Home to Station: Residential Street Design Guide

Nov 15, 2026 · @Uma Mahesh Padisetty

How to make residential streets safe for walking and riding a standing e-scooter from home to the nearest bus-loop station. Companion to the Bus Loops Final Plan and the Walk and Scoot Sidewalks Design Guide.

Summary

Most trips start on a residential lane, not a loop road. If the first 500 m from the gate is unsafe, dark or blocked, people take the car instead, however good the bus is.

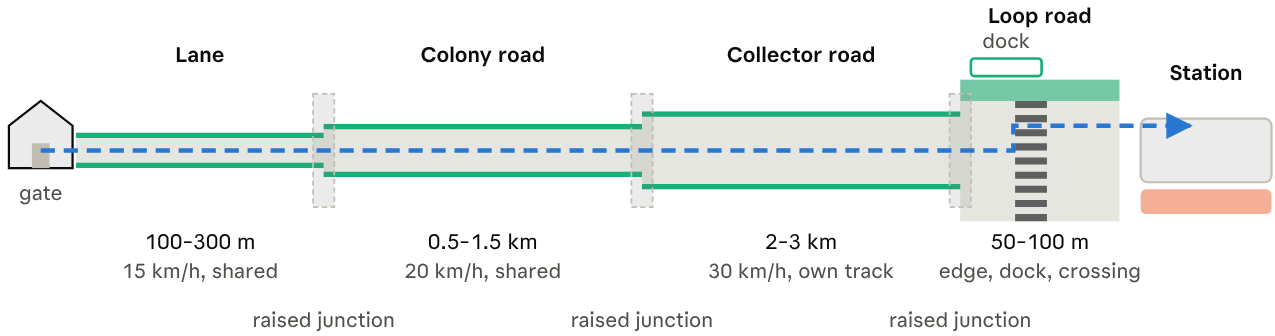
- **Slow the street, don't widen it.** Residential lanes are too narrow for separate tracks. Speeds of 15–20 km/h make it safe for scooters, walkers and cars to share, with a protected walking strip at the edge.
- **One signed access route per neighbourhood.** Each colony gets one main route to its nearest station, upgraded first, with signs showing scooter time to the station.
- **Borrow Tokyo's narrow-street methods.** Coloured walking strips painted along the edge where there is no room for a raised footpath, no centre line, and speed humps at every junction.
- **Work with residents.** Resident welfare associations (RWAs) open side gates towards stations, keep frontages clear and help maintain the street.
- **Cheap and quick.** Most of the work is paint, speed tables, bollards, lighting and clearing encroachments, at roughly ₹0.7–1.2 crore per km.
- **Start around the Phase 1 stations on L1 and L2:** Kondapur, Kothaguda, Gachibowli, Raidurg, Khajaguda and Nanakramguda.

The trip from home to station

A scooter or auto turns a 10-minute walk into a 10–15 minute ride of 3–5 km. Each station then serves many times the area it would on foot, so the residential streets within 3–5 km of a station are the ones to fix.

From gate to platform: 3–5 km, 10–15 minutes by scooter or auto

Streets get wider and faster towards the loop road; walking edges shown in green



3–5 km in all: roughly 10–15 minutes by scooter or auto; walkers use the nearest node.

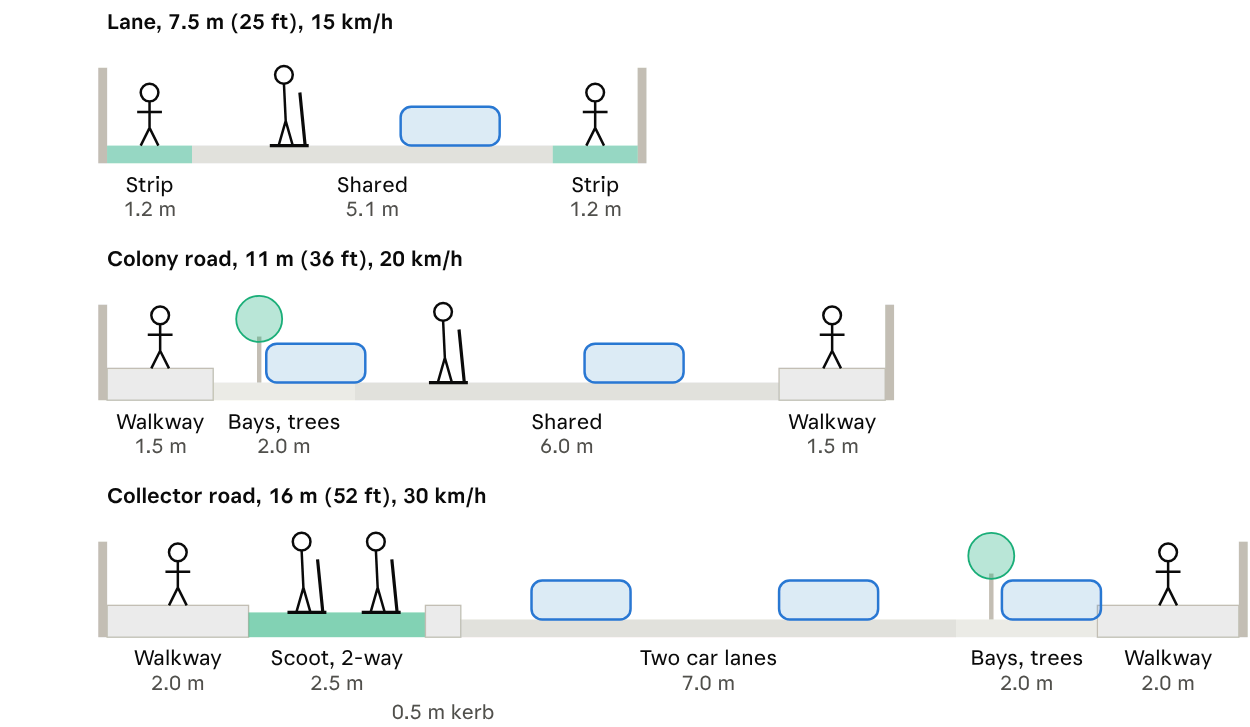
home to station · four legs, three raised junctions

Leg	Typical length	Street type	Speed limit
Home gate to the end of the lane	100–300 m	Lane, under 30 ft	15 km/h
Lane to the main colony road	300–800 m	Colony road, 30–40 ft	20 km/h
Colony road to the loop road	300–800 m	Collector road, 40–60 ft	30 km/h
Loop road edge to the median station	50–100 m	Walk-and-scoot edge, then signalled crossing	40 km/h for cars

Catchment rule: every home within 3–5 km of a loop or corridor station should have one signed access route that meets this guide. Riders park at the dock beside the crossing and walk the last 20–40 m to the platform.

Three residential street types

The narrower the street, the more it relies on low speed instead of separation. Only collector roads get a separate scooter track; on lanes and colony roads scooters share a slow carriageway.



residential cross-sections · lane, colony road, collector road

Street type	Example width	Walking	Scooters	Cars	Speed
Lane	Under 30 ft, e.g. 7.5 m wall to wall	1.2 m green walking strip painted on each side, Tokyo style	Share the middle with cars	One car at a time, passing at widenings	15 km/h
Colony road	30–40 ft, e.g. 11 m	1.5 m raised walkway on both sides	Share the 6 m carriageway, pictograms painted every 30 m	Parking bays alternate sides between trees, which slows cars	20 km/h
Collector road	40–60 ft, e.g. 16 m	2.0 m walkway on both sides	2.5 m two-way kerbed scooter track on one side	Two lanes, parking bays and trees on one side	30 km/h

Design rules

Six rules cover most residential streets: keep cars slow, give walkers a protected edge, and make every junction and gate a place where drivers give way.

1. **Slow by design, not by signs.** Speed tables every 60–80 m, raised junctions where lanes meet colony roads, and no centre line on lanes, so drivers stay cautious.
2. **A continuous walking edge.** A raised walkway where there is room; a coloured painted strip where there is not. Never interrupted by parked cars, steps or ramps.
3. **Junctions at walkway level.** Where a lane meets a colony road, the walkway carries straight across on a raised table and cars climb to cross it.
4. **Parking only in marked bays.** Bays on one side, alternating sides between trees on colony roads; no parking at all on lanes under 30 ft or on walking strips.
5. **Light and shade.** Street lights every 25–30 m with no dark gaps, LED and aimed at the walking edge; a shade tree in every second parking-bay gap.
6. **Water off the street.** Covered drains with slotted lids flush with the walkway; no open drains beside walking strips; known flooding spots fixed before anything is painted.

Signs and markings

- Scooter and walker pictograms every 30 m on colony roads and lanes.
- Speed limit painted on the road at every entry to the colony: 15 or 20 km/h.
- Wayfinding at each junction on the access route: "Kothaguda station, 6 min by scooter, 15 min on foot".

Scooter parking

- 2–4 scooter stands at every apartment block entrance and shop cluster.
- A shared-scooter dock every 300–400 m along each access route, at parks, shops and colony gates.

Gated communities and apartment blocks

A gated community with one main gate can add a kilometre to the trip. The cheapest fix in this guide is a side gate facing the nearest station.

- **Pedestrian and scooter side gates** on the boundary nearest the station access route, opened with the residents' access card and covered by CCTV. Open 6 am to 11 pm at least.
- **An internal path to the side gate:** 1.5 m wide, lit, level, with no steps, so a scooter can be ridden or wheeled.
- **Scooter parking inside:** a covered stand with charging points near each tower lobby, about one bay for every 20 flats to start, with more added as usage grows.

- **A dock just outside the main gate** for shared scooters, on community land handed over or leased to the operator.
- **No car parking in front of the gate** on the public street; the walkway in front stays continuous.

For new projects, HMDA and GHMC building approvals should require these features: a gate within 200 m of the access route, internal paths to it, and scooter parking.

Everyday problems and fixes

Residential streets fail for local reasons more than design reasons. Each needs a plain rule and someone to enforce it.

Problem	What happens today	Fix
Private ramps and steps	Homes and shops build ramps into the street, breaking the walking edge	Ramps stay inside the property line; GHMC replaces street-side ramps with a standard dropped kerb
Parked cars and two-wheelers	Vehicles fill the walking edge, forcing people into traffic	Marked bays only; no-parking line along walking strips; RWA and traffic police enforcement
Shopfronts and stalls	Goods, signboards and generators spill onto the walkway	Licensed vending spots at corners; clear 1.5 m kept at all times
Construction debris	Sand and materials dumped on the street for months	Permit requires a covered site, a 1.2 m walkway kept open and a deposit for repairs
Stray dogs	Riders and walkers chased, especially at night	Animal birth control and vaccination drives with GHMC; feeding spots away from access routes
Dark stretches	People avoid walking after 8 pm, women most of all	Lighting audit with residents; no gap over 30 m; CCTV at docks and side gates
Flooding and open drains	Lanes flood in the monsoon; open drains are a fall risk	Covered drains, recharge pits in parks, fix known low spots first

Problem	What happens today	Fix
Wrong-way riding	Two-wheelers ride against traffic on lanes	Speed tables, one-way pairs where lanes are under 20 ft, camera checks

Worked example: Mayuri Nagar Main Road, Miyapur

Mayuri Nagar Main Road is a typical collector road on the way to Miyapur metro and the C1 corridor. Its width is enough for walkways on both sides, trees and two traffic lanes without buying any land.

Today



Street View, October 2026. What the photo shows:

- **No continuous footpath.** A man walks in the traffic lane; the left edge is a dirt shoulder.
- **Gate ramps built out into the road,** breaking any walking edge.
- **Overgrown verges and litter** where a walkway should be.

- **Poles, a transmission tower and signboards** at the road edge, with no lighting aimed at walkers.
- **Nothing that slows traffic,** on a road where people walk to the bus.

Reimagined



Part of the street	Today	Reimagined
Walking	Dirt shoulder on one side, broken edge on the other	Paved walkway on both sides, raised, one surface
Edge with traffic	None	Kerbed hedges between walkway and road
Gates	Ramps built out into the road	Ramps kept inside the property line; walkway continues past at its own level
Shade and light	Mature trees on one side, no street lights for walkers	Shade trees on both sides, LED lights every 25–30 m

Part of the street	Today	Reimagined
Signs and rules	Signboards on poles	Speed limit and no-parking signs; advertising kept off the walkway

One change to add. The reimagined view does not yet show the scooter track. As a collector road on an access route to the C1 corridor, it should also get a 2.5 m two-way scooter track on one side and a 30 km/h limit, as set out in the street types above, rather than the 40 km/h sign shown.

Rough cost: about ₹3–5 crore per km for the full upgrade at the rates in this guide, or ₹0.7–1.2 crore per km for the quick kit first.

Building it with residents

Each access route takes about two months from first walk to opening, with residents choosing the route and helping keep it clear.

1. **Walk and ride audit (week 1–2).** GHMC ward engineers walk the area with the RWA and a few daily riders, marking gaps, dark spots, encroachments and flooding.
2. **Pick the access route (week 3).** One route per neighbourhood to the nearest station, agreed at an RWA meeting.
3. **Quick kit (weeks 4–8).** Paint walking strips and pictograms, install speed tables and bollards, fix lights, clear encroachments, put up wayfinding signs.
4. **Open and watch (months 3–6).** Count walkers and riders, collect complaints, fix what is not working.
5. **Upgrade (year 2).** Raised walkways, covered drains and trees on the busiest routes.

Rough cost

Work	Cost per km of street
Quick kit: paint, speed tables, bollards, lighting fixes, signs	₹0.7–1.2 crore
Upgrade: raised walkways, covered drains, trees, junction tables	₹3–5 crore

Planning figures at 2026 Hyderabad-level rates, including traffic management, design and contingency; the build-up is in the Road Upgrade: Cost and Technical Specifications document. To be confirmed by GHMC estimates.

Where to start

Start with the neighbourhoods within 3–5 km of the Phase 1 stations on L1 and L2, about ten access routes of 1–2 km each. The quick kit for all of them costs roughly ₹10–20 crore.

Neighbourhood	Nearest stations	Loop
Kondapur and Kothaguda colonies	Kothaguda, Kondapur	L1
Telecom Nagar and Indira Nagar, Gachibowli	Gachibowli	L1, L2
Raidurg and Khajaguda villages	Raidurg metro, Khajaguda	L1, L2
Nanakramguda and the Financial District edge	Nanakramguda Road stations	L2
Madhapur colonies near Cyber Towers	Cyber Towers	L1

Manikonda, Puppalaguda and Shaikpet follow with L3; Hafeezpet, Miyapur, Chandanagar and KPHB follow with the C1 and C2 corridors.

Who does what: GHMC ward engineers design and build, RWAs choose routes and keep frontages clear, Cyberabad Traffic Police enforce parking and speed, and IT employers can sponsor routes their staff use.