REVA UNIVERSITY
Bengaluru, India

POLICY ON CAMPUS PHYSICAL INFRASTRUCTURE

Rukmini Educational Charitable Trust

www.reva.edu.in

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Bengaluru - 560 064

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1. Preamble

REVA University is a multidisciplinary university which caters to students from all walks of life. The Management of REVA believes in offering world-class education in alignment with the government and the regulatory bodies guidelines issued from time to time.

2. Policy Application

This policy would be applicable to all physical infrastructure owned by REVA University. These could be for infrastructure or for any purpose that includes, but is not restricted to, teaching and learning resources, research, student accommodation, or any other operational or non-operational purpose. This Policy would oversee the sustainable, responsible, and effective management of the University's physical infrastructure planning and development activities, related facilities management responsibilities, and related space management functions. The policy will serve as a framework for the development of guidelines and implementation of procedures to support this policy. Physical infrastructure includes but is not restricted to teaching and learning resources, a hall of residences, research facilities, and other amenities. The policy serves as a guideline towards infrastructure planning, stakeholder responsibility and enables space management.

3. Objectives of the Policy

REVA University is aware of the fact and is sensitive to the need of a good, state–of–the–art infrastructure that supports and enables an effective teaching-learning process. The academic blocks, labs, washrooms, studios, gazebos, and other office spaces are very crucial to the effective functioning of the University. Hence care is taken to provide the best in infrastructure, upgrade the infra timely, sustainability, and maintenance of the infrastructure to realize the best student learning outcomes. The Management of REVA University understands fully well the responsibility of United Nations Sustainable Development Goals and hence has taken care to build a green campus.

3.1 The objective of this policy is to-

a) Consider the needs of all stakeholders

b) Ensure compliance with relevant legislation, regulations, and standards

c) Promote consistent practices, standards, operational efficiency, and best practices

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d) ensure the most efficient use of facilities, that existing building space and other related infrastructure are optimally utilized, and that all physical infrastructure is effectively managed and maintained, and

e) Ensure that new infrastructure is designed and created, following strategic objectives.

4. Policy Statement and Requirements –

4.1 **Design at REVA** - In Alignment with the 17 SDGs of the UN, REVA University must always ensure that sustainability, inclusivity, green initiatives, and economical safety are borne in mind. The annual infrastructure plan must cater to short-term, medium-term, and long-term physical infrastructure requirements. It must follow all rules and regulations laid by the Government and other authorities as regards the construction norms as well the requirements specification as laid down by the Governing authorities of the School if any. The construction of new facilities may only be considered after a formal review has confirmed that required additional space. Cannot reasonably be accommodated within the existing infrastructure. The General Assembly adopted the 2030 Agenda for Sustainable Development. This includes 17 Sustainable Development Goals. Complying with these goals should be borne in mind, in all activities related to the provisioning of physical infrastructure and facilities. The following should be the core of any activity related to infrastructure.

a) Sustainability
b) Inclusivity
c) Green Initiatives
d) Economical and Safety

4.1.1 **Sustainability –** The buildings in the campus are platinum LEED certified, sustainable in terms of the construction materials used, energy efficient, and with long-lasting appliances and fixtures. Not only should efforts be made to make the buildings sustainable, but the construction process should also be well planned and executed wherein the material being procured should be environment friendly, as far as possible and the construction sites bear the sustainability aspect as well. The required restrictions and cautions for the stakeholders, workers at the site, and the site as such, must be ensured. Utilizing solar energy, creating energy from alternate sources, automation, and wheeling to the grid, have been considered. (Refer to Annexure "A" and "B" to the policy) Carbon neutrality and zero waste efforts have been given due importance.

4.1.2 **Inclusivity – All** out efforts should be made to create an infrastructure that is inclusive of the demands of all stakeholders. REVA University should be welcoming to all stakeholders irrespective of their disability. An extra effort should be made to make the experience of every disabled stakeholder of the University, a convenient and comfortable one. (Refer to Annexure "C" to the policy). REVA University's infrastructure is to be welcoming to all students and care has to be taken to make it disabled-friendly.

4.1.3 **Green Initiatives –** The REVA University ecosystem is filled with greenery and has adequate lung spaces for students. Gazebos are planned strategically for outdoor learning and pathways are canopied with greenery. Not only does greenery contribute to reducing pollution; but also helps in adding beauty and colour to the campus. A clean, green, and pollution-free environment provides a pristine backdrop for an effective learning experience.   No stone should be left unturned in the development of a green ecosystem to provide enrichment to the mind, hearts, and souls of the employees and students. (Refer to Annexure "D" to the policy).

4.1.4 **Economical and Safety –** All academic blocks are safe and quality certified. Since the management has experience in the industry no compromise has been made on the quality of the building. Efforts should be made to bring in the economy in procurement, storage, and usage. Competitive rates should be encouraged, with ethical dealing, and no trade-off on quality or safety.

4.2 **Maintenance** - Maintenance is a generic term to include planned maintenance, repair, and provision for the replacement of the structures. The goal of infrastructure maintenance should be to sustain the life of major assets. AMCs have to be signed regularly and preventive maintenance, space administration, and general maintenance are to be given importance to.

Infrastructure maintenance may be further divided into.

a)   Space Administration
b)   General maintenance
c)   Electrical maintenance

4.2.1   **Space Administration –** Every year there is an audit conducted of the spaces available and utilized. A checklist is to be prepared for things that require due attention. Effective management of the space of the University should be monitored. All venues would be handed over appropriately to the users and the venues have then to be managed with utmost care. This includes checking that the university space is maintained clean, tidy, and hygienic and that the space and assets are effectively utilized and for the purpose, it is meant for. Common facilities also need to be managed and regular evaluations of the utilization of these facilities must be conducted. All common spaces have to be maintained neat tidy and bearing in mind all hygiene aspects.

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4.2.2 **Electrical Maintenance** - Monitoring maintenance of the electrical fixtures is also to be ensured. Periodical audits should be conducted on an ongoing basis, to identify and report on significant and abnormal energy use. Efforts should be made to implement new technologies aimed at energy conservation and improving the efficiency of the equipment. Back-up electricity installations should ensure uninterrupted electrical supply.

4.3 **Delegation of Responsibilities -** The general administration team will be responsible to oversee the entire campus administration, execution of plans, planned deadlines, safety, and security. The policy (revised periodically) will be the guiding factor for the general administration team

ANNEXURE "A"

GUIDELINES FOR SUSTAINABILITY

1. Reference is made to paragraph 4.1.1 of the Policy on Campus Physical Infrastructure.

2. The complete designing and construction process should be well planned and executed wherein the material being procured should be environment friendly as far as possible, and the sites maintained bearing the sustainability aspect as well. The required restrictions and cautions for the stakeholder, workers at the site, and the site as such, should be ensured.

3. A lot of effort is made to create beautiful infrastructure. While doing that, efforts are also required to not spoil the beauty of existing infrastructure or the beauty of the construction site or affect the beautiful environment and campus working adversely. Further, it is also necessary to ensure the safety and security of all the teams involved in the construction activity.

4. **Environmentally Friendly** – Environmentally conscious building offers benefits for every important aspect of life. Studies have shown that green buildings create healthier environments and have a positive impact on student performance. Being a responsible organization, it is pertinent to include all environmentally friendly activities and create designs that keep the stakeholders close to nature and utilize resources efficiently and effectively.

5. Points could be considered like permitting natural light during class hours as well as harnessing the free flow of air and cross ventilation; thus, reducing the use of ACs and electrical lights. Ramps up to the top floors (instead of stairways) permitting easy movement of people and material would reduce the use of lifts and maximum usage of greenery indoors and outdoors would help enhance the cooling of the buildings.

6. Use of environmentally friendly construction materials is also advised. Eco-friendly construction consists of 2 parts – material and technique. Use materials that can be available, are durable, help reduce pollution, are energy efficient, help reduce a dead load of a building, and are recyclable and/or biodegradable.

7. **Handling Construction Material** – The required materials should be analyzed well in advance, the schedules finalized as to when a specific material is required, and the indents raised accordingly. Based on the indents. Purchase orders and availability with vendors, the arrival of the material would also need to be scheduled. Transportation of the material to the construction site on campus should be handled with caution.

8. **Transportation of Construction Material** - The ability to handle construction material safely is vital to the proper functioning of any construction job site. Construction material has first to be brought to the site & then transferred within the site also. This would involve and include among others, activities like hoisting steel beams, driving a truck loaded with raw material, manually carrying bags or material and stacking supplies, etc. At all costs, we need to avoid any employee or any worker getting injured by improper lifting of material. We should consider the nature of, size, and weight of the material, etc. when planning the technique of material movement. The path/route/storage area should be finalized, and the actions initiated accordingly. All teams (stores, purchases, civil, security) involved, should be in sync. Heavy shifting and highly risky manoeuvres of heavy vehicles, if at all required, should be planned after college hours so we can reduce the risks. Pathways where there is a chance of students being available need to be cordoned off. Care should be taken to ensure that no existing services should be hampered.

9. **Points to note for Reducing Risk**:
   a. Site Storage and compound be fully secured
   b. Sign boards are erected where required
   c. High visibility clothing at risk-prone areas
   d. Deliveries to be planned and coordinated

10. Sites to be maintained in an Orderly State –

    a.   Area to be fenced appropriately.

    b. Notice to the public should be displayed (Restricted Entry /Work In progress / Children not to play in this area / Electrical Hazard)

    c. All important numbers should be displayed. (Project Manager, Fire Officer, Ambulance / Dispensary, Security / Police)

    d. Necessary precautions against fire should be ensured.

    e. Safety rules for manpower should be followed (shoes, helmets, scaffolding safety hooks, etc. like high visibility clothing at risk-prone areas)

    f. Electricity support at the site –

- There should be sufficient lighting where works are in progress.
- There should be no naked wires at the site.
- All wires should have the 3pin/2pin tops.

    g. Poor housekeeping at the site can be a cause of accidents, such as:
- Tripping over loose objects on floors, stairs, and platforms
- Being hit by falling objects
- Slipping on greasy, wet, or dirty surfaces
- Striking against projecting, poorly stacked items or misplaced material
- Cutting, puncturing, or tearing the skin of hands or other parts of the body on projecting nails, wire or steel strapping, etc.

    h. Labour - While the labour being accommodated at construction sites needs to be made aware of the necessity of, and made to follow the process of, waste disposal at the site, strictly. They should be strictly advised to not use open areas but to use toilets and washrooms provided to them Water and electricity should not be wasted at the site and no food should be thrown in the open.

    i. Children of labour tend to follow their parents to the construction sites. This should not be allowed.

    j. Numbering Sites
- All sites should bear a number
- Details of the location of various sites should be very clear
- The details of the Site Engineer should also be listed
- The complete list should be prepared by Civil Team and handed over to Security Team and Admin Team.

- The list should be updated as and when there is any change.
- This would help security and admin to be aware of the support required site-wise.

11. **Inspections –** To ensure the safety of all the people involved in the construction activity, all the points mentioned above should be given due importance, and inspections carried out at irregular time periods to maintain the surprise element in the check.

<div align="right"><u>ANNEXURE "B"</u></div>

GUIDELINES FOR PLANNING OF CAMPUS PHYSICAL INFRASTRUCTURE

1. **INTRODUCTION**

a. Reference is made to paragraph 4.1 of the Policy on Campus Physical Infrastructure.

b. Buildings should be designed based on the requirements of the specific school. While creativity and uniqueness should be the main ingredient; sustainability, inclusivity, and encouraging greenery should be the core values, and economical and safety aspects should be the key factors that go into the thought process, when any infrastructure is being designed/constructed.

c. Every action of maintenance should also strive to replace the old infrastructure with efficient, power-saving, fixtures, and fittings that enable less wastage.

d. This guideline is prepared with the aim that all members involved in the construction and maintenance process, work with the same frame of mind.

2. **ATTENTION REQUIRED** – Due attention should be provided to sustainability, inclusivity, green initiatives in campus, and safety aspects.

3. **BUIDLINGS -** Every building may be designed in its o w n way, making it one of a kind.
Keeping in mind aesthetics and maximum comfort, all amenities and facilities that are required in a building should be provided.

4. **FOOD COURT AND CAFETERIA** - Factors such as music, lighting, artwork, and spacing combine to create comfort. There should be low-height counters, tactile paths, a n d braille signage in these areas so the physically challenged stakeholders can also avail of this facility.

5. **ALUMNI -** Many alumni make their alma mater proud by making exceptional achievements. A venue could be earmarked, where the details of exceptional achievements and contributions of REVA alumni are mentioned. The pictures of the alumni and their details should also be displayed.

6. **CLASSROOMS - Each** classroom (including studio, tutorial, ED Rooms, etc.) Should be designed based on the requirement of the school. These should be spacious, should have provision for natural light to flow in, should be well-ventilated, and have comfortable seating for students. The provision of audio–visual teaching should be ensured over and above the writing boards provided. A podium for every class is suggested. Podiums could be portable and provided with a space for placing laptops to enable better teaching comfort. Seating for faculty in classrooms is to be provided on a need basis.

7. **CONFERENCE ROOMS –** As every School would need to conduct meetings and have interactive sessions, conference rooms should be provided. These should be comfortable spaces, with sufficient seating varying from 4 to 30 seating (depending on the specific case). Conference table, sufficient chairs, provision for projectors, side cabinets to place records that would be discussed, etc. should be provided. Select conference rooms could be provided with IT facilities for skype meetings or video conferences to enable meetings with people located at faraway locations. Conference rooms should be bright and vibrant to bring the best out of the users. Making them soundproof is also suggested.

8. **CORRIDORS** – Corridors should communicate with the user. Well lit, welcoming, and informative with notice boards and display boards (including braille signages) conveying the essence of the departments/ schools/colleges housed on the floor – that is how the corridors should be designed.

9. **CO-CURRICULAR ACTIVITIES –** The University encourages students to "explore their potential". Further students are also encouraged to stay fit and healthy, mentally, and physically. For this, there should be sufficient facilities.
a. Sports Arena – An area where various sports courts are available.
b. Gym – A gym equipped with the latest gym equipment. Excellent audio support.
c. Yoga Centre – Spacious, well-lit, well-ventilated, excellent audio and video support.
d. Aerobics Centre – Spacious, mirror walls, wooden flooring, excellent audio and video support

e. **SoPA Studios** – where students can practice drama and various arts and cultural activities. This area should have sufficient lighting, and CCTV access and should preferably be near the hostel so that students can practice till late, safely.

f. Sound and Light show venue - A venue where students can compete for light and sound shows with themes they would like to present. This would bring in a blend of art and technology and hence interaction and collaboration between students of various streams. Such an area should have sufficient seating, excellent landscaping, lighting, water fountains, etc.

10. **ELECTRICAL/IT CONNECTIONS** – No loose wires, naked wires, or wires entangled around equipment, etc. shall be permitted. Maximum attention should be given to the concealing of the wires. While we use the most energy-effective and economical appliances, we should also ensure these are placed in appropriate places and well-fitting furniture (stands/ tables/ platforms, etc.). There should be sufficient provision for IT connections (wired and wireless) in the campus bearing in mind the security aspect.

a. Care should always be taken to ensure that there is sufficient lighting, ventilation, and cooling in all venues. While efforts should be made to have more natural light, the electrical bulbs being used should be power-saving and fixing spaced well, to light up the entire area, as per requirement.

b. Switches should be separate for lights and fans and the provision of switches should be easy access for the users. This would help users switch off the appliances, when not required and reduce the wastage of electricity.

c. Additional openings created for fixing electrical equipment/ machine/connections etc. should be concealed to avoid entry of any rodents/ birds etc.

d. Energy efficient appliances, power-saving electrical fittings, and sensor-based electrical fittings to reduce wastage of power resources, should be considered while finalizing the electrical requirements of a building.

11. **FIRE SAFETY –** All fire safety norms applicable to the specific type of building should be ensured for every building. This would include and is not limited to, the appliances, water supply connections for fire, required exits, evacuation plans, fire safety instructions, signage etc.

12. **GATES -** Each gate should have an identity and the same should be exhibited. The layout of the campus from each gate should be displayed with the "YOU ARE HERE "marking on the layout. A guard post for each gate should be well equipped with the required furniture like a table, chair, key holders, intercoms, dark glass panes, etc.

13. The Main Gate should have visitor reception areas with sufficient seating, tactile flooring, washrooms for staff and visitors (including for the physically disabled), audio/video support, and space for placing equipment used for screening and checking baggage, etc. Screening of all who enter the campus would enable tracking people/ vehicles, in case a requirement arises at any point in time. Tracking of the movement of visitor vehicles on a display screen at the Main Gate should be considered. This could be with GPS tracking. Perimeter walls should be fenced and should also have provision for CCTV coverage.

14. **GROUNDS** –. While the playgrounds should be maintained well with trimmed grass and well-maintained sports equipment, the other grounds should be well maintained with greenery, sufficient seating lounges enabled with solar charging points, and paths provided so that the grass of the ground is not spoilt by human movement, gazebos, etc. Providing rainwater harvest pits, as per the requirement, in each ground is a necessity. Also, there should be efforts to level the grounds so there is no water stagnation and all the rainwater flows into the RWH pit.

15. **HOSTELS –** "Home away from home", for the hostellers should be designed in such a way that hostellers have a safe and comfortable stay.

a. Common Rooms – Hostellers need to have a place to sit together and have fun. There should be common rooms where the hostellers can watch TV, play games, or read the newspaper.

b. Rooms - There are single to five-seater rooms, AC and non-AC, available. Each student   should have access to a bed, mattress, closet, desk, chair, and bookcase.
   There should be enough room to fit all of these amenities for each student.
   Rooms are advised to have mirrors. Care should be taken to ensure that there is adequate cross ventilation and natural light entering the rooms and balconies. Along with the typical wooden doors and glass windowpanes, net mesh doors and windowpanes are recommended for each room.
c. Balconies – All rooms should have balconies. Provisions for drying washed inner wear Should be provided. All other clothes are to be washed through the laundry and hence no provisioning is required for other clothes drying.
d. Washrooms– These could be common toilets/bathrooms or attached to the rooms. These Should have sufficient provision of exhaust, leakage proof water supply connections and bathroom accessories that include commodes, urinals, and washbasins and spray jets or health faucets. Hot water supply should be made available for all washrooms.

e. Corridors – These should be well lit and spacious. Mirrors should be provided in the corridors so students can check if they are well dressed. The water coolers are usually provided in the end of corridors.

16. **LABORATORIES**–Laboratories (including studios, kitchens, computer labs, engineering labs, makers' space etc.) should be fully equipped to meet the academic requirements as per the university curriculum. Labs are of different nature from computer lab to labs for anatomy, kitchens would be labs for college of hospitality and there would and pharmacy labs. Hence these shall be prepared based on the demands of the concerned colleges/schools. Each may be unique. The point to always be given priority is that students should be able to get a hands-on knowledge in the labs. Further, seating for the lab in charges and lab technicians as well as required storage and display boards for the lab should also be catered for. There should be research labs too where research scholars can create prototypes or conduct experiments

17. **LANDSCAPING / FOUNTAINS/ GARDENS -** Employees and students should always have access to be close to nature, while in campus. Landscaping with trees and plants, providing fountains or rock gardens, topiaries, gardens with seasonal flowers and comfortable seating should be considered. Gazebos should be designed and catered for. Open air gyms should also be provided. Students should be encouraged to participate in beautifying and designing grounds and gardens.

18. **LIBRARIES –** Books are a major resource of the University. Libraries should be spacious areas where students and staff feel welcome and inspired to explore, research and create. The libraries should be provided with spacious reading halls, periodical centers, group discussion rooms and online database browsing areas. Provision for ample seating, sufficient lighting, net facility, storage facility, books issue / collection areas, easy movement of staff and students, etc. are points to be considered while getting a library ready. Facilities where physically challenged stakeholders can also access the libraries should be ensured. The seating facility should enable wheelchair access, availability of ramp in the library are points that need to be taken care of.

19. **LOUNGES** – A guest at the campus should be treated with all respect. They should be made comfortable. Hence, all efforts should be made to ensure hospitality is at its best. For this, there should be lounges where guests can be welcomed with warmth and due respect. Guests could be handicapped due to age or physically handicapped. Hence such spaces should be provided with easy access with lifts or ramps and should have disabled friendly washrooms and seating.

20. **MESSES and KITCHENS -** Dining areas in hostels should be spacious, ventilated, and able to accommodate the strength of the hostel students. We should aim at providing bright and colourful messes, with audio /video entertainment facilities. The food counters should be well spaced and placed to enable reduced movement of students and to enable least rush. Kitchens should be designed bearing in mind all norms and the strength of staff and students it would cater to.

21. **OFFICES -** Offices are provided for the heads of as well as for the various faculty / staff.
These shall be provided with basic furniture requisites like tables, chairs, storage, pin-up boards etc. Further electrical connections and IT connections shall also be provided for the faculty / staff. Based on the seniority of the staff and the requirements of the concerned designations, seating space for guests, storages, trophy display shelves etc. shall be provided.

22. **PARKING SPACE –** Parking spaces should be provided for vehicles of employees and students as well as vehicles of guests. Cycle and two-wheeler parking, car parking and bus parking should be considered based on the strength of employees/students and guests expected. Access to the parking spaces should be smooth. There should be sufficient space for the vehicles to move in, park and then manoeuvre and move out. Markings in parking areas should be ensured. Some parking space should be earmarked for the physically disabled too.

23. **PROJECT DISPLAY AREAS**– A facility is suggested where selected projects of students from various streams are displayed. There should be a limitation for the number of projects a school can submit for display. This would encourage students to want their projects to be displayed here and would also enable students of different streams to understand and appreciate the works being done by their counterparts in campus. Shelves, lighting, audio, etc. should add to the beauty of the space.

24. **ROADS–**Roads in the campus should enable smooth movement of motorized vehicles and should provide access to all buildings of the campus. All roads in campus should be well connected with each other and should have the entire road markings required, with the speed limit being displayed. These should be well maintained, and well   lit.   Pedestrian friendly pathways should be provided on sides of roads and alongside buildings and grounds.

25. **SCRAP YARD - Assets** grow outdated, and some get worn out, due to fair wear and tear.

These are to be treated as scrap and not waste. These cannot be disposed as and when they arise and hence there should be a space provided to store them. Spaces should be earmarked to store a specific type of scrap so that these can be disposed off easily. Hence markings and bifurcation of areas should be done. For wood and paper waste the area should preferably be covered and with a cemented base so that the scrap is not spoilt by rain.

26. **SEMINAR HALLS** –Seminar halls with seating capacity of 150 to 400 should be available.

These halls would act as a common ground for students, faculty and corporate personalities for regular interfaces, conferences, and other events. These venues should be equipped with advanced presentation tools. These shall be in a common pool and hence centrally controlled. Users would need to raise prior demands for usage of these venues. The venues should have attached washrooms or washrooms in the near vicinity, waiting areas for the guests, sufficient storage for electrical and IT assets, seating for IT and electrical operators also. Auditoriums with seating capacity of 900 to 1500 should also be considered. These should have huge performance areas (stages) and comfortable audience seating. These auditoriums should have space earmarked for background support, green room areas, sufficient washrooms (including backstage), tables with wheels for placing and displaying prizes, foldable big size tables for placing convocation ceremony degrees/ trophies etc. area for refreshments for staff and students, lounges for guest reception and seating of the VIPs, control room for the electrical and IT support of stage, waiting area for all performers and a waiting area for next performer, etc.

27. **SIGNAGE** - Campus layout should be displayed at all entry gates and at strategic locations.

Each building, at the ground floor, should have signage displaying the various offices in the building, floor wise. This would enable the users to be aware of which floor to proceed to. Each room should be numbered and should have the name plate. Each floor of the building should have a floor plan displayed and each room in the floor should have the exit plan displayed. On each floor entrance or landing of the stairs, the FLOOR NUMBER should be displayed. The EXIT signage (with arrows) should also be placed on the stairs appropriately. Signage should also be made available to provide information to employees and students and to also inculcate civic sense in them. Disabled friendly signage should also be displayed.

28. **STORAGE FOR RECORDS** – Records need to be maintained for periods as specified by UGC or other such authorities. Records of the current semester may be stored in the academic building so that there is immediate access. Hence each school should be provided sufficient storage for the same in the academic blocks.

29. Rest of the records may be stored at a central facility. This central facility should have sufficient metal storage racks (storage lockers which are adjustable), fire, termite, and rodent proof. There should be good lighting, space for movement, shifting and bundling of records, seating for checking records, a reception area where records can be handed over for storing, sufficient racks and shelves. Access to motorized vehicles to this area should be provided as records may be shifted on vehicles. CCTV coverage of this area should necessarily be provided.

30. **STORE -**The Central store should be an area where there is sufficient space for storage of all the materials that need to be procured and stored till issued to the user. The area would be huge hall with provision for different types of storages. An In -bay and Out-bay, with appropriate seating for the store staff should be provided. These areas should be accessible to motorized vehicles (including heavy vehicles). Provisioning for a security post or CCTV recording could be considered. Special care should be taken for precautions against termite, rodents, fire or leak from roof. The Central Purchase team should be provided an area for display of samples.

31. **WASHROOMS** - Adequate water efficient toilets for girls (with commodes/ toilet seats), boys (with urinals), staff (He / She) should be catered to, for every building. There should be disabled-friendly washrooms (as per specifications) also in each building.

 a. While the main doors of washrooms should be automated, with door closures, there should be sufficient lighting (natural lighting as far as possible) and provision for ventilation, to the outside.
 b. Water wastage should be reduced by using aerators on faucets, low flush toilets, sensor- based taps etc.
 c. Electricity wastage should be reduced by using sensor-based switches for lights and fans. d. Exhaust fans (as per required capacity) with louvers, are suggested for all washrooms.
 e. The drains should be well covered and there should be a separate line for black water and grey water.
 f. Providing hooks on doors and shelves above washbasins in girls washrooms is suggested.
 g. Spray jets / health faucets are suggested for girls washrooms.

32. **WASTE YARD** - There should be a clearly laid down waste yard for all the waste of the campus to be dumped, till cleared. There should be a road providing access to motor able vehicles during all seasons, including rains, to this yard. There should be lighting in this area and electrical connection provided in case any machine needs to be operated for clearing waste.

33. **WATER POINTS** - Care should also be taken to provide sufficient water points in all buildings and at certain common areas, so that there is no crowding. There should be sufficient space provided, for access to clean the water cooler and electrical connection for the water filter/ RO to be placed. The outlet of water from these areas should also be covered. Tiling the floor area and providing plinth to prevent water flowing onto the corridors or pathways, is advised.

34. **WATER STORAGE** - Main overhead tanks and underground storage tanks should be provided based on the strength of the campus (considering hostellers and day-scholars). All buildings should have required capacity of water tanks to cater to the complete strength of people expected in the building. Sensor based supply should be ensured to avoid wastage of water or manpower resource. There should be separate storage for treated water to be stored for flushing purpose, to hold wastewater of RO to use for horticulture and earmarked tanks for fire safety use.

GUIDELINES FOR INCLUSIVITY

1. Reference is made to paragraph 4.1.2 of the Policy on Campus Physical Infrastructure.
2. Accessible India Campaign or *Sugamya Bharat Abhiyan* was launched on 04 Dec 2015, with an aim to serve the disabled community of the country. REVA University shall also endeavour to make the experience of every disabled person visiting our campus, a convenient and comfortable one.
3. The following guidelines may be treated as core areas when designing and constructing

Infrastructure in the campus as well for upgrading the infrastructure.

a) **Ramps** – To enable accessibility to buildings by persons with physical disabilities or the elderly, ramps, should be provided. Access to the pedestrian pathways should be made possible for the physically disabled, with ramps. Wheelchair users can have access to building using these ramps.

b) **Lifts**– All building with more than 3 storeys should be provided lifts. The lifts should be spacious, safe and energy saving. All the norms of the Government, as specified from time to time should be ensured.

c) **Washrooms**– We should have disabled friendly washrooms in campus. Specifications as provided by the Government regulations, from time to time, should be followed in true letter and spirit.

d) **Tactile path and Braille Signage** – Cater to the requirements of stakeholders who may need the support of tactile paths in the campus, and also provide Braille signage layouts.

e) **Low Height Food Counters**– The refreshment areas that are created for the employees and students have always been vibrant and colourful. These spaces have always been utilized to the fullest. This place should be made a welcome place for the physically challenged employees, students, and guests too. The provisioning of low height counter and seating where people on wheelchairs can also be accommodated is highly recommended.

ANNEXURE "D"

GUIDELINES FOR GREEN INITIATIVES

1. Reference is made to paragraph 4.1.3 of the Policy on Campus Physical Infrastructure. A minimum of 15% -20% of the campus shall be dedicated to greenery. Staying green is now a necessity and a very important responsibility.

2. Along with the construction of various sites, consider the purpose of the project and the funds available – aim should be to go in sync with the demand of the project, while keeping the environment management in mind, and to find the best way to conserve or restore natural resources.

3. Plan the landscape after analyzing the natural elements of the site, such as the climate, soil, slope of the land, drainage, and vegetation; observing where sunlight falls on the site at different times of the day; and assessing the effect of existing buildings, roads, walkways, and utilities.

4. Treated water or water of RWH should be used for the watering of plants. Attention to be provided to the following points-

a. Landscaping with trees and plants - Plant material should be selected after site evaluation, based on the location. Choose the right plant for the right location. Care should be given to provide serene or vibrant look as per the requirement. The landscaping shall be finalized along with the design of the building.

b. Green grounds - The open grounds and playgrounds in the campus should be green with sufficient seating and lighting to encourage students using these venues and staying close to nature. Grass on grounds help reduce the dust from flying and in keeping the grounds cool.

c. Gardens – There should be as many gardens as possible. To add to variety, gardens should have seasonal plants. Flowering plants would enable add color and fragrance to the look of the campus. Gardens could be based on themes. Topiary could also add beauty to the campus. Kitchen gardens and herbal gardens would be a necessity for some of the colleges and it could be a source of learning for the students.

d. Vertical gardens / green roof systems - The best use of all space available should be ensured to include as much green as possible. Bear in mind the policy of Reduce, Reuse, and Recycle. Create vertical gardens and green roofs. The more (the green) the merrier (the atmosphere).

e. Nursery – Create and maintain a nursery. This nursery should be able to cater to the requirement of seasonal gardens.

f. All steps should be adopted to stay as close as possible, to nature and greenery.

5. Efforts should also be made to encourage employees and students to take part in these activities.

GUIDELINES FOR MAINTENANCE

1. It is important not only to own assets, but to also be sure if the assets are well utilized and well maintained. Space is a valuable and limited resource and should be utilized in the best manner possible. For ease of space management, the campus is divided into 3 parts –
Academic Areas, Residential Areas and Refreshments Areas.
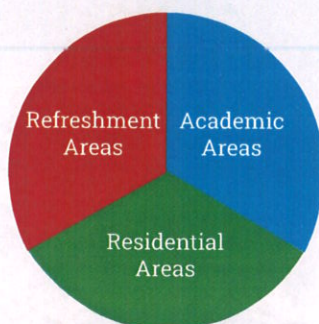
2. Once the venues are constructed, designed, and made ready, they shall be handed over by civil team to the concerned team for further administration and maintenance. These teams would further ensure the following:
   a. Takeover
   b. Maintaining inventory records
   c. Ensuring cleanliness
   d. Ensuring maintenance (preventive, corrective and emergency)
   e. Liaison for audit (energy /green/environment)

3. Records of each inventory should be maintained by concerned teams. These records should be maintained building/venue wise. Periodical updating of these records, and audit of the records should be ensured.

4. All areas and infrastructure need to be maintained clean. This would be done through HK teams, using manpower and required equipment. Systems should be laid for the same and regular checks should be in place to ensure the systems are being followed.

5. Maintenance -
a. There should be preventive, corrective, and emergency maintenance.
b. Online maintenance process should enable tracking the maintenance requirements, and the materials used as well as to track efficiency of the workers
c. AMCs should be in place for equipment and machines.

Registrar
REVA University
Bengaluru - 560 064

REVA
UNIVERSITY
Bengaluru, India

Rukmini Knowledge Park, Kattigenahalli
Yelahanka, Bengaluru - 560 064
Karnataka, India.

Ph: +91- 90211 90211, +91 80 4696 6966
E-mail: admissions@reva.edu.in

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