

Alternative Alignment

The study carried out by M/s CES suggested certain alternative to the alignment originally proposed in the D.P. of the MCGM. In view of the report of M/s CES and the alternative alignment suggested by them, MCGM had appointed separate technical consultant M/s Pentacle Consultants (India) Pvt Ltd. to prepare a Detailed Project Report. M/s Pentacle Consultant Pvt Ltd had in the year 2015 prepared a Detailed Project Report on alternative alignment for GMLR. In the DPR M/s Pentacle had in their report suggested some options.

Among the suggested options, the alignment comprising of an Elevated corridor connecting WEH near Goregaon Flyover and EEH near Mulund running along Aarey milk colony, Powai Lake and Bhandup Complex area along Trunk Main water line was proposed as the best option and the detailing has been carried out by them for this option. The option envisaged approx 13.6km of an elevated road with 1.7km connector and 1.5km at grade road at entry/exit at WEH & EEH respectively. The alignment passes along existing Aarey Road in Aarey colony and then through Bhandup Complex up to Mulund. The alignment further traverses to Khindipada on existing Goregaon Mulund Link Road crosses LBS Marg and end up on EEH as shown in figure: 1

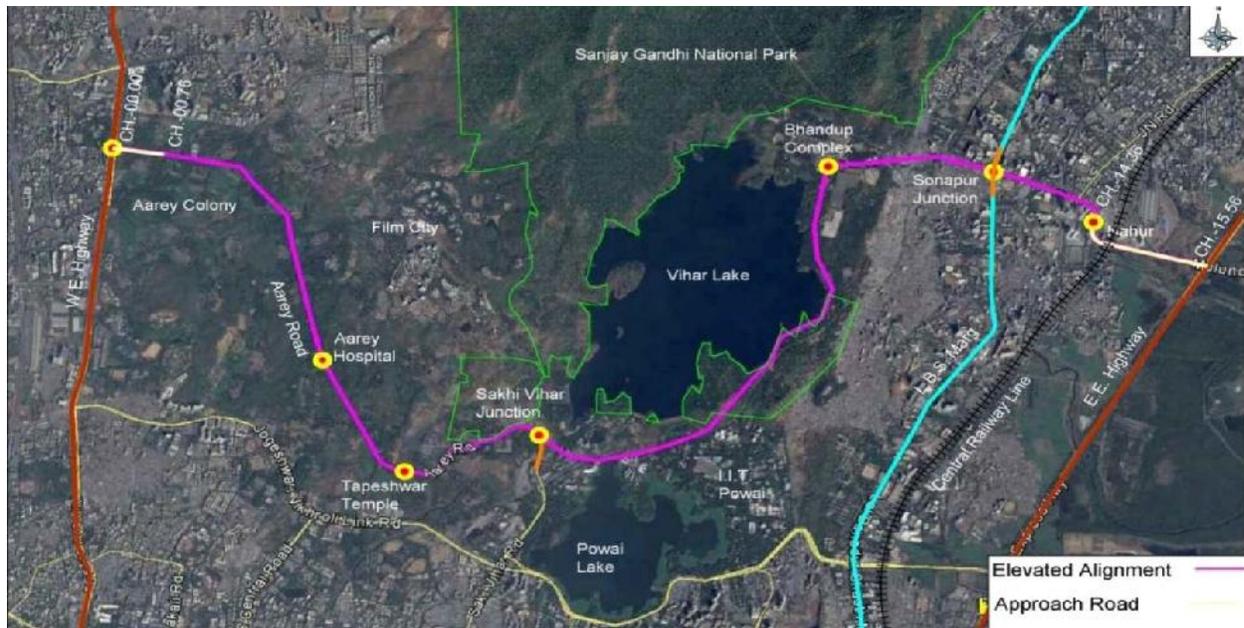


Figure:1 Proposed GMLR Connectivity (Based on M/s Pentacle study 2015)

However, due to various constraints namely, removal of large number of trees, Safety of Water reservoir, Zigzag alignment, more number of PAP's in the proposed alignment along Aarey colony, L&T,

IIT campus, it was decided to appoint M/s. PADECO Co. Ltd. as a consultant to peer review the DPR and accordingly finalize the most suitable alignment for Goregaon Mulund Link Road.

M/s. Padeco co. Ltd. has carried out the peer review of the Detail Project Report submitted by M/s. Pentacle. After reviewing the various options mentioned in the DPR submitted by M/s Pentacle, M/s Padeco have indicated that the elevated corridor option proposed in the DPR has lot of constraints. The alignment proposed in the DPR submitted by M/s Pentacle passes through Aarey colony and will cause adverse impact on the prevailing ecology and environment. It will also involve cutting of large number of trees within the Aarey colony and Bhandup Water treatment complex. The alternative will also jeopardize the safety and security of water supply system at Bhandup Complex.

In order to offset the adverse impact on the environment and to limit the constraints of land acquisition and tree cutting, the peer review consultant has suggested an alignment involving construction of a tunnel underneath SGNP as the most desirable option. The proposal envisages a twin tunnel of length of 4.7 Km. below SGNP starting at Film city at Goregaon and exiting at Khindipada at Mulund. In view of the proposed tunnel, the length of the proposed Goregaon Mulund link road will get shortened to about 12.3km. The proposed alignment starts near Dindoshi Flyover on Western Express Highway and connects the Eastern Express Highway near Nahur crossing LBS marg. The salient features of the proposed option, based on desktop study areas given below Table 1.

Table1:- Salient Features of the new Proposal

| Sr.No | Description | Value | Remarks |
|-------|--------------------|--|--------------------------------|
| 1 | Length | 12.3km | Tunnel – 4.7km underneath SGNP |
| 2 | Number of lanes | 4+4 lane at grade Tunnel -3+3 lanes Elevated-3+3 lanes | |
| 3 | Proposed Structure | Twin tunnels in National Park area and approach roads on both sides. | |
| 4 | Connecting Points | Near Dindoshi Flyover on WEH and near Airoli Junction on EEH | |

Based on Geotechnical Investigation and topographic survey within SGNP, the alignment has been fixed in such a way that

1. There will be no land acquisition inside SGNP
2. R & R will be minimum
3. There will be minimum disturbance during construction.
4. Shortest Route Alignment.
5. Alignment will be planned consistent with the DP road.



Figure 2 GMLR Proposed Tunnel Alignment Option by M.s Padeco Co ltd

The underground tunnel is proposed on this alignment near film city in such a way that the tunnel passes underneath the Sanjay Gandhi national park area without disturbing the premise of SGNP in any way whatsoever. The project also does not involve any land acquisition within Sanjay Gandhi National Park. As an underground Tunnel is proposed along this alignment, it can be ensured that there is minimum disturbance to flora and fauna and there is no adverse effect to the water supply system and the lakes situated in the area.

The exit point of the tunnel on Mulund side is located at Khindipada outside the SGNP premise and hence it will not involve any land acquisition in SGNP area. The alignment has been planned with minimum land acquisition beyond SGNP area and maximum benefit to local traffic and through traffic.

A comparative table of the proposed Tunnel project and the earlier Elevated option suggested by M/s Pentacle is tabulated below to finalize the most preferred alternative.

Table 2:- Pros and Cons of GMLR Proposed Alignment Options

| Sr. No. | Item | Elevated Option of M/s Pentacle | Corridor Advantage/ Disadvantage | Tunnel from M/s Padeco Advantage/ Disadvantage | Option Remarks |
|----------------------------------|------------------------------------|---|-------------------------------------|--|---|
| A Physical Infrastructure | | | | | |
| 1 | Number of lanes for each direction | 2 lanes | | 3 lanes | Need more than 2 lanes in future for elevated option |
| 2 | Length of corridor | 19 Km with 13.5km of elevated corridor | | About 12.30km with 4.7km tunnel | Elevated corridor adversely affects the ecology of Aarey colony |
| 3 | D.P road provision | No D P Road provision from Aarey road to Bhandup complex | | Major portion is on DP Tunnel is also reflected in Draft DP 2024 | |
| B Road User Benefits | | | | | |
| 1 | Travel time | Not significantly reduced | | reduced considerably | Travel time will be reduced to half in case of tunnel alignment |
| 2 | Connecting roads | 2 connectors proposed along the corridor. | | No intermediate connection | |
| 3 | Travel cost | with length not reduced significantly and corridor being congested, there will be | | Considerable saving in fuel cost | Elevated corridor should be minimum of 3 lanes for each direction |

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