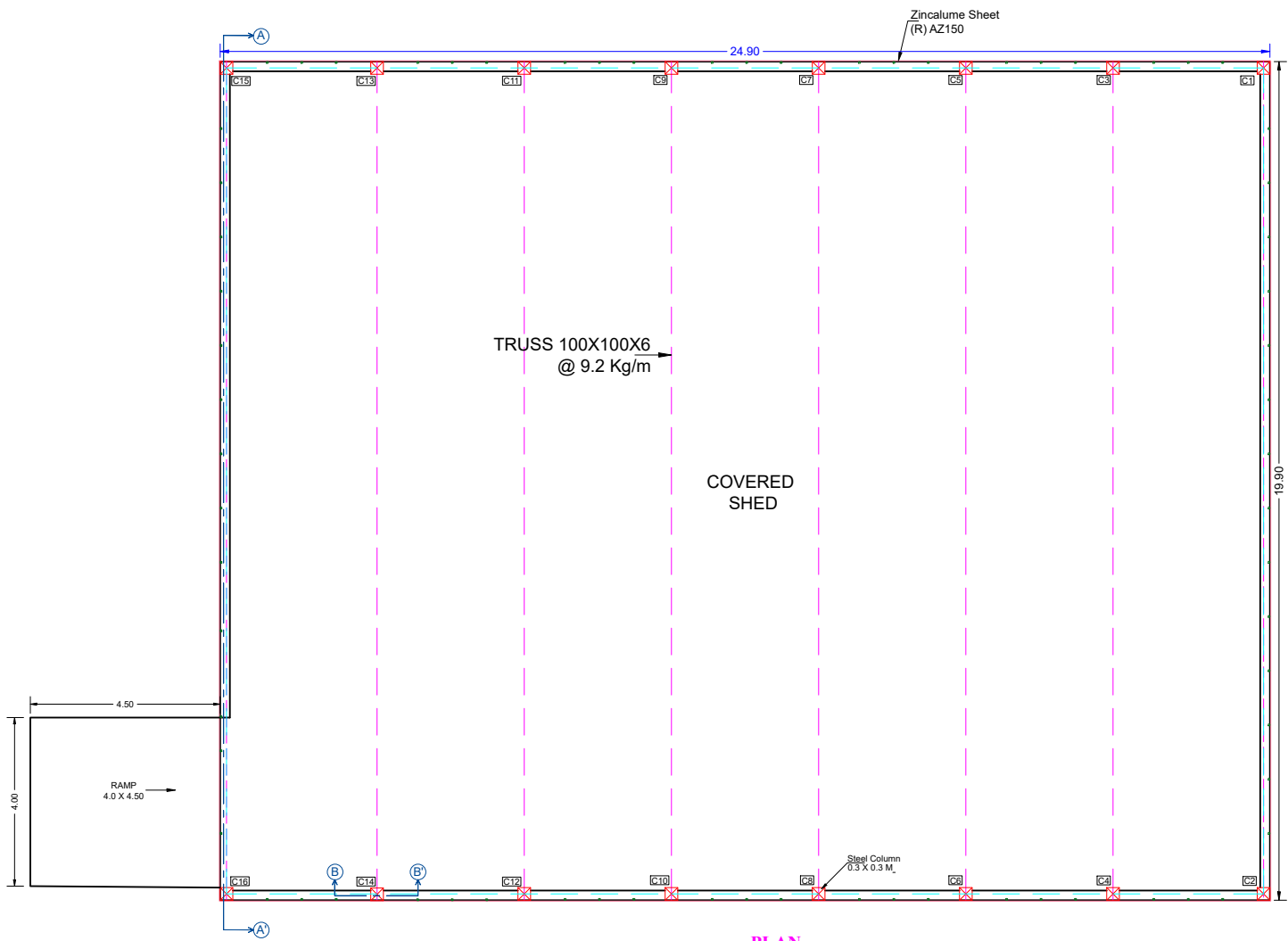
WATER SUPPLY & SANITATION ENGINEER
LATUR MUNICIPAL CORPORATION

DEPUTY COMMISSIONER
LATUR MUNICIPAL CORPORATION

TIPPING SHED - 3 Nos (25 X 20)
LATUR MUNICIPAL CORPORATION , DISTRICT :- LATUR



FOUNDATION PLAN



PLAN

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GOVERNMENT OF MAHARASHTRA
LATUR MUNICIPAL CORPORATION ,
DISTRICT:-LATUR, DIVISION:-AURANGABAD

NAME OF THE DRAWING:- TIPPING SHED - 3 Nos
(25 X 20)

CONSULTANTS

SAMARTH ENGINEERS

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Near Shivaji Statue, Kothrud, Pune - 411038
Email: samarthengineers999@gmail.com

SCALE :- N.T.S

DRAWN BY :- SHELKE DINESH

7/2

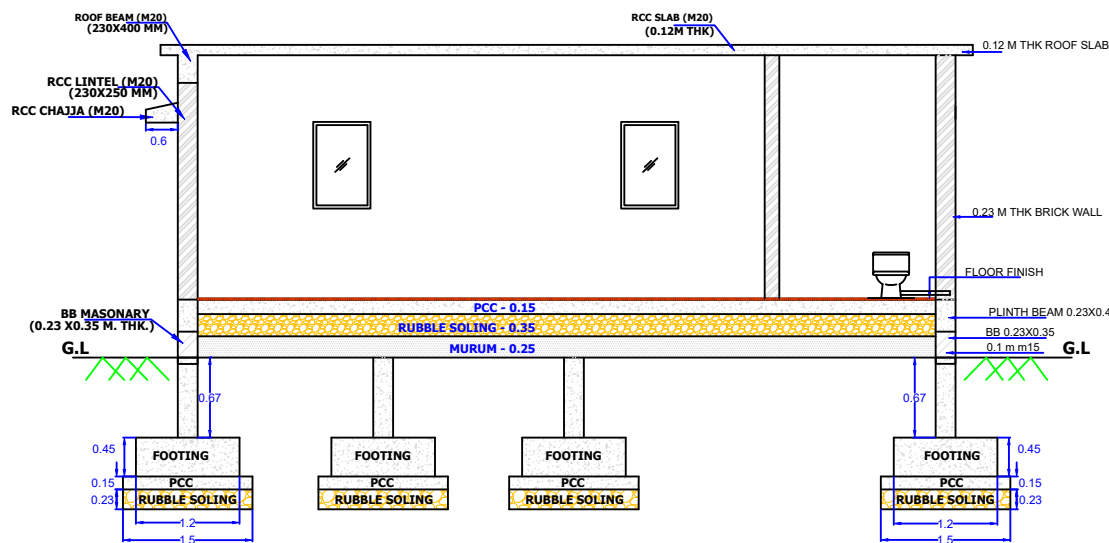
DWG. NO. CHECKED BY :- JR. ENGG. SUB DIV. ENGG. EXECUTIVE ENGG. SUPTD. ENGG. CHIEF ENGINEER

CONSULTANT
SAMARTH ENGINEERS, PUNE

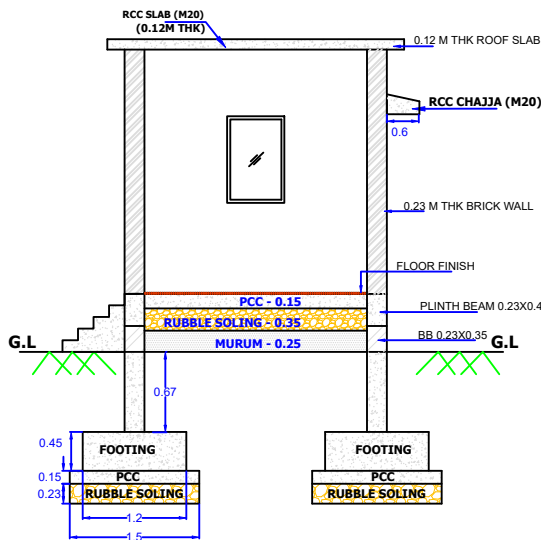
WATER SUPPLY & SANITATION ENGINEER
LATUR MUNICIPAL CORPORATION

DEPUTY COMMISSIONER
LATUR MUNICIPAL CORPORATION

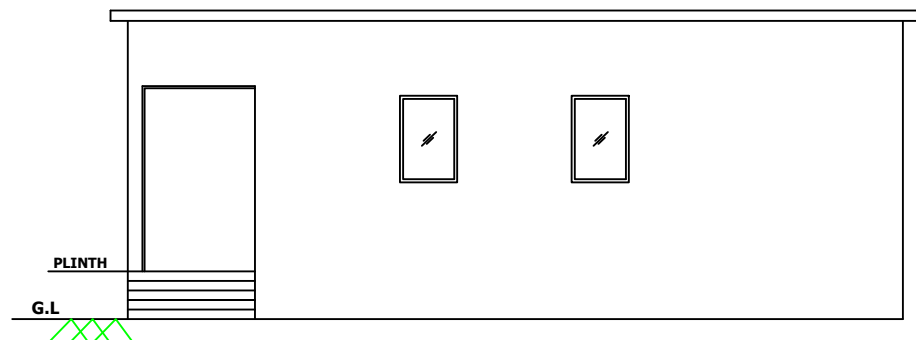
REST ROOM WITH ATTACHED TOILET (11.73 X 3.50)
LATUR MUNICIPAL CORPORATION, DISTRICT :- LATUR



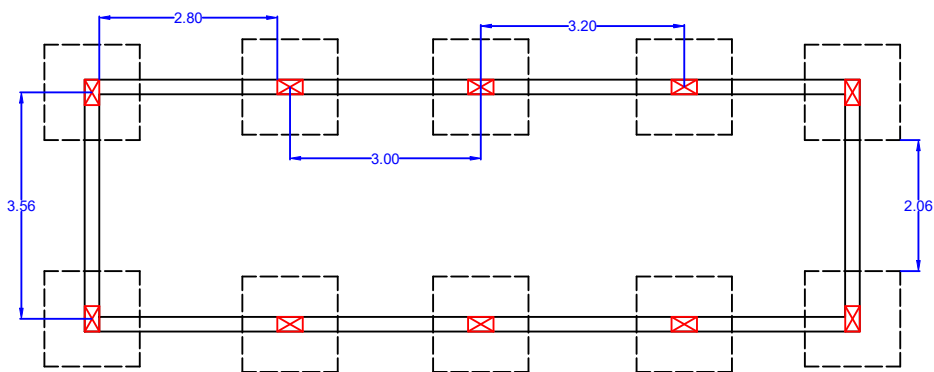
SECTION "A - A"



SECTION "B - B"



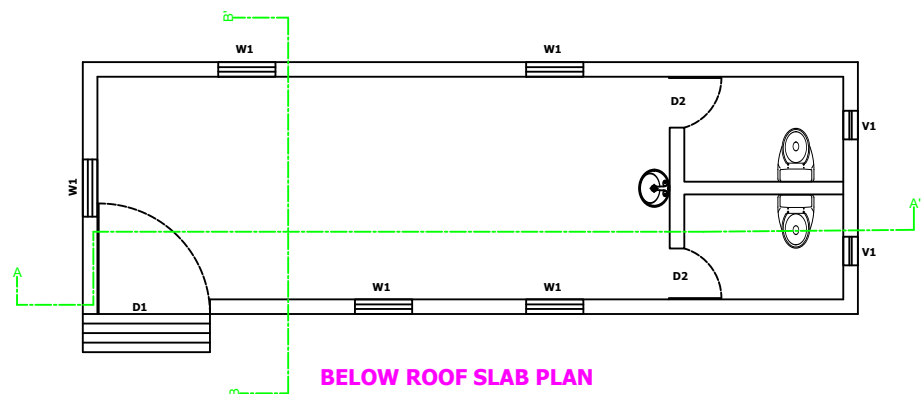
ELEVATION



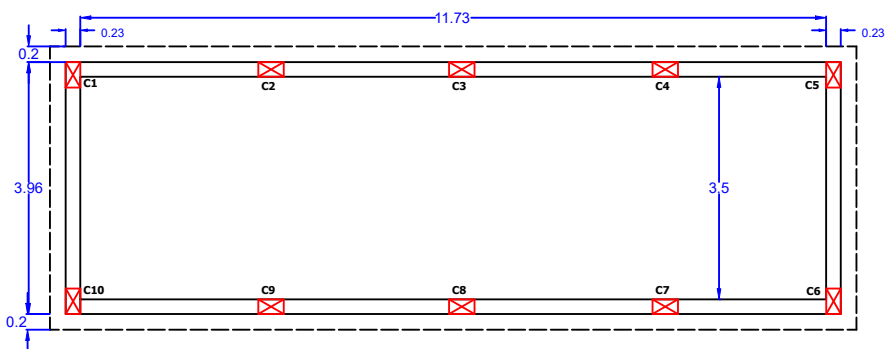
FOUNDATION PLAN

SR. NO	PARTICULAR	SIZE
1.	DOOR	D1 1.20 X 2.10
2.	DOOR	D2 0.80 X 2.10
1.	WINDOW	W1 0.9 X 1.5
2.	VENTILATOR	V1 0.45 X 0.60

SR. NO	PARTICULAR	QTY	GRADE CONCRETE	R.C.C COLUMN	FOOTING	BEAM
1.	C1	10	M20	0.23X0.4M	1.20X1.20X0.45 M	
2.	PLINTH BEAM		M20			0.23X0.40 M
3.	ROOF BEAM		M20			0.23X0.40 M
4.	R.C.C LINTEL		M20			0.23X0.25 M



BELOW ROOF SLAB PLAN



ABOVE ROOF SLAB PLAN

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**GOVERNMENT OF MAHARASHTRA
LATUR MUNICIPAL CORPORATION,
DISTRICT:-LATUR, DIVISION:-AURANGABAD**

NAME OF THE
DRAWING:-

REST ROOM WITH ATTACHED TOILET (11.73 X 3.50)

CONSULTANTS **SAMARTH ENGINEERS**



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Opp.Subudh Hospital,
Near Shivaji Statue, Kothrud, Pune - 411038
Email: samarthengineers999@gmail.com

SCALE :- N.T.S

DRAWN BY :- SHELKE DINESH

8

DWG. NO. CHECKED BY :- JR. ENGG. SUB DIV. ENGG. EXECUTIVE ENGG. SUPTD. ENGG. CHIEF ENGINEER

CONSULTANT
SAMARTH ENGINEERS, PUNE

WATER SUPPLY & SANITATION ENGINEER
LATUR MUNICIPAL CORPORATION

DEPUTY COMMISSIONER
LATUR MUNICIPAL CORPORATION