

ANALYSIS OF ALTERNATIVE ALIGNMENTS FOR PROPOSED JEJURI ROPEWAY

1. Background

Jejuri is a city and a municipal council in Purandar Taluka of Pune district of Maharashtra situated to the south - east of Pune toward Phaltan. It is an important pilgrimage place owing to presence of Lord Khandoba Temple, who is worshipped by majority of the tribes in the state of Maharashtra and neighbouring states. Presently the pilgrims visit the Khandoba temple in the main area of the Jejuri town. However, the place of origin of Lord Khandoba, believed to be on the hill top at Kade Pathar is also equally revered and often visited by pilgrims, which is accessible by steep steps (abt. 750 nos.). Owing to the increasing devotees to this old temple on hill top and difficulties encountered while climbing those steep steps, especially by older devotees, kids and disabled persons; it is proposed to develop Passenger Ropeway system from the bottom of the hill to the Kade Pathar Khandoba temple at the hill top. Charity Commissioner, Pune, Government of Maharashtra vide his approval dated 03/01/2020 has approved the implementation of the project.

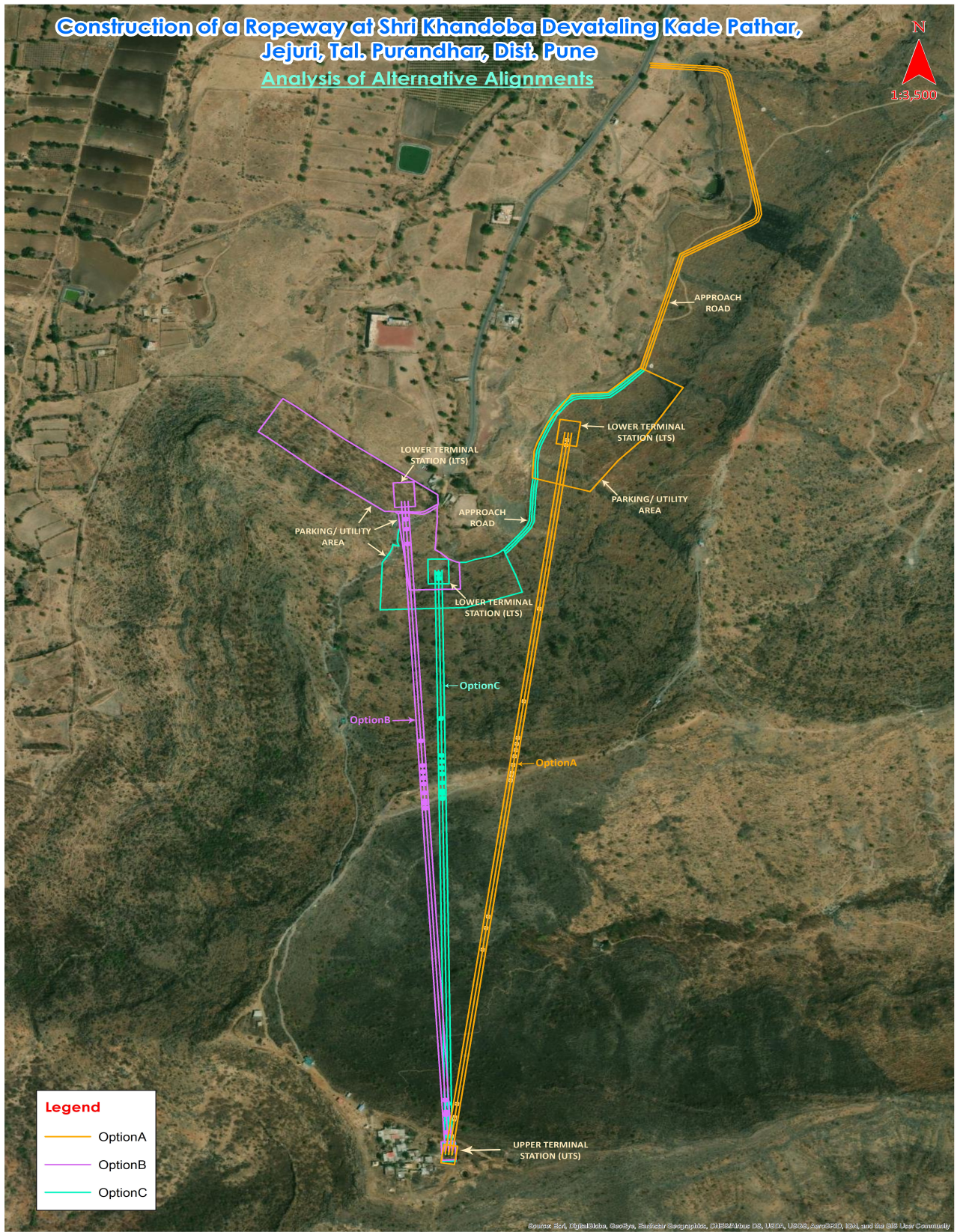
2. Route Alignment & Selection Criteria

The detailed reconnaissance survey has been carried out for the area while fixing an alignment and terminal points based on the requirement of the project. Multiple visits were conducted along with discussions held with the representatives of Temple Trust, locals and other stakeholders. Based on detailed deliberations and feasibility studies, three alternative options were selected on the basis of following selection criteria:

- Availability of adequate space for terminals i.e. Lower Terminal, Intermediate Terminal (if any)/ Line Towers and Upper Terminal.
- Easy land acquisition/Land availability.
- Minimum possible infringement.
- Design and engineering criteria.
- Feasibility of selection of ropeway system matching with traffic and construction requirements.
- Easy connectivity to Lower and Upper terminals from adjacent area.
- Minimum rehabilitation and tree cutting.
- Minimum Environmental and social impacts
- Easy traffic handling at Lower and Upper terminal stations.

3. Alternative alignment Options

Upper Terminal Station (UTS) is finalized on the east side of the Temple, whereas three different options for Lower Terminal Station (LTS) were finalized as shown in figure below:



Alignment Alternative Options

The salient features of all the three selected alternative alignments are summarized as under:

Sr. No.	Particulars	Option-A	Option-B	Option-C
1	Ropeway Length (km)	1183.00	1056.00	947.00
2	Alignment Profile	Difficult	Easy	Very Difficult
3	Level Difference (m)	240.00	199.00	207.00
4	Valley crossing	1 No.	1 No.	1 No.
5	Nallah/Stream Crossing	1 No.	1 No.	1 No.
6	Road crossing	3 Nos.	2 Nos.	2 Nos.
7	Total Land (Ha.)	4.0212	3.4758	3.6631
8	Forest Land (Ha.)	3.8490	3.4	3.4933
9	Non-Forest Pvt Land (Ha.)	0.1722	0.0758	0.1698
10	Tree cutting (nos.)	10	8	6
11	Environmental: Sensitive Receptor - New Jijamata English High School	237 m radial distance	209 m radial distance	330 m radial distance
12	Wildlife/ Protected Area	Nil	Nil	Nil
13	Ease of Connectivity	New Approach Road (0.671 Km)	Existing PWD Road	New Approach Road (1.07 Km)
14	Local issues/ Land record disputes/ General Local Consent	General Consent of Locals - Least preferred alignment	General Consent of Locals - Most preferred alignment	General Consent of Locals - Second preferred alignment
15	HT Power line crossing	Nil	Nil	Nil
16	LT Power line crossing	1 No.	1 No.	1 No.
17	Electricity Availability (LTS & UTS)	11KV line passing nearby	11KV line passing nearby	11KV line passing nearby
18	Water Availability	Local Tanker for LTP, Existing water supply line for UTP.	Local Tanker for LTP, Existing water supply line for UTP.	Local Tanker for LTP, Existing water supply line for UTP.
19	Project Cost (Cr.)	29.85	25.35	28.50

4. Matrix Evaluation of Alignment Alternatives

The matrix evaluation for comparison of all the three selected alternatives was carried out based on Design/Engineering, Environmental & Social and indicative cost aspects assigning weightage to each of the criteria. The evaluation results as obtained are tabulated as under:

Jejuri Ropeway Project: Matrix Evaluation of proposed Alignment Alternatives									
Sr. No.	Criteria	Parameters	Weights	Option-A	Score	Option-B	Score	Option-C	Score
1	Design/ Engineering aspects	Ropeway Length (km)	100	1183.00	80.05	1056.00	89.68	947.00	100.00
2		Alignment Profile	100	Difficult	75.00	Easy	100.00	Very Difficult	50.00
3		Level Difference (m)	100	240.00	85.42	199.00	100.00	207.00	99.03
4		Connectivity - Approach Road	100	Medium	75.00	Easy	100.00	Difficult	50.00
5		Difficulty in Construction	100	Medium	75.00	Low	100.00	High	50.00
6	Environmental & Social aspects	Total Land (Ha.)	100	4.0212	86.44	3.4758	100.00	3.6631	94.89
7		Forest Land (Ha.)	100	3.8490	88.33	3.4000	100.00	3.4933	97.33
8		Non-Forest Pvt Land (Ha.)	100	0.1722	44.02	0.0758	100.00	0.1698	44.64
9		Tree cutting (nos.)	100	10	60.00	8	75.00	6	100.00
10		Noise Impact - Distance of Sensitive Receptor School (m)	100	237	71.82	209	63.33	330	100.00
11		Noise Mitigation Measure - Buffer Plantation Area (Ha)	100	0.2626	52.13	0.1369	100.00	0.2324	58.91
12		Wildlife/ Protected Area	100	0.00	100.00	0.00	100.00	0.00	100.00
13		Local issues/ Land record disputes	100	High	50.00	Low	100.00	High	50.00
14	Financial aspects	Project Cost (Cr.)	100	29.85	84.92	25.35	100.00	28.50	88.95
Total Score			1400		1025.63		1328.01		1083.75

5. Conclusion

As per the above Comparative Matrix analysis based on Design/Engineering, Environmental & Social and Financial considerations, **Option-B** scored highest and hence selected as the Final Alignment. This selected alignment starts basically from North (Lower Terminal Station -LTS) to the South direction near Kade Pathar Payatha called Vijala where statue of Lord Shiva is situated and falls on the right side of the start of steps for climbing to the temple. After that it crosses a valley and finally reaches Upper Terminal Station (UTS) situated on the east side of the Khandoba Temple.

BSagal

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