



Chapter – 19 : Project & Capital Investment Plan



CHAPTER - 19 PROJECT AND CAPITAL INVESTMENT PLAN

19.1 INTRODUCTION

This section identifies projects proposed in specific sectors, based upon the strategies that have been outlined in the previous section. The project identification and capital investment plan have been prepared for sectors as per the sub-missions of JNNURM. The sectors covered in Sub-Mission-1: Urban Infrastructure and Governance are (i) Water Supply; (ii) Sewerage and Sanitation; (iii) Storm Water Drainage; (iv) Road Network and Transport Projects; (v) Solid Waste Management Projects; (vi) Redevelopment of Core City Area; (vii) Heritage Conservation and (viii) Urban Governance; and Sub-Mission-2: Basic Services to Urban Poor are (i) Housing; (ii) Basic Services and (iii) Other related civic amenities

The implementing authorities for projects in NCTD area are Municipal Corporation Delhi (MCD); New Delhi Municipal Corporation (NDMC); Delhi Jal Board (DJB); Public Works Department (PWD); Delhi Development Authority (DDA); Urban Development Department (UDD) and Delhi State Industrial Development Corporation (DSIDC).

In order to optimize life cycle costs, private sector efficiencies can be inducted in development, management, implementation and financing of projects, through PPP arrangements where appropriate.

Sector wise projects will be categorized as (i) Financially viable Projects: These projects can undertaken entirely by the private sector (ii) Projects which are financially viable, with government support such as annuity projects and (iii) projects which are financially unviable and require to be taken up directly by government.

SUB-MISSION-1: URBAN INFRASTRUCTURE AND GOVERNANCE

19.2 WATER SUPPLY

DJB is the agency of the Govt. of NCT of Delhi responsible for procurement, treatment, transportation and distribution of water in the MCD areas. It also supplies bulk water to the NDMC, and Delhi Cantonment Board.

19.2.1 Summary of strategies

The strategies identified, in order of priority are:

- i) Reduction of transmission & distribution losses, and enhancement of management of water supply;
- ii) Augmentation of water supply and distribution network
- iii) Promotion of efficiency in service delivery and strengthening of cost recovery mechanism.

(A) REDUCTION OF TRANSMISSION AND DISTRIBUTION LOSSES

Projects identified are listed below

- (a) **Revamping, up-gradation and Extension of Internal Network:** The revamping and upgradation of internal distribution will reduce the T&D loss and to have equitable distribution of water in each zone.
- (b) **Interlinking of Supply System:** Interlinking of Western Jamuna Canal (WJC) with Wazirabad pond by laying 2000mm diameter pipeline for supply of raw water from WJC to Wazirabad pond.
- (c) **Development of Monitoring System:** In order to monitor water quantity and quality, installation of Zonal level water meters, chlorination and up-gradation of water testing labs have been proposed; as well as various monitoring & leak detection studies.

(B) AUGMENTATION OF WATER SUPPLY SYSTEM

Projects have been proposed to provide water supply to urban villages, peripheral areas of the city, JJ clusters, unauthorized areas and new developments; as well as to augment the quantum of water available to the city.

- (a) **Water Treatment Plant:** It is proposed to construct one 31MGD iron removal plant at Palla (to improve water quality), 20MGD Water treatment plant at Okhla, and 40MGD water treatment plant at Dwarka. Moreover it is also proposed to construct recycling plant of 8MGD each at Chadrawal, Wazirabad Haiderpur and Bawana. The population serviced by these treatment plants is 3.2 million spread over an area of 55km².
- (b) **Upgradation of Water Works:** The project for up gradation of water works at Chandrawal, Wazirabad and Bawana. The existing capacity of these water works are 90 MGD; 120 MGD & 40 MGD respectively. The capacities of these water works are to be increased by 20 to 30 MGD to cover additional 0.35 million population.
- (c) **Construction of Tube wells:** 21 high yield tube wells are to be drilled in flood plain area of river Yamuna. Although ground water is residing down, the tube wells in these area has minimum impact on the ground water due to its location in the flood plain at palla.
- (d) **Construction & Connection of UGR/BPS:** In order to improve the distribution system in city, the construction of UGR/BPS and connecting them with transmission network has been proposed.
- (e) **Exploration of Raw Water Resources:** The water resources are to be explored to augment the water supply system to fulfill the water demand in future.

(C) PROMOTION OF EFFICIENCY IN SERVICE DELIVERY AND STRENGTHENING OF COST RECOVERY MECHANISM

Projects proposed include

- (a) **Revamping DJB Customer Care Services:** Procurement and Installation of system software for billing and customer information.

Strategy/Project	Rs Crore	2007- 08	2008- 09	2009 -10	2010 -11	2011 -12	Agencies Responsible for	
							Capital Investment	O&M
RS IN CRORE								
A) REDUCE TRANSMISSION & DISTRIBUTION LOSSES								
(i) Revamping and upgradation of internal water distribution network and pumping stations	75	25	25	25	-	-	DJB	DJB
(ii) Coverage of new colonies in outer areas of city	25	10	10	5	-	-	DJB	DJB
(iii) Interlinking of WJC with Wazirabad pond Laying of 2000 mm dia pipeline for supply of raw from WJC to Wazirabad pond	187	50	50	50	37	-	DJB	DJB
(iv) Supply and Installation of Bulk Meters	30	15	10	5	-	-	DJB	DJB
(v) Modernization and up gradation of Laboratory	20	10	10	-	-	-	DJB	DJB
(viii) Leak Detection Study	1.0	0.5	0.5	-	-	-	DJB	DJB
(ix) Energy Efficiency Study	2.0	1	1	-	-	-		
B) AUGUMENTATION OF WATER SUPPLY FROM 790 MGD TO 919 MGD								
(i) Construction of New Water Treatment Plants	696	250	250	116	50	30	DJB	DJB
(a) 31 MGD Iron removal Plan								
(b) 20 MGD WTP at Okhla								
(c) 40 MGD WTP at Dwarka								
(ii) Construction of 21 Nos. High Yield Tube wells in flood plain area of river Yamuna	1	0.5	0.5	-	-	-	DJB	DJB
(iii) Upgradation of Water Works- chandrawal	35	20	10	5	-	-	DJB	DJB
(iv) Construction of UGRs/BPS in Various Part of Delhi	250	50	50	50	50	50	DJB	DJB
(v) Construction of 8MGD recycling plants Chandrawal, Wazirabad,	20	20	-	-	-	-	DJB	DJB

Strategy/Project	Rs Crore	2007- 08	2008- 09	2009 -10	2010 -11	2011 -12	Agencies Responsible for	
							Capital Investment	O&M
RS IN CRORE								
Haiderpur and Bhagirathi								
(vi) To Connect UGR with Plants transmission lines of varying size-250kms	200	50	50	50	30	20	DJB	DJB
(vii) Construction of 1 MGD WTP at common wealth games village along with arrangement of raw water	20	10	10	-	-	-	DJB	DJB
(vii) Exploration of Raw Water Resources	50	15	15	20	-	-	DJB	DJB
C) EFFICIENCY IN SERVICE DELIVERY AND COST RECOVERY MECHANISM								
(i) Revamping DJB Customer Care Services-Procurement and Installation of system software for billing and customer information	20	8	8	4	-	-	DJB	DJB
GRAND TOTAL IN Rs CRORE	1632.0	535.0	500.0	330	167	100		

The O&M cost due to the new investment is estimated at Rs. 446.7.00 Crore. Delhi Jal Board (DJB) is the authority responsible for O&M of water supply system.

Strategy/Project	Total O&M Cost @ 10%	2007-08	2008-09	2009-10	2010-11	2011-12
A) AUGUMENTATION OF WATER SUPPLY FROM 790 MGD TO 919 MGD	343.05	0	41.55	80.1	104.2	117.2
B) REDUCE TRANSMISSION & DISTRIBUTION LOSSES	97.25	0	11.15	21.8	30.3	34
C) EFFICIENCY IN SERVICE DELIVERY AND COST RECOVERY MECHANISM	6.4	0	0.8	1.6	2	2
TOTAL	446.7	0	53.5	103.5	136.5	153.2

19.3 SEWERAGE SYSTEM

DJB is the agency of the Govt. of NCT of Delhi responsible for collection, treatment and disposal of wastewater. Projects which effectively resolve the present drawbacks of the system have been taken up on a priority basis.

19.3.1 Summary of Strategies

Strategies identified, in order of priority are given below:

- i) Extension and up-gradation of sewage network to intercept sewage-abatement of pollution.
- ii) Provision of sewer network in un-sewered areas.
- iii) Augmentation of sewage treatment capacity

(i) EXTENSION AND UPGRADATION OF SEWERAGE NETWORK

These projects aim to revamp and upgrade the existing sewer network. These include providing sanitation to uncovered areas of the city. The projects covered as part of extension and up-gradation of sewerage network are:

- (a) **Revamping and Rehabilitation of Trunk & Internal Sewerage Network:** In order to improve the sewage collection and disposal system in already sewerage area, it has been proposed to revamp and upgrade (including replacement) about 650km of internal sewer network; and rehabilitate 150km of trunk sewer network in walled city area, north & west districts of city (excluding sewer under YAP-II). This latter component will include the procurement of suction and jetting machines, CCTV etc. to ensure adequate maintenance (if maintenance is not to be out-sourced)
- (b) **Refurbishment of Sewage Pumping Stations:** The refurbishment of existing sewage pumping stations (SPS) will aim at optimal functioning of these plants.

(ii) PROVISION OF SEWER NETWORK IN UN-SEWERED AREAS

Projects included are

- (a) **Laying of Sewer Network in Uncovered Areas:** The provision of 250km of trunk sewer network in uncovered area and laying of sewer network in 169+39 villages & 1513 unauthorized/regularized colonies to improve the sanitation system in these areas.
- (b) **Construction of new sewage pumping stations:** These will allow diversion of sewage from uncovered areas to the appropriate STP, for optimal utilisation of the STP's. These are proposed at Punjabi Bagh, Nangloi extn, Preet vihar, Yamuna vihar and Jivan Vihar

(iii) AUGMENTATION OF SEWAGE TREATMENT CAPACITY

Projects proposed include

- (a) **Construction of STPs along intercepting sewers:** Total estimated project cost is 700 Crores
- (b) **Construction of Sewage Pumping Stations:** These will upgrade sanitation facilities in low lying areas. The cost of constructing the SPS's is Rs. 150 Crore
- (c) **Laying of Intercepting Trunk Sewers along Three Main Drains:** Consideration of this proposal is subject to the recommendations of the consultant due to be appointed to advice on this issue. Cost allocated is Rs. 500 Crore in the first phase.

Strategy / Project	Rs Crore	2007- 08	2008- 09	2009 -10	2010 -11	2011 -12	Agencies Responsible for	
							Capital Investme nt	O&M
RS IN CRORE								
A) EXTENSION AND UPGRADATION OF SEWERAGE NETWORK FOR INTERCEPTING SEWAGE TO CONVEY TO STPS-POLLUTION CONTROL AND ABATEMENT OF POLLUTION								
(i) Revamping and up gradation of internal sewerage network including replacement of Old Sewer line	125	75	50	-	-	-	DJB	DJB
(ii) Refurbishment of Sewage Pumping Stations- 6Nos	20	20	-	-	-	-	DJB	DJB
(iii) Rehabilitation of Trunk Sewers in walled city area, north and west districts excluding trunk sewer under YAP-II	450	100	100	150	50	50	DJB	DJB
B) PROVISION OF SEWER NETWORK IN UN-SEWERED AREAS								
(i) Provision of Sewer in left out portion of colonies and rural villages	120	20	50	30	20	-	DJB	DJB
(ii) Laying of 250 km of trunk sewer network to cater to uncovered area (U?A regularized colonies)	75	30	30	15	-	-	DJB	DJB
(iii) Provision of Sewerage Network in 30 urban villages	45	10	20	15	-	-	DJB	DJB
(iv) Provision of Sewerage Network in Unauthorized colonies	400	75	50	50	100	125	DJB	DJB
(v) Diverting the sewer from uncovered area by constructing Sewage Pumping Stations (SPS) Punjabi Bagh, Nangloi extn, Preet vihar, Yamuna vihar and Jivan vihar, Raja Garden	100	25	50	25	-	-	DJB	DJB

Strategy / Project	Rs Crore	2007- 08	2008- 09	2009 -10	2010 -11	2011 -12	Agencies Responsible for	
							Capital Investme nt	O&M
RS IN CRORE								
(vi) Laying of trunk sewers	70	25	25	20	-	-	DJB	DJB
C) AUGMENTATION OF SEWAGE TREATMENT CAPACITY								
(i) Construction of new STPs	700	75	100	150	250	125	DJB	DJB
(ii) Construction of Sewage Pumping Stations	150	50	50	50	-	-	DJB	DJB
(iii) Laying of Trunk and interceptor Sewers along main drains	500	100	150	100	75	75	DJB	DJB
TOTAL COST	2755	605	675	605	495	375	DJB	DJB

The O&M cost due to the new investment is Rs. 615 Crore. Delhi Jal Board (DJB) will be the authority responsible for O&M of the augmented sewerage system.

Strategy/Project	Total O&M Cost @ 10%	2007-08	2008-09	2009-10	2010-11	2011-12
A) EXTENSION AND UPGRADATION OF SEWERAGE NETWORK FOR INTERCEPTING SEWAGE	158	0	19.5	34.5	49.5	54.5
B) PROVISION OF SEWER NETWORK IN UN-SEWERED AREAS	184.5	0	18.5	41.0	56.5	68.5
C) AUGMENTATION OF SEWAGE TREATMENT CAPACITY	272.5	0	22.5	52.5	82.5	115.0
TOTAL	615	0	60.5	128.0	188.5	238.0

19.4 ROAD NETWORK & TRANSPORTATION SYSTEM

PWD, MCD, NDMC, DTTDC, DMRC, State Transport Authority and Delhi Development Authority are the main agencies responsible for construction, maintenance and improvement of road network and operation of the transport system in city. Road projects, which can resolve the current drawbacks of the system with minimum investment, are taken up as priority projects. The projects prepared for improving transport situation in city are presented below:

19.4.1 Summary of Strategies

Projects have been identified based on strategies as given below (in order of priority)

- i. Provision of safe and efficient public transport system
- ii. Encouraging the use of non-motorised modes of passenger transport

- iii. Equitable use of space on road and priority to pedestrians
- iv. Efficient use of existing infrastructure - removal of impediments - including enhancement of road infrastructure and provision of efficient parking facilities
- v. Redevelopment of Connaught Place and Walled City as special areas
- vi. Development of goods and passenger terminals on the basis of directional needs
- vii. Enhancement of Road Infrastructure
- viii. Awareness and enforcement drives

(i) PROVISION OF SAFE AND EFFICIENT PUBLIC TRANSPORT SYSTEM

The goal is to augment the share of trips of public transport from the current 60 percent to 80 percent. This is proposed to be done through an integrated multi-modal system of public transport. The projects proposed include

- (a) **Developing a light Rail Transport System:** Estimated project cost is Rs. 2800 Crore
- (b) **Developing a Monorail System:** Estimated Project Cost is Rs. 2400 Crore
- (c) **Putting in place a High Capacity Bus System:** Estimated Project Cost is Rs. 1305 Crore

The three systems are planned to operate in a complementary manner. The total project cost for this objective is Rs. 6505 Crore.

(ii) ENCOURAGING USE OF NON MOTORISED MODES OF PASSENGER TRANSPORT

These are proposed to be promoted for short distance trips along sub arterial roads, local roads and along major transport corridors near industrial nodes. Projects include

- (a) Provision of Cycle Tracks at Sub-Arterial & Local Level roads and streets new areas and urban extensions
- (b) Promotion of cycle rickshaws in specific localities

(iii) PROVIDING EQUITABLE USE OF SPACE ON ROAD AND PRIORITY TO PEDESTRIANS

Projects proposed are:

- a) Strengthening and improvement of footpaths along major arterial roads
- b) Construction of foot over bridges/ subways at ten critical locations

(iv) FULL DEVELOPMENT OF RIGHT OF WAY OF ROAD - REMOVAL OF IMPEDIMENTS AND MANAGEMENT AND CREATION OF NEW PARKING AREAS

Present transport system of Delhi is road based and the available infrastructure should be optimally utilized to ease the traffic on the roads in Delhi. Moreover, proper management and regulation of parking spaces especially in the commercial centers can help in better utilization of facilities. To overcome the current shortfall in parking, there is also a need for developing new parking facilities using appropriate advanced technologies in busy commercial areas as well as residential areas.

Projects proposed under this strategy include:

- (a) Traffic Management and Area Traffic Control schemes at all Grade Separators and prominent commercial areas
- (b) Improvement of road corridors spread over Delhi - 251.40 km.
- (c) Improvement of ten major entry points of Delhi
- (d) Construction of Multi-Level Parking in Delhi at 12 sites
- (e) Parking management & Regulation at 10 prominent locations
- (f) Construction of underground parking in residential areas: It is proposed to identify community areas, or open spaces that can accommodate underground parking and develop these facilities in order to decongest residential roads. Moreover, a framework for the levy of parking charges on residential roads must be developed, and the same implemented.

(v) SPECIAL SCHEMES FOR REDEVELOPMENT OF CONNAUGHT PLACE AND WALLED CITY AREAS

These include

- (a) Improvement of Major intersections like Ajmeri Gate, Fountain Chowk, Kaudia Pal, Khari Baoli etc. at 15 locations
- (b) Pedestrianisation of inner circle in Connaught Place including parking below inner circle
- (c) Pedestrianisation (partial) of Chandni Chowk Area with heritage considerations
- (d) Developing Underground Parking at Connaught Place, Super Bazar, Mayur bhawan, Shivaji Terminal as part of redevelopment of Connaught Place

(vi) DEVELOPING PASSENGER & GOODS TERMINALS BASED ON DIRECTIONAL NEEDS

The main objective of these proposals is to decentralize facilities for goods and passenger movement, in order to relieve the load on the city network. Projects proposed are

- (a) Development of Interstate Bus Terminus at Bhartal, Dwarka, Holambi Kalan and Tikri Kalan
- (b) Integrated Freight Complex at Madanpur Khadar, Gazipur and Narela

(viii) ENHANCEMENT OF ROAD INFRASTRUCTURE

To accommodate the additional demand for road space, there may be a need to construct elevated roads in the existing right of way along the major corridors of movement. The requirement for this should be ascertained after the impact of other proposals have been evaluated (using GIS based tools for traffic modeling). Efforts, however, are required to enhance existing infrastructure in terms of improvement of major intersections. Project proposals include:

- (a) East-West Corridor from Rajghat to Panjabi Bagh-12km
- (b) North-South Corridor from Majnu ka tila to Daula Kaun-15km
- (c) Prem Bari Pul (Pritampura) to Outer Ring Road along Disused Western Yamuna Canal
- (d) Sarita Vihar Intersection on Mathura Road to Okhla industrial Areas
- (e) Elevated ring road of 68.5km, with 50.5km along ring road and 18km are link roads. These are 2 lane dual carriageway with 5km at grade and 45.5km elevated corridor.

(ix) CREATING AWARENESS AND ENFORCEMENT DRIVE

The magnitude of traffic in Delhi calls for creating enhanced awareness about traffic and transport systems by running special programs; creating a traffic management data base and imparting training to road users on a periodic basis. The project cost for this objective is Rs. 16 Crore.

Strategy/Project	Rs in Crore	2007-08	2008-09	2009-10	2010-11	2011-12	Agencies Responsible for	
							Capital Investment	O&M
RS IN CRORE								
A. SAFE AND EFFICIENT PUBLIC TRANSPORT SYSTEM								
i) Developing Light Rail Transport System - 74 km	2800	560	560	740	470	470	DIMTS	DIMTS
ii) Developing Monorail System - 48 km	2400	480	480	720	360	360	DIMTS	DIMTS
iii) High Capacity Bus System -294 km.	1305	265	260	390	195	195	DIMTS	DIMTS
B. DEVELOPMENT OF PASSENGER AND GOODS TERMINALS BASED ON DIRECTIONAL NEEDS								

Strategy/Project	Rs in Crore	2007-08	2008-09	2009-10	2010-11	2011-12	Agencies Responsible for	
							Capital Investment	O&M
RS IN CRORE								
i) Development of Interstate Bus Terminus at Bhartal, Dwarka, Holambi Kalan and Tikri Kalan	50	5	15	15	10	5	PWD	DTC
ii) Integrated Freight Complex at Madanpur Khadar, Gazipur and Narela	50	10	20	10	5	5	PWD	MCD
C. DEVELOP NEW LINK ROADS AND BRIDGES AS ALTERNATIVE ROUTES								
i) East-West Corridor from Rajghat to Panjabi Bagh-12km	120	20	30	30	20	20	PWD	PWD
ii) North-South Corridor from Majnu ka tila to Daula Kaun-15km	125	25	30	30	20	20	PWD	PWD
iii) Prem Bari Pul (Pritampura) to Outer Ring Road along Disused Western Yamuna Canal	30	10	10	10	-	-	PWD	PWD
iv) Sarita Vihar Intersection on Mathura Road to Okhla industrial Areas	30	10	10	10	-	-	PWD	PWD
v) Development of elevated ring road	300	-	100	100	75	25	PWD/PVT	PWD
vi) Elevated section over Outer Ring road- NH 1 (Mukerba Chowk) to wazirabad 7.5 Km.	200	25	50	50	50	25	PWD	PWD
vii) Outer Ring Road Link from Okhla to Wazirabad - 13 km.	200	-	50	50	50	50	PWD	PWD
viii) Missing Link of Outer Ring Road from NH 8 to Janakpuri through Cantonment Area - 13Km.	200	-	50	75	50	25	PWD	PWD
ix) Wazirabad Signature Bridge over river Yamuna	464	164	150	150	-	-	PWD	PWD
x) Geeta Colony Bridge over river Yamuna	125	125	-	-	-	-	PWD	PWD
xi) Master plan road over disused Canal between Shastri Park and Karkari More	120	120	-	-	-	-	PWD	PWD
xii) Ring road bypass from Salim Garh Fort to Velodrome road	100	-	20	20	40	20	PWD	PWD
xiii) Link road from NH 24 to Lodhi road (Tunnel Bypass)	60	-	15	15	15	15	PWD	PWD
D. FULL DEVELOPMENT OF ROW OF ROAD								
i) Traffic Management and Area Traffic Control schemes at all Grade Separators and prominent commercial areas	50	10	20	20	-	-	MCD	MCD
ii) Improvement of road	500	100	150	150	50	50	MCD	MCD

Strategy/Project	Rs in Crore	2007-08	2008-09	2009-10	2010-11	2011-12	Agencies Responsible for	
							Capital Investment	O&M
RS IN CRORE								
corridors spread over Delhi.								
iii) Corridor improvement plan for Mehrauli Gurgaon Road (connecting Andheri Morh to Delhi-Haryana Border)	174	24	50	50	25	25	MCD	MCD
iv) Beautification of roads for Commonwealth Games	750	150	300	300	-	-	PWD	PWD
v) Flyover at Mukerba Chowk	195	50	100	45	-	-	PWD	PWD
vi) Grade Separator at Azadpur	154	34	60	60	-	-	PWD	PWD
vii) Three Flyovers between IIT & NH 8 on Outer Ring Road	247	47	100	100	-	-	PWD	PWD
viii) Flyover at Naraina	125	35	50	40	-	-	PWD	PWD
ix) Bridge over Neela Hauz (Aruna Asaf Ali Marg	47	17	20	10	-	-	PWD	PWD
x) Flyover at Mangolpuri Chowk on Outer Ring Road	31	11	10	10	-	-	PWD	PWD
xi) Behera Enclave underpass on Outer Ring Road	55	15	20	20	-	-	PWD	PWD
xii) Flyover at Nagloi on NH 10	78	18	30	30	-	-	PWD	PWD
xiii) ITO Chungi - 4 no.'s cloverleaves and underpass	74	24	25	25	-	-	PWD	PWD
xiv) RUB connecting road no. 58 and 64	32	12	10	10	-	-	PWD	PWD
xv) Grade Separator at Shastri Park	65	15	25	25	-	-	PWD	PWD
xvi) Flyover at Apsara border on G.T.Road	88.5	28.5	30	30	-	-	PWD	PWD
xvii) Grade Separator at intersection of Raja Ram Kohli Marg & Pusta Road	97	27	40	30	-	-	PWD	PWD
xviii) Grade separator at Shastri Park Pushta Road Intersection	83	23	30	30	-	-	PWD	PWD
xix) Flyover on Road no 56 (ISBT Anand Vihar) & NH 24 (Gazipur drain)	150	30	60	60	-	-	PWD	PWD
xx) ROB on Road No. 63 level crossing	34	34	-	-	-	-	PWD	PWD
xxi) UP link road clover leaf	200	50	75	75	-	-	PWD	PWD
xxii) ROB at G.T.Road near Shyam Lal College	85	25	30	30	-	-	PWD	PWD
xxiii) BSZ - DDU - I.P.Marg Flyover	100	20	40	40	-	-	PWD	PWD
Xxiv) Grade separator along Rani Jhansi Road between Baraf Khana Chowk and Bara Hindu Rao Chowk	178	28	50	50	25	25	MCD	MCD

Strategy/Project	Rs in Crore	2007-08	2008-09	2009-10	2010-11	2011-12	Agencies Responsible for	
							Capital Investment	O&M
RS IN CRORE								
xxv) ROB at Samaipur Badli Level Crossing on Auchandi Road	40	10	15	15	-	-	MCD	MCD
xxvi) Construction of flyovers/under bridges at various level crossing sites.	250	50	75	75	25	25	MCD	MCD
E. MANAGEMENT AND CREATION OF NEW PARKING AREA								
i) Construction of Multi-Level Parking in Delhi at 12 sites	100	10	20	20	25	25	MCD	MCD
ii) Parking management & Regulation at 10 prominent locations	15	10	5	-	-	-	MCD	MCD
iii) Construction of underground parking in residential areas	50	10	10	10	10	10	MCD	MCD
F. PROVIDE EQUITABLE USE OF SPACE ON ROAD AND PRIORITY TO PEDESTRIANS								
i) Strengthening and improvement of footpaths along major arterial roads	100	20	30	30	10	10	MCD	MCD
ii) Construction of foot over bridges/ subways at ten critical locations	10	5	5	-	-	-	MCD	MCD
iii) Modernisation of Street lighting	125	25	60	40	-	-	PWD	PWD
G. PREPARE SPECIAL INTEGRATED SCHEMES FOR MOVEMENT IN CP AND OLD CITY AREA								
i) Improvement Major intersections like Ajmeri Gate, Fountain Chowk, Kaudia Pal, Khari Baoli etc. at 15 locations	3	1	1	1	-	-	MCD	MCD
ii) Pedestrianisation of inner circle in Connaught Place including parking below inner circle	20	8	8	4	-	-	NDMC	NDMC
iii) Pedestrianisation (partial) Chowk Area with heritage considerations	10	2	2	4	2	-	MCD	MCD
iv) Provisions of subways at nine locations in outer circle of Connaught Place	18	5	5	8	-	-	NDMC	NDMC
v) Developing Underground Parking at Connaught Place, Super Bazar, Mayur bhawan, Shivaji Terminal as part of redevelopment of Connaught Place	50	-	5	10	20	15	NDMC	NDMC
vi) Corridor improvement of S.P Mukherjee Marg	75	20	30	25	-	-	MCD	MCD
vii) Traffic management plan for areas around proposed Civic Center near Minto Road	188	35	50	50	25	28	MCD	MCD
H. ENCOURAGE USE OF INTERMEDIATE PUBLIC TRANSPORT AND NON-MOTORISED PASSENGER TRANSPORT (Including cycles and cycle rickshaws)								

Strategy/Project	Rs in Crore	2007-08	2008-09	2009-10	2010-11	2011-12	Agencies Responsible for	
							Capital Investment	O&M
RS IN CRORE								
i) Provision of Cycle Tracks at Sub-Arterial & Local Level roads and streets new areas and urban extensions	15	5	5	5	-	-	MCD	MCD
ii) Road improvements for use of cycle rickshaw in Karol Bagh/Lajpat Nagar and Trans Yammuna Area	30	10	10	10	-	-	MCD	MCD
iii) Devpment of Cycle Tracks in along major transport corridor near industrial nodes at seven routes	100	10	20	20	30	20	MCD	MCD
I. CREATE AWARENESS AND ENFORCEMENT DRIVE								
i)Public awareness and enforcement drive	3	1	1	1	-	-	TRAFFIC POLICE	TRFFIC POLICE
ii)User Information System for transport systems	10	1	1	2	3	3	STA	STA
iii)Registration and Training of Transport Operators/drivers	3	1	1	1	-	-	STA	STA
TOTAL	13486.5	2885.5	3534	3986	1610	1471		

The total estimated O&M cost for transport related projects is Rs 3173 crore. The O&M borne by private operators is Rs 1218.5 Crore. The details of the O&M costs are presented in table below.

Strategy/Project	Total O&M Cost @ 10%	2007-08	2008-09	2009-10	2010-11	2011-12
		RS IN CRORE				
A. SAFE AND EFFICIENT PUBLIC TRANSPORT SYSTEM						
Government	692	0	65	130	223	274
Private	692	0	65	130	223	274
B. DEVELOPMENT OF PASSENGER AND GOODS TERMINALS BASED ON DIRECTIONAL NEEDS						
Government	12	0	1	3	4	5
Private	12	0	1	3	4	5
C. DEVELOP URBAN RELIEF ROADS AS ALTERNATIVE LINK ROADS						
Government	62.0	0	7.0	12.3	18.8	24.0
Private	432.1	0.0	42.9	89.2	136.7	163.4

D. FULL DEVELOPMENT OF ROW OF ROAD						
Government	991.7	0.0	83.1	216.1	340.6	351.9
Private	66.4	0.0	5.7	14.2	22.7	23.9
E. MANAGEMENT AND CREATION OF NEW PARKING AREA						
Government	16.0	0.0	1.5	3.3	4.8	6.5
Private	16.0	0.0	1.5	3.3	4.8	6.5
F. PROVIDE EQUITABLE USE OF SPACE ON ROAD AND PRIORITY TO PEDESTRIANS						
Government	63.5	0.0	5.0	14.5	21.5	22.5
G. PREPARE SPECIAL INTEGRATED SCHEMES FOR MOVEMENT IN CP AND OLD CITY AREA						
Government	83.8	0.0	7.1	17.2	27.4	32.1
H. ENCOURAGE USE OF INTERMEDIATE PUBLIC TRANSPORT AND NON-MOTORISED PASSENGER TRANSPORT (Including cycles and cycle rickshaws)						
Government	30.5	0.0	2.5	6.0	9.5	12.5
I. CREATE AWARENESS AND ENFORCEMENT DRIVE						
Government	3.2	0.0	0.3	0.6	1.0	1.3
TOTAL O&M	3172.6	0.0	288.6	642.0	1040.6	1201.6

19.5 STORM WATER DRAINAGE SYSTEM

PWD, MCD and Irrigation & Flood Control Department are the agencies responsible for construction, maintenance and improvement of drainage system in city. The drainage projects, which can resolve the present drawbacks, are presented below:

19.5.1 Project Summary

The projects identified under various strategies for improvement of city drainage system are (i) Comprehensive Study of Drainage System; (ii) Short term improvement measures and (iii) Revival of Major Drainage Network.

(i) COMPREHENSIVE STUDY OF DRAINAGE SYSTEM

To prepare a comprehensive drainage plan of the city, integration of total station & satellite imagery with 1m contour interval is required. The cost of preparation of comprehensive drainage plan is Rs 10 Crore.

(ii) SHORT TERM IMPROVEMENT MEASURES

The short term improvement measures involve desilting of drainage network; provision of pump houses in low lying areas with power back-up and provision of treatment plants at outfall drains.

(iii) REVIVAL OF MAJOR DRAINAGE NETWORK

The revival of major drains involves improvement and landscaping of- (A) Najafgarh Drain; Mungeshpur Drain & Palam Drain in Najafgarh basin; (B) Mungeshpur drain, Karari Suleman nagar Drain & Nangloi drain in Kanjhawala basin; (C) Bawana Escape drain, Drain no-6, Burari Check & Drain and Wazirpur complex drain in Alipur Basin; (D) Gokulpur Drain, Balbir Nagar Drain, GT road drain, Patparganj drain, Radheypuri Drain, Laxmi Nagar Drain, Vinod Nagar Drain and Shakarpur Drain in Shahdara Drainage Basin. The major drains in Mehrauli basin are Tuglakabad, Madanpur Khadar, Jaitpur and Chirag Delhi Drain. The Cost of revival and improvement of these drains is Rs 99 Crore in the first phase.

Strategy/Project	Cost in Rs Crore	2007-08	2008-09	2009-10	2010-11	2011-12	Agencies Responsible for	
							Capital Investment	O&M
RS IN CRORE								
A. COMPREHENSIVE STUDY OF DRAINAGE SYSTEM								
i) GIS based drainage mapping and planning	10	7	3	-	-	-	PWD	PWD
B. SHORT IMPROVEMENT MEASURES								
i) Remodeling of drains having outfall into Yamuna	42	13	17	8	4	-	MCD	MCD
ii) Provision of outfall treatment plants at outfall drains-15 Nos.	15	10	5	-	-	-	PWD	PWD
iii) Desilting of Drainage Network-2100km	20	10	10	-	-	-	PWD	PWD
iv) Provision of Pump houses in low lying areas with power backup	5	5	-	-	-	-	PWD	PWD
(v) Augmentation of storm water drainage	40	12	16	8	4	-	MCD	MCD
C. REVIVAL OF MAJOR DRAINAGE NETWORK								
i) Improvement and landscaping of Major drainage channel	54	24	30	-	-	-	PWD	PWD
ii) Design of Check dams and	20	10	10	-	-	-	PWD	PWD

Strategy/Project	Cost in Rs Crore	2007-08	2008-09	2009-10	2010-11	2011-12	Agencies Responsible for	
							Capital Investment	O&M
RS IN CRORE								
depressions for Ground Water Recharge								
iii) Pilot project on Sub wells to be developed under flyover for trapping rainwater-20 Flyovers	25	5	10	10	-	-	PWD	PWD
TOTAL	231	96	101	26	8	-		

The O&M cost due to the new investment is Rs. 37.6 Crore. Public Works Department (PWD) is the authority responsible for O&M of Drainage system.

Strategy/Project	Total O&M Cost @ 5%	2007-08	2008-09	2009-10	2010-11	2011-12
A. COMPREHENSIVE STUDY OF DRAINAGE SYSTEM	1.9	0.0	0.4	0.5	0.5	0.5
B. SHORT IMPROVEMENT MEASURES	19.2	0.0	2.5	4.9	5.7	6.1
C. REVIVAL OF MAJOR DRAINAGE NETWORK	16.5	0.0	2.0	4.5	5.0	5.0
TOTAL	37.6	0.0	4.9	9.9	11.2	11.6

19.6 SOLID WASTE MANAGEMENT

The MCD is the key agency in Delhi responsible for solid waste management --- including collection, transportation treatment and disposal. As mentioned earlier, the most important issue currently is to reduce the land requirement for disposal.

19.6.1 Summary of Strategies

Theses are presented below, in order of priority:

- i. Maximising effective treatment processes for different waste streams, in order to minimize land required for land fill sites
- ii. Safeguarding the environment by ensuring well developed and sufficient land fill sites for disposal, and increasing efficiency of service delivery

(i) Maximising effective treatment processes for different waste streams, in order to minimize land required for land fill sites:

Projects include:

(a) Renewal of Existing Compost Plants

The existing composting facilities may be re-engineered, revitalized and capacity augmented with technical inputs and marketing support to process 1075 tons per day (Table below), . It is proposed to do this within a year.

Name / site of existing composting facility	Existing Capacity (TPD)	Year commissioned	Proposed capacity (TPD)	Re-engineering and revival inputs required
Okhla (MCD) - closed at present	150	1981	200	Almost complete re-engineering and revival required with new plant, machinery and equipment
Okhla (NDMC)	200	1985	250	Major re-engineering and revival required with new plant, machinery and equipment, raising the level and re-surfacing of the compost yard
Bhalsawa (Private sector owned and operated)	500	1999	500	Additional 3 hectare land required, almost complete renewal of the compost pad area, augmentation of plant and machinery
Tikri Khurd	125	2001	125	Almost complete renewal of the compost pad area, augmentation of plant and machinery

(b) Proposed New Processing Facilities - for Compost, RDF and C&D Waste

New facilities of waste processing including composting, and other processing technologies to the maximum possible extent should be installed (for example, dry combustible waste can be processed as refuse derived fuel) Proposals for these are mentioned in the table below

Facility	Location	Capacity (TPD)	Land requirement (hectares)
Construction and demolition debris	Burari	500	40.4
Construction and demolition debris	Ghumman Hera	500	40.0
Compost plant	Ghumman Hera	500	8.0
Compost plant	Narela Bawana	1000	15.0
Waste to energy	Okhla	700	6.0
Waste to energy	Timarpur	700	4.0

(ii) Safeguarding the environment by ensuring well developed and sufficient land fill sites for disposal:

Projects include

- (a) **Closure, Capping and Landscaping of Existing Landfills:** This will be accompanied with a plan for disposal of waste during the intermittent period before new sanitary landfills are commissioned and actually operated. It is proposed to undertake this in the next 2 years. The inputs required are elaborated in the table below

Name / site of existing landfill	Area (hectare)	Year started	Waste received (TPD)	Inputs required
Okhla	16.20	1994	1200	Waste received from MCD and Cantonment Board; re-grading, closure, capping, LFG extraction and collection, peripheral drain, internal road, landscaping etc.
Ghazipur	29.16	1984	2000	Waste received from MCD and NDMC; re-grading, closure, capping, LFG extraction and collection, curtain wall for chicken and fish markets, peripheral drain, internal road, landscaping etc.
Bhalsawa	21.06	1993	2200	Waste received from MCD; re-grading, closure, capping, LFG extraction and collection, peripheral drain, internal road, landscaping etc.

(b) **Proposed Sanitary Landfill Sites**

Development of sanitary landfills at identified sites (Jaitpur, Narela Bawana and Bhatti Mines - in that order). It is proposed to make the first one operational within 2 years.

(c) **Other Projects**

Massive and sustained campaign encouraging people to consciously reduce waste and segregate at source to facilitate waste processing

Sustained training for all the municipal staff as well as staff of any private operator involved in waste management for their capacity building and planning capability

Strategy/Project	Cost in Rs Crore	2007-08	2008-09	2009-10	2010-11	2011-12	Agencies Responsible for

							Capital Invest ment	O&M
RS IN CRORE								
A. RENEWAL OF EXISITING COMPOST PLANTS								
(i) Revival & Reengineering of Compost Plants at Okhla with New Plant; Machinery and Equipment	14	14	-	-	-	-	Govt /Pvt.	Pvt.
(ii) Bhalsawa & Tikri Khurd Compost Plant- Additional 3 hectare land required and complete renewal of the compost pad area and augmentation of Plant and Machinery	9	9	-	-	-	-	Govt /Pvt.	Pvt.
B. CLOUSURE, CAPPING AND LANDSCAPING OF EXISTING LANDFILLS								
(i) Re-grading, Closure, Capping, LFG extraction and Collection, Peripheral drain, internal roads, landscaping etc-Okhla, Ghazipur and Bhalsawa	109	55	54	-	-	-	Pvt.	Pvt.
C. PROPOSED PROCESSING FACILITIES								
(i) 2000 TPD C&D Waste processing plant at Ghuman Hera and Burari - increase capacity	25	10	15	-	-	-	Pvt.	Pvt.
(ii) Compost Plant at Ghuman Hera, Narela-Bawana	43	20	23	-	-	-	Pvt.	Pvt.
(iii) Waste to Energy plant at Okhla and Timarpur	100	25	25	50	-	-	Pvt.	Pvt.
D. PROPOSED SANITARY LANDFILL SITES								
(i) Development of Landfill sites at Jaitpur, Narela-Bawana and Bhatti Mines-138 Hectare	272	75	60	50	50	37	Pvt.	Pvt.
E. OTHER PROJECTS								
(i) Mechanical Street Sweeper-10 Nos	7	7	-	-	-	-	MCD	MCD
(ii) IEC awareness programme	5	1	1	1	1	1	MCD	MCD
(iii) Training of Staff and Workers (52000) as part of Training of Trainers programme	5	3	2	-	-	-	MCD	MCD
(iv) Pilot Projects for Ragpickers in Old City area; North Campus, East Delhi; West Delhi	3	2	1	-	-	-	MCD	MCD

Strategy/Project	Cost in Rs Crore	2007-08	2008-09	2009-10	2010-11	2011-12	Agencies Responsible for	
							Capital Investment	O&M
RS IN CRORE								
and South Delhi-17 Nos								
(v) Study for Quantification and Development of management model for E-waste in City	1	1	-	-	-	-	MCD	MCD
(vi) Pilot project for processing & disposal of e-waste	0	-	-	-	-	-		
TOTAL	593	222	181	101	51	38		

The O&M cost associated with the new investment is Rs. 50.8 Crore. Around 90 per cent of O&M will be borne by the private developer.

Strategy/Project	Total O&M Cost @ 3%	2007-08	2008-09	2009-10	2010-11	2011-12
A. RENEWAL OF EXISTING COMPOST PLANTS						
i) Private	2.8	0.0	0.7	0.7	0.7	0.7
B. CLOSURE, CAPPING AND LANDSCAPING OF EXISTING LANDFILLS						
i) Private	11.6	0.0	1.7	3.3	3.3	3.3
C. PROPOSED PROCESSING FACILITIES FOR C&D WASTE						
i) Private	15.2	0.0	1.7	3.5	5.0	5.0
D. PROPOSED SANITARY LANDFILL SITES						
i) Private	19.0	0.0	2.3	4.1	5.6	7.1
E. OTHER PROJECTS						
i) Private	2.2	0.0	0.4	0.6	0.6	0.6
TOTAL	50.8	0.0	6.8	12.2	15.2	16.7

19.7 HERITAGE CONSERVATION AND MANAGEMENT

The agencies involved in heritage conservation and management in Delhi include the ASI, State Department of Archaeology, Delhi Development Authority (DDA), MCD, NDMC, DUAC Heritage Conservation Committee, Delhi Waqf Board and NGO's such as INTACH.

19.7.1 Summary of Strategies

Four main strategies have been identified

- i. Development of a Heritage Resource Information Management System for integration of heritage concerns within the development plans - Master Plan, Zonal, Sub-Zonal, Area Level and assisting implementation and monitoring processes,
- ii. Capacity Building & Provision of Technical Support for Conservation & Heritage Management
- iii. Area Level Conservation, revitalisation and Regeneration strategies which include supportive and linked sub-strategies for adaptive reuse, heritage sensitive infrastructure up-gradation, provision of essential community facilities, housing rehabilitation, commercial areas, guidelines for new development in historic areas, strengthening of linkages with surrounding contemporary development
- iv. Strategies for heritage tourism, enhanced visitor experience and revenue generation, and awareness generation activities.

(i) Development of an Information Management System

The aim is to facilitate integration of heritage management within development processes for the city and to provide a knowledge base for all agencies to ensure coordinated action on heritage.

- (a) Development and maintenance of a GIS based Cultural Heritage Information System integrated with overall land information management system has been proposed..
- (b) Capacity Building of employees of the Departments involved in Heritage Conservation and Management: in order to enable them to use the GIS based information system effectively.
- (c) Provision for salvage archaeology, recording remains excavated during development and removal of artifacts to museums

(ii) Capacity Building & Provision of Technical Support for Conservation & Heritage Management

Projects include:

- (a) **Establishment of a Self-Sustaining Technical Support Conservation Centre:** This will involve Capacity building and provision of technical assistance by trained, qualified heritage professionals to owners of heritage buildings as well as buildings located within designated heritage zones. Moreover, establishment and maintenance of a laboratory for testing of historic materials, appropriate contemporary materials & monitoring performance of improved techniques and conservation interventions.
- (b) **Ensuring Technical Support for Conservation required for participatory conservation at the area level.** This will be undertaken

through training of skilled masons and craftsmen required for implementation of conservation projects.

(iii) Prioritization of Identified Heritage Zones, Precincts and Area Regeneration Programmes

Projects include

- (a) Development and implementation of a comprehensive regeneration and heritage management plan for the Central Bazaar spine of Mehrauli (similar to the successful Main Street Programme) - Adham Khans Tomb to Sohan Burj.
 - (b) Community based Heritage Management Plans for the Dargahs/ traditional Pilgrim destinations of Delhi namely (i) Qutub Sahib; (ii) Hazrat Nizamuddin; (iii) Chiragh Delhi; (iv) Ardhchini; (v) Saidulajaib and (v) Qadam Sharif.
 - (c) Upgradation and regeneration of open space structure along with urban landscape of the walled city, focusing on areas such as Chandni Chowk - Ballimaran, Maliwara, Dharampur; Kashmeri Gate Chowk & Nineteenth century bazaar Hauz Qazi etc. Also proposed is the framing of guidelines for integrated conservation management of the area between Red Fort, Jama Masjid, Chandni Chowk and Darya Ganj
 - (d) Area regeneration scheme for chowks and interface between historic components of the city with the Metro Stations, focusing on the Kashmiri Gate area. This would also include drawing up of a Heritage Management Plan and guidelines for development of the area around the Old Delhi Railway Station
 - (e) Restoration of Town Hall and Preparation of a comprehensive heritage management plan including selection of appropriate adaptive reuses
 - (f) Adaptive Reuse of Buildings or Precincts: Adaptive reuse of derelict 'havelis', heritage buildings, evacuee properties of heritage significance in Shahjehanabad and 'shikargahs'(Eg: Shri Marwari Aushadhalaya, 2766 Chatta Pratap Singh, Kinari Bazaar, Haveli Ballimaran 3014, near Chota Baradari, Jaunti Shikargah, Jaunti Village, Old St Stephens College Dara Shikoh's library, Dharamshala Rai Sahib Lala Lakshmi Narain, Ramnath Inderdevi Dharamshala, 2764 Chatta Pratap Singh, Kinari Bazaar, Shri Marwari Public Library etc.)
 - (g) Rehabilitation of historic and traditional housing stock within designated heritage zones and precincts - initially in the Walled City (Ballimaran, Maliwara, Dharampura, Churiwalan, Kinari Bazaar) and Urban villages.
- (iv) Reintegrating Previously Overlooked Heritage Components into Thematic Heritage Tourism Circuits**
- (a) In order to reintegrate overlooked heritage components, tourism circuits linking the following areas are to be developed:

- Linking Humayuns Tomb with Safdarjangs Tomb via Lodhi Gardens, Karbala, Tomb of Najaf Khan, Humayuns Tomb - Hazrat Nizamuddin-Sundar Nursery -Purana Quila & Khair-ul-Manzil- Feroz Shah Kotla
 - Daryaganj - Red Fort; Red fort-Chandni Chowk - Shahjehanabad - Fatehpuri Masjid;
 - Tughlaquabad -Chiragh Delhi - Khirki Masjid - Jahanpanah Vijay Mandal Begumpuri - Hauz Khas - Mehrauli.

- (b) Revival and Revitalisation of historic water Systems and buildings including Baolis, Embankments, Sluiceways, Talaos, Catchment areas, Hauz, Sarais and Kos Minars of Delhi
- (c) Awareness generation materials and educational tools to enable children to form cognitive maps of Historic Delhi - linked with curriculum of Delhi schools
- (d) Adaptive reuse of historic buildings as Heritage Hotel at Kashmiri Gate

Strategy/Project	Project Cost in Rs	2007-08	2008-09	2009-10	2010-11	2011-12	Agencies Responsible for	
							Cap. Inv.	O&M
Rs in Crore								
A) DEVELOPMENT OF AN INFORMATION MANAGEMENT SYSTEM								
(i) Development and maintenance of a GIS based Cultural Heritage Information System integrated with overall land information management system.	20	5	5	10	0	0	DDA, MCD	DDA, NIC AND TPD
(ii) Capacity Building of employees of the Departments involved in Heritage Conservation and Management	1	0.2	0.2	0.2	0.2	0.2	Institute of Archaeology, ASI and SPA; Institute of Heritage Management Delhi Government	MCD
(iii) Provision for recording excavated remains and removal of artifacts to museums	2	0.5	0.5	1	0	0	GNCTD Dept of Archaeology	GNCTD
B) ESTABLISHMENT OF 2 SELF-SUSTAINING TECHNICAL SUPPORT CONSERVATION CENTRES								
(i) Capacity building and provision of technical assistance by trained, qualified heritage professionals to owners of heritage buildings as	10	3	4	3	0	0	MCD - TPD HERITAGE SOCIETY, GNCTD-STATE	DDA, MCD

Strategy/Project	Project Cost in Rs	2007-08	2008-09	2009-10	2010-11	2011-12	Agencies Responsible for	
							Cap. Invnt.	O&M
Rs in Crore								
well as buildings located within designated heritage zones- Mehrauli and Shahjehanabad							ARCHEOLOGY	
(ii) Ensuring Technical Support for Conservation required for participatory conservation at the area level	1	0.2	0.2	0.2	0.2	0.2	Town Planning Dept. of MCD-MCD Heritage Society, GNCTD Dept. of Archaeology, Institute of Heritage Management Delhi Government & SPA. PWD & CPWD	TPD MCD-, GNCTD Dept. of Archaeology, INTACH & SPA.
C) PRIORITISATION OF IDENTIFIED HERITAGE ZONES AND PRECINCTS AND AREA REGENERATION PROGRAMMES								
(i) Development and implementation of a comprehensive regeneration and heritage management plan- Central Bazaar spine of Mehrauli; Adham Khans Tomb to Sohan Burj (Development of heritage area)	17	8	6	3	-	-	DDA, MCD-Heritage Cell, RWA's, INTACH	MCD
(ii) Community based Heritage Management Plans for the Dargahs/ traditional Pilgrim destinations of Delhi (Development of heritage area)	37	2	7	12	8	8	SA,ASI, MCD, WAQF BOARD, COOPERATIVE	SA,ASI, MCD, WAQF BOARD, COOPERATIVE
(iii) Upgradation of open space structure along with urban landscape of the walled city (Regeneration of old inner city area)	25	3	10	10	1	1	Community Representatives, MCD, Horticulture, Roads and	MCD Town Planning Dept. and PWD

Strategy/Project	Project Cost in Rs	2007-08	2008-09	2009-10	2010-11	2011-12	Agencies Responsible for	
							Cap. Invnt.	O&M
Rs in Crore								
							Transportation, PWD	
(iv) Area regeneration scheme for chowks and interface between historic components of the city with the Metro Stations (Regeneration of old inner city area).	20	3	8	8	1	-	GNCTD Department of Archaeology, ASI, Waqf Board, Local stakeholders and community representatives, MCD, DMRC	MCD and Delhi Waqf Board GNCTD Dept of Archaeology, ASI,
(v) Heritage Management Plan and guidelines for development of the area around the Old Delhi Railway Station	2	2	-	-	-	-	Ministry of Railways, GNCTD Department of Archaeology, Waqf Board, Local stakeholders and traders/hotel associations, community representatives, MCD,	Heritage Division, Ministry of Railways, MCD and Delhi Waqf Board GNCTD Dept of Archaeology,
(vi) a. Guidelines for integrated conservation management of the area between Red Fort, Jama Masjid, Chandni Chowk and Darya Ganj.	2	2	-	-	-	-	DDA Urban Heritage Foundation and DDA Heritage Cell, GNCTD Department of Archaeology, Waqf Board,	DDA SPA, MCD and Delhi Waqf Board ASI

Strategy/Project	Project Cost in Rs	2007-08	2008-09	2009-10	2010-11	2011-12	Agencies Responsible for	
							Cap. Invnt.	O&M
Rs in Crore								
(vi) b. Revitalization of surroundings of Jama Masjid)	234	-	50	184	-	-	GNCTD Department of Archaeology, MCD Town Planning Department - Heritage Cell/ Heritage Society , DTTDC	GNCTD Dept of Archaeology, MCD
(vii) Restoration of Town Hall and Preparation of a comprehensive heritage management plan including selection of appropriate adaptive reuses	6	4	2	-	-	-	GNCTD Dept of Archaeology, MCD Town Planning Department - Heritage Cell/ Heritage Society , DTTDC	GNCTD Dept of Archaeology, MCD
(viii) Rehabilitation of historic and traditional housing stock within designated heritage zones and precincts - initially in the Walled City (Ballimaran, Maliwara, Dharampura, Churiwalan, Kinari Bazaar) and Urban villages (Regeneration of old inner city area)	45	3	10	10	11	11	DDA Urban Heritage Foundation, MCD Town Planning Department- Heritage Cell/ Heritage Society	MCD
(ix) Regeneration of inner (Old) city area	40	5	15	10	10	-	GNCTD Department of Archaeology, Local stakeholders and community organizations representatives, MCD	MCD Heritage Cell and Society , Local stakeholders and community organizations represent

Strategy/Project	Project Cost in Rs	2007-08	2008-09	2009-10	2010-11	2011-12	Agencies Responsible for	
							Cap. Invnt.	O&M
Rs in Crore								
							Heritage Cell and Society	ntative s
D) ADAPTIVE REUSE OF BUILDINGS OR PRECINCTS								
(i) Adaptive reuse of derelict 'havelis', heritage buildings, evacuee properties of heritage significance in Shahjehanabad and 'shikargahs' in rural villages for provision of essential community facilities	35	5	13	7	5	5	GNCTD Department of Archaeology, Waqf Board, Local stakeholders and community organizations representatives, MCD Town Planning Dept., Heritage Cell and Society, and Educational institutions -SPA	MCD Heritage Cell and Society, Delhi Waqf Board GNCTD Dept of Archaeology,
(ii) Retrofitting of services and rationalisation of space utilisation in heritage buildings currently used for community purposes	8	3	5	-	-	-	Ministry of Railways, GNCTD Department of Archaeology, Waqf Board, Local stakeholders and traders/hotel associations, community representatives, MCD,	Heritage Division, Ministry of Railways, MCD and Delhi Waqf Board GNCTD Dept of Archaeology,

Strategy/Project	Project Cost in Rs	2007-08	2008-09	2009-10	2010-11	2011-12	Agencies Responsible for	
							Cap. Invnt.	O&M
Rs in Crore								
D. REINTEGRATING PREVIOUSLY OVERLOOKED HERITAGE COMPONENTS INTO THEMATIC HERITAGE TOURISM CIRCUITS								
(i) Development of thematic heritage tourism circuits as an integrated network with signage systems, heritage site linked interpretation centres/site museums, tourist facilities, low speed circuit transport for tourists - battery buses, bicycle tracks, integrated with the Metro network	60	15	15	10	10	10	DTTDC, DTC, DMRC with MCD Heritage Cell-Heritage Society, DDA, ASI, GNCTD Dept of Archaeology,	DTTDC, Hotel & Tourism Associations
(ii) Revival and Revitalisation of historic water Systems and buildings including Baolis, Embankments, Sluiceways, Talaos, Catchment areas, Hauz, Sarais and Kos Minars of Delhi	12	5	3	4	-	-	MCD, DDA, INTACH, SPA, DJB, Forest Department, Department of Irrigation and Flood Control, DTTDC	Maintenance costs could be fully borne by the private sector under PPP-SIAM or ACMA
(iii) Awareness generation materials and educational tools to enable children to form cognitive maps of Historic Delhi - linked with curriculum of Delhi schools	3	3	-	-	-	-	DTTDC & Department of Education	Department of Education
(iv) Adaptive Reuse of Heritage Hotel at Kashmirigate	2	2	0	0	0	0	Private	Private
TOTAL	582	74	154	272	47	35		

The estimated O&M cost of heritage projects is Rs 51.1 Crore. The detail breakup of the cost is given in table below:

Strategy/Project	O&M Cost in Rs @3%	2007-08	2008-09	2009-10	2010-11	2011-12
A) DEVELOPMENT OF AN INFORMATION MANAGEMENT SYSTEM	1.3	0	0.1	0.2	0.5	0.5

B) ESTABLISHMENT OF A SELF-SUSTAINING TECHNICAL SUPPORT CONSERVATION CENTRE	1.0	0	0.1	0.2	0.3	0.3
C) PRIORITISATION OF IDENTIFIED HERITAGE ZONES AND PRECINCTS AND AREA REGENERATION PROGRAMMES						
(i) Government	24.4	0	0.8	3.6	9.6	10.4
(ii) Private	15.5	0	0.1	1.2	4.5	9.7
D. ADAPTIVE REUSE OF BUILDING OR PRECINCT	3.2	0	0.2	0.8	1.0	1.1
E) REINTEGRATING PREVIOUSLY OVERLOOKED HERITAGE COMPONENTS INTO THEMATIC HERITAGE TOURISM CIRCUITS						
(i) Government	2.1	0	0.2	0.5	0.6	0.8
(ii) Private	3.7	0	0.5	0.8	1.1	1.3
TOTAL	51.2	0	2.1	7.3	17.6	24.1

19.8 URBAN ENVIRONMENT

The main agencies responsible for environmental management in Delhi are the Delhi Pollution Control Committee (DPCC), Central Pollution Control Board (CPCB).

19.8.1 Summary of Strategies

Projects have been proposed under the following strategies:

- i. Outreach and capacity building
- ii. Enhancement of forests and green cover
- iii. Mitigation of air, water and noise pollution

(i) Outreach and capacity Building

- (a) The creation of awareness on noise pollution regulations; training in best practices for the reduction in air and water pollution; & techniques of water conservation; these would cover citizens, community groups and RWAs.

(ii) Enhancement of Forests and Green Cover

Projects proposed include:

- (a) South Delhi Greenway Project: aiming at the rejuvenation of selected drains in South Delhi through the development of a continuous stretch of green along their course.

- (b) Detailed study of the biodiversity and ecology of the city: To include a complete inventorisation of all the species of flora and fauna. This would provide a base document for afforestation measures including tree planting, distribution of saplings, conservation of soil and moisture; water harvesting etc; as well as for on-going initiatives such as the conservation of the Asola Wildlife Sanctuary.
- (c) GIS based Database of natural resources of the city including forest and vegetation cover, land use pattern, water bodies and others: This is a necessary tool for the effective management of environmental resources in the city.

(iii) Mitigation of Air, Water and Noise Pollution

Projects proposed include:

- (a) **Reduction in Air Pollution:** The reduction in air pollution measures are multi agency and would be linked to automobiles, power plants, domestic and commercial diesel generating sets, open burning, industrial operations and others. Indirectly it would be responsibility of the automobile manufacturers, oil companies, generator manufacturers and others to incorporate designs and specifications which would reduce air pollution. Some of the major strategies for the reduction in the air pollution have been outlined earlier (Refer Strategies for Development). In addition to these, a project for the augmentation of the continuous air pollution monitoring system is also proposed. This would include installation of more number of air quality monitoring stations in the city.
- (b) **Water Pollution:** YAP II has focussed on preparation of master plans and DPRs for non point sources of pollution, including the dhobhi ghats, crematoria, dairy farms, slaughter houses and slum rehabilitation. Further augmentation of the plans and schemes under YAP II , addressing the Dhobi Ghats, crematoria and disposal of dairy waste have been proposed.

YAP II includes the preparation of a master plan for the water bodies in Delhi in order to decentralize waste water collection and treatment; and reuse systems to intercept polluting wastewater flow in water bodies. It is proposed to augment this master plan with a DPR to study the water quality, reclamation, catchment areas and the drainage of these water bodies under this programme. This study could also assess the potential of recharge of the ground water table through the rejuvenation of the water bodies. It is also proposed to implement the outputs of the DPR.

Augmentation of ground water monitoring stations has also been proposed.

- (c) **Noise Pollution:** The overall goal is to minimize noise pollution in the city. The enforcement of relevant regulation is critical, as well as awareness of the same among citizens. Awareness raising for the same has been proposed under the project proposed for outreach and training.

- (d) **Environmental Health:** Awareness drives amongst the community to adopt measures to keep their surroundings clean so that the incidence of diseases may be controlled will also be included in the outreach and training programmes.

Strategy/Project	Cost in Rs	2007-08	2008-09	2009-10	2010-11	2011-12	Agencies Responsible for	
							Cap. Invnt.	O&M
RS IN CRORE								
A Outreach Capacity Building								
i) Create awareness for water conservation and the techniques, training programmes for the RWAs, display & promotional material & schools, hospitals, change institutions.	16	8	8	-	-	-	DJB & NGO	-
B. Enhancement of Forest & Green Cover								
i) South Delhi Greenway Project	227	40	70	67	50	-	Private	SPV
ii) Detailed study of the biodiversity and ecology of the city. To include a complete inventorisatation of all the species of flora and fauna	0.7	0.7	-	-	-	-	Forest Department	Forest Department
iii) Protection of Delhi ridge including restoration of ecology and for demarcation of bunds.	5	2	2	1	-	-	Forest Department	Forest Department
iv) GIS based Database of natural resources of the city including forest and vegetation cover, land use pattern, water bodies and others	2	1	1	-	-	-	Forest Department	Forest Department
C. Mitigation of Air, Water and Noise Pollution								
i) Installation of 9 web linked continuous air quality monitoring stations	15	8	7	-	-	-	CPCB & DPCC	Pvt.
ii) Action projects of the Master Plan	50	25	25	-	-	-	MCD	Pvt.

Strategy/Project	Cost in Rs	2007-08	2008-09	2009-10	2010-11	2011-12	Agencies Responsible for	
							Cap. Invnt.	O&M
RS IN CRORE								
for Dhobighats Sudhar Yojna under the YAP II. Creating alternate better infrastructure for the dhobis, treatment facility for the waste water and drainage in to the river								
iii) Action projects for the collection, transport and treatment of the dairy waste under the YAP II. This would include installation of treatment plants, methane generation plants and drainage system for the dairy waste	50	25	25	-	-	-	SPV & Pvt	SPV
iv) Upgradation of the crematoria in the city to make them environmentally better (air pollution treatment equipment). Master plans under the YAP II to be implemented	10	5	5	-	-	-	MCD	MCD
v) River Front Development including walkways, recreation facilities, kiosks, water sports etc	50	20	20	10	-	-	SPV	SPV
vi) Installation of 2 water quality stations for monitoring and gauging.	5	2	3	-	-	-	SPV	SPV
TOTAL	430.7	136.7	166	78	50	-		

The envisaged O&M cost of the environment projects is Rs 39.6 Crore. The details of this are given in table below.

Strategy/Project	Total O&M Cost @ 3%	2007-08	2008-09	2009-10	2010-11	2011-12
	RS IN CRORE					
B. Enhancement of Forest & Green Cover						
Private	16.6	0.0	1.2	3.3	5.3	6.8
Government	0.8	0.0	0.1	0.2	0.3	0.2
C. Mitigation of Air, Water and Noise Pollution						
Private	17.4	0.0	2.4	4.8	5.1	5.1
Government	4.8	0.0	0.6	1.2	1.5	1.5
Total	39.6	0.0	4.3	9.5	12.1	13.6

19.9 URBAN GOVERNANCE

GIS and MIS based database system for land and building records are essential in evaluation of the land situation in the city; and the assessment of property tax. This will form a common base document for the reference of all agencies involved in urban management. Moreover, effective governance will be substantially improved through interdepartmental information sharing and departmental capacity building.

Strategy/Project	Cost in Rs	2007-08	2008-09	2009-10	2010-11	2011-12	Agencies Responsible for	
							Cap. Invt.	O&M
Rs in Crore								
(i) Development of GIS/MIS based database system for Land and Building Records	5.0	2.5	2.5	-	-	-	Revenue Deptt	Revenue Deptt
(ii) Development of E-governance for various services of ULBs	1.0	0.5	0.5	-	-	-	UDD	UDD
(iii) Capacity building of the MCD, NDMC and Parastatal departments	3.0	1.0	1.0	1.0	-	-	UDD	UDD
TOTAL	9.00	4	4	1	-	-		

The O&M cost for maintenance of governance infrastructure is Rs 0.2 Crores.

19.10 OTHER DEVELOPMENT PROJECTS

While projects for land and growth management do not form part of the core focus of the JNNURM programme, this aspect remains integral to the smooth functioning and sustainable development of the city. Delhi, in particular, has

suffered in this respect, due to the peculiar institutional arrangement for growth management in the city. While this is addressed in a further chapter, a few initiatives are proposed below, aimed at easing the growth requirements of the city, and facilitating overall management.

- (a) **Decentralization of trade fair from the core city:** The location of the existing trade fair grounds, which was once peripheral with respect to the rest of the city, is now fairly central. Circulation in this area is severely affected due to the tremendous traffic generated when the annual international trade fair is held. It is proposed to relocate the trade fair grounds to more peripheral locations in the city, having good public transport connectivity through the metro.
- (b) **Redevelopment of low density government housing estates in the core city:** Large areas of land in prime areas of the city are occupied by low density government estates. These include Dev Nagar and the DIZ Area in the north; Lodi Colony, Vinay Nagar (Sarojini Nagar, Laxmi Bai Nagar, Kidwai Nagar), Sewa Nagar, R.K. Puram, Saket - MB road developments in the south, among others. Land use these areas has now become inefficient, due to the development in the surrounding areas. Moreover the ownership of these lands by public agencies represents a huge opportunity to meet the growth requirements of the city. Several cities, including New York, Shanghai, and more recently, London, have undertaken a systematic redevelopment of areas in order to meet contemporary growth needs. In view of the limited implementation of development proposals in the past, this is now an urgent requirement of the city, and can be undertaken with private sector participation in order to defray costs (after a clear structure for the same has been developed) A study, to initiate this process has been recommended. The annual O&M cost of these projects is Rs 0.2 crore.

Strategy/Project	Cost in Rs	2007-08	2008-09	2009-10	2010-11	2011-12	Agencies Responsible for	
							Cap. Inv.	O&M
Rs in Crore								
(i) Development of Trade Centres in North-East and West of City - 2 Nos	15	2	5	8	-	-	UDD	UDD
(ii) Study for Identification and Development options in Government Land in Core City area-5 Nos	5	3	2	-	-	-	UDD	UDD
TOTAL	20	5	7	8	-	-		

SUB-MISSION-2: BASIC SERVICES AND POOR

19.11 URBAN SLUMS AND POOR

The existing agency responsible for redevelopment and relocation of slums in the city is the Slum Department, under the MCD.

19.11.1 Summary of Strategies

Projects have been proposed under the following strategies:

- i. In-situ redevelopment at existing slum and JJ cluster sites, with units offered on a long term lease hold basis (with option for purchase), through a cooperative, trust, NGO etc
 - ii. Development of serviced plots, to be upgraded incrementally, at out-lying locations (relocation), for outright purchase. Connectivity to work centers to be assured.
 - iii. Development of night shelters in the city as well as at outlying locations single beds, single rooms with shared facilities for long term stay managed by trusts, or NGO's with government support
 - iv. Infrastructure up-gradation in 44 resettlement colonies, and existing relocation sites
 - v. Provision of housing (on-going) for the urban poor
 - vi. In-situ re-construction of Katras.
- (i) **In-situ redevelopment at existing slum and JJ cluster sites**, with units offered on a long term lease hold basis (with option for purchase), through a cooperative, trust, NGO etc

Group shelter schemes (G+1 and G+2) are proposed. These will offer a range of rooms and flats, and accommodate (on redevelopment) more households in comparatively smaller area and better sanitation facilities. Such schemes can be promoted by the GNCTD, through Ngo's, or trusts; or private sector participation (Private Developers).

Private Developers or Government may obtain funding from national housing finance institutions which provide low cost funds leaving enough margins for the developing agency to meet administrative and running costs. (Refer section on Institutional Reforms - Slum Housing Corporation)

Dwelling units will be provided on hire-purchase basis and the title would be transferred on payment of all installments by the beneficiaries.

The cost of the housing units will be made repayable over 15 years (maximum) carrying interests at the maximum 2 per cent over the rate at which the funds were acquired from the national financing institutions. Assuming an interest rate of about 8 %, , the EMI (equated monthly installment) on a hire purchase amount of Rs 50,000 would be approx. Rs. 400 per month.

There are 728 JJ clusters spread over an area of 650 hectare. It has been proposed to develop G+1housing in 603 JJ clusters and G+2 housing in 125 JJ

clusters (Appendix 19-1). Some of the land at the improvement sites would be released for high value uses, such as commercial development along arterial roads of the scheme. The surpluses realized would be used to cross- subsidise costs of housing. Moreover, the development of 10 transit camps (2 in North; 3 in East; 3 South West and 2 in West) on 10 hectare land to accommodate households during redevelopment has also been proposed.

(ii) Development of serviced plots, to be upgraded incrementally, at out-lying locations (relocation)

Households which chose, and have the capacity to, own plots and construct units, can opt for relocation at outlying locations with assured connectivity to work centers. This aims to provide households with a means to improve their living standards through a process in which people themselves participate. Provision of infrastructure may be basic to keep costs low, with the option to upgrade incrementally. The projects identified under this head are (a) relocation of 5000 dwelling units from slum areas of city; (b) Development of site for 10720 dwelling units at Kanjhawala, Ghogha and Bapraula. The plot sizes are 27sqm; (c) Development of plot at Savda Ghevda accommodating around 20,000JJs; (d) Development of 10 transit camps (2 in North; 3 in East; 3 South West and 2 in West) on 10 hectare land to accommodate households during redevelopment.

(iii) Development of night shelters in the city and at outlying locations: It is proposed to develop night shelters in Walled City area, near industrial complexes, and near the relocation sites in outlying areas, in order to provide long stay facilities for low income workers --- beds or single rooms with shared facilities. Five facilities are proposed. Exact location and holding capacity would have to be determined.

(iv) Infrastructure up-gradation in 44 resettlement colonies, and 11 existing relocation sites

This includes

(a) Infrastructure upgradation of 11 existing relocation sites: This involves developing street lighting system, construction of community toilets, community halls, child care centers etc.

(b) Infrastructure upgradation in 44 resettlement colonies

(c) Revival Plan for Community Work Centers: Development of the community work centers at various locations in the city (with approximate area of 22.33m² per work space) spread over an area of 22383m². The project cost is Rs 29.23 crore.

(v) Provision of housing (on-going) for the urban poor: This extent of supply is estimated to be required to cater to the demand for low income housing until 2012. This demand will have to be met in a timely manner in order to prevent the development of new slum pockets in the city. The projects identified are

(a) Multi-Storeyed Tenements at Rohini-1770 DUs;

(b) Multi-Storeyed Tenements at Dwarka-2550 DUs;

- (c) Construction of 12560 EWS houses at village Siraspur and Sector-26, Rohini;
- (d) Worker Housing with cost effective technologies at Narela, Bhorgarh and Bawana;
- (e) Housing for Urban Poor through development of EWS Housing and
- (f) Development of Night Shelters in Walled City area and Industrial Complexes-5 Nos.
- (vi) **In-situ re-construction of Katras:** The in-situ reconstruction of 25 government owned Katras (out of 319 katras) in the walled city area has been proposed The cost for reconstruction is Rs 70 Crore.

Strategy / Project	PROJECT COST	2007-08	2008-09	2009-10	2010-11	2011-12	Agencies Responsible for	
							Capital Investment	O&M
Rs in Crore								
A) IN-SITU REDEVELOPMENT OF SLUMS								
(i) In situ redevelopment of Slums-providing water supply, road network, drainage and Housing etc.	783	150	200	200	100	133	Slum Department/ Private Developers/ Beneficiary	Private Developer/ Beneficiary
(i)a Upgradation of Street Lighting system	300	100	50	75	75	-	Slum Department	Community
(i)b Construction of Community Toilets-1200 Nos.	17	10	7	-	-	-	MCD	NGO
(v) Development of Sites for Transit Camps-10 Nos	80	80	-	-	-	-	MCD	MCD
B) DEVELOPMENT OF SERVICED PLOTS (RELOCATION)								
(i) Relocation of 5000 JJ Units	30	10	10	10	-	-	MCD	Cooperative
(ii) Development of Relocation Sites at Kanjhawala, Ghogha and Bapraula	217	80	55	55	27	-	DSIDC	Cooperative
(iii) Development of plots at Savda	250	100	100	50	-	-	MCD	Cooperative

Strategy / Project	PROJEC T COST	2007- 08	2008- 09	2009- 10	2010- 11	2011- 12	Agencies Responsible for	
							Capital Investment	O&M
Rs in Crore								
Gevra-20000JJ								
C: DEVELOPMENT OF NIGHT SHELTERS								
(vi) Development of Night Shelters in Walled City area Industrial Complexes and other sites -5 Nos	15	15	-	-	-	-	MCD	Cooper ative
D INFRASTRUCTURE UPGRADATION (RESETTLEMENT COLONIES AND RESETTLEMENT SITES)								
(i) Infrastructure upgradation in 44 resettlement colonies	85	20	30	35	0	0	Slum Department/ Pvt. Developer	Pvt. Develo per
(ii) Infrastructure upgradation of 11 existing relocation sites	239	50	100	50	39	0	DSIDC	Cooper ative
(iii) Revival Plan for Community Work Centres (22383 m ²)	30	15	15	-	-	-	DSIDC	DSIDC
(iv) Civic Amenities like Community Halls	200	75	50	50	25		MCD	MCD
E. PROVISION OF HOUSING FOR THE URBAN POOR								
(i) Multi- Storeyed Tenements at Rohini-1770 DUs	50	25	25	-	-	-	Slum Deptt	Cooper ative
(ii) Multi- Storeyed Tenements at Dwarka-2550 DUs	73	30	25	18	-	-	Slum Deptt	Cooper ative
(iii) Construction of 13840 EWS houses at village Siraspur and Sector-26, Rohini	400	100	170	60	30	40	DDA	Cooper ative
(iv) Worker Housing with cost effective technologies at Narela, Bhorgarh and Bawana	101	50	51	-	-	-	DSIDC	Cooper ative
(v) Housing for Urban Poor through development of	750	100	100	250	150	150	Slum Department	Cooper ative

Strategy / Project	PROJEC T COST	2007- 08	2008- 09	2009- 10	2010- 11	2011- 12	Agencies Responsible for	
							Capital Investment	O&M
Rs in Crore								
EWS Housing								
(vi) Rehabilitation & Resettlement of slum dwellers at Narela Phase-II & Rohini	710	200	200	150	100	60	DDA	DDA
F: IN-SITU RE-CONSTRUCTION OF KATRAS								
(i) Reconstruction of Katras in old city areas	70	20	20	20	10	-	Slum Department/ Pvt. Developer	Pvt. Develo per
TOTAL COST in Rs Crore	4400	1230	1208	1023	574	383		

The O&M cost due to the new investment is estimated at Rs. 557.3 Crore. This will be borne by various agencies, including the Slum Department, DSIDC, Private Developers, Cooperatives etc.

Strategy/Project	O&M COST @ 5%	2007-08	2008-09	2009-10	2010-11	2011-12
A) PROVISION OF BASIC INFRASTRUCTURE & GROUP HOUSING						
Private Developer/Beneficiary	85.0	0.0	7.5	17.5	27.5	32.5
Community	38.8	0.0	5.0	7.5	11.3	15.0
NGO	3.2	0.0	0.5	0.9	0.9	0.9
MCD	16.0	0.0	4.0	4.0	4.0	4.0
B. DEVELOPMENT OF SERVICE PLOTS						
Cooperative	75.7	0.0	9.5	17.8	23.5	24.9
C. DEVELOPMENT OF NIGHT SHELTERS						
MCD	3.2	0.0	0.8	0.8	0.8	0.8
D. INFRASTRUCTURE UPGRADATION						
Private Developer	12.1	0.0	1.0	2.5	4.3	4.3

Cooperative	32.0	0.0	2.5	7.5	10.0	12.0
DSIDC	5.3	0.0	0.8	1.5	1.5	1.5
MCD	28.9	0.0	3.8	6.3	8.8	10.0
E. PROVISION OF HOUSING						
Cooperative	73.4	0.0	7.8	18.8	22.7	24.2
DSIDC	17.8	0.0	2.5	5.1	5.1	5.1
Slum Department	67.5	0.0	5.0	10.0	22.5	30.0
DDA	90.0	0.0	10.0	20.0	27.5	32.5
F. IN-SITU RECONSTRUCTION						
Pvt. Developer	9.5	0.0	1.0	2.0	3.0	3.5
TOTAL COST	558.4	0.0	61.7	122.2	173.3	201.2

19.12 SUMMARY OF PROJECT INVESTMENT PLAN

The shares of major sectors as shown in figure are water supply (7%); sewerage (11.5%); road network & transportation (56%); and urban poor and slums (18%) respectively.

Funding Pattern: The projects for investment support in Delhi are eligible for Central assistance under the following conditions:

- In case any JNNURM project is also approved as externally aided project (EAP), the EAP funds can be passed through as Accelerated Central Assistance to the State Government as funds contributed by States, ULBs, FIs; and JNNURM funds can be used as Govt contribution.
- If necessary, internal resources of implementing agencies, MP or MLA Local Area Development (LAD) Funds and MLA LAD funds may be substituted for institutional finance or State share.

a. Projects under appraisal by Sub-Mission Directorate for Urban Infrastructure and Governance

Strategy/Project	Project Cost	2007-08	2008-09	2009-10	2010-11	2011-12	CG	SG	ULB/ FI
								35	15
RS IN CRORE									
SUB-MISSION-1: URBAN INFRASTRUCTURE AND GOVERNANCE									

Water Supply	1632	535	500	330	167	100	571	245	816
Sewerage	2755	605	675	605	495	375	964	413	1378
Road Network and Transportation System	13487	2886	3534	3986	1610	1471	4720	2023	6743
Storm Water Drainage	231	96	101	26	8	0	81	35	116
Solid Waste Management	593	222	181	101	51	38	208	89	297
Heritage and Conservation	582	74	154	272	46	35	204	87	291
City Environment	431	137	166	78	50		151	65	215
Urban Governance	9	4	4	1	0	0	3	1	5
Other Projects	20	5	7	8	0	0	7	3	10
Street Lighting	25	5	5	5	5	5	9	4	13
SUB-TOTAL	19740	4563	5322	5407	2427	2019	6909	2961	9870

In the case of urban transport projects, the standard pattern of assistance of 35 per cent will not apply. The Cabinet Committee on Economic Affairs (CCEA), while considering any such project proposal, may decide the level of equity and/or loan to be provided by the central government.

This funding pattern is proposed for public financed projects. In case of projects incorporating public-private partnerships, the Central government's share shall not exceed the amounts prescribed.

b. Projects under appraisal by the Sub-Mission Directorate for Basic Services to the Urban Poor

Housing should not be provided free to the beneficiaries by the State Government. A minimum of 12% beneficiary contribution with bank loan should be stipulated (10 per cent in case of SC/ST/BC/OBC/PH and other weaker sections).

Strategy/Project	Project Cost	2007-08	2008-09	2009-10	2010-11	2011-12	CG	SG	ULB/FI
							35	15	50
RS IN CRORE									
SUB-MISSION-2: BASIC SERVICES AND POOR									
Urban Poor, Slum and Housing	4400	1230	1208	1023	556	383	2200	-	2200
SUB-TOTAL	4400	1230	1208	1023	556	383	2200	0	2200
TOTAL	24140	5793	6530	6430	2983	2402	9109	2961	12070