



भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन एवं राजमार्ग मंत्रालय, भारत सरकार)

National Highways Authority of India

(Ministry of Road Transport and Highways, Government of India)

क्षेत्रीय कार्यालय-पश्चिम उ०प्र०, लखनऊ Regional Office - West UP, Lucknow.

3/248, विशाल खण्ड, गोमती नगर, लखनऊ-226010 (उ.प्र.)

3/248, Vishal Khand, Gomti Nagar, Lucknow-226010 (UP)

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19001/1/RO-W-UP/NH-26/UG/IHB/NOC/1409

Date: 16.06.2022

Invitation of Public Comments

Sub: Fresh proposal for change in proposed crossing location of National Highway chainage from km.33.540 to km.33.822 on NH-26 (New NH-44) for laying 18 inch dia. LPG Pipeline along with OFC for Kandla-Gorakhpur LPG pipeline project across on NH-26 (New NH-44) (Jhansi-Lalitpur Section) in Village-Mankuwa, Tehsil-Jhansi, District-Jhansi in the State of Uttar Pradesh.

The Authorized Signatory M/s IHB Pvt. Ltd. has submitted the fresh proposal for change in proposed crossing location of National Highway chainage from km.33.540 to km.33.822 on NH-26 (New NH-44) for laying 18 inch dia. LPG Pipeline along with OFC for Kandla-Gorakhpur LPG pipeline project across on NH-26 (New NH-44) (Jhansi-Lalitpur Section) in Village-Mankuwa, Tehsil-Jhansi, District-Jhansi in the State of Uttar Pradesh.

2. As per the guidelines, issued by the Ministry vide OM No.RW/NH-33044/29/2015/ S&R(R) dated 22.11.2016, the application 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 application is invited to the below mentioned address, which should reach by this office within 30 days from the date of publication beyond which no comments shall be entertained.

The Chief General Manager cum Regional Officer,
National Highways Authority of India
Regional Office, UP-West, Lucknow
3/248, Vishal Khand, Gomti Nagar
Lucknow-226 010

This is issued with the approval of RO-West (UP).

Encl: As above.

(S.K. Sharma)

General Manager (T)
For RO-West, UP

Copy to:

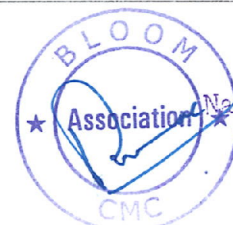
1. Web Admin, NHAI-HQ- with request for uploading on the NHAI website.
2. The Technical Director, NIC, Transport Bhawan, New Delhi- with request for uploading on the Ministry's website.
3. The Authorized Signatory, M/s IHB Pvt. Ltd., Sabarmati Terminal Near 'D' Cabin, Sabarmati Ahmadabad - 380019 for information.
4. The PD, PIU-Kanpur for information.

Check list for Crossing Permissions across Jhansi - Lalitpur Highway NH-26(New NH-44) by IHB Limited

Sr. No.	Item	Information/ Status
1	<u>General Information</u>	Laying of 18" Dia LPG Pipeline for Kandla Gorakhpur Pipeline Project, Bhopal – Unnao Section.
1.1	Name & Address of the Applicant / Agency	Senior Manager (Projects) For IHB Limited, Indian Oil Building, Sector- F, Kapoorthala, Aliganj, Lucknow - 226024
1.2	National Highway Number	NH-26 (New NH-44)
1.3	State	Uttar Pradesh
1.4	Location	National Highway No. 26 (New NH-44), Jhansi – Lalitpur Highway, NH chainage 33+822 Km; crossing at Village-Mankuwa, Tehsil- Jhansi, District- Jhansi in the State of Uttar Pradesh.
1.5	Chainage In KM	Across NH-26 (New NH-44) at 33+822 Km
1.6	Length in metres	Across NH-26 (New NH-44) 60m
1.7	Width of available ROW	Left - 30.0 meter Center of NH Right – 30.0 meter Center of NH
1.8	Proposal to Lay underground LPG Pipeline	Across NH-26 (New NH-44) at 33+822 Km
	(a) Left from center line towards increasing Chainage /Km Direction	30m
	(b) Right side from Center line towards increasing Chainage / Km direction	30m
1.9	Proposal to acquire land	NA
	(a) Left side from center	NA
	(b) Right side from center line	NA
1.10	Whether Proposal is in the same side where land is not to be acquired	Acquisition of land is not required.
	If not then where to lay the Pipeline	Across NH-26 (New NH-44) at 33+822 Km
1.11	Details of already laid services, if any along the proposed route	NA
1.12	No. of Lanes (2/4/6/8 lanes) existing	4 Lane
1.13	Proposed Number of Lanes (2 Lanes with paved shoulder 4/6/8 Lanes)	NA
1.14	Service Road Existing or not	NO
	If yes then which side	
	(a) Left Side from center line	NO
	(b) Right Side from center line	NO

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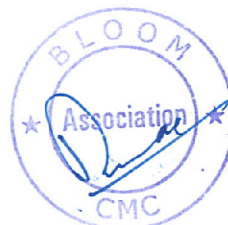
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P.U., Kanpur

1.15	Proposed Service Road	
	(a) Left Side from center line	
	(b) Right Side from center line	
1.16	Whether proposal to lay LPG Pipeline is after the service road or between the service road and main carriageway	After the service road and across the National Highway
1.17	The Permission for laying of LPG pipeline shall be considered for approval / rejection based on the Ministry Circulars mentioned as above	
	(a) Carrying of LPG pipeline on Highway bridges shall not be permitted as LPG pipes can accelerate the process of corrosion or may cause explosions, thus being much more injurious than leakage of LPG product	NA
	(b) Carrying of LPG pipelines on bridges shall also discouraged however if the LPG supply authorities seem to have no other viable alternative and approach the highway authority well in time before the design of the bridge in finalized they may be permitted to carry the pipeline on independent super structure supported on extended portion of piers and abutments in such a manner that in the final arrangement enough free spade around the super structure of the bridge remains available for inspection and repairs etc.	NA
	(c) Cost of required extension of the substructure 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 / any part of the bridges, safety of the bridges has to be kept in view while permitting various services along bridge. Approvals to be accorded in this regard with the concurrence of the Ministry's Project Chief Engineers only	NA
1.18	If crossing of the road involved	Yes
	If Yes, it shall be either encased in pipes or through structure or conduits specially build for that purpose at the expensed of the agency owning the line	
	(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 structure on the national highway, the minimum distance being 15 meter. What is the distance from the existing structures	Yes. The distance from the existing structure more than 15 m.
	(d) The casing pipe (or conduit pipe in the case of electric / OFC cable) carrying the utility line shall be of steel, case iron, or reinforced cement concrete and have adequate strength and be large enough to permit ready withdrawal of the carrier pipe / cable	Yes
	(e) Ends of the casing / conduit pipe shall be sealed from the outside, so that it does not act as a drainage path	Yes
	(f) The casing / conduit pipe should, as minimum extend from drain to drain in cuts and toe to slope toe of slope in the fills	Yes
	(g) The top of casing / conduit pipe should be at least 1.2 meter below the surface of the road subject to being at least 0.3 m below the drain inverts.	Yes
	(h) Crossing shall be by boring method (HDD) especially where the existing road pavement is of cement concrete or dense bituminous concrete type	Yes
	(i) The casing / conduit pipe shall be installed with an even bewaring throughout its length and in such a manner as to prevent the formation of a waterway along it.	Yes
2	<u>Documents / Drawings enclosed with Proposal</u>	Yes
2.1	Cross section showing the size of trench for open trenching method (is it normal size of 1.2m deep X 0.3 wide)	N.A.
	(i) Should be greater than 60 cm wider than outer diameter of the pipe	N.A.
	(ii) Located as close to the extreme edge of the right of way as possible but not less than 15 meter from the centre lines of the nearest carriageway	Yes
	(iii) Shall not be permitted to run along the National Highways when the road formation is situated in double cutting Nor shall these be laid over the existing culvers and bridges	N.A.
	(iv) These should be so laid that their top is at least 0.6 meter below the ground level so as not obstruct drainage of the road land	N.A.

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2.2	Cross section showing the size of pit and location of pipe for HDD method	Attached
2.3	Strip plan / Route Plan Showing LPG pipeline, Chainage, width of ROW, distance of proposed pipeline from the edge of ROW, important mile stone, intersections, cross drainage work etc.	Incorporated in the drawing
2.4	Methodology for laying of showing LPG pipe line	Horizontal Directional Drilling Method
2.4.1	Open trenching method. (May be allowed in utility corridor only where pavement is neither cement concrete nor dense bituminous concrete type. if yes, Methodology of refilling of trench	N.A.
	(a) The trench width should be at least 30 cm, but not more than 60 cm wider than the outer diameter of the pipe	N.A.
	(b) For filling of the trench, Bedding shall be to a depth of not less than 30cm. It shall consists of granular material free of lumps, clods and cobbles and graded to yield a firm surface without sudden change in the bearing value	N.A.
	Unusable soil and rock edged should be excavated and replaced by selected material	N.A.
	(c) The backfill shall be completed in two stage (i) side fill to the level of the top to the pipes and (ii) overfill to bottom of the road crust	N.A.
	(d) The side fill shall consist of granular material laid in 15 cm layers each consolidated by mechanical tampering and controlled tamping controlled addition of moisture to 95% of the Proctor's Density Over fill shall be compacted to the same density as the material that had been removed. Consolidation by saturation or pending will not be permitted.	N.A.
	(e) The road crust shall be built to the same strength as the existing crust on either side of the trench; care shall be taken to avoid the formation of a dip at the trench.	N.A.
	(f) The excavation shall be protected by flagman, signs and barricades, and red lights during night hours	N.A.
	(g) If required, a diversion shall be constructed the expensed of agency owning the utility line	N.A.
2.4.2	Horizontal Directional drilling (HDD) Method	Yes

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2.4.3	Laying of LPG Supply Pipe Line through CD works and method of laying	
	(a) On approaches, the water mains / cables shall be carried along a line as close to the edge of the right-of-way as possible upto a distance of 30m from the bridge and subject to all other stipulation contained in this Ministry's guidelines issued with letter No. NH- HI/P66/76 dated 19.11.1976	The pipeline shall be laid across the NH by HOD Method.
3	Draft License Agreement signed by two witness	Yes
4	Performance Bank Guarantee in favour of NHAI has to be obtained @ Rs. 100/0- per running meter (parallel to NH) and Rs. 100000/- per crossing of NH, for a period of one year initially (extendable if required till satisfactory completion of work) as a security for ensuring / making good the excavated trench for laying the cables / ducts by proper filling and compaction, clearing Debris / loose earth produced due to execution of trenching at least 50m away from the edge of the right of way. No payment shall be payable by the NHAI to the licensee for clearing debris / loose earth.	
4.1	Performance BG as per above is to be obtained	
4.2	Confirmation of BG has been obtained as per NHAI Guidelines.	
5	Affidavit / undertaking from the application	
5.1	Not to Damage to other utility, if damaged then pay the losses either to NHAI or to the Concerned agency	Yes
5.2	Renewal of Bank Guarantee	
5.3	Confirming all standard condition of NHAI's guideline	Yes
5.4	Shifting of LPG supply pipe line as and when required by NHAI at their own cost	Yes
5.5	Shifting due to 6 lanning / widening of NH	Yes
5.6	Indemnity against all damages and claims clause (xxiv)	Yes
5.7	Traffic movement during laying a LPG supply pipe line to be managed by the applicant	Yes

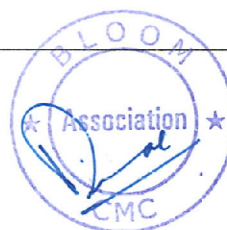
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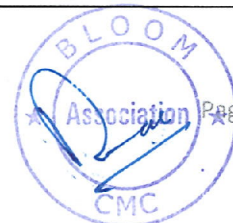


5.8	If any claim is raised by the concessionaire then the same has to be paid by the applicant	Yes
5.9	Prior approval of the NHAI shall be obtained before undertaking any work if installation, shifting or repairs, or alteration to the showing LPG supply pipe line located in the National Highway right-of-way	Yes
5.10	Expenditure, if any incurred by NHAI for repairing any damage caused to the National Highway by the laying, maintenance or shifting of the LPG supply pipe line will be borne by the agency owning the line	Yes
5.11	If the NHAI considers if necessary in future to move the utility line for any work of improvement or repairs to the road, it will be carried out as desired by the NHAI at the cost of the agency owning 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	
	(i) Laying of LPG supply pipe line will not have any deleterious effects on any of the bridge components and roadway safety for traffic	Yes
	(ii) For 6-lanning "We do undertake that I will relocate service road / approach road / utilities at my own cost notwithstanding the permission granted with such time as will be stipulated by NHAI" for future six-lanning or any other development	Yes
6	Who will sign the agreement on behalf of LPG supply pipe line agency?	Senior Manager (Project) For IHB Limited, Indian Oil Building, Sector- F, Kapoorthala, Allganj, Lucknow - 226024
7	Certificate from the Project Director	
7.1	Certificate from confirming of all standard condition issued vide ministry circular No. Ministry Circular No. NH-41 (58)/68 dated 31.01.1969, Ministry circular No. RW/NH-III/P/66/76 dated 18/19.11.1976, Ministry Circular No. RW/NH-1103/1/86-DOI (ii) Dated 28.07.1993. Ministry circular No. RW/NH-34066/2/9/S&R dated 25.10.1999 and Ministry Circular No. RW/NH-330231/19-99 17.10.2003	Attached

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Horizontal Directional Drilling (HDD) – Trenchless methodology:

These type crossings are adopted for crossings of major rivers, canals, National and State Highways, etc. In these types of crossings, very high wall thickness (e.g 18"OD x 0.438" WT, API 5L X-70 with 3LPE coating, against normal mainline pipe of 18"OD x 0.219" WT, API 5L X-70), pipe section is laid below the road by horizontal directional drilling technique. The broad methodology for installation of a pipe section by horizontal directional drilling is as follows:-

First the HDD profile of the crossing is designed based on the field investigation data and detailed engineering.

The HDD Equipment at the Rig side shall be laid out as per the sketch as depicted in Figure below:

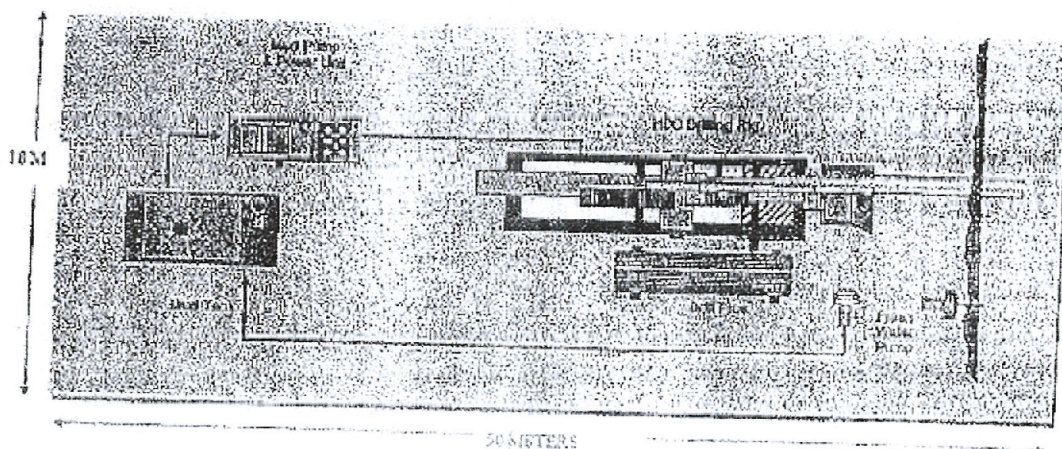


Figure 1: Layout of of HDD Equipment

* Stringing of Line Pipes and Welding of Pipe String

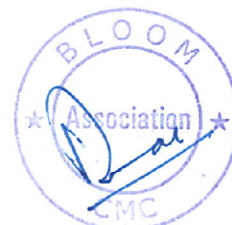
Pipes of Grade and thickness (Higher pipe wall thickness) strung on sand bags. The string shall end at the anticipated exit point of pilot hole drill rod. The requisite numbers of pipe shall be string according to as per approved procedure in ROU limits.

Joint welding including necessary beveling, grinding and line up etc. shall be carried out as per approved WPS. The welding of pipes for crossing shall be carried out by approved welding procedure.

Non Destructive Testing of the welded joints shall be carried by radiography as per as applicable codes and approved procedure.

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• Pre-installation Hydrostatic Testing

After clearance of all the weld joints of the drill string, the drill string shall be subjected to a pre-installation hydrotesting. The pre hydro static test shall be as per approved procedure.

The pipes under test shall be subjected to visual inspection for any leakage or deformation. The test shall be considered acceptable if after the end of the hold period if no bleeding of water is found and if pressure has kept a constant value throughout the test duration, except for changes due to temperature effects, and there is no abrupt pressure drop throughout the test duration.

Water shall be drained by opening the drain valve and blowing compressed air at the vent connection.

• Joint Coating & Corrosion Coating repair

After acceptance of hydrotest & after water is completely drawn out, the girth weld joints shall be coated as per approved procedure.

The coating material used shall be approved Heat Shrinkable Wraparound Sleeve (HSS).

Prior to application of heat shrink sleeves, the surface of the pipes shall be blast cleaned. Before installing the wraparound sleeve, the bare steel surface shall be pre-heated with a Torch moved back and forth over the surface. The minimum preheat temperature shall be as recommended by the manufacturer which shall be maintained during the applications and shall be checked by contact type temperature recorder. After the application of Joint Coating sleeves, they shall be checked by a full circle holiday test.

• Drilling Operations

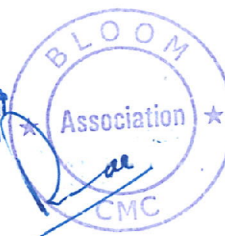
The Drilling Operations shall be carried out as per the following method statement:

- Entry Side Location: At the entry point, a steel frame footing or 'Dead Man' will be buried to which the drill rig will be secured onto. This will prevent any movement of the drill rig during the drilling operations.
- Exit Location Site: The exit location provides adequate pipe string lay down space for the proposed crossings.

The tracker shall continuously monitor the progress of the drilled hole by following the path drilled and locating the drill head assembly in real time. He shall note the depth readings every 4.5 meters and guide the driller if there is any deviation to the proposed drill path.

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- Pilot Hole Drilling

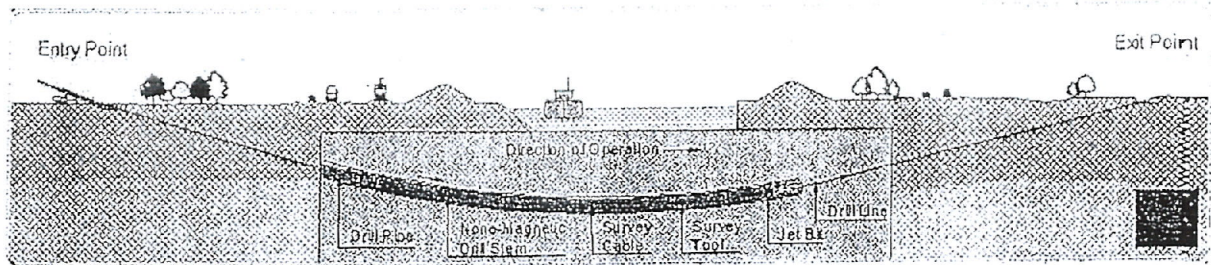


Figure : Pilot Hole Drilling

The pilot hole is advanced linearly along a pre-determined profile path. Directional deviation in azimuth and inclination will be made accordingly to stay on the pre-determined radius.

Surveys are taken at 15-foot gaps throughout the entire distance of the pilot hole. These surveys are calculated and then plotted on a work profile and plan drawing. This allows the Survey Technician and the Company Representative to track vertical depth, horizontal distance and right/left-bearing drift at all times during the project.

- Removal of Drill String for Reaming Operations
- The hole opener is then attached to the leading pipe to start ream operation.
- Reaming

Once the lead pieces are taken off, a suitable barrel reamer will be attached to the trailing end of the drill string at the surface exit location. The reaming shall be done in 3 stages before reaching to final bore hole diameter of the hole.

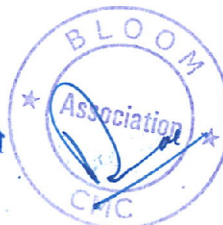
This will then be rotated by the Rig and advanced into the borehole. A section of drill pipe will then be added consecutively to the trailing end of the reamer as the reamer is being rotated and drawn along the borehole in the direction of the Rig Side location.

The reamer will then be rotated by the Rig and advanced into the borehole. A section of drill pipe will then be added consecutively to the trailing end of the reamer as the reamer is being rotated and drawn along the borehole in the direction of the Rig location.

A regular recording of the progression of the reamer, the 'reaming log' shall be maintained at site.

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- Swab Pass

While pulling the reamer back to the shore if the Driller or the Superintendent feels that the hole is not conditioned or if there is a collapse of the hole, additional swab passes shall be made. High Yield Bentonite with quick gelling characteristics shall be used to preserve the integrity of the borehole during the swab pass.

- Pipe String Preparation

The pipe shall be strung and welded in the same line as the drilled hole from Entry Side to Exit side.

- Product Pipe Attachment

A pullhead swivel assembly shall be provided and shall be pre-welded to the product pipe string, which will be on the trench. The pilot swivel shall then be removed from the trailing end of the drill string, and the drill string shall be attached to the pullback assembly attached to the leading end of the product pipe.

- Pipe Pull Back and Installation



Figure : Pull Back Operations

Once the reaming and swab passes are completed, the drill pipe shall be picked up and placed on the cradles (with roller) with the help of lifting apparatus (Excavator or Side Boom). The pipeline shall be positioned perfectly in line with the bore hole. An exit angle of approximately eight to ten degrees will have been established allowing the product pipe to gently free stress into the borehole at the exit location.

Once aligned, the pulling apparatus will then be attached to the leading end of the drill pipe string, and the product pipe(s) will be fed gently into the bored hole.

Pullback will continue until the leading end of the product pipe reaches the Surface Entry Location.

As the pipe string is being pulled into the open borehole; drilling fluid is pumped through the rotating jet swivel. This aids in the further suspension of the drilled

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solids that may be in the hole. These solids are removed by the viscosity of the fluid coming out when the pipe displaces the drilling fluids in the open hole.

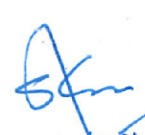
A regular recording of the progression of the pulling process, the pulling log shall be maintained at site.

• Post Hydrostatic Test

The hydrostatic testing shall be carried out in accordance with Specification & approved procedure.


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