



# 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)

दूरभाष / Phone : 0522-4960291, टेलीफैक्स / Fax : 0522-4950680

ई-मेल / E-mail : rowestup@nhai.org, rowestup@gmail.com



19001/1/RO-W-UP/NH-2 to 3/UG/DVVNL/NOC/ 1526

Date: 08.08.2022

### Invitation of Public Comments

**Sub: Permission for crossing of 11 KV underground electrical cable for separation of agriculture consumer and associated work at chainage 10.100, 15.40, 16.850, 17.9, 18.5 & 25.5 of Agra Bypass (Southern).**

The Authorized Signatory M/s DVVNL, Agra has submitted the proposal for crossing of 11 KV underground electrical cable for separation of agriculture consumer and associated work at chainage 10.100, 15.40, 16.850, 17.9, 18.5 & 25.5 of Agra Bypass (Southern) in the State of Uttar Pradesh.

2. As per the guidelines, issued by the Ministry vide OM No.RW/NII-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 issues with the approval of RO-West (UP).

Encl: As above.

(N.P. Singh)

DGM (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 DVVNL, Agra for information.
4. The PD, PIU-Agra for information.

# CHECK - LIST

Guidelines for processing the proposal for laying electrical cable/HDPE Pipe across National Highways vested with NHAI/PIU/AGRA.

## Relevant Circulars

1) Ministry Circular No.RW/NH-33044/29/2015 S&R(R) dated 22.11.2016

Check list for getting approval for laying of Electrical Cables/HDPE Pipe at AGRA BYPASS (NH 2 & NH 03 CONNECTOR) land.

S.No.	Item	Information/Status	Remarks
1	General Information	Work under New 11 KV Feeder for Separation of Agriculture Consumer and Associated work Agra Zone (Agra District) Project	
1.1	Name and Address of the Applicant/Agency	Executive Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, Kamla Nagar, Basant Vihar Kaver Kunj Kamla Nagar Uttar Pradesh	
1.2	National Highway Number	AGRA BYPASS (NH 2 & NH 03 CONNECTOR)	
1.3	State	Uttar Pradesh	
1.4	Location	Road crossing of UG Electrical Cable/HDPE Pipe (Two run) at Km. 10.100 (AGRA BYPASS (NH 2 & NH 03 CONNECTOR))	
1.5	(Chainage in Km)	Road crossing of UG Electrical Cable/HDPE Pipe (Two run) at Km. 10.100 (AGRA BYPASS (NH 2 & NH 03 CONNECTOR))	
1.6	Length in Meters	(03.004Mtr. x 2 Run) = 1 Non -127.668 Mtrs.	
1.7	Width of available ROW		
	(a) Left side from center line to tower towards increasing chainage/Km direction	30.993 Mtr From center of road (As per drawing attached)	
	(b) Right side from center line to tower increasing chainage/Km direction	32.841 Mtr From center of road (As per drawing attached)	
1.8	Proposal to lay the cables	UG Electrical cable / HDPE Pipe	
	(a) Left side from center line towards increasing chainage/Km direction	30.993 Mtr From center of road (As per drawing attached)	
	(b) Right side from center line towards increasing chainage/Km direction	32.841 Mtr From center of road (As per drawing attached)	
1.9	Proposal to acquire land	No	
	(a) Left side from center line	NA	
	(b) Right side from center line	NA	
1.10	Whether proposal is in the same side where land is not to be acquired	No land acquisition required	
	If not then where to lay the cable	Crossing at main carriageway (Below Road)	
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)	4 Lane	
1.13	Proposed Number of lanes (2 lane with paved shoulders/4/6/8 lanes)	NA	
1.14	Service road existing or not	YES <del>No</del>	
	If yes then which side	1 Lane	
	(a) Left side from center line	1 Lane	
	(b) Right side from Center line	1 Lane	
1.15	Proposed Service road	NA	
	(a) Left side from center line	NA	
	(b) Right side from center line	NA	

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National Highways Authority of India

प्रतिष्ठान कार्यालय इलाहाबाद-आगरा

Project Implementation Unit-Agra

अतिरिक्त अभियन्ता  
विद्युत वितरण खण्ड-द्वितीय  
कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
	(a) Left side from center line	NA	
	(b) Right side from center line	NA	
1.16	Whether proposal to laying UG-Electrical Cable line is after the service road or between the service road and main carriageway	Crossing at main carriageway (Below Road)	
1.17	Whether carrying of sewage/gas pipe line has been proposed on highway Bridges. If Yes, the mention the methodology	NA	
1.18	Whether carrying of sewage/gas pipe line has been proposed on parapet/any part of the bridges. If Yes, the mention the methodology	NA	
1.19	If crossings 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 expenses of the agency owning the line.	YES Electrical cable will be laid in 160mm HDPE Pipe with HDD method for crossing	
	a) Whether existing drainage structure allowed to carry utility pipeline.	NA	
	b) Is it on a line normal to NH	YES	
	c) What is the distance of crossing the utility pipelines from the existing structures. Crossings shall not be too near the existing structures on the National Highway, the minimum distance being 15 meter.	As per NHAI Norms	
	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.	HDPE Pipe 160mm Dia	
	e) Ends of the casing / conduit pipe / tower foundation 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 of slope toe of slope in the fills	YES	
	g) The top of the casing/conduit pipe / tower foundation should be at least 1.2 meter below the surface of the road subject to bring atleast 0.3 m below the drain inverts.	YES	
	h) Mention the methodology proposed for crossing of road for the proposed UG electrical cable. Crossing shall be by boring method (HDD) specially where the existing road pavement is of cement concrete or dense bituminous concrete type.	By HDD Method Drawing for methodology enclosed	
	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.	As per NHAI Norms	
2	Document / drawing enclosed with the proposal	Drawing Enclosed	

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Project Implementation Unit-Agra

संजय वर्मा/Sanjay Verma

परियोजना निदेशक/Project Director

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/

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अधिकांसी अभियन्ता  
विद्युत वितरण खण्ड-द्वितीय  
कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
2.1	Cross section showing the size of the trench for open trenching method. (Is it normal size of 1.6m (min) deep X 0.3 wide) i) Should not be greater 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 15 meter from the centre-line of the nearest carriageway iii) shall not be permitted to run along the National highway 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 atleast 0.6 meter below the ground level so as not to obstruct drainage of the road land.	Drawing Enclosed	
2.2	Cross section showing the size of pit and location of pipe line for HDD method.	Drawing Enclosed	
2.3	Strip plan / Route plan showing the cables. chainage, width of ROW, distance of proposed, cable from the edge of ROW, important mile stone, intersections, cross drawings work etc.	YES, Drawing Enclosed	
2.4	Methodology for laying of electrical cable	By HDD 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.	NA	
	(a) The trench width should be atleast 30 cm but not more than 60cm wider than the outer diameter of the pipe.	NA	
	(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 edged should be excavated and replaced by replaced by selected material	NA	
	(c) The backfill shall be completed in two stages (i) side-fill to the level to the top of the pipe and (ii) overfill to the bottom of the road crust.	NA	
	d) The side fill shall consist of granular material laid in 15cm 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 ponding will not be permitted.	NA	
	e) The road crust on either side of the trench. Care shall be taken to avoid the formation of a dip at the trench	NA	
	f) The excavation shall be protected by flagman, signs and barricades and red lights during night hours.	NA	
	g) If required, a diversion shall be constructed at the expense of agency owning the utility line	NA	
2.4.2	Horizontal Directional Drilling (HDD) method.	YES	

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National Highways Authority of India/प्रियंका मिश्रा/Project Director  
परियोजना कार्यान्वयन इकाई-आगरा/National Highways Authority of India  
Project Implementation Unit-Agra/परियोजना कार्यान्वयन इकाई-आगरा  
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अभिषेक अभियन्ता  
विद्युत वितरण खण्ड-द्वितीय  
कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
2.4.3	Methodology for laying of electrical cable through CD works and method of Laying. In cases where the carrying of gas pipe line on the bridge becoems inescapable.	NA	
3	Draft License agreement signed by two witnesses.	YES	
3.1	The License fee estimate as per Ministry's guidelines issued vide circular No. RW/NH-33044/29/2015/S&R (R) dated 22.11.2016	As per applicable	
4	Whether Performance Bank Guarnatee as Ministry's guidelines issued vide circular No. RW/NH- 33044/29/2015/S&R (R) dated 22.11.2016 is obtained.	An undertaking given by the agency towards Performance Bank Guarantee as per extant norms MoRTH per each crossing as demanded by NHAI/MoRTH.	
4.1	Confirmation of BG has been obtained or not as per MoRTH/NHAI guidelines.	Not Submitted	
5	Affidavit / undertaking from the Applicant for the following is to be furnished	Enclosed	
5.1	Undertaking for not to Damage any other utility. If damaged then to pay the losses either to NHAI or to the concerned agency.	YES, Enclosed	

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National Highways Authority of India

परियोजना कार्यान्वयन इकाई-आगरा

Project Implementation Unit-Agra

संजय शर्मा/Project Director  
परियोजना निदेशक/Project Director  
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/  
National Highways Authority of India  
परियोजना कार्यान्वयन इकाई-आगरा  
Project Implementation Unit-Agra

अविशाली अमियन्ता  
विद्युत वितरण खण्ड-द्वितीय  
कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
5.2	Undertaking for Renewal of Bank Guarantee as and when asked by MoRTH/NHAI.	YES, Enclosed	
5.3	Undertaking for Confirming all standard conditions of Ministry Circulars and NHAI's guideline	YES, Enclosed	
5.4	Undertaking for Indemnity against all damages and claims.	YES, Enclosed	
5.5	Undertaking for management of traffic movement during laying of utility line without hampering the traffic.	YES, Enclosed	
5.6	Undertaking that if any claim is raised by the concessionaire/contractor then the same has to be paid by the applicant.	YES, Enclosed	
5.7	Undertaking that prior approval of the NHAI shall be obtained before undertaking any work of the installation, shifting or repairs or alterations to the utility located in the National Highway right of ways.	YES, Enclosed	
5.8	Undertaking that expenditure, if any, incurred by NHAI for repairing any damage caused to the National Highway by the laying, maintenance or shifting of the utility line will be borne by the applicant agency owning the line.	YES, Enclosed	
5.9	Undertaking that text of the license deed is as per verbatim of MoRTH format (issued vide Ministry's Circular No. RW/NH-33044/29/2015/S&R (R) dated 22.11.2016.	YES, Enclosed	
5.10	Undertaking that the applicant has obtained various safety clearances from the representative authorities such as Directorate of Electricity, Chief Controller of Explosives, Petroleum and Explosive Safety Organisation, UTI Industry Safety Directorate, State/Central Pollution Control Board and any other statutory clearances applicable, before applying to Highway Administration.	YES, Enclosed	
5.11	If the MoRTH/NHAI considers it necessary in future to move the utility line for any work for 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, Enclosed	
5.12	Certificate from the applicant in the following format i) Laying of UG Cable/HDPE Pipe will not have any deleterious effects on any of the bridge components and roadway safety for traffic. ii) for 6 laning "we do undertake that I will relocate services road / approach road / utilities at my own cost notwithstanding the permission granted within such time as will be stipulated by NHAI for future six laning or any other development.	YES, Enclosed	

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Project Implementation Unit-Agra

संजय वर्मा/Sanjay Verma

परियोजना निदेशक/Project Director

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/

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अधिसूची अभियन्ता  
विद्युत वितरण खण्ड-द्वितीय  
कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
6	Who will sign the agreement on behalf of Laying of UG electrical cable/HDPE Pipe	Chief Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, Agra Zone 2	
	Power of Attorney to sign the agreement is available or not	YES	
7	The Project Director, will submit the following Certificates.	-	
7.1	Certificate for confirming of all standard condition issued vide Ministry Circular No. RW/NH-33044/29/2015/S&R (R) dated 22.11.2016.	-	
7.2	Certificate from PD in the following format (i) " It is certified that any other location of the Water Supply pipe line would be extremely difficult and unreasonable costly and the installation of Water Supply pipe line within ROW will not adversely affect the design, statbility & traffic safety of the highway nor the likely future improvement. Such as widening of the carriageway, easing of Curve etc". (ii) for 6-lanning (a) Where feasibility is available " I do certify that there will be no hindrance to proposed six-lanning based on the feasibilityreport considering proposed ctructures at the said location (b) In case feasibility report is not available I do certify that sufficient ROW is available at site for accommodation proposed six-laning"	-	
8	If NH section proposed to be taken up by NHAI on BOT basis — s cause in para 9 to be inserted in the agreement. "The permitted Highway on which license has been granted as a right to lay cable / duct, has also been granted as a right of the way to be concessional under the concession agreement for up-gradation on build, operate and transfer basis and therefore, the license shall honor the same".	NA	
9	Who will supervise the work of laying of UG Electrical Cable/HDPE Pipe		
	(a) On behalf of the Applicant	Executive Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, EDD2 Kamla Nagar Agra	
	(b) On bealf of NHAI	Suervision Consultant	
10	Who will ensure that the defects in road portion after laying of over Head electrical line are corrected and if not corrected then what action will be taken.		
	(a) On behalf of the Applicant	Executive Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, EDD2 Kamla Nagar Agra	
	(b) On bealf of NHAI	Suervision Consultant	

Site Engineer

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/

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परियोजना कार्यान्वयन इकाई-आगरा

Project Implementation Unit-Agra

परियोजना निदेशक/Project Director

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/


National Highways Authority of India


परियोजना कार्यान्वयन इकाई-आगरा

Project Implementation Unit-Agra

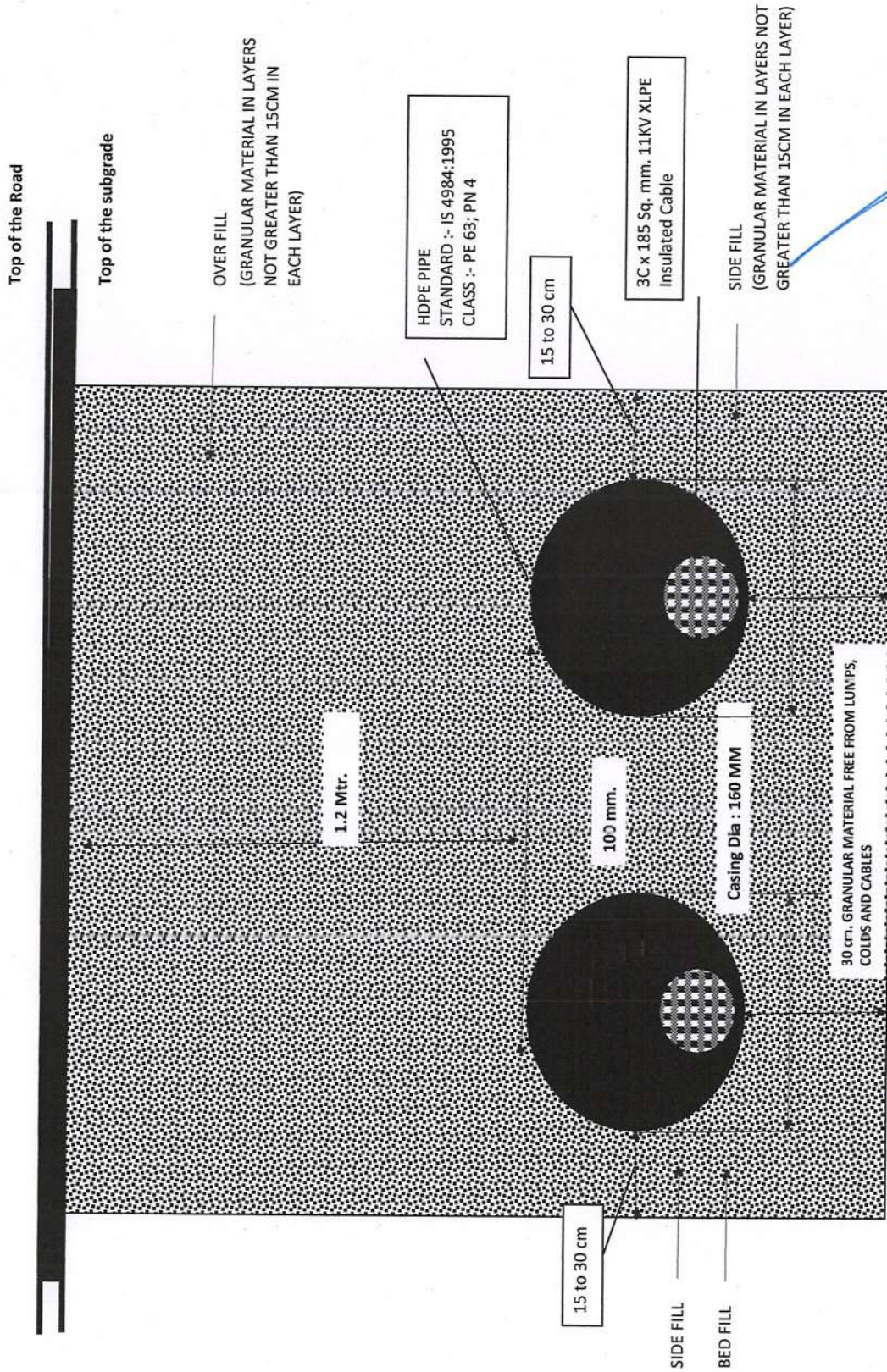
अधिसूची अभियन्ता  
विद्युत वितरण खण्ड-द्वितीय  
कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
11	Who will pay the claims for damages done / disruption in working of concessionalre if asked by the concessionalre	L&T Construction, Mr. G.G Raju (+98272074085) Project Manager Feeder Separation Project, Agra Zone (Agra District)	
12	A certificate from Project Director that he will enter the proposed permission in the register of records of the permission in the prescribed proforma (copy enclosed).	✓	
13	If any previous approval is accorded for laying of UG electrical cable then photocopy of register of records of permissions accorded as maintained by Project Director may be enclosed	NA ✓	

  
 [Name, Designation and signature of the  
 authorized representative of applicant]  
 कमला नगर, आगरा

  
 [Name, Designation and signature of  
 concerned authority of NHAI/PIU/AGRA]  
 संजय वर्मा/Sanjay Verma  
 सहायक प्रमुख, परियोजना कार्यान्वयन इकाई-आगरा  
 भारतीय राष्ट्रीय राजमार्ग प्राधिकरण  
 National Highways Authority of India  
 परियोजना कार्यान्वयन इकाई-आगरा  
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# **ANNEXURE-A** **CASING PIPE AND CABLE DETAILS**

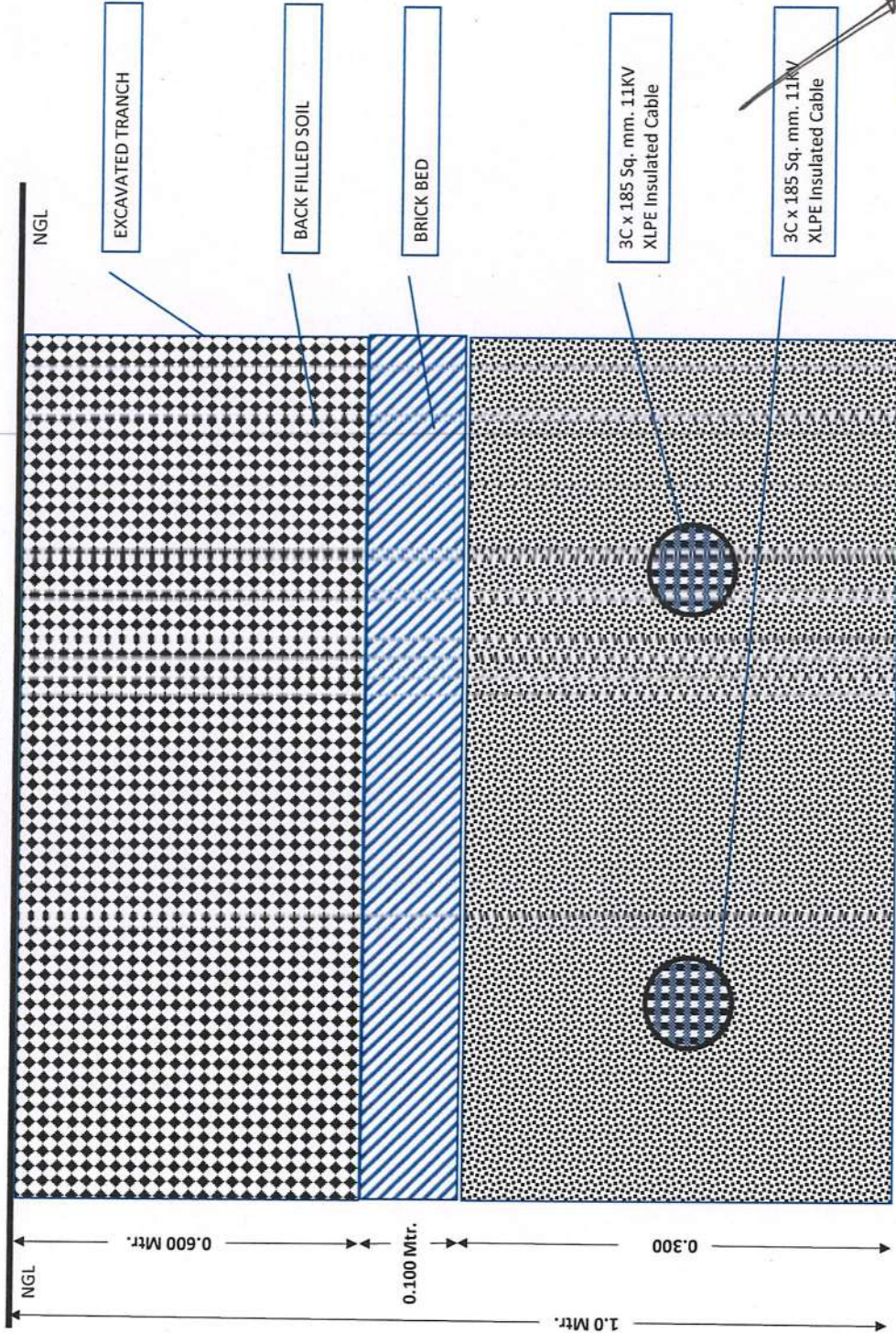


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कमला नगर, आगरा

संलग्न चर्च/संलग्न व्यक्त  
परियोजना-08/2019-20  
केंद्रीय राष्ट्रीय राजमार्ग प्राधिकरण/  
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परियोजना कार्यान्वयन इकाई-आगरा  
Project Implementation Unit-Agra

Site Engineer  
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# ANNEXURE-B CABLE BACKFILLING DETAILS

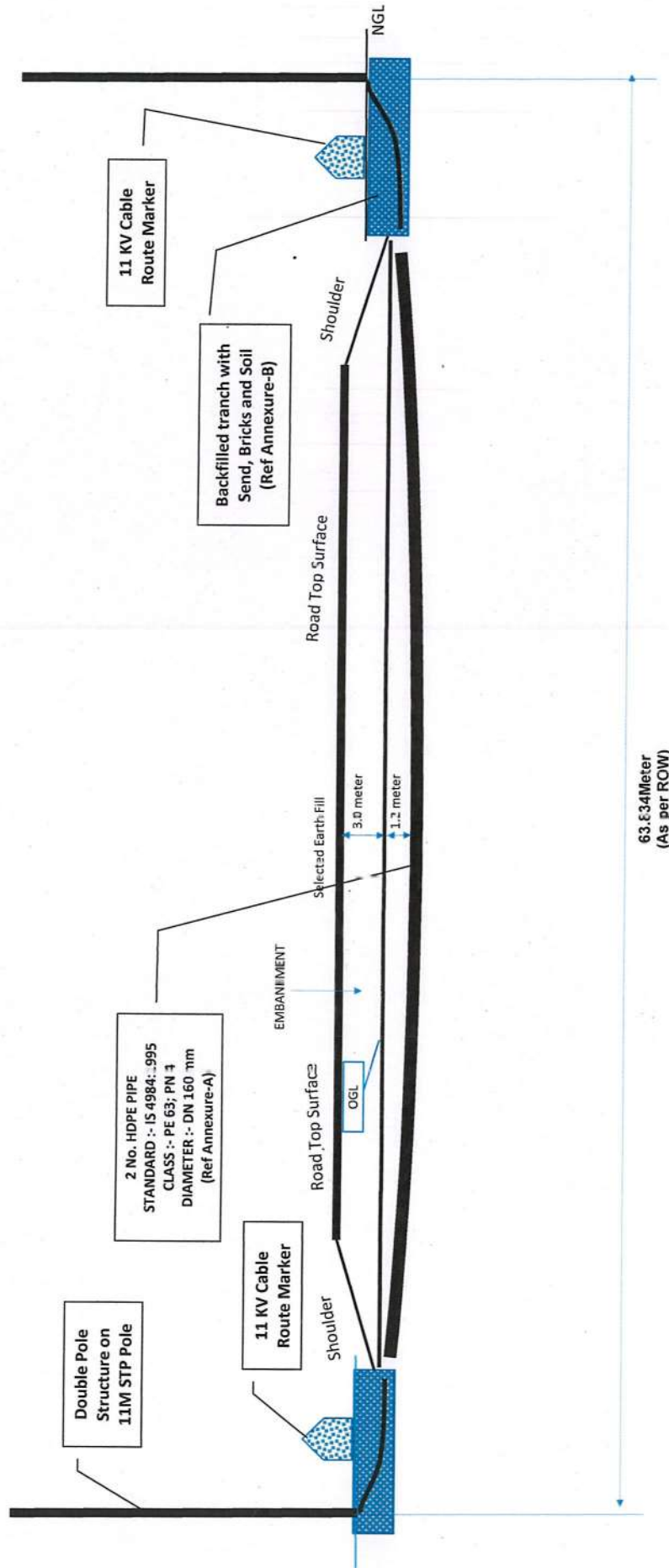


अभिज्ञान समित्या  
विद्युत वितरण, खण्ड-द्वितीय  
कमला नगर, आग्रा

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Project Implementation Unit-Agra

परियोजना निदेशक/Project Di.  
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/  
National Highways Authority of India  
परियोजना कार्यान्वयन इकाई-आगरा

# Typical Cross Sectional For HDD

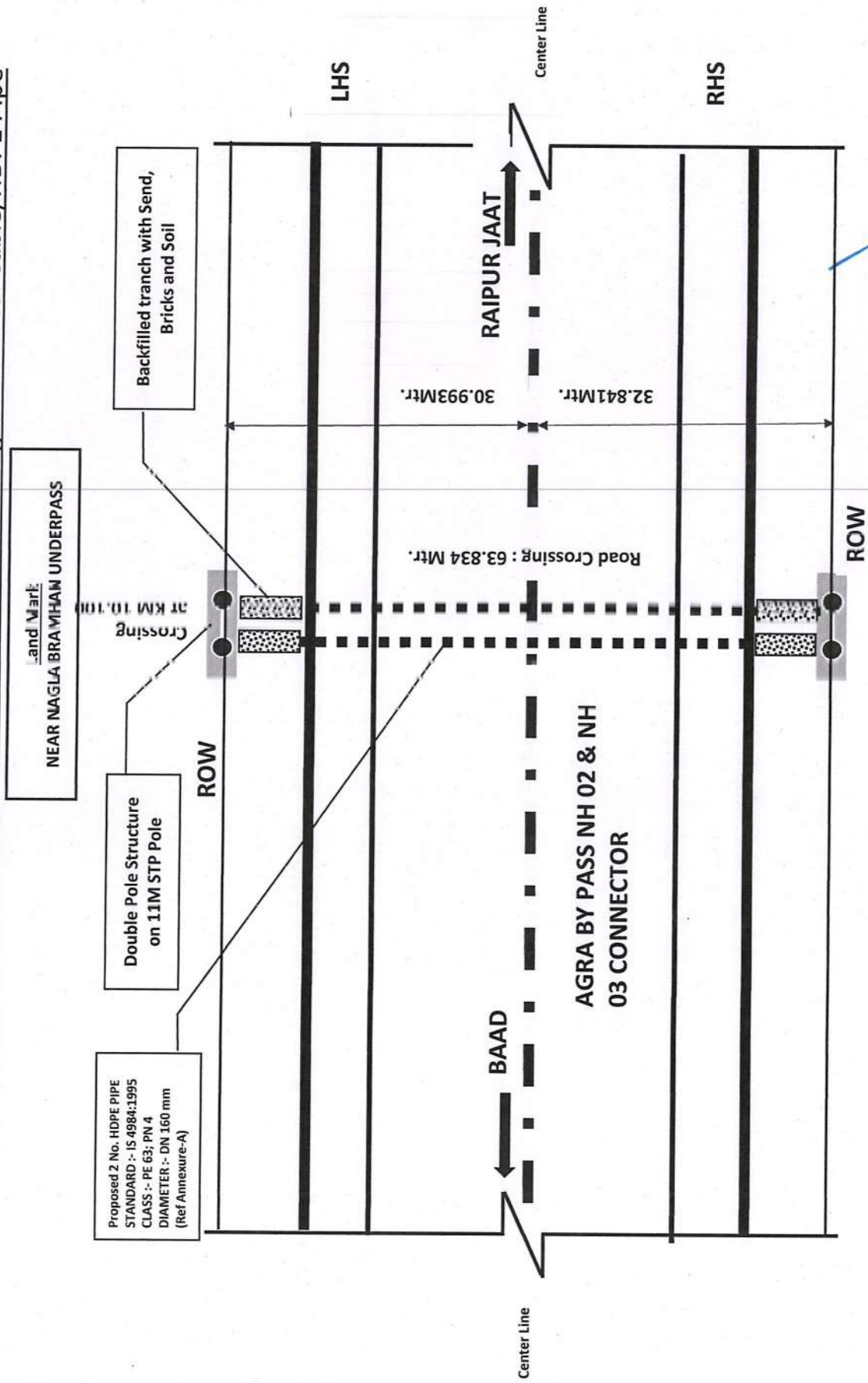


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 Project Implementation Unit-Agra

संस्थापक/संस्थापक/प्रोजेक्ट मैनेजर  
 परियोजना निदेशक/प्रोजेक्ट मैनेजर  
 भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/  
 National Highways Authority of India  
 परियोजना कार्यान्वयन इकाई-आगरा  
 Project Implementation Unit-Agra

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 विद्युत वितरण सुपुंड-द्वितीय  
 कमला नगर, आगरा

# Typical View of AGRA BY PASS NH 02 & NH 03 CONNECTOR Crossing of Electrical Cable/HDPE Pipe



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**CHECK - LIST**

Guidelines for processing the proposal for laying electrical cable/HDPE Pipe across National Highways vested with NHAI/PIU/AGRA.

**Relevant Circulars**

1) Ministry Circular No.RW/NH-33044/29/2015 S&R(R) dated 22.11.2016

Check list for getting approval for laying of Electrical Cables/HDPE Pipe at AGRA BY PASS NH 02 & NH 03 CONNECTOR

S.No.	Item	Information/Status	Remarks
1	General Information	Work under New 11 KV Feeder for Separation of Agriculture Consumer and Associated work Agra Zone (Agra District) Project	
1.1	Name and Address of the Applicant/Agency	Executive Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, Kamla Nagar, Basant Vihar Kaver Kunj Kamla Nagar Uttar Pradesh	
1.2	National Highway Number	AGRA BY PASS NH 02 & NH 03 CONNECTOR	
1.3	State	Uttar Pradesh	
1.4	Location	Road crossing of UG Electrical Cable/HDPE Pipe (Two run) at Km. 15.400 (AGRA BY PASS NH 02 & NH 03 CONNECTOR)	
1.5	(Chainage in Km)	Road crossing of UG Electrical Cable/HDPE Pipe (Two run) at Km. 15.400 (AGRA BY PASS NH 02 & NH 03 CONNECTOR)	
1.6	Length in Meters	(57.454 Mtr. x 2 Run) x 1 Nos. = 114.908 Mtrs.	
1.7	Width of available ROW		
	(a) Left side from center line to tower towards increasing chainage/Km direction	34.021 Mtr. From center of road (As per drawing attached)	
	(b) Right side from center line to tower increasing chainage/Km direction	23.433 Mtr. From center of road (As per drawing attached)	
1.8	Proposal to lay the cables	UG Electrical cable / HDPE Pipe	
	(a) Left side from center line towards increasing chainage/Km direction	34.021 Mtr. From center of road (As per drawing attached)	
	(b) Right side from center line towards increasing chainage/Km direction	23.433 Mtr. From center of road (As per drawing attached)	
1.9	Proposal to acquire land	No	
	(a) Left side from center line	NA	
	(b) Right side from center line	NA	
1.10	Whether proposal is in the same side where land is not to be acquired	No land acquisition required	
	If not then where to lay the cable	Crossing at main carriageway (Below Road)	
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)	4 Lane	
1.13	Proposed Number of lanes (2 lane with paved shoulders/4/6/8 lanes)	NA	
1.14	Service road existing or not	YES- No	
	If yes then which side		
	(a) Left side from center line	1 Lane	
	(b) Right side from Center line	1 Lane	
1.15	Proposed Service road	NA	
	(a) Left side from center line	NA	
	(b) Right side from center line	NA	

Site Engineer  
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 Project Implementation Unit-Agra

अतिरिक्त अभियन्ता  
 विद्युत वितरण खण्ड-द्वितीय  
 कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
1.16	Whether proposal to laying UG-Electrical Cable line is after the service road or between the service road and main carriageway	Crossing at main carriageway (Below Road)	
1.17	Whether carrying of sewage/gas pipe line has been propsoed on highway Bridges. If Yes, the mention the methodology	NA	
1.18	Whether carrying of sewage/gas pipe line has been propsoed on parapet/any part of the bridges. If Yes, the mention the methodology	NA	
1.19	If crossings 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 expenses of the agency owning the line.	YES Electrical cable will be laid in 160mm HDPE Pipe with HDD method for crossing	
	a) Whether existing drainage structure allowed to carry utility pipeline.	NA	
	b) Is it on a line normal to NH	YES	
	c) What is the distance of crossing the utility pipelines from the existing structures. Crossings shall not be too near the existing structures on the National Highway, the minimum distance being 15 meter.	As per NHAI Norms	
	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.	HDPE Pipe 160mm Dia	
	e) Ends of the casing / conduit pipe / tower foundation 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 of slope toe of slope in the fills.	YES	
	g) The top of the casing/conduit pipe / tower foundation should be at least 1.2 meter below the surface of the road subject to bring atleast 0.3 m below the drain inverts.	YES	
	h) Mention the methodology propsoed for crossing of road for the proposed UG electrical cable. Crossing shall be by boring method (HDD) specially wriere the existing road pavement is of cement concrete or dense bituminous concrete type.	By HDD Method Drawing for methodology enclosed	
	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.	As per NHAI Norms	
2	Document / drawing enclosed with the proposal	Drawing Enclosed	

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Project Implementation Unit-Agra

Executive Engineer  
Electricity Distribution Division-II  
B-672, Kamla Nagar, Agra

S.No.	Item	Information/Status	Remarks
2.1	Cross section showing the size of the trench for open trenching method. (Is it normal size of 1.6m (min) deep X 0.3 wide) i) Should not be greater 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 15 meter from the centre-line of the nearest carriageway iii) shall not be permitted to run along the National highway 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 atleast 0.6 meter below the ground level so as not to obstruct drainage of the road land.	Drawing Enclosed	
2.2	Cross section showing the size of pit and location of pipe line for HDD method.	Drawing Enclosed	
2.3	Strip plan / Route plan showing the cables, chainage, width of ROW, distance of proposed, cable from the edge of ROW, important mile stone, intersections, cross drawings work etc.	YES, Drawing Enclosed	
2.4	Methodology for laying of electrical cable	By HDD 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.	NA	
	(a) The trench width should be atleast 30 cm but not more than 60cm wider than the outer diameter of the pipe.	NA	
	(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 edged should be excavated and replaced by replaced by selected material	NA	
	(c) The backfill shall be completed in two stages (i) side-fill to the elvel fo the top of the pipe and (ii) overfill to the bottom of the road crust.	NA	
	d) The side fill shall consist of granular material laid in 15cm 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 ponding will not be permitted.	NA	
	e) The road crust on either side of the trench. Care shall be taken to avoid the formation of a dip at the trench	NA	
	f) The excavation shall be protected by flagman, signs and barricades and red lights during night hours.	NA	
	g) If required, a diversion shall be constructed at the expense of agency owning the utility line	NA	
2.4.2	Horizontal Directional Drilling (HDD) method.	YES	

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Page 3 of 7

Executive Engineer  
Electricity Distribution Division-II  
B-672, Kamla Nagar, Agra

S.No.	Item	Information/Status	Remarks
2.4.3	Methodology for laying of electrical cable through CD works and method of Laying. In cases where the carrying of gas pipe line on the bridge becomes inescapable.	NA	
3	Draft License agreement signed by two witnesses.	YES	
3.1	The License fee estimate as per Ministry's guidelines issued vide circular No. RW/NH-33044/29/2015/S&R (R) dated 22.11.2016	As per applicable	
4	Whether Performance Bank Guarantee as Ministry's guidelines issued vide circular No. RW/NH- 33044/29/2015/S&R (R) dated 22.11.2016 is obtained.	An undertaking given by the agency towards Performance Bank Guarantee as per extant norms MoRTH per each crossing as demanded by NHAI/MoRTH.	
4.1	Confirmation of BG has been obtained or not as per MoRTH/NHAI guidelines.	Not Submitted	
5	Affidavit / undertaking from the Applicant for the following is to be furnished	Enclosed	
5.1	Undertaking for not to Damage any other utility. If damaged then to pay the losses either to NHAI or to the concerned agency.	YES, Enclosed	

1

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 Project Implementation Unit-Agra

9/12/2022

Executive Engineer  
 Electricity Distribution Division-II  
 B-672, Kamla Nagar, Agra

S.No.	Item	Information/Status	Remarks
5.2	Undertaking for Renewal of Bank Guarantee as and when asked by MoRTH/NHAI.	YES, Enclosed	
5.3	Undertaking for Confirming all standard conditions of Ministry Circulars and NHAI's guideline	YES, Enclosed	
5.4	Undertaking for Indemnity against all damages and claims.	YES, Enclosed	
5.5	Undertaking for management of traffic movement during laying of utility line without hampering the traffic.	YES, Enclosed	
5.6	Undertaking that if any claim is raised by the concessionaire/contractor then the same has to be paid by the applicant.	YES, Enclosed	
5.7	Undertaking that prior approval of the NHAI shall be obtained before undertaking any work of the installation, shifting or repairs or alterations to the utility located in the National Highway right of ways.	YES, Enclosed	
5.8	Undertaking that expenditure, if any, incurred by NHAI for repairing any damage caused to the National Highway by the laying, maintenance or shifting of the utility line will be borne by the applicant agency owning the line.	YES, Enclosed	
5.9	Undertaking that text of the license deed is as per verbatim of MoRTH format (issued Vide Ministry's Circular No. RW/NH-33044/29/2015/S&R (R) dated 22.11.2016).	YES, Enclosed	
5.10	Undertaking that the applicant has obtained various safety clearances from the representative authorities such as Directorate of Electricity, Chief controller of Explosives, Petroleum and Explosive Safety Organisation, UTI Industry Safety Directorate, State/Central Pollution Control Board and any other statutory clearance's applicable before applying to Highway Administration.	YES, Enclosed	
5.11	If the MoRTH/NHAI considers it necessary in future to move the utility line for any work for 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, Enclosed	
5.12	Certificate from the applicant in the following format i) Laying of UG Cable/HDPE Pipe will not have any deleterious effects on any of the bridge components and roadway safety for traffic. ii) for 6 laning "we do undertake that I will relocate services road / approach road / utilities at my own cost notwithstanding the permission granted within such time as will be stipulated by NHAI for future six laning or any other development.	YES, Enclosed	

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Executive Engineer  
Electricity Distribution Division-II  
B-672, Kamla Nagar, Agra

S.No.	Item	Information/Status	Remarks
6	Who will sign the agreement on behalf of Laying of UG electrical cable/HDPE Pipe	Chief Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, Agra Zone 2	
	Power of Attorney to sign the agreement is available or not	YES	
7	The Project Director, will submit the following Certificates.	-	
7.1	Certificate for confirming of all standard condition issued vide Ministry Circular No. RW/NH-33044/29/2015/S&R (R) dated 22.11.2016.	-	
7.2	Certificate from PD in the following format (i) " It is certified that any other location of the Water Supply pipe line would be extremely difficult and unreasonable costly and the installation of Water Supply pipe line within ROW will not adversely affect the design, statbility & traffic safety of the highway nor the likely future improvement. Such as widening of the carriageway, easing of Curve etc". (ii) for 6-lanning (a) Where feasibility is available " I do certify that there will be no hindrance to proposed six-lanning based on the feasibilityreport 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 accommodation proposed six-laning"	-	
8	If NH section proposed to be taken up by NHAI on BOT basis — s cause in para 9 to be inserted in the agreement. "The permitted Highway on which license has been granted as a right to lay cable / duct, has also been granted as a right of the way to be concessional under the concession agreement for up-gradation on build, operate and transfer basis and therefore, the license shall honor the same".	NA	
9	Who will supervise the work of laying of UG Electrical Cable/HDPE Pipe		
	(a) On behalf of the Applicant	Executive Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, EDD2 Kamla Nagar Agra	
	(b) On bealf of NHAI	Suervision Consultant	
10	Who will ensure that the defects in road portion after laying of over Head electrical line are corrected and if not corrected then what action will be taken.		
	(a) On behalf of the Applicant	Executive Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, EDD2 Kamla Nagar Agra	
	(b) On bealf of NHAI	Suervision Consultant	

Site Engineer  
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 Project Implementation Unit-Agra

Executive Engineer  
 Electricity Distribution Division-II  
 B-672, Kamla Nagar Agra

S.No.	Item	Information/Status	Remarks
11	Who will pay the claims for damages done / disruption in working of concessionalre if asked by the concessionalre	L&T Construction, Mr. G.G Raju (+98272074085) Project Manager Feeder Separation Project, Agra Zone (Agra District)	
12	A certificate from Project Director that he will enter the proposed permission in the register of records of the permission in the prescribed proforma (copy enclosed).	-	
13	If any previous approval is accorded for laying of UG electrical cable then photocopy of register of records of permissions accorded as maintained by Project Director may be enclosed	NA	

[Name, Designation and signature of the authorised representative of Applicant]

Executive Engineer  
Electricity Distribution Division-II  
B-672, Kamla Nagar, Agra

[Name, Designation and signature of concerned authority of NHAI/PIU/AGRA]

परियोजना निदेशक/Project Director  
राष्ट्रीय राष्ट्रीय राजमार्ग प्राधिकरण/  
National Highways Authority of India  
परियोजना कार्यान्वयन इकाई-आगरा  
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## ANNEXURE-A



Top of the subgrade

OVER FILL  
(GRANULAR)  
NOT GREAT  
EACH LAYER

HDPE PIPE  
STANDARD :- IS 4984:1995  
CLASS :- PE 63; PN 4

15 to 30 cm

3C x 185 Sq. mm. 11KV XLPE  
Insulated Cable

SIDE FILL  
(GRANULAR MATERIAL IN LAYERS NOT  
GREATER THAN 15CM IN EACH LAYER)

## 1.2 Mtr.

1.00 mm.

Casing Dia : 160 MM

30 cm. GRANULAR MATERIAL FREE FROM LUMPS,  
COLDS AND CABLES

15 to 30 cm

**SIDE FILL**

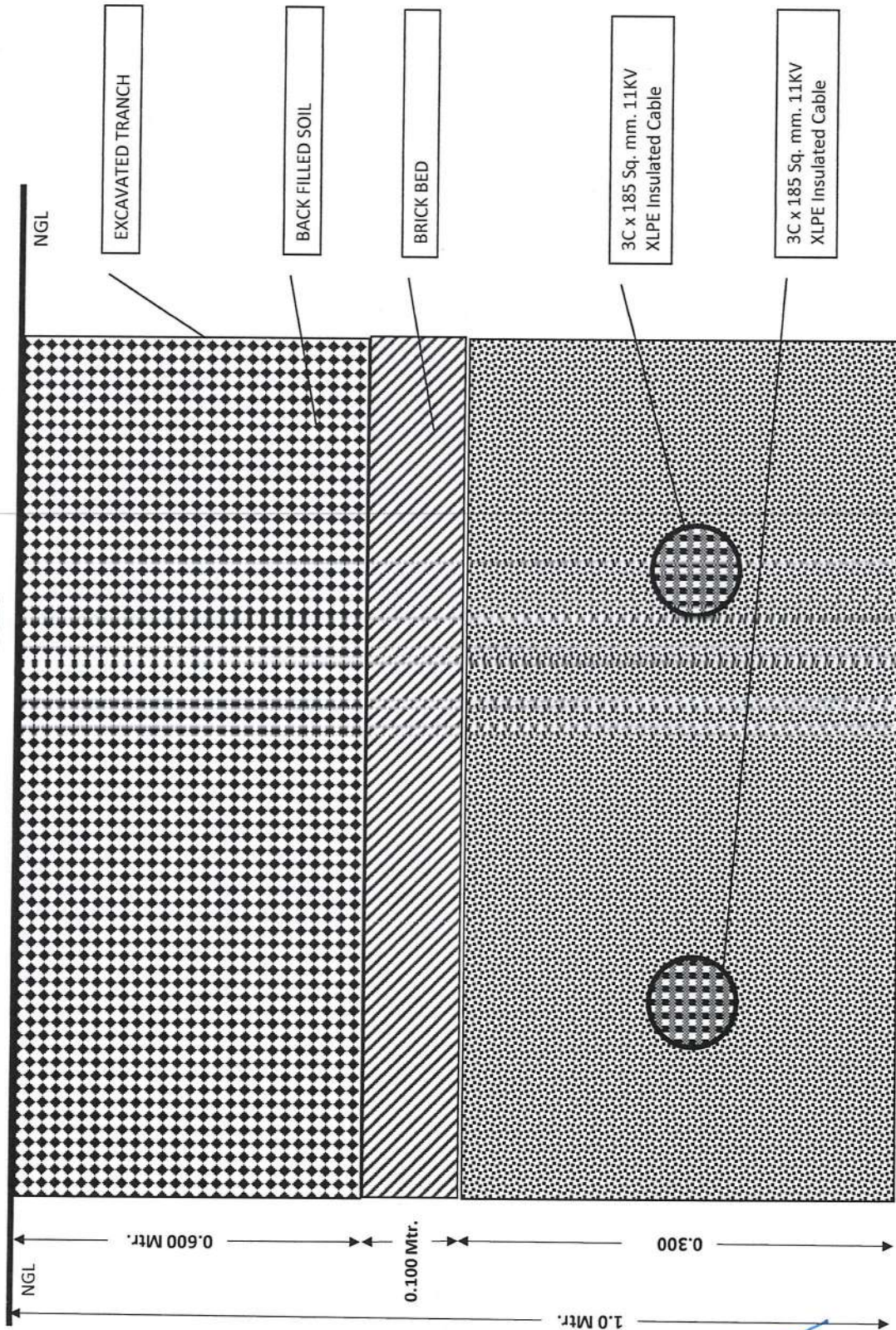
**BED FILL**

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# **ANNEXURE-B** **CABLE BACKFILLING DETAILS**

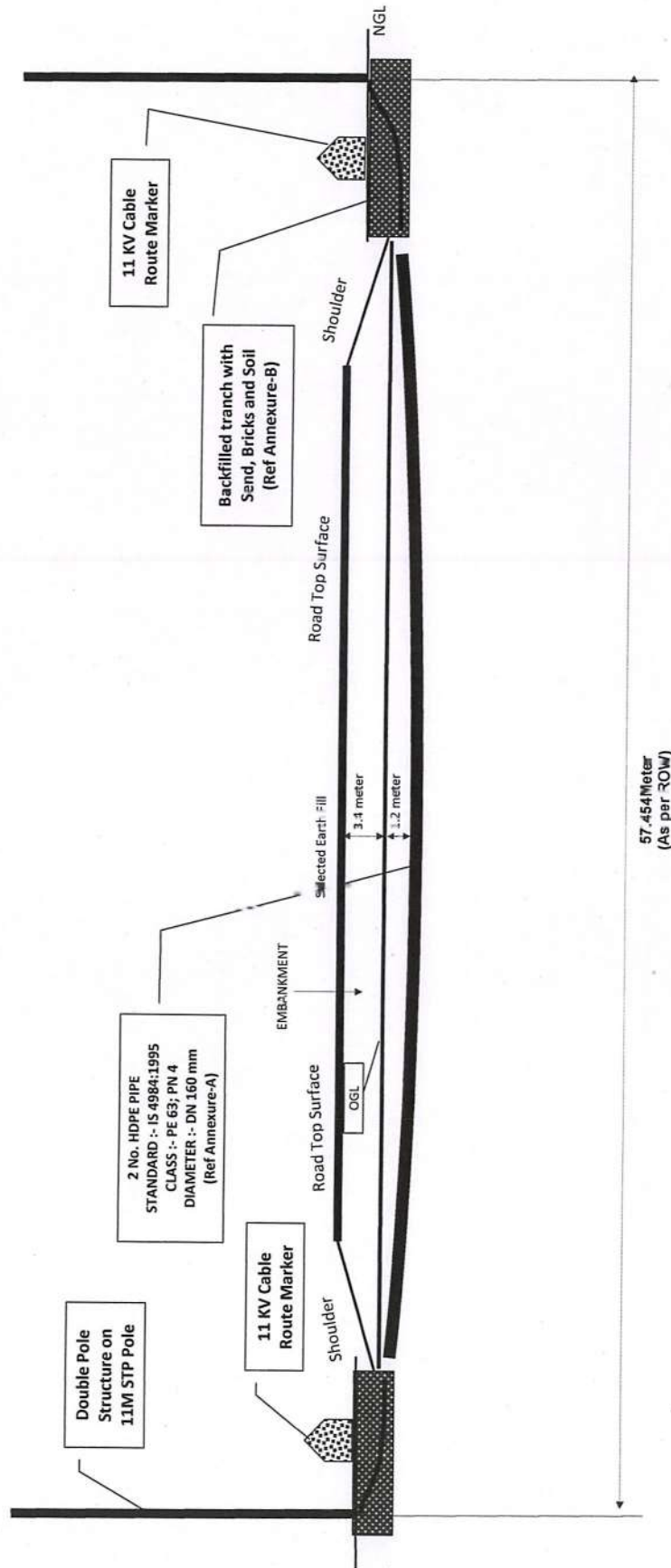


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Site Engineer  
National Highways Authority of India  
Project Implementation Unit-Agra

Director  
National Highways Authority of India  
Project Implementation Unit-Agra

## Typical Cross Sectional For HDD

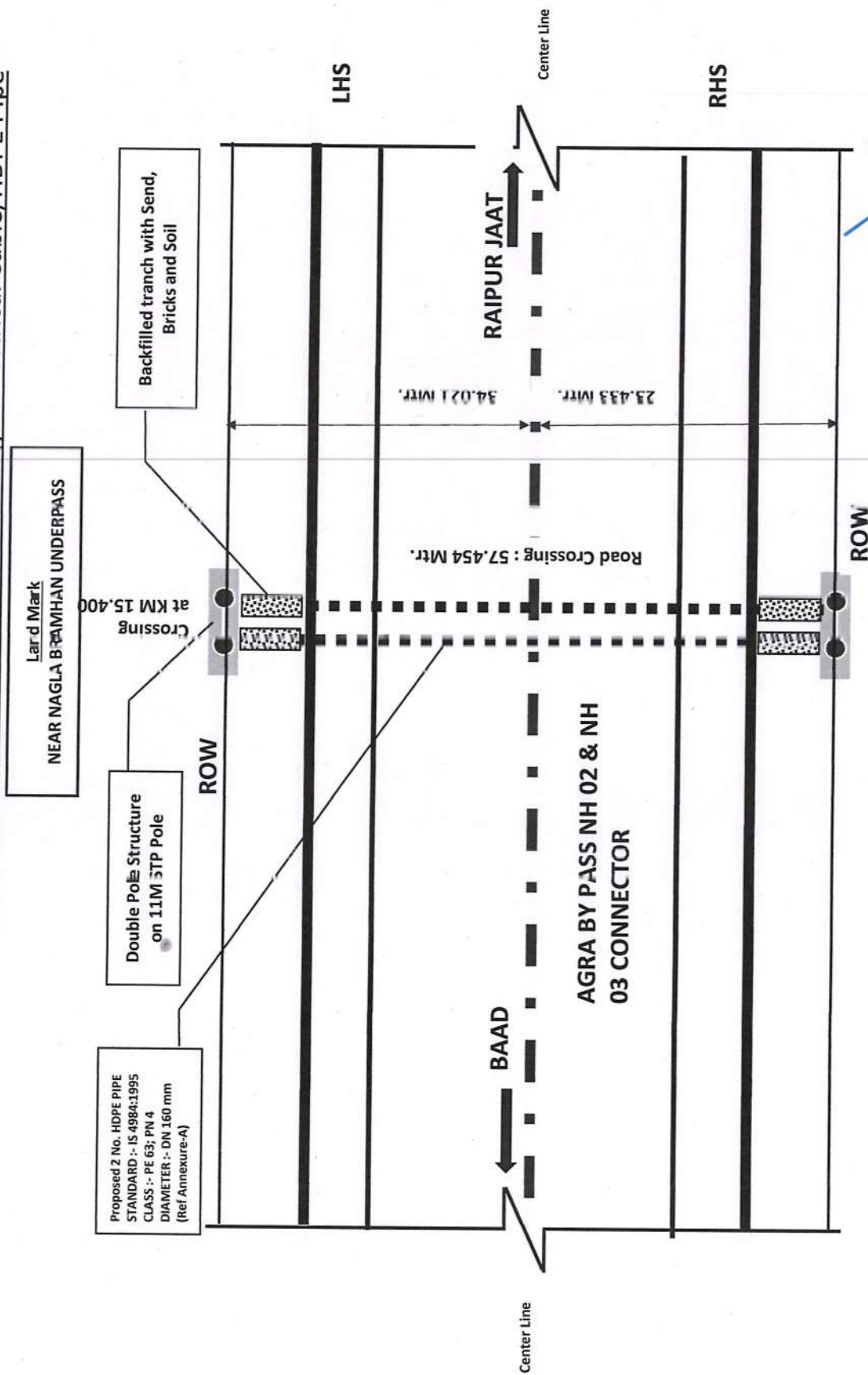


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अधिसूची अभियन्ता  
 विद्युत वितरण खण्ड-द्वितीय  
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# Typical View of AGRA BY PASS NH 02 & NH 03 CONNECTOR Crossing of Electrical Cable/HDPE Pipe



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कमला नगर, झांझार

8

**CHECK - LIST**

Guidelines for processing the proposal for laying electrical cable/HDPE Pipe accross National Highways vested with NHAI/PIU/AGRA.

**Relevant Circulars**

1) Ministry Circular No.RW/NH-33044/29/2015 S&R(R) dated 22.11.2016

Check list for getting approval for laying of Electrical Cables/HDPE Pipe at AGRA BYPASS NH 02 & NH 03 CONNECTOR land.

S.No.	Item	Information/Status	Remarks
1	General Information	Work under New 11 KV Feeder for Separation of Agriculture Consumer and Associated work Agra Zone (Agra District) Project	
1.1	Name and Address of the Applicant/Agency	Executive Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, Kamla Nagar, Basant, Vihar Kaver Kunj Kamla Nagar Uttar Pradesh	
1.2	National Highway Number	AGRA BYPASS NH 02 & NH 03 CONNECTOR	
1.3	State	Uttar Pradesh	
1.4	Location	Road crossing of UG Electrical Cable/HDPE Pipe (Two run) at Km. 16.850 (AGRA BYPASS NH 02 & NH 03 CONNECTOR)	
1.5	(Chainage in Km)	Road crossing of UG Electrical Cable/HDPE Pipe (Two run) at Km. 16.850 (AGRA BYPASS NH 02 & NH 03 CONNECTOR)	
1.6	Length in Meters	(60.727 Mtr. x 2 Run)x1 = 121.454 Mtrs.	
1.7	Width of available ROW		
	(a) Left side from center line to tower towards increasing chainage/Km direction	24.715 Mtr From center of road (As per drawing attached)	
	(b) Right side from center line to tower increasing chainage/Km direction	36.012 Mtr From center of road (As per drawing attached)	
1.8	Proposal to lay the cables	UG Electrical cable / HDPE Pipe	
	(a) Left side from center line towards increasing chainage/Km direction	24.715 Mtr From center of road (As per drawing attached)	
	(b) Right side from center line towards increasing chainage/Km direction	36.012 Mtr From center of road (As per drawing attached)	
1.9	Proposal to acquire land	No	
	(a) Left side from center line	NA	
	(b) Right side from center line	NA	
1.10	Whether proposal is in the same side where land is not to be acquired	No land acquisition required	
	If not then where to lay the cable	Crossing at main carriageway (Below Road)	
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)	4 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	1 Lane	
	(a) Left side from center line	1 Lane	
	(b) Right side from Center line	1 Lane	

Site Engineer

राष्ट्रीय राजमार्ग प्राधिकरण/

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विद्युत वितरण खण्ड-द्वितीय  
कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
1.15	Proposed Service road	NA	
	(a) Left side from center line	NA	
	(b) Right side from center line	NA	
1.16	Whether proposal to laying UG-Electrical Cable line is after the service road or between the service road and main carriageway	Crossing at main carriageway (Below Road)	
1.17	Whether carrying of sewage/gas pipe line has been proposed on highway Bridges. If Yes, the mention the methodology	NA	
1.18	Whether carrying of sewage/gas pipe line has been proposed on parapet/any part of the bridges. If Yes, the mention the methodology	NA	
1.19	If crossings 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 expenses of the agency owning the line.	YES Electrical cable will be laid in 160mm HDPE Pipe with HDD method for crossing	
	a) Whether existing drainage structure allowed to carry utility pipeline.	NA No	
	b) Is it on a line normal to NH	YES	
	c) What is the distance of crossing the utility pipelines from the existing structures. Crossings shall not be too near the existing structures on the National Highway, the minimum distance being 15 meter.	As per NHAI Norms	
	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.	HDPE Pipe 160mm Dia	
	e) Ends of the casing / conduit pipe / tower foundation 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 of slope toe of slope in the fills.	YES	
	g) The top of the casing/conduit pipe / tower foundation should be at least 1.2 meter below the surface of the road subject to bring atleast 0.3 m below the drain inverts.	YES	
	h) Mention the methodology proposed for crossing of road for the proposed UG electrical cable. Crossing shall be by boring method (HDD) specially where the existing road pavement is of cement concrete or dense bituminous concrete type.	By HDD Method Drawing for methodology enclosed	
	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.	As per NHAI Norms	
2	Document / drawing enclosed with the proposal	Drawing Enclosed	

Site Engineer

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National Highways Authority of India

परियोजना कार्यान्वयन इकाई-आगरा

Project Implementation Unit-Agra

संजय वर्मा/Sanjay Verma

परियोजना निदेशक/Project Director

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Project Implementation Unit-Agra

अधिसूची अभियन्ता  
विद्युत वितरण खण्ड-द्वितीय  
कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
2.1	Cross section showing the size of the trench for open trenching method. (Is it normal size of 1.6m (min) deep X 0.3 wide) i) Should not be greater 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 15 meter from the centre-line of the nearest carriageway iii) shall not be permitted to run along the National highway 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 atleast 0.6 meter below the ground level so as not to obstruct drainage of the road land.	Drawing Enclosed	
2.2	Cross section showing the size of pit and location of pipe line for HDD method.	Drawing Enclosed	
2.3	Strip plan / Route plan showing the cables, chainage, width of ROW, distance of proposed, cable from the edge of ROW, important mile stone, intersections, cross drawings work etc.	YES, Drawing Enclosed	
2.4	Methodology for laying of electrical cable	By HDD 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.	NA	
	(a) The trench width should be atleast 30 cm but not more than 60cm wider than the outer diameter of the pipe.	NA	
	(h) 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 edged should be excavated and replaced by replaced by selected material	NA	
	(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.	NA	
	d) The side fill shall consist of granular material laid in 15cm 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 ponding will not be permitted.	NA	
	e) The road crust on either side of the trench. Care shall be taken to avoid the formation of a dip at the trench	NA	
	f) The excavation shall be protected by flagman, signs and barricades and red lights during night hours.	NA	
	g) If required, a diversion shall be constructed at the expense of agency owning the utility line	NA	
2.4.2	Horizontal Directional Drilling (HDD) method.	YES	

Site Engineer  
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Project Implementation Unit-Agra

संजय वर्मा/Sanjay Verma  
परियोजना निदेशक/Project Director  
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/  
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Project Implementation Unit-Agra

अभिशासी अभियन्ता  
विद्युत वितरण खण्ड-द्वितीय  
कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
2.4.3	Methodology for laying of electrical cable through CD works and method of Laying. In cases where the carrying of gas pipe line on the bridge becoems inescapable.	NA	
3	Draft License agreement signed by two witnesses.	YES	
3.1	The License fee estimate as per Ministry's guidelines issued vide circular No. RW/NH-33044/29/2015/S&R (R) dated 22.11.2016	As per appleable	
4	Whether Performance Bank Guarnatee as Ministry's guidelines issued vide circular No. RW/NH- 33044/29/2015/S&R (R) dated 22.11.2016 is obtained.	An undertaking given by the agency towards Performance Bank Guarantee as per extant norms MoRTH per each crossing as demanded by NHAI/MoRTH.	
4.1	Confirmation of BG has been obtained or not as per MoRTH/NHAI guidelines.	Not Submitted	
5	Affidavit / undertaking from the Applicant for the following is to be furnished	Enclosed	
5.1	Undertaking for not to Damage any other utility. If damaged then to pay the losses either to NHAI or to the concerned agency.	YES, Enclosed	

Site Engineer

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परियोजना कार्यान्वयन इकाई-आगरा  
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परियोजना निदेशक/Project Director  
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कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
✓ 5.2	Undertaking for Renewal of Bank Guarantee as and when asked by MoRTH/NHAI.	YES, Enclosed	
✓ 5.3	Undertaking for Confirming all standard conditions of Ministry Circulars and NHAI's guideline	YES, Enclosed	
✓ 5.4	Undertaking for Indemnity against all damages and claims.	YES, Enclosed	
✓ 5.5	Undertaking for management of traffic movement during laying of utility line without hampering the traffic.	YES, Enclosed	
✓ 5.6	Undertaking that if any claim is raised by the concessionaire/contractor then the same has to be paid by the applicant.	YES, Enclosed	
✓ 5.7	Undertaking that prior approval of the NHAI shall be obtained before undertaking any work of the installation, shifting or repairs or alterations to the utility located in the National Highway right of ways.	YES, Enclosed	
✓ 5.8	Undertaking that expenditure, if any, incurred by NHAI for repairing any damage caused to the National Highway by the laying, maintenance or shifting of the utility line will be borne by the applicant agency owning the line.	YES, Enclosed	
✓ 5.9	Undertaking that text of the license deed is as per verbatim of MoRTH format (issued vide Ministry's Circular No. RW/NH-33044/29/2015/S&R (R) dated 22.11.2016.	YES, Enclosed	
✓ 5.10	Undertaking that the applicant has obtained various safety clearances from the representative authorities such as Directorate of Electricity, Chief controller of Explosives, Petroleum and Explosive Safety Organisation, UTI Industry Safety Directorate, State/Central Pollution Control Board and any other statutory clearances applicable before applying to Highway Administration.	YES, Enclosed	
5.11	If the MoRTH/NHAI considers it necessary in future to move the utility line for any work for 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, Enclosed	
5.12	Certificate from the applicant in the following format i) Laying of UG Cable/HDPE Pipe will not have any deleterious effects on any of the bridge components and roadway safety for traffic. ii) for 6 laning "we do undertake that I will relocate services road / approach road / utilities at my own cost notwithstanding the permission granted within such time as will be stipulated by NHAI for future six laning or any other development.	YES, Enclosed	

Site Engineer

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National Highways

परियोजना कार्यालय

Project Implementation Unit-Agra

संयोजक/Project Director

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/

National Highways Authority of India

परियोजना कार्यालय इकाई-आगरा

Project Implementation Unit-Agra

अधिसूची अभियन्ता  
विद्युत वितरण खण्ड-द्वितीय  
कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
6	Who will sign the agreement on behalf of Laying of UG electrical cable/HDPE Pipe	Chief Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, Agra Zone 2	
	Power of Attorney to sign the agreement is available or not	YES	
7	The Project Director, will submit the following Certificates.	-	
7.1	Certificate for confirming of all standard condition issued vide Ministry Circular No. RW/NH-33044/29/2015/S&R (R) dated 22.11.2016.	-	
7.2	Certificate from PD in the following format (i) " It is certified that any other location of the Water Supply pipe line would be extremely difficult and unreasonable costly and the installation of Water Supply pipe line within ROW will not adversely affect the design, statbility & traffic safety of the highway nor the likely future improvement. Such as widening of the carriageway, easing of Curve etc". (ii) for 6-lanning (a) Where feasibility is available " I do certify that there will be no hindrance to proposed six-lanning based on the feasibilityreport 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 accommodation proposed six-laning"	-	
8	If NH section proposed to be taken up by NHAI on BOT basis — s cause in para 9 to be inserted in the agreement. "The permitted Highway on which license has been granted as a right to lay cable / duct, has also been granted as a right of the way to be concessional under the concession agreement for up-gradation on build, operate and transfer basis and therefore, the license shall honor the same".	NA	
9	Who will supervise the work of laying of UG Electrical Cable/HDPE Pipe		
	(a) On behalf of the Applicant	Executive Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, EDD2 Kamla Nagar Agra	
	(b) On bealf of NHAI	Suervision Consultant	
10	Who will ensure that the defects in road portion after laying of over Head electrical line are corrected and if not corrected then what action will be taken.		
	(a) On behalf of the Applicant	Executive Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, EDD2 Kamla Nagar Agra	
	(b) On bealf of NHAI	Suervision Consultant	

Site Engineer

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परियोजना कार्यान्वयन इकाई-आगरा

Project Implementation Unit-Agra

Sanjay Verma

परियोजना निदेशक/Project Director

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/

National Highways Authority of India

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विद्युत वितरण उप-इ-द्वितीय

कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
11	Who will pay the claims for damages done / disruption in working of concessionalre if asked by the concessionalre	L&T Construction, Mr. G.G Raju (+98272074085) Project Manager Feeder Separation Project, Agra Zone (Agra District)	
12	A certificate from Project Director that he will enter the proposed permission in the register of records of the permission in the prescribed proforma (copy enclosed).	-	
13	If any previous approval is accorded for laying of UG electrical cable then photocopy of register of records of permissions accorded as maintained by Project Director may be enclosed	NA	

[Name, Designation and signature of the authorised representative of Applicant]

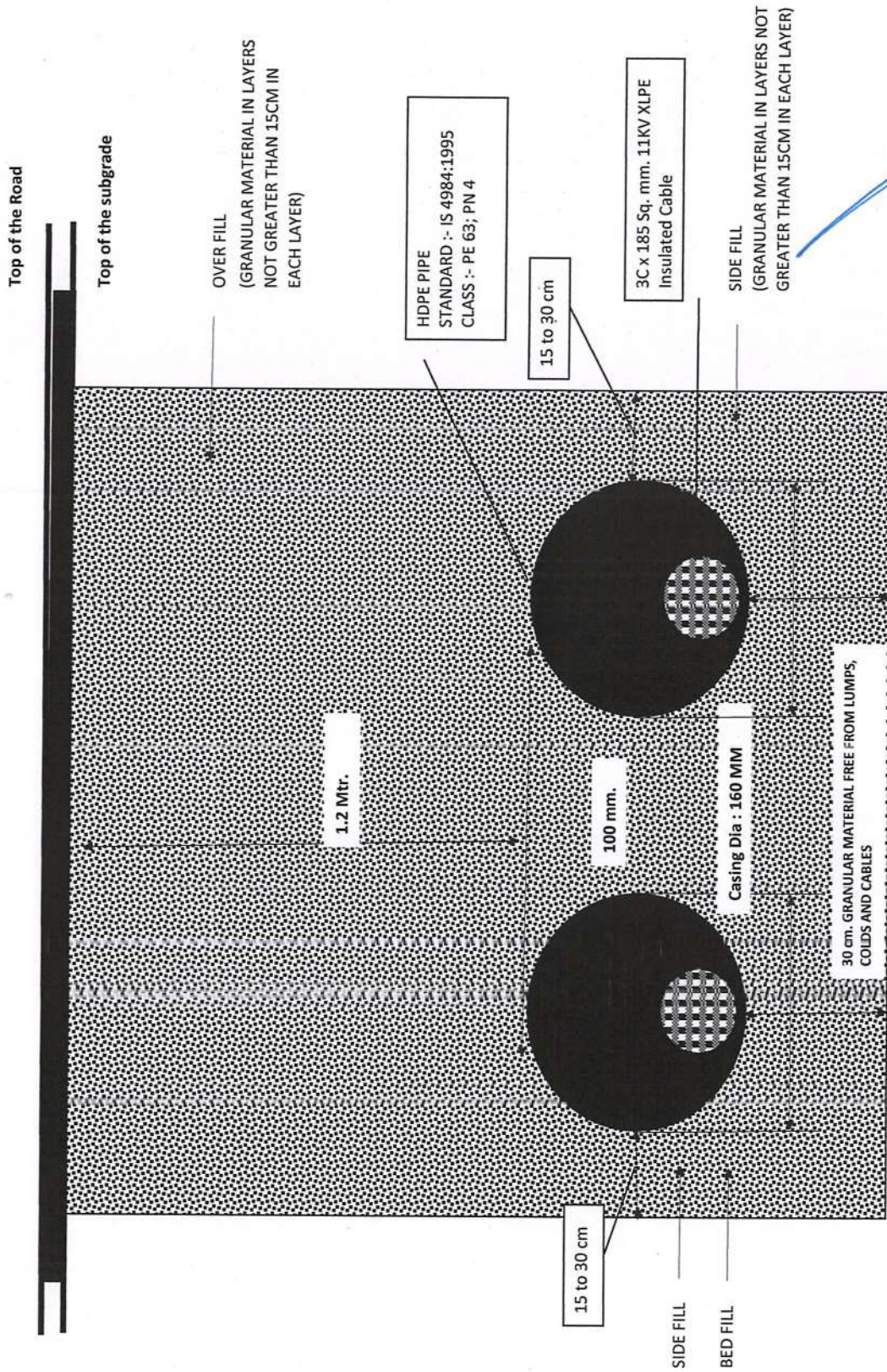
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कमला नगर, आगरा

[Name, Designation and signature of concerned authority of NHAI/PIU/AGRA ]

संजय वर्मा Sanjay Verma  
National Highways Authority of India  
परियोजना कार्यान्वयन इकाई-आगरा  
Project Implementation Unit-Agra

# ANNEXURE-A

## CASING PIPE AND CABLE DETAILS

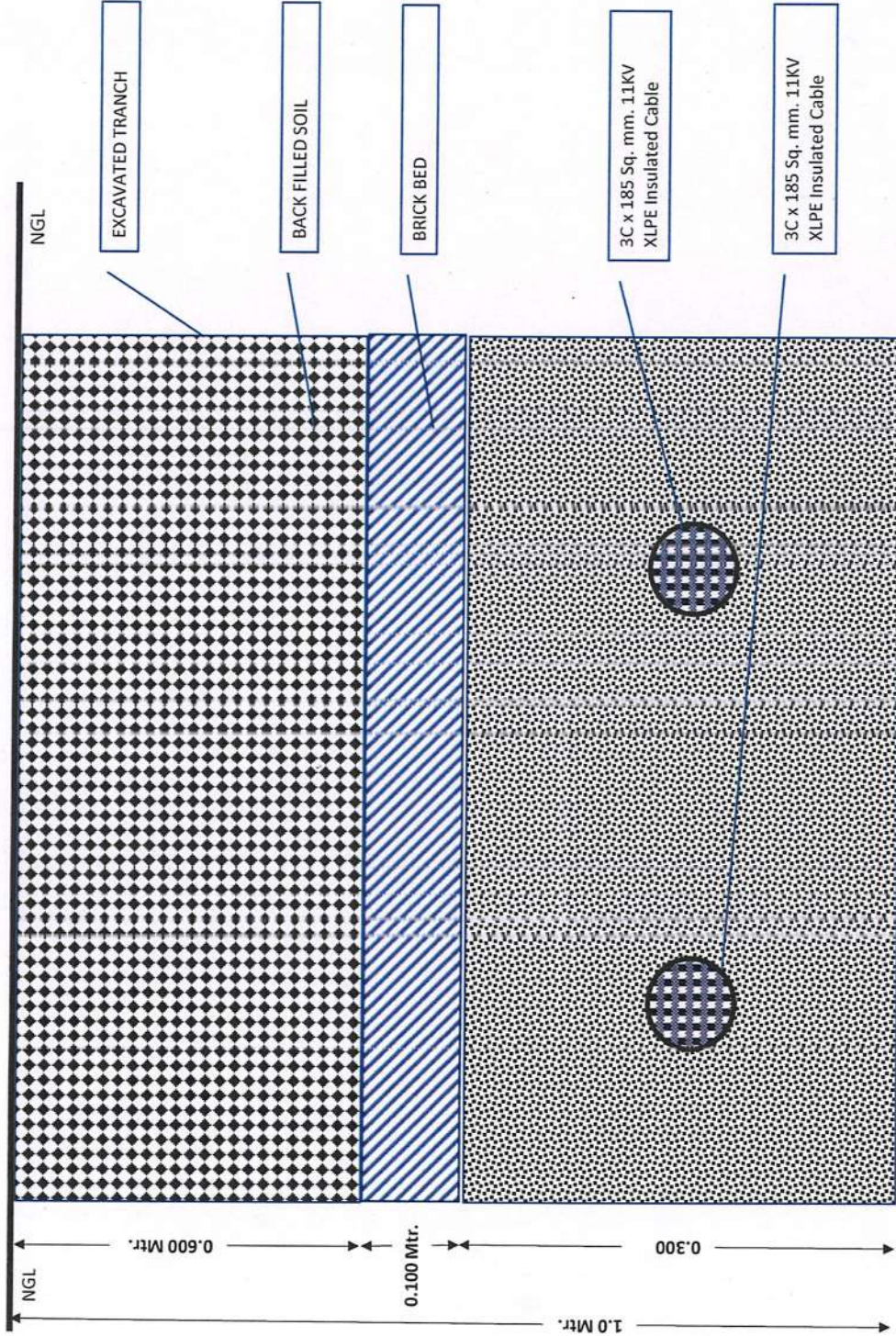


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कमला नगर आगरा

पंकज राय/सह-प्रमुख  
परियोजना निदेशक/Project Director  
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/  
National Highways Authority of India  
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Site Engineer  
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# ANNEXURE-B CABLE BACKFILLING DETAILS



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श्री वरद/Sanjay Verma  
प्रियोजना निदेशक/Project Director  
राष्ट्रीय राष्ट्रीय राजमार्ग प्राधिकरण/  
National Highways Authority of India  
प्रियोजना कार्यान्वयन इकाई-आगरा  
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Site Engineer  
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प्रियोजना कार्यान्वयन इकाई-आगरा  
Project Implementation Unit-Agra

The diagram illustrates a cross-section of a road with an embankment. Key components and labels include:

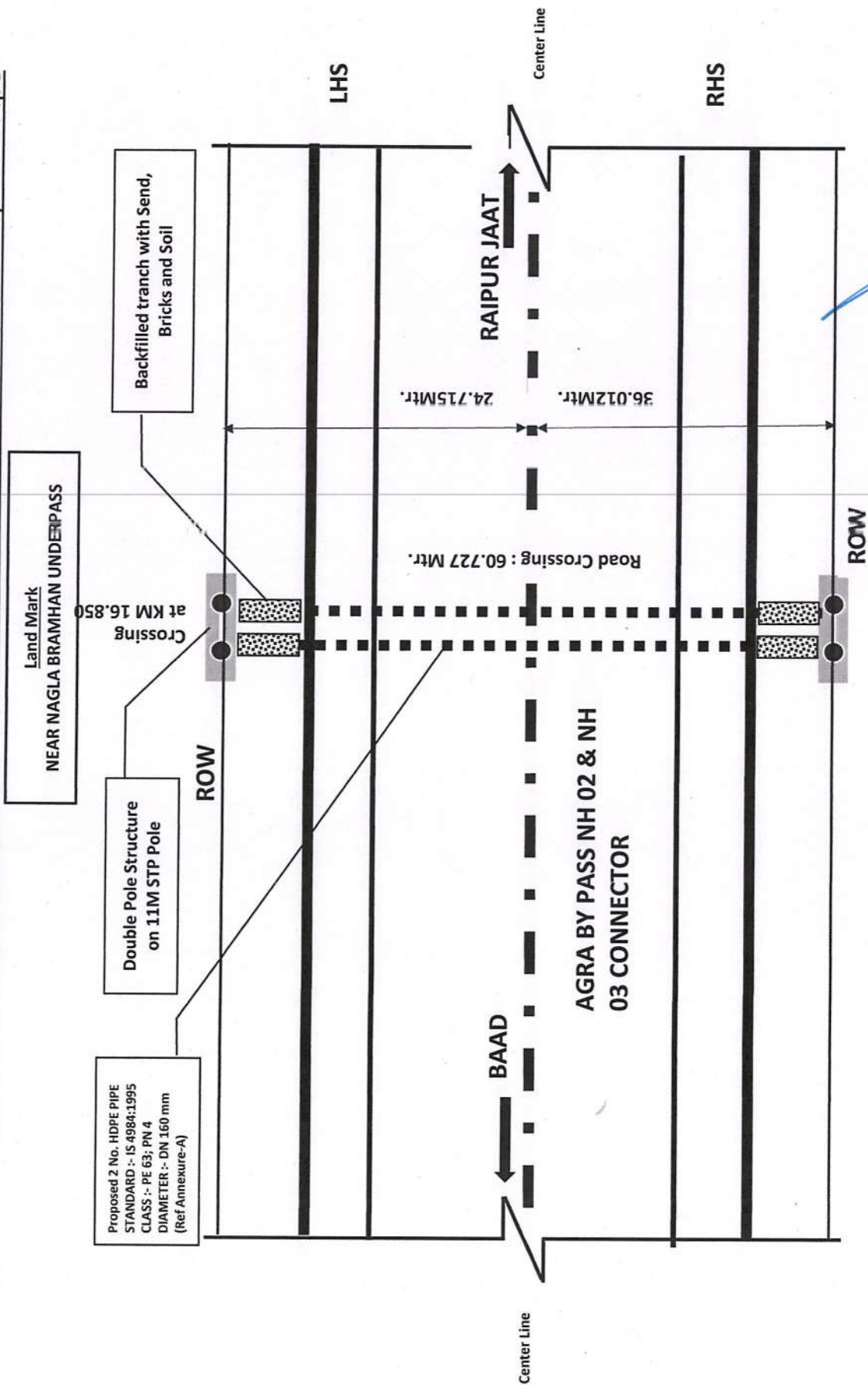
- Double Pole Structure on 11M STP Pole:** Located on the left side of the road.
- 11 KV Cable Route Marker:** Two markers are shown, one on the left shoulder and one on the right shoulder.
- Backfilled trench with Sand, Bricks and Soil (Ref Annexure-B):** A trench is shown on the right shoulder.
- 11 KV Cable:** The cable runs along the right shoulder.
- Shoulder:** The area on either side of the road.
- Road Top Surface:** The main road surface.
- Selected Earth Fill:** The material used for the embankment, with dimensions of 2.5 meter and 1.5 meter indicated.
- EMBANKMENT:** The raised section of the road.
- OGI:** Original Ground Level.
- NGL:** New Ground Level.
- 60.27 Meter (As per ROW):** The total width of the Right of Way.

Site Engineer  
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संजय वर्मा/Sanjay Varma  
परियोजना निदेशक/Project Director  
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/  
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कमला नगर आगरा

# Typical View of AGRA BY PASS NH 02 & NH 03 CONNECTOR Crossing of Electrical Cable/HDPE Pipe



4

**CHECK - LIST**

Guidelines for processing the proposal for laying electrical cable/HDPE Pipe across National Highways vested with NHAI/PIU/AGRA.

**Relevant Circulars**

1) Ministry Circular No.RW/NH-33044/29/2015 S&R(R) dated 22.11.2016

Check list for getting approval for laying of Electrical Cables/HDPE Pipe at AGRA BYPASS NH 02 & NH 03 CONNECTOR land.

S.No.	Item	Information/Status	Remarks
1	General Information	Work under New 11 KV Feeder for Separation of Agriculture Consumer and Associated work Agra Zone (Agra District) Project	
1.1	Name and Address of the Applicant/Agency	Executive Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, Kamla Nagar, Basant Vihar Kaver Kunj Kamla Nagar Uttar Pradesh	
1.2	National Highway Number	AGRA BYPASS NH 02 & NH 03 CONNECTOR	
1.3	State	Uttar Pradesh	
1.4	Location	Road crossing of UG Electrical Cable/HDPE Pipe (Two run) at Km. 17.900 (AGRA BYPASS NH 02 & NH 03 CONNECTOR)	
1.5	(Chainage in Km)	Road crossing of UG Electrical Cable/HDPE Pipe (Two run) at Km. 17.900 (AGRA BYPASS NH 02 & NH 03 CONNECTOR)	
1.6	Length in Meters	(59.887 Mtr. x 2 Run) x 1 = 119.774 Mtrs	
1.7	Width of available ROW		
	(a) Left side from center line to tower towards increasing chainage/Km direction	24.042 Mtr From center of road (As per drawing attached)	
	(b) Right side from center line to tower increasing chainage/Km direction	35.845 Mtr From center of road (As per drawing attached)	
1.8	Proposal to lay the cables	UG Electrical cable / HDPE Pipe	
	(a) Left side from center line towards increasing chainage/Km direction	24.042 Mtr From center of road (As per drawing attached)	
	(b) Right side from center line towards increasing chainage/Km direction	35.845 Mtr From center of road (As per drawing attached)	
1.9	Proposal to acquire land	No	
	(a) Left side from center line	NA	
	(b) Right side from center line	NA	
1.10	Whether proposal is in the same side where land is not to be acquired	No land acquisition required	
	If not then where to lay the cable	Crossing at main carriageway (Below Road)	
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)	4 Lane	
1.13	Proposed Number of lanes (2 lane with paved shoulders/4/6/8 lanes)	NA	
1.14	Service road existing or not	YES- No	
	If yes then which side	1 Lane	
	(a) Left side from center line	1 Lane	
	(b) Right side from Center line	1 Lane	
1.15	Proposed Service road	NA	
	(a) Left side from center line	NA	
	(b) Right side from center line	NA	

Site Engineer  
राष्ट्रीय राष्ट्रीय राजमार्ग प्राधिकरण/  
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Project Implementation Unit-Agra

संजय कुमार  
परियोजना निदेशक/PIU,  
राष्ट्रीय राष्ट्रीय राजमार्ग प्राधिकरण/  
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कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
	(b) Right side from center line	NA	
1.16	Whether proposal to laying UG-Electrical Cable line is after the service road or between the service road and main carriageway	Crossing at main carriageway (Below Road)	
1.17	Whether carrying of sewage/gas pipe line has been propsoed on highway Bridges. If Yes, the mention the methodology	NA	
1.18	Whether carrying of sewage/gas pipe line has been propsoed on parapet/any part of the bridges. If Yes, the mention the methodology	NA	
1.19	If crossings 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 expenses of the agency owning the line.	YES Electrical cable will be laid in 160mm HDPE Pipe with HDD method for crossing	
	a) Whether existing drainage structure allowed to carry utility pipeline.	NA	
	b) Is it on a line normal to NH	YES	
	c) What is the distance of crossing the utility pipelines from the existing structures. Crossings shall not be too near the existing structures on the National Highway, the minimum distance being 15 meter.	As per NHAI Norms	
	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.	HDPE Pipe 160mm Dia	
	e) Ends of the casing / conduit pipe / tower foundation 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 of slope too of slope in the fills.	YES	
	g) The top of the casing/conduit pipe / tower foundation should be at least 1.2 meter below the surface of the road subject to bring atleast 0.3 m below the drain inverts.	YES	
	h) Mention the methodology propsoed for crossing of road for the proposed UG electrical cable. Crossing shall be by boring method (HDD) specially wriere the existing road pavement is of cement concrete or dense bituminous concrete type.	By HDD Method Drawing for methodology enclosed	
	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.	As per NHAI Norms	
2	Document / drawing enclosed with the proposal	Drawing Enclosed	

Site Engineer  
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Sanjay Verma  
परियोजना निदेशक/Project Director  
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कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
2.1	Cross section showing the size of the trench for open trenching method. (Is it normal size of 1.6m (min) deep X 0.3 wide) i) Should not be greater 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 15 meter from the centre-line of the nearest carriageway iii) shall not be permitted to run along the National highway 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 atleast 0.6 meter below the ground level so as not to obstruct drainage of the road land.	Drawing Enclosed	
2.2	Cross section showing the size of pit and location of pipe line for HDD method.	Drawing Enclosed	
2.3	Strip plan / Route plan showing the cables, chainage, width of ROW, distance of proposed, cable from the edge of ROW, important mile stone, intersections, cross drawings work etc.	YES, Drawing Enclosed	
2.4	Methodology for laying of electrical cable	By HDD 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.	NA	
	(a) The trench width should be atleast 30 cm but not more than 60cm wider than the outer diameter of the pipe.	NA	
	(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 edged should be excavated and replaced by replaced by selected material	NA	
	(c) The backfill shall be completed in two stages (i) side-fill to the level to the top of the pipe and (ii) overfill to the bottom of the road crust.	NA	
	d) The side fill shall consist of granular material laid in 15cm 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 ponding will not be permitted.	NA	
	e) The road crust on either side of the trench. Care shall be taken to avoid the formation of a dip at the trench	NA	
	f) The excavation shall be protected by flagman, signs and barricades and red lights during night hours.	NA	
	g) If required, a diversion shall be constructed at the expense of agency owning the utility line	NA	
2.4.2	Horizontal Directional Drilling (HDD) method.	YES	

Site Engineer  
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 National Highways Authority of India  
 परियोजना कार्यान्वयन इकाई-आगरा  
 Project Implementation Unit Agra

संजय वर्मा/Sanjay Verma  
 परियोजना निदेशक/Project Director  
 भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/  
 National Highways Authority of India  
 परियोजना कार्यान्वयन इकाई-आगरा  
 Project Implementation Unit Agra

अग्रिम अग्रिम  
 विद्युत वितरण खण्ड-द्वितीय  
 कामजा नगर, आगरा

S.No.	Item	Information/Status	Remarks
2.4.3	Methodology for laying of electrical cable through CD works and method of Laying. In cases where the carrying of gas pipe line on the bridge becoems inescapable.	NA	
3	Draft License agreement signed by two witnesses.	YES	
3.1	The License fee estimate as per Ministry's guidelines issued vide circular No. RW/NH-33044/29/2015/S&R (R) dated 22.11.2016	As per appicable	
4	Whether Performance Bank Guarnatee as Ministry's guidelines issued vide circular No. RW/NH- 33044/29/2015/S&R (R) dated 22.11.2016 is obtained.	An undertaking given by the agency towards Performance Bank Guarantee as per extant norms MoRTH per each crossing as demanded by NHAI/MoRTH.	
4.1	Confirmation of BG has been obtained or not as per MoRTH/NHAI guidelines.	Not Submitted	
5	Affidavit / undertaking from the Applicant for the following is to be furnished	Enclosed	
5.1	Undertaking for not to Damage any other utility. If damaged then to pay the losses either to NHAI or to the concerned agency.	YES, Enclosed	

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भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/

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विद्युत वितरण खण्ड-द्वितीय  
कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
5.2	Undertaking for Renewal of Bank Guarantee as and when asked by MoRTH/NHAI.	YES, Enclosed	
5.3	Undertaking for Confirming all standard conditions of Ministry Circulars and NHAI's guideline	YES, Enclosed	
5.4	Undertaking for Indemnity against all damages and claims.	YES, Enclosed	
5.5	Undertaking for management of traffic movement during laying of utility line without hampering the traffic.	YES, Enclosed	
5.6	Undertaking that if any claim is raised by the concessionaire/contractor then the same has to be paid by the applicant.	YES, Enclosed	
5.7	Undertaking that prior approval of the NHAI shall be obtained before undertaking any work of the installation, shifting or repairs or alterations to the utility located in the National Highway right of ways.	YES, Enclosed	
5.8	Undertaking that expenditure, if any, incurred by NHAI for repairing any damage caused to the National Highway by the laying, maintenance or shifting of the utility line will be borne by the applicant agency owning the line.	YES, Enclosed	
5.9	Undertaking that text of the license deed is as per verbatim of MoRTH format (issued vide Ministry's Circular No. RW/NH-33044/29/2015/S&R (R) dated 22.11.2016.	YES, Enclosed	
5.10	Undertaking that the applicant has obtained various safety clearances from the representative authorities such as Directorate of Electricity, Chief Controller of Explosives, Petroleum and Explosive Safety Organisation, UTI Industry Safety Directorate, State/Central Pollution Control Board and any other statutory clearance's applicable before applying to Highway Administration.	YES, Enclosed	
5.11	If the MoRTH/NHAI considers it necessary in future to move the utility line for any work for 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, Enclosed	
5.12	Certificate from the applicant in the following format i) Laying of UG Cable/HDPE Pipe will not have any deleterious effects on any of the bridge components and roadway safety for traffic. ii) for 6 laning "we do undertake that I will relocate services road / approach road / utilities at my own cost notwithstanding the permission granted within such time as will be stipulated by NHAI for future six laning or any other development.	YES, Enclosed	

**Site Engineer**

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Project Implementation Unit-Agra

संजय वर्मा/Sanjay Varma

परियोजना निदेशक/Project Director

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/

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कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
6	Who will sign the agreement on behalf of Laying of UG electrical cable/HDPE Pipe	Chief Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, Agra Zone 2	
	Power of Attorney to sign the agreement is available or not	YES	
7	The Project Director, will submit the following Certificates.	-	
7.1	Certificate for confirming of all standard condition issued vide Ministry Circular No. RW/NH-33044/29/2015/S&R (R) dated 22.11.2016.	-	
7.2	Certificate from PD in the following format (i) " It is certified that any other location of the Water Supply pipe line would be extremely difficult and unreasonable costly and the installation of Water Supply 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". (ii) for 6-lanning (a) Where feasibility is available " I do certify that there will be no hindrance to proposed six-lanning 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 accommodation proposed six-laning"	-	
8	If NH section proposed to be taken up by NHAI on BOT basis as stated in para 0 to be inserted in the agreement. "The permitted Highway on which license has been granted as a right to lay cable / duct, has also been granted as a right of the way to be concessional under the concession agreement for up-gradation on build, operate and transfer basis and therefore, the license shall honor the same".	NA	
9	Who will supervise the work of laying of UG Electrical Cable/HDPE Pipe		
	(a) On behalf of the Applicant	Executive Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, EDD2 Kamla Nagar Agra	
	(b) On behalf of NHAI	Supervision Consultant	
10	Who will ensure that the defects in road portion after laying of over Head electrical line are corrected and if not corrected then what action will be taken.		
	(a) On behalf of the Applicant	Executive Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, EDD2 Kamla Nagar Agra	
	(b) On behalf of NHAI	Supervision Consultant	

**Site Engineer**

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Project Implementation Unit-Agra

संजय वर्मा/Sanjay Verma  
परियोजना निदेशक/Project Director  
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/  
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कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
11	Who will pay the claims for damages done / disruption in working of concessionalre if asked by the concessionalre	L&T Construction, Mr. G.G Raju (+98272074085) Project Manager Feeder Separation Project, Agra Zone (Agra District)	
12	A certificate from Project Director that he will enter the proposed permission in the register of records of the permission in the prescribed proforma (copy enclosed).	-	
13	If any previous approval is accorded for laying of UG electrical cable then photocopy of register of records of permissions accorded as maintained by Project Director may be enclosed	NA	

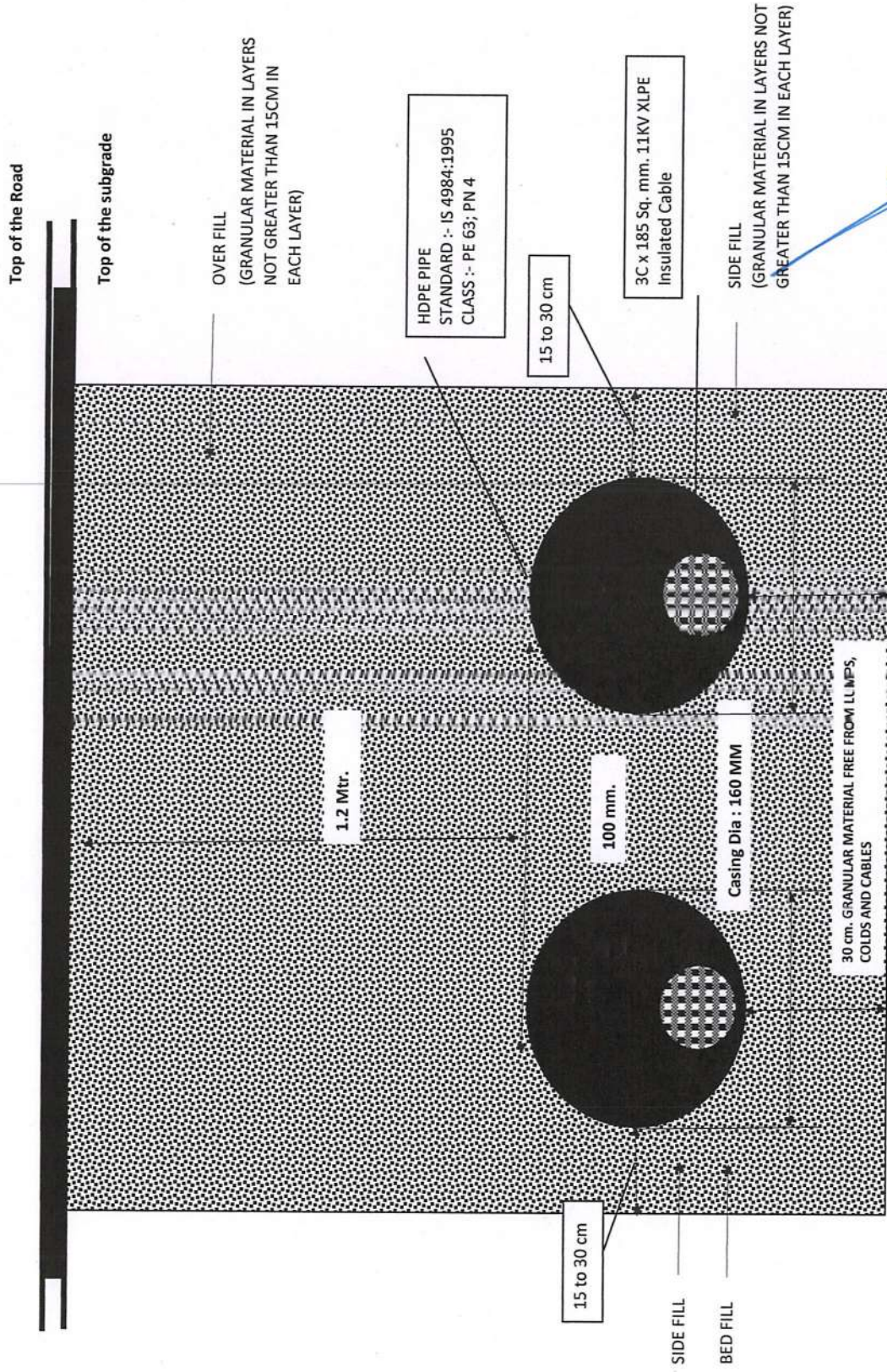
[Name, Designation and Signature of the authorised representative of Applicant]

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कमला नगर, आगरा

[Name, Designation and signature of concerned authority of NHAI/PIU/AGRA ]

संजय वर्मा/Sanjay Verma  
परियोजना निदेशक/Project Director  
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/  
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परियोजना कार्यान्वयन इकाई-आगरा  
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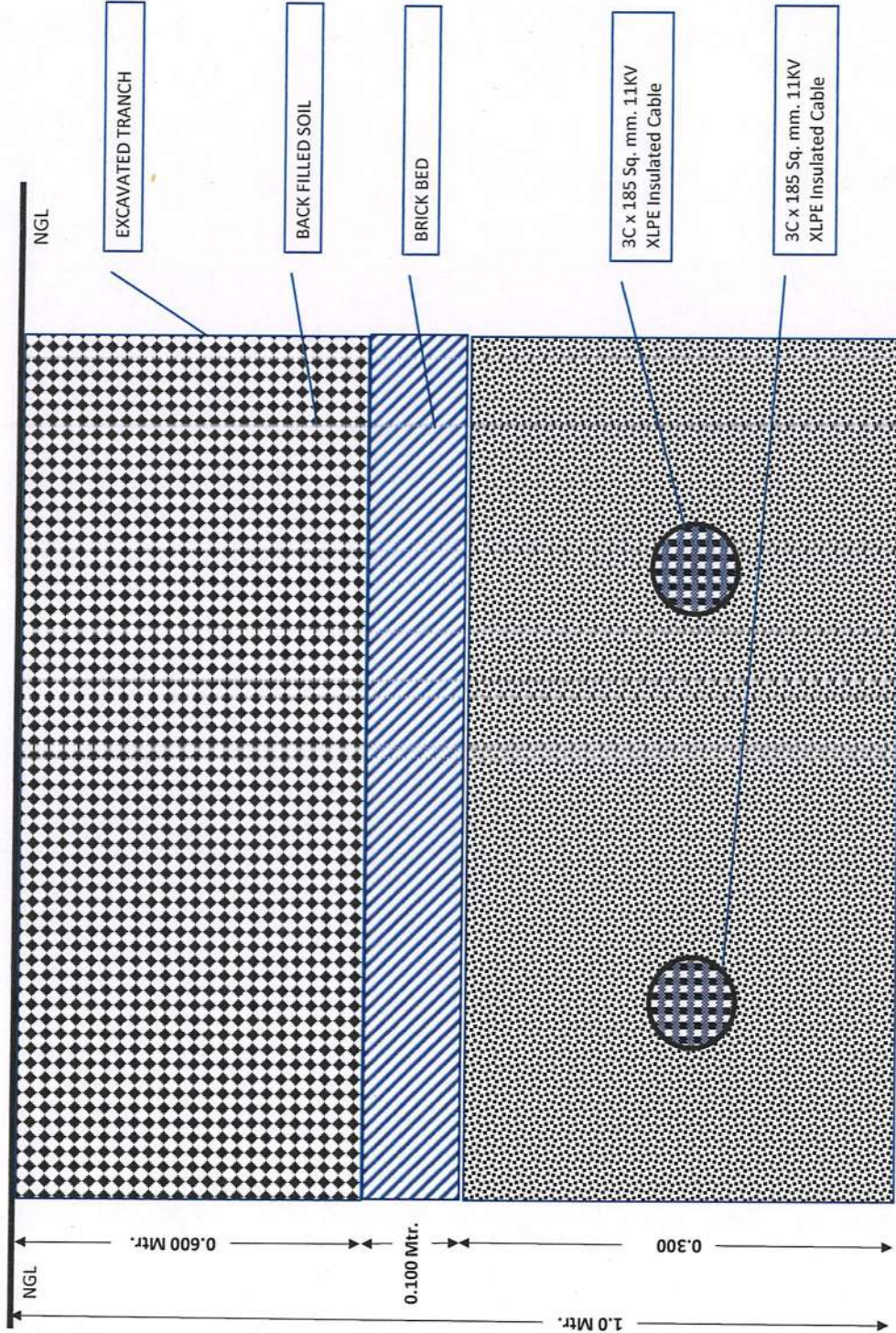
# **ANNEXURE-A** **CASING PIPE AND CABLE DETAILS**



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**कमला नगर, आगरा**  
**श्रीधर Benjoy Verma**  
**राष्ट्रीय राजमार्ग प्राधिकरण/**  
**National Highways Authority of India**  
**परियोजना कार्यान्वयन इकाई-आगरा**  
**Project Implementation Unit-Agra**

**Site Engineer**  
**राष्ट्रीय राजमार्ग प्राधिकरण/**  
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**परियोजना कार्यान्वयन इकाई-आगरा**  
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**ANNEXURE-B**  
**CABLE BACKFILLING DETAILS**

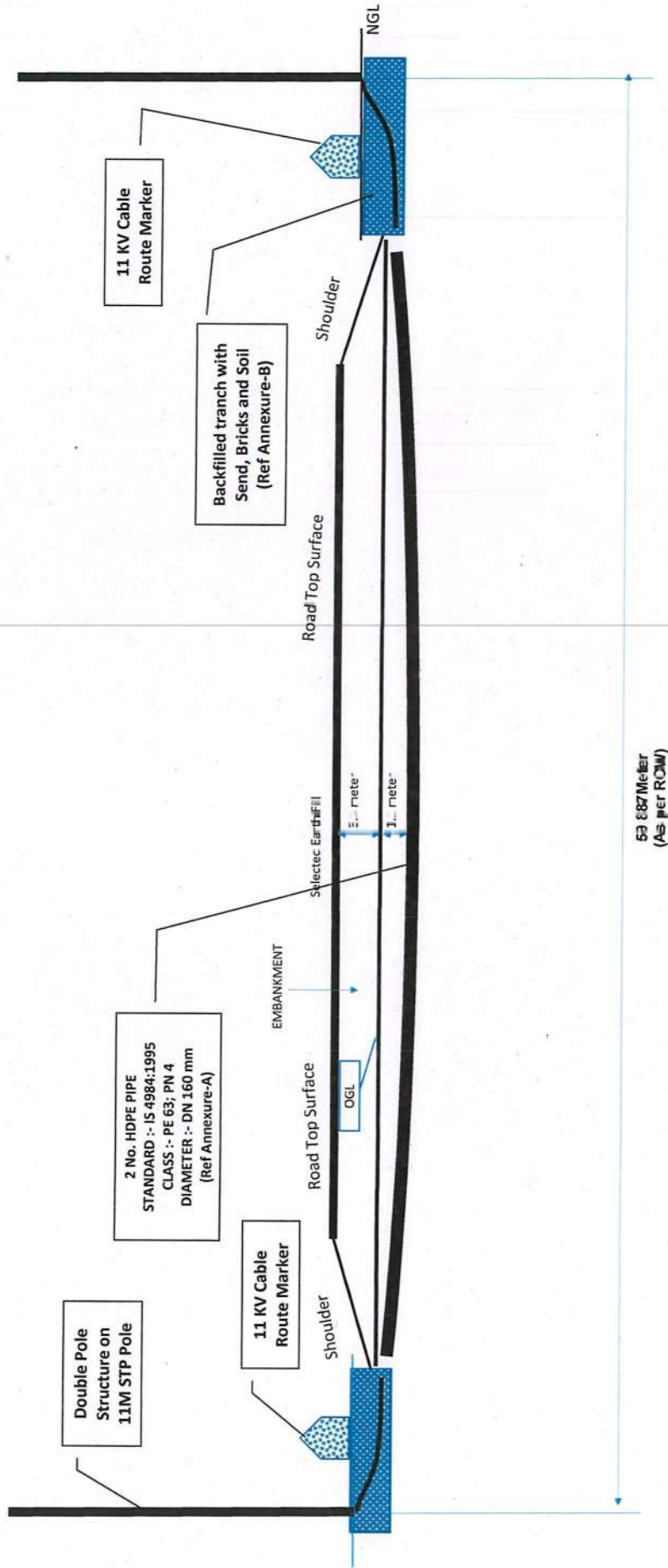


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संलग्न बन्नी/साइनी Verma  
परियोजना  
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/  
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## Typical Cross Sectional For HDD



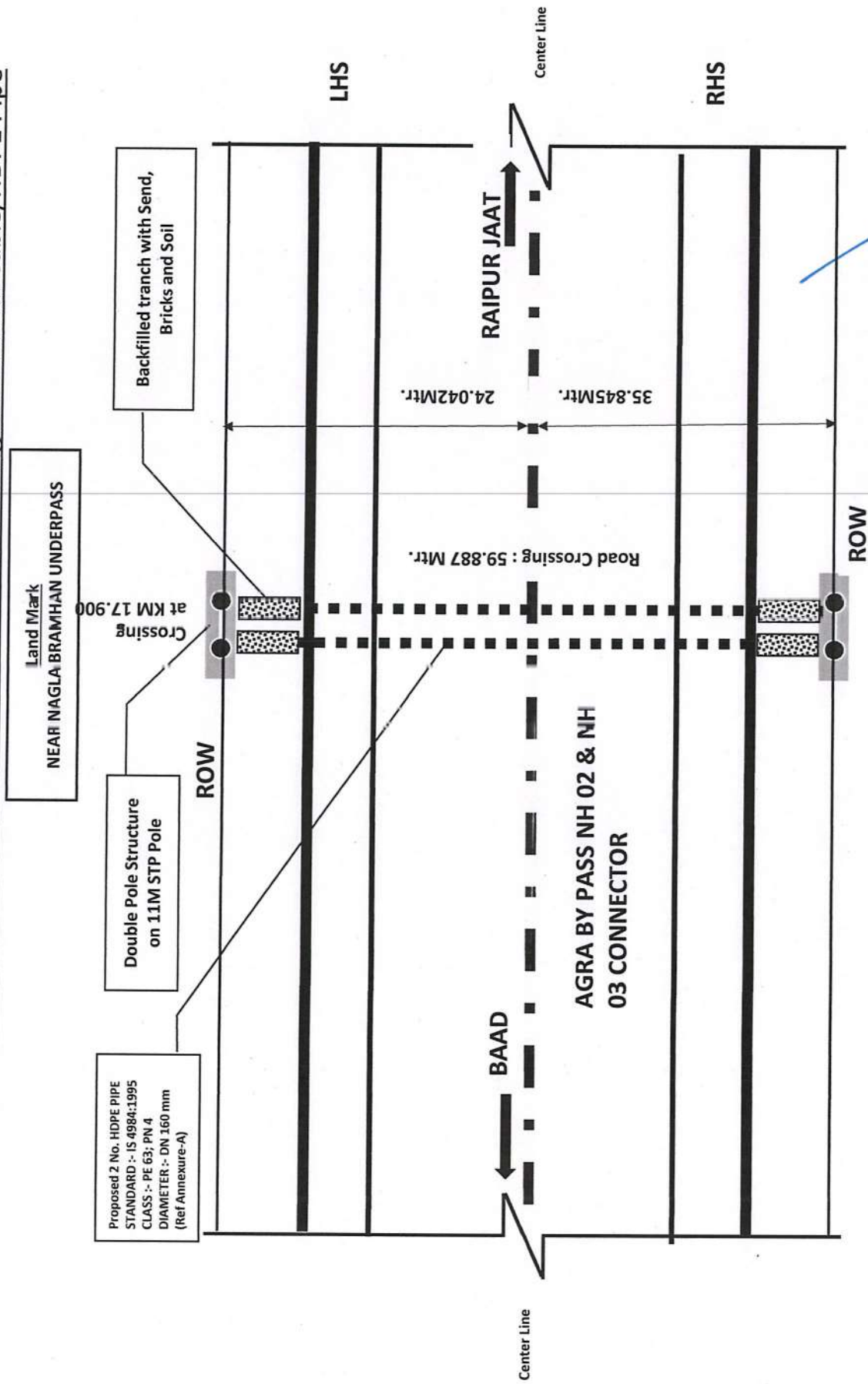
Site Engineer

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Dr. S. S. Verma  
सिस्टम प्रोड्यूसर/प्रोजेक्ट डायरेक्टर  
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/  
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अधिसारी अधिकारी  
विद्युत वितरण खण्ड-द्वितीय  
कमला नगर आगरा

# Typical View of AGRA BY PASS NH 02 & NH 03 CONNECTOR Crossing of Electrical Cable/HDPE Pipe



Site Engineer  
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 National Highways A  
 परियोजना कार्यान्वयन इकाई-अग्रा  
 Project Implementation Unit-Agri

श्रीमती शशि लाल वर्मा  
 भारतीय राजमार्ग  
 National Highways Authority of India  
 परियोजना कार्यान्वयन इकाई-अग्रा  
 Project Implementation Unit-Agri

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 कमला नगर, अग्रा

(5)

**CHECK - LIST**

Guidelines for processing the proposal for laying electrical cable/HDPE Pipe across National Highways vested with NHAI/PIU/AGRA.

**Relevant Circulars**

1) Ministry Circular No.RW/NH-33044/29/2015 S&R(R) dated 22.11.2016

Check list for getting approval for laying of Electrical Cables/HDPE Pipe at AGRA BYPASS NH 02 & NH 03 CONNECTOR land.

S.No.	Item	Information/Status	Remarks
1	General Information	Work under New 11 KV Feeder for Separation of Agriculture Consumer and Associated work Agra Zone (Agra District) Project	
1.1	Name and Address of the Applicant/Agency	Executive Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, Kamla Nagar, Basant Vihar Kaveri Kunj Kamla Nagar Uttar Pradesh	
1.2	National Highway Number	AGRA BYPASS NH 02 & NH 03 CONNECTOR	
1.3	State	Uttar Pradesh	
1.4	Location	Road crossing of UG Electrical Cable/HDPE Pipe (Two run) at Km. 25.500 (AGRA BYPASS NH 02 & NH 03 CONNECTOR)	
1.5	(Chainage in Km)	Road crossing of UG Electrical Cable/HDPE Pipe (Two run) at Km. 25.500 (AGRA BYPASS NH 02 & NH 03 CONNECTOR)	
1.6	Length in Meters	(61.106 Mtr. x 2 Run) x 1 Nos. = 122.212 Mtrs.	
1.7	Width of available ROW		
	(a) Left side from center line to tower towards increasing chainage/Km direction	28.821 Mtr. From center of road (As per drawing attached)	
	(b) Right side from center line to tower increasing chainage/Km direction	32.285 Mtr. From center of road (As per drawing attached)	
1.8	Proposal to lay the cables	UG Electrical cable / HDPE Pipe	
	(a) Left side from center line towards increasing chainage/Km direction	28.821 Mtr. From center of road (As per drawing attached)	
	(b) Right side from center line towards increasing chainage/Km direction	32.285 Mtr. From center of road (As per drawing attached)	
1.9	Proposal to acquire land	No	
	(a) Left side from center line	NA	
	(b) Right side from center line	NA	
1.10	Whether proposal is in the same side where land is not to be acquired	No land acquisition required	
	If not then where to lay the cable	Crossing at main carriageway (Below Road)	
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)	4 Lane	
1.13	Proposed Number of lanes (2 lane with paved shoulders/4/6/8 lanes)	NA	
1.14	Service road existing or not	YES- <del>No</del>	
	If yes then which side	1-Lane	
	(a) Left side from center line	1-Lane	
	(b) Right side from Center line	1-Lane	
1.15	Proposed Service road	NA	
	(a) Left side from center line	NA	
	(b) Right side from center line	NA	
1.16	Whether proposal to laying UG-Electrical Cable line is after the service road or between the service road and main carriageway	Crossing at main carriageway (Below Road)	
1.17	Whether carrying of sewage/gas pipe line has been proposed on highway Bridges.	NA	
	If Yes, the mention the methodology		

**Site Engineer**  
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कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
1.17	Whether carrying of sewage/gas pipe line has been proposed on highway Bridges. If Yes, the mention the methodology	NA	
1.18	Whether carrying of sewage/gas pipe line has been proposed on parapet/any part of the bridges. If Yes, the mention the methodology	NA	
1.19	If crossings 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 expenses of the agency owning the line.	YES Electrical cable will be laid in 160mm HDPE Pipe with HDD method for crossing	
	a) Whether existing drainage structure allowed to carry utility pipeline.	NA	
	b) Is it on a line normal to NH	YES	
	c) What is the distance of crossing the utility pipelines from the existing structures. Crossings shall not be too near the existing structures on the National Highway, the minimum distance being 15 meter.	As per NHAI Norms	
	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.	HDPE Pipe 160mm Dia	
	e) Ends of the casing / conduit pipe / tower foundation 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 of slope toe of slope in the fills.	YES	
	g) The top of the casing/conduit pipe / tower foundation should be at least 1.2 meter below the surface of the road subject to bring atleast 0.3 m below the drain inverts.	YES	
	h) Mention the methodology proposed for crossing of road for the proposed UG electrical cable. Crossing shall be by boring method (HDD) specially where the existing road pavement is of cement concrete or dense bituminous concrete type.	By HDD Method Drawing for methodology enclosed	
	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.	As per NHAI Norms	
2	Document / drawing enclosed with the proposal	Drawing Enclosed	

Site Engineer

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कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
2.1	Cross section showing the size of the trench for open trenching method. (Is it normal size of 1.6m (min) deep X 0.3 wide) i) Should not be greater 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 15 meter from the centre-line of the nearest carriageway iii) shall not be permitted to run along the National highway 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 atleast 0.6 meter below the ground level so as not to obstruct drainage of the road land.	Drawing Enclosed	
2.2	Cross section showing the size of pit and location of pipe line for HDD method.	Drawing Enclosed	
2.3	Strip plan / Route plan showing the cables, chainage, width of ROW, distance of proposed, cable from the edge of ROW, important mile stone, intersections, cross drawings work etc.	YES, Drawing Enclosed	
2.4	Methodology for laying of electrical cable	By HDD 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.	NA	
	(a) The trench width should be atleast 30 cm but not more than 60cm wider than the outer diameter of the pipe.	NA	
	(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 edged should be excavated and replaced by replaced by selected material	NA	
	(c) The backfill shall be completed in two stages (i) side-fill to the level to the top of the pipe and (ii) overfill to the bottom of the road crust.	NA	
	d) The side fill shall consist of granular material laid in 15cm 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 ponding will not be permitted.	NA	
	e) The road crust on either side of the trench. Care shall be taken to avoid the formation of a dip at the trench	NA	
	f) The excavation shall be protected by flagman, signs and barricades and red lights during night hours.	NA	
	g) If required, a diversion shall be constructed at the expense of agency owning the utility line	NA	
2.4.2	Horizontal Directional Drilling (HDD) method.	YES	

  
**Site Engineer**  
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*Signature*

  
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 विद्युत वितरण वण्ड-द्वितीय  
 कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
2.4.3	Methodology for laying of electrical cable through CD works and method of Laying. In cases where the carrying of gas pipe line on the bridge becoems inescapable.	NA	
3	Draft License agreement signed by two witnesses.	YES	
3.1	The License fee estimate as per Ministry's guidelines issued vide circular No. RW/NH-33044/29/2015/S&R (R) dated 22.11.2016	As per applicable	
4	Whether Performance Bank Guarnatee as Ministry's guidelines issued vide circular No. RW/NH- 33044/29/2015/S&R (R) dated 22.11.2016 is obtained.	An undertaking given by the agency towards Performance Bank Guarantee as per extant norms MoRTH per each crossing as demanded by NHAI/MoRTH.	
4.1	Confirmation of BG has been obtained or not as per MoRTH/NHAI guidelines.	Not Submitted	
5	Affidavit / undertaking from the Applicant for the following is to be furnished	Enclosed	
5.1	Undertaking for not to Damage any other utility. If damaged then to pay the losses either to NHAI or to the concerned agency.	YES, Enclosed	

**Site Engineer**

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/  
National Highways Authority of India  
परियोजना कार्यान्वयन इकाई-आगरा  
Project Implementation Unit-Agra

अधिसूची अभियन्ता  
विद्युत वितरण खण्ड-द्वितीय  
कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
5.2	Undertaking for Renewal of Bank Guarantee as and when asked by MoRTH/NHAI.	YES, Enclosed	
5.3	Undertaking for Confirming all standard conditions of Ministry Circulars and NHAI's guideline	YES, Enclosed	
5.4	Undertaking for Indemnity against all damages and claims.	YES, Enclosed	
5.5	Undertaking for management of traffic movement during laying of utility line without hampering the traffic.	YES, Enclosed	
5.6	Undertaking that if any claim is raised by the concessionaire/contractor then the same has to be paid by the applicant.	YES, Enclosed	
5.7	Undertaking that prior approval of the NHAI shall be obtained before undertaking any work of the installation, shifting or repairs or alterations to the utility located in the National Highway right of ways.	YES, Enclosed	
5.8	Undertaking that expenditure, if any, incurred by NHAI for repairing any damage caused to the National Highway by the laying, maintenance or shifting of the utility line will be borne by the applicant agency owning the line.	YES, Enclosed	
5.9	Undertaking that text of the license deed is as per verbatim of MoRTH format (issued vide Ministry's Circular No. RW/NH-33044/29/2015/S&R (R) dated 22.11.2016.	YES, Enclosed	
5.10	Undertaking that the applicant has obtained various safety clearances from the representative authorities such as Directorate of Electricity, Chief controller of Explosives, Petroleum and Explosive Safety Organisation, UTI Industry Safety Directorate, State/Central Pollution Control Board and any other statutory clearance's applicable, before applying to Highway Administration.	YES, Enclosed	
5.11	If the MoRTH/NHAI considers it necessary in future to move the utility line for any work for 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, Enclosed	
5.12	Certificate from the applicant in the following format i) Laying of UG Cable/HDPE Pipe will not have any deleterious effects on any of the bridge components and roadway safety for traffic. ii) for 6 laning "we do undertake that I will relocate services road / approach road / utilities at my own cost notwithstanding the permission granted within such time as will be stipulated by NHAI for future six laning or any other development.	YES, Enclosed	

Site Engineer

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S.No.	Item	Information/Status	Remarks
6	Who will sign the agreement on behalf of Laying of UG electrical cable/HDPE Pipe	Chief Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, Agra Zone 2	
	Power of Attorney to sign the agreement is available or not	YES	
7	The Project Director, will submit the following Certificates.	-	
7.1	Certificate for confirming of all standard condition issued vide Ministry Circular No. RW/NH-33044/29/2015/S&R (R) dated 22.11.2016.	-	
7.2	Certificate from PD in the following format (i) " It is certified that any other location of the Water Supply pipe line would be extremely difficult and unreasonable costly and the installation of Water Supply 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". (ii) for 6-lanning (a) Where feasibility is available " I do certify that there will be no hindrance to proposed six-lanning 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 accommodation proposed six-laning"	-	
8	If NH section proposed to be taken up by NHAI on ROT basis — a clause in para 9 to be inserted in the agreement. "The permitted Highway on which license has been granted as a right to lay cable / duct, has also been granted as a right of the way to be concessional under the concession agreement for up-gradation on build, operate and transfer basis and therefore, the license shall honor the same".	NA	
9	Who will supervise the work of laying of UG Electrical Cable/HDPE Pipe		
	(a) On behalf of the Applicant	Executive Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, EDD2 Kamla Nagar Agra	
	(b) On behalf of NHAI	Supervision Consultant	
10	Who will ensure that the defects in road portion after laying of over Head electrical line are corrected and if not corrected then what action will be taken.		
	(a) On behalf of the Applicant	Executive Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, EDD2 Kamla Nagar Agra	
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 विद्युत वितरण खण्ड-द्वितीय  
 कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
11	Who will pay the claims for damages done / disruption in working of concessionalre if asked by the concessionalre	L&T Construction, Mr. G.G Raju (+98272074085) Project Manager Feeder Separation Project, Agra Zone (Agra District)	
12	A certificate from Project Director that he will enter the proposed permission in the register of records of the permission in the prescribed proforma (copy enclosed).	-	
13	If any previous approval is accorded for laying of UG electrical cable then photocopy of register of records of permissions accorded as maintained by Project Director may be enclosed	NA	

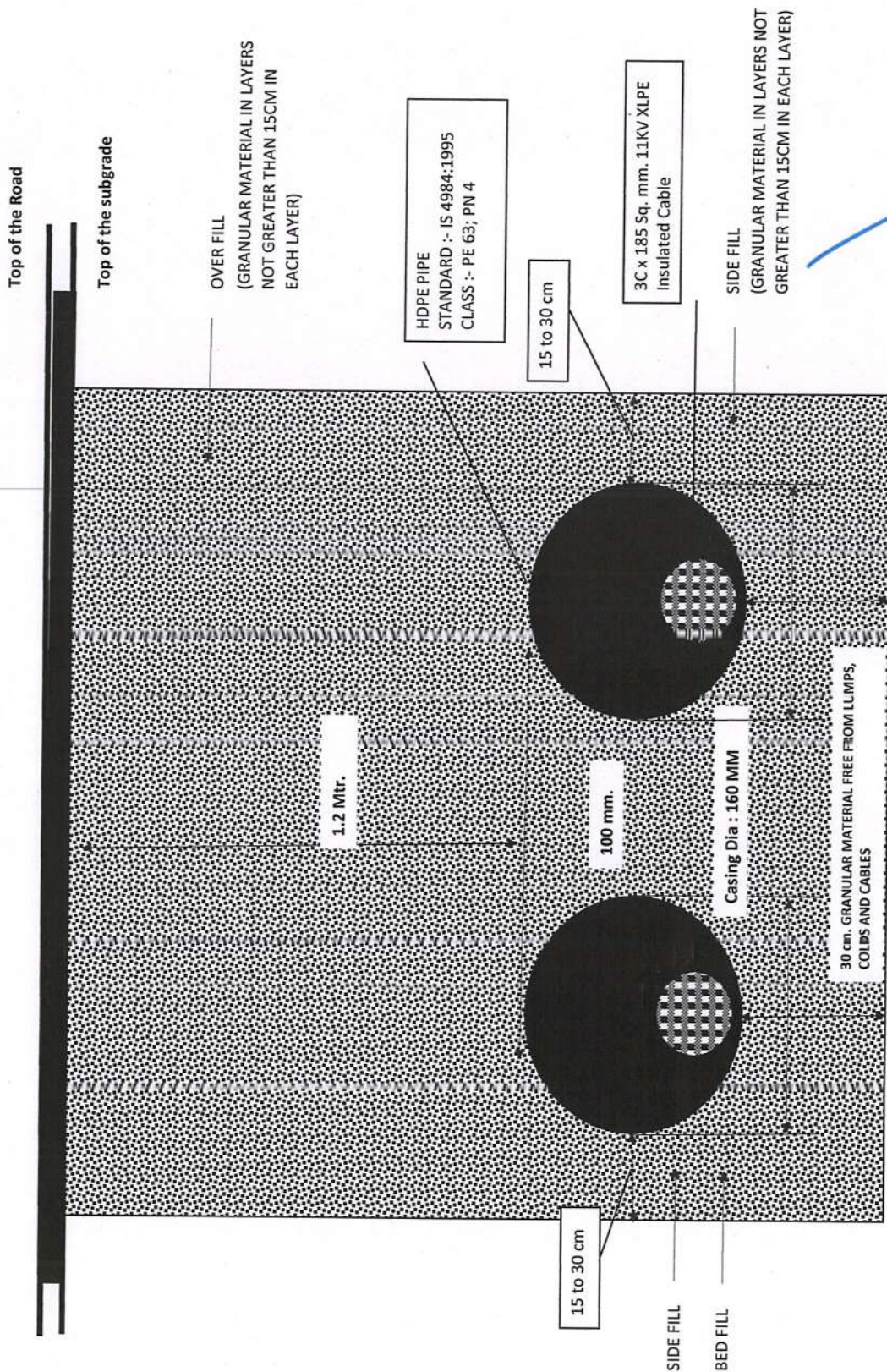
[Name, Designation and signature of the authorised representative of Applicant]

अभिषेक कुमार  
विद्युत वितरण खण्ड-द्वितीय  
कमला नगर, आगरा

[Name, Designation and signature of concerned authority of NHAI/PIU/AGRA]

*Law*

# ANNEXURE-A CASING PIPE AND CABLE DETAILS

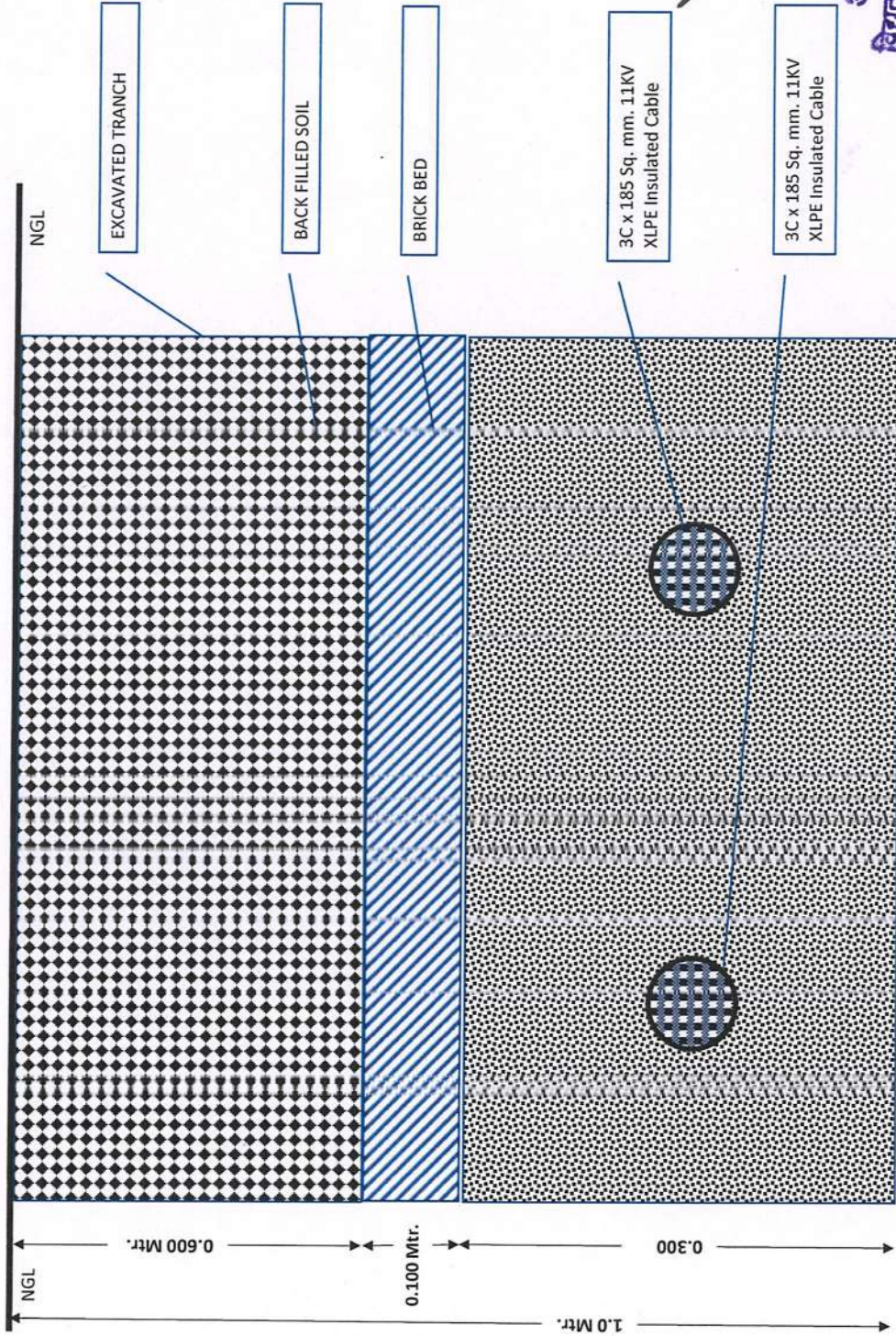


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# ANNEXURE-B CABLE BACKFILLING DETAILS

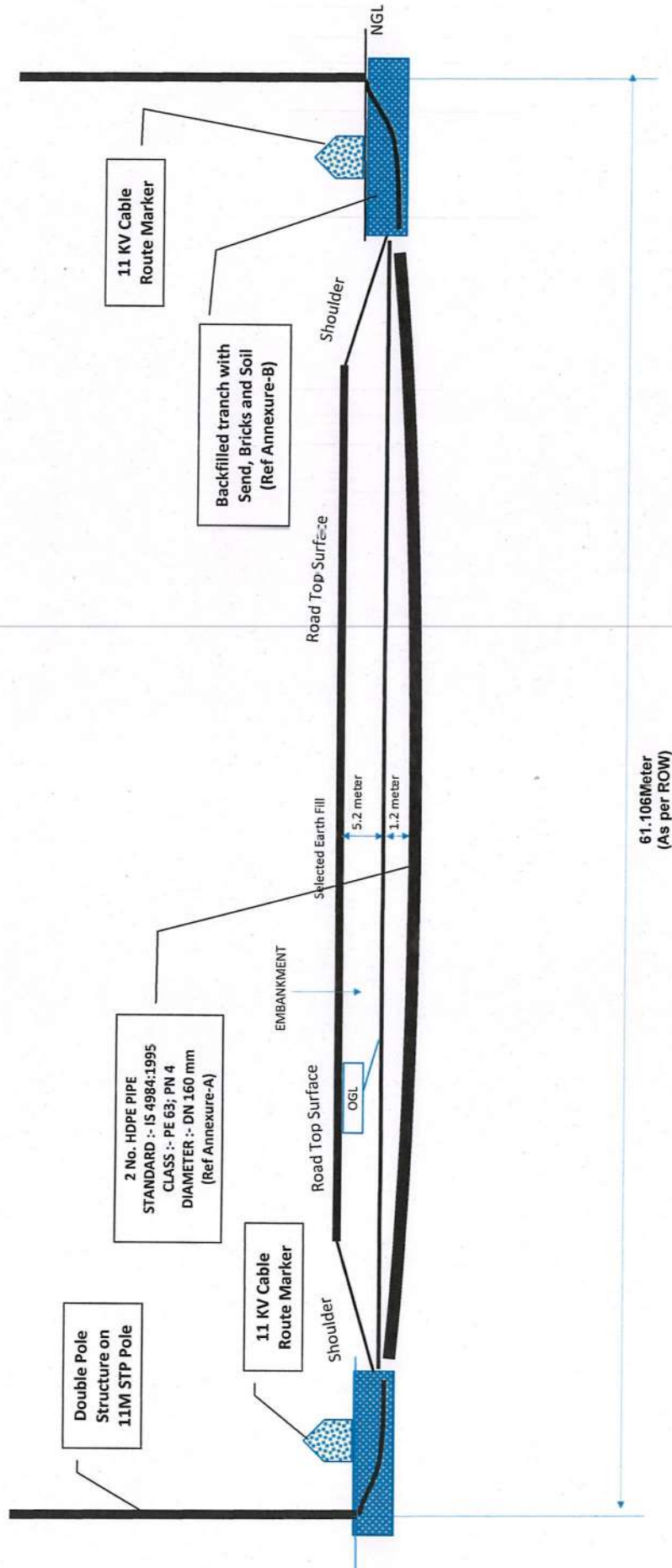


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कमला नगर, आगरा

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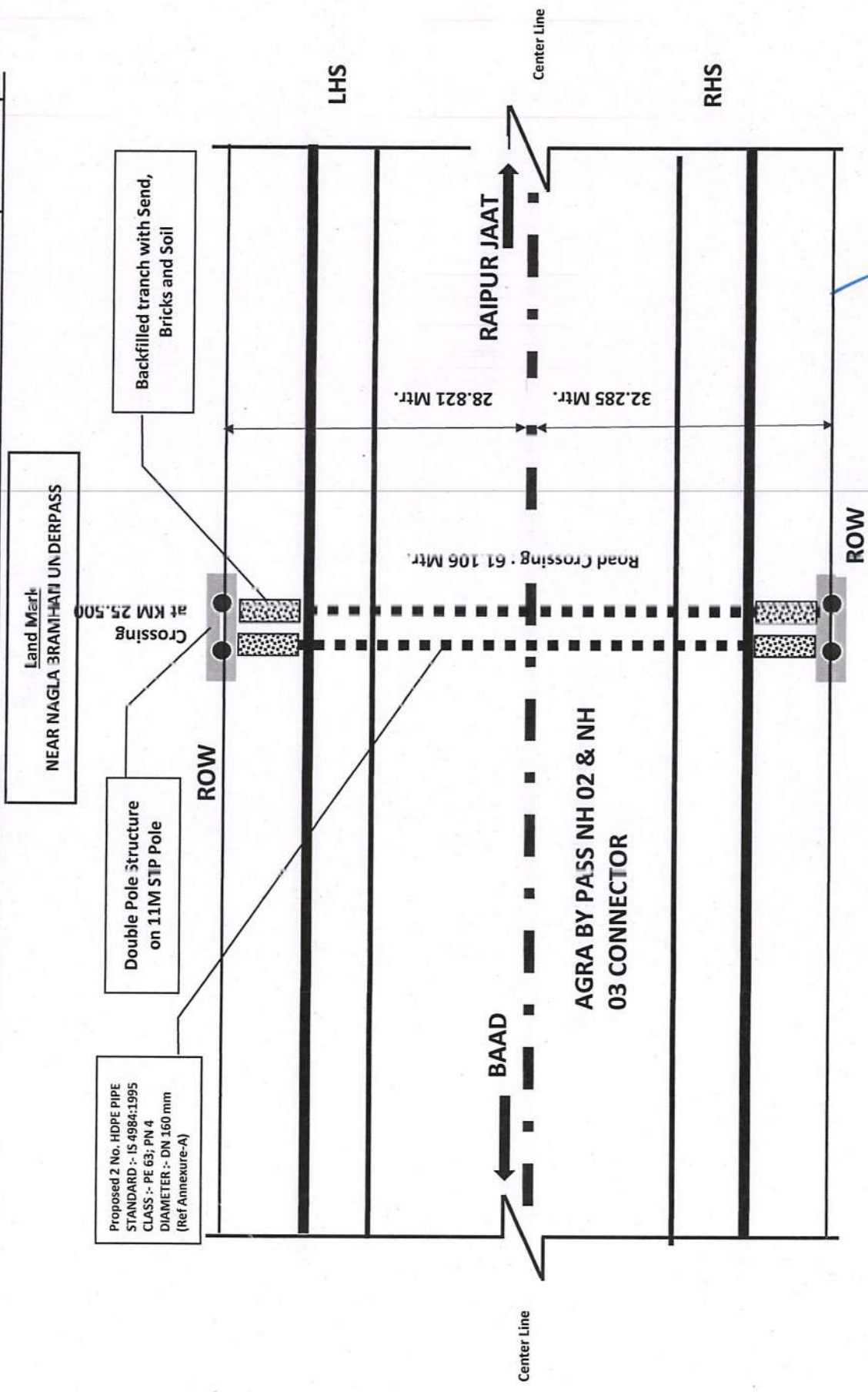
# Typical Cross Sectional For HDD



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# Typical View of AGRA BY PASS NH 02 & NH 03 CONNECTOR Crossing of Electrical Cable/HDPE Pipe



**CHECK - LIST**

Guidelines for processing the proposal for laying electrical cable/HDPE Pipe across National Highways vested with NHAI/PIU/AGRA.

**Relevant Circulars**

1) Ministry Circular No.RW/NH-33044/29/2015 S&R(R) dated 22.11.2016

Check list for getting approval for laying of Electrical Cables/HDPE Pipe at AGRA BYPASS NH 02 & NH 03 CONNECTOR land.

S.No.	Item	Information/Status	Remarks
1	General Information	Work under New 11 KV Feeder for Separation of Agriculture Consumer and Associated work Agra Zone (Agra District) Project	
1.1	Name and Address of the Applicant/Agency	Executive Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, Kamla Nagar, Basant Vihar Kaver Kunj Kamla Nagar Uttar Pradesh	
1.2	National Highway Number	<b>AGRA BYPASS NH 02 &amp; NH 03 CONNECTOR</b>	
1.3	State	Uttar Pradesh	
1.4	Location	Road crossing of UG Electrical Cable/HDPE Pipe (Two run) at Km. 18.500 (AGRA BYPASS NH 02 & NH 03 CONNECTOR)	
1.5	(Chainage in Km)	Road crossing of UG Electrical Cable/HDPE Pipe (Two run) at Km.18.500 (AGRA BYPASS NH 02 & NH 03 CONNECTOR)	
1.6	Length in Meters	(57.978 Mtr. x 2 Run) x 1 Nos. = 115.956 Mtrs.	
1.7	Width of available ROW		
	(a) Left side from center line to tower towards increasing chainage/Km direction	29.102 Mtr From center of road (As per drawing attached)	
	(b) Right side from center line to tower increasing chainage/Km direction	28.876 Mtr From center of road (As per drawing attached)	
1.8	Proposal to lay the cables	UG Electrical cable / HDPE Pipe	
	(a) Left side from center line towards increasing chainage/Km direction	29.102 Mtr From center of road (As per drawing attached)	
	(b) Right side from center line towards increasing chainage/Km direction	28.876 Mtr From center of road (As per drawing attached)	
1.9	Proposal to acquire land	No	
	(a) Left side from center line	NA	
	(b) Right side from center line	NA	
1.10	Whether proposal is in the same side where land is not to be acquired	No land acquisition required	
	If not then where to lay the cable	Crossing at main carriageway (Below Road)	
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)	4 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	1 Lane	
	(a) Left side from center line		
	(b) Right side from Center line	1 Lane	

**Site Engineer**  
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**Project Implementation Unit-Agra**

**Sanjay Verma**  
**परियोजना निदेशक/Project Director**  
**भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/**  
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**अनुराग कुमार**  
**विद्युत वितरण खण्ड-द्वितीय**  
**कमला नगर, आगरा**

S.No.	Item	Information/Status	Remarks
1.15	Proposed Service road	NA	
	(a) Left side from center line	NA	
	(b) Right side from center line	NA	
1.16	Whether proposal to laying UG-Electrical Cable line is after the service road or between the service road and main carriageway	Crossing at main carriageway (Below Road)	
1.17	Whether carrying of sewage/gas pipe line has been proposed on highway Bridges. If Yes, the mention the methodology	NA	
1.18	Whether carrying of sewage/gas pipe line has been proposed on parapet/any part of the bridges. If Yes, the mention the methodology	NA	
1.19	If crossings 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 expenses of the agency owning the line.	YES Electrical cable will be laid in 160mm HDPE Pipe with HDD method for crossing	
	a) Whether existing drainage structure allowed to carry utility pipeline.	NA	
	b) Is it on a line normal to NH	YES	
	c) What is the distance of crossing the utility pipelines from the existing structures. Crossings shall not be too near the existing structures on the National Highway, the minimum distance being 15 meter.	As per NHA Norms ✓	
	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.	HDPE Pipe 160mm Dia ✓	
	e) Ends of the casing / conduit pipe / tower foundation 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 of slope toe of slope in the fills.	YES	
	g) The top of the casing/conduit pipe / tower foundation should be at least 1.2 meter below the surface of the road subject to bring atleast 0.3 m below the drain inverts.	YES	
	h) Mention the methodology proposed for crossing of road for the proposed UG electrical cable. Crossing shall be by boring method (HDD) specially where the existing road pavement is of cement concrete or dense bituminous concrete type.	By HDD Method Drawing for methodology enclosed ✓	
	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.	As per NHA Norms ✓	
2	Document / drawing enclosed with the proposal	Drawing Enclosed	

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Project Implementation Unit-Agra

संजय वर्मा/Sanjay Verma

परियोजना निदेशक/Project Director

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/

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S.No.	Item	Information/Status	Remarks
2.1	Cross section showing the size of the trench for open trenching method. (Is it normal size of 1.6m (min) deep X 0.3 wide) i) Should not be greater 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 15 meter from the centre-line of the nearest carriageway iii) shall not be permitted to run along the National highway 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 atleast 0.6 meter below the ground level so as not to obstruct drainage of the road land.	Drawing Enclosed ✓	
2.2	Cross section showing the size of pit and location of pipe line for HDD method.	Drawing Enclosed ✓	
2.3	Strip plan / Route plan showing the cables, chainage, width of ROW, distance of proposed, cable from the edge of ROW, important mile stone, intersections, cross drawings work etc.	YES, Drawing Enclosed ✓	
2.4	Methodology for laying of electrical cable	By HDD 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.	NA	
	(a) The trench width should be atleast 30 cm but not more than 60cm wider than the outer diameter of the pipe.	NA	
	(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 edged should be excavated and replaced by replaced by selected material	NA	
	(c) The backfill shall be completed in two stages (i) side-fill to the level to the top of the pipe and (ii) overfill to the bottom of the road crust.	NA	
	d) The side fill shall consist of granular material laid in 15cm 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 ponding will not be permitted.	NA	
	e) The road crust on either side of the trench. Care shall be taken to avoid the formation of a dip at the trench	NA	
	f) The excavation shall be protected by flagman, signs and barricades and red lights during night hours.	NA	
	g) If required, a diversion shall be constructed at the expense of agency owning the utility line	NA	
2.4.2	Horizontal Directional Drilling (HDD) method.	YES	

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संजय वर्मा/Sanjay Verma  
परियोजना निदेशक/Project Director  
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/  
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S.No.	Item	Information/Status	Remarks
2.4.3	Methodology for laying of electrical cable through CD works and method of Laying. In cases where the carrying of gas pipe line on the bridge becoems inescapable.	NA	
3	Draft License agreement signed by two witnesses.	YES ✓	
3.1	The License fee estimate as per Ministry's guidelines issued vide circular No. RW/NH-33044/29/2015/S&R (R) dated 22.11.2016	As per applicable	
4	Whether Performance Bank Guarnatee as Ministry's guidelines issued vide circular No. RW/NH- 33044/29/2015/S&R (R) dated 22.11.2016 is obtained.	An undertaking given by the agency towards Performance Bank Guarantee as per extant norms MoRTH per each crossing as demanded by NHAI/MoRTH.	
4.1	Confirmation of BG has been obtained or not as per MoRTH/NHAI guidelines.	Not Submitted	
5	Affidavit / undertaking from the Applicant for the following is to be furnished	Enclosed ✓	
5.1	Undertaking for not to Damage any other utility. If damaged then to pay the losses either to NHAI or to the concerned agency.	YES, Enclosed ✓	

Site Engineer

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परियोजना निदेशक/Project Director

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/

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5.2	Undertaking for Renewal of Bank Guarantee as and when asked by MoRTH/NHAI.	YES, Enclosed	
5.3	Undertaking for Confirming all standard conditions of Ministry Circulars and NHAI's guideline	YES, Enclosed	
5.4	Undertaking for Indemnity against all damages and claims.	YES, Enclosed	
5.5	Undertaking for management of traffic movement during laying of utility line without hampering the traffic.	YES, Enclosed	
5.6	Undertaking that if any claim is raised by the concessionaire/contractor then the same has to be paid by the applicant.	YES, Enclosed	
5.7	Undertaking that prior approval of the NHAI shall be obtained before undertaking any work of the installation, shifting or repairs or alterations to the utility located in the National Highway right of ways.	YES, Enclosed	
5.8	Undertaking that expenditure, if any, incurred by NHAI for repairing any damage caused to the National Highway by the laying, maintenance or shifting of the utility line will be borne by the applicant agency owning the line.	YES, Enclosed	
5.9	Undertaking that text of the license deed is as per verbatim of MoRTH format (issued vide Ministry's Circular No. RW/NH-33044/29/2015/S&R (R) dated 22.11.2016.	YES, Enclosed	
5.10	Undertaking that the applicant has obtained various safety clearances from the representative authorities such as Directorate of Electricity, Chief controller of Explosives, Petroleum and Explosive Safety organisation UTI Industry Safety Directorate State/Central Pollution Control Board and any other statutory clearances applicable before applying to Highway Administration.	YES, Enclosed	
5.11	If the MoRTH/NHAI considers it necessary in future to move the utility line for any work for 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, Enclosed	
5.12	Certificate from the applicant in the following format i) Laying of UG Cable/HDPE Pipe will not have any deleterious effects on any of the bridge components and roadway safety for traffic. ii) for 6 laning "we do undertake that I will relocate services road / approach road / utilities at my own cost notwithstanding the permission granted within such time as will be stipulated by NHAI for future six laning or any other development.	YES, Enclosed	

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संजय बर्म/Secretary

परियोजना निदेशक/Project Director

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6	Who will sign the agreement on behalf of Laying of UG electrical cable/HDPE Pipe	Chief Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, Agra Zone 2	
	Power of Attorney to sign the agreement is available or not	YES	
7	The Project Director, will submit the following Certificates.	-	
7.1	Certificate for confirming of all standard condition issued vide Ministry Circular No. RW/NH-33044/29/2015/S&R (R) dated 22.11.2016.	-	
7.2	Certificate from PD in the following format (i) " It is certified that any other location of the Water Supply pipe line would be extremely difficult and unreasonable costly and the installation of Water Supply 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". (ii) for 6-lanning (a) Where feasibility is available " I do certify that there will be no hindrance to proposed six-lanning 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 accommodation proposed six-laning"	-	
8	If NH section proposed to be taken up by NHAI on ROT basis — s cause in para 9 to be inserted in the agreement. "The permitted Highway on which license has been granted as a right to lay cable / duct, has also been granted as a right of the way to be concessional under the concession agreement for up-gradation on build, operate and transfer basis and therefore, the licence shall honor the same".	NA	
9	Who will supervise the work of laying of UG Electrical Cable/HDPE Pipe		
	(a) On behalf of the Applicant	Executive Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, EDD2 Kamla Nagar Agra	
	(b) On behalf of NHAI	Supervision Consultant	
10	Who will ensure that the defects in road portion after laying of over Head electrical line are corrected and if not corrected then what action will be taken.		
	(a) On behalf of the Applicant	Executive Engineer, Dakshinanchal Vidyut Vitran Nigam Limited, EDD2 Kamla Nagar Agra	
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National Highways Authority of India

परियोजना कार्यान्वयन इकाई-आगरा

Project Implementation Unit-Agra

अधिसारकी अभियन्ता  
विद्युत वितरण ग्रुप-द्वितीय  
कमला नगर, आगरा

S.No.	Item	Information/Status	Remarks
11	Who will pay the claims for damages done / disruption in working of concessionalre if asked by the concessionalre	L&T Construction, Mr. G.G Raju (+98272074085) Project Manager Feeder Separation Project, Agra Zone (Agra District)	
12	A certificate from Project Director that he will enter the proposed permission in the register of records of the permission in the prescribed proforma (copy enclosed).	-	
13	If any previous approval is accorded for laying of UG electrical cable then photocopy of register of records of permissions accorded as maintained by Project Director may be enclosed	NA	

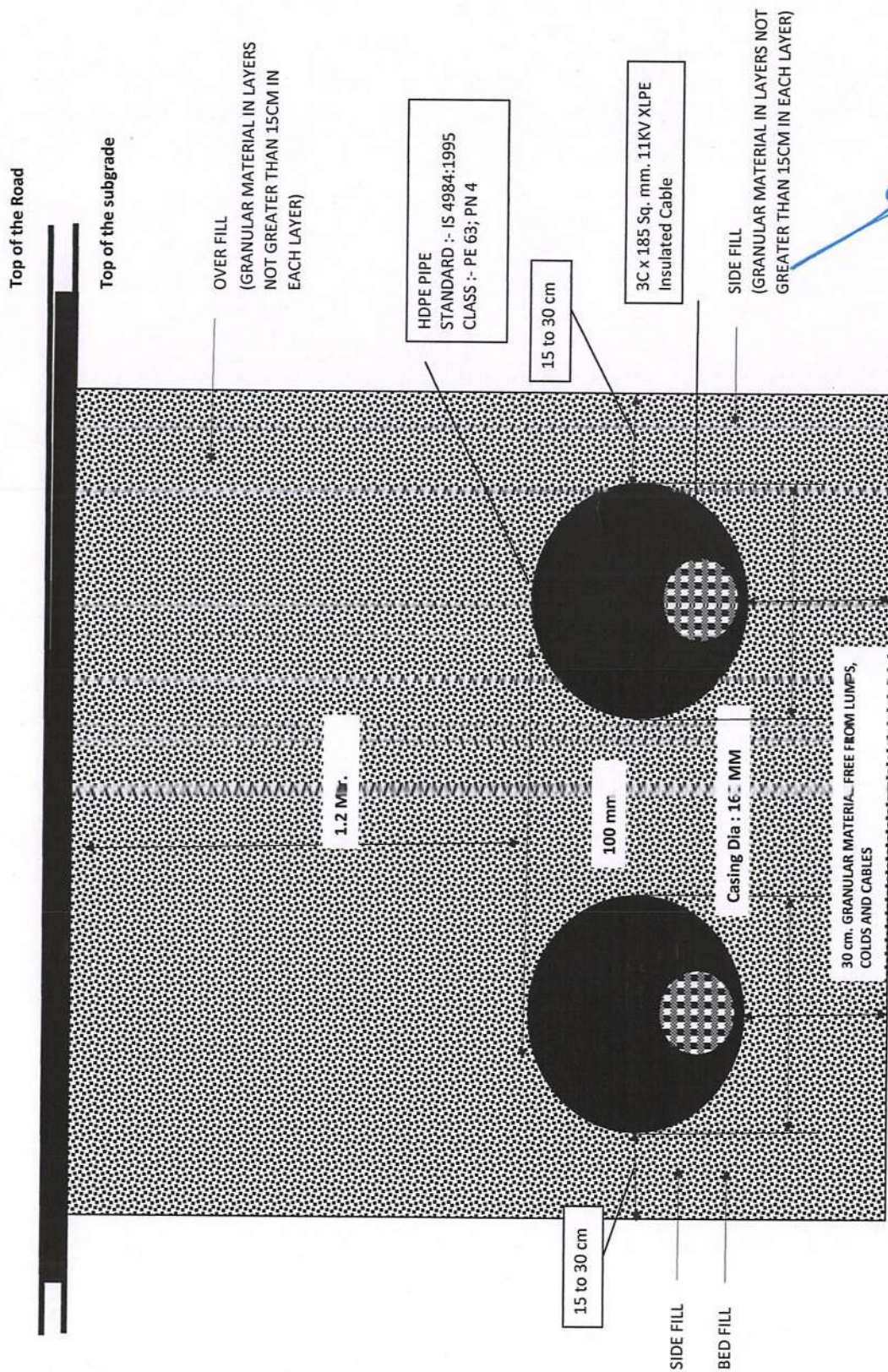
[Name, Designation and signature of the authorised representative of Applicant]

अ. वि. प्र. वि.  
विद्युत वि.  
कमला नगर, आगरा

[Name, Designation and signature of concerned authority of NHAI/PIU/AGRA ]

परियोजना निदेशक/Project Director  
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/  
National Highways Authority of India  
परियोजना कार्यान्वयन इकाई-आगरा  
Project Implementation Unit-Agra

# **ANNEXURE-A** **CASING PIPE AND CABLE DETAILS**

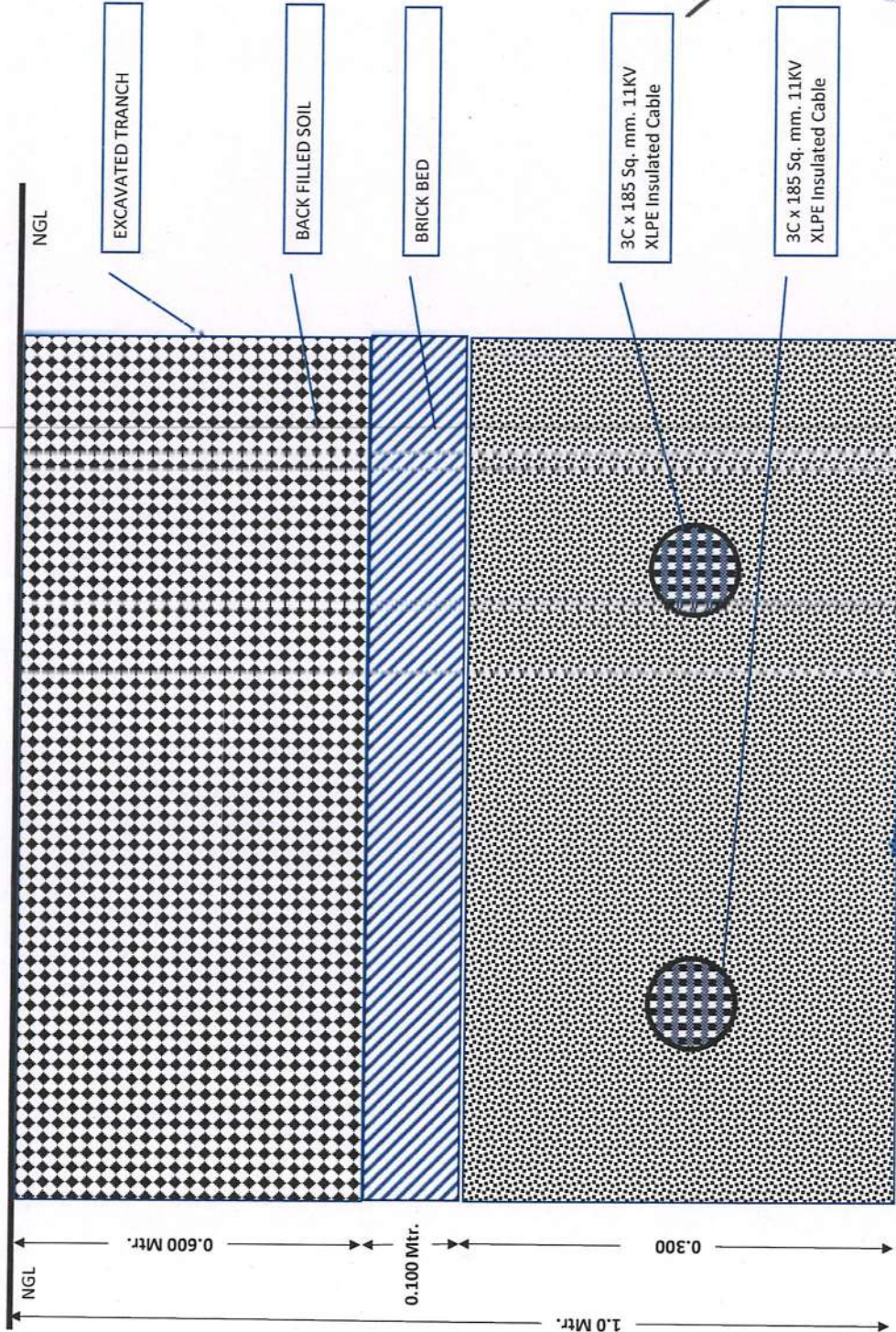


अविश्वसी अभियन्ता  
विद्युत वितरण खण्ड-द्वितीय  
कमला नगर, आगरा

संजय वर्मा/Sanjay Verma  
परियोजना निदेशक/Project Director  
राष्ट्रीय राष्ट्रीय राजमार्ग प्राधिकरण/  
National Highways Authority of India  
परियोजना कार्यान्वयन इकाई-आगरा  
Project Implementation Unit-Agra

Site Engineer  
राष्ट्रीय राष्ट्रीय राजमार्ग प्राधिकरण/  
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Project Implementation Unit-Agra

# **ANNEXURE-B** **CABLE BACKFILLING DETAILS**

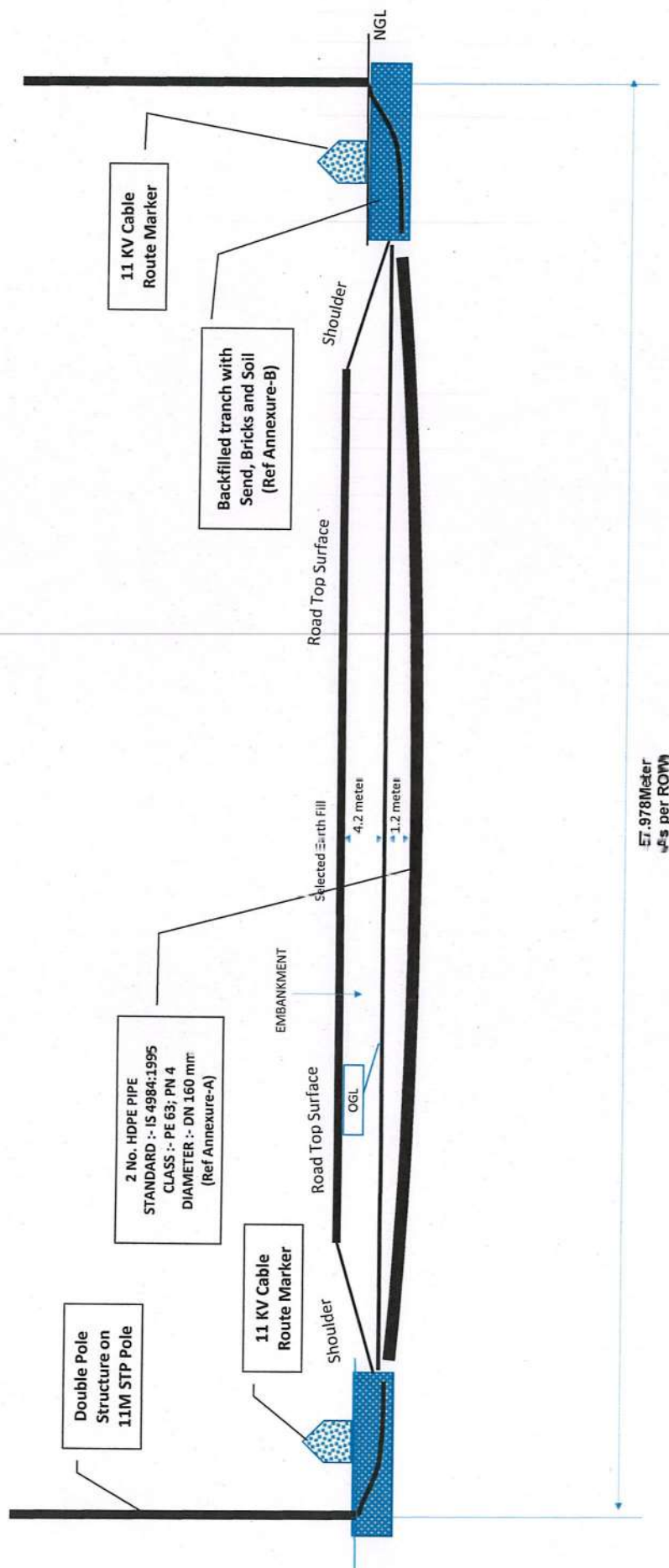


अविभाजित अधिकार  
विद्युत वितरण खांड-हिसीय  
कमला नगर, आगरा

परियोजना निदेशक  
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/  
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Site Engineer  
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National Highways Authority of India  
परियोजना कार्यान्वयन इकाई-आगरा  
Project Implementation Unit-Agra

# Typical Cross Sectional For HDD



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Site Engineer  
 भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/  
 National Highways Authority of India  
 परियोजना कार्यान्वयन इकाई-आगरा  
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संजय वर्मा/Sanjay Verma  
 परियोजना निदेशक/Project Engineer  
 भारतीय राष्ट्रीय राजमार्ग प्राधिकरण/  
 National Highways Authority of India  
 परियोजना कार्यान्वयन इकाई-आगरा  
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अधिशारी अभियन्ता  
 विद्युत वितरण खण्ड-द्वितीय  
 कमला नगर, आगरा

# Typical View of AGRA BY PASS NH 02 & NH 03 CONNECTOR Crossing of Electrical Cable/HDPE Pipe

