

## **CHAPTER - 4**

### **IRRIGATION & FLOOD CONTROL**

Irrigation & Flood Control Department is entrusted with the responsibility of providing irrigation facilities to the farmers of rural villages of Delhi through Effluent received from Sewage Treatment Outlets as well as through a Network of State tube-wells available in the rural areas, maintaining the embankments constructed on both sides of river Yamuna in the jurisdiction of Govt. of NCT of Delhi, maintenance of 63 nos. of major storm water drains e.g. Supplementary drain, Najafgarh Drain, Trunk Drain No. I & Trunk Drain No. II, Gazipur drain, Pankha Road Drain, Palam Drain, Nasirpur Drain, Mungeshpur Drain, Nangloi Drain etc., including construction of bridges over these drains. Besides this, Irrigation & Flood Control Department is also equipped with machinery such as draglines, bulldozers, dredger and heavy duty electrical and diesel pump sets which are utilized for removal of drainage congestion during monsoon from low lying areas.

#### **MINOR IRRIGATION**

Irrigation in Delhi mainly depends upon ground water and partly upon surface water. Irrigation from the ground water is provided through shallow cavity tube-wells, whereas surface irrigation by way of utilizing treated effluent water in North, South and West Districts from the existing sewage treatment Outlets located at Burari (Coronation Pillar), Okhla and Keshopur. Western Yamuna canal system under the control of Haryana Government is also being utilized for irrigation purposes in North-West District.

#### **FLOOD CONTROL**

The National Capital Territory of Delhi has experienced floods in the past, mainly from Sahibi Nadi (Passing through Najafgarh Drain in Delhi) and Yamuna River. Local Drainage system has also been found inadequate to meet the requirement when there is heavy rain fall in the catchments of these drains or during inflow of flood water from adjoining states through Yamuna River in Delhi. Several flood mitigating measures like raising and strengthening of Yamuna marginal embankments, remodeling and lining of various drains have been taken up over the years to avoid repetition of flood.

Revised Outlay & Expenditure of Annual Outlay 2015-16, Approved Outlay & Revised outlay of Annual Outlay 2016-17 and Outlay for Budget Allocation 2017-18 for Minor Irrigation & Flood Control Sector are as under:

[₹ in crore]

Sector	Annual Outlay 2015-16		Annual Outlay 2016-17		Budget Allocation 2017-18
	Revised Outlay	Expenditure	Approved Outlay	Revised Outlay	
I & FC	52.00	48.55	63.00	60.00	90.00

Total Outlay of ₹ 307 crore kept in B.E. 2017-18 on Irrigation and Flood Control. This includes revenue budget of ₹ 218 crore and capital budget of ₹ 89 crore. An amount of ₹ 90 crore is kept for implementation of various schemes, programmes and projects under Irrigation and Flood Control sector.

### **MINOR IRRIGATION:**

#### **Ground Water Recharge & Water Conservation**

Budget Allocation 2017-18 : ₹ 19.00 Lakh (Capital)

i) **Water conservation, Recharge of ground water and Creation of water detention basin etc.**

Due to uncontrolled exploitation of ground water resources and inadequate ground water re-charge measure, the ground water in Delhi has been continuously depleting over the last several years. The groundwater situation in Mehrauli and Najafgarh Block and Alipur Block are critical. In order to reverse this trend, the Dept. has taken-up number of water harvesting schemes such as creating pondage in the bed of N.G. Drain, making recharging pits/trenches in Mungeshpur Drain, Bawana Escape, Mundella Bund etc.

ii) **Construction of artificial recharge well in the existing ponds in villages in NCT of Delhi.**

- a) Construction of artificial recharge well in the bed of Sultanpur Drain, Bajitpur Drain Bawana Drain and Madanpur Drain.

Estimated cost of ₹ 37.00 lakh

60% work has been completed an expenditure amounting to ₹ 7.83 lakh has been incurred so far.

### **FLOOD CONTROL**

**1. EMBANKMENT SCHEMES INCLUDING ACCESS ROADS & BRIDGES, ANTI EROSION WORKS AND BEAUTIFICATION WORKS**

Budget Allocation 2017-18 : ₹ 6100.00 Lakh (Capital)

**Embankment schemes**

The embankment schemes envisage construction, strengthening and beautifications of embankments of river/drains under the jurisdiction of I&FC Deptt.

**1.1 REMODELING / IMPROVEMENT OF EXISTING DRAINS**

Remodeling/improvement of existing drains are being carried out to accommodate additional discharge generated on account of new habitation/township/industrial park as these drains are passing through rural areas which was not developed and now under development/likely to be developed. The schemes under this sub-head are as under:-

**1.1.1 Construction of Sump and pump house with regulator near RD 400M of Escape Drain No. 1.**

Estimated Cost of ₹ 857.00 lakh

The Karawal Nagar area in Trans Yamuna is low lying and always flooded during monsoon season as the escape drain in which Bihari pur drain, Bund Drain catering to the area falls has been constructed by reversing its slope. Due to flat gradient of these drains, the detention period of storm water is 6 to 8 hours in these colonies which are a cause of serious concern. To solve this problem, it has been decided to construct sump well at escape drain near outfall point with TD No. 1 and thereafter, it will be pumped into the TD No. 1 to check the back flow of water and speedy disposal. 30% work has been completed an expenditure amounting to ₹ 61.61 lakh has been incurred so far.

**1.1.2 Improvement of Trunk Drain No.I from RD 6150M to RD 5300M.**

Estimated Cost of ₹ 992.00 lakh

Width of Trunk Drain No. I in these reach is 20m and there is no space along the side of the drains to deploy machine & stack the desilted material. Presently the drain is being desilted manually by constructing longitudinal earthen bundies for diverting the flow of drain resulting in reduction of carrying capacity of drain. Keeping in view the above facts the earthen bundies is being replaced by RCC divide wall for diverting the flow and expeditious desilting.

1.1.3 Remodeling of Molarbund Drain from RD 615M to 1335M.

Estimated Cost of ₹ 262.66 lakh

The existing section of the drain is not sufficient to accommodate the additional discharge generated due to unauthorized colony developed in the area resulted in water logging in the area. There is no outfall, the water is pumped during the rainy season to Agra canal. A proposal has been framed to remodel the section of this drain including widening of inspection path for maintenance purpose in future. 12% work has been completed.

1.1.4 Remodeling of Sarita Vihar Drain from RD 0M to 1250M.

Estimated cost ₹ 336.00 lakh

This drain was constructed to discharge the storm water from sarita vihar as well as unauthorized colonies developed along this drain. The existing section of the drain is not sufficient to accommodate the additional discharge generated by these colonies. It has been decided to remodel this drain by lining etc., so that water logging problem of the area may be solved. The work is in progress. 5% work has been completed an expenditure amounting to ₹ 9.77 lakh has been incurred so far

1.1.5 Remodeling of Ali Drain from RD 0M to RD 2780M.

Estimated Cost of ₹ 863.00 lakh

Ali drain was constructed to drain out the waste water of Badarpur Thermal Plant. Due to urbanization of the area, numbers of unauthorized colony has come up along this drain resulted in increase in discharge manifold. The right bank as well as side slopes of drain are in dilapidated condition and require remodeling and construction of wall. For the safety of the residents and to check the garbage dumping in the drain, since, the bank is also being used as a road. The work is in progress. 25% work has been completed an expenditure amounting to ₹ 94.88 lakh has been incurred so far

#### 1.1.6 Construction of RCC box type drain along Devli Bund.

Estimated Cost of ₹ 894.00 lakh

Along Devli Bund numbers of unauthorized colonies have developed. The Govt. of NCT of Delhi, has already provided basic amenities in the colonies, such as street pavement & side drains, however, there is no outfall drains to drain off the storm water discharge of these colonies. As the drainage system is inadequate to cater the discharge the RCC box type drain along Devli bund is required. This drain will discharge its water into MCD drain. The work is in progress. 4% work has been completed an expenditure amounting to ₹ 0.66 lakh has been incurred so far.

#### 1.1.7 Construction of two out fall structures at RD 21900M & 22060M on left bank in U/S of Sultan pur Majra Bridge and D/S of Rohtak Railway Bridge of Supplementary Drain.

Estimated Cost of ₹ 65.18 lakh

Two internal drains constructed by MCD in Sultanpuri and Mangol puri area are without outfall structure resulted in erosion of side slops and bank of the drain. It has been decided that in outfall has to be constructed to check the drainage congestions and through way fare for inspection. 40% work has been completed and an expenditure of ₹ 20.22 lakh has been incurred so far. 80% work has been completed an expenditure amounting to ₹ 20.27 lakh has been incurred so far.

## **New Schemes**

- 1.1.8 Remodeling of side drain on both side of Ratia Marg from boundary of Wild Life Sanctuary to M.B. Road.

Estimated Cost of ₹ 963.00 lakh

The existing side drains on both side of the road originate from wild life sanctuary and terminate at MB road is dilapidated condition and require remodeling as the additional discharge has been increased many-fold. It has been proposed that the both side drain should be remodeled as a RCC drains covered with perforated slab with manholes and suitable interval in a length of 4400m and in a length of 600m NP-3 class RCC pipe of 900mm dia shall be laid as there is a paucity of space in this reach. A/A & E/S awaited.

## **1.2 ACCESS ROADS & BRIDGES**

- 1.2.1 Construction of two lane RCC bridges at RD 2117m (Sarangpur) on N.G. Drain.

Estimated Cost of ₹ 719.00 lakh

92% work has been completed and expenditure of ₹ 614.58 Lakh.

- 1.2.2 Construction of RCC double lane bridge at RD 23800m, U/S of existing foot Bridge, across Supplementary Drain..

Estimated Cost of ₹ 316.50.00 lakh

95% work has been completed.

- 1.2.3 Demolition of existing pipe culver and reconstruction of RCC culverts at RD 610m, 1866m, 2910, 3510, 3700m of Banker link drain.

Estimated Cost of ₹ 134.07 lakh

56% Work completed an expenditure of ₹ 61.22 lakh has been incurred so far.

- 1.2.4 Construction of Double lane R.C.C. Bridge on up stream of existing Lagat Pur bridge at RD 1670m of Supplementary drain.

Estimated Cost of ₹ 422.10 lakh

49% work completed and an expenditure of ₹ 128.97 lakh has been incurred so far.

1.2.5 Construction of RCC retaining wall between RD 21450m to RD 21660m of Supplementary Drain.

Estimated Cost of ₹ 465.61 lakh

93% work completed and an expenditure of ₹ 347.33 lakh has been incurred so far.

1.2.6 Demolition and Reconstruction of bridges at RD 670m, 890m, 7285m and 8690m at Bawana Drain.

Estimated Cost of ₹ 256.00 lakh

95% Work has been completed an expenditure of ₹ 225.83 lakh has been incurred so far.

1.2.7 Dismantling and reconstruction of two lane bridge at RD 21000m of Supplementary Drain.

Estimated Cost of ₹ 427.40 lakh

Work yet to be taken up.

1.2.8 Construction of two lane RCC skew bridge across Pankha road drain at RD 3015m at C-I Janakpuri Red light for improvement of T-Junction at Pankha Road Janakpuri, New Delhi.

Estimated Cost of ₹ 175.00 lakh

98% work completed and an expenditure of ₹ 173.07 lakh has been incurred so far.

1.2.9 Construction of two lane R.C.C Bridge at near Kendriya Vidhyalya at RD 2870m of T.D. No. 1.

Estimated Cost of ₹ 226.57 lakh

There is an Institutional area (DIET) in on eastern side of Trunk Drain No.1 between RD 1940m to RD 3130m having only one connectivity through a Foot bridge at RD2870m, being used as a pedestrian bridge by the people working in DIET. The people visiting the institutional area with Light vehicular traffic also used this foot bridge instead of using existing two bridges at RD 1940m (Karkari more) and RD 3130m (Karkardooma Court bridge) across the Drain and create congestion on Swami Dayanand Marg in front of Foot bridge at RD 2870m. In order avoid this congestion and any untoward incident, construction

of two lane RCC Bridge has been decided. 75% work completed and an expenditure of ₹ 133.12 lakh has been incurred so far.

1.2.10 Construction of two lane R.C.C bridge in between RD 3960m and RD 3970m of T.D. No. I near Bhikam Singh Colony.

Estimated Cost of ₹ 255.42 lakh

There are two foot bridges in existence at RD 3960m and RD 3970m across T.D. No.1 and local residents of Bhikam Singh Colony use these bridges as pedestrian and traffic of Bhikam Singh Colony uses 60 foota road to reach on Swami Dayanand Marg. Due to which in peak hours a jam problem is being faced by the traffic using Swami Dayanand Marg. In order to provide direct connectivity of Bhikam Singh Colony to Swami Dayanand Marg, construction of a two lane bridge is required. The proposed bridge will reduce this distance and also reduces the traffic congestion at the crossing of 60 foot a road and Swami Dayanand Marg. 70% work completed and an expenditure of ₹ 90.21 lakh has been incurred so far

1.2.11 Construction of Double Lane RCC bridge on Sarita Vihar Drain at RD 900 mt. & 1200mtr.

Estimated Cost of ₹ 134.00 lakh

Work in progress

1.2.12 Widening of two lane bridge at RD 8750m TD No. 1 at Babbarpur.

Estimated Cost of ₹ 230.00 Lakh.

40% work completed and an expenditure of ₹ 66.51 lakh has been incurred so far.

1.2.13 Improvement of inspection path on left bank of Mungeshpur drain between RD 36789 M to RD 26550m of Mungeshpur drain.

Estimated Cost of ₹ 250.00 lakh

Work yet to be start

1.2.14 Providing and laying bricks on edge flooring from RD 4150 M to RD 7850 M of KSN drain

Estimated Cost of ₹ 169.00 lakh



75% work completed and an expenditure of ₹ 99.11 lakh has been incurred so far.

1.2.15 Raising of existing service road and remodelling of side drain on cite side from RD 900m to 3800m along L.F. Bund.

Estimated Cost of ₹ 787.00 lakh

83% work completed and an expenditure of ₹ 414.16 lakh has been incurred so far.

1.2.16 Demolishing & reconstruction of two lane RCC bridge at RD 1260m of New Drain.

Estimated Cost of ₹ 301.98 lakh

20% work completed and an expenditure of ₹ 47.89 lakh has been incurred so far.

1.2.17 Resurfacing of inspection road of Right marginal embankment from RD 0m to 10500m.

Estimated Cost of ₹ 475.00 lakh

Work yet to be taken up

1.2.18 Construction of bridges at RD 9250m, RD 9730m, RD 9980m including resurfacing of service road along Trunk Drain No.1.

Estimated Cost of ₹ 872.00 lakh

32% work completed and an expenditure of ₹ 158.73 lakh has been incurred so far.

1.2.19 Construction of slip Road bridge 4.25m wide U/S existing bridge at RD 3600 M at Trunk Drain No. 2.

Estimated Cost of ₹ 188.00 Lakh

30% work completed and an expenditure of ₹ 27.25 lakh has been incurred so far.

1.2.20 Demolishing of pipe culverts and reconstruction of RCC box culverts at RD 675m, RD 770m & RD 1407m on Ghogha Drain.

Estimated Cost of ₹ 99.00 Lakh

25% Work completed an expenditure of ₹ 2.09 lakh has been incurred so far.

1.2.21 Re-construction of 1 no. Four Lane Bridge at RD 12230m, and construction of 2 no. Double Lane Bridge at RD 12687m and RD 11110 m of Trunk Drain No.1.

Estimated Cost of ₹ 832.68 Lakh

71% work completed and an expenditure of ₹ 59.18 lakh has been incurred so far.

1.2.22 Demolishing and reconstruction of two lane RCC bridge at RD 2850m (Mahendra Park) across Pankha road drain.

Estimated Cost of ₹ 103.57.00 Lakh

30% Work completed an expenditure of ₹ 34.06 lakh has been incurred so far.

1.2.23 Resurfacing of Inspection path/ approach Road on Right Bank of Mungeshpur drain RD 23000 M to RD 15850 M.

Estimated Cost of ₹ 309.51 Lakh

Work yet to be taken up

1.2.24 Resurfacing & Widening of existing inspection path on right bank of Bajitpur drain from RD 3018 M to RD 110 M.

Estimated Cost of ₹ 262.00 Lakh

Work in progress

1.2.25 Improvement of existing damaged drain by reconstructing of RCC drain from RD 3220 M to RD 3760 M of Jatkhore link drain in Distt. North.

Estimated Cost of ₹ 102.00 Lakh

66% work completed and an expenditure of ₹ 49.43 lakh has been incurred so far.

1.2.26 Demolishing/reconstruction of 8 Nos. existing pipe culverts with RCC box at RD 230m, 380m, 470m, 640m, 870m, 970m, 1665m & 4110m on KheraKhurd drain.

Estimated Cost of ₹ 102.00 Lakh

Under planning

1.2.27 Demolition and construction of 1 no. Four Lane Bridge at RD 1700m, and 2 no. Single Lane Bridge at RD 600m and RD 1600m of Karawal Nagar Drain.

Estimated Cost of ₹ 632.00 Lakh

20% work completed and an expenditure of ₹ 76.21 lakh has been incurred so far.

1.2.28 Demolishing of Existing Culvert and Reconstruction of Double Lane RCC Bridge at RD 5010 M on Khera Khurd Link Drain.

Estimated Cost of ₹ 97.00 Lakh

Work in progress

1.2.29 Demolishing & Reconstruction of bridge across Bawana Escape at RD14190m.

Estimated Cost of ₹ 402.00 Lakh

3% work completed and an expenditure of ₹ 4.71 lakh has been incurred so far.

1.2.30 Restoration of inspection road and strengthening of Bawana Escape from RD 19000m to RD 19500m.

Estimated Cost of ₹ 176.00 Lakh

96% work completed and an expenditure of ₹ 102.01 lakh has been incurred so far.

1.2.31 Construction of inspection path and boundary wall on Right Bank of Khera Kalan drain from Railway Crossing to Kherakhurd drain.

Estimated Cost of ₹ 156.00 Lakh

82% work completed and an expenditure of ₹ 78.51 lakh has been incurred so far.

1.2.32 Demolition and reconstruction of existing bridge at RD 4400m on T.D.No.I near Swarn cinema.

Estimated Cost of ₹ 201.00 Lakh

Work in progress

1.2.33 Demolition and Re-construction of bridge at RD 5800m of Trunk Drain No.I.

Estimated Cost of ₹ 295.00 Lakh

Under Planning

1.2.34 Providing & laying Pitching on city side slope of N.G. Drain on left bank from nose point RD-55904m to Timarpur Bridge RD-56704m Bridge.

Estimated Cost of ₹ 62.00 Lakh

Under Planning

1.2.35 Construction of double lane RCC bridge at RD 19310m of Supplementary Drain.

Estimated Cost of ₹ 439.10 Lakh

Work yet to be start

- 1.2.36 Demolishing of single lane bridge and reconstruction of single lane RCC bridge at RD 27941 M and RD 26550 M of Mungeshpur drain.

Estimated Cost of ₹ 106.69 Lakh

Work yet to be start

- 1.2.37 Construction of inspection path on right bank of Najafgarh drain from RD14414m to 16100m (Badusarai Bridge to Haryana Border Line) in N.G. Block.

Estimated Cost of ₹ 92.00 Lakh

99 % work completed.

**New Schemes A/A & E/S awaited after clearance from TAC**

- 1.2.38 Construction of four lane RCC bridge at upstream of RD 20180m (existing Dhoolsiras Bridge), Dhoolsiras on Najafgarh Drain.

Estimated Cost of ₹ 1969.00 Lakh

A/A & E/S awaited

- 1.2.39 Construction of Six-lane RCC bridge on downstream of existing bridge on Chaawla Najafgarh road.

Estimated Cost of ₹ 3726.00 Lakh

A/A & E/S awaited

- 1.2.40 Construction of four lane RCC bridge upstream of RD 11960m (existing Jhatikra Bridge),on Najafgarh Drain.

Estimated Cost of ₹ 947.00 Lakh

A/A & E/S awaited

- 1.2.41 Construction of four lane RCC bridge at upstream of RD 14468m (existing Badusarai Bridge),on Najafgarh Drain.

Estimated Cost of ₹ 2195.00 Lakh

A/A & E/S awaited

- 1.2.42 Construction of additional RCC double lane Bridge across N.G. Drain downstream of existing Ranhola Bridge at RD. 34350m.

Estimated Cost of ₹ 917.00 Lakh

A/A & E/S awaited.

- 1.2.43 Construction of additional RCC double lane bridge across Supplementary Drain D/S of existing Ranhola Bridge at RDI 30850m.

Estimated Cost of ₹ 439.00 Lakh

A/A & E/S awaited

- 1.2.44 Construction of additional RCC double lane bridge across N.G. Drain downstream of existing Nilothi Bridge at RD. 37250m.

Estimated Cost of ₹ 917.00 Lakh

A/A & E/S awaited

- 1.2.45 Construction of RCC double lane bridge across Supplementary Drain D/S of existing bridge at RD 28080m.

Estimated Cost of ₹ 405.00 Lakh

A/A & E/S awaited

- 1.2.46 Demolition and reconstruction of existing R.C.C. culvert at RD 5925m on Mundela Darin in Najafgarh block connecting village Paprawat to Pindwalankalan village.

Estimated Cost of ₹ 102.00 Lakh

A/A & E/S awaited

- 1.2.47 Construction of RCC Bridge at RD. 15m, 422m, 2110m and 2435m across Pankha Road drain.

Estimated Cost of ₹ 897.00 Lakh

A/A & E/S awaited.

- 1.2.48 Demolition and existing two lane RCC bridge and construction of new three lane RCC bridge at Bhikam Singh colony, T.D.No.I.

Estimated Cost of ₹ 623.00 Lakh

A/A & E/S awaited

- 1.2.49 Construction of two lane bridge at RD 7550m of Trunk Drain No.1.

Estimated Cost of ₹ 192.00 Lakh

A/A & E/S awaited

- 1.2.50 Construction of single lane R.C.C. bridge at R.D. 6430m of Trunk Drain No. 1  
Estimated Cost of ₹ 192.00 Lakh  
A/A & E/S awaited
- 1.2.51 Widening of RCC foot bridge at RD 6480m of Trunk Drain No. 1.  
Estimated Cost of ₹ 338.00 Lakh  
A/A & E/S awaited
- 1.2.52 Construction of Single Lane RCC Bridge at RD 10400m and double lane bridge at RD 11500m across Trunk Drain No. 1.  
Estimated Cost of ₹ 365.00 Lakh  
A/A & E/S awaited
- 1.2.53 Construction of Single Lane RCC Bridge near RD 450m of Karawal Nagar Drain.  
Estimated Cost of ₹ 106.00 Lakh  
A/A & E/S awaited
- 1.2.54 Demolishing of 3 nos. existing pipe culverts and reconstruction of RCC box culverts at RD 1475m, 1875m & 2100m on Bawana Escape Drain.  
Estimated Cost of ₹ 144.00 Lakh  
A/A & E/S awaited
- 1.2.55 Construction of RCC bridge at Rd 18415m of Bawana Escape.  
Estimated Cost of ₹ 305.00 Lakh  
A/A & E/S awaited
- 1.2.56 Construction of additional double lane RCC bridge D/S of existing Badli Bridge at RD 9960m of Supplementary drain.  
Estimated Cost of ₹ 422.00 Lakh  
A/A & E/S awaited
- 1.2.57 Construction of two lane RCC road bridge at RD 15300m of Supplementary Drain.  
Estimated Cost of ₹ 416.00 Lakh  
A/A & E/S awaited
- 1.2.58 Widening of existing Rithala Bridge by Single lane on both sides at RD 16436m of Supplementary Drain.  
Estimated Cost of ₹ 510.00 Lakh  
A/A & E/S awaited

1.2.59 Re-surfacing of L.F. Bund road from R.D. 0 m to R.D. 5750 m in Trans Yamuna area.

Estimated Cost of ₹ 602.00 Lakh

A/A & E/S awaited

1.2.60 Construction of wet land system based on SWAB technology including recharge pit on left bank of bawana escape drain between RD 9700 to 9970m to reduce the pollutant and silt load from Ghogha drain.

Estimated Cost of ₹ 182.00 Lakh

### **1.3 Anti Erosion Works in River Yamuna**

To protect the embankments on both the sides of river Yamuna effected on account of heavy discharge from Tajiawala head works during the monsoon the existing river training works has been effected due to change in course of river Yamuna, hence, to channelizing the flow the river Yamuna, it has become imperative to strengthen the damage river training structures by erecting ballie screening and constructing bed bars etc. The following works will be taken up in the next financial year i.e. 2016-17 for execution are as under:-

1.3.1 Restoration / strengthening of nose portion of Shank No. 7, 16, 17 at RD. 3650, 6000, 6300, of RME.

Estimated Cost of ₹ 235.00 lakh

### **1.4 Protection of Government Land.**

Construction of drains with proper embankments and space for movement, land had been acquired by Irrigation & Flood Control Department for construction of a large number of major and minor drains. As such it has become essential to protect the Government land belonging to Irrigation & Flood Control Department from encroachment by suitable measures viz. constructing walls, fencing along the boundaries of drains wherever required and feasible.

1.4.1 Construction of boundary wall between RD 4150m to RD 6090m of KSN Drain.

Estimated Cost of ₹ 172.90 lakh

Under Planning

1.4.2 Construction of Boundary wall on left side of NG drain from Goela Outfall to Kakraula village bridge.

Estimated Cost of ₹ 240.00 lakh

18% work completed and an expenditure of ₹ 16.86 lakh has been incurred so far.

1.4.3 Raising of existing boundary wall along L/B of Supplementary drain from RD 12418m to RD 13800m

Estimated Cost of ₹ 126.00 lakh

Under Planning

1.4.4 Construction of boundary wall on country side along the land boundary from RD 10500 to RD 18360 of RME to protect the Govt. land from unauthorized construction of neary area.

Estimated Cost of ₹ 584.00 lakh

Under Planning

1.4.5 Construction of boundary wall along the road on the left bank of Supplementary Drain from Vikaspuri bridge (RD 28080m) to MID Aquaduct (RD 26060m)

Estimated Cost of ₹ 127.21 lakh

Work yet to be start

1.4.6 Construction of Boundary wall on right bank/ left bank between RD 10700m to RD 11270m/RD 103330m to RD 10700m respectively at Trunk Drain No.

Estimated Cost of ₹ 401.00 lakh

71 % work completed and an expenditure of ₹ 108.33 lakh has been incurred so far.

1.4.7 Demolishing of existing R.R masonry wall and replacing with R.C.C. wall on left side bank of Escape drain no. 2.

Estimated Cost of ₹ 156.00 lakh

71% work completed and an expenditure of ₹ 46.51 lakh has been incurred so far.

1.4.8 Construction of boundary wall along both sides of bank of Bawana Escape from RD 13560m to RD 15570m & 18260m to 19000 (left bank/Right Bank).

Estimated Cost of ₹ 368.00 lakh



99% work completed and an expenditure of ₹ 319.93 lakh has been incurred so far.

- 1.4.9 Construction of boundary wall on left bank of T.D.No.I between RD 0m to RD 1940m.

Estimated Cost of ₹ 155.00 lakh

Under Planning

- 1.4.10 Construction of boundary wall on both side along the land boundary of drain No.6 from RD 5000 M to RD 1725 M.

Estimated Cost of ₹ 503.00 lakh

Work yet to be start

- 1.4.11 Construction of boundary wall on both side along the land boundary of drain No. 6 from RD 12425m to RD 7780m to protect the Govt. land from unauthorized construction in nearby area.

Estimated Cost of ₹ 754.00 lakh

Work yet to be start

- 1.4.12 Construction of boundary wall on country side along the land boundary from RD 0 M to RD 10500 M of RME.

Estimated Cost of ₹ 874.00 lakh

Work yet to be start

- 1.4.13 Construction of Boundary wall on both banks of Bijwasan Drain from RD 0m to RD 900m.

Estimated Cost of ₹ 279.09 lakh

72% work completed and an expenditure of ₹ 87.95 lakh has been incurred so far.

- 1.4.14 Widening & strengthening of inspection road at right bank of Saleempur Minor irrigation channel from RD 0 m to 3000 m.

Estimated cost of ₹ 291.00 lakh

Under Planning

- 1.4.15 Construction of brick masonry wall for protection of land at Saleempur Minor irrigation channel from RD 0 m to RD 3000 m.

Estimated cost of ₹ 216.00 lakh

Under Planning

1.4.16 Construction of boundary wall on land boundary from RD. 37190m to RD. 38990m i.e Nilothi Bridge to Chander Vihar Bridge on right bank of N.G Drain, along road No. 236 (PWD road).

Estimated Cost of ₹ 104.00 lakh

45% work completed and an expenditure of ₹ 0.53 lakh has been incurred so far.

1.4.17 Construction of inspection path on the left bank of NG drain from RD 47390m to RD 48200m.

Estimated Cost of ₹ 264.00 lakh

48% work completed and an expenditure of ₹ 59.38 lakh has been incurred so far.

## **2. MAJOR DRAINAGE SCHEME**

Budget Allocation 2017-18 : ₹ 800.00 Lakh (Capital)

### **2.1 Construction/ Drainage Work**

2.1.1 Providing plinth protection and drainage chutes on inner side slope of left and right side banks and wheel guards on outer side of N.G. drain from Amberahi Bridge to Kakraula Bridge.

Estimated Cost of ₹ 376.72 lakh

81% work has been completed an expenditure amounting to ₹ 147.92 lakh has been incurred so far.

2.1.2 Widening and Strengthening of carriage way of Right Marginal Embankment from RD 0 m to RD 10500 m.

Estimated cost of ₹ 860.00 lakh

The existing 4.00 m road width on RME is not sufficient for free movement of two vehicles while crossing each other at the same time. So, it has been decided to widen this road from existing 4.00 m to 9.50 m by utilizing the earth

to be received from Drain No. 6. 36% work has been completed and an expenditure of ₹ 97.91 lacs has been incurred so far.

2.1.3 Widening, Raising /Strengthening of Jagatpur bund from RD 0M to RD 4388M. (City Side)

Estimated cost of ₹ 939.00 lakh

This scheme comprises provision of earth filling for widening of embankment upto 5 mtr. and to achieved the top level of 211.270 m of widened portion by constructing RCC retaining wall to retain the earth on toe of embankment on city side the earth shall be made available from remodeling of drain no. 6. The existing embankment being used as a public road, shall be raised in second phase. The A/A & E/S awaited.

2.1.4 Widening, Raising/Strengthening of RME from RD. 11000M to RD. 16500 M. (City Side).

Estimated cost of ₹ 965.00 lakh

The work comprising Provision of earth filling for widening of embankment upto 5 mtr. and to achieved the top level of 213.28 m of widened portion. The earth shall be made available from remodeling of drain no. 6 between RD 7000 to RD 9000 m. It has been decided to widen RME in the above mentioned reach as the existing embankment being used as a public road. The A/A & E/S awaited.

2.1.5 Re-surfacing of inspection path and down at Dhansa bund from RD 0m to RD 3660 m in Najafgarh Block.

Estimated Cost of ₹ 164.00 lakh

99% work has been completed an expenditure amounting to ₹ 86.88 lacs has been incurred so far.

2.1.6 Re-surfacing of existing path from RD 0 m to RD 17905m i.e. (from Dhansa Regulator to Chhawla bridge on left bank of Najafgarh drain.

Estimated Cost of ₹ 525.00 lakh

91% work has been completed an expenditure amounting to ₹ 361.75 lacs has been incurred so far.

## **2.2 Procurement of Machinery/ equipments**

2.2.1 Procurement of 07 Nos. back hoe loader cum excavators (JCB type) in I&FC Department. **(New Schemes)**

Estimated cost of ₹ 140.00 lakh

The desilting of drains is a regular feature to complete the work before the onset of monsoon every year to avoid water logging. The above proposed machines are very handy in operation and useful in the existing site conditions. Presently, one machine/same make is already in operation for desilting purpose and on the basis of its performance, it has been decided that 07 more machines may be procured on the basis of approved DGS&D contract rates.

## **3. DEVELOPMENT OF CHHAT PUJA GHATS (NEW SCHEME)**

Budget Allocation 2017-18 : ₹ 2000 Lakh (Capital)

In order to respect the culture and religious customs of all the communities, Chhat Ghats will be constructed/ developed all over Delhi during 2017-18.

## **4. CHARGED EXPENDITURE**

Budget Allocation 2017-18 : ₹ 10.00 Lakh (Capital)

Expenditure attributed to the directive of force of law will be met under this head.

## **5. SURVEY MODEL STUDIES/ PREPARATION OF MASTER OUTLAY FOR DRAINAGE & FLOOD CONTROL/ WATER DEVELOPMENT SCHEMES**

Budget Allocation 2017-18 : ₹ 71.00 Lakh (Revenue)

5.1 The consultant has submitted the draft master plan copy for drainage 2021 and same has been circulated amongst all stake holders.

5.2 Survey, Model Study and Hydrological data Collection & Investigation for new schemes (Covering of Drains/Nallahs)

5.3 Establishment of Quality Control and Material Testing Laboratory (₹1.00 Lakh)