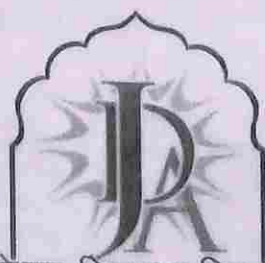
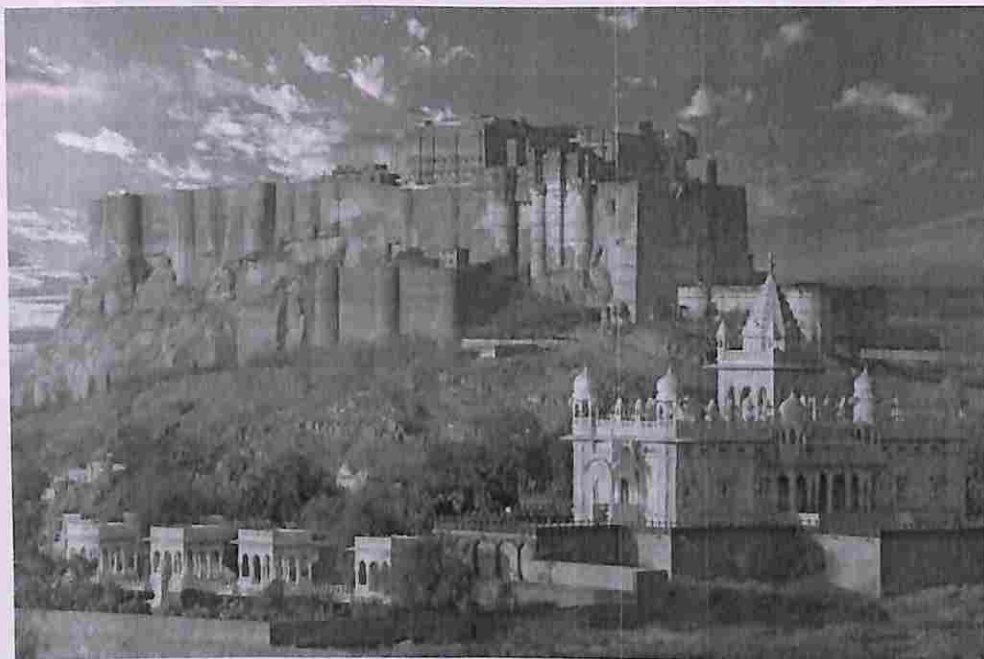


CONSTRUCTION OF NEW ROAD
PROPOSED ROAD FROM GHODA GATI TO
MEHARANGARH FORT, JODHPUR



जोधपुर विकास प्राधिकरण

A Detail Project Report By
Jodhpur Development Authority

अभिजादी अभियन्ता ()
जोधपुर विकास प्राधिकरण
जोधपुर

Jodhpur

Jodhpur is the second-largest city in the Indian state of Rajasthan and officially the second metropolitan city of the state. It was formerly the seat of a princely state of the same name. Jodhpur was historically the capital of the Kingdom of Marwar, which is now part of Rajasthan. Jodhpur is a popular tourist destination, featuring many palaces, forts and temples, set in the stark landscape of the Thar Desert. It is popularly known as Blue city and Sun city among people of Rajasthan and all over India. The city is also said to be the cultural capital of Rajasthan state.

The old city circles the fort and is bounded by a wall with several gates. However, the city has expanded greatly outside the wall over the past several decades. Jodhpur lies near the geographic center of the Rajasthan state, which makes it a convenient base for travel in a region much frequented by tourists.

The city is also home to several educational institutions, the most prominent being AIIMS Jodhpur, IIT Jodhpur, SNMC Jodhpur, DSRRAU Jodhpur, NLU Jodhpur, NIFT Jodhpur. Many research institutes like Indian Space Research Organisation (ISRO), Defence Research and Development Organisation (DRDO), Central Arid Zone Research Institute (CAZRI), Arid Forest Research Institute (AAFRI), Desert Medicine Research Centre (DMRC) are also located in the city.

Demographics

As per provisional reports of Census India, the population of Jodhpur is 1,033,918 in 2011, where males constitute approximately 52.62 percent of the population and females constitute approximately 47.38 percent. The average literacy rate of Jodhpur is 80.56 percent, with a male literacy rate of approximately 88.42 percent and a female literacy rate of approximately 73.93 percent. Approximately 12.24 percent of the population is under six years of age. Jodhpur city is governed by Municipal Corporation which comes under Jodhpur Urban Agglomeration. The Jodhpur Urban/Metropolitan area include Jodhpur, Kuri Bhagtasani, Mandore Industrial Area, Nandri, Pal Village and Sangariya. Its Urban/Metropolitan population is 1,137,815 of which 599,332 are males and 538,483 are females. According to www.citypopulation.de population of Jodhpur city on 01/01/2019 is 1,440,000.

Climate

The climate of Jodhpur is hot and semi-arid during its nearly yearlong dry season, but contains a brief rainy season from late June to September. Although the average rainfall is around 362 millimetres (14.3 in), it fluctuates greatly. In the famine year of 1899, Jodhpur received only 24 millimetres (0.94 in), but in the flood year of 1917 it received as much as 1,178 millimetres (46.4 in).

Temperatures are extreme from March to October, except when the monsoonal rain produces thick clouds to lower it slightly. In the months of April, May and June, high temperatures routinely exceed 40 degrees Celsius. During the monsoon season, average temperatures decrease slightly. However, the city's generally low humidity


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risers, which adds to the perception of the heat. The highest temperature recorded in Jodhpur was on 25 May 1932 when it rose up to 48.9 degrees Celsius.

Culture

The city is famous for its food and its popularity can be judged by the fact that one can find sweet shops named 'Jodhpur Sweets' in many cities throughout India. Being at the onshore of Thar desert, life has been influenced by ways of select nomadic tribes (So-called "Gypsy" groups - Banjare in Hindi - have settled in some parts of the city). Jodhpur has distinct cultural identity through its food Mirchi Bada and Mawa Kachori are famous], clothes especially female clothes, Marwari language, hospitality here every one is greeted with 'sa' postfix to their name. 'sa' is used to give respect and also implies the happiness of seeing that person. Like most other non capital towns of an Indian state jodhpur also successfully managed to keep alive its culture and its clearly visible in day today life. To get a glimpse of culture a tourist can visit Sadar Bazar known as Ghanta-Ghar, Tripoliya Market, Nai-Sarak Market , all these three lies within 2 kilometers and are connected.

Tourism

Jodhpur's most notable attractions are Mehrangarh Fort, Umaid Bhawan Palace, Jaswant Thada, and the Ghanta Ghar, or Clock Tower. Tourists are also within proximity to Fort Auwa, Mandore, Kaylana Lake and Garden, Balsamand Lake, Mandaleshwar Mahadev Temple (Mandalnath), Ratanada Ganesh Temple, ISKCON Temple, Sardar Samand Lake and Palace, Masooria Hills, Veer Durgadas Smarak (monument, park, and museum) and Bhim Bhadak Cave. Other attractions of people are at markets of food, antique items, traditional clothes and traditional shoes (also called Jodhpuri Mojari) held in Jodhpur.

Places of recreation

Some of the recreation places worth mentioning are:

- Mandore Gardens
- Kaylana Lake
- Shastri Circle
- Masuria Hill Garden
- Rao Jodha Desert Rock Park
- Science Park
- Ummed Garden
- Chokelav Baag
- Machiya Safari Park


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Meharagarh Fort

Meharagarh, located in Jodhpur, Rajasthan, is one of the largest forts in India. Built in around 1459 by Rao Jodha, the fort is situated 410 feet (125 m) above the city and is enclosed by imposing thick walls. Inside its boundaries there are several palaces known for their intricate carvings and expansive courtyards. A winding road leads to and from the city below. The imprints of the impact of cannonballs fired by attacking armies of Jaipur can still be seen on the second gate. To the left of the fort is the *chhatra* of Kirat Singh Soda, a soldier who fell on the spot defending Meharagarh.

There are seven gates, which include Jayapol (meaning 'victory gate'), built by Maharaja Man Singh to commemorate his victories over Jaipur and Bikaner armies. There is also a Fattehpole (also meaning 'victory gate'), which commemorates Maharaja Ajit Singhji victory over Mughals.

The museum in the Meharagarh fort is one of the most well-stocked museums in Rajasthan. In one section of the fort museum.

History

Rao Jodha, the chief of the Rathore clan, is credited with the origin of Jodhpur in India.^[1] He founded Jodhpur in 1459 as the capital of Marwar (Mandore was the previous capital). He was one of Ranmal's 24 sons and became the fifteenth Rathore ruler. One year after his accession to the throne, Jodha decided to move his capital to the safer location of Jodhpur, as the one thousand years old Mandore fort was no longer considered to provide sufficient security.

With the trusted aid of Rao Nara (son of Rao Samra), the Mewar forces were subdued at Mandore. With that, Rao Jodha gave Rao Nara the title of Diwan. With the help of Rao Nara, the foundation of the fort was decided on 12 May 1459^[2] by Jodha on a rocky hill 9 kilometres (5.6 mi) to the south of Mandore. This hill was known as Bhakurcheria, the mountain of birds. According to legend to build the fort he had to displace the hill's sole human occupant, a hermit called Cheeria Nathji, the lord of birds. Cheeria Nathji was a man with the local population as his followers and hence influential in the region. When requested to move he refused categorically. This happened many times. Rao Jodha then took extreme measures and sought help from another more powerful saint, the female warrior sage of Charan caste Shri Karni Mata of Deshnok. On request of the king she came and asked Cheeria Nathji to quit immediately. Seeing a superior power he left at once but cursed Rao Jodha with words "Jodha! May your citadel ever suffer a scarcity of water!". Rao Jodha managed to appease the hermit by building a house and a temple in the fort. Seeing the influence of Karni Mata Rao Jodha then invited her to lay down the foundation stone of the Meharagarh Fort and the same was carried out by her. Today only the forts of Bikaner and Jodhpur remain in the hands of Rathors, both had their foundation stone laid by Shri Karni Mata. All other Rajput forts of Rajasthan were abandoned for some or the other reasons by the respective clans. Only the Rathors of Jodhpur and Bikaner have their forts with them till date. This fact is considered a miracle by the local population and is attributed to Shri Karni Mata. Rao


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Jodha also granted villages of Mathania and Chopasni to the two Charan warlords who were sent by him to request Shri Karni Mata to come to Jodhpur.

To ensure that the new site proved propitious; he buried a man of the Meghwal caste called "Raja Ram Meghwal", who offered his services voluntarily, alive in the foundations as this was considered auspicious those days. "Raja Ram Meghwal" was promised that in return his family would be looked after by the Rathores. To this day his descendants still live in Raj Bagh, "Raja Ram Meghwal's" Garden.

Mehrangarh (etymology: 'Mihir' (Sanskrit) -sun or Sun-deity; 'garh' (Sanskrit)-fort; i.e. 'Sun-fort'); according to Rajasthani language pronunciation conventions, 'Mihirgarh' has changed to 'Mehrangarh'; the Sun-deity has been the chief deity of the Rathore dynasty.^[3] Though the fortress was originally started in 1459 by Rao Jodha, founder of Jodhpur, most of the fort which stands today dates from the period of Jaswant Singh of Marwar (1638–78). The fort is located at the centre of the city spreading over 5 kilometres (3.1 mi) on top of a high hill. Its walls, which are up to 36 metres (118 ft) high and 21 metres (69 ft) wide, protect some of the most beautiful and historic palaces in Rajasthan. Khandwalia community one of the old traditional community had the knowledge of breaking the big stones made this fort with others.

Entry to the fort is gained through a series of seven gates. The most famous of the gates are:

- Jai Pol ("Gate of Victory"), built by Maharaja Man Singh in 1806 to celebrate his victory in a war with Jaipur and Bikaner.
- Fateh Pol, built to celebrate a victory over the Mughals in 1707;
- Dedh Kamra Pol, which still bears the scars of bombardment by cannonballs;
- Loha Pol, which is the final gate into the main part of the fort complex. Immediately to the left are the handprints (*sati* marks) of the ranis who in 1843 immolated themselves on the funeral pyre of their husband, Maharaja Man Singh.

Within the fort are several brilliantly crafted and decorated palaces. These include, Moti Mahal (Pearl Palace), Phool Mahal (Flower Palace), Sheesha Mahal (Mirror Palace), Sileh Khana and Daulat Khana. The museum houses a collection of palanquins, howdahs, royal cradles, miniatures, musical instruments, costumes, and furniture. The ramparts of the fort house preserved old cannon (including the famous Kilkila), and provided a breath-taking view of the city.

Galleries in Mehrangarh Museum

Elephant's howdahs

The howdahs were a kind of two-compartment wooden seat (mostly covered with gold and silver embossed sheets), which were fastened onto the elephant's back. The front compartment, with more leg space and a raised protective metal sheet, was meant for kings or royalty, and the rear smaller one for a reliable bodyguard disguised as a fly-whisk attendant.

Palanquins

Palanquins were a popular means of travel and circumambulation for the ladies of the nobility up to the second quarter of the 20th century. They were also used by male nobility and royals on special occasions.

Daulat Khana - Treasures of Mehrangarh Museum[edit]

This gallery displays one of the most important and best-preserved collections of fine and applied arts of the Mughal period of Indian history, during which the Rathore rulers of Jodhpur maintained close links with the Mughal emperors. It also has the remains of Emperor Akbar.

Armoury[edit]

This gallery displays a rare collection of armour from every period in Jodhpur. On display are sword hilts in jade, silver, rhino horn, ivory, shields studded with rubies, emeralds and pearls and guns with gold and silver work on the barrels. The gallery also has on display the personal swords of many emperors, among them outstanding historical piece like the Khaanda of Rao Jodha, weighing over 3 kg, the sword of Akbar the Great and the sword of Timur.

Paintings

This Gallery displays colours of Marwar-Jodhpur, the finest example of Marwar paintings.

The Turban Gallery[edit]

The Turban Gallery in the Mehrangarh Museum seeks to preserve, document and display the many different types of turbans once prevalent in Rajasthan; every community, region, and festival having had its own head-gear.

Tourist attractions in Mehrangarh

National Geological Monument[edit]

The Jodhpur Group - Malani Igneous Suite Contact on which the Mehrangarh Fort has been built has been declared a National Geological Monument by the Geological Survey of India to encourage Geotourism in the country. This unique geological feature is part of the Malani Igenus Suite seen in the Thar desert region, spread over an area of 43,500 km². This unique geological feature represents the last phase of igneous activity of Precambrian age in the Indian Subcontinent.^{[4][5]}

The Mataji Temple

The chamunda Mataji was Rao Jodha's favorite goddess, he brought her idol from the old capital of Mandore in 1460 and installed her in Mehrangarh (Maa chamunda was the *kul devi* of the Pratihara rulers of Mandore). She remains the Maharaja's and the Royal Family's Isht Devi or adopted goddess and is worshipped by most of Jodhpur's citizens as well. Crowds throng Mehrangarh during the Dussehra celebrations.

Rao Jodha Desert Rock Park[edit]

Rao Jodha Desert Rock Park, spreads over 72 hectares, adjoining Mehrangarh Fort. The park contains ecologically restored desert and arid land vegetation.^{[6][7]} The park was created in 2006 to try and restore the natural ecology of a large, rocky area adjoining and below the fort and opened to the public in February 2011. The area in and around the park contains distinctive volcanic rock formations such as rhyolite, with welded tuff, and breccia, sandstone formations. The park includes a Visitors Centre with Interpretation Gallery, a native plant nursery, small shop and cafe.

2008 Stampede


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A human stampede occurred on 30 September 2008, at the Chamunda Devi temple inside of the Mehrangarh Fort, in which 249 people were killed and more than 400 injured.

Culture

The fort has musicians performing folk music at the entrance and houses museum, restaurants, exhibitions, and craft bazaars.^[9] The fort was one of the filming locations for Disney's 1994 live-action film *The Jungle Book*, as well as the 2012 film *The Dark Knight Rises*.^[10] Principal photography for the latter commenced on 6 May 2011.^{[11][12]} The Emraan Hashmi starrer *Awarapan* was also shot here.^[13] In 2015, the fort was used to record a collaborative album by musicians including Israeli composer Shye Ben Tzur, English composer and Radiohead guitarist Jonny Greenwood, and Radiohead producer Nigel Godrich. The recording was the subject of a documentary, *Junun*, by the American director Paul Thomas Anderson.^{[14][15]} In March 2018, the film crew for the Bollywood film *Thugs of Hindostan* used the fort as one of its shooting locations;^[16] actor Amitabh Bachchan left a reflective post about his experience there on his official blog.

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Mandore Garden

Mandore Garden, is a town located 9 km north of Jodhpur city, in the Indian state of Rajasthan. The place is known as the birthplace of Ravana's wife mandodari.

History

Mandore is an ancient town, and was the seat of the Pratiharas of Mandavyapura, who ruled the region in the 6th century CE. Even after the disintegration of the Gurjara-Pratihara empire, a Pratihara family continued to rule at Mandore. This family formed an alliance with the Rathore chief Rao Chunda (r. c. 1383-1424) to defend its chiefdom against the Tughluq dynasty of the Delhi Sultanate. Rao Chunda married a Pratihara princess of Mandore, and received the Mandore Fort in dowry; the Fort served as his family's capital until 1459 CE, when Rao Jodha shifted it to the newly-founded city of Jodhpur.^[1]

Rao Ranmal Rathore secured the throne of Mandore in 1427. In addition to ruling Mandore, Rao Ranmal also became the administrator of Mewar to assist Maharana Mokal (father of Rana Kumbha). After the assassination of Maharana Mokal in 1433, Ranmal continued as administrator of Mewar at the side of Rana Kumbha. In 1438, Rana Kumbha decided to end the power sharing arrangement and had Rao Ranmal assassinated in Chittor and captured Mandore. Rao Jodha, son of Rao Ranmal, escaped towards Marwar. Approximately 700 horsemen accompanied Rao Jodha as he escaped from Chittor. Fighting near Chittor and a valiant attempt to bar the pursuers at Someshwar Pass resulted in heavy losses amongst Jodha's warriors. When Jodha reached Mandore he had only seven people accompanying him. Jodha collected whatever forces he could, abandoned Mandore and pressed on towards Jangalu. Jodha barely managed to reach safety at Kahuni (a village near present day Bikaner). For 15 years Jodha tried in vain to recapture Mandore. Jodha's opportunity to strike finally came in 1453 with Rana Kumbha facing simultaneous attacks by the Sultans of Malwa and Gujarat. Jodha made a surprise attack on Mandore. Jodha's forces overwhelmed the defenders and captured Mandore with relative ease. Jodha and Kumbha eventually settled their differences in order to face their common enemies, the Muslim rulers of Malwa and Gujarat.

"*Mantri Karam Chand Vanshawali Prabandh*", written by Jaysom Uppadhyay, states that Bachhraj, also known as Vatsraj was not only a very religious person but a very brave and gallant warrior in Patan (Anilpura). He is a descendant of Raja Sagar, a Deora Chauhan of Delwara. During mid-15th century, on being invited, Bachhraj submitted his services to the Chief of Mandore (later Jodhpur) Rao Jodha, where he was appointed Dewan as he was an able administrator and a strategist. Rao Jodha, then, for the first time, allowed Bachhraj and other Oswals to take part in commanding armies. A holy man sensibly advised Rao Jodha to move the capital to hilltop safety. The construction of the fort thus begun by Rao Jodha in 1459, under the supervision of Dewan Bachhraj and thus Jodhpur was founded. The fort was completed by Maharaja Jaswant Singh (1637–1680). The new fort was named Mehrangarh Fort and situated on a 125 m high hill, is among the most impressive and formidable forts in Rajasthan.

Mandore was the capital of the erstwhile princely state of Marwar (Jodhpur State), before moving to Mehrangarh Fort in Jodhpur.^[2]


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Monuments

The historic town boasts several monuments. The now ruined Mandore fort, with its thick walls and substantial size, was built in several stages and was once a fine piece of architecture. A huge, now ruined temple is a highlight of the fort. The outer wall of the temple depicts finely carved botanical designs, birds, animals and planets.

The 'Mandore gardens', with its charming collection of temples and memorials, and its high rock terraces, is another major attraction. The gardens house the *Chhatris* (cenotaphs) of many rulers of Jodhpur state. Prominent among them is the *chhatra* of Maharaja Ajit Singh, built in 1793.^[2]

Ravan temple is another attraction at Mandore. It is believed to be the native place of Ravan's wife Mandodari. Ravan is treated as son in law among some local Brahmins.^[3]

The Mandore Gardens also house a government museum, a 'Hall of Heroes' and a Hindu temple to 33 crore gods.^[2] Various artefacts and statues found in the area are housed at the museum. The 'Hall of Heroes' commemorates popular folk heroes of the region. It contains 16 figures carved out of a single rock. Next door is a larger hall called "The temple of 33 crore gods" which houses images of various Hindu deities.^[2]


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Need of road from Ghoda Gati to Meharangarh Fort

Tourists from India as well as from foreign visit the Meharangarh Fort and Mandore garden during their Jodhpur visit. They usually use the way from Nagori Gate for approaching the fort first then Mandore garden or use the way from Ghoda Gati for approaching the fort after visiting Mandore Garden.

The way from Nagori Gate is very narrow and busy as it is used by both local public and tourists. The narrow and business of the way increases traffic inside the city and also increases air pollution inside the city.



Due to all above reasons, construction of road from Ghoda Gati to Meharangarh road makes sense for reduction of traffic and air pollution. That new road will provide healthy atmosphere inside the city and will provide easy approach to tourist for reaching the fort. The new road will provide additional short way to reach national highway (NH 65) from inside the city to local public.


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PROVISION IN PROPOSED PROJECT:-

GREEN ROAD (Plantation)



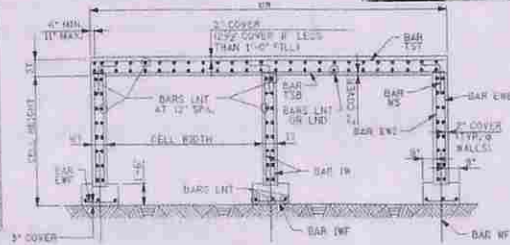
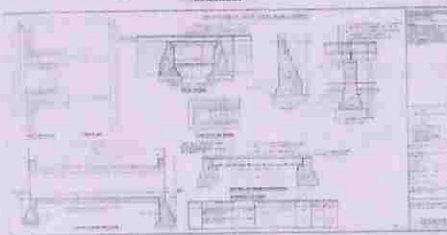
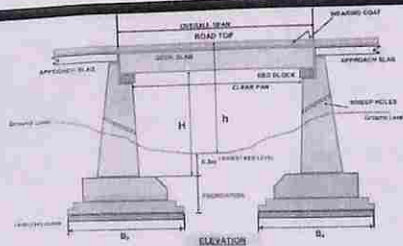
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 नोधपुर विकास प्राधिकरण
 नोधपुर

The aim of the SAFEROAD project was to improve our understanding of how and how effectively different road mitigation strategies work in order to find the best way to reduce the impacts of roads on wildlife and simultaneously enhance traffic safety. The project aimed to generate new scientific knowledge on and insights into methods to help prevent wildlife mortality due to animal vehicle collisions and assure that the barrier effect of roads is reduced sufficiently to maintain viable wildlife populations. The aim was also to transfer this knowledge into practical guidelines



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CROSS DRAINAGE WORK:-



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 मोथपुर विकास प्राधिकरण
 मोथपुर

TECHNICAL REPORT

11

Name of Work

Construction of new proposed road from Ghoda Gati to
Meharangarh Fort, Jodhpur

Estimated Cost

Rs. 1090.00 Lacs.

Name of Zone

Zone North Jodhpur

Necessity

To reduce and divert the traffic at Nagori Gate and provide
easy approach to heritage fort

Specification

Following specifications are proposed in this project-

1) Hard Rock Cutting

2) Granular sub base Grading III

3) Wet Mix Macadam

4) Dense Bituminous macadam 50 mm thick Grading II (19mm
nominal size)- Bitumen @ minimum 4.5 % of mix (VG-30 Grade)

5) Bituminous concrete as per design mix 40 mm thick Grade-1

Bitumen @ 5.5% of mix with lead of mix material 1 KM VG-30 grade
6) Reinforced cement concrete pipes N.P. 4 for culverts 1000mm dia,
600mm dia

7) Jodhpur sand stone kerb stone

8) Random Rubble stone masonry in cm 1:6

9) Cement concrete in 1 cement : 3 Coarse sand : 6 graded stone
aggregate 20mm nominal size

10) Controlled cement concrete pavement M35 grade

Rates

The estimate has been framed on the basis of BASED ON
PWD Bldg. BSR, 2019 & Road BSR, 2019, RUIDP BSR 2019

The above estimated submitted for an early technical sanction
please.

Executive Engineer (Zone North)
Jodhpur Development Authority
Jodhpur

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जोधपुर विकास प्राधिकरण
जोधपुर

Jodhpur Development Authority, Jodhpur

Name of work :- Construction of new proposed road from Ghoda Gati to
Meharangarh Fort, Jodhpur

General Abstract of Cost

S.No.	Particulars	Amount
1	Part A:- Road Work	103791248.62
2	Part B:- Road Electrical Work	5185374.54
	Total	108976623.16

Say Rs. 1090.00 Lacs

Jodhpur Development Authority, Jodhpur.

Technical Sanction No. DE (16)/ DE/EE/No. 11/2020-21

Rupees 1090.00 Lacs Date 15/01/2021

In Words Ten Crores Ninety Lacs only.

Chargeable Head SDD-3-0-01

Computer T.A. J.D.A.

J.D.A. J.D.A.

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जोधपुर विकास प्राधिकरण
जोधपुर

Jodhpur Development Authority, Jodhpur

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Name of work :- Construction of new proposed road from Ghoda Gati to
Meharagarh Fort, Jodhpur

General Abstract of Cost

S.No.	Particulars	Amount
1	Part A:- Road Work	103791248.62

Say Rs. 1038.00 Lacs

Executive Engineer, Civil (North)
J.D.A., Jodhpur

S.No.	Particulars	Amount
2	Part B:- Road Electrical Work	5185374.54

Say Rs. 52.00 Lacs

Executive Engineer, Electrical (North)
J.D.A., Jodhpur

प्रतिभाषी प्रभियंता (१७)
जोधपुर विकास प्राधिकरण
जोधपुर


JODHPUR DEVELOPMENT AUTHORITY, JODHPUR

Name of work :- Construction of new proposed road from Ghoda Gati to Meharangarh
Fort, Jodhpur

ESTIMATE

Based on PWD Building and Road BSR 2019, RUIDP 2017

S.No.	BSR	Item (Part A: Road Work)	Nos.	Measurement			Qty.	Unit	Rate	Amount
				L	B	H				
1	R.314.2	Earth work in excavation, including stacking/disposal of surplus material with all lifts and lead upto 495 metres, exclusive of compensation of earth [MoRTH specification : Clause 301 to 305] Chiseling/wedging out rock where blasting is prohibited. Hard Rock, with lead upto 50m. and lift upto 0.5m.								
		Rock cutting								
		chainage from kila road	0.5	400	18	3.2	11520.00	Cum		
		130-530	1	200	18	2	7200.00	Cum		
		730-930	1	400	18	1.5	10800.00	Cum		
		1600-2000	0.67	300	18	2.8	10130.40	Cum		
		2200-2500					39650.40	cum	609.00	24147093.6
		Total								
2	RUIDP 4.4	Construction of embankment with approved material obtained from borrow pit with all lifts and leads, transporting to site, spreading, grading to required slope and compacting by vibratory roller 8-10 tonne to meet requirement of table 300-2 including cost of compensation for earth taken from private land complete as per MoRTH specification clause 305. (Lead taken upto 5 km)								0
		From kila road	0.5	130	18	1.52	1778.40	Cum		
			0.5	200	18	2.5	4500.00	Cum		
			0.75	670	18	5.7	51556.50	Cum		
			0.5	200	18	3.5	6300.00	Cum		
			2.00	2500.00	1.00	0.50	2500.00	cum		
		berm					39650.40	cum		
		less available material					26984.50		163.00	4398473.5
		Total								
3	RUIDP 4.5	Construction of embankment with approved materials deposited at site available from roadway cutting and excavation from drain and foundation of other structures, graded and compacting by vibratory roller 8-10 tonne to meet requirement of table 300-2 as per MoRTH specification clause 305.					39650.40	cum	64.00	2537625.6
4	R.4.2.3	Providing and laying granular sub-base material having P.I. not more than 6, including spreading in layers not exceeding 150 mm compacted thickness and consolidation by 8-10 tonne power roller to required camber and grade including cost of water and hire charges of machinery, including T&P with all lead (Compacted thickness to be measured) as per MoRTH specification table 400-1, 400-2 For grading-III with CBR value not less than 20, to attain 100% proctor density.								0
		for road	2.00	2500.00	7.00	0.15	5250.00	cum	300.00	1575000
5	R.5.3	Providing, laying, spreading and compacting stone aggregate of as per table 400-12 and 400-13 Wet Mix Macadam specification including premixing the material with water to OMC in wet mix plant as per approved design mix, carriage of mixed material by Tipper to site laying in uniform layers with motor grader/F.E. Loader/paver finisher, in sub base/ base course on a well prepared under base and compacting with vibratory roller to achieve the desired density including lighting, guarding, barricading and maintenance of diversion etc. (MoRTH specification : Clause 406) by mechanical mean with lead up to 20 Km.								0
		for road	2.00	1750.00	7.00	0.23	5635.00	cum	880.00	4958800
6	R.6.1	Providing and applying primer coat over prepared surface of granular base with bitumen emulsion as per IS: 8887 & manufacturer's specifications @ 6 kg /10 sqm with a self propelled of towed bitumen pressure sprayer equipped for spraying the material uniformly at specified rates and temperatures as per MoRTH specification CI 502, 501.5.2.112 (Including cleaning of road surface)								0
		for road	2.00	1750.00	7.00		24500.00	sqm	20.00	490000


 अधिशासी अभियन्ता (इ.पु.)
 जिला मजिस्ट्रेट प्रशासनिक
 जिला-जोधपुर

15

S No	BSR	Item (Part A: Road Work)	Measurement				Qty.	Unit	Rate	Amount
			Nos	L	B	H				
7	R.6.2	Providing and applying tack coat on the prepared surface with bitumen emulsion as per IS : 8887 & manufacturer's specifications @ 2 kg /10sqm. With a self propelled or towed bitumen pressure sprayer equipped for spraying the material uniformly at specified rates and temperatures as per MORTH specification Cl.503, 501.5.2.112 (Including cleaning of Road Surface)								0
			2.00	1750.00	7.00		24500.00	sqm	7.35	180075
8	R.6.5.2	for road Providing and laying Dense Bituminous Macadam on prepared surface with specified graded crushed aggregates as per table 510 and design mix for base/binder course including loading of material with F.E loader heating of binder aggregate and filler in approved hot mix plant as per clause 6.5 of manual transporting the mixed material by tippers and laying with sensor paver finisher as per clause 505.3.5 to the required level and grade rolling by self propelled power rollers and vibratory rollers or pneumatic tyred roller 150-250KN, TP=0.7MPa to achieve the desired density (approved by the department) but excluding cost of primer/tack coat. [MORTH Specification, Clause 505.112] Grading II (19 mm nominal size) - Bitumen @ minimum 4.5 % of mix (VG-30 grade) & thickness 50 - 75 mm								0
			2.00	1750.00	7.00	0.05	1225.00	cum	5537.00	6782825
9	R.6.7.1.1	for road Providing and laying bituminous concrete as per design mix on prepared surface with specified graded stone as per table 500-16 for wearing course including loading of aggregate with F.E loader and hot mixing of binder and 2% cement filler with aggregates in approved hot mix plant as per clause 6.5 of manual Transporting the mix material with tipper to paver and laying with sensor paver finisher (as per clause 507.3.5) to the required level, grades and rolling with vibratory compactor and pneumatic tyred roller 150-250 KN, TP=0.7 Mpa, to achieve the desired density (approved by the department) excluding cost of primer/tack coat (MORTH Specification : Clause -507.112) Grade-I Bitumen @ 5.5 % of mix With lead of mix material 1 KM VG-30 grade								0
			2.00	1750.00	7.00	0.04	980.00	cum	6561.00	6429780
10	R.7.12	for road Providing and laying of hot applied thermoplastic compound inclusive type I reflectorsing glass beads as per table 800-9, 800-10 applied in uniform thickness of at least 2.5 mm and spread uniformly with reflectorising glass beads type II in addition @ 250 gms per Sqm with a road marking machine as per IRC 35 complete with traffic diversion arrangement as per MORTH specification clause 803.4.								0
			4.00	2500.00	0.15		1500.00	sqm		0
		on road	2.00	1250.00	0.10		250.00	sqm		0
			6.00	14.00	1.00		84.00	sqm		0
		Total					1834.00	sqm	455.00	834470
11	R.7.69	Providing & fixing Two way reflective Plastic body raised road studs with anchor with shank 100x100x19.8 special reflective elements 19 degree tilted etc. complete made by swareflex at 9 m. centre to centre on edge lanes, lane lines and 1 m. centre to centre on pedestrai crossing including fixing, cost of conveyance of all materials to site including labour and hire charges for machineries involved etc. complete as per standard specifications and directions of the Engineer-in-charge.					5000	nos	327.00	1635000
										0
										0
12	R.10.12.3	Providing and laying Random Rubble masonry in foundation upto a depth of 1.50 metres and 1.50 metres above Ground /Bed level [MORTH Specification: Clause 1000/1400] Cement sand mortar 1:6								0
		masonry	60.00	15.00	0.90	0.90	729.00	cum		0
			60.00	15.00	0.75	0.90	607.50	cum		
			60.00	15.00	0.80	0.90	486.00	cum		
			60.00	15.00	0.45	3.30	1335.50	cum		
			60.00	4.00	0.45	0.90	97.20	cum		0
							3256.20	cum	2913.00	9485310.6
										0

बिनाली प्रियंता ()
नोधपु विकास प्राधिकरण
ओवर

S.No.	BSR	Item (Part A: Road Work)	Measurement			Qty.	Unit	Rate	Amount
			Nos.	L	B	H			
13	B.3.2.4	Providing and laying in position cement concrete including curing compaction etc. of specified grade excluding the cost of centering and shuttering All up to plinth level IS 456-2000: 1:3:6 (1Cement :3 Course Sand :6 Graded stone aggregate 20 mm nominal size							0
		plain concrete	60.00	15.00	1.05	0.15	141.75	cum	
							141.75	cum	3127.00
		Total							0
14	R.10.17.4	Providing and laying reinforced cement concrete pipes N.P.4 for culverts including jointing ends and fixing collar with cement mortar 1:2 [MoRTH Specification : Clause : 1000/2900] 1000 mm dia	15.00	21.00	m		315.00	m	6394.00
		For crossing water							
15	R.10.17.2	Providing and laying reinforced cement concrete pipes N.P.4 for culverts including jointing ends and fixing collar with cement mortar 1:2 [MoRTH Specification : Clause : 1000/2900] 600 mm dia	15.00	21.00	m		315.00	m	2885.00
		For crossing water							
16	B-6.90	Supply and fixing Jodhpur sand stone Machine cut Kerb stone (10cm wide 40 cm. height) fixed in white cement sand mortar 1:4 with pigment including EarthWork.	2.00	2500.00			5000.00	m	714.00
		To make divider and footpath							
17	R.7.15.2	Providing and fixing of retro- reflectorised inclusive cautionary, mandatory and informatory sign as per IRC-67 made of high intensity grade sheeting lettering, border & signs fixed over aluminium sheeting, 1.5 mm thick, fixed on mild steel angle iron frame 50mmx50mmx6mm supported on a mild steel angle iron post 75mmx75mmx6mm upto the top of sign board, length of post from bottom of sign board is 2.85m. upto foundation level post duly painted in black & white synthetic enamel. fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 45 Cm x 45 Cm x 60Cm, 60 cm below ground level as per approved drawing & as per MORTH specification Cl. 801 60 Cm equilateral triangle					10.00	Nos	2286.00
18	R.7.15.3	Providing and fixing of retro- reflectorised inclusive cautionary, mandatory and informatory sign as per IRC-67 made of high intensity grade sheeting lettering, border & signs fixed over aluminium sheeting, 1.5 mm thick, fixed on mild steel angle iron frame 50mmx50mmx6mm supported on a mild steel angle iron post 75mmx75mmx6mm upto the top of sign board, length of post from bottom of sign board is 2.85m. upto foundation level post duly painted in black & white synthetic enamel. fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 45 Cm x 45 Cm x 60Cm, 60 cm below ground level as per approved drawing & as per MORTH specification Cl. 801 60 Cm circular					10.00	Nos	3817.00
19	R.7.15.4	Providing and fixing of retro- reflectorised inclusive cautionary, mandatory and informatory sign as per IRC-67 made of high intensity grade sheeting lettering, border & signs fixed over aluminium sheeting, 1.5 mm thick, fixed on mild steel angle iron frame 50mmx50mmx6mm supported on a mild steel angle iron post 75mmx75mmx6mm upto the top of sign board, length of post from bottom of sign board is 2.85m. upto foundation level post duly painted in black & white synthetic enamel. fixed to the ground by means of properly designed foundation with M-15 grade cement concrete 45 Cm x 45 Cm x 60Cm, 60 cm below ground level as per approved drawing & as per MORTH specification Cl. 801 80 cm x 60 cm rectangular					8.00	Nos	5261.00

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S.No.	BSR	Item (Part A: Road Work)	Measurement				Qty.	Unit	Rate	Amount
			Nos.	L	B	H				
20	R.B.12	Surveying road alignments to prepare plan, L- section, X- sections and to compute earthwork quantities including compass survey at required points, levelling at 25 m interval for L- sections and 50 m interval for x-sections up to desired width, preparing and submission of plan, L-section (not more than 500 m length in one sheet) and X-section in A-4 size showing various details like geometrical datas, habitations, electric lines, water courses and other spcial features, computation of earth work after marking desired grade line, marking sufficient Bench Marks in field to check the survey etc.complete as per direction of enginner - in charge.	1.00	2.50			2.50	Km	3000.00	7500
21	H.1.3	Supply & Stacking good earth at site complete including loading unloading and transportation etc.	1.00	2500.00	1.20	0.30	900.00	Cum	125.00	112500
22	R.10.4	Providing and laying RCC M20 mix with stone aggregate 20mm (nominal size) mechanically mixed and vibrated for RCC work in slab in superstru-cture upto 4 metre above 1.5 metre level from Bed/ Ground level, excluding steel reinforcement but including centering and shuttering laid in position [MoRTH Specification : Clause 1000/1700]								
		culvert slab	3.00	21.00	4.00	0.20	50.40	Cum		
		beam	6.00	21.00	0.45	0.60	34.02	Cum		
		Total					84.42	cum	4148.00	350174.16
23	R.10.6.2	Providing and fabricating steel reinforcement for R.C.C works including cutting, bending, placing in position and binding complete including cost of binding wire. [MoRTH Specification : Clause 1000/1600] Cold twisted bars								
		culvert slab steel @ 100 kg/cum of concrete in slab	84.42	cum x	100	kg/cum	9	Tones	52286.00	470664
24	R.9.28	Supply & planting of shady plants (Neem, Peepal, Goolar, Jamun, Imli or other specified) along road side including the following activities : 1) Preparation of soil including cleaning & removing of unwanted shrubs removal of stones & garbage. 2) Supply of plant at site of two years of age & height more than 1.50 mtr. 3) Supply of dry manure (Farm yard manure organic) 4) Supply of insecticides 5) Digging of pits size 60x60x60 cms. Including removal of stones, Manuring application of insecticides & watering at least 15 litre per plant after planting. 6) Half brick circular tree guard in second class bricks, internal dia 1.25 meter and height 1.20 meter above ground and 0.20 meter below ground, bottom two courses laid dry and top three courses in cement mortar 1:6 (1 cement : 6 sand) and the intermediate courses being in dry honey comb masonry, as per design complete. 7) Watering to Plants. 8) Maintenance of Plants by the contractor including of pits/bids preparation of Thavala Hoeing weeding etc. & application of intersecticides etc. & security. If the plant die during maintenance contractor has to replace same height plant at his own cost.					1000	Each	1353	1353000
25	H.2	Maintenance of plants by the contractor including of pits/bids watering preparation of Thavala Hoeing weeding etc. & application of insecticides etc. & security if the plant die during maintenance contractor has to replace same height plant at his own cost.	36 months x		1000 plants		36000	P.Plant P. Month	20	720000
26	RUIPP 39.34	Providing and fixing of RCC pre cast tree guard consisting of four panels of size 1800mm (Height) X 600mm (Width) X 35mm (thickness). Size of opening: 100mm X 100mm. All the panels shall be manufactured with monolithic legs of size 60 x 35 mm, the legs of the panels shall be 0.5 m below ground level. All the four Panels shall have a space for display of Name etc. preferably at middle level. RCC panels to be manufactured with M-30 grade of concrete using vibro-compaction process using jointless FRP moulds so as to achieve shuttering finish. RCC panels are to be suitably reinforced to promote long use and to prevent damage during handling, transportation & erection as per drawing & specifications.					1000	Each	1820	1820000
27	R.14.4.1	Providing and laying pitching on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and MoRTH specifications clause 2504. Using Stone/ Boulder weighing not less than 40 Kg. thickness not less than 150mm & specific gravity not less than 2.65.								
		In velly area	2	1125	0.15	3.5	1181.25	Cum	866	1022962.5

18

S.No.	BSR	Item (Part A: Road Work)	Nos.	L	B	H	Qty.	Unit	Rate	Amount
28	R 16.1	Construction of dry lean cement concrete sub-base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blening to be as per Table 600-1, cement content not to be less than 150 Kg/Cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant as per mix design, transported to site, laid with a hydrostatic paver with electronic sensor, compacting with 8-10 tonne vibratory roller, finishing and curing complete as per MoRTH specification clause 601.								
		PCC below cement pavement	2	750	0.15	7	1575	Cum	2032	3200400
29	R 16.7.1	Providing and laying controlled cement concrete for cement concrete pavements including mixing and vibrations concrete with necessary needle vibrators and surface with screed board vibrating complete in all respect with stone aggregate (crusher broken) including anti-skid textured finish to required camber/ superelevation and grade including curing etc. as per specification (-do-) with cement concrete M-35 grade								
		Cement pavement	2	750	0.15	7	1575	Cum	5153	8115975
30	R 7.34	Providing and erecting a "W" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 70 cm above road/ ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2m, centre-to-centre, 1.8 m. high, 1.1 m below ground / road level, all steel parts and fitments to be galvanised by hot dip process, all fittings to conform to IS: 1367 and IS: 1364, metal beam rail to be fixed on the vertical post with a spacer of channel section 150 x 75 x 5 mm, 330 mm long complete as per MORTH specification Clause 811.								
		along road	2	1250			2500	M	2943	7357500
31	B 3.2.3	Providing and laying in position cement concrete including curing compaction etc. of specified grade excluding the cost of centering and shuttering All up to plinth level IS 456-2000: 1:2.4 (1Cement :2 Course Sand 4 Graded stone aggregate 20 mm nominal size)								
		Haunching	15.00	2.85	18	1.5	1154.25	Cum		
			-30	1.13	18		-610.2	Cum		
			15.00	1.99	18	1.5	805.95	Cum		
			-30	0.47	18		-253.8	Cum		
		total					1096.2	Cum	3596	3941935.2
32	B 4.11	Centering and shuttering with plywood or steel sheets including strutting, propping, bracing both ways and removal of formwork for foundations in basements rafts, footings, strap beams, bases of columns, etc. up to plinth level.								
		Haunching	30.00	2.85	18		1539	Sqm		
			30.00	1.99	18		1074.6	Sqm		
		total					2613.6	Sqm	136	355449.6
Total										99321769.01
Add 4.5% for W.C. & Contingency Charges										4469479.61
Grand Total										103791248.6

Junior Engineer
J.D.A. Jodhpur
(Vivek Soni)

Assistant Engineer
J.D.A. Jodhpur

Executive Engineer
J.D.A. Jodhpur

प्रविशाली ग्रामियन्ता ()
जोधपुर विकास प्राधिकरण
जोधपुर

JODHPUR DEVELOPMENT AUTHORITY, JODHPUR
G-SCHEDULE

Name of work :- Construction of new proposed road from Ghoda Gati to Mehrangarh Fort, Jodhpur

S.No	BSR Code	Item (Part B: Road Electrical Work)	Qty.	Unit	Rate	Amount (Rs.)
1	E201900	Supply and erection of GI Octagonal / Conical pole of following length and dimension as per table E-10 with base plate on the cement concrete foundation of M-20 grade (1:1.5:3) with the help of anchor bolts of grade 6.8 (IS: 1367 P III). The pole shall have a weatherproof flush door and locking arrangements. The complete work shall be supervised and certified by the manufacturers for satisfactory supply, erection, testing and commissioning. Octagonal MS Poles made of S-355JO grade steel sheet, folded lengthwise to obtained Octagonal shape, having single longitudinal seam weld and hot dipped galvanised internally & externally in accordance with IS 2629. (See Table E - 10 for specs) 9 Mtr.	80.00	Nos	16800.00	1344000.00
2	E202001	Supply, Erection and Fixing of hot dipped galvanised Overhang (48.3 X 3.25 mm) with cap (400 x 88.9 / 114.3 x 3.25 mm) over the existing poles Double arm overhang	80.00	Nos	1560.00	124800.00
3	E304400	P&F of IP65 protected LED Street Light Luminaire on existing bracket. Fixture made of powder coated single piece pressure die cast aluminum with heat dissipation fins on housing with UV stabilized PC/Toughened Glass cover (from 45W onwards) and should be secondary lens on each LED. The System level Luminaire efficacy >=100 with High Power LEDs of CREE/NICHIA/OSRAM/PHILIPS/SEOL make is to be used. The LED Driver shall be BIS certified and Input Voltage AC 110 to 270 V AC with Input Frequency 50Hz±3% Power Factor >0.95 Driver Efficiency >85%, THDI <10% Humidity 10% to 90% RH Working Temp -20C to 50C. Life Expectancy Equal >75% Surge protection shall be min ≥ 5 KV internal and min 10 KV external. Manufactures Word Mark/Name Engraved/Embossed on die cast housing to allow traceability/authenticity till life of fixture. Fixtures shall be CE complained. LED Street light fixture 120 watt	160.00	Nos	9275.00	1484000.00
4	E110100	P/Laying P.V.C. / XLPE insulated & P.V.C. sheathed cable of 1.1 KV grade with aluminium conductor of IS-1554 P-I / IS 7098 P - I of Group 1 of approved make in ground as per IS 1255 including excavation of 30cmx75cm size trench, 25 cm thick under layer of sand, 11nd class bricks covering, refilling earth, compaction of earth, making necessary connection, testing etc. as required of size Group-Ist	4000.00	Mtr.	170.00	680000.00
	E 110104C	10.0 Sq. mm 4 core Arm (Armoured)	300.00	Mtr.	178.00	53400.00
	E 110105C	16.0 Sq. mm 4 core Arm (Armoured)				
5	E150511	Maintenance free Gel Earthing with Pipe in pipe / Pipe in strip technology filled with anti corrosive conductive compound (CPRI Tested) below the ground in 150 - 200 mm dia earth pit & surrounding filled with required mineral filling compound (MFC should have hygroscopic property to retain the moisture for long time to create low resistance zone) and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size 300mm x 300mm complete testing of earth resistance as required of following sizes With Pipe in Pipe Technology (Inner pipe dia / Outer pipe dia) 80 - 100 micron GI Coating GI pipe 2000 mm long, 50 / 25mm, Terminal 12 mm GI Strip Group-Ist	8.00	Nos	6150.00	49200.00
6	E040106	Supplying and drawing FR PVC insulated & unsheathed flexible copper conductor ISI marked (IS 694) of 1.1 kV grade and approved make in existing surface or recessed conduit/casing capping including making connections etc. as required. 1 x 2.5 sq.mm	3000.00	Mtr	21.00	63000.00
7	E204100	P & F of IP 55 protected light controlled switch based on infrared sensing and daylight with built in over load protection, timer to switch OFF at preselected time. Switch shall have 7 day power backup without hampering of preset time and over ride facility for maintenance purpose				
		Suitable for 15 kw load (three phase) including contactor, MCB, cable glands, terminal block and locking arrangement G-Ist Suitable for 15 kw load (three phase) including contactor, MCB, cable glands, terminal block and locking arrangement	2.00	Nos	21550.00	43100.00
8	E210100	Supply and erection of P.C.C./R.C.C. pole as per REC manual no '15/1979 conforming to IS - 2905/1966 as per requirement of sec 3 in alignment, including excavation of pit and back filling with stone aggregate/boulders and soil in 0.45 m concsolidating each deposited layer of 0.45 m by ramming and watering etc complete in all respect 9.0 Mtr long (400 Kg) as per Discom specification	35.00	Nos	4328.40	151494.00
9	E210701	Supply and fixing of 'V' type cross arms made of MS channel on the existing poles complete including all necessary nut and bolt etc with clamps as per Discom specification. 11kV cross arms (75x40x6.8 kg/mtr)	35.00	Nos	850.00	29750.00
10	E210811	Supply and fixing of top hamper on the existing pole complete including nut bolts etc as required. Vertical type 11 kV (7m long) (65 x 65 x 6mm angle)	35.00	Nos	315.00	11025.00
11	E210600	Supplying and drawing overhead steel core Aluminium conductor (ACSR) ISI marked (IS 398 part II-1996) on existing cross arms through insulator with all necessary T&P required including binding and twisting etc. complete in all respect as required as per Discom specification. 100 sqmm of (6/4.72 mm+1/1.57 mm) (Dog)	3500.00	Mtr.	89.0	311500.00
12	E210200	Supply and erection of GI stay set as per Discom specification complete with long stay rod with anchor plate including stay clamps turn buckle and GI stay wire tightened through strain insulator in cement concrete 1:3:6 including excavation of pit & filling etc as reqd. Stay set of dia 20 mm, 2.4 m long stay rod and anchor plate 380x380x6.4mm	15.00	Nos	1319.00	19785.00
13	E211900	Supply and fixing 100 Amp, 11kV Horn gap fuse set IS 9385 on existing DP structure with 6 nos. 24kV/22kV post insulator (IS:5350 part III), hot dipped hard ware, fuse wire of required size etc complete in all respect as per specification given by Discom. (Type tested by ERDA/CPRI)	1.00	Set	6050.00	6050.00
14	E212000	Supply and fixing of 11kV, 400 Amp 3pole, central pot rotating double break type isolator (IS:9921 part I 10V) without earth blade operating mechanism with GI spring loaded reverse loop type fixed contact, solid hard drawn electrolytic copper tubular moving contact with silver/ nickel plated at end points, 9 nos post insulator of 12 kV (IS 2554 & IS 5350 part III), hot dipped galvanising hard ware, nut, bolts etc complete in all respect as per specification of Discom (Type tested by ERDA/CPRI.)	1.00	Set	13150.00	13150.00

निदेशावली अभियन्ता (इ.न.)
जोधपुर विकास प्राधिकरण
जोधपुर

(20)

15	E212200	Supply and fixing double pole structure for 11/0.4 KV substation as per Discom specification complete in all respect as required including nuts and bolts etc (excluding the cost of poles) made of MS channel of 4 nos 100 x 50 x 6 mm and 4 nos 75 x 40 x 6 mm and MS flat 50x6mm as per Discom specifications.	1.00	Set	9570.00	9570.00
16	E212100	Supply and fixing of distribution type Lightning arrestor 9 KV, 10 kA (IS:3070) with mounting breaking to be installed on existing DP structure. (Type tested by ERDA/CPRI)	1.00	Set	2385.00	2385.00
17	E150810	S & Laying following size B class G.I. Pipe conforming to IS : 1239 P - 1 (1990) with accessories for laying earth conductor/strip / cable in ground/surface/recess as required 100 mm dia.	20.00	Mtr.	667.00	13340.00
18	E211800	Supply and fixing of pillar box made of 2 mm thick powder coated CRCA sheet of 415 volts 3 phase 4 wire triple pole and neutral type, complete in all respect as required. Including knife switch of 400 amp. rating, HRC fuses with copper one piece U contacts base, brass studs and nuts, copper busbar for main and interconnection, MS angle frame of 50 x 50 x 6 mm grouted with C.C. of M-10 grade to achieve the height of 1.5 feet above the road level suitable for four outgoing.	1.00	Nos.	42500.00	42500.00
19	E211300	Supply and fixing 11 KV pin insulator (IS 731 / 1971) with minimum creepage distance of 300 mm on existing bracket including all accessories like hot dipped GI spindle and nuts etc (as per specification of Discom).	105.00	Nos.	135.00	14175.00
20	E211400	Supply and fixing 11 KV Disc insulator (IS 731/ 1971) with minimum creepage distance of 300 mm on existing bracket including all accessories like hot dipped GI spindle and nuts etc (as per specification of Discom).	18.00	Nos.	560.00	10080.00
	E211401	B & S type hardware	18.00	Nos.	406.00	7308.00
	E211403	B & S disc insulator				4483612.00
Total						201762.54
Add 4.5% for W.C. & Contingency Charges						500000.00
Add JdVNL Charges						5185374.54
Total						52.00 Lac
Say Rs.						

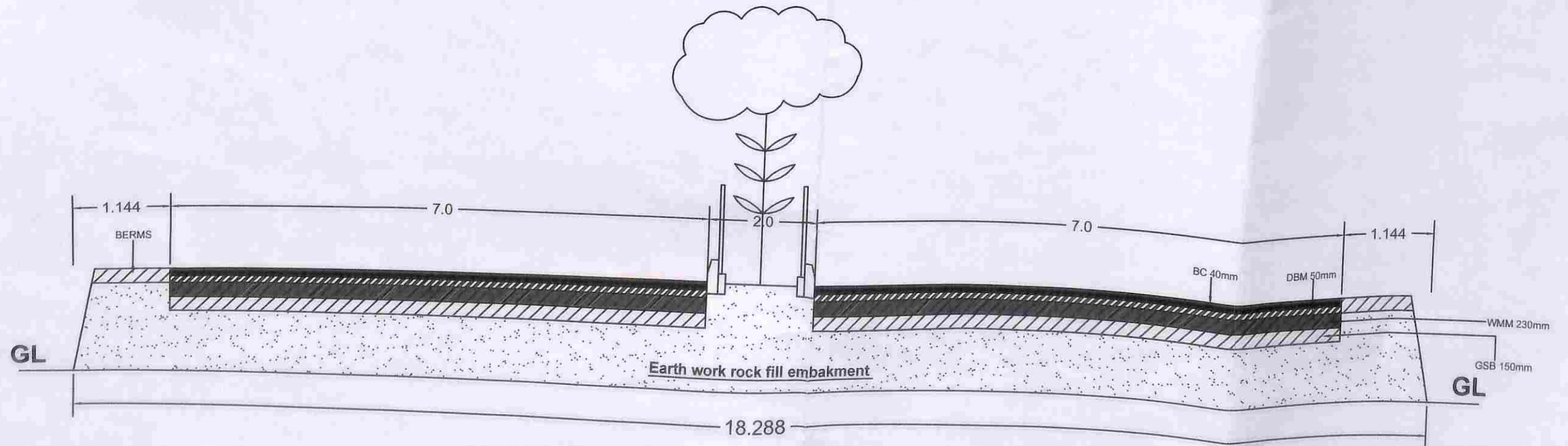
[Signature]
Junior Engineer
J.D.A., Jodhpur

[Signature]
Assistant Engineer
J.D.A., Jodhpur

[Signature]
Executive Engineer
J.D.A., Jodhpur

[Signature]
प्रधानाधीन प्रमियन्ता (:
नोधपुर विकास प्राधिकरण
नोधपुर

NAME OF WORK :- CONSTRUCTION OF NEW PROPOSAL ROAD FROM GHODA GHATI TO MEHARANGARH FORT JODHPUR

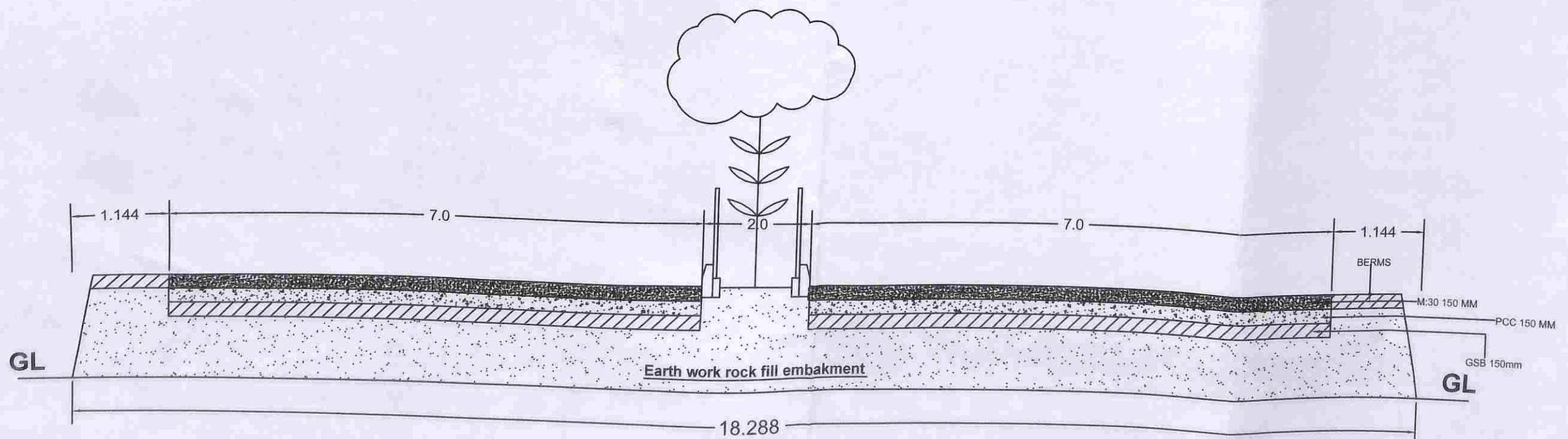


CROSS SECTIONAL VIEW OF FOUR LANE BT ROAD

Note - : All Dimension in Meter

अभिषेक अभियन्ता (१)
जोधपुर विकास प्राधिकरण
जोधपुर

NAME OF WORK :- CONSTRUCTION OF NEW PROPOSAL ROAD FROM GHODA GHATI TO MEHARANGARH FORT JODHPUR



CROSS SECTIONAL VIEW OF FOUR LANE CC ROAD

Note - : All Dimension in Meter

अभिजादी अभियन्ता (इ. इ.)
जोधपुर विकास प्रमधिकरण
जोधपुर