Annexure – 1 Design Intent

The key features of smart streets are listed below:

- Uniform Carriage-Way width along the length of the road wherever possible
- Additional space allocated towards provision of wide footpaths
- Development of cycle tracks wherever feasible
- Layering/ Sequencing of Services
- The trenches for maintenance to be clearly labelled
- New utility networks to be laid, no replacement of old networks
- Construction of Bus bays, Auto bays wherever essential.
- Beautification and Landscaping of the footpath, junctions
- Provision of Street furniture (Signage's, Lane marking)
- Provision Pedestrian footpath LED lights

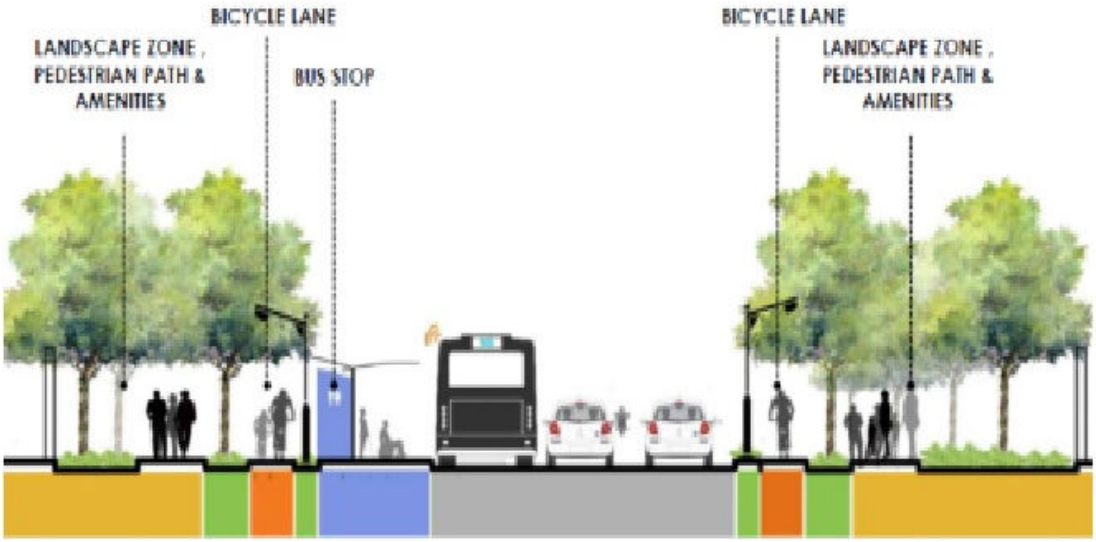
a. The approach towards this shall be:
   - Re-align Street Center (median), if required = Equal carriageway where 'To and Fro' Traffic is there
   - Reduction in carriage way may be considered wherever required
     - Resultant reduction in unnecessary over speeding, traffic calming
     - Resultant in creation of safe urban (inner city) streets
     - Equitable distribution of Right of Way (RoW) for pedestrians, cycles and vehicles
     - Wider sidewalks for safe pedestrian space, Opportunities for creating urban spaces (dedicated hawker zones)
     - Extra space to provide dedicated/regularized on-street parking to minimize hap hazard parking
   - Improvements in Junction Geometry
     - Efficient processing of traffic volumes
     - Safe crossing for pedestrians through introduction of Table Tops
   - Introduction of Dedicated Cycle Tracks / Shared Cycle Tracks
     - Promoting Non-motorized vehicles
   - Introduction of Bus-Stop and Public Toilet Cluster
     - Other facilities such as ATM, water ATM to be part of the cluster
   - Introduction of utility corridor under footpaths
     - Efficient use of space, Ensures avoiding of un-necessary road cuttings for utilities maintenance

b. Key Components shall be:
   - Road
     - Reconfiguration of roads
     - Lane appropriation
     - Junctions reconfiguration
     - Road Marking
   - Foot paths and walkways
     - Pedestrian friendly
     - Dedicated footpaths and walkways
     - Seating and Resting area

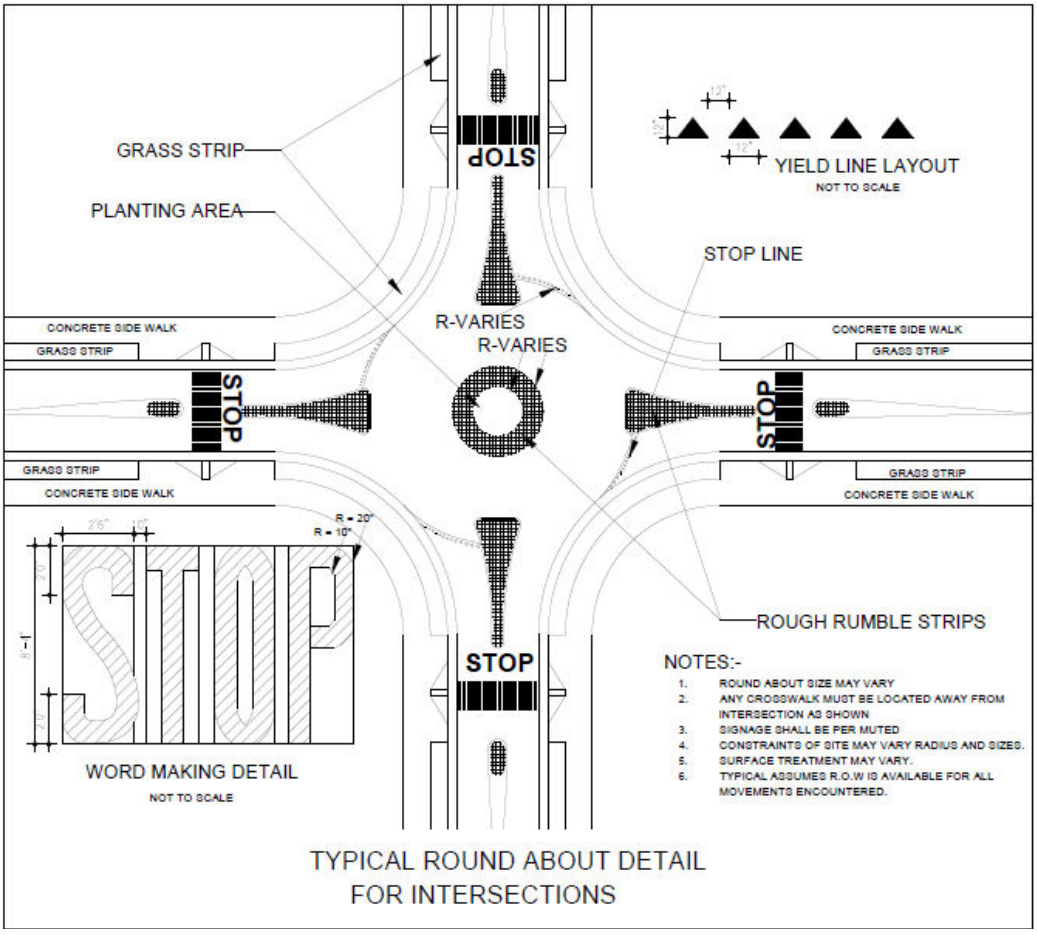
    - Other components:
        - Trees
        - Green cover
        - Permeable surfaces
- Bicycle lane:
    - Dedicated lane
    - Bike stations
    - Bike servicing stations
- Social components – Allocating space:
    - Public toilets
    - Hawkers zone
    - Accessibility to physically impaired
- Public Amenities:
    - Bus stop shelters
    - Kiosks
    - ATMs
    - Dust bins
    - Off street Parking
- Safety features
    - Pedestrian crossing markings
    - Signals
    - Signages
    - Pedestrian Lights
    - Barricades/seperators
- Underground utilities:
    - A trench for all utilities like:
      Water supply line, sewerage line **Only space allocation**
      Gas line – Space Allocation Only
      Electricity line, telephone line, TV cable line, TSE Line – In This Project Scope etc.
    - Optical fibers
    - Maintenance pits

Typical Road Section Where Two way Traffic is Permitted

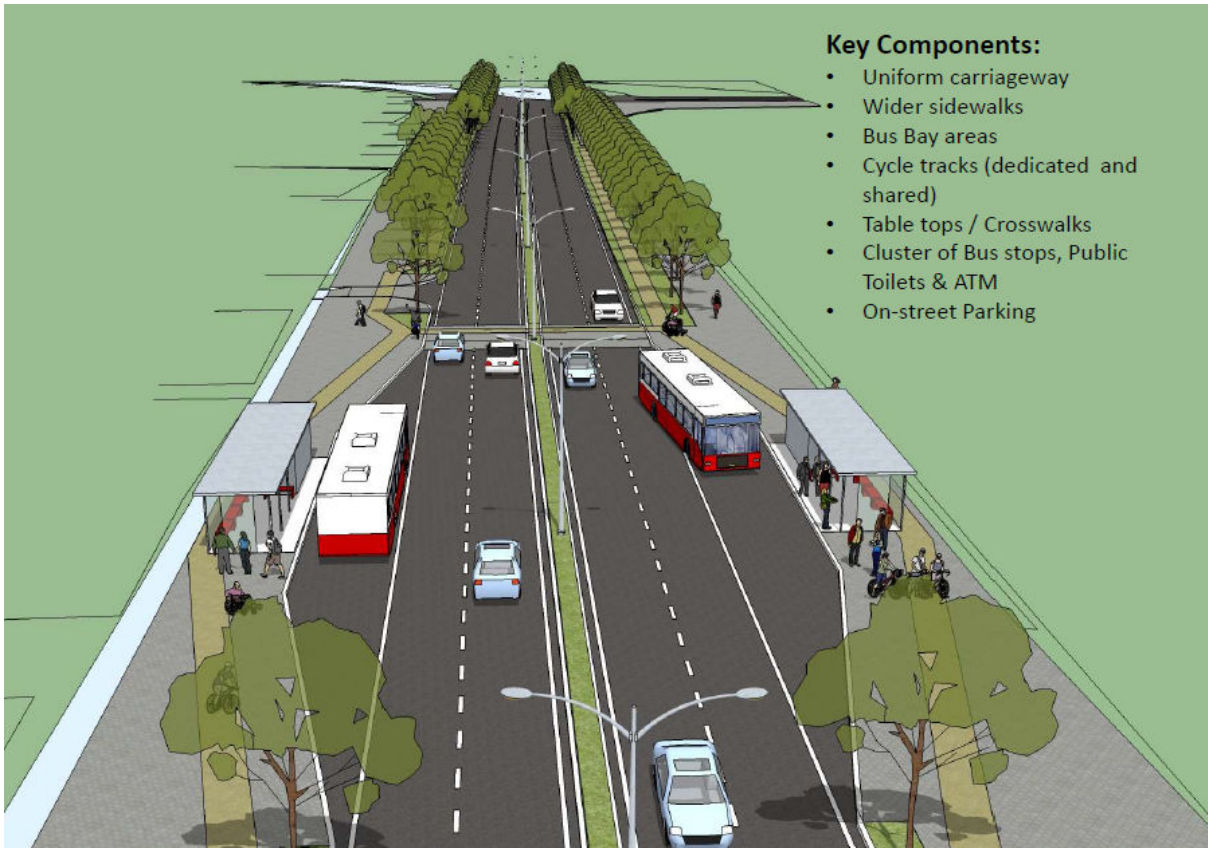
Typical Road Section Where One Way Traffic is Permitted



Typical Standard Junction design:



Typical design of Smart Street:



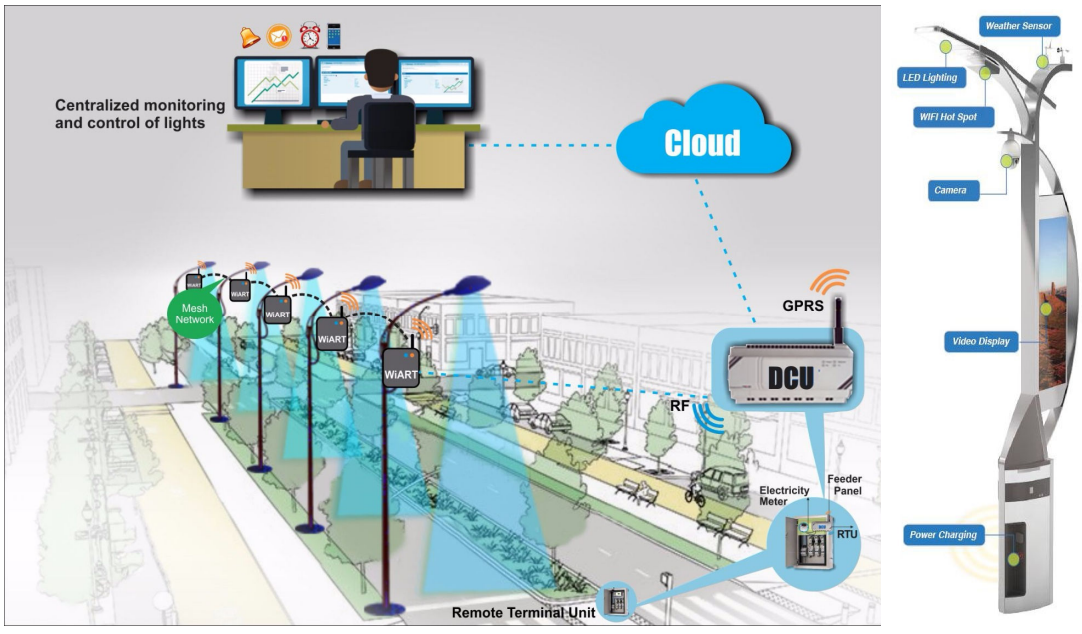
1. Bicycle Stations – BOQ and models – **Need to be developed and designed by the Bidder .**
2. **HOARDINGS AND UNIPOLES: Need to be developed and designed by the Bidder :**

   Sample Specifications of a Unipole:

   SPECIFICATIONS AND SCOPE OF WORK FOR 30' x 15' SINGLE SIDE UNIPOLE

   • Providing and fixing of Unipole Steel structure hoarding of size 9.15 m x 4.57 m (approx 30 ft x15 ft). The structural frame shall be in two layers fabricated out of 63.5mm dia of 3mm thick pipes (2.5"). The vertical pipes should be placed @ 750mm c/c and the horizontal pipes should be @ 1000mm c/c properly fabricated with bone pipe and cross bracing with 88.5mm dia of 3mm thick (3.5"). The 6.1 m (approx 20 ft) high, stand pipe shall be 500 mm dia of 10 mm thick MS sheet fixed with base plate 20 mm thick MS plate including cutting welding etc complete as per approved design & drawing in all respect.
   • Height of M.S. Pipe above ground level - 20ft + 15' ft
   • Depth foundation below ground level - 10 ft
   • Quantity - 1 no.
   • M.S. Pipe - 20' dia - 1 No.
   • Thickness of pipe - 10mm
   • Bottom and top MS plate in foundation-20mm thick - 2 nos.
   • M.S. Anchor bolt 40mm dia - 5' length
   • ACP sheets - 4mm thick - 450 sft
   • Logo DDA & NBCC - 2 nos.
   • Flex Board Size - 30' x 15' - 450 Sft
   • R.C.C Mix - 1:1½:3 - 5.60 cum

• TOR Steel in foundation 16 dia (Top & Bottom) - 150 kg approx.
8 dia - Stirrups - 20 kg
• M.S. Frame Pipe 4mm & 6mm - 2100 kg
(horizontal & vertical - 2.5" & 3.5" Round)
• Painting work with primer -
• Light LED - 100 watts - 3 nos
• G.I. Sheet - 18 gauge - 300 kg approx.
(for back, panelling 30 x 15=450 sft)
• Letter writing - 4" size
Note: The quantities are indicative only.



3. **STREET SIGNAGE:**

These signage can be of different type as listed below:

- **Bus and cycle signs**
- **Direction and tourist signs**

- **Information signs**
- **Level crossing signs**
- **Fly over signs**
- **Miscellaneous**
- **Motorway signs**
- **On street parking**
- **Pedestrian, cycle, equestrian**
- **Pedestrian zone signs**
- **Regulatory signs**
- **Road works and temporary**
- **Signs for cyclists and pedestrians**
- **Speed limit signs**
- **Tidal flow lane control**
- **Traffic calming**
- **Warning signs**

  Need to be mentioned in the Smart street tender for the street signs in line with Various Indian standards for signage and safety

4. **DOOR NUMBERING: This needs to be mentioned in the Smart street tender in Corrigendum**
5. **BOAT CLUB – STATUE AREA DEVELOPMENT PLAN – Need to be mentioned in the Smart street tender in Corrigendum**
6. **E-TOILETS - Need to be mentioned in the Smart street tender in Corrigendum**
7. **URINALS - Need to be mentioned in the Smart street tender in Corrigendum**