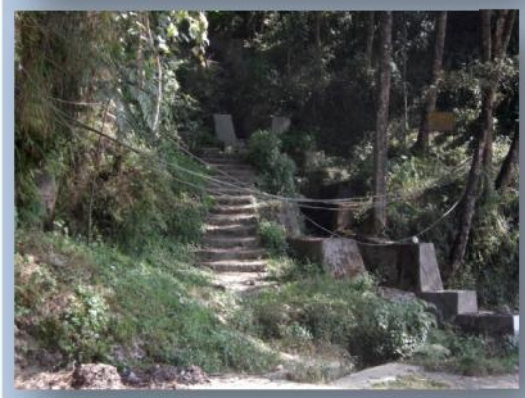
COMPREHENSIVE MOBILITY PLAN

GANGTOK

SIKKIM



Final Report: Volume II

Implementation Programme

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PREFACE

Urban Development and Housing Department, Govt. of Sikkim has entrusted DDF Consultants Pvt. Ltd. (DDFCPL) the work of the preparation of Comprehensive Mobility Plan (CMP) for the capital town Gangtok which is one of the towns eligible for central Government financial assistance under JNNURM programme.
Comprehensive Mobility Plan for the capital town of Gangtok has been prepared as per guidelines and toolkits for Urban Transport Development issued by the M/O Urban Development, Govt. of India for funding of projects under JNNURM programme. This kit was also used in the CMP to focus on planning process and examining policy options. Besides, it was also used as checklist to cover all possible sectors for surveys, analysis, and inferences.

The Final CMP Gangtok has been detailed out as per chapter schemes suggested in Module 1 of CMPs in medium sized cities in India. The whole CMP has been divided in fifteen chapters including city profile, review of land use system, existing transport system, analysis of existing traffic/transport situation, development of vision & goals strategy for transport development, travel demand model, future urban growth scenario, future transport network scenario, travel demand forecast, evolution of scenarios, public transport improvement plan, regulatory & institutional measures, social & environmental considerations and implementation programmes. For the convenience of the user, CMP Gangtok has been presented in two volumes. **Volume I** contains chapters related to existing scenario, surveys, analysis, & assessment, while **Volume II** contains proposals and identified projects' sheets. These projects are further divided into three phases. Their economic benefit in terms of generation of employment has also been worked out.

This report is revised as per comments received from UT division M/o Urban Development, Government of India regarding justification of freight terminals (Volume-II, page 33 to 34), sources of funding (Volume-II page 35) and clarification related to Bus Terminals. DDFCPL appreciates the active support provided by, Sh. T. J. Dorjee, Secretary Urban Development and Housing Department, Sh. J. D. Bhutia Joint Secretary Urban Development and Housing Department, Gangtok, Sikkim. Town and Country Planning officials, Transport department, Police department, Road and Bridge and PWD department, Directorate of Economics and Statistics in completion of this exercise. Besides these organisations, certain reports like Gangtok Integrated Development Plan: 2000 by GILCON 1987, Transport related reports by CIRT Pune and RITES 1997-98 City Development Plan Gangtok by SUIDL 2006, Gangtok Structure Plan by Surbana, 2009 and NEURDP Report 2006 are duly acknowledged for their inputs in this report. This Report is very important step in the direction of secured and efficient mobility for all classes of users through implementation of identified projects.

New Delhi

April 21, 2010

Amit Bose

Director
DDF Consultants Pvt. Ltd.

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15 IMPLEMENTATION PROGRAMMES

15.1. Sustainable Mobility: Vision for Action Plan

Field surveys and interaction with residents have established the need to have a clear vision for mobility based on sustainable approach. It was also to be taken in to account that provision of Airport at Pakyong and connection of Railway line from Siliguri to Setipool may bring sustainable change in the transport scenario in coming future.

15.2. Mobility Plan Compatible to Proposed Landuse:

The structure plan 2009 submitted by Surbana for Gangtok has suggested two commercial complexes one at Northern end and other at Southern end of the city. This in fact makes N-S commercial axis connecting existing CBD on MG Road. Besides four smaller commercial complexes are also suggested to decentralize commercial activities near major residential areas i.e. community 2, 4, 6 and 7 while community 3 & 5 are having existing CBD, community 1 is covered under proposed commercial complexes.

Further 2 activity zones are suggested on the theme of Nature zone and culture zone for tourist point of view. The Nature zone is proposed on the Northern side and cultural zone in Southern side.

The mobility of people and goods will be generated and terminated at these destinations. Hence the mobility plan has to be prepared with a vision on multidimensional and multimodal aspects. In order to identify most appropriate public transport system, various modes as given in the toolkit were considered on their technical parameters like line capacity (Pax/hr/dir), alignment, segregation, road space required, type of vehicle, passenger per vehicle/ train, traction, feeder system, flexibility of route changes and ticketing system. Etc. (Annexture). Further they are assessed whether they are the appropriate systems for Gangtok or not? On the basis of ground conditions of Gangtok some of these systems are rejected while some systems are kept on hold for near future where as some are considered for immediate implementation.

Public Transport Systems

15.3. Metro rail System:

Metro rails are high capacity and high speed vehicles, run on electricity. The carrying capacity of each metro train varies from 1200-2500 passengers at one time. The line capacity required for Metro rail system is about 40,000-75,000. Double track railway alignment is required for to and fro movement, and it is 100% segregated from the road traffic. It can either be segregated in tunnels, elevated or at grade. The system is very rigid and there is very low flexibility of route change. The ticketing system is closed type.

Line Capacity (PAX/hr/dir.): 40,000 – 75,000

Alignment: Double-track railway

Segregation: 100 % segregated in tunnels, elevated or at-grade

Road space required: None

Vehicles: High capacity EMU

Passengers per Vehicle/Train: 1.200 – 2.500

Traction: Electric:

Feeder System: Necessary

Flexibility of route changes: Very low

Ticketing System: Closed

Photo 15.1: Metro Rail

15.3.1. Advantages

- Very high carrying capacity
- High speed
- Very low pollution in operation
- Needs very little urban space

Photo 15.2: Metro Rail corridor

15.3.2. Disadvantages

- Very high capital costs
- High per unit operating costs if capacity utilization is low
- Inflexible
- Long gestation period
- Needs extensive feeder network or very dense captive area
- Complex interconnectivity with feeder system
- Relatively complex technology requiring highly specialized manpower for operation and maintenance

15.3.3. Applicable Corridors

- Very high-density corridors, where road space is very limited
- Well suited for densely populated cities that have low sprawl and few spinal, long-haul corridors
- At-grade systems are very good for suburban systems and the fringe areas of a city where space is more easily available

15.3.4. Conclusion:

Since line capacity in Gangtok is very low than the required line capacity for Metro rail. Also space for required segregation is not available. Passenger capacity per train will not reach 1.200 – 2.500 value. Due to all above reasons utilization of metro will be very low and it will cause high per unit operation cost. Providing metro will not be the complete solution for Gangtok because again after metro to feed other surrounding area separate feeder network will be required. Hence due to all such reason Metro rail system is not advisible for Gangtok city.

15.4. Light Rail Transit System:

Line Capacity (PAX/hr/dir.): 15,000 – 45,000

Alignment: Double-track railway, elevated, a-grade or in tunnels

Segregation: High degree of segregation preferred, but sections with shared right of way possible

Road space required: None in case of elevated and tunnel alignment, 2 lanes at-grade, additional space required for stations and terminals

Vehicles: Medium to high capacity EMUs (upgraded trams as an option)

Photo 15.3: Light Rail Transit System

Passengers per Vehicle/Train: 250 – 1.500

Traction: Electric

Feeder System: Necessary

Flexibility of route changes: Low

Ticketing System: Closed

15.4.1. Advantages

- Capital costs are less than for heavy rail systems
- Per unit operating costs are less than for heavy rail systems
- Low pollution levels
- Needs less urban space than bus-based systems
- Needs limited urban space if elevated or underground (however capital costs increase)

15.4.2. Disadvantages

- Capital costs higher than for bus systems
- Inflexible
- Per unit operation costs higher than for bus systems if capacity utilization is

Photo 15.4: Light Rail Transit corridor

- Needs substantial urban space if at grade
- Carrying capacity is lower than for heavy rail systems though comparable to high capacity bus systems
- Needs extensive feeder network or dense captive area

- Complex interconnectivity with feeder system
- Relatively complex technology requiring specialized skills for operations and maintenance

15.4.3. Applicable Corridors

- Medium density corridors where space availability is adequate for supporting elevated structures or at grade tracks
- Medium density cities with limited sprawl

15.4.4. Conclusion:

Desired line capacity for light rail transit is much higher than the existing line capacity in Gangtok. As roads in Gangtok are narrow, LRT requires shared right of way which is highly impossible for roads in Gangtok. Required road space is not available as widening is not possible to the extent required for LRT. With low density city like Gangtok and varying slope and undulating land LRT is not viable option in Gangtok. Hence it is not advisable for Gangtok Area

15.5. Tramways Systems:

Line Capacity (PAX/hr/dir.): 5,000 – 15,000

Alignment: Double track tramway, at-grade

Segregation: Uses public roads, but may have reserved right of way on sections with higher demand

Road space required: 2 Lanes, additional space may be required for stations and terminals, tracks can be shared with public roads or pedestrian roads

Vehicles: Trams, articulated and or with wagons as an option

Passengers per Vehicle/Train: Depends on length

Traction: Electric

Feeder System: Not necessary

Flexibility of route changes: Low

Ticketing System: Open

Photo 15.5: Tramways

15.5.1. Conclusion:

Road space required for tram ways is very difficult to provide in Gangtok. Financially as well as technically, trams are not feasible on terrain or on slopes. Tramways are not a feasible solution in Gangtok.

15.6. High Capacity Bus Systems (HCBS) on Dedicated Lanes, or BRT (HCBRT)

Line Capacity (PAX/hr/dir.): 20,000 – 35,000

Alignment: 4 Bus Lanes (2 per direction)

Segregation: Uses public roads, but may have reserved right of way on sections with higher demand

Road space required: 4 Lanes; more linear space for Interchanges and Terminals

Vehicles: Special articulated bus with at-floor boarding and wide doors

Passengers per Vehicle/Train: 180-240

Traction: Diesel/ CNG

Feeder System: Necessary

Flexibility of route changes: Very low

Ticketing System: Closed

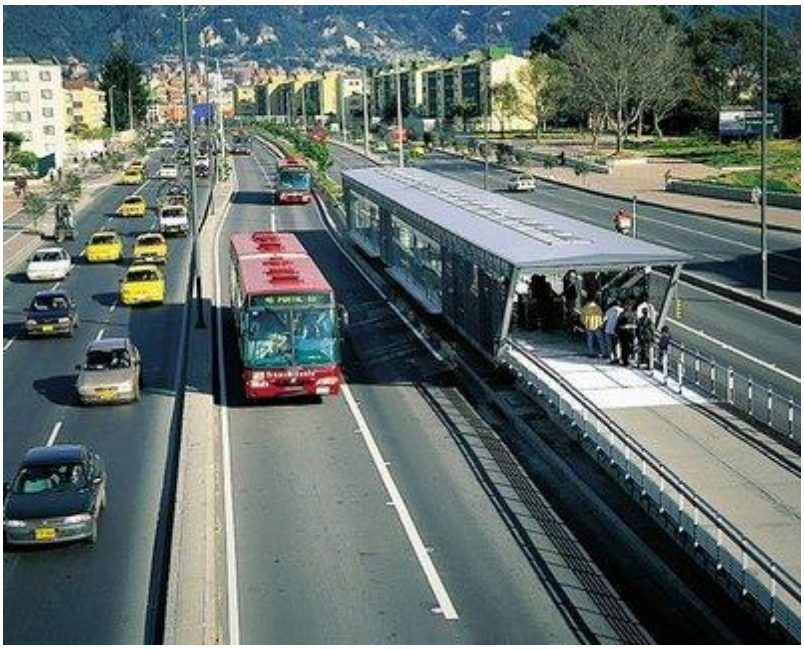

Photo 15.6: BRT Corridor

15.6.1. Advantages:

- Capital costs lower than for rail-based systems
- Low operation and maintenance costs
- Higher capacity than normal bus services
- Operational planning and capacity expansion are more flexible than rail-based systems
- As the distance between stations are shorter, it requires a less extensive feeder network than rail-based systems Relatively simple technology with easy availability of personnel for operations and maintenance

Photo 15.7: BRT Corridor systems

15.6.2. Disadvantages:

- Capacity not as high as that of heavy rail systems although comparable to that of light rail systems
- More polluting than rail-based systems in operation
- Needs imported fuel
- Needs urban space for dedicated corridors

15.6.3. Applicable Corridors

- Medium density corridors where space availability is adequate for supporting the dedicated right of way
- Medium density cities with limited sprawl

15.6.4. Conclusion:

Line capacity is little higher in High Capacity Bus Systems (HCBS). 4 bus lanes are required for alignment of HCBS which is also not possible on narrow existing road width in Gangtok. Diesel traction causes more pollution than rail base options. Hence High Capacity Bus Systems (HCBS) is not proposed for Gangtok city.

15.7. Personalize Rapid Transit (PRT)

Line Capacity (PAX/hr/dir.): 6,000

Alignment: Elevated or at grade with guiding track.

Segregation: High degree of segregation if at grade but low grade of segregation if elevated or underground.

Road space required: None in case of elevated but 2 tracks if at grade.

Vehicles: PRT Pods

Passengers per Vehicle/Train: 4-6

Traction: Battery (Electricity)

Feeder System: PRT itself acts as a feeder service for other Mass transit systems

Flexibility of route changes: Low but modifications and expansion can be done.

Ticketing System: Closed

15.7.1. Advantages

- Per unit operating costs are less than any other means
- Empty pods wait off-line at stations
- Pods move origin to destination without any stoppage.
- Construction speed – 500mt/week
- Low pollution levels
- Needs limited urban space if elevated or underground (however capital costs increase)
- 40% saving over shuttle buses

Photo 15.8: PRT systems

15.7.2. Disadvantages

- Capital costs higher than for bus systems
- Inflexible
- Needs substantial urban space if at grade
- Carrying capacity is lowest than for heavy rail systems though comparable to high capacity bus systems

15.7.3. Applicable Corridors

- Low density corridors where local pollution is not a critical issue
- Feeder to higher capacity systems

Photo 15.9: PRT Corridor

15.7.4. Conclusion

PRT is highly expensive option hence it is suggested in later stage of development. PRT can be provided from Pakyong airport to Ranipool after feasibility study. For further detail please refer annexure.

15.8. Sky Bus

Line Capacity (PAX/hr/dir.): Not Available

Alignment: Elevated or at grade with guiding rail on top.

Segregation: Low level of segregation as hanging above road at 8 Mt height.

Road space required: Small place is required to build 1 Mt diameter columns.

Photo 15.10: Sky Bus

Vehicles: Bogies (Under Tram Act)

Passengers per Vehicle/Train: 40-60 (As per the size of bogie)

Traction: Battery (Electricity)

Feeder System: Very few cases feeder system is necessary.

Flexibility of route changes: Low.

Ticketing System: Closed

15.9. Advantages

- Aesthetic and eco-friendly,
- the Sky Bus can never derail
- it is a unique mass-transit system, which can be put up within two years

In this new technology of 'Sky Wheels', almost no land acquisition will be required, except for

- providing for right of way on existing roadways
- Only at terminal points, minimum amount of land of the order of 2000 to 4000 SqM of area will be required – that too at places away from the urban centre.
- No demolition of structures or gardens will be destroyed.
- No Vandalism - Not vulnerable to persons throwing stones and track is inaccessible.
- Fire - Fastest evacuation in case of fire as compared to underground metros.
- No capsizing - If at all derails, cannot fall down coach keeps hanging. Hence no capsizing takes place as compared to railways and underground metros.
- No Deaths due to trespassing/falling off from train-In normal metros like Mumbai daily 2 to 3 deaths occur on the system with total casualties reaching almost 2000 per year.
- Reaches heart of the city - Sky Bus follows existing busy roads, thus reaches the very heart of the city decongesting the roads. This is not possible in case of Normal Railway.
- Capital cost is lowest - almost 50% of elevated systems & 25% of underground metro for same performance standards.
- Lowest running cost. - Maintenance free tracks no signals & points & crossings to maintain.
- No interference with normal road traffic- does not require road over /under bridges.
- Since the system involves guide ways in the sky, which does not fall into an

exact definition of Railway, the number of agencies involved in clearing and executing the project should be less and only one authority at state level will be created for implementing the project.

- It can be built on roads with Fly over. It is not an impediment.
- From the date financial closure is achieved, all land rights are handed over the Project can be completed and commissioned within 100 weeks i.e. about 24 months.
- Aesthetically pleasing & no noise pollution.
- Insulated against floods, rains and obstruction on track.
- Additional income from real estate/ shopping malls/ container cargo is bonus.
- Detailed survey for local area costs is required to firm up the local civil engineering costs.

15.10. Conclusion

Photo 15.11: Sky Bus System

- Sky Bus system not only redefines the urban mass transport for cities, following existing roads and brings down the cost of service while improving quality. Sky Bus provides excellent alternative for mass transport- being derailment free and safer than existing rail-based system. Financially this option is not feasible at present in Gangtok at present. After proper feasibility study in future this system will be implemented. For further details please refer annexure.

15.11. City Bus Service on Demarcated Lines/ Bus Priority Lanes

Line Capacity (PAX/hr/dir.): 5,000 – 7,500

Alignment: 2 Bus Lanes

Segregation: Bus Priority Lanes must be exclusively for busses

Road space required: 2 to 3 Lanes (3 to 4 Lanes at Bus Stops)

Vehicles: Standard City Bus, articulated as option

Passengers per Vehicle/Train: 75 - 100

Traction: Diesel/ CNG

Feeder System: Not necessary

Flexibility of route changes: Medium

Ticketing System: Open

15.11.1. Advantages

- Very low capital cost
- Low operating costs
- Highly flexible
- Does not need feeder system

15.11.2. Disadvantages

- Very low capacity
- Polluting (if not run by cleaner energy)
- Low speeds
- Poor social image (without improving the system performance and its image)

15.11.3. Applicable Corridors

- Low density corridors where local pollution is not a critical issue
- Feeder to higher capacity systems

15.11.4. Conclusion:

Bus priority lane has only problem in implementation which will reduce the existing road width. This in turn will cause more traffic congestion. Due to poor social image of bus priority lane maximum tourists will again opt for private taxis i.e. IPT. To give proper solution to problem, Bus priority lanes may be implemented with certain modifications i.e. instead of dedicated bus lane, it should be demarcated bus lanes to run city bus service with mid size CNG buses. Taxis trucks and cars will be given alternate route.

Further their advantages and disadvantages were studied and it was found that at

present only city bus service is the most appropriate public transport system which Gangtok should have on demarcated bus lanes shared with cars and pedestrians. They have advantage of low operating cost, high flexibility, very low capital cost, does not need feeder system, they can be operated on very low capacity, no pollution if run on cleaner energy (CNG) low speed on public roads with line capacity below 1000 pax/ hr/ dir from origin to various destinations.

It will take care of public transport system on demarcated lines with frequent stops along with car sharing system. Private taxis and cars may either take alternate route or will be allowed to use only vacant demarcated lines. Penalty will be imposed if these individual taxis encroach upon demarcated line when public transport buses are travelling on the roads.(Map 15.1)

15.12. Identification of mobility Improvement Projects:

The existing road network of Gangtok city is congested and has limited scope for road widening. Therefore a strategy has been developed for decongesting their roads with two tier ring roads- inner and outer and identification of inner ring road and NH31A for public transport i.e. City Bus service on demarcated bus lanes, widening and strengthening of connecting roads, pedestrian network, side walk and sky walk, strengthening of stairs/ steps connecting road network, ropeway network, inclined trains at selected places, Airport at Pakyong and railway line to Bhusuk via Setipool up to crossing of Assam Lingzey road.

Due to undulating terrain, use of non motorized vehicles is not in practice. People prefer to walk rather than to use bicycle or cycle rickshaw. Existing roads are very narrow and scope of widening of these roads is very limited, hence the scope of dedicated cycle rickshaw or cycle lane is not practical.

15.13. Proposed Road Network:

Since the Gangtok City has grown in organic form on linear road pattern from South to North along NH31A and Indira bypass, it lacks in the development of hierarchy pattern of roads due to the its undulating terrain and location of activity areas including CBD on the South North axis. This resulted in weak secondary road network which suffer from several inadequacies.

Otherwise the primary road network should have a hierarchy of roads like NH, SH, redial roads and bypass system to segregate inter and intra urban traffic. The

NH31A, North Sikkim Highway, Indira Bypass and JN Road act as the major roads converging at or passing through the city. Other major roads are connection roads like Kazi road, MG Road, Tibet Road, Paljor Stadium Road and Namnang Road. They are of narrow width to accommodate the high volume of traffic, inappropriate geometry high road gradient at certain lengths which require special consideration in planning proposals. Some roads are dedicated as one way to adjust high traffic volume especially Sadar Thana Road, DPH church Road, Part of Tibet Road and Kazi Road.

15.14. Internal and external bypass ring roads:

The existing road network has potential to develop in a efficient road network with internal and external ringroad to bypass through traffic and decongest internal roads. The Indira bypass and Gangtok bypass has formed half circle ending at NH31A. This half circle can be further developed by constructing another half circle southward traversing on the east and connecting NH31A. This will form Internal Ring Road and serve new development at Ranipool, Pakyong area in South-East direction. As town grows, this ring road will also be get congested, hence Outer Ring Road is also suggested to divert through traffic. This ring road could be taken in last phase as and when need arises. This outer ring road will run along the fringe of Gangtok at more gentle gradient and may act as an expressway with high speed.

The Structure Plan for Gangtok also mentioned these two ring roads. The alignments of both these Ring Roads will be determined in their respective Detailed Project Reports. Estimated length of inner ring road will be about 25 Km and external Ring Road will be about 35Km.

Both these ring roads will be having minimum right of way (RoW) of 11 meters and provision of footpath on one side for safe mobility of the pedestrians. This is in conformity with the national Urban Transport policy: 2006 guidelines. All services are to be placed below footpath. The actual road section and other detailing are to be worked out as per availability of land at the site during preparation of the Detailed Project Report (DPR). (Map 15.2)

15.15. Radial Roads:

Gangtok is linked with several small settlements on North, West, East and Southern side link Rumtek, Assam Lingzey, Pakyong, Ranka, Luing, Mangan, Jorethang and

Rongli etc. These road links are narrow and weak. Inadequate Carriageway of these roads at various locations creates traffic congestion and bottleneck. Walk trips generated on their roads lengths also use their ROW as these roads have no pathways. Therefore it is proposed to widen and strengthen these radial roads. Besides walkways have to be added near settlements for security of pedestrians. Both these works are to be taken up in the first phase.

15.16. Connecting Roads:

The network of connecting roads has roads of different lengths and widths. Besides inner ring road and outer ring road few collector/ connecting roads need widening and strengthening. These collector roads will be narrow with sharp turns and of slow speed. These roads will be connecting neighborhoods and major roads including NH31A. It is proposed that wherever possible these roads are to be widened and strengthened in first phase. Therefore after up gradation the entire road network will be of different right of way and carriage way depending on availability of space for widening and strengthening. There will be small stretches. Total length of these stretches will be about 3-4 Kms.

15.17. Lanes and Pathways:

The lowest level of roads is pedestrian paths connecting local neighborhood or individual establishment. Most of them are not used for motorized transport. These small lengths need to be widened and strengthened to make walk more comfortable and enjoyable. This little or minimal effort will encourage residents to walk and remain healthy. These need to be undertaken in the first phase itself. Details of these lanes and pathways and then cost estimated will be given at DPR-I stage. The total length of these stretches will be about 2-3 Kms.

15.18. Footpaths and Walkways:

Footpaths and walkways are measures to improve pedestrian movement in the city especially in hilly terrain. There is a long list of footpath stretches that need be constructed or need improvement in existing stretches. UDHD has identified footpath from Deorali Namnang, Junction to old secretariat for improvement. Apart from these the other footpath stretches that need improvement are-

Table 15.1: Footpath Stretches to be improved-

Sl No.	Footpath Stretches to be Improved	Length Km
1.	Development Area – PNG School (Along Super Market)	1.8
2.	Defence Cinema- NH31A footpath at Tadong Daragaon	2.0
3.	Munshi Colony- District court road	2.4
5.	P.S. Road- M.G. Marg Footpath	0.8
6.	M.G.Marg-Lal Bazar	1.2
7.	M.G. Marg-Tibet Road	1.8
8.	M.G. Marg- Kazi Road	1.7
9.	Kazi Road- Tibet Road	1.2
10.	Hospital (Tibet Road – NH-31 A) Footpath	1.6

At certain places in the city, vehicular flow is heavy and there are no pedestrian facilities. This becomes hazardous and may lead to accidents. New Footpaths and skywalks are also proposed at places, due to heavy pedestrian and vehicular traffic. In many stretches, road widening and provision of footpaths is not possible, due to extended shops along the roads. These encroachment needs to be removed, and the extended plinths of the shops can be converted into footpaths.

Photo 15.12: Sky Walks

Table 15.2: New Footpath and Skywalks Stretches -

Sl No.	Footpath Stretches to be constructed	Sky Walks to be constructed
1.	Zero Point to Vajra Cinema Hall	P.S Road to Hospital Junction till Metro Point
2.	Indira Bypass- District Court to Helipad.	Jiwan Theeg Marg to hospital Junction
3.	Ambedkar Road- From SNT To District Court.	Zero Point to Jiwan Theeg Marg

15.19. Steps and Stairs:

Besides there are stairs and steps connecting different destinations and roads. These steps are located at various places and need widening and strengthening and landscaping. Some of them require roof coverage to keep them usable during rains and snowfall. They also require proper drainage and supportive railings especially for children and senior citizens. Some of them are mentioned as under:

Photo 15.13: Stairs to be strengthened

Table 15.3: Stair Connections to be Improved : Gangtok

Sl. No.	Stairs Connections From To		Length (In Mts.)
	From	To	
1	Tibet Road	Kazi Road (Near Sadar Police Station)	160
2	Power Secretariat	Secretariat	160
3	Denzong Cinema Hall	M. G. Road	150
4	Secretariat	Tibet Road (Near MLA Hostel)	100
5	New Market	Taxi Stand	100
6	Kazi Road	New Market	50
7	Power Secretariat	Kazi Road	30
8	Arithang	Petrol Pump (Indira Bypass)	50
9	Forest Office	Deorali Parking	100
8	**Total**		**900**

Besides certain stretches need to be connected through new stairs. The new stairs are expected to be constructed in Arithang, Panihouse and Tadagchen to connect them to main city core. Along with the staircase proposal feasibility for ***funicular trains*** should be checked out in DPR I. (Map 15.3)

15.20. Junction Improvement:

Geometry and Junction play a key role for vehicular movement. In hilly town like Gangtok, terrain also has major impact on intersections. Most of the junctions in Gangtok city are at acute angles. Improper geometry, make these junctions accident prone and also lead to traffic congestion. Improvement of junctions will lead to free flow of traffic, avoid congestion and also reduce chances of accidents. At present 11 major junctions have been identified for improvement, they are-(Map 15.4)

i) Zero Point Junction
ii) Lal Market Junction
iii) P.S. Road and D.P.H Road Junction
iv) Metro Point Junction
v) Deorali Junction
vi) Hospital Junction
vii) Tibet road and MG Marg at Sukhani House Junction
viii) Community Hall Junction
ix) Sikkim Government College Junction
x) Tadong Bazar Junction
xi) J.N. Road and Tibet Road Junction

15.21. Footover Bridges:

In view of pedestrian's convenience UD & HD, Govt. of Sikkim has already identified Footover bridges at following points.

i) Deorali Junction
ii) Tadong below Senior Secondary School
iii) TNA & Bhanupath

Apart from the above new footover bridges are also required at-

iv) Near Bansilal Petrol Pump
v) Near Sikkim Government College
vi) Near Post Office on P.S. Road
vii) Zero Point

Beside existing old footover bridges need to be reinforced with heavy duty

chequered plates.These need to be upgraded and renovated with first phase. Details of these steps i.e. location, connecting destinations, width and length etc will be given at the stage of DPR-I.

15.22. Ropeways

In Gangtok ropeways are in use for three destinations. The total span covered by this ropeway is 1800 Mts. only. This ropeway follows ridgeline to connect to points on upper and lower ridge. This is mostly used by tourist as an additional attraction to see the beauty of the city from the cable car.

Photo 15.14: Existing Ropeway

This system can be further strengthened by identifying few more points to connect through ropeways. The structure plan has also suggested few locations to strengthen the ropeway network with provision of ropeway towers on all four prominent sites located in the North, South, East and West and six additional ropeway stations. This Network will cover almost the whole of Gangtok and take care of its congestion problem.

Proposals on ropeway suggested in the structure plan was studied with interest and found eligible for implementation in the first phase. Their location near busy activity areas will ensure greater ridership. It is one of the pollution free options which Gangtok could have in near future. (Map 15.5)

This ropeway network will be used to transport passengers from one destination to other throughout Gangtok city, while travelling passengers may also enjoy panoramic view of the city. There will be initially 20 cabins with carrying capacity of four adult passengers and a speed of 4 meter per second. It will roll over various towers while travelling to its destinations. The ropeway size will be determined in the DPR stage-I and it may range 30mm to 34mm. The required motor power will be 55 K W. It can handle approximately 1000 passengers per hour in each direction.

15.23. Airport at Pakyong:

The construction of Airport at Pakyong has been started on 28th Feb 2009. It is being implemented by the Airport Authority of India (AAI) and M/S Punj Loyd is the contractor for the project. This project is likely to be complected in the year 2012. It is prepared to upgrade and strengthen existing Pakyong Gangtok link road with two lane width initially from Pakyong Bazar. Later on feasibility of personalized Rapid Transit (PRT) will be studied based on demand and traffic volume.

Photo 15.15: Airport Site

15.24. Railway Connection

Gangtok the capital of Sikkim State is one of few north eastern capital towns which are not on the Railway map. This cheap and reliable mode of transport is urgently required to open this hilly state for development. Sikkim state has long pending demand for Rail link with the plain Siliguri Rail Line. It was informed that preliminary survey for this project was initiated some time back by M/S Pioneer Surveyors but it is still not completed. This Survey will cover the stretch from Gulma Khola (Sevoke) to Rangpo, a distance of 52.70 Km.The feasibility report and the detailed project report will establish its alignment. The feasibility study could be initiated to establish Rail link on priority. The most preferred alignment will be along the proposed outer ring road which is on the gentler gradient via Setipool to Bhusuk area.

It is a time consuming project hence its location survey is expected to be completed in 1st year followed by detailed estimates and land acquisition in 2nd year; tunneling, bridge laying and earthwork in 3rd and 4th year. Lying of Railway track is expected to be completed in 5th and 6th year, this is proposed to be implemented by the Ministry of Railways. The possibilities of its implementation could be assigned through PPP model.

15.25. Upgradation and strengthening of Helipad

The existing Helipad is located in Sichey ward. Presently, the helicopter service is limited and even the frequency is low.

Photo 15.16: Existing Helipad

Table 15.4 : Helicopter Service: Gangtok

Sl No.	Origin	Via	Destination	Rate (Rs/Person)	Time	Frequency
1.	Gangtok	-	Bagdogra	2200	35 Mins	1/day
2	Gangtok	Namchi	Bagdogra	2200	50 Mins	1/Week (Thursdays)
3.	Gangtok	Pelling	Bagdogra	2200	60 Mins	1/Week

Renovation and Capacity building of the Helipad and helicopter services is required. This service is proposed to be upgraded by increasing the frequency of services atleast during the peak tourist season.

15.26. Strengthening and Repairing of Old Bridges

Gangtok has a number of bridges, built over numerous mountain streams cutting the city. These bridges form the lifeline of the city. Most of these bridges are bailey bridges, which needs to be converted to R.C.C bridge. The R.C.C bridge over Ranikhola river is the most important connector between Ranipool and Gangtok. This bridge is in a very poor state and requires immediate repairs.

Photo 15.17: Dilapidated Condition of Ranipool Bridge

Photo 15.18: Bailey Bridges

15.27. Project Identification

Road Network

Widening and strengthening of Roads

After road inventory

Following fourteen road stretches are proposed for strengthening. The total length of those road stretches are 20.94 Km. Their ROW ranges between 5.5 Mts at lower Arithang road to 9.0 Mts on Luing to middle Bhojogari Street. Similarly their length varies from 0.7 Kms on High Court Road to 5.4 Kms of Luing to Middle Bhojogari Road. All those roads have no median and no footpath. Presently they are of bituminous surface and are in bad condition as indicated in table no 8.3

Photo 15.19: Poor Condition of Existing Roads

Table 15.5:Identified Road Network Improvement -

S.No.	Name of the Road	Rd. Lt. (Km)	ROW (Mts)	Total C/W (Mts)	Median	Left Foot-path	Right Foot-Path	Light		Rd. Surf. Type	Rd. Surf. Qlty.
								Type	**Location**		
1	Arithang	0.8	6.0	4.5	No	No	No	No Light	No Light	Bitumen	Poor
2	Forest Check Post to White hall road (J. Nehru Road) (NH-31A)	1.2	7.5	6.0	No	No	No	Sodium	One Side	Bitumen	Poor
3	IInd Miles to IIIrd mile check post (NH)	1.3	7.5	5.0	No	No	No	No Light	No Light	Bitumen	Poor
4	Lower Arithang	1.3	5.5	4.5	No	No	No	No Light	No Light	Bitumen	Poor
5	Luing to Middle Bhojoghari (MR)	5.4	9.0	6.0	No	No	No	No Light	No Light	Bitumen	Poor
6	DPH Road	1.4	8.0	6.0	No	No	No	Sodium	One Side	Bitumen	Poor
7	PWD Store Road	1.6	7.5	6.0	No	No	No	Sodium	One Side	Bitumen	Poor
8	Bahai School Road	1.0	7.5	6.0	No	No	No	No Light	No Light	Bitumen	Poor
9	High Court Road	0.7	6.0	5.0	No	No	No	Sodium	One Side	Bitumen	Poor
10.	Tibet Road	1	7.0	6.5	No	No	No	Sodium	One Side	Bitumen	fair
11.	Namnang Road	1.1	6.0	5.0	No	No	No	No Light	No Light	Bitumen	Poor
12.	JT Road	1.3	6.0	5.5	No	No	No	Sodium	One Side (Half Stretch)	Bitumen	Poor
13.	VIP Road	0.74	5.5	5.0	No	No	No	Sodium	One Side	Bitumen	Fair
14.	Sichey Road	2.1	5.0	4.5	No	No	No	No Light	No Light	Bitumen	Poor
Total		**20.94**									

15.28. Parking:

Gangtok being the hub of commercial, tourist and public and semi public activities generate a huge parking demand and there are several competing on street and off street parking facilities. Parking is one aspect of transport infrastructure which is easily compromised in most instances.

Parking survey has been carried out at 6 parking locations where parking demand is significant. These include selected commercial spaces having offices and markets, institutional areas, restaurants and other places of entertainment which have a significant parking demand.

In Gangtok parking of vehicles is a major problem and may assume a critical dimensions unless appropriate measures are identified and implimented. In the absence of public transport system and heavy tilt of modal split in favor of taxis and cars, the need for organised parking spaces are pressing hard. Due to terrain condition and organic development of the city parking at grade is very difficult hence only multilevel parking facilities at strategic locations could be a solution.

In Gangtok parking of vehicles is a major problem and may assume critical dimensions unless appropriate measures are identified and implemented In the absence of public transport system

On the basis of demand and supply parking plans need to be prepared for on and off street parking. Other regulatory cum incentive and disincentive measures need to be indentified for better implementation of parking plans.

Parking issues, if not handled carefully at an earlier stage, leads to a situation where conflict of functions arises. Dedicated parking lots, multi level parking spaces, park and ride facilities (complementing Public Transport) are some of the solutions which can be considered for Gangtok.

Paid parking spaces provided in the city need to be improved upon and to cater to the demand some differential parking rates especially for the CBD have to be adopted. The city authorities need to take initiative to implement improvement measures.

In Gangtok, there are various issues which generate problems related to parking

facilities. The most important is its topography and locations of buildings on the edge of roads. Building bye laws are also not in sync with the rapid urban and economic growth. This problem is further aggravated due to mixed landuse i.e. mixing of commercial and other activities in residential area which create parking chaos.

Therefore it is proposed to give more emphasis on the development of offstreet parking areas to meet parking needs. In future two big and four small commercial hubs will be located at North and south direction of the city covering wards Tadong, Deorali, Ranipool, Chandmari and Bhurtuk. Therefore it is prepared that at least multilevel parking facilities shall be provided about one each at their locations.

The parking demand has to be managed by city authorities through various measures. There is need to formulate parking policy in the Master Plans/ Structure Plan of Gangtok based on activities like commercial, institutional, Industrial, wholesale market, warehousing areas, Recreational areas, Residential areas, Transport terminals, modal interchange areas etc.

Besides building byelaws/ norms are to be suitably amended for provision of parking and separate norms need to be provided for different landuse such as shopping center, cinema halls, Banquet halls, Restaurants, Hotels, coaching centers, office complex, Residential (Separately for LIG, MIG, HIG flats or Industrial plots).

The prevailing general space standards for parking are 25 Sq.M. per ECS on open surface. Minimum parking space recommended for each car and Truck shall be as under:

Table 15.6:Parking Space Requirements -

Sl.No.	Vehicle	Space Requirement	Remark
1.	Car	3.0 Mt. X 6.0 Mt.	Individual parking space in parking lots for community parking.
		2.5 Mt. X 5.0 Mt.	
2.	Trucks	3.5 Mt. X 7.5 Mt.	

15.28.1. Rationalization of planning spaces for different landuses:

More rational building bylaws/norms are required for provision of parking. For example-

- Strict & different parking provision for commercial use in residential area

Separate norms for parking for different land use,

Table 15.7:Parking Spaces for Different Landuses -

S.N.	Use category	Recommended space
1.	**Residential**	
A.	Detached, Semidetached and Row housing.	
i	Plot Area up to 300 Sq. Mt.	Only community parking space is required
ii	Plot Area up to 301 to 500 Sq. Mt.	Minimum of one third of the open area should be earmarked for parking
iii	Plot Area up to 501 to 1000 Sq. Mt.	Minimum one fourth of the total area should be earmarked for parking.
iv	Plot area from 1001 Sq. Mt. and above.	Minimum one sixth of the open area should be earmarked for parking.
B.	Flats	i. One space for every two flats of 50 Sq. Mts. to 99 Sq. Mt.
		ii. One space for every flat having 100 Sq. Mt. and above
C.	Special, Costly developed Area	i. One space for every flat of 50 Sq. Mt. to 100 Sq. Mt.
		ii. One and half space for every flat of 100 Sq. Mt. to 150 Sq.Mt.
		iii. Two space for every flat having 150 Sq. Mt. of floor space.
D.	Multi Storied, Group housing	One space for every three dwellings
2.	**Offices**	One Space for every 100Sq. Mt. of Floor area
3.	**Industrial Premises**	
One space for up to 200 Sq. Mt. of Initial floor areas. Additional space@ one for every subsequent 200 Sq. Mt.		
4.	**Shops and Market**	One space for every 100 Sq. Mt. of Floor are
5.	**Restaurants**	One space for every 10 Seats
6.	**Theaters and Cinemas**	One space for every 20 seats
7.	**Hotels**	
A.	Four and Five Star Hotels	One space for every 4 guest room.
B.	Two and Three Star Hotels	One space for every 8 guest room.
8.	**Motels**	One space for each guest room
9.	**Hospitals**	One space for every 10 beds
10.	**Loading and unloading berths**	3.75 Mt X 7.50 Mt.

Beside open space left within the premises of building will be deemed to serve the parking demand provided it fulfills the minimum area of parking specified above.

15.28.2. Latest technology to develop Parking facilities:

Besides parking provision at grade on open surface area, or in the stilts or in the basements can be optimized by adopting modern technology having mechanized, automatic and computer controlled parking garages. In 50 sqm area about 50 cars could be parked in case of tower parking whereas in case of puzzle-mechanized parking one car consumes 17 sqm to 20 sqm area. These parking complexes could be developed by private entrepreneurs on BOT basis. The new technology will conserve space and ensure maximum safety of vehicles. It is recommended that provision of such parking facilities may be made in the rules and under certain situation it may be made mandatory.

15.28.3. Pricing and Parking Charges:

Land in urban area has high commercial value and use of such expensive commodity in any manner has to be covered through pricing. Parking demand is elastic with respect to the parking fee and by imposing a proper parking fee, parking demand can be curbed or minimized.

Pricing is an important component of a comprehensive parking policy. Pricing of parking areas is a strategic tool to manage parking demand. Pricing needs to be based on location, mode type and duration of occupation. It needs to be rationalized through a comprehensive pricing policy. On-street parking, where permitted, should be clearly identified, fee prescribed and charged. It is recommended that a parking fee of Rs. 10.00 per hour for cars for first four hours & Rs 5.00 per hour for subsequent period and Rs. 5.00 per hour for 2-wheelers for first four hours and Rs 3.0 per hour for subsequent period be charged in CBD area like M. G. Road etc

It is recommended that parking lots may be aggregated and only a few lots of large area be provided. Parking at the surface could be replaced by multi-level parking technology Parking charges should be levied and collected on per car per month basis. The large parking areas also provide flexibility for multi-use, especially informal markets, but these have to be properly planned and properly managed. To discourage multi car ownership per household, penal charges, in a cascading scale, for every additional car over the first car be levied. The above measures make the

provision equitable i.e. only user pays the cost/charges. It also enables to reduce vehicular access roads in residential areas, minimizes conflicts with children and aged persons and thus increases safety, improves residential environmental quality, ensures safety of vehicles and avoids social disruptions.

15.28.4. Private Sector participation for development of parking places

Looking at the long term operation & maintenance problems of the parking lots, it is advisable that parking should be developed through private sector participation. Parking projects can be leveraged by giving some area for commercial use, advertisement rights and relaxations in FAR.

15.28.5. Parking proposals:

According to Structure Plan prepared by Surbana various landuses are proposed in Gangtok IRC norms applicable for various landuses are mentioned in Chapter no 3. Landuse mentioned in it gives the detail of 2 new commercial centers proposed (at northern and southern gateway of Gangtok as shown in Map 15.4) will assume the status of regional Centers because of their strategic locations- the Northern commercial center will be of approximately 10Ha and the location of this commercial center is along the North Sikkim highway leading to the North District; southern commercial complex will be 44 Ha. According to the IRC norms for commercial area
So the capacity required for parking in these commercial areas is 1000 Cars for Northern commercial center and 4400 Cars for southern commercial complex.
In support with above regional and district centers there will be 4 fringe centers with area of about 5 Ha. Each as per IRC norms area required for the parking of these entire fringe centers will be 500 Cars.
Four new parking lots have been identified in the city at M.G. Road, Ranipool, Below Government College and P.S. Road (Near SNT). The two existing private parking lots near Sadar thana (M.G. Bazar Area) can be developed into multistoried parking lots with PPP mode. Organized multistoried parking is also required near the SNT office, as the available parking space inside the SNT will be taken up by the newly introduced JNNURM buses. The government college is inviting lot of traffic movement, as it is developing into a bigger educational hub. Ranipool has a potential to develop as a commercial centre in near future. Thus to cater the floating

population nad its parking requirement, a bigger parking lot needs to be provided in this area. These parking lots will cater 1000-5000 parking spaces. (Map 15.6)

Apart from the major parking lots, 7 smaller parking lots will be required at various residential and commercial pockets of the city. These are proposed at, Upper Bhurtuk, Lower Sichey, Chandmari, Tadong, Namnang, Sikkim Jewels and JT roads. These parking lots will have space for approximately 500 parking spaces.

Table 15.8: Proposed Parking Lots Requirement 2041 –

Sr. No	Location	Total Bays	2 Wh	Area	4 Wh	Area (Sq. Mts.)	Total BUP Area (Sq. Mts.)	Gr. Flr. Area (Sq. Mts.)	20% Circulation area (Sq.Mts.)	Total Site Area (Sq. Mts.)
Major Commercial Area										
1	Ranipool	4400	900	1350	3500	52500	53850	13463	2693	16155
2	M. G. Road	1000	200	300	800	12000	12300	3075	615	3690
Small Commercial Area										
3	Upper Bhurtuk	500	100	150	400	6000	6150	1538	308	1845
4	Lower Sichey	500	100	150	400	6000	6150	1538	308	1845
5	Chandmari	500	100	150	400	6000	6150	1538	308	1845
6	Tadong	500	100	150	400	6000	6150	1538	308	1845
	Total	7400	1500	2250	5900	88500	90750	22688	4538	27225

Table 15-9: Immediate Parking Lots Requirement 2021 –

Sr. No.	Location	Total BUP Area (Sq. Mts.)	Gr. Flr. Area (Sq. Mts.)	20% Circulation area (Sq.Mts.)	Total Site Area (Sq. Mts.)
Major Parking Lots					
1	Below Govt College	1250	313	63	375
2	P.S. Road	800	200	40	240
Small Parking Lots					
3	Namnang	240	60	12	72
4	Sikkim Jewels	500	125	25	150
5	JT road	450	113	23	135
Total		**3240**	**810**	**162**	**972**

1. *According to IRC norm for every 100 Sq Mt of Commercial space 1 Cars should be provided.*
2. *For every single bay of car 22 Sq. Mts. of area should be provided for covered multistoried parking.*

Multi storied car parking should be provided at commercial places demarcated in Structure plan so as to reduce the ground coverage of parking area. Exact size, location, shape of the multi storied parking sites will be covered in DPR phase I. Tentative locations of parking complexes are marked in proposed landuse plan.

15.28.6. Freight Terminal:

In hill towns like Gangtok, freight vehicle movement plays a very important role in transport of goods, including food grains, daily commodities, construction materials etc. from other surrounding towns, especially as there are no other means of transport available.

The share of goods traffic varies from 1.4% to 5.7% and the average is about 3.7%.There are no designated terminal facilities for goods vehicles from where goods are transported to the local sites in smaller vehicles.

- In Gangtok the freight transport services are provided both by Sikkim Nationalised Transport (SNT) and private operators. However, the operation of private trucks is monitored by SNT through collection of supervision charges from trucks entering Sikkim.
- SNT is providing point to point service as and when informed by the consignee.
- Further, in order to meet excess demand, SNT is hiring the services of private operators.
- The regular consigners of SNT include armed force, FCI and Govt of Sikkim. The Govt of Sikkim has made it compulsory that the transportation of goods meant for government purpose are carried by SNT or under arrangement authorized by SNT.
- The armed forces have been continuously hiring the services of SNT on yearly renewable contract basis. Siliguri in West Bengal is an important place especially from operational point of view as it is an important loading point (i.e.

NGP, Bangdupi and TCP). Most of the trucks and tankers movement takes place from Siliguri to various destinations in Sikkim.

All trucks and tankers enter Sikkkim through either Malli Check post or Rangpo Check post where SNT have their counters. Majority of freight movement is passing through Rangpo check post. At these counters, SNT is collecting supervision charges from private operators besides details like Origin, Destination, quantity of materials carried etc.

Private trucks and tankers carrying essential commodities like rice, milk etc are exempted from supervision charges.

At present, the freight vehicle movement is restricted to night hours from Evening 7 P.M to morning 7 A.M.

- There are no freight terminals in Gangtok.
- The freight vehicles are restricted at Rangpo and other surrounding towns. This leads to major congestion in the intercity roads, and
- Major roads within the city, as the trucks are parked off street and reduce the carriageway.

Thus 4 freight terminals have been proposed in periphery of the city to cater the freight vehicles coming from the surrounding towns and cities. These terminals have been proposed in phase 2 and phase 3. (Map 15.7) The Proposed terminals are located at-

I. Ranipool : Catering to Sigtham, Siliguri, Kalimpong and Darjeeling (South)
II. Setipool : Catering to Pakyong, Pakim and Rongli (South)
III. Bhurtuk : Catering to Penlong, Panthang, North Sikkim District (North)
IV. IInd Mile Chandmari : catering to Nathula and Tibet Border (North)

Need For Vehicle Tracking System

Any business with multiple vehicles, whether 4 or 40, faces numerous challenges as it seeks to increase vehicle utilization, reduce costs, improve customer service and reduce the risk o breakdown

Concept of Vehicle Tracking System

A GPS tracking system is easy to deploy and use. Each vehicle, that needs to be tracked, need to be installed with a vehicle tracing unit (VTU), which is small

hardware unit consisting of a GPS receiver and a GPRS communication module.

The Global Positioning System (GPS) consists of a network of 24 satellites placed into orbit by U.S. GPS satellites circle the earth and transmit signals to the earth. The GPS receiver uses signal from multiple satellites, to calculate the location of a vehicle. The GPRS module in turn transmits this location information to the internet tacking server, over the GPRS data network provided by GSM cellular operators. Transporters can now track their vehicles, on digital maps, by logging onto the internet tracking website, using a username and a password provided by tracking service provide.

Key Features of GPS Vehicle Tracking System

- Monitor all halts with exact time and duration and location of each halt.
- View accurate trip sheets with exact time of arrival and departure at given location
- Get accurate log of kilometers driven
- Monitor over speeding violations with location, distance and time stamps
- Provide storage of report for a reasonable amount of time ranging from 6 months to a year.
- Provide alerts in case driver attempts to tamper with the VTU or tries to disconnect it from the main battery of the vehicle

15.28.7. Bus Terminal

Presently, Gangtok has two bus terminals serving both interstate as well as intra state buses at P.S. Road and Police Head Quarters. These consist of 7 bus bays which has been approved and under process at the time of survey for CMP report preparation. These terminals are presently being used by the local taxi and private vehicle owners also.

To avoid movement of interstate buses and further congestion inside the city, 1 bus terminal has been proposed in phase- I at Old Floor Mil Tadong ward. 2 bus terminals proposed in phase – II at Bhurtuk and Chandmari wards.

15.29. Sources of Funding

Since cities and towns in India constitute the second largest urban system in the world, and contribute over 50 per cent of the country's Gross Domestic Product

(GDP), they are central to economic growth. For the cities to realize their full potential and become effective engines of growth, it is necessary that focused attention be given to the improvement of infrastructure in an organized manner. As such the JNNURM was launched in December 2005 with the aim to encourage reforms and fast track planned development of identified cities. Focus is to be on efficiency in urban infrastructure and service delivery mechanisms, community participation, and accountability of Urban Local Bodies (ULBs)/ Parastatal agencies towards citizens. The period of the Mission is seven years up to 2012. During this period, funds shall be provided for proposals that would meet the Mission's requirements. Assistance under JNNURM is additional central assistance, which would be provided as grant (100 per cent central grant) to the implementing agencies.

The funding from JNNURM is supported by counterpart funding in form grants from the state and the ULBs, for which the ratio has been fixed by the mission for different categories of cities. In case of the North Eastern States the funding pattern is as follows:

- Government of India grant under JNNURM- 90%
- State Government grant under JNNURM- 10%
- Contribution from Cities/ ULBs- 0%

15.29.1 Alternative Sources of Funding

For the projects which are not admissible under JNNURM, the alternative sources of funding available are given below.

15.29.1.1 Real Estate Development

It is one of most widely used avenues for raising funds particularly for projects like public transport, flyovers etc. In this the property developers are invited to develop the land along the transport corridors and share profit with the transport organization arising out of such sale of property. The model is widely accepted in other countries and has been well adopted by number of states like Maharashtra and cities such as Indore and Ahmadabad etc.

15.29.1.2 Dedicated Urban Transport Fund

Gangtok Transport Authority will be the custodian of the urban Transport Fund. Various states have created dedicated Road Fund for development of roads, by charging cess on turnover, betterment levy, shops and establishment levy, tax on employment, surcharge on octroi and other levies (Uttar Pradesh, Tamil Nadu and Punjab). Some states have created Infrastructure Initiative Fund (M.P) Surat besides some big cities have also set up a dedicated fund for Urban Transport (Surat). The following types of cess/levy could be mobilized as a resource to the aforesaid Fund

15.29.1.3 Viability Gap Funding

The Government of India has established a special financing facility, called "Viability Gap Funding" under the Department of Economic Affairs, Ministry of Finance, to provide support to PPP infrastructure projects that have committed at least 40% private equity to such project. It has also set up certain criteria to avail this facility from Government of India.

Viability Gap Funding can be provided as capital grants, subordinated loans, O&M support grants and interest subsidies. It will be in installments, preferably in the form of annuities. The total government support including Viability Gap Funding must not exceed 20% of the total project cost.

Following projects implemented by the Private Sector are eligible for funding:

a) Roads and bridges, railways seaports, airports, inland waterways
b) Urban transport, water supply sewerage, solid waste management arid other physical infrastructure in urban areas.
c) Infrastructure projects in Special Economic Zones
d) Power
e) International convention centers and other tourism infrastructure projects.

15.29.1.4 Cess on Turnover

A substantial amount of revenue could be generated through cess on turnover particularly in cities based on industry, trade & commerce activities. (Bangalore MRTS project).

15.29.1.5 Betterment Levy through Value Capture Mechanism

It aims to recover the project cost from the beneficiaries of the project by recouping the land value increment. This method has been used in Bangalore for LRT project as metro tax. In Mumbai, also resource mobilization for Transport facilities have been proposed through raising revenues from value capture resources like contribution from employees, transport development levy, development cess on daily rail and intercity bus tickets, surcharge on seasonal tickets, property development levy additional tax on petrol sold with city, Additional registration tax, Advertising revenue from bus stop etc.

15.29.1.6 Shops and Establishment Levy

This method has the potential to be one of the large revenue gathering measures; particularly where predominant economic base is trade and commerce

a. Tax on Employment

An additional source of revenue can be generated by an additional levy on the employer. This has been successfully adopted in cities of developed countries like Paris and France

b. Surcharge Levy on Octroi Rates

This method involves levying a surcharge on Octroi. In areas where there is a proposal for abolishment of Octroi, a substitute in the form of Entry Tax has been enforced which has potential to generate sizeable source of revenue.

c. Sale of Government Land and other Property

It is an efficient source of raising resources by local bodies. Cities in India have been raising funds through sale of government land for road infrastructure improvement projects.

d. Others

- Portion of parking fee
- Additional fee on PUC certification
- Traffic violation fee
- Congestion fee

Besides the above identified sources Gangtok can also access carbon credits and grants from other international sources including, GEF, DFID, GTZ etc. it can also access loans from international banks like ADB, World Bank etc

15.29.2 Funding Needs

Table 15.10: Potential Sources of funding for Identified Projects

S.N	ITEM	ULB	State	Central Govt.	Multi Lateral Funding Agency	Private Sector
1	Pedestrian Zones			●		
2	Drains Re-development			●		
3	Construction of Footpaths			●		
4	Zebra Crossing	●				
5	pedestrian phase at Junctions	●				
6	NMT network		●	●		
7	Scientific management of cycle rickshaws					●
8	Reorganization of the existing city bus service					●
9	Public Transport Network		●	●		
10	Feeder network /IPT network		●	●		
11	Management of Auto Rickshaws					●
12	Up gradation of the existing bus terminals				●	●
13	New Bus terminals				●	●
14	Providing new truck terminals					●
15	Transport System Management Measures	●				
16	Widening of existing bridges/ Culverts		●	●		
17	Intersection Improvements	●	●			
18	Flyovers				●	
19	Development and Widening of Bundh road			●	●	
20	Road Widening in City		●	●	●	
21	Parking					●

15.30. Phasing and Costing

Proposals are divided in to three phases. Three stages of phasing are 2010-2015, 2016-2025 and 2026-2041. The first phase is basically focusing on strengthening and improvement of existing traffic and transportation and priorities are given to pedestrian movement like construction and improvement footpaths, Construction and improvement of Stairs connecting roads, Geometry improvement of junction and also developing new links for alternate routes. Under NMT facility development of

ropeway network, few critical parking sites and bus terminal are also suggested in the Ist phase. In IInd phase existing road network will be re developed along with construction of new Roads i.e. Inner and Outer Ring Road.

Cost estimates are approximate and based on CPWD norms building cost index applicable to Sikkim for some items they have been adopted from similar type of projects in comparable condition. They require to be detailed out in respective DPRs of individual projects and the availability of terrain on the spot. They are only indicative and not comparative. Projects can be developed through PPP models are also mentioned in the table below.

Table 15-10: Phasing and Costing –

SL. No.	Phases	Rs. In Cr.	%
1	Ist (2010-2015)	299.08	34.19
2	IInd (2016-2025)	484.17	55.35
3	IIIrd (2026-2041)	91.5	10.46
	Grand Total	**874.75**	

Table 15-11: Phasing and Costing: Project Wise –

Phase I- 2010-2015

Sl. No.	Name of Project	Total Quantity	Unit	Unit (Rate) (Cr.)	Cost in Rs (Cr.)	PPP Potential
1	**Phase I- 2010-2015**					
	A. Footpaths Improvement	**9 Nos**	**14.5 Km**	**0.15**	**2.18**	
	I) Development Area – PNG School (Along Super Market)		1.8	0.15	0.27	
	II) Defence Cinema- NH31A footpath at Tadong Daragaon		2	0.15	0.30	
	III) Munshi Colony- District court road		2.4	0.15	0.36	
	IV) P.S. Road- M.G. Marg Footpath		0.8	0.15	0.12	
	V) M.G.Marg-Lal Bazar		1.2	0.15	0.18	
	VI) M.G. Marg-Tibet Road		1.8	0.15	0.27	

Sl. No.	Name of Project	Total Quantity	Unit	Unit (Rate) (Cr.)	Cost in Rs (Cr.)	PPP Potential
	VII) M.G. Marg- Kazi Road		1.7	0.15	0.26	
	VIII) Kazi Road- Tibet Road		1.2	0.15	0.18	
	IX) Hospital (Tibet Road – NH-31 A) Footpath		1.6	0.15	0.24	
	B. New Footpath Construction (At Grade)	**3 Nos**	**8.0 Km**	**0.25**	**2.00**	
	I) Zero Point to Vajra Cinema Hall		2	0.25	0.50	
	II) Indira Bypass- District Court to Helipad.		4	0.25	1.00	
	III) Ambedkar Road- From SNT To District Court.		2	0.25	0.50	
	C. New Footpath Construction (Elevated)	**3 Nos**	**3.90 Km**	**4**	**15.60**	
	I) P. S. Road To Hospital To Metro Point		1.8	4	7.20	
	II) Jiwan Theeg Marg to hospital Junction		1	4	4.00	
	III) Zero Point to Jiwan Theeg Marg		1.1	4	4.40	
	D. Stairs Improvement	**9 Nos**	**0.9 Km**	**1**	**0.90**	
	I) Tibet Road to Kazi Road (Near Sadar Police Station)		0.16	1	0.16	
	II) Power Secretariat to Secretariat		0.16	1	0.16	
	III) Denzong Cinema Hall to M. G. Road		0.15	1	0.15	
	IV) Secretariat to Tibet Road (Near MLA Hostel)		0.1	1	0.10	
	V) New Market to Taxi Stand		0.1	1	0.10	
	VI) Kazi Road to New Market		0.05	1	0.05	
	VII) Power Secretariat to Kazi Road		0.03	1	0.03	

Sl. No.	Name of Project	Total Quantity	Unit	Unit (Rate) (Cr.)	Cost in Rs (Cr.)	PPP Potential
	VIII) Arithang to Petrol Pump (Indira Bypass)		0.05	1	0.05	
	IX) Forest Office to Deorali Parking		0.1	1	0.10	
	E. New Staircases	**3 Nos**	**0.6 Km**	**5**	**3.00**	
	I) Arithang		0.2	5	1.00	
	II) Pani House		0.2	5	1.00	
	III) Tatangchen		0.2	5	1.00	
	F. Junction Improvement	**11 Nos**		**0.25**	**2.75**	
	I) Zero Point	1		0.25	0.25	
	II) Lal Market	1		0.25	0.25	
	III) P.S. Road DPH Road	1		0.25	0.25	
	IV) Metro Pont	1		0.25	0.25	
	V) Deorali	1		0.25	0.25	
	VI) Hospital Junction	1		0.25	0.25	
	VII) Tibet road and MG Marg at Sukhani House	1		0.25	0.25	
	VIII) Community Hall Junction	1		0.25	0.25	
	IX) Sikkim Government College	1		0.25	0.25	
	X) Tadong Bazar	1		0.25	0.25	
	XI) JN Road Tibet Road Jn.	1		0.25	0.25	
	G. New Pedestrian Foot-over Bridge	**4 Nos**		**10**	**40.00**	
	I) Near Bansilal Petrol Pump			10	10.00	
	II) Near Sikkim Govt. College.			10	10.00	
	III) Near Post office on P S Road			10	10.00	
	IV) '0' Point			10	10.00	
	H. Road Network	**4 Nos**	**50 Km**	**0.51**	**25.50**	
	Widening and Strengthening of roads					**Yes**
	I) Ranka		10	0.51	5.10	
	II) Luing		5	0.51	2.55	

Sl. No.	Name of Project	Total Quantity	Unit	Unit (Rate) (Cr.)	Cost in Rs (Cr.)	PPP Potential
	III) Rumtek		20	0.51	10.20	
	IV) Assam Lingzay		15	0.51	7.65	
	I. New Road Links	**2 Nos.**	**2.5 Km**	**1.26**	**3.15**	
	I) J.T. Road to Indira Bypass		1.5	1.26	1.89	
	II) Arithang Road to Indira Bypass		1	1.26	1.26	
	J. Construction of new bridge	**1 No.**	**0.045 Km**	**23.4**	**1.05**	**Yes**
	I) Ranikhola River to link Gangtok to Siliguri		0.045	23.4	1.05	
	K. Demarcated Bus Lane-Bus Shelter and Bus Bays	**4 Nos**	**53 Nos**	**0.288**	**15.26**	
	I) Ranipool SNT Bus Depot :11 Km		11	0.288	3.17	
	II) IInd Mile to SNT Bus Depot: 8 Km		8	0.288	2.30	
	III) SNT Bus Depot to Tashi View Point: 16 Km		16	0.288	4.61	
	IV) SNT Bus Depot to Tashi View Point Via Amdo Golai: 18 Km		18	0.288	5.18	
	L. Bus Terminal	**1 Nos.**	**10 Cr**	**10**	**10.00**	**Yes**
	I) Old Floor Mill Tadong		10 Cr	10	10.00	
	M. Parking	**5 Nos.**	**3240 Sq Mt**	**0.0025**	**8.19**	**Yes**
	i) Below Govt College		1250	0.0025	3.16	
	II) P.S. Road		800	0.0025	2.02	
	III) Namnang		240	0.0025	0.61	
	IV) Sikkim Jewels		500	0.0025	1.26	
	V)JT road		450	0.0025	1.14	
	N. Ropeway	**12 Nos**	**15.45 Km**	**10**	**154.50**	**Yes**

Sl. No.	Name of Project	Total Quantity	Unit	Unit (Rate) (Cr.)	Cost in Rs (Cr.)	PPP Potential
	i) Bhurtuk North-Bhurtuk South		1.3	10	13.00	
	ii) Bhurtuk South- Chandmari		1.5	10	15.00	
	iii) Chandmari to Tashiling Secretariat		1.9	10	19.00	
	iv) Tashiling Secretariat to Lower Sichey		1.2	10	12.00	
	v) Lower Sichey to Upper Sichey		1.8	10	18.00	
	vi) Upper Sichey to Bhurtuk South		1.4	10	14.00	
	vii) Assembly to Upper Syari		0.25	10	2.50	
	viii) Upper Syari to Middle Tatangchen		1	10	10.00	
	ix) Middle Tatangchen to Lower Tatangchen		1.3	10	13.00	
	x) Lower Tatangchen to Ranipool		1.3	10	13.00	
	xi) Ranipool to Tadong		1.2	10	12.00	
	xii) Tadong to Deorali		1.3	10	13.00	
	O. Helipad Upgradation	**1 No**		**10**	**10.00**	**Yes**
	P. RAAS & RMMS (Road Accident Analysis System & Routine Maintainance Management System)			**5**	**5.00**	
	Total				**299.08**	

Phase II- 2016-2025

Sl. No.	Name of Project	Total Quantity	Unit	Unit (Rate) (Cr.)	Cost in Rs (Cr.)	PPP Potential
2	**A. Road Network Improvement**	**14 Nos**	**20.94 Km**	**0.25**	**5.24**	
	i) Arithang		0.8	0.25	0.20	
	ii)Forest Check Post to White hall road (J. Nehru Road) (NH-31A)		1.2	0.25	0.30	

Sl. No.	Name of Project	Total Quantity	Unit	Unit (Rate) (Cr.)	Cost in Rs (Cr.)	PPP Potential
	iii) IInd Miles to IIIrd mile check post (NH)		1.3	0.25	0.33	
	iv) Lower Arithang		1.3	0.25	0.33	
	v) Luing to Middle Bhojoghari (MR)		5.4	0.25	1.35	
	vi) DPH Road		1.4	0.25	0.35	
	vii) PWD Store Road		1.6	0.25	0.40	
	viii) Bahai School Road		1	0.25	0.25	
	ix) High Court Road		0.7	0.25	0.18	
	x) Tibet Road		1	0.25	0.25	
	xi) Namnang Road		1.1	0.25	0.28	
	xii) JT Road		1.3	0.25	0.33	
	xiii) VIP Road		0.74	0.25	0.19	
	xiv) Sichey Road		2.1	0.25	0.53	
	B. Conversion of Metal Bailey Suspension Bridges to R.C.C Bridges	**4 Nos**	**0.105 Km**	**23.4**	**2.46**	
	i) Setipool	2	0.06	23.4	1.40	
	ii) Indira Bypass	1	0.02	23.4	0.47	
	iii) NH 31 A- Nathula	1	0.025	23.4	0.59	
	C. Inner Ring Road	**1 No.**	**23.17 Km**	**1.51**	**34.91**	**Yes**
	D. Outer Ring Road	**1 No.**	**25.85 Km**	**2**	**51.93**	**Yes**
	E. Road Connectivity to Greenfield Airport Proposed in Pakyong	**1 No.**	**26 Km**	**1.51**	**39.26**	
	F. Road Connectivity to Proposed Railway Station	**1 No.**	**45 Km**	**2**	**90.00**	
	G. Bus Terminals	**2Nos**		**10**	**20.00**	**Yes**
	I) Burtuk			10	10.00	
	II) Chandmari			10	10.00	

Sl. No.	Name of Project	Total Quantity	Unit	Unit (Rate) (Cr.)	Cost in Rs (Cr.)	PPP Potential
	H. Freight Terminal	**2 Nos**	**25000 Sq Mt**	**0.003**	**75.00**	**Yes**
	I) Ranipool		10000	0.003	30.00	
	II) Setipool		5000	0.003	15.00	
	I. Parking	**3 Nos**	**66150 Sq Mt**	**0.0025**	**165.38**	**Yes**
	i) Ranipool		53850	0.0025	134.63	
	ii) Upper Bhurtuk		6150	0.0025	15.38	
	iii) Lower Sichey		6150	0.0025	15.38	
	Total				**484.17**	
Phase III- 2026-2041						
Sl. No.	**Name of Project**	**Total Quantity**	**Unit**	**Unit (Rate) (Cr.)**	**Cost in Rs (Cr.)**	**PPP Potential**
3	**A. Freight Terminal**	**2 Nos**	**10000 Sq Mt**	**0.003**	**30**	**Yes**
	I) IInd mile (Chandmari)		5000	0.003	15	
	II) Penlong/ Pangthang road (Bhurtuk)		5000	0.003	15	
	B. Parking	**3 Nos**	**24600 Sq Mt**	**0.0025**	**61.5**	**Yes**
	I) M. G. Road		12300	0.0025	30.75	
	II) Chandmari		**6150**	0.0025	15.375	
	III) Tadong		**6150**	0.0025	15.375	
	Total				**91.50**	
	Grand Total				**874.75**	

15.31. Generation of Employment

It is assumed that out of total project cost of Rs.874.75 Crores, 65% i.e. Rs.568.58 Crores will be cost of the material, 35%, i.e. Rs.306.16 Crores are wages to man power at all levels. This manpower is further estimated at 5% to management level, 15% to middle level supervisory staff and 80% skilled and unskilled labour force. (Table 15.12)

Table 15.12: Expenditure on Labour Force and Generation of Employment

	Manangement (5%)	Middle Level Staff (15%)	Labourers (80%) (Skilled/Unskilled)	Total
Funds (Crores)	15.31	45.92	244.93	306.16
Salary(Rs/Month)	Rs 50000	Rs 20,000	Rs 4500(Rs150/day)	74500
Man Days (Lakh)	0.92	6.89	163.29	171.09

Thus on this basis employment of about 163.29 Lakh man days will be generated for labour force, about 6.89 lakh man days for middle level staff and about 92,000 man days for management officers. Overall 171.09 lakh man days will be generated if all projects are implemented in time bound manner. This will improve the overall economic condition of the town by generating mass employment. Also Rs.568.58 Crore expenditure on material demand will generate more employment in Gangtok and neighbouring state, leading to overall economic growth and prosperity.

Table 15.13: Employment Generation Mandays (Phasewise)

	2010-2015	2016-2025	2026-2041	Total Man Days
Manangement (5%)	41,332	32,147	22,962	91848
Middle Level Staff (15%)	309,987	241,101	172,215	688860
Labourers (80%) (Skilled/Unskilled)	7,347,840	5,714,987	4,082,133	16328533

To calculate gainful employment, 300 man days are estimated to generate gainful employment for one person. Accordingly, if all the proposed schemes are undertaken, it will lead to major employment generation. Approximately 54436 number of workers will be added to the total workforce, which will include 2722 management level staffs, 8165 middle level staffs and 43549 labourers.

ANNEXURES

ANNEXURE-I (Project Sheets)

Sl. No.	Project Name	Categories
1.1	Footpath Improvement	Pedestrian Network

	Project	Location and other Details
1.1A	Development Area to PNG School	• Development Area Ward
a	Project Rationale and Justification	• Footpaths are very important for Pedestrian Safety and free Movement. • Footpath surfaces are not accessible for Handicapped. • Insufficient width. • Not properly designed and maintained. • Hand Rails are Broken at places and need replacement
b	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c	Project Status	• Footpath is identified. • DPR needed.
d	Anticipated Timeframe	• Phase I
e	Project Description	Tasks involved in strengthening of Footpath: • Improvement of Identified Stretch of total length 1.8 Km • Improvement of Surface of identified footpath • Improvement of railings of footpath • Provision of resting places, signages, adequate lighting • Ramps for handicapped accessibility.
f	Social and Environmental Impact	• Due to up gradation of footpath , it will be used by mass population which will help in pedestrianisation of the city. • Due to standardization of footpath design, people from all groups will use footpath as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g	Implementation Arrangements:	• UDHD
h	Project Cost	• Rs. 0.27 Crores
i	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 6 months

	Project	Location and other Details
1.1B	Defence Cinema to NH 31 A Footpath	• Tadong Ward
a	Project Rationale and Justification	• Footpaths are very important for Pedestrian Safety and free Movement. • Footpath surfaces are not accessible for Handicapped. • Insufficient width. • Not properly designed and maintained. • Hand Rails are Broken at places and need replacement
b	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c	Project Status	• Footpath is identified. • DPR needed.
d	Anticipated Timeframe	• Phase I
e	Project Description	Tasks involved in strengthening of Footpath: • Improvement of Identified Stretch of total length 2 Km • Improvement of Surface of identified footpath • Improvement of railings of footpath • Provision of resting places, signages, adequate lighting • Ramps for handicapped accessibility.
f	Social and Environmental Impact	• Due to up gradation of footpath , it will be used by mass population which will help in pedestrianisation of the city. • Due to standardization of footpath design, people from all groups will use footpath as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g	Implementation Arrangements:	• UDHD
h	Project Cost	• Rs. 0.3 Crores
i	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 6 months

	Project	Location and other Details
1.1C	Munshi Colony to District Court Road	• Sichey Ward
a	Project Rationale and Justification	• Footpaths are very important for Pedestrian Safety and free Movement. • Footpath surfaces are not accessible for Handicapped. • Insufficient width. • Not properly designed and maintained. • Hand Rails are Broken at places and need replacement
b	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c	Project Status	• Footpath is identified. • DPR needed.
d	Anticipated Timeframe	• Phase I
e	Project Description	Tasks involved in strengthening of Footpath: • Improvement of Identified Stretch of total length 2.4 Km • Improvement of Surface of identified footpath • Improvement of railings of footpath • Provision of resting places, signages, adequate lighting • Ramps for handicapped accessibility.
f	Social and Environmental Impact	• Due to up gradation of footpath , it will be used by mass population which will help in pedestrianisation of the city. • Due to standardization of footpath design, people from all groups will use footpath as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g	Implementation Arrangements:	• UDHD
h	Project Cost	• Rs. 0.36 Crores
i	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 6 months

	Project	Location and other Details
1.1D	P.S Road to M.G Marg	• DPH Ward
a	Project Rationale and Justification	• Footpaths are very important for Pedestrian Safety and free Movement. • Footpath surfaces are not accessible for Handicapped. • Insufficient width. • Not properly designed and maintained. • Hand Rails are Broken at places and need replacement
b	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c	Project Status	• Footpath is identified. • DPR needed.
d	Anticipated Timeframe	• Phase I
e	Project Description	Tasks involved in strengthening of Footpath: • Improvement of Identified Stretch of total length 0.8 Km • Improvement of Surface of identified footpath • Improvement of railings of footpath • Provision of resting places, signages, adequate lighting • Ramps for handicapped accessibility.
f	Social and Environmental Impact	• Due to up gradation of footpath , it will be used by mass population which will help in pedestrianisation of the city. • Due to standardization of footpath design, people from all groups will use footpath as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g	Implementation Arrangements:	• UDHD
h	Project Cost	• Rs. 0.12 Crores
i	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 6 months

	Project	Location and other Details
1.1E	M.G Marg to Lal Bazar	• Upper M.G Marg
a	Project Rationale and Justification	• Footpaths are very important for Pedestrian Safety and free Movement. • Footpath surfaces are not accessible for Handicapped. • Insufficient width. • Not properly designed and maintained. • Hand Rails are Broken at places and need replacement
b	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c	Project Status	• Footpath is identified. • DPR needed.
d	Anticipated Timeframe	• Phase I
e	Project Description	Tasks involved in strengthening of Footpath: • Improvement of Identified Stretch of total length 1.2 Km • Improvement of Surface of identified footpath • Improvement of railings of footpath • Provision of resting places, signages, adequate lighting • Ramps for handicapped accessibility.
f	Social and Environmental Impact	• Due to up gradation of footpath, it will be used by mass population which will help in pedestrianisation of the city. • Due to standardization of footpath design, people from all groups will use footpath as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g	Implementation Arrangements:	• UDHD
h	Project Cost	• Rs. 0.18 Crores
i	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 6 months

	Project	Location and other Details
1.1F	M.G Marg to Tibet road	• Upper M.G Marg
a	Project Rationale and Justification	• Footpaths are very important for Pedestrian Safety and free Movement. • Footpath surfaces are not accessible for Handicapped. • Insufficient width. • Not properly designed and maintained. • Hand Rails are Broken at places and need replacement
b	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c	Project Status	• Footpath is identified. • DPR needed.
d	Anticipated Timeframe	• Phase I
e	Project Description	Tasks involved in strengthening of Footpath: • Improvement of Identified Stretch of total length 1.8 Km • Improvement of Surface of identified footpath • Improvement of railings of footpath • Provision of resting places, signages, adequate lighting • Ramps for handicapped accessibility.
f	Social and Environmental Impact	• Due to up gradation of footpath , it will be used by mass population which will help in pedestrianisation of the city. • Due to standardization of footpath design, people from all groups will use footpath as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g	Implementation Arrangements:	• UDHD
h	Project Cost	• Rs. 0.27 Crores
i	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 6 months

	Project	Location and other Details
1.1G	M.G Marg to Kazi road	• Upper M.G Marg
a	Project Rationale and Justification	• Footpaths are very important for Pedestrian Safety and free Movement. • Footpath surfaces are not accessible for Handicapped. • Insufficient width. • Not properly designed and maintained. • Hand Rails are Broken at places and need replacement
b	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c	Project Status	• Footpath is identified. • DPR needed.
d	Anticipated Timeframe	• Phase I
e	Project Description	Tasks involved in strengthening of Footpath: • Improvement of Identified Stretch of total length 1.7 Km • Improvement of Surface of identified footpath • Improvement of railings of footpath • Provision of resting places, signages, adequate lighting • Ramps for handicapped accessibility.
f	Social and Environmental Impact	• Due to up gradation of footpath , it will be used by mass population which will help in pedestrianisation of the city. • Due to standardization of footpath design, people from all groups will use footpath as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g	Implementation Arrangements:	• UDHD
h	Project Cost	• Rs. 0.26 Crores
	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 6 months

	Project	Location and other Details
1.1H	Kazi Road to Tibet road	• Tibet Road Ward
a	Project Rationale and Justification	• Footpaths are very important for Pedestrian Safety and free Movement. • Footpath surfaces are not accessible for Handicapped. • Insufficient width. • Not properly designed and maintained. • Hand Rails are Broken at places and need replacement
b	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c	Project Status	• Footpath is identified. • DPR needed.
d	Anticipated Timeframe	• Phase I
e	Project Description	Tasks involved in strengthening of Footpath: • Improvement of Identified Stretch of total length 1.2 Km • Improvement of Surface of identified footpath • Improvement of railings of footpath • Provision of resting places, signages, adequate lighting • Ramps for handicapped accessibility.
f	Social and Environmental Impact	• Due to up gradation of footpath , it will be used by mass population which will help in pedestrianisation of the city. • Due to standardization of footpath design, people from all groups will use footpath as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g	Implementation Arrangements:	• UDHD
h	Project Cost	• Rs. 0.18 Crores
i	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 6 months

	Project	Location and other Details
1.1-I	Tibet road to NH 31 A	• Tibet Road Ward
a	Project Rationale and Justification	• Footpaths are very important for Pedestrian Safety and free Movement. • Footpath surfaces are not accessible for Handicapped. • Insufficient width. • Not properly designed and maintained. • Hand Rails are Broken at places and need replacement
b	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c	Project Status	• Footpath is identified. • DPR needed.
d	Anticipated Timeframe	• Phase I
e	Project Description	Tasks involved in strengthening of Footpath: • Improvement of Identified Stretch of total length 1.6 Km • Improvement of Surface of identified footpath • Improvement of railings of footpath • Provision of resting places, signages, adequate lighting • Ramps for handicapped accessibility.
f	Social and Environmental Impact	• Due to up gradation of footpath , it will be used by mass population which will help in pedestrianisation of the city. • Due to standardization of footpath design, people from all groups will use footpath as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g	Implementation Arrangements:	• UDHD
h	Project Cost	• Rs. 0.24 Crores
i	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 6 months

Sl. No.	Project Name	Categories
1.2	New Footpath Construction (at Grade)	Pedestrian Network

	Project Name	Location and Other Details
1.2 A	Zero Point to Vajra Cinema	• Development Area ward
a.	Project Rationale and Justification	• Footpaths are very important for Pedestrian Safety and free Movement. • Heavy Vehicular Movement at this Stretch • Heavy Pedestrian Movement. • Many Conflict point at Crossings.
b.	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c.	Project Status	• Stretch is identified. • DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in Construction of Footpath: • New Construction of footpath on Identified Stretch of total length 2 Km • Making the footpath Handicap friendly • Provision of railings along footpath • Provision of resting places, signages, adequate lighting • Ramps for handicapped accessibility.
f.	Social and Environmental Impact	• Due to Construction of footpath, it will be used by mass population which will help in pedestrianisation of the city. • Due to standardization of footpath design, people from all groups will use footpath as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD & PWD
h.	Project Cost	• Rs. 0.5 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 1 Year
	Project Name	Location and Other Details

1.2 B	Amdu Golai to Helipad	• Lower Sichey to Upper Sichey
a.	Project Rationale and Justification	• Footpaths are very important for Pedestrian Safety and free Movement. • Heavy Vehicular Movement at this Stretch • Heavy Pedestrian Movement. • Many Conflict point at Crossings.
b.	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c.	Project Status	• Stretch is identified. • DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in Construction of Footpath: • New Construction of footpath on Identified Stretch of total length 4 Km • Making the footpath Handicap friendly • Provision of railings along footpath • Provision of resting places, signages, adequate lighting • Ramps for handicapped accessibility.
f.	Social and Environmental Impact	• Due to Construction of footpath, it will be used by mass population which will help in pedestrianisation of the city. • Due to standardization of footpath design, people from all groups will use footpath as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD & PWD
h.	Project Cost	• Rs. 1.0 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 1 Year

	Project Name	Location and Other Details
1.2 C	Ambedkar Road to District Court	• DPH ward
a.	Project Rationale and Justification	• Footpaths are very important for Pedestrian Safety and free Movement. • Heavy Vehicular Movement at this Stretch • Heavy Pedestrian Movement. • Many Conflict point at Crossings.
b.	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c.	Project Status	• Stretch is identified. • DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in Construction of Footpath: • New Construction of footpath on Identified Stretch of total length 2 Km • Making the footpath Handicap friendly • Provision of railings along footpath • Provision of resting places, signages, adequate lighting • Ramps for handicapped accessibility.
f.	Social and Environmental Impact	• Due to Construction of footpath, it will be used by mass population which will help in pedestrianisation of the city. • Due to standardization of footpath design, people from all groups will use footpath as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD & PWD
h.	Project Cost	• Rs. 0.5 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 1 Year

Sl. No.	Project Name	Categories
1.3	New Footpath Construction (Elevated)	Pedestrian Network

	Project	Location and Other Details
1.3 A	P.S Road To Hospital Junction To Metro Point	• DPH ward to Upper M.G Marg Ward
a.	Project Rationale and Justification	• Footpaths are very important for Pedestrian Safety and free Movement. • Heavy Vehicular Movement at this Stretch • Heavy Pedestrian Movement. • Many Conflict point at Crossings. • Existing footpath is inadequate so pedestrians move on road Reducing carriageway and increasing chances of accidents.
b.	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c.	Project Status	• Stretch is identified. • DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in Construction of Footpath: • New Construction of footpath on Identified Stretch of total length 1.8 Km • Making the footpath Handicap friendly • Provision of railings along footpath • Provision of resting places, signages, adequate lighting • Ramps for handicapped accessibility.
f.	Social and Environmental Impact	• Due to Construction of footpath, it will be used by mass population which will help in pedestrianisation of the city. • Due to standardization of footpath design, people from all groups will use footpath as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD & PWD
h.	Project Cost	• Rs. 7.2 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 18 months

	Project	Location and Other Details
1.3 B	Jeevan Theeg Marg to Hospital Junction	• DPH ward
a.	Project Rationale and Justification	• Footpaths are very important for Pedestrian Safety and free Movement. • Heavy Vehicular Movement at this Stretch • Heavy Pedestrian Movement. • Many Conflict point at Crossings. • Existing footpath is inadequate so pedestrians move on road Reducing carriageway and increasing chances of accidents.
b.	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c.	Project Status	• Stretch is identified. • DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in Construction of Footpath: • New Construction of footpath on Identified Stretch of total length 1 Km • Making the footpath Handicap friendly • Provision of railings along footpath • Provision of resting places, signages, adequate lighting • Ramps for handicapped accessibility.
f.	Social and Environmental Impact	• Due to Construction of footpath, it will be used by mass population which will help in pedestrianisation of the city. • Due to standardization of footpath design, people from all groups will use footpath as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD & PWD
h.	Project Cost	• Rs. 4 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 18 months

	Project	Location and Other Details
1.3 C	Zero Point to Jeevan theeg Marg	• DPH ward
a.	Project Rationale and Justification	• Footpaths are very important for Pedestrian Safety and free Movement. • Heavy Vehicular Movement at this Stretch • Heavy Pedestrian Movement. • Many Conflict point at Crossings. • Existing footpath is inadequate so pedestrians move on road Reducing carriageway and increasing chances of accidents.
b.	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c.	Project Status	• Stretch is identified. • DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in Construction of Footpath: • New Construction of footpath on Identified Stretch of total length 1.1 Km • Making the footpath Handicap friendly • Provision of railings along footpath • Provision of resting places, signages, adequate lighting • Ramps for handicapped accessibility.
f.	Social and Environmental Impact	• Due to Construction of footpath, it will be used by mass population which will help in pedestrianisation of the city. • Due to standardization of footpath design, people from all groups will use footpath as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD & PWD
h.	Project Cost	• Rs. 4.4 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 18 months

Sl. No.	Project Name	Categories
1.4	Stairs Strengthening	Pedestrian Network
	Project	**Location and Other Details**
1.4 A	Tibet Road To Kazi Road	• **Tibet Road ward**
a.	Project Rationale and Justification	• Stairs are very important links for Pedestrians. • Pedestrian stairs surfaces are very poor • These stairs are connecting two different levels. Railing is important part of stairways • Many of the stairways are not properly designed and maintained. • Some of these steps need widening, strengthening and landscape. • Pedestrian stair provides short cut and require minimum energy. They are part of walk ways.
b.	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c.	Project Status	• Stair has been identified DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	• Strengthening of stair in a stretch from Tibet road to Kazi Road: 160 Mts • Improvement of Surface of identified stairs • Improvement of railings of stairs • Provision of roof coverage to stairs so as to use during rainy season. • Provision of resting places, signages, standardization of stair elements.
f.	Social and Environmental Impact	• Due to up gradation of stairs socially stairs will be used by maximum of population which will help in pedestrianisation city. • Due to standardization of stair case design, people from all groups will use stairs as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD
h.	Project Cost	• Rs. 0.16 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 6 months

	Project	• Location and Other Details
1.4 B	Power Secretariat to Secretariat	• **Chandmari and Tatangchen ward**
a.	Project Rationale and Justification	• Stairs are very important links for Pedestrians. • Pedestrian stairs surfaces are very poor • These stairs are connecting two different levels. Railing is important part of stairways • Many of the stairways are not properly designed and maintained. • Some of these steps need widening, strengthening and landscape. • Pedestrian stair provides short cut and require minimum energy. They are part of walk ways.
b.	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c.	Project Status	• Stair has been identified DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	• Strengthening of stair in a stretch from Power Secretariat to Secretariat: 160 Mts • Improvement of Surface of identified stairs • Improvement of railings of stairs • Provision of roof coverage to stairs so as to use during rainy season. • Provision of resting places, signages, standardization of stair elements.
f.	Social and Environmental Impact	• Due to up gradation of stairs socially stairs will be used by maximum of population which will help in pedestrianisation city. • Due to standardization of stair case design, people from all groups will use stairs as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD
h.	Project Cost	• Rs. 0.16 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 6 months

	Project	• **Location and Other Details**
1.4 C	Denzong Cinema Hall to MG road	• **Lower MG Marg ward**
a.	Project Rationale and Justification	• Stairs are very important links for Pedestrians. • Pedestrian stairs surfaces are very poor • These stairs are connecting two different levels. Railing is important part of stairways • Many of the stairways are not properly designed and maintained. • Some of these steps need widening, strengthening and landscape. • Pedestrian stair provides short cut and require minimum energy. They are part of walk ways.
b.	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c.	Project Status	• Stair has been identified DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	• Strengthening of stair in a stretch from Denzong Cinema Hall to MG road: 150 Mts • Improvement of Surface of identified stairs • Improvement of railings of stairs • Provision of roof coverage to stairs so as to use during rainy season. • Provision of resting places, signages, standardization of stair elements.
f.	Social and Environmental Impact	• Due to up gradation of stairs socially stairs will be used by maximum of population which will help in pedestrianisation city. • Due to standardization of stair case design, people from all groups will use stairs as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD
h.	Project Cost	• Rs. 0.15 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 6 months

	Project	• Location and Other Details
1.4 D	Secretariat to Tibet Road	• **Tibet Road Ward**
a.	Project Rationale and Justification	• Stairs are very important links for Pedestrians. • Pedestrian stairs surfaces are very poor • These stairs are connecting two different levels. Railing is important part of stairways • Many of the stairways are not properly designed and maintained. • Some of these steps need widening, strengthening and landscape. • Pedestrian stair provides short cut and require minimum energy. They are part of walk ways.
b.	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c.	Project Status	• Stair has been identified DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	• Strengthening of stair in a stretch from Secretariat to Tibet Road: 100 Mts • Improvement of Surface of identified stairs • Improvement of railings of stairs • Provision of roof coverage to stairs so as to use during rainy season. • Provision of resting places, signages, standardization of stair elements.
f.	Social and Environmental Impact	• Due to up gradation of stairs socially stairs will be used by maximum of population which will help in pedestrianisation city. • Due to standardization of stair case design, people from all groups will use stairs as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD
h.	Project Cost	• Rs. 0.1 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 6 months

	Project	• Location and Other Details
1.4 E	New market to Taxi stand	• **Sichey ward**
a.	Project Rationale and Justification	• Stairs are very important links for Pedestrians. • Pedestrian stairs surfaces are very poor • These stairs are connecting two different levels. Railing is important part of stairways • Many of the stairways are not properly designed and maintained. • Some of these steps need widening, strengthening and landscape. • Pedestrian stair provides short cut and require minimum energy. They are part of walk ways.
b.	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c.	Project Status	• Stair has been identified DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	• Strengthening of stair in a stretch from New market to Taxi stand: 100 Mts • Improvement of Surface of identified stairs • Improvement of railings of stairs • Provision of roof coverage to stairs so as to use during rainy season. • Provision of resting places, signages, standardization of stair elements.
f.	Social and Environmental Impact	• Due to up gradation of stairs socially stairs will be used by maximum of population which will help in pedestrianisation city. • Due to standardization of stair case design, people from all groups will use stairs as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD
h.	Project Cost	• Rs. 0.1 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 6 months

	Project	• Location and Other Details
1.4 F	Kazi Road to New Market	• **Upper M.G. Marg**
a.	Project Rationale and Justification	• Stairs are very important links for Pedestrians. • Pedestrian stairs surfaces are very poor • These stairs are connecting two different levels. Railing is important part of stairways • Many of the stairways are not properly designed and maintained. • Some of these steps need widening, strengthening and landscape. • Pedestrian stair provides short cut and require minimum energy. They are part of walk ways.
b.	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c.	Project Status	• Stair has been identified DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	• Strengthening of stair in a stretch from Kazi Road to New Market: 50 Mts • Improvement of Surface of identified stairs • Improvement of railings of stairs • Provision of roof coverage to stairs so as to use during rainy season. • Provision of resting places, signages, standardization of stair elements.
f.	Social and Environmental Impact	• Due to up gradation of stairs socially stairs will be used by maximum of population which will help in pedestrianisation city. • Due to standardization of stair case design, people from all groups will use stairs as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD
h.	Project Cost	• Rs. 0.05 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 6 months

	Project	• Location and Other Details
1.4 F	Power Secretariat to Kazi Road	• **Chandmari Ward**
a.	Project Rationale and Justification	• Stairs are very important links for Pedestrians. • Pedestrian stairs surfaces are very poor • These stairs are connecting two different levels. Railing is important part of stairways • Many of the stairways are not properly designed and maintained. • Some of these steps need widening, strengthening and landscape. • Pedestrian stair provides short cut and require minimum energy. They are part of walk ways.
b.	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c.	Project Status	• Stair has been identified DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	• Strengthening of stair in a stretch from Power Secretariat to Kazi Road: 30 Mts • Improvement of Surface of identified stairs • Improvement of railings of stairs • Provision of roof coverage to stairs so as to use during rainy season. • Provision of resting places, signages, standardization of stair elements.
f.	Social and Environmental Impact	• Due to up gradation of stairs socially stairs will be used by maximum of population which will help in pedestrianisation city. • Due to standardization of stair case design, people from all groups will use stairs as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD
h.	Project Cost	• Rs. 0.03 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 6 months

	Project	• Location and Other Details
1.4 G	Arithang to Petrol Pump, Indira Bypass	• **Arithang ward**
a.	Project Rationale and Justification	• Stairs are very important links for Pedestrians. • Pedestrian stairs surfaces are very poor • These stairs are connecting two different levels. Railing is important part of stairways • Many of the stairways are not properly designed and maintained. • Some of these steps need widening, strengthening and landscape. • Pedestrian stair provides short cut and require minimum energy. They are part of walk ways.
b.	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c.	Project Status	• Stair has been identified DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	• Strengthening of stair in a stretch from Arithang to Petrol Pump, Indira Bypass: 50 Mts • Improvement of Surface of identified stairs • Improvement of railings of stairs • Provision of roof coverage to stairs so as to use during rainy season. • Provision of resting places, signages, standardization of stair elements.
f.	Social and Environmental Impact	• Due to up gradation of stairs socially stairs will be used by maximum of population which will help in pedestrianisation city. • Due to standardization of stair case design, people from all groups will use stairs as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD
h.	Project Cost	• Rs. 0.05 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 6 months

	Project	• Location and Other Details
1.4 H	Forest Office to Deorali Parking	• **Deorali ward**
a.	Project Rationale and Justification	• Stairs are very important links for Pedestrians. • Pedestrian stairs surfaces are very poor • These stairs are connecting two different levels. Railing is important part of stairways • Many of the stairways are not properly designed and maintained. • Some of these steps need widening, strengthening and landscape. • Pedestrian stair provides short cut and require minimum energy. They are part of walk ways.
b.	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To improve pedestrian environment and pedestrian safety.
c.	Project Status	• Stair has been identified DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	• Strengthening of stair in a stretch from Forest Office to Deorali Parking: 100 Mts • Improvement of Surface of identified stairs • Improvement of railings of stairs • Provision of roof coverage to stairs so as to use during rainy season. • Provision of resting places, signages, standardization of stair elements.
f.	Social and Environmental Impact	• Due to up gradation of stairs socially stairs will be used by maximum of population which will help in pedestrianisation city. • Due to standardization of stair case design, people from all groups will use stairs as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD
h.	Project Cost	• Rs. 0.1 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 6 months

Sl. No.	Project Name	Categories
1.5.	Stairs Construction	Pedestrian Network
	Project	• **Location and other Details**
1.5 A	Arithang	• **Arithang Ward**
a.	Project Rationale and Justification	• Stairs are very important links for Pedestrians. • Especially needed in hilly terrains to connect residential areas to main roads. • Present inaccessible areas can be used for residential purpose with improved connectivity. • These stairs are connecting two different levels. Railing is important part of stairways. • Pedestrian stair provides short cut and require minimum energy. They are part of walk ways.
b.	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To increase areas under various landuses..
c.	Project Status	• Stair is identified DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in strengthening of following staircase: • Construction of Identified stairs with total length of 0.2 Km to be verified in DPR. • Construction of railings of stairs • Provision of roof coverage to stairs so as to use during rainy season. • Provision of resting places, signages, standardization of stair elements.
f.	Social and Environmental Impact	• Due to construction of stairs they will be used by maximum of population which will help in pedestrianisation city. • Due to standardization of stair case design, people from all groups will use stairs as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD & PWD
h.	Project Cost	• Rs. 1 Crore
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 1 year

	Project	• **Location and other Details**
1.5 B	Panihouse	• **Panihouse**
a.	Project Rationale and Justification	• Stairs are very important links for Pedestrians. • Especially needed in hilly terrains to connect residential areas to main roads. • Present inaccessible areas can be used for residential purpose with improved connectivity. • These stairs are connecting two different levels. Railing is important part of stairways. • Pedestrian stair provides short cut and require minimum energy. They are part of walk ways.
b.	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To increase areas under various landuses..
c.	Project Status	• Stair is identified DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in strengthening of following staircase: • Construction of Identified stairs with total length of 0.2 Km to be verified in DPR. • Construction of railings of stairs • Provision of roof coverage to stairs so as to use during rainy season. • Provision of resting places, signages, standardization of stair elements.
f.	Social and Environmental Impact	• Due to construction of stairs they will be used by maximum of population which will help in pedestrianisation city. • Due to standardization of stair case design, people from all groups will use stairs as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD & PWD
h.	Project Cost	• Rs. 1 Crore
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 1 year

	Project	• Location and other Details
1.5 C	Tatangchen	• **Tatangchen Ward**
a.	Project Rationale and Justification	• Stairs are very important links for Pedestrians. • Especially needed in hilly terrains to connect residential areas to main roads. • Present inaccessible areas can be used for residential purpose with improved connectivity. • These stairs are connecting two different levels. Railing is important part of stairways. • Pedestrian stair provides short cut and require minimum energy. They are part of walk ways.
b.	Project Objectives	• Encourage walking as a sustainable mode of transport; and to encourage access to the public transport network. • To increase areas under various landuses..
c.	Project Status	• Stair is identified DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in strengthening of following staircase: • Construction of Identified stairs with total length of 0.2 Km to be verified in DPR. • Construction of railings of stairs • Provision of roof coverage to stairs so as to use during rainy season. • Provision of resting places, signages, standardization of stair elements.
f.	Social and Environmental Impact	• Due to construction of stairs they will be used by maximum of population which will help in pedestrianisation city. • Due to standardization of stair case design, people from all groups will use stairs as means of communication. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD & PWD
h.	Project Cost	• Rs. 1 Crore
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 1 year

Sl. No.	Project Name	Categories
1.6	Junction Improvement	Pedestrian Network
	Project	• **Location and other Details**
1.6 A	Zero Point Junction	• Development area Ward
a.	Project Rationale and Justification	• Geometry of Junction play key role for Vehicular Movement • Terrain has major impact on this intersection. • Improvement of the Junction will lead to free flow of traffic and avoid congestion • The junctions is at an acute angle • Junction improvement will make the point less prone to accidents.
b.	Project Objectives	• To regulate traffic flow at the Junction • To improve road safety
c.	Project Status	• Junction is identified, DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in junction improvement: • Increasing lane width at the junction • Avoid sharp turns • Increase turning radius at the junction for bigger vehicles. • Conversion of Manual control to signalized control
f.	Social and Environmental Impact	• Lesser Congestion, thus reduction of vehicular emission. • Improved pedestrian safety. • Employment Generation
g.	Implementation Arrangements:	• UDHD
h.	Project Cost	• Rs. 0.25 Crore
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within Six Months

	Project	• **Location and other Details**
1.6 B	Lal Market Junction	• Lower MG Marg Ward
a.	Project Rationale and Justification	• Geometry of Junction play key role for Vehicular Movement • Terrain has major impact on this intersection. • Improvement of the Junction will lead to free flow of traffic and avoid congestion • The junctions is at an acute angle • Junction improvement will make the point less prone to accidents.
b.	Project Objectives	• To regulate traffic flow at the Junction • To improve road safety
c.	Project Status	• Junction is identified, DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in junction improvement: • Increasing lane width at the junction • Avoid sharp turns • Increase turning radius at the junction for bigger vehicles. • Conversion of Manual control to signalized control
f.	Social and Environmental Impact	• Lesser Congestion, thus reduction of vehicular emission. • Improved pedestrian safety. • Employment Generation
g.	Implementation Arrangements:	• UDHD
h.	Project Cost	• Rs. 0.25 Crore
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within Six Months

	Project	• **Location and other Details**
1.6 C	P.S. Road- DPH Road Junction	• DPH Ward
a.	Project Rationale and Justification	• Geometry of Junction play key role for Vehicular Movement • Terrain has major impact on this intersection. • Improvement of the Junction will lead to free flow of traffic and avoid congestion • The junctions is at an acute angle • Junction improvement will make the point less prone to accidents.
b.	Project Objectives	• To regulate traffic flow at the Junction • To improve road safety
c.	Project Status	• Junction is identified, DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in junction improvement: • Increasing lane width at the junction • Avoid sharp turns • Increase turning radius at the junction for bigger vehicles. • Conversion of Manual control to signalized control
f.	Social and Environmental Impact	• Lesser Congestion, thus reduction of vehicular emission. • Improved pedestrian safety. • Employment Generation
g.	Implementation Arrangements:	• UDHD
h.	Project Cost	• Rs. 0.25 Crore
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within Six Months

	Project	• **Location and other Details**
1.6 D	Metro Point	• Upper MG Marg Ward
a.	Project Rationale and Justification	• Geometry of Junction play key role for Vehicular Movement • Terrain has major impact on this intersection. • Improvement of the Junction will lead to free flow of traffic and avoid congestion • The junctions is at an acute angle • Junction improvement will make the point less prone to accidents.
b.	Project Objectives	• To regulate traffic flow at the Junction • To improve road safety
c.	Project Status	• Junction is identified, DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in junction improvement: • Increasing lane width at the junction • Avoid sharp turns • Increase turning radius at the junction for bigger vehicles. • Conversion of Manual control to signalized control
f.	Social and Environmental Impact	• Lesser Congestion, thus reduction of vehicular emission. • Improved pedestrian safety. • Employment Generation
g.	Implementation Arrangements:	• UDHD
h.	Project Cost	• Rs. 0.25 Crore
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within Six Months

	Project	• **Location and other Details**
1.6 E	Deorali Junction	• Deorali Ward
a.	Project Rationale and Justification	• Geometry of Junction play key role for Vehicular Movement • Terrain has major impact on this intersection. • Improvement of the Junction will lead to free flow of traffic and avoid congestion • The junctions is at an acute angle • Junction improvement will make the point less prone to accidents.
b.	Project Objectives	• To regulate traffic flow at the Junction • To improve road safety
c.	Project Status	• Junction is identified, DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in junction improvement: • Increasing lane width at the junction • Avoid sharp turns • Increase turning radius at the junction for bigger vehicles. • Conversion of Manual control to signalized control
f.	Social and Environmental Impact	• Lesser Congestion, thus reduction of vehicular emission. • Improved pedestrian safety. • Employment Generation
g.	Implementation Arrangements:	• UDHD
h.	Project Cost	• Rs. 0.25 Crore
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within Six Months

	Project	• **Location and other Details**
1.6 F	Hospital Junction	• Upper MG Marg Ward
a.	Project Rationale and Justification	• Geometry of Junction play key role for Vehicular Movement • Terrain has major impact on this intersection. • Improvement of the Junction will lead to free flow of traffic and avoid congestion • The junctions is at an acute angle • Junction improvement will make the point less prone to accidents.
b.	Project Objectives	• To regulate traffic flow at the Junction • To improve road safety
c.	Project Status	• Junction is identified, DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in junction improvement: • Increasing lane width at the junction • Avoid sharp turns • Increase turning radius at the junction for bigger vehicles. • Conversion of Manual control to signalized control
f.	Social and Environmental Impact	• Lesser Congestion, thus reduction of vehicular emission. • Improved pedestrian safety. • Employment Generation
g.	Implementation Arrangements:	• UDHD
h.	Project Cost	• Rs. 0.25 Crore
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within Six Months

	Project	• **Location and other Details**
1.6 A	Tibet Road to MG Marg at Sukhani House Junction	• Tibet Road Ward
a.	Project Rationale and Justification	• Geometry of Junction play key role for Vehicular Movement • Terrain has major impact on this intersection. • Improvement of the Junction will lead to free flow of traffic and avoid congestion • The junctions is at an acute angle • Junction improvement will make the point less prone to accidents.
b.	Project Objectives	• To regulate traffic flow at the Junction • To improve road safety
c.	Project Status	• Junction is identified, DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in junction improvement: • Increasing lane width at the junction • Avoid sharp turns • Increase turning radius at the junction for bigger vehicles. • Conversion of Manual control to signalized control
f.	Social and Environmental Impact	• Lesser Congestion, thus reduction of vehicular emission. • Improved pedestrian safety. • Employment Generation
g.	Implementation Arrangements:	• UDHD
h.	Project Cost	• Rs. 0.25 Crore
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within Six Months

	Project	• **Location and other Details**
1.6 A	Community hall Junction	• Tibet Road Ward
a.	Project Rationale and Justification	• Geometry of Junction play key role for Vehicular Movement • Terrain has major impact on this intersection. • Improvement of the Junction will lead to free flow of traffic and avoid congestion • The junctions is at an acute angle • Junction improvement will make the point less prone to accidents.
b.	Project Objectives	• To regulate traffic flow at the Junction • To improve road safety
c.	Project Status	• Junction is identified, DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in junction improvement: • Increasing lane width at the junction • Avoid sharp turns • Increase turning radius at the junction for bigger vehicles. • Conversion of Manual control to signalized control
f.	Social and Environmental Impact	• Lesser Congestion, thus reduction of vehicular emission. • Improved pedestrian safety. • Employment Generation
g.	Implementation Arrangements:	• UDHD
h.	Project Cost	• Rs. 0.25 Crore
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within Six Months

	Project	• **Location and other Details**
1.6 A	Sikkim Government College Junction	• Tadong Ward
a.	Project Rationale and Justification	• Geometry of Junction play key role for Vehicular Movement • Terrain has major impact on this intersection. • Improvement of the Junction will lead to free flow of traffic and avoid congestion • The junctions is at an acute angle • Junction improvement will make the point less prone to accidents.
b.	Project Objectives	• To regulate traffic flow at the Junction • To improve road safety
c.	Project Status	• Junction is identified, DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in junction improvement: • Increasing lane width at the junction • Avoid sharp turns • Increase turning radius at the junction for bigger vehicles. • Conversion of Manual control to signalized control
f.	Social and Environmental Impact	• Lesser Congestion, thus reduction of vehicular emission. • Improved pedestrian safety. • Employment Generation
g.	Implementation Arrangements:	• UDHD
h.	Project Cost	• Rs. 0.25 Crore
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within Six Months

	Project	• **Location and other Details**
1.6 A	Tadong Bazar Junction	• Tadong Ward
a.	Project Rationale and Justification	• Geometry of Junction play key role for Vehicular Movement • Terrain has major impact on this intersection. • Improvement of the Junction will lead to free flow of traffic and avoid congestion • The junctions is at an acute angle • Junction improvement will make the point less prone to accidents.
b.	Project Objectives	• To regulate traffic flow at the Junction • To improve road safety
c.	Project Status	• Junction is identified, DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in junction improvement: • Increasing lane width at the junction • Avoid sharp turns • Increase turning radius at the junction for bigger vehicles. • Conversion of Manual control to signalized control
f.	Social and Environmental Impact	• Lesser Congestion, thus reduction of vehicular emission. • Improved pedestrian safety. • Employment Generation
g.	Implementation Arrangements:	• UDHD
h.	Project Cost	• Rs. 0.25 Crore
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within Six Months

	Project	• **Location and other Details**
1.6 A	JN road Tibet Road Junction	• Chandmari Ward
a.	Project Rationale and Justification	• Geometry of Junction play key role for Vehicular Movement • Terrain has major impact on this intersection. • Improvement of the Junction will lead to free flow of traffic and avoid congestion • The junctions is at an acute angle • Junction improvement will make the point less prone to accidents.
b.	Project Objectives	• To regulate traffic flow at the Junction • To improve road safety
c.	Project Status	• Junction is identified, DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in junction improvement: • Increasing lane width at the junction • Avoid sharp turns • Increase turning radius at the junction for bigger vehicles. • Conversion of Manual control to signalized control
f.	Social and Environmental Impact	• Lesser Congestion, thus reduction of vehicular emission. • Improved pedestrian safety. • Employment Generation
g.	Implementation Arrangements:	• UDHD
h.	Project Cost	• Rs. 0.25 Crore
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within Six Months

Sl. No.	Project Name	Categories
1.7	Footover Bridge	Pedestrian Network
	Project	**Location and Other Details**
1.7A	Bansilal Petrol Pump	• Daragaon Ward
a.	Project Rationale and Justification	• Footover Bridges are very important for Pedestrian Safety and free Movement. • Heavy Vehicular Movement at this Stretch • Heavy Pedestrian Movement. • Many Conflict point at Crossings. • Being a highway, it needs to be signal free for free flow of traffic, thus Footover Bridge required for pedestrian crossing. • Traffic congestion due to pedestrian interference on main road. • Accident Prone.
b.	Project Objectives	• Encourage safe pedestrian crossing • To increase free flow of vehicular traffic.
c.	Project Status	• Stretch is identified. • DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in Construction of Footpath: • New Construction of Footover Bridge over the identified stretch. • Making the Footover Bridge handicapped friendly by providing ramps and railings. • Provision of signages and adequate lighting
f.	Social and Environmental Impact	• Due to Construction of Footover Bridge, it will be used by mass population which will help in pedestrianisation of the city. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD & PWD
h.	Project Cost	• Rs. 10 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 1 year

	Project	Location and Other Details
1.7 B	Near Sikkim Govt. College	• Tadong Ward
a.	Project Rationale and Justification	• Footover Bridges are very important for Pedestrian Safety and free Movement. • Heavy Vehicular Movement at this Stretch • Heavy Pedestrian Movement. • Many Conflict point at Crossings. • Being a highway, it needs to be signal free for free flow of traffic, thus Footover Bridge required for pedestrian crossing. • Traffic congestion due to pedestrian interference on main road. • Accident Prone.
b.	Project Objectives	• Encourage safe pedestrian crossing • To increase free flow of vehicular traffic.
c.	Project Status	• Stretch is identified. • DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in Construction of Footpath: • New Construction of Footover Bridge over the identified stretch. • Making the Footover Bridge handicapped friendly by providing ramps and railings. • Provision of signages and adequate lighting
f.	Social and Environmental Impact	• Due to Construction of Footover Bridge, it will be used by mass population which will help in pedestrianisation of the city. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD & PWD
h.	Project Cost	• Rs. 10 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 1 year

	Project	Location and Other Details
1.7C	Near Post Office P.S. Road	• D.P.H. Ward
a.	Project Rationale and Justification	• Footover Bridges are very important for Pedestrian Safety and free Movement. • Heavy Vehicular Movement at this Stretch • Heavy Pedestrian Movement. • Many Conflict point at Crossings. • Being a highway, it needs to be signal free for free flow of traffic, thus Footover Bridge required for pedestrian crossing. • Traffic congestion due to pedestrian interference on main road. • Accident Prone.
b.	Project Objectives	• Encourage safe pedestrian crossing • To increase free flow of vehicular traffic.
c.	Project Status	• Stretch is identified. • DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in Construction of Footpath: • New Construction of Footover Bridge over the identified stretch. • Making the Footover Bridge handicapped friendly by providing ramps and railings. • Provision of signages and adequate lighting
f.	Social and Environmental Impact	• Due to Construction of Footover Bridge, it will be used by mass population which will help in pedestrianisation of the city. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD & PWD
h.	Project Cost	• Rs. 10 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 1 year

	Project	Location and Other Details
1.7D	Zero Point Intersection	• Development Area Ward
a.	Project Rationale and Justification	• Footover Bridges are very important for Pedestrian Safety and free Movement. • Heavy Vehicular Movement at this Stretch • Heavy Pedestrian Movement. • Many Conflict point at Crossings. • Being a highway, it needs to be signal free for free flow of traffic, thus Footover Bridge required for pedestrian crossing. • Traffic congestion due to pedestrian interference on main road. • Accident Prone.
b.	Project Objectives	• Encourage safe pedestrian crossing • To increase free flow of vehicular traffic.
c.	Project Status	• Stretch is identified. • DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Tasks involved in Construction of Footpath: • New Construction of Footover Bridge over the identified stretch. • Making the Footover Bridge handicapped friendly by providing ramps and railings. • Provision of signages and adequate lighting
f.	Social and Environmental Impact	• Due to Construction of Footover Bridge, it will be used by mass population which will help in pedestrianisation of the city. • Pedestrianisation will reduce vehicular emission which in turn will reduce the pollution in Gangtok. • Employment Generation
g.	Implementation Arrangements:	• UDHD & PWD
h.	Project Cost	• Rs. 10 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 1 year

Sl. No	Project Name	Categories
1.8.	Widening and Strengthening of road	Road Network

	Project	Location and Other Details
1.8 A	Ranka	West of Gangtok
a.	Project Rationale and Justification	• Potholes and very rough surface of Road causing problem in travel speed and traffic movement. • Side strips of roads are with steep cut causing problems in overtaking and crossing. • Repair and maintenance of roads required. • Due to weathering condition, slope and topology, wear and tear of road is higher than roads on plain. • Strengthening, widening and repairing should be carried out on identified stretch • State level policy should be prepared for repair and maintenance of road. In which physical condition of road is regularly monitored.
b.	Project Objectives	• Safe and efficient traffic movement on various stretches of road. • Decongestion of major roads • To strengthen road network • Improve Connectivity for decentralized growth.
c.	Project Status	• Identification of road stretch completed. DPR Needed
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Total 10 Km Stretch of road from Gangtok to Ranka need strengthening.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment. • Employment Generation
g.	Implementation Arrangements:	PWD
h.	Project Cost	5.1 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 2.5 years

	Project	Location and Other Details
1.8 B	Luing	West of Gangtok
a.	Project Rationale and Justification	• Potholes and very rough surface of Road causing problem in travel speed and traffic movement. • Side strips of roads are with steep cut causing problems in overtaking and crossing. • Repair and maintenance of roads required. • Due to weathering condition, slope and topology, wear and tear of road is higher than roads on plain. • Strengthening, widening and repairing should be carried out on identified stretch • State level policy should be prepared for repair and maintenance of road. In which physical condition of road is regularly monitored.
b.	Project Objectives	• Safe and efficient traffic movement on various stretches of road. • Decongestion of major roads • To strengthen road network • Improve Connectivity for decentralized growth.
c.	Project Status	• Identification of road stretch completed. DPR Needed
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Total 5 Km Stretch of road from Ranka to Luing need strengthening.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment. • Employment Generation
g.	Implementation Arrangements:	PWD
h.	Project Cost	2.55 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 1.5 years

	Project	Location and Other Details
1.8 C	Rumtek	South West of Gangtok
a.	Project Rationale and Justification	• Potholes and very rough surface of Road causing problem in travel speed and traffic movement. • Side strips of roads are with steep cut causing problems in overtaking and crossing. • Repair and maintenance of roads required. • Due to weathering condition, slope and topology, wear and tear of road is higher than roads on plain. • Strengthening, widening and repairing should be carried out on identified stretch • State level policy should be prepared for repair and maintenance of road. In which physical condition of road is regularly monitored.
b.	Project Objectives	• Safe and efficient traffic movement on various stretches of road. • Decongestion of major roads • To strengthen road network • Improve Connectivity for decentralized growth.
c.	Project Status	• Identification of road stretch completed. DPR Needed
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Total 20 Km Stretch of road from Gangtok to Rumtek need strengthening.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment. • Employment Generation
g.	Implementation Arrangements:	PWD
h.	Project Cost	10.20 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 3.5 years

	Project	Location and Other Details
1.8 D	Assam Lingzay	East of Gangtok
a.	Project Rationale and Justification	• Potholes and very rough surface of Road causing problem in travel speed and traffic movement. • Side strips of roads are with steep cut causing problems in overtaking and crossing. • Repair and maintenance of roads required. • Due to weathering condition, slope and topology, wear and tear of road is higher than roads on plain. • Strengthening, widening and repairing should be carried out on identified stretch • State level policy should be prepared for repair and maintenance of road. In which physical condition of road is regularly monitored.
b.	Project Objectives	• Safe and efficient traffic movement on various stretches of road. • Decongestion of major roads • To strengthen road network • Improve Connectivity for decentralized growth.
c.	Project Status	• Identification of road stretch completed. DPR Needed
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Total 15 Km Stretch of road from Gangtok to Assam Lingzay need strengthening.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment. • Employment Generation
g.	Implementation Arrangements:	PWD
h.	Project Cost	7.65 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 3 years

Sl. No	Project Name	Categories
1.9.	Construction of New Road Link	Road Network

	Project	Location and Other Details
1.9 A	JT Road to Indira Bypass	Development Area ward
a.	Project Rationale and Justification	• Missing Links in the existing Road Network. • Creation of this link will Deviate vehicular movement and create alternative route. • Less Pressure on Main City Roads • Development of new areas along this route. • Lesser congestion and continuous vehicular flow.
b.	Project Objectives	• Decongestion of major roads • Create New Link • Improve Connectivity for decentralized growth.
c.	Project Status	• Identification of road stretch completed. DPR Needed
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Total 1.5 Km Stretch needs to be constructed.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment. • Increased Growth Potential • Employment Generation
g.	Implementation Arrangements:	UDHD & PWD
h.	Project Cost	1.89 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 1 year

	Project	Location and Other Details
1.9 B	Arithang Road to Indira Bypass	Arithang ward
a.	Project Rationale and Justification	• Missing Links in the existing Road Network. • Creation of this link will Deviate vehicular movement and create alternative route. • Less Pressure on Main City Roads • Development of new areas along this route. • Lesser congestion and continuous vehicular flow.
b.	Project Objectives	• Decongestion of major roads • Create New Link • Improve Connectivity for decentralized growth.
c.	Project Status	• Identification of road stretch completed. DPR Needed
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Total 1 Km Stretch needs to be constructed.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment. • Increased Growth Potential • Employment Generation
g.	Implementation Arrangements:	UDHD & PWD
h.	Project Cost	1.26 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 1 year

Sl. No	Project Name	Categories
1.10.	Construction of New Bridge	Road Network

	Project	Location and Other Details
1.10 A	Ranikhola Bridge	**Ranipool**
a.	Project Rationale and Justification	• Major link for freight movement into the city • Existing Bridge in Dilapidated Condition • The Bridge main link between Gangtok and surrounding towns. • Collapse of the bridge can lead to major disaster • Seismic activities and vehicular movement cause major wear and tear.
b.	Project Objectives	• Strengthening Link between Gangtok and Siliguri. • Avoid major disaster due to collapse of existing bridge. • Avoid sudden cutoff of freight movement in Gangtok.
c.	Project Status	• Identification of bridge completed. DPR Needed
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Total span of new bridge to be constructed- 0.045 Km
f.	Social and Environmental Impact	• Continuous flow of freight movement will ensure economical and thus social stability of the city. • Maximum precaution will be taken to protect natural environment. • Increased Growth Potential • Employment Generation
g.	Implementation Arrangements:	UDHD , PWD and Private Party in PPP Mode.
h.	Project Cost	1.05 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 1 year

Sl. No	Project Name	Categories
1.11	Construction of Demarcated Bus Lanes with Bus Shelter and Bus Bays.	Public Transport

	Project	Location and Other Details
1.11 A	Ranipool to SNT Bus Depot	**Gangtok Municipal Area**
a.	Project Rationale and Justification	• Major Public Movement from Ranipool to Gangtok. • Major congestion due to flow of mixed traffic. • Maximum use of personalized transport causing congestion. • Existing Buses has low journey speed.
b.	Project Objectives	• To encourage use of public transport. • To increase journey speed of public transport on this route. • To generate higher revenues through public transport
c.	Project Status	• Identification of stretch completed. DPR Needed
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Provision of bus shelter and bus bays • Total length of stretch 11 Kms. • Marking of Bus lanes on road surface
f.	Social and Environmental Impact	• Maximum use of public transport will lower movement of private vehicle on road, thus causing lower emission. • Will be used by all economic groups. • Increase safety. • Employment Generation
g.	Implementation Arrangements:	UDHD & SNT
h.	Project Cost	3.17 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 9 Months

	Project	Location and Other Details
1.11 B	IInd mile to SNT Bus Depot	**Gangtok Municipal Area**
a.	Project Rationale and Justification	• Major Public Movement from Gangtok to Nathula • Major congestion due to flow of mixed traffic. • Maximum use of personalized transport causing congestion. • Existing Buses has low journey speed.
b.	Project Objectives	• To encourage use of public transport. • To increase journey speed of public transport on this route. • To generate higher revenues through public transport
c.	Project Status	• Identification of stretch completed. DPR Needed
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Provision of bus shelter and bus bays • Total length of stretch 8 Kms. • Marking of Bus lanes on road surface
f.	Social and Environmental Impact	• Maximum use of public transport will lower movement of private vehicle on road, thus causing lower emission. • Will be used by all economic groups. • Increase safety. • Employment Generation
g.	Implementation Arrangements:	UDHD & SNT
h.	Project Cost	2.30 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 9 Months

	Project	Location and Other Details
1.11 C	SNT Bus Depot to Tashi View Point	**Gangtok Municipal Area**
a.	Project Rationale and Justification	• Major Public Movement from Gangtok to Tashi and North Sikkim District • Major congestion due to flow of mixed traffic. • Maximum use of personalized transport causing congestion. • Existing Buses has low journey speed.
b.	Project Objectives	• To encourage use of public transport. • To increase journey speed of public transport on this route. • To generate higher revenues through public transport
c.	Project Status	• Identification of stretch completed. DPR Needed
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Provision of bus shelter and bus bays • Total length of stretch 16 Kms. • Marking of Bus lanes on road surface
f.	Social and Environmental Impact	• Maximum use of public transport will lower movement of private vehicle on road, thus causing lower emission. • Will be used by all economic groups. • Increase safety. • Employment Generation
g.	Implementation Arrangements:	UDHD & SNT
h.	Project Cost	4.61 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 1 Year

	Project	Location and Other Details
1.11 D	SNT Bus Depot to Tashi View Point Via Indira Bypass	**Gangtok Municipal Area**
a.	Project Rationale and Justification	• Major Public Movement from Gangtok to Tashi and North Sikkim District. • Major congestion due to flow of mixed traffic. • Maximum use of personalized transport causing congestion. • Existing Buses has low journey speed.
b.	Project Objectives	• To encourage use of public transport. • To increase journey speed of public transport on this route. • To generate higher revenues through public transport
c.	Project Status	• Identification of stretch completed. DPR Needed
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Provision of bus shelter and bus bays • Total length of stretch 18 Kms. • Marking of Bus lanes on road surface
f.	Social and Environmental Impact	• Maximum use of public transport will lower movement of private vehicle on road, thus causing lower emission. • Will be used by all economic groups. • Increase safety. • Employment Generation
g.	Implementation Arrangements:	UDHD & SNT
h.	Project Cost	5.18 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 1 year

Sl. No	Project Name	Categories
1.12.	Construction of Bus Terminal	Public Transport

	Project	Location and Other Details
1.12	Old Flour Mill Tadong	Tadong ward
a.	Project Rationale and Justification	• Separate Bus Terminus Needed for interstate Movement • Major inflow of floating population from South, from West Bengal. • Thus Separate terminal is needed to manage the quantum of bus inflow from west Bengal • City core and SNT bus terminal is already congested • To avoid movement of Interstate Buses and further congestion inside the city • To maintain the hierarchy amongst interstate and intercity buses
b.	Project Objectives	• To encourage use of interstate public transport. • To generate higher revenues through public transport • To delineate areas in which public as well as interstate transport will run.
c.	Project Status	• Identification of site for Bus Terminal completed. DPR Needed
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Construction of bus terminal
f.	Social and Environmental Impact	• Maximum use of public transport will lower movement of private vehicle on road, thus causing lower emission. • Will be used by all economic groups. • Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & SNT
h.	Project Cost	10 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 1.5 years

Sl. No	Project Name	Categories
1.13.	Construction of Multilevel Parking	Parking

	Project	Location and Other Details
1.13 A	Below Government College	**Tadong Ward**
a.	Project Rationale and Justification	• Existing road congested due to unorganized Off-street parking • Multilevel parking will increase parking capacity. • Increase in effective road width thus leading to uninterrupted traffic flow. • More revenue will be generated from organized parking. • Existing mixed landuse of the area is leading to chaos; this will be reduced once the parking lot is built. • More Commercial space can be developed along with the multi level parking
b.	Project Objectives	• To facilitate parking facility in the area • To reduce congestion on road • To generate higher revenues through parking
c.	Project Status	• Site for multilevel parking identified. Feasibility of commercial space will be checked while DPR is prepared.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Construction of 1250 Sq Mt multilevel car parking
f.	Social and Environmental Impact	• Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	3.16 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 2.5 years

	Project	Location and Other Details
1.13 B	P.S.Road	DPH ward
a.	Project Rationale and Justification	• Existing road congested due to unorganized Off-street parking • Multilevel parking will increase parking capacity. • Increase in effective road width thus leading to uninterrupted traffic flow. • More revenue will be generated from organized parking. • Existing mixed landuse of the area is leading to chaos; this will be reduced once the parking lot is built. • More Commercial space can be developed along with the multi level parking
b.	Project Objectives	• To facilitate parking facility in the area • To reduce congestion on road • To generate higher revenues through parking
c.	Project Status	• Site for multilevel parking identified. Feasibility of commercial space will be checked while DPR is prepared.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Construction of 800 Sq Mt multilevel car parking
f.	Social and Environmental Impact	• Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	2.02 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 2 years

	Project	Location and Other Details
1.13 C	Sikkim Jewels	Deorali ward
a.	Project Rationale and Justification	• Existing road congested due to unorganized Off-street parking • Multilevel parking will increase parking capacity. • Increase in effective road width thus leading to uninterrupted traffic flow. • More revenue will be generated from organized parking. • Existing mixed landuse of the area is leading to chaos; this will be reduced once the parking lot is built. • More Commercial space can be developed along with the multi level parking
b.	Project Objectives	• To facilitate parking facility in the area • To reduce congestion on road • To generate higher revenues through parking
c.	Project Status	• Site for multilevel parking identified. Feasibility of commercial space will be checked while DPR is prepared.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Construction of 500 Sq Mt multilevel car parking
f.	Social and Environmental Impact	• Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	1.26 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 1.5 years

	Project	Location and Other Details
1.13 D	JT Road	Development Area Ward
a.	Project Rationale and Justification	• Existing road congested due to unorganized Off-street parking • Multilevel parking will increase parking capacity. • Increase in effective road width thus leading to uninterrupted traffic flow. • More revenue will be generated from organized parking. • Existing mixed landuse of the area is leading to chaos; this will be reduced once the parking lot is built. • More Commercial space can be developed along with the multi level parking
b.	Project Objectives	• To facilitate parking facility in the area • To reduce congestion on road • To generate higher revenues through parking
c.	Project Status	• Site for multilevel parking identified. Feasibility of commercial space will be checked while DPR is prepared.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Construction of 450 Sq Mt multilevel car parking
f.	Social and Environmental Impact	• Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	1.14 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 1.5 years

	Project	Location and Other Details
1.13E	Namnang	Tatangchen Ward
a.	Project Rationale and Justification	• Existing road congested due to unorganized Off-street parking • Multilevel parking will increase parking capacity. • Increase in effective road width thus leading to uninterrupted traffic flow. • More revenue will be generated from organized parking. • Existing mixed landuse of the area is leading to chaos; this will be reduced once the parking lot is built. • More Commercial space can be developed along with the multi level parking
b.	Project Objectives	• To facilitate parking facility in the area • To reduce congestion on road • To generate higher revenues through parking
c.	Project Status	• Site for multilevel parking identified. Feasibility of commercial space will be checked while DPR is prepared.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Construction of 240 Sq Mt multilevel car parking
f.	Social and Environmental Impact	• Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	0.61 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 1 years

Sl. No	Project Name	Categories
1.14.	Construction of Ropeway	Alternate Mode of Transport

	Project	Location and Other Details
1.14 A	Bhurtuk North to Bhurtuk South	**Bhurtuk Ward**
a.	Project Rationale and Justification	• Existing road congested, thus increasing the travel time. • Alternate mode required. • Ropeway will reduce pressure on road. • More revenue will be generated from public transport. • Will enhance tourism network. • More Commercial areas can be developed in the vicinity
b.	Project Objectives	• To reduce congestion on the road stretch. • To reduce travel time • To generate higher revenues through public transport. • To Improve connectivity.
c.	Project Status	• Stretch identified. Feasibility will be checked while DPR is prepared.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Construction of 1.3 Km Ropeway link. • Construction of ropeway stations at Bhurtuk North and Bhurtuk South
f.	Social and Environmental Impact	• Ropeway is pollution free mode of transport. • Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	13 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 3 years

	Project	Location and Other Details
1.14 B	Bhurtuk South to Chandmari	**Bhurtuk Ward**
a.	Project Rationale and Justification	• Existing road congested, thus increasing the travel time. • Alternate mode required. • Ropeway will reduce pressure on road. • More revenue will be generated from public transport. • Will enhance tourism network. • More Commercial areas can be developed in the vicinity
b.	Project Objectives	• To reduce congestion on the road stretch. • To reduce travel time • To generate higher revenues through public transport. • To Improve connectivity.
c.	Project Status	• Stretch identified. Feasibility will be checked while DPR is prepared.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Construction of 1.5 Km Ropeway link. • Construction of ropeway stations at Chandmari
f.	Social and Environmental Impact	• Ropeway is pollution free mode of transport. • Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	15 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 3 years

	Project	Location and Other Details
1.14 C	Chandmari to Tashiling Secretariat	**Chandmari Ward**
a.	Project Rationale and Justification	• Existing road congested, thus increasing the travel time. • Alternate mode required. • Ropeway will reduce pressure on road. • More revenue will be generated from public transport. • Will enhance tourism network. • More Commercial areas can be developed in the vicinity
b.	Project Objectives	• To reduce congestion on the road stretch. • To reduce travel time • To generate higher revenues through public transport. • To Improve connectivity.
c.	Project Status	• Stretch identified. Feasibility will be checked while DPR is prepared.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Construction of 1.9 Km Ropeway link.
f.	Social and Environmental Impact	• Ropeway is pollution free mode of transport. • Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	19 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 3 years

	Project	Location and Other Details
1.14 D	Tashilling Secretariat to Lower Sichey	**Sichey Ward**
a.	Project Rationale and Justification	• Existing road congested, thus increasing the travel time. • Alternate mode required. • Ropeway will reduce pressure on road. • More revenue will be generated from public transport. • Will enhance tourism network. • More Commercial areas can be developed in the vicinity
b.	Project Objectives	• To reduce congestion on the road stretch. • To reduce travel time • To generate higher revenues through public transport. • To Improve connectivity.
c.	Project Status	• Stretch identified. Feasibility will be checked while DPR is prepared.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Construction of 1.2 Km Ropeway link. • Construction of ropeway station at Lower Sichey
f.	Social and Environmental Impact	• Ropeway is pollution free mode of transport. • Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	12 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 3 years

	Project	Location and Other Details
1.14 E	Lower Sichey to Upper Sichey	**Sichey Ward**
a.	Project Rationale and Justification	• Existing road congested, thus increasing the travel time. • Alternate mode required. • Ropeway will reduce pressure on road. • More revenue will be generated from public transport. • Will enhance tourism network. • More Commercial areas can be developed in the vicinity
b.	Project Objectives	• To reduce congestion on the road stretch. • To reduce travel time • To generate higher revenues through public transport. • To Improve connectivity.
c.	Project Status	• Stretch identified. Feasibility will be checked while DPR is prepared.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Construction of 1.8 Km Ropeway link. • Construction of ropeway station at Upper Sichey
f.	Social and Environmental Impact	• Ropeway is pollution free mode of transport. • Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	18 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 3 years

	Project	Location and Other Details
1.14 F	Upper Sichey to Bhurtuk South	**Sichey Ward and Bhurtuk Ward**
a.	Project Rationale and Justification	• Existing road congested, thus increasing the travel time. • Alternate mode required. • Ropeway will reduce pressure on road. • More revenue will be generated from public transport. • Will enhance tourism network. • More Commercial areas can be developed in the vicinity
b.	Project Objectives	• To reduce congestion on the road stretch. • To reduce travel time • To generate higher revenues through public transport. • To Improve connectivity.
c.	Project Status	• Stretch identified. Feasibility will be checked while DPR is prepared.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Construction of 1.4 Km Ropeway link
f.	Social and Environmental Impact	• Ropeway is pollution free mode of transport. • Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	14 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 3 years

	Project	Location and Other Details
1.14 G	Assembly to Upper Syari	**Tatangchen Ward**
a.	Project Rationale and Justification	• Existing road congested, thus increasing the travel time. • Alternate mode required. • Ropeway will reduce pressure on road. • More revenue will be generated from public transport. • Will enhance tourism network. • More Commercial areas can be developed in the vicinity
b.	Project Objectives	• To reduce congestion on the road stretch. • To reduce travel time • To generate higher revenues through public transport. • To Improve connectivity.
c.	Project Status	• Stretch identified. Feasibility will be checked while DPR is prepared.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Construction of 0.25 Km Ropeway link. • Construction of ropeway station at Syari
f.	Social and Environmental Impact	• Ropeway is pollution free mode of transport. • Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	2.5 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 1.5 years

	Project	Location and Other Details
1.14 H	Upper Syari to Middle Tatagchen	**Tatangchen Ward**
a.	Project Rationale and Justification	• Existing road congested, thus increasing the travel time. • Alternate mode required. • Ropeway will reduce pressure on road. • More revenue will be generated from public transport. • Will enhance tourism network. • More Commercial areas can be developed in the vicinity
b.	Project Objectives	• To reduce congestion on the road stretch. • To reduce travel time • To generate higher revenues through public transport. • To Improve connectivity.
c.	Project Status	• Stretch identified. Feasibility will be checked while DPR is prepared.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Construction of 1 Km Ropeway link. • Construction of ropeway station at Tatngchen
f.	Social and Environmental Impact	• Ropeway is pollution free mode of transport. • Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	10 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 3 years

	Project	Location and Other Details
1.14 I	Middle Tatangchen to Lower Tatangchen	**Tatangchen Ward**
a.	Project Rationale and Justification	• Existing road congested, thus increasing the travel time. • Alternate mode required. • Ropeway will reduce pressure on road. • More revenue will be generated from public transport. • Will enhance tourism network. • More Commercial areas can be developed in the vicinity
b.	Project Objectives	• To reduce congestion on the road stretch. • To reduce travel time • To generate higher revenues through public transport. • To Improve connectivity.
c.	Project Status	• Stretch identified. Feasibility will be checked while DPR is prepared.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Construction of 1.3 Km Ropeway link. • Construction of ropeway station at Lower Tatangchen
f.	Social and Environmental Impact	• Ropeway is pollution free mode of transport. • Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	13 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 3 years

	Project	Location and Other Details
1.14 J	Lower Tatangchen to Ranipool	**Tatngchen Ward and Ranipool**
a.	Project Rationale and Justification	• Existing road congested, thus increasing the travel time. • Alternate mode required. • Ropeway will reduce pressure on road. • More revenue will be generated from public transport. • Will enhance tourism network. • More Commercial areas can be developed in the vicinity
b.	Project Objectives	• To reduce congestion on the road stretch. • To reduce travel time • To generate higher revenues through public transport. • To Improve connectivity.
c.	Project Status	• Stretch identified. Feasibility will be checked while DPR is prepared.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Construction of 1.3 Km Ropeway link. • Construction of ropeway station at Ranipool
f.	Social and Environmental Impact	• Ropeway is pollution free mode of transport. • Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	13 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 3 years

	Project	Location and Other Details
1.14 K	Ranipool to Tadong	**Ranipool and Tadong Ward**
a.	Project Rationale and Justification	• Existing road congested, thus increasing the travel time. • Alternate mode required. • Ropeway will reduce pressure on road. • More revenue will be generated from public transport. • Will enhance tourism network. • More Commercial areas can be developed in the vicinity
b.	Project Objectives	• To reduce congestion on the road stretch. • To reduce travel time • To generate higher revenues through public transport. • To Improve connectivity.
c.	Project Status	• Stretch identified. Feasibility will be checked while DPR is prepared.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Construction of 1.2 Km Ropeway link. • Construction of ropeway station at Tadong
f.	Social and Environmental Impact	• Ropeway is pollution free mode of transport. • Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	12 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 3 years

	Project	Location and Other Details
1.14 L	Tadong to Deorali	**Tadong and Deorali ward**
a.	Project Rationale and Justification	• Existing road congested, thus increasing the travel time. • Alternate mode required. • Ropeway will reduce pressure on road. • More revenue will be generated from public transport. • Will enhance tourism network. • More Commercial areas can be developed in the vicinity
b.	Project Objectives	• To reduce congestion on the road stretch. • To reduce travel time • To generate higher revenues through public transport. • To Improve connectivity.
c.	Project Status	• Stretch identified. Feasibility will be checked while DPR is prepared.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Construction of 1.3 Km Ropeway link
f.	Social and Environmental Impact	• Ropeway is pollution free mode of transport. • Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	13 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 2 years

Sl. No	Project Name	Categories
1.15.	Helipad Upgradation	Alternate Mode of Transport

	Project	Location and Other Details
1.15	Helipad Upgradation	**Sichey Ward**
a.	Project Rationale and Justification	• Existing Helicopter service inadequate, keeping in view the heavy tourist inflow during peak season. • Capacity building is necessary • More revenue will be generated from public transport. • Will enhance tourism network. • More Commercial areas can be developed in the vicinity
b.	Project Objectives	• To reduce congestion on the road stretch. • To reduce travel time • To generate higher revenues through public transport. • To improve connectivity.
c.	Project Status	• Site exists. Financial Feasibility will be checked while DPR is prepared.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • Upgradation of existing Helipad. • Capacity building to increase the number and frequency of service • Improve infrastructure facilities.
f.	Social and Environmental Impact	• Decongestion of roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	10 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 5 years

Sl. No	Project Name	Categories
1.16.	RAAS and RAMMS	Traffic Control System

	Project	Location and Other Details
1.16	RAAS and RAMMS	**Road Accident Analysis System and Routine Maintenance Management System**
a.	Project Rationale and Justification	• Concrete steps need to be taken for traffic management • Maintenance of public vehicles will reduce overall emission, thus reducing pollution and increasing efficiency • Output from RAAS will give inputs for traffic management measure to reduce accidents.
b.	Project Objectives	• To improve traffic management • To increase vehicle efficiency • To reduce traffic accidents. • To create an agency for implementation of traffic management.
c.	Project Status	• Conceptual Stage. DPR needed.
d.	Anticipated Timeframe	• Phase I
e.	Project Description	Task involved- • To establish the agency responsible for implementation of RAAS and RMMS • Periodical checkup of all public vehicles
f.	Social and Environmental Impact	• Increase Safety on road • Maintenance of vehicles will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	SNT
h.	Project Cost	5 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 2 years

Sl. No	Project Name	Categories
2.1.	Widening and Strengthening of road	Road Network

	Project	Location and Other Details
2.1 A	Arithang Road	• Arithang ward
a.	Project Rationale and Justification	• Potholes and very rough surface of Road causing problem in travel speed and traffic movement. • Side strips of roads are with steep cut causing problems in overtaking and crossing. • Repair and maintenance of roads required. • Due to weathering condition, slope and topology, wear and tear of road is higher than roads on plain. • Strengthening, widening and repairing should be carried out on identified road. • State level policy should be prepared for repair and maintenance of road. In which physical condition of road is regularly monitored.
b.	Project Objectives	• Safe and efficient traffic movement on various stretches of road. • Decongestion of major roads • To strengthen road network
c.	Project Status	• Identification of road stretch completed.DPR Required.
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Resurfacing and strengthening of poor roads In total 0.8 Km Stretch of road in Arithang need strengthening.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment.
g.	Implementation Arrangements:	UDHD & PWD
h.	Project Cost	0.2 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 6 Months

	Project	Location and Other Details
2.1 B	Forest Checkpost to Whitehall	• Chandmari Ward
a.	Project Rationale and Justification	• Potholes and very rough surface of Road causing problem in travel speed and traffic movement. • Side strips of roads are with steep cut causing problems in overtaking and crossing. • Repair and maintenance of roads required. • Due to weathering condition, slope and topology, wear and tear of road is higher than roads on plain. • Strengthening, widening and repairing should be carried out on identified road. • State level policy should be prepared for repair and maintenance of road. In which physical condition of road is regularly monitored.
b.	Project Objectives	• Safe and efficient traffic movement on various stretches of road. • Decongestion of major roads • To strengthen road network
c.	Project Status	• Identification of road stretch completed.DPR Required.
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Resurfacing and strengthening of poor roads In total 1.2 Km Stretch of road from Forest Checkpost to Whitehall need strengthening.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment.
g.	Implementation Arrangements:	UDHD & PWD
h.	Project Cost	0.3 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 6 Months

	Project	Location and Other Details
2.1 C	IInd Mile to IIIrd Mile Check Post	• Chandmari Ward
a.	Project Rationale and Justification	• Potholes and very rough surface of Road causing problem in travel speed and traffic movement. • Side strips of roads are with steep cut causing problems in overtaking and crossing. • Repair and maintenance of roads required. • Due to weathering condition, slope and topology, wear and tear of road is higher than roads on plain. • Strengthening, widening and repairing should be carried out on identified road. • State level policy should be prepared for repair and maintenance of road. In which physical condition of road is regularly monitored.
b.	Project Objectives	• Safe and efficient traffic movement on various stretches of road. • Decongestion of major roads • To strengthen road network
c.	Project Status	• Identification of road stretch completed.DPR Required.
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Resurfacing and strengthening of poor roads In total 1.3 Km Stretch of road from IInd Mile to IIIrd Mile Check Post need strengthening.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment.
g.	Implementation Arrangements:	UDHD & PWD
h.	Project Cost	0.33 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 6 Months

	Project	Location and Other Details
2.1 D	Lower Arithang Area	• Arithang Ward
a.	Project Rationale and Justification	• Potholes and very rough surface of Road causing problem in travel speed and traffic movement. • Side strips of roads are with steep cut causing problems in overtaking and crossing. • Repair and maintenance of roads required. • Due to weathering condition, slope and topology, wear and tear of road is higher than roads on plain. • Strengthening, widening and repairing should be carried out on identified road. • State level policy should be prepared for repair and maintenance of road. In which physical condition of road is regularly monitored.
b.	Project Objectives	• Safe and efficient traffic movement on various stretches of road. • Decongestion of major roads • To strengthen road network
c.	Project Status	• Identification of road stretch completed.DPR Required.
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Resurfacing and strengthening of poor roads In total 1.3 Km Stretch of road in lower Arithang Area need strengthening.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment.
g.	Implementation Arrangements:	UDHD & PWD
h.	Project Cost	0.33 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 6 Months

	Project	Location and Other Details
2.1 E	Luing to Middle Bhojogari	• Lower Sichey Ward
a.	Project Rationale and Justification	• Potholes and very rough surface of Road causing problem in travel speed and traffic movement. • Side strips of roads are with steep cut causing problems in overtaking and crossing. • Repair and maintenance of roads required. • Due to weathering condition, slope and topology, wear and tear of road is higher than roads on plain. • Strengthening, widening and repairing should be carried out on identified road. • State level policy should be prepared for repair and maintenance of road. In which physical condition of road is regularly monitored.
b.	Project Objectives	• Safe and efficient traffic movement on various stretches of road. • Decongestion of major roads • To strengthen road network
c.	Project Status	• Identification of road stretch completed.DPR Required.
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Resurfacing and strengthening of poor roads In total 5.4 Km Stretch of road from Luing to Middle Bhojogari need strengthening.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment.
g.	Implementation Arrangements:	UDHD & PWD
h.	Project Cost	0.1.35 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 1 year

	Project	Location and Other Details
2.1 F	DPH Road	• DPH Ward
a.	Project Rationale and Justification	• Potholes and very rough surface of Road causing problem in travel speed and traffic movement. • Side strips of roads are with steep cut causing problems in overtaking and crossing. • Repair and maintenance of roads required. • Due to weathering condition, slope and topology, wear and tear of road is higher than roads on plain. • Strengthening, widening and repairing should be carried out on identified road. • State level policy should be prepared for repair and maintenance of road. In which physical condition of road is regularly monitored.
b.	Project Objectives	• Safe and efficient traffic movement on various stretches of road. • Decongestion of major roads • To strengthen road network
c.	Project Status	• Identification of road stretch completed.DPR Required.
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Resurfacing and strengthening of poor roads In total 1.4 Km Stretch of road of DPH road need strengthening.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment.
g.	Implementation Arrangements:	UDHD & PWD
h.	Project Cost	0.35 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 6 Months

	Project	Location and Other Details
2.1 G	PWD store Road	• Development Area Ward
a.	Project Rationale and Justification	• Potholes and very rough surface of Road causing problem in travel speed and traffic movement. • Side strips of roads are with steep cut causing problems in overtaking and crossing. • Repair and maintenance of roads required. • Due to weathering condition, slope and topology, wear and tear of road is higher than roads on plain. • Strengthening, widening and repairing should be carried out on identified road. • State level policy should be prepared for repair and maintenance of road. In which physical condition of road is regularly monitored.
b.	Project Objectives	• Safe and efficient traffic movement on various stretches of road. • Decongestion of major roads • To strengthen road network
c.	Project Status	• Identification of road stretch completed.DPR Required.
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Resurfacing and strengthening of poor roads In total 1.6 Km Stretch of road in PWD store road stretch need strengthening.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment.
g.	Implementation Arrangements:	UDHD & PWD
h.	Project Cost	0.4 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 6 Months

	Project	Location and Other Details
2.1 H	Bahai School Road	• Deorali Ward
a.	Project Rationale and Justification	• Potholes and very rough surface of Road causing problem in travel speed and traffic movement. • Side strips of roads are with steep cut causing problems in overtaking and crossing. • Repair and maintenance of roads required. • Due to weathering condition, slope and topology, wear and tear of road is higher than roads on plain. • Strengthening, widening and repairing should be carried out on identified road. • State level policy should be prepared for repair and maintenance of road. In which physical condition of road is regularly monitored.
b.	Project Objectives	• Safe and efficient traffic movement on various stretches of road. • Decongestion of major roads • To strengthen road network
c.	Project Status	• Identification of road stretch completed.DPR Required.
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Resurfacing and strengthening of poor roads In total 1.0 Km Stretch of road in Bahai School road stretch need strengthening.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment.
g.	Implementation Arrangements:	UDHD & PWD
h.	Project Cost	0.25 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 6 Months

	Project	Location and Other Details
2.1 I	High Court Road	• DPH Ward
a.	Project Rationale and Justification	• Potholes and very rough surface of Road causing problem in travel speed and traffic movement. • Side strips of roads are with steep cut causing problems in overtaking and crossing. • Repair and maintenance of roads required. • Due to weathering condition, slope and topology, wear and tear of road is higher than roads on plain. • Strengthening, widening and repairing should be carried out on identified road. • State level policy should be prepared for repair and maintenance of road. In which physical condition of road is regularly monitored.
b.	Project Objectives	• Safe and efficient traffic movement on various stretches of road. • Decongestion of major roads • To strengthen road network
c.	Project Status	• Identification of road stretch completed.DPR Required.
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Resurfacing and strengthening of poor roads In total 0.70 Km Stretch of road in High Court Road area need strengthening.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment.
g.	Implementation Arrangements:	UDHD & PWD
h.	Project Cost	0.18 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 6 Months

	Project	Location and Other Details
2.1 J	Tibet Road	• Tibet Road Ward
a.	Project Rationale and Justification	• Potholes and very rough surface of Road causing problem in travel speed and traffic movement. • Side strips of roads are with steep cut causing problems in overtaking and crossing. • Repair and maintenance of roads required. • Due to weathering condition, slope and topology, wear and tear of road is higher than roads on plain. • Strengthening, widening and repairing should be carried out on identified road. • State level policy should be prepared for repair and maintenance of road. In which physical condition of road is regularly monitored.
b.	Project Objectives	• Safe and efficient traffic movement on various stretches of road. • Decongestion of major roads • To strengthen road network
c.	Project Status	• Identification of road stretch completed.DPR Required.
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Resurfacing and strengthening of poor roads In total 1.0 Km Stretch of road in Tibet Road stretch need strengthening.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment.
g.	Implementation Arrangements:	UDHD & PWD
h.	Project Cost	0.25 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 6 Months

	Project	Location and Other Details
2.1 K	Namnang Road	• Tatangchen Ward
a.	Project Rationale and Justification	• Potholes and very rough surface of Road causing problem in travel speed and traffic movement. • Side strips of roads are with steep cut causing problems in overtaking and crossing. • Repair and maintenance of roads required. • Due to weathering condition, slope and topology, wear and tear of road is higher than roads on plain. • Strengthening, widening and repairing should be carried out on identified road. • State level policy should be prepared for repair and maintenance of road. In which physical condition of road is regularly monitored.
b.	Project Objectives	• Safe and efficient traffic movement on various stretches of road. • Decongestion of major roads • To strengthen road network
c.	Project Status	• Identification of road stretch completed.DPR Required.
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Resurfacing and strengthening of poor roads In total 1.1 Km Stretch of road in Namnang Road stretch need strengthening.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment.
g.	Implementation Arrangements:	UDHD & PWD
h.	Project Cost	0.28 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 6 Months

	Project	Location and Other Details
2.1 L	JT road	• Development area Ward
a.	Project Rationale and Justification	• Potholes and very rough surface of Road causing problem in travel speed and traffic movement. • Side strips of roads are with steep cut causing problems in overtaking and crossing. • Repair and maintenance of roads required. • Due to weathering condition, slope and topology, wear and tear of road is higher than roads on plain. • Strengthening, widening and repairing should be carried out on identified road. • State level policy should be prepared for repair and maintenance of road. In which physical condition of road is regularly monitored.
b.	Project Objectives	• Safe and efficient traffic movement on various stretches of road. • Decongestion of major roads • To strengthen road network
c.	Project Status	• Identification of road stretch completed.DPR Required.
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Resurfacing and strengthening of poor roads In total 1.3 Km Stretch of road in JT Road Stretch need strengthening.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment.
g.	Implementation Arrangements:	UDHD & PWD
h.	Project Cost	0.33 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 6 Months

	Project	Location and Other Details
2.1 M	VIP Road	• Chandmari Ward
a.	Project Rationale and Justification	• Potholes and very rough surface of Road causing problem in travel speed and traffic movement. • Side strips of roads are with steep cut causing problems in overtaking and crossing. • Repair and maintenance of roads required. • Due to weathering condition, slope and topology, wear and tear of road is higher than roads on plain. • Strengthening, widening and repairing should be carried out on identified road. • State level policy should be prepared for repair and maintenance of road. In which physical condition of road is regularly monitored.
b.	Project Objectives	• Safe and efficient traffic movement on various stretches of road. • Decongestion of major roads • To strengthen road network
c.	Project Status	• Identification of road stretch completed.DPR Required.
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Resurfacing and strengthening of poor roads In total 0.74 Km Stretch of road in VIP Road need strengthening.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment.
g.	Implementation Arrangements:	UDHD & PWD
h.	Project Cost	0.19 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 6 Months

	Project	Location and Other Details
2.1 N	Sichey Road	• Sichey Ward
a.	Project Rationale and Justification	• Potholes and very rough surface of Road causing problem in travel speed and traffic movement. • Side strips of roads are with steep cut causing problems in overtaking and crossing. • Repair and maintenance of roads required. • Due to weathering condition, slope and topology, wear and tear of road is higher than roads on plain. • Strengthening, widening and repairing should be carried out on identified road. • State level policy should be prepared for repair and maintenance of road. In which physical condition of road is regularly monitored.
b.	Project Objectives	• Safe and efficient traffic movement on various stretches of road. • Decongestion of major roads • To strengthen road network
c.	Project Status	• Identification of road stretch completed.DPR Required.
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Resurfacing and strengthening of poor roads In total 2.1 Km Stretch of road in Sichey Road stretch need strengthening.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment.
g.	Implementation Arrangements:	UDHD & PWD
h.	Project Cost	0.53 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 1 year

Sl. No	Project Name	Categories
2.2.	Conversion of Metal Bailey Suspension Bridges to R.C.C Bridges	Connectivity

	Project	Location and Other Details
2.2 A	Setipool Bridge	Ranipool ward
a.	Project Rationale and Justification	• Existing Bailey bridge is poor condition • 1 vehicle can pass at a time, thus increasing traffic congestion and leading to delay. • Major link between Gangtok and Pakyong where airport is proposed. • Collapse of the existing bridge can lead to major disaster • Seismic activities and vehicular movement cause major wear and tear.
b.	Project Objectives	• Strengthening Link between Gangtok and Pakyong • Avoid major disaster due to collapse of existing bridge. • Reduce congestion and delay in the route.
c.	Project Status	• Identification of bridge completed. DPR Needed
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Two new bridges to be constructed of span 0.035 Km and 0.025 Km.
f.	Social and Environmental Impact	• Increased Growth Potential • Employment Generation
g.	Implementation Arrangements:	UDHD, PWD and Private Party in PPP Mode.
h.	Project Cost	1.4 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 1 year

	Project	Location and Other Details
2.2 B	Bridge on Indira Bypass, between District Court and Petrol Pump	Daragaon ward
a.	Project Rationale and Justification	• Existing Bailey bridge is poor condition • 1 vehicle can pass at a time, thus increasing traffic congestion and leading to delay. • Major road of the city, for diversion of through traffic • Collapse of the existing bridge can lead to major disaster • Seismic activities and vehicular movement cause major wear and tear.
b.	Project Objectives	• Diversion of Through traffic • Avoid major disaster due to collapse of existing bridge. • Reduce congestion and delay in the route.
c.	Project Status	• Identification of bridge completed. DPR Needed
d.	Anticipated Timeframe	• Phase II
e.	Project Description	One new bridges to be constructed of span 0.02 Km
f.	Social and Environmental Impact	• Increased Growth Potential • Employment Generation
g.	Implementation Arrangements:	UDHD, PWD and Private Party in PPP Mode.
h.	Project Cost	0.47 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 1 year

	Project	Location and Other Details
2.2 C	Bridge between NH 31A to Nathula	Adjoining Gangtok Municipal area
a.	Project Rationale and Justification	• Existing Bailey bridge is poor condition • 1 vehicle can pass at a time, thus increasing traffic congestion and leading to delay. • Major link between Gangtok and Nathula, which is major tourist attraction • Collapse of the existing bridge can lead to major disaster • Seismic activities and vehicular movement cause major wear and tear.
b.	Project Objectives	• Strengthening Link between Gangtok and Nathula • Avoid major disaster due to collapse of existing bridge. • Reduce congestion and delay in the route.
c.	Project Status	• Identification of bridge completed. DPR Needed
d.	Anticipated Timeframe	• Phase II
e.	Project Description	One new bridges to be constructed of span 0.025 Km
f.	Social and Environmental Impact	• Increased Growth Potential • Employment Generation
g.	Implementation Arrangements:	UDHD, PWD and Private Party in PPP Mode.
h.	Project Cost	0.59 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 1 year

Sl. No	Project Name	Categories
2.3	Construction of Inner Ring road	Road Network

	Project	Location and Other Details
a.	Project Rationale and Justification	• Gangtok road Network has typical characteristics the total load is concentrated on central spine i.e. NH31A. IT is excessively loaded with high traffic volume and causing traffic congestion during morning and evening peak hour. • To reduce the traffic volume on central spine especially, through traffic ring road is necessary. • Half ring of Internal Ring road is formed by the road from Indira bypass ending at NH31A. This half circle can be further developed by constructing another half circle southward traversing on the east and connecting NH31A.
b.	Project Objectives	• To divert through traffic to reduce pressure on City inner roads. • To increase the travel speed of the vehicles. • Alternate road network will provide various options for various trips than the major road network.
c.	Project Status	• Concept Stage- DPR required for identification of road alignment
d.	Anticipated Timeframe	• Phase II
e.	Project Description	• Construction of Inner Ring road • Total road length need to be construct will be 23.17 Km. • ROW will 9 M. Minimum • Footpath on one side of road • Half loop is already under use and rest half is identified from southward traversing to the east and connecting NH31A. • Storm water drain on both sides. • Feasibility Report and DPR required
f.	Social and Environmental Impact	• Construction of the inner ring road may cause cutting of trees from the alignment. • Efforts will be made to minimize the deforestation • Detail slope analysis for inner ring road will be carried out in their respective DPR so as to reduce human intervention on natural topology. • Sound and air pollution may cause during construction of roads. • This pollution can be minimized by taking necessary precaution prescribed by CPCB norms.
g.	Implementation Arrangements:	• UDHD and PWD
h.	Project Cost	• 34.91 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 3.5 years
		•

Sl. No	Project Name	Categories
2.4.	Construction of Outer Ring road	Road Network

	Project	Location and Other Details
a.	Project Rationale and Justification	• Gangtok road Network has typical characteristics the total load is concentrated on central spine i.e. NH31A. IT is excessively loaded with high traffic volume and causing traffic congestion during morning and evening peak hour. • In order to connect all fringe of Gangtok outer ring road is also required. • Outer ring road acts as bypass and will divert the through traffic.
b.	Project Objectives	• To divert through traffic to reduce pressure on City inner roads. • To increase the travel speed of the vehicles. • Alternate road network will provide various options for various trips than the major road network.
c.	Project Status	• Concept Stage- DPR required for identification of road alignment
d.	Anticipated Timeframe	• Phase II
e.	Project Description	• Construction of outer ring road • Total road length of outer ring road will be about 30 Km. • ROW will 11 M. Minimum • Footpath on one side of road • Storm water drain on both sides.
f.	Social and Environmental Impact	• Construction of the outer ring road may cause cutting of trees from the alignment. • Efforts will be made to minimize the deforestation • Detail slope analysis for outer ring road will be carried out in their respective DPR so as to reduce human intervention on natural topology. • Sound and air pollution may cause during construction of roads. • This pollution can be minimized by taking necessary precaution prescribed by CPCB norms.
g.	Implementation Arrangements:	• UDHD and PWD
h.	Project Cost	• 51.93 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction • To be Completed within 3.5 years

Sl. No	Project Name	Categories
2.5.	Road Connectivity to Greenfield Airport	Road Network

	Project	Location and Other Details
2.5 A	Road Connectivity to Greenfield Airport	• Pakyong
a.	Project Rationale and Justification	• Potholes and very rough surface of Road causing problem in travel speed and traffic movement. • Side strips of roads are with steep cut causing problems in overtaking and crossing. • Repair and maintenance of roads required. • Due to weathering condition, slope and topology, wear and tear of road is higher than roads on plain. • Strengthening, widening and repairing should be carried out on identified road. • State level policy should be prepared for repair and maintenance of road. In which physical condition of road is regularly monitored.
b.	Project Objectives	• Safe and efficient traffic movement on various stretches of road. • Decongestion of major roads • To strengthen road network
c.	Project Status	• Identification of road stretch completed.DPR Required.
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Resurfacing and strengthening of poor road In total 26 Km Stretch of road from Gangtok to green field airport need strengthening.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment.
g.	Implementation Arrangements:	UDHD & PWD
h.	Project Cost	39.26 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 3.5 years

Sl. No	Project Name	Categories
2.5.	Road Connectivity to Proposed Railway Station	Road Network

	Project	Location and Other Details
2.5 A	Road Connectivity to Proposed Railway station	• Rangpo
a.	Project Rationale and Justification	• Potholes and very rough surface of Road causing problem in travel speed and traffic movement. • Side strips of roads are with steep cut causing problems in overtaking and crossing. • Repair and maintenance of roads required. • Due to weathering condition, slope and topology, wear and tear of road is higher than roads on plain. • Strengthening, widening and repairing should be carried out on identified road. • State level policy should be prepared for repair and maintenance of road. In which physical condition of road is regularly monitored.
b.	Project Objectives	• Safe and efficient traffic movement on various stretches of road. • Decongestion of major roads • To strengthen road network
c.	Project Status	• Identification of road stretch completed.DPR Required.
d.	Anticipated Timeframe	• Short term
e.	Project Description	Resurfacing and strengthening of poor road In total 45 Km Stretch of road from Gangtok to Rangpo need strengthening.
f.	Social and Environmental Impact	• Due to smooth and continuous road surface running speed of vehicle will increase. This will further decrease the vehicular emission. • Little sound and air pollution will cause during tarring and resurfacing of road. • Maximum precaution will be taken to protect natural environment.
g.	Implementation Arrangements:	UDHD & PWD
h.	Project Cost	90 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 5 years

Sl. No	Project Name	Categories
2.6.	Construction of Bus Terminal	Public Transport

	Project	Location and Other Details
2.6 A	Bhurtuk	Bhurtuk Ward
a.	Project Rationale and Justification	• Separate Bus Terminus Needed for interstate Movement • Major inflow of floating population from North, from North Sikkim District. • Thus Separate terminal is needed to manage the quantum of bus inflow from North • City core and SNT bus terminal is already congested • To avoid movement of Interstate Buses and further congestion inside the city • To maintain the hierarchy amongst interstate and intercity buses
b.	Project Objectives	• To encourage use of interstate public transport. • To generate higher revenues through public transport • To delineate areas in which public as well as interstate transport will run.
c.	Project Status	• Identification of site for Bus Terminal completed. DPR Needed
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Task involved- • Construction of bus terminal
f.	Social and Environmental Impact	• Maximum use of public transport will lower movement of private vehicle on road, thus causing lower emission. • Will be used by all economic groups. • Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & SNT
h.	Project Cost	10 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 3.5 years

	Project	Location and Other Details
2.6 B	Chandmari	Chandmari ward
a.	Project Rationale and Justification	• Separate Bus Terminus Needed for interstate Movement • Major outflow of Tourist population to Nathula from Gangtok • Thus Separate terminal is needed to manage the quantum of bus inflow from North • City core and SNT bus terminal is already congested • To avoid movement of Interstate Buses and further congestion inside the city • To maintain the hierarchy amongst interstate and intercity buses
b.	Project Objectives	• To encourage use of interstate public transport. • To generate higher revenues through public transport • To delineate areas in which public as well as interstate transport will run.
c.	Project Status	• Identification of site for Bus Terminal completed. DPR Needed
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Task involved- • Construction of bus terminal
f.	Social and Environmental Impact	• Maximum use of public transport will lower movement of private vehicle on road, thus causing lower emission. • Will be used by all economic groups. • Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & SNT
h.	Project Cost	10 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 3.5 years

Sl. No	Project Name	Categories
2.7.	Construction of Freight Terminal	Freight Movement

	Project	Location and Other Details
2.7 A	**Ranipool**	Ranipool Ward
a.	Project Rationale and Justification	• Freight movement inside the city is restricted in the day time. • No freight terminal exists at present • Ranipool is a major stoppage for freight goods coming from Singtham, Rangpo and Siliguri • Thus Separate Freight Terminus needed for parking of trucks during day time. • Presently all freight vehicles are parked off-street, hence reducing the effective carriageway. • Presently no resting space and amenities for the drivers. • Freight terminal can act as an intermediate station to shift goods from bigger vehicle to smaller ones, thus reducing traffic load on roads.
b.	Project Objectives	• To facilitate freight parking • To generate higher revenues through freight transport • To develop basic amenities and resting places for the drivers.
c.	Project Status	• Identification of site for Bus Terminal completed. DPR Needed
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Task involved- • Construction of truck terminal in pockets and phase wise
f.	Social and Environmental Impact	• Construction of 10000 Sq Mt Freight Terminal • Better amenities for drivers • Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & SNT
h.	Project Cost	30 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 5 years

	Project	Location and Other Details
2.7 B	**Setipool**	Ranipool Ward
a.	Project Rationale and Justification	• Freight movement inside the city is restricted in the day time. • No freight terminal exists at present • Setipool is a major stoppage for freight goods coming from Pakyong and Rongli • Thus Separate Freight Terminus needed for parking of trucks during day time. • Presently all freight vehicles are parked off-street, hence reducing the effective carriageway. • Presently no resting space and amenities for the drivers. • Freight terminal can act as an intermediate station to shift goods from bigger vehicle to smaller ones, thus reducing traffic load on roads.
b.	Project Objectives	• To facilitate freight parking • To generate higher revenues through freight transport • To develop basic amenities and resting places for the drivers.
c.	Project Status	• Identification of site for Bus Terminal completed. DPR Needed
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Task involved- • Construction of truck terminal in pockets and phase wise
f.	Social and Environmental Impact	• Construction of 5000 Sq Mt Freight Terminal • Better amenities for drivers • Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & SNT
h.	Project Cost	15 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 3 years

Sl. No	Project Name	Categories
2.8.	Construction of Multilevel Parking	Parking

	Project	Location and Other Details
2.8 A	Ranipool	Ranipool Ward
a.	Project Rationale and Justification	• Existing road congested due to unorganized Off-street parking • Multilevel parking will increase parking capacity. • Increase in effective road width thus leading to uninterrupted traffic flow. • More revenue will be generated from organized parking. • Existing mixed landuse of the area is leading to chaos; this will be reduced once the parking lot is built. • More Commercial space can be developed along with the multi level parking
b.	Project Objectives	• To facilitate parking facility in the area • To reduce congestion on road • To generate higher revenues through parking
c.	Project Status	• Site for multilevel parking identified. Feasibility of commercial space will be checked while DPR is prepared.
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Task involved- • Construction of 53850 Sq Mt multilevel car parking • To be developed as smaller pockets in decentralized manner.
f.	Social and Environmental Impact	• Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	134.63 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 5 years

	Project	Location and Other Details
2.8 B	Upper Bhurtuk	Bhurtuk Ward
a.	Project Rationale and Justification	• Existing road congested due to unorganized Off-street parking • Multilevel parking will increase parking capacity. • Increase in effective road width thus leading to uninterrupted traffic flow. • More revenue will be generated from organized parking. • Existing mixed landuse of the area is leading to chaos; this will be reduced once the parking lot is built. • More Commercial space can be developed along with the multi level parking
b.	Project Objectives	• To facilitate parking facility in the area • To reduce congestion on road • To generate higher revenues through parking
c.	Project Status	• Site for multilevel parking identified. Feasibility of commercial space will be checked while DPR is prepared.
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Task involved- • Construction of 6150 Sq Mt multilevel car parking • To be developed as smaller pockets in decentralized manner.
f.	Social and Environmental Impact	• Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	15.38 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 2 years

	Project	Location and Other Details
2.8 C	Lower Sichey	Sichey ward
a.	Project Rationale and Justification	• Existing road congested due to unorganized Off-street parking • Multilevel parking will increase parking capacity. • Increase in effective road width thus leading to uninterrupted traffic flow. • More revenue will be generated from organized parking. • Existing mixed landuse of the area is leading to chaos; this will be reduced once the parking lot is built. • More Commercial space can be developed along with the multi level parking
b.	Project Objectives	• To facilitate parking facility in the area • To reduce congestion on road • To generate higher revenues through parking
c.	Project Status	• Site for multilevel parking identified. Feasibility of commercial space will be checked while DPR is prepared.
d.	Anticipated Timeframe	• Phase II
e.	Project Description	Task involved- • Construction of 6150 Sq Mt multilevel car parking • To be developed as smaller pockets in decentralized manner.
f.	Social and Environmental Impact	• Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	15.38 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 2 years

Sl. No	Project Name	Categories
3.1.	Construction of Freight Terminal	Freight Movement

	Project	Location and Other Details
3.1 A	IInd Mile	Chandmari Ward
a.	Project Rationale and Justification	• Freight movement inside the city is restricted in the day time. • No freight terminal exists at present • Chandmari is a major stoppage for freight goods coming from Nathula and Tibet Border • Thus Separate Freight Terminus needed for parking of trucks during day time. • Presently all freight vehicles are parked off-street, hence reducing the effective carriageway. • Presently no resting space and amenities for the drivers. • Freight terminal can act as an intermediate station to shift goods from bigger vehicle to smaller ones, thus reducing traffic load on roads.
b.	Project Objectives	• To facilitate freight parking • To generate higher revenues through freight transport • To develop basic amenities and resting places for the drivers.
c.	Project Status	• Identification of site for Bus Terminal completed. DPR Needed
d.	Anticipated Timeframe	• Phase III
e.	Project Description	Task involved- • Construction of 5000Sq Mt truck terminal
f.	Social and Environmental Impact	• Better amenities for drivers • Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & SNT
h.	Project Cost	15 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 2 years

	Project	Location and Other Details
3.1 B	Bhurtuk	Bhurtuk Ward
a.	Project Rationale and Justification	• Freight movement inside the city is restricted in the day time. • No freight terminal exists at present • Bhurtuk is a major stoppage for freight goods coming from Penlong, Panthang, North Sikkim District • Thus Separate Freight Terminus needed for parking of trucks during day time. • Presently all freight vehicles are parked off-street, hence reducing the effective carriageway. • Presently no resting space and amenities for the drivers. • Freight terminal can act as an intermediate station to shift goods from bigger vehicle to smaller ones, thus reducing traffic load on roads.
b.	Project Objectives	• To facilitate freight parking • To generate higher revenues through freight transport • To develop basic amenities and resting places for the drivers.
c.	Project Status	• Identification of site for Bus Terminal completed. DPR Needed
d.	Anticipated Timeframe	• Phase III
e.	Project Description	Task involved- • Construction of 5000 Sq Mt truck terminal
f.	Social and Environmental Impact	• Better amenities for drivers • Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & SNT
h.	Project Cost	15 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 2 years

Sl. No	Project Name	Categories
3.2.	Construction of Multilevel Parking	Parking

	Project	Location and Other Details
3.2 A	M.G Road	Upper MG Marg Ward
a.	Project Rationale and Justification	• M.G. road is a heavily congested area , by virtue of being a major commercial centre and tourist attraction zone. • Existing road congested due to unorganized Off-street parking • Multilevel parking will increase parking capacity. • Increase in effective road width thus leading to uninterrupted traffic flow. • More revenue will be generated from organized parking. • Existing mixed landuse of the area is leading to chaos; this will be reduced once the parking lot is built. • More Commercial space can be developed along with the multi level parking
b.	Project Objectives	• To facilitate parking facility in the area • To reduce congestion on road • To generate higher revenues through parking
c.	Project Status	• Site for multilevel parking identified.
d.	Anticipated Timeframe	• Phase III
e.	Project Description	Task involved- • Construction of 12300 Sq Mt multilevel car parking • To be developed as smaller pockets in decentralized manner.
f.	Social and Environmental Impact	• Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	30.75 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 5 years

	Project	Location and Other Details
3.2 B	Chandmari	Chandmari Ward
a.	Project Rationale and Justification	• Chandmari is a heavily congested area, as it is a major Institutional area, and also some commercial activity is seen on Jawahar lal Nehru Road • Existing road congested due to unorganized Off-street parking • Multilevel parking will increase parking capacity. • Increase in effective road width thus leading to uninterrupted traffic flow. • More revenue will be generated from organized parking. • Existing mixed landuse of the area is leading to chaos; this will be reduced once the parking lot is built. • More Commercial space can be developed along with the multi level parking
b.	Project Objectives	• To facilitate parking facility in the area • To reduce congestion on road • To generate higher revenues through parking
c.	Project Status	• Site for multilevel parking identified.
d.	Anticipated Timeframe	• Phase III
e.	Project Description	Task involved- • Construction of 6150 Sq Mt multilevel car parking • To be developed as smaller pockets in decentralized manner.
f.	Social and Environmental Impact	• Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	15.37 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 2 years

	Project	Location and Other Details
3.2 C	Tadong	Tadong Ward
a.	Project Rationale and Justification	• Tadong road is a heavily congested area, by virtue of being a major commercial (Tadong Bazar) and Institutional centre (Tadong Govt. College) • Existing road congested due to unorganized Off-street parking • Multilevel parking will increase parking capacity. • Increase in effective road width thus leading to uninterrupted traffic flow. • More revenue will be generated from organized parking. • Existing mixed landuse of the area is leading to chaos; this will be reduced once the parking lot is built. • More Commercial space can be developed along with the multi level parking
b.	Project Objectives	• To facilitate parking facility in the area • To reduce congestion on road • To generate higher revenues through parking
c.	Project Status	• Site for multilevel parking identified.
d.	Anticipated Timeframe	• Phase III
e.	Project Description	Task involved- • Construction of 6150 Sq Mt multilevel car parking • To be developed as smaller pockets in decentralized manner.
f.	Social and Environmental Impact	• Decongestion of City roads will reduce pollution level. • Employment Generation
g.	Implementation Arrangements:	UDHD & Private party PPP Mode
h.	Project Cost	15.37 Crores
i.	Implementation Schedule	• Feasibility Study (DPR I) • DPR II • Project Preparation, Procure Contractor • Land Acquisition and Clearance • Construction To be Completed within 2 years

ANNEXURE-II (Models of Public –Private Partnerships)

i) Build – Operate – Transfer (BOT)

Under this method of financing the public and the private sector join hands to complete a project. A common method of financing urban transport works is the Build-Operator-

Transfer method. This is a contractual arrangement whereby the project sponsor undertakes the construction, including financing, of a given infrastructure facility, and the operation and maintenance thereof. The project sponsor operates the facility over a fixed term during which it is *allowed to charge facility users* appropriate tolls, fees, rentals, and charges not exceeding those proposed in its bids or as negotiated and incorporated in the contract to enable the project sponsor to recover its investment, and operating and maintenance expenses in the project. The facility is transferred to the government agency or local government unit concerned at the end of a predetermined term.

The main characteristic of such project is finance arrangement which sets its reliance on the revenue generated from a project for the repayment of loans and investment. An easily understood example is toll roads where the funds for the construction and operation of the project are generated by the users.

A number of are involved in a BOT project. There is the entrepreneur who takes up the work and is the driving force behind a project. The contractors construct and may operate the asset. They may be a part of the operating group. The Government is a party as it is the main client who wants the job done and a customer is the user of the facility. A financier lends money and may be a bank or an international agency such as the IFC and a facilitator does the initial assessment of a project and design it.

ii) Build-and-Transfer (BT)

A contractual arrangement whereby the project sponsor undertakes the financing and construction of a given infrastructure or development facility. After the completion of the project it is turned over to the government agency or local government unit concerned, which pays the sponsor or an agreed schedule, its total investment expended on the project, plus a reasonable rate of return thereon. This arrangement may be employed in the construction of any infrastructure or development project, including critical facility that, for security or strategic reasons, must be operated directly by the Government.

iii) Build – Lease – and – Transfer (BLT)

Under this arrangement, a project sponsor is authorized to finance and construct an infrastructure or development facility and upon its completion turns it over to the government agency or local government unit concerned on a lease arrangement for a fixed period, after which ownership of the facility is automatically transferred to the government agency or local government unit concerned.

iv) Build-Own-and Operate (BOO)

A contractual arrangement whereby a project proponent is authorized to finance construct, own, operate and maintain an infrastructure or development facility from which the proponent is allowed to recover its total investment, operating and maintenance costs plus a reasonable return thereon by collecting tolls, fees, rentals or other charges from facility users. Under this project, the proponent who owns the assets of the facility may assign its operation and maintenance to a facility operator.

v) Build – Transfer – and – Operate (BTO)

The public sector contracts out the building of an infrastructure facility to a private entity such that the contractor builds the facility on a turn – key basis, assuming cost overruns, delays, and specified performance risks. Once the facility is commissioned satisfactorily, title is transferred to the implementing agency. The private entity however operates the facility on behalf of the implementing agency under an agreement.

vi) Contract-Ad-and Operate (CAO)

A contractual arrangement whereby the project proponent adds to an existing infrastructure facility which is renting from the Government and operates the expended project over an agreed franchise period. There may or may not be a transfer arrangement with regard to the added facility provided by the project proponent.

vii) Develop-Operate-and-Transfer (DOT)

A contractual arrangement whereby favorable conditions external to a new infrastructure project which is to be build by a private project proponent are integrated into the arrangement by giving that entity the right to develop adjoining property, and thus, enjoy some of the benefits the investment creates.

viii) Rehabilitate-Operate-and Transfer (ROT)

A contractual arrangement whereby an existing facility is turned over to the private sector to refurbish, operate and maintain for a franchise period at the expiry of which the legal title to the facility is turned over to the Government.

ix) Rehabilitate-Own and Operate (ROO)

A contractual arrangement whereby an existing facility is turned over to the private sector to refurbish and operate with no time limitation imposed on ownership. As long as the operator is not an violation of its franchise, it can continue to operate the facility in perpetuity.

x) Shadow Tolls

Shadow tolls are 'per vehicle' amounts paid to a facility operator by a third party as a sponsoring governmental entity and *not by facility users*. Shadow toll amounts paid to a facility operator are based upon the type of vehicle and distance traveled. Shadow tolls can be an element of finance approach whereby a public or private sector developer/operator accepts certain obligations and risks- such as construction, operations and most specifically traffic – and receive periodic shadow toll payments in place of, or in addition to, real or explicit tolls paid by users. Funds for shadow tolls can come from diverse (and multiple) government and/or private sector sources.

Shadow tolls automatically spread periodic or annual payments to a facility operator over a concession or franchise period: this can place the initial financing responsibility on the developer/operator rather than placing this burden on the public sector agency sponsoring the project.

xi) Commercial Development

The aim is to explore the possibility of revenue generation from sale/lease of a strip of land on either side along the road through commercial development of land. In addition, ways and means of generating additional revenue including advertisement revenue, direct tolling, shadow tolling etc. are envisaged.

Annexure
Technical Parameters of Public Transport Options

	Metro	LRT	Tramways	HCBRT	BRT	Bus Priority Lanes	City Bus
Line Capacity (PAX/hr/dir.)	40,000 – 75,000	15,000 – 45,000	5,000 – 15,000	20,000 – 35,000	7,500 – 15,000	5,000 – 7,500	Below 1,000
Alignment	Double-track railway	Double-track railway, elevated, a-grade or in tunnels	Double track tramway, at-grade	4 Bus Lanes (2 per direction)	2 to 3 Bus Lanes	2 Bus Lanes	Use public roads
Segregation	100 % segregated in tunnels, elevated or at-grade	High degree of segregation preferred, but sections with shared right of way possible	Uses public roads, but may have reserved right of way on sections with higher demand	Uses public roads, but may have reserved right of way on sections with higher demand	Bus Lanes must be in general segregated, exceptions possible, reduce capacity and speed	Bus Priority Lanes must be exclusively for busses	None
Road space required	None	None in case of elevated and tunnel alignment, 2 lanes at-grade, additional space required for stations and terminals	2 Lanes, additional space may be required for stations and terminals, tracks can be shared with public roads or pedestrian roads	4 Lanes; more linear space for Interchanges and Terminals	2 Lanes, possibly 3 or 4 at Stations and Interchanges, space for major Interchanges and Terminals	2 to 3 Lanes (3 to 4 Lanes at Bus Stops)	Shared with cars and pedestrian
Vehicles	High capacity EMU	Medium to high capacity EMUs (upgraded trams as an option)	Trams, articulated and or with wagons as an option	Special articulated bus with at-floor boarding and wide doors	Articulated buses; pre-paid boarding required	Standard City Bus, articulated as option	Standard City Bus

Passengers per Vehicle/Train	1.200 – 2.500	250 – 1.500	Depends on length	180-240	150-180	75 - 100	75
Traction	Electric	Electric	Electric	Diesel	Diesel (Electric as an option)	Diesel	Diesel
Feeder System	Necessary	Necessary	Not necessary	Necessary	Desired	Not necessary	Not necessary
Flexibility of route changes	Very low	Low	Low	Very low	Medium	Medium	Very high
Ticketing System	Closed	Closed	Open	Closed	Closed or open	Open	Open

Source: CMP Tool Kit, Module 1.

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Golden
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INDIRA BYE-PASS
LOWER BURTUK
EAST SIKKIM
Estd.- 2005


SINGTAM
RANGPO
SILIGURI

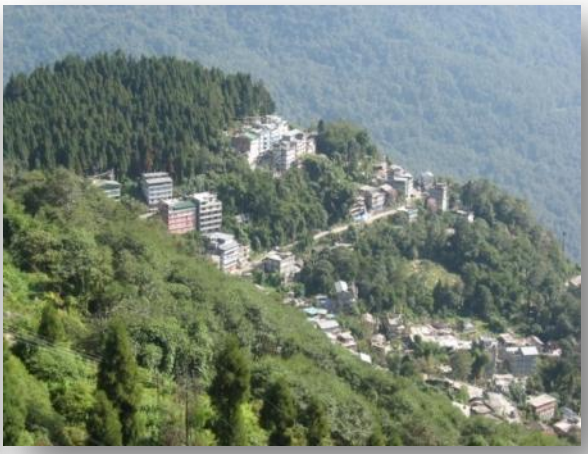

SARVATRA BUS STOP


NSH
GANGTOK
5KM
SILIGURI
123KM


WELCOME TO TASHI VIEW POINT
TOURIST CAFETERIA
WELCOME TO
TASHI VIEW POINT


GANGTOK
6KM
NATHULA
54KM
SILIGURI
123KM
CHUNGTHANG
90KM


BORDER ROADS ORGANISATION - PROJECT
41 KM
SHERBATHANG
शेर्बाथांग
29 KM
TSOMGO
सोमगो
40 KM
NATHULA
नथूला
SAFETY MAKE IT A HABIT




HANUMAN TOK