

-: 5 :-

acceptance tests/criteria shall be given in writing to
AF/EE if it is a 4 storeyed or lower building and by
SE if it is technically sanctioned by S.E.

[Signature]
5/9/85
ENGINEER MEMBER
D.D.A. VIKAS SADAN
NEW DELHI

ALL CEs/SEs/EEs/AEs

N.P.*

For designing the foundations on important buildings or on treacherous soils including deep fills, it is necessary to design the foundation in a comprehensive manner taking into consideration the soil condition, the expected transformation it may be subjected to by subsequent development, rain fall and super imposed loading later. It is necessary to design the foundations taking all the above factors into consideration. For ascertaining the details about the land fill, bearing capacity of the soil, expected variations etc. We get the tests carried out by some consultants. It is necessary that the tests are carried out properly before the recommendations are made by the consultants. It is also necessary to keep in mind the present geography of the ground and the transformation that may take place after levelling etc. by which time there can be difference in the levels. The tests to be carried out, the design calculations made and inferences should be scientific and technically sound based on present knowledge in soil mechanics and foundation engineering. The report from the consultants should not be accepted merely on its face value. The tests also should not be left unseen by our site engineers. In other words, it should not be expected that the consultants will come out with a total report which we can accept in its totality. The process of testing, the procedures adopted for testing, the documentation of the results, should be watched and appreciated by the engineers. The results should be properly drawn up & documented for arriving at the important work namely fixing the safe bearing capacity of soil, the depth of foundation and the precautionary measures for stability.

All the designs and field officers are therefore required to keep in mind the importance of this exercise and proper control at every stage. The acceptance of the report of the soil testing has to be done at a level not lower than that of a EE(P) or EE(constn.). In buildings more than 4 floors a formal analysis of the report and its acceptance should be an essential part of technical sanction of the foundations or the total structure.

It is also necessary to look into the bonafides of the various consultants who offer their services for soil testing. The consultants capacity has to be properly ascertained not only from equipment he possesses & experience but also the technical know how & his past specialisation.

The CE(D) has prepared certain guide lines etc. He is being requested to circulate the information to all the persons all useful information for all officers and engineers entrusted with the work of special soil excavation, soil machine and other work. It is also necessary to keep in mind the type of soil and its chemical characteristics also especially in areas with high water level or where industrial effluents are likely to be discharged profusely by industrial units.

Engineer Member
DDA

1. All Chief Engineers i/e CE(D) & CE(OC).
2. All Suptg. Engineers.
3. All EEs., DDA.
4. Chief Architects, DDA.

No:EM.1(10)83/

Dt :

Circular No. 239

Sub :- Precautions and procedures to be followed in constructions of deep sewers.

-0-0-0-0-0-0-0-

Accidents at the various construction sites pertaining to deep sewer works are reported at sporadic intervals. It is, thus, necessary to have greater control on the construction procedures adopted in deep sewer works. In addition to the instructions already issued from time to time, the following precautions should be taken by the field Engineers for the construction of sewers deeper than 5 mtr.

A copy of instructions note No.F.16(2)88/D&B/CM/8210 dt.15.3.88 issued by Commr. & Secy.(L&B) Delhi Administration (para 1 to 7) is enclosed for reference & strict compliance.

1. Prequalification of contractors shall be done for all deep sewer works. A select list of contractors shall be prepared and works awarded only to competent contractors with proven ability.
2. The practice of pushing pipes into the trench shall be avoided. Pipes should be gradually lowered into the trenches with the help of cranes/chainpulls block etc.
3. Works shall be carried out in limited reaches only and before the next reach is taken up, the previous reach shall be filled up with the excavated earth and made to the desired standard. The practice of preparing reaches over long distance shall be avoided and the Engineer Incharge shall give specific instructions about the length of reach that can be opened up for C/O laying sewers at a time.
4. Proper designs should always be a supporting feature and contractors should be insisted upon to take all the precaution in carrying out the work in a scientific manner with modern technology.
5. Proper barricading of GI sheets painted with Red & white paint be provided along the trenches.

The above administrative instructions should be inserted as conditions in the contracts for construction of deep sewer beyond 5 mtr. Any officer or contractor trying to carryout the work in a careless manner shall be seriously dealt with.

Encl: As Above

V.S. Singh
13/10/88
Engineer Member
DDA
AKC

Copy to:-

1. All CEs, DDA
2. All SEs, DDA
3. All SAs, DDA

Delhi Development Authority

NO: WAB 1(76) P+X/15704-10

Dt: 26/11/88

Circular NO: 240

At present only one copy of justification statement is being sent by the Chief Engineers to Finance alongwith tenders while sending the WAB items. Since the files are subsequently returned to the concerned Chief Engineers, Finance is left with no spare copy for any further reference, comparison or cross linking. It has therefore been decided that the CE's shall henceforth send 2 copies of the justification statement while sending the WAB items to Finance.

Director (Works)
D.D.A.

All Chief Engineers & C.A.O.

Received to file
at 2.10 PM
Dis-patch

26/11/88

DELHI DEVELOPMENT AUTHORITY

No. EM1 (10)83/ 16165

Dt. 2/11/88

CIRCULAR NO: 241

The following instructions shall come into operation with immediate effect.

The height of the brick wall of the parks presently being raised to a height of 45 cm. shall now be raised to a height of 15 cm. only above the pavement level (\pm 0 Level) with grills where necessary.

2. The EE(Civil) shall not allow contractors executing civil works to dump malba/rubbish in the parks under their jurisdiction.
3. The Dy. Director (Hort) incharge of the area shall keep a watch that malba is not dumped by the contractors in the parks. In case it comes to their notice that malba is being dumped they shall immediately bring it to the notice of concerned EE(Civil).

V.S. Murti
(V.S. MURTI)
Engineer Member

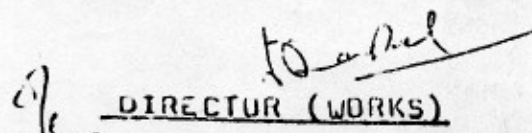
Copy to :-

1. All Chief Engineers/
2. Chief Architect.
3. Project Planner (Rohini).
4. Project Planner (Papan Kalan).
5. All SEs & Director's (Hort).
6. All EEs & Dy. Director (Hort).

It has been observed that file No.8(5)/85/WZ/Pt. was put up by the E.O. II to the E.M. of the note started with a reference to PUC without indicating the actual reference No or page number. It was not known as to which was the actual letter and which was referred to PUC on which action was needed. It has also been seen by the E.M. from the file that the last letter available on the file was dated 24.10.88. E.M. has desired that office should put up files in proper manner indicating what is the paper which is being referred to and what is the subject matter and suggestion of the E.O. Keeping in view of the past tradition, principles, and practices and fairness in dealing the cases and merely, to put up the file for perusal is not the standard of disposal accepted from E.O's. The E.M. has desired that in future the files should be submitted complete in all respects indicating the paper under consideration back ground of the case, containing suggestion/recommendations of E.O.s. The flags of file which are old & not required should be removed & new flag of thick paper nicely cut be added every time, so that file gives a presentable look.

1. E.O.1 & E.O.-11
2. Asstt. Director
3. All A.E's
4. All dealing assistants
5. Copy also forwarded to P.S. to E.M. for information.


DIRECTOR (WORKS)


DIRECTOR (WORKS)

NO. EH1(10)83/18207-18364

DATED: 1.12.82

CIRCULAR, No. 243

SUB: Execution of S.F.S. Schemes.

In order to ensure that the delays do not occur in completion of Self Financing Scheme leading to payment of interest to registrants, the following steps should be invariably taken:-

1. Possession of land, free from all encumbrances, should be available before tenders are invited for the work.
2. Feasibility of layout should be checked before preparation of estimates & drawings from Chief Architect shall be issued.
3. Where the building is supported on pile foundations, site investigations to ascertain the design of the piles should be carried out before piling work is awarded. The building work should be entrusted to a contractor only when it is fairly certain about the anticipated date of completion of pile work.
4. There should be better coordination between Engg. Wing, Housing Wing & Planning and where delays are anticipated such as due to problems in pile foundations or delays by contractors, the Engineering Wing should intimate to the Housing Wing accordingly so that the second installment could be deferred. Similarly, before each of the subsequent installments are due, there should be interaction between the Engg. & Housing Cell to check up whether any deferment of installment is to be made on account of slow progress at site.
5. There shall be a full financial clearance to take up the scheme as a whole, with a year to year forecast of funds.

[Signature]

(V. S. MURTI)

MEMBER.

Copy to:-

1. All Chief Engineer, DDA.
2. All Suptdg. Engineer, DDA.
3. All Executive Engineers, DDA.
4. Commr. (Land), Director (HD), Addl. Commr. (Land).
5. Commr. (Housing), Director (Housing) I & II.
6. Chief Architect, DDA.
7. Addl. Chief Architect, DDA.

DELHI DEVELOPMENT AUTHORITY
E.M.'s OFFICE

NO: EM.2(115)84/Arbn./19330

DT: 14-12-88.

CIRCULAR No. 244

SUB : Arbitration cases

E.M. has ordered that where the amount of claims of the contractor for arbitration is up to Rs.2 lacs, the claim shall also be examined by the SEs & are submitted with his comments to E.M. for reference. Where the claims exceed Rs. 2 lacs, the claims of the contractor shall be examined by the CEs also and will be submitted to E.M. with his comments/notes for reference to the arbitrator. It is also necessary that to the extent possible SEs & CEs should decide action within their own financial powers to avoid reference of many of the claims of the contractors to the arbitrator.

The above instruction may be followed by all EEs/SEs/CEs.

[Signature]
Director (works)
D.D.A.

No.

Copy forwarded to:-

1. All CEs, DDA
2. All SEs, (civil), & (Elect.), DDA
3. Director (Hort.) I & II, DDA
4. All Dy. Directors (Hort.) DDA
5. All EEs (Civil) & (Elect.), DDA.

ENGINEER MEMBER'S OFFICE

NO:EM:4(10)83/20076

Dated: 26.12.88

CIRCULAR NO: 245

Sub: Submission of tenders to UAB- delays in submission of tenders thereof.

It has been observed by the Works Advisory Board that the C.Es are submitting tenders to Works Advisory Board for consideration either at the fast end of the validity period of tenders or when the validity of tenders has already expired. This is happening in most of the cases. Submission of tenders in this manner is resulting into delays on the decision by the Board. In a ~~xxx~~ number of cases it is also observed that contractors do not extend the validity of tenders resulting in to financial loss to the DDA. The Works Advisory Board has viewed this delay seriously. As per provisions contained in para 2 of Section-20 of chapter-III, Appendix-9 of CPWD Manual-II, the tenders should be submitted to Board within a period of 27 days from the date of opening of tenders. By taking into account the margin of some days for the preparation of justification on computer, the tender should be submitted to Board within a period of not more than 45 days from the date of opening of tenders.

It has, therefore, been decided by Board that tenders to be submitted to Board for the decision, shall be submitted to Board within a period as prescribed in manual or in exceptional cases is 45 days from the date of opening of tenders. However, if a tender with ~~in~~ margin of 30 days before the expiry of the validity of tenders is not received by Secy, UAB it will not be considered.

These instructions shall be strictly followed by all CEs in future. CEs shall issue suitable instructions to all concern within their zone in this regard.

V.S. Murti
19.12.88
(V.S. Murti)
Engineer Member

1. All C.Es, DDA.
2. C.A.O., DDA.
3. All S.Es, DDA.(Civil & Elect.)
4. All E Es(Civil & Elect)DDA.

Copy to:-

1. V.C. for information.
2. F.M. for information.

NO:EM.1(10)83/ 20114

Dt: 27.12.88

CIRCULAR NO: 246

Sub: Anti Termite Treatment

It has been decided that here-after chemical required for Anti Termite Treatment works will be not be procured by the central stores but will be arranged departmentally by the CEs/SEs/EEs themselves. To ensure proper execution of Anti Termite Treatment work for buildings the Anti Termite Treatment work sh^d invariably be executed departmentally after first procuring chemicals conforming to specifications from approved and well known suppliers. If due to any special reason, the work cannot be executed departmentally in rare cases, the EEs should first obtain permission in writing from their CEs to get the work executed ~~xxx~~ through specialised firms approved for doing this special work. Only firms duly approved by the Zonal Chief Engineer should be entrusted with the Anti Termite Treatment work. It is also to be ensured that chemical-s procured for Anti Termite Treatment works conform to the specifications and are covered by I.S.I. marking. It may be ensured that only chemicals of approved quality are brought to site irrespective of the fact whether the work is executed departmentally or through a specialised firm. Sample of chemical should invariably be got tested from the Govt. Laboratories. Any deficiency in the quality of the chemicals bearing I.S.I. marking shall be brought to the notice of C E for taking further necessary action.

These instructions shall be strictly followed in future.

V.S. Murti
27/12.88
(V.S. Murti)
Engineer Member

Copy to:-

1. All Chief Engineers.
2. All S.Es(P).
3. All S.Es(Civil)
4. All E.Es(Civil)

DELHI DEVELOPMENT AUTHORITY

No. EM1(1C)83/37

Dated: 3.1.69

CIRCULAR No. 247

Sub: Correspondence regarding WAB items.

- o -

It is observed that C.Es are making correspondence with Engineer Member regarding tenders which fall within the purview of Works Advisory Board. Engineer Member is a member of Works Advisory Board and he alone cannot take any decision. It is, therefore, desired by Engineer Member that no correspondence should be addressed to Engineer Member in connection with the tenders falling within the purview of Works Advisory Board in future. If at all, any reference is to be made either it should be made to Secretary(WAB) or C.Es should initiate agenda item for discussion in the Board. These instructions shall be strictly followed by Chief Engineers in future.

This issues with the approval of Engineer Member.

SECRETARY(WAB)
D.D.A.

All Chief Engineers

DELHI DEVELOPMENT AUTHORITY

EM.1(10)83/ 192

DATED:- 4.1.89

CIRCULAR NO. 248

The approval granted for payment of earnest money against exemption bonds by DDA for the contractors registered in CPWD is hereby withdrawn w.o.f. 1.1.1989.

It is, therefore, enjoined upon all the Executive Engineers to get the earnest money deposited here in after, in the required shape from the contractors registered in CPWD.

D. D. A.
SECRETARY (CRB)
D.D.A.

Copy for information to:-

All CEs/SEs/EEs, DDA.

HO.EM.1(10)83/ 403-181

Dated: 9.1.89

Circular NO: 249

The work of earth filling was awarded by DDA to a contractor in the year 1981. The DDA was required to authorise the contractor to take out earth from a particular place, free of royalty charges for filling the same at the required location.

No record was maintained by DDA officials at appropriate level to ensure that the earth taken out by the contractor, free of royalty charges was utilised for filling with the same at the required location as per the contract. In the absence of such check and record, it is quite possible that the contractor might have sold a part of "royalty-free earth" in the market or might have utilised the same for filling the earth under some other contract thus gaining undue financial advantage at the cost of DDA. Some cross check to ensure proper utilization was not maintained.

In order to avoid recurrence of such situations it is enjoined on all concerned that proper record of the earth lifted and the filling of the earth at the other location should be maintained to ensure that only ~~the~~ that much quantity of earth is taken out by the contractor as is actually required for filling at the required location and no chance is given to contractor to mis-use the earth supplied, to gain undue financial advantage at the cost of DDA.

All concerned are required to observe these instructions carefully and to maintain suitable records which can be checked even on subsequent date as and when necessary.

(V.S. Murti)
Engineer Member

Copy to:-

1. All Chief Engineers, DDA.
2. All Suptdg. Engineers, DDA.
3. All Executive Engineers, DDA

NO. EM. 3(10)83/405-07

Dated: 9.1.83

CIRCULAR NO: 250

In the year, 1981 a contract for earth work with estimated cost of about Rs. 4.75 lacs was awarded at 31.4% above the estimated cost. The time allowed for executing this work of earth work was only 15 days.

Apparently, the time of 15 days for executing work of this magnitude was too short and it was not practically possible to complete this work in the time allowed of 15 days.

Another ill effect of stipulating very short and unreasonable time is that the required numbers of contractors some-times do not come forward for giving tenders for such work which results in less competition. Also in view of the short time duration allowed, the contractors tend to assume that they have to engage extra labour or they have to pay over time payment to labour and accordingly they quote comparatively higher rates.

Towards off these ill effects resulting in less competition and receipt of higher rates in tenders, it is enjoined on all concerned that even in emergent works a reasonable and appropriate time should be stipulated in the tender documents so that it is practically possible for the contractor to complete the job in the stipulated period, which is fixed from either normal considerations or administrative exigencies.

All concerned are directed to keep these instructions in mind while calling tenders, and act appropriately keeping all factors in view.

(V.S. Murti)
Engineer Member

Copy to:-

1. All Chief Engineers, DDA.
2. All Suptdg. Engineers, DDA.
3. All Executive Engineers, DDA.

NO. EM1(10)83/591

DATED: 10.1.89

Circular No. 251

The following instructions shall, henceforth, be followed:-

1. The exercise of powers by the SEs in respect of accepting any work at reduced rates is of utmost importance and SEs should weigh all pros & cons before taking the decision to reject the item or allow any part rates. The EEs should approach the SEs well in time to take decision whether any work done by the contractor falls short of standard but can be accepted with a reduction in rate.
2. The contractor must be told to rectify the defects under the specific provisions of the contract; timely action and notice to contractor is necessary to convey Deptt's intension. Also EEs must ensure that timely action is taken for the sub-standard work, either by the contractor or by the Deptt. or through alternate agency.
3. The EEs should make it a point to discuss the outstanding paras with the SE(QC) and CE(QC). The CEs also should in turn discuss with CE(QC) at least once in a quarter about the observations and their compliance.
4. The EEs should report to CE(QC) the exact action taken on issue and should not mention in a general way that the matter is 'UNDER CONSIDERATION' with the appropriate authority.

The above instructions shall be strictly followed.

All CEs/SEs/EEs.

V S murti
9.1.89
(V.S. MURTI)
ENGINEER MEMBER.

DELHI DEVELOPMENT AUTHORITY

(EM's Secretariat)

...

No.EM.8(38)/88/CTE/NL/2414 13, February, 1990

CIRCULAR No 252

Sub: Approvals to samples - Raw materials.

...

Before raw materials are allowed to be used in the work, necessary tests are to be carried out for their essential qualities. This job of testing is necessary for steel, sand, tiles, aggregate etc. Some times other fabricated materials or finished goods are brought to site, to ensure that approved materials are used at site, It is necessary that these fabricated/processed materials are tested for their quality for usage at the site is approved. In fact these instructions are not new but these are reiterated to ensure that no materials are allowed to be used on the work, till they are cleared in advance for its quality, standard etc.

V.S. Murti

12/2-90

(V.S. Murti)

Engineer Member

All CEs/SEs/EEs in DDA.

NO: EM1(10)83/1963

Dt: 8.2.89

CIRCULAR NO. 253

In accordance to the clause 13A(ii) of Form PWD.6 there is a provision for rebates to be given by the contractor with a prescribed ceiling limit of 1% for each condition. It has now been decided that the prescribed limit of this rebate be restricted to a ceiling upto 0.25% for each rebate.

Necessary amendment in clause 13A(ii) of PWD.6 of NIT be incorporated to this effect. These orders will be invoked from the date of issue of this circular.

V.S. Murti
4/2/89
(V.S. MURTI)
Engineer Member

Copy to:

1. All CD., A.D.
2. G.M., ISET, DDA
3. All SEs i/c SEs(P)
4. All EEs i/c EEs(P)

No.: D-1(10)33/2097/07

Dt.: 9.2.89

CIRCULAR No. 254

Sub.: Reimbursement payable under Clause-10C
in the event of statutory increase in
rates of labour.

Reimbursement under Clause-10C of the agreement in
the event of statutory increase in rates of labour shall
be worked out hereafter by C.E.(R) in respect of Scheduled
items.

The rates so worked out from time to time shall be
circulated to all the C.E.s/SEs/ELs of DDA by C.E.(WZ)
after getting it approved from undersigned to achieve
uniformity.

V.S. Marti

1/2

(V.S. Marti)
Engineer Member

Copy to:-

1. C.E. (Rohini), DDA.
2. All Chief Engineers.
3. All SE.s(P), (Civil & Electrical).
4. All ELs(P), (Civil & Electrical).

Engineer Member
D.D.A.

HC

76

ENGINEER MEMBER
DELHI DEVELOPMENT AUTHORITY

No.: EM1(10)83/3959

Dt., 10-3-1989

CIRCULAR No. 255

Ensuring quality of water supply for drinking purposes is not only an important function of engineers but is essential because it is connected with the health of the people. Detailed instructions were given vide Circular No. 231 and subsequent circular No. 232, dt. 21st July, 1988 and 29th July, 1988 respectively.

In these circulars, this matter was emphasised and re-emphasised in many words laying down various procedures and directions. This was also discussed in a meeting of SEs at one stage. In spite of this, it is seen that adequate attention is not being given for this purpose and only occasional attention is being given to this.

The E.E.s should take this as one of the most important functions to identify the places (where water is being pumped by us to various destinations). The cleaning of the tanks and testing of water should be made a highly important function and the EEs should watch them as of special and critical importance. They should maintain the register themselves to watch information about regular testing as mentioned in the above circulars.

S.E.s also will be responsible to periodically check up the details.

V.S. Murti
8/3/89
(V.S. Murti)
Engineer Member
D.D.A.

All C.E.s (by name)

All S.E.s (by name)

DELHI DEVELOPMENT AUTHORITY
EM's OFFICE

No. LM1(15)33/4055

Dt. 14.3.89

CIRCULAR NO. 256

CORROSION OF REINFORCEMENT IN CONCRETE

Good concrete provides an structural cum chemical environment, which should insure reinforcement against corrosion for the entire service life of the structure. But, good concrete implies good construction practices and materials which are often lacking in DDA as seen from the vast extent of corroded steel in DDA building.

2. Concrete has ~~has~~ inherently protective attributes, and normally corrosion of embedded steel should not occur in majority of concrete structures. But once it starts, it is a continuous process, almost impossible to stop except through costly repairs. Insurance against corrosion is basically a proposition of correct construction practiced which requires a little care and vigilance on the part of the contractor and the supervisory staff.

3.1 The corrosion in concrete is an electrochemical process. Good concrete, as produced, has a p^H value of 12.5 or more. In such alkaline concrete, reinforcing steel has a positive potential and is passive due to a protective film formed around it by the concrete. Circumstances causing to the destruction of this passivity leads to setting of corrosion.

3.2 A steel surface will remain passive, so long as the concrete in which it is embedded remains highly alkaline even ~~thru~~ though oxygen and moisture are present in concrete. If, the alkalinity of the concrete falls to a p^H value less than, say, 11.5 the ~~ext~~ oxide film is broken and the steel ceases to be passive. Alternatively, the presence of certain

environment, which should insure reinforcement against corrosion for the entire service life of the structure.

But, good concrete implies good construction practices and materials which are often lacking in DDA as seen from the vast extent of corroded steel in DDA building.

2. Concrete has ~~an~~ inherently protective attributes, and normally corrosion of embedded steel should not occur in majority of concrete structures. But once it starts, it is a continuous process, almost impossible to stop except through costly repairs. Insurance against corrosion is basically a proposition of correct construction practiced which requires a little care and vigilance on the part of the contractor and the supervisory staff.

3.1 The corrosion in concrete is an electrochemical process. Good concrete, as produced, has a p^H value of 12.5 or more. In such alkaline concrete, reinforcing steel has a positive potential and is passive due to a protective film formed around it by the concrete. Circumstances causing to the destruction of this passivity leads to setting of corrosion.

3.2 A steel surface will remain passive, so long as the concrete in which it is embedded remains highly alkaline even ~~thru~~ though oxygen and moisture are present in concrete. If, the alkalinity of the concrete falls to a p^H value less than, say, 11.5 the ~~ext~~ oxide film is broken and the steel ceases to be passive. Alternatively, the presence of certain chemicals in the concrete can penetrate or disperse the oxide film even though the alkalinity of the concrete is still relatively high, thereby, exposing the steel to the formation

of corrosion. In either case, the conditions are ripe for the electro-chemical process to be activated and for corrosion of the steel to commence.

4. Loss of alkalinity occurs mostly through carbonation, a process by which atmospheric carbondioxide reacts with alkaline materials to convert them to carbonates, thereby reducing the pH values. Carbonation proceeds from the surface of the concrete inwards and requires the presence of moisture, though not of water, to progress. Thus, the properties of concrete, that can reduce the penetration of carbondioxide and moisture are very important to reduce carbonation. Dense concrete with low permeability reduces access to moisture and air. Honey combing greatly increases such access. Concrete shall be dense with minimum water ~~excess~~ cement ratio consistent with workability. Rate of carbonation is low where the water cement ratio is low. With improper cover on reinforcing bars, the depth of carbonation can reach the bars, destroy the passivity around it due to lowering of alkalinity of concrete and set in motion the electrochemical activity leading to corrosion. Improper curing results in micro cracks which increase carbonation.

5.1 Presence of chloride salts can disrupt the passivity of the steel even in the highly alkaline conditions of an uncarbonated concrete. Combined with carbonation, even small chloride concentrations will de-passivate the steel and accelerate the corrosion process. Chloride will be formed in concrete, only if they were originally present in the materials used to make the concrete or if they have subsequently permeated through the concrete from an external source. Good concrete with adequate cover prevents external sources but, it can do

process by which atmospheric carbon dioxide reacts with alkaline materials to convert them to carbonates, thereby reducing the pH values. Carbonation proceeds from the surface of the concrete inwards and requires the presence of moisture, though not of water, to progress. Thus, the properties of concrete, that can reduce the penetration of carbon dioxide and moisture are very important to reduce carbonation. Dense concrete with low permeability reduces access to moisture and air. Honey combing greatly increases such access. Concrete shall be dense with minimum water ~~semen~~ cement ratio consistent with workability. Rate of carbonation is low where the water cement ratio is low. With improper cover on reinforcing steel, the depth of carbonation will reach the steel, thereby the passivity around it due to lowering of alkalinity of concrete and set in motion the electrochemical activity leading to corrosion. Improper curing results in micro cracks which increase carbonation.

5.1 Presence of chloride salts can disrupt the passivity of the steel even in the highly alkaline conditions of an uncarbonated concrete. Combined with carbonation, even small chloride concentrations will de-passivate the steel and accelerate the corrosion process. Chloride will be formed in concrete, only if they were originally present in the materials used to make the concrete or if they have subsequently permeated through the concrete from an external source. Good concrete with adequate cover prevents ingress of chlorides from external sources but, it can do little to inhibit corrosion if the salts were already entrapped in the concrete at the time of its production. The three sources of such contamination are :-

- i) The aggregates
- ii) Mixing water.
- iii). Admixture.

While admixtures containing chloride can be completely banned, it is not reasonable to expect that aggregates and mixing water will be totally free from chloride. Secondly, the concept of specifying limits for chlorides in individual constituents of concrete is now out moded and, perhaps, even dangerous. It is the total chloride content, as available from all the constituents of concrete that really matters.

5.2 Para A-2 of IS: 456-1978 specifies that the total amount of chloride and soluble sulphate in the concrete at the time of placing should be limited to 0.15 per cent by mass of cement and 4 per cent by mass of cement respectively. This, however, is related to the provisions in para 4.3 of IS : 456-1978 that is the permissible limit for sulphate and chloride content in water used for mixing and curing of concrete are 500 mg/l and 1000 mg/l respectively.

6. Having considered the mechanism of corrosion and the condition conducive for the same it is necessary to take the following precautions in the work; the main idea shall be to provide defined slope for quick drainage & minimum pipe joints :

- a) Concreting shall be done strictly as per CPWD specifications. The quantity of materials that go into the concrete must be as per specification and the concrete properly vibrated. Use of low water cement ratio, consistent with workability, so that the concrete will be dense and as impermeable as possible, is important. In situations like fins, junction of columns and beams, parapets etc. high slump concrete is normally used to avoid honeycombing. This results in faster corrosion. At the same time, stiff mix may result in honeycombing. The solution will probably be, the use of non-chloride plasticisers. Such material should be ~~also~~ selected after proper scrutiny, enquiry and tests. In respect of good concreting, instructions have already been issued vide circular Nos. 24 & 34.

- b) Proper grading of aggregates to get a dense concrete and proper workmanship in formwork and concreting, without loss of slurry and without honeycombing alongwith prolonged moist curing are important.
- c) All exposed surface of RCC shall be rendered in C.M. 1 : 3.
- d) The Chajjas, canopies etc. should have distinct and pronounced slopes and substantial rounding of junction with walls with proper outlets for draining out water.
- e) No exposed concrete should be permitted without ~~specific~~ specially designing the mix and extra cover on steel and making concrete impermeable and water repellant.
- f) RCC members in and around WCs and baths may be of mix 1 : 1½ : 3, if need be.
- g) Reinforcements should have adequate and dense cover. Cover thickness shall be as per para 25.4 and IS : 456-1978.
- h) The importance of testing water used in the construction of curing has already been brought out in circular No.17. As elaborated in para 5 above, all ingredients of the concrete should be tested for chloride and sulphate salts and their content in the concrete at the time of placing shall not exceed the limits 0.25 per cent and 4 per cent by mass of cement respectively as per para A-2 of IS: 456-1978. This is, however, subj to provisions of para 4.3 of IS: 456-1978 i.e. the limit for chloride and sulphate content in water used for mixing and curing shall be 1000 mg/l and 500 mg/l respectively. As already stated in circular No.17, the tests shall be got conducted every three months and EE & AE concerned will be responsible for maintaining the standard.
- i) Sub-soil and ground water shall be tested for chloride and sulphate salts. In aggressive soil and sub-soil water conditions, use of sulphate resisting cement, protective surface treatment to concrete and special anticorrosive treatment to reinforcing bars may be considered.
- j) Slabs which are lowered, in WC etc. shall have slightly outward slope and an arrangement to drain out the trapped water from leaking pipes shall be made by providing outlets.
- k) As far as possible, all waste pipes, soil pipes and rain water pipes shall be exposed and not embedded in RCC columns/walls. All traps shall be positioned that no joint (after the trap) is required to be embedded in walls. No pipe shall pass through any beam. Position of WCs and other sanitary fittings should be such that the pipes below the floor level are minimum. All waste pipes provided under the floors shall be fully tested after jointing and cement concrete shall be provided around the pipes and joints. These pipes shall have adequate slope and the slab shall be lowered sufficiently to allow such slopes.

- 1) At terrace the mud phuska shall be laid to proper affective slope so that the rainwater is drained off without any hindrance. The brick tiles on top shall be properly grouted with cm. 1:3.

1/5 min
18/3.89
(V.S. MURTI)
ENGINEER ALDER.

Copy to:-

1. All Chief Engineers, DDA, with 20 spare copies for SE's & EE's under them.
2. G.M., I.S.B.T., DDA.
4. ... (1).

NO: EM1(10)/83/9800

Dated: 24/5/89

C I R C U L A R No. 257.

SUB:- Completion of houses/handing over the allottees.

1. The present practice is to complete 90% related activities of the houses and issue completion information to the Housing for allotment. As and when the allottees come, we get the remaining work done. In this process the completion is not reaching a final stage. The contractor is never feeling the seriousness of the completion. The engineers also are not ensuring the necessity for completing the work. Therefore, the bills are also getting delayed and arbitration cases increasing.
2. Of particular importance is the fact that since the even viz a total completion is never felt or taken seriously either by the engineers or by the contractor, defects are continuing and allottees are put to trouble. Therefore, the following practice should be followed hereafter with immediate effect. The CEs should give instruction for all work- civil, electrical & development work.
3. The completion date, as given in the contract, should be strictly adhered to. If the date of completion is nearing completion but work is not completed, it is necessary for the Executive Engineer to indicate to the contractor that time is still essence of the contract but extension is being given provisionally requesting the contractor to reduce the delay and manage the remaining work most expeditiously by the extended date.
4. The completion date should be firm and all the work should be completed and the date of completion recorded by the EE/SE. If the EE is satisfied with the date of completion, he should record it and inform the SE also in writing for his report of completion expeditiously.

5. The completion would automatically mean the total completion of all the works and satisfactory removal of malba as per relevant contract clauses. Of special importance is the satisfactory completion of the services namely the water supply line, sewage line, the storm water, drainage the electrical wiring etc. in side and outside the building. All these services comprising of the material and the work job like pipes, pipe installation, fittings, fitting installation, drainage water pipe etc. shall be tested to the required extent as per the mandatory tests (field and laboratory) and recorded. This automatically forms a part of the work.

6. The EE need not wait for the allottees to turn up for getting the work completed by the contractor. They should complete the work without waiting for the allottees. They should fix up separate agencies for watch & ward of those houses, if needed. The normal defects, if any, have to be taken care of and the contractor asked to rectify in case defect liability period still continues. There should be a mechanism by which we know whether any particular defect is brought to our notice by any allottee within 6 months of the date of possession or not. In case a particular allottee turns up much later and we still have to put any coat of colour wash etc., we may do separately by way of small work order. The procedure of testing should be made regular and all the tests necessary for these services installation should be recorded and seen by the JE, AE & Ex. Engineer. This register should be seen by these officers atleast once in a month and there should be one register maintained for each of the works costing more than Rs.4 lacs. It is for the EE to see that these registers are maintained and seen by him also atleast once a month.

7. The following additional action is to be taken by the EEs. Apart from the normal test done as a part of the work by the EEs or by a team of his officers, EE should constitute a small technical committee under the Quality Control Wing, which is with each EE. This team should check up atleast $2\frac{1}{2}\%$ of the

150
../3p..

housing stock of each contractor's work more than Rs.4 lacs and they should independently check up specially the installation of all the services. This team will report directly to CE. This team should invariably check the work within three months after the completion certificate signed by the EE. The CE is to take a decision on this report of services. The EEs, however, need not wait for this certificate for completing their final bills etc. These are parallel actions and are supposed to be independently checked. These instructions are given in the interest of ensuring the total completion of work, finalisation of bills and also to ensure a proper documentation and additional check of the services- water supply, sanitary system, drainage water supply etc. This Special Team may or may not go into any other test check- as ordered by CE. I am to request the CEs to issue instructions and confirm to me that these are being put into practice with immediate. Wide publicity may be given to this circular. If any additional points are to be covered, the CEs may seek instruction but not delay issue of appropriate instructions conveying the gist of the circular.

V.S. Murti
(V.S. MURTI) 17/5.89
ENGINEER MEMBER

Copy to:-

1. All the CEs.)
2. CE(Design).)
3. CE(Quality Control))
4. G.M.(ISST))

for
With 25 spare copies circulation
to SM's & MM's under them.

Handwritten
EOI

DELHI DEVELOPMENT AUTHORITY
ENGINEER MEMBER'S OFFICE

NO: EM1(10)/93/9894

C I R C U L A R 258

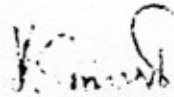
Dated: 24.5.89

In a case, tenders were invited by an Executive Engineer and one of the conditions incorporated in the NIT was as follows.


"Only those contractors would be eligible for issue of tender documents who have completed at least three works of similar nature each costing not less than Rs.10 lacs in Govt. Deptt./ Public sector undertaking and who produce certificates of satisfactory completion of such works and performance from them".

The Executive Engineer accepted the photocopies of experience certificate said to have been issued by another office, without verifying from the original certificate. On the basis of the experience certificate work was awarded to the contractor. Subsequently it came to light that the experience certificate of the contractor was not genuine.

It is therefore enjoined on all Executive Engineer that whenever a contractor produces photocopies of experience certificates and documents, the same should be verified by writing to the Authority who has given the certificate. In important cases a direct reference shall be made.


Engineer Member

Copy to all CEs/SEs/EEs for
strict compliance.


C.C.I to E.M.
D.D.A.

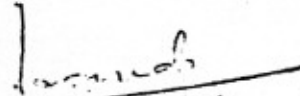
DELHI DEVELOPMENT AUTHORITY
EM's OFFICE

No. E.M.:1(10)83/1 9548

Dt. 19-5-89

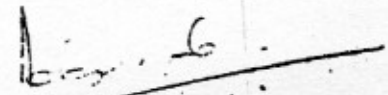
CIRCULAR NO. 259.

A press note was published in all leading newspapers of Delhi that tender documents of DDA shall be issued only ^{to} ~~to~~ contractors registered in appropriate class with DDA w.e.f. 1st June 1989. It is for the information of all EEs that after 1st June 1989, tender documents should only be issued ^{to} ~~to~~ contractors registered with DDA.


E.O.I to E.M.
D.D.A.

Copy to :-

1. All Chief Engineers, DDA.
2. All Suptg. Engineer (Civil & Elect.).
3. Directors (H&T) North & South.
4. All Ex. Engineers (Civil & Elect.), DEA.


E.O.I to E.M.
D.D.A.

H*D*B*

DELHI DEVELOPMENT AUTHORITY

1 D. WAB1(76)Pt.X/Secy./12141

DATE: 16.6.80

CIRCULAR. 261

During discussions of various items of supply of stores by WAB it was observed that there should not be any deviation/violation of the quantity of supply mentioned in the contract for purchase of stores. It has been decided that deviation clause in the standard (WAB-9 for stores procurement) may henceforth be deleted. These instructions be passed to all concerned.

(V.S.H. R. I.)
Engineer Member, DDA.

1. Finance Member, DDA.
2. All Zonal Chief Engineers/Sup ..Eng.
3. E.M. I.S.B.T..
4. Director (H. S.) North & South.
5. CAO, DDA.

CIRCULAR - 260

(Not issued)

Engineer Member,
DDA.

DELHI DEVELOPMENT AUTHORITY.

NO. EM1(10)83/42744

DATED: 28.6.89

CIRCULAR. 262

The provisions contained in Para-5 under sections 18 of CPWD manual Volume II clearly specify the minimum time period for due publicity for call of tenders. It has been observed that due attention is not being paid to these instructions and proper time is not being given for publicity. The WAB in its meeting held on 24.5.89 took a serious note of it.

It is once again, directed that all concerned should strictly follow manual/codal provisions for proper publicity for generating proper competition. Any deviation in this regard without proper reasons will be taken seriously.

27/6/89
(V.S.MURTI)
ENGINEER MEMBER.

1. All C.Es.
2. All SEs including SEs(P) & SEs(E).
3. All EEs including EEs(P) & EEs(E).
4. G.M., ISBT.
5. Director(Hort.) North & South.

Copy for information to:-

1. V.C., DDA.
2. F.M., DDA.
3. CE(QC), DDA.
4. CAO, DDA.

DELHI DEVELOPMENT AUTHORITY.

NO: EM1(10)83/

13860

DATED: 21-7-89

CIRCULAR. 263.

In one of the contract cases, it has been observed that the approval of WAB was obtained for execution of works for C/o houses in one pocket but the work was got executed in another pocket and the scope of work was also increased without getting the approval of WAB. The expenditure of that work was also charged to a different administrative approval. These deviations occurred because the feasibility of site was not properly checked, before according A/A & T/S.

It is very important that the accord of technical sanction to the detailed estimate and the approval of NIT should not be resorted to unless and until the site feasibility is checked, the layout approved by the competent authority and the administrative approval and expenditure sanction accorded by the competent authority for the specific work and the specific location. Any change in location deviation in scope, change of scheme/drawings should invariably be brought to the knowledge of the authority, who accorded the administration approval for getting necessary modified administrative approval. These instructions must be strictly followed and must be brought to the knowledge of SEs/EEs/AEs.

V.S. Murti
(V.S. MURTI)
Engineer Member.

All Chief Engineers.

G.M., ISBT.

COPY FOR INFORMATION TO:

1. PS to VC.
2. PS to FM.
3. C.V.O.
4. CE(QC).
5. SE(Vigilance).
6. Copy to be placed in EM6(34)89/Estt/Pt.

L. Sam
Director(Works),

No. EM1(10)83/Pt.1/14806

Dt. 1/8/89

CIRCULAR No. 264

SUBJECT: CORRIGENDUM TO CIRCULAR NO. 257.

Vide this office letter No. EM1(10)83/9800 dt.24.5.89 Circular No. 257 regarding completion of houses/handing over to allottees was issued to all concern. In this context the para 7 of the said circular may please be read as under.

Amendment to para 7.

The following additional action is to be taken by the S.E's.

Apart from the normal test done as a part of the work by the E.E's or by a team of his officers, S.E. should constitute a small Technical Team which should checkup at least 2½% of the housing stock of each contractor's work more than Rs. 4.00 lacs and they should independently check up specially the installation of all the services. This team will report directly to S.E. This team should invariably check the work within three months after the completion certificates signed by the E.E. The S.E. is to take decision on the report of services. The E.E's, however, need not to wait for the certificate for completing their final bill etc. These are parallel actions and are supposed to be indepently checked. These instructions are given in the interest of ensuring the total completion of work, finalisation of bills and also to ensure a proper documentation and additional check of services i.e. Water supply, Sanitary system, Drainage, etc. This special team may or may not go into any other test check as ordered by S.E. I am to request S.Es to issue instructions and confirm to me that these are being put into practice with immediate effect. Vide publicity may please be given to this circular. If any additional points are to be covered, the S.Es may seek instruction but not delay issue of appropriate instructions conveying the gist the circular.

V.S. Murti

V.S. MURTI 27/7/89
ENGINEER MEMBER
D.D.A.

Copy to:-

1. All the C.E.'s
2. C.E.(Design)
3. C.E.(Q.Control)
4. G.M., I.S.B.T.
5. Director (H.H.O.)

With 25 spare copies for circulation to S.Es & E.Es under them.

E.O.I to E.M.
D.D.A.

DELHI DEVELOPMENT AUTHORITY
EM's OFFICE

Dt. 8/8/89

EMIC(10)83/14805
CIRCULAR No. E 65.

During the inspection of CTE of the work of DDA, it was observed that Acrylic based water proofing compound of Max Corona make was used. The sample of this Acrylic based water proofing compound was got tested by CTE from National Test Houses, Calcutta. The test report received by CTE indicates that there was no presence of Acrylic based water proofing compound in the sample. CTE has further clarified that no firm in India is manufacturing Acrylic based water proofing compound.

Henceforth, the stipulation of Acrylic based water proofing compound may be discontinued and only ordinary cement based water proofing compound may be used. In all the cases where Acrylic based water proofing compound has been used in DDA works, recoveries may be effected from the contractor's bills. The copy of the recovery statement supported by the analysis of rates be sent to CTE wherever necessary.

V.S. Murti
(V.S. MURTI)
ENGINEER MEMBER

Copy to:

1. All CE's DDA for information and necessary action along with 20 spare copies for circulation among their SE's (Plg.) & EE.
2. Director (Hort) North & South DDA.
3. CE(QC), DDA.
4. G.M., ISBT, DDA.
5. Director (Hort)
6. All EO's and AE's of EM office

14/11/89
E.O.I to E.M.
D.D.A.
19

DELHI DEVELOPMENT AUTHORITY.

NO. EM1(10)83/Circular/16072

DATED: 31/8/85

Circular No. 266.

To facilitate contractors to submit well planned and clear bids, it has been decided that henceforth the tender documents should be available for issue to contractors atleast 14 days before the date of opening of tenders. These documents on proper dates should be available with the persons who actually sell the tender documents.

Contractors should be encouraged to submit tenders through registered post. Depositing of the sealed tenders to the officers may also be done but then it should be done only with the appropriate authorised responsible persons.

It is for the office, who is to receive the tenders to ensure above arrangement.

Tenders should be open by the person who is to receive the tenders, at the appointed time for opening

(V. S. MURTI) 11/8/85
ENGINEER MEMBER

Copy to:-

1. All Chief Engineers with 20 spare copies for circulation among SE's, SE(P) & EEs under them.
2. G.M., I.S.B.T., DDA.
3. Dir. (Hort.)-South, with 20 spare copies for circulation among Dy. Directors (Hort.).
4. Dir. (Hort.)-North, with 20 spare copies for circulation among Dy. Director (Hort.).
5. Copy to Director (Works).
6. All Engineer Officers & Asstt. Engineers E.M.'s office.

EPT

May be kept in a file

THW

Engineer Member.

DDA.

DELHI DEVELOPMENT AUTHORITY
ENGINEER MEMBER'S OFFICE

NO: EN1(10)83/Circular/17222

Dt. 22.9.89

CIRCULAR NO: 267.

Sub:- Delegation of powers to Engineer Member, DDA.
Enhanced powers for purchase of materials for
undertaking construction works departmentally.

The authority vide its resolution No. 61, during its
meeting held on 27.7.89 has delegated the following enhanced powers
for purchase of materials departmentally only for those works which
are to be executed departmentally.

	Existing powers.	Enhanced powers.
EE:-	Rs. 10,000/- per item subject to a ceiling of Rs. 1,00,000/-	Powers to purchase items which are turned as local purchase. Rs. 30,000/- per item subject to a limit of Rs. 3.00lacs. per year.
SE:-	Rs. 40,000/- per item subject to a ceiling of Rs. 2,00,000/- per annum.	Rs. 1.00lacs per item subject to a ceiling of Rs. 10.00lacs per year for local purchase items.
CE:-	Rs. 1,00,000/- per item without limit.	C.E. will have powers to purchase 2.00lacs at a time upto maximum of the quantity necessary to be purchased for departmental work.

The Enhanced powers for purchase of materials for the works
to be executed departmentally as above shall be exercised by the
various officers for the specific work only which shall be approved
by the Engineer Member, DDA as such from time to time. The labour
shall however be arranged on work order/other means.

V.S. Murti
21/9
(V.S. Murti)
Engineer Member
D.D.A.

Copy to:-

1. All Chief Engineer's, DDA, with 20 spare copies for
circulation among their SEs, EEs & FOs, Dy. CADs, AOs etc.
2. Dir. (Hort.) North & South with 20 spare copies for circu-
lation among their Dy. Directors.
3. Chief Account officer, DDA with 20 spare copies.
4. G.M., I.S.B.T., Delhi.
5. Director (Works). E.O.s & all AEs in E.M. office.

V.S. Murti
21/9
Engineer Member
14/9

Delhi Development Authority

No. EM(10)83/ 18234

Dt. 13.10.89

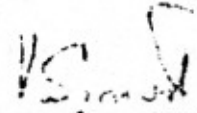
CIRCULAR No. 268

Sub:- Clearance of projects by Expert Committee.

The Expert Committee was constituted vide Circular No.28 dated 13.7.83 issued by this office stipulating that all projects and housing schemes where building component (excluding services) is more than Rs. 1.0 Crore, would be vetted by the Committee. Accordingly, schemes were discussed and approved with modifications wherever considered necessary during the past years.

It is seen that over the years the cost of projects has been increasing owing to upward trend of cost index. It has, therefore, been decided that henceforth the schemes whose building component costs Rs. 1.5 Crores or more would be discussed by the Expert Committee for its approval. However, a scheme, which is of a difficult nature and has special features can be discussed by the Expert Committee even if its cost is of the order of Rs.50 lakhs and more.

The constitution of the Expert Committee remains the same as stated in Circular No.163 dated 7.11.86 and the instructions issued vide letter No.EM(10)/12846-59 dated 2.12.87 in which the desirability of participation by members themselves has been emphasised, to make the purpose of the Expert Committee meaningful and useful, shall have to be strictly followed.


(V.S. MURTI) 7/10 89
Engineer Member

Copy to:-

1. V.C., DDA for favour of information.
2. All Chief Engineers in DDA including Q.C. and Design & Training Wings with spare copies for distribution among EEs & EEs.
3. Chief Architect, DDA with spare copies.
4. Commissioner(Planning), DDA.
5. Director(DD&P), DDA.
6. All Suptdg. Engineers. DDA.

DELHI DEVELOPMENT AUTHORITY
EM'S OFFICE

NO: EM1(10)03/20,544

Dt. : 28.11.89

CIRCULAR No. 269

Subs:- Testing of materials at Quality Control Laboratory
Siri Fort.

It has been observed that the material for testing is generally being sent by the field staff to the laboratories set up by the respective Zones or by reputed laboratories or Govt. laboratories and materials for testing are not being sent by the Executive Engineers for testing in Quality Control laboratories set up by DDA, where facilities for testing coarse aggregates, fine aggregates, cement concrete cubes, bricks, white glazed tiles, mosaic tiles, flush door shutters, modizing test for aluminium fittings are available.

Henceforth, in addition to getting the materials tested in the laboratories set up by the Zones, atleast 25% of the test be got done by the Executive Engineers in the outside govt. laboratories like Quality control laboratories of D.D.A., C.P.W.D. laboratories, National Test House, N.P.L. etc.

The above instructions should meticulously be followed by all Engineers.

V.S. Murti
(V.S. Murti)
Engineer Member

Copy to:-

1. AllCEs, DDA with 25 spare copies from circulation among SEs & EEs.
2. G.M., I.S.B.T., Delhi.
3. Director (Works), all E.O.s & A.E.s of E.M. Office.

25/10
Engineer Member
28.11.89

DELHI DEVELOPMENT AUTHORITY
ENGINEER MEMBER'S OFFICE

No. EM1(10)83/20,543

Dated: 28.11.39

Circular No.270

It has been observed that Horticulture Department is procuring sludge in trucks and the same is paid to the contractor accordingly. In order to safeguard interest of the Department, it is enjoined upon all concerned that recording of Measurements should be done strictly in accordance with the provisions of C.P.W.D. Specifications 1977 Vol.11 para 22.2.5.1 & 22.2.5.2.

V.S. Murti
23/11/89
(V.S. MURTI)
ENGINEER MEMBER
EX
12.11.89

Copy to:

1. All C.Es, DDA with 25 spare copies for circulation among SEs & EEs under them.
2. Chief Engineer(Hort.) with 20 spare copies for circulation among Dir./Ly.Dir.(Hort.) under them.
3. G.M., I.S.B.T., DDA.
4. All B.Os & A.Es of E.M. Office.

B. Kumar
C.O.I to E.M.

AKM
16/11

13
17-11-89

DELHI DEVELOPMENT AUTHORITY
ENGINEER MEMBER'S OFFICE

NO: EMM(10)83/ 19402/

Dt. 7.11.89

CIRCULAR NO: 271

- Sub:- Instructions regarding
- (i) Fixing of foot rest in Manhole.
 - (ii) Plastering of shaft walls prior to fixing of sanitary pipes.
 - (iii) Use of I.S.I. market S.W. Gully Traps.

The following instructions regarding above cited subject are hereby issued for strict compliance by the field staff.

1. Fixing of Foot rest in Manholes:

It has been observed that the foot rests in Manholes are not embedded during the construction. These foot rests are seen to be fixed later on by making holes in the manhole walls. The fixing of foot rests will not have, that adequate anchorage and strength. It may lead to mis-happening for the workers during maintenance period. Therefore all the foot rests in manholes should simultaneously be fixed during the progress of brick work of manholes. The provisions of C.P.W.D. specifications applicable to the work, shall be followed.

2. Plastering of shaft walls in bldg. works:

In many cases, C.T.E. has informed that plastering of shaft walls is done after fixing of sanitary stacks, therefore portion underneath the pipes is not done properly and the finish is not also up to the mark. One of the important function of plaster is also to make the wall water proof. If plaster is done after fixing of pipes at some places, it will be difficult to apply plaster owing to the limited space for working. It is, therefore, enjoined upon all that henceforth plastering of shaft should be done before fixing of sanitary pipes.

..2/..

3. Use of Gully Traps as per I.S.I./C.P.W.D. specifications:

It has been observed that the gully traps used in DDA work did not have prescribed water seal as per C.P.W.D. specifications/ I.S.I. code of practice. The use of Gully traps with less water seal results in foul smell emitting from the sewer line and the very purpose of using gully trap is defeated. Now that gully traps of I.S.I. specifications are available ^{freely} in the market, It is therefore enjoined upon all the Engineers that hence-forth the gully traps of I.S.I. specifications be only used on D.D.A. works.

The above instructions should meticulously be followed by all Engineers.

(V.S. Murti)
Engineer Member

Copy to:-

1. All C.E.s, D.D.A: I with 25 spare copies for
2. G.M., I.S.B.T. I circulation among their
3. All E.O.s & A.E.s, I staff.
- E.M. Office.

Engineer Member.

DELHI DEVELOPMENT AUTHORITY

No. 111(10)83/20,550

Dated: 28.11.89

CIRCULAR NO. 272

1. A case has come to the notice of this office where tenders for specialised work like water proofing treatment were invited without preparing a select list of specialised agencies and attaching it to the tender documents.
2. According to Circular No. CE/CO/709 dt. 13.12.79 under Clause 19.2 of CPWD Manual Vol. II, a list of specialised agencies has to be prepared by the C.E and up dated periodically so that tenders for such works can be invited from such firms and a list of such approved firms can be attached to the tender documents for work in which specialist firms have to be appointed as sub-contractor.
3. Henceforth, it is decided that whenever work of some specialised nature is required to be executed, tender from specialist agencies should be called. In case the work is to be executed as sub contract then also only specialised agencies shall execute the work. A list of specialised agencies should be appended to the tender documents.
4. The above instructions should be meticulously followed by all Engineers.
5. C.E.(D&T) will prepare such specialised agencies list for whole of LDA and get it issued through the Secy.(CRB) by 1.12.89.

V.S. Murti
(V.S. MURTI)
ENGINEER MEMBER

Copy to:

No. DM1(10)83/21364

Dated: 11.12.89

CIRCULAR No.273

It is enjoined upon the various officers concerned i.e. C.Es/S.Es/E.Es to inspect the work being executed under their jurisdiction in order to ensure that the work is executed as per the terms of the agreement, designs and specifications prescribed for the work. The purpose of inspection by the superior officers is to oversee what the subordinate officer could not see. In order to improve the quality of work, the engineers must make adequate surprise checks to ensure proper quality of work.

As already circulated vide this office circular No.13 dt. 19.5.83 and circular No.25 dt. 16.6.83, a site order book/register should be maintained invariably at all works and inspecting officers including Architects etc. should give their remarks if any defective work is noticed by them during inspection. *These must be Conform/Specification Overides.*

The E.Es/S.Es/CEs must inspect all major works as frequently as possible and issue inspection notes giving their observations on quality of the works and defects noticed. Alternatively the inspecting officers may also give their remarks in the site order books/registers.

Maintenance of this site register is additional and has been once again considered necessary so as to provide a compact record of all inspections including those of C.T.E. and quality control wing. The register should be properly maintained by the site engineers. The proforma for the register as circulated vide circular No.25 dt. 16.6.83 is once again enclosed for follow up action.

The above instructions should meticulously be followed by all concerned.

V. S. Murti

4/12/89

(V.S. MURTI)
ENGINEER MEMBER

Encl: Proforma for Register

Copy to:

1. All Zonal Chief Engineers with 25 spare copies for circulation amongst their staff.
2. Chief Engineer(EO) with 10 spare copies.
3. Chief Engineer(Hort.) with 15 spare copies.
4. G.M., I.S.B.T. with 4 spare copies.
5. Chief Architect with 6 spare copies.
6. Chief Vigilance Officer, DDN with reference to his letter dated 15.11.89.
7. All L.Os & L.Ds of L.M. Office.

Signature
L.O.I to L.M.
D.D.N.

5/12

No. EM/10/83/VOL-VII 2124.34 Dt., the 7th January, 1990
 Sub: EM&CIS/83/QC/1 Reinforced Concrete work-testing in standards.

The officers incharge of the designing and issue of structural drawings using RCC shall carefully indicate the design standards adopted in the design and acceptance criteria to be followed at site. I have observed that some of the designs are being carried out by private consultants but in all such cases, the departmental designer who is the officer supposed to give the designs should ensure that the drawings and designs conform to the provisions in the contract.

It is necessary that the departmental designer takes all the factors of site conditions, requirements, standards accepted at site, type of maintenance and the construction schedule and practice while designing the structural and prescribing the acceptance criteria.

We are following the CPWD specifications not only in our designs but particularly in our constructions which cannot be ignored. Therefore, even if the designs are given by the private consultants the references shall be particularly corrected with the CPWD specifications which for all purposes is a document related to the contract.

In case for special reasons, we use concrete not specified in the CPWD specifications, then the contract should also provide specially so and the acceptance criteria should be aimed particularly in that direction.

Whereas the I.S. specification is related to the characteristic strength using ^{design} mix concrete or nominal mix concrete, the CPWD specifications aim at nominal ^{mix} concrete with special reference to the acceptance criteria as a part of the contract. Therefore, in all our structural drawings where CPWD specification is mentioned in the contract, only nominal mix shall be specified with the related acceptance criteria for the design purposes. The *Structural* drawing also should show accordingly. Where characteristic strength is aimed in the design, agreement also should be properly worded and there should be no mix up. CEs may please instruct the designers in their offices to keep this point in view for all cases.

As a matter of guidance, testing can be done in various manners apart from the indirect test when specified in the CPWD

V.S.Murti

oh Engineer Member

C.E. (Design)

Zonal Chief Engineers

S.Es. Planning.

पुस्तकालय संस्था, पुणे

7.2.90

DELHI DEVELOPMENT AUTHORITY.

NO. EM1(10)83/20999

DATED: 5.12.89

CIRCULAR NO. 274

It has been observed that in one of the cases of call of tenders, some short listing of the contractors was made on the basis of conditions given in press tendered notice but the same was not got approved from the competent authority i.e. L.G. However, in this case the action taken was condoned by Works Advisory Board. In future all such cases should invariably be referred to L.G. for approval before sale of tender to such parties.

V.S. Murti
(V.S. MURTI)
ENGINEER MEMBER.

1. All Chief Engineers.
2. Chief Engineer(Hort),DDA.
3. Chief Engineer(SP).
4. Chief Engineer(Design).
5. Chief Engineer(QC).
6. G.M., I.S.B.T., DDA.
7. Dir.(Hort.)North-DDA.
8. Dir.(Hort.)-South,DDA.
9. CAO,DDA.
10. PS to VC.
11. PS to FM.
12. PS to EM
13. E.O.I,DDA.
14. E.O.II,DDA.
15. E.O.III,DDA.

16. Secy to the Authority

10
DEVELOPMENT AUTHORITY

No. DM1(10)83/Circular/21805

Dated: 18/12/89

CIRCULAR No. 275

It has been observed that the Arbitration cases are not being dealt with effectively by the concerned officers resulting the delay in dealing the cases. The normal observations are as follows:-

1. No heed is being paid to Arbitration claims to fully verify them, to settle them if possible or contest them with full records by EEs/SEs.
2. The proceedings of the hearing of the Arbitration cases are sometime not being attended by the E.Es which had been reflected by so many Arbitrators. Instead of E.Es, A.E or D.As are attending the meetings - manytimes E.Es are avoiding attendance.
3. The Arbitrators are generally informed at the last moment to postpone the hearing for one or the other reason. The practice be avoided and the E.E. must attend the hearing to avoid any adverse remarks or effect to the department.
4. The counter statement of facts is never given in the stipulated time. The final bills are not finalised in most of the cases resulting non-formulation of counter claims and there by loss to the department. Hence the SE/EE are thus make all out efforts to get the bills prepared and raise the counter claims in time.
5. The E.E. himself should defend the case and should not direct either the Divisional Accountant or Asstt. Engineer to attend the hearings. One

officers resulting the delay in dealing the cases. The normal observations are as follows:-

1. No heed is being paid to Arbitration claims to fully verify them, to settle them if possible or contest them with full records by EEs/SEs.
2. The proceedings of the hearing of the Arbitration cases are sometime not being attended by the E.Es which had been reflected by so many Arbitrators. Instead of E.Es, A.E or D.As are attending the meetings - manytimes E.Es are avoiding attendance.
3. The Arbitrators are generally informed at the last moment to postpone the hearing for one or the other reason. The practice be avoided and the E.E. must attend the hearing to avoid any adverse remarks or effect to the department.
4. The counter statement of facts is never given in the stipulated time. The final bills are not finalised in most of the cases resulting non-formulation of counter claims and there by loss to the department. Hence the SE/EE are thus make all out efforts to get the bills prepared and raise the counter claims in time.
5. The E.E. himself should defend the case and should not direct either the Divisional Accountant or Asstt. Engineer to attend the hearings. One of the Arbitrators has informed that the J.E. is sent by the E.E. to defend the case which is highly objectionable.

contd...2/-

6. No prompt action is seems to be taken on the notices/summons of the court for appearing the concerned D.Ls, which is in contravention of the benefit of the department.
7. The extension of time cases are not being settled in time affecting the final bills and inturb the raising of counter claims. Thus the extension cases be expedited in time.
8. The cases of closing of contracts are not effectively decided by the DE/SBs which keeps the Clause-25 of the agreement open to the contractor for pouing the additional claims, revisions of claims within the time. The D.Ls should inform the contractor for his final bill asper the provisions of the clause, which will help the department in not referring the claims or revision of claims of the claimant to the Arbitrator.
9. No prompt action is being taken by the SAs to decide the compensation to be imposed on the contractor under Clause-2 of the agreement, resulting in huge financial losses to the department.
10. In most of the cases, it has been seen that the D.Ls are sending the counter claims without getting them settled by the S.L. concerned, which reflects that either the D.L. is not aware of the requirement or he is not bothering to follow the procedure. If this is so in future the matter would be viewed seriously on the part of the D.L. who will send the counter claims

of the E.E. who will send the counter claims directly to this office without getting them vetted. This delays the reflecting of the counter claims which is contrary to the department.

contd...3/-

Copy 12

This state of affairs shows that E.Es/S.Es are not exercising their full responsibility to defend the arbitration case in all its aspects. It is, therefore, enjoined upon all S.Es/E.Es to please see that the shortcomings listed above do not take place henceforth. In case any arbitrator brings to the notice of this office that E.E is not co-operating in the case, there will be no other alternative but to take serious notice. It is further stressed that the counter statement of facts must be prepared carefully and the final bills are invariably ready before the counter statement of facts are submitted before the Arbitrator. The counter statement of facts should always be sent to the Arbitrator through S.Es only under his signature and not direct by the E.E. to the Arbitrator.

Normally, E.E. for arbitration should not advise. Senior Engineer should feel this. He should have a written reply. And if there is any for arbitration it should be properly handled and not mixed up with other work.

11/5/1958
(V.S. MURTI) 13/12/58

ENGINEER MEMBER

Copy to:

1. All Chief Engineers, DDA with 25 spare copies for circulation.
2. Chief Engineer (Hort.), DDA with 15 spare copies for circulation.
3. G.M., I.S.B.T. with 4 spare copies.
4. E.Os & A.Es of E.M. office.

Babu Ram
(Mr. BABU RAM)

O.I to E.M.

DELHI DEVELOPMENT AUTHORITY

NO: EM1(10)83/21757

Dt. 18.12.89

CIRCULAR NO: 276

It has been observed that the Ex. Engineers are not sending copy of the letter awarding contract for the civil and Electrical works costing more than Rs. 2.00 lacs and Rs. 1.00 lac respectively to the Quality Control Cell. Also the bi-monthly progress reports of Civil and Electrical works costing more than Rs. 10 lacs & Rs. 1.00 lac respectively are not being sent to the Quality Control Department regularly with the result some of the works under execution does not attract the attention of Quality Control Wing. Directions to send the report of works mentioned above has already been issued by Chief Engineer(QC) vide Memo No. F.73(94)CE/QC/DDA/4660 dt. 5.12.89. and *g* vide No. 142 dt. 12.12.89.

It is enjoined upon all the E.Es to send the progress report for Civil works costing more than Rs. 10.00 lacs and Electrical works more than Rs. 1.00 lac regularly to Chief Engineer(QC). Also the copy of award letters for Civil work and Electrical work costing more than Rs. 2.00 lacs and Rs. 1.00 lac should be sent to Chief Engineer(QC) without fail. All the Superintending Engineers Civil and Electrical are hereby directed that these instructions should be brought to the knowledge of all Ex. Engineers working under them.

V S murti
12/12/89
(V.S. MURTI)
ENGINEER MEMBER

ASLW
Copy to:

1. All Zonal Chief Engineers for information. } With 25 spare copies for circulation.
2. Chief Engineer(QC)
3. G.M., I.S.B.T. with 4 copies.
4. C.E.(Hort.) with 10 spare copies.
5. E.Os & A.Es of E.M. office.

DELHI DEVELOPMENT AUTHORITY
D.D.'S SECRETARIAT

No. EM.1(10)33/21656

Dated: 14-12-1989

CIRCULAR NO. 277

With the approval of Competent Authority, it has been decided to dispense with the practice of granting exemption to the registered contractors for non-deposition of earnest money with individual tenders against exemption bond with effect from 26-12-1989.

All exemptions already granted are also withdrawn with effect from 26-12-1989.

[Signature]
(V.S. MURTI)
ENGINEER MEMBER

Copy to:-

1. All Zonal C.Es with 30 spare copies.
2. C.E.(Hort.) with 20 spare copies.
3. C.E.(Special Project) with 5 spare copies
4. G.M., ISPT with four spare copies.
5. C.E.(QC) with 6 spare copies.
6. C.E.(D&T) with 5 spare copies.
7. S.E.(Vig.)-I & II with 6 spare copies.
8. C.A.O. with 10 spare copies for the circulation to the concerned Account's Officers.
9. P.S. to E.M. for information of the latter.
10. P.S. to E.M. for information of the latter.
11. All E.Os and A.Es of E.M. Office.

[Signature]
(BABU RAM)
E.O.I TO EM

CSK
12-12

DELHI DEVELOPMENT AUTHORITY
E.M.'S OFFICE

No. EM1(10)83/ 21637

Dated: 14.12.89

CIRCULAR No.278

As approved by the competent authority the following changes have been approved for incorporating in the M.I.Ts and relevant contract agreement documents when preparing tenders and agreements for various contracts in D.D... w.e.f. 26.12.89.

1. Case of withdrawl of offer

Action to be taken

i) If the contractors withdraw their offer within 90 days of quoting the rates.

Action required is to forfeit the earnest money absolutely.

ii) If the contractor withdraw his offer immediately after the award of work.

The action required is only to forfeit earnest money absolutely.

iii) If the contractor/agency withdraws his offer after award of work after taking over possession of site.

The action under clause 2&3 of the agreement i.e. taking up work at the risk and cost of the contractor and to penalise the contractor for not completing the work within the stipulated period will be taken against the contractor if he abandons the site after taking over the possession of the

CIRCULAR No.278

As approved by the competent authority the following changes have been approved for incorporating in the N.I.Ts and relevant contract agreement documents when preparing tenders and agreements for various contracts in D.D.M. v.e.i. 26.12.89.

1. Case of withdrawal of offerAction to be taken

i) If the contractors withdraw their offer within 90 days of quoting the rates.

Action required is to forfeit the earnest money absolutely.

ii) If the contractor withdraw his offer immediately after the award of work.

The action required is only to forfeit earnest money absolutely.

iii) If the contractor/agency withdraws his offer after award of work after taking over possession of site.

The action under clause 2&3 of the agreement i.e. taking up work at the risk and cost of the contractor and to penalise the contractor for not completing the work within the stipulated period will be taken against the contractor if he abandons the site after taking over the possession of the

site from the Engineer-in-charge.

For taking action under clause-2³

the only documentary proof

required will be the document

showing signature of contractor

or his authorised representative

for taking over the possession

of site. It is further clarified

that action under clause-2³ of

the agreement is attracted even

though the contractor fails to

assign the agreement on Rs.2/- non

judicial stamp paper but do not

start the work from the 10th day

after the date on which the

order to commence the work is

issued to contractor. The date

of start of the work will be

considered as date of taking

over possession of site.

In case of tender for

supply of material, the

documentary proof for start of

work will be the admission of

samples for approval to

Engineer-in-Charge i.e. in case

the supply order is given to

the contractor and if he fails

to supply the material or

submit the samples to

Engineer-in-Chief, then the

action to be taken against the

contractor is only of forfei-

ture of earnest money and if

submits the samples for supply
after
and there/abandones the work or
fails to supply the material
action under clause-2⁴³ is attracted.

It is further clarified that all the pending action cases
will also be dealt with the above provisions.

2. Increase in amount of Earnest Money.

The earnest money will be deposited with each tender at the
following slabs.

<u>Estimated cost</u>	<u>Amount of Earnest Money</u>
a) For works estimated cost upto Rs.8.00 lacs.	2½% of the estimated cost of work put to tender.
b) For estimated cost of work above Rs.8.00 lacs & upto 100 lacs.	Rs.20,000 + ½% of the amount by which the cost exceeds Rs.8.00 lacs subjected to maximum total of Rs.50,000/-
c) For estimated cost of work above Rs.100 lacs.	Rs.50,000 + ½% of the amount by which the estimated cost exceeds Rs.100 lacs subjected to the maximum total of Rs.1.00 lac.

Keeping in view the above change in amount of earnest money the necessary amendments may please be made in P.W.D. 6,7 or 8 as follows:-

- 1) The words "unless exempted" appearing in the first line of clause-3 of P.W.D.-6 to be deleted.
- 2) Clause-25 of P.W.D.-6 to be deleted.

3. Increase in amount of Security Deposit

The security deposit will be deducted from the running account bill of the contractor at the following rates.

Estimated cost of work

Security

- i) Increase of works costing up to Rs. 10.00 lacs.

10% of the estimated cost of work.

- ii) For works costing more than 10.00 lacs.

1.0 lacs + 2% of the amount by which the estimated cost exceeds Rs. 10.00 lacs subject to maximum total of Rs. 3.0 lacs.

For security deposits the following changes may be made in P.W.D. 6, 7 & 8.

- i) The revised rates of security deposit to be indicated below clause-9 of PWD-6.
- ii) Sub clause-1 below class-1 of PWD 7/8 "Conditions of contract" to be substituted with the revised rates of security deposit.

4. The facility of exemption from depositing the earnest money by virtue of executing the bond will be withdrawn w.e.f. 26.12.89 and all the bond stands cancelled from this date. Each intending tenderer has to deposit the required earnest money with individual tender as mentioned in Para-2 above.

The additional clause as per S.No. 1 may be incorporated in P.W.D. 6 of tender documents amendment in the amount of earnest money security Deposit may be made in the relevant clauses of

Estimated cost of work

Security

- i) Increase of works costing up to Rs. 10.00 lacs.

10% of the estimated cost of work.

- ii) For works costing more than 10.00 lacs.

1.0 lacs + 2% of the amount by which the estimated cost exceeds Rs. 10.00 lacs subject to maximum total of Rs. 3.0 lacs.

For security deposits the following changes may be made in P.W.D. 6, 7 & 8.

- i) The revised rates of security deposit to be indicated below clause-9 of PWD-6.
- ii) Sub clause-1 below class-1 of PWD 7/8 "Conditions of contract" to be substituted with the revised rates of security deposit.

4. The facility of exemption from depositing the earnest money by virtue of executing the bond will be withdrawn w.e.f. 26.12.89 and all the bond stands cancelled from this date. Each intending tenderer has to deposit the required earnest money with individual tender as mentioned in Para-2 above.

The additional clause as per S.No.1 may be incorporated in P.W.D.6 of tender documents as an amendment in the amount of Earnest Money Security Deposit may be made in the relevant clauses of

..15/-

tender document for the works put to tender after 26.12.89.

[Signature]
(V.S. MURTI)
ENGINEER MEMBER

Copy to:-

1. All Zonal C.Es with 30 spare copies.
2. Chief Engineer(Hort.) with 20 spare copies.
3. Chief Engineer (Special Project) with 5 spare copies.
4. G.M., I.S.B.T. with four spare copies.
5. Chief Engineer(QC) with 6 spare copies.
6. Chief Engineer(D&T) with 5 spare copies.
7. S.E.(Vig.)-I & II with 5 spare copies each.
8. C.A.O. with 10 spare copies for the circulation to the concerned officials.
9. P.S. to E.M. for information of the latter.
10. P.S. to E.M. for information of the latter.
11. All E.Os and A.Es of E.M. office.
12. File No. F.4(8)70/Misc./Secy.(CRB).

[Signature]
E.O.-I to E.M.
D.D.A.

13/12/89

DELHI DEVELOPMENT AUTHORITY
ENGINEER MEMBER'S OFFICE

No: EN(10)3/21484

Dated: 12.12.89

CIRCULAR NO. 279

During inspection of one of the work in D.D.A. by the Chief Technical Examiner, it has come to notice that a copy of the "Quality Control" D.D.A's inspection note was forwarded to the contractor. This action is totally wrong. It may create contractual complications in the Arbitration case. It displays that EE/SE ~~Engineers~~ are not exercising necessary quality checks.

The appropriate course in such cases should be that the deficiencies/defects pointed out by the quality control/Chief Technical Organisation should be brought in an appropriate letter by E.E. to the notice of contractor for rectification without giving any reference to the quality control/Chief Technical Examiner inspection memo's etc. Also in the reduction rate statement no reference of such memo's should be given. In other words, unless such remarks of CE(QC) are not dropped by CE(QC), it is as if the defects were noticed and accepted by EE/SE.

The above instructions should meticulously be followed by all engineers.

V.S. Puri
(V.S. Puri)
Engineer Member

Copy to:

1. All Chief Engineers i/c CE(QC) (with 25 spare copies for circulation among their staff).
2. Director(Hort.) North & South (10 spare copies)
3. General Manager, IS&T (4 spare copies)
4. All E.Os and A.Es of E.M. Office
5. S.E. (Vigilance)

Bachchan
(Er. Bachchan)
E.O. I. to E.M.

DELHI DEVELOPMENT AUTHORITY

NO: EM1(10)83/1011

dt. 10.1.90

CIRCULAR NO: 287

A number of circulars are given repeating the codal provisions, the importance of technical sanction and the purpose it has to serve. Even if the architects and planners indicate certain proposals, the engineers technically sanctioning the proposals following the drawings have to exercise certain restraints and care in preparing the estimates covering these provisions. While precedents and existing instructions regarding standards and scale of provisions shall always be kept in mind, one has to achieve economy and assess whether the provisions made in the estimate are really appropriate, necessary and above all economical. Sometimes even a scheme very well conceived and appropriate cannot be taken up if the expenditure is of a high volume and it is likely to set off some new standards. This does not mean that the provisions made by the architects and planners should always be put in a straight jacket and proposals modified just to see that the cost is reduced. The engineers have a tremendous responsibility in assessing the cost and expenditure and shall have a proper dialogue before such provisions are slightly modified, reduced or altered keeping in view the expenditure involved. Such an exercise will always mean a dialogue with the architects by the engineers who are technically sanctioning the estimates. A proper solution is to finally emerge which takes into consideration the architect's ideas and the financial availability, norms etc. If certain deviations are to be made to accommodate and take into full cognizance the architect's proposals, this shall be finalised only after discussions, in which sometimes even the finance have to be associated before a final decision is taken.

Economy is essential in all our works. Economy does not come suddenly nor it shall be restricted to only in big works. Economy should be the underlying idea in every work. However, a very open mind is necessary at the level of technically sanctioning authority to assess that the economy we are achieving is reasonable with safety and

soundness of the structure and its maintainability. The technically sanctioning authority does a very challenging task when he applies his mind to these considerations. It is only for this purpose that delegated powers are given to various officers to use their discretion, technical knowledge and experience for finding proper specifications, method of work, criteria of acceptance etc. while technical sanction is accorded.

It is also seen that at some times due to pressure of very high authorities, some works are taken up by the engineers in anticipation of administrative approval or some times even in anticipation of availability or confirmation of funds availability. Sometimes it is very embarrassing to tell the competent officer that the work can be taken up only after administrative approval is accorded and the position of funds is confirmed by the finance. Sometimes some higher authorities do not like such replies also. Even so, it is necessary that the engineers while taking up such unscheduled works do immediately keep the finance informed about the liability they are going to incur under the orders of an appropriate authority and finance may be requested to make the funds provision appropriately. The code itself provides for such schemes but such exceptions should be rare. In other words, the finance have to be informed about the need for funds whenever the engineering officers take up some works and expect to incur expenditure which are not otherwise budgeted.

This is all the more important when DDA takes up works of other departments. As a rule, no expenditure should be incurred on such works unless the particular department agrees to the expenditure being incurred on the works. It is all the more appropriate if full funds are received before incurring the expenditure or at least 50% shall be received. In any case, action to incur expenditure shall be taken and tenders accepted only after a clear promise is made for funds or better still the funds are made available. If certain exceptions are to be made, we have to keep the administrative authority

.. / 3 / ..

as well as finance informed about the decision to incur the expenditure in anticipation. The essence of these instructions shall be adequate as guidelines for the various officers who are incharge of works.

V. S. Murti
up to
(V.S. Murti)
Engineer Member

All CEs

All SEs

Copy to:

1. V.C. 2. F.M. 3. C.A.D. 4. F.A.(H)

DELHI DEVELOPMENT AUTHORITY
ENGINEER MEMBER'S OFFICE

NO: EM(10)83/612

dt. 11.1.20

CIRCULAR NO: 281

During the inspection of one of the pile foundation work of D.D.A. by the Chief Technical Examiner, the following short comings were noticed.

1. The bentonite slurry used in the work was not got tested for its specific gravity as specified in I.S. Code No. 2911(Pt.-III) and bentonite used was not as per the specifications.
In this regard it is advised that the bentonite should be got tested as per the provision of I.S. Code No.2911 (Pt.-III) 1980 before it is used on the work.
2. In the specifications appended to agreement the special condition as under was contemplated to be followed.

"The work shall be executed and measured in metric units. Concrete used for piles shall be of nominal mix to give a minimum cube crushing strength of 200 Kg./Cm^2 at 28 days and shall be as specified in the nomenclature of the item. For other R.C.C. items strength shall be confirming to CPWD specification."

The above condition of acceptance criteria of cube crushing strength of 200 Kg./Cm^2 at 28 days is contrary to the nomenclature of piling item where the mix of reinforced cement concrete is mentioned as 1:1½:3 (1 cement 1½ coarse sand : 3 stone aggr. of 20mm. nominal size). The 28 days cube strength of cement concrete 1 : 1½ : 3 as per C.P.W.D. specification is 265 Kg./Cm^2 . It is therefore advised that hence forth no such special condition for acceptance of cube crushing strength should be given in the agreement which is contrary to C.P.W.D. specifications as it leads to ambiguity.

.../2/...

The above instruction should meticulously be followed
by all Concerned.

V.S. Murti
12.9.
(V.S. MURTI)
Engineer Member

Copy to:-

1. All Zonal Chief Engineers with 25 spare copies for circulation.
2. C.E.(QC) with 10 spare copies for circulation.
3. C.E., Design with 10 spare copies for circulation.
4. G.M., I.S.B.T. with 5 spare copies.
5. All E.Os and A.Es, E.M. office.
6. C.E. (Special Project Coll)

Bachchan
E.O.-I to E.M.
D.D.A.

NO: EM(10)83/1012

dt. 10.1.79

CIRCULAR NO: 282

Various officers in DDA are delegated powers for accord of Technical Sanction to the estimates with different limits. The underlying idea is that the larger works should be properly examined technically and also quantitatively to see that the work is carried out economically with appropriate specifications and standards.

There is no bar that Technical Sanction for minor works where a junior officer can give a technical sanction cannot be sanctioned under the competence of a senior officer if he considers that the work is of highly technical nature or needs greater technical control, standards or scrutiny. Senior officers can always tell the junior officers to keep certain standards of check, measurement or quality control in technical sanctions to be issued by the junior officers.

It is, however, very appropriate that the officers who technically sanction the estimates also take adequate care to supply information to the executive officers about the standards expected, the test to be conducted, the quality control criteria to be adopted and also the structural drawings or special points to be followed at site. It is for the technically sanctioning authority to assess from popular knowledge of the controls available at site and guide them carefully so that the process of work gets control at site adequately. It is, however, incumbent on the appropriate officer issuing technical sanction to see that the drawings are invariably issued not only for the qualitative work, but also for the technical part of the work including the sub-structure, the super structure and the foundations etc. Where large works are carried out, it would be necessary for the technically sanctioning authority to give drawings even if it means giving structural drawings for a compound wall of considerable cost. Any special aspect which needs special attention on the work like precaution for dewatering roof supporting, centering or shuttering or process or system of work or material should be clearly mentioned in the technical sanction estimate which is the main instrument for that purpose.

..2/..

Officers should understand implications of technical sanction and the items that should be taken care of by the appropriate officers.

V. S. Murti
(V. S. Murti)
Engineer Member

1. CE(EZ),(WZ),(NZ),(SWZ),(SEZ),(Rohini),(Hort.),(QC),(D&T) 25 spare copies.
2. G.M., I.S.B.T. with 10 spare copies.
3. All E.Os & A.Es E.M. office.

No. EM/10/83/Vol-VII 2124.34 7-2 80
 Dt., the 7th Jan, 1990
 Sub: EM/156/84/O.C.
 Reinforced Concrete work-testing in standards.

The officers incharge of the designing and issue of structural drawings using RCC shall carefully indicate the design standards adopted in the design and acceptance criteria to be followed at site. I have observed that some of the designs are being carried out by private consultants but in all such cases, the departmental designer who is the officer supposed to give the designs should ensure that the drawings and designs conform to the provisions in the contract.

It is necessary that the departmental designer takes all the factors of site conditions, requirements, standards accepted at site, type of maintenance and the construction schedule and practice while designing the structural and prescribing the acceptance criteria.

We are following the CPWD specifications not only in our designs but particularly in our constructions which cannot be ignored. Therefore, even if the designs are given by the private consultants the references shall be particularly corrected with the CPWD specifications which for all purposes is a document related to the contract.

In case for special reasons, we use concrete not specified in the CPWD specifications, then the contract should also provide specially so and the acceptance criteria should be aimed particularly in that direction.

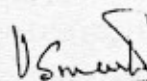
Whereas the I.S. specification is related to the characteristic strength using ^{design} mix concrete or nominal mix concrete, the CPWD specifications aim at nominal ^{mix} concrete with special reference to the acceptance criteria as a part of the contract. Therefore, in all our structural drawings where CPWD specification is mentioned in the contract, only nominal mix shall be specified with the related acceptance criteria for the design purposes. The ^{drawings} drawing also should show accordingly. Where characteristic strength is aimed in the design, agreement also should be properly worded and there should be no mix up. CEs may please instruct the designers in their offices to keep this point in view for all cases.

As a matter of guidance, testing can be done in various manners apart from the indirect test when specified in the CPWD

- 101 - 136 -

- 2 -

specifications. For other tests for confirmation in case of necessity should be chosen particularly though they may not necessarily form part of the agreement.



(V.S. Murti)
Engineer Member

C.E. (Design)

Zonal Chief Engineers

S.Es. Planning.

10000 241(10)83/Vol-VII/2124-34
Date: 7.2.90
Letter: 7.2.90
Dated: 7.2.90

संलग्निकाएँ एवं सूचिका
Destination: 7.2.90

CIRCULAR NO:- 283

Sub:- Important instructions regarding pile foundation work.

The following instructions shall be kept in mind while carrying out the above work. These are of essential nature. The standard specifications and codes of practice shall be followed:

1. Testing of pile work shall be carefully done.
2. Test to be carried out for a specific job shall be predetermined by the competent officer who is the technical sanctioning authority.
3. Complete drawings shall be made available.
4. After the final tests are conducted, a certificate shall be recorded by the EE or SE that the test on the piles are conducted conclusively and successfully and the foundations are best for constructing super structure. This certificate shall be got recorded before the final bill of the pile foundation work is completed and the building work physically starts in the superstructure.

A separate register for actual quantity of cement used in each pile shall be maintained and the method of concreting shall be mentioned.

The level of pile should be properly determined with reference to the actual ground levels and the foundation levels necessary for the building. The following shall also be kept in view:

- (a) The bottom level of pile, the cut of level and the level of bottom of grade beam should be decided which should be as per structural drawing. These levels can be checked with respect to some bench mark established at the site of work.
- (b) The pile should be bored to complete depth. The depth of the pile after it is bored should be checked by comparing it with the length of the auger and extension rod used subsequently.
- (c) By the length of the under reamer and extension rods.
- (d) Finally it should be cross checked after the reinforcement cage is inserted which should be framed as per the structural drawing. The reduced level of top of reinforcement cage should be checked and it should be compared with the theoretical reduced level.

The cement used in piles shall be properly selected keeping in view the type of water and the soil surrounding the piles. Care shall be taken to ensure that the correct quantity of bentonite is used on the job. The sample shall be got tested at least in two laboratories and not in one laboratory only.

[Signature]
14.1.90
(V.S. Murti)
Engineer Member
[Initials]

Copy to:-

1. All Zonal Chief Engineer with 25 spare copies for circulation.
2. C.E.(QC) with 10 spare copies for circulation.
3. G.M. I.S.B.T. with 4 spare copies for circulation.
4. All E.Os & A.Es E.M. office.

[Signature]
E.O.-I to E.M.
[Stamp]
10/11

DELHI DEVELOPMENT AUTHORITY
ENGINEER MEMBER'S OFFICE.

NO.EM1(10)83/2272

DATED:9.2.90

CIRCULAR NO: 284.

SUB: Use of I.S.I. Marked Items.

...

As per specifications and conditions appended with P.W.D.7 & P.W.D.8, the various items in use on our works are required to confirm with CPWD specification- 1977 Vol.I & II. For item not covered under CPWD specification 1977 Vol.I & II the relevant I.S. specification are to be followed or a good practical working specification detailed.

It has been observed that for various items which confirms to I.S. specification for example pipes and sanitary fittings the name of the firm manufacturing the items as per ISI or having ISI certification mark is not printed or embossed on item. It has been decided that henceforth for all the high cost items and items which are not likely to be checked up later, the items should confirm with the requirement of the I.S. specification. In other words we should insist upon the name of manufacturer or his trade mark on the product. This applies to pipes also.

Above instructions should meticulously be followed by all Engineers.

V.S. Murti

9/2/90

(V.S. Murti), Zonal
Engineer Member.

Copy to:-

1. All Zonal Chief Engineers with 25 spare copies for circulation.
2. CE(OC), DDA, with 10 spare copies.
3. Director(Hort.)-South & North with 10 spare copies.
4. G.M., I.S.B.I. with 5 spare copies.
5. All E.Os & A.Es, E.M. Office.

Engineer Member.

DDA.

DELHI DEVELOPMENT AUTHORITY

No.:EM1(10)83/2262/

Dt.: 9.2.90

CIRCULAR NO.: 285

It has been observed that most of the claims/counter claims in the Arbitration cases submitted by E.E.'s/S.E.'s are not accompanied by the following certificates:-

1. Efforts are made to settle the claims but it was not possible.
2. The claims are bonafide and are as per agreement.

The S.E. should sign the claims & counter claims and same should be sent to this office under the signature of S.E. and not Sd/- or C/s. etc.

It is, therefore, enjoined upon all S.E.'s that these instructions should meticulously be followed. The claims/counter claims not accompanied by such certificates shall be returned to S.E.'s and matter will be viewed seriously. The delay in referring the claims/counter claims will rest with the concerned S.E.

V.S. Murti
7/2-90
(V.S. Murti)
Engineer Member
B

Copy to:-

1. All Zonal Chief Engineers with 25 spare copies for circulation among S.E.'s & E.E.'s.
2. C.E.(Slum) D.D.A. with 25 spare copies.
3. C.E.(QC) with 10 spare copies for circulation.
4. Director(Hort.) North & South with 10 spare copies each.
5. G.M., I.S.B.T. with 5 spare copies.
6. All E.Os & A.Es C.D. office.

Rathore
E.O.-I to E.M.
e

Completed
General
2/2/90

DELHI DEVELOPMENT AUTHORITY
ENGINEER MEMBER'S OFFICE

NO: EM(10)83/2415

dt. 13.2.90

CIRCULAR NO: 286

Sub:- Instructions regarding issue/maintenance of M.Bs.

The following instructions regarding issue/maintenance of M.Bs are hereby issued. All the concerned are requested ^{to} follow these instructions scrupulously. These instructions should be brought to the knowledge of all the Field Engineers by the concerned Chief Engineer.

1. Para-6 of section-7 of C.P.W.D. manual Vol.II emphasises the importance of these documents and is reproduced below.
"These books should be considered as very important accounts records and maintained very carefully and accurately as these may have to be produced as evidence in court of law, if and when required."
2. Instead of issuing an ordinary register, machine numbered registers be issued for maintenance of records of M.Bs in Division as well as Sub-division offices.
3. The M.Bs to the J.Es be issued for a particular work. To minimise the cost of stationary only one M.B. be issued to the J.Es for petty works. This will also reduce misuse of M.Bs.
4. All the M.Bs be returned back to the Division after the final payment of a particular scheme/work is made.
5. Periodical review of M.Bs shall be conducted by the Div. Accountant & Ex. Engineer(Civil & Elect.)/Dy. Directors (Hort.) which is generally not in practice, to avoid loss of M.B.s & misuse of the same as required in Para No-10, 50 to 53 of C.P.W.D. Manual Vol.II.
6. No J.E. be relieved till he hands over all the M.Bs issued to him. For this the A.E. concerned will give a certificate to the E.E. that all the M.Bs have been taken back or handed over to another J.E.
7. To keep a continuous watch on the M.Bs the Asstt. Engineer/ Asstt. Director(Hort.) should submit a quarterly certificate of physical verification of the M.Bs with J.Es as per his records.

..//2/..

8. The printing/issue of M.Be is centralised. The same shall be printed and issued by S.E.(Stores) w.e.f. 15.3.90. The M.B's shall be issued by S.E.(Stores) to FOSTCES & Directors ~~Multitasking~~ for further issue.
9. The record of issue/re-issue of M.Be shall be updated in the Divisional/Sub-divisional M.Be issue register in accordance with the relevant provisions of Section-7 of CPWD Manual Vol.II, specifically the para-7, 9, 11 & 23.
10. No, J.E./A.E. shall be issued L.P.C. until a certificate is produced ^{from} Divisional Accountant that all M.Be issued in a particular J.Es/A.Es name are actually returned back and there is no M.B. with the officer transferred.

V. S. Murti
 9/2-90
 (V.S. Murti)
 Engineer Member

Copy to:-

1. All Zonal Chief Engineers with 25 spare copies.
2. Chief Engineer(Q.C.), DDA with 10 spare copies.
3. Chief Engineer(Hort.) DDA with 25 spare copies.
4. G.M., I.S.B.T. with 10 spare copies.
5. All E.Os & A.Es E.M. office.
6. S.E.(Vig.), D.D.A. with 10 spare copies.

B. Kumar
 E.O.-I to E.M.
 D.D.A.
 DK *mm*
 5/2 . 6/82

DELHI DEVELOPMENT AUTHORITY
ENGINEER MEMBER'S OFFICE

NO: EM(10)83/ 2908

dt. 23.2.90

CIRCULAR NO: 287.

Subj:- Limits of tendering for D.D.A. registered contractors.

The following changes have been approved by Contractor Registration Board for tendering for various works in D.D.A. and be implemented with immediate effect.

A. Category(B&R) Building & Roads.

1) Tendering limits:

The tendering limits have been raised from the existing ones to as follows:-

Class-I(B&R)	:	Qualified to tender for works upto any amount.
Class-II(B&R)	:	Qualified to tender for works upto Rs. 30.00 lacs.
Class-III(B&R)	:	Qualified to tender for works upto Rs. 10.00 lacs.
Class-IV(B&R)	:	Qualified to tender for works upto 4.00 lacs.
Class-V(B&R)	:	Qualified to tender for works upto Rs. 1.00 lacs.

Henceforth the tenders shall be issued as per the limits mentioned above.

B. SEWERAGE, WATER SUPPLY & DRAINAGE (SW&D):

1) The tendering limits for SW&D has been fixed as follows:

Class-I(SW&D)	:	Qualified to tender for works upto any amount.
Class-II(SW&D)	:	Qualified to tender for works upto Rs. 30.00 lacs.
Class-III(SW&D)	:	Qualified to tender for works upto Rs. 10.00 lacs.
Class-IV(SW&D)	:	Qualified to tender for works upto Rs. 4.00 lacs.
Class-V(SW&D)	:	Qualified to tender for works upto Rs. 1.00 lacs.

Henceforth the tenders shall be issued as per the limits mentioned above. Only contractors registered in SW&D category shall be entitled to tender for sewerage, water supply and drainage works and not the others.

C. Electricians

1) The tendering limits for Electric contractors has been raised as follows:-

Class-I (Elect.)	: Qualified to tender for works upto any amount.
Class-II (Elect.)	: Qualified to tender for works upto 4.00 lacs.
Class-III (Elect.)	: Qualified to tender for works upto 1.50 lacs.
Class-IV (Elect.)	: Qualified to tender for works upto 50,000/-

D. The contractors enlisted in Class-I & II (SW&D) will be required to employ an graduate engineer (Civil) or a recognised diploma holder engineer (Civil) with an experience of not less than five years but out of which atleast one year experience should be in sewerage, water supply or drainage work, which costs more than Rs. 1.00 lac. This condition be incorporated under Clause-36 of P.W.D.-7.

V.S. Murti
(V.S. Murti) 90
Engineer Member

Copy to:-

1. All Zonal C.Es with 30 spare copies.
2. Dy. Director North & South (Hort) with 5 spare copies each.
3. C.E. (Spl. Project) with 5 spare copies.
4. G.M., I.S.D.T. with 4 spare copies.
5. C.E. (QC) with 6 spare copies.
6. C.E. (D&T) with 5 spare copies.
7. S.E. (Vig.)-I & II with 5 spare copies.
8. C.A.O. with 10 spare copies for the circulation.
9. P.S. to E.M. for the information of the later.
10. P.S. to F.M. for the information of the later.
11. All E.Os & A.Es of E.M. office.

Baburam
Secretary (C.R.D.)

prajal
10/2/90

DELHI DEVELOPMENT AUTHORITY.

NO. EM1(10)83/ 381..

DATED: 28.2.90.

CIRCULAR NO. 288

The Works Board in its meeting held on 31.1.90 observed that one of the CEs had accepted the tenders, which should have been referred to Works Board being beyond his powers as per its face value at the time of receipt of tenders. The tenders when received were worth more than one crore but valued less than one crore after negotiations. The CE accepted the tenders considering the same within his powers, in view of the decision of the Board, taken in its meeting held on 8.7.85 which is reproduced as under:-

"The Board also decided that in all cases in future to save time CEs can conduct negotiations with the first lowest tenderer to bring down the rate in the vicinity of the justified rates and for this they may not invariably take **prior** approval of the Board."

The above decision of the Works Board should be interpreted in its right spirit. The above authorisation has been accorded to save time but does not authorise CEs to accept the tender. Such tenders should invariably be brought before the Board for its concurrence to the action (of conducting negotiations) by the CE and for its consideration & approval.

These instructions are issued with EM's concurrence.

Lub air
Secretary (WAB). 26.2.90
DDA.

All Zonal CEs.
CE (Hort.), DDA.
CE (Spl. Project).
CAO, DDA.
GM, ISBT DDA.
Secy., (WAB).

Copy for information to:-

VC/FM/EM.

Lub air
Secretary (WAB). 26.2.90
DDA.

DELHI DEVELOPMENT AUTHORITY
ENGINEER MEMBER'S OFFICE

NO:EM1(10)83/4320

dt.21.3.90

CIRCULAR No. 289

Sub:- Gap between W.C. pan outlet & trap.

It has been observed with concern that the gap between W.C. pan outlet & trap is not filled properly as per specification, with the result that seepage occurs in the toilets, which is visible on the walls also. The seepage from the W.C. can be avoided if the joint between W.C. pan and trap is filled properly and in time as per specification.

All the field staff are therefore, directed to check this joint properly to avoid chances of leakage. In this context the Assistant Engineer incharge of the work shall perform 50% test check and Executive Engineer shall check as many as possible. No flooring should be laid till this joint is checked properly. These instructions should be brought to the notice of all the field staff up to the level of J.E.

V.S. Murti
17/3/90
(V.S. Murti)
Engineer Member

Copy to:-

- DK*
14/3
1. All Zonal Chief Engineer with 25 spare copies for circulation.
 2. C.E.(Q.C.) with 10 spare copies.
 3. G.M., I.S.B.T. with 5 spare copies.
 4. All E.Os & A.Es E.M. office.
 5. C.E.(Special project cell).

B. Chinn
E.O.-I to E.M.

DK
14/3

NO:EM1(10)83/4321

dt. 21.3.90

CIRCULAR No. 290

It has been observed that Port. Department is procuring good earth and sludge through trucks and is also operating items of spreading of good earth and mixing of good earth with sludge/manure and the same are paid to the contractor accordingly. In order to safeguard the interest of the Department, it is enjoined upon all concerned that recording of measurements for these items should be done strictly in the manner as detailed below:-

1. Supplying and Stacking of good earth at site:-

Length, breadth and height of stacks shall be measured correct to a cm. The volume of the stacks shall be reduced by 20% for voids before payment, unless otherwise described.

The relevant provisions for procurement and payment of this items are given in detail in Paras 22.3.1 to 22.2.3.3 of CPWD Specifications 1977 Vol.II.

2. Procurement of Sludge:-

It shall be transported to the site in lorries, with efficient arrangements to prevent spilling enroute. It shall be stacked at site in stacks of not less than 50cm. height and of volume not less than 3 cum. .

Length, breadth and depth of stacks shall be measured correct to a cm. The volume of the stacks shall be reduced by 8% for looseness in stacking, to arrive at the net quantity for payment, as per the provisions of para 22.2.5.1 to 22.2.5.3 of CPWD Specifications 1977 Vol.II.

3. Spreading Good Earth:-

The quantity of good earth spread shall be determined by the difference in the volume of good earth in stacks before and after spreading duly reduced for looseness

../2/..

in stacking by 20% of good earth as per the provisions of Para 22.6.2 of CPWD Specifications 1977 Vol.II.

4. Mixing of good earth and sludge/manure:-

The quantity of good earth and sludge or manure mixed shall be determined by the difference in the volume of good earth, sludge or manure in stack, before and after spreading duly accounted for voids and looseness in stacks as per the provisions of Para 22.11.2 of C.P.W.D. Specifications 1977 Vol.II.

This is in modification of circular No.270 issued vide EM1(10)83/20,543 dt.28.11.89.

V.S. Murti
13/3/90
(V.S. Murti)
Engineer Member

Copy to:-

1. All C.Es, DDA with 25 spare copies for circulation among SEs & EEs under them.
2. Chief Engineer(Hort.) with 20 spare copies for circulation among Dir./Dy. Dir.(Hort.) under them.
3. G.M., I.S.B.T., D.D.A.
4. All E.Os & A.Es of E.M. office.

B. Sharma
E.O.-I to E.M.
19/3/90

DELHI DEVELOPMENT AUTHORITY
ENGINEER MEMBER'S OFFICE

NO:EM1(10)83/4402

dt.22.3.90

CIRCULAR No. 291

The Chief Technical Examiner during inspection of one of the works of D.D.A. has observed that the principle and details for penal rate recovery of machine made shutters, flush door shutters and white Glazed tiles etc. were not specified in the agreement. This is a lapse on the part of the officer preparing the N.I.T. and may result into contractual complications in case of deviation beyond permissible limit as per agreement.

It is, therefore, enjoined upon all officers preparing and approving N.I.Ts to ensure that penal rate recovery for all the items stipulated in the contract should invariably be mentioned irrespective of the case whether particular material bears any issue rate or is to be supplied free of cost to the contractor with specific total for rates.

The above instructions should meticulously be followed by all concerned.

V.S. Murti
20.3.90
(V.S. Murti)
Engineer Member

Copy to:-

1. All Zonal Chief Engineers with 25 copies for circulation.
2. C.E. (QC) with 10 spare copies for circulation.
3. C.E. (Designs) with 10 spare copies for circulation.
4. C.E. (Special Project Cell) with 10 spare copies.
5. G.M., I.S.B.T. with 5 spare copies.
6. All E.Os & A.Es, E.M. office.

B. C. Murti
A.O.I to S.M.

DK *19/3* *19/30*

NO:EM1(10)83/6440

dt. 2/4/90

C I R C U L A R No.292

Sub:- Attention to comments about quality.

As per the existing system the quality control exercises are done by various levels covering the CTE, CE(QC) offices of DDA etc. In these cases the idea is to inculcate a spirit of quality consciousness which is very important. There are agencies which are trying to achieve what is called zero defect level.

To see that attention is given to the observations, the officers concerned should act promptly. The EE is the officer operating the contract and ^{other} their officers who will give certain decisions at the level of SE and CE. The main purpose of quality control is to ensure that the work is done as per those conditions which are stipulated in the contract or the specifications mentioned in the contract. Since the work is of continuous nature, action, if not taken in time would mean that the work is allowed to proceed with the deficiencies noticed. There are some cases where it would be difficult to rectify the defects except the total demolition.

Since the time is essence of the contract the rectification of deficiencies also becomes essential. A decision has to be taken about the quality of work or the nature of remedial action.

While the paras essentially are to be replied by the EE or the SE, There can be some cases where the CTE/CE(QC) or the undersigned may feel it necessary to bring it to the notice of the Chief Engineer. The idea in those cases is to highlight the problem which can be of a critical nature so that the best attention is given for those critical cases. The report from the CE(QC) indicates that some EE do not send even first reply to the quality control observations within 60 days after issue. There are a few cases where reply is sent after three years.

There are a large number of reminders which the SE have not replied even after one year. To see that the quality control exercises are properly attended to, every officer will have to make an effort to attend to the observations for taking final decision. No doubt as per the existing orders SE is authorised to decide about the rates and is thus the final authority for accepting the quality of work. There can be some cases where the CE's intervention is necessary because he has to prepare the draft NIT or to ensure an appropriate quality control management in the entire zone or to take remedial action in preparing agreements. The following practice should be followed hereafter scrupulously:-

The CE(QC) will issue his observations memo through his units to the EE. All such reports should be replied to in 45 days from the date of issue of the letter. Principally, it will be the responsibility of the EE to see that the first reply is positively sent within 45 days. There is no use keeping a matter in suspense even for 60 days. If the EE feels it necessary to discuss the matter with SE, within the period he may take a view on the various observations and reply to CE(QC) unit definitely within 45 days. In all observations EE should definitely make up his mind within 45 days. If, however, there is a very exceptional case he will inform the CE(QC) that he made written reference to his SE about his observations where he is not able to take a decision. In such cases, the CE(QC) office will write to the SE for a decision on his part. In all other cases, the EE should definitely reply within 45 days.

The CE (QC) will send observations of special nature to the SE where the operation of quality reduced rates etc. are involved. In all such cases SE should make a reply to the CE(QC) office within 30 days.

The CE (QC) where he finds it necessary may write to the CE on special issue or any particular para which his unit has raised already. CE, in all such cases, should send his observations and comments to the CE (QC) within 30 days positively.

../3/..

In all these cases, the basic idea is to ensure the quality as per the agreement or standards specification referred in the agreement. In other cases the comments should be about the procedure adopted, system evolved. Since the observations are mostly about the past things the officers concerned should be able to reply within this time limit. The senior officers can definitely take a view with their experience behind them in the interpretation of clause. The CE(QC) where he ^{does not} agrees with the CE will refer the matter to the Vice-Chairman who will take a decision in consultation with the Engineer Member appropriately.

The time limits mentioned above should be strictly followed in the interest of proper quality in DDA.

All letters addressed by the CE (QC) to various CEs, SEs or EEs directly should be replied to by the CE, SE or EE and not by any other subordinate officer.

V.S. Murti
24-90
(V.S. Murti)
Engineer Member

Copy to:-

1. All Zonal Chief Engineers with 25 spare copies.
2. CE (QC) with 10 spare copies.
3. CE (Special project cell) with 4 spare copies.
4. CE (D&T) with 10 spare copies.
North & South
5. Director (Hort.) with 10 spare copies.
6. G.M. I.S.B.T. with 3 spare copies.
7. All E.Os & A.Es E.M. office.

Bachan
E.O.-I to E.M. 3078.
DK *3073*

DELHI DEVELOPMENT AUTHORITY
ENGINEER MEMBER'S OFFICE

NO: EM(10)83/ 7654-58

dt. 2.5.90

C I R C U L A R No. 293

Sub:- Regarding Kota stone work and brick work.

During inspection of various sites, it has come to the notice of undersigned that quality of Kota stone work being executed is not up to the requisite standard.

Also it has been observed that the bricks stacked at site for brick work were of very poor quality. In this context attention of all field Engineers is drawn to the specifications relating to Kota stone and brick works which should meticulously be followed by all Engineers.

V.S. Murti
24/4.90
(V.S. Murti)
Engineer Member

D.K. Murti
23.4.90

Copy to:-

1. All Zonal Chief Engineer with 25 spare copies for circulation.
2. C.E.(Q.C.) with 10 spare copies.
3. G.M., I.S.B.T. with 5 spare copies.
4. Director(Hort.) North & South with 10 spare copies.
5. All E.Os & A.Es, E.M. office.

B. D. A.
E.O.-I to E.M.
D.D.A.

DELHI DEVELOPMENT AUTHORITY
ENGINEER MEMBER'S OFFICE

CM(10)83/8383

dt. 14.5.90

C I R C U L A R, No. 294

During the inspection of one of the works of D.D.A. it was observed that decision on a tender was taken up after the validity period expired and also the date of validity of tender was not got extended, before communicating acceptance.

It is enjoined upon all concerned that the time schedule for processing the tenders at various levels as mentioned in CPWD manual Vol.-II should strictly be adhered to so that a decision on the tenders is taken and communicated properly within the validity period. In case due to some unavoidable reasons, the tender could not be decided within the validity period, then the date of validity of tender should be got extended before the expiry of the same and then only acceptance communicated.

V.S. Murti
11/5/90
(V.S. Murti)
Engineer Member

DK *10/5/90*

Copy to:-

1. All Zonal Chief Engineer with 25 spare copies for circulation.
2. C.E.(QC) with 10 spare copies.
3. C.E. special project cell with 5 copies.
4. Director(Hort.) North & South with 10 spare copies.
5. G.M., I.S.B.T. with 5 spare copies.
6. All E.Os & A.Es E.M. office.

E.O.-I to E.M.
D.D.A. *BL*

82

DELHI DEVELOPMENT AUTHORITY

NO: EM(10)83/ 9105

dt. 28.5.90

CIRCULAR No. 295

In a particular contract, certain conditions offered by the contractor were not got modified in writing by the contractor before indicating the acceptance of the tender and certain doubtful condition causing ambiguity were left unincorporated in the agreement by the tender accepting officers.

This has caused certain problems later on.

It is, therefore, enjoined upon all concerned to ensure that before acceptance of tender, all the ambiguous conditions offered by the contractor which may lead to contractual complications are invariably got clarified or corrected in writing before acceptance of the tender.

V.S. Murti
24/5.90
(V.S. Murti)
Engineer Member

Copy to:-

1. All CEs with 25 spare copies for circulation.
2. CE(QC) with 10 spare copies for circulation.
3. CE(Spl. Project Cell) with 5 spare copies.
4. G.M. I.S.B.T. with 5 spare copies.
5. Director (Hort.) (S) & (N) with 10 spare copies.
6. All E.Os and A.Es E.M.'s office.

DK. Murti B
23/5. 23.5.90

Rehman
officer, I.
Engineer Member

DELHI DEVELOPMENT AUTHORITY
ENGINEER MEMBER'S OFFICE

NO: EM(10)83/ 10247

dt. 13.6.90

CIRCULAR NO: 226

During the S.E.'s Co-ordination meeting held on 26.5.90, it was decided that to avoid delay in processing the arbitration cases, The S.E.'s shall henceforth will be asked to send the certified copy of the clause 25 of the agreement etc. as soon as the request is received from the contractor for appointment of Arbitrator. S.E.'s shall also mention in their reply whether the work is completed or not and if work is completed whether the final bill is paid or not.

Hitherto the above information were sought from the Executive Engineer, but now, S.E.s are to furnish the information. S.E.s are therefore, requested to follow the above instructions meticulously.

V.S. Murti
4/6/90
(V.S. Murti)
Engineer Member

Copy to:-

1. All Zonal Chief Engineers (with 25 spare copies for circulation among S.E.s and Executive Engineers under them).
2. C.E.(Q.C.) with 10 spare copies for circulation.
3. Director (Hort.) North & South with 10 spare copies.
4. G.M. I.S.B.T. with 5 spare copies.
5. All E.O.s & A.E.s, E.M. office.

B.K. ...
E.O.-I to E.M.
Delhi

DELHI DEVELOPMENT AUTHORITY
ENGINEER MEMBER'S OFFICE

NO:EM(10)83/12178

dt. 23.7.90

CIRCULAR NO: 297

SUB: Adoption of Delhi Schedule of rates C.P.W.D.
1989 in D.D.A.

Delhi schedule of rates, 1999 has been released and the same has already been put into practice in C.P.W.D. Therefore, it has been decided that this Schedule will be made applicable on D.D.A. works and shall come into operation w.e.f. 1.7.90.

It is, hereby, ordered that the required number of copies of the schedule with up-to date correction slips, if any, be got purchased by the Zonal Chief Engineers for their respective zones immediately and be issued to all the subordinate offices under their respective charge. It should be attempted that required number of copies of the schedule of rates are taken in the library accounts of the offices concerned and issued to various officers. In the event of transfer of the officer from one office to the other, the schedule of rates should be returned to the library and "No Demand" certificate should be obtained.

It is further ordered that all the estimates & NIT's henceforth be prepared on new schedule from 1.7.90. The new schedule should also be mentioned in the relevant clauses of N.I.T. and work orders etc. However, where tenders have already been called, such works could remain on the old schedule in order to avoid unnecessary delay. Tenders received and already under process should continue to be on the schedule mentioned

..2/..

in N.I.T. while calling the tender. If tenders are to be recalled, they shall be on new Schedule of rates basis.

The above instructions should meticulously be followed by all concerned.

V.S. Murti
18/7/90
(V.S. Murti)
Engineer Member

Copy to:

1. Commissioner(Housing) with 5 spare copies for circulation.
2. Commissioner(Lands) with 5 spare copies for circulation
3. Commissioner (Planning) with 5 spare copies for circulation.
4. Chief Architect/DDA with 5 spare copies for circulation.
5. C.V.O., D.D.A. with 10 spare copies for circulation.
6. All Zonal Chief Engineers with 25 copies for circulation among all concerned.
7. C.E.(Q.C.) DDA with 10 spare copies for circulation.
8. C.E.(Designs) with 5 spare copies for circulation.
9. C.E.(Electrical) DDA with 10 spare copies for circulation.
10. C.A.O./DDA with 10 spares copies for circulation.
11. G.M., I.S.B.T. with 3 spare copies for circulation.
12. Director(Hort.) North & South with 10 spare copies for circulation.
13. P.S. to V.C. for kind information of the later.
14. P.S. to F.M. for kind information of the later.
15. All E.O.s & A.E.s E.M. office.
16. C.E.(S.P.) with 2 spare copies for circulation.

3

E.Q.-I to E.M.
D.D.A.

24/7/90
2

No. EM.1(10)/83/ 12587

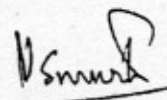
August 1, 1990

CIRCULAR NO.298

Before taking up execution of any work at a particular site, the first and foremost exercise which the engineers have to get carried out is the soil investigation. In some of the cases, it has been observed that the process of soil investigation had been taken very lightly, thus resulting into defects of serious nature in the buildings at a later date. While getting soil investigation carried out for a particular site the following points must be taken care of by the concerned field staff:-

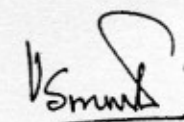
1. The soil investigation must invariably be assigned to some reputed soil consultant only *if it is not done departmentally*
2. The soil investigation must be got carried out for adequate number of bore holes and for sufficient depth as prescribed under the IS Code. The bore holes should be fairly well distributed in the entire area of the pocket and together with the DCP test, should fairly represent the entire pocket so that all blocks are covered.
3. The soil investigation report must contain the classification of soil met with so as to understand the properties of the soil like plasticity, compressibility etc.
4. The agreement entered with the soil consultants, must specify the tests to be done and the data to be collected. The field units must act in coordination with the consultant in deciding the number and location of bore holes and DCP test.
5. The field units must be in a position to inform the details like ground water table level etc.
6. Alongwith soil investigation report, which is submitted to the Design Units for obtaining foundation design of the building, a complete site data must be furnished by the Field Units like details of the earth filling done and their locations etc.
7. After receipt of approval of structural design, during the execution of the work of the foundation, the engineers of the Design Unit concerned must invariably be associated and brought to site to ensure that the execution of the foundation is being carried out as per observations recorded on the foundation drawings and as per approval given by Design Unit.

8. Due to site conditions, in case there is a need to change the location of a particular block at some new place, the soil investigation for that new site must invariably be got carried out details submitted to Design Office and design obtained accordingly.
9. The Executive Engineer at site must ensure good quality and ensure foundation decisions seeing the soil condition and the design parameters stipulated in the foundation drawings.


(V.S. Murti)
Engineer Member
30.7.90

Copy to:

1. CE (Design) & (QC).
2. CE(SW Z),(SEZ),(W Z),(NZ),(EZ), (Rohini), (Elect) & (Training).
3. All SEs/SEs(P).
4. All EEs/EEs(P).
5. E O I, II, & III in EM office.


Engineer Member

No. EM(10)83/ 15621

dt. 8.9.90

STANDING INSTRUCTION No. 299

1. While preparing the N.I.T.'s the place of delivery of stipulated materials is entered as "Any D.D.A. stores at Delhi/New Delhi" by some EEs.

This may invite objections being of unspecific nature as the judgement required for carriage of material can not be ascertained from it.

2. The discription of the material stipulated is also incomplete. The type of cement i.e. gray cement, white cement, pozzalana cement etc. The type of the steel i.e. M.S. round bars for reinforcement or M.S. Sections such as angle, tee, flats etc. to be issued is also not indicated.

To remove the element of uncertainty and to avoid any misunderstanding and possibility of disputes due to such insufficient stipulations, it is, therefore, enjoined upon all the E.Es that while preparing Notice Inviting Tenders a care should be taken to indicate/specify:-

- i) The actual location of stores for issue of materials and also the type of cement to be issued.etc.
- ii) The type of steel to be issued giving reference to use/ make/quality as per requirements.
- iii) Some times, some materials are issued free of cost.

In such cases, the place of delivery and the clause regarding penal rates to be enforced in case of negligence or misuse shall also be clearly be indicated.

The above instructions may be noted for strict compliance in all the N.I.T.s in future.

(1)

DELHI DEVELOPMENT AUTHORITY
ENGINEER MEMBER'S OFFICE

NO: EM(10) 83/16043

dt. 13.9.90

STANDING INSTRUCTIONS NO: 300

A case has come to the notice of the undersigned in which the recovery of the amount due to reduction in rates on account of defective/sub-standard/poor quality of the work could not be effected since no money was available for its recovery from the contractor's running A/c bills. This has happened due to delay in preparation and approval to the reduction rate item statements. Had the reduction item statement been finalised as soon as the sub-standard work was detected by the competent authorities and a decision taken thereon, the amount on this account could have been recovered immediately from the immediate running A/c bills of the contractors after serving him a notice.

Therefore, it is enjoined upon all the engineers to see that while making payment to the contractor, recovery/reduction items statements, if any, should be made and approved immediately and effect recovery of the same as soon as necessity requiring reduction in rates arises. All the Chief Engineers being Head of the Engineering Wing of their respective zones may ensure strict compliance of these instructions and see that such lapses are not allowed to occur in future. The idea is not to allow reduction rate statements as mere formalities but enforce quality - and if some E.Es & S.Es show tardy attention, they are warned or booked after giving a chance.

V. S. Murthy
10/9.90.
Engineer Member
D.D.A.

Copy to:

1. All Zonal Chief Engineers ^{with} 25 spare copies.
2. C.E.(Q.C.) with 10 spare copies.
3. C.E.(D&T) with 10 spare copies.
4. Director (Hort.) North & South with 10 spare copies.
5. G.M., I.S.B.T. with 3 spare copies.
6. All E.Os & A.Es E.M.'s office.
7. C.V.O./DDA.
8. Copy to guard file.