

National Highways Authority of India  
(Ministry of Road Transport & Highways)

Four Laning of Sethiyahopu-Cholopuram from Km. 65.960 to  
Km.116.440 of NH-45C under NHDP-IV on Hybrid Annuity Mode Basis.

PATEL SETHIYAHOPU-CHOLOPURAM HIGHWAY PRIVATE LIMITED



**MONTHLY PROGRESS REPORT**

**DECEMBER 2020**

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## Executive Summary

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The old National Highway (NH -45C) runs through the state of Tamil Nadu. The project road is part of the 168 km long Vikravandi to Thanjavur section of the existing National Highway 45C (NH-45C). Recently MORTH has amended the number and Length of the National Highways. The old NH 12 in the state of Tamil Nadu has become the part of the New National Highway 36. It links Chennai with Thanjavur and is 418 km long.

The Sethiyahopu to Cholopuram section of NH-45C is an important link to connect Metropolitan city of Chennai to religious and tourist places of Cholopuram, Thanjavur, kumbakonam, Puducherry. The project is also expected to provide improved connectivity to other religious places & other major cities like Rameswaram, Madurai, Tiruchirappalli, etc. The Project stretches passing through the 03 nos. of districts of Cuddalore, Ariyalur and Thanjavur.

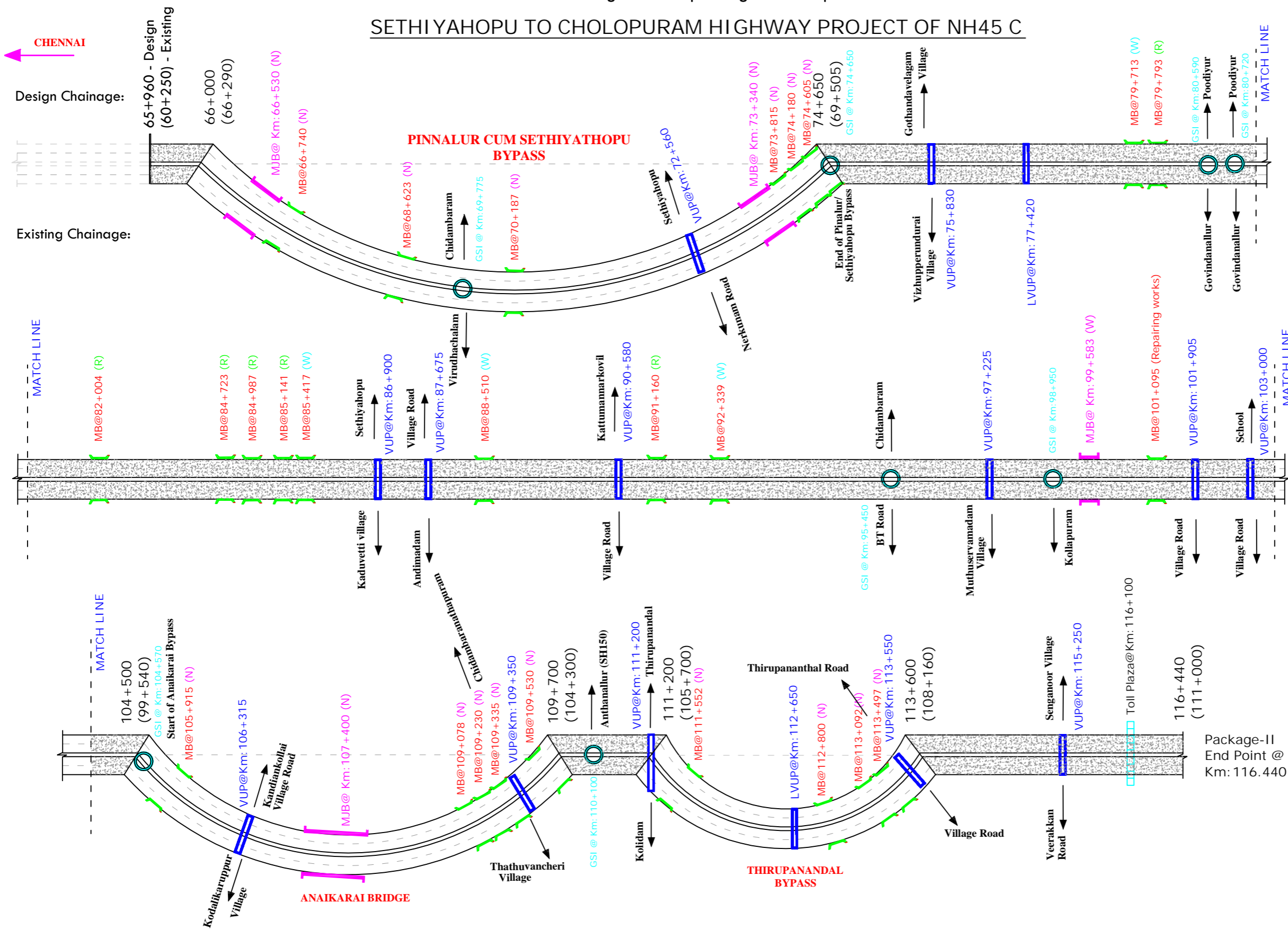
## Project Synopsis

The Government of India had entrusted to the National Highway Authority of India (NHAI) the development, maintenance and management of National Highway No. 45C including the section from km 65.960 to Km 116.440 (approx. 50.480 Km). The Authority had resolved to augment for four Laning of Sethiyahopu - Cholopuram from Km 65.960 to Km 116.440 section of NH - 45C in the State of Tamil Nadu under NHDP Phase-IV on design, build, operate and transfer (the "DBOT Annuity" or "Hybrid Annuity") basis.

The scope of work will broadly include rehabilitation, upgradation and widening of the existing carriageway to four - lane standards with construction of new pavement, rehabilitation of existing pavement, construction and/or rehabilitation of major and minor bridges, culverts, road intersections, interchanges, drains etc. Including those prescribed in the Concession Agreement and its Schedule and the operation and maintenance itself. The map of project road is given in Figures below. The details of habitations are given in table - 01.

Figure 2: Project Alignment Map

SETHIYAHOPU TO CHOLOPURAM HIGHWAY PROJECT OF NH45 C



Pinnalur /Sethiyathopu Bypass  
Km: 66+000 to 74+650

SI No	Description	Unit	Quantity
1.	Culvert	Nos.	05
2.	Minor Bridge	Nos.	06
3.	Major Bridge	Nos.	02
4.	VUP/LVUP	Nos.	01
5.	Grade Separator	Nos.	02

Widening of Existing Road  
Km: 74+650 to 104+500

SI No	Description	Unit	Quantity
1.	Culvert	Nos.	29
2.	Minor Bridge	Nos.	10
3.	Major Bridge	Nos.	01
4.	VUP/LVUP	Nos.	08
5.	Grade Separator	Nos.	04

Anaikarai Bypass  
Km: 104+500 to 109+700

SI No	Description	Unit	Quantity
1.	Culvert	Nos.	12
2.	Minor Bridge	Nos.	05
3.	Major Bridge	Nos.	01
4.	VUP/LVUP	Nos.	02
5.	Grade Separator	Nos.	01

Widening of Existing Road  
Km: 109+700 to 111+200

SI No	Description	Unit	Quantity
1.	Culvert	Nos.	6
2.	Minor Bridge	Nos.	-
3.	Major Bridge	Nos.	-
4.	VUP/LVUP	Nos.	01
5.	Grade Separator	Nos.	01

Thirupanandal Bypass  
Km: 111+200 to 113+600

SI No	Description	Unit	Quantity
1.	Culvert	Nos.	-
2.	Minor Bridge	Nos.	04
3.	Major Bridge	Nos.	-
4.	VUP/LVUP	Nos.	02
5.	Grade Separator	Nos.	-

Widening of Existing Road  
Km: 113+600 to 116+440

SI No	Description	Unit	Quantity
1.	Culvert	Nos.	08
2.	Minor Bridge	Nos.	-
3.	Major Bridge	Nos.	-
4.	VUP/LVUP	Nos.	01
5.	Toll Plaza	Nos.	01

**LEGENT:**

- Major Bridge(MJB)
- Minor Bridge(MB)
- Grade Separated Structure
- Toll Plaza
- Vehicle Under Pass (LVUP/VUP)
- Reconstruction of Existing Road
- Bypass/Newconstruction

**Salient Features of Project:**

SI No	Description	Unit	Scope
1.	Total Length of Project	Km	50.480
2.	Length of Widening Portion	Km	34.230
3.	Length of Bypass	Km	16.250
4.	Length of service/Slip Road	Km	27.100
5.	Culverts	Nos.	53
6.	Slab Culvert	Nos.	07
7.	Minor Bridge	Nos.	25
8.	Major Bridge	Nos.	04
9.	VUP/LVUP	Nos.	15
10.	Grade Separated Structure	Nos.	08
11.	Toll Plaza	Nos.	01
12.	Minor Intersection	Nos.	100
13.	Major Intersection	Nos.	07
14.	Bus Bays and Shelters	Nos.	09

**Drawing Title**

Strip Plan - Sethiyahopu to Cholopuram Highway Project

Date.	Project No.
31-08-2018	PSCHP/NHAI/TN/001

Figure 1: Project Location Map

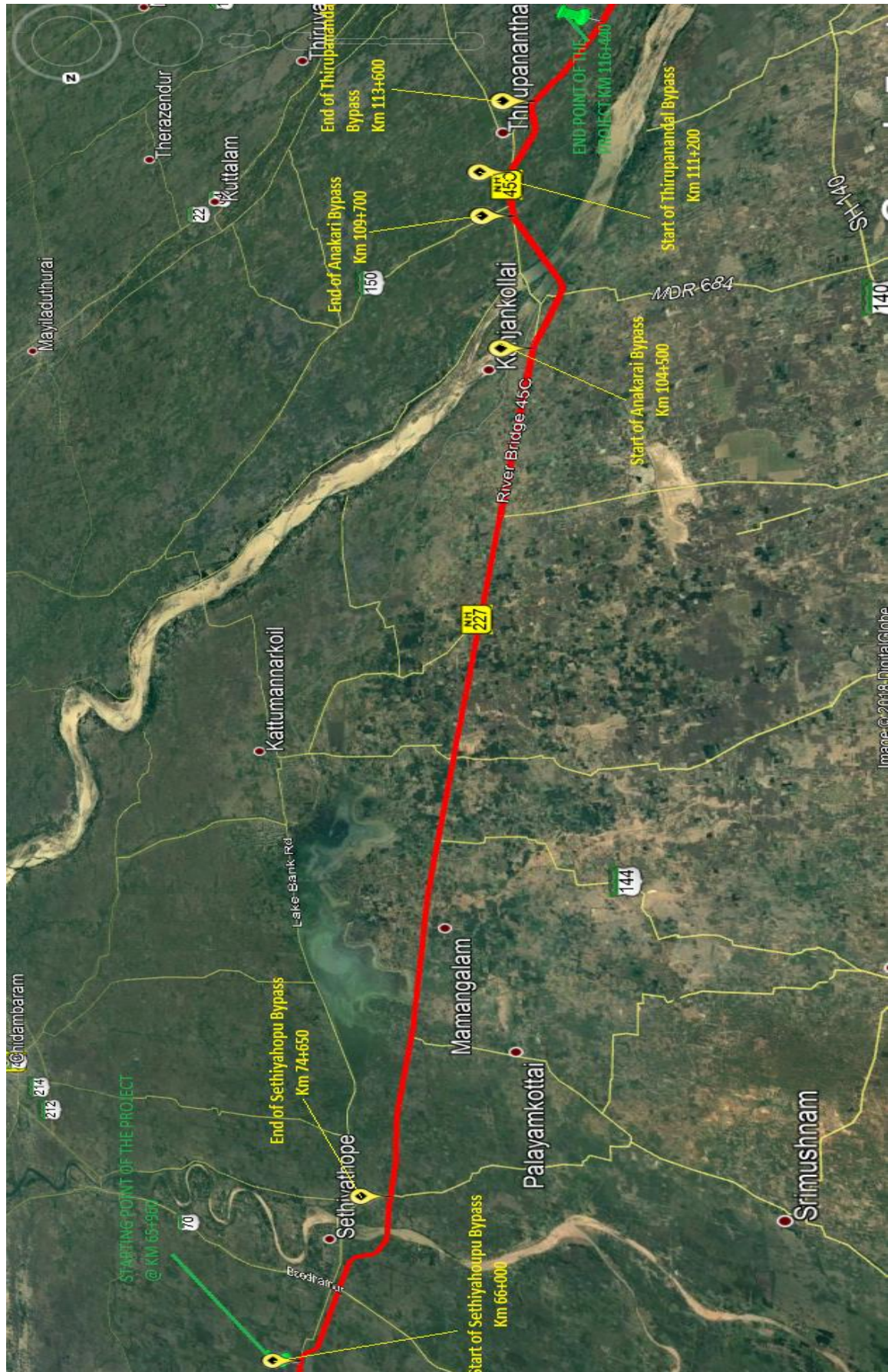




Table - 1.1: Details of Project Alignments

Existing and Proposed Alignments							
Sl. no.	Existing Chainage (Km)		Design Chainage (Km)		LENGTH (Km)	TCS Type	Remarks
	From	To	From	To			
1	60.250	Bypass	65.960	69.460	3.500	Type-A-3 (Fig 2.4 of the manual)	Bypass
2	Bypass	Bypass	69.460	70.090	0.630	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
3	Bypass	Bypass	70.090	72.350	2.260	Type-A-3 (Fig 2.4 of the manual)	Bypass
4	Bypass	Bypass	72.350	72.775	0.425	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
5	Bypass	Bypass	72.775	74.335	1.560	Type-A-3 (Fig 2.4 of the manual)	Bypass
6	Bypass	69.820	74.335	74.960	0.625	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
7	69.820	70.375	74.960	75.520	0.560	Type-A-3 (Fig 2.4 of the manual)	Eccentric Widening
8	70.375	71.010	75.520	76.150	0.630	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
9	71.010	71.855	76.150	76.900	0.750	Type-B (Fig 2.6 of the manual) with both side service road	Eccentric Widening
10	71.855	72.170	76.900	77.220	0.320	Type-B (Fig 2.6 of the manual) with both side service road	Concentric Widening
11	72.170	72.570	77.220	77.620	0.400	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
12	72.570	72.800	77.620	77.850	0.230	Type-B (Fig 2.6 of the manual) with both side service road	Concentric Widening
13	72.800	73.230	77.850	78.300	0.450	Type-B (Fig 2.6 of the manual) with both side service road	Eccentric Widening
14	73.230	75.105	78.300	80.150	1.850	Type-A-3 (Fig 2.4 of the manual)	Eccentric Widening
15	75.105	76.080	80.150	81.120	0.970	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
16	76.080	76.460	81.120	81.500	0.380	TCS-1	Concentric Widening
17	76.460	77.000	81.500	82.240	0.740	Type-A-3 (Fig 2.4 of the manual)	Eccentric

							Widening
18	77.000	78.115	82.240	83.150	0.910	Type-B (Fig 2.6 of the manual) with both side service road	Eccentric Widening
19	78.115	79.110	83.150	84.150	1.000	Type-B (Fig 2.6 of the manual) with both side service road	Concentric Widening
20	79.110	79.510	84.150	84.550	0.400	Type-B (Fig 2.6 of the manual) with both side service road	Eccentric Widening
21	79.510	80.610	84.550	85.650	1.100	Type-A-3 (Fig 2.4 of the manual)	Eccentric Widening
22	80.610	81.555	85.650	86.580	0.930	Type-B (Fig 2.6 of the manual) with both side service road	Concentric Widening
23	81.555	82.170	86.580	87.210	0.630	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
24	82.170	82.320	87.210	87.360	0.150	Type-B (Fig 2.6 of the manual) with both side service road	Concentric Widening
25	82.320	82.910	87.360	87.990	0.630	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
26	82.910	83.180	87.990	88.265	0.275	Type-B (Fig 2.6 of the manual) with both side service road	Concentric Widening
27	83.180	83.660	88.265	88.745	0.480	Type-A-3 (Fig 2.4 of the manual)	Eccentric Widening
28	83.660	85.220	88.745	90.265	1.520	Type-B (Fig 2.6 of the manual) with both side service road	Concentric Widening
29	85.220	85.850	90.265	90.895	0.630	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
30	85.850	86.555	90.895	91.600	0.705	Type-A-3 (Fig 2.4 of the manual)	Eccentric Widening
31	86.555	87.015	91.600	92.050	0.450	TCS-1	Concentric Widening
32	87.015	87.525	92.050	92.560	0.510	Type-A-3 (Fig 2.4 of the manual)	Eccentric Widening
33	87.525	90.000	92.560	95.035	2.475	Type-B (Fig 2.6 of the manual) with both side service road	Concentric Widening
34	90.000	90.830	95.035	95.865	0.830	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
35	90.830	91.350	95.865	96.400	0.535	Type-B (Fig 2.6 of the manual) with both side service road	Concentric Widening
36	91.350	91.970	96.400	96.910	0.510	TCS-1	Concentric

							Widening
37	91.970	92.460	96.910	97.535	0.625	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
38	92.460	93.550	97.535	98.535	1.000	TCS-1	Concentric Widening
39	93.550	94.370	98.535	99.335	0.800	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
39A	94.370	94.875	99.335	99.840	0.505	Type-A-3 (Fig 2.4 of the manual)	Eccentric Widening
40	94.875	95.350	99.840	100.300	0.460	Type-B (Fig 2.6 of the manual) with both side service road	
41	95.350	96.630	100.300	101.590	1.290	Type-A-3 (Fig 2.4 of the manual)	Eccentric Widening
42	96.630	97.260	101.590	102.225	0.635	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
43	97.260	97.720	102.225	102.685	0.460	Type-B (Fig 2.6 of the manual) with both side service road	Eccentric Widening
44	97.720	98.360	102.685	103.315	0.630	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
45	98.360	99.190	103.315	104.160	0.845	Type-B (Fig 2.6 of the manual) with both side service road	Eccentric Widening
46	99.190	Bypass	104.160	104.990	0.830	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
47	Bypass	Bypass	104.990	106.000	1.010	Type-A-3 (Fig 2.4 of the manual)	Bypass
48	Bypass	Bypass	106.000	106.625	0.625	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
49	Bypass	Bypass	106.625	109.035	2.410	Type-A-3 (Fig 2.4 of the manual)	Bypass
50	Bypass	104.260	109.035	109.660	0.625	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
51	104.260	105.015	109.660	110.515	0.855	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
52	105.015	105.390	110.515	110.890	0.375	Type-B (Fig 2.6 of the manual) with both side service road	Eccentric Widening

53	105.390	Bypass	110.890	111.515	0.625	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
54	Bypass	Bypass	111.515	112.430	0.915	Type-A-3 (Fig 2.4 of the manual)	Bypass
55	Bypass	Bypass	112.430	112.840	0.410	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
56	Bypass	Bypass	112.840	113.225	0.385	Type-A-3 (Fig 2.4 of the manual)	Bypass
57	Bypass	108.410	113.225	113.850	0.625	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
58	108.410	109.395	113.850	114.835	0.985	Type-A-3 (Fig 2.4 of the manual)	Eccentric Widening
59	109.395	110.220	114.835	115.660	0.825	Figure 7.8- Grade separator and its approaches with RE wall and both side 5.5 m wide Slip road	
60	110.220	111.000	115.660	116.440	0.780	Type-A-3 (Fig 2.4 of the manual)	Eccentric Widening

## 1. Background and Project Details

### 1.1. Project Overview

<b>Name of Work</b>	Four Laning of Sethiyahopu-Cholopuram from Km. 65.960 to Km. 116.440 of NH-45C under NHDP-IV on Hybrid Annuity Mode Basis.
<b>Name of Employer</b>	National Highways Authority of India (NHAI) G-5 & 6, Sector-10, Dwarka, New Delhi -110075
<b>Name of Concessionaire</b>	Patel Sethiyahopu – Cholopuram Highway Pvt Ltd, Patel House, Beside Prakruti Resorts, Channi Road, Vadodara. Gujarat– 391740 Tel: +91-265 277 6678 Fax: +91-265 277 7878
<b>Independent Engineer</b>	M/s. Theme Engineering Services Pvt. Ltd, S.F B1&B2, gateway Apartments, koranattu Karuppur, Kumbakonam – 612501.
<b>EPC Contractor</b>	M/s. Patel Infrastructure Limited, Patel House, Beside Prakruti Resorts, Channi Road,Vadodara Gujarat– 391740, Tel: +91-265 277 6678 Fax: +91-265 277 7878
<b>Design Consultant</b>	CTL Global Services Pvt. Ltd. 101, 1st Floor, Krishna Chambers, HAL, Airport Road, Bangalore-560017
<b>Senior Lender</b>	Punjab National Bank, Large Corporate Branch, Neelkamal Building, Opp. Sales India, Ashram Road, Ahmedabad - 380009
<b>Lenders Independent Engineers</b>	Sharul Techno-Financial Consultancy Services Pvt. Ltd., 403, Aspire Tower 5, Amanora Park Town, Hadapsar, Pune - 411028.
<b>Length of Road (Design Length)</b>	50.480 Kms
<b>Total Bid Cost</b>	Rs. 1461.00 Crores (as per concession agreement)
<b>Date of Concession Agreement</b>	November 9, 2017

<b>Concession Period</b>	17 Years ( Construction Period 2 Years from Appointed date, Operation period 15 years from COD)
<b>Appointed Date</b>	16.08.2018
<b>Construction Period</b>	2 years from Appointed date
<b>Completion Date</b>	15.08.2020
<b>Revised Completion Date as per IEOT of (257 D + 180 D) 437 days</b>	25.10.2021
<b>Maintenance Period</b>	15 years from COD

## 1.2. Salient Project Features

Besides the construction of new carriageways and widening and strengthening of existing carriageways, the following table summaries the major elements of the project construction:

4 - Lane Divided Carriage Way	50.48 Km.
Service Road/ Slip Road	26.595 Km (Slip Road = 14.510 Kms & Service Road = 12.085 Kms)
Major Bridge	04 Nos.
Minor Bridge	25 Nos.
Grade Separate Intersection	08 Nos.
Vehicular Underpass	13 Nos.
Light Vehicular Underpass	2 Nos.
Culverts	60 Nos.
Major Intersections	07 Nos.
Minor Intersections	100 Nos.
Bus Bays	09 Nos.
Toll Plaza	01 Nos.

### 1.3. Contractual Project Milestones

Following is a listing of the Key Project Milestones:

Mile Stone	Description	Target Date	Revised Target as per proposed IEOT of 437 days	Achieved date
Mile Stone-I	Concessionaire shall expended not less than 20 % of the Total capital cost and shall have commenced construction of the project and achieved 20% of physical progress on 214 <sup>th</sup> day from the Appointed Date.	18 <sup>th</sup> March 2019	27 <sup>th</sup> May 2020	15 <sup>th</sup> Dec 2019
Mile Stone-II	Concessionaire shall expended not less than 35% of the Total capital cost and shall have commenced construction of the project and achieved 35% of physical progress on 334 <sup>th</sup> day from the Appointed Date.	16 <sup>th</sup> July 2019	24 <sup>th</sup> Sept 2020	20 <sup>th</sup> Nov 2020
Mile Stone-III	Concessionaire shall expended not less than 75 % of the Total capital cost and shall have commenced construction of the project and achieved 75% of physical progress on 584 <sup>th</sup> day from the Appointed Date.	22 <sup>nd</sup> March 2020	01 <sup>st</sup> June 2021	NA
Scheduled Completion	Concessionaire shall have completed Project on 730 <sup>th</sup> day from the Appointed Date.	15 <sup>th</sup> August 2020	25 <sup>th</sup> Oct 2021	NA

Note: PD NHA1 recommended the PCOD proposal for the completion of 20 Kms on 31.05.2021 and target for Completion of balance workable length of 15.73 kms is 30.11.2021.

### 1.4. Payment milestone during Construction Period

Payment Mile Stone	Eligibility Criteria	Payment Amount (Rs.)	Claimed Amount (Rs.)	Date of release of payment
Mile Stone-I	On Achievement of 10% of Physical Progress	116.88 Crs.	116.88 Crs.	04.10.2019
Mile Stone-II	On Achievement of 30% of Physical Progress	116.88 Crs.	116.88 Crs.	25.09.2020
Mile Stone-III	On Achievement of 50% of Physical Progress	116.88 Crs.		
Mile Stone-IV	On Achievement of 75% of Physical Progress	116.88 Crs.		
Mile Stone-V	On Achievement of 90% of Physical Progress	116.88 Crs.		

## 1.5. Permits &amp; Approvals

Sr. No.	Details	Authority	Current Status	Remarks
1	Extraction of Boulders from Quarries	Dist. Mining Officer	Obtained	PIL (EPC Contractor) have executed an agreement with Mr. Thiru V. Sekar for supply of boulders that is having a valid license for extraction of boulders for the quarry at Padalur Village, Perambalur District.
2	Installation of Crusher	Village Panchayat Head	Obtained	
3	-----D O-----	Pollution Control Board	Obtained	
4	Use of Explosives	District Collector	Obtained	
5	Labour License	Labour Commissioner	Obtained	
6	Environmental Clearance		NA	
7	Trees Cutting Permission	Forest department through NHAI	Obtained	Work in Progress
8	Electric Poles Shifting	Tamil Nadu Electricity Board	Obtained	Work in Progress
9	Water Pipes Shifting	Tamilnadu Water Supply and Drainage Board	Obtained	Work in Progress
10	Drawing Water from river/ reservoir		NA	



## 2. Right of Way Status

### 2.1. Land Acquisition

As per the Schedule – A of Concession Agreement, the Proposed Right of Way (ROW) is of 45 & 60 meters as per table below.

	Design Chainage (Km)	Design Length (Km)	Width (m)	Remarks
<b>Full Right of Way (full width)</b>				
Stretch	65.960 to 75.150	9.190	60.00	Within 15 days of date of Agreement.
Stretch	75.150 to 82.380	7.230	45.00	
Stretch	82.380 to 83.080	0.700	60.00	
Stretch	83.080 to 84.050	0.970	45.00	
Stretch	84.050 to 86.440	2.390	60.00	
Stretch	86.440 to 87.660	1.220	52.50	
Stretch	87.660 to 91.730	4.070	45.00	
Stretch	91.730 to 93.730	2.000	52.50	
Stretch	93.730 to 95.900	2.170	45.00	
Stretch	95.900 to 99.700	3.800	60.00	
Stretch	99.700 to 104.500	4.800	30.00	
Stretch	104.500 to 109.700	5.200	60.00	
Stretch	109.700 to 110.980	1.280	30.00	
Stretch	110.980 to 113.700	2.720	60.00	
Stretch	113.700 to 116.440	2.740	30.00	
<b>Total Length</b>		<b>50.480</b>		

	Design Chainage (Km)	Design Length (Km)	Width (m)	Remarks
Stretch	099.700 to 104.500	4.800	15.00	Within 90(Ninety) days of the Appointed date
Stretch	109.700 to 110.980	1.280	15.00	
Stretch	113.700 to 116.400	2.740	15.00	

Besides this, the Authority has to acquire additional land at Toll plaza location, Bus bays, Turning radius at Major junctions.

Sl. No.	Description	Unit	Present Status	Remarks
A)	<b>Total Length of the Project Highway</b>	<b>Km</b>	<b>50.48</b>	
1	Use of Existing Road Portion	Km	34.23	
2	Proposed Bypass / Realignment portion	Km	16.25	
B)	<b>Hindered Length</b>			
1.	Hindrance towards existing building, payment pending, NOC from PWD/WRO, teak trees etc.,	Km	11.490	
2.	Hindrance due to Electrical Lines	Km	1.050	
3.	Hindrance due to Rural Water Supply lines	Km	19.500	
4.	Net Hindered Length (both Side)	Km	33.61	
C)	<b>Total Project Length (both Side)</b>	<b>Km</b>	<b>100.96</b>	
D)	<b>% Hindered Length</b>	<b>%</b>	<b>33.29%</b>	

The details of land acquisition status and available hindrances are produced on a strip chart under section 04.

The status of compensation disbursed is as below: -

Table 2.1-3: Compensation disbursement for land					
SL. No.	Name of the District	Total No. of Land cases	Amount paid (in Nos.)	Balance to be Paid (in Nos.)	Remarks
1	Cuddalore	710	613	97	
2	Ariyalur	355	310	45	
3	Thanjavur	102	98	4	
	<b>Total in Nos.</b>	<b>1167</b>	<b>1021</b>	<b>146</b>	
		<b>Total in %</b>	<b>87.49%</b>	<b>12.51%</b>	

Table 2.1-4 - Compensation disbursement for Structures					
Sl. No.	Name of the District	Total No. of structures	Amount paid (in Nos.)	Balance to be Paid (in Nos.)	Remarks
1	Cuddalore	383	333	50	
2	Ariyalur	461	433	28	
3	Thanjavur	148	96	52	
	<b>Total in Nos.</b>	<b>992</b>	<b>862</b>	<b>130</b>	
		<b>Total in %</b>	<b>86.89%</b>	<b>13.11%</b>	

□ Details of Stretches Under Hindrance towards existing building, payment pending, NOC from PWD/WRO, teak trees etc.:

S. No	Chainage		Length (km)	Net Affected Length (Km)	Side	Remarks
	From	To				
1	66.100	66.260	0.16	0.16	BHS	Obstruction of Veeranam Pipe Line
2	72.550	72.560	0.01	0.01	BHS	Land handed over on Appointed date but hindered due to disputes in compensation disbursement protests by Landowners
3	77.050	77.220	0.17	0.085	LHS	Land handed over on Appointed date but hindered due to disputes in compensation disbursement protests by Landowners
4	80.100	81.150	1.05	1.05	BHS	RE Wall Location: Fully buildup area, payment made to all owners and not accepting to vacate. Need police force and requested DRO in this regards.
5	82.050	82.150	0.10	0.10	BHS	Shifting of Sluice. Estimate awaited from PWD
6	83.400	84.280	0.88	0.88	BHS	Land handed over on Appointed date but hindered due to disputes in compensation disbursement protests by Landowners
7	85.800	86.200	0.40	0.40	BHS	Land handed over on Appointed date but hindered due to disputes in compensation disbursement protests by Landowners
8	86.400	86.560	0.16	0.16	BHS	Land handed over on Appointed date but hindered due to disputes in compensation disbursement protests by Landowners
9	87.500	88.200	0.70	0.70	BHS	RE Wall Location: - Diversion ProblemsRHS - 01 unauthorised building, 01 Temple,.LHS - Electric Lines to be removed.
10	95.050	95.850	0.80	0.80	BHS	RE Wall Location: RHS - Police station arch, House compound wall, 01 building, 01 Temple, LHS - School compound wall, 02 building under revaluation, 01 trees and 14 nos of commercial building(shops) & EB poles to be removed.
11	98.500	99.400	0.90	0.90	BHS	RE Wall Location: RHS - 01 transformer, 01 Temple, 02 unpaid building, 07 shops to be removed. EB lines to be removed.LHS - 02 building compound wall, school compound wall, 02 shops to be removed.
12	113.600	113.850	0.25	0.25	BHS	Pending Disbursement
13	114.400	114.650	0.25	0.25	BHS	Pending Disbursement
<b>Total Hindrances (in Km)</b>			<b>5.745</b>			

Table 2.1.6 - Hindrance Photographs

Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	240	Veeranam Pipe Line	65+960	66+200	Veeranam Pipe Line	240		
			68+600		Sluice Gate (2 Nos)	40		
	150	HT Line Crossing	70+030	70+200				
			70+700		Building			
	550	Agriculture Land & Trees	71+000	71+550				
		Teek Farm, Pump Set & 5 Poles	71+250					
		Bore Well	71+300					
		Borewell	71+550		Borewell			
		Pump Set	72+200					Damaged
	100	Veera mudaiyaan natham Village	72+450	72+550	Veera mudaiyaan natham Village	100		
	10	Hand Pump	72+550		Hand Pump	10		
	50	Pump Set & Trees	72+700					
			72+850		Pump Set, Bore Well & Trees			
			72+900		Bore & Pump Set			

Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
		Bore & Pump Set	72+950					
			73+400		HT Line Tower	20		
			73+450		Bore Well, Pump Set & Tree EB Pole	50		
			74+500		Bore Well			
		Telephone Poles	74+710	74+850	Telephone Poles			2 - Telephone Pole
		Temple, Hand Pump,	74+710					
		Hut	75+210					
		Huts	75+270	75+350	Huts			
		Flag Poles	75+390					
			75+520		Huts			
			75+560		Huts			
			75+565	75+640	Pond			
		Building	75+640					
			75+650		Temple			

Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
			75+660		Water Tap			
		Building	75+680					
			75+700		OFC			
		Bore Well & Water Tank	75+700					
		Kothanda vilagam Village	75+700	76+200	Kothanda vilagam Village			
		Hand Pump	75+710					
		Water Tap	75+810					
		Street Light	75+840					
		Flag Pole	75+840		Existing Culvert			
		Water Tap	75+880					
		Bore Well & Water Tank	76+025					
		Pump Set	76+260					
			76+600		Temple			
			76+695		OFC & Compound Wall			

Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
			76+800	77+300	Telephone Pole			3 nos
			76+850		OFC			
			76+940		Bore & Water Tank			
		Buildings	76+980		Buildings			
			77+060		Bore & Water Tank			
			77+080	77+190	School Compound Wall			
		Building	77+100	77+300				
			77+220		Building			
			77+240		OFC			
			77+280		Compound Wall			
	300	Buildings	77+300	77+600	Buildings	300		
		Flag Pole	77+390	77+420				4 Nos
		Hand Pump	77+505					
		Telephone Pole	77+390	77+510				3 Nos


Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
		Hand Pump	77+590					
			77+700		OFC			
		Building	77+730					
			77+760		Water Tank & Motor Room			
		Water Tap	77+975					
			78+120		OFC			
			78+390		EB Pole, Bore Well			
			78+725		Transformer			
			79+080		OFC			
		Hand Pump	79+105					
		Existing Culvert	79+110					
			79+220		Flag Pole			
		Water Tank & Motor Room	79+240					
			79+260		OFC			



Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
			79+565		OFC			
		Hut	79+955					
	400	EB Pole, Water Tap, Trees, Telephone Pole	80+000	80+500	EB Pole, Water Tap, Trees, Telephone Pole	400		
		Water Tank, Motor Room, Hand Pump & Existing Culvert	80+120					
			80+125		Temple			
			80+170		Existing Culvert			
			80+190		OFC			
			80+300	80+390	Pond			
		Transformer	80+340					
		Flag Poles	80+530	80+570	Flag Poles			6nos
			80+710		Existing Culvert			
		Bore Well	80+740					
			80+900		OFC			
			81+325	81+360	Existing Culvert & Compound Wall			
















Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
		Pond	81+360	81+460				
		OFC & Temple	81+445					
			81+585		OFC			
		Transformer	81+715					
			82+875		Existing Culvert			
			82+890		OFC			
		Existing Culvert	82+975					
	450	Water Tap	83+000	83+500	Water Tap	450		Tap - 6
			83+060		OFC			
		Existing Culvert	83+205					
		OFC	83+265					
			83+310		OFC			
		Flag Post	83+385					
			83+425		Transformer			25


Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	450	EB Pole, Water Tap, Trees, Telephone Pole	83+500	84+000	EB Pole, Water Tap, Trees, Telephone Pole	450		Pole - 13, Tap - 37, Tree - 239
			83+615		Temple			
			83+625		OFC			
		EB, Transformer	83+850					
			83+890		Flag Poles			4 nos
			83+935		Water Tank			
			83+995		Hand Pump			
		Temple & Well	84+070					
			84+110		OFC & Flag Pole			
			84+280		Transformer			
		Transformer	84+480					
			84+560		Flag & Ex Culvert			Pole 2 Nos
			84+650		OFC			
			84+920		OFC			

Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
		Building	84+930	84+980				
		Hut	85+045					
			85+060		EB, Transformer			
			85+090		OFC			
		Transformer	85+865					
		Building	85+910					
		Hut	85+930					
			85+955		Temple			
			86+280		Temple			
			86+350		Bore Well			
		Temple	86+390					
			86+585		Motor Room			
		Buildings	86+000	86+700	Buildings			
	700	Building & Huts	86+700	87+500	Building & Huts	700		
















Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
			86+720		Flag Pole			
			86+830		OFC, Transformer			
		Transformer	86+915					
			86+985		OFC			
		Existing Culvert	87+080					
			87+155		OFC			
		Transformer	87+330					
			87+360		OFC			
	400	EB Pole, Tree, Tap, Telephone Pole	87+500	88+000	EB Pole, Tree, Tap, Telephone Pole	400		EB - 24, Tree - 163, Tap - 13, T Pole - 5
		Buildings & Huts	87+500	88+000	Buildings & Huts			
		Temple	87+500					
			87+640		OFC			
			87+670		Water Tank, Motor Room			
			87+690		Temple			

Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
			87+735		Flag Pole			
			87+835		Water Tank			
			87+990		OFC			
			88+225		Transformer			
		House	88+500	89+000	House			
			88+910		Temple			
		Existing Culvert	88+965					
	450	water Tap, Telephone Pole	89+000	89+500	water Tap, Telephone Pole	450		Tap - 15, T Pole - 5, Tree - 195
		Flag Post Pedestal	89+110					
			89+355		Temple			
		Water Tank	89+515					
	400	EB Pole, Water Tap, House	90+000	90+500	EB Pole, Water Tap, House	400		EB - 34, Tap - 4
			90+180		Transformer			

Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
			90+195		OFC			
			90+230		Transformer			
			90+325		Temple			
			90+375		Existing Culvert			
	400	EB Pole, Telephone Pole, Water Tap	90+500	91+000	EB Pole, Telephone Pole, Water Tap	400		EB - 14, Tap - 5, T. Pole 7
			90+560		OFC			
			90+610		Water Tank			
			90+830	90+860	Pond			
			91+080		OFC			
			91+480		OFC			
	450	EB Pole, Water Tap, Telephone Pole, Trees	91+500	92+000	EB Pole, Water Tap, Telephone Pole, Trees	450		
			91+600		OFC			
			91+730		OFC			
			91+780		Temple			

Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
		Pond	91+780	91+860				
	700	EB Pole, Water Tap, Telephone Pole	92+000	93+000	EB Pole, Water Tap, Telephone Pole	700		EB - 16, Tap - 10, T, T Pole - 7
		Temple	92+135					
			92+300	92+380	Water Pipe Crossing			
			92+390		OFC			
		Temple	92+455					
			92+570		Temple			
			92+600		OFC			2 Nos
			92+770		OFC			2 Nos
		OFC	92+995					
	750	EB Pole, Water Tap, Tree	93+000	94+000	EB Pole, Water Tap, Tree	750		EB - 44, Tape - 14, Tree - 270
			93+045		OFC			
			93+115		Transformer			
			93+200		OFC			














Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
			93+360		OFC			
			93+660		OFC			
			93+930		Hand Pump			
			93+975		OFC			
		TEMPLE	94+440					
			94+530		OFC			
			94+780		OFC, Transformer			
		Pond, Pipe Line	94+830	94+900				
	450	EB Pole, Tape, Telephone Pole	95+000	95+500	EB Pole, Tape, Telephone Pole	450		EB - 16, T Pole - , Tap 5
			95+130	95+230	Compound Wall			
			95+210		Telephone Panel, Water Tank With Well			
			95+255		Police Station Arch			
			95+290		OFC			
			95+435		Street Light			


Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	400	EB Pole, Tape, Telephone Pole	95+500	96+000	EB Pole, Tape, Telephone Pole	400		EB - 25, T Pole - 7, Tap - 6,
			95+570		Temple			
		Pond	95+950					
	400	EB Pole, Tape, Telephone Pole	96+000	96+500	EB Pole, Tape, Telephone Pole	400		EB - 39, T Pole - 5, Tap - 6,
			96+120		OFC			
			96+150		Transformer			
			96+480		Transformer			
	450	EB Pole, Tape, Telephone Pole	96+500	97+000	EB Pole, Tape, Telephone Pole	450		EB - 16, T Pole - 3,
			97+195		OFC			
			97+395		OFC			
			97+390	97+500	Pond			
	300	EB Pole, Tape, Telephone Pole	97+500	98+000	EB Pole, Tape, Telephone Pole	300		EB - 16, Tap - 5,
		Temple	97+520					
			97+600		OFC			









Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
			97+680		Motor Room With Bore			
	350	EB Pole, Tape, Telephone Pole	98+500	99+000	EB Pole, Tape, Telephone Pole	350		EB - 19, T Pole - 3
			98+620		Transformer			
		OFC	98+635		Temple			
		Water Tank with Bore	98+735					
		OFC	98+825					
	750	EB Pole, Tree, Tape, Telephone Pole	99+000	100+000	EB Pole, Tree, Tape, Telephone Pole	750		EB - 47, T Pole - 4, Tap - 5, Tree 118
			99+120		Temple			
		Motor Room With Bore	99+150					
			99+160		Transformer			
			99+195		Temple With Water Tank			
		OFC	99+300					
		OFC	99+490					
	650	EB Pole, Tree, Tape, Telephone Pole	100+000	101+000	EB Pole, Tree, Tape, Telephone Pole	650		EB - 32, Tap - 12, Tree 210, T Pole - 3

















Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
		Transformer	100+150					
			100+195		Bore Well			
			100+200		OFC			
		OFC	100+320					
		Pond	100+350					
		Motor Room With Tank	100+390					
			100+475		Water Tank			
		OFC	100+600					
		OFC	100+670					
		OFC	100+720					
		OFC	100+740					
		Pond	100+740	100+820				
	650	EB Pole, Tree, Tape, Telephone Pole	101+000	102+000	EB Pole, Tree, Tape, Telephone Pole	650		EB - 42, T Pole - 5, Tap - 6 Tree 100
			101+005		OFC			
















Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
		OFC	101+125					
			101+120	101+300	Pond			
		OFC	101+330					
			101+480		Hand Pump			
			101+805		OFC			
		Transformer	101+835					
	750	EB Pole, Tree, Tape, Telephone Pole	102+000	103+000	EB Pole, Tree, Tape, Telephone Pole	750		EB - 30, T Pole - 2, Tap - 13, Tree 110
		OFC	102+100					
			102+240		Temple			
			102+365		Transformer			
		OFC	102+390					
		OFC	102+435					
		OFC	102+575					
		OFC	102+730					





Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
		Schooh Arch	102+960					
	800	Tape, Telephone Pole	103+000	104+000	Tape, Telephone Pole	800		T Pole - 2, Tap - 13
		OFC	103+025					
		Pond	103+090	103+300				
		OFC	103+530					
			103+590		Temple			
		OFC & Flag Pole	103+720					
		Pond	103+775	103+815				
			103+860	103+910	Pond			
		Pond	103+935	104+250				
		Existing Irrigation Sluice	103+990					
	400	EB Pole, Tree	104+000	104+500	EB Pole, Tree	400		EB - 4, Tree - 3
		House	104+500		House			
	350	EB Pole, Tree, Tape	104+500	105+200	EB Pole, Tree, Tape	350		Tree - 21, EB - 23, Tap - 3

Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
	500	EB Pole, Tree, Tape	105+200	105+900	EB Pole, Tree, Tape	500		Tree - 42, EB - 4, Tap - 4
			105+850		Motor Room			
	750	EB Pole, Tree, Tape	105+900	106+900	EB Pole, Tree, Tape	750		Tree - 100, EB - 1, Tap - 7
			105+920		Well			
		Motor Room	106+900					
	1150	EB Pole, Tree, Tape	107+900	109+700	EB Pole, Tree, Tape	1150		Tree - 94, EB - 9, Tap - 6
	1350	Tape	109+700	111+200	Tape	1350		Tap - 18
		OFC	109+705					
		OFC	109+710					
			109+720		Motor Room			
			109+985		Water Pipe			
		OFC	110+330					
		Water Tank	110+450					
			110+725		OFC			















Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
			110+740		Motor Room with well			
	1750	EB Pole, Tree, Tape	111+200	113+500	EB Pole, Tree, Tape	1750		Tree - 460, EB -23, Tap - 12
		OFC	111+230		OFC			
			111+450		Motor Room With Bore			
		Gate Valve	111+500					
		Motor Room With Bore	111+600					
			111+680		Motor Room With Bore			
		Motor Room With Bore	112+300					
			112+310		House & Hand Pump			
			112+390		Motor Room With Bore			
			113+220		Motor Room With Bore			
			113+250		House			
			113+330		Motor Room With Bore			
	750	EB Pole, Telephone Pole, Tape	113+500	114+600	EB Pole, Telephone Pole, Tape	750		Tree - 280, EB -38, T Pole - 9. Tap - 6



Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
			113+670	113+720	Sub Station			
			113+700		HT Line Crossing			
			114+060		Flag Pole			
			114+090		Flag Pole, Water Tank			
		HT Line	114+130					
		Transformer	114+460					
		Water Tank	114+450					
		Water Tank	114+495					
		OFC	114+520		Temple			
		Pond	114+540	114+580				
	650	EB Pole, Telephone Pole, Tree, Tape	114+600	115+600	EB Pole, Telephone Pole, Tree, Tape	650		Tree - 80, EB -18, Tap - 2
		Hand Pump	114+610					
		Transformer	114+950					
		Transformer	115+210					

Photo	Obstruction Length (m)	LHS -Type of Hindrance	Chainage		RHS -Type of Hindrance	Obstruction Length (m)	Photo	Remarks
			From	To				
			115+230		Flag Pole			5 Nos
	700	Telephone Pole, Tape	115+600	116+440	Telephone Pole, Tape	700		EB -26, T Pole - 2 Tap - 16
			115+650		Motor Room			
		OFC	115+820					
		Transformer	115+970					
		OFC	116+095					
		OFC	116+170					
		Hand Pump	116+200					
		Water Tank & Motor Room	116+210					
		OFC	116+275					
		OFC	116+410					
			116+560		Flag Pole			
		House	115+600	116+440	House			

## 2.2. Removal of Religious Structures

The following structures coming within the ROW are to be demolished

Sl No.	Name of the District	Total No. of structures	Removed as on Date (in Nos.)	Balance (in Nos.)
1	Cuddalore	10	3	7
2	Ariyalur	10	1	9
3	Thanjavur	2	2	0
	<b>Total in Nos.</b>	<b>22</b>	<b>6</b>	<b>16</b>

## 2.3. Shifting of Utilities and Electrical HT/LT Lines

To proceed with the project construction, several utilities are required to be shifted under the supervision of the respective authorities. These include a water supply line, hand pumps, overhead water tanks, besides Electrical lines, as shown in the table below.

Sr. No.	Name of the District	Chainages			Total Number of Estimates	Remarks
		From	To	Length in Km		
1	Cuddalore	65+960	86+440	20.48	25	Work in Progress
2	Ariyalur	86+440	106+860	20.42	46	
3	Thanjavur	106+860	116+440	9.58	4	

Sr. No	Name of the District	Chainages			Number of Estimates	Present Status	Remarks
		From	To	Length in Km			
1	Cuddalore	65+960	86+440	20.48	10	Estimate Approved	Supervision charges are paid and work in progress
2	Ariyalur	86+440	106+860	20.42	5	Estimate Approved	
3	Thanjavur	106+860	116+440	9.58	5	Estimate Approved	
4	Cuddalore & Thanjavur	Km:70+020, Km:73+470 and Km:113+720			3	Estimate Approved	Supervision Charges paid

Estimates for shifting of the above Electric lines have been prepared. The estimated cost is Rs. 17.45 Crores.

Estimates have been done for the shifting of the water supply pipeline & related items mentioned above. The final amount of Rs.15.87 Crores sanctioned by RO, NHAI, Madurai.

Sl. No.	Authority	Description	Unit	Total Length/ Nos.	Work done	Balance	Remarks
1	BDO & EE, TWAD	Water Supply Pipe Line	Kms.	72.695	25.679	47.016	Work in progress
2	BDO of Concern Union	Hand Pump/Pump Room with Bore well	Nos.	24	16	8	
3	BDO of Concern Union	Over Head Tank	Nos.	15	13 Nos Completed	2	
4	TNEB	Electrical Lines	Kms.	6.83	5.78	1.05	

#### 2.4. Tree felling

Sl.No.	Name of the District	Chainages			Effectuated Length in Kms.	Completed as on Date	Balance as on Date	Balance no. of Trees	Remarks
		From	To	Length in Km					
1	Cuddalore	65+960	86+440	20.48	6.535	6.535	0	0	In addition of 123 nos of teak wood trees to be removed and Permission of the same is awaited from DFO, Cuddalore.
2	Ariyalur	86+440	106+860	20.42	8.385	8.385	0	0	
3	Thanjavur	106+860	116+440	9.58	2.515	2.515	0	0	
Total				50.48	17.435	17.435	0	0	

## 3. Progress Briefing – Contractor Activities

## 3.1. Pre-construction Activities

## Detailed Design &amp; Drawings

The Plan and Profile, as well as the Pavement Designs for the entire 50.48 km project length has been completed and reviewed by the Independent Engineer (IE). Construction Methodology, QA & QC procedures submitted to the IE has been reviewed and accepted.

Table 3.1-1: Status of Design and Drawings-Highway

Sl No.	Description	Unit	Total Scope As per Sch. B	Design Submitted	Drawing Approved
1	Pavement Design	Km	50.48	50.48	50.48
2	Plan & Profile	Km	50.48	50.48	50.48
3	Typical Cross Sections	Type	7	7	7
4	Major Intersections	No	07	05	-
5	Minor Intersections	No	100	14	-
6	Toll Plaza (Typical Details)	No	01	01	-
7	Service Roads	No	26.595	26.595	26.595

Table 3.1-2 : Status of Design and Drawings –Structures

Sr. No	Description	Unit	Total Scope As per Sch. B	Design Submitted	Drawing Approved
1	Major Bridges	No	04	04	04
2	Minor Bridges	No	25	25	25
3	Grade Separated Intersection	No	08	08	08
4	VUP/LVUP	No	15	15	15
5	Box /Slab Culvert	No	60	60	60

## 4. Physical Progress of Work

## 4.1. Physical Progress of Work:

The Progress of the Major Works carried out at the Site in the Month of December 2020 is as follows.

**CUMMULATIVE STATEMENT****For Main Carriageway**

Sr. No.	Description	Total Length of Highway Excluding Toll Plaza (in. Km.)	Progress up to Previous Month (in Km.)	Progress during this Month (in Km.)	Cumulative Progress Achieved up to this Month (in Km.)	Work in Progress (In Km.)	Balance Length to be Completed	Cumulative % of Progress Achieved
1	Clearing and Grubbing							
	LHS	47.28	40.62	0.00	40.62	0	6.66	85.91%
	RHS	47.28	39.53	0.00	39.53	0	7.75	83.61%
2	Embankment							
	LHS	47.28	25.61	0.00	25.61	3.13	21.67	54.17%
	RHS	47.28	20.665	0.00	20.665	5.54	26.615	43.71%
3	Sub grade							
	LHS	47.28	24.16	0.00	24.16	0.80	23.12	51.10%
	RHS	47.28	19.87	0.00	19.87	0.51	27.41	42.03%
4	GSB/ Cement Treated Base							
	LHS	47.28	19.07	0.00	19.07	2.30	28.21	40.33%
	RHS	47.28	15.74	0.33	16.07	2.75	31.21	33.99%
5	Wet Mix Macadam							
	LHS	47.28	18.21	0.04	18.25	0	29.03	38.60%
	RHS	47.28	13.92	0.13	14.05	0	33.23	29.72%
6	Dense Bitumen Macadam							
	LHS	47.28	16.70	0.21	16.91	0	30.37	35.77%
	RHS	47.28	13.76	0.10	13.86	0	33.42	29.31%
7	Bituminous Concrete							
	LHS	47.28	0.00	0.00	0.00	0.00	47.28	0.00%
	RHS	47.28	0.00	0.00	0.00	0.00	47.28	0.00%

**For Service Road**

Sr. No.	Description	Total Length of Service Road (in Km.)	Progress up to Previous Month (in Km.)	Progress during this Month (in Km.)	Cumulative Progress Achieved up to this Month (in Km.)	Work in Progress (in Km.)	Balance Length to be Completed	Cumulative % of Progress Achieved
1	Embankment	53.19	6.80	0.00	6.80	4.01	46.39	12.78%
2	Sub grade	53.19	4.91	0.00	4.91	0.47	48.28	9.23%
3	GSB/ Cement Treated Base	53.19	2.47	0.00	2.47	0.45	50.72	4.64%
4	Wet Mix Macadam	53.19	1.62	0.00	1.62	0	51.57	3.05%
5	Dense Bitumen Macadam	53.19	1.00	0.00	1.00	0	52.19	1.88%
6	Bituminous Concrete	53.19	0	0.00	0	0	53.19	0.00%

**Structure Work**

Sr. No.	Type of Structure	Total No. of Structures	Nos. of Structures		
			Completed	Work in Progress	Balance to be taken up
1	Culvert	60	27	14	19
2	Light Vehicular Underpass	2	1	0	1
3	Vehicular Underpass	13	3	9	1
4	Minor Bridges	25	10	11	4
5	Major Bridge	4	0	4	0
6	Flyover	8	2	5	1

The Physical Progress of the Project up to December 2020 as per Approved Schedule G is as follows:-

Component	Item Description	Unit	Planned in Scope (As per Scope of Work)	Cost Weightage in Component (%)	Progress till Date	% Physical Progress
1	2	3	4	5	6	7
Road works including culverts, minor bridges, underpasses, overpasses, approaches to ROB/RUB/ Major Bridges/ Structures (but excluding service roads)	A- Widening and strengthening of existing road					
	(1) Earthwork up to top of the sub-grade	Km	66.96	9.517%	33.18	4.716%
	(2) Granular work (sub-base, base, shoulders)					
	(a) GSB/ Cement Treated Base	Km	65.52	3.373%	29.63	1.525%
	(b) WMM/ Cement Treated Base	Km	65.52	4.046%	28.37	1.752%
	(3) Shoulders	Km	17.65	0.112%		
	(4) Bituminous work					
	(a) DBM	Km	65.52	3.344%	27.29	1.393%
	(b) BC	Km	65.52	3.023%		
	(5) Rigid Pavement					
	(6) Widening and repair of culverts	Nos.	16	0.440%	4.50	0.124%
	(7) Widening and repair of minor bridges	Nos.	4	0.959%	2.50	0.599%
	<b>B- New realignment/bypass</b>					
	(1) Earthwork up to top of the sub-grade	Km	28.68	6.437%	10.85	2.435%
	(2) Granular work (sub-base, base, shoulders)					
	(a) GSB/ Cement Treated Base	Km	28.68	1.615%	5.51	0.310%
	(b) WMM/ Cement Treated Base	Km	28.68	1.436%	3.93	0.197%
	(3) Shoulders	Km	24.63	0.112%		
	(4) Bituminous work					
	(a) DBM	Km	28.68	1.279%	3.48	0.155%
	(b) BC	Km	28.68	1.158%		
	(5) Rigid Pavement					
	<b>C- New culverts, minor bridges, underpasses, overpasses on existing road, realignments, bypasses:</b>					
(1) Culverts	Nos.	44	2.070%	22.50	1.059%	

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	<b>(2) Minor bridges</b>					
	(a) Foundation	Nos.	58	3.953%	32.00	2.181%
	(b) Substructure	Nos.	134	2.623%	82.00	1.605%
	(c) Superstructure (including crash barrier etc. complete)	Nos.	50	1.559%	21.00	0.655%
	<b>(3) Cattle/Pedestrian underpasses</b>					
	(a) Foundation	Nos.				
	(b) Substructure	Nos.				
	(c) Superstructure (including crash barrier etc. complete)	Nos.				
	<b>(4) Pedestrian overpasses</b>					
	(a) Foundation	Nos.				
	(b) Substructure	Nos.				
	(c) Superstructure (including crash barrier etc. complete)	Nos.				
	<b>(5) Grade separated structures</b>					
	<b>(a) Underpass (13 VUP, 2 LVUP)</b>					
	(i) Foundation	Nos.	56	2.574%	41.00	1.885%
	(ii) Substructure	Nos.	60	0.751%	38.00	0.476%
	(iii) Superstructure (including crash barrier etc. complete)	Nos.	30	1.289%	8.00	0.344%
	(b) Overpass					
	(i) Foundation					
	(ii) Substructure					
	(iii) Superstructure (including crash barrier etc. complete)					
	<b>(c) Flyover</b>					
	(i) Foundation	Nos.	36	2.426%	27.00	1.819%
	(ii) Substructure	Nos.	36	0.470%	25.00	0.327%
	(iii) Superstructure (including crash barrier etc. complete)	Nos.	20	1.244%	6.00	0.373%
	(d) Foot over Bridge					
<b>Major Bridge works and ROB/RUB</b>	<b>A- Widening and repairs of Major Bridges</b>					
	(1) Foundation					
	(a) Open Foundation					
	(b) Pile Foundation/ Well Foundation					

	(2) Sub-structure					
	(3) Super-structure (including crash barriers etc. complete)					
	<b>C- New Major Bridges</b>					
	(1) Foundation					
	(a) Open Foundation					
	(b) Pile Foundation/ Well Foundation					
	(i) Foundation	Nos.	84	9.699%	53.00	6.120%
	(2) Sub-structure	Nos.	84	4.576%	41.00	2.233%
	(3) Super-structure (including crash barriers etc. complete)					
	(i) For MJB at Km. 107+400					
	(a) Casting of Superstructure (Box Segment)	Nos.	666	1.450%	300.00	0.653%
	(b) Erection of Superstructure (Box Segment)	Nos.	666	1.050%	10.00	0.016%
	(i) For other Major Bridges					
	(a) Super-structure (including crash barriers etc. complete)	Nos.	37	2.500%		
	<b>D- New rail-road bridges</b>					
	<b>(a) ROB</b>					
	(1) Foundation	Nos.				
	(2) Sub-structure	Nos.				
	(3) Super-structure (including crash barriers etc. complete)	Nos.				
	<b>(b) RUB</b>					
	(1) Foundation	Nos.				
	(2) Sub-structure	Nos.				
	(3) Super-structure (including crash barriers etc. complete)	Nos.				
<b>Structures (elevated sections, reinforced earth)</b>	<b>A- Elevated Structures</b>					
	(1) Foundation	Nos.				
	(2) Sub-structure	Nos.				
	(3) Super-structure (including crash barriers etc.	Nos.				
	<b>B- Reinforced earth Wall (includes Approaches of ROB, Underpasses, Overpasses, Flyover etc)</b>	Sqm	196027	7.604%	47319	1.836%

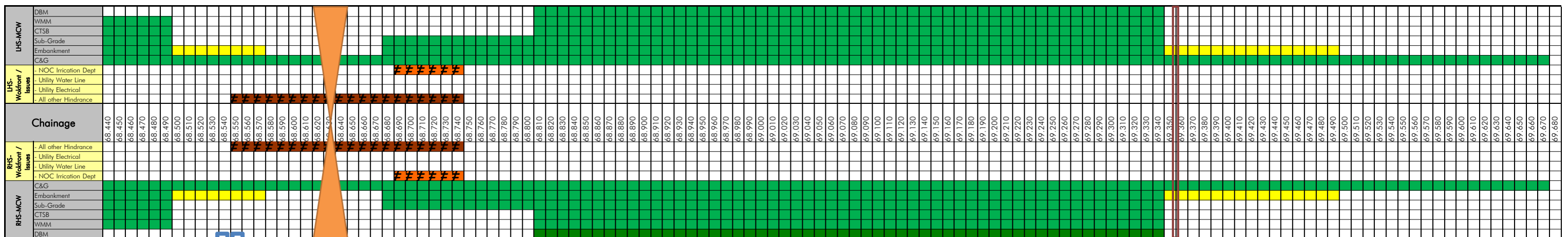
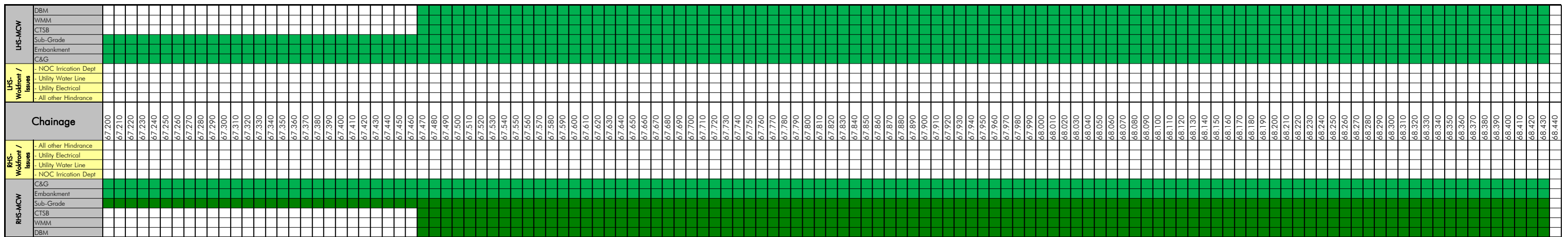
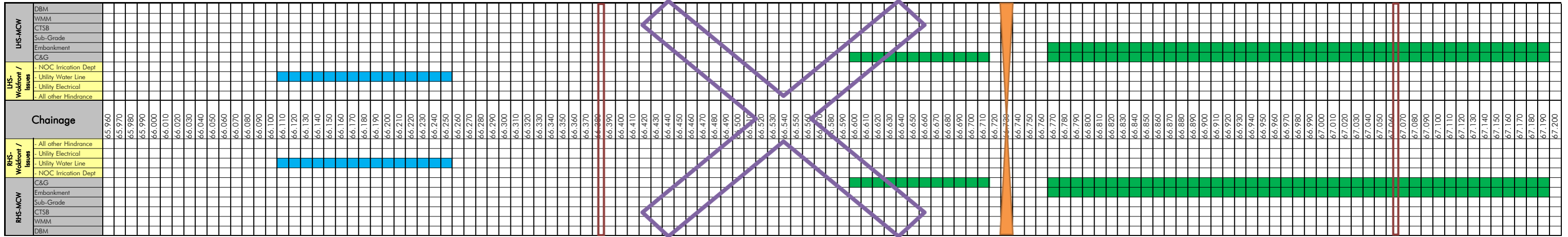
Other Works	(i) Service roads/ Slip Roads	Km	53.19	4.690%		
	(ii) Toll Plaza	Nos.	1	1.821%		
	(iii) Road side drains	Km	28.85	5.429%	5.35	1.007%
	(iv) Road signs, markings, km stones, safety devices,					
	(a) Road signs, markings, km stones, ...	Km	100.96	2.558%		
	(b) Concrete Crash Barrier/ W-Beam Crash Barrier in Road work					
	(i) Concrete Crash Barrier	Km	26.5	1.179%		
	(ii) W-Beam Crash Barrier	Km	10.03	0.788%		
	(v) Project facilities					
	(a) Bus Bays	No.	18	0.009%		
	(b) Truck Lay-byes	No.				
	(c) Rest areas	No.				
	(vi) Repairs to bridges/structures	Nos.				
	(vii) Road side plantation	Km	23.66	0.451%		
	(viii) Protection works					
	(a) Boulder pitching on slopes	Km	10.03	0.218%		
	(b) Toe/Retaining wall	Km	10.03			
	(x) Miscellaneous	Ls.	100%	0.164%	0.098%	0.098%
		<b>Total</b>			<b>100.00%</b>	

Work progress has been severely affected due to heavy monsoon during the month. The rainfall is recorded 28% more than average rainfall. Work Progress of structure is also affected due to non-availability of motorable approach to site especially to bypass stretches due to continuous heavy rainfall.

Four Laning of Sethiyahopu - Cholopuram from Km.65.960 to Km.116.440 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode

Sethiyahopu - Cholopuram Road Projects

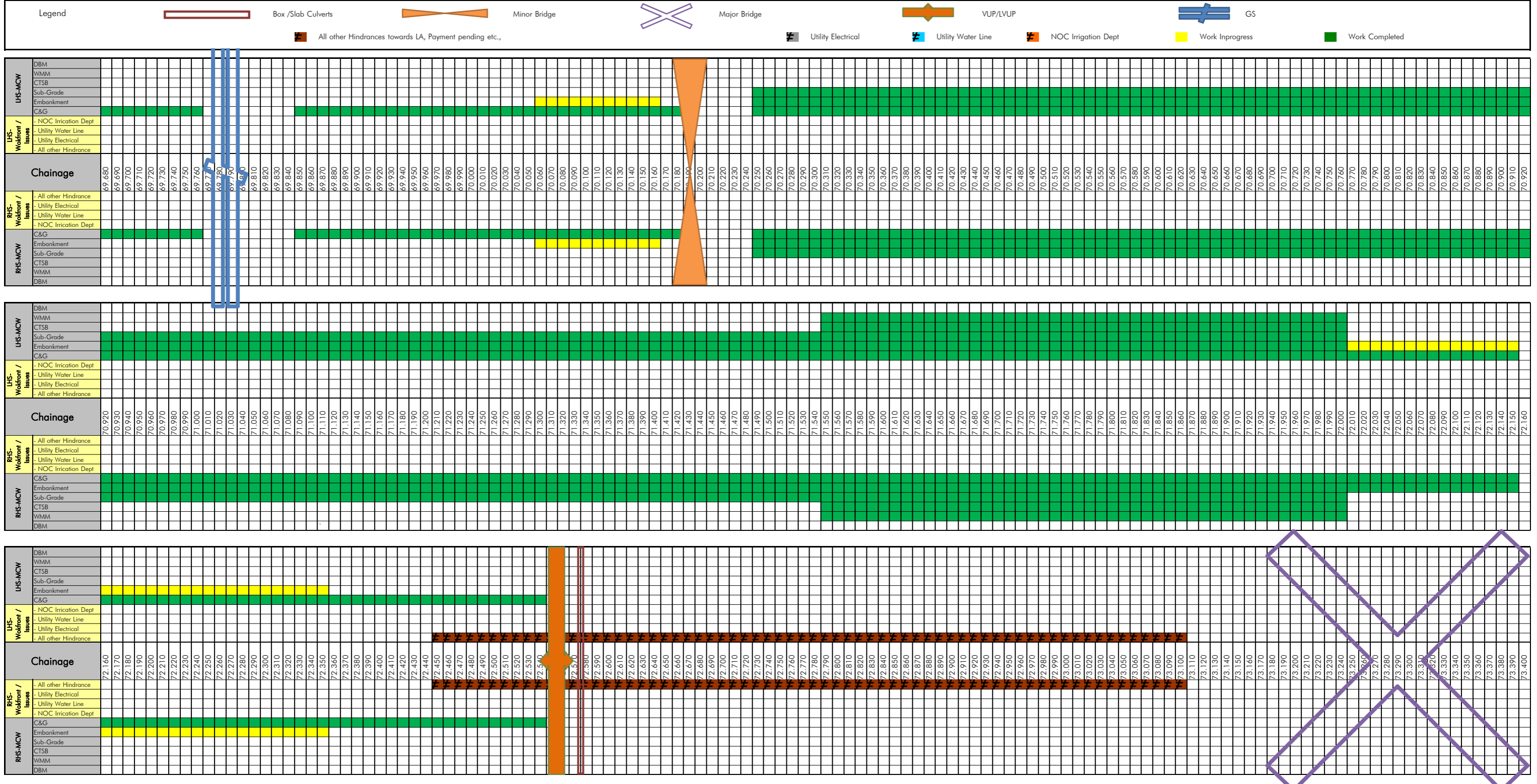
Strip Plan for MCW on 31-12-2020



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Sethiyahopu - Cholopuram Road Projects

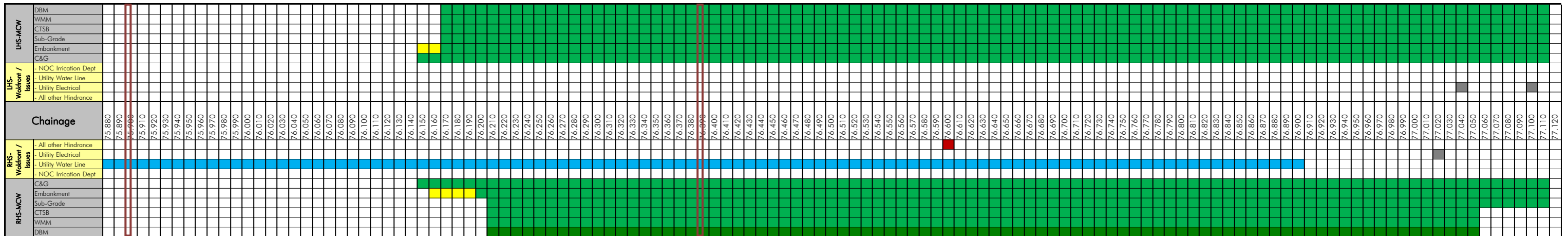
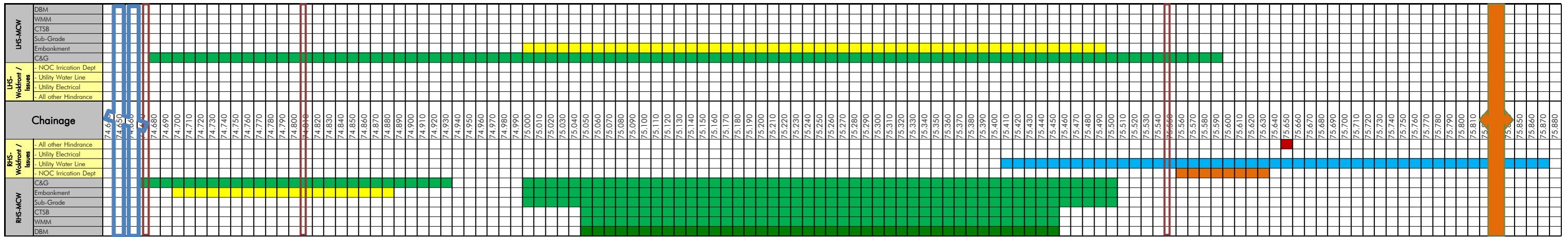
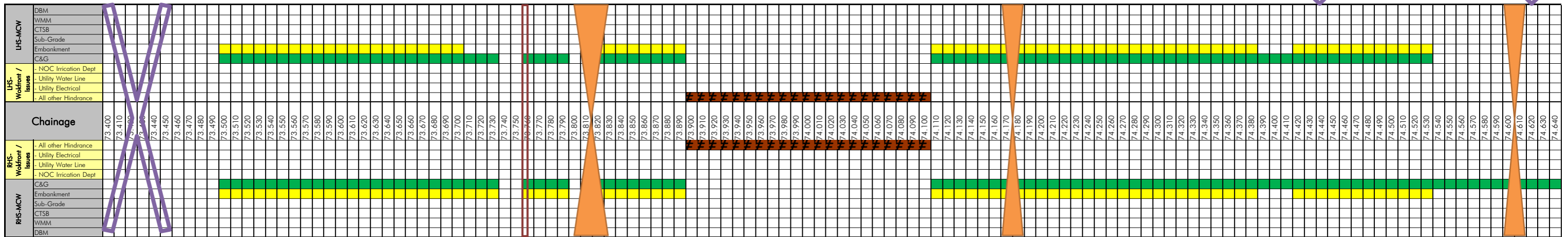
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Sethiyahopu - Cholopuram Road Projects

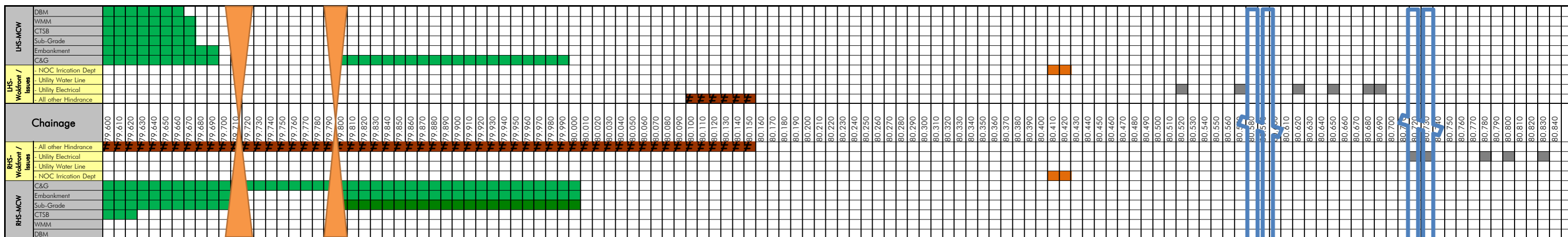
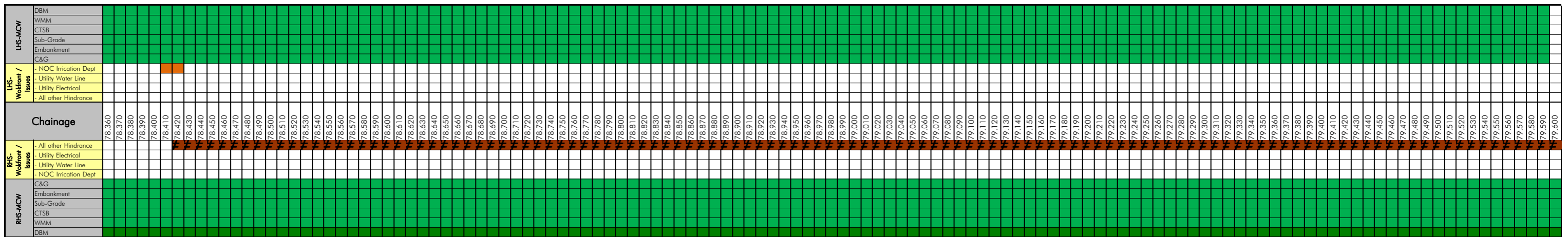
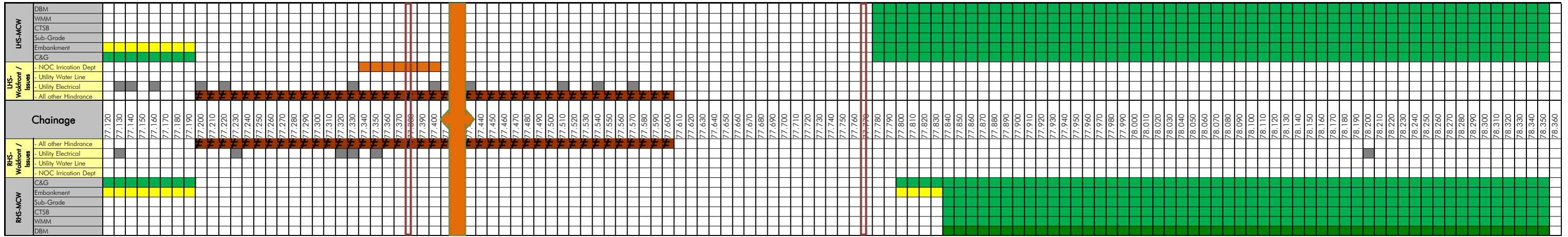
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Sethiyahopu - Cholopuram Road Projects

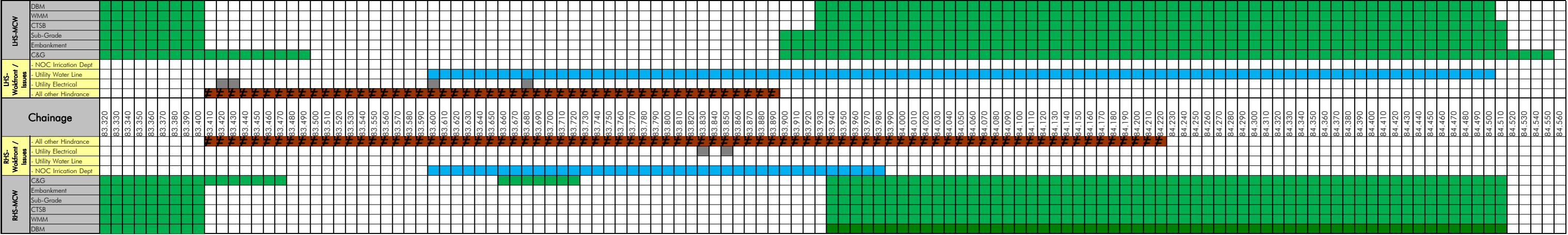
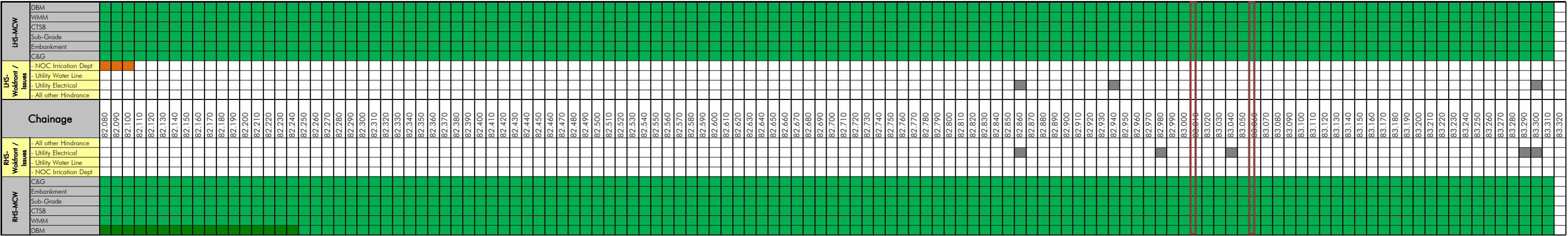
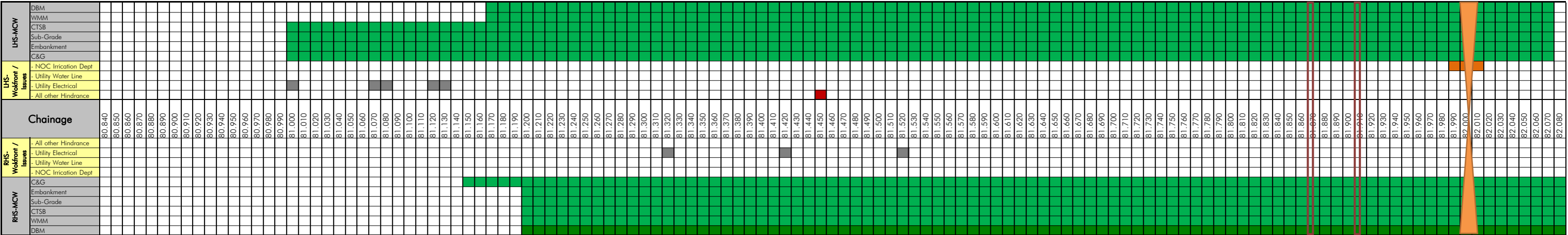
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Sethiyahopu - Cholapuram Road Projects

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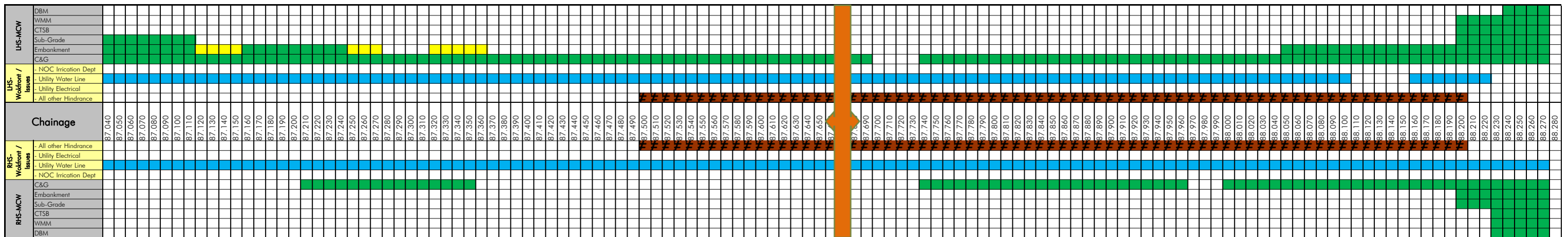
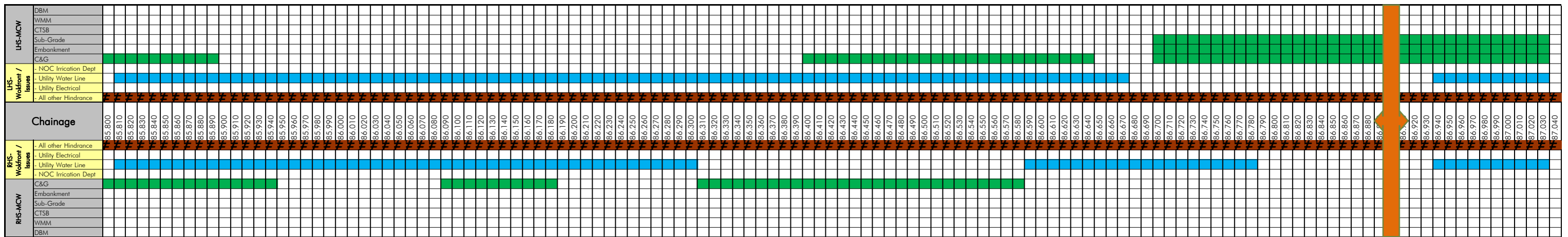
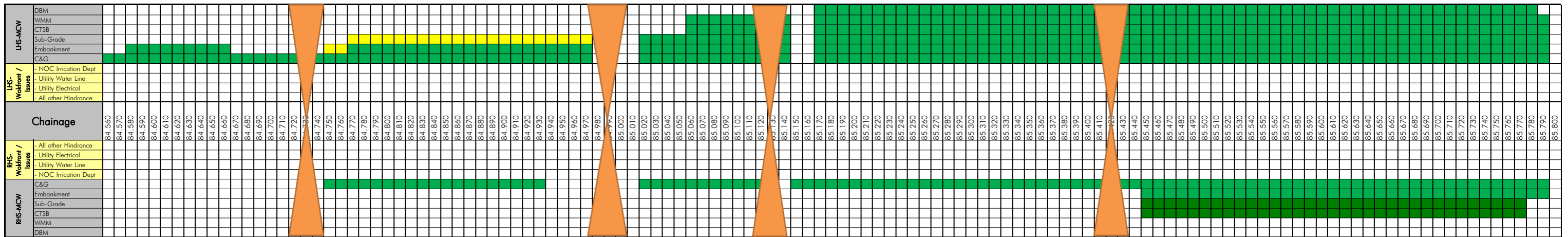




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Sethiyahopu - Cholopuram Road Projects

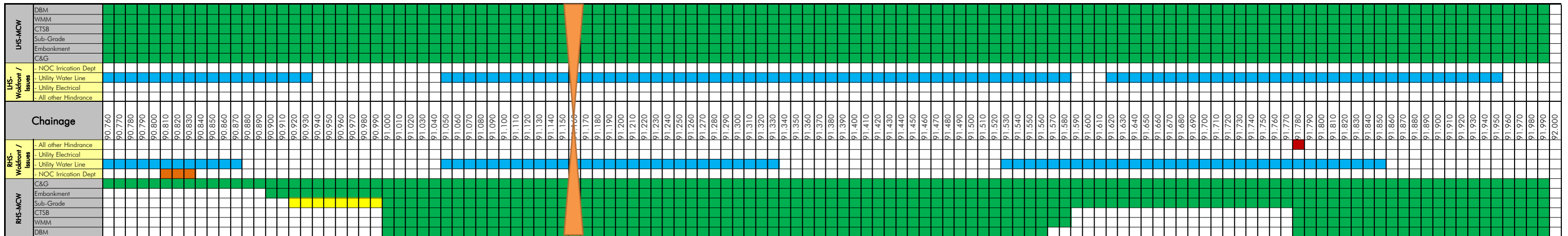
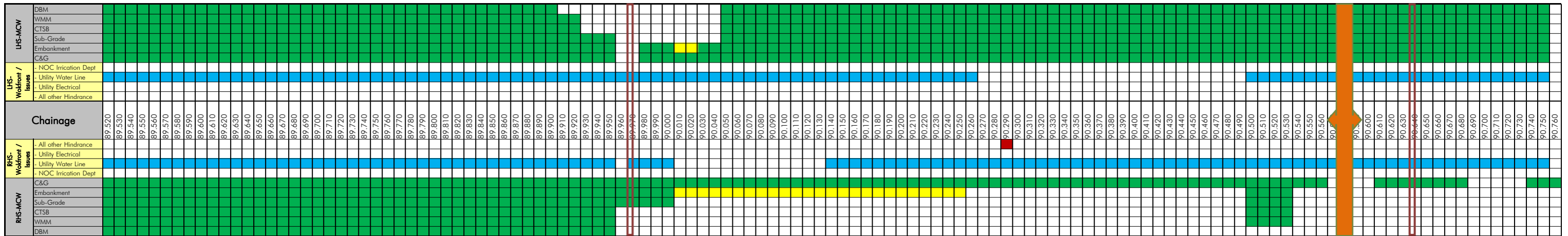
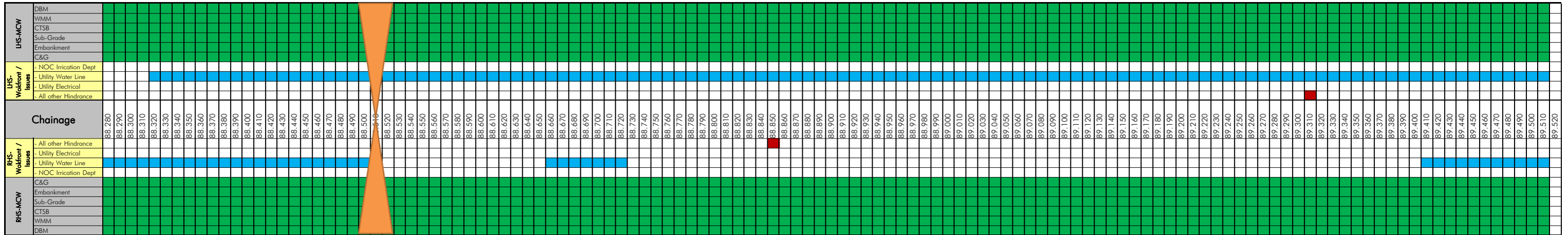
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Sethiyahopu - Cholopuram Road Projects

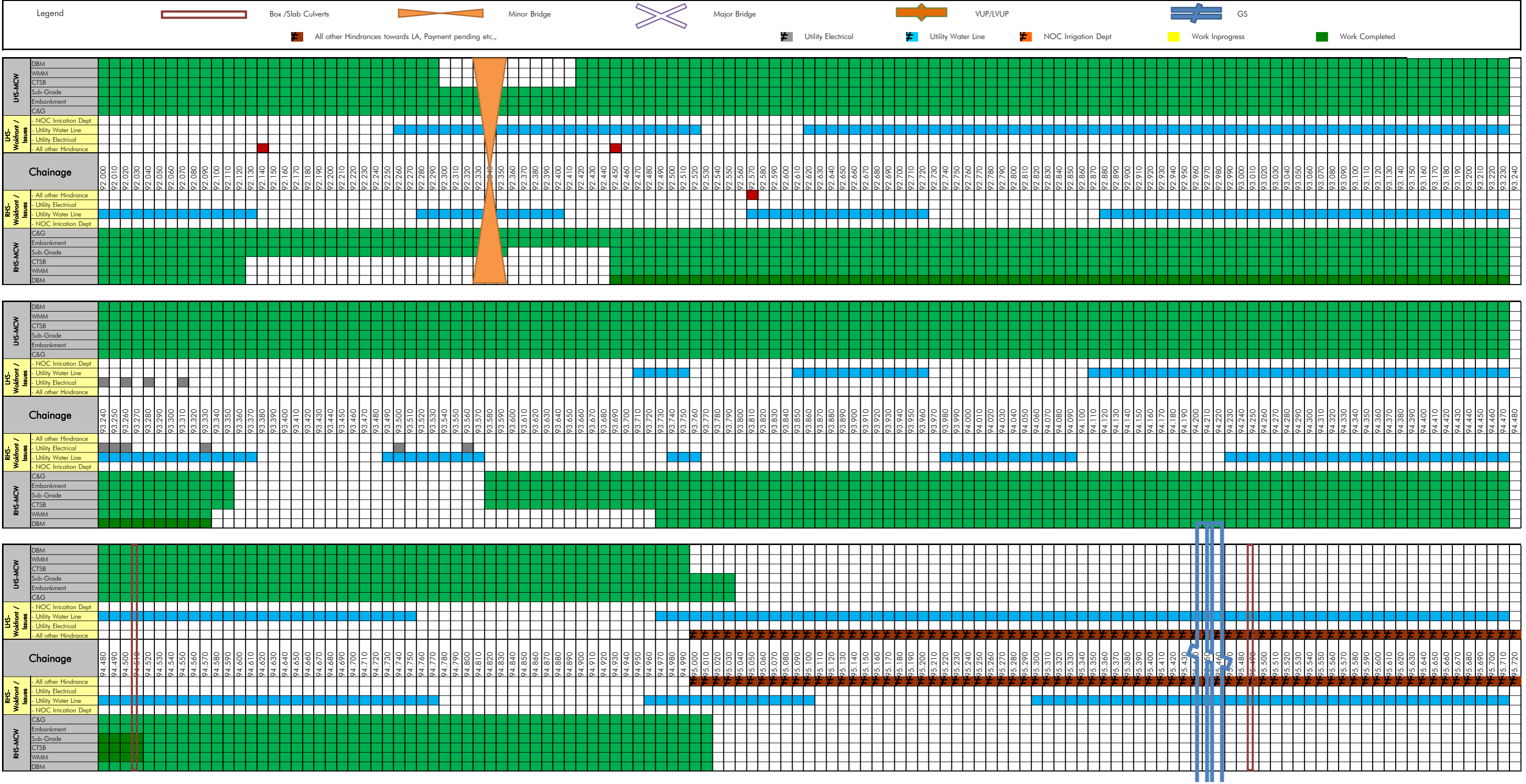
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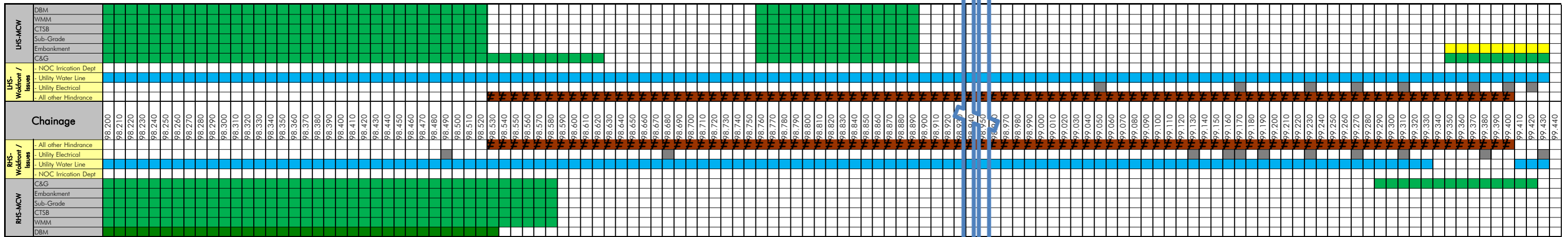
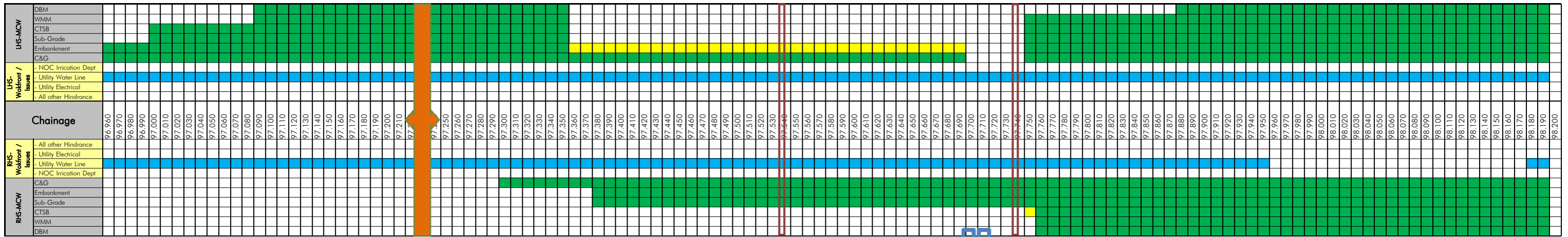
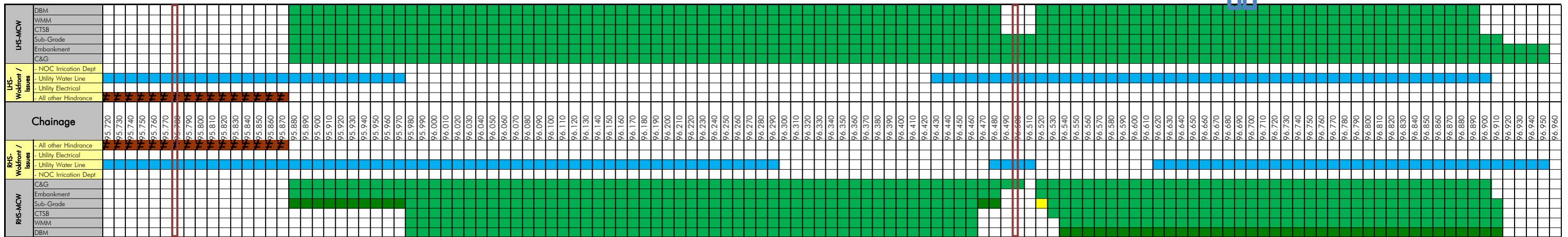
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Sethiyahopu - Cholopuram Road Projects

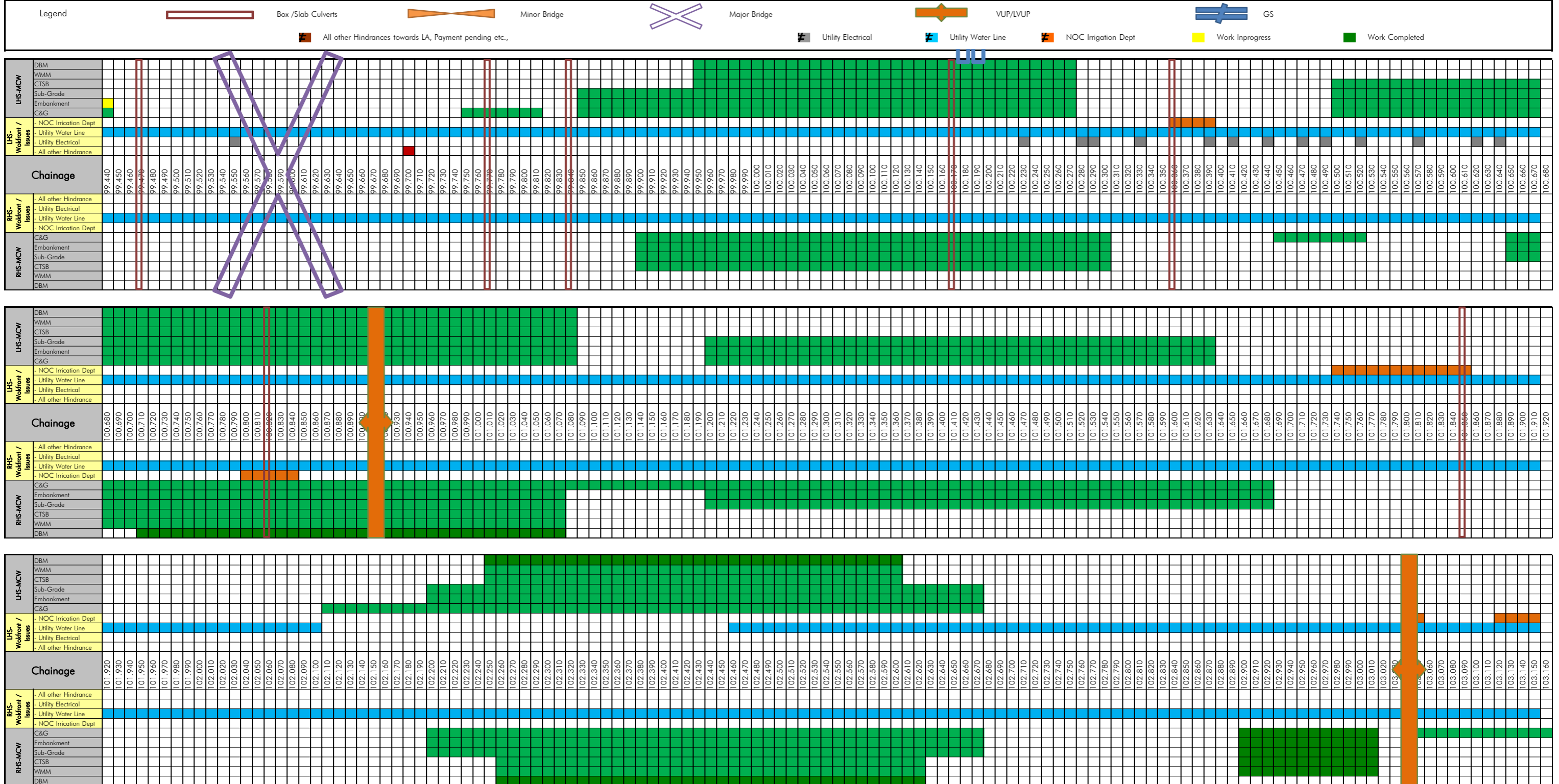
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Sethiyahopu - Cholopuram Road Projects

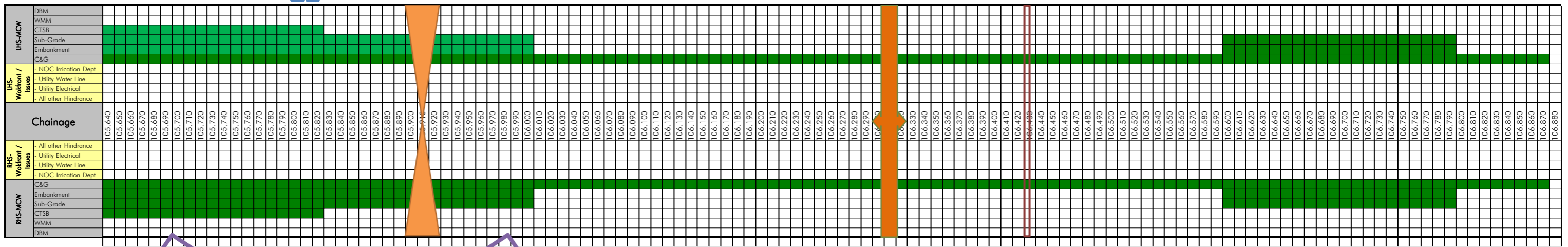
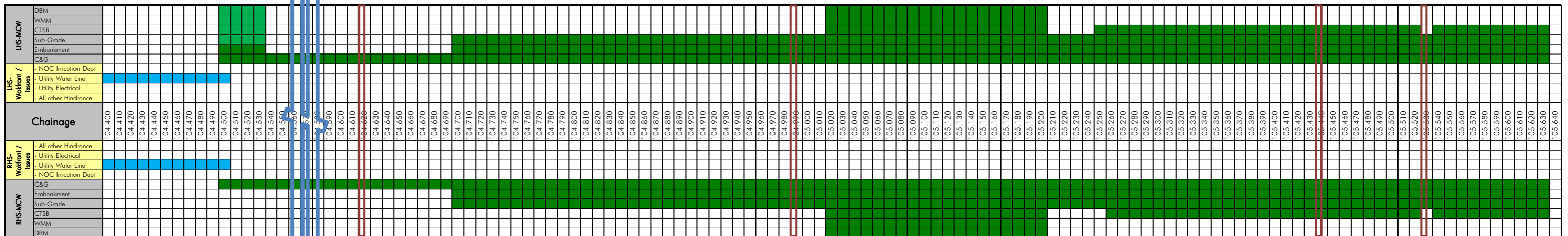
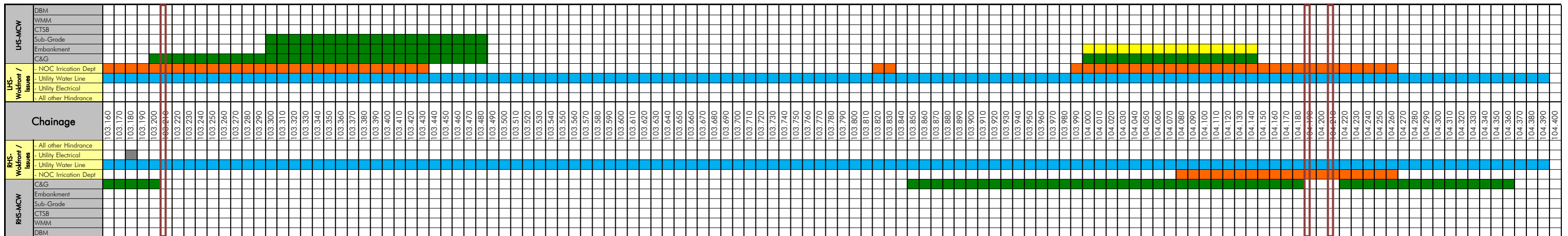
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Sethiyahopu - Cholopuram Road Projects

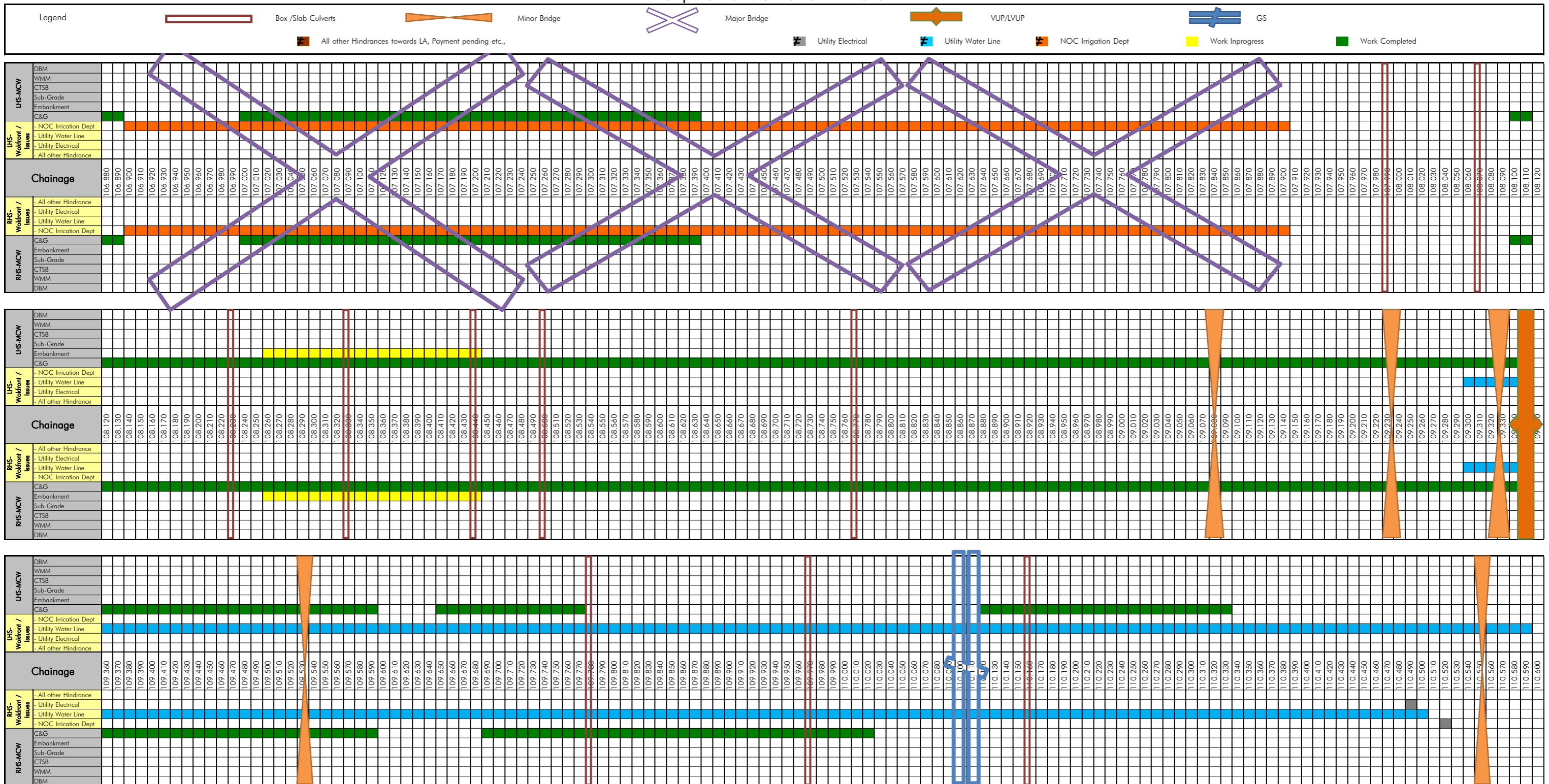
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Sethiyahopu - Cholopuram Road Projects

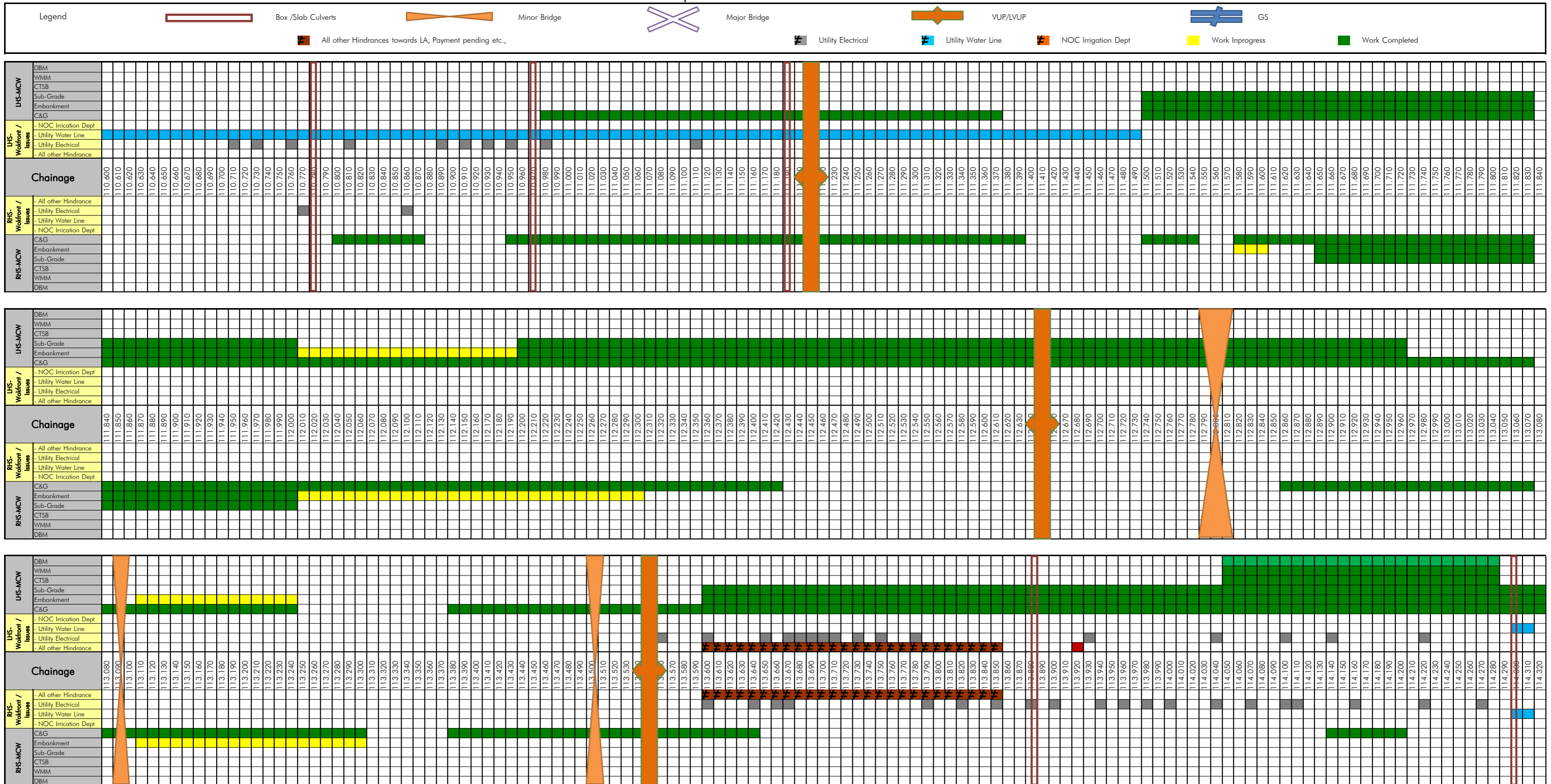
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Sethiyahopu - Cholopuram Road Projects

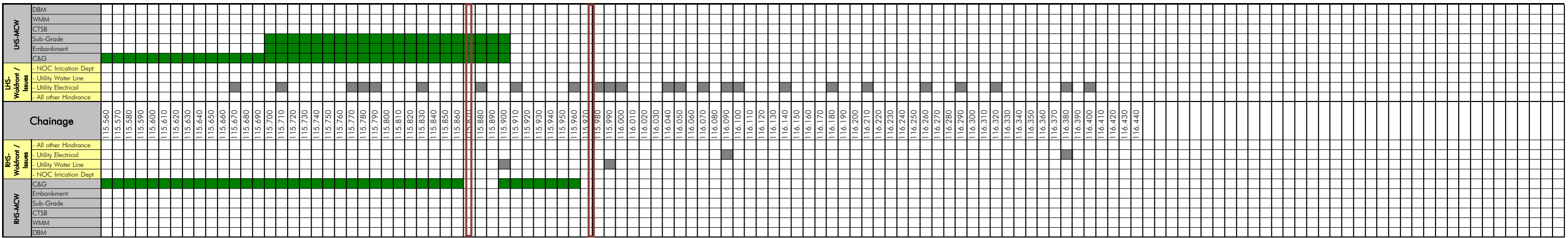
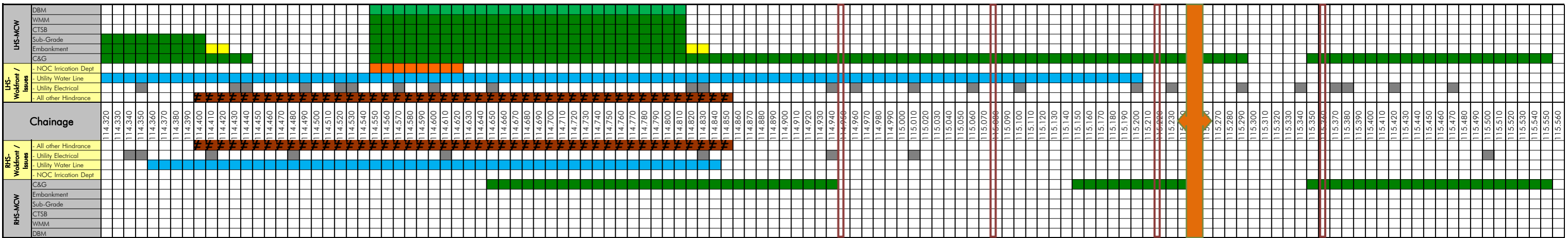
Strip Plan for MCW on 31-12-2020





Four Laning of Sethiyahopu - Cholopuram from Km.65.960 to Km.116.440 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode  
Sethiyahopu - Cholopuram Road Projects

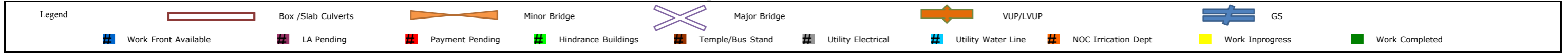
Strip Plan for MCW on 31-12-2020



# Four Laning of Sethiyahopu - Cholopuram from Km.65.960 to Km.116.440 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode

## Sethiyahopu - Cholopuram Road Projects

### Strip Plan for SR on 31.12.2020



LIIS-MCW	DBM	WMM	CTS	Sub-Grade	Embankment	C&G
<b>Chainage</b>						
RIIS-MCW						

LIIS-MCW	DBM	WMM	CTS	Sub-Grade	Embankment	C&G
<b>Chainage</b>						
RIIS-MCW						

LIIS-MCW	DBM	WMM	CTS	Sub-Grade	Embankment	C&G
<b>Chainage</b>						
RIIS-MCW						

LIIS-MCW	DBM	WMM	CTS	Sub-Grade	Embankment	C&G
<b>Chainage</b>						
RIIS-MCW						

LIIS-MCW	DBM	WMM	CTS	Sub-Grade	Embankment	C&G
<b>Chainage</b>						
RIIS-MCW						



# Four Laning of Sethiyahopu - Cholopuram from Km.65.960 to Km.116.440 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode

## Sethiyahopu - Cholopuram Road Projects

### Strip Plan for SR on 31.12.2020

**Legend**

		Box /Slab Culverts		Minor Bridge		Major Bridge		VUP/LVUP		GS									
	Work Front Available		LA Pending		Payment Pending		Hindrance Buildings		Temple/Bus Stand		Utility Electrical		Utility Water Line		NOC Irrigation Dept		Work Inprogress		Work Completed

		LHS-MCW												RHS-MCW											
		DBM	WMM	CTS	Sub-Grade	Embankment	C&G	DBM	WMM	CTS	Sub-Grade	Embankment	C&G												
	<b>Chainage</b>	89.520 89.530 89.540 89.550 89.560 89.570 89.580 89.590 89.600 89.610 89.620 89.630 89.640 89.650 89.660 89.670 89.680 89.690 89.700 89.710 89.720 89.730 89.740 89.750 89.760 89.770 89.780 89.790 89.800 89.810 89.820 89.830 89.840 89.850 89.860 89.870 89.880 89.890 89.900 89.910 89.920 89.930 89.940 89.950 89.960 89.970 89.980 89.990 90.000 90.010 90.020 90.030 90.040 90.050 90.060 90.070 90.080 90.090 90.100 90.110 90.120 90.130 90.140 90.150 90.160 90.170 90.180 90.190 90.200 90.210 90.220 90.230 90.240 90.250 90.260 90.270 90.280 90.290 90.300 90.310 90.320 90.330 90.340 90.350 90.360 90.370 90.380 90.390 90.400 90.410 90.420 90.430 90.440 90.450 90.460 90.470 90.480 90.490 90.500 90.510 90.520 90.530 90.540 90.550 90.560 90.570																							
		90.570 90.580 90.590 90.600 90.610 90.620 90.630 90.640 90.650 90.660 90.670 90.680 90.690 90.700 90.710 90.720 90.730 90.740 90.750 90.760 90.770 90.780 90.790 90.800 90.810 90.820 90.830 90.840 90.850 90.860 90.870 90.880 90.890 90.900 90.910 90.920 90.930 90.940 90.950 90.960 90.970 90.980 90.990 91.000 91.010 91.020 91.030 91.040 91.050 91.060 91.070 91.080 91.090 91.100 91.110 91.120 91.130 91.140 91.150 91.160 91.170 91.180 91.190 91.200 91.210 91.220 91.230 91.240 91.250 91.260 91.270 91.280 91.290 91.300 91.310 91.320 91.330 91.340 91.350 91.360 91.370 91.380 91.390 91.400 91.410 91.420 91.430 91.440 91.450 91.460 91.470 91.480 91.490 91.500 91.510 91.520 91.530 91.540 91.550 91.560 91.570																							

		LHS-MCW												RHS-MCW											
		DBM	WMM	CTS	Sub-Grade	Embankment	C&G	DBM	WMM	CTS	Sub-Grade	Embankment	C&G												
	<b>Chainage</b>	90.760 90.770 90.780 90.790 90.800 90.810 90.820 90.830 90.840 90.850 90.860 90.870 90.880 90.890 90.900																							
		91.480 91.490 91.500 91.510 91.520 91.530 91.540 91.550 91.560 91.570 91.580 91.590 91.600 91.610 91.620 91.630 91.640 91.650 91.660 91.670 91.680 91.690 91.700 91.710 91.720 91.730 91.740 91.750 91.760 91.770 91.780 91.790 91.800 91.810 91.820 91.830 91.840 91.850 91.860 91.870 91.880 91.890 91.900 91.910 91.920 91.930 91.940 91.950 91.960 91.970 91.980 91.990 92.000 92.010 92.020 92.030 92.040 92.050 92.060 92.070 92.080 92.090 92.100 92.110 92.120 92.130 92.140 92.150 92.160 92.170 92.180 92.190 92.200 92.210 92.220 92.230 92.240 92.250 92.260 92.270 92.280 92.290 92.300 92.310 92.320 92.330 92.340 92.350 92.360 92.370 92.380 92.390 92.400 92.410 92.420 92.430 92.440 92.450 92.460 92.470 92.480 92.490 92.500																							

		LHS-MCW												RHS-MCW											
		DBM	WMM	CTS	Sub-Grade	Embankment	C&G	DBM	WMM	CTS	Sub-Grade	Embankment	C&G												
	<b>Chainage</b>	93.240 93.250 93.260 93.270 93.280 93.290 93.300 93.310 93.320 93.330 93.340 93.350 93.360 93.370 93.380 93.390 93.400 93.410 93.420 93.430 93.440 93.450 93.460 93.470 93.480 93.490 93.500 93.510 93.520 93.530 93.540 93.550 93.560 93.570 93.580 93.590 93.600 93.610 93.620 93.630 93.640 93.650 93.660 93.670 93.680 93.690 93.700 93.710 93.720 93.730 93.740 93.750 93.760 93.770 93.780 93.790 93.800 93.810 93.820 93.830 93.840 93.850 93.860 93.870 93.880 93.890 93.900 93.910 93.920 93.930 93.940 93.950 93.960 93.970 93.980 93.990 94.000 94.010 94.020 94.030 94.040 94.050 94.060 94.070 94.080 94.090 94.100 94.110 94.120 94.130 94.140 94.150 94.160 94.170 94.180 94.190 94.200 94.210 94.220 94.230 94.240 94.250 94.260 94.270 94.280 94.290 94.300 94.310 94.320 94.330 94.340 94.350 94.360 94.370 94.380 94.390 94.400 94.410 94.420 94.430 94.440 94.450 94.460 94.470 94.480																							

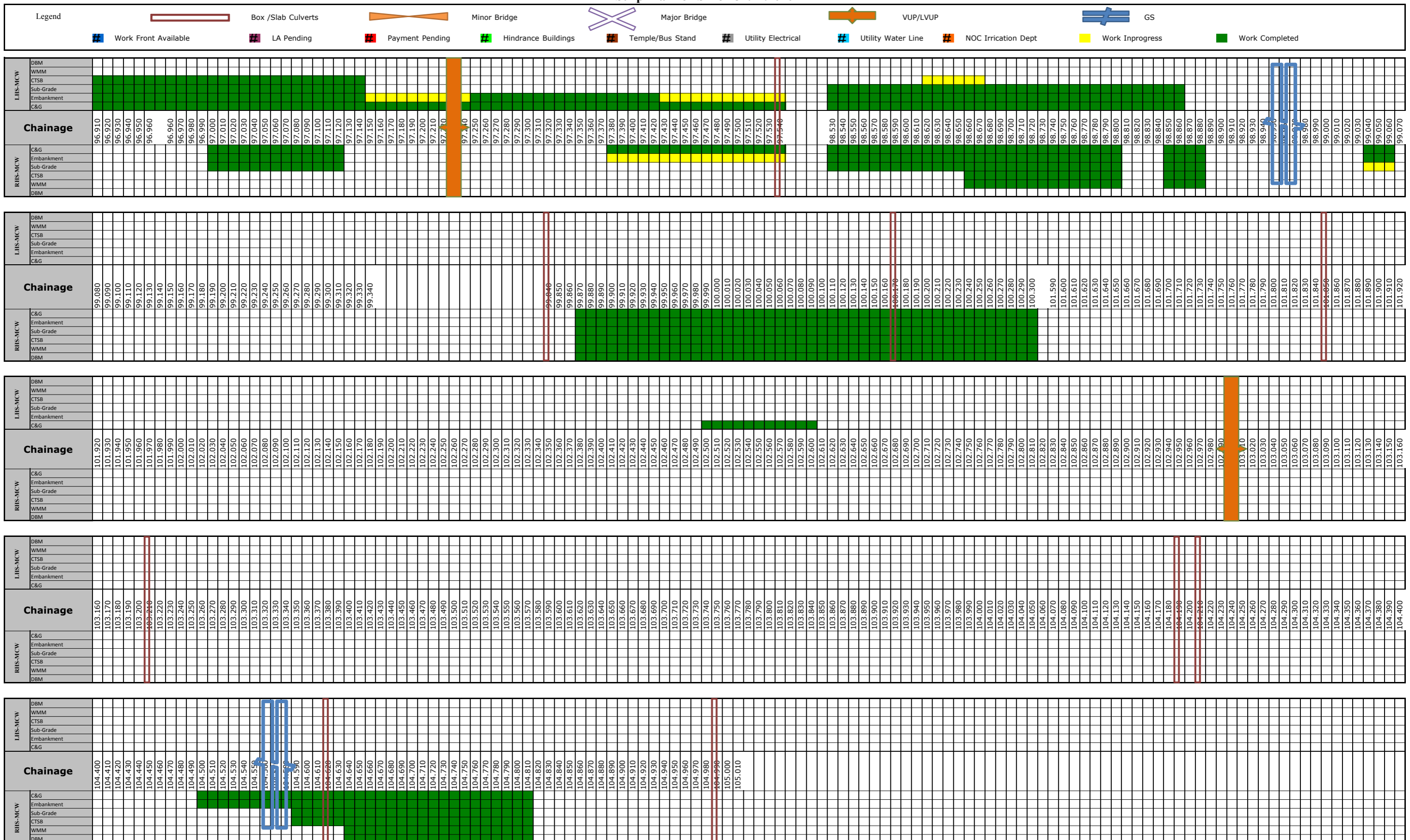
		LHS-MCW												RHS-MCW											
		DBM	WMM	CTS	Sub-Grade	Embankment	C&G	DBM	WMM	CTS	Sub-Grade	Embankment	C&G												
	<b>Chainage</b>	94.480 94.490 94.500 94.510 94.520 94.530 94.540 94.550 94.560 94.570 94.580 94.590 94.600 94.610 94.620 94.630 94.640 94.650 94.660 94.670 94.680 94.690 94.700 94.710 94.720 94.730 94.740 94.750 94.760 94.770 94.780 94.790 94.800 94.810 94.820 94.830 94.840 94.850 94.860 94.870 94.880 94.890 94.900 94.910 94.920 94.930 94.940 94.950 94.960 94.970 94.980 94.990 95.000 95.010 95.020 95.030 95.040 95.050 95.060 95.070 95.080 95.090 95.100 95.110 95.120 95.130 95.140 95.150 95.160 95.170 95.180 95.190 95.200 95.210 95.220 95.230 95.240 95.250 95.260 95.270 95.280 95.290 95.300 95.310 95.320 95.330 95.340 95.350 95.360 95.370 95.380 95.390 95.400 95.410 95.420 95.430 95.440 95.450 95.460 95.470 95.480 95.490 95.500 95.510 95.520 95.530 95.540 95.550 95.560 95.570 95.580 95.590 95.600 95.610 95.620 95.630 95.640 95.650 95.660 95.670 95.680 95.690 95.700 95.710 95.720																							

		LHS-MCW												RHS-MCW											
		DBM	WMM	CTS	Sub-Grade	Embankment	C&G	DBM	WMM	CTS	Sub-Grade	Embankment	C&G												
	<b>Chainage</b>	95.720 95.730 95.740 95.750 95.760 95.770 95.780 95.790 95.800 95.810 95.820 95.830 95.840 95.850 95.860 95.870 95.880 95.890 95.900 95.910 95.920 95.930 95.940 95.950 95.960 95.970 95.980 95.990 96.000 96.010 96.020 96.030 96.040 96.050 96.060 96.070 96.080 96.090 96.100 96.110 96.120 96.130 96.140 96.150 96.160 96.170 96.180 96.190 96.200 96.210 96.220 96.230 96.240 96.250 96.260 96.270 96.280 96.290 96.300 96.310 96.320 96.330 96.340 96.350 96.360 96.370 96.380 96.390 96.400																							

Four Laning of Sethiyahopu - Cholapuram from Km.65.960 to Km.116.440 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode

Sethiyahopu - Cholapuram Road Projects

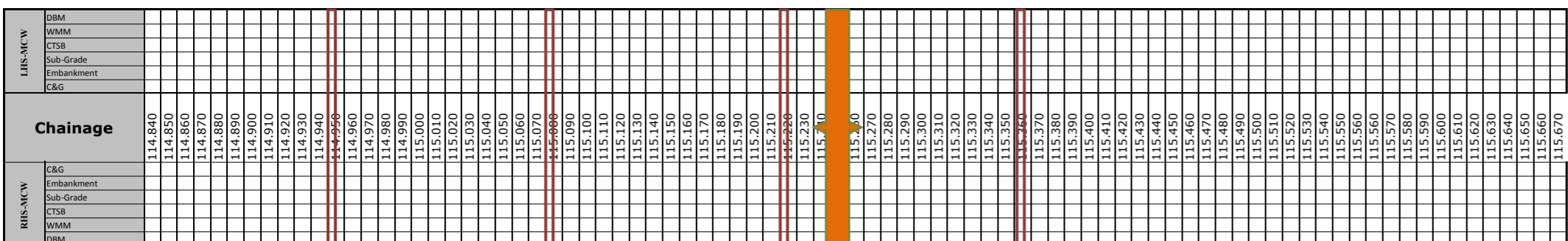
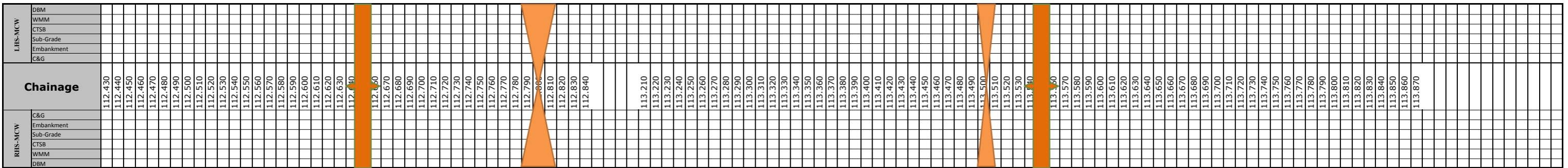
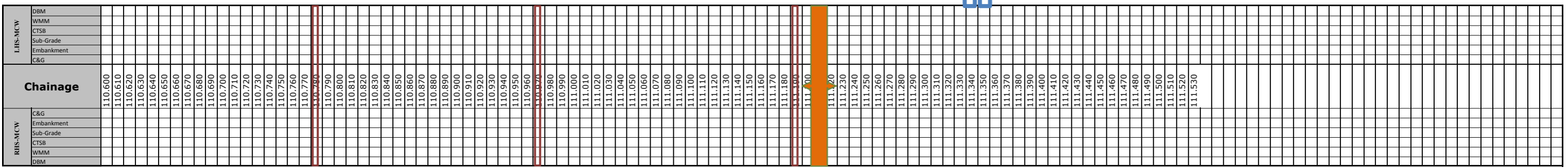
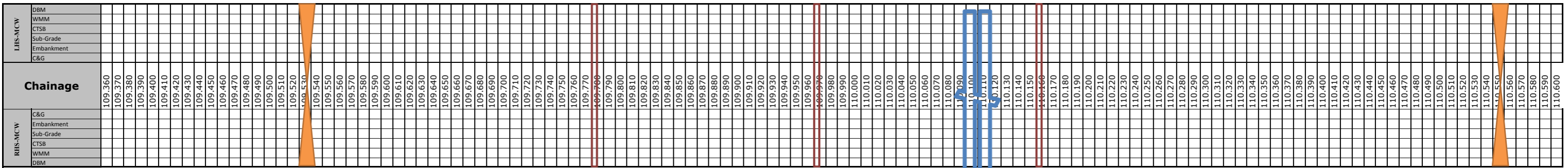
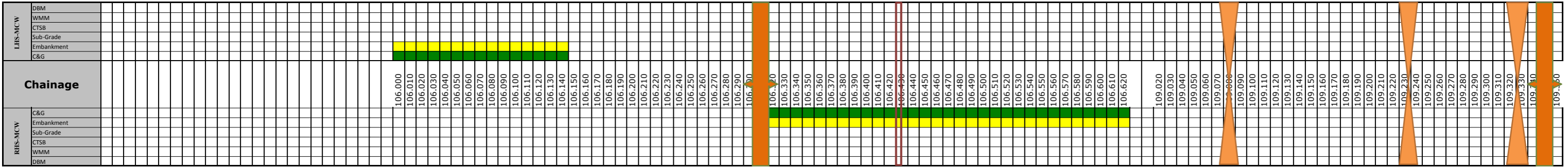
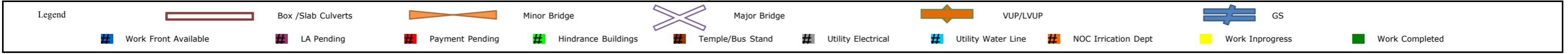
Strip Plan for SR on 31.12.2020



Four Laning of Sethiyahopu - Cholopuram from Km.65.960 to Km.116.440 Section of NH45C in the state of Tamil Nadu Under NHDP Phase-IV on Hybrid Annuity Mode

Sethiyahopu - Cholopuram Road Projects

Strip Plan for SR on 31.12.2020



SETHIAHOPU CHOLOPURAM PROJECT - STATUS OF BOX CULVERTS ON EXISTING ROAD - MCW							Completed	In Progress													
Status Upto	31.12.2020						LHS							RHS							
Sr. No.	As Approved by IE	Design Chainage As per CA		Number and Length of Spans (m)	Remarks	Type of Structure	Protection Work	Slab	Wall	Raft	PCC	Granular Filling	Excavation	Excavation	Granular Filling	PCC	Raft	Wall	Slab	Protection Work	
1	74+675	74.670	EXISTING	1 x 3.0m x 2.0m	New Construction	BOX CULVERT															
2	74+800	74.808	EXISTING	1 x 1.20m	Reconstruction	BOX CULVERT															
3	75+558	75.555	EXISTING	1x3.0m	Reconstruction	BOX CULVERT															
4	75+902	75.897	EXISTING	1 x 2.0m x 2.0m	Reconstruction	BOX CULVERT															
5	76+390	76.387	EXISTING	1 x 3.0m	Reconstruction	BOX CULVERT															
6	77+382	77.379	EXISTING	1 x 4.0m	Reconstruction	BOX CULVERT															
7	77+766	77.764	EXISTING	1 x 2.0m	Widening	BOX CULVERT															
8	81+868	81.867	EXISTING	1 x 2.0m x 2.0m	Reconstruction	BOX CULVERT															
9	81+913	81.910	EXISTING	1 x 1.95m x 1.0m	Widening	BOX CULVERT															
10	83+012	83.007	EXISTING	2 x 2.0m x 2.0m	Reconstruction	BOX CULVERT															
11	83+065	83.062	EXISTING	1 x 2.0m x 2.0m	Reconstruction	BOX CULVERT															
12	89+973	89.969	EXISTING	4 x 0.75m	Widening	BOX CULVERT															
13	90+640	90.637	EXISTING	1 x 1.20m	Reconstruction	BOX CULVERT															
14	94+509	94.509	EXISTING	1 x 3.6m x 1.6m	Widening	BOX CULVERT															
15	95+495	95.490	EXISTING	1 x 1.2m x 0.9m	Reconstruction	BOX CULVERT															
16	95+794	95.787	EXISTING	1 x 1.20m	Reconstruction	BOX CULVERT															
17	96+511	96.505	EXISTING	1 x 5.0m	Reconstruction	BOX CULVERT															
18	97+530	97.534	EXISTING	1x2.0m	Reconstruction	BOX CULVERT															
19	97+742	97.738	EXISTING	1 x 3.0m x 1.0m	Widening	BOX CULVERT															
20	99+471	99.467	EXISTING	1 x 3.0m x 4.0m	Repair & Widening	BOX CULVERT															
21	99+776	99.769	EXISTING	1 x 2.0m x 2.0m	Repair & Widening	BOX CULVERT															
22	99+840	99.838	EXISTING	1 x 1.5m x 1.5m	Repair & Widening	BOX CULVERT															
23	100+177	100.173	EXISTING	1 x 1m	Repair & Widening	BOX CULVERT															
24	100+364	100.358	EXISTING	1 x 10m	Repair & Widening	BOX CULVERT															
25	100+823	100.817	EXISTING	1 x 3.5m x 2.5m	Repair & Widening	BOX CULVERT															
26	101+851	101.851	EXISTING	1 x 1.5m x 1.5m	Repair & Reconstruction	BOX CULVERT															
27	103+220	103.214	EXISTING	1 x 4.0m x 2.5m	Repair & Reconstruction	BOX CULVERT															
28	104+197	104.190	EXISTING	1 x 1.0m	Repair & Reconstruction	BOX CULVERT															
29	104+215	104.208	EXISTING	1 x 1.0m	Reconstruction	BOX CULVERT															
30	109+786	109.779	EXISTING	1 x 1.0m	Repair & Reconstruction	BOX CULVERT															
31	109+975	109.967	EXISTING	1 x 2.0m x 1.7m	Repair & Reconstruction	BOX CULVERT															
32	110+167	110.160	EXISTING	2 x 1.0m	Repair & Reconstruction	BOX CULVERT															
33	110+795	110.785	EXISTING	1 x 1.2m x 2.0m	Repair & Widening	BOX CULVERT															
34	110+980	110.971	EXISTING	1 x 1.5m x 2.0m	Repair & Reconstruction	BOX CULVERT															
35	113+897	113.885	EXISTING	1 x 1.0m	Repair & Widening	BOX CULVERT															
36	114+313	114.300	EXISTING	1 x 1.0m	Repair & Widening	BOX CULVERT															
37	114+703	114.703	EXISTING			BOX CULVERT															
38	114+954	114.952	EXISTING	1 x 1.0m	Repair & Reconstruction	BOX CULVERT															
39	115+097	115.087	EXISTING	2 x 1.0m	Repair & Reconstruction	BOX CULVERT															
40	115+232	115.221	EXISTING	1 x 2.0m x 2.0m	Repair & Reconstruction	BOX CULVERT															
41	115+381	115.368	EXISTING	1 x 2.0m	Repair & Reconstruction	BOX CULVERT															
42	115+884	115.872	EXISTING	2 x 1.0m	Repair & Widening	BOX CULVERT															
43	115+978	115.978	EXISTING	1 x 2.0m x 2.0m	Repair & Widening	BOX CULVERT															

SETHIAHOPU CHOLOPURAM PROJECT - STATUS OF BOX CULVERTS ON EXISTING ROAD - SERVICE ROAD							Completed							In Progress							
Status Upto	31.12.2020						LHS							RHS							
Sr. No.	As Approved by IE	Design Chainage As per CA		Number and Length of Spans (m)	Remarks	Type of Structure	Protection Work	Slab	Wall	Raft	PCC	Granular Filling	Excavation	Excavation	Granular Filling	PCC	Raft	Wall	Slab	Protection Work	
1	74+675	74.670	EXISTING	1 x 3.0m x 2.0m	New Construction	BOX CULVERT															
2	74+800	74.808	EXISTING	1 x 1.20m	Reconstruction	PIPE CULVERT															
3	75+558	75.555	EXISTING	1x3.0m	Reconstruction	BOX CULVERT															
4	75+902	75.897	EXISTING	1 x 2.0m x 2.0m	Reconstruction	BOX CULVERT															
5	76+390	76.387	EXISTING	1 x 3.0m	Reconstruction	BOX CULVERT															
6	77+382	77.379	EXISTING	1 x 4.0m	Reconstruction	BOX CULVERT															
7	77+766	77.764	EXISTING	1 x 2.0m	Widening	BOX CULVERT															
8	83+012	83.007	EXISTING	2 x 2.0m x 2.0m	Reconstruction	BOX CULVERT															
9	83+065	83.062	EXISTING	1 x 2.0m x 2.0m	Reconstruction	BOX CULVERT															
10	89+973	89.969	EXISTING	4 x 0.75m	Widening	PIPE CULVERT															
11	90+640	90.637	EXISTING	1 x 1.20m	Reconstruction	PIPE CULVERT															
12	94+509	94.509	EXISTING	1 x 3.6m x 1.6m	Widening	BOX CULVERT															
13	95+495	95.490	EXISTING	1 x 1.2m x 0.9m	Reconstruction	BOX CULVERT															
14	95+794	95.787	EXISTING	1 x 1.20m	Reconstruction	PIPE CULVERT															
15	96+511	96.505	EXISTING	1 x 5.0m	Reconstruction	BOX CULVERT															
16	97+530	97.534	EXISTING	1x2.0m	Reconstruction	BOX CULVERT															
17	99+776	99.769	EXISTING	1 x 2.0m x 2.0m	Repair & Widening	BOX CULVERT															
18	99+840	99.838	EXISTING	1 x 1.5m x 1.5m	Repair & Widening	BOX CULVERT															
19	100+177	100.173	EXISTING	1 x 1m	Repair & Widening	PIPE CULVERT															
20	100+364	100.358	EXISTING	1 x 10m	Repair & Widening	BOX CULVERT															
21	101+851	101.851	EXISTING	1 x 1.5m x 1.5m	Repair & Reconstruction	BOX CULVERT															
22	103+220	103.214	EXISTING	1 x 4.0m x 2.5m	Repair & Reconstruction	BOX CULVERT															
23	104+197	104.190	EXISTING	1 x 1.0m	Repair & Reconstruction	PIPE CULVERT															
24	104+215	104.208	EXISTING	1 x 1.0m	Reconstruction	PIPE CULVERT															
25	109+786	109.779	EXISTING	1 x 1.0m	Repair & Reconstruction	PIPE CULVERT															
26	109+975	109.967	EXISTING	1 x 2.0m x 1.7m	Repair & Reconstruction	BOX CULVERT															
27	110+167	110.160	EXISTING	2 x 1.0m	Repair & Reconstruction	PIPE CULVERT															
28	110+795	110.785	EXISTING	1 x 1.2m x 2.0m	Repair & Widening	BOX CULVERT															
29	110+980	110.971	EXISTING	1 x 1.5m x 2.0m	Repair & Reconstruction	BOX CULVERT															
30	113+897	113.885	EXISTING	1 x 1.0m	Repair & Widening	PIPE CULVERT															
31	114+313	114.300	EXISTING	1 x 1.0m	Repair & Widening	PIPE CULVERT															
32	114+954	114.952	EXISTING	1 x 1.0m	Repair & Reconstruction	PIPE CULVERT															
33	115+097	115.087	EXISTING	2 x 1.0m	Repair & Reconstruction	PIPE CULVERT															
34	115+232	115.221	EXISTING	1 x 2.0m x 2.0m	Repair & Reconstruction	BOX CULVERT															
35	115+381	115.368	EXISTING	1 x 2.0m	Repair & Reconstruction	BOX CULVERT															
36	115+884	115.872	EXISTING	2 x 1.0m	Repair & Widening	PIPE CULVERT															
37	115+978	115.978	EXISTING	1 x 2.0m x 2.0m	Repair & Widening	BOX CULVERT															



SETHIAHOPU CHOLOPURAM PROJECT - STATUS OF BOX CULVERTS ON BYPASS - MCW						Completed							In Progress							
Status Upto	31.12.2020					LHS							RHS							
Sr. No.	As Approved by IE	Design Chainage As per CA		Number and Length of Spans (m)	Type of Structure	Protection Work	Slab	Wall	Raft	PCC	Granular Filling	Excavation	Excavation	Granular Filling	PCC	Raft	Wall	Slab	Protection Work	
1	66+357	66.383	BYPASS	1 x 3.0m x 2.0m	BOX CULVERT															
2	67+068	67.068	BYPASS	1 x 3.0m x 2.0m	BOX CULVERT															
3	69+357	69.357	BYPASS	1 x 2.0m x 2.0m	BOX CULVERT															
4	72+570	72.578	BYPASS	1 x 3.0m x 2.0m	BOX CULVERT															
5	73+755	73.755	BYPASS	1x1.2.0mx2.0m	PIPE CULVERT															
6	104+622	104.618	BYPASS	1 x 2.0m x 2.0m	BOX CULVERT															
7	104+998	104.992	BYPASS	1 x 4.0m x 2.0m	BOX CULVERT															
8	105+440	105.440	BYPASS	1 x 2.0m x 2.0m	BOX CULVERT															
9	105+536	105.525	BYPASS	1 x 2.0m x 2.0m	BOX CULVERT															
10	106+442	106.432	BYPASS	1 x 2.0m x 2.0m	BOX CULVERT															
11	108+002	107.994	BYPASS	1 x 3.0m x 2.0m	BOX CULVERT															
12	108+080	108.070	BYPASS	1 x 4.0m x 2.0m	BOX CULVERT															
13	108+225	108.225	BYPASS	1 x 3.0m x 2.0m	BOX CULVERT															
14	108+345	108.334	BYPASS	1 x 3.0m x 2.0m	BOX CULVERT															
15	108+441	108.441	BYPASS	1 x 3.0m x 2.0m	BOX CULVERT															
16	108+540	108.500	BYPASS	1 x 2.0m x 2.0m	BOX CULVERT															
17	108+767	108.767	BYPASS	1 x 4.0m x 2.0m	BOX CULVERT															
18	111+205	111.196	BYPASS	1 x 1.0m	PIPE CULVERT															
19	111+452	111.452	BYPASS		PIPE CULVERT															

SETHIYAHOPU CHOLOPURAM PROJECT - STATUS OF BOX CULVERTS ON BYPASS - SERVICE ROAD						Completed							In Progress						
Status Upto	31.12.2020					LHS							RHS						
Sr. No.	As Approved by IE	Design Chainage As per CA		Number and Length of Spans (m)	Type of Structure	Protection Work	Slab	Wall	Raft	PCC	Granular Filling	Excavation	Excavation	Granular Filling	PCC	Raft	Wall	Slab	Protection Work
1	72+570	72.578	BYPASS	1 x 3.0m x 2.0m	BOX CULVERT														
2	104+622	104.618	BYPASS	1 x 2.0m x 2.0m	BOX CULVERT														
3	104+998	104.992	BYPASS	1 x 4.0m x 2.0m	BOX CULVERT														
4	106+442	106.432	BYPASS	1 x 2.0m x 2.0m	BOX CULVERT														
5	111+205	111.196	BYPASS	1 x 1.0m	PIPE CULVERT														

SETHIAHOPU CHOLOPURAM PROJECT - STATUS OF MNB-BOX - MCW						Completed	In Progress													
Status Upto	31.12.2020					LHS							RHS							
Sr. No.	As Approved by IE	Design Chainage As per CA	Number and Length of Spans (m)	Type of Structure		Protection Work	Slab	Wall	Raft	PCC	Granular Filling	Excavation	Excavation	Granular Filling	PCC	Raft	Wall	Slab	Protection Work	
1	79+716	79.715	1 x 12.50m	MNBB	Widening															
2	79+795	79.795	2 x 12.50m	MNBB	Re-Const.															
3	82+007	82.006	2 x 12.50m	MNBB	Widening															
4	85+144	85.144	2 x 12.50m	MNBB	Re-Const.															
5	85+435	85.432	1 x 12.50m	MNBB	Widening															
6	88+513	88.513	1 x 12.50m	MNBB	Widening															
7	91+164	91.165	2 x 12.50m	MNBB	Re-Const.															
8	92+343	92.342	1 x 12.50m	MNBB	Widening															
9	101+101	101.100		MNBB	EXISTING															
10	66+757	66.730	2 x 12.5m	MNBB	BYPASS															
11	68+644	68.650	2 x 12.5m	MNBB	BYPASS															
12	74+173	74.175	2 x 12.5m	MNBB	BYPASS															
13	74+605	74.600	2 x 12.5m	MNBB	BYPASS															
14	105+915	105.915	2 x 12.5m	MNBB	BYPASS															
15	109+090	109.088	2 x 12.5m	MNBB	BYPASS															
16	109+195	109.208	2 x 12.5m	MNBB	BYPASS															
17	109+365	109.365	2 x 12.5m	MNBB	BYPASS															
18	109+540	109.540	2 x 12.5m	MNBB	BYPASS															
19	111+563	111.565	2 x 12.5m	MNBB	BYPASS															
20	112+807	112.807	1 x 25m	MNBB	BYPASS															
21	113+100	113.100	2 x 12.5m	MNBB	BYPASS															
22	113+505	113.505	2 x 12.5m	MNBB	BYPASS															

SETHIAHOPU CHOLOPURAM PROJECT - STATUS OF MNB-BOX - SERVICE ROAD						Completed							In Progress							
Status Upto	31.12.2020					LHS							RHS							
Sr. No.	As Approved by IE	Design Chainage As per CA	Number and Length of Spans (m)	Type of Structure		Protection Work	Slab	Wall	Raft	PCC	Granular Filling	Excavation	Excavation	Granular Filling	PCC	Raft	Wall	Slab	Protection Work	
1	74+605	74.600	2 x 12.5m	MNBB	BYPASS															
2	105+915	105.915	2 x 12.5m	MNBB	BYPASS															
3	109+090	109.088	2 x 12.5m	MNBB	BYPASS															
4	109+195	109.208	2 x 12.5m	MNBB	BYPASS															
5	109+365	109.365	2 x 12.5m	MNBB	BYPASS															
6	109+540	109.540	2 x 12.5m	MNBB	BYPASS															
7	111+563	111.565	2 x 12.5m	MNBB	BYPASS															
8	112+807	112.807	1 x 25m	MNBB	BYPASS															
9	113+100	113.100	2 x 12.5m	MNBB	BYPASS															
10	113+505	113.505	2 x 12.5m	MNBB	BYPASS															

SETHIAHOPU CHOLOPURAM PROJECT - STATUS OF LVUP					Completed							In Progress						
Status Upto	31.12.2020				LHS						RHS							
Sr. No.	As Approved by IE	Number and Length of Spans (m)	Type of Structure		Protection Work	Slab	Wall	Raft	PCC	Excavation	Excavation	PCC	Raft	Wall	Slab	Protection Work		
1	77+420	1X10.5	LVUP	EXISTING														
2	112+643	1X10.5	LVUP	BYPASS														

SETHIYAHOPU CHOLOPURAM PROJECT - STATUS OF MNB (>15m Span)				Completed	In Progress																				
Status upto	31.12.2020	LHS											RHS												
Sr. No.	MNB at Chainage	Span			Crash Barrier	Slab	Girder Launching	Girder Casting	Piercap /Abtcap	Pier/Abt	Open Foundation	PCC	Excavation	Excavation	PCC	Open Foundation	Pier/Abt	Piercap /Abtcap	Girder Casting	Girder Launching	Slab	Crash Barrier			
1	70+185	2 x 20	BYPASS	A1																					
				P1																					
				A2																					
2	73+815	1 x 15	BYPASS	A1																					
				A2																					
3	84+725	1 x 15	EXISTING	A1																					
				A2																					
4	84+987	2 x 15	EXISTING	A1																					
				P1																					
				A2																					

SETHIAHOPU CHOLOPURAM PROJECT - STATUS OF MJB									Completed							
MJB at Chainage 66+530 (8x30) - BYPASS									In Progress							
Status Upto 31.12.2020	LHS/LSR								RHS/RSR							
	Crash Barrier	Slab	Girder Launching	Girder Casting	Pier Cap/Abt Cap	Pier/Abt	Pile Cap	Pile	Pile	Pile Cap	Pier/Abt	Pier Cap/Abt Cap	Girder Casting	Girder Launching	Slab	Crash Barrier
A1																
P1																
P2																
P3																
P4																
P5																
P6																
P7																
A2																
MJB at Chainage 73+340 (9x30) - BYPASS									Completed							
MJB at Chainage 73+340 (9x30) - BYPASS									In Progress							
Status Upto 31.12.2020	LHS/LSR								RHS/LSR							
	Crash Barrier	Slab	Girder Launching	Girder Casting	Pier Cap/Abt Cap	Pier/Abt	Pile Cap	Pile	Pile	Pile Cap	Pier/Abt	Pier Cap/Abt Cap	Girder Casting	Girder Launching	Slab	Crash Barrier
A1																
P1																
P2																
P3																
P4																
P5																
P6																
P7																
P8																
A2																

MJB at Chainage 99+583 (3x25) - EXISTING ROAD									<div style="display: flex; justify-content: space-between;"> <span style="width: 15px; height: 15px; background-color: green; border: 1px solid black;"></span> Completed           <span style="width: 15px; height: 15px; background-color: yellow; border: 1px solid black;"></span> In Progress         </div>							
Status Upto 31.12.2020	LHS/LSR								RHS/LSR							
	Crash Barrier	Slab	Girder Launching	Girder Casting	Pier Cap/Abt Cap	Pier/Abt	Pile Cap	Pile	Pile	Pile Cap	Pier/Abt	Pier Cap/Abt Cap	Girder Casting	Girder Launching	Slab	Crash Barrier
A1									Existing Major Bridge need to be retained.							
P1																
P2																
A2																
MJB at Chainage 107+400 - BYPASS									<div style="display: flex; justify-content: space-between;"> <span style="width: 15px; height: 15px; background-color: green; border: 1px solid black;"></span> Completed           <span style="width: 15px; height: 15px; background-color: yellow; border: 1px solid black;"></span> In Progress         </div>							
Status Upto 31.12.2020	LHS/LSR								RHS/LSR							
	Crash Barrier	Slab	Girder Launching	Girder Casting	Pier Cap/Abt Cap	Pier/Abt	Pile Cap	Pile	Pile	Pile Cap	Pier/Abt	Pier Cap/Abt Cap	Girder Casting	Girder Launching	Slab	Crash Barrier
A1																
P1																
P2																
P3																
P4																
P5																
P6																
P7																
P8																
P9																
P10																
P11																
P12																
P13																
P14																
P15																
P16																
P17																
P18																
P19																
A2																



SETHIAHOPU CHOLOPURAM PROJECT - STATUS OF FLYOVER					Completed									In Progress											
Status upto	31.12.2020				LHS									RHS											
Sr.No.	FO at Chainage	Span			Crash Barrier	Slab	Girder Launching	Girder Casting	Piercap /Abtcap	Abt Shaft	Pile Cap	PCC	Pile	Pile	PCC	Pile Cap	Abt Shaft	Piercap /Abtcap	Girder Casting	Girder Launching	Slab	Crash Barrier			
1	69+785	1x30	BYPASS	A1																					
				A2																					
2	74+655	1x30	BYPASS+EXISTING	A1																					
				A2																					
3	80+556	1x30	EXISTING	A1																					
				A2																					
4	80+720	1x30	EXISTING	A1																					
				A2																					
5	95+455	2x30	EXISTING	A1																					
				P1																					
				A2																					
6	98+950	2x30	EXISTING	A1																					
				P1																					
				A2																					
7	104+570	1x30	BYPASS	A1																					
				A2																					
8	110+110	1x30	EXISTING	A1																					
				A2																					

SETHIAHOPU CHOLOPURAM PROJECT - STATUS OF VUP					Completed									In Progress									
Status upto	31.12.2020				LHS									RHS									
SR.NO.	VUP at Chainage	Span			Crash Barrier	Slab	Girder Launching	Girder Casting	Piercap /Abtcap	Abt Shaft	Pile Cap	PCC	Pile	Pile	PCC	Pile Cap	Abt Shaft	Piercap /Abtcap	Girder Casting	Girder Launching	Slab	Crash Barrier	
1	72+545	1x25	BYPASS	A1																			
				A2																			
2	75+830	1x25	EXISTING	A1																			
				A2																			
3	86+900	1x25	EXISTING	A1																			
				A2																			
4	87+670	1x25	EXISTING	A1																			
				A2																			
5	90+580	1x25	EXISTING	A1																			
				A2																			
6	97+225	1x25	EXISTING	A1																			
				A2																			
7	101+910	1x25	EXISTING	A1																			
				A2																			
8	102+975	1x25	EXISTING	A1																			
				A2																			
9	106+318	1x25	BYPASS	A1																			
				A2																			
10	109+350	1x25	BYPASS	A1																			
				A2																			
11	111+235	1x25	BYPASS+EXISTING	A1																			
				A2																			
12	113+550	1x25	BYPASS+EXISTING	A1																			
				A2																			
13	115+258	1x25	EXISTING	A1																			
				A2																			

5. Financial & Physical Progress of Work

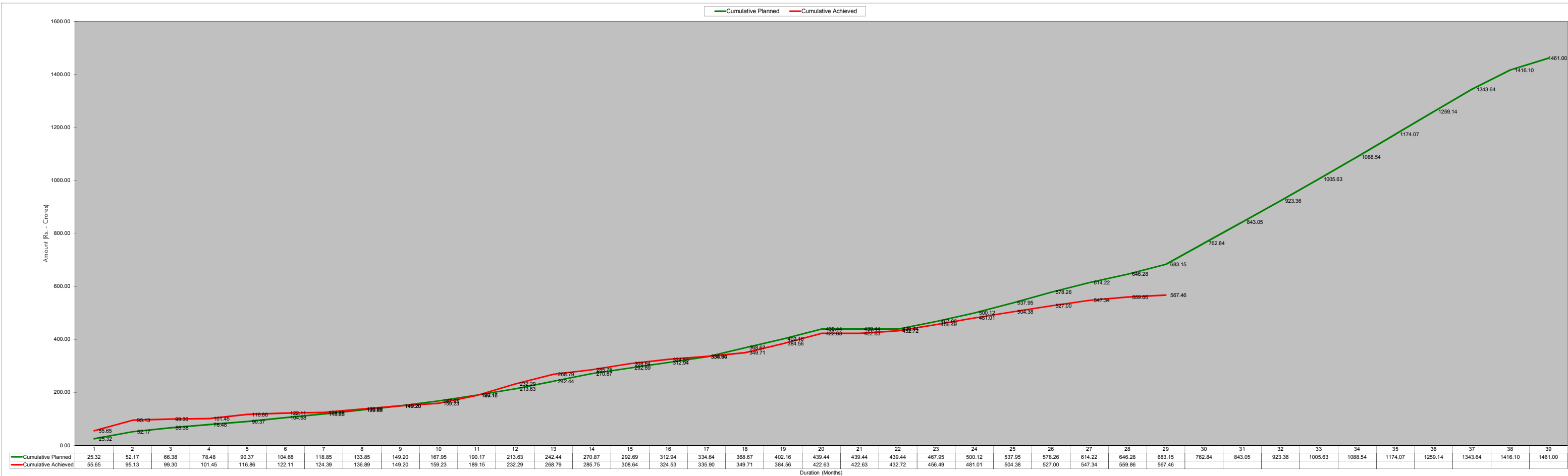
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Figure 3a: Financial Progress - Planned vs Achieved - S Curve

Figure 3b: Physical Progress - Planned vs Achieved - S Curve

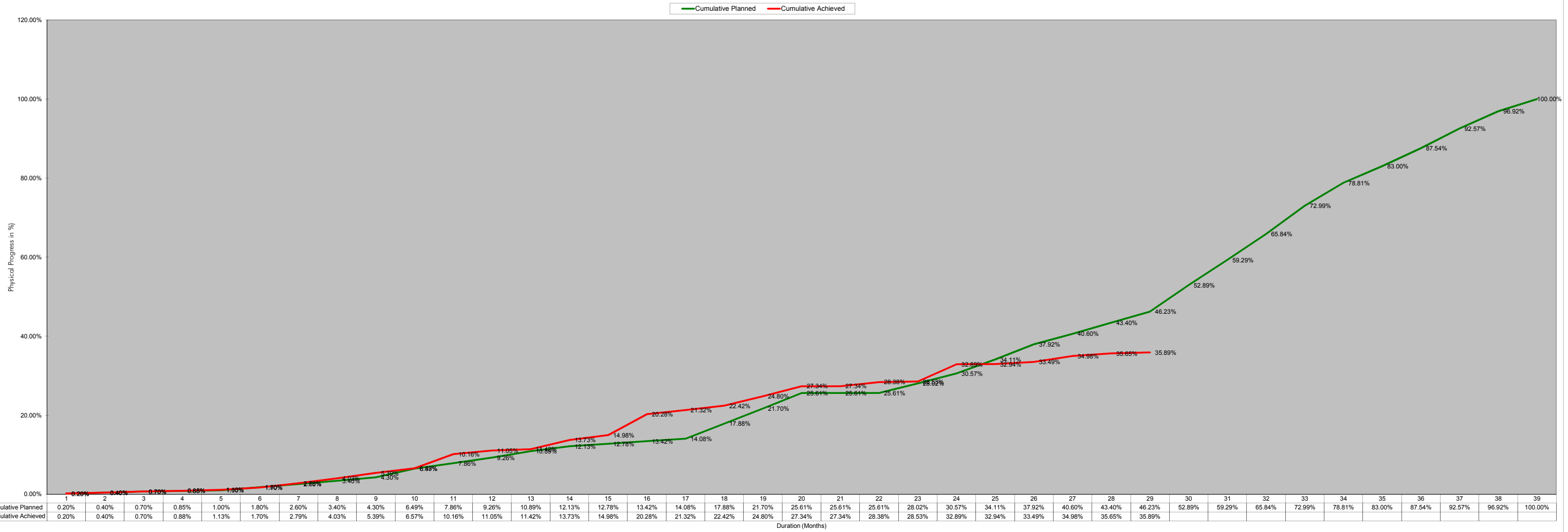
Four Laning of Sethiyahopu - Cholapuram from Km. 65.960 to 116.440 Section of NH45C in the state of Tamilnadu under NHDP-IV on Hybrid Annuity Mode

Fig. 03a- Financial Progress (S-Curve) as per revised Target based on EOT of 437 days (257 days+180 Days)



Schedule	2018					2019												2020												2021															
	Aug 1	Sep 2	Oct 3	Nov 4	Dec 5	Jan 6	Feb 7	Mar 8	Apr 9	May 10	Jun 11	Jul 12	Aug 13	Sep 14	Oct 15	Nov 16	Dec 17	Jan 18	Feb 19	Mar 20	Apr 21	May 22	Jun 23	Jul 24	Aug 25	Sep 26	Oct 27	Nov 28	Dec 29	Jan 30	Feb 31	Mar 32	Apr 33	May 34	Jun 35	Jul 36	Aug 37	Sep 38	Oct 39						
Monthly Planned	25.32	26.85	14.21	12.10	11.88	14.31	14.17	15.00	15.36	18.74	22.22	23.46	28.81	28.43	21.82	20.24	21.71	34.03	33.49	37.28	0.00	0.00	28.51	32.17	37.83	40.31	35.96	32.06	36.87	79.69	80.21	80.31	82.27	82.91	85.53	85.07	84.50	72.46	44.90						
Monthly Achieved	55.65	39.48	4.17	2.15	15.41	5.26	2.27	12.50	12.31	10.03	29.92	43.15	36.50	16.96	22.89	15.89	11.36	13.81	34.85	38.07	0.00	10.09	23.76	24.53	23.37	22.62	20.34	12.52	7.60																
Cumulative Planned	25.32	52.17	66.38	78.48	90.37	104.68	118.85	133.85	149.20	167.95	190.17	213.63	242.44	270.87	292.69	312.94	334.64	368.67	402.16	439.44	439.44	439.44	467.95	500.12	537.95	578.26	614.22	646.28	683.15	762.84	843.05	923.36	1005.63	1088.54	1174.07	1259.14	1343.64	1416.10	1461.00						
Cumulative Achieved	55.65	95.13	99.30	101.45	116.86	122.11	124.39	136.89	149.20	159.23	189.15	232.29	268.79	285.75	308.64	324.53	335.90	349.71	384.56	422.63	422.63	432.72	456.49	481.01	504.38	527.00	547.34	559.86	567.46																
Monthly Planned (%)	1.7%	1.8%	1.0%	0.8%	0.8%	1.0%	1.0%	1.0%	1.1%	1.3%	1.5%	1.6%	2.0%	1.9%	1.5%	1.4%	1.5%	2.3%	2.3%	2.6%	0.0%	0.0%	2.0%	2.2%	2.6%	2.8%	2.5%	2.2%	2.5%	5.5%	5.5%	5.5%	5.6%	5.7%	5.9%	5.8%	5.8%	5.0%	3.1%						
Monthly Achieved (%)	3.8%	2.7%	0.3%	0.1%	1.1%	0.4%	0.2%	0.9%	0.8%	0.7%	2.0%	3.0%	2.5%	1.2%	1.6%	1.1%	0.8%	0.9%	2.4%	2.6%	0.0%	0.7%	1.6%	1.7%	1.6%	1.5%	1.4%	0.9%	0.5%																
Cumulative Planned (%)	1.7%	3.6%	4.5%	5.4%	6.2%	7.2%	8.1%	9.2%	10.2%	11.5%	13.0%	14.6%	16.6%	18.5%	20.0%	21.4%	22.9%	25.2%	27.5%	30.1%	30.1%	30.1%	32.0%	34.2%	36.8%	39.6%	42.0%	44.2%	46.8%	52.2%	57.7%	63.2%	68.8%	74.5%	80.4%	86.2%	92.0%	96.9%	100.0%						
Cumulative Achieved (%)	3.8%	6.5%	6.8%	6.9%	8.0%	8.4%	8.5%	9.4%	10.2%	10.9%	12.9%	15.9%	18.4%	19.6%	21.1%	22.2%	23.0%	23.9%	26.3%	28.9%	28.9%	29.6%	31.2%	32.9%	34.5%	36.1%	37.5%	38.3%	38.8%																

**Four Laning of Sethiyahopu - Cholopuram from Km. 65.960 to 116.440 Section of NH45C in the state of Tamilnadu under NHDP-IV on Hybrid Annuity Mode**  
**Fig. 03b- Physical Progress (S-Curve) as per revised Target based on EOT of 437 days (257 days+180 Days)**



Schedule	2018					2019												2020												2021									
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
Monthly Planned	0.20%	0.20%	0.30%	0.15%	0.15%	0.80%	0.80%	0.80%	0.90%	2.19%	1.37%	1.40%	1.63%	1.24%	0.65%	0.64%	0.66%	3.80%	3.82%	3.91%	0.00%	0.00%	2.41%	2.55%	3.54%	3.81%	2.69%	2.80%	2.83%	6.66%	6.40%	6.56%	7.14%	5.83%	4.19%	4.54%	5.03%	4.35%	3.07%
Monthly Achieved	0.20%	0.20%	0.30%	0.18%	0.25%	0.57%	1.09%	1.24%	1.36%	1.18%	3.59%	0.89%	0.37%	2.31%	1.25%	5.30%	1.04%	1.10%	2.38%	2.54%	0.00%	1.04%	0.15%	4.36%	0.04%	0.55%	1.49%	0.67%	0.24%										
Cumulative Planned	0.20%	0.40%	0.70%	0.85%	1.00%	1.80%	2.60%	3.40%	4.30%	6.49%	7.86%	9.26%	10.89%	12.13%	12.78%	13.42%	14.08%	17.88%	21.70%	25.61%	25.61%	25.61%	28.02%	30.57%	34.11%	37.92%	40.60%	43.40%	46.23%	52.89%	59.29%	65.84%	72.99%	78.81%	83.00%	87.54%	92.57%	96.92%	100.00%
Cumulative Achieved	0.20%	0.40%	0.70%	0.88%	1.13%	1.70%	2.79%	4.03%	5.39%	6.57%	10.16%	11.05%	11.42%	13.73%	14.98%	20.28%	21.32%	22.42%	24.80%	27.34%	27.34%	28.38%	28.53%	32.89%	32.94%	33.49%	34.98%	35.65%	35.89%										

## 6. Quality Control and Quality Assurance

### 6.1. List of Lab Equipment's

A site laboratory has been set up with all equipment required for testing soil, GSB, WMM, Bitumen, aggregate and concrete. Following tables represents the list of QA/QC equipment's available at Annaikarai & Meensurity Lab.

Table 6.1 - 1 QA/QC Lab Equipment at Annaikarai Lab		
Sl. NO	EQUIPEMENT LIST'S	QUANTITY
1	compression testing machine 2000 kN	1
2	cement mortar vibrating machine	1
3	AIV Apparatus	1
4	electronic weighing balance (50 kg)	1
5	electronic weighing balance (600 gm)	1
6	Hot Air Oven( 250° c)	1
7	Hot plate	1
8	Rain Gauge	1
9	Sieve: as per IS 460 -1962 200 dia Brass frame	
10	4.75 mm	1
11	1.18 mm	1
12	600 mic	1
13	300 mic	1
14	90 mic	1
15	75 mic	1
16	Pan with Lid	1
17	Sieve: as per IS 460 -1962 200 dia GI frame	
18	40 mm	1
19	20 mm	1
20	12.5 mm	1
21	10 mm	1
22	4.75 mm	1
23	2.36 mm	1
24	Pan with Lid	1

25	Thickness Gauge	1
26	Glass Rain measuring jar (200CM <sup>2</sup> )	2
27	GI Tray ( 18 x24 x50 )	5
28	Enamel Tray ( medium)	4
29	Enamel Tray ( small)	6
30	spactula wooden handle	8
31	GI Tray ( )	1
32	Iron tray	1
33	slump cone apparatus with tamping rod	2

Table 6.1 - 2 QA/QC Lab Equipment at Meensurity Lab

Sl. NO	EQUIPEMENT LIST'S	QUANTITY
1	Test Sieves Set 450mm internal diameter as per IS complete with lid & pan of hole sizes	
a	100mm	2 Nos
b	75mm	2 Nos
c	90mm	2 Nos
d	63mm	2 Nos
e	53mm	2 Nos
f	50mm	2 Nos
g	45mm	2 Nos
h	40mm	2 Nos
i	37.5mm	2 Nos
j	31.5mm	2 Nos
k	26.5mm	2 Nos
l	25mm	2 Nos
m	22.4mm	2 Nos
n	20.0mm	2 Nos
o	19.0mm	2 Nos
p	18mm	2 Nos
q	16mm	2 Nos
r	14mm	2 Nos
s	13.2mm	2 Nos

t	12.5mm	2 Nos
v	11.2mm	2 Nos
u	10mm	2 Nos
w	9.5mm	2 Nos
x	6.3mm	2 Nos
y	5.6mm	2 Nos
z	4.75mm	2 Nos
2	Test Sieves Set 200mm internal diameter (Brass frame & steel or brass wire cloth mesh ) as per IS complete with lid & pan of sieve	
a	37.5mm	2 Nos
b	26.5mm	2 Nos
c	22.4mm	2 Nos
d	19mm	2 Nos
e	16mm	2 Nos
f	14mm	2 Nos
g	13.2mm	2 Nos
h	12.5	2 Nos
i	11.2mm	2 Nos
j	10mm	2 Nos
k	9.5mm	2 Nos
l	4.75mm	2 Nos
m	2.8mm	2 Nos
n	2.36mm	2 Nos
o	2.0mm	2 Nos
Sl. NO	EQUIPEMENT LIST'S	QUANTITY
p	1.80mm	2 Nos
q	1.7mm	2 Nos
r	1.4mm	2 Nos
s	1.18mm	2 Nos
t	1.0mm	3 Nos
v	0.600mm	2 Nos
u	0.425mm	2 Nos



w	0.355mm	2 Nos
x	0.300mm	2 Nos
y	0.180	2 Nos
z	0.090mm	2 Nos
aa	0.075mm	6 Nos
3	Measuring cylinder - Borosilicate glass - 100ML	40 Nos
4	Glass Thermometer 00c to 3000c	10 Nos
5	Flash filtering borosil glass - 2000ML	1 No
6	Flash filtering borosil glass - 5000ML	1 No
7	Round hot Plate	2 Nos
8	Measuring cylinder - Borosilicate glass - 1000ML	4 Nos
9	Measuring cylinder - Borosilicate glass - 250ML	4 Nos
10	Measuring cylinder- Borosilicate glass - 500ML	4 Nos
11	Beakers - glass borosil - low from cap 600ML	4 Nos
12	Compaction pedestal - 4"	4 Nos
13	Extractor plate - 6" dia for marshal test	1 No
14	Rammer marshal - 4"	4 Nos
15	Thermometer Infra red - MTX - 2	2 Nos
16	LE - Chatlier mould one set of six	2 Nos
17	Cone penetrometer	1 No
18	Los angeles abrasion testing machine	1 No
19	Marshal Mould - 4" dia	51 nos
20	G.I Tray - 1500*1500*100MM	4 Nos
21	Compaction pedestal - 6"	1 No
22	Marshal stability apparatus	1 No
23	Measuring cylinder- Plastic - 50ML	4 Nos
24	Measuring cylinder- Plastic - 250ML	2 Nos
25	Measuring cylinder- Plastic - 500ML	2 Nos
26	Measuring cylinder- Plastic - 1000ML	2 Nos
27	Vibrating machine with digital timer	1 No
28	Hot Air Oven - Thermostatic - NoN Digital - 45*45*45 CM	1 No
29	Hot Air Oven - Thermostatic - NoN Digital - 90*60*60 CM	1 No

30	Penetration cup - 55*70 MM	2 Nos
31	Penetration cup - 55*35MM	6 Nos
32	Standard Penetrometer - Automatic with digital timer	1 No
33	proctor compaction mould 100mm dia with 2.69kg Rammer mid steel	4 Nos
34	proctor compaction mould 150mm dia with 4.89kg Rammer mid steel	6 Nos
35	proving ring compression type 10kn	1 Nos
<b>Sl. NO</b>	<b>EQUIPEMENT LIST'S</b>	<b>QUANTITY</b>
36	proving ring compression type 2.5kn	1 Nos
37	proving ring compression type 25kn	1 Nos
38	proving ring compression type 50kn	1 Nos
39	pycnometer bottle	4 Nos
40	Rapid moisture meter-0-25%	4 Nos
41	Riffle sample divider -G.I-20mm , no of slot ;16	1 nos
42	Riffle sample divider -G.I-40mm , no of slot ;12	1 Nos
43	Pipette borosilicate glass - 10 ml	4 Nos
44	Sant equivalent value test apparatus with accessories	1 Nos
45	field density test app - sand replacement method small	2 Set
46	shrinkage limit set W/O mercury	1 Nos
47	Mercury 250 Gm	1 Nos
48	Buoyancy balance	1 Nos
49	Spatula 8"	10 Nos
50	Spatula 4"	10 Nos
51	Standard sand - grade III - Bag of 25 kg	2 Nos
52	Standard sand - grade I - Bag of 25 kg	2 Bag
53	Standard sand - grade II - Bag of 25 kg	2 Bag
54	standard penetrometer - automatic with digital timer	1 Nos
55	Beaking head assembly - 6'	1 Nos
56	Bulk density cylindrical metal measure - 15 LTR	1 Nos
57	Bulk density cylindrical metal measure - 5 LTR	1 Nos
58	Bulk density cylindrical metal measure - 30 LTR	1 Nos
59	Calcium carbide - 500 GM for rapid moisture meter	10 Nos

60	Liquid limits device - hand operated	1 Nos
61	CBR mould mild steel 150mm dia eith collar and base plate	60 Nos
62	Perforrated plate - for CBR test AS per 1377	57 Nos
63	Spacer disc - for CBR test	4 nos
64	surcharge weight 2.5kg annular for cbr test	120 nos
65	cbr load frame electrical single speed	1 nos
66	chiesel 25mm wide *300mm long	20 nos
67	compression testing machine 2000kn digital manual pace	1 nos
68	cube moulds 7.06cm isi marked for cement	12
69	Concrete mixer - Tilting drum type	1 No
70	Constant temperature waterbath for marshal test with digital	2 Nos
71	Core drilling machine with disel engine	1 No
72	Electronic weighing balance - 10KG	1 No
73	Cube moulds - 10CM	18 Nos
74	Cube moulds - 5CM	12 Nos
75	Electronic weighing balance - 600Gms	2 Nos
76	Dial gauge 0.01*30mm	4 Nos
77	Electronic platform balance - 100KG	1 Nos
78	Electronic weighing balance - 30KG	2 Nos
79	Electronic weighing balance - 50KG	2 Nos
80	Electronic weighing balance - 5KG	1 No
81	Stop watch - digital	4 Nos
<b>Sl. NO</b>	<b>EQUIPEMENT LIST'S</b>	<b>QUANTITY</b>
82	Direct shear apparatus	1 No
83	Bottle wash plastic - 1000ML	4 Nos
84	Length gauge	1 No
85	Tray - G.I 300*300MM (12"*12")	6 Nos
86	Enamel tray -300*250*40 mm (10"*12")	9 Nos
87	Tray G.I -300*250*40 mm (10"*12")	9 Nos
88	Enamel tray -450*600*40 mm (18"*12")	12 Nos
89	Field density test app -sand replacement method medium	2 Set
90	Field density test app -sand replacement method Large	2 Set

91	Filter paper for marshal test 100mm dia	10 PKT
92	Filter paper for CBR test 15cm dia PKT of 100 circles	10 PKT
93	Flakiness gauge - M.S .Chrome / powder coated	1 Nos
94	Pensky marten flash piot apparatus	1 Nos
95	Flexural strength testing machine curve	1 Nos
96	French curve	2 Nos
97	Slump test aprpratus with tamping rod 16mm dia *600mm long	9 Nos
98	Thermometer dial 100mm dia * 300mm long 00 - 3000c	10 Nos
99	Tripod stand for CBR test	4 Nos
100	Gauging trowel 6" (150mm)	4 Nos
101	U tube glass viscometer	1 Nos
102	Saybolt viscometer with energy regulator	1 Nos
103	Vacuum pump -Singal Stage	1 Nos
104	Vibrating table -60*60 CM	1 Nos
105	Needle final setting time for vicat needle aprpratus	1 Nos
106	Needle Intial setting time for vicat needle aprpratus	1 Nos
107	Vicat Needle apparatus	2 Nos
108	Hammer with Handle - 1000 GM	4 Nos
109	Aggregate Impact testing machine	1 Nos
110	Beakers - glass borosil - low form cap ; 600ML	2 Nos
111	Beam mould -15*15*70 CM - Mild steel	17 Nos

## 6.2. Quality Control Test Summary

GSB material, soil samples from borrow areas, aggregates, cement and bitumen are being tested regularly. Trial mix design for concrete with different admixtures is also in progress.

The detailed list of quality control test conducted up to the month of December - 2020 are tabulated below -

Monthly Progress Report : Summary of Quality Control Report : Month of December-2020

S. No.	Description	IS Specification Clause	Frequency of Tests	Test conducted upto Previous month				Tests conducted during reporting month December 2020				Test conducted upto this month			
				No. of test Conducted EPC/ Concessionaire	Passed	Failed	Nos. of test witnessed by IE	No. of test Conducted EPC/ Concessionaire	Passed	Failed	Nos. of test witnessed by IE	No. of test Conducted EPC/ Concessionaire	Passed	Failed	Nos. of test witnessed by IE
<b>1.0 Tests on OGL</b>															
1.1	Grain size analysis	IS:2720 (Part4)	1 test / 250 meters	345	345	16	97	0	0	0	0	345	345	16	97
1.2	Atterberg Limits	IS:2720 (Part5)	1 test / 250 meters	345	345	16	97	0	0	0	0	345	345	16	97
1.3	Proctor	IS:2720 (Part8)	1 test / 250 meters	345	345	16	97	0	0	0	0	345	345	16	97
1.4	Free Swell index	IS:2720 (Part40)	1 test / 250 meters	345	338	7	97	0	0	0	0	345	338	7	97
1.5	California bearing ratio	IS:2720 (Part16)	As required	0	0	0	0	0	0	0	0	0	0	0	0
<b>2.0 Borrow Area for EMB/Subgrade (MoRT&amp;H 305)</b>															
2.1	Grain size analysis	IS:2720 (Part4)	1 test /1500 m <sup>3</sup>	958	958	0	546	0	0	0	0	958	958	0	546
2.2	Atterberg Limits	IS:2720 (Part5)	1 test /1500 m <sup>3</sup>	958	958	0	546	0	0	0	0	958	958	0	546
2.3	Proctor	IS:2720 (Part8)	1 test /1500 m <sup>3</sup>	958	958	0	546	0	0	0	0	958	958	0	546
2.4	Free Swell index	IS:2720 (Part40)	1 test /1500 m <sup>3</sup>	958	958	0	546	0	0	0	0	958	958	0	546
2.5	California bearing ratio	IS:2720 (Part16)	1 test / 3000 m <sup>3</sup>	225	218	10	115	0	0	0	0	225	218	10	115
2.6	Direct shear Test	IS:2720 (Part13)	1 test /3000 m <sup>3</sup>	130	119	3	58	0	0	0	0	130	119	3	58
<b>3.0 Cutting portion &amp; Existing for EMB/SG site sampling (MoRT&amp;H 305)</b>															
3.1	Grain size analysis	IS:2720 (Part4)	1 test /1500 m <sup>3</sup>	53	51	0	20	2	2	0	1	55	53	0	21
3.2	Atterberg Limits	IS:2720 (Part5)	1 test /1500 m <sup>3</sup>	53	51	0	20	2	2	0	1	55	53	0	21
3.3	Proctor	IS:2720 (Part8)	1 test /1500 m <sup>3</sup>	53	51	0	20	2	2	0	1	55	53	0	21
3.4	Free Swell index	IS:2720 (Part40)	1 test /1500 m <sup>3</sup>	53	51	0	20	2	2	0	1	55	53	0	21
3.5	California bearing ratio	IS:2720 (Part16)	1 test / 3000 m <sup>3</sup>	25	23	2	12	2	2	0	1	27	25	2	13
3.6	Direct shear Test	IS:2720 (Part13)	1 test /3000 m <sup>3</sup>	1	1	0	1	0	0	0	0	1	1	0	1
<b>4.0 Service Road</b>															
4.1	Grain size analysis	IS:2720 (Part4)	1 test /1500 m <sup>3</sup>	27	27	0	20	0	0	0	0	27	27	0	20
4.2	Atterberg Limits	IS:2720 (Part5)	1 test /1500 m <sup>3</sup>	27	27	0	20	0	0	0	0	27	27	0	20
4.3	Proctor	IS:2720 (Part8)	1 test /1500 m <sup>3</sup>	27	27	0	20	0	0	0	0	27	27	0	20
4.4	Free Swell index	IS:2720 (Part40)	1 test /1500 m <sup>3</sup>	27	27	0	20	0	0	0	0	27	27	0	20
4.5	California bearing ratio	IS:2720 (Part16)	1 test / 3000 m <sup>3</sup>	8	8	0	8	0	0	0	0	8	8	0	8
4.6	Direct shear Test	IS:2720 (Part13)	1 test /3000 m <sup>3</sup>	0	0	0	0	0	0	0	0	0	0	0	0
<b>5.0 FLYASH For Embankment</b>															
5.1	Liquid Limit & Plastic limit	TABLE-1	1 test /1500 m <sup>3</sup>	227	227	0	136	20	20	0	10	247	247	0	146
5.2	Maximum Dry Density	Clause 5.2	1 test /1500 m <sup>3</sup>	227	227	0	148	20	20	0	10	247	247	0	158
5.3	Grain size analysis	IS:2720 (Part4)	1 test /3000 m <sup>3</sup>	107	107	0	70	10	10	0	5	117	117	0	75
5.4	Direct shear Test	IS:2720 (Part13)	1 test /3000 m <sup>3</sup>	87	87	0	52	10	10	0	5	97	97	0	57

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<b>6.0 Field Density Test MORT&amp;H 305</b>															
6.1	Field density (OGL)	IS:2720 (Part28)	1 test /3000 sqm	3959	3839	120	988	0	0	0	0	3959	3839	120	988
6.2	EMB field density	IS:2720 (Part28)	1 test /3000 sqm	47886	46155	1731	11849	1484	1370	114	411	49370	47525	1845	12260
6.3	SG field density	IS:2720 (Part28)	1 test / 2000 sqm	7277	7058	219	3484	40	40	0	30	7317	7098	219	3514
6.4	Shoulder field density	IS:2720 (Part28)	1 test / 2000 sqm	323	320	3	30	0	0	0	0	323	320	3	30
6.5	Ground improvement (Soil)	IS:2720 (Part28)	1 test / 2000 sqm	2511	2443	68	371	0	0	0	0	2511	2443	68	371
6.6	Ground improvement & Midean filling (Flyash)	IS:2720 (Part28)	1 test / 2000 sqm	6990	6866	121	1088	481	478	3	167	7471	7344	124	1255
<b>7.0 Filter Media &amp; Back filling MoRT&amp;H 2500</b>															
7.1	Gradation		As required	0	0	0	0	0	0	0	0	0	0	0	0
7.2	Backfilling field density		1 test /1000 m <sup>3</sup>	752	752	0	40	60	60	0	8	812	812	0	48
7.3	RE Wall field density		As required	0	0	0	0	0	0	0	0	0	0	0	0
<b>8.0 Safe Bearing capacity of soil</b>															
8.1	Free Swell index	IS:2720 (Part40)	As required	80	74	6	64	6	6	0	6	86	80	6	70
8.2	Grain size analysis	IS:2720 (Part4)	As required	80	80	0	64	6	6	0	6	86	86	0	70
8.3	Proctor	IS:2720 (Part8)	As required	80	80	0	64	6	6	0	6	86	86	0	70
8.4	Direct shear Test	IS:2720 (Part13)	As required	80	71	9	64	6	6	0	6	86	77	9	70
8.5	Bearing Capacity / Plate Load Test	IS:6403 / IS 1888	As required	10	10	0	10	0	0	0	0	10	10	0	10
<b>9.0 CTSB Mix Design/Site Frequency MoRT&amp;H 403</b>															
9.1	Gradation	Table 400-4	1 test/400m <sup>3</sup>	306	306	0	166	11	11	0	5	317	317	0	171
9.2	Atterberg Limits	IS:2720 (Part5)	1 test/400m <sup>3</sup>	185	185	0	89	11	11	0	5	196	196	0	94
9.3	Proctor	IS:2720 (Part8)	As required	18	18	0	16	1	1	0	1	19	19	0	17
9.4	CBR Test or unconfined compressive strength test	IS:2720 (Part16)	As required	1	1	0	1	0	0	0	0	1	1	0	1
9.5	Quality of cement		Minimum 1 test/5 tons	2	2	0	2	0	0	0	0	2	2	0	2
9.6	Aggregate Impact value	IS:2386 Part-4	As required	28	28	0	17	0	0	0	0	28	28	0	17
9.7	Field Density	IS:2720 (Part28)	1 set of 2 Test per 500Sqm	2041	2041	0	1484	74	74	0	61	2115	2115	0	1545
9.8	Specific gravity & Water absorption	IS:2386 (Part2)	As required	2	2	0	2	0	0	0	0	2	2	0	2
9.9	Cubes	IRC SP 89 (2010)	1 set 400 MT	744	744	0	271	10	10	0	8	754	754	0	279
<b>10.0 Granular Bedding Material (For Structures-Ground Improvement)- Mix Design</b>															
10.1	Gradation	Table 400-1	1 test/400m <sup>3</sup>	0	0	0	0	0	0	0	0	0	0	0	0
10.2	Atterberg Limits	IS:2720 (Part5)	1 test/400 m <sup>3</sup>	0	0	0	0	0	0	0	0	0	0	0	0
10.3	Proctor	IS:2720 (Part8)	As required	0	0	0	0	0	0	0	0	0	0	0	0
10.4	CBR Test	IS:2720 (Part16)	As required	0	0	0	0	0	0	0	0	0	0	0	0
10.5	Aggregate Impact value	IS:2386 Part-4	As required	0	0	0	0	0	0	0	0	0	0	0	0
10.6	Field Density	IS:2720 (Part28)	1 Test per 1000 Sq.m.	0	0	0	0	0	0	0	0	0	0	0	0

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<b>11.0 Granular Bedding Material (For Structures-Ground Improvement)- Site Frequency</b>															
11.1	Gradation	Table 400-1	1 test/400m <sup>3</sup>	3	3	0	3	0	0	0	0	3	3	0	3
11.2	Atterberg Limits	IS:2720 (Part5)	1 test/400 m <sup>3</sup>	3	3	0	3	0	0	0	0	3	3	0	3
11.3	Proctor	IS:2720 (Part8)	As required	0	0	0	0	0	0	0	0	0	0	0	0
11.4	CBR Test	IS:2720 (Part16)	As required	0	0	0	0	0	0	0	0	0	0	0	0
11.5	Aggregate Impact value	IS:2386 Part-4	As required	0	0	0	0	0	0	0	0	0	0	0	0
11.6	Field Density	IS:2720 (Part28)	1 Test per 1000 Sq.m.	90	90	0	21	0	0	0	0	90	90	0	21
<b>12.0 WMM Mix Design</b>															
12.1	Gradation	Table 400-3	1 test/200m <sup>3</sup>	53	53	0	53	0	0	0	0	53	53	0	53
12.2	Aggregate Impact Value	IS:2386 Part-4	1 test/ 1000 m <sup>3</sup>	5	5	0	5	0	0	0	0	5	5	0	5
12.3	Flakiness & Elagation index	IS:2386 Part1	1 test/ 500 m <sup>3</sup>	4	4	0	4	0	0	0	0	4	4	0	4
12.4	Atterberg Limits	IS:2720 (Part5)	1 test/200m <sup>3</sup>	4	4	0	4	0	0	0	0	4	4	0	4
12.5	Water absorption & Sp.Gravity	IS:2386 Part2	As required	8	8	0	8	0	0	0	0	8	8	0	8
12.6	Proctor	IS:2720 (Part8)	As required	4	4	0	4	0	0	0	0	4	4	0	4
12.7	CBR	IS:2720 (Part16)	As required	2	2	0	2	0	0	0	0	2	2	0	2
<b>13.0 WMM Site Frequency MoRT&amp;H 406</b>															
13.1	Gradation	Table 400-3	1 test/200m <sup>3</sup>	192	192	0	103	4	4	0	2	196	196	0	105
13.2	Aggregate Impact Value	IS:2386 Part-4	1 test/ 1000 m <sup>3</sup>	102	102	0	48	2	2	0	1	104	104	0	49
13.3	Flakiness & Elagation index	IS:2386 Part1	1 test/ 500 m <sup>3</sup>	104	104	0	35	2	2	0	1	106	106	0	36
13.4	Atterberg Limits	IS:2720 (Part5)	1 test/200m <sup>3</sup>	169	169	0	80	4	4	0	2	173	173	0	82
13.5	Water absorption	IS:2386 Part2	As required	4	4	0	4	0	0	0	0	4	4	0	4
13.6	Proctor	IS:2720 (Part8)	As required	5	8	0	4	1	1	0	0	6	9	0	4
13.7	CBR	IS:2720 (Part16)	As required	1	1	0	1	0	0	0	0	1	1	0	1
13.8	Field Density	IS:2720 (Part28)	1 set Test per 1000Sq.m / 3 pits	382	382	0	275	11	11	0	4	393	393	0	279
<b>14.0 Dense Bituminous Macadam (Grade - II)</b>															
14.1	Bitumen Extraction Test		1 Test/400MT	160	160	0	67	6	6	0	4	166	166	0	71
14.2	Gradation	Table 500 - 18, Grad.II	1 Test/400MT	160	160	0	67	6	6	0	4	166	166	0	71
14.3	Flakiness & Elagation index	MORTH Table 900 - 4	1 test/ 350 m <sup>3</sup>	124	124	0	51	3	3	0	2	127	127	0	53
14.4	Aggregate Impact Value	MORTH Table 900 - 4	1 test/350m <sup>3</sup>	163	163	0	69	6	6	0	4	169	169	0	73
14.5	Marshall Density	ASTM D 2726	1 Set/400MT	196	196	0	85	6	6	0	4	202	202	0	89
14.6	GMM	MORTH Table 900 - 4	1 Test/400MT	165	165	0	69	6	6	0	4	171	171	0	73
14.7	DBM Core Cutting	MORTH Table 900 - 4	1 Test/700M <sup>2</sup>	427	427	0	184	13	13	0	13	440	440	0	197
<b>Bitumen test</b>															
14.8	Softening Point	IS:1205 - 1978	1 Test/ 1 lot	63	63	0	22	4	4	0	3	67	67	0	25
14.9	Penetration	IS:1205 - 1978	1 Test/ 1 lot	63	63	0	22	4	4	0	3	67	67	0	25
14.9	viscosity	IS:1205 - 1978	1 Test/ 1 lot	63	63	0	22	4	4	0	3	67	67	0	25

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<b>15.0 Prime Coat</b>															
15.1	Rate of Spread of Binder		Three tests per day	276	276	0	140	17	17	0	17	293	293	0	157
<b>16.0 Tack Coat</b>															
16.1	Rate of Spread of Binder		Three tests per day	69	69	0	32	0	0	0	0	69	69	0	32
<b>17.0 Fine Aggregate MoRT&amp;H 1008</b>															
17.1	Grade / Sieve analysis	IS:2386 (Part1)	1 test per day	1133	1133	0	425	47	47	0	22	1180	1180	0	447
17.2	Specific gravity & Water absorption	IS:2386 (Part2)	As required	16	16	0	15	0	0	0	0	16	16	0	15
17.3	Fineness Modulus	MORT&H Sec. 1008&383	1 test per day	991	991	0	353	47	47	0	22	1038	1038	0	375
17.4	Alkali aggregate reactivity test	IS:2386 (Part-7)IS : 456	1 test per source	0	0	0	0	0	0	0	0	0	0	0	0
17.5	Deleterious material/silt	IS:2386 (Part2)	1 test per source	0	0	0	0	0	0	0	0	0	0	0	0
<b>18.0 Coarse Aggregate MoRT&amp;H 1007</b>															
18.1	Gradation	IS:2386 (Part2)	1 test per day	1031	1031	0	412	47	47	0	22	1078	1078	0	434
18.2	Specific gravity & Water absorption	IS:2386 (Part3)	As required	18	18	0	15	0	0	0	0	18	18	0	15
18.3	Aggregate Impact Value	IS:2386 (Part4)	1 test / each source & monthly	305	305	0	156	12	12	0	4	317	317	0	160
18.4	Flakiness index	IS:2386 (Part1)	1 test / each source & monthly	275	275	0	143	12	12	0	4	287	287	0	147
18.5	Soundness	IS:2386 (Part5)	As required	2	2	0	2	0	0	0	0	2	2	0	2
18.6	Alkali aggregate reactivity test	IS:2386 (Part-7)IS : 456	1 test per source	2	2	0	2	0	0	0	0	2	2	0	2
18.7	Deleterious constituents	IS:2386 (Part2)	1 test per source	2	2	0	2	0	0	0	0	2	2	0	2
18.8	Petrographic Examination	IS:2386 (Part8)	1 test per source	0	0	0	0	0	0	0	0	0	0	0	0
<b>19.0 Cement MoRT&amp;H 1006</b>															
19.1	Chemical test / Physical test	IS:4031,4032	1 test per source	6	15	0	6	0	0	0	0	6	15	0	6
19.2	Fineness	IS:4031 (Part1)	Every batch	379	379	0	188	12	12	0	5	391	391	0	193
19.3	Normal Consistency	IS:4031 (Part4)	Every batch	351	351	0	188	12	12	0	5	363	363	0	193
19.4	Initial,Final setting time	IS:4031 (Part5)	Every batch	351	351	0	188	12	12	0	5	363	363	0	193
19.5	Soundness of Cement	IS:4031 (Part3)	Every batch	295	295	0	154	12	12	0	5	307	307	0	159
19.6	Compressive Strength-set	IS:4031 (Part6)													
	3 days		1 test per Lot	308	308	0	149	12	12	0	2	320	320	0	151
	7 days		1 test per Lot	301	301	0	147	9	9	0	1	310	310	0	148
	28 days		1 test per Lot	289	289	0	135	12	12	0	8	301	301	0	143



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<b>20.0.(A) Concrete Cube Strength</b>															
	<b>M15 PCC</b>														
	7Days Compressive Strength	MORT&H Sec. 1700	MORT&H Sec. 1700 No of sets	377	374	0	162	9	9	0	2	386	383	0	164
	28Days Compressive Strength			619	619	0	316	31	31	0	5	650	650	0	321
	<b>M20 KERB</b>														
	7Days Compressive Strength	MORT&H Sec. 1700	MORT&H Sec. 1700 No of sets	143	143	0	51	7	7	0	2	150	150	0	53
	28Days Compressive Strength			374	374	0	103	28	28	0	3	402	402	0	106
	<b>M20 RCC</b>														
	7Days Compressive Strength	MORT&H Sec. 1700	MORT&H Sec. 1700 No of sets	238	238	0	81	0	0	0	0	238	238	0	81
	28Days Compressive Strength			464	464	0	182	0	0	0	0	464	464	0	182
	<b>M30 RCC</b>														
	7Days Compressive Strength	MORT&H Sec. 1700	MORT&H Sec. 1700 No of sets	334	334	0	146	8	8	0	5	342	342	0	151
	28Days Compressive Strength			559	559	0	249	36	36	0	15	595	595	0	264
	<b>M30 RCC PUMPABLE</b>														
	7Days Compressive Strength	MORT&H Sec. 1700	MORT&H Sec. 1700 No of sets	26	26	0	16	0	0	0	0	26	26	0	16
	28Days Compressive Strength			73	73	0	41	0	0	0	0	73	73	0	41
	<b>M35 RCC</b>														
	7Days Compressive Strength	MORT&H Sec. 1700	MORT&H Sec. 1700 No of sets	225	225	0	140	8	8	0	5	233	233	0	145
	28Days Compressive Strength			457	457	0	265	34	34	0	11	491	491	0	276
	<b>M35 PILING</b>														
	7Days Compressive Strength	MORT&H Sec. 1700	MORT&H Sec. 1700 No of sets	909	909	0	479	12	12	0	4	921	921	0	483
	28Days Compressive Strength			2696	2690	0	1453	47	47	0	24	2743	2737	0	1477
	<b>M35 RCC PUMPABLE</b>														
	7Days Compressive Strength	MORT&H Sec. 1700	MORT&H Sec. 1700 No of sets	544	544	0	229	20	20	0	6	564	564	0	235
	28Days Compressive Strength			1519	1519	0	598	103	103	0	62	1622	1622	0	660
	<b>M35 RE BLOCK</b>														
	7Days Compressive Strength	MORT&H Sec. 1700	MORT&H Sec. 1700 No of sets	740	740	0	225	1	1	0	1	741	741	0	226
	28Days Compressive Strength			2064	2064	0	682	40	40	0	22	2104	2104	0	704
	<b>M40 PUMP &amp; M40 RCC</b>														
	7Days Compressive Strength	MORT&H Sec. 1700	MORT&H Sec. 1700 No of sets	99	99	0	46	29	29	0	14	128	128	0	60
	28Days Compressive Strength			192	192	0	77	18	18	0	15	210	210	0	92
	<b>M40 PILING</b>														
	7Days Compressive Strength	MORT&H Sec. 1700	MORT&H Sec. 1700 No of sets	306	306	0	92	0	0	0	0	306	306	0	92
	28Days Compressive Strength			997	997	0	271	0	0	0	0	997	997	0	271
	<b>M45 PUMP</b>														
	7Days Compressive Strength	MORT&H Sec. 1700	MORT&H Sec. 1700 No of sets	179	179	0	64	15	15	0	9	194	194	0	73
	28Days Compressive Strength			453	453	0	149	51	51	0	26	504	504	0	175
	<b>M50 RCC</b>														
	7Days Compressive Strength	MORT&H Sec. 1700	MORT&H Sec. 1700 No of sets	6	6	0	6	0	0	0	0	6	6	0	6
	28Days Compressive Strength			12	12	0	12	0	0	0	0	12	12	0	12
	<b>M60 PUMP</b>														
	7Days Compressive Strength	MORT&H Sec. 1700	MORT&H Sec. 1700 No of sets	261	261	0	63	9	9	0	3	270	270	0	66
	28Days Compressive Strength			897	897	0	201	18	18	0	9	915	915	0	210

## Source Approvals

S.No	Item	Source	Submission Letter No	Approved Letter No	Remarks
1	Cement	M/s Ramco Cements Limited, Chennai.	PSCHPL/SCP/IE/2018/012	TES/IE/SC/PIL/2018/005	
		M/s Dalmia Bharat Cement, Ariyalur	PSCHPL/SCP/IE/2018/009	TES/IE/SC/PIL/2018/006	
		M/s Ultratech	PSCHPL/SCP/IE/2018/090	TES/IE/SC/PIL/2018/060	
		M/s India Cement (Coremendal)	PSCHPL/SCP/IE/2018/063	TES/IE/SC/PIL/2018/040	
		M/s Chettinad Cement, Chennai.	PSCHPL/SCP/IE/2018/009	TES/IE/SC/PIL/2018/052	
		M/s Barathi Cement,	PSCHPL/SCP/IE/2018/154	TES/IE/SC/PIL/2018/128	
		M/s JSW Cement,	PSCHPL/SCP/IE/2018/294	TES/IE/SC/PIL/2018/257	
2	Steel	M/s Jindal Steel & Power Limited, New Delhi.	PSCHPL/SCP/IE/2018/202	TES/IE/SC/PIL/2018/010	
		M/s shyam Steel	PSCHPL/SCP/IE/2018/202	TES/IE/SC/PIL/2018/016	
		M/s Kamachi Industries limited, Chennai.	PSCHPL/SCP/IE/2018/301	TES/IE/SC/PIL/2018/056	
		M/s SAIL	PSCHPL/SCP/IE/2018/202	TES/IE/SC/PIL/2018/173	
		M/s VIZAG STEEL	PSCHPL/SCP/IE/2018/202	TES/IE/SC/PIL/2018/173	
		M/s Tata Steel Limited,	PSCHPL/SCP/IE/2018/202	TES/IE/SC/PIL/2018/173	
		M/s Essar Steel Ltd,	PSCHPL/SCP/IE/2018/202	TES/IE/SC/PIL/2018/173	
		M/s Electrosteel Steels Limited,	PSCHPL/SCP/IE/2018/202	TES/IE/SC/PIL/2018/173	
		M/s Agarwal Foundries pvt Limited,	PSCHPL/SCP/IE/2019/516	TES/IE/SC/PIL/2019/402	
3	HT strands	M/s Usha Martin Limited	PSCHPL/SCP/IE/2018/286		
		M/s D.P.Wires Limited	PSCHPL/SCP/IE/2018/045		
		M/s Kataria industries Pvt Ltd,	PSCHPL/SCP/IE/2018/253	TES/IE/SC/PIL/2018/213	
4	Prestressing Agency	M/s Dynamic Prestressing India Pvt. Ltd	PSCHPL/SCP/IE/2018/059	TES/IE/SC/PIL/2018/037	
5	Mechanical couplers	M/s Unitech couplers India (P) Ltd., Coimbatore.	PSCHPL/SCP/IE/2018/018	TES/IE/SC/PIL/2018/009	
		M/s Spplisetek India Pvt Ltd., Mumbai.	PSCHPL/SCP/IE/2018/018		
6	Chemical Admixture	M/s Fosroc, Bangalore	PSCHPL/SCP/IE/2018/008	TES/IE/SC/PIL/2018/003	
		M/s Kunal Conchem Pvt.Ltd, Faridabad	PSCHPL/SCP/IE/2018/008	TES/IE/SC/PIL/2018/067	
		M/s Rheoplast Technology Pvt. Ltd, Mumbai	PSCHPL/SCP/IE/2018/008	TES/IE/SC/PIL/2018/066	
		M/s BASF India Limited	PSCHPL/SCP/IE/2018/072	TES/IE/SC/PIL/2018/043	
		M/s Sika India Pvt Ltd,	PSCHPL/SCP/IE/2018/272	TES/IE/SC/PIL/2018/234	
		M/s B&B Specialities India Pvt Ltd,	PSCHPL/SCP/IE/2018/233	TES/IE/SC/PIL/2018/179	
		M/S CAC Pvt Ltd,	PSCHPL/SCP/IE/2018/219	TES/IE/SC/PIL/2018/180	
		M/s CBS Chemicals,	PSCHPL/SCP/IE/2018/293	TES/IE/SC/PIL/2018/256	
7	Curing Compound	M/s Kunal Conchem Pvt.Ltd, Faridabad	PSCHPL/SCP/IE/2018/094	TES/IE/SC/PIL/2018/067	
		M/s CBS Chemicals Pvt.Ltd, Faridabad	PSCHPL/SCP/IE/2019/464	TES/IE/SC/PIL/2019/369	
8	Emulsion	M/s Indian Oil Corporation	PSCHPL/SCP/IE/2018/061	TES/IE/SC/PIL/2018/039	
		M/s IWL India Limited	PSCHPL/SCP/IE/2018/073	TES/IE/SC/PIL/2018/054	
		M/s Hindustan Colas Private Limited	PSCHPL/SCP/IE/2018/062	TES/IE/SC/PIL/2018/035	
		M/s Ooms Polymer Modified Bitumen Pvt Ltd,	PSCHPL/SCP/IE/2018/314	TES/IE/SC/PIL/2018/254	
		M/s Tiki Tar and shell india pvt ltd	PSCHPL/SCP/IE/2020/674	TES/IE/SC/PIL/2020/485	
9	Bitumen	M/s Indian Oil Corporation	PSCHPL/SCP/IE/2018/061	TES/IE/SC/PIL/2018/039	
		M/s Hindustan Colas Private Limited	PSCHPL/SCP/IE/2018/282	TES/IE/SC/PIL/2018/0238	
		M/s IWL India Limited	PSCHPL/SCP/IE/2018/073	TES/IE/SC/PIL/2018/054	
		M/s Tiki Tar industries,	PSCHPL/SCP/IE/2018/250	TES/IE/SC/PIL/2018/0215	
10	Mastic Ashphalt	M/s IWL India Limited	PSCHPL/SCP/IE/2018/073	TES/IE/SC/PIL/2018/053	
11	Micro Silica	M/s Elkem South Asia pvt Ltd,	PSCHPL/SCP/IE/2018/201	TES/IE/SC/PIL/2018/170	
12	Anti Stripping	M/s HCPL & Tiki Tar Pvt Ltd,	PSCHPL/SCP/IE/2019/495	TES/IE/SC/PIL/2019/384	
13	Micro Fine	M/s Suyag Elements India Pvt Ltd	PSCHPL/SCP/IE/2019/580		
14	Expansion Joint	M/s Kantaflex India Pvt Ltd	PSCHPL/SCP/IE/2020/784		
		M/s Sanfield India Ltd	PSCHPL/SCP/IE/2020/781		
		M/s Hercules Structural Systems Pvt Ltd	PSCHPL/SCP/IE/2020/782		

**BORROW AREA SUMMARY**

S.NO	B/A NO.	Chainage	Side	Suitable For	Approved Qty (Cum)	Submission Letter No	Approved Letter No	Remark	
1	1	Maruvay 61+090	LHS	Emabankment		PSCHPL/SCP/IE/2018/093	TES/IE/SCP/PIL/2018/059	Approved	
2	1	61+090 LHS ( Maruvai ) EX - 01	LHS	Emabankment	30000	PSCHPL/SCP/IE/2020/656	TES/IE/SC/PIL/2020/470	Approved	
3	1	61+090 LHS ( Maruvai ) EX - 02	LHS	Emabankment &Subgrade	30000	PSCHPL/SCP/IE/2020/656	TES/IE/SC/PIL/2020/470	Approved	
4	1	61+090 LHS ( Maruvai ) EX - 03	LHS	Emabankment	30000	PSCHPL/SCP/IE/2020/670	TES/IE/SC/PIL/2020/477	Approved	
5	1	61+090 LHS ( Maruvai ) EX - 04	LHS	Emabankment &Subgrade	30000	PSCHPL/SCP/IE/2020/679	TES/IE/SC/PIL/2020/486	Approved	
6	1	61+090 LHS ( Maruvai ) EX - 05	LHS	Emabankment	30000	PSCHPL/SCP/IE/2020/679	TES/IE/SC/PIL/2020/486	Approved	
7	1	61+090 LHS ( Maruvai ) EX - 06	LHS	Emabankment	45000	PSCHPL/SCP/IE/2020/683	TES/IE/SC/PIL/2020/500	Approved	
9	2	106+350 RHS Kodali	RHS	Emabankment	18000	PSCHPL/SCP/IE/2018/084	TES/IE/SCP/PIL/2018/061	Approved	
10	2	106+350 RHS ( Kodali ) EX - 01	RHS	Emabankment	30000	PSCHPL/SCP/IE/2020/670	TES/IE/SC/PIL/2020/477	Approved	
11	2	106+350 RHS ( Kodali ) EX - 02	RHS	Emabankment	30000	PSCHPL/SCP/IE/2020/689	TES/IE/SC/PIL/2020/490	Approved	
12	3	113+250 LHS Paalur	LHS	Emabankment	15000	PSCHPL/SCP/IE/2018/101	TES/IE/SCP/PIL/2018/098	Approved	
13	4	113+250 LHS Kattanakaram	LHS	Emabankment	15000	PSCHPL/SCP/IE/2018/147	TES/IE/SCP/PIL/2018/122	Approved	
14	5	113+250 LHS Manikudi	LHS	Emabankment	15000	PSCHPL/SCP/IE/2018/116	TES/IE/SCP/PIL/2018/099	Approved	
15	6	112+250 RHS Ammiyapan	RHS	Emabankment	15000	PSCHPL/SCP/IE/2018/160	TES/IE/SCP/PIL/2018/131	Approved	
16	7	80+500 RHS Palayan kottai	RHS	Emabankment	30000	PSCHPL/SCP/IE/2018/160	TES/IE/SCP/PIL/2018/129	Approved	
17	7	80+500 RHS Palayan kottai EX-01	RHS	Emabankment	60000	PSCHPL/SCP/IE/2019/374	TES/IE/SCP/PIL/2018/300	Approved	
18	7	80+500 RHS Palayan kottai EX-02	RHS	Emabankment	60000	PSCHPL/SCP/IE/2019/396	TES/IE/SCP/PIL/2018/315	Approved	
19	7	80+500 RHS Palayan kottai EX-03	RHS	Emabankment &Subgrade	60000	PSCHPL/SCP/IE/2019/435	TES/IE/SCP/PIL/2019/343	Approved	
20	8	98+950 RHS Ponnery	RHS	Emabankment	30000	PSCHPL/SCP/IE/2019/302	TES/IE/SCP/PIL/2018/247	Approved	
21	8	98+950 RHS Ponnery EX-01	RHS	Emabankment & Subgrade	30000	PSCHPL/SCP/IE/2019/488	TES/IE/SCP/PIL/2019/386	Approved	
22	9	106+320 RHS (Uthayanatham)	RHS	Emabankment	25500	PSCHPL/SCP/IE/2019/302	TES/IE/SCP/PIL/2018/247	Approved	
23	9	106+320 RHS (Uthayanatham EX-01)	RHS		15000	PSCHPL/SCP/IE/2019/472	TES/IE/SCP/PIL/2019/365	Approved	
24	10	96+600 LHS (Pandianeery)	LHS	Emabankment	34500	PSCHPL/SCP/IE/2019/302	TES/IE/SCP/PIL/2018/247	Approved	
25	10	96+600 LHS (Pandianeery) EX-01	LHS		30000	PSCHPL/SCP/IE/2019/345	TES/IE/SCP/PIL/2018/268	Approved	
26	11	88+550 (Kaduvetti)	LHS	Emabankment	25500	PSCHPL/SCP/IE/2019/335		Approved	
27	11	88+550 (Kaduvetti) EX - 01	LHS	Emabankment & Subgrade	30000	PSCHPL/SCP/IE/2019/352	TES/IE/SCP/PIL/2018/280	Approved	
28	12	90+500 Puthueary	RHS	Emabankment & Subgrade	30000	PSCHPL/SCP/IE/2019/390	TES/IE/SCP/PIL/2018/307	Approved	
29	12	90+500 Puthueary EX-01	RHS	RE WALL	30000	PSCHPL/SCP/IE/2019/510			
30	13	87+900 Andi Madam	RHS	Using For Filter Media					
31	14	87+900 Vilanthai	RHS						
32	15	87+600 Velaneary	RHS	Emabankment	18000	PSCHPL/SCP/IE/2019/387	TES/IE/SCP/PIL/2018/302	Approved	
33	16	82+900 Aandi Palayam	RHS	Emabankment	18000	PSCHPL/SCP/IE/2019/381	TES/IE/SCP/PIL/2018/299	Approved	
34	16	82+900 Aandi Palayam EX-01	RHS	RE WALL	36000	PSCHPL/SCP/IE/2019/501	TES/IE/SC/PIL/2019/390	Approved	
35	16	82+900 Aandi Palayam EX-02	RHS	Subgrade& RE WALL	30000			Testing in Progress	
35	17	94+400 kundaveli East	LHS	Emabankment	30000	PSCHPL/SCP/IE/2019/408	TES/IE/SC/PIL/2019/320	Approved	
36	18	83+000 Vanamadevi	LHS	Emabankment	15000	PSCHPL/SCP/IE/2019/397	TES/IE/SC/PIL/2019/314	Approved	
37	19	101+900 Thaluthalai Medu	RHS	Emabankment	30000	PSCHPL/SCP/IE/2019/422	TES/IE/SC/PIL/2019/355	Approved	
38	20	110+100 Athipakkam	RHS	Emabankment	15000	PSCHPL/SCP/IE/2019/452	TES/IE/SC/PIL/2019/354	Approved	
39	21	103+200 VEmabankmentankudi	LHS	Subgrade & RE WALL	30000	PSCHPL/SCP/IE/2019/463	TES/IE/SC/PIL/2019/362	Approved	
40	21	103+200 VEmabankmentankudi EX-01	LHS	Subgrade & RE WALL	22500	PSCHPL/SCP/IE/2020/717	TES/IE/SC/PIL/2020/504	Approved	
41	21	103+200 VEmabankmentankudi EX-02	LHS	Subgrade & RE WALL	30000			Approved	
41	22	97+300 Muthuservamadam	RHS	Emabankment	30000	PSCHPL/SCP/IE/2019/447	TES/IE/SC/PIL/2019/349	Approved	
42	23	80+500 Kandiyankuppam	RHS	Emabankment & Subgrade	30000	PSCHPL/SCP/IE/2019/561	TES/IE/SC/PIL/2019/418	Approved	
43	23	80+500 Kandiyankuppam EX - 01	RHS	Emabankment & Subgrade	30000	PSCHPL/SCP/IE/2020/626	TES/IE/SC/PIL/2020/452	Approved	
44	24	106+900 Karaikuruchi	RHS	Emabankment	15000	PSCHPL/SCP/IE/2020/636	TES/IE/SC/PIL/2020/453	Approved	
45	24	106+900 Karaikuruchi EX - 01	RHS	Subgrade	30000	PSCHPL/SCP/IE/2020/691	TES/IE/SC/PIL/2020/491	Approved	
46	25	90+500 RHS (IDAIPALLAM)	LHS	Emabankment	15000	PSCHPL/SCP/IE/2020/637	TES/IE/SC/PIL/2020/454	Approved	
47	25	90+500 RHS (IDAIPALLAM) EX-01	RHS	Emabankment & Subgrade	30000	PSCHPL/SCP/IE/2020/640	TES/IE/SC/PIL/2020/469	Approved	
48	26	98+900 LHS ( kommedu )	LHS	Emabankment & Subgrade	30000	PSCHPL/SCP/IE/2020/661	TES/IE/SC/PIL/2020/472	Approved	
49	27	91+400RHS ( pappakudi )	RHS	Emabankment	15000	PSCHPL/SCP/IE/2020/657	TES/IE/SC/PIL/2020/471	Approved	
50	28	92+600 RHS Chokalingapuram	RHS	Emabankment & Subgrade	30000	PSCHPL/SCP/IE/2020/676	TES/IE/SC/PIL/2020/471	Approved	
51	29	90+580 RHS Irudhayapuram	RHS	Emabankment	15000	PSCHPL/SCP/IE/2020/711	TES/IE/SC/PIL/2020/501	Approved	
52	30	80+500 RHS Keelpathi	RHS	Emabankment	15000	PSCHPL/SCP/IE/2020/711	TES/IE/SC/PIL/2020/501	Approved	
53	31	87+600 RHS Thirukalappur	RHS	Subgrade & RE WALL	30000	PSCHPL/SCP/IE/2020/717	TES/IE/SC/PIL/2020/504	Approved	
54	32	106+300 RHS Keelnatham	RHS	Subgrade & RE WALL	30000	PSCHPL/SCP/IE/2020/725	TES/IE/SC/PIL/2020/505	Approved	
55	33	87+600 RHS Thathur	RHS	Emabankment & RE WALL	30000	PSCHPL/SCP/IE/2020/736	TES/IE/SC/PIL/2020/511	Approved	
<b>FLYASH</b>									
1	1	FLYASH Ex-01	LHS	RE WALL	25500	PSCHPL/SCP/IE/2018/122	TES/IE/SC/PIL/2018/101	Approved	
2	2	FLYASH EX-02	LHS		25500	PSCHPL/SCP/IE/2019/303	TES/IE/SC/PIL/2019/255	Approved	
3	3	FLYASH EX-03	LHS		30000			Approved	
4	4	FLYASH EX-04	LHS		30000	PSCHPL/SCP/IE/2019/448	TES/IE/SC/PIL/2019/350	Approved	
5	5	FLYASH EX-05	LHS		45000	PSCHPL/SCP/IE/2019/489	TES/IE/SC/PIL/2019/385	Approved	
6	6	FLYASH EX-06	LHS		30000	PSCHPL/SCP/IE/2019/518	TES/IE/SC/PIL/2019/400	Approved	
7	7	FLYASH EX-07	LHS		30000	PSCHPL/SCP/IE/2019/570	TES/IE/SC/PIL/2019/430	Approved	
8	8	FLYASH EX-08	LHS		30000	PSCHPL/SCP/IE/2019/571	TES/IE/SC/PIL/2019/431	Approved	
9	9	FLYASH EX-09	LHS		30000	PSCHPL/SCP/IE/2020/728	TES/IE/SC/PIL/2020/512	Approved	
10	10	FLYASH EX-10	LHS		30000	PSCHPL/SCP/IE/2020/761	TES/IE/SC/PIL/2020/527	Approved	
11	11	FLYASH EX-11	LHS		30000				

**PATEL SETHIYAHOPU CHOLOPURAM HIGHWAY PVT. LTD.**

Four Laning of Sethiyahopu - Cholapuram from Km.65.960 to 116.440 section of NH-45C in the state of Tamil Nadu under NHDP Phase-IV on Hybrid Annuity Mode

**STATUS OF NCR**

Sl No	NCR NO.	Date	Location		Description of NCR	NCR Issued reference	Concessionaire Reply Reference	NCR Closed Reference	Remarks
			From	To					
1	NCR - 01	30.01.2019	Box Culver at Km:76+390 (LHS)		Improper Ground Improvement for Box culver at Km:76+390	Lr.No.221_30.01.2019	Lr.No.280_14.02.2019	Lr.No.258_20.03.2019	Closed
2	NCR - 02	23.05.2019	Minor Bridge at Km:79+795 (LHS)		a) Improper compaction/vibration of Abtment -1 wall 2nd lift lead to honey combs. b) No cover to the reinforcement in Abutment -1 wall 2nd lift	Lr.No.304_23.05.2019			
3	NCR - 03	23.05.2019	Abutment A2 of Minor Bridge at Km:85+435 (LHS)		Improper alignment (plumb) of Abutment-2 wall 2nd lift	Lr.No.305_23.05.2019			
4	NCR - 04	23.05.2019	Pile cap for Abutment A2 of VUP at Km.102+975 LHS		Honey combs in Pile cap for Abutment A2 of VUP at Km.102+975 LHS	Lr.No.306_23.05.2019			
5	NCR - 05	15.11.2019	HW between Km:93+900 to Km.94+200 (RHS)		Rectification required in Median kerb	Lr.No.403_15.11.2019	Lr.No.639_13.03.2020		Rejected the compliance vide Lr.No.478 dt 09.07.2020
6	NCR - 06	13.12.2019	HW between Km:82+850 to Km.82+970 (RHS)		WMM segregation	Lr.No.429_13.12.2019	Lr.No.786_23.12.2020		
7	NCR - 07	09.07.2020	Diversion road damaged at Km:97+300 to Km:97+600		Diversion road damaged	Lr.No.476_09.07.2020	Lr.No.727_02.10.2020	Lr No 509_14.10.2020	Closed
8	NCR - 08	23.07.2020	95+990 to 96+100(RHS) 96+230 to Km:96+300(RHS)		Improper laying of Kerb and not as per approved drawings	Lr.No.482_23.07.2020			
9	NCR - 09	31.07.2020	96+300 to 96+400(RHS)		Kerb mould is not as per the approved drawings	Lr.No.484_31.07.2020			
10	NCR - 10	18.08.2020	96+100 to 96+220(RHS)		Kerb mould is not as per the approved drawings	Lr.No.489_18.08.2020			
11	NCR - 11	12.11.2020	83+950 to 84+100 (RHS)		Excavated Embankment fill and using in subgrade layerNCR No.11	Lr.No.523_12.11.2020	Lr.No.774_02.12.2020		
12	NCR - 12	02.12.2020	83+940 to 84+080 (LHS)		Improper Kerb laying	Lr.No.531_02.12.2020			

## 7. Weather Report -Meensuritti

DATE	Temperature (°C)		Rainfall in mm	Humidity in %		Remarks
	Max	Min		Max	Min	
01/12/2020	30.10	25.0	7.00	84	63	Rainy
02/12/2020	30.00	24.2	51.00	86	62	Rainy
03/12/2020	30.00	24.2	240.00	96	68	Rainy
04/12/2020	29.60	24.8	45.00	99	70	Rainy
05/12/2020	30.10	24.6	17.00	99	72	Rainy
06/12/2020	30.00	25.1	50.00	99	76	Rainy
07/12/2020	25.90	24.8	27.00	98	74	Rainy
08/12/2020	30.10	25.4	10.00	99	77	Rainy
09/12/2020	30.20	25.1	7.00	98	75	Rainy
10/12/2020	30.10	24.2	0.00	94	72	Sunny
11/12/2020	30.30	23.9	0.00	91	68	Sunny
12/12/2020	30.10	23.4	0.00	89	65	Sunny
13/12/2020	30.00	23.5	0.00	88	64	Sunny
14/12/2020	30.30	24.0	0.00	89	65	Sunny
15/12/2020	30.10	23.6	11.00	85	64	Rainy
16/12/2020	30.30	24.8	52.00	92	68	Rainy
17/12/2020	30.00	24.5	31.00	98	74	Rainy
18/12/2020	30.10	24.2	9.00	99	75	Rainy
19/12/2020	30.30	24.5	0.00	95	70	Sunny
20/12/2020	31.70	24.1	0.00	91	68	Sunny
21/12/2020	28.10	22.6	0.00	78	60	Sunny
22/12/2020	28.20	23.2	0.00	74	56	Sunny
23/12/2020	28.70	23.4	0.00	77	55	Sunny
24/12/2020	28.80	23.0	0.00	81	57	Sunny
25/12/2020	29.50	23.1	0.00	82	58	Sunny
26/12/2020	30.30	22.5	0.00	84	54	Sunny
27/12/2020	30.20	23.3	0.00	81	52	Sunny
28/12/2020	30.40	23.8	0.00	82	51	Sunny
29/12/2020	30.30	25.0	6.00	80	53	Rainy
30/12/2020	30.10	23.9	22.00	87	52	Rainy
31/12/2020	30.30	25.0	0.00	98	51	Sunny

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## Weather Report Anakarai

DATE	Temperature (°C)		Rainfall in mm	Humidity in %		Remarks
	Max	Min		Max	Min	
01/12/2020	31.70	27.8	-	84	66	Sunny
02/12/2020	30.20	24.1	20.00	83	68	Rainy
03/12/2020	24.00	22.2	290.00	97	90	Rainy
04/12/2020	24.30	21.9	100.00	98	93	Rainy
05/12/2020	26.70	25.2	113.00	96	89	Rainy
06/12/2020	29.10	25.6	113.00	94	80	Rainy
07/12/2020	26.70	23.1	73.00	97	90	Rainy
08/12/2020	33.10	24.6	-	89	64	Sunny
09/12/2020	33.60	24.5	-	90	66	Sunny
10/12/2020	34.20	25.1	-	92	67	Sunny
11/12/2020	31.70	25.5	-	93	73	Sunny
12/12/2020	30.40	26.1	-	92	76	Sunny
13/12/2020	31.60	24.4	-	94	75	Sunny
14/12/2020	31.30	24.7	-	95	94	Sunny
15/12/2020	33.10	27.1	11.00	92	59	Rainy
16/12/2020	29.10	24.3	44.00	94	75	Rainy
17/12/2020	32.30	25.6	28.00	96	77	Rainy
18/12/2020	30.70	24.9	24.00	94	94	Rainy
19/12/2020	29.40	26.2	-	96	68	Sunny
20/12/2020	33.20	25.1	-	79	60	Sunny
21/12/2020	30.80	24.6	-	89	76	Sunny
22/12/2020	31.10	25.2	-	88	70	Sunny
23/12/2020	32.60	25.6	-	90	55	Sunny
24/12/2020	32.30	24.3	-	87	70	Sunny
25/12/2020	33.10	25.7	-	88	68	Sunny
26/12/2020	31.60	26.8	-	90	63	Sunny
27/12/2020	32.80	25.7	-	86	72	Sunny
28/12/2020	33.10	26.3	-	86	70	Sunny
29/12/2020	33.40	25.2	15.00	90	54	Rainy
30/12/2020	32.70	26.5	20.00	91	72	Rainy
31/12/2020	30.30	25.4	-	92	82	Sunny

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- Various issues related to environment and safety, such as traffic management, safety signage, disposal of waste materials and oil spillage, housekeeping, area barricading and traffic management, etc, are being taken care of during the execution of the project.

Periodic Safety meetings being conducted on a regular basis and the details of the photographs for the same along with action taken are as below.

## 9. Support required from NHAI

Concessionaire requests NHAI to take early action on the following issues:

1. Pending Disbursement of Payment to the beneficiaries from CALA towards Land and Buildings in Cuddalore, Ariyalur & Thanjavur District. – Request Authority to advise/instruct the Competent Authority of Land Acquisition to speed up the process of disbursement of pending payment.
2. Additional land acquisition for toll plaza, bus bays, turning radius of major junctions along the project highways.
3. Finalization of Toll plaza location.
4. Change of Scope notice required for relocation of VUP @ Km 113+500 due to existence of electrical substation of TANGENDCO at Km:113+700 to 113+800(RHS).
5. Change of Scope notice required for widening of Existing Minor Bridge @ Km 101+095 from two lane to four-lane carriageway.
6. Change of Scope notice required for reconstruction of Existing Box Culvert @ Km 110+785 because the existing structure of said location at site is a Pipe Culvert, which has been mentioned as Box type in the concession agreement.
7. Removal of Electrical substation 85+300 to 85+400, which is obstructing the project highways.
8. NOC from PWD/WRO, Govt of Tamil Nadu for construction of Minor Bridge (13 Nos) and Major Bridge (3 Nos) as per below

Sl No	Description	Total scope (Nos.)	Submitted as on date (Nos.)	Approved as on date (Nos.)	Balance (Nos.)	Present Status
1	MNB	26	26	13	13	Under Processing with Engineer In Chief, Chennai
2	MJB	4	4	2	2	
	Total	30	30	15	15	

9. In sufficient Right of Way with respect to the land handed over as per Clause 10.3.1 of Concession Agreement at the time of Signing of Joint Memorandum.
10. Payment disbursement and necessary clearances required for removal of religious and Govt. buildings.
11. NOC from PWD/WRO, Govt. of Tamil Nadu for construction of project highways in the existing ponds (in a length of 1.702 Kms).

Sl No	Chainage		Length Affected (M)	Side	AVG Toe Width from CL "A"	Width/distance of Pond Edge from CL "C"
	From	To				
1	75+557	75+632	74.75	RHS	32.50	7.00
2	77+330	77+400	70.00	LHS	28.16	3.00
3	78+404	78+422	17.90	LHS	16.00	9.50



4	80+396	80+415	19.00	LHS	27.00	7.00
5	80+400	80+423	23.00	RHS	24.00	6.50
6	81+356	81+416	60.30	LHS	18.00	9.00
7	81+760	81+835	75.00	LHS	14.30	2.00
8	90+804	90+837	32.77	RHS	32.00	12.80
9	97+376	97+551	175.00	RHS	32.67	11.00
10	97+822	97+845	23.00	RHS	27.50	7.80
11	99+961	100+020	59.70	RHS	25.00	17.28
12	100+350	100+389	39.00	LHS	22.70	4.00
13	100+800	100+845	44.70	RHS	23.00	12.25
14	100+731	100+854	123.75	LHS	23.00	5.00
15	103+039	103+056	17.60	LHS	23.00	6.60
16	103+125	103+435	310.10	LHS	23.00	6.00
17	103+822	103+846	24.00	LHS	23.20	5.20
18	104+091	104+262	171.00	RHS	23.00	16.80
19	103+992	104+264	271.50	LHS	23.00	10.90
20	114+547	114+617	70.00	LHS	20.62	0.00
<b>Total Length affected (in M)</b>			<b>1702.1</b>			

12. Removal/relocation of existing irrigation sluice and regulator in the locations.

Sl. No.	Chainage	Distance from PCL	Remarks/Action to be taken	Present Status
1	68+644 (02 Nos)	-	To be shifted to edge of PROW	Approval of estimate is pending with NHAI
2	81+850	9.3m	To be shifted to edge of PROW	
3	81+870	1.8m	To be shifted to edge of PROW	
4	81+910	1.8m	To be shifted to edge of PROW	
5	82+010	1.8m	To be shifted to edge of PROW	
6	82+100	7.4m	To be shifted to edge of PROW	
7	103+990	5.97m	To be shifted to edge of PROW	

13. Permission for Removal of Teak wood trees from the Project Highway in Cuddalore District in a length of 2.84 Kms.

Sl no	Name of the Village	Location/Chainage	Effectted Length (in Km)	Remarks
1	Nandeeswaramanagalam	78+400 to 79+400	1.00	Teak Trees under

2	Cholatharam	79+730	0.25	Forest Dept. to be removed.
3	Pudaiyur	81+860	0.20	
4	Pudaiyur	82+100	0.15	
5	Agaraputhur	84+680	0.25	
6	Agaraputhur	84+830	0.25	
7	Agaraputhur	84+990	0.28	
8	Mamangalam Addl.	85+450	0.21	
9	Mamangalam Addl.	85+420	0.15	

14. Removal of Religious structures of 16 Nos. and Bus stand from the proposed ROW.

SL No	Chainage	Type of Structure	Side	Distance from PCL (M)	TCS Type	Formation Width Required from PCL	ROW From PCL	Remarks
<b>Priority I – Obstruction of Main Carriage way &amp; Service Road :-</b>								
1.	86+350	Temple	LHS	7	Type - B with SR 7.5	21.25	26.10	
2.	87+500	Temple	LHS	13	Fig -7.8 with SR 5.5	22.75	26.80	
3.	92+455	Temple	LHS	14	Type - A3	18.80	23.70	
4.	92+570	Temple	RHS	12	Type - B with SR 7.5	21.25	28.80	
<b>Priority II – Obstruction of Service Road :-</b>								
1.	75+650	Temple	RHS	15	Fig -7.8 with SR 5.5	22.75	25.50	
2.	80+125	Temple	RHS	16	Type -A3	20.80	23.50	
3.	83+615	Temple	RHS	16	Type - B with SR 7.5	21.25	21.25	
4.	84+070	Temple	LHS	16	Type - B with SR 7.5	21.25	29.00	
5.	86+280	Temple	RHS	23	Type - B with SR 7.5	21.25	30.00	
6.	86+390	Temple	LHS	18	Type - B with SR 7.5	21.25	26.10	
7.	89+310	Temple	RHS	16	Type - B with SR 7.5	21.25	22.50	
8.	90+325	Temple	RHS	14	Fig -7.8 with SR 5.5	22.75	23.00	
<b>Priority III – Falling Within ROW and effecting the Utility shifting works:-</b>								
1.	76+600	Temple	RHS	24.5	Type - B with SR 7.5	21.25	31.10	
2.	91+780	Temple	RHS	22	TCS - 1	14.00	26.00	
3.	92+135	Temple	LHS	22	Type - A3	15.65	26.00	
4.	99+710	Temple	LHS	20	Type - A3	17.95	25.00	

15. Removal of Government Buildings like VAO office, School, Post Office & Ration Shop etc.

16. Removal of unauthorized occupations in 38 nos. in Cuddalore dist. & 32 nos. in Ariyalur dist. in the project highways.
17. Removal/relocation of Veeranam Pipes between Km: 65+960 to 66+200 causing material adverse effect on construction, Authority requested to take up the matter with Concern Department for early removal of the same.
18. Providing/finalization of land by the concern owning department for construction of Over Head Tank in the following locations:

S. No	Name of the Village	Location/ Chainage	Capacity of OHT	Remarks
1	Nandeewaramangalam	77+760	30 KL	Land yet to be finalized
2	Cholatharam	80+120	30 KL	

19. With reference to our several correspondence time to time vide which we intimated the matter of enforced nationwide lockdown as well as its impact on the Project Highway, the World Health Organization (WHO) on 11th March' 2020 had characterized the Novel Coronavirus Disease (COVID-19) outbreak as a global Pandemic. In view of the WHO's announcement and over all prevailing condition of the nation, the Union Government of India (GOI) had invoked section 2 of Epidemic Disease Act 1897 on 12.03.2020 to prevent the spread of novel coronavirus in India. Accordingly, the State Government of Tamilnadu has enforced complete lockdown of the entire state from 24.03.2020 to 31.03.2020 to avoid the spread of COVID-19. Subsequently, The Ministry of Home Affairs (MHA) vide Order No. 40-3/2020-DM-I(A), dated 24.03.2020 directed to enforce complete nationwide lockdown for the period of 21 days from 25.03.2020 to 14.04.2020.

Further, based on the outcome of COVID-19 spread containment during 1st nationwide lockdown till 14<sup>th</sup> April' 2020 & condition of country as a whole, Ministry of Home Affairs (MHA), Govt. of India in exercise of powers conferred under Section 10(2)(l) of Disaster Management Act 2005, has issued an Order bearing no. 40-3/2020-DM-I(A), dated 15.04.2020 that the nationwide lockdown will remain continue till 3rd May' 2020 to contain the spread of COVID-19 in the country. However, to mitigate hardship of the public select additional activities will be allowed with effect from 20th April' 2020 including Road Construction Activities as per sr. no. 16 of Consolidated Revised Guidelines on the measures to be taken by Ministries / Departments of GOI, State/ UT Govt. and State/ UT Authorities incorporating these guidelines are enclosed with the MHA order.

Accordingly, we have submitted the detailed work program during the extended lock down period up to 03.05.2020 along with the list of Manpower & Machineries to be involved in the Construction work to take suitable action for the issuance of necessary permission from District Administration in this regard. Further, vide our letter no. 12 dated 23.04.2020 we informed that Press released no. 280 dated 20.04.2020 issued by Government of Tamilnadu that Government of Tamilnadu had instructed to continue to enforce all the existing restrictions issued by MHA order dated 24.03.2020 during extended lock down period i.e. up to 03.05.2020.

Further, vide our letter no. 16 dated 08.05.2020 & 19 dated 20.05.2020 we informed that Government of Tamilnadu had instructed to continue to enforce all the existing restrictions issued by MHA order dated 24.03.2020 during extended lock down period i.e. up to 31.05.2020. After that, a notification issued by Revenue and Disaster Management (D-II)

Department, Govt. of Tamilnadu bearing no. 203 dated 23.04.2020 vide which it is informed that resumption of construction of road & bridge project can be done with taking all precaution as per Standard Operating Procedure (SOPs) for social distancing and obtain permission from District Administration.

But so far we have not received the requisite permission from the District Administration for commencement of works and the entire construction activities are standstill since 21.03.2020 and the mobilised manpower and machineries are in idle conditions which the Concessionaire facing the huge losses of valuable time and cost due to occurrence of this Force Majeure under the Article-28 of Concession Agreement. Furthermore, we also notified in our earlier correspondence that Ministry of Home Affairs, Govt. of India vide their order dated 29.04.2020 allowed the movement of stranded migrant workers to their home town and subsequently, Local officials of District Administration are now approaching to our staff/labours directly & taking their willingness for movement to their home town. Due to this and havoc of spreading of coronavirus, our workers and labours are putting their voice/desire for roaming to their home town. Based on prevailing situation and circumstances thereto & on human ground we could not restrict them from going to their home town and many migrant labours/ staffs have registered their name for the movement to their home town.

Further, Concessionaire has also reported that order dated 31.05.2020 issued by Health and Family Welfare (P1) Department, Government of Tamilnadu vide which they notified that state of Tamilnadu has been divided into 8 zones and issued additional guidelines for strict adherence on movement of person/ vehicle, testing & quarantine strategies for management of COVID-19 in the state.

After that Government of India has announced "Unlock 1.0" in entire country except containment zones but Government of Tamilnadu has instructed to extended all restrictions issued vide additional guidelines for strict adherence on movement of person/ vehicle, testing & quarantine strategies for management of COVID-19 in the state.

In addition to that due to surge of cases of COVID-19 in State of Tamilnadu, Government of these states has given instruction to compulsory quarantine period of 14 days for passenger/people who are coming in the state from another state.

Thus, Concessionaire started construction activities in Project Highway after getting permission from District Administration as well as tried to get momentum of the Progress of work as like they have on 20.03.2020 but they are facing lots of challenges like non-availability of desired nos. of skilled labours, non-availability of desired staff for operation of our machineries, non-availability of spare parts in local market due to disturbance of supply chain, due to enforcement of 14 days Quarantine as per Govt. norms labours are also not willing to come back to work considering upcoming Monsoon season, etc. which are beyond of control of Concessionaire.

20. Unprecedented heavy rain affected the construction activities in the project highway due to the occurrence & effect of severe cyclonic storm NIVAR on 25.11.2020.

## 10. Important Events

Table 10.1. Details of Important Events

Sl. No	Date of Events	Description of Events	Remarks
1.	03-12-2020	Occurrence of Burevi Cyclone	

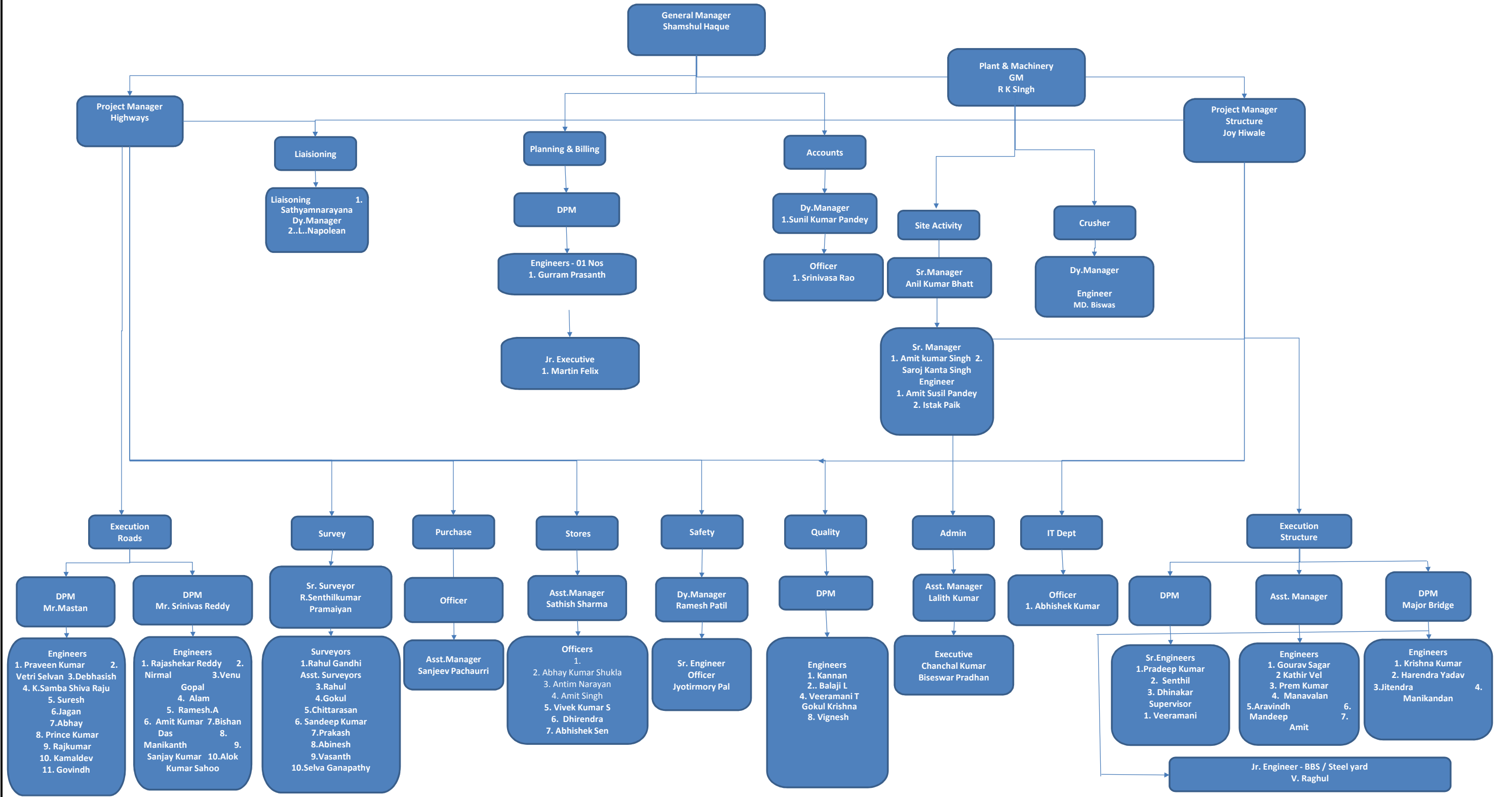
## 11. Organization Chart

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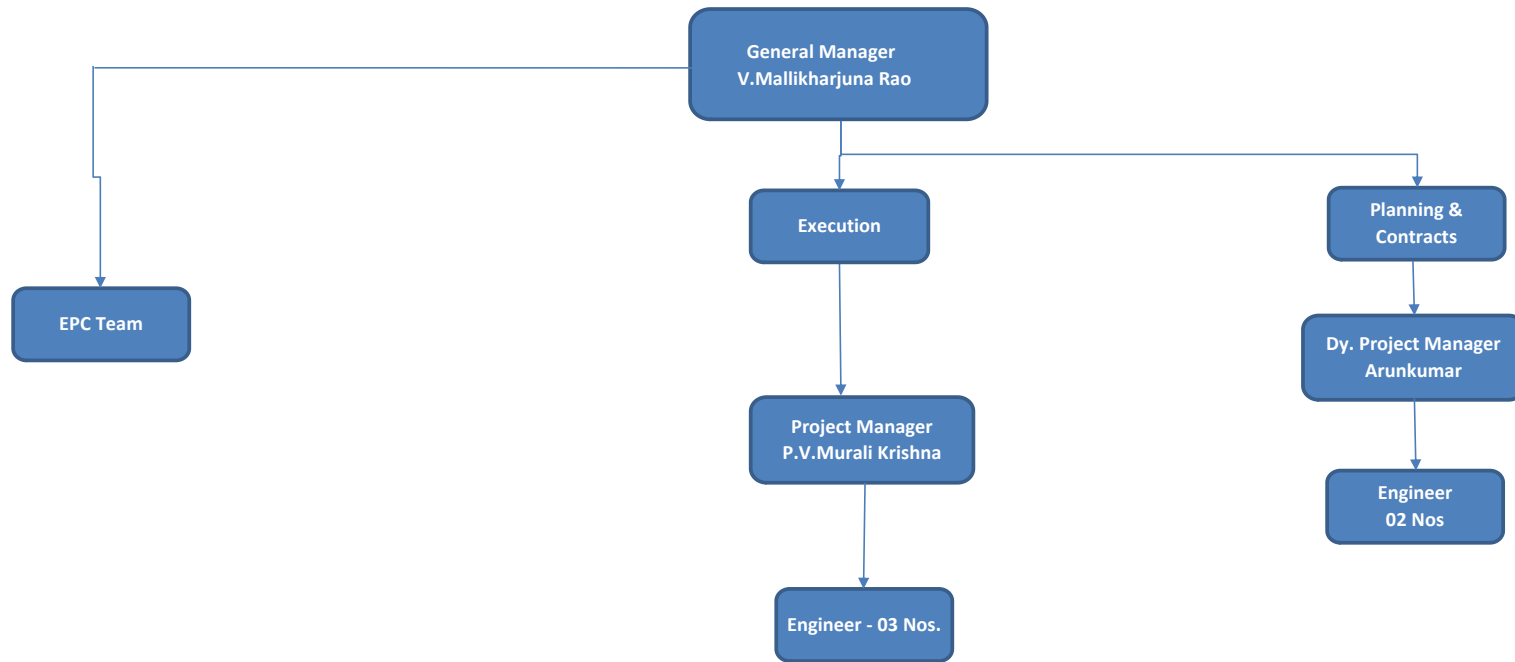
The following figures represents the organization structure of the EPC and SPV Team.

1. Fig. 4 - Organization Chart - EPC Team
2. Fig. 5 - Organization Chart - SPV Team

# ORGANIZATION CHART - EPC TEAM



## ORGANIZATION CHART - SPV TEAM





## 12. List of Plants, Machinery and Equipment's

Table 12.1 - List of Plants, Machinery and Equipment's

S.No.	Name of the Machinery	Capacity / Model	Mobilized in Nos.	Remarks
1	Grader	120K2	9	
2	Excavator	JCB-220	9	
3	Dozer		3	
4	Soil Compactor	HAMM 311	8	
5	Backhoe Loader	JCB 3DX	7	
6	Tipper	Bharat Benz- 3128C	73	
7	Transit Mixture	2523C	8	
8	Loader	455 ZX	4	
9	Trailer		2	
10	Water Tanker		5	
11	Boom Placer	S-36	1	
12	Tractor	5036 D V-2	2	
13	Mobile Service Van		1	
14	Tower Light	AJASKY	3	
11	Hydra Crane		2	
12	Asphalt Batch Mix Plant		1	
13	Wet Mix Plant	250 TPH	1	
14	Concrete Batch Mix Plant	45 cum	1	
15	Concrete Batch Mix Plant	60 cum	2	
16	Crusher Plant (3 Stage)	250 TPH	2	
17	Weigh Bridge for Camp 100MT	100MT	3	
18	Weigh Bridge for Crusher 100MT	100MT	2	
19	Genset Base Camp	25KV	1	
20	Genset 63KVA Boiler	63KVA Boile	1	
21	Genset (H.M & B/P)	82.50KV	3	
22	Genset (B/P-CP-45)	125KV	2	
23	Genset Concrete Plant-180 KVA	180 KVA	1	
24	Genset (Crusher)	1010KVA	3	
25	Gantry at Box Segment Casting Yard	100 MT	2	Both are in operation.

26	Launching Girder		2	1 no. in operation at site & 1 no. under erection.
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## 13. Change of Scope Proposals

Table 13.1 - Status of Change of Scope Proposals

Sl. No	Proposal Details	Date of Proposal	Current Status	COS Amount	Actual Date of Approval
1	Replacement of Pipe Culverts with Box Culverts	23.03.2018	Approved	3.21 Cr	21.02.2020
2	Strengthening/up grade the incident Management Service	10.05.2019	Required COS notice for Strengthening/upgrade the incident Management Service.	NA	NA
3	COS proposal for 09 nos of Box culvert and 01 MNB under +ve COS and 01 nos of Box culvert under -ve COS.	24.09.2020	PD, NHAI, PIU, Thanjavur recommended to the Competent Authority vide Lr.No. NHAI/PIU/THanj/11025/28/2019/1613 dated 24.09.2020 for obtaining in principle approval of the same.	(-) 13.99 Cr../byru5[ '5	Under process of approval
4	Alternate proposal for construction of VUP at Km.113+550 to avoid shifting of Electrical substation of TANGEDCO				
5	Proposal for deletion of VUP at Km:86+900 under Negative COS				
6	Proposal for deletion of GSI at Km:80+710 under Negative COS				

## 14. Details of Correspondences

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The following tables list out the correspondences between the parties.

Table 14.1. - Concessionaire to NHAI

Table 14.2. - NHAI to Concessionaire

Table 14.3. - Concessionaire to Independent Engineer

Table 14.4. - Independent Engineer to Concessionaire

TABLE 14.1 - CORRESPONDANCE - CONCESSIONAIRE TO NHAI

S.No	Date	Letter No	Subject	Remarks

**TABLE 14.2 - CORRESPONDANCE - NHAI TO CONCESSIONAIRE**

S.No	Date	Letter No	Subject	Remarks
1	02.12.2020	NHAI/PIU/Thanj/11025/11/2018/2192	Maintenance of Existing Project highway requested	
2	03.12.2020	NHAI/PIU/Thanj/11099/05/2009/2216	Information sought under Right to Information Act 2005 by Sh.Tamilnesan- Report Called for	
3	05.12.2020	NHAI/PIU/Thanj/11025/11/2018/2235	Details of payment made Mile stone No 03	
4	07.12.2020	NHAI/PIU/Thanj/11027/09/2009/2240	Usage of plastic waste in Construction of Service road in the Projects- Compliance Report Called For - Copy	
5	09.12.2020	NHAI/PIU/Thanj/11025/39/2020/2254	Public Interest Litigation Petition filed by Sh Vairasekar-report called for	
6	09.12.2020	NHAI/PIU/Thanj/11025/11/2018/2260	Details of payment made GST Reimbursement	
7	09.12.2020	NHAI/PIU/Thanj/11025/11/2018/2261	Details of payment made IPC 02 of payment milestone 03	
8	10.12.2020	NHAI/PIU/Thanj/11025/11/2018/2275	Shifting of Electrical utilities like HT lines & tower at Km 113+720-Payment of RA Bill No 16	
9	10.12.2020	NHAI/PIU/Thanj/11019/47/2017/2281	Compliants recieved from public-Action taken and compliance report called for	
10	14.12.2020	NHAI/PIU/Thanj/11025/11/2018/2291	IPC 04 of payment milestone II	
11	14.12.2020	NHAI/PIU/Thanj/11020/57/2020/2303	Issue of No Objection Certificate proposed Ms HSD retail Outlet abutting on LHS of NH 45C of Km 84798 to km 84+833	
12	14.12.2020	NHAI/PIU/Thanj/11025/09/2018/2320	Shifting of Existing drainage sluices at Km 81.850,82.100,81.870,81.910,82.010 -Estimate submitted by EE PWD Coleroon Basin Chidambaram -Approval requested	
13	16.12.2020	NHAI/PIU/Thanj/11021/23/2019/2354	Request for permission to lay Underground Water supply and Distribution to Thanjavur Municipality under smart City	
14	17.12.2020	NHAI/PIU/Thanj/11026/28/2018/2353	Disruption of Construction activities due to delay in disbursement of payment to the land owners	
15	23.12.2020	NHAI/PIU/Thanj/11019/52/2017/2389	2389_23.12.2020_NHAI_SCP_Independent Consultancy Services for the month of November 2020-50% Claim	

**TABLE 14.3 - CORRESPONDANCE - CONCESSIONAIRE TO INDEPENDENT ENGINEER**

S.No	Date	Letter No	Subject	Remarks
1	01.12.2020	PSCHPL/SCP/IE/2020/773	Submission of IPC 04 of PMS 03 against monthly work as per NHA Policy Guidelines dated 22.06.2020	
2	02.12.2020	PSCHPL/SCP/IE/2020/774	Compliance report-NCR 11-Excavated Embankment fill and using in Subgrade layer	
3	04.12.2020	PSCHPL/SCP/IE/2020/775	Soil test reports for the proposed borrow area of the project ( BA No 21 Ex 02)	
4	06.12.2020	PSCHPL/SCP/IE/2020/776	Submission of monthly progress report for the month of November 2020	
5	12.12.2020	PSCHPL/SCP/IE/2020/778	Providing Escape channel on either side of Major Bridge at Km 73+340-Request to issue COS notice as per Article 16 of Concession Agreement	
6	16.12.2020	PSCHPL/SCP/IE/2020/779	Providing of Irrigation Pipeline across the NH road at Km 108+540-Request to issue COS notice as per Article 16 of Concession Agreement	
7	16.12.2020	PSCHPL/SCP/IE/2020/780	Procurement of Modified Binder from Ms Tikitar and shell india Pvt limited	
8	18.12.2020	PSCHPL/SCP/IE/2020/781	Procurement of Expansion joints from Ms Sanfeld India Limited	
9	18.12.2020	PSCHPL/SCP/IE/2020/782	Procurement of Expansion joints from Ms Hercules Structural systems Pvt Ltd	
10	21.12.2020	PSCHPL/SCP/IE/2020/783	Submission of Design & Drawings of Box Culvert at Km 113+372 & Km 114+703	
11	22.12.2020	PSCHPL/SCP/IE/2020/784	Procurement of Expansion Joints from Ms Kantaflex India Pvt Ltd	
12	22.12.2020	PSCHPL/SCP/IE/2020/785	Submission of Job Mix Formul for DBM ( Grading III) with RAP	
13	23.12.2020	PSCHPL/SCP/IE/2020/786	Compliance report-NCR No.06-WMM Segregation	
14	26.12.2020	PSCHPL/SCP/IE/2020/787	Submission of Method statement for erection of segmental spans at Km 107+400 (MJB)	

**TABLE 14.4 - CORRESPONDANCE - INDEPENDENT ENGINEER TO CONCESSIONAIRE / NHAI**

S.No	Date	Letter No	Subject	Remarks
1	02.12.2020	TES/IE/SC/PIL/2020/531	NCR No-12 -Improper Kerb Laying	
2	04.12.2020	TES/IE/SC/PIL/2020/214	Submission of IPC 04 of Payment Milestone III - Recommendation for payment	
3	10.12.2020	TES/IE/SC/PIL/2020/532	Submission of drawing for 1 No of Minor Bridge at Km 92+342 (RHS)	
4	10.12.2020	TES/IE/SC/PIL/2020/533	Compliance Report-Providing of Irrigation Pipeline across the NH road at Km 108+540	
5	10.12.2020	TES/IE/SC/PIL/2020/534	Site Instruction Report (SIR)	
6	11.12.2020	TES/IE/SC/PIL/2020/536	Submission of revised work program	
7	11.12.2020	TES/IE/SC/PIL/2020/537	Submission of methodology Erection/launching of Precast Box Segments at Km 107+400 (MJB)	
8	12.12.2020	TES/IE/SC/PIL/2020/215	Shifting of existing drainage inlet sluices at Km 81.850, 82.100, 81.870, 81.910 & 82.010 –Estimate Submission – Remarks called for – Observations – Reg. (1)	
9	17.12.2020	TES/IE/SC/PIL/2020/216	Review and comments of IE on Concessionaire Monthly progress Report for the month of November 2020.	
10	18.12.2020	TES/IE/SC/PIL/2020/217	Pappakudi village of Ariyalur Dist-Construction of Box Culvert at Km 90+637	
11	19.12.2020	TES/IE/SC/PIL/2020/218	IE Inspection Report for the month of November 2020	
12	23.12.2020	TES/IE/SC/PIL/2020/538	Proposal of Borrow Area No –21 Extension NO-02	



15. Progress Photographs

Sl.No	Description	Location	Side
1	Subgrade In Progress	84+550	RHS
2	RE Wall Filling Work in Progress	74+650	LHS



Sl.No	Description	Location	Side
3	RE Wall Ground Improvement In Progress	104+700	RHS
4	Slip Road in Progress	104+850	LHS



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Sl.No	Description	Location	Side
5	CTSB Laying Work in Progress	83+120	RHS
6	CTSB Laying Work in Progress	99+960	RHS



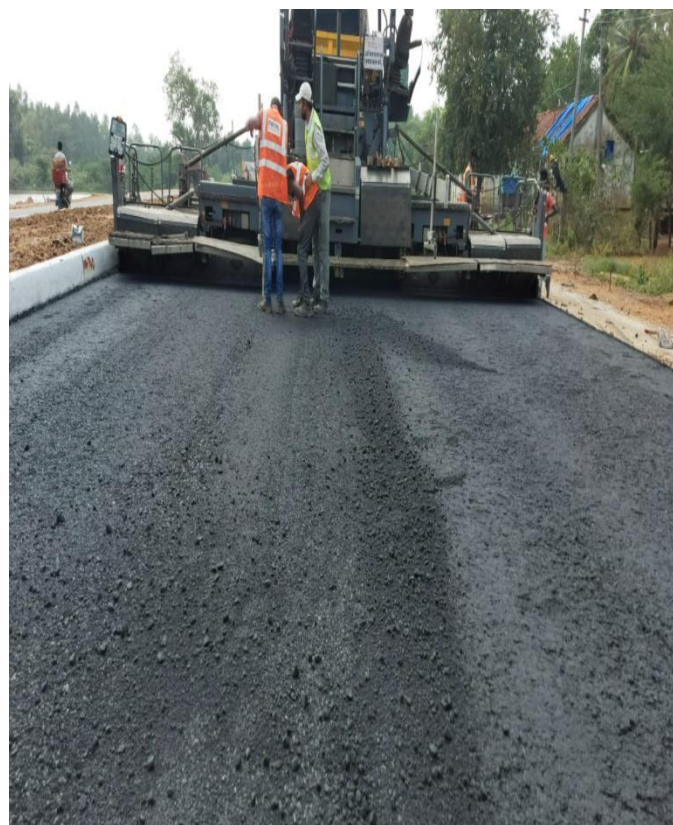
Sl.No	Description	Location	Side
7	WMM Laying Work in Progress	88+820	RHS
8	WMM Laying Work in Progress	89+300	RHS



Sl.No	Description	Location	Side
9	DBM Laying Work in Progress	94+440 to 94+560	RHS



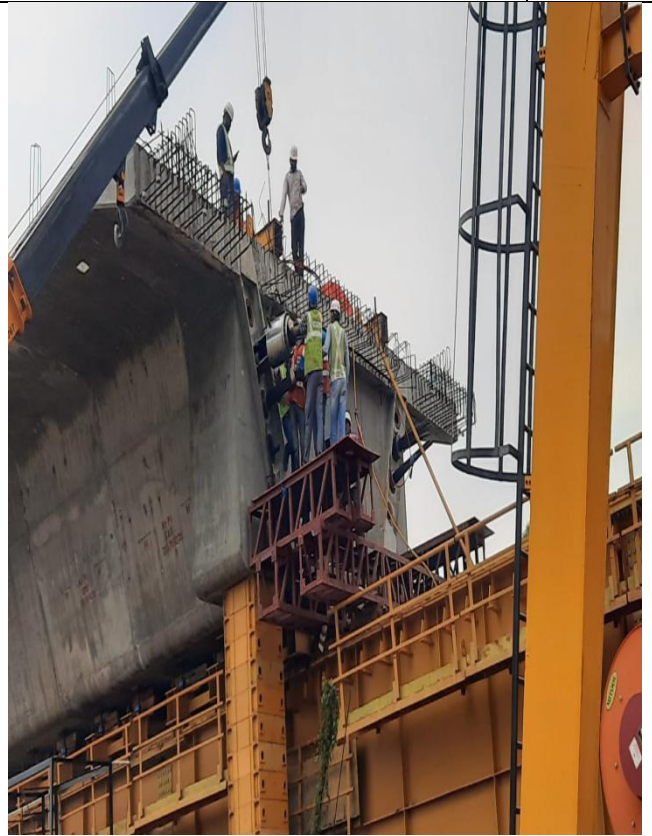
Sl.No	Description	Location	Side
10	DBM Laying Work in Progress	100+740	LHS
11	DBM Laying Work in Progress	83+180 to 83+480	LHS



Sl.No	Description	Location	Side
12	GSI Slab Work in Progress	69+785	LHS
13	VUP Abutment Cap Work in Progress	109+345	LHS



Sl.No	Description	Location	Side
14	P.S.C. Girder Casting Work in Progress	66+491	BHS
15	Box Segment Post Tensioning Work in Progress	107+400	LHS



Sl.No	Description	Location	Side
16	R.C.C. Girder launching Work in progress	115+258	RHS

