

SCOPE OF WORK

Indent No.: 20210185

The scope of work shall be as follows:

For laying of Bitumen Road

- 1). Supply and stacking of stone aggregates. Laying, spreading, screening and compaction of W.B.M. (water bound macadam) in uniform thickness with 3 wheeled road roller.
- 2). Tack coat shall be laid using bitumen emulsion on WBM @ 0.4Kg/Sqm, on bituminous surface @ 0.25Kg/sqm.
- 3). Laying of 50 mm thick compacted thickness of Bituminous Macadam and 25 mm thick compacted thickness of semi dense bituminous course with compaction factor of 1.36.
- 4). The laying of bituminous course will be executed using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by tippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level & alignment and rolling with smooth wheeled vibratory and tandem rollers as per specifications to achieve the desired compaction and density.
- 5). Road marking strips of desired shade / color using hot thermoplastic material by fully / semi automatic thermoplastic paint applicator machine is to be made as and where required as per instructions of BHEL.



TERMS & CONDITIONS**PART-A: General**

1. Work is to be executed strictly as per scope of work, Terms & conditions, special Terms & Conditions and BOQ stipulated in Annexure – I, Annexure – II, Annexure –III & Annexure-IV respectively.
2. Bidder has to quote prices only in Price bid format as per Annexure-V. The rate for individual activities shall be calculated as per Annexure-IV (BOQ cum Price distribution sheet). In case, quote is not submitted by the bidder in format as per Annexure-V, the bidder's offer shall be rejected even if the same stands technically acceptable before opening of the price bid.
3. **Safety:** Adequate safety precautions & PPEs (safety belts, safety shoes, helmet, etc.) for workmen engaged by the contractor & taking work permit from BHEL as per Format F-HSE-18 (format shall be provided by BHEL) for working at height >7ft as required shall be the sole responsibility of contractor. It may be noted that wearing of safety shoes & face mask shall be the essential requirement for entering into BHEL premises. Contractor should ensure & provide valid test certificate of safety belt / other PPEs used by the contractor or its workmen. Contractor shall follow all preventive norms as applicable at BHEL premises regarding COVID-19.
4. Site clearance: Commencement of work shall be after site clearance by BHEL.
5. Delivery schedule: Work shall be completed in all respect within 60 days from the date of site clearance.
6. Water used in the work shall be provided by BHEL through the existing outlets within factory premises. Any other arrangement of water through tanker etc. / temporary extension of water line through flexible hose/pipes shall be made by contractor at its own cost. More over contractor has to ensure the availability of water before carrying out the work and if it is not possible to provide the water at site through existing outlet / extension, then contractor has to make borehole arrangement at its own cost for ensuring water availability at site and that too with prior written permission of BHEL. Water consumption shall be charged @ Rs. 1 per thousand of gross value of the bill. Free of cost AC power supply at 415 Volt / 230 Volt (if required) shall be given only at single point by BHEL. All extensions / other arrangements required shall be in Contractor's scope.
7. The contractor shall not sublet the work awarded by BHEL to another agency / firm.
8. **Quality of Supply & workmanship:** The quality of materials should be as per relevant code and specification as per Annexure-III. Laying of bituminous macadam should be using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by tippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications.
9. **Inspection:** Inspection of work shall be carried out at following stages by BHEL during and after execution of work at site:



- (a). Surface Cleaning before applying tack coat.
- (b) Percentage of Binder content (bitumen of grade VG 30 as per Annexure-IV) during batch preparation on sample basis.
- (c) Bituminous layers – 50 mm bituminous macadam shall be inspected before (d).
- (d) Bituminous layers – 25 mm semi dense bituminous course.
- (e) Temperature of Bituminous Macadem before laying.
- (f) Visual Inspection after completion of work for undulation, cracks, proper camber, cavities.

The contractor shall give due notice for inspection by BHEL at all stages of work. No work shall be covered up or put out of view without the approval of the BHEL. In the event of the failure of the contractor to give such notice, BHEL may uncover such work for inspection at the contractor's expense.

Contractor should ensure that the items be made strictly as per specification and quality requirement in the contract. Items & work not as per the required specification /quality during work progress or after completion of work has to be rectified / replaced by the contractor to the satisfaction of BHEL before site handover for takeover by BHEL. Item / Work not found as per specification shall be rejected.

10. **Measurement of work:** The work executed by the contractor shall be measured, recorded & verified at site jointly by BHEL & Contractor representatives and the same shall be recorded in measurement book (M.B.). Unit of measurement for individual items shall be as mentioned in Annexure-IV. The contractor shall provide all required appliances, labour and other things as necessary for the measurement of work at site.
11. The contractor shall deploy all Tools, Tackles, required plant & machinery, Safety equipment's / PPE's, manpower & material for the work, fulfilment of statutory obligations w.r.t. the workmen engaged, including all temporary arrangements, staging, working platforms etc.
12. All tools & tackles, plant & machinery(P&M) and manpower required for the execution of work shall be in contractor's scope. All tool & tackles, P&M shall be brought inside BHEL premises by the contractor through returnable challan duly stamped at BHEL security gate, a copy of which is also to be submitted to WEX/Civil deptt. of BHEL-CFP for records. The contractor shall also provide detail of manpower engaged for the work.
Note : Contractor in its own interest should take due care to supply the material as per the requirement of work. Any excess material supplied inside the BHEL premises by the contractor shall neither be returned back to the contractor nor compensated by BHEL under any circumstances.
13. **Handing over / Taking over document:** Contractor shall hand over the site to BHEL in writing after completion of work. BHEL shall take over the site after inspection based on satisfactory completion of work by contractor and measurement of work. The handing over / taking over document shall be duly signed & stamped by the respective contractor & BHEL representative.
14. **Payment terms:** Contractor shall raise GST invoice in duplicate only after completion of 100% work. Payment against satisfactory completion of work shall be made through e-



payment to the contractor's account within 45 days of submission of invoice based on WAM7 and actual measurement of work along with handing over / taking over document.

*Note: The payment shall be subject to the following conditions:

- (i) All payments will be subject to TDS & other statutory deduction as per applicable rules.
- (ii) No mobilization / re-mobilization advance for the work or compensation therefor shall be paid by BHEL to the contractor.
- (iii) No payment shall be made for only & against supply of material.

15. **Risk Purchase:** BHEL reserves the right to exercise risk purchase in case of failure on the part of contractor to meet the contractual obligations under the contract w.r.t. unsatisfactory execution of work and/or quality, incomplete work carried out by the contractor & failure to meet delivery schedule. BHEL shall not be liable to compensate the contractor for any loss arising out of risk purchase action.
16. **Liquidated DAMAGES / PENALTY:** If the contractor fails to complete the work in stipulated time and there is delay in the completion of the work against delivery schedule, BHEL shall have the right to impose Liquidated Damage / Penalty at the rate of 1 % of the value of unexecuted work per week of delay or part thereof subject to a maximum of 10% of the contract value. For this purpose, the period of delay shall be the delay attributable to the Contractor for the completion of work as per contract.
17. **Time Extension :** In case, the work is delayed due to Force majeure conditions like, abnormally bad weather, serious loss or damage by fire, civil commotion, strike or lockout, flood, riots, cyclone, earthquake etc. or delay in site clearance by BHEL, which is in the absolute discretion of BHEL and beyond the contractor's control, request for extension of time along with reason(s) to be eligible for consideration, shall be made by the contractor in writing within seven days of the happening of the event causing delay but before expiry of scheduled date of completion. BHEL may or may not, at its discretion, give any extension after review of contractor's application and mere submission of application for extension shall not absolve the contractor of its obligation to complete the work within scheduled time or liable to be penalized for delay unless time extension is provided by BHEL. Status on grant / turndown of extension request shall be communicated to the contractor.
18. **Warranty & Security Deposit:** Onsite warranty of 18 months against defective supply & defective workmanship shall be applicable after completion of work from the date of taking over of site by BHEL. Any defective supply or defective workmanship during warranty period shall be rectified / replaced free of cost by the contractor. Contractor shall be required to deposit an interest free security deposit @5% of contract value before start of the work, which shall be retained by BHEL up to two months after successful completion of the warranty period.
19. Contractor shall take due care in carrying out the works so as not to cause damage to BHEL property. Any damage to BHEL property caused and attributed to the contractor or its workmen shall be repaired / 100% compensated by the contractor free of cost. In case, the contractor does not repair the damages, BHEL shall recover the cost of such damages from contractor's dues at contractor's risk & cost.



20. Bidder / contractor shall provide the following information:

Particulars	Requirement	Bidder's / Contractor's Remarks
EPF Registration No	Enclose a Copy	
ESI Registration No.	Enclose a Copy	
Pan Card No	Enclose a Copy	
GST Registration no.	Enclose a Copy	
Bank Account Details IFSC Code Account No. Bank Name Branch Name	Furnish details	
Acceptance to engage trained /qualified staff / workmen	Bidder's acceptance required	

21. The actual quantity used in the final work may vary up to 10% for the individual activities vis-à-vis the quantity mentioned in Annexure-IV.

22. COMMENCEMENT OF WORK

The contractor shall commence the work within 15 days after site clearance by BHEL. If the contractor fails to commence the work within the stipulated time, BHEL, at its sole discretion, will have the right to cancel the contract. In such case, the Earnest money and/or Security Deposit by the contractor shall be forfeited by BHEL.

23. If any material supplied by the contractor is rejected, the same should be removed from site within 48 (forty-eight) hours of rejection, failing which BHEL reserves the right to get the rejected materials removed at the risk and cost of the contractor. Contractor has to remove all the debris from the site of execution and dispose them at suitable places within a distance of 200 meters from site as per instruction of BHEL.

24. Contractor shall carry out the work during normal working hours of BHEL i.e., 0700 hrs. to 1700 hrs. on all working days. The work may be carried out beyond normal working hours and on Sundays / Holidays with prior written permission from BHEL. The contractor shall make himself or his representative available at the site during execution of work for supervision of work, contractor's workmen and day to day co-ordination with BHEL w.r.t. progress of work.

25. Contractor shall maintain a daily work progress register/ record in which the work executed on daily basis is to be recorded for ensuring the progress of work.

26. Water that may accumulate on the site during progress of the works or at any excavated place of working site have to be evacuated from site by the contractor to the entire satisfaction of BHEL and at the Contractor's expense.

27. The bidder is advised to visit the site before participating in the tender to get himself / herself familiar with the site conditions.

28. It will be the responsibility of contractor to regularly supervise the work and ensure the coordination with WEX / Civil department.



29. All material to be supplied such as stone aggregates of all the required sizes, Stone screening, stone dust, Bitumen, Emulsion, etc. as per the prescribed specification.
30. The contractor shall be fully and finally responsible for correctness and quality of his work as per scope, terms & conditions of contract and to the entire satisfaction of BHEL.
31. Contractor shall strictly follow all contractual and statutory obligations as stipulated in this tender.
32. Material supplied by the contractor within BHEL premises shall be stored in area specified by BHEL. Adequate arrangement be made for material handling & storage taking due care against damages.

PART B: HEALTH, SAFETY & ENVIRONMENT (HSE) POINTS:

The following safety measures which are not exhaustive to be followed by the contractor while carrying out the work:

1. It will be the Contractor's responsibility to fulfill all the legal compliances with respect to Health, Safety and Environmental aspects of the entire work (namely; the person employed, the equipment & PPEs used during the work, etc.) under the jurisdiction of the district of that state where it is operating. Ensure that sub-contractors (if any) hired by the contractor should comply with the same requirement as the contractor himself and shall be liable for ensuring compliance all HSE laws by the sub-contractors.
2. Every person deployed by the contractor must wear safety PPEs to be provided by the contractor. The Contractor shall provide proper Personnel Protective Equipment like safety boots, goggles, helmets and safety belts etc. to all the workers as per the hazard identified and risk assessed for the job and conforming to statutory requirement and company PPE schedule.
3. Any compensation arising due to accident of the contractor's workmen while carrying out the job, will be payable by the contractor.
4. The contractor shall have to report all incidents including near miss to departmental representative of WEX / Civil department of BHEL.
5. The contractor has to keep a register of the persons employed by him / her. The contractor's supervisor shall take and maintain attendance of his men every day for the work, punctually.
6. A contractor's employee must, while at work, take reasonable care for the health and safety of people who are at the employee's place of work and who may be affected by the employee's act or omissions at work.
7. A contractor employee must, while at work, cooperate with his or her employer or other persons so far as is necessary to enable compliance with any requirement under the act or the regulations that is imposed in the interest of health, safety and welfare of the employee or any other person.
8. In case Contractor is found non-compliant of HSE laws as required, BHEL will have the right for directing the contractor to take action to comply with the requirements, and for further non-compliance, the contractor will be penalized prevailing relevant Acts/Rules/Regulations.

9. When there is a significant risk to health, environment or safety of a person or place arising because of a non-compliance of HSE Measures, BHEL will have the right to direct the contractor to cease work until the non-compliance is corrected.
10. For any HSE matters not specified in the contract document, the contractor will abide the relevant and prevailing Acts/rules/regulations/ pertaining to Health, Safety and Environment.
11. Proper and necessary precautions shall have to be taken wherever the work involves breaking of reinforced cement concrete slab and dismantling of brick work.
12. Before excavation at any place, contractor has to ensure with electrical department that that there is no power cable running in the ground. In case of identification of any running live power cable or any other cable, proper shut down shall be taken before commencement of the work from the respective department.
13. Proper barricading/caution must be arranged by the contractor at work sites.



SPECIAL TERMS & CONDITIONS

- 1) Work shall be done as per BHEL / CPWD specification with latest correction slips.
- 2) In case of any discrepancy, the order of precedence in interpretation shall be as under: -
 - (i) BHEL specification & terms of contract
 - (ii) CPWD latest Civil specifications Vol-I & Vol-II
 - (iii) Indian Road Congress (IRC)
 - (iv) Indian Standard codes
 - (v) Standard Engineering practice

3). BITUMEN WORK

- i) The bituminous road work shall be carried out by using **bitumen of grade VG30**.
- ii) Bituminous Macadam & Semi-dense bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by tippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications.
- iii) For Bituminous Macadam, 50 mm average compacted thickness with bitumen of grade VG-30 @3.50% (percentage by weight of total mix) prepared in drum type Hot Mix Plant of 60-90 TPH capacity.
- iv) For Semi-dense Bituminous Macadam, 25 mm average compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of aggregate) prepared in drum type Hot Mix Plant of 60-90 TPH capacity.
- v). The camber should be properly maintained on the road surface in the transverse direction to drain the rain water from the road surface.



BOQ cum Price Distribution Sheet- for 1 set of work

Name of Work: - Laying of bituminous Road at B H E L, Rudrapur

S.No.	Activity	UNIT	QTY	Activity wise percentage against total cost %	GST to be quoted by bidder in %
	LAYING OF BITUMINOUS ROAD				-
1	Carriage of Materials by Mechanical Transport including loading,unloading and stacking				-
	Earth	Cum	76.00	0.23%	
2	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 Sqm on plan) including getting out and disposal of excavated earth lead upto 50 m and lift upto 1.5 m, as directed by Engineer-in-charge.				-
	All kind of soil	Cum	76.00	0.24%	
3	Supplying and stacking at site:				-
A	90 mm to 45 mm size stone aggregate.	Cum	64.63	2.66%	
					-
B	63 mm to 45mm size stone aggregate.	Cum	42.15	1.45%	
					-
C	53mm to 22.4mm size stone aggregate	Cum	21.08	0.83%	
					-
D	Stone screening 13.2 mm nominal size (Type A)	Cum	18.42	0.71%	
					-
E	Stone screening 11.2 mm nominal size (Type B)	Cum	12.96	0.58%	
					-
F	Moorum	Cum	16.25	0.29%	
					-
4	Laying, spreading and compacting stone aggregate of specified sizes to WBM specifications in uniform thickness, hand picking, rolling with 3 wheeled road / vibratory roller 8-10 tonne capacity in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fill up interstices of coarse aggregate, watering and compacting to the required density .	Cum	127.86	1.52%	
					-
5	Providing and applying tack coat using bitumen emulsion conforming to IS: 8887, using emulsion pressure distributor including preparing the surface & cleaning with mechanical broom.				-
	With medium setting bitumen emulsion				
A	On W.B.M. / W.M.M. @ 0.4 kg/Sqm.	Sqm	200.00	0.07%	
B	On bituminous surface @ 0.25 kg/Sqm.	Sqm	10940.00	2.67%	
					-
6	Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by tippers, laid over a previously prepared surface with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge.				-
	50 to 100 mm average compacted thickness with bitumen of grade VG-30 @3.50% (percentage by weight of total mix) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.	Cum	304.73	52.15%	
					-



7	Providing and laying semi-dense Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.				-
	25 mm compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.	Sqm	5900.00	32.80%	
					-
8	Providing and applying 2.5mm thick road marking strips (retro-reflective) of specified shade/colour using hot thermoplastic material by fully/ semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour T&P, cleaning the road surface of all dirt, seals, seals, oil, grease and foreign material etc. complete as per direction of Engineering-in-charge and accordance with applicable specification.	Sqm	286.00	3.80%	
					-
TOTAL				100.00%	-

Note: 1). Total amount (without GST) quoted by the bidder in Annexure-V shall be distributed & allocated to the individual activity as per above percentage. Basic rate (without GST) for individual line item shall be worked out as per respective amount for all activities.

2). Payment shall be made on actual GST rate or quoted rate, whichever is lower, on actual consumption.

3). The correctness of GST tariff and its payment to government shall be the sole responsibility of supplier. Accordingly, supplier has to ensure the tariff of GST quoted for the above activities.

4) The actual quantity used in the final work may vary upto 10 % for individual activities vis-à-vis the quantity mentioned above.



Indent No- 20210185

Annexure- V

FORMAT OF PRICE BID

SL. NO.	DESCRIPTION OF ITEM	QUANTITY	TOTAL AMOUNT WITHOUT GST (Rs.)
1	Laying of bituminous road at BHEL- CFP Rudrapur as per annexure I, II, III & IV	1 set	do not quote here

Total amount (WITHOUT GST) in words : Rupees

ONLY

- Note:** (1) GST for individual activity to be mentioned in % age in the Annexure-IV only.
(2) No term / condition should be mentioned in the price bid. If any term / condition is found mentioned by the bidder in the price bid, the offer shall be rejected.
(3) Total amount quoted above shall be distributed as per Annexure -IV.
(4) GST Shall be extra as applicable.

Declaration by the bidder :

I have read and understood all the documents of NIT and have submitted our quote accordingly

(Bidder's Signature with Stamp)



PRE-QUALIFICATION REQUIREMENT

1	Submission of EMD as specified in NIT (copy of receipt to be enclosed)
2	<p>Bidder should have successfully executed (running / completed) similar works for any of the following during the last seven years from the date of tender opening:</p> <ol style="list-style-type: none"> Three Similar work costing not less than the amount to Rs. 17.08 Lakh each or Two Similar works costing not less than the amount to Rs. 21.35 Lakhs each or One Similar work costing not less than the amount to Rs. 34.15 Lakhs each <p>The values shown above are inclusive of GST. Actual executed value shall be considered based on work completion certificate from work contracting organization. Bidders to submit work execution certificate from the work contracting organization bearing its complete address, name of contact person and valid contact phone no(s) in support of this criteria.</p> <p>In case of running contracts the bidder has to provide the partial work completion certificate having details & value of work executed before or on the due date for submission of tender. The value and nature of executed work shall only be considered for the qualifying criteria.</p>
3	<p>(a). Average Financials turnover during the last three years, ending 31st March 2021 should be at least 12.81 Lakhs.</p> <p>(b). Bidder must have earned profit in any of the three financial years as applicable in the last three financial years as furnished for (a) above.</p> <p>The following documents should be submitted by the bidder:</p> <ol style="list-style-type: none"> Balance sheet and Profit & Loss Account (audited/issued by Chartered Accountant) of last three years ending on 31st March 2021 in support of the above. In case the latest balance sheet (for FY 2020-21) has not been finalized, balance sheet of previous three years (i.e. 2019-20, 2018-19 and 2017-18) need to be submitted. If financial statements are not required to be audited statutorily, then instead of audited financial statements, financial statements are required to be certified by Chartered Accountant.
4	Bidder to submit signed & stamped (on each page) copy of terms & conditions and scope of work unequivocal acceptance of all terms & conditions and scope of work of contract.
5	<p>Note (i): The party should submit EMD as per Sl. 1, documents mentioned in Sl. NO. 2 & 3 and acceptance as per Sl. 4. These are mandatory qualifying criteria & non fulfillment of any one or more criteria shall render the offer as technically rejected.</p> <p>Note (ii). Definition of similar work: Construction / laying of Bitumen Road.</p>

Authorized Sign. With seal

Name of the Bidder

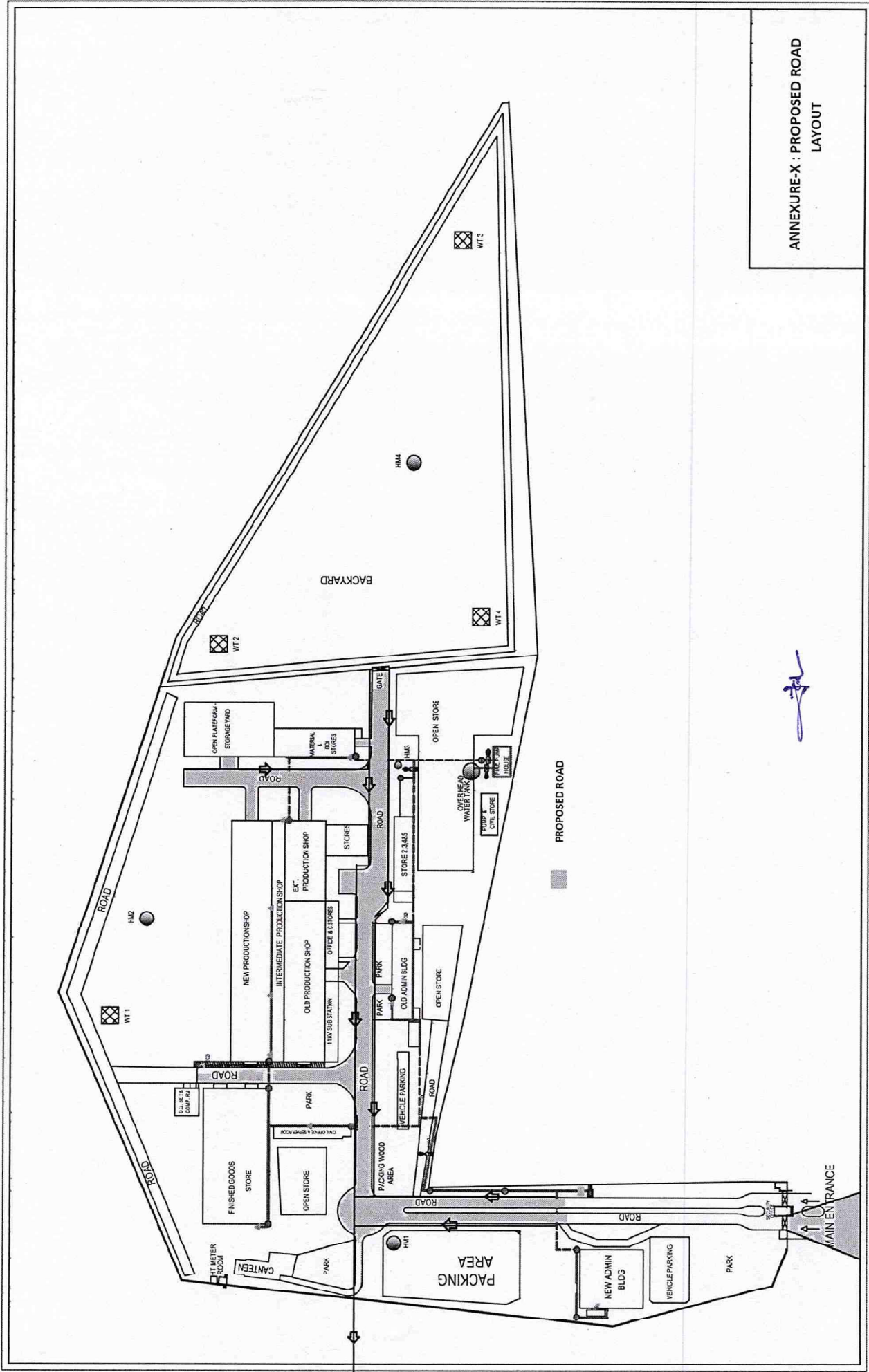
Address:

Contact of details

E-Mail Address:



ANNEXURE-X : PROPOSED ROAD LAYOUT



[Handwritten signature]