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PRE-FEASIBILITY REPORT

1. Executive Summary

The proposed Greenfield expressway will start at km 40.10 of NH-8 near Kherki Dhaula Toll Plaza and, it will terminate at km 217.0 of NH- 8 near Chandwaji. Total length of project road is 195.10 km.

The TOR for initial design was considered in 128th meeting of EAC on 20th-23rd November, 2013 and Terms of references for EIA study was granted by MoEF, New Delhi on 10th December, 2013 vide F. No. 10-62/2013-IA.III

In the light of high cost and subsequent decision of Ministry of Road, Transport and Highway and Government of Haryana, the proposed Greenfield Expressway alignment was revised and now it will start at km 40.10 of NH-8 near Kherki Dhaula Toll Plaza and, it will terminate at km 217.0 of NH- 8 near Chandwaji. Total revised length of project road is 195.10 km. The spurs have been deleted in the present proposal and factually the main expressway alignment remains the same except change in start and end point.

The project was also presented in the 161st meeting of EAC held on 26th July, 2016 and Minutes of meeting has been displayed on the website of MoEF&CC on 08th August, 2016, where the project proponent was advised "to resubmit the proposal clearly mentioning about the earlier ToRs and a categorical declaration regarding withdrawing the previous proposal or continuing with it, and a clear view on the present one".

Terrain of the project road is 90% plain and 10% hilly/rolling terrain. It traverses through 423 villages, 11 talukas & 7 districts namely: Gurgaon, Jhajjar, Rewari, Mahendergarh, Alwar, Sikar and Jaipur of two states. The proposed RoW will be 90 m for expressway.

Total land covered is 1755.90 ha; Govt. Land is 360.65 ha, Private Land is 1354.98 ha, 1.22 ha Reserve forest area and 8.907 ha protected notified for managerial purpose in Haryana state, 30.821 ha Protected forest area in Rajasthan state are involved. Sultanpur bird sanctuary is situated at a distance of 5.15 km from the main expressway.

Delhi-Jaipur Expressway (Greenfield) Project

Pre-feasibility Report

Construction of ROB (1), ROB cum VUP (3), Flyovers (2), PUP (79), CUP (4) and VUP/Overpasses (12 VUP, 20 VOP), 2 Toll plazas are proposed. An elevated corridor of 11.5 km, Minor Bridge (34) & Major bridges (2) and Culverts (425) are also proposed to maintain the natural drainage pattern of the area. Three Interchanges are proposed at identified locations and Entry / Exit ramps.

Approximately 14650 no. of trees (with girth size of <60 cm – 29%; 60-90 cm – 20%; 90-120 cm – 32%; >120 cm 19%) are proposed to be felled for construction activity. The avenue plantation will be carried out apart from the statuary requirement as per IRC SP: 21, 2009 and NHAI's Guideline for National Green Highway Policy 2015 as availability of land.

The use of the aggregates, soil, sand and bitumen is estimated to be 0.93 million cum, 19.92 million cum, 0.21 million cum, and 0.06 MT respectively.

Around 640 properties/structures are affected due to the construction of the above road.

During the construction phase of the project which is likely to be completed within 36-48 months, local manpower will be needed to take the part in various project activities. Skilled, semi-skilled and unskilled labours will likely to get work.

7000 KLD of water will be required during construction stage. It is proposed that surface water is to be used for the project especially from the en-route canal and river subject to availability.

NTPC Badarpur, Delhi; Indira Gandhi Super Thermal Power Plant, Jhajjar; Mahatma Gandhi Thermal Power Plant, Jhajjar and NTPC Dadri Thermal Power Plants are within the project influence area of 100 km. The fly ashes of 6.4 million cubic meters are proposed to be utilized for construction, subject to availability.

The total environment budget is 50.60 crores; R&R cost of the project is 5,000 crore; Total civil cost is estimated to be 6,350 crores.

2. Introduction of the project/ Background Information

Identification of project and project proponent.

It is a green field project. The project road, proposed to connect Delhi and Jaipur. The Greenfield expressway will start at km 40.1 of NH-8 at Kherki dhaula toll plaza and will terminate at km 217.0 of NH-8 near Chandwaji at Jaipur.

Project proponent: National Highway Authority of India

Description & Nature of the project:

Cabinet Committee on Economic Affairs (CCEA) has approved 1000 km of expressways under National Highway Development Program (NHDP) Phase-VI, in India. Under this phase, Government of India felt the necessity of a fully access controlled high speed corridor between Delhi and Jaipur through construction of 195.10 km long Delhi – Jaipur (6/4 lane) expressway on a virgin land (green field), which intends to divert and redistribute the heavy traffic on existing corridors.

The Project road is an access controlled green field project. It will be facilitated with controlled entrances and exits through slip roads into /out of the expressway. The proposed expressway passes through 2 states, 7 districts, 11 Talukas and 423 villages. The project expressway shall pass through 7 districts of two different states viz. 65.1 km length through Gurgaon, Jhajjar, Rewari and Mahendragarh districts of Haryana and length of 130 km through Alwar, Sikar and Jaipur districts of Rajasthan. Besides a number of villages would also be part of the proposed project.

It is a green field project. The project road, proposed to connect Delhi and Jaipur. The Greenfield expressway will start at km 40.1 of NH-8 at Kherki dhaula toll plaza and will terminate at km 217.0 of NH-8 near Chandwaji at Jaipur.

Need for the project and its importance to the country or region:

Technologies are available for construction of super infrastructure in terms of technology; the travel time will be reduced by 30% assuming current speed of 100km/hour.

The proposed project can be viewed as boosting economic growth and poverty reduction, which will bring substantial social and economic development in the region. This road will provide better connectivity between Delhi and Jaipur which will be strengthening the transportation network and ultimately improve the overall economy of the region.

The proposed Delhi – Jaipur expressway aims for:

 High speed connectivity between Indira Gandhi International (IGI) Airport, New Delhi and Jaipur;

- Avoid congestions at Gurgaon, Manesar, Dharuhera, Shahjahapur, Behror, Kotputli and Shahpura and reduce delay and hence travel time to an appreciable extent;
- > Enhanced safety and level of service for the road users;
- Superior operation and maintenance enabling enhanced operational efficiency of the Expressway.
- The incidental benefit would be that it will create employment during construction phase and post development. It will boost industrialization which will largely benefit the entire region.

Demand Supply Gap.

For the construction of road and bridges, various kinds of materials such as subgrade soil, borrow area soil and granular sub-base material, fine and coarse aggregates are required. Material is easily available in nearby areas.

Employment Generation (Direct and Indirect) due to the project.

Highway construction broadly encompasses the issues relevant to the process of construction and maintenance, including the design, contracting, implementation, supervision, and maintenance of highways and related structures.

There will be temporary influx of people to the area as labor and other people who will be involved directly or indirectly during the construction of highway; however preference will be given to local people in the employment.

Direct employment generation: During the construction phase of the project which is likely to be completed within 24 months, manpower will be needed to take the part in various project activities. Skilled, semi-skilled and unskilled labours will likely to get work. In the post construction phase it is expected that the project will provide social benefits to people in terms of direct employment by way of better commercial and industrial development of the area.

The project shall also induce indirect employment generation for cleaners, guards, local vendors, operation and maintenance workers etc. Indirect employment will be both temporary and permanent.

Temporary indirect employment: Local vendors, construction material traders, electrician, plumbers etc. will be benefitted through employment generated during construction and maintenance phase.

Permanent indirect employment:

Cleaners, guards, local vendors, kiosk stalls will be benefitted through employment generated during operation phase. The project will therefore provide employment to people from all walks of life i.e. Construction, Building materials, Engineering, Medicine, Hospitality, Education, Information Technology and Administration etc. The project will be beneficial for the local communities, as it will generate employment by way of construction and reduction in pollution with better communication. The project will benefit all the population groups and consequently not differentially or adversely affect any groups.

3. Project Description

Location (map showing general location, specific location, and project boundary & project site layout) with coordinates.

Delhi-Jaipur Expressway (Greenfield) Project

Pre-feasibility Report



Figure: Location Map & Key Plan of Project Road

Size or magnitude of operation

The total stretch of proposed Project is 195.10. The proposed Greenfield expressway will start at km 40.10 of NH-8 near Kherki Dhaula Toll Plaza and, it will terminate at km 217.0 of NH-8 near Chandwaji.

Project description with process details

The total stretch of proposed Project is 195.10. The proposed Greenfield expressway will start at km 40.10 of NH-8 near Kherki Dhaula Toll Plaza and, it will terminate at km 217.0 of NH- 8 near Chandwaji.

Terrain of the project road is 90% plain and 10% hilly/rolling terrain. It traverses through 423 villages, 11 talukas & 7 districts namely: Gurgaon, Jhajjar, Rewari, Mahendergarh, Alwar, Sikar and Jaipur of two states. The proposed RoW will be 90 m for expressway.

The construction work will be carried out and materials like earth work WMM, concrete, bitumen will be used for which mixing plant will be installed. Construction of ROB (1), ROB cum VUP (3), Flyovers (2), PUP (79), CUP (4) and VUP/Overpasses (12 VUP, 20 VOP), 2 Toll plazas are proposed. An elevated corridor of 11.5 km, Minor Bridge (34) & Major bridges (2) and Culverts (425) are also proposed to maintain the natural drainage pattern of the area. Three Interchanges are proposed at identified locations and Entry / Exit ramps.

Raw material required along with estimated quantity, likely source, marketing area of final product/s, Mode of transport of raw Material and Finished Product.

| S. No. | Item | Quantity (Approximate) | |
|--------|------------------|------------------------|--|
| 1 | Aggregates (CUM) | 931663 | |
| 2 | Soil (CUM) | 19920421 | |
| 3 | Sand (CUM) | 206612 | |
| 4 | Bitumen (MT) | 65983 | |
| 5 | BC (MT) | 569777 | |
| 6 | DBM (CUM) | 49919 | |
| 7 | GSB (CUM) | 980993 | |
| 8 | WMM (CUM) | 789231 | |

The construction material requirement in broad view is as below:

The required construction material is available locally and will be transported by road only.

Resource optimization/ recycling and reuse envisaged in the project, if any, should be briefly outlined.

Reuse of large quantity of fly ash discharged from thermal power plants is envisaged to minimize land use for disposal.

NTPC Badarpur, Panipat Thermal Power station, Indira Gandhi Super Thermal Power Plant, Mahatma Gandhi Thermal Power Plant and NTPC Dadri Thermal Power Plants are within the project influence area. The fly ash is proposed to be utilized for construction of embankments if same is available.

| Sr. No. | Power Plant Station | Quantity of Fly Ash (cubic meter) |
|--|--|-----------------------------------|
| 1 | NTPC Badarpur | 2,240,700 (Selected) |
| 2 | Panipat Thermal Power Station | Nil |
| 3 | Indira Gandhi Super Thermal Power Plant | 4,117,500 |
| 4 | Mahatma Gandhi Thermal Power Plant | 4,207,200 (Selected) |
| 5 | NTPC Dadri Thermal Power Plant | 1,210,500 |
| Total (selected) Proposed Quantity of Fly Ash to | | 6,447,900 |
| be Used | | |
| Note: Total quantity of Fly Ash proposed is subjected to availability. | | |

Table: Fly Ash Utilization

Availability of water its source, Energy/ power requirement and source should be given.

Water: Water will be required for onsite workers and construction works, while water for expressway construction and sprinkling for dust suppression will also be needed. About 7000 KLD water will be required for all purposes. The details are as follows-

| S.no | Purpose | Demand (KLD) | Source |
|------|-------------|--------------|------------------------|
| 1 | Road Making | 4000 | |
| 2 | Dust | 2450 | |
| 3 | Drinking | 50 | Available from local |
| 4 | Others | 500 | surface water bodies – |
| | Total | 7000 | canal & river. |

Water source is proposed to be from local surface water bodies - canal & river.

Power: D.G sets shall be used for power for onsite construction and labour camps, wherever grid power supply is not available.

Quantity of wastes to be generated (liquid and solid) and scheme for their Management/disposal.

Wastes generated within the site would be of food items, paints, cement, grit, bitumen, tar, cement, concrete, oil & grease etc. Waste shall be segregated and collected in separate bins and disposed off according to MoEF&CC regulations.

Schematic representations of the feasibility drawing which give information of EIA purpose.



4. Site Analysis

The latitude and longitude are 28°28'00" N latitude, 77°01'59" E longitude at Gurgaon and 26°55'00" N latitude, 75°49'00" E longitude at Jaipur District Respectively. The total stretch will be through the 90 % flat terrain and 10 % hilly terrain.

Connectivity

The proposed route is connected and approached through State highways and National Highways. At present the route from Delhi to Jaipur is covered by the Delhi-Jaipur, National Highway no. 8. Gurgaon Railway station is just 9.4 km from the take off point of the proposed project. There are other state highways connecting nearby are SH-13 and SH-52 of Rajasthan. National highway no. 8 and Delhi to Jaipur Railway route is almost parallel to the proposed expressway route.

Land Form, Land use and Land ownership.

The development of expressway in the area shall possibly bring substantial changes in the existing land use pattern. Total land required for the project is 1755.90 ha. The land acquired for the purpose is predominantly private land. There is some proportion of Govt. Land also.

Forest land includes 1.22 ha Reserve forest area and 8.907 ha protected notified for managerial purpose in Haryana state, 30.821 ha Protected forest area in Rajasthan state.

Soil Profile:

The soil is generally silty sand with clay in most of the stretch, however in some portions it is sandy silt with clay. It was observed that the soil in the project stretch is alkaline in nature.

Topography:

Topographically the area is plain terrain with mild gradients. The alignment mostly passes through agriculture & barren land except some sections where it is passing through reserved/protected forest.

Existing land use pattern (agriculture, non-agriculture, forest, water bodies (including area under CRZ), shortest distances from the periphery of the project to periphery of the forests, national park, wildlife sanctuary, eco-sensitive areas, water bodies (distance from the HFL of the river), CRZ. In case of notified industrial area, a copy of the Gazette notification should be given.

Total land required for the project is 1755.90 ha. The land acquired for the purpose is predominantly private land. There is some proportion of Govt. Land also.

Sultanpur bird sanctuary is situated at a distance of 5.15 km from the main expressway. Project Alignment traverses though 7 Canals and 3 seasonal Rivers.

The land use will be changed to Highway construction from agriculture, forest and settlement. There is no such densely populated area along the proposed expressway. It is purely a virgin alignment & connectivity to built- up areas to be provided by Underpasses & exit/entry ramps.

The matrix of villages though which concluded alignment is passing is as below;

| Sr. No. | Name of District | Name of Tehsil | Number of Village |
|------------|------------------|-----------------|----------------------|
| 1 | | Farrukhnagar | 58 |
| | Gurgaon | Manesar | 10 |
| | | Pataudi | 14 |
| 2 | Rewari | Rewari | 45 |
| | | Bawal | 3 |
| 3 | Jhajjar | Jhajjar | 25 |
| 4 | Mahendragarh | Nagal Chaudhary | 5 |
| 5 | Alwar | Behror | 88 |
| 6 | Jaipur | Kotputli | 87 |
| | | Shahpura | 27 |
| 7 | Silver | Neem ka Thana | 23 |
| | JINUI | Srimadhopur | 38 |
| | 423 | | |

Table: Delhi-Jaipur (Greenfield) Expressway Village List

Water Bodies:

The alignment of the proposed passes through mostly plain and some undulating terrain and passes through agricultural area. Project Alignment traverses though 7 Canals and 3 seasonal Rivers. The seasonal rivers are Sota, Madhobani and Bandi.

Existing Infrastructure

The proposed route is connected and approached through State highways and National Highways. At present the route from Delhi to Jaipur is covered by the Delhi-Jaipur, National Highway no. 8. There are other state highways connecting nearby are SH-13 and SH-52 of rajasthan. National highway no. 8 and delhi to Jaipur Railway route is almost parallel to the proposed expressway route. The proposed project route is also having well rail transport in existence. Gurgaon Railway station is just 9.4 km from the take off point of the proposed project.

The proposed expressway passes through some of the big Industrial areas of the country i.e. Manesar, Bhiwadi, Neemrana etc, The project route is having various prestigious industrial projects.

There are Educational Hub of International Standards, International IT Companies, Water Resources Infrastructure etc on the proposed project route.

Soil Classification

The soil found in the proposed stretch is mostly alluvial type. The soil is generally silty sand with clay in most of the stretch, however in some portions it is sandy silt with clay. It was observed that the soil in the project stretch is alkaline in nature.

Climatic data from secondary sources.

The climate of the project area is sub-tropical, semiarid, continental and monsoon type. Average temperature ranges from 7 °c in January to 40.5 °c in May and June. January is the coldest month, bringing down the temperature to 3 °c; while in summer season it goes up to 47 °c.

Four seasons of the region are winter from end of November to middle of March, dry summer from April to June, south-west monsoon from July to September and post monsoon season in October and November.

Annual average rainfall in the region is 596 mm, with 28 normal rainy days in a year. Average rainfall in monsoon season is 508 mm (77% of the total rainfall). The air is generally dry during the greater part of the year. Humidity is high in the south-west monsoon season. April and May are the driest months when the relative humidity in the morning is about 30 per cent and in the afternoon less than 20%. Winds are generally light but gain force in the summer and monsoon seasons.

Social Infrastructure available.

Basic social infrastructure is not well developed along the route. The villages on the proposed route have primary health care facilities, basic education, markets, police station, transportation, roads etc. People have to go to Gurgaon or Jaipur for major hospital and education facilities.

5. Planning Brief

Planning Concept (type of industries, facilities transportation etc) Town and Country Planning/Development authority Classification The stretch of proposed Project is 195.10 km. The Greenfield expressway will start at km 40.10 of NH-8 near Kherki Dhaula Toll Plaza and, it will terminate at km 217.0 of NH-8 near Chandwaji.

As project road is access controlled, PUP/CUP has been proposed for movement of agricultural material, pedestrians and cattle. Way side amenities are proposed at some locations. Other planned activities include construction of intersections/junctions, culverts and drainage works, toll plazas and ancillary structures, temporary access, diversion roads and site location for WMM plant and other road construction related plants and establishments.

The offsite work includes, quarrying from nearby quarry sites, labour camps, material storage yard, earth from nearby burrow area and dumping of construction spoils at dumping sites.

Population Projection

In construction phase, skilled, semi-skilled and unskilled labours will likely to get work. In the post construction phase it is expected that the project will provide social benefits to people in terms of direct employment by way of better commercial and industrial development of the area. Also other than this area development and entertainment centres, it is expected the influx of employees and residents.

Land use planning (breakup along with green belt etc).

The stretch of proposed Project is 195.10 km and RoW will be kept about 90 m. The green belt development as per Indian Road Congress Guidelines (IRC: SP: 21-2009) and the Ministry of Road Transport & Highways (MORTH) Green Highways (Plantation, Transplantation, Beautification & Maintenance) Policy-2015.

Details of Land use breakup will be described in EIA. Compensatory plantation will be a part of management plan.

Assessment of Infrastructure Demand (Physical & Social)

Infrastructure: The infrastructure required is office, store and shelter for workers and it will be provided at project site.

Water: Water for drinking, dust suppression & plantation purpose water will be required & drawn from the local surface water bodies – canal & river.

Workers: Most of the workers will be from nearby village so accommodation at site will not be required.

Landscaping & Green belt development: As per IRC: SP: 21-2009 and MORTH Green Highways (Plantation, Transplantation, Beautification & Maintenance) Policy-2015, it is mandatory to have plantation along the highways.

Trees will be removed only in phases depending on the requirement of the construction. As per the guidelines of the concerned State Govt. the number of trees planted will be two times of the trees removed for the tree loss. Plantation will be raised in the form of strip and block plantations depending on the availability of land within the project corridor. The compensatory plantation plan shall be drawn up in consultation with the State Forest Department. Species-mix of such plantations will be decided in consultation with the communities. Some flowering and fruit bearing trees, good for attracting birds will also be used in such plantations.

The plantation will be proposed stick to the guidelines and policy. A number of species will be planted suitable to this area of climate conditions like indigenous Neem, Mango, Pipal, Wad, Jamun etc. Approximately 14650 no. of trees (with girth size of <60 cm – 29%; 60-90 cm – 20%; 90-120 cm – 32%; >120 cm 19%) are proposed to be felled for construction activity. The avenue plantation will be carried out apart from the statuary requirement as per IRC SP: 21, 2009 and NHAI's Guideline for National Green Highway Policy 2015 as availability of land. The general benefits of plantations are;

- Reduction in Heat Island,
- Plantation of herbs, shrubs and trees will create three tier which will reduce the impacts of air pollution and dust as trees and shrubs are known to be natural sink for air pollutants
- It will provide much needed shade on glaring hot roads during summer
- It will reduce the impact of ever increasing noise pollution caused due to increase in number of vehicles
- Moderating the effect of wind and incoming radiation
- Grass plantation on the embankment slopes will reduce soil erosion and cutting
- Prevention of glare from the headlight of incoming vehicles
- Enhancement of Bio-diversity,
- Fruit bearing plants can generate local economy,
- > Enhance Greenery and Aesthetics along the stretch.

Health and safety system: During the construction phase and allied activities, all the precautionary measures shall be taken into account as per Rules & regulations for safety & security.

Disaster management and risk assessment: There is a possibility of incidents like bank caving, flooding during the monsoon. Detailed emergency plan in consultation with Risk and Hazard Expert and project manager will be prepared and submitted during EIA.

Amenities/Facilities.

Amenities and Facilities: Basic amenities such as toilets for both men and women and clean drinking water will be provided to the workers. A temporary restroom will also be erected for resting. First aid kits and PPE will be provided to the employees while imparting knowledge about its usage.

6. Proposed Infrastructure

Residential Area (Non Processing Area).

Basic social infrastructure is not well developed along the route. The villages on the proposed route have primary health care facilities, basic education, markets, police station, transportation, roads etc.

Green Belt.

Plantations shall be done on either side of the road, as well as on the median, by NHAI after the completion of project. Forest clearance will be obtained from MoEF&CC as per requirement.

Social Infrastructure.

It is anticipated that toll booths, temporary camps and rain water harvesting structures along with supporting drains shall come up along the alignment. Also it is proposed that Development / Township Projects, Hospitals, Food Courts, Institutions, police stations, public toilets, petrol pumps will be developed.

Connectivity (Traffic and Transportation Road/ Rail/ Metro/ Waterways etc)

The proposed route is connected and approached through State highways and National Highways. At present the route from Delhi to Jaipur is covered by the Delhi-Jaipur, National Highway no. 8. There are other state highways connecting nearby are SH-13 and SH-52 of Rajasthan. National highway no. 8 and Delhi to Jaipur Railway route is almost parallel to the proposed expressway route. The proposed project route is also having well rail transport in existence. Gurgaon Railway station is just 9.4 km from the take off point of the proposed project.

The proposed expressway passes through some of the big Industrial areas of the country i.e. Manesar, Bhiwadi, Neemrana etc.

Main Railway Stations:

1. Gurgaon Railway station is 9.4 km away from take off point of Expressway.

- 2. Rewari railway station within 6.4 km from Expressway.
- 3. Jaipur railway station within 41 km from Expressway.

Main Bus Depots:

- 1. Gurgaon Bus Depot at about 7.7 Km from take off point of Expressway.
- 2. Rewari Bus Stand at a distance of 6 km from Expressway.
- 3. Jaipur bus stand at a distance of 40 km from Expressway.

Airport:

New Delhi International Airport is at a distance of 20 km from take off point of Expressway.

Jaipur International Airport is at a distance of 51 km from Expressway.

Drinking Water Management (Source & Supply of water)

Water will be required for onsite workers and construction works, while water for expressway construction and sprinkling for dust suppression will also be needed. About 7000 KLD water will be required for all purposes.

Sewerage System

The waste disposal and sewage system for the camp will be designed, built and operated such that no odor is generated. Unless otherwise arranged by the local sanitary authority, arrangements for disposal of night soils (human excreta) suitably approved by the local medical health or municipal authorities or as directed by the SC will have to be provided by the contractor.

Mobile toilets and soak pit shall be provided for construction and operational workers. In operation phase the waste water management system like proper sewerage system and STPs will be provided.

Industrial Waste Management

There will be no Industrial waste generation during construction or operation phase.

Solid Waste Management

Waste management during construction and operational phase shall be done as per MoEF&CC norms. Organic and inorganic wastes will be segregated and disposed off as per SWM rules and regulations.

Power Requirement & Supply / source

D.G sets shall be used for power for onsite construction and labour camps, wherever grid power supply is not available.

7. Rehabilitation and Resettlement (R & R) Plan

i. Policy to be adopted (Central/State) in respect of the project affected persons including home oustees, land oustees and landless laborers (a brief outline to be given).

Most of the land coming under the project area is agricultural and barren land. Along with this the alignment of expressway is passing through forest land and inhabited area. The land required for the construction will be acquired by NHAI before the start of construction work. R&R plan will be prepared and will be submitted with EIA.

8. Project Schedule & Cost Estimates

Likely date of start of construction and likely date of completion

The project shall start its construction work as and when DPR is finalized and will get Environmental clearance from MoEF&CC and consent from State Government. The completion period of the project construction is estimated about 36-48 months.

Estimated project cost along with analysis in terms of economic viability of the project.

The estimated capital cost of project is approximately Rs. 6350.00 Crores.

9. Analysis of proposal (Final Recommendations)

Financial and social benefits with special emphasis on the benefit to the local people including tribal population, if any, in the area

The project will have multiple benefits. It will reduce the travel time substantially between Delhi and Jaipur. In addition the improved road will provide other benefits like proposed activity improves the economic status of the village people the dedicated project area. Overall improvement will be expected in local area in terms of;

- 1. Development and improvement in transportation infrastructure facility will connect villages with the nearby cities
- 2. Proposed Education institutes in the villages
- 3. Better approach to Medical & Educational services and quick transportation of perishable goods like fruits, vegetables and dairy products and
- 4. Drinking water facility
- 5. Development of local agriculture and handicrafts
- 6. Development of tourism and pilgrimage
- 7. Vocational and skill development training for youth
- 8. Opening up of opportunities for new occupations
- 9. Improved quality of life for people and so on.
- 10. Transporting, processing and marketing of agricultural products

11. Fast and safe connectivity resulting in savings in fuel, travel time and total transportation cost to the society

- 12. Reduction in accidents
- 13. Reduction in pollution

14. Proposed Tree Plantation along the road side, green pockets alongside of the alignment will have social/Environmental benefits to the nearby people

15. The proposed expressway will have infrastructural Launchpad.

16. Along with this it is also proposed to have area development, real estate development, emergency landing of plane, medical facilities, food courts, police stations, public toilets, petrol pumps. This will definitely add value in the social and financial benefits in the region

17. Indirect and direct employment opportunity to people from all skilled, semiskilled and unskilled streams will act as social benefits

It is assumed that the overall NHAI project will boost socio-economic development in the entire Northern and western region of India. Accordingly project will contribute towards this objective.