



भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन एवं राजमार्ग मंत्रालय, भारत सरकार)

National Highways Authority of India

(Ministry of Road Transport & Highways, Govt. Of India)

क्षेत्रीय कार्यालय, उ०प्र० (पूर्व) वाराणसी

Regional Office - U.P. (East), Varanasi

एस- 2/656, ए-3 बी, वरुणा विहार कालोनी, द्वितीय एवं तृतीय तल, वन प्लेस टावर
(जो पी० मेहता सीनियर सेकेंडरी स्कूल के पीछे), सिकरौल, वाराणसी-221002 (उ०प्र०)

S-2/656, A-3B, Varuna Vihar Colony, 2nd & 3rd floor, one place Tower
(Behind J.P. Mehta Sr. Secondary School), Sikraul, Varanasi-221002 (U.P.)

No. 14011/42/RO/UP(E)/2020/3385

दूरभाष / Phone : 91-542-2280243

: 91-542-2280372

ई-मेल/E-mail : rovaranasi1@gmail.com

: rolucknow@nhai.org

वेबसाइट/Website: www.nhai.org

Date: 04.11.2020

Invitation of public comments

Sub.: Permission for laying Natural Gas Pipelines 6" dia steel with 40 mm OFC duct & 125 MM MDPE across at chainage 103 km. and 6" Dia Steel with 40 mm OFC duct along NH Chainage km. 86.00 to km. 103 and 4" Dia steel with 40 MM OFC duct along NH Chainage km. 76.959 to km. 86.00 (total ROW length of 26.071 km.) in the State of Uttar Pradesh-Reg.

The Chief Manager, CGD Bharat Gas Resource Ltd., has submitted the subject proposal through PIU- Raebareli letter No- 19029, dated 04.09.2020 & 19683, dated 03.11.2020 for granting permission for subject work.

2. From the submitted proposal, it is noted that the Natural Gas Pipelines with OFC duct & MDPE pipeline as mentioned in the subject has been proposed to lay at the extreme edge of ROW leaving appropriate offset through trenchless/open cut methodology as per site condition. ROW at crossing location (Km 103) is 30 mtr.

3. 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).

4. 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 Regional Officer,
National Highways Authority of India
Regional Office, UP-East, Varanasi
S-2/656, A-3B, VarunaVihar Colony, 2nd & 3rd Floor, One Place Tower,
Behind J.P. Mehta Sr. Secondary School, Sikraul, Varanasi-221002

This issue with the approval of Regional Officer.

Encl: As above

(C.M.Dwivedi)
General Manager (Tech.)

Copy to:

- Web Admin, NHAI-HQ- with request for uploading on the NHAI website
- The Technical Director, NIC, Transport Bhawan, New Delhi - with request for uploading on the Ministry's website.
- Project Director, NHAI, PIU-Raebareli- for information please.
- The Chief Manager-CGD, Bharat Gas Resource Ltd., Raebareli, Amethi, Pratapgarh-G.A- for information please



To,
The Project Director,
National Highway Authority of India
Project Implementation Unit
House No.257, Ward No.22, Vishnu Nagar
Raebareli, Uttar Pradesh-229001.

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
परियोजना कार्यान्वयन इकाई, रायबरेली
प्राप्ति संख्या... 32199
फाइल संख्या...
दिनांक... 09-10-2020

Subject: Permission for laying Natural Gas Pipelines 6" Dia steel with 40MM OFC duct & 125MM MDPE across at Chainage 103KM and 6" Dia steel with 40MM OFC duct along NH between Chainage 103 KM to 86.00 KM and 4" Dia steel with 40MM OFC duct along NH Chainage 86.00KM to 76.959 KM with total ROW length of 26.071KM in the state of Uttar Pradesh.

Dear Sir,

With reference to your email dated 06/10/2020 (Copy Attached), we would like to inform you that BGRL will be laying gas pipeline as a part of implementation of City Gas Distribution project with details as under:

S.No	NHAI Chainage Number (KM)	Diameter of Steel Pipeline (Inch)	Diameter of MDPE Pipeline (MM)	HDPE Duct for OFC (MM)	Width of Pipeline (M)
1	103 KM Across	6"	125 MM	40 MM	0.61
2	103 KM to 86.00 KM Along	6"	-	40 MM	0.215
3	86.00 KM to 76.959 KM Along	4"	-	40 MM	0.16

In the revised calculation Sheet (Annexure-A) Casing diameter of 0.61M at crossing (Ch. 103KM) has been considered. Breakup of width of pipeline is as below:

S.No	Width Of Pipeline (M)	Remarks
1	0.61	Casing Diameter
2	0.215	0.1683 (6" Steel) + 0.006 (Coating) + 0.04 (HDPE Duct for OFC)= 0.215
3	0.16	0.1143 (4" Steel) + 0.006 (Coating) + 0.04 (HDPE Duct for OFC)= 0.16

As per your letter to NHAI RO Office dated 04/09/2020, our Gas Pipeline will be laid at extreme edge of ROW leaving appropriate offset. We have already obtained NOC from Sharda Sahayak for Raebareli sections (Copy attached). As per Forest Dept. NOC will be issued by them only after obtaining NHAI NOC.

Mgr/(T)
- Pl chk compliance of
Obm raised by RO office
incl details of availability of ROW.
- Addd licence fee amount to
be deposited by applicant's bank.

Rajeev Sachdeva / राजीव सचदेवा
Chief Manager - G.D. / मुख्य प्रबंधक - सी.जी.डी.
Bharat Gas Resources Limited
भारत गैस रिसोर्सेस लिमिटेड
Rae Bareli, Amethi, Pratapgarh-G.A.
रायबरेली, अमेठी, प्रतापगढ़-जी.ए.
Mob:-9413330676

Page 1 of 2

भारत भवन, 4 एवं 6 करीमभाय रोड, बेलार्ड इस्टेट, पोस्ट बॉक्स नं. 688, मुंबई-400001 सीआईएन : U11200MH2018GO1310461

We will be using Trenchless/ Open cut methodology for laying our Gas Pipelines and the same is detailed in Annexure-B. Cross-section drawing of laying is attached as Annexure-C. Online application has been made in NHAI's "Right to Access" link (Copy Attached).

We have already submitted Demand Draft of Rs. 48,39,785/- to you on 31/07/2020. Grateful if you please grant NOC to us at the earliest.

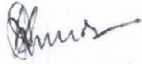
In view of above, we once again request you to help us out in rolling out this prestigious public utility project urgently as it is our Nation's mission to increase the share of Natural Gas in our energy basket from current 6.2% to 15% by year 2030. We have been assigned yearly Minimum Work Program (MWP) target to be achieved by PNGRB with penalties for non/under achievement of the targets.

Thanking you and awaiting positive response.

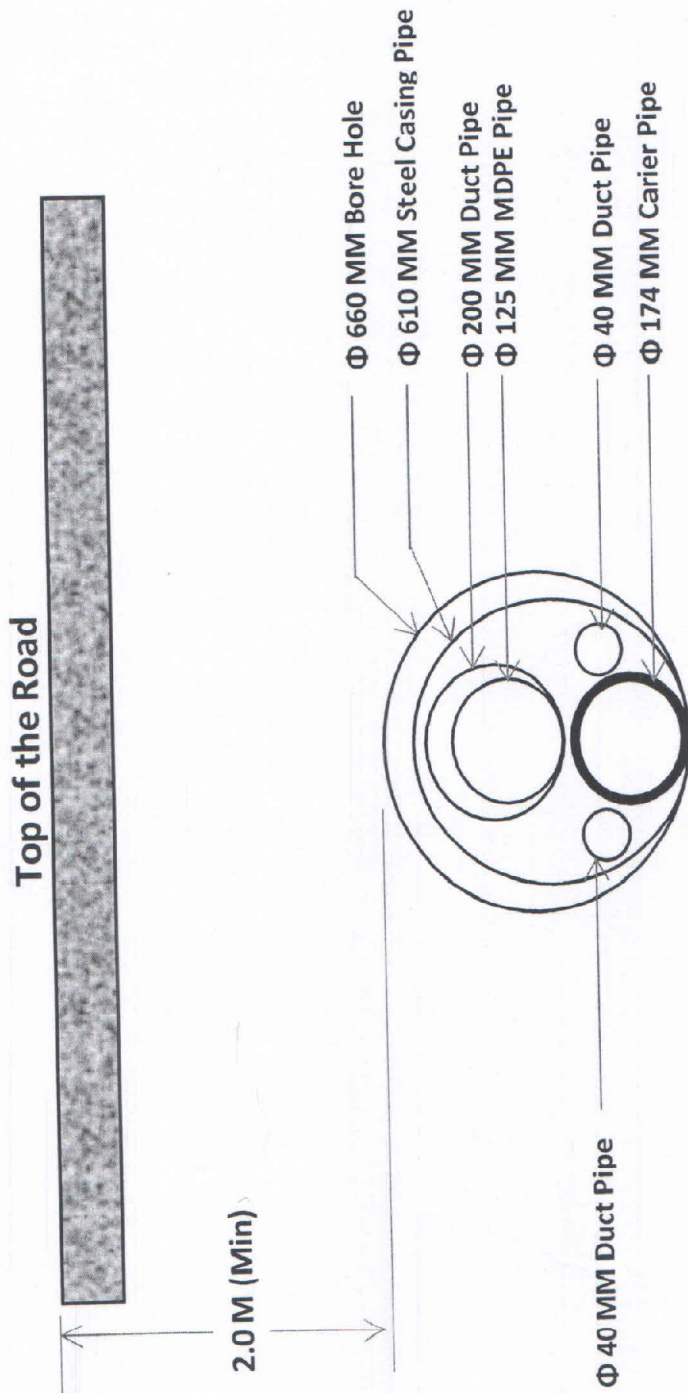
Yours faithfully

Rajeev Sachdeva / राजीव सचदेवा
Chief Manager, G.D. / मुख्य प्रबंधक, सी.जी.डी.
Bharat Gas Resources Limited
भारत गैस रिसोर्सेस लिमिटेड
Rae Bareli, Amethi, Pratapgarh-G.A.
रायबरेली, अमेठी, प्रतापगढ़-जी.ए.
Mob:-9413330676

Encl: As Above.



Installation of Casing Pipe for Crossing the NH-31



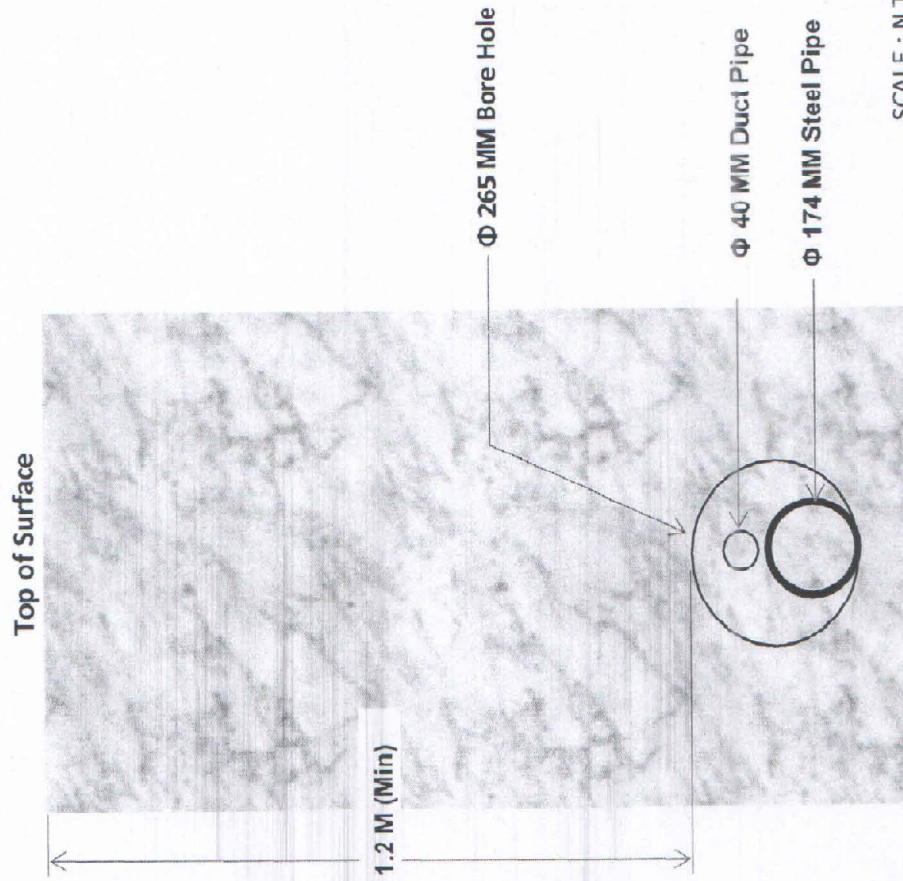
SCALE : N.T.S.



Rajeev Sachdeva / राजीव सचदेवा
 Chief Manager-C.O. / मुख्य प्रबंधक-सी.ओ.
 Bharat Gas Resources Limited
 भारत गैस रिसोर्सेस लिमिटेड
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 Mob:-9413330676

Installation of Dia 174 MM Pipe + Dia 40 MM OFC Duct for Parallel to NH-31 by

Trenchless Method



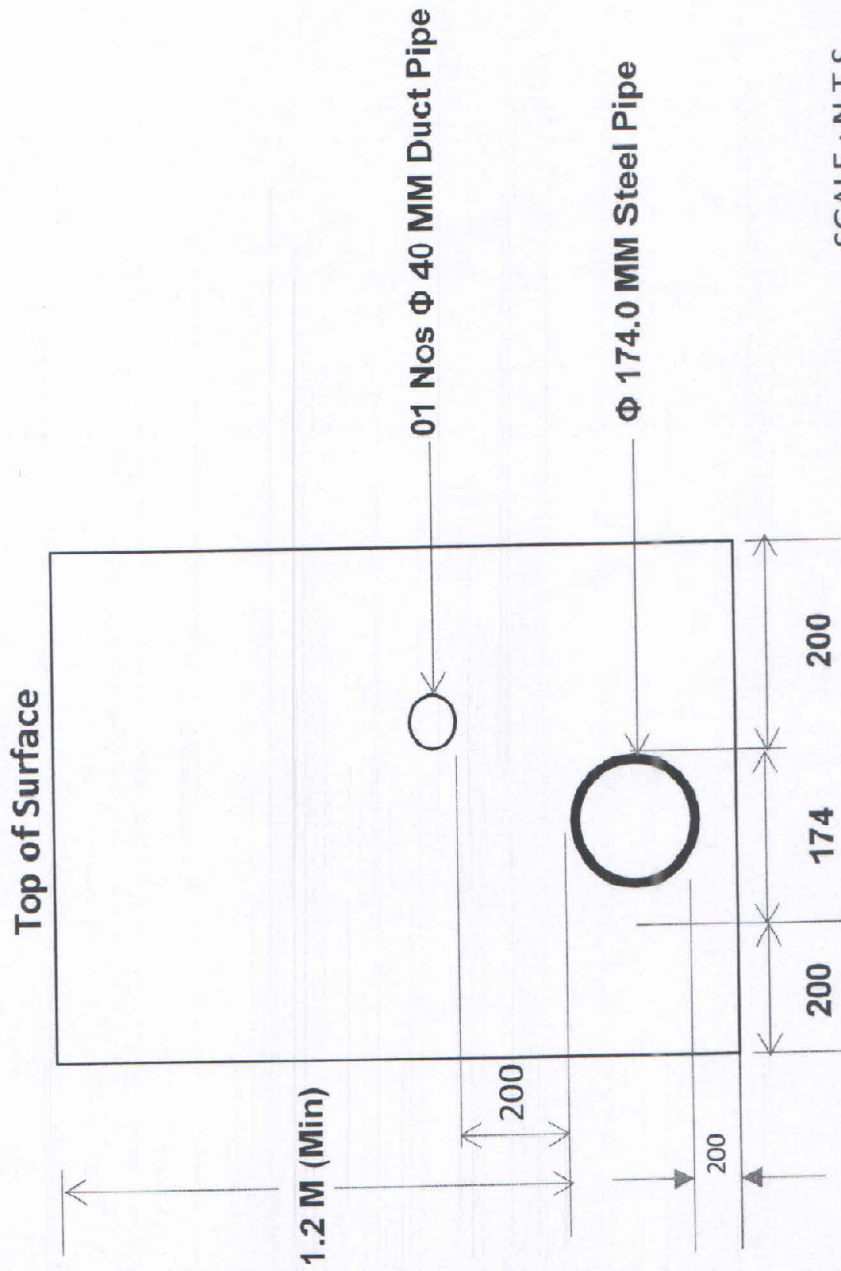
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Rajeev Saghdeva / राजीव सगधेवा
Chief Manager - G.D. / मुख्य प्रबंधक - सी.जी.डी.
Bharat Gas Resources Limited
भारत गैस रिसोर्स लिमिटेड
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Installation of Dia 174 MM Pipe + Dia 40 MM OFC Duct for Parallel to NH-31 by Open Cut

Method

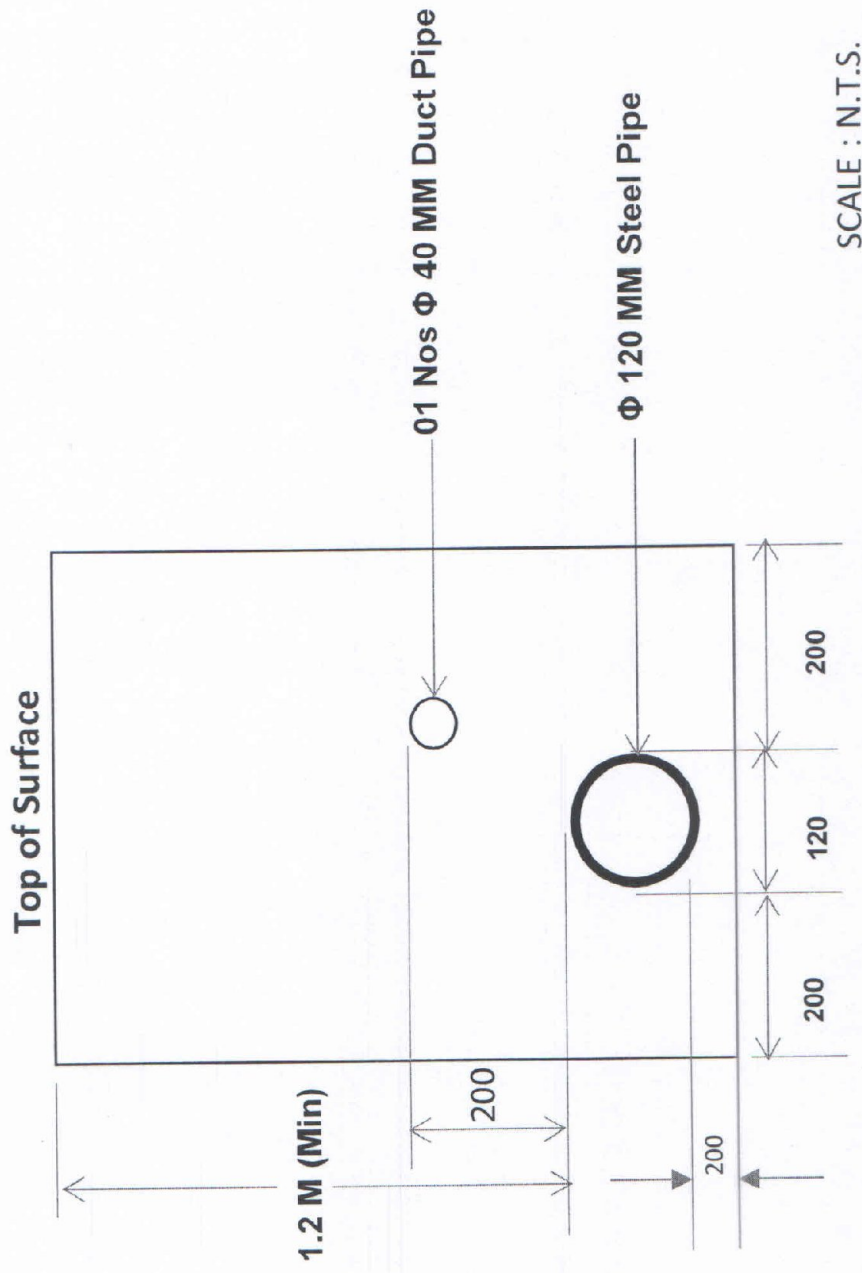


SCALE : N.T.S.



Rajeev Sachdeva / राजीव साचदेवा
 Chief Manager-C.O.D. / मुख्य प्रबंधक सी.ओ.डी.
 Bharat Gas Resources Limited
 भारत गैस रिसोर्स लिमिटेड
 Rae Bareilly, Amethi, Pratapgarh-G.A.
 रायबरेली, अमेठी, प्रतापगढ़-जी.ए.
 Mob:-9413330676

Installation of Steel 120 MM Pipe + 40 MM OFC Duct for Parallel to NH-31 by Open Cut

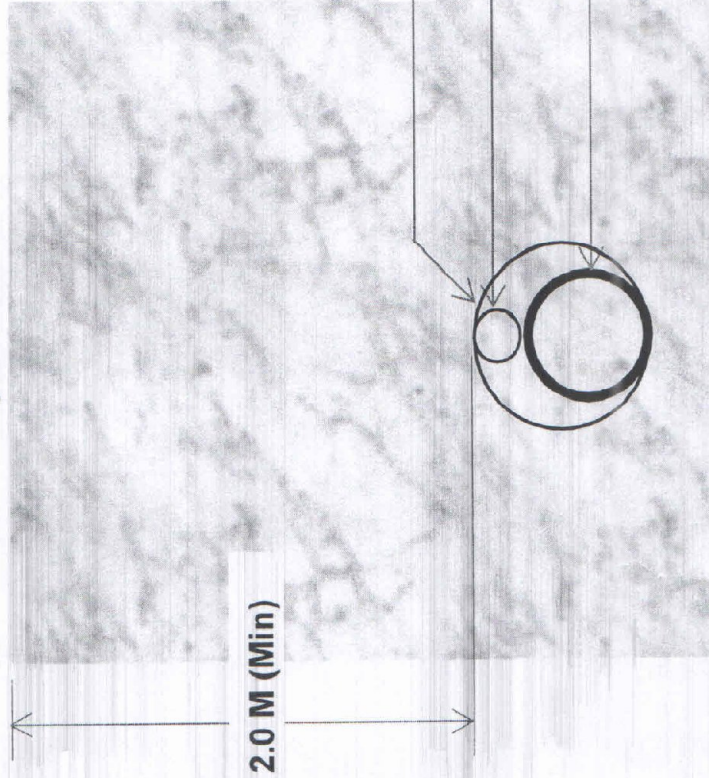


Rajeev Sachdeva / राजीव सचदेवा
 Chief Manager-C.G. / मुख्य प्रबंधक-सी.जी.
 Bharat Gas Resources Limited
 भारत गैस रिसोर्स लिमिटेड
 Rae Bareilly, Amethi, Pratapgarh-G.A.
 रायबरेली, अमेठी, प्रतापगढ़-जी.ए.
 Mob:-9413330676

Installation of Dia 120 MM Pipe + 40 MM OFC Duct for Parallel to NH-31 by Trenchless

Method

Top of Surface



SCALE : N.T.S.



Rajeev Sachdeva / राजीव सचदेवा
Chief Manager-C.G.D. / मुख्य प्रबंधक-सी.जी.डी.
Bharat Gas Resources Limited
भारत गैस रिसोर्स लिमिटेड
Rae Bareilly, Amethi, Pralaggarh-G.A.
रायबरेली, अमेठी, प्रतापगढ़-जी.ए.
Mob:-9413330576

CHECK - LIST

Sr. No.	Item	Information /Status	Remarks
1	General Information	Laying Pipelines across and parallel to National Highway - 31 (Raebarely - Lalganj - Unnao Section)	
1.1	Name and Address of the Applicant / Agency	Bharat Gas Resources Limited, Bharat Bhawan, 4 & 6 Currimbhoy Road, Ballard Estate, Mumbai, Maharashtra, India - 400001	
1.2	National Highway Number	NH- 31	
1.3	State	Uttar Pradesh	
1.4	Location	As annexure 'A' attached	
1.5	(Chainage in km)	As annexure 'A' attached	
1.6	Length in Meters	As annexure 'A' attached	
1.7	Width of available ROW	30Mt to 50 Mt variable	
	(a) Left side from center line towards increasing chainage /km direction	15 Mt to 25 Mt variable	
	(b) Right side from center line towards increasing chainage / km direction	15 Mt to 25 Mt variable	
1.8	Proposal to lay underground Gas Pipeline/Electrical Cable.	Gas pipeline Across and Parallel to NH	
	(a) Left side from center line towards increasing chainage / Km direction	Within ROW near Outer Edge	
	(b) Right side from center line towards increasing chainage / Km direction	Within ROW near Outer Edge	
1.9	Proposal to acquire Land	No	No
	(a) Left side from center line		No
	(b) Right side from center line		No
1.10	Whether proposal is in the same side where land is not to be acquired	Yes Existing NH RoW	
	If not then where to lay the cable	Within RoW	
1.11	Details of already laid services,if any,along the proposed route	Nil	
1.12	Number of lanes (2/4/6/8 lanes) existing	2 Lane with paved shoulder	
1.13	Proposed Number of lanes (2 lane with paved shoulders / 4 /6/8 lanes)	Nil	
1.14	Service Road existing or not If yes then which side	Not existing	
	(a) Left side from center line		
	(b) Right side from center line		
1.15	Proposed Service Road	Not Applicable	No service Road
	(a) Left side from center line		
	(b) Right side from center line		
1.16	Whether proposal to lay Gas Pipeline is after the service road or between the service road and main carriageway	Not Applicable	No service Road
1.17	The permission for laying of Petroleum Products pipeline shall be considered for approval/ rejection based on the Ministry Circulars mentioned as above	Yes	
1.18	Whether carrying of sewage/gas pipeline has been Proposed on the parapet / part of the bridges. If yes, then mention the methodology proposed for the	No	

प्रबन्धक (तक- Same.

प० का० ई०, रायबरेली

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन एवं राजमार्ग मंत्रालय, भारत सरकार)



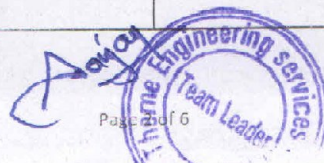
Rajeev Sachdeva / राजीव सचदेवा
Chief Manager - G.D. / मुख्य प्रबंधक-सी.जी.डी.
Bharat Gas Resources Limited
भारत गैस रिसोर्सेस लिमिटेड
Rae Bareilly, Amethi, Pratappgarh-G.A.
रायबरेली, अमेठी, प्रतापगढ़-जी.ए.
Mob:-9413330676

परियोजना निदेशक
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन एवं राजमार्ग मंत्रालय, भारत सरकार)
परियोजना कार्यान्वयन इकाई
रायबरेली


1.19	If crossing of the road involved, If yes it shall either encased in pipes or through structure or conduits specially built for that purpose at the expenses of the agency owning the line	Yes, Method used is HDD for crossing and Open Cut for parallel.	
	(a) Whether existing drainage structures are allowed to carry sewage/gas pipeline	Not Applicable	
	(b) Is it on a line normal to NH	Parallel & Crossing	
	(c) What is the distance of crossing the sewage/gas pipeline 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 cement concrete and have adequate strength and be large enough to permit ready withdrawal of the carrier pipe/cable. Mention type of casing.	NO	
	(e) Ends of the casing/conduit pipe shall be sealed from the outside, so that it does not act as a drainage path.	NO	
	(f) The casing/conduit pipe should, as minimum extend from drain to cuts and toe of slope in the fills.	No	
	(g) The top of the casing/conduit pipe should be at least 1.65 meter below the surface of the road subject to being at least 0.3 below the drain inverts. Mention the proposed details.	No	
	(h) Mention the methodology proposed for crossing of road for the proposed Sewage/gas pipe line, Crossing shall be by broing method (HDD) [Trenchless Technology] specially, where the existing road pavement is of cement concrete or dense bituminous concrete type.	HDD	
	(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 waterway along it.	Yes	
2	Document / Drawings enclosed with the proposal		
2.1	Cross section showing the size of trench for open trenching method (Is it normal size of 1.65 meter deep X 0.3 meter wide) (i) Should not be less than 60 cm wider than the outer diameter of the pipe (ii) Located as close to the extreme edge of the right-of-way as possible but not less than 30 meter from the centre-lines of the nearest carriageway (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 culverts and bridges (iv) These should be so laid that their top is at least 0.6 meter below the ground level so as not to obstruct drainage of the road land.	Enclosed	

प्रबन्धक (तकनीकी)

प० का० इं०. रायबरेली
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन एवं राजमार्ग मंत्रालय, भारत सरकार)



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परियोजना निदेशक
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन एवं राजमार्ग मंत्रालय, भारत सरकार)
परियोजना कार्यान्वयन इकाई
रायबरेली

Rajeev Sachdeva / राजीव सचदेवा
Chief Manager / मुख्य प्रबंधक - सी.जी.डी.
Bharat Gas Resources Limited
भारत गैस रिसोर्सेस लिमिटेड
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रायबरेली, अमेठी, प्रतापगढ़ - जी.ए.
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2.2	Cross section showing the size of pit and location of cable for HDD method	Enclosed	
2.3	Strip plan / Route plan showing Gas pipeline, Chainage, Width of ROW, distance of proposed Pipeline from the edge of ROW, Important mile stone, intersections, cross drainage works etc.	Enclosed	
2.4	Methodology for laying of showing Gas pipeline	Enclosed	
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, what is the Methodology of refining trench.	Yes	
	(a) The trench width should be at least 30 cm, but not more than 60 cm wider than the outer diameter of the pipe.	Yes	
	(b) For filling of the trench, Bedding shall be to a depth of not less than 30 cm. It shall consist of granular material, free of lumps, clods and cobbles and graded to yield a firm surface without sudden change in the bearing value. Unsuitable soil and rock	Yes	
	(c) The backfill shall be completed in two stages (i) side -fill to the level of the top of the pipe and (ii) overfill to the bottom of the road crust.	Yes	
	(d) The side-fill shall consist of granular material laid in 15 cm layers each consolidated by mechanical tampering and controlled addition of moisture to 95% of the Proctor'S Density. Overfill shall be compacted to the same density as the material that had been removed. Consolidation by saturation or pending will not be Permitted.	Yes	
	(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.	Yes	
	(f) The excavation shall be protected by flagman, signs and barricades, and red lights during night hours.	Yes	
	(g) If required, a diversion shall be constructed at the expense of agency owning the utility line.	Yes	
2.4.2	Horizontal Directional Drilling (HDD) Method	Enclosed	
2.4.3	Methodology for Laying of Gas pipeline through CD works and method of laying. In cases where the carrying of Gas pipeline on the bridge becomes inescapable.	N.A.	
3	Draft License Agreement signed by two witnesses	Yes Enclosed	

परियोजना निदेशक
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
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परियोजना कार्यान्वयन इकाई
रायबरेली

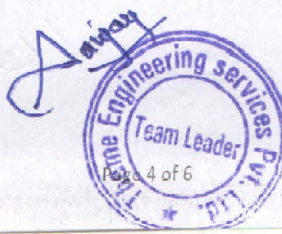
प्रबन्धक (तकनीकी)
प० का० ई०, रायबरेली
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन एवं राजमार्ग मंत्रालय, भारत सरकार)



Rajeev Sanhdeva / राजीव सचदेवा
Chief Manager / सी.एम. / मुख्य प्रबंधक - सी.जी.डी.
Bharat Gas Resources Limited
भारत गैस रिसोर्स लिमिटेड
Rae Bareilly, Amethi, Pratapgarh - G.A.
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Mob:-9413340676

4	Performance Bank Guarantee in favour of <u>NH Division</u> has to be obtained as per MoRTH guidelines 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 Gas pipe line/ducts by proper filling and compaction, clearing debris/loose earth produced due to execution of trenching at least 50 m 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. Performance BG as per above is to be obtained.	As per new guidelines of MoRTH circular dt.22.11.2016	
4.1	Confirmation of BG has been obtained or not as per NHAI guidelines.	To be Confirm	
5	Affidavit / Undertaking from the Applicant for the following is to be furnished	Yes	
5.1	Not to Damage to other utility, if damaged then to pay the losses either to NH or to the concerned agency.	Yes	
5.2	For Renewal of Bank Guarantee	As Applicable	
5.3	For Confirming all standard condition of Ministry Circulars and NH guideline	Enclosed	
5.4	For Shifting of Gas pipeline as and when required by NHAI at their own cost.	Enclosed	
5.5	For Shifting Gas pipeline due to 4/6 lanning / widening of NH	Enclosed	
5.6	For Indemnity against all damages and claims clause (xxiv)	Enclosed	
5.7	For traffic movement during laying of Gas pipeline to be managed by the Applicant.	Enclosed	
5.8	If any claim is raised by the Concessionaire then the same has to be paid by the applicant.	Enclosed	
5.9	Prior approval of the NHAI shall be obtained before undertaking any work of installation, shifting or repairs, or alterations to the Gas pipe line/any other utility located in the National highway right-of-ways.	Enclosed	
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 Gas pipe line will be borne by the applicant agency owning the line.	Enclosed	
5.11	If the NHAI considers it 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.	Noted	

प्रबन्धक (तकनीकी)
प० का० ई०, रायबरेली
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन एवं राजमार्ग मंत्रालय, भारत सरकार)



Rajeev Sachdeva / राजीव सचदेवा
Chief Manager- O.S.D. / मुख्य प्रबंधक- सी.जी.डी.
Bharat Gas Resources Limited
भारत गैस रिसोर्सेस लिमिटेड
Rae Bareilly, Amethi, Pratapgarh- G.A.
रायबरेली, अमेठी, प्रतापगढ़-जी.ए.
Mob:-9413330675

परियोजना निदेशक
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन एवं राजमार्ग मंत्रालय, भारत सरकार)
परियोजना कार्यान्वयन इकाई
रायबरेली

5.12	Certificate from the applicant in the following format (i) Laying of Gas pipeline will not have any deleterious effects on any of the bridge components and Roadway safety for traffic (ii) "We do not undertake that I will relocate service road / approach road / utilities at my own cost notwithstanding the permission granted withing such time as will be stipulated by NH" for future 4/6 lanning or any other development.	Yes; Enclosed	
6	Who will sign the agreement on behalf of Gas pipeline agency	Rajeev Sachdeva Chief Manager-CGD (BGRL)	
6.1	Power of Attorney to sign the agreement is available or not	Yes	
7	The Project Director/Excutive Engineers, will submit the following Certificates	Yes	
7.1	Certificate for proposal for confirming of all standard condition issued vide Ministry of Road Transport and Highway Circular No.-NH-III/P/66/76 dated 18/19.11.1976, RW/NH-III/P/66/76 dated 11.5.1982, (ii) RW/NH-11037/1/86/DOI dated 28.7.1993. (iii) RW/NH-11037/1/86/DOI dated 19.1.1995 (iv) RW/NH-34066/2/95/ S&R dated 25.10.1999 and (v) RW/NH-34066/7/2003 S&R (B) dated 17.9.2003	Yes, Enclosed	
7.2	Certificate from XEN in the following format (i) " it is certified that any other location of the Gas pipeline would be extremely difficult and unreasonable costly and the instaliation of Gas pipe line within ROW will not adversely affect the design, stability & traffic safety of the highway nor the likely future improvement such as widening of the carriageway, easing of curve etc".	Yes, Enclosed	
	(ii) for 6- lanning (a) Where feasibility is available "I do certify that there will be no hindrance to proposed six laning based on the feasibility report considering proposed structures at the said location". (b) In case feasibility report is not available "I do certify that sufficient ROW is available at site for accommodating proposed six laning".	Agreed	
8	If NH section proposed to be taken up by NHAI on BOT basis - a clause is to be inserted in the Agreement. "The permitted highway on which licensee has been granted the right of lay Gas pipeline/cable/duct has also been granted as a right of way to the concessionaire under the concession agreement for up-gradation of (Jaunpur- Lucknow) NH No. 731 crossing & Parallel details as per Annexure "A" attached on Build, Operate and Transfer Basis and therefore, the licensee shall honor the same."	(1) Across right to left from jail road chauraha Raebarely. (2) parallel Left side from Jail road chauraha to Modern Rail Coach Factory Lalganj.	

[Signature]
परियोजना निदेशक
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन एवं राजमार्ग मंत्रालय, भारत सरकार)
परियोजना कार्यान्वयन इकाई
रायबरेली

प्रबन्धक (तकनीकी)
पो कार्ड ई०, रायबरेली
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन एवं राजमार्ग मंत्रालय, भारत सरकार)



Rajeev Sachdeva / राजीव सचदेवा
Chief Manager, G.D. / मुख्य प्रबंधक-सी.जी.डी.
Bharat Gas Resources Limited
भारत गैस रिसोर्सेस लिमिटेड
Rae Bareli, Amethi, Pratapgarh-G.A.
रायबरेली, अमेठी, प्रतापगढ़-जी.ए.
Mob:-9413330578

9	Who will supervise the work of laying of Gas pipeline	(BGRL) India/NHAI	
	(a) On behalf of the Applicant	Rajeev Sachdeva Chief Manager-CGD (BGRL)	
	(b) On behalf of NH Division	Person deputed by NHAI	
10	Who will ensure that the defects in road portion after laying of water / Gas supply pipeline are corrected and if not corrected then what action will be taken.	(BGRL) India/NHAI	
	(a) On behalf of the Applicant	Rajeev Sachdeva Chief Manager- CGD (BGRL)	
	(b) On behalf of NH Division	Person deputed by NHAI	
11	Who will pay the claims for damages done / disruption in working of concessionaire if asked by the concessionaire	(BGRL) India	
	On behalf of the Applicant		
12	A certificate from Project Director/Executive Engineer that he will enter the proposed permission in the register of records of the permissions in the prescribed Performa (Copy enclosed).	Enclosed	
13	If any previous approval is accorded for laying of underground water / Petroleum / Gas supply pipeline then Photocopy of register of records of permissions accorded as maintained by Project Director/Executive Engineer then copy be enclosed.	To be confirmed by NHAI	To be confirmed by NHAI

Bharat Gas Resources Limied,

Rajeev Sachdeva

Chief Manager-CGD (BGRL)



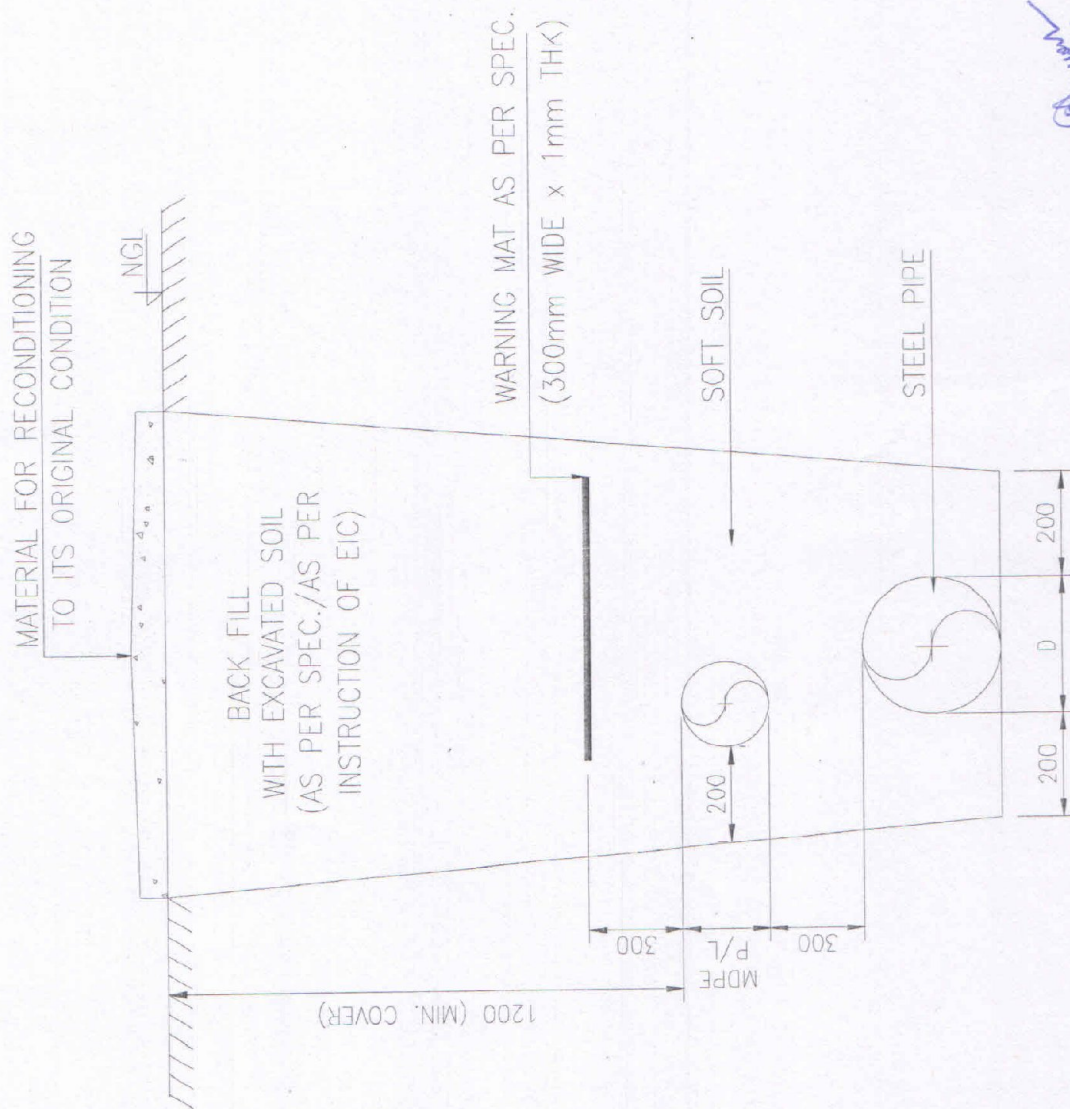
Rajeev Sachdeva / राजीव सचदेवा
Chief Manager, C.G.D. / मुख्य प्रबंधक-सी.जी.डी.
Bharat Gas Resources Limited
भारत गैस रिसोर्स लिमिटेड
Rae Bareilly, Amethi, Pratapgarh-G.A.
रायबरेली, अमेठी, प्रतापगढ़-जी.ए.
Mob:-9413330676

प्रबन्धक (तकनीकी)
प० का० ई०, रायबरेली
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन एवं राजमार्ग मंत्रालय, भारत सरकार)

परियोजना निदेशक
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन एवं राजमार्ग मंत्रालय, भारत सरकार)
परियोजना कार्यान्वयन इकाई
रायबरेली

NOTES

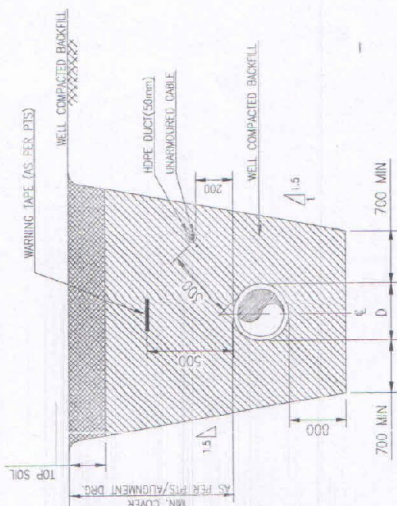
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2. FOLLOW WRITTEN DIMENSIONS ONLY DO NOT SCALE



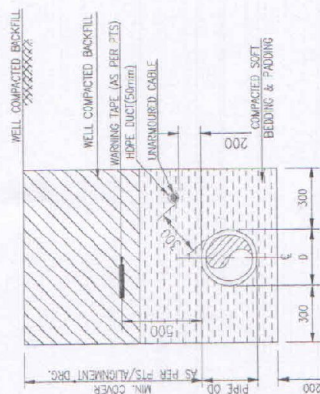
Rajeev Saindeva / राजीव सैन्देवा
 Chief Manager - G.D. / मुख्य प्रबंधक - जी.डी. सी.
 Bharat Gas Resources Limited
 भारत गैस रिसोर्सेस लिमिटेड
 Rae Bareilly, Amethi, Pratapgarh-G.A.
 रायबरेली, अमेठी, प्रतापगढ़-जी.ए.
 Mob:-9413330676

Sl. No.	Issued For	Rev.	Drawn By	Checked By	Approved By
1	ISSUED FOR TENDER	1.0	JN	AM	US
SUBJECT					
Bharat Gas Resources Limited					
PROJECT					
Bharat Gas Resources Limited					
TENDER					
CITY GAS DISTRIBUTION PROJECT					
TYPICAL SKETCH FOR TRENCH CROSS SECTION WITH STEEL AND MDPE PIPELINE					
TRACTEBEL					
TRACTEBEL Engineering (P) Ltd.					
P 013752 D 20759 003					

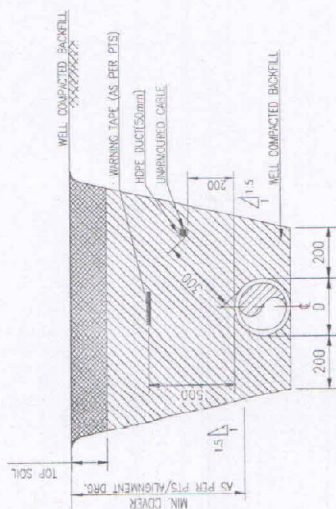
For 72
 Rajeev Saindeva



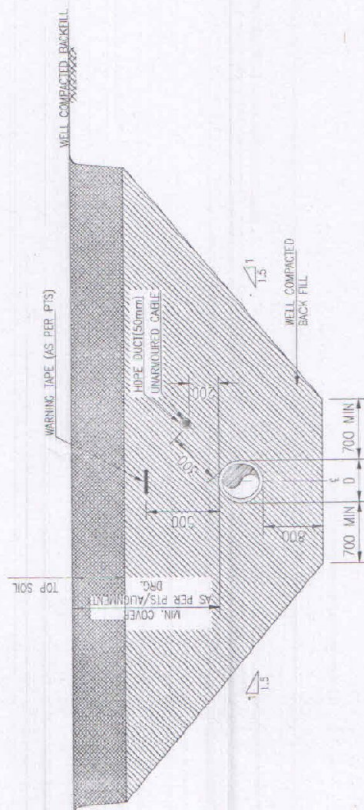
TYPICAL TRENCH DETAILS FOR REVERSE SLIP FAULT (IN NORMAL SOIL) AREAS



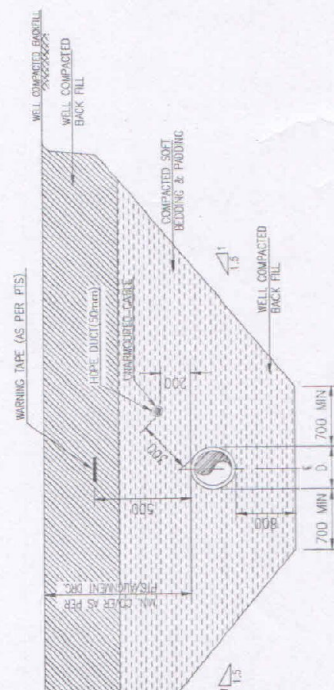
TYPICAL TRENCH DETAILS IN ROCK AREA



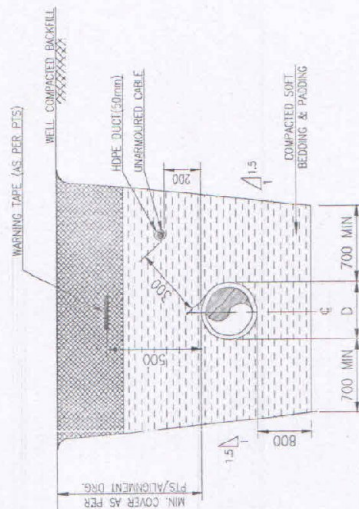
TYPICAL TRENCH DETAILS IN NORMAL SOIL
TYPE-1



TYPICAL TRENCH DETAILS FOR SLIP FAULT (IN NORMAL SOIL) AREAS
TYPE-4



TYPICAL TRENCH DETAILS FOR SLIP FAULT (IN ROCK) AREAS



TYPICAL TRENCH DETAILS FOR REVERSE SLIP FAULT (IN ROCK) AREAS
TYPE-5

Rajeev Sachdeva / राजीव साचदेवा
Chief Manager- C.D. / मुख्य प्रमुख- सी.जी.डी.
Bharat Gas Resources Limited
भारत गैस रिसोर्सेस लिमिटेड
Rae Bareilly, Amethi, Pratapgarh-G.A.
रायबरेली, अमेठी, प्रतापगढ़-जी.ए.
Mob:-9413830676

NOTES:-

- ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
1. ALL DIMENSIONS ARE TO FACE UNLESS SPECIFIED AS PER PITS ALIGNMENT SHEET AND
2. REQUIREMENT OF CONCERNED AUTHORITY.
- THIS SKECH IS INDICATIVE ONLY
- AS PER SPECIFICATION, OPTG IS TO BE PROVIDED, IT WILL BE 'A' AND ALONGWITH-
LINEPATE AS PER THE APPROVED PROCEDURE REFER DRAWING N0:
GANG-J-70707-2028 FOR CIRC INSULATION
TYPE OF TREACHING TO BE USED SHALL BE AS PER PITS AND APPROVED
PROCEDURE.
CROSS SECTIONS MUST BE VIEWED LOOKING IN THE DIRECTION OF
FLOW.

[illegible]

- ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
- THE CROSSING WORKS SHALL BE EXECUTED IN ACCORDANCE WITH API RECOMMENDED PRACTICE 1102 LATEST EDITION.
- 500MM AWAY FROM BOTH ENDS TWO NOS. INSULATORS SHALL BE PLACED. IN BALANCE LENGTH MAX. SPACING OF INSULATORS SHALL BE 2000 mm.
- ELECTRICAL INSULATION BETWEEN THE CASING AND CARRIER PIPE SHALL BE CHECKED WITH A SUITABLE MEGGER.
- MATERIAL OF THE CASING INSULATORS SHALL BE HOPE, END SEALS SHALL BE HEAT SHRINKABLE TYPE (MAKE RAYCHEM OR EQUIVALENT). CONTRACTOR SHOULD TAKE PRIOR APPROVAL FOR MATERIAL OF CONSTRUCTION FOR END SEAL & SHALL SUBMIT MATERIAL CERTIFICATES TO OWNER/CONSULTANT FOR APPROVAL.
- 1:250 SLOPE TO BE PROVIDED FOR DRAINING DURING INSTALLATION OF CASING PIPE.
- CASING PIPE SHOULD EXTEND MIN. 600mm BEYOND THE TOE OF THE SLOPE OR BASE GRADE OR MIN 900mm BEYOND THE BOTTOM OF THE DRAINAGE DITCH, WHICHEVER IS MORE.
- CONTRACTOR SHOULD SUBMIT DETAILED WORK PROCEDURE ALONG WITH SKETCHES AND MATERIAL TEST CERTIFICATES FOR APPROVAL.
- THE CROSSING SHALL BE CARRIED OUT WITH PIPE SIZE AND MINIMUM THICKNESS GIVEN IN THE PIS & DESIGN BASIS, THE SIZES GIVEN IN THIS SHEET ARE MINIMUM INDICATIVE ONLY.
- FILLING OF ANNULAR SPACE BETWEEN CASING AND CARRIER PIPE SHALL BE AS PER PROJECT SPECIFICATION.
- CROSSING MAY BE CARRIED OUT PRIOR TO MARINE ACTIVITIES ADDITIONAL ROW, IF REQUIRED, FOR APPROACH TO CROSSING, PIPELINE STRINGING, HYDROTESTING, WORKING PIT FOR CROSSING, TO AVOID CAVING OF SOIL, SHALL BE PROVIDED BY CONTRACTOR WITHOUT ANY COST IMPLICATION.
- CATHODIC PROTECTION :- ALL CASING PIPES FOR RAILWAY CROSSING SHALL BE CP, PROTECTED, USING SACRIFICIAL ANODE.
- TEST STATION ON BOTH SIDE OF CROSSING.
- THE LOCATION OF ENTRY AND EXIT PIT SHALL BE DECIDED AT SITE TO SUIT THE SITE REQUIREMENT.
- AT EACH CROSSING, PIPELINE CROSSING WARNING SIGN SHALL BE INSTALLED ON EITHER SIDE OF CROSSING. THE WARNING PLATE MAY BE MOUNTED ON THE VENT/ DRAIN OFF PIPE.
- ALL CARRIER PIPELINE JOINTS SHALL BE RADIOGRAPHED.
- PIPELINE SECTION SHALL BE PRETESTED HYDROSTATICALLY SEPARATELY FROM THE MAIN LINE TESTING WHEN REQUIRED BY CONCERNED AUTHORITIES OR AS DIRECTED BY CLIENT.
- THE CASING PIPE SHALL BE PROVIDED WITH MINIMUM 50 MM DIAMETER VENT PIPE FOR FILLING THE FILLER MATERIAL, IF REQUIRED AS PER PROJECT SPECIFICATION. AFTER FILLING, VENT PIPE AT BOTH ENDS SHALL BE TRIMMED AND PLUGGED/SEALED WITH END CAPS.
- IN ANY CASE, THE MINIMUM LENGTH OF CASING PIPE SHALL BE 72M FOR NATIONAL HIGHWAY CROSSING, AND 60M FOR ALL STATE HIGHWAY/MR CROSSING.
- THICKNESS OF CASING PIPE SHALL BE CALCULATED AS PER API RP 1102 AND SUBMITTED FOR APPROVAL.

Rajeev Sachdeva / राजीव सखदेवा
 Chief Manager G.D./मुख्य प्रबंधक-जी.डी.
Bharat Gas Resources Limited
 भारत गैस रिसोर्स लिमिटेड
 Rax Bareilly, Amelma, Pratapgarh-G.A.
 राखबरेली, अमेली, प्रतापगढ़-जी.ए.
 Mob:-9413330976

Rev.	ID	M	Y	Modifications	Drawn	Checked	Approved	Validated
1	05.12.14			REVISED AND RE-ISSUED	M	MS	NC	SKH
2	19.09.16			APPROVED FOR CONSTRUCTION	M	MS	NC	SKH

SUBJECT: TYPICAL ROAD CASED CROSSING (B+C)

TYPE - I

SEPARATE CASING FOR CARRIER AND OFC

Scale

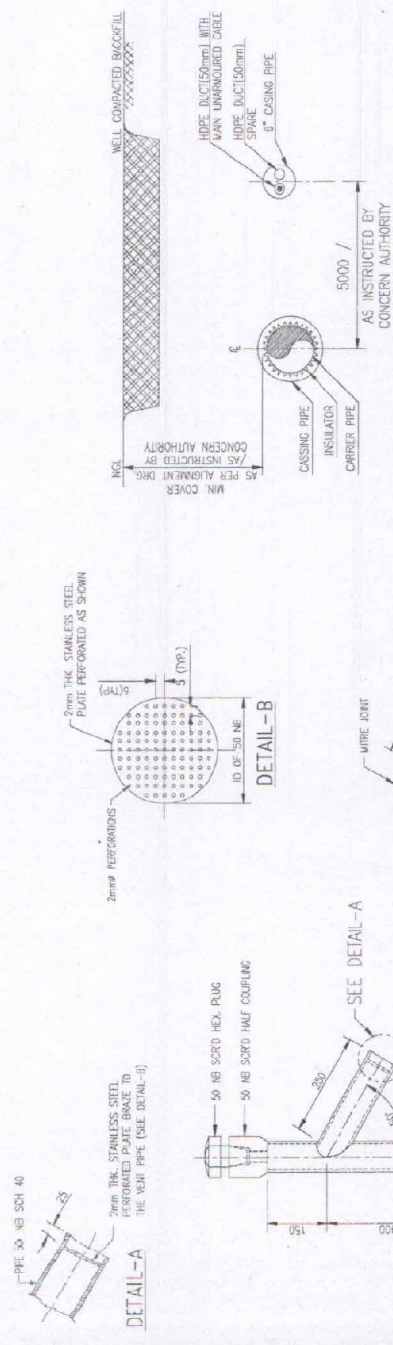
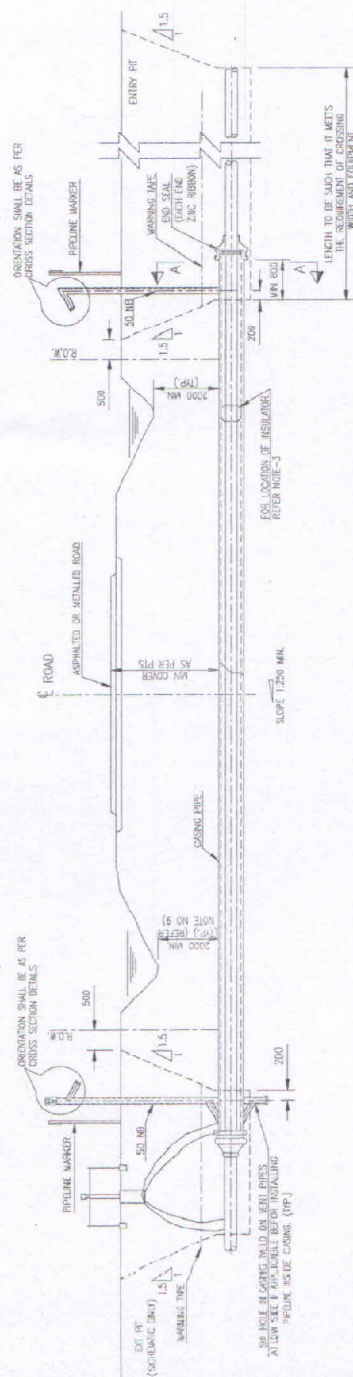
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01 of 01

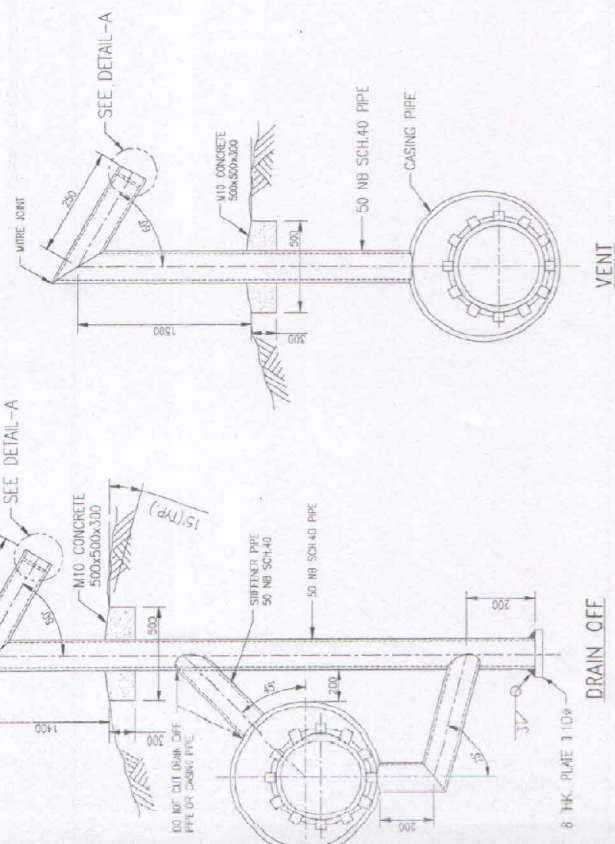
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TRACTABEL
 TRACTABEL Engineering Pvt. Ltd.

Page No. of 26



SECTION A-A TYPICAL BORE PIT EXCAVATION



S. NO.	SIZE OF CARRIER PIPE (INCH NB)	MINIMUM SIZE OF CASING PIPE (FOR TYPE-I)	MATERIAL
1.	4"	10"	API 5L Gr. B or Equivalent
2.	6"	12"	API 5L Gr. B or Equivalent
3.	8"	14"	API 5L Gr. B or Equivalent
4.	10"	16"	API 5L Gr. B or Equivalent
5.	12"	18"	API 5L Gr. B or Equivalent
6.	16"	22"	API 5L Gr. B or Equivalent
7.	18"	24"	API 5L Gr. B or Equivalent
8.	20"	26"	API 5L Gr. B or Equivalent
9.	24"	30"	API 5L Gr. B or Equivalent
10.	30"	36"	API 5L Gr. B or Equivalent
11.	36"	42"	API 5L Gr. B or Equivalent
12.	42"	48"	API 5L Gr. B or Equivalent
13.	48"	54"	API 5L Gr. B or Equivalent

