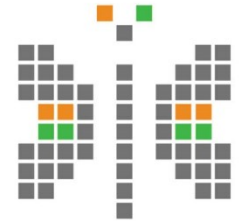


MAKE OUR SURAT CITY SMART (ROUND-2) Contest For Visual Improvement-Junction



SURAT SMART CITY



Smart City

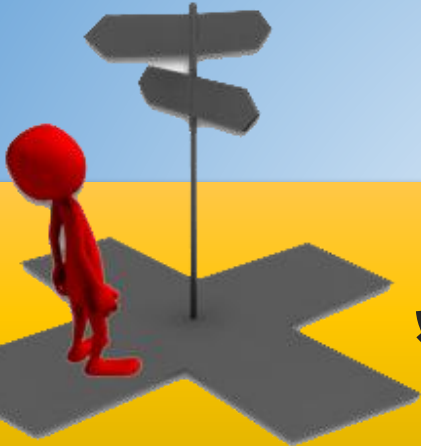
MISSION TRANSFORM-NATION

WINNER : 1
HITESH SOLANKI

MAKE OUR SURAT CITY SMART

ROUND

2



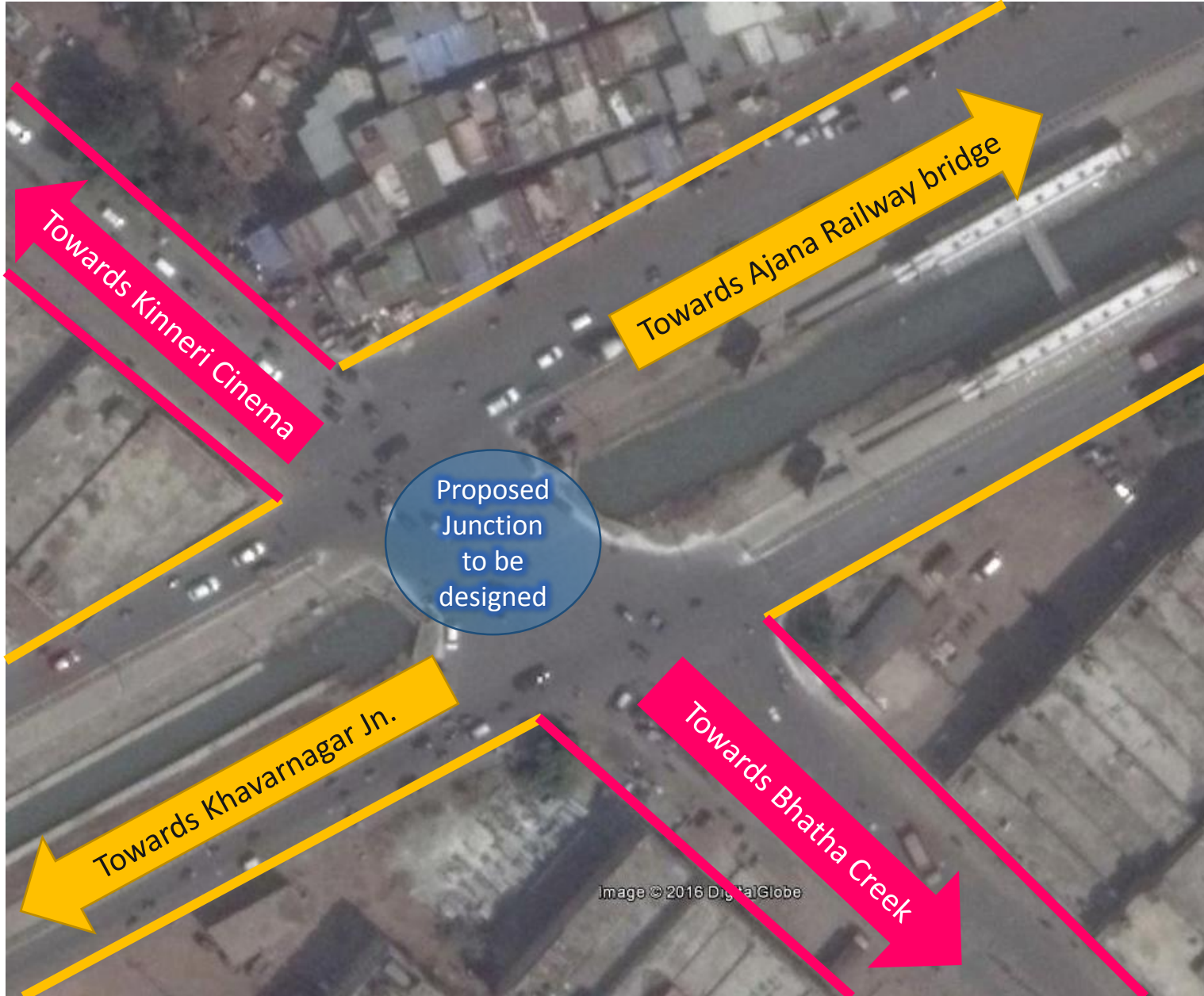
JUNCTION

VISUAL IMPROVEMENT DESIGN CONTEST

NAME	: HITESH BIPINCHANDRA SOLANKI
ADDRESS	: B-83, SANGAM SOCIETY, JIYAV-BUDIYA ROAD, BHESTAN, SURAT
AGE	: 33 YRS
GENDER	: MALE
PROFESSION	: BUSINESS
CONTACT NO	: 98984 10551
EMAIL	: hbsolanki1983@gmail.com

PRESENT LOCATION

BHATHENA JUNCTION DESIGN



PRESENT SITUATION & ISSUES



No Footpath at Junction.
Walk on your own way !!!

Canal becomes Waste Bin, then where is the Waste Bin?



PRESENT SITUATION & ISSUES



Waste Container found, But Not in Good Condition. It needs health checkup !!!

Two Bike Racers on BRTS Track, who won, God knows !!!



PRESENT SITUATION & ISSUES



Junction is at its
WORST Condition.
It needs O₂ to live !!!

Encroachment at
Junction, Not New.
Kaka e thelo
pathari didho !!!



PRESENT SITUATION & ISSUES



Unauthorized Auto parking in BRTS lane. Free parking in BRTS lane???

Heavy Vehicle parking at Junction & Murtikar makes Murti at Junction!!!



PRESENT SITUATION & ISSUES



Bollard Spacing at BRTS station, How wheelchair person will ever cross these bollards. Question is How ???

And Award goes to Traffic (Non) Sense of Citizen (All are not same, I know)

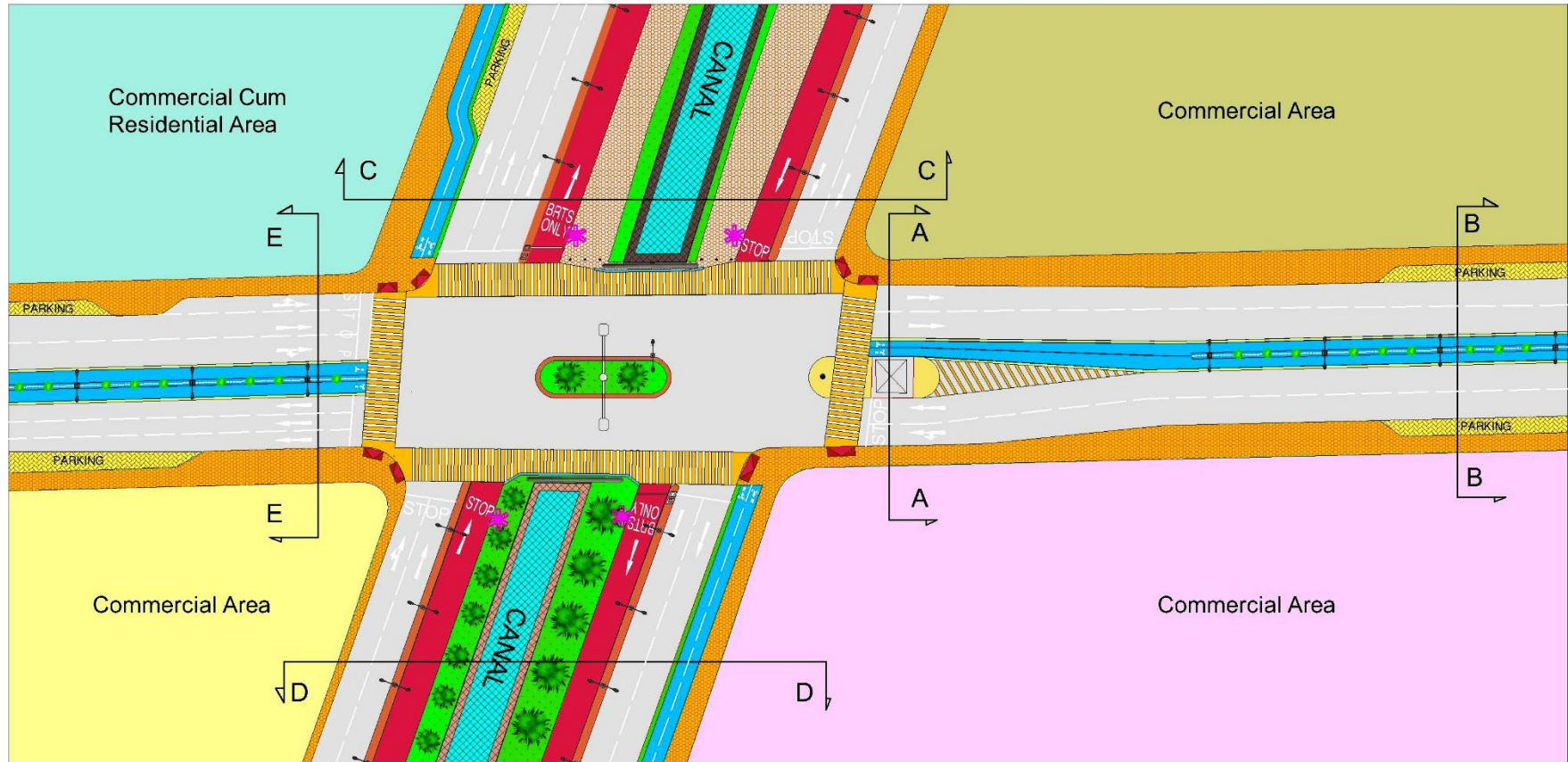


Where he is going???

Even God don't care anymore !!!

PROPOSED SOLUTION

Junction Plan

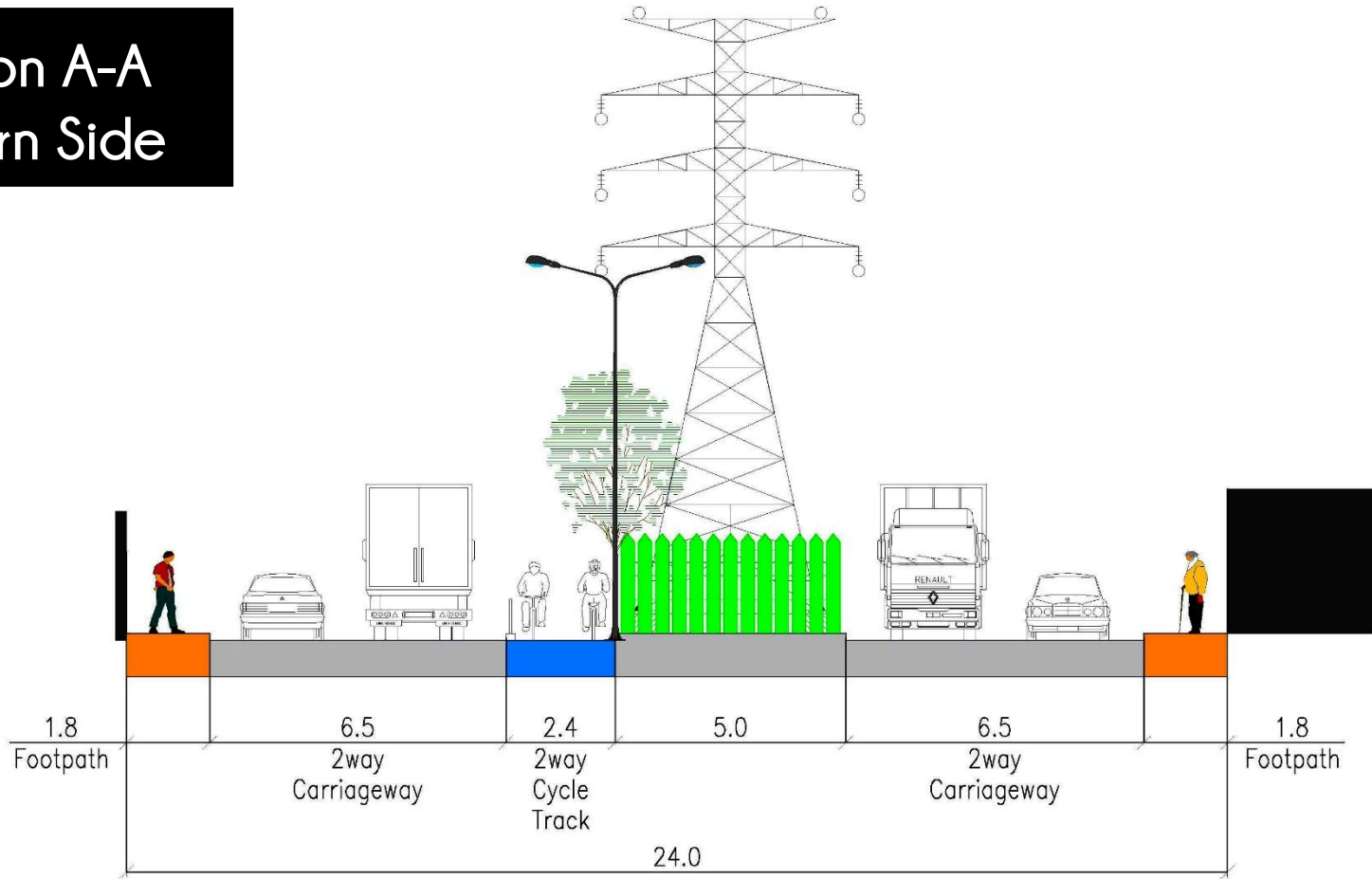


Concept

Central Island is having SMART Pole. Cross works around junction is sharing with Pedestrian and Cyclist. Eastern side road is having Power transmission line in the center that is why its design is proposed accordingly. Other features are explained sectionwise in the next slides.

PROPOSED SOLUTION

Section A-A Eastern Side

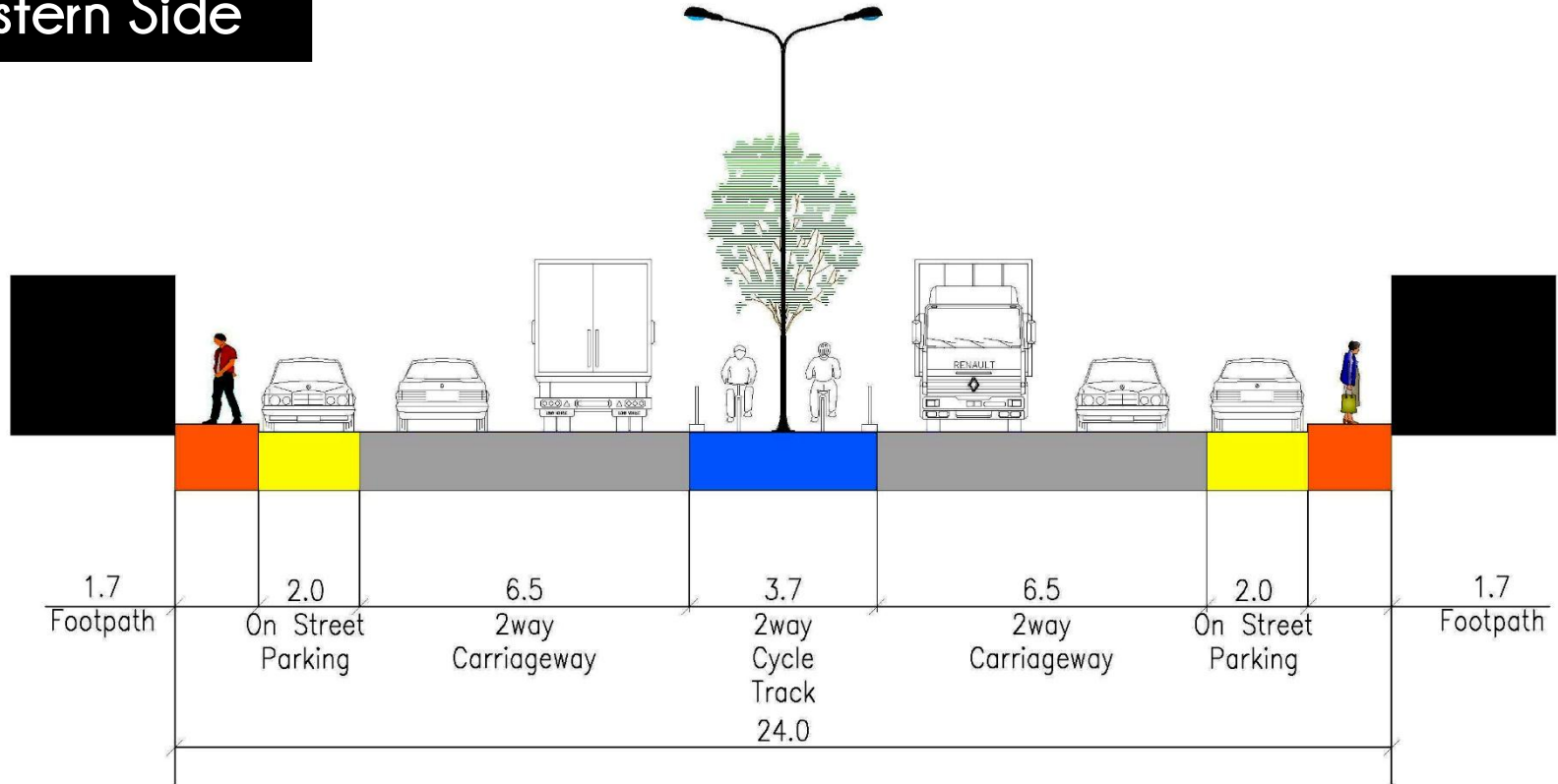


Concept

Almost 90% area near junction is commercial. Loading/unloading takes place from the shops so there will be obstruction for cyclist to drive in the footpath area, so I propose cycle track centrally.

PROPOSED SOLUTION

Section B-B Eastern Side

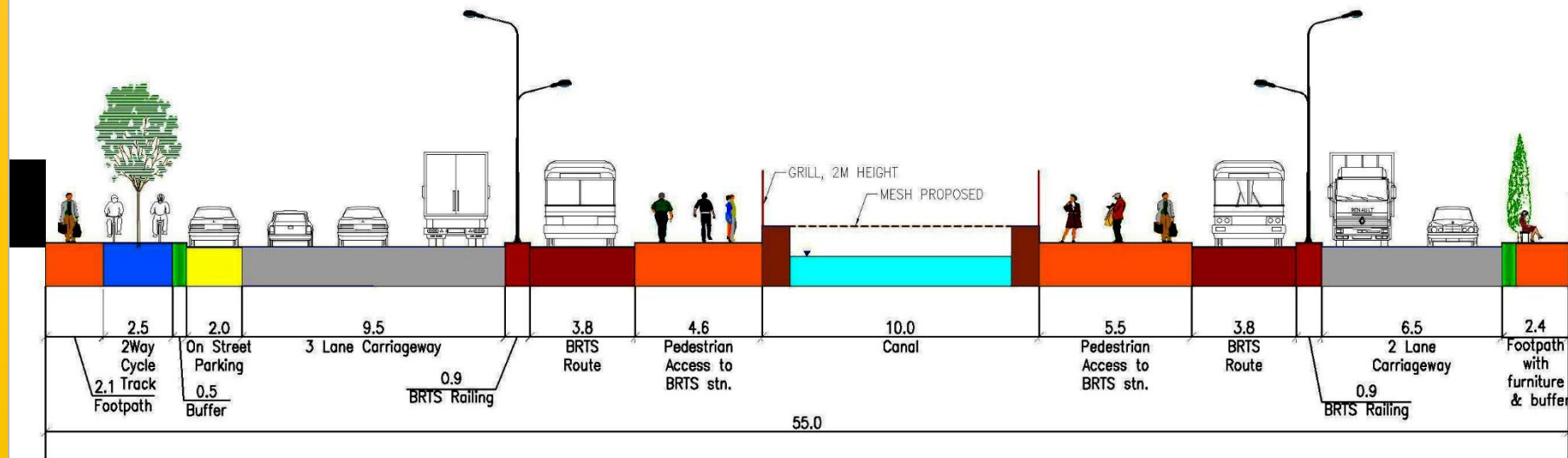


Concept

Same as Section A-A, only thing is that it has parallel parking on both sides of road.

PROPOSED SOLUTION

Section C-C Northern Side



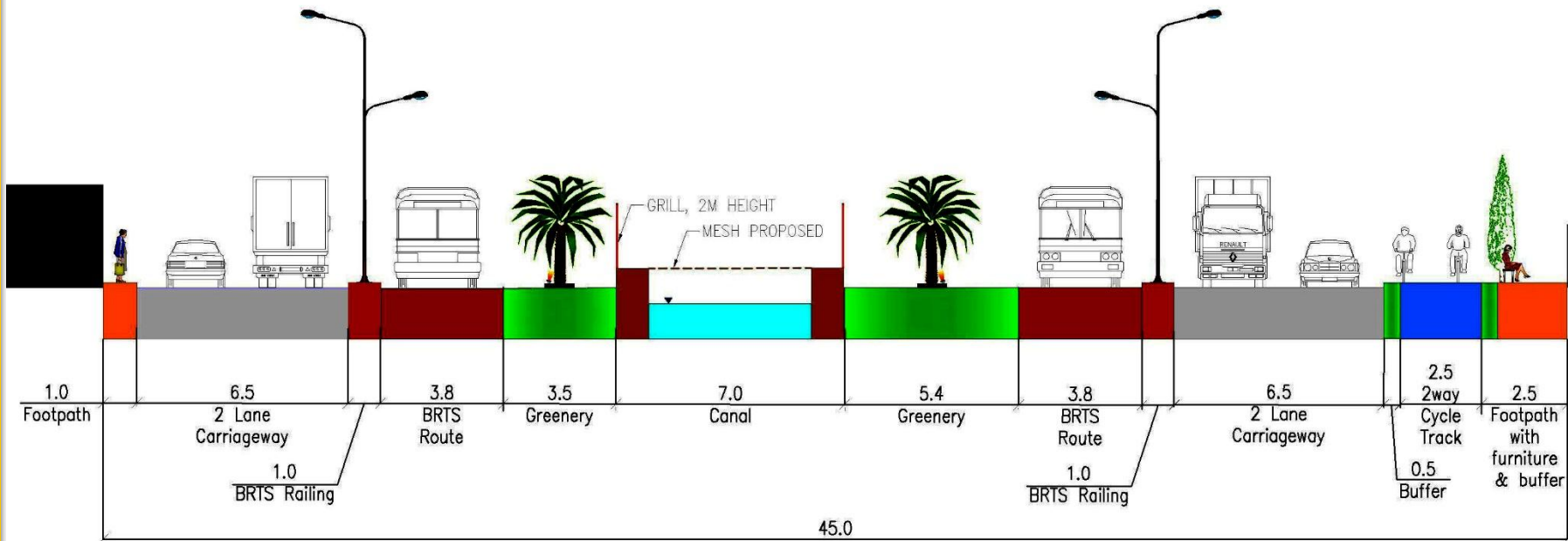
Concept

Proper road boundary is not defined in Survey report but as an avg. considered 55m wide road. As width of carriageway is not equally distributed due to Canal alignment, 2 way cycle track and 3 lane carriageway proposed at left side and right side only 2 lane road with footpath on both side.

To prevent Canal from being polluted, the grill of 2m height is proposed above canal wall and as preventive measure, mesh is proposed at top surface of Canal.

PROPOSED SOLUTION

Section D-D Southern Side



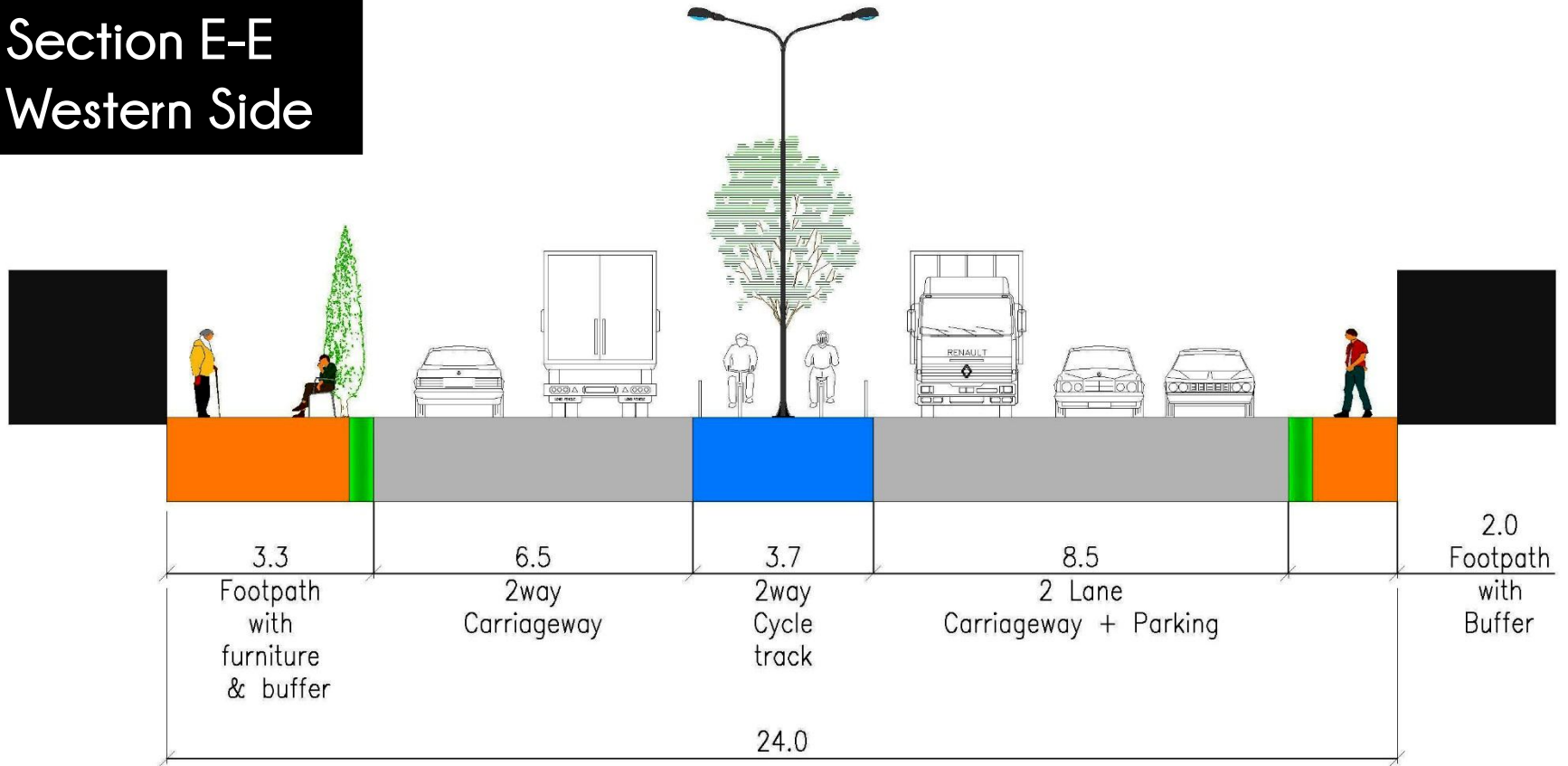
Concept

Proper road boundary is not defined in Survey report but as an avg. considered 45m wide road. As width of carriageway is not equally distributed due to Canal alignment, 2 way cycle track proposed at right side and 2 lane road with footpath on both side.

As ample space is available between BRTS route and Canal wall, attractive trees with light at bottom is proposed to make this place beautiful and attractive by developing this as Linear Park.

PROPOSED SOLUTION

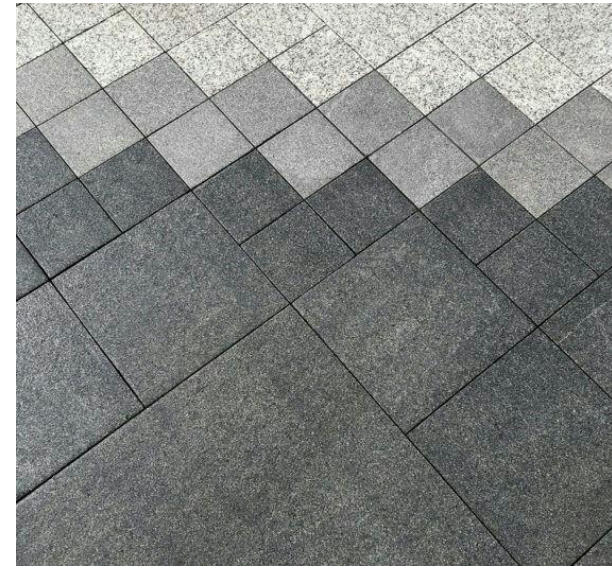
Section E-E Western Side



It is proposed similar to Eastern side road.

Concept

Footpath – Paver Color & Patterns



Cycle Track



Image shown here is very much similar to the solution proposed for said junction.

- Pavers' Color & Pattern are the main theme of footpath. Both images are having various grey color tone pavers arranged beautifully which are adding aesthetical value to the footpath.
- SMC needs to decide such type of theme for different type of streets & junctions in the city.

Way Finding – Street Identity Guide



- Another very essential urban furniture is completely missed by our city.
- Any person which is new for our city or any citizen in unknown area of city has to ask others for the places what they are looking for.
- This kind of way finding are very useful. As they provide all the necessary information regarding that street or any important info regarding city.
- Emergency helpline numbers should also be provided and nearest local transport, medical support, restaurant etc. facilities should also be mentioned.
- Backlit Way findings can be used to provide beautiful look in the night.
- SMC may also go for digital Way-finding.

Waste Bin/ Container



Separate Waste Bins as per Waste type

Seating at Junction



Toilet at Junction



Underground Waste Container with sensors



LED Street Light



Nowadays, every city plans to install LED light fixtures, Surat is also planning the same. The above image is shown LED light with solar panel. This is good option to utilize natural sun light and generate electricity. This option is completely eco-friendly.

Street Art – Let Creativity Speaks



Railing Art



Street Art



Utility Box Art



Wall Art

SMC has made Performance Art Centers across City. It's really great move towards Art. Request to let Street Artist to perform on Street. Make City Creative !!!

SPECIAL PROVISIONS FOR PHYSICALLY CHALLENGED PEOPLE

Handicapped People



Ramp Provision



Hydraulic Ramp Provision in Mini-bus



Special Parking Provision

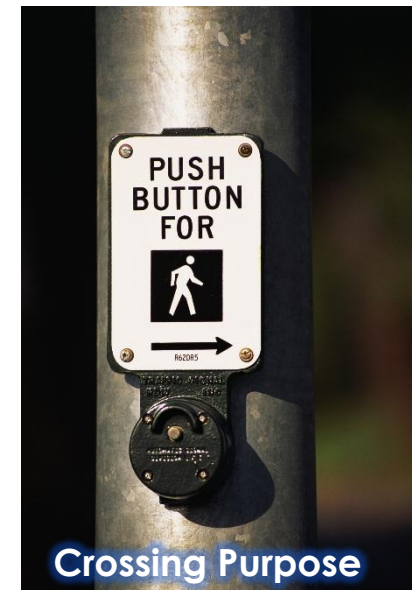
Visually Impaired People



Braille Map, Austria



Tactile Paving



Crossing Purpose

Above Facilities are very essential and it is to be implemented wherever required..



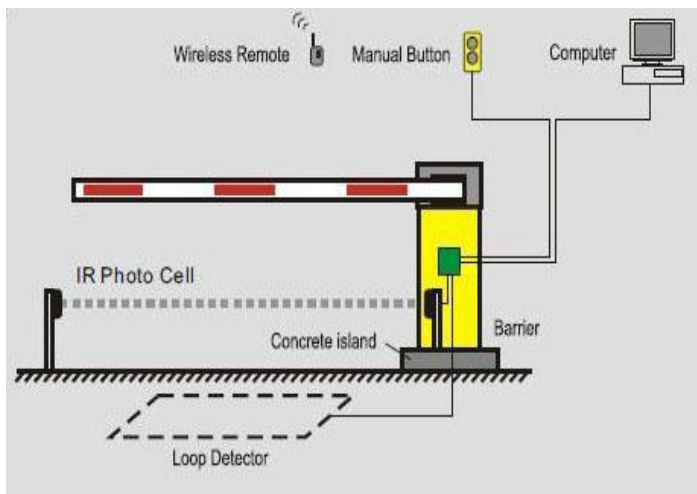
Smart pole shown in the image must be installed in entire city, as single pole supports multiple facilities as mentioned.

Adaptive Traffic Signal Control (ATSC)



- Timing of a traffic signal is continuously adjusted based on the changing arrival patterns of vehicles at an intersection.
- During the process, a traffic signal provides green time to each intersection approach based on anticipated arrivals for adjacent intersections.
- As arrival patterns change from cycle to cycle, the length of green time provided to each approach also changes.

Automatic Gate Mechanism at BRTS Route at Junction

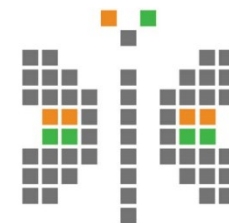


- Automatic gate mechanism needs to be installed at BRTS corridor at Junction to prevent other vehicles to enter in the corridor. It is required for safety of people as many died due to drive in the BRTS corridor in City.
- BRTS corridors should allow for emergency vehicles. All emergency vehicles should equip with the mechanism that can operate this gate opening mechanism at BRTS corridor.

- SMC to re-construct BUMPS on road, as most of them are not comfortable for riding.
- Traffic sense is to be developed in Citizen's mind. To serve this purpose, SMC and Traffic police department jointly need to do campaigning at ward level to educate the citizens about traffic elements and how to use them properly.
- After educating citizens, if anyone breaks the traffic rule, he/she will be levied heavy penalty then and then all these traffic related issue will be solved at least from rider side.

Let's GET STARTED... !!!

Make Surat Smart... !!!



Smart City

MISSION TRANSFORM-NATION

WINNER : 2
VISHAL PARESH

Name : Vishal V Parekh

**Resi: 117, kotyark nagar, opp.
Navyug college, rander road,
surat.**

Age: 35

Gender: Male

Firm: AR.VISHAL PAREKH

**Address: 409,kinaro apartment,
nanpura,surat**

**Contact: +91 9879317886
+91 9624821190**

EMAIL ID:

Ar.vishalparekh@gmail.com

vishalvparekh@yahoo.com



CONTEST:- JUNCTION DESIGN

Being an active junction (chowk) it contains the notable factors which elaborates the problem. Which is categorized in two aspects. The one is Movement aspects and the other is Visual beautification aspects.

Factors affecting movement aspects are as below.

- 1) There is no provision of speed regulating mechanism or provision for movement for disabled people.
- 2) Pedestrian and cyclist movement And safety are not considered.
- 3) Lack of signboards at necessary points other than BRTS route to control & safety of pedestrians, parking and vehicular movements.



4) Parking space is not marked or provided. Unplanned parking creates obstruction & use excessive space.

5) At grade interaction present a driver with several points of conflict with other vehicles.

6) The junction is traffic light controlled junction but the environment is not created to make people more responsible for their movement or improve safety. In short no stop or signal or signal controlled at junction.



PROBLEM STATEMENT -01



Factors of movement aspects are as below.

- 1) median is broken & incompletes at certain corner.
- 2) Unplanned trees located on road which obstructs pedestrian movements & spoils visual beauty.



- 3) The footpath is incomplete & broken at some places kerb stone is not provided. it is obstructed by electrical distribution boards, property owners, parking & trees



- 4) The high tension tower make major impact on movement & make visual interaction in space.



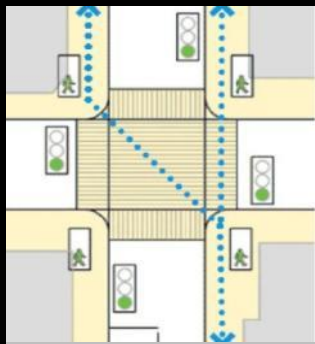
- 5) Spaces are not defined at junction. No division of government land & private properties. Many spaces are unused & has becomes a land for nomadic.

- 6) Unplanned location and billboard spoil the beauty of space.

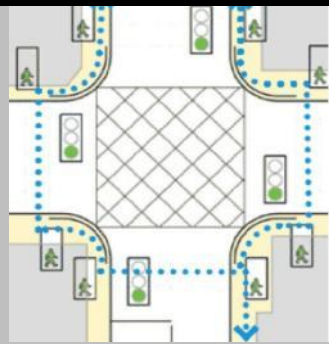


- 7) both sides of canal on BRTS routes are leftover and spoils visual beauty.

- 8) garbage container spoil the beauty of space.



Typical approach



Better balance approach

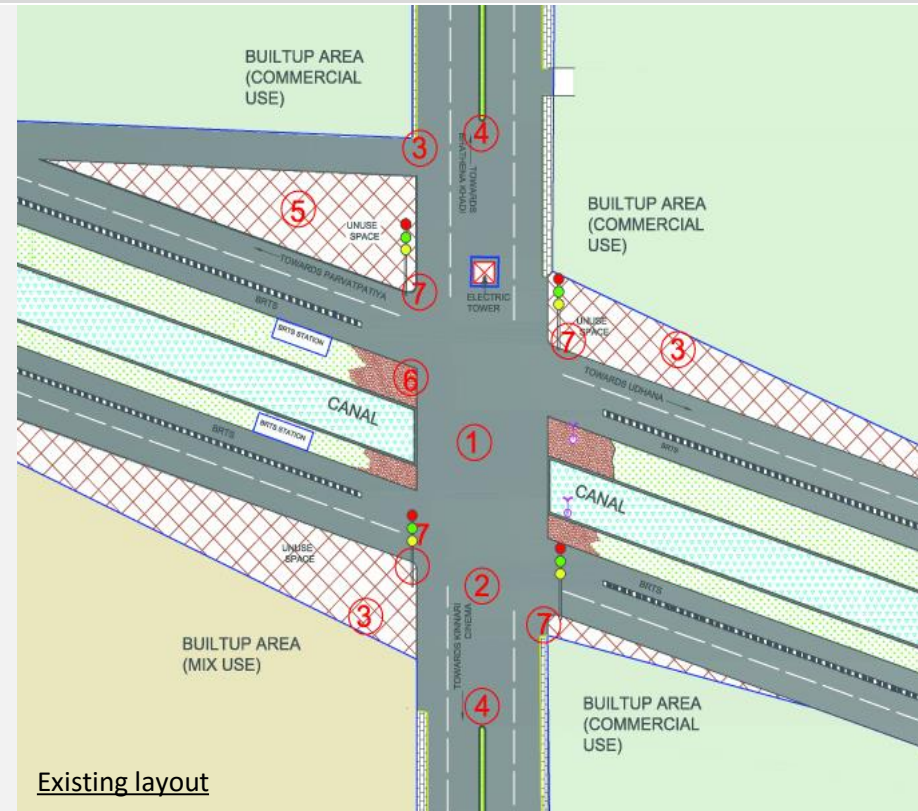
Features of existing plan:

- 1) several interaction points conflict with other vehicles.
- 2) no planned movement and safety for pedestrians.
- 3) boundaries are not defined footpaths are incomplete.
- 4) medians are incomplete.
- 5) land is leftover which is unplanned and become a place for nomadic.
- 6) green area not developed.
- 7) no turning/bigger turning radius. which is uncontrollable for vehicle speed.

The word junction is more suggestive of road engineering than a quality place. Improvising junction is about efficient interaction of pedestrians, cyclist and motor vehicles with quality of public space.

The detailed solutions have been carried out by studying and surveying type of junction and road, its characteristic, usage and material used keeping in mind its future development. Some of the key silent features of the proposed solutions are as below.

- 1) Designing penetration crossing:** there is tendency for the design of junction & location of crossing to force people to go out of their way to cross road. It is important to consider ways in which crossing can prioritise pedestrians and be both safe and convenient.
- 2) Creating an island:** the island is proposed to avoid conflict at several points of junction, which makes traffic movement smoother and minimize road blockages.
- 3) Reducing the radius of kerbs:** reducing the radius of kerbs around junctions requires drivers to turn more slowly and carefully which in turn, creates a safer environment.
- 4) Allowing for self regulations:** there is evidence that providing lots of instructions actually reduces road safety as people tend to rely on the sign rather than their own common sense. Creating an environment in which people take more responsibility for their movement not only looks more attractive, it can also improve safety.
- 5) Retrofitting and relocating road space:** Road space needs to be relocated by measuring space allocation as it exists in comparison to what it can and should be retrofitting of road elements are an inevitable to enhance the beauty of space.
- 6) Parking offer:** providing a bespoke parking offer is less about volume of space and more about a range of users and uses to encourage and support flexible economic activities. Suggesting people parking space designs by keeping in mind existing condition and survey.



Existing layout

SALIENT FEATURES OF THE PROPOSED SOLUTION-01



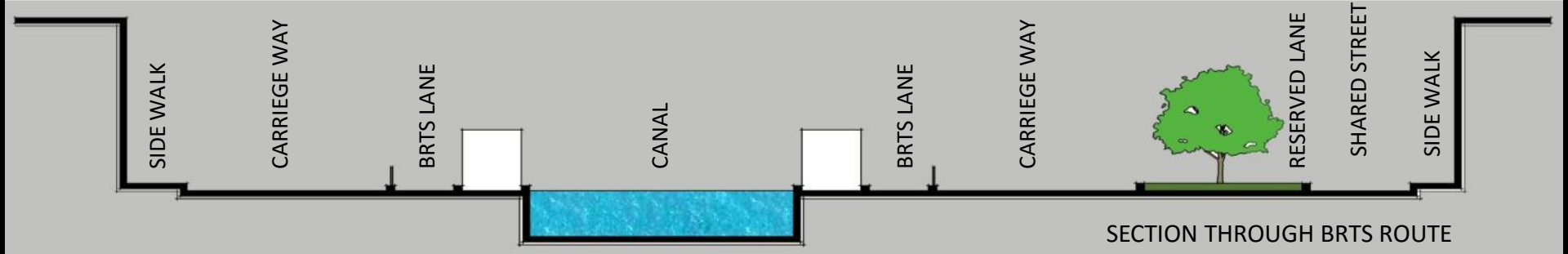


Features of proposed plan:

- 1) beautifying leftover area with greens that will enhance character of the junction.
- 2) providing parking space in leftover areas to minimize road blockages.
- 3) make proper boundary of canal and beautifying around canal.
- 4) Extend medians of BRTS road up to zebra crossing.
- 5) Providing foot over bridge for pedestrians for easy movement.
- 6) island which divides and reduces conflict node points of motor vehicles.
- 7) complete footpath with minimum curvature to control vehicle's speed.
- 8) complete median keeping in mind the location of high tension tower.
- 9) Provide signal light as per layout.
- 10) Provides street lights around junction on medians.
- 11) Enhance area with greens near bus-station
- 12) feature walls which hide pipes & beautifying space with water body.



BIRD EYE VIEW



SECTION THROUGH BRTS ROUTE

GRAPHICAL PRESENTATION- 01





PROPOSED VIEW



EXISTING VIEW

P.C- Vishal parekh

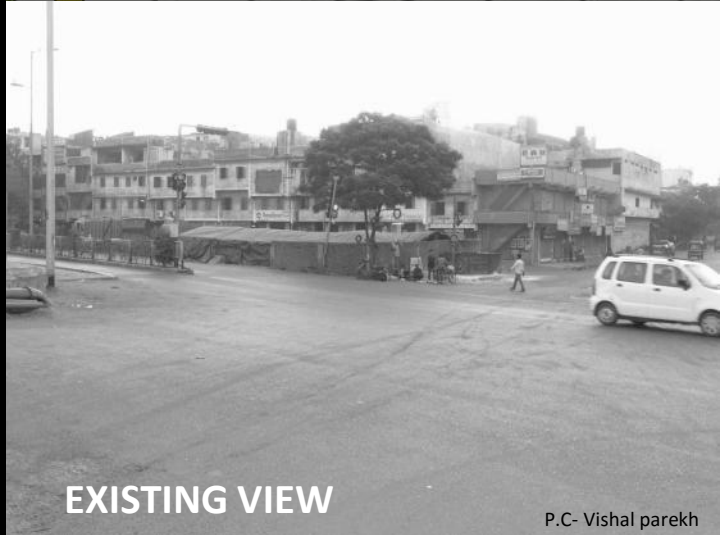
There is existing water lines on both side of junction. The approach taken to hide that big pipes with a feature wall. That shows 'surat as emerging smart city'.

GRAPHICAL PRESENTATION-02





PROPOSED VIEW



EXISTING VIEW

P.C- Vishal parekh

There is ample of existing land which is unused and is covered with illegal structures. We proposed beautify the space with green areas with a beautiful sculpture. The internal space can be used for organized parking.

GRAPHICAL PRESENTATION-03





PROPOSED VIEW



EXISTING VIEW

There is no pedestrian crossing with safety. this design includes a pedestrian bridge which extends zebra crossing can make pedestrian movement easier and safe.

GRAPHICAL PRESENTATION-04





PROPOSED VIEW



EXISTING VIEW

P.C- Vishal parekh

The proposed curved wall on other side reflect the skyline of the 'smart city'. The water body symbolized the holy river 'tapi' both the curved walls visually makes a complete circle around a junction.

GRAPHICAL PRESENTATION-05





PROPOSED VIEW

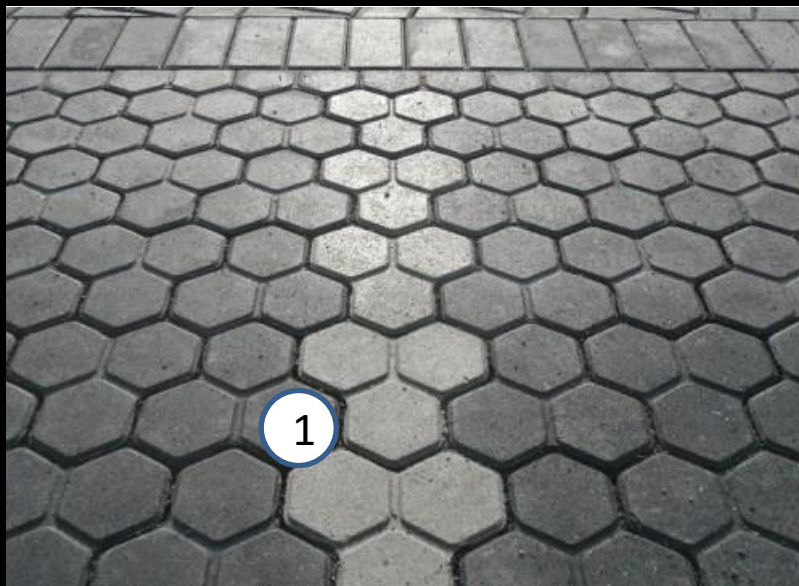


EXISTING VIEW

The Junction has a high tension tower located on a center of the road which can block traffic & restricts vision. We can not remove & relocate but it is incorporated with curbing which gives smooth turn to vehicles and minimize blockage. the green creeper may help to a reduce the heaviness of the tower in space.

GRAPHICAL PRESENTATION-06





APPLICATION OF MATERIAL

1) Asphalt pre-cast into hexagonally-shaped Pavers. Hexagonal pavers are relatively easy to reset or replace, especially for utility access.

2) Tree gratings finished at the same level as surrounding pavement allow people to walk over them, while still allowing water, air and nutrients to access the roots.

3) Use of continuous Paving Materials or Colours at Crossings – provides visual continuity to Pedestrians and also makes crossings clearly visible to drivers from a distance.

4) Asphalt could be 100% recycled material and can be reused as a subgrade for new roads. high albedo coating with colour coating may be applied to reduce urban heat index.



Pc.: www.i.wting.com



pc: UTIPEC, new delhi)



ADDITIONAL DETAILS (MATERIAL SELECTION)-01



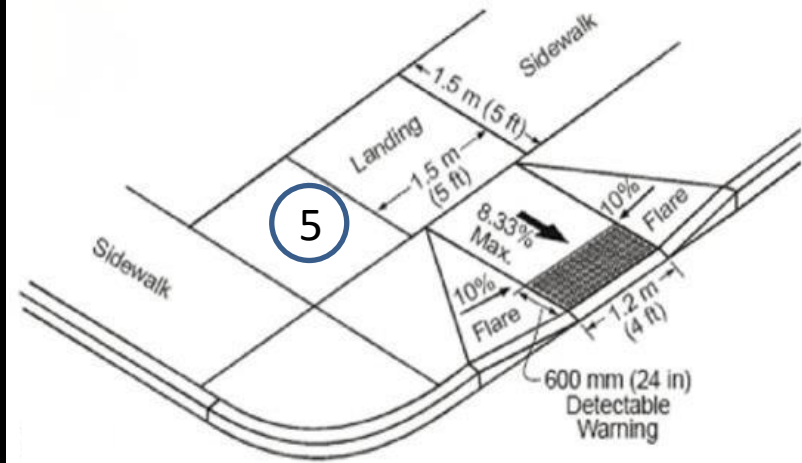
DETAILS NEAR JUNCTION

5) Kerb ramp provides pedestrian access between the sidewalk and roadway for people using wheelchairs, strollers, walkers, handcrafts, bicycles and pedestrians who have trouble stepping up and down.

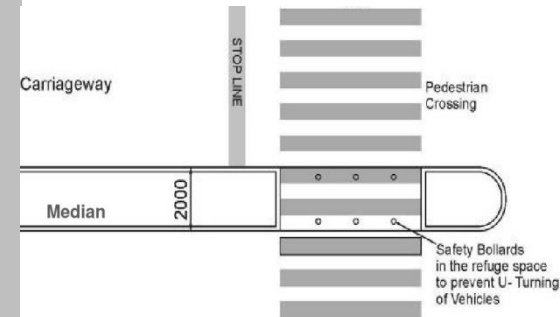
6) Provide parking area required place by side of road to conflict Road blockages.

7) A median is inevitable which separates traffic of opposite directions. It act as a pedestrian refuge island. It can be used for landscape or storm water management.

8) Since Pedestrians must be given the shortest possible direct route to cross the street, the most preferred Crossing for them is "at-grade".



(PC: UTTIPEC, NEW DELHI)



Typical Pedestrian Refuge at Median



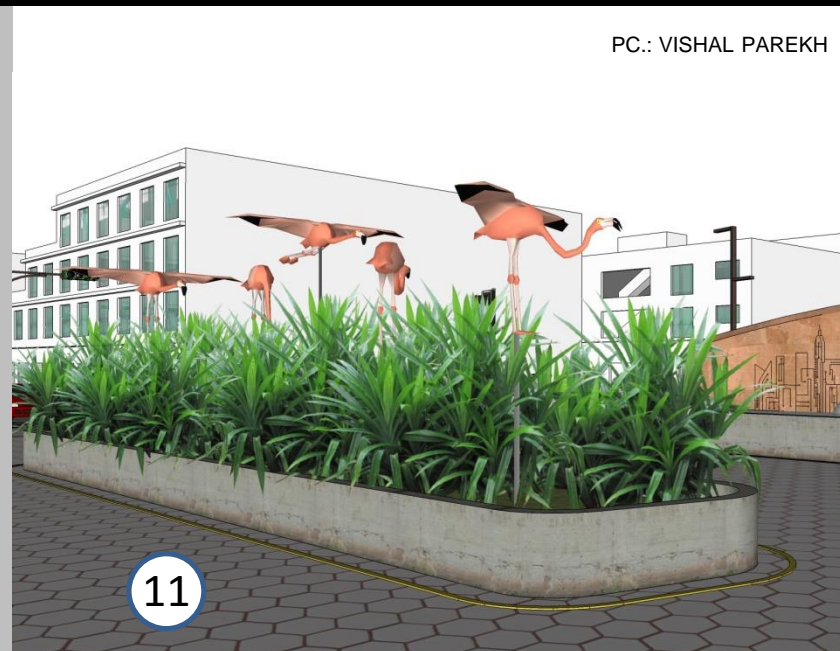
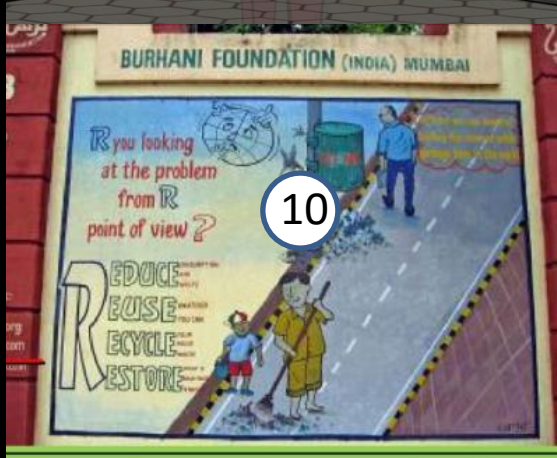
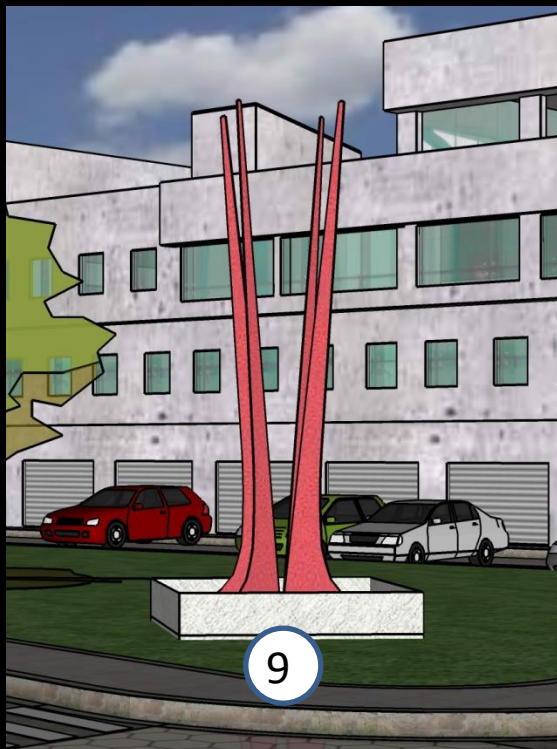
ELEMENTS OF BEAUTIFICATION

9) A land in a corner which is unused can become a piece of art and serve as landmark for the junction.

10) The abundant boundary walls around the city could be used for educative public art.

11) Mini traffic calming circle is a raised garden island located in a centre of the intersection round which traffic must be circulated.

12) street banners would give a sense of place and identity to unique neighborhood and destination of the city. they area easy to install- banner supports can be clamped on existing street lamps or other street poles.





13

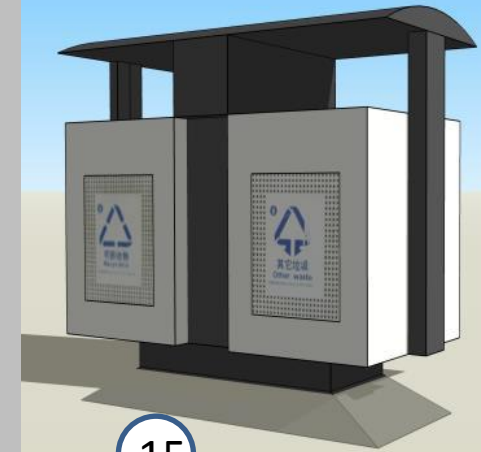
STREET FURNIUTE

13) signage of way finding and information of pedestrians and cyclist are essential for creating a public transport friendly city. signage provides help to pedestrian to navigate the city with ease and safety

14) Lighting needs of pedestrians are different from those of vehicular traffic and therefore need to be designed and integrated within the overall lighting strategy for the street. This would aid the safety of pedestrians on pavements after dark. Uniform low ambient levels of lighting provides better visibility for pedestrians. The height of street light should not more than 10-12 m.

15) Innovative, clean, well maintained and well loved Dustbins are the key to a “Clean” City. An Artistic way (graphics, cartoons) could convey – why and what kind of waste should go into which bin—even to illiterate users.

16) Adequate Way finding Signage and well-designed, artistic and bi-lingual “Local Area Maps” at Bus Stops – showing local roads and important civic destinations.



15



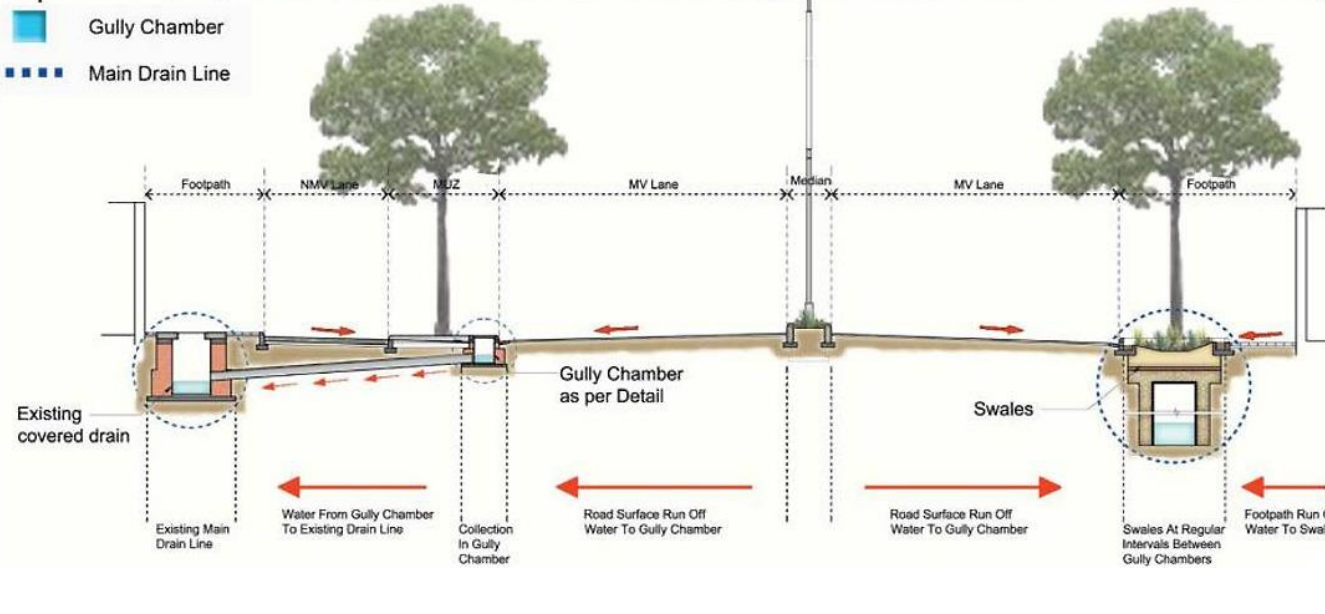
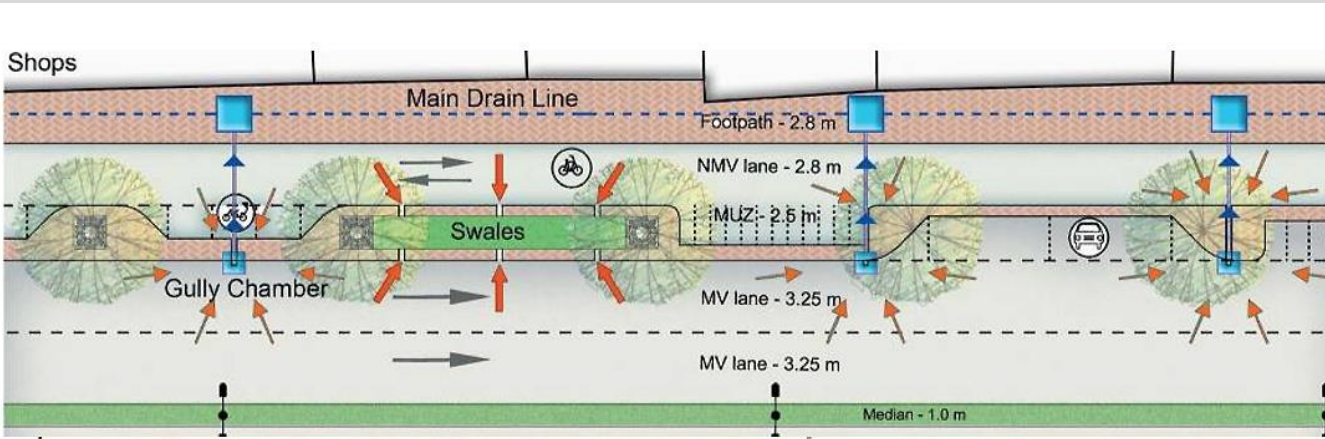
14



16



Street-edge Plan showing flow of surface (rain) water into Swales –from the carriageway as well as the footpaths/ cycle tracks.

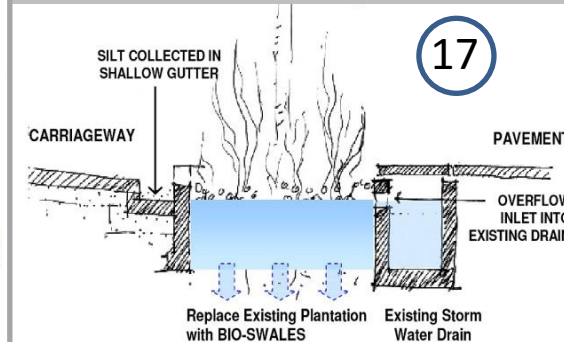


RAIN WATER HARVESTING

17) storm water can be managed as shown in Storm Water flows directly into a Bio-filtration or Bioretention Swale. Water is retained and infiltrated in the bio-swale.

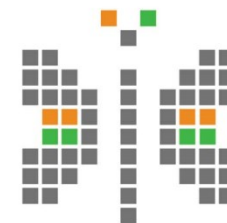
In heavy rains, extra stormwater overflows into the existing S.W. Drain.

Bioswales can connect to the Main Storm Water Drain –either in Series (connected only at the end); or in parallel –i.e. each bioswale bed overflows directly into the Storm Water drain, in case of heavy rainfall.



ADDITIONAL DETAILS (RAIN WATER HARVESTING)-05





Smart City

MISSION TRANSFORM-NATION

WINNER : 3
RUTA PAREKH

Contest #2 Junction Design

Name : Ruta Parekh

Address: 27 Om Sai Raw House, Nr. Someshwara enclave, Surat-395008

Age: 28

Gender : Female

Profession : Architect

Contact no : 9712190612

Email address : Ruta.parekh19@gmail.com

PROBLEMS



Lack of Identity

Identity is very essential for the place to be recognised as an urban junction; the landmark.

The existing situation without defined signages and urban street scape the place looks similar as other junction in suburban area.

Lack of public space

The scattered public realm at corner of the street and edge of footpath are commonly found. These places are not for people to congregate or sit for some time.



Lack of lively neighbourhood

Lack of greenery and lack of lively neighbourhood for people to hangout, sit and spend time watching people and to be watched is found to be a key problem in unifying the place.

PROBLEMS



Cleanliness

The cleanliness is the basic need of the place to create a healthy environment.

Due to canal and some of the broken road side edged creates an un desire condition for the urban junction.

Urban Kiosk

Due to large traffic island and lack of defined image of junction, the junction creates urban untidiness.

It also brings the confusion and for pedestrian, vehicle drivers and BRTS driver while transiting from the junction.



CONCEPT



URBAN GREEN

+



PEOPLE

+



SURAT - BRTS

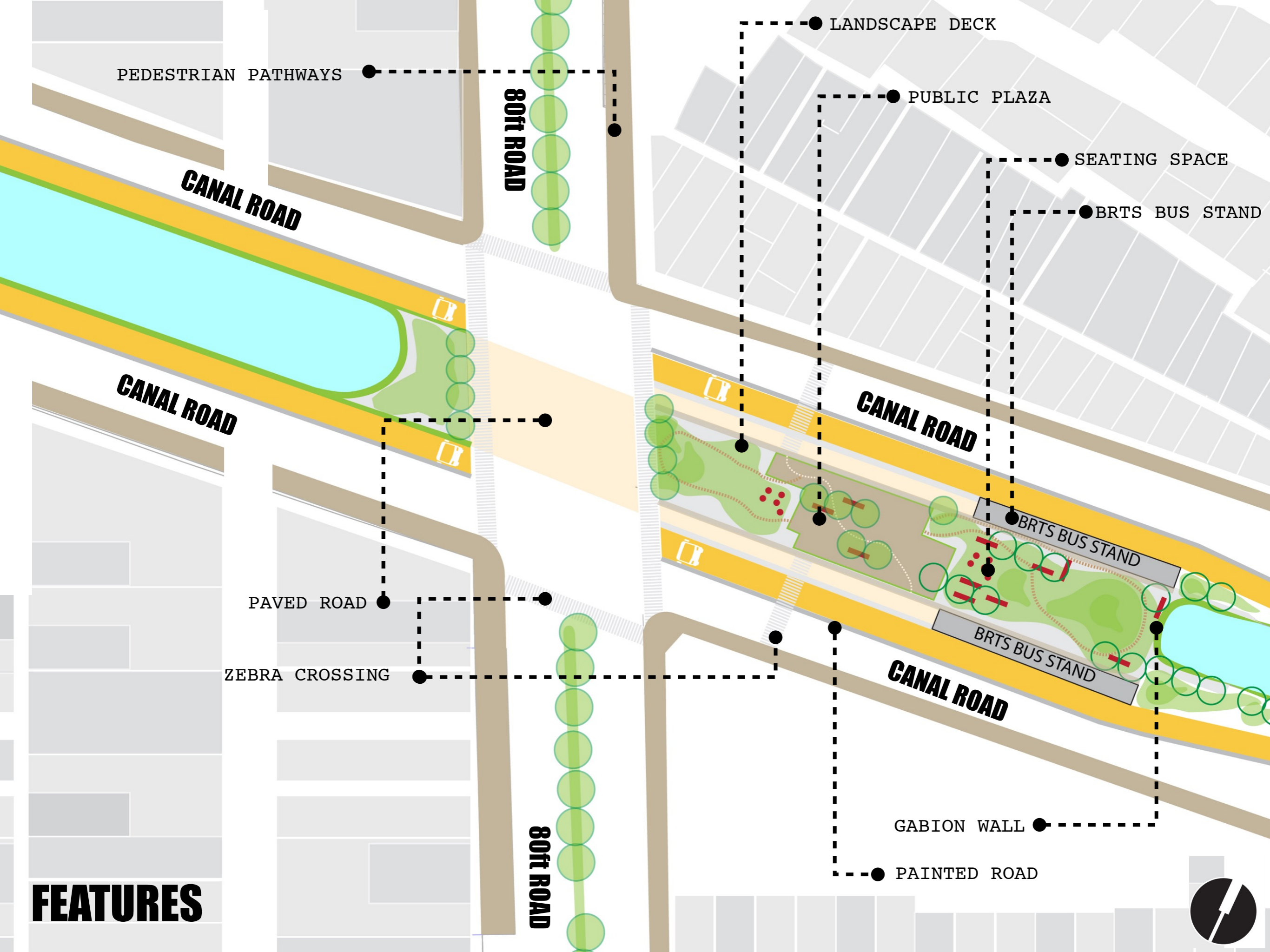
+



CLEAN INITIATIVE



Public space



PEDESTRIAN PATHWAYS

CANAL ROAD

80ft ROAD

LANDSCAPE DECK

PUBLIC PLAZA

SEATING SPACE

BRTS BUS STAND

CANAL ROAD

CANAL ROAD

PAVED ROAD

ZEBRA CROSSING

BRTS BUS STAND

BRTS BUS STAND

CANAL ROAD

GABION WALL

PAINTED ROAD

80ft ROAD

FEATURES



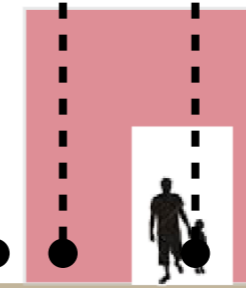
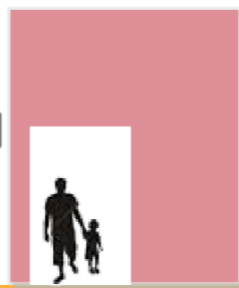
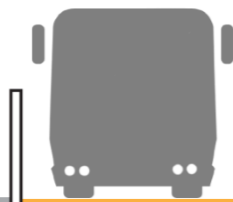


OPEN CANAL ● - - -

● - - - OPEN CANAL

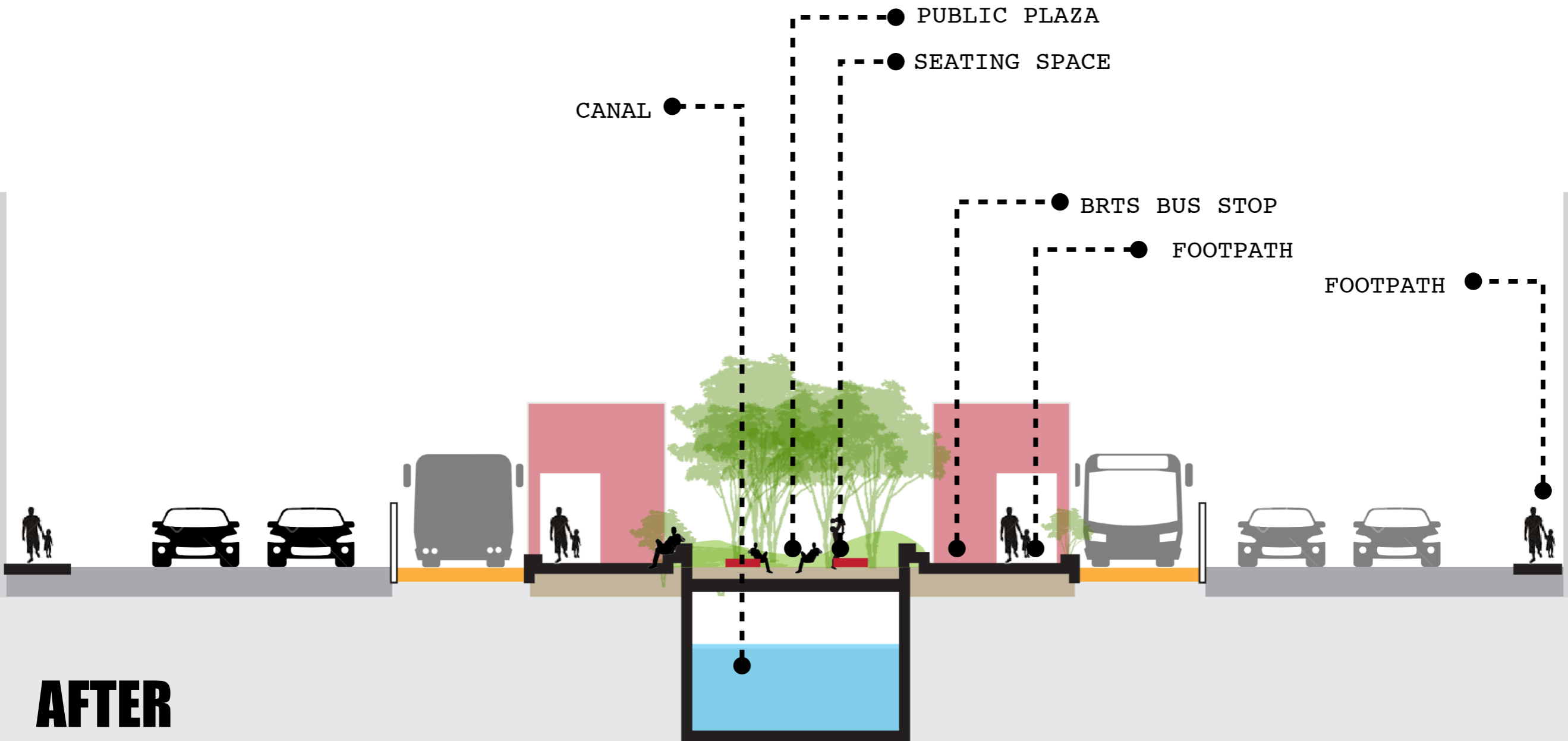
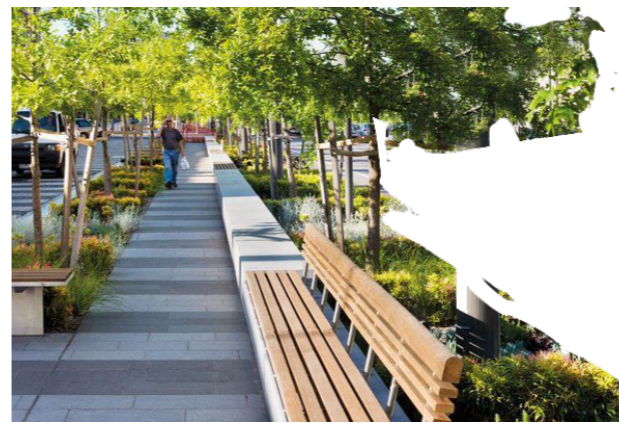
● - - - BRTS BUS STOP

● - - - FOOTPATH



BEFORE





Colour the road

Public gathering

Seating Space

Pedestrian crossing



PERSPECTIVE

Landscape space

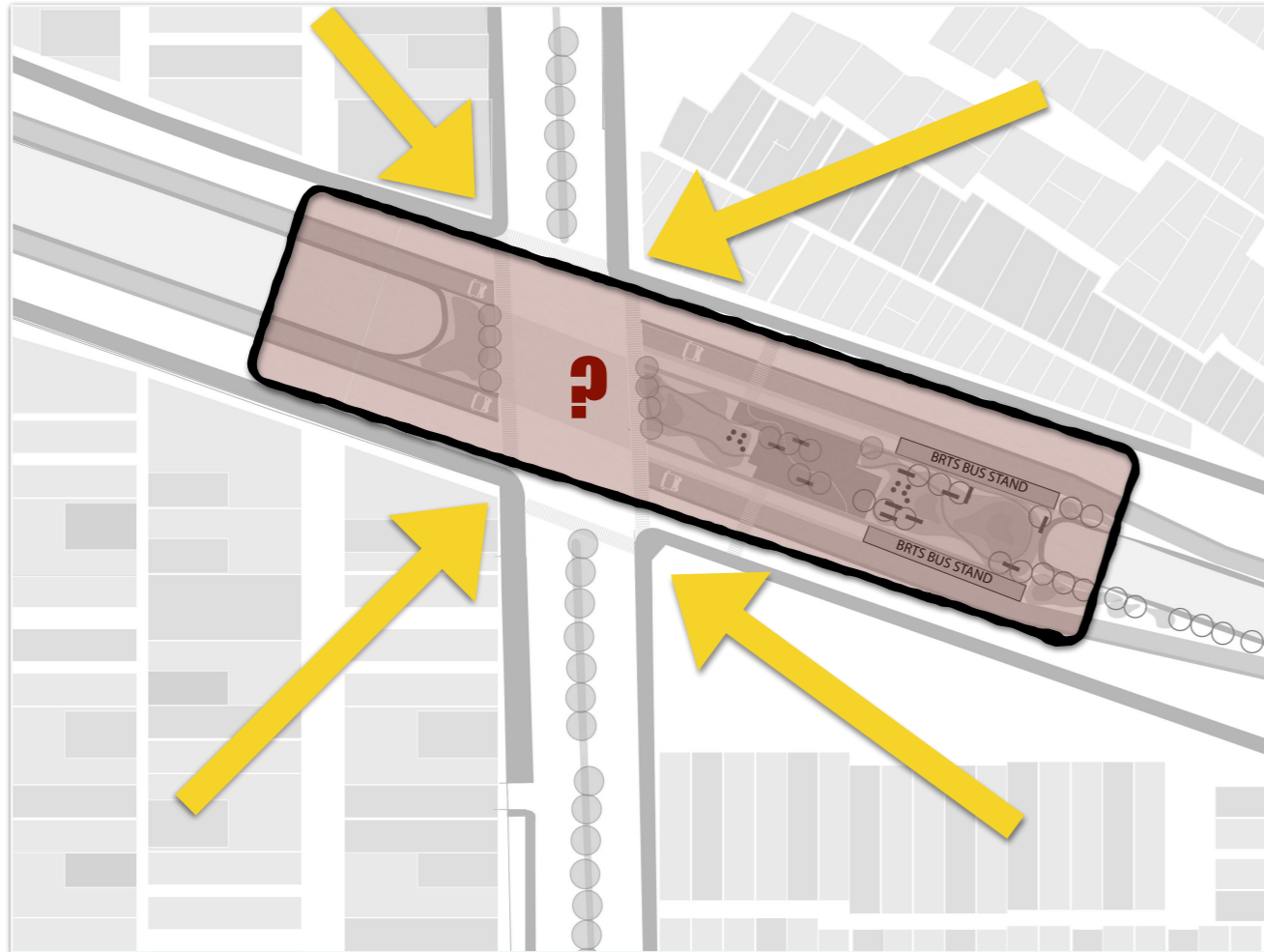
Seating space

Pedestrian crossing



PERSPECTIVE

KEY IDEAS



BRING COMMUNITY

The site is surrounded by mixed with diverse population at four corner of the site.

The junction becomes a potential element to provide a pause point in the center to create a transition phase between four parcel of the site.

KEY IDEAS

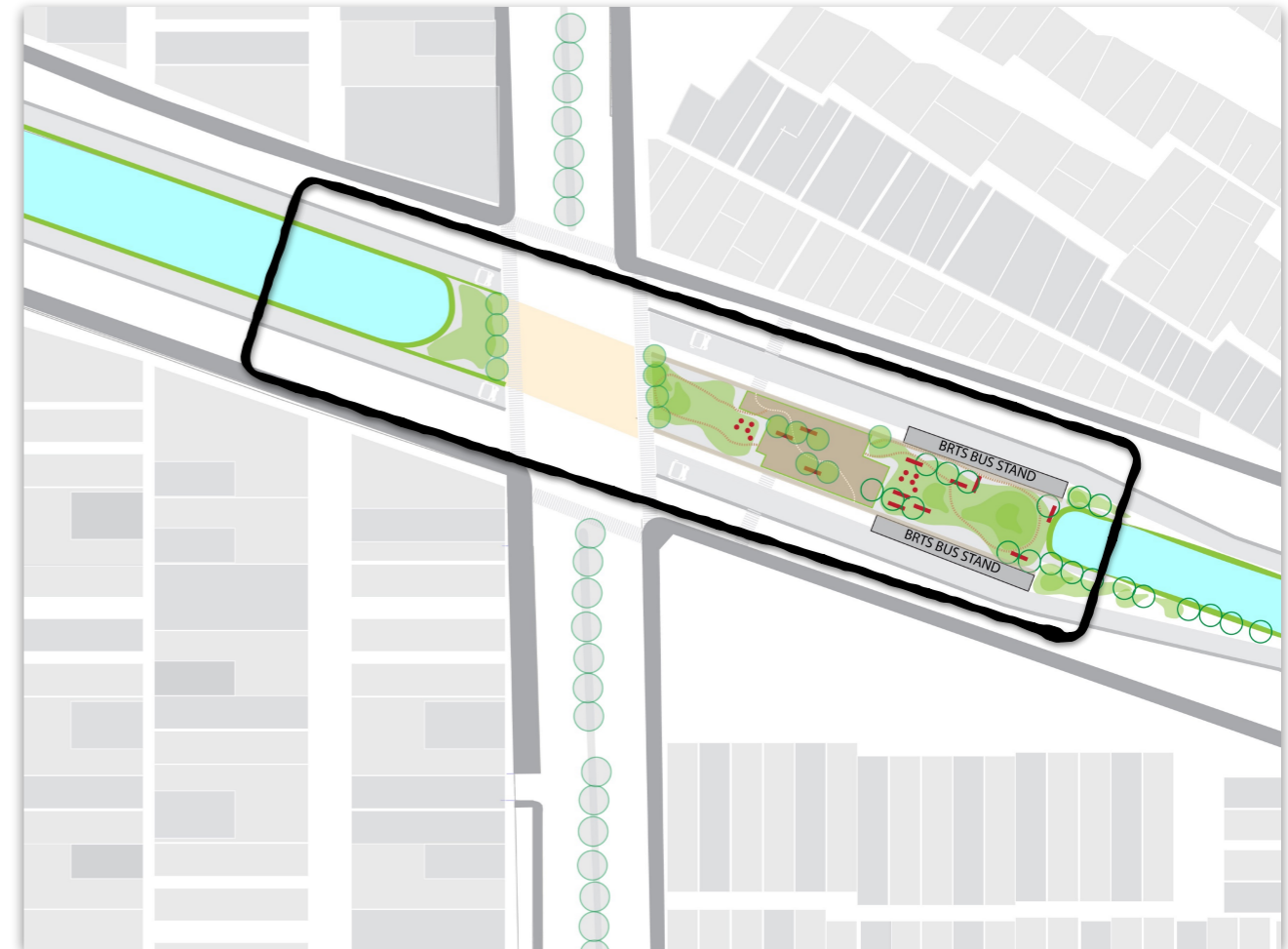
PUBLIC SPACE

The community is using the BRTS for their daily need of transport.

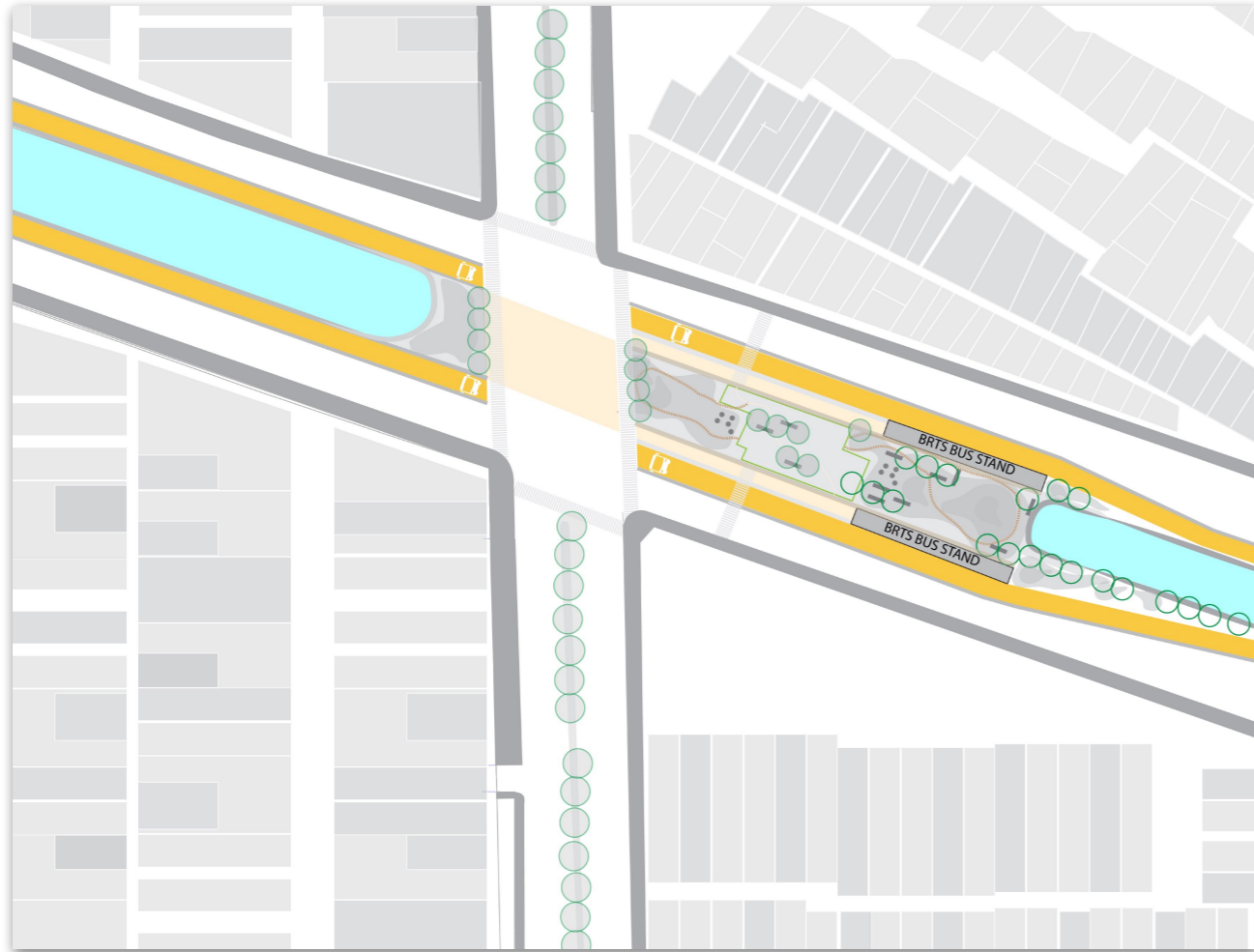
The transient space from across the four parcel to the BRTS required to be an important space for people

The canal serves a potential opportunity to bring the public space in the site sitting.

The found green space can act as potential public space where, people can see and to be seen by others.



KEY IDEAS



ENHANCING PUBLIC TRANSPORT

The public transport has been envisioned to gain a new identity by minimal intervention of painting the road surface.

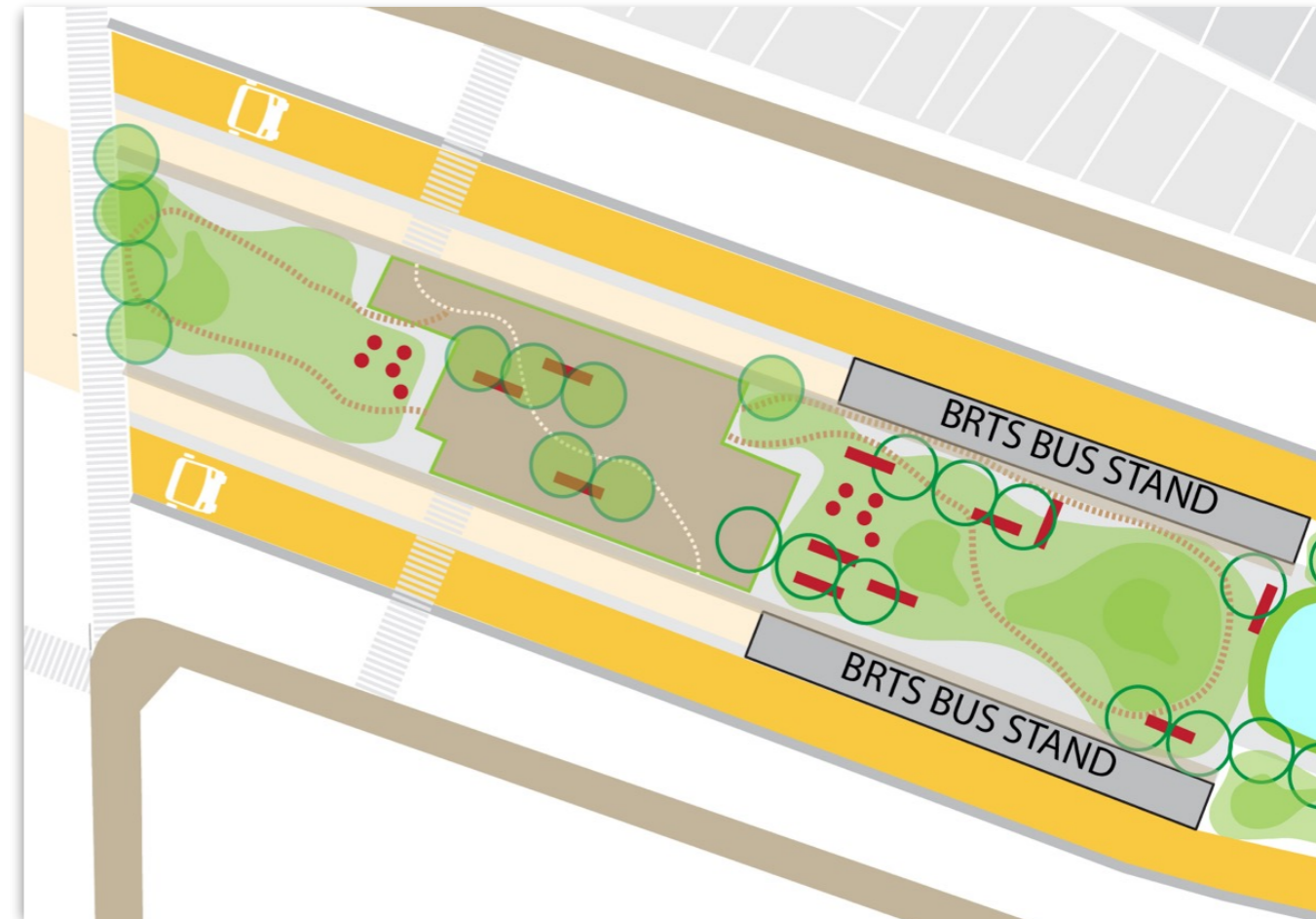
Despite of minimal intervention, this can create a liveliness in the surrounding environment.

KEY IDEAS

INTEGRATED LANDSCAPE SPACE

The covered deck over the canal brings the public space as well as provide shaded environment. It also helps the buffer the unpleasant the canal.

The pathways, landscape seating spaces is also provide



MATERIAL



Paving



Pedestrian crossing



Painted Road



rocknstone.com.au

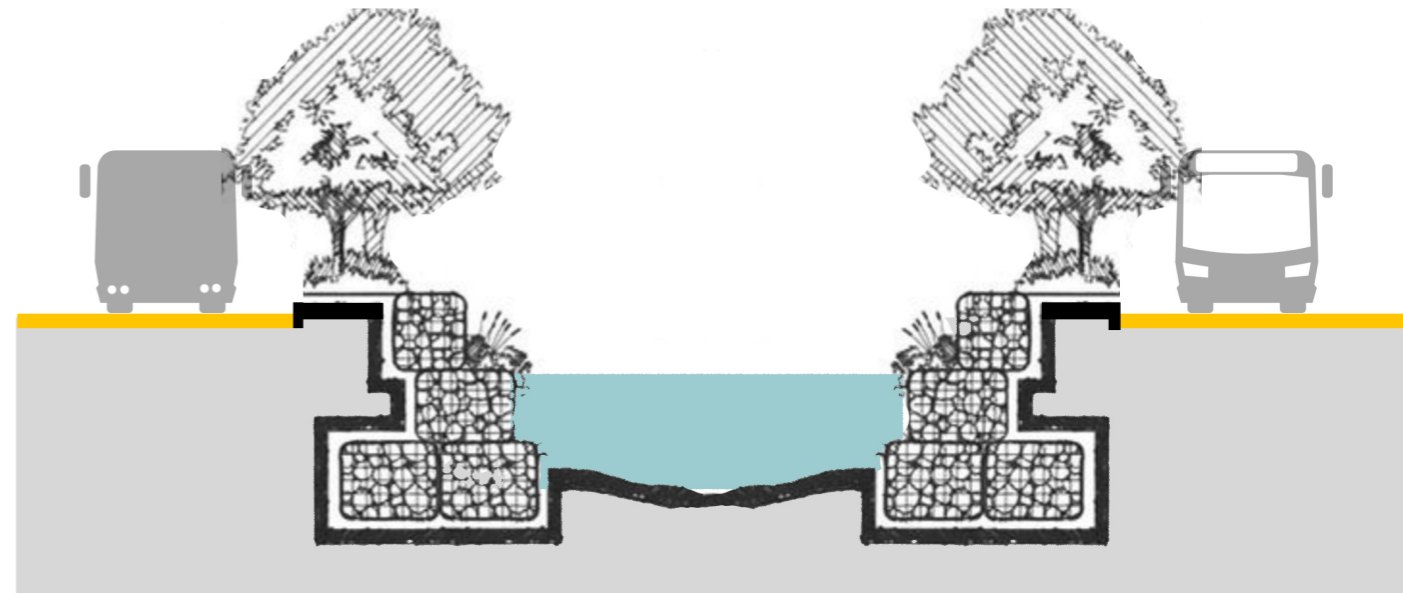
Concrete elements

KEY LANDSCAPE FEATURE

Canal edge

Canal edge can be further extended to create the continuation of the landscape.

The gabion wall can be used as a medium for the retaining structure. This allows the landscape to grow over and help the water percolation for the ground water table.

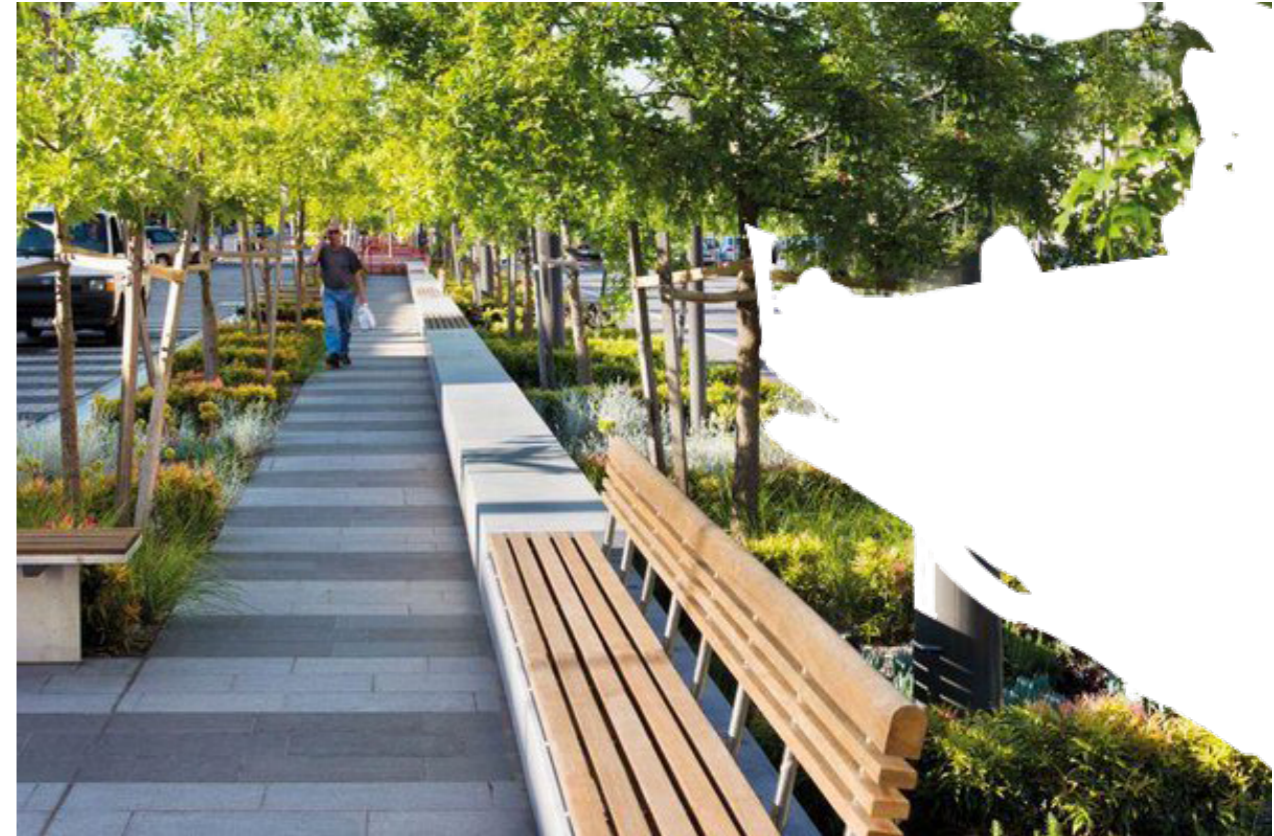


KEY LANDSCAPE FEATURE

Landscape over deck

The deck can be furnished with drought resistant landscape species that required less maintenance. The selection of trees will be with larger foliage to provide appropriate shade for people to sit and walk with comfort.

The landscape integration is envisioned with rich material pallet that can enhance the character of public space between two BRTS stops.





Our Public Spaces are as profound as we allow them to be.
-Candy Chang