Walk and Scoot Sidewalks: Design Guide

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How to build the street edge for the Cyberabad Bus Loops network, so people can walk or ride a standing e-scooter safely to the bus and to work.

Summary

Every bus-loop road gets a continuous edge on both sides: a 1.5 m walkway, a 2.0 m scooter lane and a 0.5 m planted kerb, with nothing parked, sold or stopped on it.

- **The bus loops free the kerb.** Buses run and stop in the median, so the kerbside never has bus bays, waiting crowds or buses pulling across riders. That is what makes a continuous scooter lane possible on an 80-ft road.
- **Separate the three speeds.** Walkers on a raised walkway, scooters on their own coloured lane, cars behind a planted kerb. Each space has its own surface colour, so nobody has to read a sign.
- **Borrow simple methods from Tokyo and Dubai.** Tokyo shows how much a narrow road gains from paint, pictograms, low hedges and green guard fences. Dubai shows wide paved walkways, raised crossings and fences that steer people to them.
- **Build in three steps.** A quick paint-and-planter version opens in weeks; a standard kerbed version follows in months; the full rebuild with drains and shade comes with road works.
- **Start on the Phase 1 loops, L1 and L2:** about 24 km of road edge on each side, around HITEC City, Gachibowli, Raidurg, Khajaguda and the Financial District.

Lessons from Tokyo and Dubai

The three reference photos show two ends of the same idea: Tokyo gets order from cheap, consistent markings on narrow roads, and Dubai from wide, solid paving and crossings that people cannot miss.

Tokyo: a narrow prefectural road with a painted cycle lane

A two-lane road, about as narrow as many Cyberabad connector roads. There is no room for a raised track on this side, so the edge does the work instead.



- **Pictograms and arrows painted on the road edge** tell cyclists where to ride and which way, every few metres.
- **Low hedges in kerbed planters** separate the edge from parking and pavement, and are cheap to install and maintain.
- **Green steel guard fences** at corners stop people stepping out between parked cars and steer them to the zebra crossing.
- **Zebra crossings set back from the junction,** with a clear kerb line, so turning drivers see walkers before they reach them.

We borrow: pictograms and direction arrows on every scooter lane, kerbed hedges as the buffer, guard fences at corners and set-back crossings.

Tokyo: a kerbed walkway beside a 40 km/h road

A slightly wider road with a raised walkway on one side and a clear painted edge lane on the other.

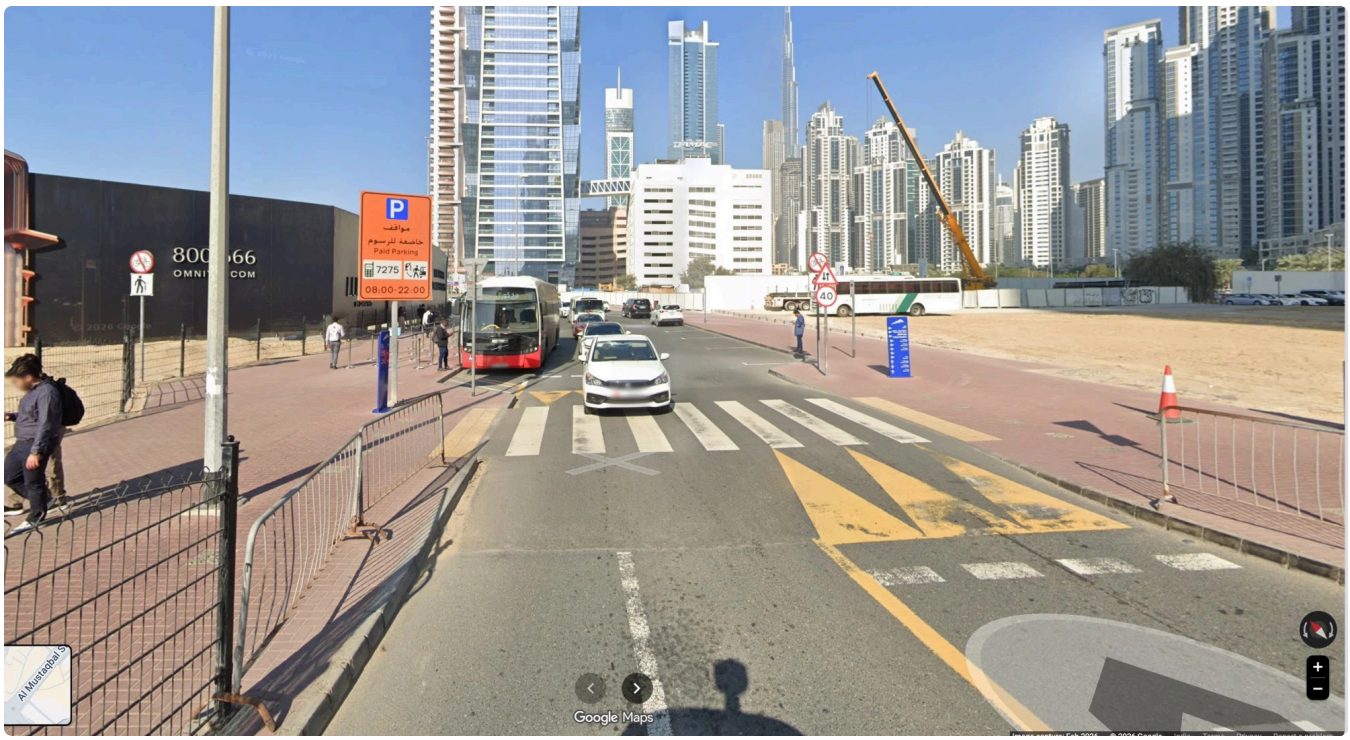


- **A raised, kerbed walkway** with hedge boxes at corners, wide enough for a cyclist and walkers to pass.
- **An orange-yellow kerb line** that means no stopping, so the edge stays clear without signs every few metres.
- **A posted 40 km/h limit** and a no-parking sign on the same pole, so the rules are clear at a glance.
- **Car parks and gates set back** behind fences, with a few defined entrances instead of an open frontage.

We borrow: the coloured no-stopping kerb line, 40 km/h on loop roads, and frontages with defined gates instead of open forecourts.

Dubai: Business Bay, a wide street near a bus stop

A newer district where the walkway is generous and the crossing is built to be seen.



- **Wide terracotta interlocking paving** on both sides, one material, laid edge to edge.
- **A raised zebra crossing** with yellow hatched approaches, so cars slow down before they reach it.
- **Railings that funnel people to the crossing,** instead of letting them cross anywhere.
- **A bus bay cut into the kerb,** clear signs for parking hours, and no-cycling signs on the walkway itself.

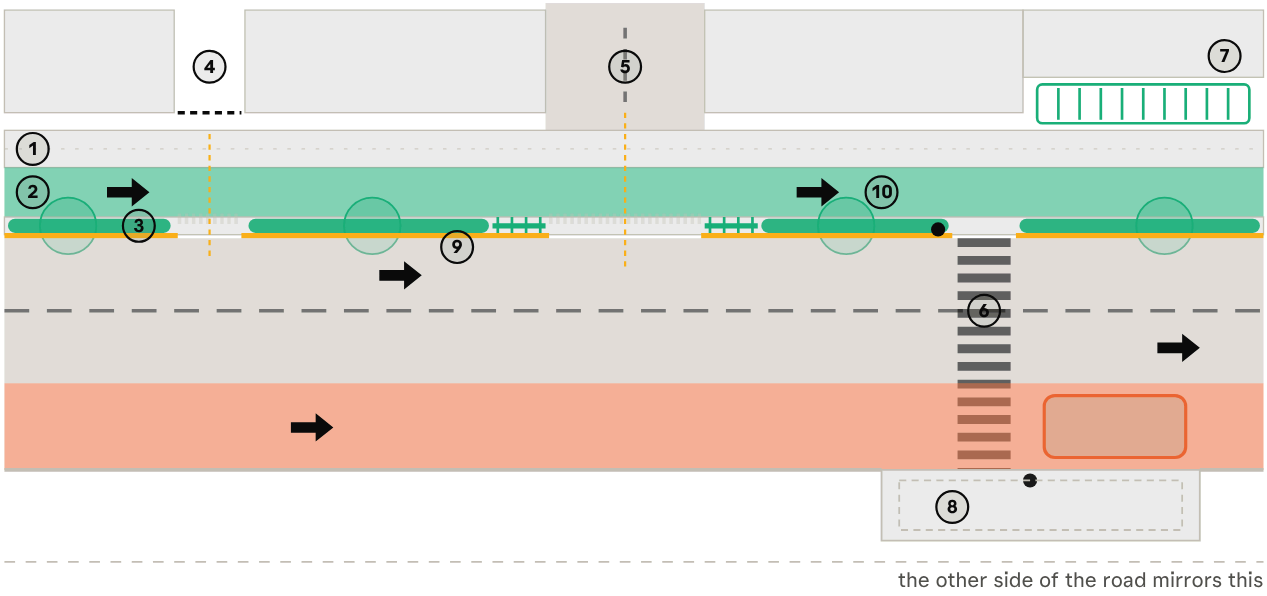
We borrow: one paving colour for walking, raised crossings with hatched approaches, and railings that lead to crossings. We do not copy the kerbside bus bay: our buses stop in the median, so the kerb stays free for scooters.

The standard street edge

Each side of a bus-loop road is 10 m from building line to the centre lanes: 1.5 m walkway, 2.0 m scooter lane, 0.5 m planted kerb and two 3.0 m car lanes. The edge stays continuous past every gate, side street and station.

The edge stays continuous past gates, side streets and stations

Plan view of about 120 m of one side of a loop road. Widths to scale, length shortened.



1 Walkway, 1.5 m, one paver colour
2 Scooter lane, 2.0 m, smooth and coloured
3 Planted kerb, 0.5 m, hedges and trees
4 Gate: lanes continue, car ramp in the kerb
5 Side street: raised crossing, fences at corners
6 Raised zebra with signal to the station
7 Scooter dock beside the crossing
8 Median bus lane and covered platform
9 No-stopping kerb line along the edge
10 Painted arrows and scooter pictograms

standard street edge · plan view of one side of a loop road

Part	Width	Surface	Height above road
Walkway	1.5 m (1.8–2.0 m within 300 m of stations and large campus gates)	Grey or terracotta interlocking pavers, one colour throughout	150 mm
Scooter lane	2.0 m, one way, same direction as traffic	Smooth red or green coloured asphalt or concrete, no pavers	75 mm
Planted kerb	0.5 m	Low hedge in a kerbed planter, bollards at gaps	150 mm
Car lanes	2 × 3.0 m	Asphalt	Road level

Five rules for the edge

1. **No gaps.** The walkway and scooter lane run straight across gates and side streets at their own level; cars climb a ramp to cross them.

2. **Nothing stands in the walkway.** Poles, transformers, signboards and vendor stalls go in the planted kerb or at corners, never in the 1.5 m.
3. **No stopping on the edge.** A coloured kerb line, as in Tokyo, marks the whole edge as no-stopping; deliveries use marked bays on side streets.
4. **Every crossing to a median station has a scooter dock** on the edge beside it.
5. **Corners get fences and set-back crossings,** as in Tokyo and Dubai, so people cross where drivers expect them.

Which edge goes on which road

The full edge goes on every bus-loop and corridor road. Narrower roads use the Tokyo approach: a raised walkway and a painted scooter lane instead of a kerbed one.

Road	Example routes	Walkway	Scooter lane	Buffer
Loop roads, 80 ft+	L1, L2, L3	1.5–2.0 m, raised	2.0 m, kerbed, coloured	Planted kerb
Corridor roads, 90 ft+	C1 Gachibowli–Miyapur Highway, C2 HITEC City–Kukatpally Main Road, C3 Old Bombay Road and ISB Road	1.5–2.0 m, raised	2.0 m, kerbed, coloured	Planted kerb
Bus-road stretches of 60–90 ft	Parts of C1, C2 and C3, to confirm by survey	1.5 m, raised	1.5 m, painted with pictograms (Tokyo style)	Flexible posts and hedges at corners
Short pinch points under 60 ft	Flyover approaches, bridges, old village centres	1.5 m, raised, never narrowed	Shared with traffic at 20 km/h, pictograms on the road, bus-first signal	Bollards at both ends of the pinch
Feeder roads	W: Nallagandla Road, Gopanpally–Wipro Road	1.5 m, raised	1.5 m, painted with pictograms	Hedges at corners, no-stopping kerb line

Road	Example routes	Walkway	Scooter lane	Buffer
Colony and campus roads, 40–60 ft	Streets leading to stations	1.5 m both sides	None: scooters share a 20 km/h street, with pictograms on the road	Speed tables every 80–100 m

Three rules where the road is narrow: the walkway is never cut; a car lane is given up before the scooter lane or the bus lane; buying land is the last resort. Every stretch is measured before design.

Three ways to build

Open quickly with the Tokyo kit, prove people use it, then build the permanent Dubai-quality edge stretch by stretch.

	Quick (Tokyo kit)	Standard	Full
What goes in	Paint, pictograms, flexible posts, kerbed hedge planters, guard fences at corners, no-stopping kerb line	Precast kerbs, coloured scooter lane surface, interlocking pavers for the walkway, raised crossings	Standard, plus new drains, shared cable ducts, shade trees or canopies, lighting
Road space	Reuses the existing road edge and broken footpath	New kerb lines	New kerb lines and underground works
Time for 2 km	4–6 weeks	3–4 months	4–6 months
Rough cost per km of road, both sides	₹1–2 crore	₹9–12 crore	₹16–22 crore
Best for	Phase 1 opening, feeder roads, trials	Loop roads after the pilot	Corridors and loops being rebuilt anyway

Costs include moving utilities, traffic management during works, design and contingency, at 2026 Hyderabad-level rates. The item-by-item build-up is in the Road Upgrade: Cost and Technical Specifications document.

How to build fast without blocking the road

- **Night work.** Heavy work from 10 pm to 6 am, road open for the morning rush.
- **Factory-made parts.** Kerbs, planters, drain sections and bollard bases cast in a yard and placed on site.
- **Half a kilometre at a time, one side at a time,** with a temporary walkway always open.
- **Dig once.** Cables and pipes go into a shared duct before the surface is laid, so nobody digs up the new walkway.
- **Avoid the monsoon** for digging; use June to September for painting, planting and fit-out.

Details that make it work

Small details decide whether people trust the edge: smooth scooter surfaces, crossings at walkway level, shade, and water that drains in minutes.

Surfaces

- Scooter lane: smooth coloured asphalt or concrete. Never pavers; small wheels catch on the joints.
- Walkway: one paver colour along the whole route, as in Dubai, with yellow tactile strips at every crossing and kerb ramp.
- Manhole covers and drain grates sit flush, with grate slots across the direction of travel.

Crossings and corners

- Gates and side streets: walkway and scooter lane continue at their own level; the car ramp sits in the planted kerb.
- Station crossings: a raised zebra with yellow hatched approaches, as in Dubai, a signal, and a scooter dock on the edge.
- Corners: green guard fences, as in Tokyo, and crossings set 5–6 m back from the junction.
- Kerb ramps no steeper than 1 in 12, at every crossing, for wheelchairs, prams and scooters.

Shade and light

- Shade trees in the planted kerb every 8–10 m, or lightweight canopies over the walkway near stations.
- Lights every 25–30 m, aimed at the walkway and scooter lane as well as the road.

Water

- Walkway and scooter lane slope 2% towards drain inlets every 15 m.
- The scooter lane sits 75 mm above the road so it drains first in heavy rain.

Signs and markings

- Pictograms (walker, scooter) and direction arrows painted every 20–30 m, as in Tokyo.
- Coloured no-stopping kerb line along the whole edge.
- 40 km/h limit on loop and corridor roads, 20 km/h on colony streets.
- Route numbers (L1, L2, C1…) and walking or riding times to the next station at every crossing.

Keeping it clear

- Bollards 1.2 m apart at every entry: scooters, wheelchairs and prams pass, cars and most motorcycles do not.
- Camera enforcement against parking and two-wheelers on the edge.
- Licensed vending spots at corners and near stations, outside the walkway.

Where to start, cost and upkeep

Start with the roads under the Phase 1 bus loops, L1 and L2: about 20 km of road, edged on both sides, opened with the quick kit in 2027 and upgraded to the standard edge in 2028.

Stretch	Road	Loop
Kothaguda to Gachibowli	Gachibowli–Miyapur Highway	L1
Gachibowli to Biodiversity	Old Bombay Road	L1, L2
Biodiversity to Raidurg metro	Hi Tech City Main Road	L1
Raidurg metro to Cyber Towers	HITEC City Road	L1
Cyber Towers to Kothaguda	HITEC City–Kondapur Main Road	L1

Stretch	Road	Loop
Biodiversity to Khajaguda	Khajaguda–Nanakramguda Road	L2
Khajaguda to ISB Road	Nanakramguda Road	L2
ISB Road back to Gachibowli	ISB Road	L2

Rough cost for Phase 1: about ₹30 crore for the quick kit, then about ₹420 crore to rebuild the Phase 1 roads in full, with bus lanes, new drains and cable ducts (about ₹260 crore if existing drains are kept). Corridors and the outer loop follow with the bus phases.

Upkeep (about 2–3% of build cost a year)

- Sweep walkway and scooter lane daily; repair any lip or pothole within 48 hours.
- Repaint pictograms, arrows and kerb lines every year.
- Trim hedges and trees to keep 2.5 m clear height over the walkway and scooter lane.
- Clean drain inlets monthly, weekly from June to October.

Who owns it: GHMC builds and maintains the edge on city roads and TGIIC on IT-park roads. Cyberabad Traffic Police enforce no-stopping and keep two-wheelers off the edge. IT employers fund scooter docks and shade at their own gates.

Worked example: Gachibowli–Miyapur Road near Kothaguda

This stretch of the C1 corridor can fit a bus lane, a 2 m walkway and a 2 m scooter lane on each side without widening the road. The kerbside parking strip becomes the walk-and-scoot edge, and bus stations sit between the flyover piers, in the shade of the deck.

Today



Street View, April 2026. What the photo shows:

- **No footpath on this side.** People walk in the traffic lane, between parked cars and moving autos.
- **The kerbside strip is a car park.** Cars, autos and two-wheelers fill it, along with a showroom's stacked display racks.
- **Poles stand at the road edge,** with overhead cables.
- **The median under the flyover is planted but carries nothing,** although it is the widest shaded space on the street.
- **Three general lanes each way,** with no room set aside for buses or scooters.

Reimagined



Space, one side (building to median)	Today	Reimagined
Frontage strip, about 4–5 m	Parked cars, autos, two-wheelers	2.0 m walkway and 2.0 m scooter lane
Kerb	Broken edge with poles	0.5 m planted kerb with trees; poles moved into it
Traffic lanes	Three general lanes	Two car lanes, 3.0 m each
Lane next to the median	General traffic	C1 bus lane, 3.5 m
Median under the flyover	Planters and railings	Planting, with station platforms between the piers

What it takes

- Move overhead cables into a shared duct and poles into the planted kerb.
- End kerbside parking on the stretch; showrooms and shops park on their own land or in a nearby lot.
- A signal and raised zebra at each station, with a scooter dock beside it.

- Bus stations every 500–700 m, placed in gaps between piers so the deck shades the platform.

The reimagined view assumes about 14 m from the building line to the median on each side. Confirm by survey before design.