# भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
( सड़क परिवहन एवं राजमार्ग मंत्रालय,भारत सरकार )
## National Highways Authority of India
(Ministry of Road Transport & Highways, Govt. Of India)
क्षेत्रीय कार्यालय, उ0प्र0( पूर्व ) वाराणसी
**Regional Office - U.P. (East), Varanasi**
एस- 2/656, ए-3 बी, वरुणा विहार कालोनी, द्वितीय एवं तृतीय तल, वन प्लेस टावर
(जे0पी0 मेहता सीनियर सेकेन्डरी स्कूल के पीछे), सिकरौल, वाराणसी-221002 (उ0प्र0)
S-2/656, A-3B, Varuna Vihar Colony, 2nd & 3rd floor, one place Tower
(Behind J.P. Mehta Sr. Secondary School), Sikraul Varanasi-221002 (U.P.)

150 YEARS OF CELEBRATING THE MAHATMA

दूरभाष/Phone : 91-542-2280243
: 91-542-2280372
ई-मेल/E-mail : rovaranasi1@gmail.com
: rovaransi@nhai.org
वेवसाइट/Website : www.nhai.org


No. 14011/42/RO/UP(E)/2020/1787 Date: 11.05.2020

**Invitation of public comments**

**Sub.: Proposal for the Overhead Crossing of NH-31, Varanasi-Raebareli between KM 250-251 at village-Durwa by 400 KV DC Obra-Jaunpur Transmission Line.**

The GM-Projects, Obra-C Badaun Transmission Ltd. (OCBTL), Bareilly has submitted proposal for granting permission for the Overhead Crossing of 400 KV DC Obra-Jaunpur Transmission Line at km 250.251 (between Ch.250-251) of NH-31, Varanasi-Raebareli at village-Durwa.

2. From the submitted proposal, it is seen that the height of both proposed structures (Transmission Towers) on which the proposed overhead line is hanging is 46.30M. The structures (Towers) on either side are being erected at distance of 92.05M &156.60M respectively from the centre line of National Highway. Further, the minimum clearance of 15.19M between the lowest conductor of the proposed line and NH carriageway shall be maintained. However, the proposed transmission line shall be crossing the National Highway at 88 degree.

3. As per the guidelines, issued by the Ministry vide OM No.RW/NH-33044/29/2015/S&R(R) dated 22.11.2016, the application shall be put out in the public domain for 30 days for seeking claims and objections (on grounds of public inconvenience, safety and general public interest).

4. In view of the above, comments of the public on the above application is invited to the below mentioned address, which should reach by this office within 30 days from the date of publication beyond which no comments shall be entertained.

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

This issue with the approval of CGM (Tech.)/RO.

Encl: As above

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

Copy to:

(i) Web Admin, NHAI-HQ- with request for uploading on the NHAI website
(ii) The Technical Director, NIC, Transport Bhawan, New Delhi - with request for uploading on the Ministry's website.
(iii) Project Director, NHAI, PIU-Lucknow- for information please.
(iv) The GM-Projects, Obra-C Badaun Transmission Ltd. (OCBTL), House No. 116, Green Park Colony, Bisalpur Road, Bareilly.

OBRA-C BADAUN TANSMISSION LIMITED
Add: House No: 116, Green Park Colony, Bisalpur Road, Bareilly, (UP) India, Pin code 243006, CIN: U40106DL2018G0I337373,
Ph No. 0581-2522211

Ref: OCBTL/Bhadohi/2019/NH/22 Date: 17/11/2019

29647
28-11-2018

**To,**
**The Project Director**
**NHAI**
**Raebareilly, UP**

**Ref: -** Construction of 400 kV DC Obra- Jaunpur Transmission Line.

**Subject:-** Reg. Proposal for the overhead crossing of NH-31, Varanasi- Raebareli between Chainage 250 & 251 by 400 kV DC Obra- Jaunpur Transmission Line.

Dear Sir,

This is to bring in your kind notice that OBRA-C BADUAN TRANSMISSION LIMITED is engaged in construction, operation & maintenance of HV & EHV Transmission lines and Substations across the country. In this reference, the construction of 400 KV D/C Obra – Jaunpur Transmission line is under progress. The project will interconnect the existing Obra-C S/S to the new Jaunpur 400 KV S/S. This will facilitate sufficient and stable power supply to our Region.

We are herewith submitting the NH-31 (i.e. Varanasi- Raebareli) crossing proposal of 400 kV DC Obra- Jaunpur Transmission Line. Said crossing falls under NHAI, Division- Raebareilly.

Detail of crossing is as underneath:-

| Sr. No. | Line Name | Crossing Details | Tower No. & Type | Distance from Tower | Remarks |
|---|---|---|---|---|---|
| 1 | 400 kV D/C Obra-Jaunpur Transmission line. | NH -31 (Between Chainage 250 & 251) | AP 164/0 (DB+0) & AP 165/0 (DC+0) | 92.05 Mtr. From 164/0 and 156.60 Mtr. From 165/0. | Village-Durwa |

It's confirmed that the necessary tower extensions are provided to maintain required electrical clearance as per the norms. Thus, you are kindly requested to please verify and accord the approval for the same.

Thanking you and assuring you of our best services at all times.

For, **Obra- C Badaun Transmission Limited**

**(S K Sendil Ragavan)**
**GM- Projects**

**Encl:** 1. Profile of crossing Span,
2. Tower schedule for crossing span,
3. Questionnaire
4. Plan view.
5. Check list.
6. Undertaking & Agreement

# OBRA-C BADAUNTRANSMISSION LIMITED

## PROPOSAL FOR NH-31 CROSSING

## OF

## 400 KV D/C JAUNPUR-OBRA (UP TO LILO POINT OF OBRA-B TO OBRA-C) TRANSMISSION LINE

## CROSSING BETWEEN MILE STONE 250-251

## IN VARANASI-MIRZAPUR (NH-31) SECTION

## TOWER NO- AP-164/0(DB+0)& TOWER NO- AP165/0(DC+0)

**OBRA-C BADAUNTRANSMISSION LIMITED.**

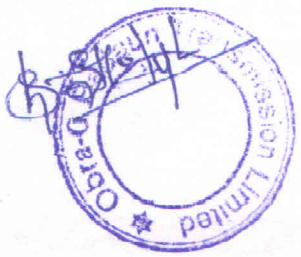
**VARANASI - RAIBARELI NationalHighway31** crossing between km250-251 ANDfor construction of 400 KV D/C (TWIN) JAUNPUR – OBRA (UP TO LILO POINT OF OBRA-B & OBRA-C) TransmissionLine between Angle Tower No. – AP 164/0 (DB+0)& AP 165/0 (DC+0),

**Name of Transmission Line:400 KV D/C JAUNPUR – OBRA (UP TO LILO POINT OF OBRA-B TO OBRA-C) TRANSMISSION LINE**

| | | |
|---|---|---|
| 1. | Situation of the EHV transmission line crossing on National Highway. | On Varanasi – RaebareliNational Highway (NH-31) near Durwa village |
| 2. | Site Plan showing location of crossing (with NH boundaries) in reference to NH Mileage to be supplied on quadruplicate. | Site Plan Drawing is enclosed showing the NH boundaries& NH Mileage. |
| 3. | Angle of crossing of the transmission line with the National Highway at crossing point | $88^0 48' 27''$ |
| 4. | The length of the span at the crossing and also those on either side of the crossing | A) Crossing span 248.65 Mtr.<br>B) Preceding span 367.75 Mtr.<br>C) Succeeding span 316 Mtr. |
| 5. | In the event of the transmission line deviating at any of the supports of the crossing necessitating one of the structures to be a corner structure, National angle of such deviation the deviation of the span on either side of crossing shall be illustrated in the sketch mentioned in the clause 2 above. | Angle Tower Location No.<br><br>164/0-DB+0<$03^0 14' 19''$ LT<br>165/0-DC+0<$19^0 43' 48''$ LT |
| 6. | The number, size and the material of the conductors and wires crossing the NH / SH each wire under phase, neutral each, guard, bearer and ground cross wire should be separately described and their disposition indicated by means of sketch. | A) ACSR Moose Conductor dia 3.177 cm, No. of Conductor – 12x 2 Nos. Unit Weight2.004 Kg/m, ultimate strength – 16432kg.<br>B) Aluminum – 54/3.53mm, Steel – 7/3.53 mm<br>C) Earthwire – 7/4.57 mm (Steel), no. of Earthwire -1 Nos.<br>D) OPGW-8.6 To 9.5 $\mu$ m |
| 7. | Indicate whether the proposed guard is to be restricted to the crossing span or it is to be continued over the adjacent span. | No guard wire is provided. |

Obra-C Badaun Transmission Limited

| | | |
|---|---|---|
| 8. | The deviation of the span on either side on the crossing shall be illustrated in the sketch mentioned in the clause 2 above. | Enclosed in sketch. |
| 9. | System of supply (i.e. Voltage) frequency, No. of phases, whether neutral is earthed or not. | 400 KV, 50 Hz, 3 Phase Double Circuit with 1 earth wire& 1 OPGW. |
| 10. | Height of structure above ground and below ground separately. | A) Angle tower location no.164/0, DB+0 heights above GL 46.30m. Depth below GL = 3.5m.<br>B) Angle Tower Location no.165/0, DC+0 heights above GL 46.30m. Depth Below GL = 3.5m. |
| 11. | Height above ground level of (1) Lowest conductor on insulator and (2) guard wire on bracket above ground level. | 11. Angle Tower Location No = 164/0, DB+0 (1) 22.25 m, (2) 46.30m.<br>Angle Tower Location No. 165/0, DC+0 (1) 22.25 m. (2) 46.30m. |
| 12. | Height of road level above ground level measured at the foot of the structure. | Angle Tower Location No.<br>164/0 DB+0= 2.18M.<br>Angle Tower Location No.<br>165/0 DC+0 = 3.18M. |
| 13. | Clearance under maximum sag condition between road level and the lowest live conductors & between road level and lowest guard wire (Stateif "box" type guarding is provided in case of adoptions of unearthed neutral system). | At Road = 15.19M<br>Raebareli to Varanasi |
| 14. | Ultimate Tensile stress of the steel wire used for guard for earth wire in tones per Sq. Cm. | Not applicable |
| 15. | Approximate distance of each of the structures to the nearest NH (marked by pillars/ Fencing) measured along the alignment of the transmission line. | Angle Tower Location No.<br>164/0 DB+0 =79.55M.<br>Angle Tower Location No.<br>165/0 DC+0 = 144.10 M. |
| 16. | Are the proposed structure is in NH boundary. | No, Both structures are Outside of NH boundary. |
| 17. | Are approved anticlimbing devices and warning notices provided on the structures erected | Anticlimbing devices & Warning boards are provided on both the Towers. |



| | | |
|---|---|---|
| 18. | National / State the tensile strength and dimension of the steel used for construction of each member of the supporting structures. It is to be noted that supporting structure must be of approved design confirming with I.S.I code of practice for use of structural steel in general building construction (IS 800 1965). | Tested steel quality Lattice steel structure made of mild steel and high tensile steel in confirmly with clause 4.0 of I.S. 226- 1975 and with a tensile strength of 15704 Lbs/Sq Inch. |
| 19. | Dimensions and types of brackets used for the cross arms as well as for the guards wires. | Not applicable for transmission Line. |
| 20. | In each structure of the crossing span independently earthed by means of an earth plate. | Yes, each structure is earthed. |
| 21. | In each structure supported by means of stage in three directions give the size of guy wires, (the neglected in calculating the strength of structure). | No. guys or stays are provided structures are self-supporting. |
| 22. | If no guard is provided, in the transmission line protected by device to ensure instantaneous isolation is conduction? | Yes, the transmission line is protected instantaneously by high speed protection relays with carrier equipment. |
| 23. | Type of insulators used. | Polymer discs of electromechanical strength of single disc =160 KN. |
| 24. | State the method of maintenance to be employed to ensure the following protections. | |
| a) | From overhanging or decaying trees which might fall on the line. | Tree clearance to a width of 46M+3M is done. |
| b) | To reduce the hazard to life and property. | Warning boards are provided. |
| c) | Supporting structure including guys, from the danger of being struck by moving road vehicle. | Structures are at safe distance from road. |
| 25. | Drawing showing details of crossing disturbance of road, ground or attachment that may be necessary<br>**(To be supplied in quadruplicate.)** | Enclosed. |

## CHECK LIST

**Project Director for processing the Proposal of overhead electrical line crossing national highways vested with NHAI**

**Circular / Codes:-**

**Ministry Circular No NH-III/P/20/77 dated 08-04-1982**
**Indian Electricity Act 1910**
**Indian Electricity Rules 1956**
**IRC: 32-1969**
**IS:5613-1976 Part I to IV**
**For getting approval for layering of overhead electrical line along the National Highways NH31 vested with NHAI**

| S.NO | Item | Information/ status | Remarks |
|---|---|---|---|
| 1 | General Information | 400 KV D/C (Twin) Jaunpur –Obra (Up to Lilo point of Obra-B to Obra-C) Transmission Line | |
| 1.1 | Name and address of the applicant | Obra-C Badaun Transmission Limited | |
| 1.2 | National Highway No | NH-31 | |
| 1.3 | State | Uttar Pradesh | |
| 1.4 | Location | Durwa,Tehsil:MahhaliShahar,District:Jaunpur | |
| 1.5 | Type of electric including carrying voltage details and purpose | 400 KV D/C (QUAD) | |
| 1.6 | Chain -age in Kilometers | 250-251 | |
| 1.7 | Length in Meter | 248.65 | |
| 1.8 | Width of available ROW | 46 | |
| | (a). Left side from Center Line towards increasing chainage / KM Direction | 23 | |
| | (b) Right side from Center Line towards increasing chainage / KM Direction | 23 | |
| 1.9 | Proposal to lay Overhead | | |
| (a) | Left side from Center Line towards increasing chainage / KM Direction | As above | |
| (b) | Right side from Center Line towards increasing chainage / KM Direction | As above | |
| (c) | Errection of Electrical line along the NH 7 | NA | |
| 1.10 | Proposal to acquire land | NA | |
| | (a)Left side from Center Line | | |
| | (b)Right side from Center Line | | |
| 1.11 | Whether the proposal is<br>a- in the same side where land is not to the acquired<br>b- Crossing the National Highway<br>If not then where to lay the overhead electrical line | Yes | |
| 1.12 | Details of Already laid services (overhead telecommunication line, overhead electric line etc), if any , along the proposed route / proposed crossing | NA | |
| 1.13 | NO of lanes (2/4/6/8 lanes ) existing | 02 lane | |
| 1.14 | Proposed number of lanes (2 lanes with paved shoulder 4/6/8 lanes ) | N/A | |
| 1.15 | Service Road existing or not | N/A | |
| | If yes then which side | | |
| | a) Left side from center line | | |
| | b) Right side from center line | | |
| 1.16 | Proposed Service Road | N/A | |

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परियोजना कार्यान्वयन इकाई
रायबरेली

Obra-C Badaun Transmission Limited

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|---|---|---|---|
| | a) Left side from center line | | |
| | b) Right side from center line | | |
| 1.17 | Whether proposal to lay overhead electric line is after the service road or between the service road and main carriage way, or crossing for approval / rejection based on the Ministry circulars and relevant codes mentioned as above. | N/A | |
| 1.19 | I- If crossings of the roads involved<br>**(a)** Crossing angle for NH and provide length along the Highway<br>**(b)** Structure (Tower, pole and for HT Line only tension towers) for crossings shall not be too near the existing structures on the National Highway, The minimum distance being 15 meter.<br>(i)- Type of Existing / proposed structure for National Highways<br>(ii)- What I s the distance of tower, pole and tension tower lying from the existing / proposed structure for National Highways. | Yes<br>(a) 88°48'27",248.65 mtr<br>(b) Tower no AP 164 & AP 165 placed at a distance of 92.05 mtr& 156.60 mtr | |
| | (c)- The overhead lines and their supporting poles / towers should ordinarily be placed at the extreme age of the road land boundary. In any case, these shall be at least 10 meter away for the age of the existing shoulders of extreme traffic lane. Where the existing road way is narrower than the minimum according to standard or where the widening is proposed for any reason the lateral clearance shall be reckoned with respect to ultimate road way.<br><br>What is the horizontal clearance from the extreme edge of the road land boundary? | N/A.<br><br>N/A | |
| | (d)The overhead lines and their supporting poles/ towers should originally be placed at the minimum distance of 5.0 m from the nearest line of avenue trees.<br><br>What is the horizontal clearance from the nearest line of avenue trees? | N/A | |
| | (e)- in mountainous / hilly terrain the overhead lines should be erected preferably on the valley side as far away as practicable .In hilly reason, label of ground at a suitable distance below the outer conductor on either side from the central line is also to be noted and marked in profile so as to ensure required ground clearance underneath conductor and side clearances in swung conditions. Is the proposal in hilly area? | Plain terrain | |
| | The horizontal clearances in respect of poles erected for the purpose of street lighting in Urban situations shall be as under:- | | |
| | i-For roads with Minimum300mm from the<br>Raised kerbs300mm from the aged of nearest<br>kerb Preferably 600mm | N/A | |
| | ii- For roads with At least 1.5m from the edge of the carriage | N/A | |

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| | way ,<br>raised kerbs subject to minimum of 5.0 from the central line<br>of the carriage way . | | |
| | (g) the Pylons of HT lines along crossing the road shall be located outside the NH land | N/A | |
| | (h) for crossing the line of same voltage or lower voltage , suspension/ tension tower with suitable extensions shall be used . | N/A | |
| | (i) The vertical clearance of the overhead lines crossing the road shall be reckoned from the top of the crown of the road taking into account the anticipated final top level due to future raising of road level, strengthening of pavement etc. The actual ground clearance of High Tension line for voltage above 650 voltes varies depending upon the voltage transmitted and these are stipulated in Indian standard. Codes is 56130-1976 part 1 to IV and Indian Electricity Rules 1956 as under. | Ground Clearance shall be taken jointly with OCBTL and NHAI after completion | |
| 2 | **Affidavit / Undertaking to be obtained from(to be furnished by the applicant).** | Yes | |
| 2.1 | Not to damage to other utility , if damaged then to pay the losses either to NHAI or to the concerned agency | Yes | |
| 2.2 | Under Taking for Renewal of Bank Guarantee if required. | N/A | |
| 2.3 | Confirming all standard conditions as laid down in ministry circular no- NH-III/P/20/77 dated 08-04-1982 Indian Electricity Act 1910 Indian Electricity Rules 1956 IRC :32-1969, IS : 5613-1976 part I to IV of (NHAI ) | . Yes | |
| 2.4 | Shifting of overhead Electrical line at their own cost as an when required by (NHAI ) | Done by OCBTL electrical Department own cost | |
| 2.5 | Shifting of overhead Electrical line at their own cost as an when required due to 4/ 6 lanning/ widening of NH | Done by OCBTL electrical Department own cost | |
| 2.6 | Indemnity against all damage and claims whatsoever kind that may be to NHAI or to any third party in the row during installation, operation and maintenance | Done by OCBTL electrical Department own cost | |
| 2.7 | Traffic movement during laying of OFC/Cable to be managed by the applicant | Done by OCBTL electrical Department own cost | |
| 2.8 | If any claim is raised by the concessionaire then the same has to be paid by the applicant. | Done by OCBTL electrical Department own cost | |
| 2.9 | Prior approval of the NHAI shall be obtained before undertaking any work of installation, shifting or repairs , or | Yes | |

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| | alterations to the overhead electrical line located in the National Highway right of way | | |
| 2.10 | Expenditure, if any , incurred by electric department for repairing any damage caused to the National Highway by the laying , maintenance or shifting of the overhead electrical line located in the National Highway right of the way | Yes. | |
| 2.11 | **If the NHAI considers it necessary in future to move the utility line for any work of improvement or repairs to the road , it will be carried out as desired by the NHAI at the cost of the electric department owing the utility line within a reasonable time (not exceeding 60 days) of the intimation given** | Yes | |
| 2.12 | Certificate from the applicant in the following format :-<br>(i) Laying of overhead electrical will not have any deleterious effects on any of the bridge components and roadway safety for traffic.<br>(ii) For 4/6 laning**"we do undertake that I will relocate service road/ approach road, utilities at my own cost, notwithstanding the permission granted within such time as will be stipulated by NHAI"** for future 6 laning or any other development . | Yes | |
| 2.13 | The transmission line installation shall be carried out by trained and experienced personnel and supervised by technically qualified persons competent to undertake such work. | Yes | |
| 2.14 | The applicant ensures the safety of the Highway traffic against the Hazards of the high voltage lines during installation , operation and maintenance | Yes | |
| 2.15 | Undertaking the compliance with Indian electricity rules and other authorities, regulations- allover headlines shall comply with the requirement of the Indian electricity act and rules made their under and the regulations or specification as laid down by NHAI . | Yes | |
| | **Other documents and drawing to be furnished by the applicant** | Yes | |
| 3.1 | Methodology for laying of overhead electric line. | Yes | |
| 3.2 | Draft license agreement | Yes | |
| 3.3 | Performance bank guarantee in favor of NHAI has to be obtain at the Rs100/- per running meter (Parallel to NH) and Rs 1, 00,000/- per crossing of NH, for a period of one year initially (extendable if required till satisfactory completions of work) as a security for insuring/ making good the area, Clearing debris / loose earth etc produced in the right of way. No payment shall be payable by the NHAI to the license for clearing debris/ loose earth. | YES | |
| 3.4 | Strip plan/ route plan showing overhead electrical line,chainage with of ROW, distance of proposed, | Yes | |

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| | structure(tower, pole and for HT Line only tension towers) from the edge of ROW, important milestone, intersections, cross drainage works any other structure existing of proposed etc. | | |
| 4 | **Certificate from the Project Director** | | |
| 4.1 | Certificate for confirming that the proposal has been examined with respect to the structures and developmental work considered at this location and compliance of the standard conditions issued vide ministry circular no- NH-III/P/20/77 dated 08-04-1982 Indian Electricity Act 1910 Indian Electricity Rules 1956 IRC :32-1969, IS : 5613-1976 part I to IV of (NHAI ) and NHAI's guideline. | Yes | |
| 4.2 | Certificate from PD In the following format:-<br>(i)- **"it is certified that any other location of the electric line would be extremely difficult and unreasonable costly and the installation of electric 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 carriage way easing of kerb , etc."**<br>(ii) for 6- laning<br>**(a)** Where feasibility is available " **I do certify that there will no hindrance to propose 6 laning based on the feasibility report considering proposed structures at the said location "**<br>**(b)** In case feasibility report is not available "**I do certify that sufficient ROW is available at site for accommodating of six -laning"** | YES | |
| 5 | If NH section proposed to be taken up by NHAI on BOT basis-a-clause is to be inserted in the agreement "The permitted highway on which licensee has been granted the right to lay overhead electrical line has also been granted as a right of way to the concessionaire under the concession agreement for up-gradation. | YES | |
| 6 | Who will supervise the work of laying of overhead electrical line? | OCBTL | |
| 7 | Who will the sign the agreement on behalf of overhead electrical line agency | General Manager,OCBTL | |
| 8 | Who will ensure that the defect in road portion after laying of overhead electrical are corrected and if not corrected that what action will be taken. | OCBTL | |
| 9 | Who will pay the claims for damages done / disruption in working of concessionaire, if asked by the concessionaire. | OCBTL | |
| 10 | A certificate from PD that he will enter the proposed | NHAI | |

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

परियोजना निदेशक
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परियोजना कार्यान्वयन इकाई
रायबरेली

| | | | |
|---|---|---|---|
| | permission in register of record of the permission in the prescribed performa (copy enclosed) | | |
| 11 | If any previous approval for laying of overhead electrical line then photocopy of register of records of permission accorded as maintained by PD may be enclosed. | NO | |

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रायबरेली

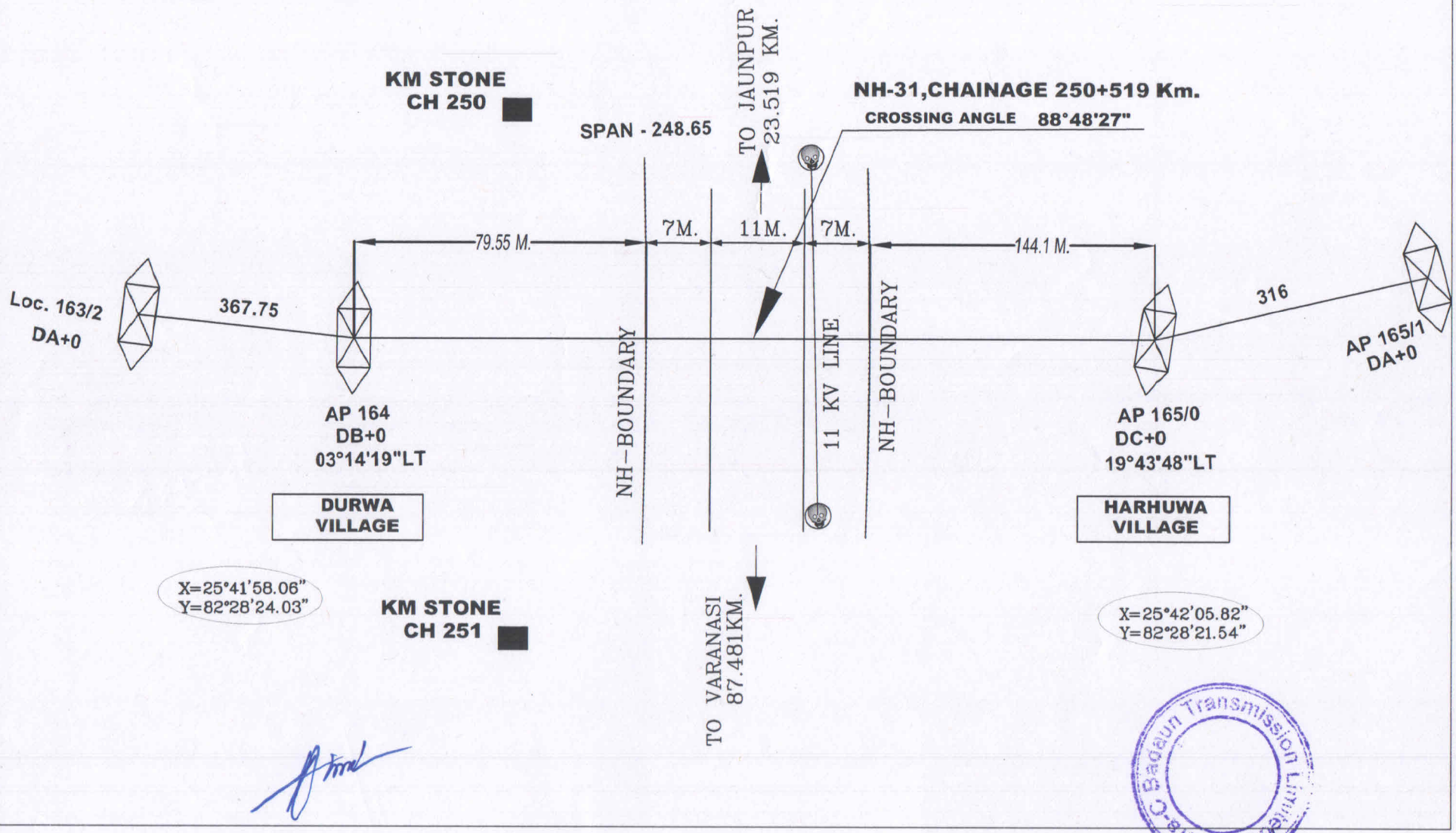
| OBRA-C BADUAN TRANSMISSION LTD | OBTCL DOC No- A17-TS(R-B) |
|---|---|
| PROJECT:-400 KV D/C JAUNPUR-OBRA TRANSMISSION LINE WITH TWIN MOOSE CONDUCTOR | |
| CONTRACTOR:-KEC INTERNATIONAL LIMITED | KEC DRG. NO.: B 943/XYZ-9038 |
| (Wind Zone :4) | |

| Sl. No | Loc. No. (Provisional) | Type of Tower | Deviation Angle (Deg) | Span, m | Section Length, m | Cumulative distance, m | Sum of Adjacent Spans, m | Wind Span, m | Weight Span in m (Cold) | | | Weight Span in m (Hot) | | | Northing, m | Easting, m | R.L., m | Village Name | Remarks & Crossings. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Left | Right | Total | Left | Right | Total | | | | | |
| | 163/1 | DA+0 | | | | | 730.0 | 365.0 | 143 | 184 | 327 | 155 | 184 | 339 | | | | | |
| | | | | 371 | | 730 | | | | | | | | | | | | | |
| 1 | 163/2 | DA+0 | | | | | 738.8 | 369.4 | 187 | 183 | 370 | 187 | 183 | 370 | 27°13'19.94"N | 2842868.55 | 78.86 | | |
| | | | | 367.75 | | 1097.75 | | | | | | | | | | | | | |
| 2 | 164/0 | DB+0 | 3° 14' 19"LT | | 1097.75 | | 616.4 | 308.2 | 185 | 126 | 311 | 185 | 125 | 310 | 25°13'31.20"N | 2843226.00 | 79.38 | DURWA | |
| | | | | 248.65 | | 1346.40 | | | | | | | | | | | | | NH-31,VARANASI-RAEBARELI |
| 3 | 165/0 | DC+0 | 19° 43' 48"LT | | 248.65 | | 564.7 | 282.3 | 123 | 152 | 275 | 124 | 154 | 278 | 25°13'35.79"N | 2843464.00 | 79.20 | HARHUWA | |
| | | | | 316.00 | | 1662.40 | | | | | | | | | | | | | 11 KV LINE |
| 4 | 165/1 | DA+0 | | | | | 735.0 | 367.5 | 164 | 194 | 358 | 162 | 199 | 361 | 25°13'51.44"N | 2843717.82 | 79.83 | | |
| | | | | 419.00 | | 2081.40 | | | | | | | | | | | | | |
| | 165/2 | DA+3 | | | | | 841.0 | 420.5 | 225 | 226 | 451 | 220 | 222 | 442 | | | | | |
| | | | | | | | | | | | | | | | | | | | |

| For KEC INTERNATIONAL LTD | | | For OCBTL | |
|---|---|---|---|---|
| SURVEYED BY | CHECKED BY | SUBMITTED BY | CHECKED BY | RECOMMENDED BY | APPROVED BY |

Obra-C Badaun Transmission Limited

# KEY PLAN




C Badaun Transmission Limited