

आजादी का अमृत महोत्सव (India@75) कार्यक्रम के दौरान केन्द्रीय मृदा एवं सामग्री अनुसंधानशाला में "यमुना नदी पर एक सड़क पुल के लिए हाइड्रोलिक प्रभाव और संरक्षण को अंतिम रूप देना" पर डॉ एन. पी. होंकनदवार, वैज्ञानिक 'ई' द्वारा द्वारा ऑनलाइन वेबिनार दिया गया ।

[#आजादीकाअमृतमहोत्सव](#)


Viewing N. P. Honkanadava...

OBJECTIVES OF THE STUDY


- To ascertain suitability of proposed road bridge site from hydraulic point of view.
- To determine orientation of bridge piers for free and smooth flow conditions.
- To find afflux on upstream side due to the construction of proposed bridge and its effect on structure situated on upstream and downstream.
- To determine maximum expected scour based on the maximum intensities of the flow at model studies.
- To ascertain the suitable river training works such as guiding bunds and spurs with its geometrics based on actual flow conditions.

Viewing N. P. Honkanadava...


Flow pattern along the proposed bridge under existing condition



Flow pattern in the vicinity of proposed bridge site under existing condition (7022 m³/s)



Flow pattern in the vicinity of proposed bridge site under existing condition (9910 m³/s)



Flow pattern in the vicinity of proposed bridge site under existing condition (12750 m³/s)

Er. Kumar Lal Babu
harendra prakash
Mahabir Dixit
neetu singh
P S K Murthy
Pankaj Joshi
Pankaj Kumar
R K Prasad
Raj Kumar
Rajeev Gupta
rajesh12khanna1965
S K Jain
sameer vyas
sandeep dhanote
Senthil P



हरि देव

dhirender

Dr K K Mishra

Dr R P Yadav

N. P. Honkanadavar

Viewing N. P. Honkanadava...

CONCLUSIONS

- The alignment of the bridge axis is found to be suitable from hydraulic considerations. However, this being in meandering reach of the river, constant monitoring of protection works is essential. Monitoring and care should be taken during high floods.
- The waterway of 595 m is considered to be sufficient and did not cause any appreciable afflux on the upstream. Hence recommended to be adopted.
- The elliptical guide bund evolved through model studies is observed to provide satisfactory flow conditions and hence recommended to be adopted.
- The maximum water level observed through model studies is about R.L. 200.62 m for discharge of 12,750 m³/s. Considering the observed likely maximum discharge intensity of 34.57m³/s/m, deepest scour level is expected to extend up to about R.L.168.12 m and providing 1/3rd grip length of maximum scour depth below HFL, the founding level may be provided as R.L. 157.29 m.



हरि देव

dhirender

Dr K K Mishra

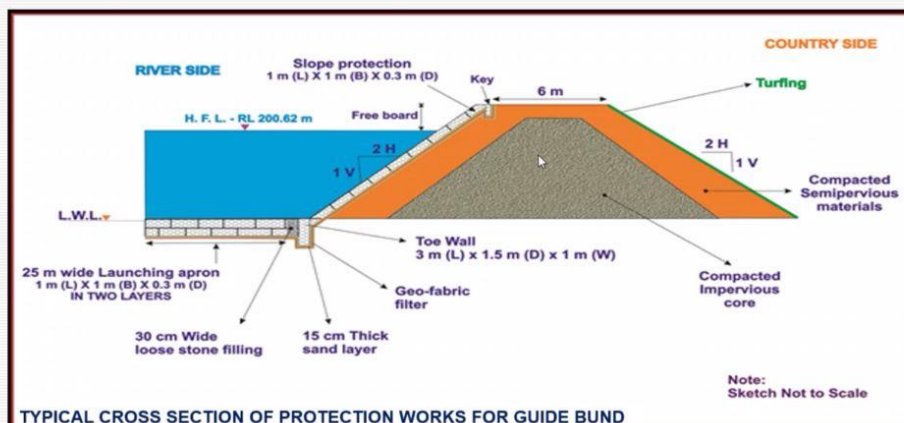
Dr R P Yadav

N. P. Honkanadavar

Viewing N. P. Honkanadava...

CONCLUSIONS

- Maximum velocities and discharge intensities of 2.06 m/s and 15.09 m³/s/m and 2.36 m/s and 19.78 m³/s/m and 2.74 m/s 34.57 m³/s/m are expected at the proposed bridge axis for the discharge of 7,022 m³/s, 9,910 m³/s and 12,750 m³/s respectively at the bridge axis with elliptical guide bund.
- The guide bund embankments shall be provided with river side slope of (1V: 2H) or flatter as per site condition.



TYPICAL CROSS SECTION OF PROTECTION WORKS FOR GUIDE BUND