Walkabili ty" USP of MCC-CC Metro Corridor.

> GURUGRAM METRO RAIL LIMITED

> > FOB between Cyber Hub & Cyber City For connection with DLF Ph III Station

### Definition of walkapility in urpan

context for users

The measure of how friendly an area is Various factors are ease, comfort, & safety of Walking: Key

alamanta that define welkshility include.



**Accessibility:** The proximity of essential services and amenities such as shops, schools, parks, and public transportation, which makes walking a convenient option.



**Connectivity:** A well-connected network of streets and pathways that provide direct and continuous routes for pedestrians.

**Safety:** The presence of safe pedestrian crossings, adequate lighting, and low crime rates, which ensures the safety of walkers.

**Comfort and Aesthetics:** The availability of wide sidewalks, shade from trees, street furniture, and overall pleasant surroundings that enhance the walking experience.

Traffic Conditions: Low traffic speeds and volumes that reduce kelihood of accidents and make walking more enjoyable.

rian Infrastructure: Well-maintained sidewalks, pedestrian

# MRTS is a factor of Walkability:

Mass Rapid Transit Systems (MRTS) significantly enhance urban walkability by improving connectivity and accessibility within cities. Here are several wavs MRTS contributes to walkability:



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Reduced Reliance on Cars: By providing an efficient alternative to driving, MRTS reduces the need for personal vehicles, leading to fewer cars on the road and a safer, more pedestrian-friendly environment.

connectivity Improved Connectivity: MRTS networks are often integrated with 📰 🔜 🗁 pedestrian pathways, making it easier for people to walk to and from 🖉 🔯 transit stations. This encourages walking as a part of daily commutes.



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Accessibility to Amenities: MRTS stations are usually located near key urban amenities such as shopping centers, offices, parks, and residential areas. This proximity encourages walking as the primary mode of transportation for short trips.

**Enhanced Safety:** Well-designed MRTS infrastructure often includes pedestrian-friendly features like crosswalks, footbridges, and underpasses, which improve safety for walkers.

**Encouragement of TOD/Mixed-Use Development:** The presence of MRTS can stimulate TOD/mixed-use developments, where residential, commercial, and recreational spaces are integrated. This compact urban form supports walkable neighborhoods. and wibrant urban spaces

## Barriers of Walkability around Metro Stations

Primary challenges that **Compromise** overall efficiency and user experience of MRTS:

- 1. Infrastructure and Urban Design
- **Poor Sidewalks:** Many areas around MRTS stations lack well-maintained sidewalks, with issues such as uneven surfaces, obstructions, and inadequate width.
- **Insufficient Crossings:** Safe pedestrian crossings are often scarce, leading to jaywalking and unsafe pedestrian behavior.
- Encroachments: Street vendors, parked vehicles, and illegal constructions often encroach upon sidewalks and pedestrian pathways, making walking inconvenient and hazardous.
- **Poor** Lighting: Inadequate street lighting reduces the safety and comfort of walking, particularly at night.
- 2. Traffic and Safety

• High Traffic Volume: Heavy vehicular traffic around MRTS stations creates a hazardous environment for pedestrians, increasing the risk of and dents.

## Barriers of Walkability around Metro Stations

Primary challenges that Compromise overall efficiency and user experience of MRTS:

- 3. Accessibility
- **Inaccessible Pathways:** Pathways are often not accessible for people with disabilities, the elderly, and those with strollers or luggage.
- Poor Integration with Other Modes of Transport: Lack of seamless integration with other transport modes (e.g., buses, bicycles) complicates the last-mile connectivity for pedestrians.
- 4. Maintenance and Cleanliness
- **Poor** Maintenance: Lack of regular maintenance leads to deterioration of pedestrian infrastructure.
- **Cleanliness:** Litter, open drains, and poor waste management contribute to an unappealing walking environment.
- 5. Urban Planning and Policy Issues

• Fragmented Planning: Lack of coordinated planning between different government agencies results in inconsistent and fragmented pedestrian infrastructure.

## Walkability around Mass Rapid Transit Systems (MRTS) :

Solutions and Recommendations: for improving the overall efficiency and improved if Marsture: Develop and maintain wide,

- unobstructed, and well-lit sidewalks, along with ample safe crossings.
- Accessibility Enhancements: Ensure pathways are accessible for all, including people with disabilities and those carrying luggage.
- Enhanced Security: Improve security measures through better lighting, surveillance, and policing around pedestrian areas.
- Traffic Management: Implement traffic calming measures and enforce speed limits around MRTS stations.
- Public Awareness: Run campaigns to promote the benefits of walking and educate people on pedestrian safety and rights.
- Policy and Planning: Create integrated urban plans that prioritize pedestrian infrastructure and ensure coordination
  between various agencies.

MB addressing these challenges, Gurugram can enhance

## Strategies to enhance walkability:

- 1. . Street Design
- Narrow streets: Design narrower streets to slow down traffic and make pedestrian crossing safer.
- **Traffic** calming measures: Use speed bumps, raised crosswalks, and curb extensions to reduce vehicle speeds.
- **Complete streets:** Design streets that accommodate all users, including pedestrians, cyclists, and public transit.
- 2. Connectivity
- **Grid layout:** Design neighborhoods with a grid layout to provide multiple routes and reduce travel distances.
- **Pedestrian shortcuts:** Include alleys, pathways, and pedestrian-only streets to increase connectivity.
- 3. Pedestrian-Friendly Infrastructure
- Sidewalks and pathways: Ensure wide, continuous, and wellmaintained sidewalks.

### 4. Accessibility

- **Universal** design: Ensure that sidewalks, crossings, and public spaces are accessible to people with disabilities.
- Wayfinding: Implement clear signage and maps to help pedestrians navigate the area

#### 5. Landscaping

- **Street trees:** Plant trees along streets to provide shade and improve aesthetics.
- **Green buffers:** Use landscaping to create buffers between pedestrians and traffic.

#### 6. Public Spaces

- **Parks** and **plazas:** Create green spaces, parks, and public plazas where people can gather, relax, and socialize.
- Street furniture: Install benches, trash bins, and lighting to make walking more comfortable and convenient.



**Tighting**. Ensure streets and nublic snaces are well-lit to enhance safety

#### 8. Public Transportation Integration

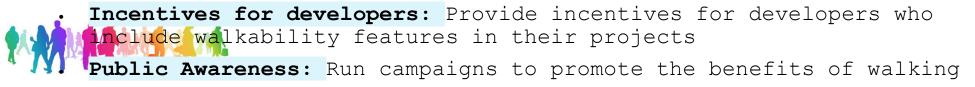
- **Transit-oriented** development: Develop around transit hubs to encourage the use of public transportation.
- Access to transit: Ensure safe and easy access to bus stops, train stations, and other transit points.

#### 9. Mixed-Use Development

- Encourage diverse land uses: Integrate residential, commercial, and recreational spaces within close proximity to reduce the need for driving.
- **Vertical mixing:** Incorporate residential units above commercial spaces to increase density and vibrancy.

#### 10. Policy and Incentives

- Policy and Planning: Create integrated urban plans that prioritize pedestrian infrastructure and ensure coordination between various agencies.
- **Zoning laws:** Implement zoning laws that support mixed-use development and higher densities.



### 11. Community Engagement

- Stakeholder involvement: Engage local residents and businesses in the planning process to ensure that developments meet their needs and preferences.
- **Public feedback:** Regularly collect and incorporate feedback on walking conditions and infrastructure improvements.

### 12. Maintenance

• **Ongoing upkeep:** Regularly maintain sidewalks, pathways, and public spaces to ensure they remain safe and attractive.

By integrating these strategies, City Authorities , builders and developers can create environments that prioritize and enhance walkability, leading to healthier, more vibrant, and sustainable communities.

# AGENCIES

- The Chief Executive Officer, Gurugram Metropolitan Development Authority (GMDA). Plot No. 3, Sector 44, Gurugram, Haryana.
- The Commissioner, Municipal Corporation Gurugram, Haryana
- The Administrator, Haryana Shehri Vikas Pradhikaran, HSVP Office Complex, Sector 14, Gurugram, Haryana.
- The GM Estate, HSIIDC, Industrial Estate, Phase V, Vanijya Nikunj, Udyog Vihar, Gurgaon.





# THANK YOU