

**SCHEDULE – II**  
**(SCOPE OF WORK)**

**1. General Scope of Work:**

- i. The scope of works to be completed under this contract includes miscellaneous works of civil, electrical, and mechanical nature maintenance, upgradation, small scale construction works and general maintenance and housekeeping services , horticulture works as per terms and conditions mentioned in this document. These include day to day maintenance, annual repairs, preventive maintenance, special repairs, upgradation works and additions and alterations, new construction etc as indicated in Table 1, 2 & 3 below.
- ii. The Works shall be carried out by contractor maintaining the uniformity in Color scheme, Aesthetics of complex, pleasant ambience, presentable infrastructure, green belt and hygiene in offices, toilets etc. The color scheme of the buildings, Godowns & other Civil infrastructure in Complex, as approved by Corporation shall be followed uniformly.
- iii. Officer in charge shall decide and he shall be responsible for the quantum, time line, measurement and payment related to the works he ordered vide a particular work order to Contractor. Engineer of the corporation shall do all technical checks on the works mentioned in Table 2 and 3 , for its quality, specification , rates , quantity & amount etc.
- iv. Contractor shall be responsible for execution, timely completion, quality and workmanship of all works & services as ordered by officer in charge under the contracted rates for the items stipulated in Price schedule and at the rates as determined by Engineer of the Corporation for the items not stipulated in price schedule. He will ensure successful implementation of contract so that all infrastructure in CW Complex is effectively maintained and is brought to a presentable stage.
- v. General Maintenance Manual, & Service requirements/frequencies to be provided by Contractor are given in **Appendix- II this Schedule**. The Check list of minimum requirements of Infrastructure & Its maintenance in CW Complex, which will serve as a guide for deciding the works to be executed under a CW Complex is given in **Appendix III of this Schedule**.

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<b>TABLE -1</b>	<b>GENERAL MAINTENANCE WORKS &amp; SERVICES</b>
	<b>Housekeeping Services</b>
1	Removal of garden waste
2	Cleaning/Sweeping of CW Roads, Main entry Ramps, Parking yards Godown Veranda/Open Platforms and Weighbridge platform area etc. including Safe disposal of garbage/ Refuse.
3	Cleaning, dusting, mopping of Window Glasses (both sides), floors, furniture, etc. to make the area neat and clean free from cobwebs, flies etc, and hygienic in Office buildings, labour Huts, Security Cabins, weighbridge cabin and other similar amenities
4	Cleaning, dusting of Godown Walls, Top Ventilators, Roof Trusses, Parapets and other heightened structures, Cleaning of Fans installed in office buildings, Cleaning of firefighting equipment including portable fire extinguishers
5	Cleaning of all Toilets /Washrooms / drinking water utilities and other similar amenities within CW Complex. With water including flushing as per requirement
6	Cleaning of terrace/loft water storage tank
7	Cleaning and desilting of gully trap chamber, Cleaning of outlet chambers connecting swage / drains of CWC complex with city means drains/ swage chamber
8	Cleaning of chocked / existing drain of campus / sewer line
9	Cleaning of underground sump, Over Head R.C.C. Tank .
10	Clearing of blockages in Rain Water Harvesting systems pit , Cleaning, disinfecting/ recouping the aggregates/ repair of RWH pits/ borewells
11	Cleaning of valley gutter in godown and underground tranches, drain pips
	<b>Horticulture works and services</b>
12	Grassing with selection No. 1 doob grass including watering and maintenance of the lawn
13	Cleaning of garden, Watering of landscaped/green belt areas and maintaining the plants/ shrubs, trees, bushes, flowering beds etc and keeping these in healthy condition Frequency of cleaning shall be daily and watering or other activities shall be as per requirement.
14	Renovating lawns including weeding, cheeling the grass, forking the ground, top dressing with sludge or manure, mixing the same with forke and keeping the lawn free from weeds
15	Other horticulture services like Mixing earth and sludge or manure in the required proportion and spreading/ of sludge, dump manure and/or good earth in required thickness within complex as per requirement
16	Plantation of Trees, Shrubs, and Hedge at site i/c watering and removal of unserviceable material's
17	Cutting of designer hedge/edge hoeing of hedge/edge bed Topiary cutting/shaping of plant removing of cut materials,
18	Clearing heavy jungle in open area including uprooting of rank vegetation
19	Clearing grass, shrubs, bushes grown unwanted near to buildings

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<b>Other repair and maintenance related works and services</b>	
20	General servicing including greasing, re -alignment, refixing of doors, rolling shutters etc
21	Replacement of broken glasses, Jalli, bird mesh in window and ventilators, doors etc
22	Replacement of damaged/ non-functional fittings of doors, windows and ventilators and rolling shutters, lubricating of rolling shutters Repairs to rolling shutters by replacing brackets, springs, gear box handles, MS cover locking rail, laith, shaft etc.
23	Replacement of ceramic fittings and fixtures of toilets, labs and other utilities, sanitary items.
24	Replacement / repair in fittings (tee, elbow etc in rainwater down take pips and storm water drains, swage pips etc.
25	Repair /replacement of Platform fender.
26	Replacement, refilling of fire extinguishers, sand bucket etc
27	Repair, replacement of PVC water tank, Borewell pump, UG tank pump and other fixtures of water supply network.
28	Painting on aisle way, Entry Gates, Security Cabin, Boundary walls, Office Buildings, Toilets & other amenities to restore the originals and to maintain the aesthetic of complex, in case of requirements before expiring next due date of painting as per periodicity.
29	Painting of Godown Gable walls, long walls etc to restore the originals and to maintain the aesthetic of complex and where Standard Measurement is certified by Engineer in case of requirements before expiring next due date of painting as per periodicity.
30	Plugging the punctures, arresting the leakages and laying water proofing sheets on leaking areas in Roofs like tarfelt over ridges, flashing and any other similar item on leaking locations.
31	Replacement/ refixing/realigning of isolated damaged ridges, flashing, velly gutters, sky light sheeting, turbo ventilators, Galvalume / GI Sheeting, Cement roofing sheet, rain water down take pipes such that volume of works is less than Rs. 5,00,000/- in each case.
32	Minor repair works in Walls, plaster, floors & Roads (pot holes, cracks etc), damages in drains, sewage pipes, manhole chambers etc, ramps at entry gates, steps, fins/jamb/off sets of doors/windows and any other similar asset including minor replacement works of paver blocks, Cement concrete in roads, floors, Bituminous mix, carpeting, Rolling shutters, Doors, Windows etc such that no technical supervision is required and / Or any other works mentioned in Table 2 below where extent of repair to carry out is such that value of repair works does not exceed Rs. 5,00,000/- in each case.
33	Repairs to electrical fittings wiring, panels, etc. Supplying & installation of electrical fittings, luminaries/ fans etc such that volume of works is less than Rs. 5,00,000/- in each case.

**TABLE – 2 REPAIR & MAINTENANCE /UPGRADATION**

1. Providing & fixing of new Jalli gates/steel gates/rolling shutters/Wood-PVC-FRP doors etc in the door openings or complete replacement / upgradation with new system.
2. Providing of new expanded metal Jallis/Glass/polycarbonate sheet over ventilators/ Glazed/wire meshed /Aluminium/UPVC/PVC/Steel/Wooden windows in wall opening or complete replacement / upgradation with new system.
3. Complete replacement/upgradation of roofing system of Godown or other Buildings in CWC Complex.
4. Repair to Major roof leakages in Godowns by water proofing of entire roofs or replacement of all cracked sheets.
5. Complete replacement /major repair of roof water drain system, wind ties, sky light sheeting, turbo ventilators

6. Repair / strengthening /modification in damaged trusses/purlins/runners/bracings in Godowns
7. Relaying/Replacement of roof slabs with or without RCC framing in the office block/ staff quarters.
8. Complete replacement/upgradation of Flooring system of Godown or other Buildings in CWC Complex.
9. Providing tiling works in floors/walls.
10. Providing wooden works in office blocks/staff quarters/guest houses
11. Repairs to Major damage in fins/jambs/off sets in the doors/windows
12. Repairs to Major damage of plaster in patches
13. Repairs to Major damage in flooring in patches.
14. Repairs to seepage in walls/roofing/floors.
15. Repairs / replacement /laying of plinth protection
16. Major Repair works in masonry walls of bricks/stones/CC/RCC, rebuilding, retrofitting and or anchoring works etc.
17. Repairs in RCC works of roof slab/Floors/columns/beams etc.
18. Repairs in Steel works with welding/extra riveting/bolting etc. in trusses, rafters, stanchions, columns, bracing, runners, purlins etc in building.
19. Replacement of paint finishing system as per Periodicity and /or new work of painting including White washing, colour washing & painting on CC/Plastered/Steel/wood works etc.
20. Major repair/ new Construction of drainage system in the complex.
21. Major repair/ new Construction of Rain Water harvesting infrastructure within the complex.
22. Major repair/ new Construction of Underground Water Tank.
23. Major Repairs/ Renewal/relaying/replacement to sewage /drainage/ water supply system including pumps, sumps, pipes and fittings.
24. Major repair/Installation of shallow borewell
25. Providing of base works to floor/Paver block yard/Road etc like subgrade preparation, Sub base and base laying with WBM/WMM/Mooram/Good earth/PCC etc.
26. Major repair/replacement/new Construction of CC/RCC roads/ramps/ VDC /CC floor/approaches in the complex.
27. Major Supply & installation of paver blocks in the parking yard/roads/godown floors.
28. Relaying of premix carpeting / seal coat/BM/DBM/BC/SDBC etc on the roads.
29. Filling of pot holes in the roads by stone/brick aggregate-Major works.
30. Complete replacement/upgradation of Roads & Other Circulation area of Godown or other Buildings in CWC Complex.
31. Patch repairs to roads by bitumastic concreting -Major works
32. Raising the height by construction of boundary wall, installation of entry gates.
33. Supplying & fixing concertina wire for fencing over boundary wall.
34. Renewal / replacement/ major repair or completely new works of wiring, internal, external electrical power conveyance system, earth pits, electrical conductor etc.

**Table 3: New construction works (Small scale construction)**

1. Construction of new building/ rooms like Public Toilets, Weighbridge Cabin, Security Cabin, Driver Block, Visitor lobby, Labs etc.
2. Construction of marketing sheds for farmers, labour shed, parking shed etc within the warehouses.
3. Construction of New boundary walls.
4. Construction of overhead water tank, Under Ground Fire Water Reservoir.
5. Construction of foundations of tower mast, high mast, Container cabins, DG set, weighbridge etc.
6. Installation of High mast, street lightings, Providing Street lighting in the complex.
7. Providing of new transformer, new cablings etc.
8. Installation of submersible, centrifugal pumps (Electrical equipment) , deep borewell etc.

**2. Nature of works to be executed under the contract.**

**A. Day to day Repairs**

- i. Day to day or routine repairs are the works which are to be attended on the day-to-day basis such as cleaning, Housekeeping, removing chokage of drainage pipes, manholes, restoration of water supply, repairs to faulty switches, watering of plants, lawn mowing, hedge cutting, sweeping of leaf falls etc.
- ii. In addition, works such as patch repair to plaster, minor repairs to various items of work, replacement of glasspanes, replacement of wiring damaged due to accident, replacement of switches, sockets tiles, Gap filling of hedges/perennial beds, Replacement/Replanting of trees, shrubs, painting of tree guards, planting of annual beds and trimming/pruning of plants etc., which are not emergent works and are considered to be of routine type shall be done as per requirement at any time during contract period, depending upon the exigency.  
Such works can be done under day-to-day repair also.
- iii. These services shall be provided by contractor in a time bound manner based on receipt of complaints / requirements /call from the Warehouse manager.

**B. Preventive Maintenance**

Preventive maintenance is essential to keep the building services in serviceable condition. Preventive maintenance shall be taken up so that the services or the assets do not fail due to wear and tear and those components and services expected to fail are replaced well in time.

**Periodical Checks for Preventive Maintenance**

Systematic inspections by Warehouse Manager/ Engineer and Contractor along with his Engineer shall be carried out particularly of those services and components which are prone to higher wear and tear and nearing to outlive/outlived their life. Thin members, exposed members to severe weathering conditions, members affected by leakage/seepage and members/components affected by water splashes shall also be inspected periodically.

The following categories of items of preventing maintenance has to be paid special attention

- i. Cleanliness of roofs, inlet of rain water pipes, khurra, chajja/sunshade top, outlet of rain water pipes, plinth protection and drains minimum once a year and particularly before monsoon.
- ii. Cracks on gola and top of parapet
- iii. Cleanliness and waterproofing of mumty roof
- iv. Leakage from terrace tanks
- v. Damage of water proofing due to installation of various services on roof like Dish antenna, solar panels, etc or weed/vegetation.
- vi. Cracks on grit plaster, spalling of concrete, cladding stone coming out of substrate etc
- vii. Leakages/seepages from Roof/Wall/Pipes/Velly Gutters
- viii. Rusting of GI pipes and fittings showing seepage
- ix. Shafts for the leakage/seepage
- x. Sagging false ceiling
- xi. Termite affected areas and wooden members
- xii. The cleaning of manholes and sewer line and checking for rain water getting mixed in sewer lines
- xiii. Damaged cables & other abandoned service lines
- xiv. Electrical systems like main boards etc. should be checked annually.
- xv. Fire services particularly during hot weather and assessment of electric load due to additional services installed
- xvi. Whether unprotected heaters in use likely to cause fire incident

**C. Annual Repairs**

- i. The works of periodical nature like white washing, color washing, distemping, painting etc. shall be called Annual Repair works and these shall be generally undertaken based on requirement.
- ii. The periodicity for painting system shall be as below.

White washing and color washing on exterior surfaces, horticulture belt etc.	One Year
White washing and color washing on interior surfaces	two years
Painting with Distemper on plastered /concrete surface (interior)	three years
Painting with Emulsion on plastered /concrete surface (Exterior)	four years
Painting with Emulsion on plastered /concrete surface (interior)	four years
Steel surface (exposed) like veranda purlin & truss, Fender, Rolling shutter etc.	four years
Steel surface (interior) Like roof truss, roof purlin, internal Steel columns etc.	Ten Years
Cement paint over exterior walls	three years
Wood work polishing	three years

In city of adverse climate receiving excess rain, extreme weather, high dust, temperature variation, this periodicity can be reduced based on the severity of climate and degradation occurred in physical appearance of painting etc.

- iii. Following guidelines shall be followed for planning and execution of Annual repair works.

The total estimated cost of maintenance of a building / structure during a year, as annual repair, shall be within the prescribed limits as approved by the Competent Authority as per DOP, from time to time, for Annual repairs.

The entire exercise of finishing under annual repair should be carried out in a professional manner. Before sanctioning of estimate, placement of work order, it should be ensured that all defects like dampness of walls, damage to RCC, brick work and plaster, electrical cabling, its dressing, correctly installation of wiring are covered and also rectified so that the building looks renovated and presentable for sufficient time after annual repairs.

Painting along with associated annual repair works should be carried in One GO in entire CW Complex.

Payment of works will be made on the basis of actual work carried out and in case made based on standard measurement book, it shall be ensured that no work is left and there shall be no slackness of supervision on the part of the Officers.

No work of original construction or complete replacement of components shall be taken up in Annual Repair works.

**D. SPECIAL REPAIR**

As the building ages, there is deterioration to the various parts of the building and services and major repairs and replacement of elements become inevitable. It becomes necessary to prevent the structure from deterioration and undue wear and tear as well as to restore it back to its original conditions to the extent possible. The following types of works in general are to be undertaken under special repairs: -

- i. Provision of water proofing treatment to the roof, velly gutter. All the existing treatments known are supposed to last satisfactorily only for a period of about ten years.
- ii. Major Repair in Roof system, realignment of sheets, replacement in blocks, Replacement of Velly Gutters with replacement of Down take Pipes system etc.
- iii. Major Repair of internal roads and pavements.
- iv. Major Repairs/replacement of flooring, skirting, dado and plaster.
- v. Replacement / new installations of doors, window frames, shutters and fittings.
- vi. Replacement of complete water supply network and sanitary installation like water tanks, WC cistern, wash basins, kitchen sinks, pipes etc. The life of GI pipes shall be considered as 25 years.

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- vii. Re-grassing of lawns/grass plots in 5 to 6 years without replacement of earth and in 8 to 10 years with replacement of earth.
- viii. Renovation of lawn in 4 to 6 years as per site requirement.
- ix. Replanting of hedges in 8-10 years.
- x. Completely uprooting and removing hedges / shrubbery.
- xi. Replanting of
  - a) Rose beds in 5-6 years.
  - b) Perennial beds in 5-6 years.
  - c) Canna beds in 1-2 years.
- xii. Shifting of any garden feature from one site to another within building.
- xiii. Electrical Equipment's/ Installations after their useful life.

The replacement shall be made only after detailed inspections after assessing the condition of the components where they have outlived their useful life or not.

- i. At the commencement of contract, a Survey of the buildings shall be conducted to identify the items of Special Repairs which are required to be carried out. Special repair complaints are also to be noted and referred from general inspection reports of warehouses.
- ii. Special repairs, which are required to eliminate leakage and dampness in the buildings shall be given priority and completed before the monsoon. Special repairs to plastering, replacement of doors and windows and flooring shall be synchronized with the annual repairs so that white washing, color washing / distemping are carried out systematically.
- iii. It shall be ensured that the plants/trees survive and as such maintenance of the same shall be taken care with. Trees/Plants which are planted near to foundation of the buildings and in open areas/parks shall be planted in such a way that neither they damage the foundation nor are required to be fell down due to redevelopment of the area.

### **Authenticity of Special Repairs**

Any work of Special Repair to be undertaken in the CW Complex has to be certified by the Engineer. The Engineer has to verify himself the necessity of undertaking Special Repair to any item of the building. All such repair shall be done with approval of Regional Manager for AA/ES or higher authority as per DOP.

### **E. Upgradation Works**

Upgradation works, under this contract may be carried out as per the guidelines issued from corporate office time to time. A record shall be kept of the items upgraded building wise online/offline and once a building is already upgraded, further upgradation shall not be carried out without approval of the Competent Authority as per DOP. All the services, Civil and Electrical, which have completed their life or which are beyond repair or may not remain sustainable with repair shall be replaced and record shall be maintained.

At the commencement of contract, a Survey of the buildings shall be conducted to identify the items of all upgradation works which are required to be carried out in complex. complaints are also to be noted and referred from general inspection reports of warehouses.

### **F. Small value capital works /new construction works:**

- Works as mentioned in table 3 above, may also be carried out under the contract based on exigencies of service and operational requirement as per decision of Regional Manager.
- Efforts shall be made to carry out all upgradation works of Roof and Road in One GO. Other capital works of new construction Should also be planned in ONE GO however, if total requirement of such works during a FY Year is small or the exigencies of the works /urgency or nature of operations / customer requirement is such that, the works are required to be taken up in phased manner or partially, these may also be executed under the contract by placing the works order with approval of Regional Manager.
- Upgradation of Floor of Godowns should be taken up in this contract because it has to be done in phased manners
- No capital works of upgradation and new construction of value exceeding Rs.50 lakh should be executed under this rate contract. Such higher value works should be executed through separate contracts after inviting tenders.
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**G. Energy Efficiency Measures**

- All electrical installations shall be made adopting Energy efficiency measures like fixing of LED fittings, providing energy efficient fans etc.
- Green Building approved materials should be used preferably over other material.
- Use of water/ Power, Waste disposal, Vehicle circulation/ movement etc in CW Complex should be done with minimum carbon emission.
- Sewage Waste, should be treated before disposal into public sewer and should be used for Horticulture, Toilet re-flushing etc. Storm water collection and harvesting should be made effective based on geological profile of CW Complex.

**3. Materials, Tools & Plants to be provided by the Contractor and Testing of Materials**

3.1 The contractor shall, at his own expense, provide all materials, required for the works other than those which are stipulated to be supplied by the Corporation.

The contractor shall, at his own expense and without delay, supply to the Engineer, samples of materials to be used on the work and shall get these approved in advance. All such materials to be provided by the Contractor shall be in conformity with the specifications laid down or referred to in the contract. The contractor shall, if requested by the Engineer furnish proof, to the satisfaction of the Engineer that the materials so comply.

In case contractor does not set a field laboratory at CW Complex, all required tests shall be carried out in the reputed / approved outside laboratory. Payment of testing charges of such tests will be borne by the contractor in each case.

- i. For outside testing, test of materials and stipulated samples shall be carried out by one of the following laboratories/tests houses - (1) IIT, (2) NIT, (3) National Test Houses, (4) National Council of Cement & Building Material, (5) Govt. Engg. College/National Accreditation Board Approved Lab (NABL), as per decision of the Engineer section in the region.
- ii. Testing and acceptance criteria for cement, steel and any other materials, supplied by contractor should be as per BIS codes/Technical Specification or as decided by Engineer in charge, as per stipulated testing frequency given in enclosed list (field quality Plan) or CPWD Specifications.
- iii. Sample of material for testing will be supplied free of cost by the contractor, including its transportation to the approved test houses/laboratory, as directed by the Engineer or inspecting officials.
- iv. All Routine tests on various materials shall be carried out as per the field quality plan -List of Mandatory Tests (enclosed) at the cost of the contractor. Wherever it is not specified, it will be carried out as per decision of Site Engineer, which will be final and binding on the contractor.
- v. In addition to the tests required under above clauses thereof, the Engineer or his representative may order tests to be carried out by an independent person appointed by him at such place or in such laboratory, as he may determine in accordance with the appropriate Clauses of relevant Standard Specifications and cost of such tests shall be borne by the contractor.
- vi. Testing record shall be maintained as per standard Testing Performa, enclosed in the contract document for proper testing and their record by the contractor.
- vii. In case, test results indicate that the cement, steel, bitumen or any other material brought or arranged by the contractor for incorporation in work does not conform to the relevant BIS Codes, the same shall stand rejected and shall be removed from site by the contractor at his own cost within a week's time of written order from the Engineer-in-charge to do so.

**3.2 Contractor to Supply Tools & Plants etc : Plant & Machinery Required for the Work**

The contractor shall provide at his own cost all materials except such special materials, if any, as may in accordance with the contract be supplied from the CWC stores, machinery, tools & plants as specified in Appendix 7 of Schedule 1.

In addition to this, appliances, implements, other plants, ladders, cordage,tackle, scaffolding and temporary works required for the proper execution of the work, whether original, altered or substituted and whether included in the specifications or other documents forming part of the contract or referred to in these

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conditions or not, or which may be necessary for the purpose of satisfying or complying with the requirements of the Officer-in-Charge as to any matter as to which under these conditions he is entitled to be satisfied, or which he is entitled to require together with carriage therefore to and from the work.

The contractor shall also supply without charge the requisite number of persons with the means and materials, necessary for the purpose of setting out works and counting, weighing and assisting the measurement for examination at any time and from time to time of the work or materials. Failing his so doing, the same may be provided by the Corporation at the expense of the contractor and the expenses may be deducted, from any money due to the contractor, under this contract or otherwise and/or from his dues or the proceeds of sale thereof, or of a sufficient portion thereof.

- (i) It will be responsibility of the Contractor to arrange all plants & machinery, trucks, vibratory, Road roller etc. as required by him for execution of works.
- (ii) Contractor will also arrange for getting permission of such plant & machinery, if required from local or other concerned authorities for use as well as for their transportation to site.
- (iii) All expenditure incurred in this connection will be borne by the Contractor.

#### 4. Maintenance after Completion (Defect Liability Period-DLP):

Following works executed /services delivered under this contract/ Work Order shall be maintained by the contractor at his own cost during the maintenance period/DLP as mentioned below. This period shall be reckoned from the actual date of completion of work.

- i. All kind of construction / repair works in Bituminous Roads/ concrete /masonry works in Building /Roads/Drains - DLP/Maintenance period-12 month.
- ii. All kind of leakage arresting, plugging in Roofs/ pipes etc.- DLP/ Maintenance period-12 month.
- iii. New construction-Upgradation works of Road/Roof /Floor- 3 Years
- iv. New construction /upgradation works -Others including Painting and any other special repair: - Maintenance period-12 month.
- v. Electrical fittings/items /Motors/Pump- As per manufacturer warranty; DLP/Maintenance period -1 year.
- vi. Sanitary Installation /Fitting/Fixture- As per manufacturer warranty; DLP- 12 Month.
- vii. Rolling shutters/Manual gears and other similar mechanical fitting works- DLP/Maintenance period-12 month.

The works /services, for which no maintenance period is prescribed here, contractor is waived off from his obligations of maintaining the works post completion.

#### 5. Night Work

Contractor shall plan and deploy his all resources to complete the work within time as per agreed program of completion. If the CWC is, however, satisfied that the work is not likely to be completed in time except by resorting to night work; by special order, the contractor would be required to carry out the work even at night, without conferring any right on the contractor for claiming for extra payment for introducing night working. The decision of the Officer in charge in this regard will be final and binding on the contractor.

#### 6. Work to be Executed in Accordance with Specifications, Drawings, Orders etc.

The Contractor shall execute the whole and every part of the work in the most substantial and workman like manner both as regards materials and otherwise in every respect in strict accordance with the specifications. The Contractor shall also conform exactly, fully and faithfully to the design, drawings and instructions in writing in respect of the work assigned by the Corporation and the Contractor shall be furnished free of charge one copy of the contract documents together with specifications, designs, drawings and instructions, as are not included in the standard specifications of Central Public Works Department, specified in **Schedule I: Appendix-7** or in any Bureau of Indian Standard or any other, published standard or code or Schedule of Rates or any other printed publication referred to elsewhere in the contract.

The Contractor shall comply with the provisions of the contract and with the care and diligence execute and maintain the works and provide all labour and materials, tools and plants including for measurements and

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supervision of all works, structural plans and other things of temporary or permanent nature required for such execution and maintenance in so far as the necessity for providing these, is specified or is reasonably inferred from the Contract. The Contractor shall take full responsibility for adequacy, suitability and safety of all the works and methods of construction.

### **7. Work(s) where no Specifications are specified**

In the case of any class of work for which there is no specifications provided under this Contract, such work shall be carried out in accordance with the Bureau of Indian Standards Specifications. In case, there are no specifications in Bureau of Indian Standards, the work shall be carried out as per manufacturers' specifications, if not available then as per State / District Specifications. In case there are no such specifications as required above, the work shall be carried out in all respects in accordance with the instructions and requirements of the Corporation.

### **8. Water for Works**

- (a) Departmental water supply, if available, shall be the sources of water for using into various works/services under this contract:

Water on the request of Contractor and, if available may be supplied to the contractor by the Corporation, subject to the following conditions:

- (i) The water charges shall be recovered from dues of Contractor, @ 1% on gross amount of the work done/services delivered.
- (ii) Main sources of supply (Tapping source), shall be decided by Warehouse Manager based on availability of water. The contractor shall make his/their own arrangement of water connection and laying of pipelines from existing main of source of supply up to place of work at his own cost.
- (iii) The Corporation do not guarantee to maintain uninterrupted supply of water and it will be incumbent on the contractor(s) to make alternative arrangements for water at his/their own cost in the event of any temporary break down in the Corporation water main so that the progress of his/their work is not held up for want of water. No claim of damage or refund of water charges will be entertained on account of such temporary break down.

- (b) In case, CW complex does not have adequate source of water or there is no such water which is fit for construction purpose, Warehouse Manager shall inform the contractor in writing, before commencement of work to arrange the water at its own. In all such cases, the contractor(s) shall make his/their own arrangements for water required for the work (sources as well conveyance of water) and nothing extra will be paid for the same. In all such cases, when contractor has procured construction water with its own arrangement due to non-availability of same in CW Complex, as confirmed by warehouse Manager in writing, The water charges @ 1% shall not be recovered from contractor's bill as mentioned in subclause (a-i) above. The procurement /arrangement of construction water by Contractor will be subject to the following conditions:

- (i) That the water used by the contractor shall be fit for construction purposes to the satisfaction of the Engineer.
- (ii) The Engineer-in-Charge shall make alternative arrangements for supply of water at the risk & cost of contractor(s), if arrangements made by the contractor(s) for procurement of water are in the opinion of the Engineer unsatisfactory.
- (iii) In all such cases, alternate Water Arrangements can also be done by contractor by installation of borewell into CWC Land if it is permitted as per local bye-laws. The contractor shall be allowed to construct temporary wells in Corporation land for taking water only for construction purposes when he has got permission of the respective local authority and of Engineer in writing.

No charges shall be recovered from the contractor towards providing of land for installation of borewell, but the contractor shall be required to provide necessary safety arrangements to avoid any accidents or damage to adjacent buildings, roads and service lines. He shall be responsible for any accidents or damage caused due to construction and subsequent maintenance of the wells and shall restore the ground to its original condition after the wells are dismantled on completion of the work.

**9. Arrangements for Electric Connection, Lighting & Other Purpose**

- i. CWC shall allow tapping of electric power, if available in CW Complex, on actual electric energy consumption basis by putting separate electric energy meter at tapping source with due permission of Corporation and payment of such electricity consumption shall be done by Contractor.
- ii. Contractor will have to make his own arrangements for supply of power from tapping source to site of work through cables, MCBs, Electric Bulbs, Fans etc. All cables shall be laid neatly dressed though proper supports on walls/underground etc. NO overhanging wires/cable shall run across the roads, buildings.
- iii. If for reasons of urgency to expedite or complete the work within time, work has to be executed at night, contractor shall make his own arrangement for additional illumination if required at the site. Nothing extra will be paid for doing works at night.
- iv. Any power backup required during failure of regular power, will be arranged by Contractor at his own cost for completing the services/works and no compensation shall be paid by CWC on his account.

**10. Employment of Technical Staff and Employees**

Contractor's Superintendence, Supervision, Technical Staff & Employees:

- i. The contractor shall provide all necessary superintendence during execution of the work and all along thereafter, as may be necessary for proper fulfilling of the obligations under the contract.
- ii. The contractor shall immediately after receiving letter of award of the tender and before commencement of the work, intimate in writing to the Corporation , the name(s), qualifications, experience, age, address(s) and other particulars along with certificates, of the principal technical representative to be in charge of the work and other technical representative(s) who will be supervising and measuring the work.
- iii. Minimum requirement of such technical representative(s) and their qualifications and experience shall not be lower than specified in **Schedule I: Appendix-7**. Even of the contractor {or partner(s) /Director in case of firm/company} is himself / herself an Engineer, it is necessary on the part of the contractor to employ principal technical representative / technical representative(s) as per stipulation in **Schedule I: Appendix-7**
- iv. The Corporation shall, within 3 days of receipt of such communication, intimate in writing his approval or otherwise of such a representative(s) to the contractor. If due to any reason, such approval is not received in writing, Contractor shall continue to deploy the technical representative(s) considering they are meeting the criteria stipulated in **Schedule I: Appendix-7**
- v. Any such approval may at any time be withdrawn or if at any stage, it is found by Corporation that technical representative(s) do not meet criteria stipulated in **Schedule I: Appendix-7** or they are not technically competent then in all such cases, the contractor shall appoint another such representative(s) according to the provisions of this Clause.
- vi. Decision of Corporation shall be final and binding on the contractor in case of any conflict/dispute in this respect.
- vii. Such technical representative(s) deployed by contractor shall be available at site before start of work and shall remain available, supervise all time, control during execution of work and will remain available when any activity as per work order placed is in progress at CW Complex. Principal technical representative will periodically inspect the works, inform Corporation on progress and will remain available for taking instructions or verifications as and when required by Officer in charge or his representative and /or Corporation .
- viii. All the provisions applicable to the principal technical representative under the Clause will also be applicable to other technical representative. Instructions given to the principal technical representative or other technical representative(s) shall be deemed to have the same force as if these have been given to the contractor.
- ix. The principal technical representative and other technical representative(s) shall be actually available at site fully during all stages of execution of work, during estimation (pre award

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stage) / recording/checking/test checking of measurements of works (post award stage) and whenever so required by the Corporation and shall also note down instructions conveyed by the Officer-in- Charge or his designated representative(s)/ Corporation in the site order book and shall affix his/their signature in token of noting down the instructions and in token of acceptance of measurements / checked measurements / test checked measurements.

- x. These representative(s) shall not look after any other work, not in scope of contractor. Substitutes of these representative, duly approved by Corporation for work in similar manner as aforesaid, shall be provided in event of absence of any of the representative(s) by more than two days.
- xi. If the Corporation , whose decision in this respect is final and binding on the contractor, is convinced that no such technical representative(s) is/are effectively appointed or is/are effectively attending or fulfilling the provision of this Clause, a recovery (non- refundable) shall be effected from the contractor, as specified in **Schedule I: Appendix-7** and the decision of the Corporation / Officer-in-Charge, as recorded in the site order book and measurement recorded checked/test checked in Measurement Books shall be final and binding on the contractor.
- xii. Further, if the contractor fails to appoint suitable technical Principal technical representative and/or other technical representative(s) and if such appointed persons are not effectively present or are absent by more than two days, during the requirement at CW Complex, without duly approved substitute or do not discharge their responsibilities satisfactorily, the Officer-in-Charge shall have full powers to suspend the execution of the work until such date as suitable other technical representative(s) is/are appointed and the contractor shall be held responsible for the delay so caused to the work. The contractor shall submit a certificate of employment of the technical representative(s) (in the form of copy of Form-16 of CPWD GCC or CPF deduction issued to the Engineers employed by him) along with every on-account bill / final bill and shall produce evidence if at any time so required by the Corporation.
- xiii. The contractor shall provide and employ on the site only such technical assistants as are skilled and experienced in their respective fields and such foremen and supervisory staff, as are competent to give proper supervision to the work. The contractor shall provide and employ skilled, semiskilled and unskilled labor as is necessary for proper and timely execution of the work/delivery of services. The Officer-in-Charge shall be at liberty to object to and require the contractor to remove from the works any person who in his opinion misconducts himself or his representative, or is incompetent or negligent in the performance of his duties or whose employment is otherwise considered by the Officer-in-Charge to be undesirable. Such person shall not be employed again at works site without the written permission of the Corporation and the persons so removed shall be replaced as soon as possible by competent substitutes.

**Important conditions**

**A) Initial Inspection of Complex and Building survey**

- (i) Within 7 days of placement of LOA, an Initial inspection shall be carried out jointly by Warehouse Manager/ Engineer and Contractor along with his team of Engineers (principal technical representative) to particularly assess the requirement of all maintenance works & services which are required to be carried out in CW Complex as well all upgradation and new capital construction works (from table 1,2 & 3 of **Schedule II: Scope of Work**). The works required to be carried can be accessed with reference of Checklist of minimum requirement of Infrastructure & its Maintenance mentioned in **Appendix III of Schedule II: Scope of Work**.
- (ii) Contractor will deploy at least one engineer having the qualifications mentioned in the **Appendix 7 of Schedule I** for carrying out the Measurement of area where general maintenance / repair & maintenance works / services are required. The measurement of the required Repair & maintenance activities shall be done along with Joint inspection. The Contractor, within 10 days of initial inspection, shall submit to the Corporation the detailed estimates of quantities mentioning the type of the works / services required to be carried out in the CW Complex.
- (iii) Initial Inspection and Measurement of quantities for preparation of estimates shall be done by Warehouse Manager and Contractor's Engineer Jointly.
- (iv) The estimated quantities to be executed shall be assessed meticulously by Contractor's Engineer, and any variation beyond plus minus 10% in each item of work may not be acceptable to Corporation.

The Corporation at its own discretion may place separate work order for executing additional quantities (beyond estimates provided by Contractor's Engineer) or may or may not do the payment of any kind of excess work done beyond the +110% of the quantities mentioned in work order based on estimates provided by Contractor's Engineer. Decision of Corporation, in all such cases, shall be final and binding on the Contractor.

**B) Execution of works/delivery of Services:**

- (i) The contractor will engage the experienced technical representatives of concerned discipline in the CW Complex, who should have full knowledge of work and are capable of getting executed the work and removing defects, as pointed out by the Officer-in-charge. Deployment of the technical representatives and recovery, in case the contractor fails to do so, shall be in accordance with the **Appendix-7 to Schedule I: General Conditions of Contract**.
- (ii) The contractor will carry out the works and will deliver the services as per the scope of work, the specifications and requirements stipulated the work order.
- (iii) The contractor shall take levels and record them in prescribed Level Book before commencement of work. Levels taken shall be got verified from Engineer or his representative.
- (iv) Contractor shall keep Corporation informed on progress of various works being executed by contractor. The verification of quantities of works executed, measurement of works and assessment of quality shall be done by Officer in charge as per the terms & conditions mentioned in the Contract/Work Order and Indian code of practices, specifications of CPWD etc.
- (v) All works ordered at a time shall be executed by Contractor as per time line stipulated in Work order by commencing works simultaneously in all places through parallel and independent team. Sequencing and phasing of works will not be accepted due to non-availability of manpower/material/T&P etc.
- (vi) The Officer in charge will certify the measurement of the all works completed / and services delivered for the work order placed by him for the works/services.
- (vii) The decision of Officer in charge shall be final towards the measurement of actual work completed and It shall be binding on the contractor.

**GENERAL MAINTENANCE MANUAL& MAINTENANCE SERVICE QUALITY REQUIREMENTS**

**1. Service Requirements**

- 1.1. The Contractor shall adhere to Good Industry Practices for maintaining Services quality.
- 1.2. The Contractor shall deploy the multiskilled staff – (skilled Labours) along with unskilled workers to ensure all kind of maintenance services including horticulture services and housekeeping services in the Central Warehouse Complex as per Good Industry Practises.
- 1.3. General maintenance works & services shall be carried out at their prescribed frequency as mentioned in below paragraph. The payment towards satisfactory delivery of these services, shall be done as per contracted price schedule considering contractor percentage quoted in Price schedule. Nothing extra shall be payable to contractor for performing these activities & providing services except such monthly payment based on frequency, area, and satisfactorily delivery of services upon certification of warehouse manager.  
Rates of such jobs is mentioned in contracted Price Schedule.

**2. General Maintenance & Service Requirements**

- 2.1. The Contractor shall, at all times, maintain the Central Warehouse Complex in accordance with the provisions of the Agreement, Applicable Laws and Applicable Permits. In particular, the Contractor shall, at all times during the Contract Period, confirm to the General Maintenance & Service Requirements set forth in the Table below.
- 2.2. The Maintenance activities, put forth in Table at B (S/n 1to to 9) below shall invariably carry out by deploying adequate skilled workmen with required tools, plants, and consumables on requirement basis as and when Corporation through Officer in charge ask to carry out the activities upon breakdown in services. Officer in charge will send the requirement to Contractor via email and SMS on registered mobile number of contractors.
- 3. The payment towards these specific maintenance works shall be done after satisfactory restoration of service based on the contracted rates for General Civil & Electrical works.

	<b>Activity</b>	<b>Coverage</b>	<b>LD for not performing/delivering satisfactory service</b>
A	<b>Service Requirements</b>		
	<b>Housekeeping Services</b>		
1	Removal of waste, garbage, scraps etc. <b>Frequency: once in a week</b> or as per requirement.	Within CW complex	Rs 100 per day
2	Cleaning/Sweeping of CW Roads, Main entry Ramps, Parking yards Godown Veranda/Open Platforms and Weighbridge platform area etc. including Safe disposal of garbage/ Refuse. <b>Frequency: Daily</b>	Within CW complex	Rs 300 per day
3	Cleaning, dusting, mopping of Window Glasses (both sides), floors, furniture, etc. to make the area neat and clean free from cobwebs, flies etc, and hygienic in Office buildings, labour Huts, Security Cabins, weighbridge cabin and other similar amenities. <b>Frequency: Daily</b>	Within CW complex	Rs 300 per day

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4	Cleaning, dusting of Godown Walls, Top Ventilators, Roof Trusses, Parapets and other heightened structures, Cleaning of Fans installed in office buildings, Cleaning of firefighting equipment including portable fire extinguishers. <b>Frequency: Once in 2 months</b>	Within CW Complex	Rs 300 per day
5	Cleaning of all Toilets /Washrooms / drinking water utilities and other similar amenities within CW Complex. With water including flushing as per requirement. <b>Frequency: Twice daily</b>	Within CW Complex	Rs 300 per day
6	Cleaning of terrace/loft water storage tank. <b>Frequency: Once in 6 months.</b>	Within CW Complex	Rs 300 per day
7	Cleaning and desilting of gully trap chamber, Cleaning of outlet chambers connecting swage / drains of CWC complex with city means drains/ swage chamber	Within CW Complex	Rs 300 per day
8	Cleaning of choked / existing drain of campus / sewer line. <b>Frequency : once a year or as per requirement</b>	Within CW Complex	Rs 300 per day
9	Cleaning of under ground sump, Over Head R.C.C. Tank . <b>Frequency: once in 6 months,</b>	Within CW Complex	Rs 300 per day
10	Clearing of blockages in Rain Water Harvesting systems pit , Cleaning, disinfecting/ recouping the aggregates/ repair of RWH pits/ borewells. <b>Frequency: Twice a year.</b>	Within CW Complex	Rs 300 per day
11	Cleaning of valley gutter in godown and underground tranches, drain pips	Within CW Complex	Rs 300 per day
<b>Horticulture works and services</b>			
12	Grassing with selection No. 1 doob grass including watering and maintenance of the lawn. <b>Frequency: as per requirement</b>	All Gardens within Complex	Rs 150 per day
13	Cleaning of garden, Watering of landscaped/green belt areas and maintaining the plants/ shrubs, trees, bushes, flowering beds etc and keeping these in healthy condition. <b>Frequency of cleaning shall be daily and watering or other activities shall be as per requirement.</b>	All Gardens within Complex	Rs 150 per day
14	Renovating lawns including weeding,	All Gardens within	Rs 150 per day

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	cheeling the grass, forking the ground, top dressing with sludge or manure, mixing the same with forke and keeping the lawn free from weeds. <b>Frequency: Once in 6 months</b>	Complex	
15	Other horticulture services like Mixing earth and sludge or manure in the required proportion and spreading/ of sludge, dump manure and/or good earth in required thickness within complex as per requirement. <b>Frequency: once a month</b>	All Gardens within Complex	Rs 150 per day
16	Plantation of Trees, Shrubs, and Hedge at site i/c watering and removal of unserviceable material's	All Gardens within Complex	Rs 150 per day
17	Cutting of designer hedge/edge hoeing of hedge/edge bed Topiary cutting/shaping of plant removing of cut materials. <b>Frequency: Once in month</b>	All Gardens within Complex	Rs 50 per day
18	Clearing heavy jungle in open area including uprooting of rank vegetation. <b>Frequency: once in 6 months</b>	Within CW Complex	Rs 150 per day
19	Clearing grass, shrubs, bushes grown unwanted near to buildings. <b>Frequency: once in 3 months</b>	Within CW Complex	Rs 150 per day
20	Clearing grass, shrubs, bushes grown unwanted near to buildings. <b>Frequency: once in 3 months</b>	Within CW Complex	Rs 150 per day

	<b>Maintenance Requirements</b>	<b>Coverage</b>	<b>Frequency/ Requirement</b>	<b>LD for not performing/delivering satisfactory service</b>
<b>Wet Utilities</b>				
1	Damage related to Water supply, Water pumping units & fittings.	Within CW Complex	Restoration through temporary measures within 4 hours Restoration through permanent measures within 3 days.	Rs. 800 per for each lapse
2	Damage of drainage system, removal of drain block, draining the storm water logged over roads etc by pumping or any other suitable means as per requirement etc	Within CW Complex	Restoration through temporary measures within 6 hours Restoration through permanent measures within 1 day	Rs. 1000 for each lapse

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3	Damage of Sewage system, removal of sewage block, draining the sewage, preventing back flow, over flow over roads etc by pumping or any other suitable means as per requirement etc	Within CW Complex	Restoration through temporary measures within 6 hours Restoration through permanent measures within 1 day	Rs. 1000 for each lapse
4	Damage of sanitary installations, repair /replacement of fittings, fixtures and plugging the leakages from pipes etc.	Within CW Complex	Leakages to be repaired within 24 hours Damage to septic tank to be repaired within 1 day after detection	Rs. 800 for each lapse
5	Damage to rainwater harvesting system including cleaning of Rain water pit, replacing the aggregates, removal of blockages etc to restore the water flow.	Within CW Complex	Restoration through temporary measures within 1 days Restoration through permanent measures within 7 days Periodically desilting and particularly prior to pre-monsoon & monsoon	Rs. 1000 for each lapse
6	Plugging the leakages from Roof, Velly Gutter, Restoration of blown sheets /turbo ventilators in Original Position	Within CW Complex	Restoration through temporary measures within 1 days Restoration through permanent measures within 3 days	Rs. 1000 per day for each lapse
<b>Electrical Utilities</b>				
7	Restoration of Functioning of power supply, electrical installations and electrical equipment for buildings and external as per direction of WHM	Within CW Complex	Temporary Restoration of Power supply to common areas to be restored within 30 minutes during the night and within 60 minutes during the day, in the event of a power shortage/ breakdown. Restoration through permanent measures within 2 days	Rs. 500 for each lapse
8	Replacement /repair in Electrical fittings like bulbs, lamp shades, wiring etc. to make it operational at all times within Offices/ Godowns and other amenities as per direction of WHM	Within CW Complex	Replacement/restoration through temporary measure within 4 hours Restoration through permanent measure within 2 days	Rs. 500 for each lapse
9	Repair/rectification of Damage to exterior lighting, High masts, Street light including replacement to make it operational as per direction of WHM	Within CW Complex	Faults and minor failures to be repaired within 4 hours Any major failure of the system to be repaired within 2 days	Rs. 500 for each lapse

**Notes:**

1. Daily means each working day of CW Complex.
2. The Contractor shall at all times maintain an adequate inventory of spares and consumables to deliver these General Maintenance & Services as per requirements not less than the quantity /item as mentioned in **Appendix-7 to Schedule I: General Conditions of Contract**.
3. Notwithstanding anything to the contrary specified in this Schedule, if the nature and extent of any defect or deficiency justifies more time for its repair or rectification than the time specified herein, the Contractor shall be entitled to additional time in conformity with Good Industry Practice. Such additional time shall be determined by the Officer in charge based on the necessity, urgency and magnitude of the repair and conveyed to the Contractor. His decision shall be final and binding on contractor. In case of such extension, LD shall not be levied
4. **Emergency repairs/restoration:** Notwithstanding anything to the contrary contained in this Schedule, if any defect, deficiency, or repair requirement is such that it poses a hazard to safety or risk of damage to property, the Contractor shall promptly take all reasonable measures for eliminating or minimising such danger.
5. **Inspection by the Contractor:** The Contractor shall, through its engineer, undertake an initial Inspection jointly with Corporation Authorized Engineer and / or Warehouse Manager and then later on with his Engineer shall carry out periodic (at least once in 30 days) visual inspection of the CW Complex to access the non-conformity in services and to measure the maintenance /repair requirement in Buildings, Utilities, Roads etc in accordance Good Industry Practises and Maintenance Check List mentioned in **Appendix- III to Schedule II: Scope of Work**.

Contractor will submit its inspection report to Corporation and He will also keep Corporation informed on all such periodic inspection /progress of works.

6. Non performing of the activities, denial to undertake any of these upon requirement of Corporation or Its officer in charge and non-delivery of satisfactory services or failure in timely completion will attract LD as mentioned above. The Amount of LD to be levied shall be decided by Authority as mentioned in Appendix 7 of Schedule-I and it shall be recovered from any dues payable to contractor under any contract with CWC.

## **MINIMUM REQUIREMENTS OF INFRASTRUCTURE & ITS MAINTENANCE IN CW COMPLEX**

**Below, minimum requirements of facilities, infrastructure are mentioned as check list. The Regional Manager shall ensure that all below mentioned infrastructure requirements are met in CW Complex.**

**Any additional requirements, providing better specifications and rich ambience may be adopted but none of below can be relaxed.**

### **1. Godowns :**

- The Godowns should be well painted and neat & clean. All exterior wall should be painted with exterior grade long durable emulsion paint and interior should be at least white washed free from cobweb etc. Godown & verandah truss should be free from rust & well painted.
- Uniform color scheme shall be followed in all complex. All CW Godowns & Buildings in complex shall be painted to follow uniform color scheme decided by Competent Authority and conveyed by Engg division from Corporate office.
- Godown floor & platform should be free from depressions, sinking, potholes and cracks. Floors should be in operator-able conditions and storage worthy.
- Godown platform should be protected by fender as per technical requirement. Fender should not be damaged & should be kept intact. Platform canopy truss should be rust free and well painted.
- Godown Platform shall be provided clear approaches and accesses. Gola of platform sheet with wall should be intact and free from cracks. In case when no Gola treatment is provided, adequate size flashing should be provided to avoid leakages.
- There should be no crack in Godown walls, plaster etc all joints of walls at beam and column locations should be well grooved, dressed and crack free.
- Godown roof should be leak-free and rust free. Needful upgradation should be taken up in case of old/aged damaged AC roofing sheet.
- Godown should receive sufficient Day lights through sky light sheeting.
- Godown should be well ventilated.
- Turbo ventilators, sky light sheets should not be provided in the roof to prevent the water leakage wherever already existing, these fittings should be adequately fixed in matching profile of roof sheet by additional tie-bar, screws etc. to ensure that there is no gap in between these fittings and roof sheets allowing the rain water to percolate through.
- Godown inside drains should be clear & free from damage. Valley gutters should be well painted and FRP lining/ PU coating should be provided in case of rusting in old valley gutters. Needful maintenance of such pipes should be invariably done in each year before monsoon season.
- All rain water down take pipes in Godown should be well erected and leak free.
- Godown Roof sheet & purlin shall be rust free. Necessary coating shall be done to prevent rusting of steel.

### **2. Roads:**

- All circulating roads in CW Campus must be motorable, free from water logging etc. Needful upgradation of existing roads in the CW complex with M40/M50 Grade CC paver Block or M30 grade CC Concrete Pavement to done to make it motorable.
- The work of drainage wherever not existing or damaged should invariably be included as a part of road work.

### **3. Drains:**

- All drains should be free from blockage and well connected with city outskirts drains. There should be no backflow or stagnation of storm water in CW campus. Needful drains should be made connecting all roads and yards.
- In case of low-lying campus, an underground sump should be provided & maintained along with adequate capacity pump with power back up facility to effectively drain the storm water without flooding in CWC campus.
- In case of low lying Campus, Ramp and sump approaches shall be provided at all entry gates to avoid ingress of storm water drains from city roads and to throw out storm water from campus.
- Wherever required liaisoning with the local authorities of Municipalities, Sewerage Board etc. should be done to connect drains from CW complex with city outskirts drains. Efforts should be made to ensure the

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cleaning of city drains to prevent the back flow of sewage, storm water in CW campus and if required, such cleaning should be taken up by CWC with permission of local authority on merit of case basis.

### **4. Rain water Harvesting:**

- RWH should be kept in working conditions. RWH should be provided in low level area in CW campus wherever feasible.

### **5. Storage Yard:**

- All open storage yard to be kept free from Jungle, bushes, waterlogging etc. Regular cleaning of jungles etc should be done and yard should be developed with hard soil/paving as per requirement.

### **6. Boundary Wall:**

- All-around boundary wall should be intact. 6 feet high Boundary wall (from outskirt Road side) along with 2 feet concertina coil/ barbed wire fencing should mandatorily be maintained to prevent encroachment in CW property. This boundary wall should be free from holes etc.
- In case of low-lying CW campus, main entrance should be raised from city roads by providing a RCC ramp and a storm water catch pit at the entrance should be available. This is mandatorily required to prevent the entry of storm water from the city roads.
- Entry Gates /Doors shall be well maintained and functional at each entry /exit locations. Gate shall be made of Structural Steel (tubular / ISA/ISMC sections).

### **7. Ventilators, rolling shutters & Jalli gates:**

- All ventilators should be intact. Glass & wire mesh in these ventilators should be clear visible, mesh should be rust free and painted. There should be no broken glass or wire mesh in Ventilators / windows.
- Rolling shutters or steel doors should be rust free, well painted and in working condition. Proper support system & alignment should be maintained to prevent the accidental falling.
- Jalli gates in the openings of rolling shutters/gates should be provided & maintained as per operational requirements.

### **8. Illumination & wiring:**

- CW campus should be well illuminated and the lights during the night hours should be available in all circulating area & operating area to prevent the security threat. High Mast & street lights should be provided and maintained accordingly as per the requirement of the campus.
- Godown (interior), circulation area, platforms, office all should be well illuminated and Energy efficient lights (LED) must be available at all key movement area. LUX level requirement as per operations of warehouse shall be maintained thoroughly.
- All types of cables like power cable, communication cable, IT cable, CCTV cable etc. should be properly dressed, running through conduits and should not be over hanging along the roads/office/godowns.
- Preventive checks should be implemented to avoid haphazard digging of roads and cutting of underground cables during civil works in CW campus.

### **9. Electricals:**

- All type of the electrical installations should be properly grounded and should be in well maintained working condition.
- Sub-stations, transformers, control panels, DG sets. Etc. should be properly maintained regularly serviced through AMC and needful upkeeping should be done to ensure the safety.

### **10. Firefighting:**

- The CW campus should be equipped with fire mitigation system like dry type fire extinguishers and fire water sump and firefighting arrangement as per local bye-laws should be maintained in all CFSs as per requirement.

### **11. Basic facilities/amenities:**

The basic facilities like

- ACs (Warehouse Manager cabin), Coolers (in staff rooms), Water coolers/ purifier should be well maintained and in working condition.
- Visitor room, office cabins, staff rooms should be properly maintained, well painted, neat & clean.
- The labor huts (rest rooms), public toilets, drinking water facilities should be provided and well maintained in each of warehouses.

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- Separate toilets for ladies & gents should be provided & well maintained in each warehouse. These toilets should be part of the office building and should not be haphazardly built in the campus.
- Access to CWC office, godown should be well maintained, free from debris and approachable by physically handicapped persons too.
- The office space should be provided with modular furniture with adequate storage system for proper upkeep of records & supplies.
- There should be a proper movement plan indicating the directions to approaches the CW godowns, parking yards, docking yards, office, scrap yards etc. The signage board indicating the movement plan & directions along with the speed limit(20kmph) should be erected in position and clearly visible to all.
- Signages of Proper height, size to ensure wide visibility shall be provided in all Godowns, Buildings indicating the fire signages, hazard signage, Do's , Don'ts etc.
- Parking yard should be exclusively designated for office vehicles and logistic vehicles. The parking of the vehicles should be ensured in designated parking place. Parking yard should be well maintained and should be free from fire and safety hazard.
- There should be no encroachment in CWC campus. Any kind of temporary or permanent labor hut by outsiders should not be permitted inside the campus.
- The dumping yard for garbage, scrap dumping should be located in isolation within CWC campus. This Yard should also be maintained & regularly cleaned to prevent fire hazard, bad odor or unpleasant ambience. Proper size and capacity dustbins shall be provided in all important locations of garbage collections along the road in Complex and in Offices buildings also.
- Housekeeping for cleanliness of roads, godowns, drains yard, offices and sanitary works should be mandatorily ensured. Road area, Parking Bay and office are should be free from garbage and scraps.
- CWC board and LOGO should be well lit, positioned and of sufficient size to ensure the visibility from main approach roads outside of warehouse. Board must be of pleasing appearance.
- A well-developed green belt shall be maintained along with landscaping near Office area as per Guideline of corporate office released time to time.
- Sand buckets filled with clean sand shall be kept maintained in position at Admin Building/ Office Building, Each Godowns and other areas prone to fire hazard in CW Campus.
- Separate area shall be provided for hazardous storage. area shall be kept barricaded and isolated.

Campus should be free from litter and waste and no animal should be roaming inside CW Complex.