



**NATIONAL INSTITUTE OF DESIGN**

A Statutory Institute Under DIPP

Ministry of Commerce & Industry

Govt. Of India

PALDI, AHMEDABAD 380 007

Phone: 079 2662 9500, 079 2662 9600

Web Site:[www.nid.edu](http://www.nid.edu)

**NIT No : 15/16-17 dated 23.11.2016**

Tender document for “Resurfacing of Road works at NID Campus, Paldi Ahmedabad.”

Client :

National Institute of Design

Paldi, Ahmedabad 380 007 India

Tele : 079 26629500, 079 26629600



**NATIONAL INSTITUTE OF DESIGN**  
A STATUTORY INSTITUTE UNDER DIPP  
MINISTRY OF COMMERCE & INDUSTRY  
GOVERNMENT OF INDIA  
PALDI, AHMEDABAD 380 007  
PHONE : 079 26629500, 079 26629600  
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**NOTICE INVITING e - TENDER**

National Institute of Design (NID) invites on line tenders (through e-tendering) from established & reputed firms /bidders with experience for Resurfacing/ Construction of Bitumen Road works for Resurfacing of Road at NID Campus, Paldi Ahmedabad.”. Tender Notices & Tender documents are available on Govt. Of India Central Public Procurement Portal [www.eprocure.gov.in](http://www.eprocure.gov.in) and [www.nprocure.com](http://www.nprocure.com) for downloading. Any modification / corrigendum etc. In the tender will be available on this website. Tender document can be viewed only on [www.nid.edu](http://www.nid.edu) / tender.

Sr. No.	NIT No.	Name of work & Location	Estimated cost put to bid in Rs.	EMD in Rs.	Period of completion	Last date & time of bid, EMD, e-tender processing fees online & Hardcopy submission	Time & date of opening of technical bid.
1	2	3	4	5	6	7	8
1	15/16-17	Resurfacing of Road works at NID Campus, Paldi Ahmedabad	23.00 Lakh	46,000/-	1month	05.12.2016 upto 15.00 hrs. e-tender fees Rs. 2500/-	05.12.2016 at 17.00 hrs

**NID reserves the right to accept or reject any or all the offers without assigning any reason.**



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### **Resurfacing of Existing Road (Including Both Material & Labour)**

The National Institute of Design invites the online e tender for Resurfacing of Existing Road to be carried out at NID Paldi campus. (Including both material and labor)

The work is estimated to cost approx. Rs. 23 lakhs and is proposed to commence during December 2016 and to be completed within 1 (one) month. First class reputed firms of long standing and having experience of **Road works** need **only apply**.

National Institute of Design (NID) invites on line tenders (through e-tendering) for **resurfacing of existing road** works to be carried out at NID's Ahmedabad Campus. Tender Notices & Tender documents are available on Govt. Of India Central Public Procurement Portal [www.eprocure.gov.in](http://www.eprocure.gov.in) as well as on [www.nprocure.com](http://www.nprocure.com) for downloading. Any modification / corrigendum etc. in the Tender Notice will be available on these websites. Also, the Tender documents can **only be viewed** on [www.nid.edu](http://www.nid.edu). The last date for submission of Technical bid and on-line commercial bid along with EMD is **Monday 05-12-2016 up tp 15.00 hrs.**

No further tender notice will be published in the press and issue of tender forms will be restricted only those prescreened and short listed contractors from amongst who apply against this advertisement.

The NID reserves the rights to select or reject all or any contractor for inclusion in the short listed panel without assigning any reason thereof or alter the schedule of implementation of of the project as per requirements.



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Web Site:[www.nid.edu](http://www.nid.edu)

Date: 23.11.2016

### **NOTICE INVITING e-TENDER (NIT)**

NID,Ahmedabad invites online item rate open tenders through press in Two bid System from First class reputed firms of long standing and having experience of Road works Contractors/ Agencies & eligible for “Resurfacing of Road works at NID Campus, Paldi Ahmedabad” as per schedule as under :

Tendering Document No	15/ 16-17 dated 23.11.2016
Name of the Work	Resurfacing of Road works at NID Campus, Paldi Ahmedabad
Brief Scope of Work	Resurfacing of existing Road with execution of Tack coat, Premix carpet, Seal coat wherever applicable, Removing & Refixing of kerb stone, PCC etc.at NID Campus, Paldi, Ahmedabad
Estimated Cost	Rs. 23,00,000.00 (Rupees Twenty Three Lacs Only)
Period of Completion	1 Months (One Month)
Earnest Money Deposit	Rs. 46,000.00 (Rupees Fourty Six Thousand Only) in the shape of DD/PO in favour of NID Payable at Ahmedabad
Non-refundable cost of Tender document	Rs. 2500.00 ( Rs. Two Thousand Five Hundred Only ) in the shape of DD/PO in favour of NID Payable at Ahmedabad
Last date & time of submission of Online Tender	Upto 05.12.2016 by 15.00 Hrs

Period during which hard copy in original of EMD, Cost of Tender Document, Letter of Acceptance of tender conditions unconditional other document as per NIT shall be submitted.	before and up to 15.00 Hrs on 05.12.2016 in the office of:  Secretary & Head, General Administration , NID, Paldi, Ahmedabad -380 007
Date & Time of Opening of technical Tender	05.12.2016 at 17.00 Hrs.
Date & Time of Opening of Financial Tender	To be intimated later
Validity of offer	90 days from the date of opening of financial bid
Pre-Tender Meeting & Venue	-

#### QUALIFYING REQUIREMENT FOR BIDDER:

The bidder who wishes to participate in the bidding shall satisfactory establish that he fulfils the qualifying requirements stipulated here under and Joint ventures are not accepted:

Estimated cost put to tender (Rs. in lakh)	Average Annual Turnover during last 3 years ending 31.03.16 (Rs. in lakhs)	Proof of having completed similar works such as Resurfacing / construction of Bitumen Road works successfully completed works during last during last 5 years ending previous day of last date of submission of application as detailed below: (bidders should fulfill either of three options)			Latest Bank Solvency value of (Rs in Lakh)
		Single work of value (Rs in Lakh)	Two works, each of at least value of (Rs in Lakh)	Three work, each of at least value of (Rs in Lakh)	
23.00 Lacs	23.00	18.40	13.80	9.20	10.00

(Similar Works for this purpose means “Resurfacing / construction of Bitumen Road works”)

The bidder must fulfill the requirements under sub-head “Parameters of bidding” also.

1.0

- a) The past experience in similar nature of work should be supported by certificates issued by an officer not below the rank of Executive Engineer or Equivalent. In case the bidder has executed

the work(s) under a private sector, the value of the work shall be reflected in the TDS of the Corresponding year(s) and shall submit requisite Proof/ TDS certificate for the same.

- b) The value of free issue of materials shall be taken in to account while evaluating completion cost of project. The value of such materials incorporated in the project should be certified by the Client.
- c) “The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to last date of receipt of applications for tenders.”
- d) Should not have incurred any loss in more than two years during the last three years ending 31st March 2016.
- e) In addition to the above, the applicant has to submit the following documents /information's:-
  - a. Should have valid Service Tax Number.
  - b. Should have EPF Registration Certificate.
  - c. Should have Sales Tax/VAT-Registration certificate from State/Central Govt.
  - d. Bank Solvency certificate for the value of at least **Rs 10.00** lakh issued not before six month of the date of publication of this NIT.
  - e. Completion certificate from the clients.
  - f. Sufficient manpower and resources to carry out such works.
  - g. Complete Name and mailing address of the applicant along with Telephone numbers, Mobile Numbers and E-mail address.
  - h. Information regarding the Constitution of the applicant/firm e.g. Proprietors, Partnership, Private etc. along with proof of the same such as copies of registration with Council of Architecture/ Certificate of Incorporation/Partnership deed etc.
  - i. Details of projects executed supported by copies of completion certificates/agreement/LOI etc.
  - j. Details of key Personnel on roll and their qualification and experiences
  - k. Copies of PAN/TAN card
  - l. Details of Litigations, if any

The tender document can be downloaded from website [www.nprocure.com](http://www.nprocure.com) and [www.eprocure.gov.in](http://www.eprocure.gov.in) & it can be viewed only on NID website [www.nid.edu](http://www.nid.edu) “**Corrigendum, if any, not to be published in any News Paper**”. It will be available on [www.nprocure.com](http://www.nprocure.com) & [www.eprocure.gov.in](http://www.eprocure.gov.in) only.

- 2.0 The intending tenderer must read the terms and conditions carefully. He should only submit his tender if he considers himself eligible and he is in possession of all the documents required.
- 2.0(A) Information and Instructions for Tenderers posted on Website(s) shall form part of Tender Document.
- 3.0 The Tender Document as uploaded can be viewed and downloaded free of cost by anyone including intending tenderer. But the tender can only be submitted after uploading the mandatory scanned documents a) Demand Draft / Pay order towards cost of tender document b) Demand Draft/Pay Order against EMD & All other documents shall be as per Notice Inviting e-tender.

#### **4.0 Set of Contract/Tender Documents:**

The following documents will constitute set of tender documents:

- a) Notice Inviting e-Tender.
  - b) Quoting Sheet for Tenderer / Bill of Quantities
  - c) General Conditions of Contract
  - d) Technical Specifications & Approved Makes
  - e) Tender Drawings
  - f) Acceptance of Tender Conditions
  - g) Corrigendum, if any.
- 5.0 The tenderers are required to quote strictly as per terms and conditions, specifications, standards given in the tender documents and not to stipulate any deviations.
- 6.0 After submission of the tender the tenderer can re-submit revised tender any number of times but before last time and date of submission of tender as notified.
- 7.0 When it is desired by NID to submit revised financial tender then it shall be mandatory to submit revised financial tender. If not submitted then the tender submitted earlier shall become invalid.
- 8.0 On opening date, the tenderer can login and see the tender opening process.
- 9.0 Contractor can upload documents in the form of JPG format and PDF format.
- 10.0 Contractor to upload scanned copies of all the documents including valid service tax registration/EPF registration/VAT registration/Sales Tax registration, PAN NO. as stipulated in the tender document.
- 11.0 If the contractor is found ineligible after opening of tenders, his tender shall become invalid and cost of tender document and processing fee shall not be refunded.
- 12.0 If any discrepancy is noticed between the documents as uploaded at the time of submission of tender and hard copies as submitted physically by the contractor the tender shall become invalid and cost of tender document and processing fee shall not be refunded.
- 13.0 Notwithstanding anything stated above, NID reserves the right to assess the capabilities and capacity of the tenderer to perform the contract, in the overall interest of NID. In case, tenderer's capabilities and capacities are not found satisfactory, NID reserves the right to reject the tender.

14.0 Certificate of Financial Turn Over: At the time of submission of tender, the tenderer shall upload Affidavit/Certificate from Chartered Accountant mentioning Financial Turnover of last 3 years or for the period as specified in the tender document and further details if required may be asked from the tenderer after opening of technical tenders. There is no need to upload entire voluminous balance sheet.

**15.0 List of Documents to be scanned and uploaded within the period of tender submission:**

- a) Demand Draft/Pay Order or Banker's Cheque of any Nationalized / Scheduled Bank against EMD ( In favour of National Institute of Design payable at Ahmedabad)
- b) Demand Draft/Pay Order or Banker's Cheque of any Scheduled Bank towards cost of Tender Document.
- c) Letter of Transmittal – Section III
- d) Appendix I – Condition of Contracts
- e) Appendix II – Acceptance of Tender conditions
- f) Form A – Financial Information
- g) Form B – From of Bankers' certificate from a Scheduled Bank
- h) Form C – Details of all works of similar works successfully completed works during last during last 5 years ending previous day of last date of submission of application
- i) Form D – Projects Under Execution or Award
- j) Form E – Performance report of works referred to informs C & D
- k) Form F - Structure & Organization
- l) Form G – Details of Technical & Administrative personnel to be employed for the work
- m) Form H – Details of Plant Machinery and Equipment likely to be used in carrying out the work
- n) Power of Attorney of the person having digital signature for signing/submitting the tender.
- o) All pages of all the Corrigendum (if any) duly signed by the authorized person.
- p) Valid service tax registration/ EPF registration/VAT registration/ Sales Tax registration, PAN NO.
- q) Details of Litigations, if any

21.0 In case of any query, please contact on 079-26629777 / 26629676/26629778 during Office hours.





NATIONAL INSTITUTE OF DESIGN, PALDI, AHMEDABAD

To,

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**Tender for Resurfacing of Road works at NID Campus, Paldi Ahmedabad**

**GENERAL CONDITIONS**

Dear Sirs,

- 1) NID takes great pleasure in inviting you to quote for the above mentioned work. The building is located at the premises of NID, Ahmedabad.
- 2) The draft for the agreement, conditions of Contract, and specifications are attached herewith for study and reference. The type of work, finishes and various conditions to be observed while quoting the work are also attached h/w. The site should be seen by the Contractor thoroughly before quoting. It is also desirable for the contractor to visit the site for availability of space for stacking the material etc.
- 3) The bidder is advised to visit the site of work, at his own cost, and examine it and its surroundings to collect all information that he considers necessary for proper assessment of the prospective assignment.
- 4) The bidders shall have to deposit an amount of **Rs. 46,000/-** as an Earnest Money Deposit (EMD) along with the submission of tender documents through a pay order of any Nationalized / Scheduled bank in favor of "National Institute of Design" payable at Ahmedabad. On award of the work, he will have to deposit 5% of the total accepted contract value (including earnest money deposit) as security deposit in the name of NID by Demand Draft only.
- 5) NID reserves the right to reject any or all the tenders without assigning any reason to do so.
- 6) The bidder shall have experience of carrying out similar works and shall produce attested documents for the same.
- 7) The bidder shall get done the specialized work given in BOQ through specialized agencies approved by NID.
- 8) The successful bidder shall be notified of the acceptance of his tender within 30 days of the opening of the tenders. He shall execute the contract within 15 days following such notification. The tender will be valid for a period of 90 days from the date of opening of tenders.
- 9) The date of commencement of the work shall be within two weeks from the date of letter of intent / work order.

Yours faithfully,  
Secretary & Head,  
General  
Administration.

## APPENDIX-I

Date of commencement	:	within 15 (fifteen) days of issue of Work order to commence the work.
Period of completion	:	1 month
Defects liability period	:	12 (twelve) months from completion of the Work and handing over to NID.
Liquidated Damage for delay completion:		Point five percent (0.5%) per week of the contract value or part subject to maximum five percent of the contract value
Minimum amount of Running bill	:	Rs. 5 lakh
Percentage retention	:	Ten percent (10%) will be deducted from the gross value of the work done against each RA Bill
Period of final settlement	:	2 (two) months from the date of final bill and valuation date of bill submission.
Security Deposit (SD)	:	Five percent of the total contract value including EMD
Labor Cess	:	If applicable, would be paid at the applicable rate by the approved bidder and Voucher / challan must be submitted to NID. No separate charges would be paid for labor cess; it should be included in the rate.
Release of Retention and Security Deposit:		On completion of defects liability period of 12 months from the date of completion of building / handing over the building to NID whichever is late duly certified by NID - without interest.
Special Note	:	Upon short listing of the bidders, if two lowest bidders are found for a single work on both the website, the lowest bidder amongst two L1 bidders will be considered for award of contract. NID reserves the right to accept or reject any or all the offers without assigning any reason.

There must be two separate offers (Technical and Commercial). Both the offers must be submitted at the same time, giving full particulars on website [www.nprocure.com](http://www.nprocure.com) or [www.eprocure.gov.in](http://www.eprocure.gov.in) on or before **15.00 hours on 05.12.2016**. **Please note that** Identical hardcopy of only technical offer in **sealed envelopes** must be submitted on or before **15.00 hours on 05.12.2016** at NID's address, Offers received after the date and time specified in this tender will not be accepted. Commercial offer must be submitted online either on [www.nprocure.com](http://www.nprocure.com) or [www.eprocure.gov.in](http://www.eprocure.gov.in) only.

Commercial offer submitted online only will be considered and if submitted in any other form will be not considered and rejected. NID reserves the right to accept or reject any or all the offers without assigning any reason.

## SECTION II

### INFORMATION & INSTRUCTIONS FOR BIDDERS

#### 1.0 General :

- 1.1 Letter of transmittal and forms for deciding eligibility are given in Section III.
- 1.2 All information called for in the enclosed forms should be furnished against the relevant columns in the forms. If for any reason, information is furnished on a separate sheet, this fact should be mentioned against the relevant column. Even if no information is to be provided in a column, a “nil” or “no such case” entry should be made in that column. If any particulars/query is not applicable in case of the bidder, it should be stated as “not applicable”. The bidders are cautioned that not giving complete information called for in the application forms or not giving it in clear terms or making any change in the prescribed forms or deliberately suppressing the information may result in the bid being summarily disqualified.
- 1.3 The bid should be type-written. The bidder should sign each page of the application.
- 1.4 Overwriting should be avoided. Correction, if any, should be made by neatly crossing it, initialling, dating and rewriting. Pages of the eligibility criteria document should be numbered. Additional sheets, if any added by the contractor, should also be numbered by him. They should be submitted as a package with signed letter of transmittal.
- 1.5 References, information and certificates from the respective clients certifying suitability, technical knowledge or capability of the bidder should be signed by an officer not below the rank of Executive Engineer or equivalent.
- 1.6 The bidder may furnish any additional information which he thinks is necessary to establish his capabilities to complete the envisaged work successfully. He is, however, advised not to furnish superfluous information. No information shall be entertained after submission of eligibility criteria document unless it is called for by the Employer.
- 1.7 The credentials submitted in respect of pre-qualification of the tender/tender for specialised work by the first lowest bidder after opening of the financial bid shall be verified before award of work. Any information furnished by the bidder found to be incorrect either immediately or at a later date would render him liable to be debarred from tendering/taking up of work in NID. If such bidder happens to be enlisted contractor of any class in NID, his name shall also be removed from the approved list of contractors.

#### 2.0 Definitions:

- 2.1 In this document the following words and expressions have the meaning hereby assigned to them.
- 2.2 Employer: Means the competent Authority of NID, acting through the Sr. Engineer, L,B & Maintenance
- 2.3 Bidder: Means the individual, proprietary firm, firm in partnership, limited company private or public or corporation.
- 2.4 “Year” means “Financial Year” unless stated otherwise.

#### 3.0 Method of application:

- 3.1 If the bidder is an individual, the application shall be signed by him above his full type written name and current address.
- 3.2 If the bidder is a proprietary firm, the application shall be signed by the proprietor above his full

typewritten name and the full name of his firm with its current address.

3.3 If the bidder is a firm in partnership, the application shall be signed by all the partners of the firm above their full typewritten names and current addresses, or, alternatively, by a partner holding power of attorney for the firm. In the later case a certified copy of the power of attorney should accompany the application. In both cases a certified copy of the partnership deed and current address of all the partners of the firm should accompany the application.

3.4 If the bidder is a limited company or a corporation, the application shall be signed by a duly authorized person holding power of attorney for signing the application accompanied by a copy of the power of attorney. The bidder should also furnish a copy of the Memorandum of Articles of Association duly attested by a Public Notary.

4.0 Final decision making authority.

The employer reserves the right to accept or reject any bid and to annul the process and reject all bids at any time, without assigning any reason or incurring any liability to the bidders.

5.0 Particulars provisional

The particulars of the work given in Section I are provisional. They are liable to change and must be considered only as advance information to assist the bidder.

## 6.0 Site visit

**The bidder is advised to visit the site of work, at his own cost, and examine it and its surroundings to collect all information that he considers necessary for proper assessment of the prospective assignment.**

7.0 Initial criteria for eligibility

7.1 The Bidder should have satisfactorily completed works during the last seven years ending previous day of last date of submission of tenders. For this purpose, cost of work shall mean gross value of the completed work including cost of material supplied by the Government/Client but excluding those supplied free of cost. This should be certified by an officer not below the rank of Executive Engineer/Project Manager or equivalent.

(i) Three similar works each costing not less than Rs....., or completed two similar works each costing not less than Rs....., or completed one similar work costing not less than Rs.....

and

(ii) One work of any nature (either part of (i) above or a separate one) costing not less than Rs..... with Central/State Government/Central Autonomous Body/Central Public Sector Undertaking.

Similar work shall mean works of .....

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of seven percent per annum; calculated from the date of completion to last date of receipt of applications for tenders.

7.2 At the time of purchase of tender, the tender shall have to furnish an affidavit as under:

“I/We undertake and confirm that eligible similar work(s) has /have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of

Department, then I/We shall be debarred from tendering in NID contracts in future forever. Also, if such a violation comes to the notice of Department before start date of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.”

7.3 The bidder should have had average annual financial turn over (gross) of Rs..... on Civil/Electrical construction work during the last available three consecutive balance sheets (may range from six to eighteen months) duly audited by Chartered Accountant. Year in which no turnover is shown would also be considered for working out the average.

7.4 The bidder should not have incurred any loss in more than two years during available last five consecutive balance sheets, duly certified and audited by the Chartered Accountant.

7.5 The bidding capacity of the contractor should be equal to or more than the estimated cost of the work put to tender. The bidding capacity shall be worked out by the following formula:

Bidding Capacity =

$\frac{A \times N}{2} - B$  Where,

A = Maximum turnover in construction works executed in any one year during the last five years taking into account the completed as well as works in progress. The value of completed works shall be brought to current costing level by enhancing at a simple rate of seven percent per annum (as mentioned in Para 7.1 of Appendix-20).

N = Number of years prescribed for completion of work for which bids has been invited.

B = Value of existing commitments and ongoing works to be completed during the period of completion of work for which bids have been invited.

7.6 The bidder should have a solvency of Rs. .... certified by his Bankers.

(Not required if applicant is a Class-I (Civil) registered contractor of CPWD) \*

7.7 The bidder should own constructions equipment as per list required for the proper and timely execution of the work. Else, he should certify that he would be able to manage the equipment by hiring etc., and submit the list of firms from whom he proposes to hire.

7.8 The bidder should have sufficient number of Technical and Administrative employees for the proper execution of the contract. The bidder should submit a list of these employees stating clearly how they would be involved in this work.

7.9 The bidder's performance for each work completed in the last seven years and on hand should be certified by an officer not below the rank of Executive Engineer or equivalent and should be obtained in sealed cover.

\* May be struck off for works with estimated cost more than Rs. 25 Crores.

## 8.0 Evaluation criteria

8.1 The details submitted by the bidders will be evaluated in the following manner:

8.1.1 The initial criteria prescribed in para 7.1 to 7.5 above in respect of experience of similar class of works completed, bidding capacity and financial turn over etc. will first be scrutinized and the bidder's eligibility for the work will be determined.

8.1.2 The bidders qualifying the initial criteria as set out in para 7.1 to 7.5 above will be evaluated with the following criteria by scoring method on the basis of details furnished by them.

- |  |                  |
|--|------------------|
| (a) Financial strength (Form 'A' & 'B')                          | Maximum 20 marks |
| (b) Experience in similar nature of work during last seven years | Maximum 20 marks |

(c) Performance on works (Form 'E') – Time over run	Maximum 20 marks
(d) Performance on works (Form 'E') – Quality	Maximum 15 marks
(e) Personnel and Establishment (Form "F"&"G")	Maximum 10 marks
(f) Plant & Equipment (Form "H")	Maximum 15 marks
Total	100 marks

To become eligible for short listing the bidder must secure at least fifty percent marks in each and sixty percent marks in aggregate.

The department, however, reserves the right to restrict the list of such qualified contractors to any number deemed suitable.

8.2 Even though any bidder may satisfy the above requirements, he would be liable to disqualification if he has:

- (a) made misleading or false representation or deliberately suppressed the information in the forms, statements and enclosures required in the eligibility criteria document,
- (b) record of poor performance such as abandoning work, not properly completing the contract, or financial failures / weaknesses etc.

### 9.0 Financial information

Bidder should furnish the following financial information:

Annual financial statement for the last five year in (Form "A") and solvency certificate in (Form "B")

### 10.0 Experience in works highlighting experience in similar works

10.1 Bidder should furnish the following:

- (a) List of all works of similar nature successfully completed during the last seven years in (Form "C").
- (b) List of the projects under execution or awarded in (Form "D").

10.2 Particulars of completed works and performance of the bidder duly authenticated/certified by an officer not below the rank of Executive Engineer or equivalent should be furnished separately for each work completed or in progress in (Form "E").

10.3 Information in (Form "D") should be complete and no work should be left out.

### 11.0 Organisation information

Bidder is required to submit the information in respect of his organization in Forms "F" & "G"

### 12.0 Construction plant and equipment

Bidder should furnish the list of construction plant and equipment including steel shuttering, centering and scaffolding to be used in carrying out the work. (in Form "H"). Details of any other plant & equipment required for the work not included available with the applicant may also be indicated.

### 13.0 Letter of transmittal

The bidder should submit the letter of transmittal attached with the document.

### 14.0 Opening of Price bid

After evaluation of applications, a list of short listed agencies will be prepared. Thereafter the financial bids of only the qualified and technically acceptable bidders shall be opened at the notified

time, date

and place in the presence of the qualified bidders or their representatives. The bid shall remain valid for a period mentioned below:

1. For specialized work involving three envelope system - 120 days from the date of opening of technical bids.
2. Normal works involving two/three envelope system - 90 days from the date of opening of technical bids.

**15.0 Award criteria**

15.1 The employer reserves the right, without being liable for any damages or obligation to inform the bidder, to:

- (a) Amend the scope and value of contract to the bidder.
- (b) Reject any or all the applications without assigning any reason.

15.2 Any effort on the part of the bidder or his agent to exercise influence or to pressurize the employer would result in rejection of his bid. Canvassing of any kind is prohibited.

**SECTION III**  
**INFORMATION REGARDING ELIGIBILITY**  
**LETTER OF TRANSMITTAL**

From:

To

Secretary & Head

General Administration

NID,Paldi

A 'bad

Subject: Submission of bids for the work of “**Resurfacing of Road works at NID Campus, Paldi Ahmedabad**” NIT No. 15 /16-17

Sir,

Having examined the details given in press notice and bid document for the above work, I/we hereby submit the relevant information.

1. I/we hereby certify that all the statement made and information supplied in the enclosed forms A to H and accompanying statement are true and correct.
2. I/we have furnished all information and details necessary for eligibility and have no further pertinent information to supply.
3. I/we submit the requisite certified solvency certificate and authorize the Sr. Engineer: Land, Bldg., Maintenance NID, A'bad to approach the Bank for issuing the solvency certificate to confirm the correctness thereof. I/we also authorize Sr. Engineer, LMB, NID, A'bad to approach individuals, employers, firms and corporation to verify our competence and general reputation.
4. I/we submit the following certificates in support of our suitability, technical knowledge and capability for having successfully completed the following works:

Name of work

Certificate from

Enclosures:

Seal of bidder

Date of submission:

Signature(s) of  
Bidder(s).



**ACCEPTANCE OF TENDER CONDITIONS**

From: (On the letter head of the company by the authorized officer having power of attorney)

To,  
Secretary & Head,  
General Administration  
NID, Paldi,  
Ahmedabad

**Sub: Resurfacing of Road works at NID Campus, Paldi Ahmedabad** (NIT No.: 15/16-17 dated 23.11.2016)

Sir,

- i) This has reference to above referred tender. I/We are pleased to submit our tender for the above work after visited the site of work at NID premises and I/We hereby unconditionally accept the tender conditions and tender documents in its entirety for the above work.
- ii) I/we are eligible to submit the tender for the subject tender and I/We are in possession of all the documents required.
- iii) I/We have viewed and read the terms and conditions of this GCC carefully. I/We have downloaded all the documents documents forming part of the tender document:
  - a) Notice Inviting e-Tender.
  - b) Quoting Sheet for Tenderer / Bill of Quantities
  - c) Appendix – I Condition of Contract
  - d) Appendix – II Acceptance of Tender Conditions
  - e) Tender Drawings
  - f) Approved Makes
  - g) Corrigendum, if any.
- iv) I/we have uploaded the mandatory scanned documents such as cost of tender document, EMD and other documents as per Notice Inviting e-tender AND I/We agree to pay the cost of tender document, EMD and other documents in physical form in the form and manner as described in NIT.
- v) Should this tender be accepted, I/We agree to abide by and fulfill all terms and conditions referred to above and as contained in tender documents elsewhere and in default thereof, to forfeit and pay NID, Ahmedabad, or its successors or its authorized nominees such sums of money as are stipulated in the notice inviting tenders and tender documents.
- vi) If I/we fail to commence the work within 15 days of the date of issue of Letter of Award and/or I/we fail to sign the agreement as per Clauses of Contract and/or I/we fail to submit security deposit per Clauses of Contract, I/we agree that NID, Ahmedabad shall, without prejudice to any other right or remedy, be at liberty to cancel the Letter of Award and to forfeit the said earnest money as specified above.

Yours faithfully,

(Signature of the tenderer with rubber stamp)

Dated \_\_\_\_\_

**FORM 'A'**  
**FINANCIAL INFORMATION**

I. Financial Statements – Details to be furnished duly supported by figures in balance sheet/ profit & loss account for the last five years duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax Department (Copies to be attached).

**Years**


(i) Gross Annual turnover on construction works. (ii) profit/Loss.

II. Financial arrangements for carrying out the proposed work.

III. Solvency Certificate from Bankers of the bidder in the prescribed Form "B".

Signature of Chartered Accountant with Seal

Signature of Bidder(s).

**FORM "B"**

**FORM OF BANKERS' CERTIFICATE FROM A SCHEDULED BANK**

This is to certify that to the best of our knowledge and information that M/s./ Sh..... having marginally noted address, a customer of our bank are/is respectable and can be treated as good for any engagement Upto a limit of Rs..... (Rupees.....)

This certificate is issued without any guarantee or responsibility on the bank or any of the officers.

(Signature) For the Bank

**NOTE**

- (1) Bankers certificates should be on letter head of the Bank, sealed in cover addressed to tendering authority.
- (2) In case of partnership firm, certificate should include names of all partners as recorded with the Bank.

Certified that the above list of works is complete and no work has been left out and that the information given is correct to my knowledge and belief.

Signature of Bidder(s)

**FORM 'C'**

**DETAIL OF ALL WORKS OF SIMILAR CLASS COMPLETED  
DURING THE  
LAST FIVE YEARS ENDING LAST DAY OF THE MONTH.....**

S.No.	Name of work/project and location	Owner or sponsoring organization	Cost of work	Date of commencement as per contract	Stipulated date of completion	Actual date of completion	Litigation/arbitration cases pending/in progress with details*	Name and address/ telephone number of officer to whom reference can be made	Remarks
1	2	3	4	5	6	7	8	9	10

\* Indicate gross amount claimed and amount awarded by the Arbitrator.

Signature of Bidder(s)

**FORM 'D'**

**PROJECTS UNDER EXECUTION OR AWARDED**

Sr. No.	Name of work /project and location	Owner or sponsoring organization	Cost of work	Date of commencement as per contract	Stipulated date of completion	Upto date percentage of the progress of work	Slow Progress if any and reasons thereof	Name and address/ telephone number of officer to whom reference can be made	Remarks
1	2	3	4	5	6	7	8	9	10

Certified that the above list of works is complete and no work has been left out and that the information given is correct to my knowledge and belief.

Signature of Bidder(s)

## FORM 'E'

### PERFORMANCE REPORT OF WORKS REFERRED TO IN FORMS "C" & "D"

1. Name of work/project & location
2. Agreement no.
3. Estimated cost
4. Tendered cost
5. Date of start
6. Date of completion
  - (i) Stipulated date of completion
  - (ii) Actual date of completion
7. Amount of compensation levied for delayed completion, if any
8. Amount of reduced rate items, if any
9. Performance Report

(1) Quality of work	Very Good/Good/Fair/Poor
(2) Financial soundness	Very Good/Good/Fair/Poor
(3) Technical Proficiency	Very Good/Good/Fair/Poor
(4) Resourcefulness	Very Good/Good/Fair/Poor
(5) General Behavior	Very Good/Good/Fair/Poor

Dated:

Executive Engineer or  
Equivalent

## FORM "F"

### STRUCTURE & ORGANISATION

1. Name & address of the bidder
2. Telephone no./Telex no./Fax no./e-mail address.
3. Legal status of the bidder (attach copies of original document defining the legal status)
  - (a) An Individual
  - (b) A proprietary firm
  - (c) A firm in partnership
  - (d) A limited company or Corporation
4. Particulars of registration with various Government Bodies (attach attested photocopy)

**Organization/Place of registration  
category, if any**

**Registration No. with class**

- 1.
- 2.
- 3.
5. Names and titles of Directors & Officers with designation to be concerned with this work.
6. Designation of individuals authorized to act for the organization
7. Was the bidder ever required to suspend construction for a period of more than six months continuously after he commenced the construction? If so, give the name for the project and reasons for suspension of work.
8. Has the bidder, or any constituent partner in case of partnership firm, ever abandoned the awarded work before its completion? If so, give name of the project and reasons for abandonment.
9. Has the bidder, or any constituent partner in case of partnership firm, ever been debarred/black listed for tendering in any organization at any time? If so, give details
10. Has the bidder, or any constituent partner in case of partnership firm, ever been convicted by the court of law? If so, give details.
11. In which field of Civil Engineering, the bidder has specialization and interest?
12. Any other information considered necessary but not included at above.

Signature of Bidder(s)

**FORM 'G'**

**DETAILS OF TECHNICAL & ADMINISTRATIVE PERSONNEL  
TO BE EMPLOYED FOR THE WORK**

S.No.	Designation	Total number	Number available for this work	Name	Qualifications	Professional experience and details of work carried out	How He/she would be involved in this work	Remarks
1	2	3	4	5	6	7	8	9

Signature of Bidder(s)



**FORM 'H'**  
**DETAILS OF PLANT MACHINERY AND EQUIPMENT LIKELY**  
**TO BE USED IN CARRYING OUT THE WORK**

S.No.	Name of equipment	Nos.	Capacity or type	Age	Condition	Ownership status			Current location	Remarks
						Presently owned	Leased	To be purchased		
1	2	3	4	5	6	7	8	9	10	11

**Item Rate Tender & Contract for Works**

(A) Tender for the work of: -  
.....

**TENDER**

I/We have read and examined the notice inviting tender, schedule, A, B, C, D, E & F Specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, Special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for the NID Authority within the time specified in Schedule 'F' viz., schedule of quantities and in accordance in all respect with the specifications, designs, drawing and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respect of accordance with, such conditions so far as applicable.

We agree to keep the tender open for thirty/ forty five/ sixty/ ninety (30/45/60/90) days from the due date of its opening in case of single bid system / Ninety(90) days from the date of opening of technical bid in case tenders are invited on 2 bid/envelop system/ One hundred twenty(120) days from the date of opening of technical bid in case bids are invited on 3 bid/envelop system for specialized work (strike out as the case may be) and not to make any modification in its terms and conditions.

I/We agree that the said NID Authority or his successors, in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/ We agree that NID Authority or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said Performance Guarantee shall be a guarantee to execute all the works referred to in the

tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

Further, I/We agree that in case of forfeiture of Earnest Money or Performance Guarantee as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.

I/We undertake and confirm that eligible similar work(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/We shall be debarred for tendering in NID in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.

I/We hereby declare that I/We shall treat the tender documents drawings and other records connected with the work as secret/confidential documents and shall not communicate information/derived there from to any person other than a person to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

Dated  
Contractor  
Witness:  
Address:  
Occupation:

Signature of  
  
Postal Address

## MATERIALS

**These specifications provide general requirements regarding quality, testing, handling, storing of materials required for construction. The materials shall be tested as per relevant IS codes.**

All materials or workmanship shall be of the best description and to the entire satisfaction of the NID and the contractor shall immediately remove from the site any materials and/or workmanship which in the opinion of the NID is defective or unsuitable and substitute proper materials and/or workmanship forthwith.

The contractor shall submit to the NID immediately on starting of work, the samples of the materials proposed to be used in the work and get them tested as and when desired by the NID and get approval of NID. CPWD specification shall be followed for all items.

### LIST OF MATERIALS OF APPROVED BRAND

Sr.No	Materials	Make
1	CEMENT 53 GRADE ORDINARY PORTLAND CEMENT CONFIRMING TO IS: 12269.	ACC, GUJARAT AMBUJA, J.K LAKSHMI, ULTRA TECH OR as approved by the NID

**NID** reserves the right to choose any one of the make of materials and its decision is final & binding to all.

Signature of the Contractor with Seal : \_\_\_\_\_

## Technical Specification

### TACK COAT :

**Providing and applying tack coat with VG-10 Grade bitumen using bitumen pressure distributor at the rate of 0.20 kg/sqm on the existing bituminous surface cleaned with Air Compressor.**

### 16.25 SURFACE DRESSING ON OLD SURFACE WITH HOT BITUMEN-ONE COAT

**16.25.0** This treatment consists of cleaning old painted surfaces and applying a coat of hot bitumen on the prepared base, blinding with stone chippings and consolidation with road roller.

#### 16.25.1 Materials

Binder shall be as specified and conform to Table 16.7 stone chipping shall conform to grading given Table 16.17 for 11.2 mm. Unless otherwise specified or directed by the Engineer-in-Charge stone Chippings of 11.2 mm nominal size shall be used @ 1.5 cum per 100 sqm area and bitumen @ 1.95 kg per square metre area. A proper record shall be kept to ensure that the daily turn out of work is correlated with the quantity of bitumen used as per proforma given in Appendix 'A'.

**16.25.2** Preparation of Surface (Repairs and cleaning) shall be as specified under 16.24.2.

**16.25.3** Applying binder, Blinding, Consolidation, Surface Finishing, Measurement and Rate shall be as **specified under 16.24 except that the binder and chippings shall be applied at the rate specified above.**

### 16.27 SURFACE DRESSING ON OLD SURFACE WITH BITUMEN EMULSION-ONE COAT

**16.27.0** This treatment consists of cleaning old painted surfaces and applying a coat of bitumen emulsion on the prepared base, blinding with stone chippings and consolidation with a road roller. This type of treatment is normally done under damp conditions.

#### 16.27.1 Materials

Binder shall be as specified and shall conform to RS grade IS 8837. Unless otherwise specified or directed by the Engineer-in-Charge 11.2 mm the stone chippings shall be used @ 1.10 cum per 100 sqm area and bitumen @ 1.22 kg per sqm area. A proper record shall be kept to ensure that the daily out turn of work is correlated with the quantity of bitumen used as per proforma given in Appendix 'A'.

**16.27.2** Preparation of surface shall be as specified in 16.24.2 (a) except that the binder used for patch repairs etc. shall be bitumen emulsion.

**16.27.3** Applying binder, bitumen emulsion, blinding or Spreading to it including consolidation of blindage, measurement etc. shall be as specified under 16.24 except for preparation of surface and that the binder and stone chippings shall be used at the rates prescribed in 16.26.1.

### 16.28 TACK COAT OF HOT STRAIGHT RUN BITUMEN

**16.28.0** The rate of application of binder which shall be as specified and which shall conform to 16.1.5 **shall depend on the surface on which the premix carpet is to be laid.**

(a) 0.75 kg/sqm on W.B.M. surface.

**(b) 0.50 kg/sqm on existing black topped surface.**

#### 16.28.1 Materials

**Bitumen :** This shall be straight-run bitumen of penetration value 80/100 conforming to IS 73 specifications.

## **16.28.2 Preparation of Surface**

### **16.28.3 Cleaning**

Prior to the application of bitumen, all vegetation, loose sealing compound, caked mud, animal dung, dust, dirt and foreign material shall be removed from the entire surface of the pavement and from existing dummy, construction and expansion joints (wherever existing) by means of mechanical sweepers and blowers, otherwise with steel wire brushes, small picks, brooms or other implements as approved by the Engineer-in-Charge. The material so removed shall be disposed off as directed by the Engineer-in-Charge.

### **16.28.4 Weather and Seasonal Limitations**

The tack coat shall not be applied nor any bitumen work done during rainy weather or when the surface is damp or wet or when the atmospheric temperature in the shade is not more than 16 deg. C.

### **16.28.5 Application of Tack Coat**

**16.28.5.1 Heating :** Bitumen shall be heated in a boiler to a temperature of 165 deg. C to 175 deg. C and maintained at that temperature. Temperature shall be checked at regular intervals with the help of a thermometer.

**16.28.5.2 Application of Bitumen :** Hot bitumen shall be applied evenly to the clean, dry surface by means of a pressure sprayer at specified rate. Even and uniform distribution of bitumen shall be ensured. Bitumen shall be applied longitudinally along the length of the pavement and never across it. Excessive deposits of bitumen caused by stopping or starting of the sprayer or through leakage or any other reason shall be suitably rectified.

### **16.28.6 Measurements**

Length and breadth shall be measured correct to a cm, along the surface of pavement. Area shall be worked out in sqm correct to two places of decimal.

### **16.28.7 Rate**

Rate shall include the cost of all materials and labour involved in all the operations described above.

## **16.29 TACK COAT WITH BITUMEN—EMULSION**

**16.29.1** Specification of item 16.28 to be followed except Bitumen emulsion (Rapid Setting) of specified grade and consistency to be used at room temperature instead of hot straight run bitumen at following rate.

1. on w.b.m @ 0.4kg/sqm.
2. on bituminous surface @ 0.25 kg/sqm.

## **16.30 PREMIX CARPET WITH HOT BITUMEN**

**16.30.0** This type of treatment is normally applied on roads where the motor traffic is of medium intensity, but bullock cart traffic is fairly heavy. This treatment is suitable for district roads and for internal and service road in colonies. The consolidated thickness of this type of treatment shall be 2 cm or 2.5 cm as specified.

CPWD SPECIFICATIONS 2009 678

This treatment consists of applying a tack coat on the prepared base followed immediately by spreading aggregates pre-coated with specified binder to camber and consolidated. Premix carpet shall not be laid during rainy weather or when the base course is damp or wet or, **when the atmospheric temperature in the shade is not more than 16 degree C.**

### **16.30.1 Preparation of Surface**

This shall be done as described in 16.26.

### **16.30.2 Materials**

Grading of stone chipping shall be as per Table 16.17. Binder shall be as specified and shall conform to Table 16.7. Quantities of materials shall be as given in Table 16.18. A proper record shall be kept to ensure that the daily out turn of work is correlated with the quantity of bitumen used as per proforma given in Appendix 'A'.

### **16.30.3 Tack Coat**

The rate of application of binder for tack coat shall be as specified. The rate will be depending upon the surface on which the premix carpet is to be laid i.e. water bound macadam surface or existing black topped surface. Tack coat shall be applied as described in 16.28.

### **16.30.4 Preparation of Premix**

The aggregate shall be dry and suitably heated to temperature as directed by Engineer-in-Charge before these are placed in the mixer to facilitate mixing with the binder.

Mixers of approved type shall be employed for mixing the aggregates with the bituminous binder. The binder shall be heated to the temperature appropriate to the grade of bitumen approved by the Engineer-in-Charge, in boilers of suitable design avoiding local overheating and ensuring a continuous supply.

The aggregates shall be dry and suitably heated to a temperature as directed by Engineer-in-Charge before these are placed in the mixer. After about 15 seconds of dry mixing, the heated binder shall be distributed over the aggregates at the rate specified.

The mixing of binder with chippings shall be continued until the chippings are thoroughly coated with the binder. The mix shall be immediately transported from the mixer to the point of use in suitable vehicles or wheel barrows. The vehicles employed for transport shall be cleaned and be covered over in transit if so directed.

### **16.30.5 Spreading and Rolling**

The premixed material shall be spread on the road surface with rakes to the required thickness and camber or distributed evenly with the help of a drag spreader, without undue loss of time. The camber shall be checked by means of camber boards and inequalities evened out. As soon as sufficient length

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of bituminous material has been laid, rolling shall commence with 6 to 9 tonne power rollers, preferably of smooth wheel tandon type, or other approved plant. Rolling shall begin at the edges and progress towards the centre longitudinally. Except on the super elevated portions rolling shall progress from the lower to upper edge, parallel to the centre line of the pavement. The consolidated thickness shall not at any place be less than the specified thickness by more than 25%. However, the average thickness shall not be less than that specified in the item.

When the roller has passed over the whole area once, any high spots or depressions which become apparent shall be corrected by removing or adding premixed materials. Rolling shall then be continued until the entire surface has been rolled to compaction and all the roller marks eliminated. In each pass of the roller, preceding track shall be overlapped uniformly by at least 1/3 width. The roller wheels shall be kept damp to prevent the premix from adhering to the wheels and being picked up. In no case shall fuel/lubricating oil be used for this purpose.

Rollers shall not stand on newly laid material as it may get deformed thereby.

The edges along and transverse of the carpet, laid and compacted earlier shall be cut to their full depth so as to expose fresh surface which shall be painted with a thin surface coat of appropriate binder before the new mix is placed against it.

Further, the prepared finished surface shall be protected from traffic for 24 hours or such period as may be directed by the Engineer-in-Charge.

### **16.30.6 Surface Finishing**

The surface regularity both in longitudinal and transverse directions shall be within the tolerances specified in Table 16.19 of CPWD Specification Vol II.

The longitudinal profile shall be checked during rolling with a three metres long straight edge and graduated wedge at the middle of each traffic lane along the road. Similarly the transverse profile shall be checked with adjustable templates at intervals of 10 metres.

#### **16.30.7 Rectification**

Where the surface irregularity fall outside the specified tolerances the contractor shall be liable to rectify it to the satisfaction of Engineer-in-Charge by adding fresh material and recompacting to specifications where the surface is low. Where the surface is high the full depth of the layer shall be removed and replaced with fresh material and compacted to specifications.

#### **16.30.8 Measurements**

The length and width of the finished work shall be measured correct to a cm along the finished surface of the road. The area shall be calculated in square metre, correct to two places of decimal. For record purposes, the measurement for binder and stone chippings shall be taken as specified in 16.4.2.2 and 16.4.3.2 before they are actually used on the work. Premeasurements of the materials taken for record purposes shall simply serve as a guide and shall not form the basis for payment.

#### **16.30.9 Rate**

The rate shall include the cost of materials and labour involved in all the operations described above for the particular item, except for the cost of Repairs described under para 16.24.2(a).

### **16.31 PREMIX CARPET WITH BITUMEN EMULSION**

**16.31.0** This type of work is not ordinarily recommended but may be done in case of urgent repairs under damp conditions.

#### **16.31.1 Materials**

Binder shall be as specified and shall conform to RS grade IS 8837 grading of 11.2 mm stone chipping shall be as per Table 16.17. Quantities of bitumen emulsion and stone chippings shall be as specified in Table 16.20. A proper record shall be kept to ensure that the daily out turn of work is correlated with the quantity of bitumen used as per proforma given in Appendix 'A'.

**TABLE 16.20** of CPWD Specification

**16.31.2** Preparation of surface and binder application shall be as specified under 16.26 except that the rate of application of bitumen for tack coat shall be 0.75 kg per sqm on water bound macadam surface and 0.5 kg per sqm on black topped surface.

**16.31.3** Preparation, spreading, consolidating mix, surface finishing, measurements and rate shall be as specified under 16.30 except that the bitumen emulsion shall not be heated but it shall be poured over the aggregate at atmospheric temperature at the correct rate before spreading on the road surface. The rolling shall commence 24 hours after spreading the mixture. The surface shall be protected by a **suitable device such as barricading and posting of watchmen for closing the traffic.**

### **16.35 SEAL COAT**

#### **16.35.1 Scope**

This work shall consist of the application of a seal coat for sealing the voids in a bituminous surface laid to the specified levels, grade and cross fall (camber).

**16.35.2** Seal coat shall be of either of the two types specified below:

(A) Liquid seal coat comprising of an application of all layer of bituminous binder followed by a cover of stone chips.

(B) Premixed seal coat comprising of a thin application of the aggregate premixed with bituminous binder.



### 16.35.3 Materials

**16.35.3.1 Binder :** The binder and its quantity shall be a penetration bitumen of a suitable grade as specified in the item or as directed by the Engineer-in-charge.  
CPWD SPECIFICATIONS 2009 692

**16.35.3.2 Stone Chips for Item 16.41 of D.S.R. 2007 of Seal Coat :** The stone chips shall consist of angular fragments of clean, hard, tough and durable rock of uniform quality throughout. They should be free of soft or disintegrated stone, organic or other deleterious matter. Stone chips shall be of 6.7 mm size defined as 100 per cent passing through 11.2 mm sieve and retained on 2.36 mm sieve. The quantity used for spreading shall be 0.09 cubic metre per 100 square metre area. The stone chips shall satisfy the quality requirements in Table 16.31 bituminous except that the upper limit for water absorption value shall be 1 per cent.

Table as per CPWD Specification

The elongation test to be done only on non-flaky aggregate on the sample.

\*\* This test is only required if the minimum retained coating in the stripping test is less than 95%.

**16.35.3.3 Fine Aggregate :** The aggregate shall be sand or grit and shall consist of clean, hard durable, uncoated dry particles and shall be free from dust, soft or flaky/elongated material, organic matter or other deleterious substances. The aggregate shall pass 2.36 mm sieve and be retained on 180 micron sieve. The quantity used for premixing shall be 0.06 cubic metres per 100 square metres area. Stones or fine aggregate shall be used as specified in item.

### 16.35.4 Construction Operations

**16.35.4.1 Weather and Seasonal Limitations :** Ref. Item No. 16.32.2.1.

**16.35.4.2 Preparation of Surface :** The seal coat shall be applied immediately after laying the bituminous course which is required to be sealed. Before application of seal coat materials, the surface shall be cleaned free of any dust or other extraneous matter.

**16.35.4.3 Construction of Seal Coat with Stone Chips :** Bitumen shall be heated to 150oC - 163oC and sprayed at the rate specified on the dry surface in a uniform manner with a self-propelled mechanical sprayer

Immediately after the application of binder, stone chips which shall be clean and dry, shall be spread uniformly at the rate specified on the surface preferably by means of a self-propelled or towed mechanical grit spreader so as to cover the surface completely. If necessary, the surface shall be brushed to ensure uniform spread of chips.

Immediately after the application of the cover material, the entire surface shall be rolled with a 8-10 tonne smooth wheeled steel roller, 8-10 tonne static weight vibratory roller, or other equipment approved by the Engineer after laying trials if required. Rolling shall commence at the edges and progress towards the centre except in superelevated and unidirectional cambered portions where it shall proceed from the lower edge to the higher edge. Each pass of the roller shall uniformly overlap not less than one-third of the track made in the preceding pass. While rolling is in progress, additional chips shall be spread by hand in necessary quantities required to make up irregularities. Rolling shall continue until all aggregate particles are firmly embedded in the binder and present a uniform closed surface.

**16.35.4.4 Construction of Seal Coat with Premixed Fine Aggregate :** A mixer of appropriate capacity and type approved by the Engineer-in-charge shall be used for preparation of the mixed material. The plan shall have separate dryer arrangements for heating aggregate.

The binder shall be heated in boilers of suitable design, approved by the Engineer-in-Charge to the temperature appropriate to the grade of bitumen or as directed by the Engineer-in-Charge. The aggregates shall be dry and suitably heated to a temperature between 150oC and 165oC or as directed by the Engineer-in-charge before these components are placed in the mixer. Mixing of binder with aggregates to the specified proportions shall be continued until the latter are thoroughly coated with the former.

The mix shall be immediately transported from the mixing plant to the point of use and spread uniformly on the bituminous surface to be sealed.

As soon as a sufficient length has been covered with the premixed material, the surface shall be rolled with an 8-10 tonne smooth-wheeled roller. Rolling shall be continued until the premixed material completely seals the voids in the bituminous course and a smooth uniform surface is obtained.

#### **16.35.5 Opening to Traffic**

In the case of seal coat with premixed fine aggregate traffic may be allowed soon after final rolling when the premixed material has cooled down to the surrounding temperature. In the case of seal coat with stone chips traffic shall not be permitted to run on any newly sealed area until the following day. In special circumstances, however, the Engineer-in-charge may open the road to traffic immediately after rolling, but in such case traffic speed shall be rigorously limited to 16 km. per hour until the following day

#### **16.35.6 Measurement for Payment**

Seal coat, for both items shall be measured as finished work over the area specified to be covered, in square metres at the thickness specified in the item.

#### **16.35.7**

The rate for seal coat shall be cost of all materials, labour and equipment involved in operation described above.

#### **VISITS TO THE SITE**

**Before the submission of tender, the tenderer is advised to visit the work site to get himself acquainted with the site conditions and other information which may affect his rates. No claim on this account shall be accepted / entertained at a later date.**

**Measurement for Estimate for Resurfacing of Internal Road of NID, Paldi, Ahmedabad**

Item No.	Description	Unit	Qty	Rate	Amount (Rs.)
<b>ROAD WORK</b>					
1	Providing and applying tack coat using bitumen emulsion conforming to IS: 8887, using emulsion pressure distributor including preparing the surface & cleaning with mechanical broom.				
1.1	With medium setting Bitumen emulsion				
1.1.1	On Bituminous surface @ 0.25 kg /sqm	sqm	10000		
2	2.5 cm premix carpet surfacing with 2.25 cum and 1.12 cum of stone chippings of 13.2 mm and 11.2 mm size respectively per 100 sqm and 52 kg and 56 kg of hot bitumen per cum of stone chippings of 13.2 mm and 11.2 mm size respectively, including a tack coat with hot straight run bitumen, including consolidation with road roller of 6 to 9 tonne capacity etc. complete (tack coat to be paid for separately).				
2.1	With paving Asphalt grade VG-10 heated and then mixed with solvent at the rate of 70 grames per kg of asphalt	sqm	4000		
3	Providing and laying sealcoat prepared surface of road with bitumen heated in bitumen boiler fitted with the spray set spraying using 98 kg of bitumen of grade VG 10 and binding surface with 0.9 cum of stone aggregate of 6.7mm size ( Passing 11.2 mm sieve and retained on 2.36mm sieve ) per 100 sqm of road surface including rolling and finishing with power road roller all complete including spreading of sand.	sqm	10000		
<b>KERB STONE</b>					
4	Cement concrete flooring 1:2:4 ( 1 cement: 2 coarse sand 4 : Graded Stone Aggregates ) finished with floating coat of neat cement, including cement slurry				
4.1	40mm thick with 20mm nominal size stone aggregates	sqm	300.00		
5	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :				
5.1	1:2:4 ( 1 Cement : 2 Coarse Sand : 4 Graded Stone Aggregate 20 mm nominal size)	Cum	60.00		
6	Taking out of existing kerb stones of all types from footpaths / central verge , including removal of mortar etc. disposal of unserviceable material to the dumping ground, for which payment shall be made saperately and staking of serviceable material within 50 meter lead as per direction of Engineer- In Charge	metre	3500		
7	Laying at or near ground level old kerb stones of all types in position to the required line, level and cruvature, jointed with cement mortar 1:3 (1 cement : 3 coarse sand ), including making joints with or without grooves (thickness of joints, except at sharp cruve, shall not be more than 5 mm), including making drainage opening wherever required etc. complete as per direction of Engineer-in-charge. (Length of finished kerb edging shall be measured for payment). (Old kerb stones shall be supplied by the department free of cost)	metre	3500		
<b>TOTAL AMOUNT (Rs.)</b>					