

**SCHEDULE -C**  
*(See Clause 2.1)*  
**PROJECT FACILITIES**

**1. Project Facilities**

The Concessionaire/ Contractor shall construct the project facilities in accordance with the provisions of this agreement. Such Project facilities shall include:

- a)** Toll Plaza
- b)** Road side furniture
  - i. Kilometer and Hectometer Stones
  - ii. Traffic Signs
  - iii. Overhead Signs
  - iv. Road Marking
  - v. Road Delineators
  - vi. Reflective Pavement Markers & Solar Studs
  - vii. Traffic Impact Attenuators
  - viii. Providing End Terminals
  - ix. Boundary wall and Fencing
  - x. Antiglare Screen
- c)** Operation and Maintenance centers
- d)** Way side Amenities / Service Areas
- e)** Truck lay-byes
- f)** Bus Bay and Bus shelter
- g)** Pedestrian Facilities
- h)** Highway Lighting
- i)** Rainwater Harvesting
- j)** Environmental Management Plan
- k)** Land Scaping and Tree Plantation
- l)** Advanced Traffic Management System (ATMS)
- m)** Highway Patrol Units
- n)** Emergency medical services
- o)** Crane Service

**1.1** Project Facilities to be completed on or before project completion date have been described in Annexure-II of this Schedule-C.

**Annexure - II**  
**(Schedule-C)**  
**PROJECT FACILITIES**

**1. Project Facilities**

The Concessionaire/ Contractor shall construct the Project Facilities described in this Annexure-I to form part of the Project Highway. The Project Facilities shall include:

1. Toll Plaza
2. Roadside furniture
  - 2.1. Kilometer and Hectometer Stones
  - 2.2. Traffic Signs
  - 2.3. Overhead Signs
  - 2.4. Road Marking
  - 2.5. Road Delineators
  - 2.6. Reflective Pavement Markers & Solar Studs
  - 2.7. Traffic Impact Attenuators
  - 2.8. Providing End Terminals
  - 2.9. Boundary wall/ Toe wall/Fencing
  - 2.10. Antiglare Screen
3. Operation and Maintenance centers
4. Way side Amenities / Service Areas
5. Truck lay-byes
6. Bus Bay and Bus shelter
7. Pedestrian Facilities
8. Highway Lighting
9. Rainwater Harvesting
10. Environmental Management Plan
11. Land Scaping and Tree Plantation
12. Advanced Traffic Management System (ATMS)
13. Highway Patrol Units
14. Emergency medical services
15. Crane Service

**Description of Project Facilities**

Each of the Project Facilities is briefly described below:

**1. Toll Plaza:** Not Applicable

**2. Roadside furniture**

**2.1 Kilometer and Hectometer Stones (Clause No. 12.3 IRC: SP:87-2019):**

S.No.	Item	Number	Remarks
1	Kilometer Marker(Including 5 <sup>th</sup> Kilometer Marker)	16	The KM/ Hectometer stones/ marker can be Concrete/ Stones and shall be placed on both outer side of the earthen shoulder. The size of Kilometer/5 <sup>th</sup> Kilometer/Hectometer will be as per Manual.
2	Hectometer Marker	8X No. of Kms 3)x2 = 48	

S.No.	Item	Number	Remarks
			<p>In case KM/ Hectometer marker are to be fixed on separator between Main Carriageway &amp; Service Road then these should be fixed as reflective signs.</p> <p>In case of Access Control Highway/ Expressway, KM/ Hectometer marker should be fixed as reflective signs.</p> <p>Km/ Hectometer stones are required to provide on main carriageway and Service Road, both if continuous service road is provided throughout project length (Service Road length is more than 1 Km).</p>

**2.2 Traffic Signs (MoRTH circular no RT 25035/ 07/2023-RS (Part) (221534) dated 20th July 2023 amended on 24<sup>th</sup> December 2024 and NHAI policy circular 12.40/2025 dated 20<sup>th</sup> September 2025)**

- Traffic Signs include roadside signs, overhead signs and kerb mounted signs etc. shall be provided along the entire Project Highway and on all Side, Roads joining the main carriageway/service road. The detailed signage plan indicating places, direction, distances and other features marked on the change plan shall be prepared and same shall be finalized in consultation with Independent Engineer/Project Director, NHAI as per site requirement. A QR code shall be marked on back of each sign as per IRC 67.
- All sign shall be of Micro Prismatic Grade Sheeting Corresponding to Class C sheeting as per ASTM D 4956
- All shoulder mounted signs such as mandatory, regulatory, informative, Confirmative shall be supported on GI Pipes (min dia 80mm). Overhead Signs shall be placed on a structurally sound gantry or cantilever structure made of GI pipes.
- On multi lane roads (6 lanes or above), signs shall be mounted overhead.
- The siting of signs shall confirm to Table 4.1 and Fig 4.1 of IRC 67. (Clause No. 4.7 IRC: SP:84-2019/ IRC: SP:87-2019). The two successive signs shall be placed at a minimum distance of  $0.6 \times V$  metre (V is design speed in Km/h).
- The signboards shall be trilingual Hindi, kannada, English should be in compliance of NHAI guidelines.

The overhead gantry signs shall be placed as given below: (Clause No. 16.3.2 of IRC 67 2022)

S.No.	Item	Carriageway (Left, Right, Both)
1	Overhead Gantry signs	
a	Start of Project	Both
b	End of project	Both
c	Toll plaza location on both side	NA
d	Advance Direction Sign Ahead of a Grade Separated Junction/Interchange and Information on Lane dedication	Both Sides
2	Overhead Cantilever Gantry signs	

S.No.	Item	Carriageway (Left, Right, Both)
a	At all major locations of crossroads i.e. NH, SH, MDR (start of grade separated structure/at grade interchange)	Either left or Right
b	At major trauma center, roads leading to religious places or any other important location	Both sides
c	Advance Direction Sign Ahead of a Grade Separated Junction/Interchange and Information on Lane dedication	Both sides
d	Truck Lay-bye	NA
e	Toll Plaza Ahead	NA
f	Weigh Bridge Ahead	NA
g	Rest Area	NA
3.	Double/Butterfly Cantilever	On Gore Area of Exit Locations of Access Controlled Highway/Expressway.

The detailed minimum number of signages indicating places, direction, distances and other features shall be marked on the alignment plan and submitted, which are as mentioned below:

S. No.	Road Signs	Number	Remarks
<b>I</b>	<b>Mandatory/Regulatory</b>	<b>6</b>	
1	Stop signs	6	
2	Give Way Signs		
3	Prohibitory signs		
4	No Parking signs		
5	No Stopping signs		
6	Speed Limit signs (Circular)		
7	Speed Limit signs (Vehicle Type)		
8	Vehicle Control signs		
9	Restriction Ends sign		
10	Compulsory Direction Control and other signs		
<b>II</b>	<b>Cautionary/Warning</b>	<b>22</b>	
1	Left/Right Curve		
2	Left / Right Curve with side road		
2	Right/Left Hairpin Bend		
3	Right/Left Reverse Bend		
4	Series of Bends		
5	270 Degree Loop		
6	Side Road		
7	Y-intersection		

S. No.	Road Signs	Number	Remarks
8	Cross Road	5	
9	Roundabout	1	
10	Traffic Signals		
11	T-Intersection	3	
12	Major Road Ahead	5	
13	Staggered Inter-section		
14	Merging Traffic Ahead	2	
15	Narrow Road Ahead		
16	Road Widens		
17	Narrow Bridge Ahead		
18	Steep Ascent/Descent		
19	Reduced Carriageway		
20	Start /End of Dual Carriageway		
21	Gap in Median		
22	Pedestrian Crossing		
23	Pedestrian crossing with backing board		
24	School Ahead		
25	Built Up Area		
26	Two Way Operation (on main carriage way /service road		
27	Two Way Traffic on Cross Road Ahead		
28	Danger Warning Sign		
29	Deaf or Blind Persons Likely on Road Ahead		
30	Cycle Crossing		
31	Cycle Route Ahead (Warning for Cycles on road ahead)		
32	Dangerous Dip		
33	Speed Breaker	6	
34	Rumble Strip		
35	Rough Road		
36	Dangerous Ditch		
37	Slippery Road		
38	Slippery Road because of Ice		
39	Opening or Swing Bridge		
40	Overhead Cable		

S. No.	Road Signs	Number	Remarks
41	Play Ground Ahead		
42	Quay Side or River Bank		
43	Sudden Side Winds		
44	Tunnel Ahead Warning		
45	Sudden Side Winds		
46	Tunnel Ahead Warning		
47	Falling Rocks		
48	Cattle Crossing		
49	Wild Animals likely to be on Road Ahead		
50	Queues Likely Ahead		
51	Low flying Air Craft		
52	Unguarded Railway Crossing		
53	Guarded Railway Crossing		
54	Crash prone area ahead		
55	U- Turn		
<b>III</b>	<b>Chevron Signs</b>	<b>10</b>	
1	Single Chevron	10	
2	Double Chevron		
3	Triple Chevron		
<b>IV</b>	<b>Object Hazard Marker Sign</b>	<b>8</b>	
1	Left /Right side Object Hazard Marker	5	
2	Two way Object Hazard Marker	3	
<b>V</b>	<b>Informatory/Guide</b>	<b>19</b>	
1	Direction and Place Identification signs		
2	Stack Type Advance Direction Sign (Shoulder Mounted)	5	
3	Stack Type Advance Direction Sign with cautionary / regulatory signs (Shoulder Mounted)		
4	Map Type Advance Direction Sign (Shoulder Mounted)	5	
5	Map Type Advance Direction Sign for roundabout (Shoulder Mounted)		
6	Flag Type Direction Sign	2	
7	Reassurance Sign		
8	Place Identification Sign		
9	Truck Lay -By		

S. No.	Road Signs	Number	Remarks
10	Toll Booth Ahead		
11	Weigh Bridge Ahead		
12	Shoulder Mounted Sign in Advance of a Grade Separated Junction/ Interchange	5	
13	Expressway Sign		
14	Gantry Mounted advance Direction Sign Ahead of a Flyover in Urban/City Roads		Instead of continuous sign board, Separate Signs shall be provided for each information
15	Gantry Mounted advance Direction Sign Ahead of a Grade Separated Junction		
16	Gantry Mounted advance Direction Sign Ahead of a At Grade Intersection		
17	Gantry Mounted Advance Direction Sign for Interchange		
18	Cantilever Gantry Mounted Advance Direction Sign for Interchange	2	
19	Lane Dedicated Gantry Sign		
20	Definition/Supplementary Plates		
21	Tourism Related Sign		
22	Tourist Destination Direction Information Signs Without Photograph		
23	Tourist Destination Direction Information Signs With Photograph		
24	Finger Destination direction Information Sign for Pedestrians		
25	Tourist Map Information Sign		
26	Boundary Sign at Entrance to a City/Place		
27	Boundary Sign at Entrance to a Tourist Destination		
<b>VI</b>	<b>Facility Information signs</b>		
1	Eating Place		
2	Light Refreshment		
3	Resting Place		
4	First Aid Post		
5	Toilet		
6	Filling Station(Fuel Pump)		
7	Hospital		
9	U-Turn Ahead		
10	Pedestrian Subway		
11	Police Station		
12	Picnic Site		
13	Repair Facility		

S. No.	Road Signs	Number	Remarks
14	Railway Station/Metro Station/ Monorail Station		
15	Industrial Area		
16	Cycle Rickshaw Stand		
17	Taxi Stand		
18	Auto Rickshaw Stand		
19	Home Zone		
20	Camp Site		
21	Airport		
22	Golf Course		
23	National Heritage		
24	No Through Road		
25	No Through Side Road		
26	Toll Road Ahead		
27	Guide Sign on Toll Lane Portal		
28	Country Border		
29	Entry Ramp for Expressway		
30	Exit Ramp for Expressway		
31	Expressway Symbol		
32	End of Expressway		
33	Bus Stop		
34	Bus Lane		
35	Contra Flow Bus Lane		
36	Cycle Lane		
37	Contra Flow Cycle Lane		
38	Holiday Chalets		
39	Emergency Exit		
<b>VII</b>	<b>Other Useful Information Signs</b>		
1	Signs For Persons With Disabilities		
2	International symbol of Accessibility		
3	Parking Information		
4	Parking Areas		
5	Ramped Entrance to Subway/Over Bridge		
6	Telephone Facilities		
7	Toilet Facilities		



S. No.	Road Signs	Number	Remarks
8	Way Finding		
9	Parking Signs		
10	Auto Rickshaw Parking		
11	Cycle Parking		
12	Cycle Rickshaw Parking		
13	Scooter and Motorcycle Parking		
14	Taxi Parking		
15	Park and Ride		
16	Parking Restrictions Signs for Traffic Management		
17	Flood Gauge Sign		
VIII	<b>Route Maker Signs</b>		
1	State Highway Route Marker Sign		
2	National Highway Route Marker Sign		
3	Asian Highway Route Marker Sign		
4	Expressway Route Marker Sign		
IX	<b>Project Information QR Sign Board</b>		

#### 2.2.1 Note:

- The above table are excluding the required signages for intersections crossing and connecting roads, construction zone traffic management and diversions that is to be provided as per traffic management during construction and maintenance considering all safety aspects.
- The required number of signages and locations of the placement of signages shall be finalized in consultation with Independent Engineer/ NHAI, as per site requirement.
- The above specified Nos are bare minimum, any extra sign boards required as per site conditions shall be placed as per IRC: SP:87, IRC:67 2022 & MoRTH circular RT-25035/07/2023-RS (Part) (221534) dated 11/08/2025 and consultation with IE/NHAI. The same shall not constitute a Change of Scope.

#### 2.4 Road Marking (MoRTH circular no RT-25035/07/2023-RS (Part) (221534) dated 20th July2023)

- Road Markings shall be Hot applied thermoplastic materials with reflectorized beads to achieve visibility confirming to clause 2.7.2 of IRC 35
- The cold applied plastics pavement markings shall be used for School Zone Markings, Audible Raised Profile Edge Lines and Block Markings (BM 01/02/03).

S. No.	Item	Unit		Remarks
		Length (m)	Number	
1	Longitudinal Marking	37200		MCW, Service Road and Ramps

S. No.	Item	Unit		Remarks
		Length (m)	Number	
2	Transverse Marking		28	Transverse bar marking at Junction and Ramp Locations.
3	Hazard Marking			
4	Block Marking			
5	Arrow Marking		72	At Merging-Demerging Locations and Ramp Location
6	Directional Marking			
7	Facility Marking			
8	Center Line	25550		On MCW and Service Road
9	Traffic Lane Lines			
10	No Overtaking Lines			
11	Warning Lines			
12	Border or Edge Lines			
13	Longitudinal Markings for Undivided Roads			
14	Longitudinal Markings for divided Roads			
15	Longitudinal Markings For Ramps/ Slip Roads/ One Way Streets			
16	Stop Line		3	
17	Give Way Lines		3	
18	Diagonal Markings			
19	Chevron Markings			
20	Continuity Line			
21	Word Messages			
22	Lane Change			
23	Merging/Diverging Markings		6	
24	Hatch Markings			
25	Raised Profile Edge Lines			
26	Lane Reduction / Narrowing Situations And Transitions (lane Balancing)			
27	Directional Arrows			
28	Mandatory Turn Arrows			
29	Guidance Arrows			
30	Deflection Arrows			
31	Bifurcation Arrows			
32	Arrows on Side Road Approaches			

S. No.	Item	Unit		Remarks
		Length (m)	Number	
33	Arrows on Main Road Approaches			
34	Word Messages			
35	Yellow Box Markings			
36	Ghost Island			
37	Marking for Speed Breakers			
38	Pedestrian Crossing		12	
39	Markings when highway passes through settlement fig 9.4 of IRC SP 87			
40	Transverse Bar Markings			
41	Busbay Marking		7	
42	Truck Lay-by Markings			
43	Toll Plaza Marking			
44	School Zone Markings			
45	Object Markings within Carriageway			
46	Objects Markings Adjacent to Carriageway			
I.	Subway Piers, Abutments, Culverts Head Walls, Concrete Barrier			
I.	Electrical Poles			
II.	Guard Rails			
II.	Trees			
V.	Kerbs			
47	Directional Markings as per Annexure: A Table: A.6 of IRC:35-2015			
48	Facility Markings as per Annexure A Table: A.6 of IRC:35-2015			

Note: The above specified Nos are bare minimum, and the locations of the marking shall be finalized in consultation with Independent Engineer/NHAI, as per site requirement. The road markings at entry and exit of slip/service roads at grade separated intersections/built-up areas shall be executed in accordance with figures 2.1A to fig. 2.1D of section 2 of IRC: SP: 87 – 2019. The same shall not constitute a Change of Scope.

## 2.5 Road Delineators:

S.No.	Item	Number	Length (m)	Remarks
1.	Roadway Indicators	NA		
2.	Median Marker on Median/RCC Barrier	NA		Nos

3.	Object Markers	NA		Nos
4.	Flexible Object Markers (Clause 6 of IRC 79 2019) i. On Metal Beam Barrier ii. On Toll Booth/Toll Island iii. On Entry/Exit of Tunnel iv. On Exit from Main carriageway	NA		Nos
5.	Solar Blinkers on Median Opening, on exit from main carriageway and traffic islands of grade separated intersections	08		Nos

Note: The locations of the marking shall be finalized in consultation with Independent Engineer/NHAI, as per site requirement.

## 2.6 Reflective Pavement Markers (RRPM) & Solar Studs:

The Prismatic Retro-Reflective type conforming to ASTM D-4280 Pavement Markers & Solar Power Studs on Highway shall be provided in accordance with Schedule D. In addition to Table 9.1 of Clause 9.5 of IRC: SP:84/87:2019, RRPMS shall be provided on all traffic lanes, shoulder and median side edge lines at spacing of 27m on Project Highway.

S.No.	Item	Number	Location	Remarks
<b>A. - For 6 Lane Projects along with Service Road</b>				
1	White Colour one coloured face Road Studs	1376	Traffic lane line on Entire project Highway (Spacing As per Manual except interval of 27m on straight sections.	Uni-directional carriageway
2	Red Colour one coloured face Road Studs	688	Left hand edge of the carriageway, entry to truck lay bye / bus bay, start of service road, chevron/ diagonal markings on gorge	
3	Yellow / Amber Colour one coloured face Road Studs	688	Median side edge line, zebra crossing	
4	Green Colour one coloured face Road Studs	102	Lay byes, left hand side of the carriageway in case of multi-lane divided carriageways, crossable continuous line like in acceleration/deceleration lanes involving lane changing	
5	Solar Studs on Major/Minor bridge, RoB, and all structures (Interchange/Flyover/VU P) and Builtup areas, In storage lane of median opening and Exit/Entry from main carriageway			

S.No.	Item	Number	Location	Remarks
<b>B- For 2 Lane PS Projects</b>				
6	White Colour Two coloured face Road Studs		Traffic lane line & center of carriageway	Bi-directional carriageway
7	Red Colour Two coloured face Road Studs		Left hand edge of the carriageway, entry to truck lay bye / bus bay, start of service road, chevron/ diagonal markings on gorge	
8	Green Colour Two coloured face Road Studs		Lay byes, left hand side of the carriageway in case of multi-lane divided carriageways, crossable continuous line like in acceleration/ deceleration lanes involving lane changing	
9	Solar Studs on Major/Minor bridge, RoB, and all structures (Interchange/Flyover/VU P) and Builtup areas, In storage lane of median opening and Exit/Entry from main carriageway			

## 2.7 Traffic Impact Attenuators

NA

## 2.8 Providing End Terminals

Provide End Terminals P-4 type confirming to EN 1317-4 to Parapet Walls of Culverts, Structures ends for the safety of approaching traffic etc.

S.No.	Item	Chainage	Number	Remarks
1	Culvert Ends			Nos
2	Structures Ends		4	Nos
3	Any other location which Safety Hazard		6	Nos

## 2.9 Boundary wall/ Toe wall:

NA

## 2.10 Antiglare Screen

S.No	Chainage	Antiglare Measures
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	From	To	
1	365+200	368+275	"Antiglare devices of materials like fiberglass-reinforced polymer (FRP) or plastic screens with UV coating for weather resistance. 300 mm width x 910 mm height x 5 mm thick or flexible types 180 mm width x 800 mm height, 3-5 mm thick. Total height, including mounting on barriers, should reach about 1.5 m above the road level. Panels are placed at every 4-5m as per design."

### 3 Operation and Maintenance centers:

NA

There shall be operation and maintenance center(s) as per Clause 12.15 of Schedule-D, either near the toll plaza location or at any other location along the Project Highway, as identified by the Concessionaire/ Contractor. The minimum land for O & M center shall be 2000 sq.m and shall be acquired by the Concessionaire/ Contractor at his own cost and risk. Dedicated operation and maintenance center shall be provided in accordance to Schedule D.

### 4 Way side Amenities / Service Areas/Rest Area

S.No	Item	Design Chainage (Km)	Side	Remarks
Nil				

The Site needs to levelled/ graded for the whole of Way side Amenities area and boundary wall of the height of 1.5m shall be constructed along the periphery of the area.

### 5 Truck lay-byes

5.1 The truck lay-bye shall be provided at below given location and as per the design mentioned in Schedule-D.

Sr. No.	Design Chainage	Side	Remarks
Nil			

### 5.2 Toilet block:

NA

**5.3 Truck Lay Bye Pavement: Not Applicable**

Provide pavement composition (Flexible/Rigid/ Paver Blocks) as follows:

Pavement Composition (Flexible/Rigid/ Paver Blocks)
Same as Main Carriageway Crust Composition as Mentioned in Schedule-B.

**6. Bus Bay and Bus shelter (Clause No. 12.7 IRC: SP:87-2019) :**

Provision of Busbay and bus shelter on highways as per IRC 80 : 2022 including paving of layby, signs, markings, speed calming measures, drainage, lighting etc., in builtup areas, intersections of NH/SH/MDR and roads leading to large settlements is as follows:

**6.1 Bus Bays** with tapers shall be provided along with passenger's shelters shall be constructed at the following locations:

Bus Bay :

Sr. No.	Design (Existing) Chainage (Km)	Entry Taper Length	Bus Bay Length	Exit Taper Length	Remarks

Bus Shelter

Sr. No.	Design Chainage (Km)		Remark
	Left	Right	
1	365+350		The location of the bus shelter shall be finalized at site with the approval of the AE/PIU.
2	366+230	366+180	
3	366+680	366+650	
4	367+500	367+500	

**6.2 Kerb Side Bus Stop with Pedestrian shelter:**

Kerb Side Bus Stop with Pedestrian shelter shall be provided at the following locations.

Sr. No.	Design Chainage (Km)		Pedestrian Shelter Length	Remark
	Left	Right		
Nil				

**Bus Bay Pavement:** Provide pavement composition (Flexible/Rigid/ Paver Blocks) as follows:

Pavement Composition (Flexible/Rigid/ Paver Blocks)
NA

**6 Pedestrian Facilities (Clause No. 9.8 IRC: SP:87-2019)**

Pedestrian Facilities shall be provided in accordance with the Manual of Specifications and Standards as referred in Clause 9.8 of Schedule D and IRC 103 2022. This shall consist of footpath (sidewalks), pedestrian guard rails and pedestrian crossing.

The details are as mentioned below:

S.No.	Pedestrian facilities	Chainage		Side	Remarks
		From	To		
1	Pedestrian guardrails shall be 150 mm from Carriageway/Paved Shoulder i. Hazardous Locations on Straight Stretches ii. At Junctions/Intersections iii. Schools iv. Bus Stop/Railway Stations v. Overpass, Subway vi. Central Reserve	As per clause 8.4 of schedule B			
2	Footpath paving including fixing of Tactile pavers				
3	Pedestrian Crossing i. With Zebra Marking ii. With Tabletop Crossing iii. At Intersections iv. At Schools	365+200	368+275	BHS	All Intersection locations specified in Sch-B and at Bus Shelter locations with Zebra Crossings

#### 8. Highway Lighting (Clause No. 12.5 IRC: SP:87-2019)

The street light poles shall be 1 piece, continuous-tapered, Octagonal poles and shall be manufactured from one length of steel sheet, formed in continuous tapered tube, with one continuous arc-welded vertical seam. The minimum wall thickness for lighting poles shall not be less than 4 mm. The Bottom Diameter shall be minimum 175 mm. The Top Diameter shall be minimum 75 mm. The door on window of pole shall be antitheft. All electrical cable should be concealed. All electrical lighting fixers shall be LED. The fixtures shall be concealed except on poles. Lighting poles shall be fixed on outer side of steel/concrete barrier. The lighting shall be providing at the following locations:

S.No.	Lighting facilities	Chainage		Side	Lighting Source: Electricity Board/ Generator/ Solar
		From	To		
1	<b>Toll Plaza area:</b> The lighting in and around toll plaza, toll booths, office building, on the approach road, etc. shall be as per Section 12 of the Manual. In addition to at least two high mast light shall be provided on either side of toll plaza	NA			NA



S.No.	Lighting facilities	Chainage		Side	Lighting Source: Electricity Board/ Generator/ Solar
		From	To		
2	<b>Rest Areas:</b> The entire Rest areas shall be provided with lighting with average illumination to 40 Lux	NA			NA
3	<b>Truck lay-bye:</b> The entire area of truck lay-byes and 50m length of the project highway on its either side shall be illuminated at night to provide an average illumination of 40Lux. Suitable designed electric poles having aesthetic appeal and energy saving bulbs (LED) may be used to provide required illumination. Alternatively, photo voltaic lamps may be used	NA			NA
4	<b>Bus Bay &amp; bus shelter locations:</b> The entire bus bay & bus shelter area shall be provided with Lighting (Average illumination of 40Lux.).	NA			NA
5	<b>Grade separated structures, interchanges, flyovers, underpasses (vehicular/ pedestrian) and Vehicle overpasses:</b> Lighting requirement shall be as per section 12 of the Manual. The top and underside of the grade separated structures including service road/ slip road, interchange area at the ground level up to 50m beyond the point from where flaring of the main carriageway takes place shall be provided with lighting. Also, on all legs of at grade interchange/ crossings the lighting shall be provided 50m beyond the point of Centre on all legs. The minimum illumination shall be 40 Lux., at the extreme edge of the Highway	CH-365+200 to 368+275 3 Rows ( Double Arm Lighting on Median and Single Arm Lighting on RE/Service Road Edge on Both Sides)			Electricity Board
6	<b>Built-up sections</b> on the project highway both in the median of main carriageway and on the service roads on both sides	CH-365+200 to 368+275 3 Rows ( Double Arm Lighting on Median and Single Arm Lighting on RE/Service Road Edge on Both Sides)			Electricity Board

S.No.	Lighting facilities	Chainage		Side	Lighting Source: Electricity Board/ Generator/ Solar
		From	To		
7	On Median Openings provide 1 nos. high mast lighting of 25m height	CH-366+200 CH-366+675 CH-367+285 CH-367+650  Below Grade Separated Structure on Both side.			Electricity Board
8	On Major and Minor bridges and its approaches higher than 3m.	NA			NA

Concessionaire to Provide lighting on both sides of Main carriageway and also on service road/ramp proposed along the Project Highway.

### 9. Rainwater Harvesting

The provision of rainwater harvesting shall be provided at every 500m staggered in the entire project length and shall be executed as per requirement of IRC SP: 42-2014 and IRC SP: 50-2013. Additionally, wherever urban drains are provided, which do not have a definite outfall for discharge of water, at such location one pit for rain water harvesting shall be provided along the side drains at the lowest point/ where the water stagnates. The type and location of rain water harvesting is as follows:

S.No.	Rain water Harvesting Type	Chainage	Side	Depth of Recharge Structure
NA				

### 10. Environmental Management Plan: Not Applicable

The Concessionaire/Contractor shall implement the mitigation measures of the approved Environmental Management Plan (EMP) based on Environment Impact Assessment (EIA) and conditions of the Environmental Clearance accorded by the Ministry of Environment, Forests and Climate Change. All the conditions and directions stipulated by the MoEF&CC shall be complied by the Contractor/ Concessionaire.

The Concessionaire/ Contractor also shall implement the approved mitigation measures including Wildlife Mitigation measures and conditions as per Forest and Wildlife Clearance accorded by the Ministry of Environment, Forests and Climate Change. All the conditions and directions stipulated by the MoEF&CC shall be complied by the Contractor/ Concessionaire.

The Concessionaire/ Contractor shall also implement the approved mitigation measures of the Environmental Management Plan (EMP) for the project.

### 11. Land Scaping and Tree Plantation):

The Concessionaire/ Contractor shall maintain the trees and shrubs in good condition during

concession period as per the concession agreement.

**12. Advanced Traffic Management System (ATMS):**

NA

**13. Highway Patrol Units:**

NA

**14. Emergency medical services (Clause No. 12.11 IRC: SP:87-2019):** Not Applicable

**15. Crane Service (Clause No. 12.12 IRC: SP:87-2019):** Not Applicable

**16. Buildings for Traffic Aid Posts:** Not Applicable

**17. Building for Medical Aid Post:** Not Applicable

**18. Telecom system:** Not Applicable

**19. Painting of Viaduct:** All structures shall be painted with synthetic enamel paint. An embossed NHAI/NMPA logo shall be provided on both sides of every pier and shall be painted in its colour. Artistic painting shall also be carried out on RE Wall showcasing local culture. On alternate piers, a message as per NHAI Policy Circular 4.35/2025 dated 07.02.2025 shall be painted on both sides. This activity shall be carried out in consultation with the Authority.

**19. Toilet Block:** Not Applicable

Separate Toilet Blocks with full facilities for public use shall be provided within the toll plaza for public access. The provisions listed below are:

**20. Transverse Bar Markings:** Transverse Bar Markings of thickness 15 mm should be provided at every merging and diverging locations and shall also be provided on main carriageway at location approved by Authority Engineer.