



**कार्यालय : वन प्रमण्डल पदाधिकारी, पोडाहाट वन प्रमण्डल, चाईबासा।**

पत्रांक.....765...../ चाईबासा, दिनांक 23/06/2021,

सेवा में,

वन संरक्षक,  
प्रादेशिक अंचल, चाईबासा।

विषय :- सोनुवा—पनसुवा—लोढ़ाई—गुदड़ी पथ के कि०मी० 0.00 से 41.56 कि०मी० तक चौड़ीकरण एवं मजबूतीकरण कार्य के लिए 18.28 हे० वनभूमि के अपयोजन प्रस्ताव के संबंध में।

प्रसंग :- आपका ज्ञापांक—763, दिनांक—23.06.2021

महाशय,

उपर्युक्त विषयक प्रसंगाधीन पत्र के सम्बन्ध में सूचित करना है कि क्षेत्रीय कार्यालय, राँची का पत्रांक—4663, दिनांक—03.06.2021 द्वारा पृष्ठित 5 बिन्दुओं पर बिन्दुवार अनुपालन प्रतिवेदन निम्नांकित विवरणी के अनुसार है:—

क्रमांक	पृष्ठित बिन्दु	अनुपालन
01	02	03
1.	Comments of the concerned DFO regarding the vulnerability of the forest area to soil erosion.	Attached as annexure 1.
2.	Details of the other two alternatives explored with the reasons of their rejection.	Attached as page no. 2-3 of annexure 2.
3.	Since the forest land proposed for diversion is in hilly area, Cost Benefit Analysis is required.	Attached as page no. 4-19 of annexure 2.
4.	Since a large area of Reserved Forest is proposed for diversion, a proper justification along with the volume of the traffic survey for the requirement of 16 m ROW for the purpose of reconstruction of the proposed road.	Attached as page no. 20-22 of annexure 2.
5.	As per submitted kml file, forest land proposed for diversion is calculated as 15.585319 ha instead of 18.28 ha. Correct kml file of the forest land proposed for diversion is required.	Attached as page no. 23 of annexure 2. Modified kml has been uploaded.

अनु०:-प्रतिवेदन (छ: प्रतियों में)।

आपका विश्वासी,

*Naresh  
23/6/21*

वन प्रमण्डल पदाधिकारी,  
पोडाहाट वन प्रमण्डल चाईबासा।

## ANNEXURE - 1

### Note on Vulnerability of the forest areas to Erosion

#### **Project: Widening and Strengthening of Sonua-Pansua-Lodhai-Gudari Road.**

The slope in forest sections is moderate (0.2-0.3) to high (0.4-0.5). These forests have rocky sub surface with layer of soil on it of varying thickness. The hills come close to the proposed road after Pansua dam and before Banskatta village (11000-15000 chainage) and in parts after Jante village (chainage 25000-35000). They are prone to moderate soil erosion, especially after tree felling. Guard walls would be necessary in sections where standing hills are adjacent to road and in rest portions where steep hills (slope > 0.4) come close to the road, slope stabilization needs to be taken so as to avoid soil erosion.

Also, while going from Sonua to Gudari, in the section after Jante Village (chainage 25000+) a stream/rivulet in certain sections, is coming close to the left side of the proposed road. In such sections, to avoid bank erosion, river bank stabilization measures along shoulder of road, are advised on left side of the proposed road.

DIVISIONAL FOREST OFFICER

PORAHAT FOREST DIVISION

DIVISIONAL FOREST OFFICER

PORAHAT FOREST DIVISION

CHAIBASA



कार्यपालक अभियंता का कार्यालय  
पथ निर्माण विभाग, पथ प्रमण्डल, मनोहरपुर।

eercdmanohar-jhr@nic.in

पत्रांक :— ३९० (छठ०)

मनोहरपुर / दिनांक :— २१.०६.२१

सेवा में,

वन प्रमण्डल पदाधिकारी,  
पोड़ाहाट वन प्रमण्डल, चाईबासा।

विषय :— सोनुवा—पनसुवा—लोढ़ाई—गुदड़ी पथ के कि०मी० 0.00 से कि०मी० 41.56 तक चौड़ीकरण एवं मजबूतीकरण कार्य हेतु 18.28 हेठो वन भूमि अपयोजन प्रस्ताव के संबंध में।

संदर्भ :— पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार, क्षेत्रीय कार्यालय, राँची का पत्रांक—FP/JH/ROAD/26179/2017/6463 दिनांक 03.06.2021.

महाशय,

उपर्युक्त विषयक प्रासंगिक पत्र के द्वारा पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार के क्षेत्रीय कार्यालय द्वारा 5 (पाँच) बिन्दुओं पर Query किया गया है। बिन्दु संख्या 2 से 5 अधोहस्ताक्षरी के कार्यालय से संबंधित है। उनका बिन्दुवार व्याख्या निम्न है, जो पत्र के साथ अलग—अलग पेज पर अंकित कर दिया गया है।

सभी वर्णित जानकारियाँ तथा Referecned किया गया Enclosure सहित सभी दस्तावेज / जानकारी को Parivesh Web Portal पर Upload कर दिया जायेगा।

अनु०:— यथोक्त।

विश्वासभाजन,

*Ranavay*  
कार्यपालक अभियंता, २१.६.२१  
प०नि०वि०, पथ प्रमण्डल,  
मनोहरपुर।

*Nitish*

DIVISIONAL FOREST OFFICER  
PORAHAT FOREST DIVISION  
CHAIBASA

Query No. 2 – Details of the other two alternative explored with the reasons of their rejected

Explanation :- विषय योजना में सोनुवा—पनसुवा—लोढ़ाई—गुदड़ी पथ की कुल लम्बाई 41.56 कि०मी० है। गुदड़ी प्रखण्ड की निकटतम प्रमुख रेल हेड एवं अनुमण्डल मुख्यालय चक्रधरपुर से दूरी  $41.5 + 28$  कि०मी० = 63.5 कि०मी० होती है। यह पथ जिला मुख्यालय चाईबासा से 61.5 कि०मी० + 30 कि०मी० = 91.5 कि०मी० है। यह पथ जिला मुख्यालय चाईबासा से गुदड़ी पहुँचने वाला न्यूनतम दूरी वाला मार्ग है।

अन्य वैकल्पिक निम्नवत हैं :—

1. चक्रधरपुर—सोनुवा—गोइलकेरा—बड़ीहा—गुदड़ी पथ है, जिसकी लम्बाई—63 कि०मी० तथा जिला मुख्यालय से 63 कि०मी० + 61.00 कि०मी० = 124 कि०मी० एवं चक्रधरपुर रेल हेड एवं अनुमण्डल मुख्यालय से 63 कि०मी० + 37 कि०मी० = 100 कि०मी० है। यह पथ वर्तमान में 3.05 मीटर चौड़ी है तथा 39 कि०मी० लम्बाई सघन वन क्षेत्र से गुजरती है। इस पथ के उन्नयन (Improvement/ चौड़ीकरण एवं सुदृढ़ीकरण) कार्य में ज्यादा वन भूमि अपयोजन की आवश्यकता होगी। पथ जीर्ण—शीर्ण अवस्था में है। पथ के वर्तमान चौड़ाई में Traffic के Through Movement संभव नहीं है। जिला मुख्यालय, अनुमण्डल मुख्यालय एवं निकटतम रेल हेड से अधिक दूरी होने के साथ अधिक वन भूमि अपयोजन की आवश्यकता होगी। इसलिए इस प्रस्ताव को वैकल्पिक मार्ग के रूप में उन्नयन (Improvement) कार्य के लिए उपयुक्त नहीं समझा गया।

(ii) जिला मुख्यालय, अनुमण्डल मुख्यालय एवं प्रमुख रेल हेड से गुदड़ी पहुँचने का दूसरा वैकल्पिक मार्ग बन्दगाँव—बड़केल—गिरु—गुदड़ी पथ हो सकता है, जो N.H. 75E पर स्थित बन्दगाँव से निकलती है। इस पथ की बन्दगाँव से गुदड़ी तक की लम्बाई 57 कि०मी० है। जिसका 21.00 कि०मी० अंश सघन वन क्षेत्र से गुजरता है, अधिकांश अंश में पगड़ंडी मात्र की तरह है इस मार्ग द्वारा चक्रधरपुर अनुमण्डल से  $57 \text{ कि०मी०} + 51 \text{ कि०मी०} = 108 \text{ कि०मी०}$  एवं जिला मुख्यालय—चाईबासा 138 कि०मी० होगी। इसके अतिरिक्त इस पथ के उन्नयन कार्य के लिए सोनुवा—गुदड़ी की तुलना में अधिक वन भूमि अपयोजन की आवश्यकता होगी तथा तुलनात्मक रूप से कम जनसंख्या यातायात सुगमता प्रदान करेगा। इसलिए प्रस्ताव को अनुपर्युक्त पाया गया। दोनों वैकल्पिक मार्गों की दूरी को चार्ट के द्वारा Elaborate किया जा रहा है :—

क्रमांक	पथ का नाम	चक्रधरपुर से दूरी	जिला मुख्यालय से दूरी	वन पथ की लम्बाई
1.	सोनुवा—पनसुवा—गुदड़ी पथ, 41.56 कि०मी०	63.5 कि०मी	91.5 कि०मी०	17.56 कि०मी०
2.	चक्रधरपुर—सोनुवा—गोइलकेरा—बड़ीहा—गुदड़ी पथ, 63 कि०मी०	100.00 कि०मी०	124.00 कि०मी०	39.00 कि०मी०
3.	बन्दगाँव—बड़केल—गिरु—गुदड़ी पथ, 57 कि०मी०	108 कि०मी०	138 कि०मी०	21 कि०मी०

उपर्युक्त तथ्यों के अवलोकन से स्पष्ट होगा कि सोनुवा—पनसुवा—लोढ़ाई—गुदड़ी पथ न्यूनतम दूरी वाला पथ के सबसे कम वन भूमि अपयोजन वाला पथ है। गुदड़ी क्षेत्र काफी अविकसित क्षेत्र है। यहाँ के लोगों को आकर्षिक स्वास्थ्य सेवाओं के लिए नजदीक के किसी बड़े स्वास्थ्य केन्द्र/हास्पीटल जाने का कोई मार्ग उपलब्ध नहीं है। अन्य आकर्षिकता की स्थिति में भी जिला मुख्यालय; अनुमण्डल मुख्यालय से गुदड़ी पहुँचने को All Weather मार्ग

DIVISIONAL FOREST OFFICER  
DIVISIONAL FOREST OFFICER  
PORAHAT FOREST DIVISION  
CHAIBASA

Fr. Raghubansh Chaurasia  
Executive Engineer  
R.D. Road Division,  
Majlakpur

Chaudhary

21.6.21

(3)

उपलब्ध नहीं है। सोनुवा—पनसुवा—लोढ़ाई—गुदड़ी पथ के Near Vicinity में सोनुवा से गुदड़ी को जोड़नेवाली कोई और वैकल्पिक मार्ग उपलब्ध नहीं है। इसलिए सोनुवा—पनसुवा—लोढ़ाई—गुदड़ी पथ का चौड़ीकरण एवं मजबूतीकरण कार्य को सरकार द्वारा कराने का निर्णय लिया गया है।

*Hirish*  
DIVISIONAL FOREST OFFICER  
PORAHAT FOREST DIVISION  
CHAIBASA

Chandwari  
Er. Raghubansh Chaudhary  
Executive Engineer,  
R. C. D. Road Division,  
Manoharpur

(v)

**QUERY 3 > COST BENEFIT ANALYSIS – PORAHAT FOREST DIVISION**

**Table-B Estimation of Costs for Cost Benefit Analysis**

Sl. No.	Parameters	NPV Factor as per guidelines	Remarks
1	Ecosystem services losses due to proposed forest diversion	1	The total area considered for diversion is 18.28 ha. The economic value of loss of eco-system services due to diversion of forests is taken as the NPV of the forest land being diverted as per MoEFCC, forest type and forest class is considered as per FSI report 2015, and NPV value as per MoEFCC guidelines dated 05.02.2009 at Rs.803000/- for Dense forest class-III, density >0.4. The value is calculated at Rs.146.78 lakhs for the forest area diverted.
2	Loss of animal husbandry productivity, including loss of fodder	0.1	The economic value of loss due to diversion of forests is taken as the NPV of the forest land being diverted as per MoEFCC, forest type and forest class is considered as per FSI report 2015, and NPV value as per MoEFCC guidelines dated 05.02.2009 at Rs.803000/- for Dense forest class-III, the value is calculated at Rs.14.67 lakhs for the forest area diverted.
3	Cost of human settlement		Nil, as No human settlement is displaced in forest area.
4	Loss of public facilities and administrative infrastructure (Roads, buildings, schools, dispensaries, electric lines, railways, etc.) on forest land, which would require forest land if these facilities were diverted due to the project		Diversion is made only for widening and upgradation to intermediate lane of existing alignment.
5	Possession value of forest land diverted	0.3	The loss is calculated as per the NPV value and factor as per guidelines. This value is calculated at Rs.44.03 lakhs for the forest area diverted.
6	Cost of suffering of oustees		Nil, no displacement of people is anticipated.
7	Habitat fragmentation cost	0.5	The loss is calculated as per the NPV value and factor as per guidelines. This value is calculated at Rs.73.39 lakhs for the forest area diverted.
8	Compensatory afforestation and soil and moisture conservation cost		This is calculated as per the CA costs as per Jharkhand Government Forest guidelines The total value of CA scheme is calculated at Rs.72 lakhs.
		Total	The total cost in terms of NPV for the forest land diversion is calculated at Rs.350.87 lakhs.

*Nitish*  
**DIVISIONAL FOREST OFFICER  
PORAHAT FOREST DIVISION  
CHAIBASA**

*Raghav Chaudhary*  
**E. Raghav Chaudhary  
Executive Engineer,  
R. C. D. Road Division,  
Manoharpur**

Table-C – Existing guidelines for estimating benefits of forest diversion in CBA

Sl. No.	Parameters	Descriptions
1	Increase in productivity attributable to the specific project	The Overall output of the industries established in the vicinity of the area will be increased as the Project road will provide them fast and safe transportation system which will decrease their transportation charge in terms of diesel consumption and hauling capacity due to time saving in hauling with respect to the present condition of the road. Moreover this Project road will also provide a safe and fast access to of the forest officials, Increase in productivity with respect to time saved in travel and manpower hours saved are addressed. This NPV comes to Rs.513.82 Lakhs in 20 years @ 12% interest rate.
2	Benefits of economy	During and after the construction of Project road, local people and the industries situated in this area will be benefitted greatly. The construction of the road will provide a safe and fast transportation to people which in turn will accelerate the rate of growth in this area .Industries in this area will be benefitted by the construction of this road as it would prove to be a better transportation facility for them. Increase in District GDP/per capita income and saving in fuel costs would be a direct indicator for benefit to the economy. This comes to Rs.12,334 lakhs at 12% NPV rates.
3	No. of Population benefited	While overall the populations of Jharkhand state (3.29Cr.) will benefit from the project. Specifically, the population of districts West Singhbhum (15.02 Lakhs) through which the alignment passes will benefit largely. (Source: Census 2011, Jharkhand). More specifically the populations of the following blocks namely Sonua, Anandpur, Goilkera, Gudri and Manoharpur will benefit. Population benefited as on 2011 for these 5 blocks would be 324546. Projected population based upon 2001-2011 population growth rates of 21.75% comes to 395135 in 2021.
4	Economic benefits due to direct and indirect employment due to the project	300 employees during the construction phase will be employed. During the construction period approx. 99000 man-days will be generated and after the construction indirect employment will be generated due to development of shop along the project road. 99000 man-days will be benefitted in terms of salary and wages @Rs.350/day =Rs.346.50 lakhs.
5	Economic benefits due to Compensatory afforestation	Considering the total forest diverted area for CA i.e. 18.28 ha and the NPV of forest the Economic benefit would be Rs.72 Lakhs ones the total CA is done and similar benefits are accrued as in forest areas.

Total benefit accrued due to the project at NPV is Rs13,263 lakhs.

<sup>^</sup>Note: A period of 20 years is considered as per SP-30 for calculating economic returns due to the project, Economic analysis of Highway projects for benefits calculation. Net present value of benefits is also calculated to compare the cost vs benefit at 12% interest rate. NPV included project construction cost.

**Benefit-Cost Ratio = Net Benefit/Net Loss is 37.80:1 hence project is viable**

Nitin  
DIVISIONAL FOREST OFFICER  
PORAHAT FOREST DIVISION  
CHAIBASA

Fr. Raghunandan Chaudhary  
Executive Engineer  
R. C. D. Road Division,  
Manoharpur  
21-6-21

(6)

Considering the tangible benefits, the project is found to be viable. If considers the intangible benefits also, then the projects become even more viable and attractive.

RANCHI

Place: 21/6/21

Date:

Chaudhary

(Signature of User Agency) 21-6-21

Er. Raghubansh Chaudhary  
Executive Engineer,  
R. C. D. Road Division,  
Manoharpur

Nitish

Countersigned by

Divisional Forest Officer, Porahat Forest Division

DIVISIONAL FOREST OFFICER

PORAHAT FOREST DIVISION

CHAIBASA

(7)

## Annexures of CBA

West Singhbhum Census data and projection of population						
Blocks	Population 2011	Male	Female	House holds	Decadal Popl. GR	Projected Population 2021
Sonua	77,697	38,612	39,085	16,408	21.7500	94,596
Gudri	38,282	19,445	18,837	7,245	Annual GR	46,608
Goilkera	74,019	37,167	36,852	15,072	2.175	90,118
Anandpur	44,406	22,158	22,248	8,371		54,064
Manoharpur	90,142	45,471	44,671	18,260		1,09,748
<b>Total 2011</b>	<b>3,24,546</b>				<b>Total popl.2021</b>	<b>3,95,135</b>

Nitin  
 DIVISIONAL FOREST OFFICER  
 PORAHAT FOREST DIVISION  
 CHAIBASA

Raghav Chaudhary  
 Er. Raghubansh Chaudhary (2)  
 Executive Engineer,  
 R. C. D. Road Division,  
 Manoharpur

(8)

## Increase in productivity attributable to the specific project

			Per capita income West Singhbhum	Rs.30546/ Annum 2018	Monthly Income base values
Sl.	YR.	VEHICLES	Hrs Saved/day	Total savings in man hours Rs.	2545.5
1	2013	1000	500.0	1749000	<b>HOURLY INCOME</b>
2	2014	1020	510.0	1783980	<b>10.6</b>
3	2015	1040	520.2	1819660	
4	2016	1061	530.6	1856053	
5	2017	1082	541.2	1893174	
6	2018	1104	552.0	1931037	
7	2019	1126	563.1	1969658	
8	2020	1149	574.3	2009051	
					<b>Per Hr income/saving</b>
9	2021	2297	1148.7	3965397	10.46
10	2022	2355	1177.4	4267758	10.98
11	2023	2414	1206.8	4593175	11.53
12	2024	2474	1237.0	4943404	12.11
13	2025	2536	1267.9	5320339	12.72
14	2026	2599	1299.6	5726015	13.35
15	2027	2664	1332.1	6162623	14.02
16	2028	2731	1365.4	6632523	14.72
17	2029	2799	1399.6	7138253	15.46
18	2030	2869	1434.6	7682545	16.23
19	2031	2941	1470.4	8268339	17.04
20	2032	3014	1507.2	8898800	17.89
21	2033	3090	1544.9	9577334	18.79
22	2034	3167	1583.5	10307605	19.73
23	2035	3246	1623.1	11093560	20.71
24	2036	3327	1663.6	11939444	21.75
25	2037	3410	1705.2	12849827	22.83
26	2038	3496	1747.9	13829626	23.98
27	2039	3583	1791.6	14884135	25.18
28	2040	3673	1836.3	16019050	26.43
29	2041	3765	1882.3	17240503	27.76
			<b>Total</b>	<b>191340255</b>	
			<b>NPV @12% interest rate</b>	<b>₹ 5,13,81,592</b>	
			<b>In Lakhs</b>	<b>₹ 513.82</b>	

*Hilink*  
**DIVISIONAL FOREST OFFICER**  
**PORAHAT FOREST DIVISION**  
**CHAIBASA**

*Chaudhary*  
**Er. Raghubansh Chaudhary**  
**Executive Engineer,**  
**R. C. D. Road Division,**  
**Manoharpur**

### Benefits of economy

GDP BENEFITS AND FUEL SAVINGS									
	Vehicle numbers			Population growth	Per capita income Rs./year West Singhbhum	Rs.30546/-	Business as usual		
Year	BIKE	CAR	COMMERCIAL	Population growth	Per capita income growth @5%/annum	GDP due to new road	GDP Due to Road improvement	Per capita income BAU @ 4.90%	GDP BAU
2021	450	72	25	5 blocks					
2021	1410750	338580	70125	395135	30546	12069793710	30546	12069793710	
2022	1438965	345352	71528	403729	32073	12948927309	32043	12936594998	
2023	1467744	352259	72958	412510	33677	13892094802	33613	13865646270	
2024	1497099	359304	74417	421482	35361	14903960257	35260	14861418056	
2025	1527041	366490	75906	430650	37129	159895227463	36988	15928701940	
2026	1557582	373820	77424	440016	38985	17154164669	38800	17072633616	
2027	1588734	381296	78972	449587	40935	18403631138	40701	18298717604	
2028	1620508	388922	80552	459365	42981	19744105621	42696	19612853732	
2029	1652918	396700	82163	469356	45130	21182216915	44788	21021365533	
2030	1685977	404634	83806	479565	47387	22725076639	46982	22531030665	
2031	1719696	412727	85482	489995	49756	24380314409	49284	24149113530	
2032	1754090	420982	87192	500653	52244	26156115559	51699	25883400230	
2033	1789172	429401	88935	511542	54856	28061261627	54233	27742236030	
2034	1824956	437989	90714	522668	57599	30105173770	56890	29734565517	

DIVISIONAL FOREST OFFICER  
PORAHAT FOREST DIVISION

R. C. D. Ward Division, Manarpur  
Chaudhary Ranbir Singh  
Executive Officer  
21-6-21

2035	1861455	446749	92528	534036	60479	32297959365	59678	31869975641
2036	1898684	455684	94379	545651	63503	34650461980	62602	34158741844
2037	1936657	464798	96267	557519	66678	37174315004	65669	36611877508
2038	1975391	474094	98192	569645	70012	39881999174	68887	39241186951
2039	2014898	483576	100156	582035	73513	42786904288	72263	42059322222
2040	2055196	493247	102159	594694	77188	45903395430	75803	45079843992
2041	2096300	503112	104202	607629	81048	49246883994	79518	48317286798
Total	36373815	8729716	1808055			559658283124.24		553046306386.66
NPV	₹ 1,21,28,366	₹ 29,10,808	₹ 6,02,872			₹ 1,52,22,91,66,835		₹ 1,51,01,17,49,793
						Improvement in GDP		
Total benefits	₹ 12,331						₹ 1,21,74,17,043	
Total Cost	351							
Total benefits	₹ 13,263							
CBR	37.80							

Raghubansh Chaudhary, (6.2)  
Er. Raghubansh Chaudhary,  
Executive Engineer,  
R. C. D. Road Division,  
Manoharpur

DIVISIONAL FOREST OFFICER  
PORAHAT FOREST DIVISION  
— CHAIABASA



DIRECTION OF TRAFFIC COUNT HOURS FROM	UP	FRONT (Place)	CUTTING	FRONT (Place)	SONUA GUDARI	TO (Place)	JA-LODHAN GUDARI ROAD SONUA GUDARI	KILOMETER-G. OF COUNT STATION		PLACE OF COUNT STATION : CHAIASHA DISTRICT : JHIMPURA STATE : JHARKHAND	DATE : 18-12-3 TIME : 8-900					
								Cars/Jeeps/Van/ Three Wheeler (Alto Rikshaw)	Trucks/ Buses/ Vehicles (Two Wheeler/Mot orcycle/Scoote r/Etc.)	LCV/Comm Vehicle e.g Mini truck	Two axle Truck Trailer	Multi Axle Truck/ Trailer	Tanker	AGRICULTURAL TRACTOR WITH TRAILER	BULLOCK CARTS OR HORSES CARTS POWERED BY ANIMAL	OTHERS (SPECI AL)
0000-0100	U	0	0	0	0	D	U	0	0	0	D	U	D	U	0	0
0100-0200	0	0	0	0	0	D	U	0	0	0	D	U	D	U	0	0
0200-0300	0	0	0	0	0	D	U	0	0	0	D	U	D	U	0	0
0300-0400	0	0	0	0	0	D	U	0	0	0	D	U	D	U	0	0
0400-0500	1	1	10	0	0	D	U	0	0	0	D	U	D	U	0	0
0500-0600	1	2	9	9	0	D	U	0	0	0	D	U	D	U	0	0
0600-0700	2	3	11	8	0	D	U	0	0	0	D	U	D	U	0	0
0700-0800	3	1	14	6	0	D	U	0	0	0	D	U	D	U	0	0
0800-0900	5	2	16	8	0	D	U	0	0	0	D	U	D	U	0	0
0900-1000	1	1	12	7	0	D	U	0	0	0	D	U	D	U	0	0
1000-1100	2	6	12	6	0	D	U	0	0	0	D	U	D	U	0	0
1100-1200	3	3	9	8	0	D	U	0	0	0	D	U	D	U	0	0
1200-1300	6	5	10	9	0	D	U	0	0	0	D	U	D	U	0	0
1300-1400	5	3	14	6	0	D	U	0	0	0	D	U	D	U	0	0
1400-1500	3	1	18	8	0	D	U	0	0	0	D	U	D	U	0	0
1500-1600	2	0	12	6	0	D	U	0	0	0	D	U	D	U	0	0
1600-1700	1	1	14	15	0	D	U	0	0	0	D	U	D	U	0	0
1700-1800	2	0	18	5	0	D	U	0	0	0	D	U	D	U	0	0
1800-1900	3	1	21	6	0	D	U	0	0	0	D	U	D	U	0	0
1900-2000	4	0	19	8	0	D	U	0	0	0	D	U	D	U	0	0
2000-2100	1	1	0	9	0	D	U	0	0	0	D	U	D	U	0	0
2100-2200	1	1	0	10	0	D	U	0	0	0	D	U	D	U	0	0
2200-2300	0	2	0	12	0	D	U	0	0	0	D	U	D	U	0	0
2300-2400	1	1	0	0	0	D	U	0	0	0	D	U	D	U	0	0
Total	47	35	219	153	0	D	U	0	0	0	D	U	D	U	0	0
Total(U&D)	82	372	0	4	4	D	U	14	27	0	D	U	D	U	0	0

191  
 DIVISIONAL FOREST OFFICER  
 PORTRAIT FOREST DIVISION  
 CHAIASHA  
 DISTRICT OFFICER

ER. Raghunath Choudhary  
 R.C.D. Road Division  
 Manoharpur

12/12/2018

21.6.21

942

COUNT HOURS FROM	DIRECTION OF TRAFFIC		DOWN FROM (Place): SONUA		TO (Place): GUJARAT		UP FROM (Place): SONUA		TO (Place): GUJARAT		STATE : JHARKHAND	
	U	D	U	D	U	D	U	D	U	D	U	D
<b>Cars/Jeeps/Trucks/Three Wheelers/Two Wheelers/Scooter etc)</b>												
0000-0100	0	0	0	0	0	0	0	0	0	0	0	0
0100-0200	0	0	0	0	0	0	0	0	0	0	0	0
0200-0300	0	0	0	0	0	0	0	0	0	0	0	0
0300-0400	0	0	0	0	0	0	0	0	0	0	0	0
0400-0500	1	0	12	6	0	0	0	0	0	0	0	0
0500-0600	1	1	11	7	0	0	0	0	0	0	0	0
0600-0700	3	2	14	12	0	0	0	1	1	0	0	0
0700-0800	2	3	18	15	0	0	0	0	1	0	0	0
0800-0900	2	6	20	18	0	0	0	1	0	0	1	10
0900-1000	3	2	15	20	0	0	0	1	0	0	7	20
1000-1100	2	3	15	16	0	0	0	1	0	0	2	1
1100-1200	1	5	11	14	0	0	0	2	1	0	0	0
1200-1300	0	2	12	10	0	0	0	1	1	0	0	0
1300-1400	3	1	16	23	0	0	0	0	1	0	1	1
1400-1500	5	0	20	20	0	0	0	1	0	0	1	0
1500-1600	6	2	23	18	0	0	0	0	2	0	0	0
1600-1700	3	1	31	11	0	0	0	1	0	0	2	1
1700-1800	7	0	19	6	0	0	0	0	1	0	15	27
1800-1900	2	2	20	7	0	0	0	1	0	0	1	1
1900-2000	1	0	23	10	0	0	0	0	0	0	3	31
2000-2100	1	1	0	11	0	0	0	0	0	0	1	15
2100-2200	0	1	0	12	0	0	0	0	0	0	2	18
2200-2300	0	2	0	15	0	0	0	0	0	0	0	0
2300-2400	1	1	0	0	0	0	0	0	0	0	1	0
Total	44	35	280	251	0	0	0	0	0	0	2	0
Total(U&D)	79	531	0	4	2	10	11	0	0	1	0	0
					21	0	0	14	17	31	10	3
								31	495	23	0	1184

DNTS/DR/FOREST DIVISION  
PDR/HM/FOREST DIVISION  
CHHATRAJ

Page

*Signature*  
Er. Raghunath Chaudhary  
Executive Engineer,  
R. C. D. Road Division,  
Manoharpur.

Manoharpur

193

⑩

DIVISIONAL FOREST CHARTER  
K.L.M. FOREST CHARTER  
POORHAT FOREST DIVISION

Page

R. C. D. Road Division,  
Manoharpur

DISTINCTIONAL FOREST DIVISION  
DORRAHAT FOREST DIVISION  
Page

Page

DIRECTION OF TRAIL	DOWN	FROM	TO (Place)
COUNT HOURS FROM	0000 HRS	TO 2300 HRS	TO (Place)

195

91

**PORTRAIT FOREST DIVISION  
DRAWING OFFICE**

Page

*Mr. D. B. Bhagat* 00-04  
Executive Engineer ~~21/6/24~~  
R. C. D. Road Division  
Manoharpur

196

61

Page

DIRECTION OF TRAFFIC	UP	DOWN	DATE	HOUR	COUNT HOURS FROM							REMARKS	
					03-Jan	04-Jan	05-Jan	06-Jan	07-Jan	08-Jan	09-Jan	10-Jan	
CARS/JEEPS/STHREE WHEELERS(AUTO)					74	425	82	372	0	4	21	0	
RICKSHAW					74	425	82	372	0	4	21	0	
WHEELERS(MOTOR VEHICLES)					74	425	82	372	0	4	21	0	
LCV(Light Commercial Vehicles e.g. Mini Van)					74	425	82	372	0	4	21	0	
TWO WHEELERS(MOTOR CYCLES)					74	425	82	372	0	4	21	0	
TRUCK/TANKEER					74	425	82	372	0	4	21	0	
MULTI AXLE TRUCK					74	425	82	372	0	4	21	0	
AGRICULTURAL TRAILER					74	425	82	372	0	4	21	0	
CYCLE/CYCLE RICKshaw/OTHER VEHICLES					74	425	82	372	0	4	21	0	
BULLDOCK CARTS/HORSES					74	425	82	372	0	4	21	0	
CARTS/OTHER ANIMALS					74	425	82	372	0	4	21	0	
OTHERS (Specify)					74	425	82	372	0	4	21	0	
AVERAGE DAILY TRAFFIC FOR THE WEEK	74	450	0	25	0	25	0	20	2	2	0	24	443
												17	0

DIMONIAT DIVISION  
CHIRIBA  
PRAHAT FOREST DIVISION

*Chiribay*  
Er. Raghubansh Chaudhary  
Executive Engineer,  
R. C. D. Road Division,  
Manoharpur

21-6-24

197

21

**CHABASA**  
**DIVISIONAL FOREST OFFICER**  
**DIVISIONAL FOREST OFFICER**  
**N-J-Tel**

TYPE		25	25	3	75
(A)		0	0	6	0
(a) CARS/VEEP STATION/AVIATION AVIATION					
TWO AXLE TRUCK/TANKER		24	24	4.5	108
(B)		443		0.5	222
(a) CYCLE					0
(b) BULLOCK CARTS/HORSE DRAWN CART/ OTHER ANIMAL DRAWN VEHICLES		17	8	136	
(C) OTHERS VEHICLES IF ANY, PLEASE SPECIFY		0			
<b>TOTAL</b>		<b>52</b>			<b>849</b>
Present PCU	=	849			
Construction period	=	1 years	(12 months)		
Design life	=	15 years			
Projected PCU	=	$849 \times (1+5/100)^{1/(2.0+15)}$	=		

178

61

*Chabasa*  
*Er. Raghubansh Chauhan 21/6/21*  
*Executive Engineer,*  
*R.C.D. Road Division,*  
*Manoharpur*

1944.778 So it is qualified for intermediate lane.

Query No. 4 – Large area of Reserved Forest is proposed for diversion a proper justification along with the volume of the traffic survey for the requirement of 16 m ROW for the purpose of reconstruction of the proposed road.

– इस कार्य के निमित वर्ष 2012–13 में Seven day Traffic Census कराया गया था (Traffic Census Report संलग्न)। यातायात गणना के अनुसार पथ पर कुल PCU – 849 थीं। Traffic growth rate  $r = 5\%$  एवं पथ का Design Life – 15 साल लेने के पश्चात् पथ के Design के Life के अन्त में Traffic =  $849 (1+0.05)^n$

Project Completion Year – 2022-23

$$n = 10 + 15 = 25 \text{ Year}$$

$$= 849 (1+5/100)^{25}$$

$$= 2875 > 1500 \text{ PCU}$$

Hence, it qualifies for Intermediate Lane Construction.

Intermediate lane construction के लिए Road way width 9.00 meter एवं Carriageway width 5.5 m है। पथ निर्माण में Ordinary Guard Level से कम से कम 1.00 मीटर ऊँचाई पथ का Structural Component GSB Lay करने का प्रावधान है, जिसे Typical Cross-Section के माध्यम से दर्शाया गया है Embankment के Stability के लिए Natural Slope 1:2 रखा गया है (Typical Cross-Section संलग्न)। जिससे पथ में Intermediate lane में भी पुल–पुलिया का न्यूनतम चौड़ाई 12.00 मीटर रखना है, जिसका निर्माण 16.00 मीटर से कम चौड़ाई Right of way में करना असम्भव है। इसके अतिरिक्त पुल–पुलिया निर्माण के दौरान Diversion का भी निर्माण करना पड़ता है (Typical Cross-Section TC-02 attached)।

सोनुवा–पनसुवा–लोढ़ाई–गुदड़ी पथ Left Wing Extremism (LWE) क्षेत्र में पड़ता है। Both directions में निर्वाध Traffic आवागमन के लिए न्यूनतम 5.50 मीटर Carriageway की आवश्यकता है। इसके अतिरिक्त सारी Utilities Service Lines यथा– Telephone Cables/ Mobile Cables, High Tension Cables, Water Supply Pipe Lines इत्यादि पथ निर्माण की भूमि से गुतरती है। इसलिए 16.00 मीटर Right of way इस पथ के निर्माण के लिए न्यूनतम भूमि की आवश्यकता है।

*Nitin*  
DIVISIONAL FOREST OFFICER  
PORAHAT FOREST DIVISION  
CHAIBASA

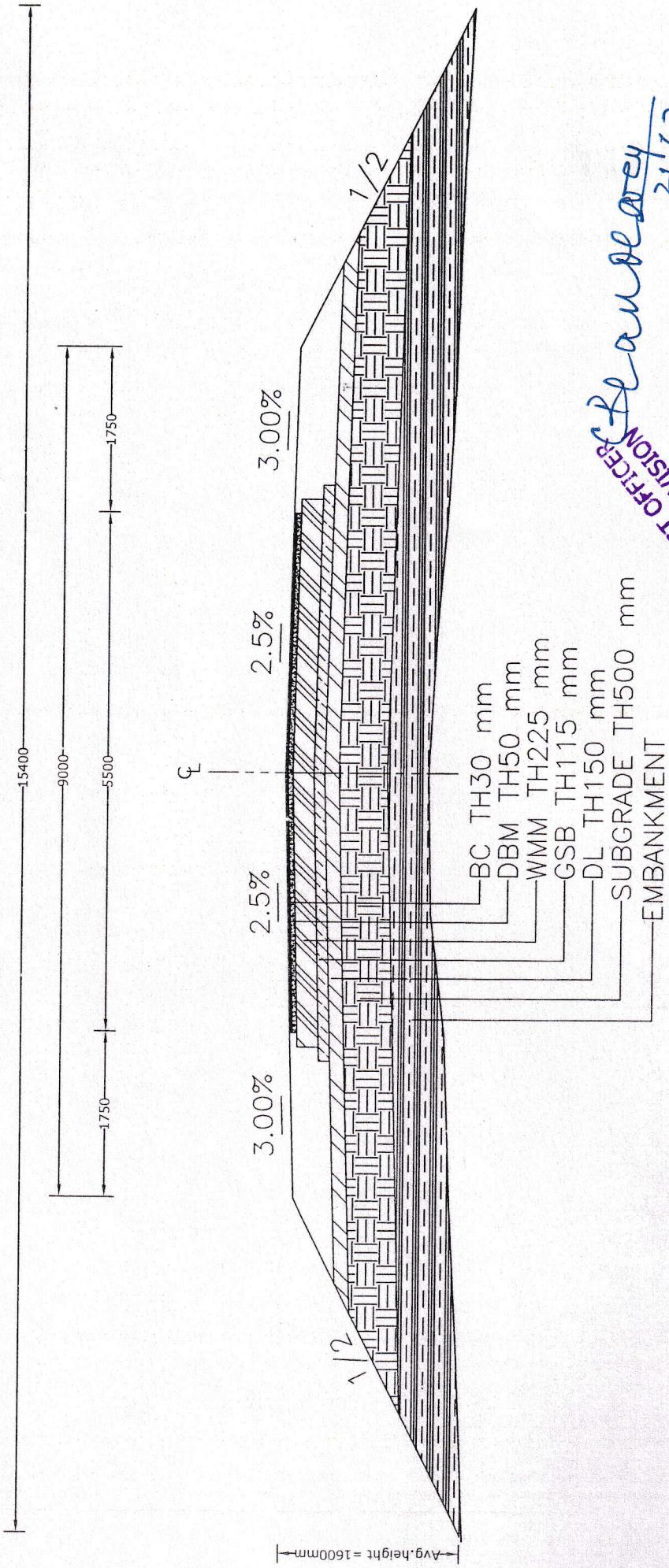
*Raghubansh Chaudhary*  
Executive Engineer,  
R. C. D. Road Division,  
Manoharpur

*Chaudhary*  
Er. Raghubansh Chaudhary  
Executive Engineer,  
R. C. D. Road Division,  
Manoharpur

21-6-21

TCS - 01

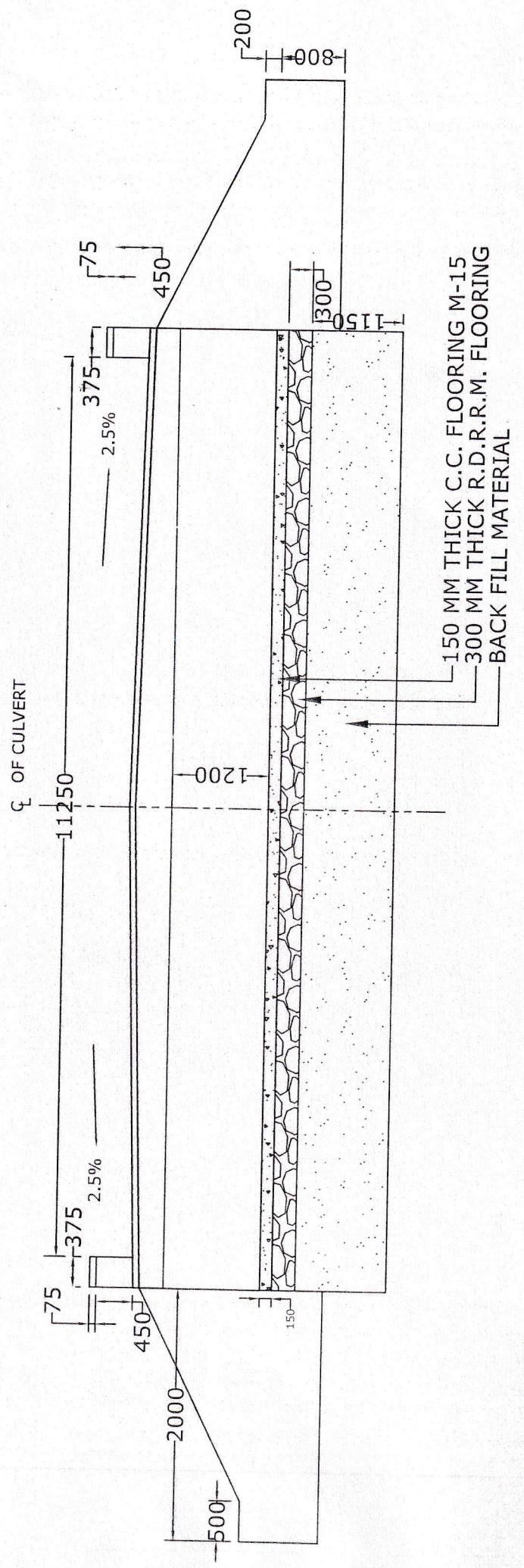
## TYPICAL CROSS SECTION 01 (For Road Works)



DINSONT DRIVERS  
DRAFTS  
R.D. DIVISION  
CMBAS  
DRAFTS  
DRAFTS  
21.6.21

Er. Raghubansh Chaudhary  
Executive Engineer,  
R.C.D. Road Division,  
Manoharpur

## TYPICAL CROSS SECTION 02 (For Culvert Works)



**Er. Raghubansh Chaudhary**  
Executive Engineer,  
R. C. D. Road Division,  
Manoharpur  
*21-06-24*

~~ERIK H. R.~~  
R.  
POHJANTO CHABIASA  
DINISIONL FOREST DIVISION  
~~ERIK H. R.~~

(23)

Query No. 5 – As per submitted KML, forest land proposed for diversion is calculated as 15.585319 ha instead of 18.28 ha. Correct KML file of the forest land proposed for diversion is required.

—पथ निर्माण कार्य के लिए वास्तविक हस्तांतरण की आवश्यकता 18.28 है। तदनुसार KML फाइल में आवश्यक सुधार कर दिया गया है। संशोधित KML की सॉफ्ट कॉपी संलग्न किया जा रहा है।

*Lalish*  
DIVISIONAL FOREST OFFICER  
PORAHAT FOREST DIVISION  
CHAIBASA

*Chaudhary*

Er. Raghubansh Chaudhary  
Executive Engineer,  
R. C. D. Road Division,  
Manoharpur

21-6-21