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पाइपलाइन प्रभाग  
Pipelines Division

## इंडियन ऑयल कार्पोरेशन लिमिटेड

दक्षिणी क्षेत्र पाइपलाइन्स

हाउस ऑफ फोर फ्रेम्स

6/13, व्हीट क्रॉफ्ट रोड, नुंगम्बक्कम, चेन्नै-600 034

टेलीफोन : 044-2824 3103 / 169 / 181

फैक्स : 044-2824 3121 / 3122 / 3123

**Indian Oil Corporation Limited**

Southern Region Pipelines

House of Four Frames

6/13, Wheat Croft Road, Nungambakkam, Chennai - 600 034

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IndianOil

SRPL/ENTMBPL/G-I/18

Date: 02.04.2019

The Project Director,  
Salem Main Road  
Near KAKC Petrol Bunk  
Krishnagiri - 635 001.

**Sub:** Permission for laying Ennore - Thiruvallur - Bengaluru - Pondicherry - Nagapattinam - Madurai - Tuticorin R-LNG Pipeline along with OFC (Optical Fiber Cable) across NH-04 <sup>at</sup> between NH Chainage ~~54.038~~ Km & ~~55.000~~ Km near Budanur Village, Sriperumbudur Taluk, Kancheepuram District by Horizontal Directional Drilling method (HDD)

Ref: 1. IOCL Letter Ref: SRPL/ENTMBPL/G-I/18 dated 31.05.2018  
2. NHAI Letter Ref: NHAI/11013/Access Permission/2018/PIU-K'giri/1530 dated 03.10.2018

Dear Sir,

Vide reference letter No.1, an application was submitted to your good office seeking crossing permission for laying Natural Gas pipeline across NH - 04 at NH Chainage 48.038 Km near Budaur Village, Sriperumbudur Taluk, Kancheepuram District by Horizontal Directional Drilling method (HDD).

Subsequent to the joint site inspections with your officials, a communication vide reference letter No. 2 was received at our office. We have been informed that as per Concession Agreement a Bridge with box culverts was proposed at Km 48/00 onwards and hence we were requested to explore the feasibility of alternate alignment considering the proposed Minor Bridge.

Upon receipt of your communication, we have assessed the feasibility of alternate alignment at the proposed pipeline crossing location. We would like to bring to your notice that the RoW for laying pipeline has already been acquired as per the Petroleum & Minerals Pipeline Act 1962 and a pipeline (Chennai - Trichy - Madurai Product Pipeline) has already been laid in the acquired RoU and are operational for more than 15 years.

Now, Indian Oil is in the process of laying a Natural Gas pipeline from Ennore to Madurai Via Trichy in the available RoW. The proposed pipeline traverses across NH - 04 between Chainage 48.038 Km by Horizontal Directional Drilling Method (HDD) and your good office has intimated that a minor box culverts are proposed at chainages 48 Km and 48.126Km.

The pipeline alignment falls approx.38 metres (Min.) away from the proposed minor bridge and will not foul the upcoming NHAI structure. It is also pertinent to mention that the pipeline is proposed to be laid through Horizontal Directional Drilling method which is trenchless method and also the depth of the pipeline below the NH facility will be greater than 10 metres.

Satish  
02/04/2019  
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पंजीकृत कार्यालय : इंडियन ऑयल भवन, जी-9, अली यावर मार्ग बांद्रा (पूर्व), मुम्बई - 400 051, महाराष्ट्र (भारत)  
Regd Office : Indian Oil Bhavan, G-9, Ali Yavar Jung Marg, Bandra (East), Mumbai-400 051 Maharashtra (India)  
CIN - L23201MH1959GOI011388

The pipeline can be laid only in the already acquired RoU and realignment of the pipeline is not feasible in the crossing location, as the area adjoining to the pipeline RoU has already been converted into plots/houses. It is also pertinent to mention that the Tamilnadu Govt. have advised to maximize the utilization of existing RoW only for laying of Pipeline.

We hereby request you to kindly consider the proposal in its original form as such and to accord us with crossing permission for laying the natural gas pipeline along with Optical Fiber Cable (OFC) across National Highway - 04 under your jurisdiction.

We also wish to have a joint meeting at your Office for finalization of the scheme at that location. It is kindly requested to intimate the convenient time and date for joint meeting please.

Thanking you,

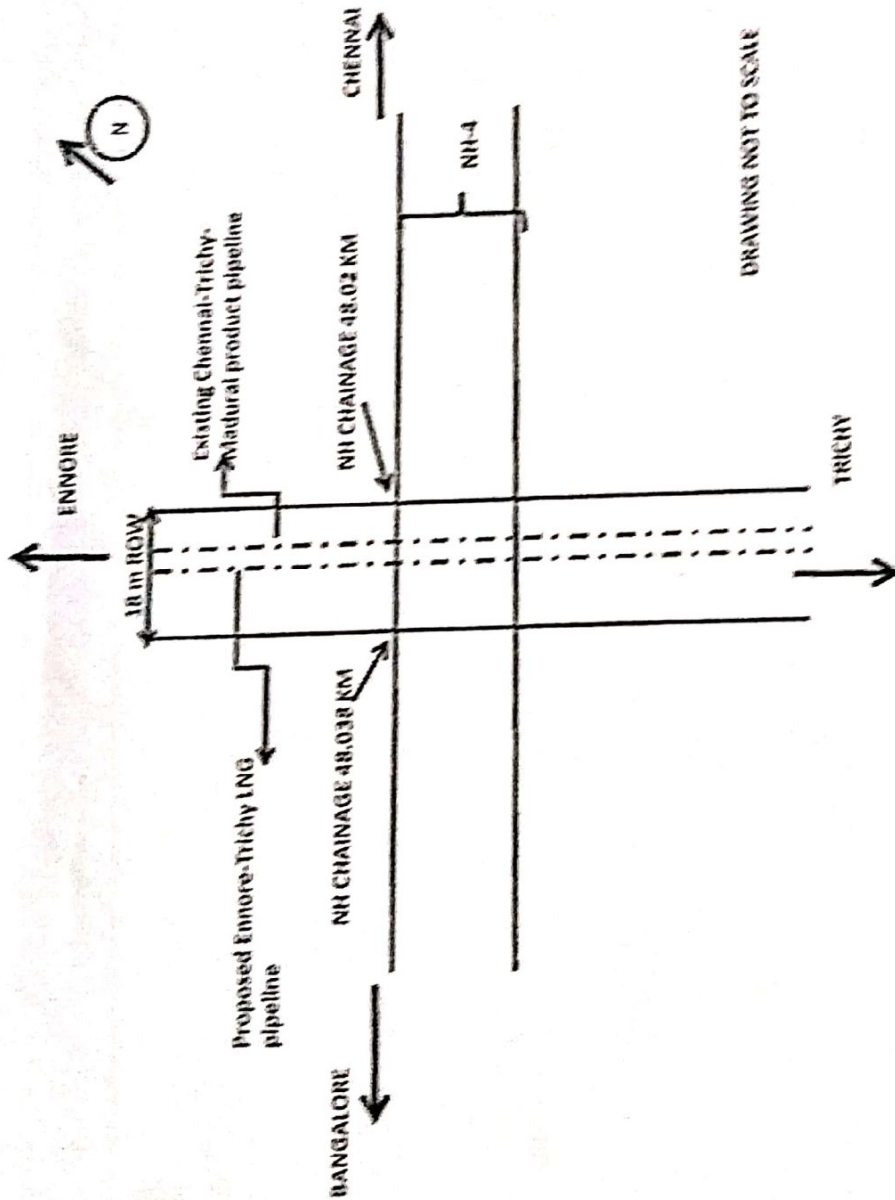
Yours faithfully,

*Satish* 82/04/2019  
(K.V.V. Satish Kumar)  
Chief Construction Manager





# KEY PLAN FOR NH-04 CROSSING



DRAWING NOT TO SCALE

IOCL PIPELINE ROW CROSSES NH 4 BETWEEN CHAINAGES 48.020 KM AND 48.038 KM

*Sd/-*



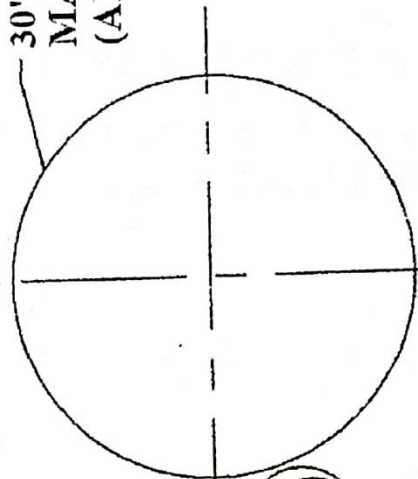
TOP OF THE ROAD



TOP OF THE SUBGRADE

7.0 m (MIN)

30" OD X 0.812" WT  
MAINLINE PIPE  
(API 5L X-70, 3LPE COATED)



89MM (OD) SCH.80  
MS PIPE

40 MM(OD) HDPE

OFC CABLE



*S. S. S.*

### SECTION A-A

NAME OF THE PROJECT	ETBPMPL R-LNG PIPELINE PROJECT
OWNER	INDIAN OIL CORPORATION LIMITED, PIPELINES DIVISION, NOIDA
TITLE	CROSS SECTION



Check list for getting approval for laying of R-LNG Pipeline along with OFC cable across NH04

National Highways permission for 1.Laying of 30" R-LNG line across the Nh-04 chainage 48.038Km at Budanur village of Sriperambudur taluk of kanchepuram district by trenchless method (HDD).

1.0	General information:	
1.1	Name and Address of the Applicant	Chief Construction Manager , Indian Oil Corporation Ltd, 6/13 Wheatcrofts road, Nungambakkam, Chennai-34.
1.2	National Highway Number	NH 04
1.3	State	Tamil Nadu
1.4	Location	NH 04 in between Chennai and Bengaluru
1.5	Chainage in Km.	48.038Km
1.6	Length in Meters	-
1.7	Width of available NHA ROW	39.20 mtrs.

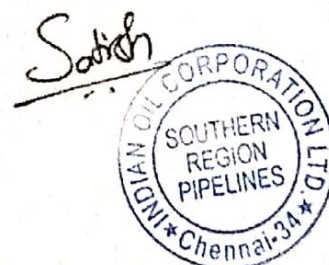


1.8	Proposals to lay the pipeline	Laying of 30" R-LNG line across the Nh-04 at chainage 48.038Km
	(a) Left side from centre line towards increasing chainage/ Km direction	-
	(b) Right side from centre line towards increasing chainage/ Km direction	-
1.9	Proposal to acquire land	
	(a) Left side from centre line	No Acquisition
	(b) Right side from centre line	No Acquisition
1.10	Whether Proposal is in the same side where land is not to be acquired	NA.
	If Not , then where to lay the pipe line	NA.
1.11	Details of already laid services, if any along the proposed route	Existing IOCL pipeline
1.12	Number of lanes (2/4/6/8 lanes) existing	-
1.13	Proposed number of lanes( 2 lane with paved shoulders /4/6/8 lanes )	NA.
1.14	Service road existing or not	NA
	If yes, then which side	NA
	(a) Left side from centre line	NA
	(b) right side from centre line	NA
1.15	Proposed service road	
	(a) Left side from centre line	NA
	(b) Right side from centre line	NA
1.16	Whether proposal to lay pipe line is after the service road or between the service road and main carriageway	NA
1.17	The permission for laying pipe line shall be consider for approval / rejection	The proposed project is of national importance to evacuate the R-LNG product from the upcoming import terminal at Ennore to various anchor customers across Tamilnadu.
(a)	Carrying of pipe line bridges shall not be permitted as Furness / gases pipes can accelerate the process of corrosion or may cause explosion, thus being much more injurious than leakage of water	NA
(b)	Carrying pipe line lines on bridges shall also be discouraged. However, if the water supply authorities seem to have no other viable alternative and approach the highway authority well in time before the design of bridges is finalized , the way may be permitted to carry the	NA



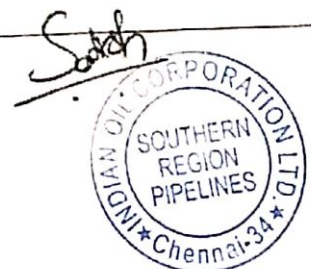


1.8	Proposals to lay the pipeline	Laying of 30" R-LNG line across the Nh-04 at chainage 48.038Km
	(a) Left side from centre line towards increasing chainage/ Km direction	-
	(b) Right side from centre line towards increasing chainage/ Km direction	-
1.9	Proposal to acquire land	
	(a) Left side from centre line	No Acquisition
	(b) Right side from centre line	No Acquisition
1.10	Whether Proposal is in the same side where land is not to be acquired	NA.
	If Not , then where to lay the pipe line	NA.
1.11	Details of already laid services, if any along the proposed route	Existing IOCL pipeline
1.12	Number of lanes (2/4/6/8 lanes) existing	-
1.13	Proposed number of lanes( 2 lane with paved shoulders /4/6/8 lanes )	NA.
1.14	Service road existing or not	NA
	If yes, then which side	NA
	(a) Left side from centre line	NA
	(b) right side from centre line	NA
1.15	Proposed service road	
	(a) Left side from centre line	NA
	(b) Right side from centre line	NA
1.16	Whether proposal to lay pipe line is after the service road or between the service road and main carriageway	NA
1.17	The permission for laying pipe line shall be consider for approval / rejection	The proposed project is of national importance to evacuate the R-LNG product from the upcoming import terminal at Ennore to various anchor customers across Tamilnadu.
(a)	Carrying of pipe line bridges shall not be permitted as Furness / gases pipes can accelerate the process of corrosion or may cause explosion, thus being much more injurious than leakage of water	NA
(b)	Carrying pipe line lines on bridges shall also be discouraged. However, if the water supply authorities seem to have no other viable alternative and approach the highway authority well in time before the design of bridges is finalized , the way may be permitted to carry the	NA



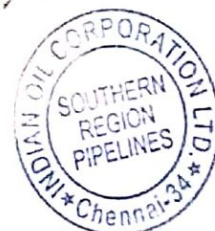


	pipe line on independent superstructure, supported on extended portion of piers and abutments in such a manner that in the final arrangement enough free space around the super structure of the bridge remains available for inspection and repairs, etc. ,	
(c)	Cost of required extension of the substructures as well as that of the supporting super structure shall be borne by the agency -in-charge of the utilities	NA
(d)	Services are not being allowed indiscriminately on the parapet and part of the bridges, safety of the bridges has to be kept in view while permitting various services along the bridge. Approvals are to be according in this regard with the concurrence of the ministry's project chief engineers only	NA
1.18	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	Crossing through trenchless method (HDD)
(a)	Existing drainage structure shall not be allowed to carry the lines	Yes
(b)	Is it on a line normal to NH	yes
(c)	Crossing shall not be too near the existing structures on the national highways, the minimum distance being 15 m. what is the distance from the existing structures?	No structures
(d)	The casing pipe ( or conduit pipe in the case of electric cable) carrying utility line shall be steel, cast iron or reinforcement cement concrete and have adequate strength and be large enough to permit repay withdrawal of the carrier pipe / cable	No casing pipe is required as the pipeline is being laid through HDD method
(e)	Ends of the casing / conduit pipe shall be sealed from outside, so that it does not act as a drainage path	NA
(f)	The casing / conduit pipe should as minimum extend from drain to drain in cuts and toe of slope in the fills	NA
(g)	The top of the casing / conduit pipe should be at least 1.6 meters below the surface of the road subjected to being at least 0.3 m below drain	NA





	inverts	
(h)	Crossing shall be by boring method(HDD specially where the existing road pavement is cement concrete dense bituminous concrete type)	Pipeline is laid across the NH through HDD method
i)	The casing / conduit pipe shall be installed with an even bearing throughout its length in such a manner as to prevent the formation of water way along it	No casing pipe is being installed
	i) Whether the ROW is more than 45 m then the duct cable shall be laid at the edge of the Right of Way within the utility corridor 2m width , duly keeping in view the future widening	-
	ii) Where the land is at to be acquired for 4 lining and the position of new carriageway has been decided then the cable shall be laid at the edge of Right of Way within the utility corridor of 2m width, on that side of existing carriageway where extra land is not proposed to be acquire for 4 lining	-
	iii) Where the widening plan for 4 lining is not yet decided and available ROW is around 30 m or less, a judicious decision would need be taken for permitting the laying of cable or duct. This could be within 1.5 m to 2.0 m of the utility corridor at the edge of existing ROW, duly keeping in view the possible widening plans.	- -
	iv) Where the ROW is restricted and adequate only to accommodate the carriageway, central verge, shoulders and drains (e.g. highways in cutting through hilly/ rolling terrain ), the cable shall be laid clear of the drain	-
	v) Where land strips for utility corridor cannot be conveniently earmarked( available ROW restricted to the toe of the embankment) for laying pipe line the permission may be refused	No land acquisition
1.19	Number of applicants on the same stretch	-
1.20	Whether the case of multiple licenses	NA
1.21	If so furnish a joint implementation program to lay their respective ducts within stipulated time frame	NA
	i) If crossing of the road involved, if yes it	Yes through HDD method





	shall only be through trench-less technology.	
2	Documents/ Drawing enclosed with the proposals	Yes
2.1	Cross section showing the size of trench for open trenching method. (Is it normal size of 1.6 m deep X 0.5 m wide)	Through HDD method (trenchless)
2.2	Cross section showing the size of pit and location of pipe line for HDD method	Enclosed
2.3	Strip plan/ route plan showing the pipe line, Chainage, width of ROW, distance of proposed, cable from the edge of ROW , important mile stone, intersections, cross drainage works etc.	yes
2.4	Methodology for laying of pipe line	yes
2.4.1	Open trenching method	NA.
2.4.2	Horizontal Directional Drilling (HDD) method	Yes
2.4.3	Laying of pipe line through CD works	No.
3.0	Draft license agreement signed by two witnesses	Yes
4.0	Performance bank guarantee	Yes.
4.1	Performance BG as per Ministry's Circular no.RW/NH-33044/27/2000-S&R(R) dated 21.03.2006 to be obtained @ rs.50/- per meter length	Yes shall be submitted as per the demand of NHAI
4.2	Confirmation of BG has been obtained as per NHAI guidelines	NA
5.0	Affidavit/ Undertaking from the applicant for	Yes
5.1	Not to damage to other utility, if damaged then to pay the losses either to NHAI or to the concerned agency.	Yes
5.2	Renewal of bank guarantee	Yes will be obtained after obtaining BG
5.3	Confirming all standard conditions of NHAI's guidelines	Yes
5.4	Shifting of pipe line as and when required by NHAI	Yes (under taking furnished)
5.5	Shifting due to 6 laning / widening of NH	Yes
5.6	Indemnity against all damages and claims clause (xxiv)	Yes
5.7	Traffic movement during laying of pipe line to be managed by the applicant	No obstruction to traffic as pipeline is laid through HDD
5.8	If any client is raised by the concessionaire then the same has to be paid by the applicant	Yes
5.9	Prior approval of the NHAI shall be obtained before undertaking any work of installation	Yes

*Satish*





	shifting or repair or alternation to showing cable line located in national highway Right of Way	
5.10	Expenditure, if any incurred by NHAI for repairing any damages caused to the national highway by the laying maintenance or shifting of the pipe line will be borne by the agency owing the line	Yes
5.11	If NHAI considers it necessary in future to move the utility line for any work or improvement or repairs to the road, it will be carried out as desired by the NHAI at the cost of the agency owing the utility line within a reasonable time (not exceeding 60 days of the intimation given)	yes
5.12	Certificate from the application in the following format	Yes
5.13	Laying of pipeline will not have any deleterious effects on any of the bridge components and roadway safety for traffic	Yes
5.14	Certificate for 6-lanning from the applicant in the following format: "We do undertake that I will relocate service road/approach road/utilities at my own cost notwithstanding the permissions granted within such a time as will be stipulated by NHAI for future 6-lanning or any other development".	Yes
6.0	Power of attorney in favor of authorized signatory	Yes
7.0	Copy of approved license	IOCL
8.0	Certificate from the project director	
8.1	Certificate for conforming of all standard conditions vide Ministry circular NO.RW/NH-33044-17/2000-S&R dated 29.09.2000 and NHAI's guidelines issued vide no.NHAI/OEC/2k/Vol.II dated 07.11.2000 and Ministry's circular no.RW/nh-33044/27/2000-S&R* dated 21.03.2006	yes
	Certificate from the Project Director	
8.2	"it is certified that any other location of the pipeline would be extremely difficult and unreasonably costly and the installation of the pipeline RoW will not adversely affect the design, stability and the traffic safety of the highway nor the likely improvement such as widening of the carriage way, easing of curve etc". Cable line	YES

*Satish*



	within	
8.3	<p>Certificate for 6-lanning</p> <p>(a) Where feasibility is available" I do certify that there will be no hindrance to proposed 6-lanning based the feasibility report considering proposed structures at the said location"</p> <p>(b) In case of feasibility report is not available " I do certify that sufficient RoW is available at site for accommodating proposed 6-lanning".</p>	NA
9.0	The agreement fee of Rs.1/- shall be charged	Yes
10.0	If NH section proposed to be taken up by NHAI on BOT basis- a clause is to be instead in the agreement."The permitted highway on which licensee have been granted the right to lay pipe has also been granted as a right of way concessionaire under the concession agreement for up-gradation of (section from Km._____ to Km._____ of NH-_____ on Build, Operate and Transfer basis) and therefore, the licensee shall honor the same."	NA
11	Who will supervise the work of laying pipeline.	Consultants
12	Who will ensure that the defects in road portion after laying of pipeline are corrected and if not corrected them what action will be taken.	IOCL
13	Who will pay the claims for damages done/ disruption in working of concessionaire, if asked by the concessionaire.	IOCL
14	A certificate from PD that he will enter the proposed permissions in the prescribed Performa issued vide Ministry circular No.RW/NH/33044/17/2000/S&R, dated 23.07.2003.	YES
15	If any previous approval is accorded for laying of pipeline then photocopy of register of records of permission accorded as maintained by PD (as per ministry circular no.RW/NH/33044/17/2000/S&R dated 23.07.2003) as referred in para 13 above is enclosed or not.	-

