

Operator Assisted Drive Test Report

Ayodhya-Kanpur Rail route Date - 10/09/2024 By TRAI Regional Office Bhopal

The Operator Assisted Drive Test has been carried out by Regional Office, Bhopal with the help of Telecom Service Providers for Ayodhya cant to Kanpur central Rail route by Vande Bharat Train from 15 Hrs to 18:00 Hrs of 10/09/2024. The drive test covered drive route of around 202 KMs.

TSP	Network tested
Airtel	2G & Volte
BSNL	2G & 3G
JIO	VoLTE
VIL	2G & Volte

Key Performance Indicators:

KPI	Benchmark	Observations
Block call rate %	≤3%	All TSPs achieved the benchmark
Drop call rate %	≤2%	All TSPs achieved the benchmark, except BSNL in 2G & 3G and VI in VoLTE
CSSR %	≥95 %	All TSPs achieved the benchmark, except VI in VoLTE
Mobility HOSR %	≥95%	All TSPs achieved the benchmark
Good RX Quality %	≥95%	All TSPs achieved the benchmark, except BSNL in 3G and VI in 2G & VoLTE.

Overview

Regional Office, TRAI Bhopal conducted Operator Assisted Drive Test. The performance of Airtel, BSNL, Vodafone Idea and Jio was monitored across various technologies (2G, 3G, 4G & 5G). The test results obtained from these drive tests were utilized to assess the network quality for Voice and Data services.

Voice: Coverage, Quality, Handover Success Rate, Call Setup Success Rate, Drop Call Rate and Block Call Rate.

Data: Download Throughputs

Drive Test Details :

Voice Tests:

- i. 2G measurement UE Locked in 2G
- ii. 3G measurement UE in Dual mode (2G and 3G)
- iii. 4G measurement UE in Free mode

Calls were made for the **180-sec** duration with a wait time of **10 sec** between calls in all technologies.

Data Tests:

Dynamic data – repeat data file download (to check throughput on the entire route)

- i. 3G measurement UE in 3G File Size- 20MB
- ii. 4G measurement UE in LTE File Size- 40MB

Overview



Voice & Dynamic Data Test Drive Route

List of important area covered during the drive test

Ayodhya Cantt Lucknow Charbagh NR

Kanpur Central

Voice Calls

QoS compliance of the TSPs for Voice across technologies 2G/3G/4G-VoLTE:















KPIs	2G		3G		VoLTE			
	Airtel	BSNL	VIL	BSNL	VIL	Airtel	RJIL	VIL
Drop Call Rate %	0.96	4.16	0.73	5.45	NA	0.96	0	4.08
Block Call Rate %	1.92	2.04	0.73	1.78	NA	0.96	0	6.10

a) All TSPs have met the 2% QOS benchmark of Drop Call Rate (DCR%) except BSNL 2G&3G andVI in VoLTE.

b) Call Block Rate (CBR%) benchmark of 3% was achieved by all TSP's, except VI in VoLTE.

Voice Calls

Key Observations

Coverage

a) Percentage of coverage samples for $2G \ge -85$ dBm.

	2G			
TSPs	Airtel	BSNL	VIL	
Coverage %	91.21	79.82	61.30	

b) Percentage of coverage samples for $3G \ge -90$ dBm

TODa	3G
ISPS	BSNL
Coverage %	64.32

b) Percentage of coverage samples for LTE \geq -110 dBm.

TODO	VoLTE			
1055	Airtel	JIO	VIL	
Coverage %	97.29	93.80	86.11	

c) Percentage of time spent on 3G/4G network

	3G		VoLTE		
TSPs	BSNL	VIL	Airtel	JIO	VIL
Time Spent on 3G/4G %	64.32	NA	100	100	87.33

Key Observations

Data Services Dynamic

Dynamic Data -Download Throughput was tested.

Data Download Performance – Dynamic 3G/4G/ 5G Network



TSP	Airtel	BSNL	JIO	VIL
Average Download throughput- 3G In Mbps	NA	1.30	NA	NA
Average Download throughput-LTE in Mbps	24.35	NA	8.15	22.45
Average Download throughput- 5G in Mbps	NA 6	NA	NA	NA

Summary

City Level Summary- Voice

	•		
TSP (For 2G)	Airtel	BSNL	VIL
Call attempts	104	49	136
Block call rate %	1.92	2.04	0.73
CSSR %	97.12	97.96	99.27
Drop call rate %	0.96	4.16	0.73
Mobility HOSR %	96.65	95.91	96.30
RX Quality %	96.30	98.32	84.52
Average CST Sec	4	2.85	3.12

TSP (For 3G)	BSNL
Call attempts	56
Block call rate %	1.78
CSSR %	98.22
Drop call rate %	5.45
Mobility HOSR %	98.86
RX Quality %	86.31
Average CST (Sec)	2.707

TSP (For Volte)	Airtel	BSNL	JIO	VIL
Call attempts	104	NA	61	98
Block call rate %	0.96	NA	.0	6.10
CSSR %	98.08	NA	100	93.90
Drop call rate %	0.96	NA	0	4.08
Mobility HOSR %	95.28	NA	100	98.06
RX Quality %	95.80	NA	97.84	83.72
Average CST(Sec)	3	NA	0.93	1.27

RF Coverage relates to the geographical footprint within the system that has sufficient RF signal strength to provide for a call session. The Coverage rate is calculated on the basis of % of samples in which the Rx level \geq -85 dBm, RSCP is \geq -90 dBm & RSRP \geq -110dBm. The details are as follows.

TSP	Coverage Rate %
Airtel 2G	91.21
BSNI 2G	79.82
VIL 2G	61.30
BSNL 3G	64.32
Airtel VoLTE	97.29
Jio VoLTE	93.8
VIL VoLTE	86.11



Nawat

Fair

Ayodhya

TSP-Airtel Technology Coverage % 2G 91.21 abank Dariyabad Malihabad Kakori Rudau Sohawal Rudau 18 Mohan Resengenj Mohanlaiganj Milkipur Haidarga Jab Gan Inhauna Musafirkhana Jagdishpur Bachhrawan Musarfirkhana

2G

Overall RxLevel	# Samples	% PDF	Legends
[Max, >=-75]	1232670	65.33	
[-75, >=-85)	488262	25.88	
[-85, >=-95)	115853	6.14	
[-95, >=Min)	49938	2.65	
Total	1886723		

Coverage Details

TSP-BSNL Technology Coverage % 2G 79.82 C Mapinfo Professional - [AYC_KNP0910152047Sep24,...,MIPTsite_NEW Map] - 8 × <u>」●第一回回回回。 1 ② ▼ 2 3 3 の ③ ③ □ □] ■ 2 2 2 4 点</u> <u>1 ③ ▼ 2 3 3 0 ◎ ③ □ □ □] ■ 2 2 2 4 点</u> Web S... 🖻 491_Barakal UPE-0420-441_BHINGATE/ UPE-0462-1131_Lachhamanpur Bazar 0990-1339 Dain TE UPE-1673-17301-LAHARPUR TE UPE-1667-16931_KALAN TE 図 🤌 図 <u>速</u> UPE-1675 MAHOL TE / UPE-4705-18211_Khanpu 0636-11261_KAMPIL TE Bahraich TE UPE-6411-7601_Between Pachperwa and Sugganagar Domari UPE 0638 11151 CAMPLETE UPE 0638 11151 CAMAGANUTE UPE 0646-11551 Abra TE UPE 0975 13381 Auro UPE 0638-10321 Garristato TE UPE 705 UPE 0638-10321 Garristato TE UPE 705 UPE 0638-11371 Kolucioau TE UPE 0640-11171 Kolucioau TE UPE-0418 693_UmrouliUPE-1678 UPE-0342 15401 Barhani TE UPE-6490-8371 Sonauli T.E. UPE-0429-811 SRAWAS Ŕ AN TE uraha, BSNL Store Shohratgarh TE UPE-4893-11611_K R TFUPE-0784-423 R. UPE-0425-462 FAKARP ur-li UPE-0351-4583 URTE 1688-183 UPE-0431-761_HUZOO madabad TE UPE-07 UP 574-18421 Mahammadabad TE 92-4215 TIYATHOK TE .egend UPE-0452-641_PYAREPUR UPE-1733-AYC KNP0910152047Sep24 by RXLEV FdE UPE-3159-751_SALPUR DALELNAGAR TE UPE-0626-11131_CHIBRAMAU TE TTARIA UP UPE-0808-354 MOTIGAN -75 to 0 (781784) • UPE-0637-19901 UPE-6718 indoli ANN UPE-0811-181_PARASPUR TE -85 to -75 (77354) UPE-0664-11442_Sakrawan TE UPE HE-1289-231 akshi Ka Tal θQ UPE-3180-3671_PASKA -0254 -95 to -85 (124050) • <u>Q</u>(?) UPE-18 ANGARMAU TE UPE 1290 1625 nada 611 SARALBARAL -115 to -95 (93214) UPE-1 ajepur UPE-1291-25 agh TE i 86-91 RUDHAUU UPE-1308 UPE-13 VUPF 02 1 TE UPE-0589-43521_AMANIGANJ TE 171-28261 RASOOLABA **¥** 🔛 951_Kamela UPE-0568-41922 UPE-0363-45311_DHANGHATA TE F1121_HAZALAPURA HPE-ΞΣ UPE-1863 RE-0567-10321_KUMARGAN -0475-4 bar TE 50 B2 1597-64731 SA UPE IPE 0552.41 KAR NAGAR TE 151 RUDRAF Nagar TE UPE-2379-2 UPE-0900hwaja phool UPE-1587-64791_TILO 1742_FULLAUNA AKRI UPE-048 2-16261_BIGHAPUR TE UPE-4600-274 IPE-0106-49041_ATRAULIA TE JPE-1618-64741 Shahmau TI 1401_TIYARI 24791_BARAUSA TE UPE-1831-16601_Bihar TE UPE-04 UPE-0091-49091_BUDHANPUR TE UPE-0092-49121_Captanganj UPE-1632-14361_JAISTE UPE-1 E-1615-64961_Pure-Ebukul TE UP UPE-1477-1051_BANGARA TE PE-2206-2 UPE-0479-401-LAR ROA 24971_RAE BEEGO 16661_Unchga UPE-4966-31621_Keolari UPE-1492-31421_Ku UPE 49221_MAHUL TE 162,2004129ELTHERA R UPE-0701 KORAJAH UPE-1530-62273_Athena TE UPE-1517-5416 AD TE UPE-0102-49921_SA UPE 0166-20281 SIK NOKITE UPE-0690-350 UPE-0102-49091-SARAI RANI E-0108-49061_BINDRADIO-R_T UPE-8005-3138 UPE-1473-31081_KONCH T UPE-0176-20 UPE-1512-540 CHILBALA TE UPE-0687-5111 UPE-20521 Salen UPE-0937-34361 Ben TE 1125-16501 Sa 704-35281 Abour TE 35201 Mono Pur Gaunt TE E-1045-63202. Ra CUPE-0099-48291_MEHNAC 5-59121 UPE-0938-34391_Dagwah (Afrauli) TE 1 RASRA UPE-0219-51161_CHILLA TE UPE-07-0-UPE-0256-59131_Jauharour UPE-07-0-PE-1036-63451_Belwar 38-54451_Fatanpur TE 0094-49191 1 AT GANU TE -2363 MRAUKH UPE-0935-34181_SARILA TE ÚPE-0106/2 TOD-4901 DEC GOAN TE У UPE-UPE-0929-34091 GOHAND TE 3.861_Amaoa XE Selecting: None Zoom: 329.6 m • Editing: None EN 🔺 🚜 🕪 😹 🗊 2:15 PM 18-Sep-24 圏 0 2)

	2G			
Overall RxLevel	# Samples	% PDF	Legends	
[Max, >=-75]	781784	72.63		
[-75, >=-85)	77354	7.19		
[-85, >=-95)	124050	11.52		
[-95, >=Min)	93214	8.66		
Total	1076402	100		

TSP- VIL Technology Coverage %



	2G		
Overall RxLevel	# Samples	% PDF	Legends
[Max, >=-75]	3967	32.97%	
[-75, >=-85)	3409	28.33%	
[-85, >=-95)	2523	20.97%	
[-95, >=Min)	2134	17.73%	
Total	12033	100%	

TSP-BSNL





3G			
Overall RSCP	# Samples	% PDF	Legends
[Max, >=-70]	355191	33.14	
[-70, >=-80)	101653	9.48	
[-80, >=-90)	232534	21.70	
[-90, >=Min)	382348	35.68	
Total	1071726	100.00	

TSP-Airtel Technology Coverage % VoLTE 97.29 abariki Nawat Dariyabad Malihabad Kakori tanehighol Faiz ckno n nuo i dad Nago Ruda मेत्री Mohan Hosongonj Ayodhya Mohanlalganj Milkipu laidarg wab Gan Inhauna Musafirkhana Japdishpu Bachhrawan Musarfirkhana

	VoLTE				
Overall RSRP	# Samples	% PDF	Legends		
[Max, >=-80]	2417067	63.42			
[-80, >=-90)	1038180	27.24			
[-90, >=-110)	252850	6.63			
[-110, >=Min)	103199	2.71			
Total	3811296				



	VoLTE		
Overall RSRP	# Samples	% PDF	Legends
[Max, >=-80]	1903	15.72467	
[-80, >=-90)	2791	23.0623	
[-90, >=-110)	6658	55.0157	
[-110, >=Min)	750	6.197323	
Total	12102	100	



	VoLTE		
Overall RSRP	# Samples	% PDF	Legends
[Max, >=-80]	54366	3.12%	
[-80, >=-90)	247177	14.20%	
[-90, >=-110)	1197650	68.79%	
[-110, >=Min)	241825	13.89%	
Total	1741018	100	

For measuring voice quality, as per the QoS norms, RxQual <=5 for GSM TSPs, EcNo >= -14 dBm for 3G TSP sand SINR >0 in case of VoLTE is considered to be good, where as quality beyond this benchmark is considered to be bad. The benchmark should usually be \ge 95%.

TSP	Rx Quality %
Airtel 2G	96.30
BSNI 2G	98.32
VIL 2G	84.52
BSNL 3G	86.31
Airtel VoLTE	95.80
Jio VoLTE	97.84
VIL VoLTE	83.72



For measuring voice quality, as per the QoS norms, RxQual <=5 for GSM TSPs, EcNo >= -14 dBm for 3G TSP sand SINR >0 in case of VoLTE is considered to be good, where as quality beyond this benchmark is considered to be bad. The benchmark should usually be \geq 95%.

TSP-Airtel



(IVIII, <=Z)	803465	53.21	
(2, <=3)	294325	19.49	
(3 , <=4)	190589	12.62	
(4 , <=5)	165759	10.98	
(5 , <=Max)	55834	3.70	
Total	1509972		

Quality Details

For measuring voice quality, as per the QoS norms, RxQual <=5 for GSM TSPs, EcNo >= -14 dBm for 3G TSP sand SINR >0 in case of VoLTE is considered to be good, where as quality beyond this benchmark is considered to be bad. The benchmark should usually be \geq 95%.

TSP-BSNL



Overall Rx Quality	# Samples	% PDF	Legends
(Min, <=2)	991475	96.26	
(2, <=3)	10308	1.00	
(3 , <=4)	0	0.00	
(4 , <=5)	10914	1.06	
(5 , <=Max)	17299	1.68	
Total	1029996	100	

For measuring voice quality, as per the QoS norms, RxQual <=5 for GSM TSPs, EcNo >= -14 dBm for 3G TSP sand SINR >0 in case of VoLTE is considered to be good, where as quality beyond this benchmark is considered to be bad. The benchmark should usually be \geq 95%.

TSP- VIL

Technology	Rx Quality %
2G	84.52



For measuring voice quality, as per the QoS norms, RxQual <=5 for GSM TSPs, EcNo >= -14 dBm for 3G TSP sand SINR >0 in case of VoLTE is considered to be good, where as quality beyond this benchmark is considered to be bad. The benchmark should usually be \geq 95%.

TSP-BSNL.

TechnologyRx Quality %3G86.31



Overall Ec/No	# Samples	% PDF	Legends
(Max, <=-6)	385682	35.83	
(-6, <=-9)	170571	15.85	
(-9, <=-11)	209850	19.50	
(-11, <=-14)	162911	15.13	
(-14, <= Min)	147387	13.69	
Total	1076401	100.00	

For measuring voice quality, as per the QoS norms, RxQual <=5 for GSM TSPs, EcNo >= -14 dBm for 3G TSP sand SINR >0 in case of VoLTE is considered to be good, where as quality beyond this benchmark is considered to be bad. The benchmark should usually be \ge 95%.



Total

3780802

For measuring voice quality, as per the QoS norms, RxQual <=5 for GSM TSPs, EcNo >= -14 dBm for 3G TSP sand SINR >-6 in case of VoLTE is considered to be good, where as quality beyond this benchmark is considered to be bad. The benchmark should usually be \ge 95%.



Overall SINR	# Samples	% PDF	Legends
(Min, <=-6)	262	2.16	
(-6, <=5)	5283	43.65	
(5, <=10)	3372	27.86	
(10, <=15)	1961	16.20	
(15, <=Max)	1224	10.11	
Total	12102	100.00	

For measuring voice quality, as per the QoS norms, RxQual <=5 for GSM TSPs, EcNo >= -14 dBm for 3G TSP sand SINR >0 in case of VoLTE is considered to be good, where as quality beyond this benchmark is considered to be bad. The benchmark should usually be \geq 95%. TCD

Тес	hnology	Rx Quality %	
	VoLTE	83.72	
Overall SINR	# Sample	es % PDF	Legends
Overall SINR (Min, <=0)	# Sample 287628	es % PDF 3 16.28	Legends
Overall SINR (Min, <=0) (0, <=5)	# Sample 287628 414651	es % PDF 3 16.28 23.46	Legends
Overall SINR (Min, <=0) (0, <=5) (5, <=10)	# Sample 287628 414651 425339	es % PDF 3 16.28 23.46 9 24.07	Legends
Overall SINR (Min, <=0) (0, <=5) (5, <=10) (10, <=15)	# Sample 287628 414651 425339 300103	es % PDF 3 16.28 23.46 24.07 3 16.98	Legends
Overall SINR (Min, <=0) (0, <=5) (5, <=10) (10, <=15) (15, <=Max)	# Sample 287628 414651 425339 300103 339392	PS % PDF 3 16.28 23.46 9 24.07 3 16.98 2 19.21	Legends

TSP	% of Time Spent on 3G/VoLTE
BSNL 3G	64.32
Airtel VoLTE	100
Jio VoLTE	100
VIL VoLTE	87.33



TSP-Airtel % of Time Spent on Technology 3G VoLTE 100 14 Dariyabad Malinaba Kakor मेठी Mohan Hasangan Ayodhya idaro Inhauria Musafirkhand lagdishpur Purwo Rach Musarfirkhana Ameth

TSP-BSNL.

Technology	% of Time Spent on
3G	64.32
VoLTE	NA



TSP- VIL

Technology	% of Time Spent on
3G	
VoLTE	87.33



Dynamic Data Test

TSP-Jio

Data Statistics - Dynamic data testing





DL throughput	No of Sample	%	Legends
< 2Mbps	3181	31.94	
2-5 Mbps	1988	19.96	
5-10 Mbps	1712	17.19	
>10Mbps	3079	30.91	

TSP-Airtel



DL throughput	No of Sample	%	Legends
< 2Mbps	249947	6.79	
2-5 Mbps	327200	8.9	
5-10 Mbps	131999	3.68	
>10Mbps	2968830	80.72	

TSP-BSNL

Data Statistics - Dynamic data testing

Data KPIs - Overall	3G
Download Throughput (Mbps)	1.30



DL throughput	No of Sample %		Legends
< 1 Mbps	507929	73.61	
1-5 Mbps	159391	23.10	
5-10 Mbps	22695	3.29	
>10Mbps	0	0.00	

TSP- VIL

Data Statistics - Dynamic data testing

Data KPIs - Overall	LTE
Download Throughput (Mbps)	87.38



DL throughput	No of Sample	%	Legends
< 2Mbps	400936	12.62	
2-5 Mbps	283335	8.92	
5-10 Mbps	267593	8.42	
>10Mbps	2226178	70.05	

TSP-Airtel

Non / poor coverage area – 08 Kms i.e. around 4% of the route

			Inter Site Distance	Remark (No coverage / Poor coverage / other
Sn	Patch Name	Circle	in KM)
1	Dera Musi	UPE	1.5	Poor Coverage
2	Shahpur	UPE	6.158	Poor Coverage
3	Niyamtpur	UPE	2.5	Poor Coverage
4	Katra	UPE	2.3	Poor Coverage
5	Magawara Railway Crossing	UPE	01	Poor Coverage
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				

TSP-Airtel

Plan to improve the converge in this route

Sn	Patch Name	Circle	Inter Site Distance in KM	Remark (No coverage / Poor coverage / other)	Improvement Plan
1	Dera Musi	UPE	1.5	No any dominant Sector towards Railway Route	Physical optimization planned at DDI03,BWNP01,DEOR0 1
2	Shahpur	UPE	6.158	No any dominant Sector towards Railway Route	A new site planned at this lat/long- 26.7594,81.7619
3	Niyamtpur	UPE	2.5	No any dominant Sector towards Railway Route	Physical Optimization planned at BPK01,DRYB01
4	Katra	UPE	2.3	No any dominant Sector towards Railway Route	Physical Optimization planned at ZQA01,LKVJ01,DRDA0 1,SDBD01
5	Magawar a Railway Crossing	UPE	01	No any dominant Sector towards Railway Route	Physical Optimization Planned at MGR01,MGR02,MGRW 01,LKKN09
6					
7					
8					
9					
10					
11					

TSP-BSNL

Non / poor coverage area – 38 Kms i.e. around 19 % of the route

Sn	Patch Nama	Cirolo	Inter Site Distance	Remark (No coverage / Poor coverage /
1			5	BTS/NedeR down
	MOSTAFADAD TE IO BELHARI		5	
2	JETHAUTI to JALALPUR	UPE	4.8	BTS/NodeB down
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				

TSP-BSNL

Plan to improve the converge in this route

Sn	Patch Name	Circle	Inter Site Distance in KM	Remark (No coverage / Poor coverage / other)	Improvement Plan
1	MUSTAFABAD TE to BELHARI	UPE	5	BTS/NodeB down	Network availability of existing BTS/NodeB to be improved along with new eNodeB installation in upcoming phases.
2	JETHAUTI to JALALPUR	UPE	4.8	BTS/NodeB down	Network availability of existing BTS/NodeB to be improved along with new eNodeB installation in upcoming phases
3					
4					
5					
6					
7					
8					
9					
10					
11					

Coverage status

TSP-Jio

Non / poor coverage area – 12.9 Kms i.e. around 6.2 % of the route

			Inter Site	
Sn	Patch Name	Circle	Distance in KM	Remark (No coverage / Poor coverage / other)
1	Near Raunahi	UPE	3	Poor Coverage
2	Mahmudabad Barabanki	UPE	1.8	Poor Coverage
	Near Shalimar Paradise,			
3	Lucknow	UPE	1.5	Poor Coverage
	Near Golden Ganga Resort &			
4	Lawn , Lucknow	UPE	1	Poor Coverage
	Near Gahru Kisan Path Bridge,			
5	Amausi Lucknow	UPE	1.5	Poor Coverage
6	Near Harauni , Lucknow	UPE	1.3	Poor Coverage
7	Near Dahichowki, Unnao	UPE	0.7	Poor Coverage
	Near Seth Anandram Jaipuria			
8	School	UPE	0.5	Poor Coverage
9				
10				
11				
12				
13	3			
14	4			
15				
16				
17				
18				
19				

TSP-Jio

Plan to improve the converge in this route

Sn	Patch Name	Circle	Inter Site Distance in KM	Remark (No coverage / Poor coverage / other)	Improvement Plan
1	Near Raunahi	UPE	3	Poor Coverage	Serving Site I-UE-SOWL-ENB-9059-1 Azimuth need to change from 150 to 180
2	Mahmuda Bad Barabanki	UPE	1.8	Poor Coverage	RET change Plan from 7 to 5 in Alpha sector 850ENB of site Id I-UE-SRUL-ENB- G004 and Azimuth change Plan from 170 to 190 at site Id I-UE-SRUL-ENB-H002-1
3	Near Shalimar Paradise, Lucknow	UPE	1.5	Poor Coverage	I-UE-LCKN-ENB-9146-0_RET change from 7/4/8 to 3/4/6
4	Near Golden Ganga Resort & Lawn , Lucknow	UPE	1	Poor Coverage	I-UE-LCKN-ENB-9206-2_RET change from 5/6/8 to 3/4/6
5	Near Gahru Kisan Path Bridge, Amausi Lucknow	UPE	1.5	Poor Coverage	I-UE-LCKN-ENB-0003 RET open from 6 t o 4 in 1800 band
6	Near Harauni , Lucknow	UPE	1.3	Poor Coverage	I-UE-LCKN-ENB-9004 Azimuth change plan from 280 to 250
7	Near Dahichowki, Unnao	UPE	0.7	Poor Coverage	I-UE-UNNO-ENB-I012_Alpha Sec Azimuth Correction Plan 80 to30
8	Near Seth Anandram Jaipuria School	UPE	0.5	Poor Coverage	New Site Required at lat –long for Coverage Improvement at 26.460014, 80.366556 (Cantonment Area)
9					
10					
11					

TSP- VIL

Non / poor coverage area – ...30.. Kms i.e. around ...13.5.. % of the route

S No	Patch Name		Inter Site Distance in KM	Remark (No coverage / Poor coverage / other)
1	Chirra-Sohawal	UPE	4.3 km	Poor Coverage
2	Badagaon-Khalilpur	UPE	8.3 km	No coverage
3	Sohawal - Kapsi	UPE	4.3 km	Poor Coverage
4	Patranga-Jethauti	UPE	8.4 km	No coverage
5	Beekapur-Mia ka Purwa	UPE	11.7 km	No coverage
6	Safdargunj-Rasoli	UPE	8.2 KM	No coverage
7	Rasoli- Naveen Mandi	UPE	4.6 km	Poor Coverage
8	Naveen mandi-Nageshwar Mandir	UPE	2.9 KM	Poor Coverage
9	Sintola -Bhaura	UPE	5.7 km	Poor Coverage
10	Lonaha-Harauni	UPE	6.4 km	Poor Coverage
11	Harauni-Jaitipur	UPE	6.7 km	No coverage
12	Kunjpur-Ajgain	UPE	6 km	No coverage
13	Ajgain-Sonik	UPE	7.6 km	Poor Coverage
14	Unnao-Sahajani	UPE	5.5 km	Poor Coverage
15	Shuklagunj- Moti Mahal	UPE	3.2 km	Ganga pull and Kanpur Cantt

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Plan to improve the converge in this route

Sn	Patch Name	Circle	Inter Site Distance in KM	Remark (No coverage / Poor coverage / other)	Improvement Plan
1	Chirra-Sohawal	UPE	4.3 km	Poor Coverage	New Site planned
2	Badagaon-Khalilpur	UPE	8.3 km	No coverage	New site required
3	Sohawal - Kapsi	UPE	4.3 km	Poor Coverage	New Site planned
4	Patranga-Jethauti	UPE	8.4 km	No coverage	New site required
5	Beekapur-Mia ka Purwa	UPE	11.7 km	No coverage	New Site planned
6	Safdargunj-Rasoli	UPE	8.2 KM	No coverage	New Site planned
7	Rasoli- Naveen Mandi	UPE	4.6 km	Poor Coverage	Optimization plan
8	Naveen mandi- Nageshwar Mandir	UPE	2.9 KM	Poor Coverage	Optimization plan
9	Sintola -Bhaura	UPE	5.7 km	Poor Coverage	Optimization plan
10	Lonaha-Harauni	UPE	6.4 km	Poor Coverage	Optimization plan
11	Harauni-Jaitipur	UPE	6.7 km	No coverage	New Site required
12	Kunjpur-Ajgain	UPE	6 km	No coverage	New Site required
13	Ajgain-Sonik	UPE	7.6 km	Poor Coverage	New Site required
14	Unnao-Sahajani	UPE	5.5 km	Poor Coverage	Optimization plan
15	Shuklagunj- Moti Mahal	UPE	3.2 km	Ganga pull and Kanpur Cantt	New Site planned