

## Assessment of Tinkune-Maitighar Cycle Track Design

*Note: Illustrations are indicative.*



Connectivity

Intersections

Bus stop

Crossings

Pavement  
Quality

Safety

Conflict with  
other users

Amenities

Driveways

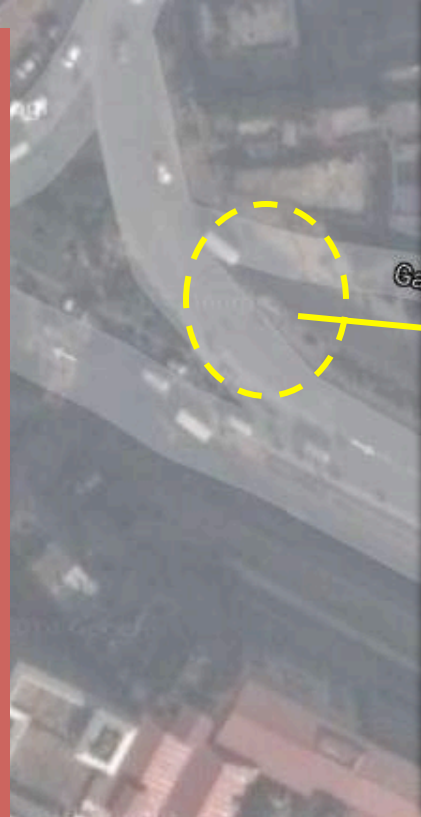
Surface  
Materials

Obstruction

The cycle track from Tinkune-Maitighar is 2.7 km long. It is physically segregated and raised from the carriageway. The existing width of cycle track ranges from 2 to 2.5 meter. It is provided in both sides of the road, however it is not continuous and consistent. In few places, like Babarmahal and Maitighar, cycle track is completely missing. There is no space for cycle users in Dobhikhola and Bagmati bridge. In many places cycle track abruptly ends impeding seamless mobility of users.

Although government has built the cycle track, it's poor design, paving material choice, improper network and connectivity deter the cycle users from using the track. Instead of using the existing cycle track, people prefer to use the carriageway.

Therefore, we did the assessment (of different parameters or design) of cycle track. This report recommends the design intervention to make the existing cycle track comfortable and cycle-friendly for the users.



No proper connectivity and signage at the start and end of cycle track. Cycle track is completely missing in some stretches namely in front Nepal Art Council, Babarmahal.

## Connectivity (PROPOSED)



Painted cycle lane with signage in conflicting areas (with motorized vehicles) to increase the visibility and prioritize movement of cycle users. Continuous and consistent sidewalk required.



No proper connectivity at bridges-  
abrupt drop impeding the mobility  
of cycle users.

## Connectivity (PROPOSED)



Painted lanes with signage in conflicting areas ensures seamless connectivity and continuous movement of cycle users.

Surface Materials (Now)

Absence of tree  
grates and guards

Use of interlock blocks  
(rough surface materials)  
makes the cycle users  
journey uncomfortable. It  
also compromises the  
speed of cycle. There are  
no proper signage.

## Surface Materials (Proposed)

Tree shade along the sidewalk and cycle track acts as buffer as well as provide pleasant environment for users.

Sidewalk with different texture for aesthetics or visual comfort

Tree grates and guards

Space for multi-utility zone

Green buffer zone to capture rainwater and segregation from carriageway

Use of smooth surface materials such as concrete and asphalt instead of stone or interlock block pavement with proper signage and markings.





Improper placement of signage and information boards

Improper design in conflict areas with pedestrians

Obstructions, potholes etc.

Lack of seamless & safer pedestrian crossing

Lack of designated space for cycle parking

**Amenities & Crossings (PROPOSED)**

Placement of visible signage without obstructing sidewalk and cycle track



Bicycle parking space (@Restaurant, Babarmahal)



Infrastructure for bicycle parking in commercial areas and where required- promotes usage of cycling

Painted lanes in conflict areas



Raised crossings for pedestrians- Traffic calming measures for pedestrian safety and disable-friendly

Improper design in conflict areas with pedestrians

Very high kerb and no seamless connectivity

Lack of traffic calming measures and not disable-friendly

# Street Crossings & Amenities (PROPOSED)



Bicycle parking space

Lower kerb height ( $\leq 150\text{mm}$ )

Painted lane or marking in conflict zone

Raised and leveled crossing for traffic calming, seamless connectivity for pedestrians and disabled.

There is no crossing for cycle users throughout the stretch

Pedestrian crossing are not leveled- hampers the accessibility of disabled people

## Street Crossings (PROPOSED)

Painted street crossing for cycle users in certain intervals throughout the stretch, preferably next to pedestrians crossing.

Median Refugee Area

Raised and leveled pedestrian crossing

Driveways (NOW)



Discontinuous sidewalks and cycle track. Improper design and signage at conflict zones

Priority is given to the access of vehicles

No defined multi-utility zone

**Driveways (PROPOSED)**

Continuous, leveled and colored sidewalk and cycle track to provide seamless connectivity and prioritize pedestrians and cycle users over vehicles.

Disable-friendly design - leveled sidewalk with warning and guiding tactile

Defined multi-utility zone with proper signage

Use of bollards for restricting entry of motor vehicles

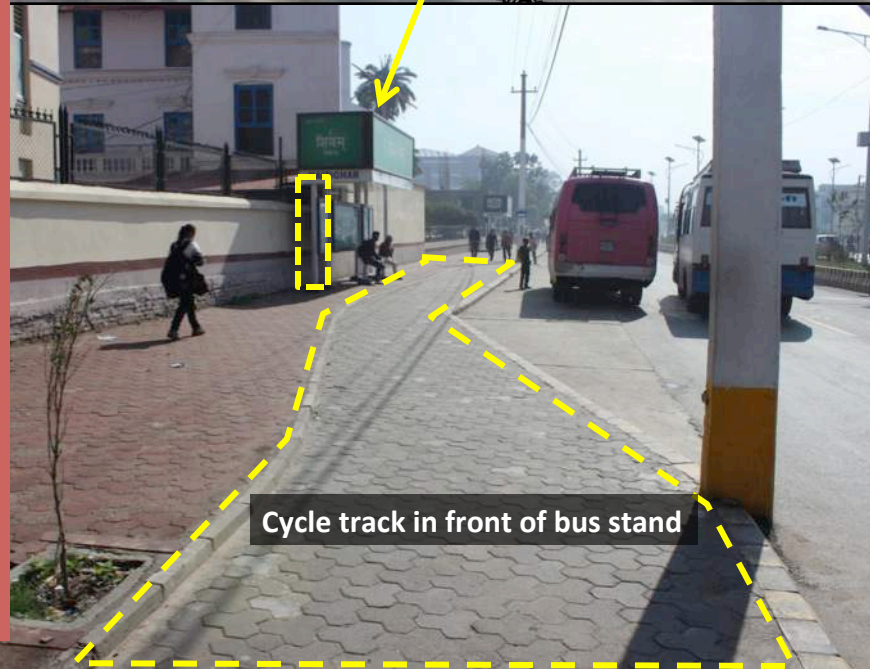
Ramps for motor vehicles for accessing establishments - to prioritize and for the safety of pedestrians and cycle users



Distance between two bus stops is very less and inappropriate if it's not provided for different routes or type of public transport

Installation of bus stands behind sidewalk and cycle track creates conflict between pedestrians/cycle users and waiting passengers

Bus Stops (NOW)



Cycle track in front of bus stand



Inadequate space for pedestrians force them to walk on cycle track

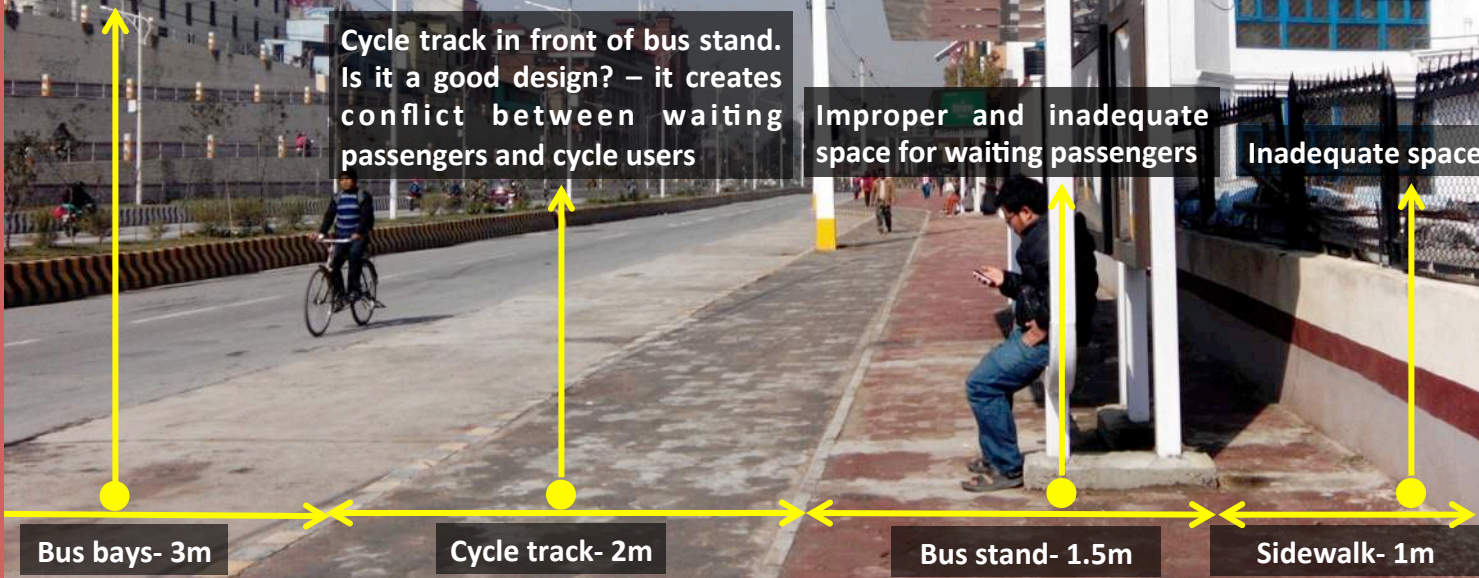
Bus Stops (NOW)

Wider bus bays than required - can be narrowed to create space for waiting passengers

Cycle track in front of bus stand. Is it a good design? – it creates conflict between waiting passengers and cycle users

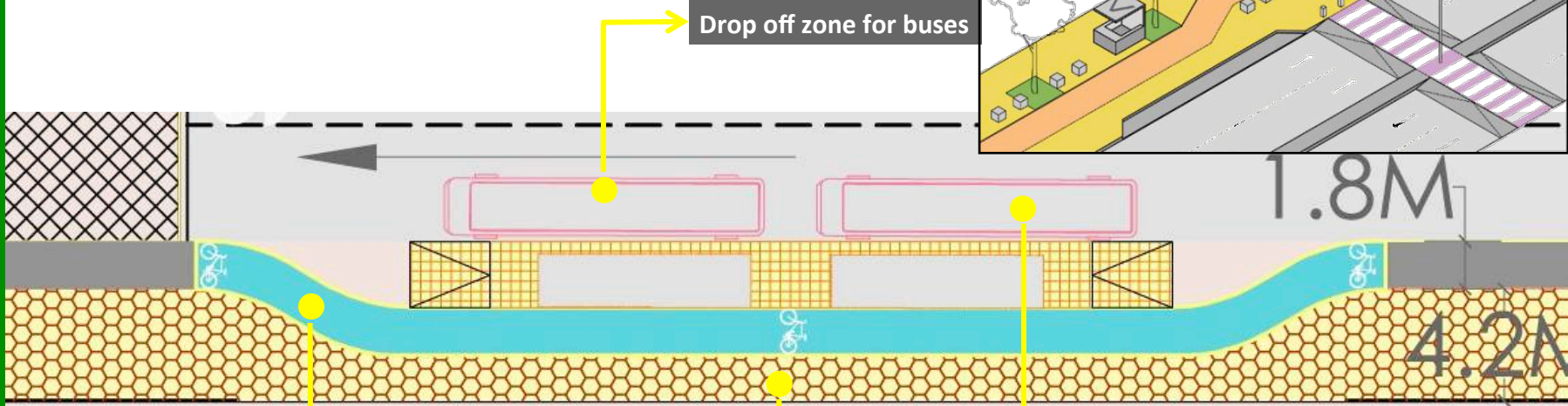
Improper and inadequate space for waiting passengers

Inadequate space for pedestrians



**Bus Stops (PROPOSED)**

Continuous sidewalk and cycle track ensuring minimum of 1.8m of width each. Bus stand built in front of sidewalk and cycle track to lessen/avoid the conflict between bus passengers and pedestrians/cycle users



Drop off zone for buses

1.8M

4.2M

Continuous cycle track behind the bus stand with min. 1.8 m width and use of colored lanes to highlight the potential conflict zone

Continuous sidewalk with clear min. width of 1.8 m

Bus Stand- min. 2.5 m of space for waiting passengers

Bus Stops (PROPOSED)



Street level view of the bus stop design with clear right-of-way for pedestrians and cycle track behind the bus stands

None of the intersections between Maitighar and Tinkune section are cycle-friendly

Intersection (NOW)

Discontinuous cycle track

No bicycle boxes for queuing at intersection

Faded zebra crossings

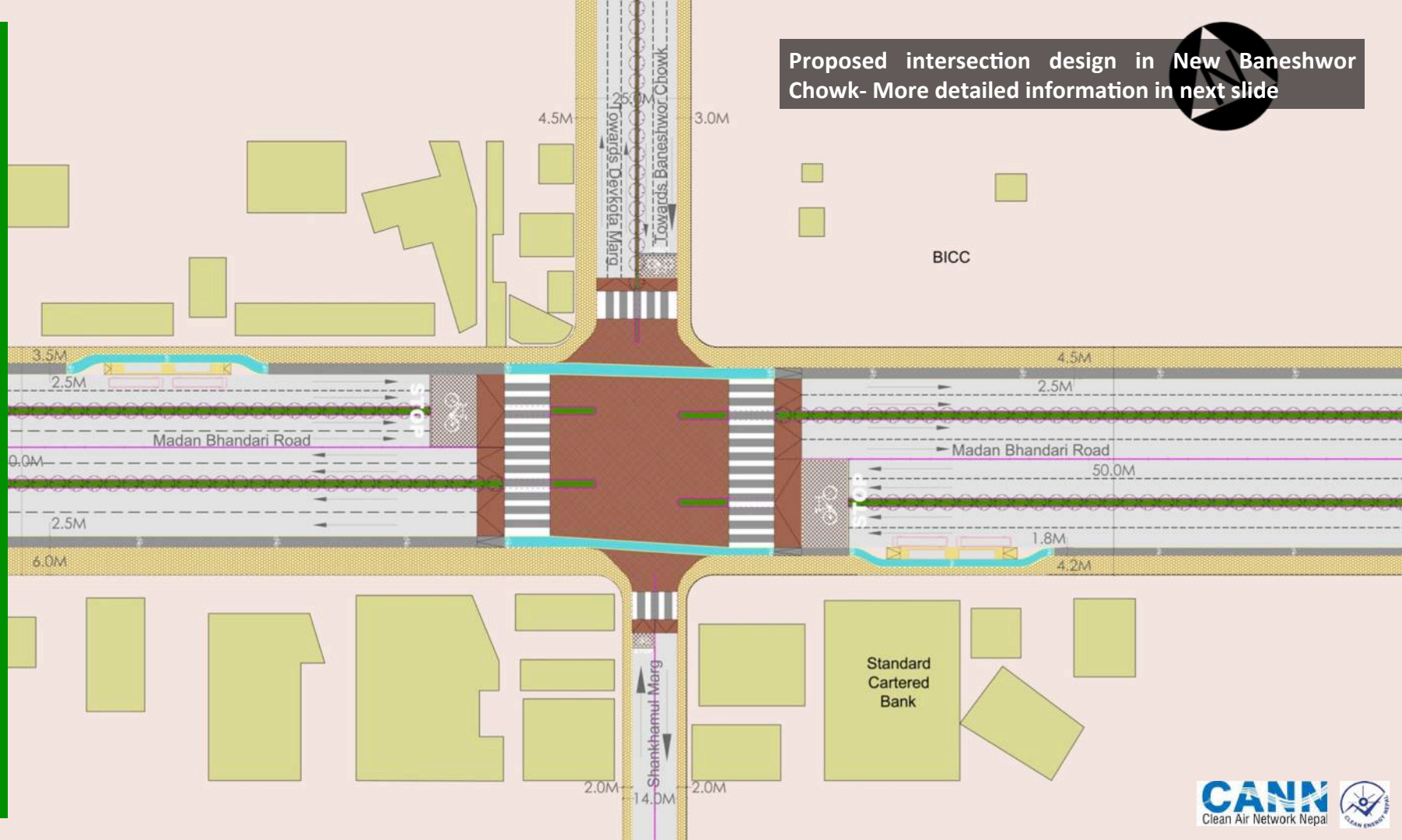
No lane markings for cycle users

Lack of pedestrian and bicycle prioritized traffic signals and intersection design

Circular large turning radii - encourage high speed movement of vehicles making it unsafe for pedestrian and cycle users

Intersection (PROPOSED)

Proposed intersection design in New Baneshwor Chowk- More detailed information in next slide



Intersection (PROPOSED)

Blown up detail

Continuous painted cycle track in conflict zones

Compound curves or angular turning radii to discourage high speed of vehicles which improves the safety of pedestrian and cycle users.




Pedestrian refugee island and median

Raised intersection for traffic calming

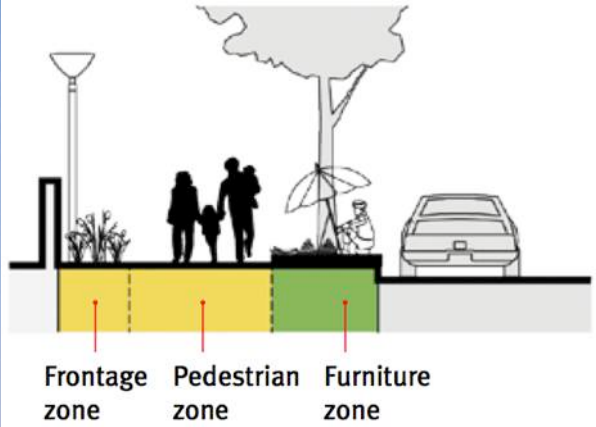
Continuous at grade pedestrian crossing with bollards spacing 1.2m (c/c)

Kerb Height (NOW)



In many places kerb height is large, even >450mm-  
accessibility for pedestrians??? Greater kerb height  
also makes cycling unsafe. It should be  $\leq 150$ mm.

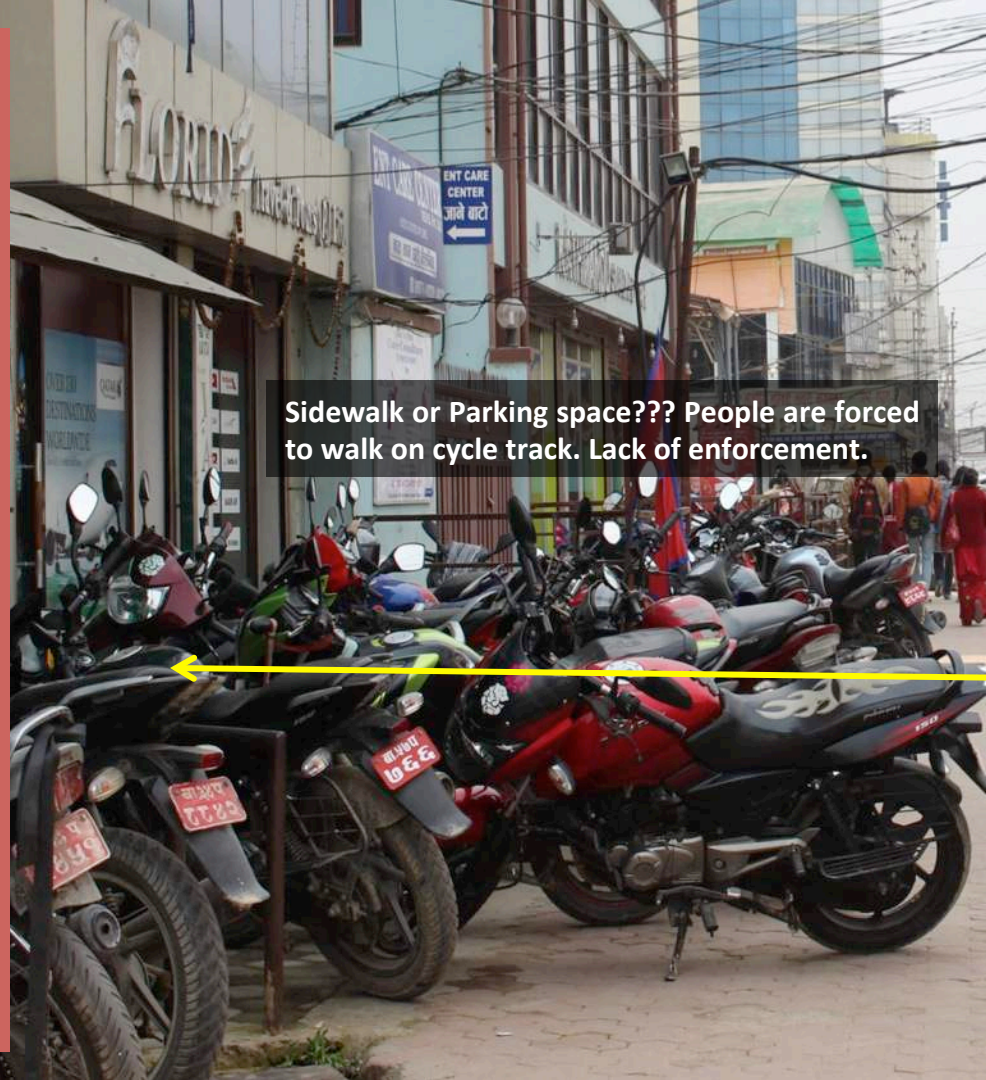




Such street activities makes the space lively, vibrant and safer and provide basic services to pedestrians, if provided with proper designated spaces. Lack of proper space for street vendors compromises the right-of-way of pedestrians. Sidewalks should be divided into frontage zone, pedestrian zone and multi-utility zone (this space can accommodate street vendors) as shown in the illustration (Source: ITDP).

Such dead and opaque boundary walls makes environment unsafe and visually unattractive for pedestrians





Sidewalk or Parking space??? People are forced to walk on cycle track. Lack of enforcement.



Lack of enforcement- motor vehicle using the cycle track



Obstructions (NOW)



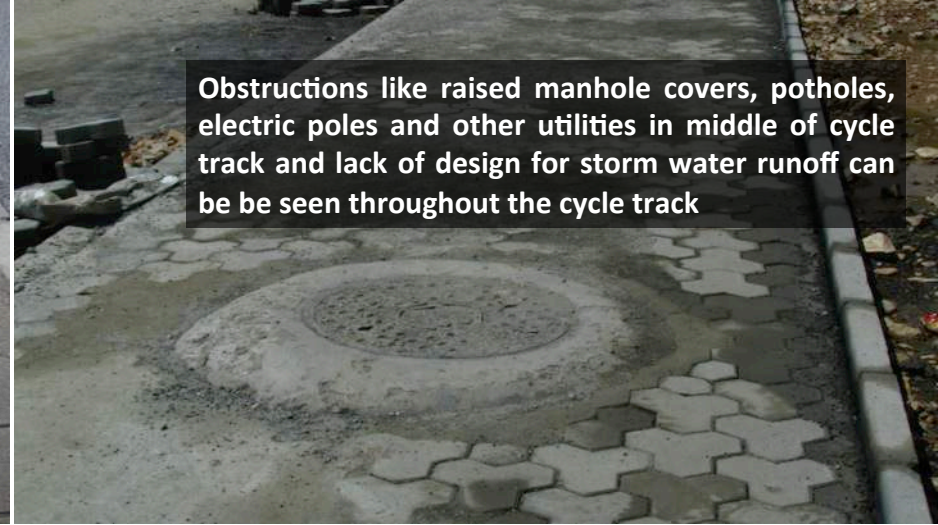
Height - >500mm



Priority is being given to the mobility of vehicles in driveways

Inconsistent and discontinued cycle track and sidewalk can be seen throughout the stretch. This impedes the mobility of users - one of the major design fault, discouraging cycle users to use the track

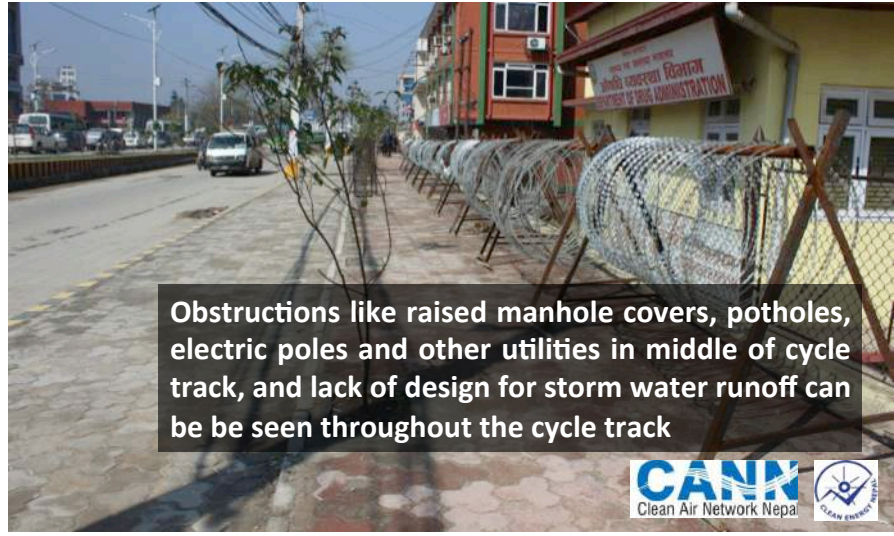
Obstructions (NOW)



Obstructions like raised manhole covers, potholes, electric poles and other utilities in middle of cycle track and lack of design for storm water runoff can be seen throughout the cycle track



Obstructions (NOW)



Obstructions like raised manhole covers, potholes, electric poles and other utilities in middle of cycle track, and lack of design for storm water runoff can be seen throughout the cycle track

Amenities (PROPOSED)



rov.au



p://www.nytimes.com/



<https://urbancommuter.files.wordpress.com/>



<http://bikeit.tumblr.com/>

A network of cycle track is prerequisite for encouraging more people to cycle. The existing Tinkune-Maitighar cycle track should be immediately extended to central business district area and integrated with Airport cycle track for the seamless connectivity.

## Cycle -Track Design Guidelines

A good and efficient cycle track should be **Safe, Convenient, Continuous, Unobstructed, Attractive** and **Direct**.

- Minimum width of 2 m for one-way and 3 m for two-way movement (continuous and unobstructed)
- Minimum of 2.5 m for one-way to accommodate cycle rickshaws.
- Continuous shade through tree cover.
- A smooth surface material—asphalt or concrete. Paver blocks are to be avoided.
- Elevation above the carriageway (e.g. +150 mm) that allows for storm water runoff
- A buffer of 0.5 m between the cycle track and the carriageway or on-street parking areas.
- At property access points, the cycle track should remain at the same level and vehicle access should be provided via ramps.
- Manhole covers should be avoided and, if unavoidable, should be level with the surrounding surface.
- Vertical edges of segregation should not obstruct the movement of pedals (they should preferably be approximately 0.05 to 0.075m high from the level of cycle track).
- Traffic calming option for left turn vehicles.
- Provide cycle prioritized, signalized and colored intersections and crossings.

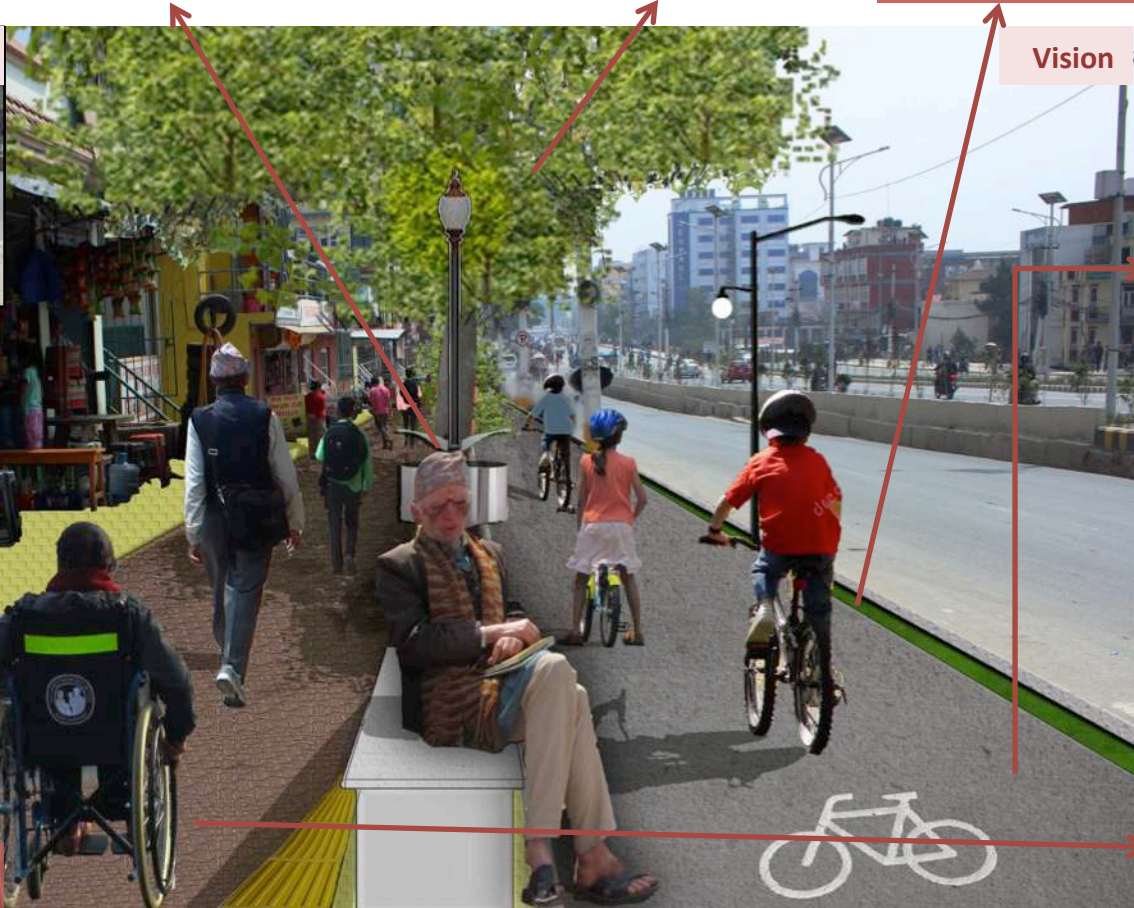
(Ref: ITDP/EPC, 2011)

Frontage zone: Providing buffer between commercial street activities & pedestrian zone.

Multi-utility zone: Street furniture, tree, cycle stand, trash bin, street light, space for street vendors & for other public utilities.

Tree cover: Continuous shade through tree cover with medium size tree with large canopy & deciduous.

Green buffer zone: Preferably 0.5 m between cycle track & carriageway with elevation of +150mm. Design to capture storm water runoff.



Cycle track: Smooth surface materials such as asphalt or concrete instead of paver blocks. Consistent, continuous & clear width of 2 m with proper signage & coloring.

Pedestrian zone: Consistent, continuous, unobstructed & well-drained 2 m of right-of-way for pedestrians, disable-friendly.

Vision: People-friendly Cities



Now

Vision

# Creating Safer and Livable Cities for People...

