BEAUTIFICATION OF HOSTEL CAMPUS

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Abstract - This paper details a comprehensive plan to enhance the visual appeal and functionality of a hostel campus. The project includes modernizing windows, addressing renovation-induced damage, and reinforcing security with mild steel grills. Interior refurbishment encompasses painting and measuring rooms, corridors, bathrooms, and entrances. Strategically planted trees and shrubs add a touch of greenery to the campus. The paper concludes by suggesting future improvements, including decorative elements and the adoption of solar panels for sustainability. These multifaceted efforts aim to create a more inviting and aesthetically pleasing living environment for residents.

Key Words: Hostel campus, window replacement, security, sustainability

1.INTRODUCTION

In the realm of academic life, the significance of a hostel transcends its conventional role as a mere dwelling place; it evolves into a dynamic space where students forge enduring memories, cultivate lasting friendships, and embark on transformative journeys. Recognizing the pivotal role that the environment plays in shaping the holistic well-being of its occupants, the 'Beautification of Hostel and its Campus' project emerges as a visionary endeavor aimed at not only elevating the physical aesthetics but also fostering an environment conducive to academic success, personal growth, and overall contentment.

Nestled within the cocoon of academia, a hostel is more than just four walls and a roof; it is a microcosm of a student's academic odyssey. The proposed project stems from a profound understanding that a living environment goes beyond its utilitarian purpose, profoundly influencing the mental, emotional, and physical health of its inhabitants. The stark reality of broken windows, lackluster walls, and the absence of greenery can inadvertently sow the seeds of stress, creating an unwelcome atmosphere that casts a shadow on the residents' well-being.

Studies underscore the undeniable connection between the physical surroundings and mental health. A dull and uninviting atmosphere can contribute to heightened stress levels and a diminished quality of life. By addressing these visual and sensory elements, the 'Beautification of Hostel and its Campus' project aspires to create an oasis of tranquility, a haven where students can rejuvenate their spirits, fostering an environment that nurtures not only academic pursuits but also mental and emotional resilience.

Moreover, the significance of safety cannot be overstated. Inadequate lighting, both within the hostel premises and around the campus, casts shadows of insecurity, impeding the students' ability to navigate their surroundings with confidence. Recognizing this critical aspect, the project endeavors to illuminate not only the physical spaces but also the sense of security, ensuring that the hostel becomes a safe and welcoming haven at all hours.

At the heart of the project lies the belief that true transformation is not a one-time endeavor but a continual process, involving the active participation of its primary beneficiaries—the students. By creating an environment that resonates with their needs and aspirations, the project aims to instill a sense of pride and ownership among the residents. The hope is that they will become stewards of their revitalized living space, taking an active role in its maintenance and sustainability.

In essence, the 'Beautification of Hostel and its Campus' project is an earnest endeavor to redefine the hostel experience. It seeks to transform these living quarters into a home away from home, a nurturing environment where students can not only thrive academically but also find solace, inspiration, and a sense of belonging. Through this holistic approach, the project aspires to contribute to the overarching goal of creating a conducive, safe, and visually pleasing living environment that becomes an integral part of the students' academic journey—an environment where they can flourish, learn, and ultimately succeed.

2. Literature Review

A seminal study by Zhang, Li, and Wang [1] explores the "Impact of Green Spaces on Student Well-being in University Campuses." The research delves into the positive influence of greenery on student mental health, emphasizing the need for integrating natural elements into hostel environments. This finding aligns with the sustainable strategies discussed by Khan, Ahmed, and Khan [2], who advocate for environmentally conscious approaches in "Sustainable Strategies for Enhancing Hostel Living Environments." This study not only underscores the importance of sustainable design but also highlights its potential to create a harmonious living space that promotes the well-being of hostel occupants.

The nexus between aesthetics and student engagement is addressed in the work of Smith and Jones [3], titled "The Role of Aesthetics in Promoting Student Engagement in Campus Life" [3]. Their research emphasizes the profound impact that visually appealing surroundings can have on fostering a sense of community and active participation in campus life. This is complemented by Johnson and Lewis [4], who, in "Community-Based Design: Engaging Students in the

Beautification of Their Hostel Campus," explore the transformative potential of involving students directly in the enhancement of their living spaces.

Brown and Green [5] contribute to the literature by investigating "The Impact of Landscaping on Mental Health and Stress Levels of University Students." Their findings corroborate the notion that thoughtful landscaping contributes positively to the mental well-being of students. These studies collectively point to the pivotal role of green spaces and aesthetics in mitigating stress and creating a conducive environment for academic and personal growth.

In exploring broader perspectives, Kaplan's [6] work on "The Campus Landscape: Designing for Student Success" delves into the overarching principles of campus design. The text emphasizes the need for a holistic approach, considering various elements that contribute to a positive and supportive campus environment. Building upon this, Blewitt and Cullingworth [7] present a guide for "Building Sustainable Universities," offering comprehensive strategies for creating campuses that not only meet the needs of students but also align with sustainable practices.

Trowler and Bamber [8] provide insights into "The Student Experience: Enhancing Learning and Campus Life," emphasizing the interconnectedness of academic success and overall well-being. Mittelstadt and Kezar's work [9] on "The Future of the University" broadens the scope, exploring the evolving landscape of higher education and its implications on the design of educational spaces.

Turning to architectural considerations, Sanoff's [10] "The Design of Educational Spaces: A Guide for Architects and Decision-Makers" serves as a foundational resource. This text offers practical insights for architects and decision-makers involved in the design of educational spaces, providing a framework for creating environments conducive to learning and personal development.

In addition to scholarly publications, several organizations offer valuable resources for campus beautification and sustainable design. The Association of Public and Land-grant Universities [11], the International Campus Greening Network [12], and the American Society of Landscape Architects [13] provide guidelines and best practices for creating environmentally friendly and aesthetically pleasing campus environments.

Furthermore, the National Clearinghouse for Educational Facilities [14] and the Sustainable Buildings Institute [15] contribute to the discourse with resources on best practices and guidelines for campus design. These organizations play a pivotal role in shaping the conversation around creating sustainable, engaging, and student-centric living environments.

In summary, the literature review draws from a diverse range of sources to illuminate the multifaceted relationship between hostel design, aesthetics, sustainability, and student well-being. The collective insights from these studies and resources form a comprehensive foundation for the 'Beautification of Hostel and its Campus' project, providing a nuanced understanding of the factors that contribute to creating a home away from home for students.

3. Methodology

1. Replacement of Window

Step 1: Removing the Existing Window.
To initiate the window replacement process, the existing window will be meticulously unscrewed from its frame. Careful attention will be given to ensure a gentle removal without causing any damage to the surrounding frame.

Step 2: Repair of Damage.
After the removal of the old window, a thorough inspection of the frame will be conducted to identify any damage incurred during the extraction process. Any identified damage will be diligently repaired using an appropriate wood filler. The repaired areas will be sanded to achieve a smooth finish.

Step 3: Fixing Mild Steel Grill.
To enhance security, a mild steel grill will be installed. The dimensions of the opening will be measured, and the grill will be cut to the required size. Subsequently, the grill will be affixed to the window frame using cement mortar, ensuring a level and secure attachment.

Step 4: Fixing Green Marble at Sill Level.
For an additional aesthetic appeal, green marble will be fixed at the sill level of the window. Precise measurements will be taken, and the green marble will be cut to the required size. It will then be securely attached to the window sill using an appropriate adhesive.

Step 5: Installing the New Window
The final phase involves the installation of the new window. This process will entail carefully placing the new window into the frame and securing it with screws. A thorough check will be conducted to ensure the window is level and functions properly.

Cost Estimate:
Based on our assessment, we anticipate the total cost for this project to be Rupees 1,889,115. It is important to note that this estimate is subject to change, contingent upon any additional requirements or unforeseen challenges that may emerge during the course of the project.

Trowler and Bamber [8] provide insights into "The Student Experience: Enhancing Learning and Campus Life," emphasizing the interconnectedness of academic success and overall well-being. Mittelstadt and Kezar's work [9] on "The Future of the University" broadens the scope, exploring the evolving landscape of higher education and its implications on the design of educational spaces.

Abstract Sheet (Window)

Sr. no	Item Description	Quantity	Rate	Per	Amount (In Rs)
1	Removing doors and windows with frames and stacking the materials as directed with all leads, lifts etc. complete				
	SSR Item no - 46.15				
	Reference No. BDW 8	216	156	One Number	33696
2	Repair of damage cause while removing the window and Providing and fixing mild steel grill work for windows, ventilators etc. 20 Kilogram/ One Square Metre as per drawing including fixtures, necessary welding and painting with one coats of anticorrosive paint and two coats of oil painting complete.				
	SSR Item no - 40.01				
	Reference No. BDU 1	259.2	2097	One Square Metre	543542.4
3	Providing and fixing green marble of 18 to 20 mm thick for door frame/ dado/window boxing etc. On C.M. 1:6 including filling joints with polymer base filler nosing/moulding the sharp edges wherever necessary, curing, etc. complete.				
	SSR Item no - 33.48				
	Refrence No - BDM 12	21.6	2367	One Square Metre	51127.2
4	Providing and fixing in position. (as per I.S.1868 / 1982) Aluminium sliding window of two tracks with rectangular pipe having overall dimension 763.50 x 38.10 x 1.02 mm at weight 0.547 Kilogram/ One Running Metre. and window frame bottom track section 61.85 x 31.75 x 1.20 mm at weight 0.695 Kilogram/One Running Metre. Top and side track section 61.85 x 31.75 x 1.30 mm at weight 0.659 Kilogram/One Running Metre. The shutter should be of bearing bottom 40 x 18 x 1.25 mm at weight 0.417 Kilogram/One Running Metre. Inter locking section 40 x 18 x 1.10 mm at weight 0.469 Kilogram/One Running Metre. And handle section 40 x 18 x 1.25 mm at weight 0.417 Kilogram/One Running Metre. and top section 40 x 18 x 1.25 mm at weight 0.417 Kilogram/Running metre. As per detailed drawings and as directed by Engineer in charge with all necessary Aluminium sections fixtures and fastenings such as roller bearing in nylon casting and self locking catch fitted in vertical section of shutter including 5 mm thick plain glass with all required screws and nuts etc, complete. With powder coating without box				
	SSR Item no - 39.40				
	Reference No. BDT	259.2	4864	One Square Metre	1260748.8
					1889114.4 Total cost

Fig-1: Window Abstract Sheet

Measurement Sheet (Window)

Item no	Description	Nos	Length (m)	Width (m)	Depth (m)	Unit	Quantity	Total Quantity
1	Window							
	w	216	1		1.2	square meter	259.2	259.2
2	Green marble for window sill	216	1	0.1		square meter	21.6	21.6
3	Aluminium window	216	1		1.2	square meter	259.2	259.2

Fig-2: Window Measurement Sheet

2. Estimation for Internal Painting

Step 1: Measure the Sizes of Rooms

Initiating the internal painting project, we meticulously measured each room's length, width, and height within the hostel. Employing a measuring tape and a ladder facilitated an accurate measurement of ceiling height. Special attention was given to alcoves and built-in furniture, multiplying the length, width, and height to calculate the surface area of each room.

Step 2: Measure the Passages

Subsequently, the length and width of every passage within the hostel were measured using a measuring tape. Precision was maintained to ensure accurate measurements, and the total surface area of all passages was calculated.

Step 3: Measure the WC and Bathroom Area

Moving on, each WC and bathroom area underwent thorough measurement of length, width, and height. This involved using a measuring tape and a ladder to obtain precise measurements. The total surface area of all WC and bathroom spaces was then calculated.

Step 4: Measure the Entrance and Staircase Area

The entrance area and staircase within the hostel were measured meticulously to obtain accurate surface area measurements.

Step 5: Deduction of Windows and Doors Area

To refine our estimates, the surface area occupied by doors and windows in each room, passage, WC/bathroom, entrance, and staircase was subtracted from the total surface area calculated in Steps 1-4.

Cost Estimate:

Leveraging the surface area measurements from Steps 1-5, we proceeded to estimate the quantity of paint required for the entire hostel. Additionally, we factored in the costs associated with labor and materials. Given the absence of a building drawing, our calculation was approached with precision, ensuring an approximate yet accurate estimate. The total cost for internal painting, calculated at Rupees 723,165.92, reflects a thorough consideration of the hostel's dimensions and specific requirements. It is important to note that this estimate is subject to adjustments based on any unforeseen challenges or additional needs that may arise during the project.

Abstract Sheet (Internal Painting)

Sr. no	Item Description	Quantity	Rate	Per	Amount (In Rs)
1	Washing and cleaning of decorated wall surfaces with soap, soda and water etc. complete.				
	SSR Item no - 36.15				
	Reference No. BDP	6758.56	3	One Square Metre	20275.68
2	Providing and applying plastic emulsion paint of approved quality, colour and shade to old and new surfaces in two coats including scaffolding, preparing the surface. (excluding the primer coat)etc. complete.				
	SSR Item no - 36.12				
	Reference No. BDP 6	6758.56	80	One Square Metre	540684.8
3	Labour cost	6758.56	24	One Square Metre	162205.44
					723165.92 Total Cost

Fig-3: Internal Painting Abstract Sheet

Measurement Sheet (Internal Painting)

Item no	Description	Nos	Length (m)	Width (m)	Depth/Height (m)	Unit	Quantity	Total Quantity
1	Wall No (For 2 seater room)							
	W1	1	4.6		2.9	square meter	13.34	
	W2	1	4.6		2.9	square meter	13.34	
	W3	1	4.6		2.9	square meter	13.34	
	W4	1	4.6		2.9	square meter	13.34	
	W5 (ceiling)	1	4.6		4.6	square meter	21.16	66.7
2	Deductions							
	Window							
	w	2	1		1.2	square meter	2.4	
	Door							
	D	1	0.9		2.5	square meter	2.25	4.65
							Total area	62.05
3	Wall No (For 4 seater room)							
	W1	1	7.2		2.9	square meter	20.88	
	W2	1	7.2		2.9	square meter	20.88	
	W3	1	4.6		2.9	square meter	13.34	
	W4	1	4.6		2.9	square meter	13.34	
	W5 (ceiling)	1	7.2		4.6	square meter	33.12	101.56
4	Deductions							
	Window							
	w	4	1		1.2	square meter	4.8	
	Door							
	D	1	0.9		2.5	square meter	2.25	7.05
							Total area	94.51
	Total internal room area of painting (for 2 seater) is = 24(No of rooms) X 62.05(area) =1489.20 Sq.m							
	Total internal room area of painting (for 4 seater) is = 36(No of rooms) X 94.51(area) =3402.36 Sq.m							
	Total Area = 4891.56 Sq.m							
	Total internal painting area (including passages + W.C and bathroom area and T area entering staircase) = 1867 Sq.m							
	Therefore Total internal area = 4891.56+1867= 6758.56 Sq.m							

Fig-4: Internal Painting Measurement Sheet

3. Estimation for Plantation and Shrubs.

Step 1: Measure the Internal Area for Plantation
Commencing the plantation and shrub project, our team measured the length and width of the internal area within the hostel designated for tree and shrub planting. Utilizing a measuring tape ensured accurate measurements, and the total surface area of the internal planting zone was calculated.

Step 2: Measure the Outer Area for Plantation
Proceeding to the external spaces around the hostel, we measured the length and width of the outer areas intended for tree and shrub planting. The use of a measuring tape facilitated precise measurements, and the total surface area of the outer planting zones was then calculated.

Step 3: Measure the Area Around Entrance
Additionally, the area surrounding the entrance of the hostel, designated for tree and shrub planting, underwent meticulous measurement. The measuring tape was employed to obtain accurate measurements, and the total surface area of the entrance planting zone was calculated.

Step 4: Research the Rates for Plantation and Labor
To gather comprehensive cost data, we diligently researched published rates for tree and shrub planting, along with associated labor costs, referencing the SSR garden rates. The rates for each required item and the corresponding cost per item were noted down for future calculations.

Cost Estimate:
   Leveraging the surface area measurements obtained in Steps 1-3 and the rates for tree and shrub planting, along with labor costs from Step 4, we proceeded to estimate the total cost. The surface area was multiplied by the appropriate rates, and the cost of labor was added to derive the total cost. After meticulous calculation, the estimated cost for the plantation and shrub project was determined to be Rupees 18,452.64. It is important to note that this estimate is subject to potential adjustments based on any unforeseen challenges or additional requirements that may arise during the implementation of the project. Our commitment is to ensure the accuracy and fairness of the estimate, taking into account both the specific measurements and the associated costs involved in the plantation and shrub project.

Abstract Sheet					
Sr. no	Item Description	Quantity	Rate	Per	Amount (In Rs)
1	Labour charges for removing grass, thorney shrubs, Jungli shrub, Kubabul and alike grass along roadside making the ground clean by showel and phavaras etc. complete.				
		330	7	One Square Metre	2310
2	Supplying on site fresh Garden soil (i. e. 3 part soil) (free from stones rubbish like dried grass roots, other such materials) for excavated pit size area of 0.60 x 0.60 x 0.60m (consolidated thickness).(As per P&G DSR 2022-23 Items of garden work,Sr No.52)				
		22	112.8	Nos	2481.6
3	Supplying on site well decomposed Farm Yard Manure FYM (i. e. 1 part FYM) for excavated pit size area of 0.60 x 0.60 x 0.60m (consolidated thickness).(As per P&G DSR 2022-23 Items of garden work,Sr No.53)				
		22	52.8	Nos	1161.6
4	Excavation pit size 0.60 x 0.60 x 0.60m for planting small & medium ornamental plants/large flowering/ shady trees (plant height 1 to 2 mtr.)/ palm varieties upto height 1 to 2 mtrs. in earth, soil of all types, soft murum, including removing the excavated & unwanted material up to a required distance of 50 mtrs. (As per P&G DSR 2022-23 Items of garden work,Sr No.11)				
		12	51.62	Nos	619.44
5	Providing on site required variety of Tree (free from weeds /diesease etc.) 30 cms. apart c/c.Name:-Bahava;Bag Size 13 x13", ht 6-8'(plants list sr no1,item no 5B)				
		12	320	Nos	3840
6	Providing Areca Palm height of 7 to 8 ft for inside area of the hostel	4	1450	Nos	5800
7	Providing Nilmohar height of 6 ft to 8 ft for inside area of the hostel	4	240	Nos	960
8	Providing Dropping Ashok height of 6 ft to 8 ft for inside area of the hostel	4	320	Nos	1280
				Total Cost	18452.64

Fig-5: Plantation and Shrubs Abstract Sheet

Measurement Sheet								
Item no	Description	Nos	Length (m)	Width (m)	Depth/Height (m)	Unit	Quantity	Total Quantity
1	Area of plantation							
	A1	2	15	2		square meter	60	
	A2	1	33	2		square meter	66	
	A3	2	25.5	4		square meter	204	
								330

Fig-6: Plantation and Shrubs Measurement Sheet

4. CONCLUSIONS

In conclusion, the estimated costs for window replacement, painting the interior, and plantation of trees and shrubs in the hostel are approximately rupees 1,889,114.4, 723,165.92, and 18,452.64, respectively. While these are estimations, actual costs may vary based on material quality and unforeseen expenses. Nevertheless, these estimates offer a reliable approximation for the expected costs in each project area.

5. FUTURE SCOPE

   Window replacement: In the future, the hostel administration may consider using energy-efficient windows that can help in reducing electricity consumption. Additionally, they could explore different materials and finishes to improve the aesthetics of the building.

   Painting: To enhance the overall look and feel of the hostel, the administration could consider adding murals or artwork on the walls. They could also use different color schemes for different areas to create a more visually appealing environment.

   Plantation: The future scope for plantation is to introduce more sustainable and native plant species to the hostel campus, which can help in improving the local ecology. The administration could also look into developing a regular

maintenance plan for the trees and plants to ensure their growth and longevity.

Here are some additional ideas that could be done for more beautification.

Lighting: Adding decorative lighting fixtures can create a warm and welcoming environment, especially during the night time.

Sustainable initiatives: The administration could incorporate sustainable initiatives such as rainwater harvesting systems, solar panels, or composting facilities to promote environmental consciousness.

Building facades: The exterior of the hostel building can be improved by adding decorative elements such as cornices, pediments, or decorative moldings.

Overall, there is always room for improvement in the beautification of a hostel campus. The administration could explore various options to make the campus more visually appealing, sustainable, and inviting for students and visitors alike.

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