RETHINKING OF RAILWAY PLATFORM FOR BETTER CIRCULATION AND USER MOVEMENT.

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ABSTRACT
Rethinking Along with the rapidly changing urban landscape in terms of infrastructure, built-forms, social habits, and sustainability requirements Indian Railways has also been forthright in suggesting schemes and options for upgrading existing railway stations. Due to their strategic positions in India, major railway stations have historically become transportation network hubs. Various locations in India are undergoing large-scale rail station renovations to meet the passenger demand. Researchers are challenged by these ventures to define appropriate technological methods for developing infrastructure layouts that effectively accommodate walking passengers. Their interior spaces are increasingly being used for non-transportation related functions such as retail shops, cafes, restaurants, supermarkets, clinics, and even libraries, all of which are crammed into a small room. The aim of this paper is to better understand how to retrofit the concourse and platform areas of railway stations. The study focuses on issues such as promoting an architectural vision with a focus on efficient passenger movement in the concourse area, passenger convenience transfers, passenger protection, security, and comfort while maintaining design quality and a friendly healthy environment for both active and passive passengers of the railway station.

1. INTRODUCTION
The central nerve of any city is railway station and which is the only transportation system which can be afforded by every class of people so here the footfall is more comparison to other public transport stations. So for the betterment of railway station here the step is taken for approaching towards platform services and activities. That how can it will be achieved through architectural perspective.

When railways were the only long-distance mode of transportation for those who lived far away, railway stations served as city gateways. Despite the fact that it no longer serves as the city's primary gateways due to the growth of cars and air travel, most travelers regard rail as an essential mode of transportation, but the majority of travelers regard rail as a vital mode of transportation. With over 64,000 kilometers of track and 7,000 stations, Indian Railways owns and operates one of the world’s largest railway networks. The Indian railways transport over 17.5
million passengers a day, with some major railway stations handling 100-200 million passengers annually. As a result, there are primarily two places where passengers can be gathered at the railway station.

1.1. Platform
A dedicated area used as an elevated strip for passenger movement along railway coaches to board the train and for passengers alighting to exit the platform area by it means.

1.2. Concourse/Entrance Lobby (Connecting course)
A main entrance area that communicates with boarding passengers and provides general information, inquiry desks, unreserved waiting areas, modern facilities, and foot access to a variety of platforms at the station via bridges.

Overcrowding, unauthorized vending, and other constants for the adverse condition of railway stations are overcrowding, unauthorized vending, and limited social perception. Indian railways have lost market share in its freight and passengers’ segment due to a lack of passenger responsiveness and limited social perception. The lack of modern facilities, the poor state of waiting lounges, access control, and passenger guidance systems all contribute to passengers' dissatisfaction with the Indian railway system. Systems that all contribute to passengers' dissatisfaction with the Indian railway system by making their stay uncomfortable. Passengers' satisfaction with railway stations had to be retrofitted for both active and passive passengers in order to achieve the highest pre-travel standards and post-travel experiences at the stations.

2. PROBLEM INFOCUS AT INDIAN RAILWAY STATIONS PLATFORMS.

2.1. Undesignated space for sitting at platforms
The platform area of some Indian railway stations that merely handle heavy footfall of passengers appears to provide less sitting area, resulting in inappropriate passenger seating arrangements by the railways. The situation is also being observed as an obstacle for boarding passengers, as passengers travelling by train may be carrying heavy luggage.

( as shown in figure 1)

Figure.1 showing improper arrangement of sitting.
2.2. Poor facilities for differently disabled peoples at platform

As mentioned, it's a common problem at Indian railway stations, and it's also been noticed that platform design isn't very comfortable for disabled passengers and senior citizens. Many of the passengers were stranded on the platform due to overcrowding.

(as shown in figure 2)

![Figure 2 showing problems of disables](image)

2.3. Unauthorized entry of passengers at platforms

The majority of passengers using Indian railways are disobedient to the rules established by the railways, resulting in major issues such as crossing railway tracks at stations and unauthorised entry of passengers from various points inside station premises, all of which create a danger and safety issue for other passengers.

(as shown in figure 3)

![Figure 3 showing unauthorized access](image)

2.4. Sitting over stair case or near o other VCE’s (Vertical circulation equipment)

As the only means of vertical circulation given to passengers in Indian railway stations are stairs, ramps, foot over bridges under pass, and elevators/escalators at very few redeveloping stations, these particles are also being used as a sitting room, which creates a problem for travelling passengers to board their train by these kinds of encounters between alighting and boarding passengers.
2.5. Overcrowding at platform by the misconduct of potters and misbehaviour of public

Peak hours, heavy footfall at some major railway stations, and improper seating arrangements cause overcrowding and passenger encroachment.

( as shown in figure 4)

Figure.4 showing unauthorized sitting.

Figure.5 showing overcrowding at platform.

TYPES OF RAILWAY PLATFORM.

1 – SIDE LOADED
2 – ISLAND PLATFORM.

Disadvantages

DISADVANTAGES OF ISLAND PLATFORM.

A) Queuing for vertical circulation must mix with queuing for vehicle boarding along the platform.
B) Less ability to accommodate increased vertical circulation demands and surges in reverse commuters.
DISADVANTAGES OF SIDE LOADED PLATFORM.
A) Need for directional decisions to be made prior to descending to the platform, in order to avoid backtracking and delay
B) Less space productivity.

KEY POINTS.1-Platform gap-closing solutions
Inherent platform gaps cause accessibility issues, not only for disabled passengers, but also for able-bodied passengers. Depending on the dimensions of the gap and the availability of supports or devices to bridge this gap, access issues are categorized by 2 methods.

A) Train-to-platform gap mitigator
B) Platform edge extender.

SOLUTION

PROVISION OF VCE
Both disabled and non-disabled travellers should have access to (vertical circulation equipment) such as stairs, ramps, travelators, escalators, and lifts. The provision of a wheelchair lift for disabled passengers, so that they can use it to gain access to the exit gates. Wheelchair lifts come in a variety of shapes and sizes, and they can move in a circle, straight, or other pattern.

ELEVATED STRIPS (RAMP)
The height of the railway coaches remains elevated from the level of the platform in the Indian railway system, resulting in a 350mm gap in level, making it impossible for physically handicapped passengers to reach the rail coach As a result, for the disabled traveller, a designated ramp or elevated strip with a landing of 800 mm to enter the railway coach without the assistance of others could be a solution for station redevelopment and should be given only in front of the disabled coach at each platform As a result, disabled passengers would be able to alight or board the train with ease. This area must be distinct and close to any VCEs that may be used by disabled passengers.

CONCLUSION

The following conclusion can be made out of the above data.

New design platform needs to be implemented in urban context. since this approach lead to contemporary architecture.

With the elaboration of platform design concept, the designer can implement a better design approach. That is through a good understanding of circulation.

Understanding the basics of platform importance and its concept of designing a designer can merge it with green and platform.
3. References


