

Developing a Circulation plan to decongest major arterial roads in Siliguri and pilot for Junction improvement under the Capacity Building Project on Low Carbon and Climate Resilient City Development in India (CapaCITIES)

Terms of Reference

Title	Developing a circulation plan to decongest major arterial roads in Siliguri and pilot for Junction improvement under the Capacity Building Project on Low Carbon and Climate Resilient City Development in India (Capacities)
Location	Siliguri City
Period (4 Months)	<p>TOR published on ICLEI South Asia website –11/10/2018</p> <p>Last date of acceptance of proposals: 25/10/2018</p> <p>Strategy to improve the circulation along major arterial roads along the core market area: 10/02/2019</p> <p>Designs to improve road geometric of the Sevoke More, Panitanki More and Air View along this road: 20/02/2019</p> <p>Pilot to demonstrate the effect of passive design solution for improved road geometrics: 10/03/2019</p>
Involvement of Experts	Urban Mobility Expert: 50 Man Days

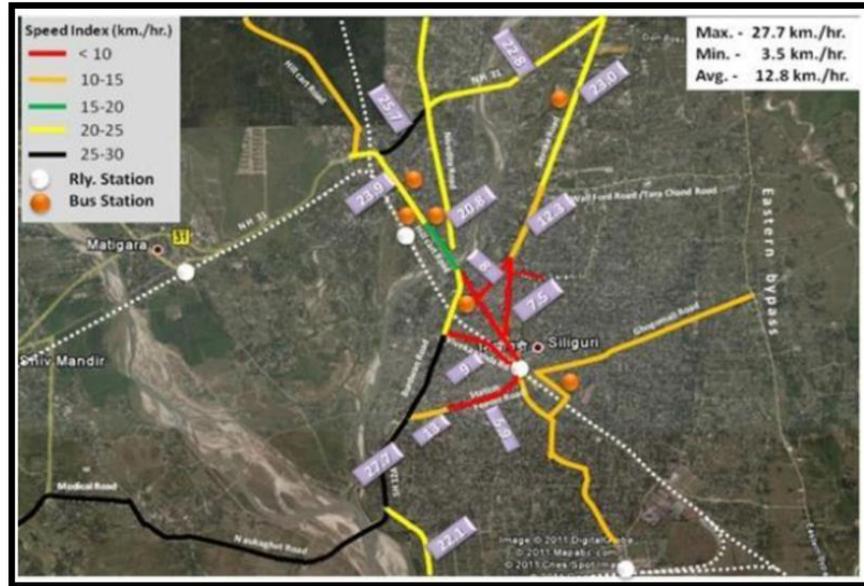
Background:

The Swiss Agency for Development and Cooperation (SDC) is supporting the CapaCITIES project in four Indian cities, including Siliguri. The project aims at strengthening the capacities of Indian cities to identify, plan and implement measures for achieving lower greenhouse gas emissions growth path and enhancing resilience to climate change in an integrated manner. The CapaCITIES project is offering to assist the city in developing a strategy to decongest its major roads along the core market area as well as improving overall circulation on major roads.

ICLEI Local Governments for Sustainability, South Asia (ICLEI South Asia) on behalf of Siliguri Municipal Corporation and CapaCITIES implementation team, invites proposals for involvement of a mobility expert for “Developing circulation plan to decongest major arterial roads in Siliguri and pilot for junction improvement under the capacity building Project on Low Carbon and Climate Resilient City Development in India (CapaCITIES)”

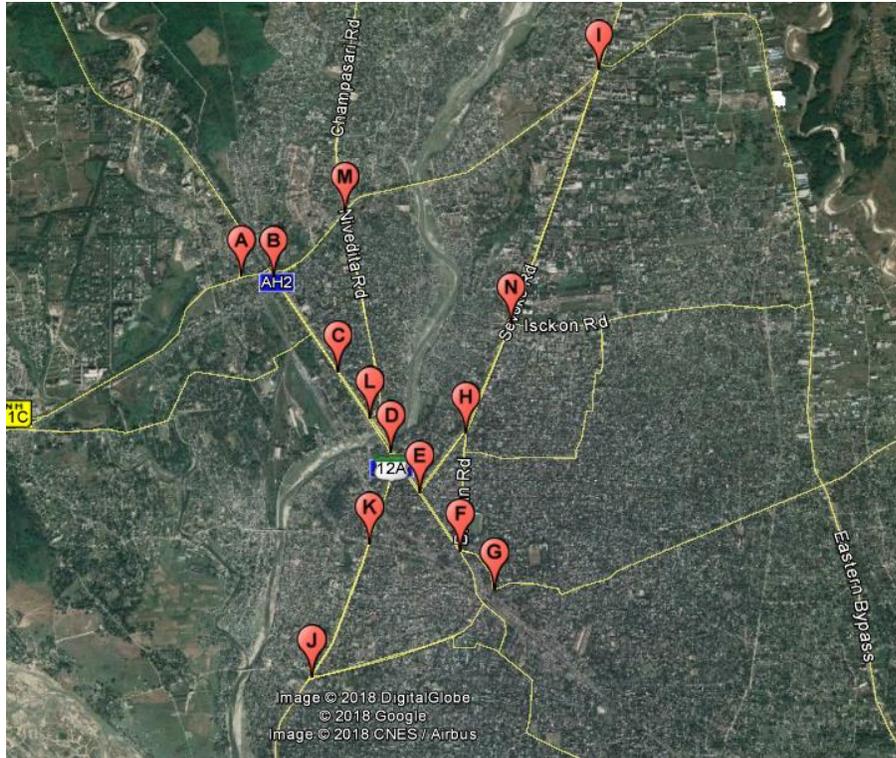
Description of the Project

Most major roads in Siliguri are affected by traffic congestion and consequent low vehicular speed. The average speed of a vehicle running along the major roads of Siliguri is 13 kmph¹, and in some stretches it is as low as 4 kmph (refer figure below). This leads to increased fuel consumption, pollution and GHG emissions.



The pollution levels are abnormally high in the SMC area, especially along the major road stretches. One of the major reasons for such severe congestion is friction between various road users and vehicles on narrow roads in city. In addition, mix of local and long-distance traffic, friction between different road users and poor geometrics of road network increases the magnitude of traffic congestion. The city is dominated by Y-shaped junctions along the entire network, where local/collector streets merge into the major arterial roads creating bottlenecks. The geometrics of the junctions are poorly planned, which increases the conflict and is not conducive to smooth traffic movement.

¹ As per traffic studies conducted by SJDA



A	Darjeeling More
B	Mallaguri More
C	Junction More
D	Air View More
E	Sevoke More
F	Venus More
G	Court More
H	Panitanki More
I	Salugara Check Post
J	Jalpai More
K	Jhankar More
L	Gurung Basti More
M	Champasari More
N	Payel Cinema More

Among all the major intersections around the core market area, Venus More witnesses the maximum number of vehicles passing through, followed by Sevoke More, Panitanki More and Air View More (Table below²), which can be considered for improvement. Moreover, the junctions of Venus More, Sevoke More and Panitanki More bind the core market area of Siliguri alongside multiple schools, administrative buildings, banking and financial institutions, and a stadium. Thus, invariably this area is congested from 10 am to 7 pm every day, throughout the year.

Road	Section	Total (PCU)	Peak hour (PCU)
Hill Cart road	Between Venus More & Sevoke More	47,639	5105
Hill Cart road	Between Sevoke More & Air View More	63,222	8738
Hill Cart road	Between Air view More & Junction More	70,072	8226
Hill Cart road	Between Darjeeling More & Junction More	83,828	5478
Hill Cart road	Between Venus More and Court More	31,442	3882

² Source of data is traffic studies undertaken by SJDA

Sevoke road	Between Sevoke More & Panitanki More	54,150	4671
Sevoke road	Between Panitanki More & Salugara Check Post	42,937	3647
NH 31	Between Darjeeling More & Salugara Check Post	28,640	3427
Burdwan road	Between Air View More & Jalpai More	34,500	2758
Bidhan road	Between Venus More & Panitanki More	16,981	2549
SH 12	Between Jalpai More and Tinbatti More	23,471	3163

In the above context, it proposed to identify strategies to decongest major arterial roads through different interventions as listed below:

Part 1: Strategy to improve the circulation along the major arterial roads around the core market area

Part 2: Strategy to decongest the major roads along the core market area, including designs to improve road geometric and junction design of the Sevoke More, Panitanki More and Air View More along this road.

Part 3: Pilot to demonstrate the effect of passive design solutions for improved road geometrics (subject to approval of above design interventions from city officials).

Objectives of the project

The main objectives of the study include:

- Comprehensive study of traffic (all modes including Pedestrian/NMT) movement along the core market area.
- Understand present circulation along and around the core market area.
- Propose a comprehensive solution to decongest major arterial roads with focus on improvement of circulation.
- Propose a detailed design of all intersections along core market area on arterial & major traffic movement corridors.
- Based on approval from city officials, demonstrate the effectiveness of passive design solutions to ease the congestion through junction design improvements.

Outputs of the project

- Circulation plan for major arterial roads which segregates local and long-distance trips and reduces the friction between different road users
- Decongestion strategy for major roads along the core market area

- Detailed improvement design of all intersections along the core market area on arterial & major traffic movement corridors
- Pilot to demonstrate the impact of improvement in road network geometrics along intersections, on reducing the congestion.

Note: The final output of the project must be in a report format which includes detailed data analysis, inference strategies and designs.

Study area

Siliguri city is part of larger urban agglomeration where peri urban areas form a major part. These urban centers are spread along the periphery of the city. Siliguri city forms the core of the region and can be accessed through main arterial roads. However, these arterial roads are characterized by poorly planned road geometrics and Y shaped junction thereby increasing the stress on the access point to the city. The study area to be considered is listed below:



- The circulation plan needs to be developed for arterial roads within the city which considers the traffic from peri urban areas.
- Decongestion strategy will be focused on major roads along the core market area which includes:
 - Hill Cart Road
 - Sevoke Road
 - NH 31
 - Bidhan Road
 - SH 12
- The junctions to be considered for improvement are:
 - Sevoke More,
 - Panitanki More
 - Venus More

Scope of Work

The scope of the work includes the following:

Part 1: Circulation plan for the arterial roads in Siliguri and decongestion strategy for the major roads along the core market area

- To carry out classified traffic volume count survey for all categories of vehicles for 18 hours on any two mid-week working days showing all turning movements with classification of vehicles, pedestrian/NMTs all along the corridors and at junctions surrounding the core market area.
- Assess arterial road capacity for the stretch under study, carry out speed and delay survey. The objective of the survey would be to suggest for the future, suitable measures for segregation of local traffic, smooth flow of traffic and traffic safety.
- To carry out parking (off-street and on-street) and activity survey along the corridor.
- To study the present signal system/cycle time, provision of markings/signages all along the corridors and at all mid point's pedestrian crossings.
- Detailed road inventory study. Study of existing openings in intersections, side footpaths etc. and rationalization of the same within the overall scheme.
- Traffic assessment & its management all along the corridor & 100 meters across the alignment on roads meeting the alignment.
- Based on the congestion analysis on the arterial roads, preparation of circulation plan, network connectivity plan for arterial roads within Siliguri.
- Preparation of decongestion strategy for the stretch under study.

Note: Though not mandatory, the consultant is requested to suggest advance technology/methods to assess the traffic congestion such as aerial videography using drones, Google Maps etc.

Part 2: Improved road geometric design of the Sevoke More, Panitanki More and Air View along this road.

- Carrying out Total Station Survey to work out the feasibility of geometric improvement plan for the all intersections. A survey shall be taken up to 100 m depth beyond the ROW for the connecting streets all along the proposed corridor with foot prints of buildings or 50 mt (whichever is less) on both sides of the corridor and connecting streets showing entry/exit points/gates etc. in detail.
- Prepare design solution for improvement of road intersection.
- Assist CapaCITIES project team to present the design solution to city officials and obtain acceptance for implementation.

Part 3: Pilot to demonstrate the effect of passive design solutions for improved road geometrics.

- Subjected to approval from city officials, demonstrate the junction improvement measures through temporary installations for at least 7 working days along one of the above junctions.

Documents to be submitted by applicants

- **Technical Proposal:** The Technical Proposal should provide the following information/documents:
 - Consultant/ firm profile and detailed CV.
 - Consultant's experience on assignments of similar nature, the outline should indicate, inter alia, the profiles and names of the staff provided (if in case of a firm), duration of the assignment, contract amount, and firm's involvement.
 - Detailed approach and methodology for undertaking the current assignment, project schedule with activity and duration to accomplish the task within the scheduled project duration along with detailed work plan.
 - List of proposed staff, details of tasks assigned to each staff as per his/her experience shall influence the evaluation.
 - All relevant CVs shall be provided in full detail. If the CV of a proposed staff is found incorrect, the award of the consultancy to the applicant may also be liable to cancellation in such an event.

- **Financial Proposal:**
 - A financial proposal including all manpower, travel, equipment, survey and costs as may be required.
 - The financial proposal shall be inclusive of all the costs including taxes associated with the assignment.
 - It is clarified that, for the purposes of evaluation, the financial proposal should be prepared in INR.
 - The total amount indicated in the financial proposal shall be without any condition attached or subject to any assumption and shall be final and binding. In case any assumption or condition is indicated in the financial proposal, it shall be considered non-responsive and liable to be rejected.
 - The final amount should be quoted in both figure and word.
 - A copy of valid PAN number, of registration with GST, last 3 financial year's balance sheet (or as applicable), audited by certified Chartered Accountant need to be submitted.

Qualification and Experience

- **Urban Mobility expert**
 - a. Minimum of 10 years of experience in urban transport planning and research and preferably should have a good understanding of sustainable urban transport.
 - b. Experience in road network analysis, demand analysis, circulation planning and geometrics of road intersection is essential;
 - c. Should be a good coordinator and would be responsible for quality of the outputs;

- d. The candidate should have knowledge and experience in providing designs for traffic segregation, road and intersection geometrics.
- e. Should have experience in conducting traffic surveys, analysis and preparing circulation plans.

Proposal Submission:

- The Terms of Reference (ToR) can be downloaded from the ICLEI South Asia website (southasia.iclei.org).
- The financial & technical proposals should be submitted as separate documents.
- The proposal should be submitted with the title “Developing Circulation plan to decongest major arterial roads in Siliguri and pilot for Junction improvement under the Capacity Building Project on Low Carbon and Climate Resilient City Development in India (CapaCITIES)”.
- The proposal can be submitted by the applicant through email to ashish.rao-ghorpade@iclei.org on or before 24/10/2018.
- The proposal shall be submitted in two parts, viz.
 - Part I: Technical Proposal
 - Part II: Financial Proposal

Terms and conditions:

- In case of any doubt/query regarding any portions of ToR, the applicant should send it by mail to contact person mentioned in ToR.
- ICLEI South Asia reserves the right to reject any proposal, and to annul the selection process and reject all proposals at any time, without thereby incurring any liability to the affected applicant or any obligation to inform the affected applicants of the grounds for such decision.
- It should be noted that the project is being implemented in above SMC jurisdiction area and hence instructions to applicants will be given by ICLEI South Asia in consultation with city officials. ICLEI South Asia will be overall in-charge for all the works that would be executed under the present scope of work
- The applicant shall also obtain necessary permission from concerned government departments related to the work/data collection if deemed necessary and in coordination with city officials and ICLEI South Asia.
- The decision of ICLEI South Asia will be final.
- The proposals received will be scrutinized & evaluated by ICLEI South Asia in consultation with senior officials of city officials involved in the execution of CapaCITIES project. The decision shall be informed to the winning applicant.
- Detailed Work Order will be issued to winning applicant within 14 days of announcing the results.

- The selected applicant is to forward the signed and sealed work order to ICLEI South Asia at the earliest or not more than 7 days of issue of work order.