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Preface

The Development Control plays an important role in guiding and facilitating the physical Development. Since the commercial development along with station redevelopment in the railway land is to be done under Section 11 of the Railways Act 1989, there was a need to have set of Manuals/Guidelines to guide the entire development. In fact the Union cabinet has approved (in terms of communication received from Ministry of Railways, GOI vide letter No. 2011/LMB.WCS/22/07/25 Pt.1 dated 17.10.2018) that 'Railways/RLDA/IRSDC shall consult urban local bodies/other statutory authorities while approving its plans in terms of powers conferred to it under Section 11 of the Railways Act 1989 so that the development in Railway Land is harmonious with surrounding development, generally following National Transit Oriented Development (TOD) Policy. No change in Land Use is required pan India by Railways for developing railway land for commercial use.' It is further approved that IRSDC shall be the Nodal Agency and the main Project Development Agency for redevelopment/development of all stations. MoHUA has also conveyed the approval of Union Cabinet to Chief Secretaries of All States/UTs to incorporate suitable provisions in the local byelaws/ development control norms in congruence with the National TOD Policy as well as relevant provisions of the Railways Act to facilitate Railways/RLDA/IRSDC to proceed with their development plans in consultation with local bodies/other statutory authorities, at the earliest.

Accordingly as the Nodal Agency for station redevelopment, IRSDC took upon the responsibility, on behalf of Railways/RLDA besides for guiding its own work for station redevelopment along with commercial development, to produce a series of Manuals/Guidelines to guide the Architects/Developers/Concessionaires as well as the Authority on the Procedures, Dos & Don'ts in preparing development plans and submitting the applications for approval of Layout Plans and Building Plans of the commercial development to IRSDC.

IRSDC aims to transform the railway stations and the adjoining land into a "RAILOPOLIS" - a Mini Smart 24/7 City Centre where one can live, work, play and ride while putting the land resources to optimal use following the National Transit Oriented Development Policy norms. The aim is to facilitate developments by streamlining policies and making the Manuals/Guidelines as transparent as possible to promote ease of doing business. The Manual on Form Based Codes explains various developments such as buildings set back, ground coverage, FAR, heights etc. while Manual on building plan approval and commercial assets covers the process for the approval of building plans. The Manuals are mandatory while the Guidelines are Recommendatory and the Development Agreement/Concession Agreement or any other legal agreement between IRSDC (Authority) and Developments/Concessionaires shall prevail over and above the guidelines.

The advantage of the Manual on Form Based Codes is that it facilitates flexibility in development of mix use (horizontal and vertical mixing) to make the development sustainable, user friendly and market responsive while most of the local building byelaws restrict mixing which is essential for development of TOD. The guidelines propose good practices related to Construction Standards that promote and protect health, safety and general welfare of the occupant and environment across its life cycle while permitting dynamic building use.

These "Manuals for Station (Re)development including Commercial Development" is a comprehensive set of documents which provide standards and guidelines in the following order of decreasing priority-

- 1. Safety Standards, (like fire safety, earthquake related controls, etc.)
- 2. Passenger and user comfort and convenience.
- 3. Environmental Conservation (Natural and Man-made)
- 4. Heritage Conservation
- 5. Design and aesthetic in harmony

These Manuals and Guidelines have been prepared over a period, after research, site visits, case studies, best practices, study of other similar national, international designs, National TOD Policy and Form Based Codes (as advised by MoHUA), National Building Codes, UBBL-2016 and Environment Management Guidelines issued by MoEF&CC. Some of these have also been applied and tested on the on-going projects of IRSDC.

PUBLIC CONSULTATIONS: The (draft) Manuals and Guidelines were posted on IRSDC's website. These documents are available for reference at- www.irsdc.in.The stakeholder consultation was held via six (6) national webinars during April 2021- July 2021. The attendees were provided with a brief overview of salient features of the Manual, Guidelines, etc. Over 1300 participants, which included about 25 Government Agencies, Educational Institutions, Professional Bodies, Centres of Excellence, and senior professionals, attended, and shared their valuable feedback during the Webinars and over emails.

These Manuals and Guidelines have now been adopted for Station Redevelopment Works after incorporating relevant feedback and other suggestions by all the stakeholders. Further, final draft Manuals and Guidelines were discussed in the Plan Sanctioning and Monitoring Committee (PSMC) where subject experts were also invited as

special invitees in July 2021. IRSDC's Board of Directors (BOD) has also deliberated on this subject in August 2021 for adoption and application to the program of (re)development of Railway Stations along with Commercial Development. These Manuals and Guidelines are expected to transform the railway area around stations into model development as envisaged also by MoHUA and spur similar development in surrounding area.

STRUCTURE OF THIS WORKING POLICY FOR RAILWAY HERITAGE ASSETS

SI. No.	Chapter	Content
1	Introduction	Introduction to Railway Heritage and Existing Statutory Framework for Railway Heritage
2	Working Policy	Definitions, Guiding principles for Conservation and Maintenance of RHA and its Environs, Interventions not permitted in any listed RHA, Guidelines for Conservation and Reuse of RHA, Guidelines for Management and Maintenance of RHA, Documents to be prepared/adhered

The manuals and guidelines are intended to be comprehensive for promoting balance and orderly development of railway stations and surrounding city area. Manuals and Guidelines inter-alia provide the framework, necessary technique, norms and standards, and development promotion techniques. Conditions may vary from place to place and accordingly these manuals and guidelines may be applied to all situations and places by adopting to local conditions. These manuals and guidelines fulfil the need for a planning process which facilitate efficient and dynamic station development in overall urban framework.

The manuals and guidelines are also intended to be a possible reference for various aspects of urban planning and design by State Governments, Development Authorities, Private Sector and Planning Organizations.

(Sanjeev Kumar Lohia)

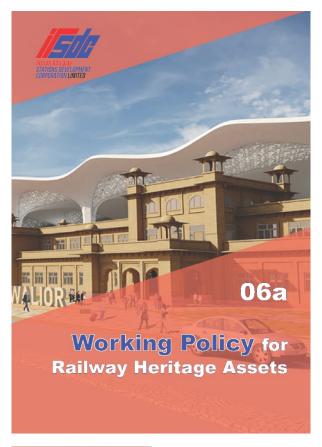
Managing Director and Chief Executive Officer Indian Railway Stations Development Corporation Ltd.

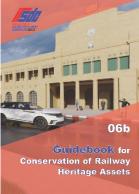
Section 0.1: About this Working Policy

Indian Railways envision that their Station Redevelopment works and Commercial Assets shall ensure Conservation of Heritage within their purview.

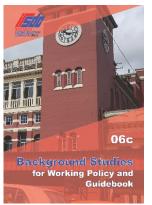
In the above context, Working Policy, and Guidebook have been developed for the Indian Railways, so that the Railway Station Redevelopment responds to Railway Heritage Assets (RHA). Accordingly, these documents lay down Policy and Guidelines for Conservation, Management and Maintenance of the RHA.

Departing from the conventional monument-centric approach, the focus of these Policy and Guidelines shall be to conserve the RHA while ensuring their continued use, necessary expansion, and suitable preservation.





Guidebook for Conservation of Railway Heritage Assets contains guidelines implementing the Working Policy.



Background Studies for Working Policy and Guidebook is a compilation of relevant studies for reference purpose only.

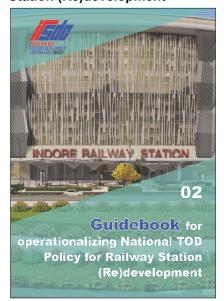
Table 1: Schedule of remaining parts of the Manuals for Station Redevelopment including Commercial Development

Handbook for Station Planning (for internal use only)

B B To Station Planning

This document contains Norms, Standards and Tools for Design of Station Operational Areas.

Guidebook for operationalizing National TOD Policy for Railway Station (Re)development



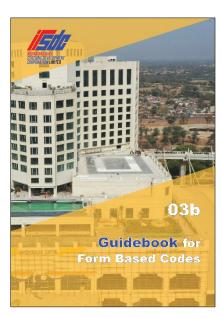
This document contains Tools and Processes for Layout Planning within the Railway Land, with the intent of 'Land Value Capture' for optimum monetization.

Manual of Form Based Codes for Station (Re)development



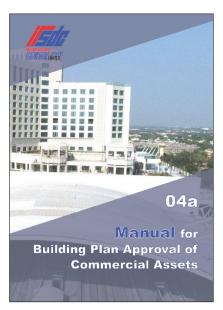
This document contains (a) Development Control Norms (b) Format for preparation of Layout Regulating Plans and (c) Parameters of Property Development Card.

Guidebook for Form Based Codes



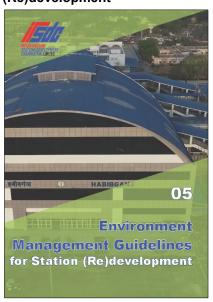
This document assists in preparation of Layout Regulating Plans and Property Development Card.

Manual for Building Plan Approval of Commercial Assets



This document contains the procedures and parameters for the approval of Building Plan of Commercial Assets.

Environment Management Guidelines for Railway Station (Re)development



This document contains guidelines for integrating provisions of Environment Management during Layout Planning and is based on the recommendations issued by MoEF&CC, NGT and other statutory bodies.

Section 0.2: Inventory of Abbreviations and Definitions

0.2.1. Abbreviations

1. AMASR Act : Ancient Monuments and Archaeological Sites and Remains Act

2. ASI : Archaeological Survey of India

3. BOD : Board of Directors

4. CCZ
5. CoE
6. DPR
7. GOI
8. HA
Construction Control Zone
Centre of Excellences
Detailed Project Report
Government of India
Heritage Asset

9. HAR
10. HBCR
11. HCRP
12. HMMP
13. HVAC
14. Heritage Assessment Report
15. Heritage Building Condition Report
16. Heritage Conservation and Reuse Plan
17. Heritage Management and Maintenance Plan
18. HVAC
19. Heritage Management and Maintenance Plan
19. Heating, Ventilation, and Air Conditioning

14. IR : Indian Railways

15. IRSDC : Indian Railway Stations Development Corporation

16. KPI : Key Performance Indiciators17. MCA : Model Concession Agreement

18. MoEF&CC : Ministry of Environment, Forest and Climate Change

19. MoHUA : Ministry of Housing and Urban Affairs

20. MoR : Ministry of Railways

21. MSSR : Manual of Standards and Specifications for Railway Stations 2009

22. NBC : National Building Code

23. NMA : National Monuments Authority

24. NTOD : National Transit Oriented Development

25. OoS : Object of Significance

26. PSMC : Plan Sanctioning and Monitoring Committee

27. RfP : Request for Proposals28. RHA : Railway Heritage Asset

29. RLDA : Rail Land Development Authority

30. RPwD Act : Rights of Persons with Disabilities (RPwD) Act

31. SFM : Station Facility Management 32. UBBL : Unified Building Bye-Laws

33. UNESCO : United Nations Educational, Scientific and Cultural Organization

34. WHC : World Heritage Convention

Chapter 1: Introduction

A significant number of Railway Stations, Station Areas, and other protected and Heritage Assets (HA) - have been earmarked for necessary upgradation during redevelopment. Assets which fall within the Protected Category come under the purview of the Indian Railways (IR), the respective State Departments, or private entities. Five of Railway Heritage Assets (RHA) are inscribed on UNESCO World Heritage List¹. Unprotected HA vary in nature, are numerous, and are collectively important to the narrative and functioning of today's India. The protected and unprotected Heritage combined display Industrial and Engineering prowess, its syncretic art and craft, and architectural movements that developed in India and contributed to a shift in global culture. It also displays the emergence of a new planning process - where public places became an important planning tool.

This Working Policy and Guidebook provide desired response to Railway Heritage Asset with the Station redevelopment works. These are essential to ensure continued, compatible, adaptive reuse and functionality through necessary expansion that are not addressed through existing norms and bye-laws².

Section 1.1: Introduction to Railway Heritage

Railway Stations, Station Areas and all its components collectively testify more than two centuries of global history. This living, growing and evolving entity evidences a culmination point of transdisciplinary scientific endeavour. No other form of Engineering and Technological heritage has had the width and depth of impact as the Railways. From indelibly changing the face of modern day Industrialisation and Socio-Economic character, the Railways has also been defining the sense of time, city-structures, human aspiration and movement. With its positive and negative externalities, for India, the Railways is as much about winning its Independence as it is about growth in Science and Technology, Entrepreneurship, Trade and Commerce, Military history, Urbanization and Industrialization and Socio-Economic mobility.

Railway Stations and Station Areas are points of direct contact between people and the Railway System (all operational and non-operational parts). Having co-evolved simultaneously, these are important Heritage Assets of a city and its people. The mutual interdependency of Railways and cities has traditionally manifested itself in the growing interconnected web of factories, buildings, land uses, streetscaping, amenities, street-network, frequented routes, supporting infrastructure et al. (Refer to Figure 1: Map of Area upto 2-Km radius of the original Howrah Railway Station).

Railway stations were always located at convergence points of important routes that ferried goods, services, had resources of interest and were a vantage point for military movement. Its primary function within the entire network determined the Layout Plan and architectural features of a Railway Station Area and the Station, respectively. Gradually, the increase and diversification of functions, changes in technology and footfall reflected in the increasing scale and complexity of Station Buildings architecture, functional-attaches to the Station Area.

A Railway Station and Station Layout is an ensemble of built and open spaces, with operational infrastructure and non-operational functions like residences, schools, colleges, clubs, hospitals, et al. The interface between Stations and the city had two transition zones. First, city-level Public Spaces - and then, a Commercial, crossfading into Residential or Economic zone. In metropolises, Railway Stations led to banks, custom houses, hotels, warehouses and business hubs, through a network of public transport. In fact, the Railways were the first-generation Transit-Oriented Development where local, regional, and international interests converged.

Hence, Railway Heritage has been widespread than its visible footprints. It pervaded all sectors and sections of society, and lowered barriers, which reinforced our Freedom Movement. From upward Socio-Economic mobility to fostering aspirations, the Railways embodied the spirit of possibilities.

¹ The four Mountain Railways lines (Kalka-Shimla, Darjeeling, Matheran and Nilgiri Hill) and the Chhatrapati Shivaji Maharaj Terminus (erstwhile Victoria Terminus), Mumbai.

² Changes in volume, land use, building use, extension, addition, et all have been the principle measures used -- to increase the economic prospects of Stations and Station Areas through increased effective footfall and traffic converging at these places. However, changes envisioned through this form of development conflict with the laws protecting Monuments and its context (Prohibited and Regulated Areas), that mainly focus on controlling, and minimizing changes to, the Heritage and the areas around it.

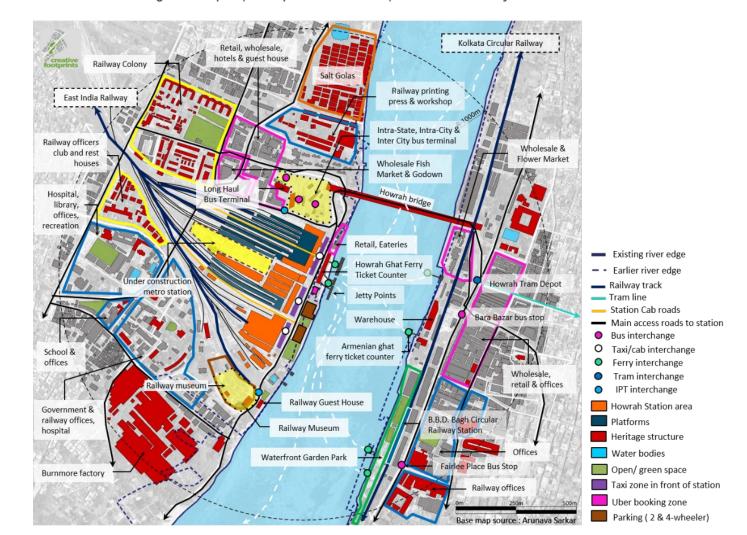


Figure 1: Map of (Area upto 2-Km radius of) the Howrah Railway Station Area

Section 1.2: Existing Statutory Framework for Railway Heritage

Railway Assets are governed by The Railway Act of 1989, subsequent amendments and the *Manual of Standards and Specifications for Railway Stations 2009 (MSSR)*. As specified in MSSR, the *Heritage Station Designs* have to follow procedures laid out by:

- Ancient Monuments Preservation Act (India), 1904.
- Ancient Monuments and Archaeological Sites and Remains (AMASR) Act, 1958.

1.2.1. Limitations of MSSR with reference to RHA

- Railway Heritage (excluding archeological remains, if any) are neither governed by the norms of the
 Archaeological Survey of India (ASI; through the Ancient Monuments and Archaeological Sites and
 Remains Act, its Rules, Policies and Works Manuals), nor does its documents specify provisions for
 incremental changes necessary to conserve Railway Heritage across life-cycle. Nor does it provide any
 guidance for continued, compatible, adaptive reuse of high footfall assembly building such as these.
- Heritage is in the Concurrent List of the Constitution of India. Thus, the responsibility to conserve, protect and manage RHA is shouldered equally by the Union, the State Governments, and the Asset owners.
- MSSR does not specify technical standards and mechanisms involved in documentation, assessments, conservation, repair, maintenance and management that define "suitable response to Heritage".

1.2.2. Limitations to the role of NMA (National Monument Authority)

 National Monuments Authority (NMA) under the Ministry of Culture, Govt. of India is established as per provisions of The Ancient Monuments and Archaeological Sites and Remains AMASR (Amendment and

- Validation) Act, 2010 and was enacted in March, 2010. NMA's mandate is to (i) enable protection and preservation of monuments and sites through management of the Prohibited and Regulated Zone around the ASI protected monuments, and (ii) review application and grant permissions for construction in the Prohibited and Regulated area.
- Stations are not protected by ASI as of yet. The role of NMA therefore applies only where a Railway Station or Station Area exists in the Regulated and Prohibited Zones of a Centrally Protected Monument under AMASR Act 1958 (amended in 2010). In such a case, the Asset Owner is expected to draft their own Byelaws for approval of the NMA and subsequent plans for any form of changes shall follow codal procedures laid under AMASR Act 1958 (amended in 2010).

Chapter 2: Working Policy

In order to conserve the unique heritage of Indian Railways, the large number of RHA widespread in the country need to be appropriately maintained, to ensure preservation of heritage and continued, compatible functionality for value maximization. This working policy sets out principles, policies and guidelines that shall assist Indian Railways in long term to maintain, use, leverage from and enhance value of its heritage.

2.0.1. Railway Heritage Assets (RHA) can be categorized as either (i) inscribed on UNESCO's World Heritage or Tentative List, or (ii) Listed as National or State Heritage, or (iii) Listed/Unlisted Railway Heritage, or (iv) Object of Significance. The approach to such assets shall be as per Table-2 below:

Category	Description	Applicable Manuals and Guidelines
I	Inscribed on UNESCO's World Heritage List and the Tentative List or	Latest version of the Operational Guidelines of the World Heritage Convention'72 (WHC'72)
	is located in the Property Boundary or the Buffer Zone of a World Heritage Property inscribed on the World Heritage List and the Tentative List	Nomination Dossier, its Management Plan, State of Conservation Reports, Periodic Reporting and any other, and Tentative List document submitted to the World Heritage Centre, Paris
II	Listed by any other Agency as Central or State Heritage	As per approval of National/ State Level Heritage Conservation Committee.
		Additional items as per Working Policy for Railway Heritage Assets
III	Listed by Indian Railways	As per approval of Competent Authority based on Working Policy for Railway Heritage Assets
IV	Object of Significance (Unlisted Heritage)	As per approval of Competent Authority based on Working Policy for Railway Heritage Assets

Table 2: Category of Railway Heritage Assets

Section 2.1: Definitions

- **2.1.1. "Conservation"** shall mean the processes (such as preservation, restoration et al) through which material, design and integrity of the monument is safeguarded in terms of its archaeological and architectural value, its historic significance and its cultural or intangible associations.
- **2.1.2.** "Continued, Compatible, Adaptive (Re)use" of Railway Heritage Assets (RHA) refers to the process of re-use/ continued use/ new use proposed for the RHA which is compatible to its intrinsic value, does not damage the heritage values of the asset and is compliant with Policy and Guidelines for Conservation and Management of the RHA.
- **2.1.3.** "Heritage Assessment Report (HAR)" shall provide the documentation of the state of the RHA based on inspection, monitoring, mapping, evaluations, tests etc. It shall comprise of details of the RHA, its inherent properties and values and a Heritage Building Condition Report (HBCR).
- 2.1.4. "Heritage Conservation and Reuse Plan (HCRP)" shall refer to the dynamic document that shall form the basis of continued restoration/ use/ reuse of the RHA, while preserving or enhancing its intrinsic heritage value. The Plan shall be periodically updated and include summary of HAR, use/adaptive reuse strategy with well-defined scope and limitations, and actions proposed in short, medium and long term for conservation and reuse of the asset;
- **2.1.5.** "Heritage Management & Maintenance Plan (HMMP)" shall refer to the comprehensive plan prepared to guide the regular maintenance, upkeep and (re)use of the RHA. HMMP shall include periodically updated RHA documentation, building condition survey reports, Work Plans, emergency/ disaster management plans, regular Inspection reports, Maintenance & upkeep protocols, etc. and shall be updated at least twice a year.

³ Source: (Archaeological Survey of India, 2014)

- **2.1.6.** "Object of Significance (OoS)" shall include any natural or man-made unlisted heritage, that is important by the virtue of its historical or contemporary association, aesthetics, functionality, age, period or rarity of type, works of art, as adjudged by the Competent Authority.
- **2.1.7.** "Railway Heritage Asset (RHA)"⁴ shall include and not be limited to historic and preserved railways, tourist railways, tramways and railway museums, historic fixed and rolling stock, fixed and moving structures and equipment currently in use or otherwise, archival material, drawings, photographs, publicity material, (films, posters, pamphlets) estimates, journals, designs and prototype models, industries, housing, commercial and administrative establishments and all other types of uses that have enabled the Railways to perform and achieve its intended goal.

Section 2.2: Guiding principles for Conservation and Maintenance of RHA and its Environs

- **2.2.1.** Building must remain structurally sound and its life-cycle is to be maximized.
- **2.2.2.** Significance (historical authenticity and integrity) of the Heritage Assets should be maintained and enhanced; and customized appropriately to the new functions and vice versa (if required).
- 2.2.3. Retrofitting and upgradation of infrastructure shall be taken up without compromising the above.
- 2.2.4. All protocols related to safety, security and usability shall be complied.
- **2.2.5.** Adaptive reuse and retrofitting of the heritage building are taken up as per appropriate guidelines ensuring fire safety, moisture control, acoustics, vibration control, lighting, etc.

Section 2.3: Interventions not permitted in any listed RHA

- 2.3.1. Removing or relocating historic and heritage buildings, its part-components, complex or landscape features;
- 2.3.2. Replicating historic façade or features;
- 2.3.3. Blocking the view of the Railway Heritage Asset or rendering it inaccessible;
- 2.3.4. Use of elements that emit pollutants towards the Railway Heritage Asset;
- **2.3.5.** Ad-hoc additions of infrastructure, ducting (electrical, HVAC, fire-fighting), finishes, fixtures, advertisements, etc. without prior approval of Competent Authority;
- 2.3.6. Demolition of historic assets without prior approval of Competent Authority;
- **2.3.7.** Defacing the Historicfabric like facades/ walls etc.

Section 2.4: Guidelines for Conservation and Reuse of RHA:

2.4.1. Planning Guidelines

- a) Planning works to account for Preservation and enhancement of the original design intent and relation between the Historic Station, Station Area, surrounding landscape and other historic assets.
- b) Development Controls⁵ such as View corridors and height cones for enhancing/ framing both internal and external heritage assets through creation of landscaped forecourts, height controls, etc. to be planned as relevant
- c) Safety offsets⁶ such as Construction Control Zone (CCZ) from the heritage buildings to be proposed based on appropriate data collection & assessment.
- d) A Heritage Conservation and Reuse plan (HCRP) is to be prepared.
- e) Spaces inside the heritage assets shall be kept in continued, compatible, adaptive reuse and not converted to inactive spaces.
- f) Addition of universal accessibility features (as per The Rights of Persons with Disabilities (RPwD) Act, 2016) and Green Building upgradations shall be taken up without damage to the asset.
- **2.4.2.** During Construction/ repair works, provisions shall be made for appropriate buffering, shuttering, scaffolding, supporting et al, to prevent any settlement, dislodgement, movement, detachment, breakage or any form of damage/ injury to Historic Building, its component part and Landscape, during construction, continued use or maintenance.

⁴ Source: (Ministry of Railways, 2018). The section in italics is as per the mentioned source. Remaining additions is made to make the definition inclusive of other types of heritage assets.

⁵ For details refer 03a: Form Based Codes for Station (Re)development, Chapter 4: Property Development Card.

⁶ For details refer 03a: Form Based Codes for Station (Re)development, Chapter 4: Property Development Card.

Section 2.5: Guidelines for Management and Maintenance of RHA

- **2.5.1.** Regular Checks for signs of distress (e.g., structural damages, differential settlement, dislodgement, sick building syndrome; undesirable visual clutter, incongruent additions or alterations etc.) and its corresponding repairs (at least twice a year before and after rainy season);
- **2.5.2.** Protection from vibrations, construction dust, adhoc changes to microclimate and relative humidity, and other polluting/invasive agents;
- **2.5.3.** Protection of foundation, loadbearing structural elements, Overhangs and Projections and Details of the Heritage Building;
- 2.5.4. Adherence to the approved Heritage Management and Maintenance Plan (HMMP);
- 2.5.5. Capacity Building of heritage building maintenance team.
- **2.5.6.** Maintenance of temperature and relative humidity levels to ensure longevity of the historic material and not cause its deterioration;
- **2.5.7.** Selection and application of substitute materials and new features only with compatible materials, preferably selected/implemented in consultation with experts;
- 2.5.8. Maintenance of proper record (with photo and video documentation) of each aspect for proper monitoring.

Detailed guidance for all the above aspects is in 06b: Guidebook for Conservation of Railway Heritage Assets.

Section 2.6: Documents to be prepared/ adhered

Table 3: Documents to be prepared/ adhered for Conservation, Maintenance and Management of RHA

Stage	Documents to be prepared/adhered to:	
Surveys	Heritage Assessment Report a) HA Form to be filed b) Heritage Building Condition Report (HBCR)	
DPR	Heritage Conservation & Reuse Plan (HCRP) a) Restoration and Reuse plan b) Management Plan	
RfP	Refer to 03a: Form Based Codes for Station (Re)development, 06a: Working Policy for Railwa Heritage Assets, and 06b: Guidebook for Conservation of Railway Heritage Assets	
SFM	a) Heritage Management & Maintenance Manual b) Heritage Management KPIs	

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