No. RO/VJA/Misc.24/B/OFC/NH-42/Sr.no.98 1317
Government of India
Ministry of Road Transport & Highways

Regional Office, Vijayawada

Door No.41-29-45A, 3<sup>rd</sup> & 4<sup>th</sup> floors, MORTH/NHAI Buildings, Ranigarithota, Near Kanakadurga Varadhi, Krishnalanka, Vijayawada-520013. Tele: 0866-2571985

Dated: 22.02.2022

### **Invitation of Public Comments**

Sub: Proposal for Permission for laying Optical Fibre cable (OFC) along the road Nh-42 by M/s Telesonic Networks Limited from km 228.600 to km 242.600 (RHS) of NH-42 (Uravakonda-Krishnagiri section) for a total length of 14000mtrs in Chittoor District in the State of Andhra Pradesh - reg.

Please find enclosed herewith the proposal in accordance with Ministry's latest guidelines dated 22.11.2016 forwarded by Chief Engineer(R&B), NH & CRF, AP vide letter dated 19.01.2022 for laying Optical Fibre cable (OFC) along the road NH-42 by M/s Telesonic Networks Limited from km 228.600 to km 242.600 (RHS) of NH-42 (Uravakonda-Krishnagiri section) for a total length of 14000mtrs in Chittoor District in the State of Andhra Pradesh by the Horizontal Directional Drilling (HDD) method.

- 2. As per the guidelines, issued by the Ministry vide Circular No.RW/NH-33044/29/2015/S&R(R) dated 22.11.16, the proposal for Highway crossing permission along & across National Highways shall be put out in the public domain for 30 days for seeking claims and objections on grounds of public inconvenience, safety and general public interest.
- 3. In view of the above, comments of the public on the above mentioned proposal is invited on the address mentioned below:

The Regional Officer,
Ministry of Road Transport and Highways,
Door No.41-29-45A, 3<sup>rd</sup> & 4<sup>th</sup> floors, MORTH/NHAI Buildings,
Ranigarithota, Near Kanakadurga Varadhi,
Krishnalanka, Vijayawada - 520013
Email id: <a href="mailto:romorthvijayawada@gmail.com">romorthvijayawada@gmail.com</a>.

Yours Faithfully,

Encl: As above

(Venkataiah Mekala) Sr. Technical Assistant, For Regional Officer, MoRTH, Vijayawada

### Copy to:

- 1) The Senior Technical Director, NIC for uploading on the Ministry's website.
- 2) The Chief Engineer(R&B), NH & CRF, AP.
- 3) M/s Telesonic Networks Limited, 1-8-437, 438, 364 & 445, Splendid towers, Opp. Begumpet police station, Hyderabad 500016, Telangana.

### INSPECTION REPORT

I have inspected site on Date: 14-06-2021 for "Proposal for granting of permission for Telecom Cables/OFC/ducts along Uravakonda Krishnagiri Section of NH-42 road from Km 228.600 to Km 242.600 (RHS) for the total length of 14000mts in Chittoor District of Andhra Pradesh under the Jurisdiction of R&B , NH Division, Chittoor." by M/s Telesonic Network Ltd. The following points were observed and mentioned below.

- 1. The total length of OFC Proposed is 14000 Mts (14000 Mts on R/s of road by HDD only)
- 2. The M/s Telesonic Network Ltd. has Proposed to lay OFC by HDD

  (at a depth of 1.65 Mts below ground level ) to a length of 14000

  Mts
- 3. The ROW of the road varies from 15 Mts to 22 Mts in this location.
- 4. Restoration of trench should be done by the Agency as specified by the Ministry Vide F.No.RW/NH-33044/29/2015/S&R(R) Dated 22-11-2016.
- 5. The Agency has submitted Undertaking for submission of Performance Bank Guarantee ,Indemnity bond, Certificate foe relocation of pipe line in case 4/6-Lanning of the road ,and under taking to comply with the MORTH Guide lines.
- The strip plan and methodology of laying pipe line and other documents submitted by the agency is attached here with.

Assistant Executive Engineer (R&B) N.H. SECTION

MADANAPALLE

14/06/2021

Deputy Executive Engineer
R&B) N.H. SUB - DIVISION
MADANAPALLE

EXECUTIVE ENGINEER (R & B) N.H. Division CHITTOOR.

Superintending Engineer (R & 3) NH Circle, Anantapurarmy

### **CERTIFICATE**

- Undersigned has examined the proposal of the applicant M/S Telesonic Networks Limited, Hyderabad for "Laying of optical Fiber cable Km 228/600 to Km 242.600 (RHS) for the total length of 14000 Mts in Chittoor District" and confirm that all standard conditions issued vide MoRT&H memo. No. RW/NH/330044/2015/S&R(R), Dt: 22.11.2016.
- 2. It is certified that any other location of Utility line would be extremely difficult and unreasonable costly and installation of utility lie within RoW will not adversely affect design, stability and traffic safety of the highway nor the likely future improvement such as widening of the carriageway, easing of curve etc.
- 3. I will ensure supervision of the work of Laying of utility and ensure that the defects in road portion after Laying of utility are corrected.
- 4. I will notify / forfeit the BG for claims for damages done / disruption in working, if any.
- 5. I will ensure that proposed permission in entered in the register of records.
- 6. The record of previous approval, if any has been considered and copy of same is enclosed with the proposal.

Assistant Executive Engineer (R&B) N.H. SECTION
MADANAPALLE

Deputy Executive Engineer
(R&B) N.H. SUB - DIVISION
MADANAPALLE

EXECUTIVE ENGINEER
(R & B) N.H. Division
CHITTOOR.

Superintending Engineer (R & 3) NH Circle, Anantapuramu.

### **SPECIFICATION REPORT**

Specification report to accompany the estimate towards licence fee for laying OFC along NH-42 from Km 228/600 to Km 242.600 (RHS) for the total length of 14000 Mts in Chittoor District of Andhra Pradesh under (R&B) NH Division, Chittoor.

### **Estimate Amount:**

License Fee: Rs.1,28,205/- Bank Guarantee: Rs.14,00,000/-

The Authorized signatory of Telesonic Networks Limited, has requested to accord permission for laying OFC along NH-42 from Km 228/600 to Km 242.600 (RHS) for the total length of 14000 Mts in Chittoor District of Andhra Pradesh under (R&B) NH Division, Chittoor.

The Land rates have been obtained from official website of registration & Stamp department, Government of Andhra Pradesh and copy of the same is attached herewith.

Further, the license fee and Bank Guarantee amount have been worked out as per the MoTR&H circular memo. No. RW/NH/330044/2015/S&R(R), Dt:22.11.2016.

Assistant Executive Engineer (R&B) N.H. SECTION MADANAPALLE

Deputy Executive Engineer (R&B) N.H. SUB - DIVISION MADANAPALLE

EXECUTIVE ENGINEER (R & B) N.H. Division CHITTOOR.

Superintending Engineer (R & 3 ) NH Circle, Anantapuramu.

### ANNEXURE - I

## Calculation of License Fees & Bank Guarantee Amount

Proposal for granting of permission for Telecom Cables/OFC/ducts along Uravakonda Krishnagiri Section of NH-42 road from Km 228.600 to Km 242.600 (RHS) for the total length of 14000mts in Chittoor District of Andhra Pradesh under the Jurisdiction of R&B, NH Division, Chittoor.

From Km 228.600 to Km 242.600 (RHS) in Chittoor District under limits of R&B NH-Sub-division Madanapalle.

Amount Re	Rs. mar	৯		V 3/10 DD	20:01:01	157,035.00	414,410.00	25,126.00		176,137.00		777,057.00	6,475.00	388,500	128,205
Prevailing Circle	rate of Land in	Rs./Sq.Mtrs. (Rate per	Acre/4046.86)	108 7753	2071001	314.0707	627.8942	314.0707		1,467.8047					
Prevailing Circle	rate	of Land in Rs./Acre (As per Revenue	Records)	00 000 000	20:000/01+	1,271,000.00	2,541,000.00	1,271,000.00		5,940,000.00					¥
Prevailing Circle	rate of Land in	Rs./Sq.Mtrs. (Rate per yard x	0.836127)			1	1.			1					<(s
Prevailing Circle rate	of Land in Rs./Sq.	yard (As per Revenue	Records)	J		I	ı			1					nse Fees payable by M/s Telesonic Network Ltd. for Laying of Public Utility Service (Telecom Cable (For Public Utility 33% of Industrial Utilities as per point No. 5 of MoRTH gude lines vide letter No.
Utilized NH	Land Area	Sq. Mtrs.		00.00	Point	200.00	00.099	80.00		120.00			(10*12)	0x12x5	ublic Utility S MoRTH gude
Width	Mtrs.		ı	ç	110	0.1	0.1	0.1		0.1		nt	77057.00/	rs = 6475.0	Laying of F nt No. 5 of
Length	route	Mtrs.		400	2	5,000	009'9	800		1,200	14,000	Total Amount	/month) =7	s for 5 yea	rk Ltd. for as per poi
Chainage	to	Ē		טטס פרנ	253.000	234.000	240.600	241.400		242.600		Ţ	License Fees (Rs./month) =777057.00/(10*12)	Total License Fees for 5 years = 6475.00x12x5	sonic Networ
Cha	from	æ		228 500	77777	229.000	234.000	240.600		241.400			Licer	Tota	by M/s Tele 33% of Indus
Name of Village	0.40			Kotavooru	Kurabalakota	( Agricultural Land)	Angallu (Agricultural Land)	Thettu( Agricultural Land)	Banda meeda kamma palle	( Agricultural Land)					Total License Fees payable by M/s Telesonic Network Ltd. for Laying of Public Utility Service (Telecom Cables)> (For Public Utility 33% of Industrial Utilities as per point No. 5 of MoRTH gude lines vide letter No.
ı.;	Š.	7		н	2		m	4	r2						

Performance Bank Guarantee Amount calculation

Amount of Performance Bank Guarantee to be submitted = Total No. of route meters x Rs. 100/- per route meter (<= 300 mm dia/width) 1,400,000 = 1400000.00/-14,000 × Rs. 100/- =

Performance Bank Guarantee Amount =Rs:

Superintending Engineer (R & 3 ) NH Circle, Anamaburamu.

(R&B) N.H. SECTION MADANAPALLE

Deputy Executive Engineer
R&B) N.H. SUB - DIVISION
MADANAPALLE

EXECUTIVE ENGINEER
(R & B) N.H. Division
CHITTOOR.

### **CHECK-LIST**

Guidelines for processing the proposal for laying of utility line in the land along National Highways vested with NHAI/PWD/BRO.

SI. No.	Item	Information/ Status	Remarks	7
1	General Information			-
1.1	Name and Address of the Applicant/Agency	Telesonic Networks Limited, 1-8- 437, 438, 364 & 445, Splendid Towers, Opp. Begumpet Police Station, Hyderabad-500016.		
1.2	National Highway Number	NH-42		
1.3	State	Andhra Pradesh		
1.4	Location	Kandlamadagu to Madanpalli		
1.5	(Chainage in km.)	Km.228.600 to Km.242.600 (RHS)		
1.6	Length in Meters	14000 Meters		
1.7	Width of available ROW			-
	(a) <u>Left side</u> from center line towards increasing chainage/ km direction	15 Meters		
	(b) Right side from center line towards increasing chainage/ km direction	15 Meters		
1.8	Proposal to lay the utility			
	(a) Left side from center line towards increasing chainage/km directions	NA		
	(b) Right side from center line towards increasing /km direction	Km.228.600 to Km.242.600		
1.9	Proposal to acquire land			
	a) left side from center line	NA		
	b) right side from center line	NA NA		-
1.10	Whether proposal is in the same side where land is not to be acquired	NA		
	If not then where to lay the cable			
1.11	Details of already laid services, if any, along the proposed route	NA		
1.12	Number of existing lanes (2/4/6/8 lanes)	2 lane		
1.13	Proposed Number of lanes (2 lane with paved shoulders/4 /6/8 lanes)	NA		
1.14	Service road existing or not	No		
	If yes then which side			
	(a) Left side from center line	NA		de
4 - 5	(b) Right side from center line	NA		VX X
1.15	Proposed Service road		1	18/18
	(a) Left side from center line	No Proposed service road	EVECUA	INE E
1.10	(b) Right side from center line	No Proposed service road	EXECUT	INFF
1.16	Whether proposal to lay utility is after the service road or between the service road and	NA	( <del>B &amp; B)</del>	N.H.

Assistant Executive Engineer (R&B) N.H. SECTION MADANAPALLE

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1.17	Whether carrying of sewage/OFC has been proposed on highway Bridges.	No, Utility (OFC) not proposed on Bridges.	
	If yes, then mention the methodology proposed for the same.		
1.18	Whether carrying of sewage/OFC has been proposed on the parapet/any part of the Bridges.  If yes, then mention the methodology proposed for the same.	No, Utility (OFC) not proposed on the parapet/any part of the Bridges.	
1.19	If Crossing of the Road involved If Yes, it shall be either encased in pipes or through structure or conduits specially built for that purpose at the expense of the agency owning the line	No crossing	
	a) Whether the existing drainage structures are allowed to carry the OFC	No	
	b) Is it on a line normal to NH	No	
	c) What is the distance of crossing the utility OFC from the existing structures?  Crossings shall not be too near the existing structures on the National Highway, the minimum distance being 15 meter.	Not Applicable	
	d) The casing pipe (or conduit pipe in the case of electric cable) carrying the utility line shall be of steel, cast iron or reinforced concrete and have adequate strength and be large enough to permit ready withdrawal of carrier pipe/cable Mention type of casing.	Not Applicable	
	e) Ends of the casing/conduit pipe shall be sealed from the outside, so that it does not act as a drainage path	Not Applicable	
	f) The casing/conduit pipe should be as minimum extend from drain to drain in cuts and toe of slope in the fills.	Not Applicable	
	g) The top of the casing/conduit pipe should be at least 1.5 meter below the surface of the road subject to being at least 0.3 m below the drain inverts. Mention the proposed details	Not Applicable	
	h) Mention the methodology proposed for crossing of road for the proposed sewage/OFC.  Crossing shall be by boring method (HDD) (Trenchless Technology), specially where the existing road pavement is of cement concrete or dense bituminous concrete type	Not Applicable	
	i) The casing/conduit pipe shall be installed with an even bearing throughout its length and in such a manner as to prevent the formation of a water way along it	Not Applicable	EXECUTIVE ENGINE
2	Document/Drawings to be enclosed with the		(R & B) N.H. Division CHITTOOR.

Assistant Executive English N.H. SECT

Assistant Executive Engineer

(R&B) N.H. SECTION (R&B) N.H. SUB - DIVISION

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2.1	Cross section showing the size of trench for open trenching method	Not Applicable		
	Is it normal size of 1.5m deep x 0.3 m wide	Not Applicable		
	i) should not be greater than 60 cms wider	Not Applicable		
	than the outer diameter of the pipe	Not Applicable		
	ii) located as close to the extreme edge of the			
	Right of Way as possible but not less than 15m	Not Applicable		
	from the center line of the nearest carriageway	Not Applicable		
	iii) shall not be permitted to run along the		-	
	National Highways when the road formation is	Not Applicable		
	situated in double cutting nor shall these be			
	laid over the existing culverts and bridges			
	iv) These should be so laid that their top is at	Not Applicable		
	least 0.6m below the ground level so as not to	, and the production		
	obstruct drainage of the road land			
2.2	Cross section showing the size of pit and			
	location of cable for HDD method	HDD Cross section enclosed		
2.3	Strip plan / Route Plan showing utility/OFC			
	chainage, width of ROW, distance of	Strip plan showing all the details is		
	proposed pipe line from the edge of ROW,	enclosed		
	important mile stone, intersections, cross			
2.4	drainage works etc.			
2.4	Methodology for laying of the OFC	Enclosed- HDD method only		
2.4.1	Open trenching method (may be allowed in			
	utility corridor only where pavement is neither	Not Applicable		
	cement concrete nor dense bituminous			
	concrete type)			
	If yes, what is the methodology of refilling the trench			
	tiench			
	a) The trench width should be at least 30			
	cms, but not more than 60 cms. wider	Not Applicable		
	than the outer diameter of the pipe	Not Applicable		
	b) For filling of the trench, Bedding shall			
	be to a depth of not less than 30 cms.			
	It shall consist of granular material,			
	free of lumps, clods, cobbles and	Not Applicable		
	graded to yield firm surface without			
	sudden change in the bearing value.			
	Unsuitable soil and rock edges should			
	be excavated and replaced by			
	selected material.			
	c) The backfill shall be completed in two			
	stages- i) side fill to the level of the	Not Applicable		
	top of the pipe and ii) overfill to the			
	bottom of the road crust			

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Assistant Executive Engineer (R&B) N.H. SECTION MADANAPAL E

Deputy Executive Engineer (R&B) N.H. SUB - DIVISION MADANAPALLE

EXECUTIVE ENGINEER
(R & B) N.H. Division
CHITTOOR.

### **CHECK-LIST**

	d) The side fill shall consist of granular		
	material laid in 15 cms. Layers each		
	consolidated by mechanical tampering		
	and controlled addition of moisture to	Not Applicable	
	95% of the proctor density. Overfill	47	
	shall be compacted to the same		
	density as the material that has been		
	removed. Consolidation by activation		
	removed. Consolidation by saturation		
	or ponding will not be permitted.		
	e) The road crust shall be built to the		
	same strength as the existing crust on	Not Applicable	
	either side of the trench. Care shall be		
	taken to avoid the formation of a dip		
	at the trench.		
	f) The excavation shall be protected by		
	flagman, Signs and barricades and red	Alan As all III	
		Not Applicable	
	lights during night hours.		
	g) If required a diversion shall be		
	constructed at the expense of agency	Not applicable	
	owing the utility line.		
2.4.2	Horizontal Directional Drilling (HDD) Method	Details provided in Methodology of	
		Laying.	
2.4.3	Methodology for laying of the OFC through CD	////6	
	works and method of laying	Yes, Methodology of OFC laying	
	In cases where the carrying of OFC on the	attached.	
	bridge becomes inescapable	attached.	
3	Draft License Agreement signed by two	Enclosed	
	witnesses		
3.1	The License fee estimate as per Ministry's		
	guidelines issued vide circular No.	Enclosed	
	RW/NH/33044/29/2015/S&R dated 22-11-2016	Liiciosed	
4	Whether Performance Bank Guarantee as per	Voc Englaced	
	Ministry guidelines issued vide circular No.	Yes, Enclosed	
	RW/NH/33044/29/2015/S&R dated 22-11-2016		
	is obtained		
1.1			
4.1	Confirmation of BG has been obtained or not	Confirmation of BG shall be	
	as per MoRTH/NHAI guidelines	obtained after BG submission by	
		M/s Telesonic Networks Ltd	
5	Affidavit/Undertaking from the Applicant for		
	following is to be furnished		
5.1	Undertaking for not to damage any other		
	utility, if damaged then to pay the losses either	Yes, Enclosed	
	to NHAI or to the concerned agency	res, Effclosed	
5.2			
3.2	Undertaking for Renewal of Bank Guarantee as	Yes, Enclosed	
5.3	and when asked by MoRTH/NHAI		
5.3	Undertaking for confirming all standard	Yes, Enclosed	
	Undertaking for confirming all standard conditions of Ministry/NHAI's guidelines	Yes, Enclosed	
5.3 5.4	Undertaking for confirming all standard conditions of Ministry/NHAI's guidelines Undertaking for Indemnity against all damages	Yes, Enclosed Yes Enclosed	
	Undertaking for confirming all standard conditions of Ministry/NHAI's guidelines		
	Undertaking for confirming all standard conditions of Ministry/NHAI's guidelines Undertaking for Indemnity against all damages and claims	Yes Enclosed	
5.4	Undertaking for confirming all standard conditions of Ministry/NHAI's guidelines Undertaking for Indemnity against all damages and claims Undertaking for management of traffic		
5.4	Undertaking for confirming all standard conditions of Ministry/NHAI's guidelines  Undertaking for Indemnity against all damages and claims  Undertaking for management of traffic movement during laying of utility line without	Yes Enclosed	
5.4	Undertaking for confirming all standard conditions of Ministry/NHAI's guidelines  Undertaking for Indemnity against all damages and claims  Undertaking for management of traffic movement during laying of utility line without hampering the traffic	Yes Enclosed Yes Enclosed	ı
5.4	Undertaking for confirming all standard conditions of Ministry/NHAI's guidelines  Undertaking for Indemnity against all damages and claims  Undertaking for management of traffic movement during laying of utility line without hampering the traffic  Undertaking that if any claim is raised by the	Yes Enclosed	EXECU
5.4	Undertaking for confirming all standard conditions of Ministry/NHAI's guidelines  Undertaking for Indemnity against all damages and claims  Undertaking for management of traffic movement during laying of utility line without hampering the traffic  Undertaking that if any claim is raised by the Concessionaire/contractor then the same has	Yes Enclosed Yes Enclosed	
5.4 5.5 5.6	Undertaking for confirming all standard conditions of Ministry/NHAI's guidelines  Undertaking for Indemnity against all damages and claims  Undertaking for management of traffic movement during laying of utility line without hampering the traffic  Undertaking that if any claim is raised by the Concessionaire/contractor then the same has to be paid by the applicant	Yes Enclosed Yes Enclosed	(R & B
5.4	Undertaking for confirming all standard conditions of Ministry/NHAI's guidelines  Undertaking for Indemnity against all damages and claims  Undertaking for management of traffic movement during laying of utility line without hampering the traffic  Undertaking that if any claim is raised by the Concessionaire/contractor then the same has	Yes Enclosed Yes Enclosed	EXECU (R & B

(R&B) N.H. SECTION MADANAPALLE

Deputy Executive Engineer (R&B) N.H. SUB - DIVISION MADANAPALLE

N.H. Division

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	of installation, shifting or repairs, or alterations		
	to the utility located in the National Highway	_	
	Right of Ways.		
5.8	Undertaking that expenditure if any incurred		
	by NHAI for repairing any damage caused to	Yes Enclosed	
	the NH by laying, maintenance or shifting of		
	the utility line will be borne by the applicant		
	agency owning the line.		
5.9	Undertaking that text of the License deed is as		
	per verbatim of format issued by MoRTH vide	Yes Enclosed	
	circular No. RW/NH/33044/29/2015/S&R dated		
	22-11-2016		
5.10	Undertaking that the applicant has obtained		
	various safety clearances from the respective		
	authorities such as Directorate of Electricity,	Not Applicable as the Utility line	
	Chief Controller of Explosives, Petroleum and	proposed is OFC.	
	Explosive Safety Organization, Oil Industry	proposed is or c.	
	Safety Directorate, state/central pollution		
	control board and any other statutory		
	clearances as applicable, before applying to		
	Highway Administration.		
5.11	If the MoRTH/NHAI considers it necessary in		
	future to move the utility line for any work of	Yes, enclosed	
	improvement or repairs to the road, it will be	res, enclosed	
	carried out as desired by the MoRTH/NHAI at		
	the cost of the Agency owning the utility line		
	within a reasonable time (not exceeding 60		
	days) of the intimation given.		
5.12	Certificate from the applicant in the following		
	format		
	i) Laying of OFC will not have any deleterious		
	effects on any of the bridge components and	Enclosed	
	roadway safety for traffic	Eliciosed	
	Total and Total		
	ii) We do undertake that I/we will relocate		
	service road/approach road/utilities at my/our	Enclosed	
	own cost notwithstanding the permission	Liicioseu	
	granted within such time as will be stipulated		
	by NHAI for future six laning or/any other		
	development.		
6	Who will sign the agreement on behalf of OFC		
	line agency?	Manager Telescois N	
		Manager, Telesonic Networks Ltd.,	
	available or not	Copy of Power of Attorney enclosed.	
7	The Project Director shall submit the following		
	Certificates		
7.1	Certificate that the proposal is confirming to all		
	standard conditions issued vide MoRTH circular	realess)	
	No. RW/NH/33044/29/2015/S&R dated 22-11-	Enclosed	
	2016		
7.2	Certificate from the PD in the following format		
	i) "it is certified that any other location of the		0
	OFC would be extremely difficult and		V
	unreasonably costly and the installation of OFC	Enclosed	alul.
	l serithin Data serit man all the contract		
	within RoW will not adversely affect the		///
	design, stability and traffic safety of the		-
	design, stability and traffic safety of the highway nor the likely future improvement		EXECUTIVE ENGINE
	design, stability and traffic safety of the		-

Assistant Executive Engineer (R&B) N.H. SECTION MADANAPALLE

Deputy Executive Engineer
(R&B) N.H. SUB - DIVISION
MADANAPALLE

# [Enclosur Ministry Circular No. RW/NH-33044/27/2015-S&R(R) 9d 22.11.2016] Format for Maintaining Records of Right-of-Way permission granted for laying OFC

(to be maintained separately for every NH and State)

Andhra Pradesh

Name of Agency Name of State

NH Number

က

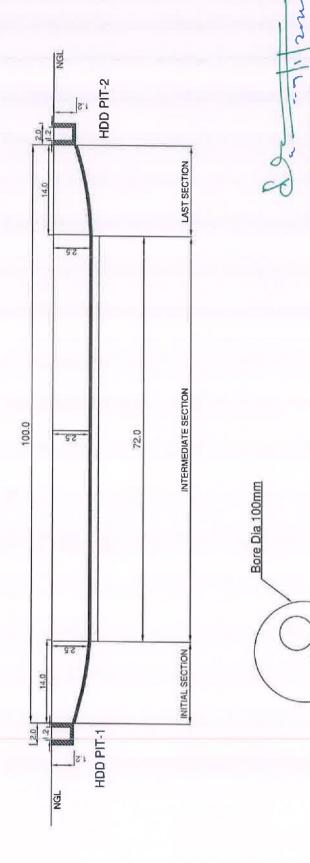
: NH R&B, Chittoor

: NH-42

Жs	
Remarks	
Any deviation from MOST standard norms	<u>o</u>
Date of last inspectio n of site	
Date of Date of signing of validity of agreement	
Date of signing of agreement	
Kind of Name of license and contact service address	Telesonic Networks Ltd, 1-8-437,438,364 & 445, Splendid Towers Opp. Begumpet Police Station, Hyderabad-500016
Kind of service	Telecom
Section and reach	Kandlamadagu to Madanpalli
Left or right side of NH (towards increasing chainage/km direction	RHS
Location (change in Km)	Km.228.600 to Km.242.600
S.No	<del></del>



## Typical Cross Sectional For HDD



(R & 3 ) NH Circle, Anantapuramu Superintending Engineer

AN SELVE Many Deputy Executive Engineer Assistant Executive Engine R. R. B. N. H. SUB - DIVISION MADANAPALLE

40mm HDPE Duct

TD.

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(R & B) N.H. Division EXECUTIVE ENGINEER CHITTOOR.

### Methods:

- Trench less technology by Horizontal Directional Drilling (HDD) Method
- Crossings

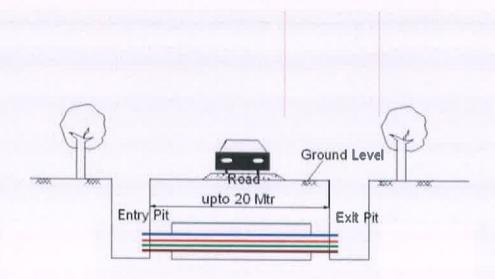
### Installation of OFC Ducts by Trenchless Techniques (e.g. by HDD)

For the process of HDD excavation of only 2 pits each of standard size 1X1X1.65M is required which is called Entry pit and exit pit. Pit size may vary based on the site condition. The first stage drills a pilot hole on the designed path, and the second stage (reaming) enlarges the hole by passing a larger cutting tool known as the reamer. The reamer's diameter depends on the size of the duct (HDPE duct in our case) to be pulled back through the bore hole. The driller increases the diameter according to the outer diameter or the conduit and to achieve optimal production. The third stage places the Duct (2 ducts of 40mm dia each) in the enlarged hole by way of the drill stem; it is pulled behind the reamer to allow cantering of the Duct in the newly reamed path. Pit size may vary based on site condition. Entry and exit pits shall be dug at both ends of the segment which shall later on become either a location for man-hole/hand-hole. The drilled hole profile between entry and exit pits (except transition areas) shall be as straight as possible.

### High Ways/Roads/Railway/Bridge Crossings

Highways /Roads/railway crossings may be crossed by trenchless technique (HDD/Mouling) appropriate / approved by the authorities (refer typical sketches below). Moiling method is generally not suitable for crossing width of more than 20 meters. For such crossings only HDD should be used when trenchless technique only is approved by authorities.





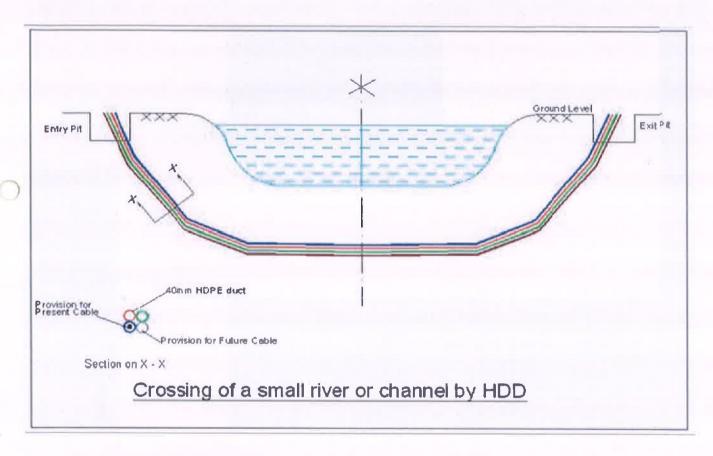
SINGLE ROAD CROSSING BY MOILING / BORING

### **Water Body Crossing**

Water bodies and other natural obstructions can be crossed by open-cut method, trenchless techniques. In all cases, installation technique shall be such that protection of HDPE ducts is ensured. Necessary protection should be provided.



Pit size of HDD will be 1.5X1.5X1.65m depth



### Crossing by Open-cut method

- Open cut method is used when installation on bridge / culvert is not available. This method however is more suited to seasonal water bodies (prone to flowing water such as nala/ stream/ river/ canal etc.) which may be completely / partially dry during installation period. This method can also be used for small water bodies where it is possible to divert water for a short period of installation.
  - ii In case there is only one Hume pipe up to 600mm dia used as a culvert to equalise the water level on both side of road. The duct can be laid at a min depth of 1.65 m without any protection for more than one 600mm dia and all sizes of Box-culverts, ducts shall be installed as clause iii) below
  - iii In Case the water body bed is not rocky (i.e. normal soil is present), a trench 2.0 meter below the bottom of culvert bed shall be dug out and DWC pipe of suitable size shall be installed inside the trench. In case the bed is rocky then minimum depth of trench shall be 1.5 m. 50mm thick sand padding (covering highest point on the trench bottom



surface) shall be provided before installing DWC pipe.

### **Route Markers**

Route markers made of RCC (1:2:4) shall be provided at a distance of every 250 meters or wherever there are crossings or major deviation in the route from being straight. Additionally route markers shall be installed on both sides of the crossing. Route markers shall also be put at duct coupler locations and man-hole and Handhole locations. Markers shall be of length 1250 mm with base of 100 mm x 250 mm tapering to 100 mm x 200 mm. Name/logo of Owner shall be engraved on the surface of marker. Aboveground surface of route marker shall be painted in Blue colour. Route Markers placed at coupler locations shall be painted yellow. Markers placed at the man-holes shall be painted red in colour. Owner name/logo shall be filled with fluorescent white.

### Man Holes/Hand holes

Size of Manholes made of RCC is 1.0m dia and depth 1.1m depth. They will be placed 500mm below GL and will be placed each at 1.0Km distance.

Note: Trenchless technology will be used (e.g.: HDD) wherever available ROW is restricted/Built up areas and utility corridors cannot be conveniently earmarked.



