

## **MUMBAI METROPOLITAN REGION – ENVIRONMENT IMPROVEMENT SOCIETY**

**No. MMR-EIS/Study/Urban Walkability/2021**

### **REQUEST FOR PROPOSAL**

The Mumbai Metropolitan Region – Environment Improvement Society (MMR-EIS) invites sealed tenders/offers from Consultants fulfilling the eligibility criteria for the Project of Walkability Improvement in Urban MMR.

#### **Eligibility**

The Consultants desirous of submitting proposals for the project are expected to satisfy the following eligibility criteria:

1. It should be an agency registered in India under appropriate statute enabling it to carry out the project and should have been actively working for the past at least 5 years. It should not be a consortium or a joint venture.
2. It should have a local work space with adequate infrastructure in MMR and should have an annual turnover of a minimum Rs. 25 lakhs during the preceding 3 years.
3. It should have the experience in carrying out at least one urban traffic and transportation related study / preparation of one urban transport project, involving the component of pedestrian traffic for any Government agency in India.
4. It should have a team of qualified and experienced Transportation Planners, Urban Designers/ Planners, Civil Engineers or Architects, Draftsmen, Computer Operators and Surveyors.

#### **Arrangement for the Project**

The MMR-EIS will first scrutinize the documents and proofs for ascertaining satisfaction of above eligibility criteria and shortlist the eligible Consultants, evaluate the eligible bids and select the Consultant, enter into an agreement with it for this purpose and will also supervise Consultant's work, reporting etc. and make payments to it as per the details specified in the Terms of Reference and this RFP. The period of engagement will be about 12 months.

#### **Brief Scope of Work**

The Consultant is expected to study various aspects, including availability and requirement of infrastructure / amenities / facilities, related to walkability for the areas of 3 cities / towns in MMR, i.e. Mira-Bhayander Municipal Corporation, and Ambernath and Pen Municipal Councils, calculate Walkability Indices and suggest design and other solutions, including 'quick wins', and prepare walkability improvement reports, including action plans, for each of them.

#### **Terms of Reference**

The Terms of Reference indicating the scope of services is given in **Annexure-I**. The total time limit for the assignment and various outputs shall be as per **Annexure-II**.

#### **Pre-bid Meeting**

A pre-bid meeting will be held on 23<sup>rd</sup> February 2021, at 11 a.m. in the office of MMR-EIS, 6<sup>th</sup> Floor, MMRDA New Office, BKC, Bandra (E), Mumbai to clarify issues of prospective bidders, if any,

related to the RFP, ToR etc. Interested parties are requested to attend. Any change in the schedule of the pre-bid meeting will be informed on MMR-EIS's web-site.

### **Submission of Bids**

Consultants should submit the following documents (one copy each) in separate sealed packages (together put in one sealed package):

1. Eligibility Note
2. Technical Proposal
3. Financial Proposal

Each envelope should specifically indicate type of proposal (technical or financial) / Eligibility Note, Name of Project, Name and Address of the Consultant etc. The common envelope should also indicate Name of Project, Name and Address of the Consultant etc. Successful bidders will be required to submit additional copies of Technical and Financial Proposal, if necessary, as desired by the MMR-EIS.

### **Contents of the Proposals**

The Consultant is expected to submit the bid (and not as a joint venture) indicating the manpower proposed to be used for the assignment, which may include external manpower proposed to be hired and available for the project.

### **Eligibility Note:**

1. Eligibility Note providing details, including in the format provided in **Annexure-III**, demonstrating with documentary proofs how the Consultant satisfies the Eligibility Criteria. The documents should include copies of registration certificates, work orders and/or contracts indicating scope of work and terms of reference and completion certificate for a completed assignment.

### **Technical Proposal:**

1. General profile of the agency.
2. Information with documentary proofs indicating experience in carrying out urban traffic and transportation related studies and preparation of urban transport projects, involving the component of pedestrian traffic and about the concerned Government agencies.
3. Approach and Methodology in carrying out Walkability Improvement project for concerned cities / towns of MMR; and comments or suggestions on ToR, if any.
4. Contact details including details of Nodal Officer for the project.
5. The Proposed Team, their detailed self-certified CVs specifically indicating relevant experience and should be conclusive proof of eligibility and experience, and document of undertaking indicating their commitment for the project during its entire period.
6. Detailed tasks assignment based on individual area of experience and Manning Schedule

It may be noted that the experience of individual members of proposed team should not be counted / claimed as experience of the agency and such experience can only be counted / claimed for particular individual. The documents specified above should include copies of registration certificates, work orders and/or contracts indicating scope of work and terms of reference and completion certificates

for completed assignments, self-certified CVs of experts specifically indicating relevant experience and shall be conclusive proof of eligibility and experience. The key personnel expected to be made available for the project is given in **Annexure-IV**.

The Consultant will be required to make a presentation to the Sub Committee of MMR-EIS regarding Technical Proposal.

### **Financial Proposal**

The Consultants shall quote their lump sum all-inclusive offer (excluding GST) and also provide separate break up of cost for items specified in the table given below:

<b>Sr. No.</b>	<b>Particulars of Cost</b>	<b>Estimated Amount (Rs.)</b>
1.	<u>Remuneration to the Team</u> Team Leader / Sr. Transportation Planner - 1 (manmonths X amount p.m.)	
	Urban Designers/Planners - 2 (manmonths X amount p.m.)	
	Civil Engineers / Architects - 2 (manmonths X amount p.m.)	
	Surveyors - 8 (manmonths X amount p.m.)	
	Draftsman & Computer Operator – 1 each (manmonths X amount p.m.)	
2.	Travel and Conveyance (lump sum)	
3.	Stationery (lump sum)	
4.	Administration Overheads (lump sum)	
5.	<u>Reporting Cost</u> (Scanning, Digitising, Printing, Plotting & Colour-copy)	
6.	Miscellaneous (as % of overall cost)	
	<b>TOTAL</b>	

The amount of incidence of Goods and Services Tax (GST) should be separately indicated.

Consultants shall not be entitled for getting any extra payment from MMR-EIS except on account of any increase in the scope of work or revision in the rate of applicable taxes. The MMR-EIS will consider making extra payment for above specified items if such claims are made by the Consultant and are found valid on scrutiny by the MMR-EIS. Payment for any additional task not specified in the ToR will be as per the terms to be mutually agreed in writing between the MMR-EIS and the Consultant.

### **Procedure for Opening of Bids and Evaluation of Proposals**

Only the agencies, which qualify in Eligibility Criteria and which have submitted valid technical and financial proposals will be eligible to participate in the bid. Incomplete, invalid and delayed submission of bids will be summarily rejected by the MMR-EIS. Proposals if unsigned and incomplete, not responding to the TOR fully and properly and those with lesser validity period than

that prescribed in the RFP will be summarily rejected as being non-responsive. The MMR-EIS reserves the right to accept or reject any proposal for consideration without assigning any reason thereof.

### Evaluation Method

The proposals will be evaluated using Quality and Cost Based Selection (QCBS) method. Consultants fulfilling the Eligibility Criteria will only be considered for evaluation of Technical proposals. The Sub-Committee of the MMR-EIS will be the Evaluation Committee. Consultants scoring 75% of the total score of 70 assigned to technical criteria (75% of 70 = 52.50) will be considered for opening of financial proposal and for further evaluation. Suitability of such Consultants for awarding the project will be evaluated on the basis of their Technical and Financial proposals. The proposals will be evaluated based on the following criteria:

Sr. No.	Technical / Financial Criteria		Marks
I	Technical Criteria		
1	Relevant Experience of the Agency	i) General experience in transport sector	5
		ii) No. of Govt. transport studies and preparation of transport projects involving pedestrian traffic component carried out	5
		iii) No. of Govt. transport studies and preparation of transport projects exclusively related to pedestrian traffic carried out	5
	Total		15
2	Approach to and Methodology in carrying out the project	i) Understanding of Walkability Issues	5
		ii) Methodology in carrying out various tasks	10
		iii) Approach to carrying out surveys and in providing solutions	10
	Total		25
3	Edu. Qualifications & Exp. of Key Personnel	i) Team Leader / Sr. Transportation Planner	10
		ii) Urban Designers/Planners	10
		iii) Familiarity and Experience of transport studies and preparation of transport projects involving pedestrian traffic for (i) & (ii) above	10
	Total		30
	Total Technical Criteria		70 *
II	Financial Criteria		
1	Financial proposal	All-inclusive lump-sum cost	30
	Grand Total		100

\* - The Financial proposals of only those Consultants scoring 52.50 out of total technical score of 70 will be opened and considered for further evaluation.

The financial criteria score for the lowest proposal will be 30 and for other proposals it will be estimated on the basis of the following formula : (Cost of Lowest Proposal / Cost of Proposal) X 30.

The agency scoring the maximum points (out of 100) in a combined technical and financial score shall be considered as the preferred bidder followed by second and third preferred bidders depending on their scores. The technical information such as proposed team, schedule of outputs, detailed task assignment and manning schedule submitted by the preferred bidder will be scrutinized for suitability for the project. Improvements, if so required, will be suggested in the technical inputs proposed by such bidders, who will have to agree to carry out the same. Further, the project cost specified in the Financial Proposal may be negotiated with the Consultant, if so considered necessary by MMR-EIS. The preferred bidder, who does not agree to carry out improvements in technical inputs suggested by MMR-EIS and/or the negotiations about the cost of the project between the bidder and MMR-EIS fail, such bidder will no more be considered as the preferred bidder and, in such a case, bid with the next highest score will be considered as the preferred bidder.

### **Other Instructions and Conditions**

1. If during the bid validity period, the bidder withdraws any of his bid/s, the bidder may be disqualified from bidding for further works of MMR-EIS.

### Additional Technical Information for each Bid

The Consultant shall enclose following documents:

1. Details of technical personnel on the roll of Consultant to be deployed on this project.
2. Details of technical personnel (visiting consultants from outside etc.) to be engaged by the consultant.

### Financial Proposal

1. The cost of the project as reflected in the financial proposal of the selected Consultant may be further negotiated with the Consultant, if MMR-EIS considers it necessary. On successful negotiations, the negotiated cost will be considered as final.
2. The validity of the offer shall be 180 days from the date of opening of the offer unless and until it is withdrawn by notice in writing duly addressed to Secretary, MMR-EIS by the bidder. Withdrawal of the offer shall be effective from such date of receipt of written notice by the MMR-EIS.
3. The offer of the Consultant shall be treated as unconditional. Additional and/or hidden conditions, if any, shall be treated as null and void. No claim for additional payment shall be entertained on account of such conditions.
4. The Consultant shall enclose a separate break-up of the fees according to the tasks as referred to in the Terms of Reference. The Agency shall note that if, at a later stage, it is found that the Agency has not carried out a particular task to the satisfaction of the MMR-EIS, the MMR-EIS will be at liberty to deduct fees as indicated in the said break-up for that particular task. The decision of President, MMR-EIS shall be final and binding on the Consultant in such case.
5. The Consultant shall further note that if any task as enlisted in the Terms of References is found to be not necessary at a later stage, the MMR-EIS shall be at liberty to delete the same from the scope of the Consultant and, in such case, the part of the fees as indicated in the above break-up, shall not be payable to the Consultant.
6. The payment to the Consultant shall be done in stages as per **Annexure-V**.

7. Bank Guarantee: The selected Consultant will be required to submit Bank Guarantee for an amount equal to the amount of first installment payable to the Consultant on execution of agreement.

#### Payment of Stamp Duty

The selected Consultant shall have to execute an agreement with the MMR-EIS and shall be responsible for payment of applicable Stamp Duty as per the related rules. The Consultant shall bear any other related charges towards execution of the agreement.

#### Miscellaneous

1. The project will need coordination and liaison with Municipal Governments of concerned urban areas as well as with MMR-EIS. The Consultant shall be responsible for all such duties.
2. The Consultant shall nominate their nodal officer / liaisoning officer for the project. The said officer shall not be replaced during the operative period of contract. Telephone numbers/Mobile phone numbers of such representative shall be communicated to the MMR-EIS.
3. It will be binding on the part of Consultant to visit the Office of the MMR-EIS and the project sites as and when called for any clarifications, presentations, meetings etc.
4. The assignment shall be carried out as per the requirements specified in the RFP and ToR.
5. MMR-EIS Support: The Consultant will be provided available documents / support as specified in the ToR.

#### **How to apply**

Interested Consultants are requested to submit detailed proposals to the office of the Secretary, MMR – Environment Improvement Society, 6<sup>th</sup> Floor, New MMRDA Building, Bandra-Kurla Complex, Bandra (E), Mumbai 400 051, Tel No. 26594092 on or before 8<sup>th</sup> March, 2021, 5 p.m. Bids received after due time and date shall not be considered. In case of any clarification, the Secretary, MMR-EIS may be contacted at the above mentioned address.

## Annexure-I

### **Terms of Reference For the Project of Walkability Improvement in Urban MMR**

The Mumbai Metropolitan Region - Environment Improvement Society (MMR - EIS), with a view to focus on movement of people rather than vehicles, and for that purpose, promote use of sustainable and non-motorized transport modes in urban areas, desires to appoint a Consultant to comprehensively study and suggest solutions for improving walkability in certain samples cities and towns in Mumbai Metropolitan Region (MMR).

#### **Background of the Project**

With higher economic growth and employment opportunities, and the resultant population and spatial growth of cities and towns, more and more people use private motor vehicles, as they become more affluent. In MMR, the private motor vehicles, consisting of 2 & 4 wheelers, have registered an annual compound growth of nearly 10% during 2001-2018 and the share of trips by such vehicles to total trips (excluding walk) was nearly 20% in 2017<sup>1</sup>. While the road network in most urban areas was not planned to handle such volume of motor vehicle traffic, the response of public authorities has been to provide vehicle & speed - centric solutions leading to more costly infrastructure being provided through widening of roads, construction of flyovers etc., which at best provide only temporary reliefs due to further increases in the use of private motor vehicles. Such vehicles carry less people as compared to other modes such as organized public transport, intermediate public transport (auto rickshaws, private buses etc.) and non-motorized transport (primarily walking and cycling) but occupy more road and parking spaces leading to inefficient use of available space. Further, this leads to congestion, pollution and accidents, the brunt of which is mainly borne by the pedestrians.

In MMR, nearly 47% of total trips are made by walk, which include a large proportion of trips made to school (72.5%) and last mile connectivity trips associated with public transport (60%)<sup>2</sup>. Most multi-modal trips start and end with walk. However, the allocation of street space is not equitable. Despite such large volume of pedestrians, the infrastructure available in the form of appropriate walkways near congested locations with heavy pedestrian traffic such as transport nodes, commercial areas etc., continuous and obstruction free side-walks along streets and appropriately designed and managed road crossings, is woefully inadequate.

In view of the non-sustainability of private motorized transport as the main mode of movement of people, policies are now framed to take suitable measures to increase the shares of public and non-motorized transport and also manage private vehicle transport by integrating transport with land use planning and providing priority and dedicated facilities for pedestrians, cyclists and mass public transport. Better walkability means better accessibility to all, including the poor and vulnerable sections of society, less pollution and travel cost, and a healthier population. Improving walkability of urban areas is now a recognized objective of sustainable urban transport. Walkable cities are considered more liveable.

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<sup>1</sup>Updation of Comprehensive Transportation Study for MMR, Executive Summary, MMRDA, December, 2019  
<sup>2</sup>*Ibid.*(1)

## **Walkability Studies and Policy Framework**

In 2008, the Ministry of Urban Development, GoI, carried out a Study on Traffic and Transportation Policies and Strategies in Urban Areas in India, which covered 30 cities of different sizes and shapes in the country, including Mumbai; and among other matters, included use of Walkability Index estimated as a function of availability of footpaths and pedestrian facility rating of factors such as availability and quality of footpaths, obstructions, maintenance, lighting, security from crime, safety in crossings and other qualitative matters, by pedestrians themselves. It was found that while the average Walkability Index was low at 0.52 (out of 1), generally, the larger cities performed better and Mumbai had a Walkability Index of 0.85, although the share of pedestrian trips was generally more in smaller cities<sup>3</sup>.

Using the methodology based on Global Walkability Index developed by the World Bank, the Asian Development Bank (ADB) carried out a study of 13 cities across Asia, including the city of Kota in India, which included field walkability surveys, pedestrian interview surveys and an assessment of current pedestrian-related policies and guidelines. The walkability ratings were derived based on 9 factors, including those related to availability and usefulness of walking paths, quality of crossings, security, amenities etc. The average ratings (out of a total of 100) for various areas were commercial : 61.06, public transport terminals : 54.28, Educational : 55.55 and residential : 57.41, which appear to be not very high<sup>4</sup>.

The National Urban Transport Policy of India (March, 2014) envisages encouraging measures that allocate road space on a more equitable basis, with people as its focus. The Indian Road Congress has issued Guidelines on Regulation and Control of Mixed Traffic in Urban Areas, which include detailed guidelines on pedestrian traffic (IRC:70-1977) and Guidelines for Pedestrian Facilities (IRC:103-1988). The Govt. of Maharashtra has notified a comprehensive draft of the Maharashtra State Urban Transport Policy in June, 2017, which prioritizes sustainable modes of transport – walking cycling and public transport – and dissuades the use of personal motor vehicles. As per the vision expressed in the policy, “the state will have people friendly cities with integrated land use and transport systems that provide safe, reliable, and convenient access for people of all ages, incomes, genders and abilities and enable the movement of people and goods at the least environmental, social and economic cost.” The policy goes on to set goals for various aspects including Mode Share, Access to Public Transport, Traffic Safety, Emission Control; initiatives for different elements of Sustainable Mobility Plans and targets for all such items, and also prescribes supporting policy instruments for Institutional Structure, Planning Process, Monitoring, Financing, Outreach and Capacity Building. The Final Notification for the State Policy is yet to be issued. However, cities like Pune have already framed Policy for Pedestrian Facilities and Safety and taken initiatives in implementing it.

The above mentioned documents provide a detailed framework for the study of walkability in the urban areas of MMR. Provision of amenities and facilities such as footpaths, crossings, speed breakers, signals and signage etc. considered as necessary for pedestrians typically cost much less compared to the other measures usually taken up for speed improvements of motor vehicles. These measures, on the other hand, have very high benefits in the form of reduced use of motor vehicles and

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<sup>3</sup>Study on Traffic and Transportation Policies and Strategies in Urban Areas in India, MoUD, GOI, May, 2008

<sup>4</sup>Walkability and Pedestrian Facilities in Asian Cities : State and Issues, Draft, ADB, May, 2010.



reduction in associated problems like pollution, savings in costs to users and better accessibility to and safety of pedestrians.

### **Coverage for the Project**

The MMR (excluding portion added in 2019) includes areas from 5 administrative districts comprising of Mumbai City, Mumbai Suburbs, and parts of Thane, Raigad and Palghar districts. It includes areas of 8 Municipal Corporations, 9 Municipal Councils and 35 census towns, which together accounted for 21.33 million (94%) of total 22.80 million population of MMR in 2011. Most of these cities and towns follow the pattern of Gr. Mumbai as seen in increasing ownership and use of private motor vehicles and face the issues of congestion, pollution and accidents due to inequitable use of streets and less priority assigned to non-motorized and public transport. These urban areas are also expected to have higher pedestrian trips, however, accompanied by poor amenities and facilities for pedestrians. Currently no detailed studies and systematic information is available on the state of affairs and on the efforts made by respective local governments on improving the travel experience of the pedestrians.

The review of literature indicates that the following activities in urban areas generate large volumes of pedestrian traffic and need to be specifically studied in this regard :

1. Transport Nodes such as Suburban Railway Stations, Metro Rail Stations, Bus Terminals / Specific Bus Stops, Auto Rickshaw / Taxi Stands
2. Commercial Areas including Shopping lines, Vegetable and Fruit Markets, Malls, Hotels and Restaurants
3. Institutional Areas such as Schools, Colleges, Office Centres, Religious Places
4. Entertainment and Sports Hubs like Cinema Halls, Auditoriums, Tourist Destinations, Stadiums, Beaches and other Water-fronts, Playgrounds & Gardens
5. Residential Areas including Building Complexes and Slums

Most urban areas are expected to have majority or some of the above activity locations, and while the concentration of activities and pedestrian volumes generated at such places may vary depending on the size of urban areas, the resultant situations, their characteristics and possible remedies may not be very different (excluding some peculiar cases). Further, studying all urban areas in MMR for walkability improvement will be costly and not very useful. It may thus be better to study only certain urban areas on sample basis.

While Mumbai has already got a higher ranking on Walkability Index, and is observed to be generally better in providing footpaths and well managed crossings, Thane has also built significant infrastructure for pedestrians, particularly near Railway Station. Navi Mumbai is a planned city with such amenities provided in a planned manner. It is, therefore, proposed not to include Gr. Mumbai, Thane and Navi Mumbai and instead study relatively smaller cities where pedestrian trips are also expected to be more. Based on their population sizes and different urban character, the following 3 cities / towns are chosen for the project :

<b>City / Town</b>	<b>Population in 2011</b>	<b>Urban Character</b>
Mira-Bhayander	8,09,378	Predominantly residential dormitory town
Ambernath	2,35,475	Historical town with local economic base
Pen	37,852	Small town with market hub

A maximum of 5 locations (one for each types of activity) in an urban area are required to be studied in detail. If in any of the three urban areas (e.g. in Pen), certain activity locations are either not prominent and do not generate high pedestrian volumes, such locations need not be included for detailed study, and in such case, the locations to be covered for detailed study will be less than five. Further, in a particular urban area, if there are multiple prominent activity locations for a specific activity type (e.g. institutional areas), the scope of the project will be limited to representative sample locations for such activities. In any case, the total locations for detailed study across all 3 urban areas shall not exceed 15 in number. It is expected that the study findings and solutions suggested for these sample cities / town will be largely applicable to similar other urban areas in MMR, excluding Gr. Mumbai, Thane and Navi Mumbai.

### **Objectives of the Project**

The broad objective of the project is to assess the walkability in urban areas of MMR and suggest design and other solutions to improve walkability, particularly for locations of high pedestrian volumes. The specific objectives of the project are as follows :

1. To make a general assessment of availability of pedestrian infrastructure / amenities / facilities across entire jurisdiction of sample urban areas,
2. To identify and specifically study areas at different activity locations with higher pedestrian volumes (not exceeding 15 for all 3 urban areas), calculate Walkability Indices for them against different factors based on the IRC Guidelines and the methodologies adopted for such exercises carried out by MoUD, GoI and ADB in the sample urban areas; and
3. Suggest design and other solutions, including 'quick wins', for each of the identified activity areas in each of the sample urban areas.

The above objectives are further broken down into different stages, tasks and outputs.

### **Scope of Work and Tasks**

The project will involve walkability study in the area of municipal jurisdictions of Mira-Bhayander Municipal Corporation (MBMC) and Ambernath and Pen Municipal Councils (AMC & PMC). The scope of work and particular tasks to be carried out are as follows :

#### Review and Assessment of Existing Situation

1. Review of policies, guidelines, studies and any other documents related to walkability in urban areas.
2. Study of Development Plans in the context of transportation, and review local transport studies, policies, project documents, available data on travel characteristics and walking trips, accidents etc. related to walkability in MBMC, AMC and PMC.
3. Reconnaissance survey of Municipal Areas for assessment of availability of pedestrian infrastructure / amenities / facilities and identification of activity areas such as transport nodes, commercial areas, institutional areas, entertainment and sport hubs, and different categories of residential areas with relatively higher volumes of pedestrian traffic for detailed study.

4. Identify peak hours (which could be different for different activities) for pedestrian traffic and carry out the count of pedestrians.
5. Identification of pedestrian facilities required to be provided based on applicable policies and guidelines and identify indicators / factors for assessment of adequacy of availability of such facilities.
6. Detailed study of provision / availability and use of pedestrian infrastructure, amenities and facilities in and surrounding (for a suitable distance not less than 500 m.) areas identified on the basis of traffic volumes during peak hours (not exceeding 15 in all 3 urban areas).
7. Carrying out a sample survey of users about their opinion related to adequacy and requirement of pedestrian facilities at particular activity areas.

#### Calculation and Analysis of Walkability Indices

1. Formulate methodology for calculation of walkability indices separately for different activities areas, common for all activity areas and common for the entire urban area (taking into account general assessment, e.g. extent of availability of footpaths for all streets).
2. Calculate various walkability indices for different urban areas as specified in point no. 1 above and carry out analysis based on comparison of different indices.

#### Recommendations for Solutions

1. Carry out reasonable projections of pedestrian traffic for 20 year horizon period at individual identified locations based on information readily available on related parameters and understanding of the local situations.
2. Identify general deficiencies in pedestrian infrastructure / amenities / facilities for overall urban areas.
3. Identify requirement of various types of pedestrian infrastructure / amenities / facilities based on current deficiencies and future requirements vis-à-vis standards for specific identified activity locations for all urban areas.
4. Evaluate practices, measures and projects, if any, being implemented by the Urban Local Bodies for improvement in walkability.
5. Prepare a set of design and other solutions for typical and peculiar situations for various identified activity locations for each urban area and also make general recommendations for actions for overall urban area.
6. Identify 'quick win' measures that require minimum effort and cost but provide significant gains for improving walkability.
7. Prepare an Action Plan for a 20 year horizon period for implementation of design and other solutions (will involve estimation of only broad cost) for each urban area.

#### **Approach and Methodology**

Walkability Improvement project involves activities related to Consultation with concerned Urban Local Bodies and reporting to MMR-EIS, Desk Research, Field Studies, Data Analysis and Presentations and Preparation of Reports.

Consultation with ULBs and reporting to MMR-EIS involves but is not limited to obtaining various documents / information from and consulting concerned ULB on information to be collected, conducting site visits with them etc.. Consulting MMR-EIS on devising formats for data and reporting, method of presentation, periodical reporting of progress of project etc. and also active communication with and holding and attending meetings with MMR-EIS.

Desk Research involves but is not limited to review of literature involving acts, policies, guidelines, planning and project documents, drawings, data collection from secondary sources, development of methodology and tools for collection of data through primary sources etc.

Field Studies involve but are not limited to site visits for reconnaissance, preparing sketches and creating visual record, training of investigators, conducting various types of surveys, counts etc.

Data Analysis involves but is not limited to tabulation and compilation of collected data, preparation of drawings, calculation of indices, preparation of schedules and action plans etc.

Preparation of Reports involves but is not limited to preparation of Walkability Improvement Reports for each of the concerned ULBs, and its various Annexures, in the form of draft reports and final reports and their submission to MMR-EIS by incorporating suggestions given by it. This shall also involve making presentations of findings etc.

The project requires application of scientific and appropriate methodology in dealing with the following issues:

1. Reconnaissance survey of overall urban areas taking into account availability of information from secondary sources.
2. Identification, selection and coverage of all types of prominent / representative sample activity locations (not exceeding 15 in all 3 urban areas) and delineation of specific areas for detailed studies.
3. Determination of peak hours, taking pedestrian traffic counts and their projection for 20 year horizon period.
4. Spatial / physical survey and formulation of structured questionnaire for and carrying out of pedestrian opinion surveys at specific locations.
5. Calculation of various Walkability Indices.
6. Identification of typical and peculiar local situations for suggesting solutions.

### **Support by MMR-EIS**

The MMR-EIS will provide the following documents or provide support in obtaining certain information and carrying out certain tasks:

- a. Access to MMRDA library and available literature / documents and specific data, if any.
- b. Introduction / reference letters for concerned ULBs and any other institution.
- c. Consultation and review of outputs produced by Consultants

## Annexure-II

### Time Limits for the Assignment

The total period of engagement will be for 12 months and all tasks are expected to be carried out simultaneously for all the three urban areas. The time allocation for main milestones identified for each project would be as follows:

Task Details	Completion time from the date of Commencement
To obtain and review secondary information from ULBs and other sources as may be necessary	60 days
To carry out reconnaissance survey	120 days
To carry out pedestrian counts and detailed study of all identified activity locations including pedestrian opinion surveys	240 days
To carry out data analysis and calculation of walkability indices	270 days
To prepare design and other solutions, including quick win measures and prepare action plan	300 days
To prepare Draft Walkability Improvement Reports for each ULB	335 days
To revise draft reports as per the requirements of the MMR-EIS	365 days

Note: The Consultant shall submit progress reports as may be sought by MMR-EIS.

The MMR-EIS will review the progress and performance and convey its comments and suggestions, if any, which shall be adhered and incorporated in subsequent actions. The documents / reports required to be submitted by the Consultant shall be prepared in English and shall use SI units in mathematical, engineering and statistical data analysis. All documents, reports databases etc. should be submitted to the MMR-EIS in soft and hard formats.

### Outputs for the Assignment

The details of documents to be submitted, schedule of submission and copies to be submitted are as follows:

Documents	Schedule of Submission from the date of Commencement	No. of Hard Copies and CDs for Soft Copies
Stage-I : Report on findings of review of secondary	125 days	5 and 2 CDs

information and Reconnaissance Survey		
Stage-II : Report on findings of detailed surveys and calculation of indices	275 days	5 and 2 CDs
Stage-III : Report on solutions and action plan	305 days	5 and 2 CDs
Draft Walkability Improvement Reports for each Urban Area	335 days	5 and 2 CDs
Final Walkability Improvement Reports for each Urban Area	365 days	5 and 2 CDs

### Annexure-III

#### Format for Details on Fulfillment of Eligibility Criteria

Sr. No.	Eligibility Criteria	Description	Documentary Proofs provided	Page No.
1	It should be an agency registered in India under appropriate statute enabling it to carry out the project and should have been actively working for the past at least 5 years.	(Registered under what statute and when and some of the assignments carried out at least during past 5 years)		
2	It should have a local work space with adequate infrastructure in MMR and should have an annual turnover of a minimum Rs. 25 lakhs during the preceding 3 years	(Office location, amenities available, financial statements for past 3 years)		
3	It should have the experience in carrying out at least one urban traffic and transportation related study / preparation of one urban transport project, involving the component of pedestrian traffic for any Government agency in India.	(Specific details of actual tasks, name of the project, name of the Govt. agency, year of completion of assignment, proof of experience)		
4	It should have a team of qualified and experienced Transportation Planners, Urban Planners or Urban Designers, Civil Engineers or Architects, Draftsmen, Computer Operators and Surveyors.	(Names of specific persons and their details)		

## **Annexure-IV**

### **Expected Key Personnel**

The Consultant will operate principally from MMR. Given the scale of the project, it is envisaged that the Consultant will work in close partnership with a team of officials from the concerned ULBs, and as may be necessary, from MMR-EIS.

#### **Composition of the Team**

The Consultant should propose appropriate teams for each urban area (depending on man-month requirement of specific experts) for this project. Experts with appropriate qualification and experience in the following disciplines are necessary in the team :

- ❖ Team Leader / Senior Transportation Planner with appropriate educational qualifications (Post Graduation in Transportation Planning or Traffic Engineering) and actual experience of carrying out transportation / traffic studies or preparation of transport project documents for a period of minimum 8 years.
- ❖ Urban Designers/Planners with appropriate educational qualifications (Post Graduation in Urban Design/Planning) and knowledge and experience in carrying out transportation / traffic studies or preparation of transport project documents for a period of minimum 3 years.
- ❖ Civil Engineers / Architects with appropriate educational qualifications (bachelors of civil engineering or architecture) with experience in surveys, mapping, digitization etc. for a minimum period of one year.
- ❖ Draftsmen, Computer Operators, Surveyors etc.

The team shall be led by an experienced and qualified Sr. Transportation Planner and the Consultant will be responsible for managing all the staff working on the project.

The estimated number of key experts and their man-month inputs expected to be required for all urban areas together are as follows:

Sr. No.	Expert	Number	Total Man-months
1	Team Leader / Sr. Transportation Planner	1	4
2	Urban Designer/Planner	2	12
3	Engineer / Architect	2	8

It is estimated that while a half of the proposed man-months for various members of the team will be used for MBMC, being a large city, the remaining half man-months will be divided between AMC and PMC depending on the requirement.



## Annexure-V

### Schedule of Payment

Task Details	Fee as % of Accepted Cost	Cumulative % of Fee Payable
On execution of Agreement	10%	10%
On submission and approval of Stage-I : Report on findings of review of secondary information and Reconnaissance Survey	15%	25%
On submission and approval of Stage-II : Report on findings of detailed surveys and calculation of indices	20%	45%
On submission and approval of Stage-III : Report on solutions and action plan	20%	65%
On submission and approval of Draft Walkability Improvement Reports for each Urban Area	25%	90%
On submission and approval of Final Walkability Improvement Reports for each Urban Area	10%	100%