

DELHI DEVELOPMENT AUTHORITY
QUALITY CONTROL CELL
C-BLOCK, VIKAS ESTATE, NEW DELHI

No. F73(94)CE/DC/DDO/4660

dt. 5/12/88.

M E M O

Progress report of works are not being received from the all Executive Engineers in time and certain works in progress are not even in the knowledge of Quality Control Cell. Hence it is decided that besides sending bi-monthly progress reports of building works costing more than Rs. 10 lacs and of electrical works costing more than Rs. 1 lac, the Executive Engineers shall also hence-forth endorse a copy of the award letter to the concerned Executive Engineer, Q.C.Cell for all the civil works costing more than 2 lacs and of all electrical works costing more than Rs. 1 lac. If it is found that certain works falling in the above categories are not brought to the knowledge of Q.C.Cell, it shall be reported to the disciplinary authority.

S. C. Prasad

(S.C. Prasad)
Chief Engineer (C)

Copy to:-

1. All Chief Engineers, DD.A. (C & S & Z)
2. All S.E.s including Electrical. SE-16
3. All Ex. Engineers including electrical.
4. S.E. Q.C. Cell.
5. All E.E. Q.C. Cell including electrical

S.W.D - I

S.W.D - II

Q S.W.D - III

9. E & CE (ED) III

10. EE (ED) IV

11. S.W.D - VIII

DELHI DEVELOPMENT AUTHORITY
QUALITY CONTROL UNIT

No. 35(3)/QC/Circular/344

DC. 27.1.89.

CIRCULAR NO. 101

In DDA, under rammed piles are being provided in many works. To ensure that the bore hole has not collapsed and proper quantity of concrete has gone inside, it is essential that cement consumption for each pile should be maintained at site. Most of the agreements provide for this but not being followed. The excuse given is that concrete of a part cement bag cannot be measured. If theoretical requirement of cement in a pile comes to say 4.7 bags, the concrete of 4 bags mix can be poured fully and then approximation can be done by the A.E./JE for the last bag mix. This will give concreting status of each pile and the work may not be too much out than what required. In all pile works, this procedure should be followed whether this is provided in the agreement or not.

(S.C. raised)
Chief Engineer (QC)

Copy to:-

1. V.C., DDA.
2. E.M., DDA.
3. All Chief Engineers, DDA.
4. All, S.E.s DDA including Q.C.
5. All Ex, Engineers DDA including Q.C. Cell.

OFFICE OF THE SUPERINTENDING ENGINEER (I.C.)
DELHI DEVELOPMENT AUTHORITY

102 4

No. SE(C) DA/83/145/115

Dated - 11-1-89

CIRCULAR

In continuation to this office circular No. SE(C)DDA/88/3607 dated 16-3-88/2-9-88 it is hereby brought to the notice of all concerned that terrazzo tiles can now be tested for abrasion value and transverse strength in our D.C.C. laboratory at Asian Games Village office complex.

(S.C. TYAL)
SUPERINTENDING ENGINEER(I.C.)

Copy to:-

1. Engineer Member, DDA alongwith a copy of earlier circular.
2. Chief Engineer(Q.C.), D.D.A.
3. All Zonal Chief Engineers, DDA alongwith spare copies for their Superintending Engineers and Executive Engineers.
4. All Executive Engineer(Quality Control).

(S.C. TYAL)
SUPERINTENDING ENGINEER(I.C.)

/BHATIA/10-1-1989/

102

DELHI DEVELOPMENT AUTHORITY
QUALITY CONTROL CELL

F.No.F.73(91)CE(QC)/DDA/89/142

Dt. 12.01.1989.

M E M O

Attention of all the Executive Engineers is drawn to this Office memo issued vide 4660 dt.5.12.88 of even number. Still monthly, quarterly progress reports are being received from the Executive Engineers. No progress report is being received from some divisions. Some are sending reports for works costing more than 15 lacs and some for works costing more than 40,000/-. They are requested to follow strictly the instructions given in this office memo dt.5.12.88. Bi-monthly progress report for all civil works costing more than Rs.10 lacs and electrical works costing more than Rs.1 lac for the month ending December, 88 should be sent within 10 days. Monthly and quarterly progress reports are to be dispensed with. EEs shall also endorse a copy of award letter for civil works costing more than Rs.2 lacs and Electrical works costing more than Rs.1 lac to the concerned EE(QC).

Attention of the Ex.Engineers is also drawn to this Office letter F.73(160)/4540-48 dt.22.11.88, addressed to all the Chief Engineers. They are not complying with the instructions that after the receipt of O.M. from the Quality Control Cell, rectification of defects should be done within 45 days and first reply of the O.M. should be sent to the Q.C. Cell within 60 days. The reply to the O.M.s issued upto October, 88 should be sent within 10 days after complying the above instructions.


(S.C. PRASAD)
CHIEF ENGINEER (QC)

Copy to:-

1. All the Chief Engineers

DELHI DEVELOPMENT AUTHORITY
QUALITY CONTROL CELL

No. CE(3)QC/Circular/DDA/ 155/

Dt. 3.5.89.

CIRCULAR NO - 102

Attention of all the S.E.s and E.E.s is drawn to this office Circular No.98 dt. 7.9.88. It is observed that reduced rate statements are still being sanctioned for the items which can be easily replaced/redone like lesser size of fittings, less thickness of PVC sheet, weak plaster, moulding not provided in chajja, brick bats used in brick work, improper lines and levels of plaster etc. S.E.s are again requested to ensure that reduced rates are accepted only when it is not possible to replace/redone the item. They are also not recording certificate on RIS statement that "this reduction would not affect the work structurally and the work is acceptable". This certificate is a must on the statement. If such certificate is not given on the statement, it shall not be accepted by Q.C.Cell.

When excessive silt content in coarse sand is intimate the Ex.Engineers have started now replying that they are mixing ghaggar sand/stone dust with Badarpur to bring down the silt content within 8%. No such record is maintained at site. It is also observed that little quantity of ghaggar sand/stone dust is kept at site not for use but only to show to the inspecting officers. This is not a healthy practice. If they are actually mixing, the correct proportion should be recorded in the silt content register and produced during inspection. Informations furnished later on shall not be considered.

(S.C. PRASAD)
Chief Engineer (QC)

Copy to:

1. E.M., DDA.
2. All Chief Engineers, DDA.
3. All S.E.s, including Q.C.Cell, DDA.
4. All Ex.Engineers including Q.C.Cell.

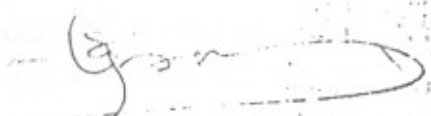
DAVIS DEVELOPMENT ASSOCIATES
QUALITY CONTROL DIV.

No. CE(3) CIO/CE/OC/DDA/2560 Dc. 26.7.89.

CINCLAR HQ. 103

It has come to notice where a driver of C.C. Cell unit park^{ed} the vehicle in his house and the same was stolen. In this regard the circular of Secretary, DDA is very clear. The office vehicle should be parked in the office complex only. This should be followed strictly.

A driver must be having chassis number and engine number with him.


(S.C. Prasad)
Chief Engineer (IC)

Copy to:-

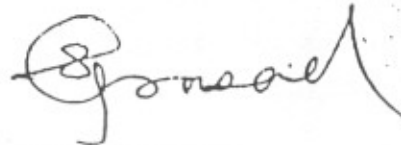
1. S.I. (IC), DDA.
2. All Ex. Engineers, C.C. Cell, DDA.

DEBRI OF ENGINE AUTOMATION
QUALITY CONTROL UNIT

no. CE(3) RC/cir/89/DDH/2891-97 2.10.89

RECEIVED 104

It is reported that in certain cases Ex. Engineers, Quality Control are not signing the slip sealed with the samples collected during inspection in token of proof of collection. This is not correct. The ex. Engineers must sign the slip in proof of collection of sample in his presence and to testify before the inquiry if required at any time. This may please be followed strictly.



(S. J. Prasad)
Chief Engineer (Q)

Copy to:-

1. B. S. (C. G. O.) D. D.
2. All Ex. Engineers, C. C. Unit.

MEMO FOR THE RECORD
SUBJECT: TEST RESULTS

No. CE(3) 001000/3096

On 5.9.59.

105

It has been noted that while communicating the test results of materials to the Ex. Engineers, S.E.(C) mentions the name of the work only in the forwarding letter and not on the copy of test results. It should be ensured that name of the work must be put over the test results before making photo copy of it. Since coding register is with the S.E.(C), he should put the name of the work on the test result under his signature. This should be followed by all the Executive Engineers (C.E.).

(S.E. (C))
Chief Engineer (C)

Copy to:-

All Ex. Engineers (C.E.).

DEIHI DEVELOPMENT AUTHORITY
QUALITY CONTROL CELL

No. CE (B) QC/PDA/3099.

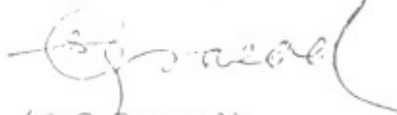
Dt. 7.9.89.

CIRCULAR NO. 106

During surprise inspection on 1.9.89 lot of staff had not come to office upto 9.50 a.m. If during surprise inspection they are found late on more than three occasions, disciplinary action against them shall be initiated.

It is ~~the~~ duty of branch officer to check the attendance of the staff. If on any occasion more than 50% of the staff are found late during checking actions shall also be initiated against the Branch Officer.

The above may please be brought to the notice of all the staff.


(S.C. Prasad)
Chief Engineer (QC)

Copy to:-

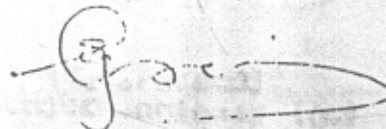
- d/L
1. S.E. (QC).
 2. All Ex. Engineers (QC).
 3. A.E. (HQ).
 4. P.S. to C.E. (QC)

Q 2(3)/8c/008/04 | 311

10.6.9.93.

10/01/01

an committee that comply against
direction, original documents are invariably
used by vigilance units. In view of the
cases & inquiries that are pending that
these are not available. This has been
viewed seriously. I would like to know the
system of maintaining proper files of the
D.C. (H.C.) and the cases from which all the
original case reports of the laboratory are
available with them. For proper to identify
it original case reports are not available
the reasons for the same to be furnished.
In cases where documents are not available
I would ask an independent officer to call
regularly into it and to fix the responsibility
for the same.



(10.6.9.93)
10/01/01

copy to:-

To. Secy (H.C.)

To. All concerned

DELHI DEVELOPMENT AUTHORITY
QUALITY CONTROL CELL

NO. CE (3) CE (LC)/DDA/3261

Dated:- 19-9-89

C I R C U L A R - 108

As a result of large number of inspections done by Quality Control Cell, certain common defects have been noticed in housing work. These are of vital importance for the safety of the building and for the allottee. These defects occur due to ignorance and/or non adherence of the provisions of the specifications. These defects can be avoided by taking certain preventive measures. List of such defects are pointed out below. Preventive measure to avoid the same are also suggested.

1. RCC WORK
DEFECTS:

- (a) Building of concrete resorting to chiseling.
- (b) Less bond length.
- (c) Less cover to reinforcement.
- (d) Use of fine aggregate with more silt content.
- (e) Bad quality of water.
- (f) Weak concrete in some cases.

Preventive Measures:

- (a) Formwork to be checked and approved before allowing concreting. Entry in this regard to be made in site register by JE/AE.
- (b) While recording measurements of reinforcement in
- & (c) bond length to be checked and proper cover blocks to be ensured.
- (d) Quality of stone aggregate and sand to be checked one day before concreting.
- (e) Water to be got tested every 3 month. If it fails, matter to be referred to the Chief Engineer. In Delhi, water at most of the places is alkaline.
- (f) Mixing to be ensured by Boxes of one bag size in Hopper Mixer.

2. FINISHING.
DEFECTS:

- (a) Weak plaster around openings.
- (b) Improper lines and levels of plaster.
- (c) Improper slope in toilet, kitchen, bath and balcony.

Contd...2....

(d) Moulding not provided in chhajja.

Preventive Measures:

- (a) This mostly happens as walls are plastered first. Jambbs and sills are plastered afterwards and no curing is done to it. Hence walls, jambbs and sills all should be plastered together.
- (c) One sample flat should be made first and approved by the EE/SE. The JE and AE should ensure similar workmanship in all the flats. EE should check this fortnightly and SE monthly.
- (c) At the design and NIS stage itself, provision of 15mm tuch should be considered and made clear in the drawings. The slopes and the position of sanitary and water supply fittings should be approved in the sample flat and then further work should proceed.
- (d) In the begining of the external finish work, moulding to chhajja should be ensured. No reduction in rate should be accepted for this.
- (e) External finish to be ensured as per sample flat.

3. Seepage from toilet, Bath & Kitchen.

This is a common defect noticed every where. This happens due to following reasons :-

- (a) Gap between WC pan and the trap.
- (b) Use of constriction type floor trap in bath and kitchen.
- (c) Improper fixing of floor trap.

Preventive measures:

- (a) The depressed portion should be plastered with 1:3 cement mortar and properly bitumen painted alround. Firstly, false laying of pipeline and WC pan should be done by giving temporary packings. The level should be checked and corrected taking into account the final finish level of flooring. Then

DELHI DEVELOPMENT AUTHORITY
QUALITY CONTROL CELL

No.F.C3(QC)/Circular/ 3404

Dt. 3/10/89

CIRCULAR 109

During various inspections, it has been noticed that crust thickness of the road being built up with three layers of stone metal, first layer consolidated thickness of 6 inches with 40-90mm size stone metal, second layer 4½ inches with 40-63mm size stone metal and top layer 3 inches with 20-50mm size stone metal. CPWD specifications and MOT specifications do not provide consolidated thickness of more than 100mm in one layer for 40-90mm size stone metal and 75mm for 40-63mm and 20-50mm size stone metal. This criteria has been kept for proper consolidation. The same is not being followed in DDA. It should be brought to the notice of all the S.Es and E.Es that ^{if}metalling is done in layers of consolidated thickness ^{exceeding} ~~exceeding~~ the above specifications, the work shall be considered as sub-standard.

(S.C. Prasad)
(S.C. PRASAD)
Chief Engineer(QC)

Copy to:-

1. E.M., DDA.
2. All the Chief Engineers.

DELHI DEVELOPMENT AUTHORITY
QUALITY CONTROL CELL

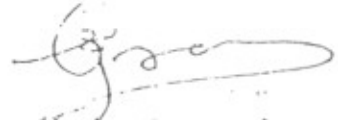
No. 13(94)CE/00/DDA/2646/89 Dt. 19-10-89

PO1 MEMO

In spite of emphasis to improve quality of work, it is still noticed that even primary checks like using proper size of stones, proper filling of concrete cubes, checking quality of coarse sand, use of measuring boxes etc. are not done by the field staff. It is suggested that following category of officers should be held directly responsible for the following:-

1. Using tokries in place of boxes - JE
2. Bad quality of coarse sand - AE
3. For not filling 6 cubes - AE
4. For not ensuring hopper mixer for RCC - EB

& The above may please be considered and necessary instructions issued under intimation to the undersigned.


T.S.C. PRASAD)
Chief Engineer(OC)

All the Chief Engineers.

1. CE (EZ)
2. CE (WZ)
3. CE (NZ)
4. CE (SWZ)
5. CE (SEZ)
6. CE (Reliance)

OFFICE OF THE CHIEF ENGINEER
QUALITY CONTROL CELL
DELHI DEVELOPMENT AUTHORITY
C-2, IInd Floor, Vikas Sedan,
I.N.A., NEW DELHI-23.

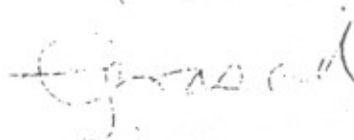
No. CE(3)Q.C/D.D.A/ 1249

Dated:- 25/6/80

C I R C U L A R 110

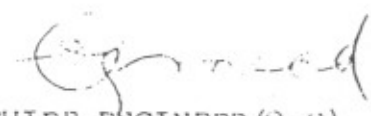
Agreement specifications provide for testing of water supply, sanitary and drainage lines. But lines are seldom tested and no record is maintained in proof of that. There is common complaint of seepage in D.D.A. houses. This affects the building structurally and sometimes there is settlement of foundation also due to leakage from sewer and drain lines. It is enjoined on all the field officers that they should follow strictly the provisions in this regard VIZ para 18.6.3, 19.3.8 19.5.6, 19.6.6, 19.10.3, 20.6.4 and 20.7.4 of C.P.W.D. specifications, 1977 which invariably form part of the agreement. In proof of testing the lines, a testing register should be maintained at site where J.E/A.E should enter the details of testing indicating pressure etc. and this should be test checked by the E.E. Strict instructions, in this regard, should be issued to the Ex. Engineers.

To All the S.Es.


(S.C. PRASAD)
CHIEF ENGINEER (Q.C.)
D.D.A.

Copy to:-

1. V.C.
2. E.M.
3. All the Chief Engineers
4. The S.E(Q.C)
5. All the E.Es. (Q.C).


CHIEF ENGINEER (Q.C.)
D.D.A.

DELHI DEVELOPMENT AUTHORITY
QUALITY CONTROL CELL

NO: CE(3) QC/DDA/90/2289

Dt: 25/10/90

CIRCULAR NO.111

Subject: Provision of ordinary fan hooks
at terrace slabs

It has been observed that fan boxes are still being provided in the terrace slabs. This may cause seepage. To avoid the same ordinary fan hooks should be provided on the terrace slabs. Provision of fan boxes for such slabs should also not be made in the estimate of internal electrical installations. It shall be the responsibility of EE(Civil) to ensure this before casting of roof slabs.

S.C. Prasad
(S.C. PRASAD)
CHIEF ENGINEER(QC)
D.D.A.

Copy to:-

1. E.M., DDA
2. All the Chief Engineers
3. All the SEs
4. All the EEs

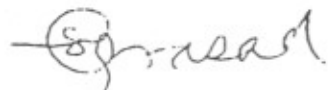
DELHI DEVELOPMENT AUTHORITY
QUALITY CONTROL CELL

No. CE(3) QC/DDA/10/1175

Dated: 7-1-90

M E M O

It is observed that S.Es. are sanctioning reduced rate item statements but not giving certificate on the body of the statement "that this will not affect the work structurally and work is acceptable". This was made clear in this office circular No.102 dated 3.5.1989 but it is not being complied. Again it is made clear that without such certificate, no reduced rate item statement shall be accepted.



(S.C. Prasad)
Chief Engineer (QC)

Copy to :

1. Engineer Member, DDA.
2. All Chief Engineers
3. All S.Es.
4. All E.Es. (QC).

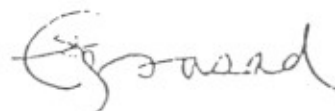
OFFICE OF THE CHIEF ENGINEER
QUALITY CONTROL CELL
DELHI DEVELOPMENT AUTHORITY
C-2, II FLOOR, VIKAS SADAN
NEW DELHI-23

No. CE(3)QC/DDA/90/2519

Dt: 21.11.90

CIRCULAR- 112

Importance of quality and compliance of Quality Control inspection reports were explained by E.M. during Review Meeting on 20.11.90 with all CEs and SEs. It has been decided that wherever RIS is sanctioned by SE, copy of RIS, record entry in MB and information that money against part rates of these items or otherwise available for recovery in next bill shall be sent by EE/SE to Q.C. Cell for closing the paras.



(S.C. PRASAD)
CHIEF ENGINEER (Q.C.)

Copy to:-

1. E.M.
2. All the C.Es
3. All the S.Es
4. Director (Hort.) (North)
5. Director (Hort.) (South)
6. All the E.Es (QC)

OFFICE OF THE CHIEF ENGINEER
QUALITY CONTROL CELL
DELHI DEVELOPMENT AUTHORITY
C-2, II FLOOR, VIKAS SADAN,
NEW DELHI - 110 023.

No.CE(3)QC/90/DDA/2628

Dated.- 6.12.90

C I R C U L A R - 113

The attention of E.Es is drawn to the provisions under para 42 of Section 7 of C&D manual, Vol.II regarding recording and test check of levels. The test check of levels should be carried out independently by each officer i.e. A.E & E.E and reading should be recorded in the red ink against the old levels. Inspite of persuasions from Q.C. Cell this procedure is still not being followed in most of the Divisions. Levels are being recorded jointly by J.E, A.E & E.E which does not amount to any test check. In future, if above code provision is not followed, it shall be considered as a serious lapse.

It has also come to notice that numbering of level books are given yearwise which is unwarranted. Serial nos. should be continuous from the very beginning. If it is maintained yearwise, any one can add new levels books in back date. Such lapse should not come to notice in future.


(S.C. PRASAD)
CHIEF ENGINEER (Q.C.)

Copy to :-

1. All C.Es.
2. All S.Es with spare copy for the E.Es. *① SE/Elect.-I*
3. P.O. to E.M. *+ S Coker*

85

CHIEF ENGINEER
QUALITY CONTROL CELL
DELHI DEVELOPMENT AUTHORITY
.....
dated - 6.12.81

CIRCULAR No. 114

No. CE(3)RC(91/cir/DDA/54-60 dated: 10-1-91

Circular No. 42 issued vide this office letter
No. CE/1/CC/82/Circular/503 dated 10.8.1983 is
herby withdrawn.

(S.C. Prasad)
Chief Engineer (CC)

Copy to :

1. S.E. (CC).
2. All the Executive Engineers (CC).

OFFICE OF THE CHIEF ENGINEER
QUALITY CONTROL CELL
DELHI DEVELOPMENT AUTHORITY
VIKAS SADAN, NEW DELHI

NO. CE(3)-C/DDA/cor/91/363

Dt. 14-2-91

CIRCULAR No.115

Dampness and Seepage.

Seepage and dampness are even now seen not only causing problems to the allottees but also structurally affecting the building. Attention of the E.Es is drawn to C.E(QC) Circular No.89 dated 6.4.87 in which it was stated that one floor trap should not discharge over the other floor trap. But even now it is seen that wherever there are more than one floor traps in one toilet, one is discharging over the other and with the result, the top of floor traps are fixed much below the floor level leading to permanent dampness. IS-5329 provides that all waste pipes should discharge separately connected to a common pipe outside the wall leading to the stack. This provision should be kept in view while planning and executing internal sanitary works.

2. Another source of seepage is from faulty joint of WC pan. In European type WC pan, it should be ensured that pipe socket is projected above the floor. In case of Indian type WC, it should be ensured that outlet is properly seated over the trap and joints properly filled in. In this regard, E.E's Circular 289 dated 21.3.90 may be complied with which provides that Asstt.Engineer shall check 50% of the joints and E.E. shall check as many as possible. No flooring shall be laid till the joint is properly checked. To comply with this, a proper record is to be kept at site.

3. C.E(QC)Circular-110 dated 25.6.90 for testing of sanitary and water supply lines should be followed without exception.

4. C.E.(QC) Circular-88 dated 20.8.86 for prevention of seepage from roof should also be invariably followed.

The above guidelines may be strictly followed.

S.C. Prasad
(S.C. PRASAD)
CHIEF ENGINEER (QC)

To all the EEs(Civil)

Copy to -

1. V.C.

2. E.M.

3. All the Chief Engineers,
4. All the JEs.

- 8 / 67 C

S.C. Prasad

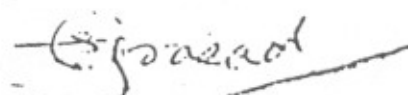
OFFICE OF THE CHIEF ENGINEER
QUALITY CONTROL CELL
DELHI DEVELOPMENT AUTHORITY
VIKAS SADAN : NEW DELHI-23.

No. F. CE(3) AC/DDA/745

Dated:- 10-4-91

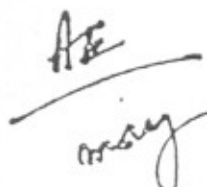
C I R C U L A R - 116

It is still observed that S.Es and E.Es are replying that paras should be dropped since no complaint received from allottees in last 2/3 years. Such reply shall not be entertained in future as structural defects can occur even after 10 years. The S.E. should clearly state in his reply that he is satisfied with the rectifications done and he considers the work structurally sound.


(S.C. PRASAD)
CHIEF ENGINEER (Q.C.)

Copy to:-

1. All the S.Es (Civil).
2. All the E.Es (Civil)
3. All the E.Es (C.C).

 note for
10/4



BHABHA DEVELOPMENT AUTHORITY
QUALITY CONTROL CELL

No. CE(3) QC/DDA/Circular/51/2/13

Dated:- 16/10/91

C I R C U L A R - 1 1 7

Complaints regarding seepage from roof are still being received in plenty. It is emphasised that no reduction in rate should be accepted by S.E for any substandard roof work and wherever defects found, it should be re-done. The normal defects in the roof seen are as below:-

1. Wider and weaker mortar joints in tiles.
2. Undulations in roof.
3. Improper slope.
4. Less chase for gola.
5. Gap between gola and roof tile.
6. Less thickness of PVC Sheet.
7. Sheet and concrete of khurra not taken upto outer edge of the parapet wall.
8. C.C. flooring below water tank not done.
9. Tiles not overlapping khurra and flooring below water tank.
10. Rain water outlet fixed above khurra level.
11. Weak cement plaster in parapet wall.
12. Top of parapet wall not finished inclined towards roof.

Proper records of checking W.C. joints as per S.M. Circular 289 should also be maintained at site.

Handwritten signature

60/6
2/12/91

DELHI DEVELOPMENT AUTHORITY
OFFICE OF THE CHIEF ENGINEER
QUALITY CONTROL CELL

No.F.CE(3)QC/DDA/Cir./91/2428

Dated:- 29.11.91.

C I R C U L A R No. 118

It has been observed that centring and shuttering for main R.C.C. work like slab and beams is not approved by A.E/E.E with the result major honey-combing, sagging undulations, naked reinforcement etc. are seen in RCC requiring chipping which is not desirable; The reinforcement gets disturbed and exposed. It is enjoined on all E.Es to approve centring and shuttering of major R.C.C work and to keep documentary evidence of the same at site.

It is seen that test check of measurement of reinforcement of one slab is done by E.Es and they leave the balance 9 slabs to be checked by J.E/A.E only as he has to test check only 10%. This is not advisable. The test check should be more or less spread over all the works.

Quarterly Progress Report is not being received for works costing more than Rs.10 lakhs for Civil Works and costing more than Rs.1 lakh for Elect. Works from all the E.Es. For Q.C.Cell, this is very important document on the basis of which inspection is planned. They are also sometimes not endorsing the copy of the award letters of Civil works costing more than Rs.2 lakhs and Elect. Works costing more than Rs.1 lakh to Q.C.Cell. They are requested to send the above meticulously.

In cement register, a mention should be made of type of cement received i.e. OPC or PPC.

(S.C. PRASAD)
CHIEF ENGINEER (Q.C.)
D.D.A.

Copy to:-

1. All the C.Es.

DELHI DEVELOPMENT AUTHORITY
QUALITY CONTROL CELL.

No. CF(3)QC/93/DDA/641

Dated 23.4.93

C I R C U L A R NO. 119.

Sub : Steel Windows, Ventilators etc.

In the Housing projects being constructed by D.D.A., windows and ventilators fabricated out of steel rolled sections are being provided. It is noticed that many a time such windows and ventilators do not function properly.

As per prevalent practice in DDA, it is not mandatory that the steel windows etc. should be factory made. The result is that frequently these windows are fabricated at site of work and do not fully conform to required specifications, dimensions and finish. It has been experienced that the factory manufactured windows alone are of requisite quality. The reasons are;

- a) The factories are equipped with proper tools and equipments and workers get skilled in manufacturing steel windows and like items.
- b) Factories have facilities necessary to produce steel windows to true geometrical dimensions and required finish.
- c) Suitable flash butt welding and proper grinding arrangements required as per specifications are available with the factories, which are normally not practicable at site.

Since the windows are manufactured in factories under controlled conditions, it is considered appropriate to use such structural steel work from suitable factories specialising in such jobs. This may be ensured by approving factory made samples within the powers of the Engineer-in-Charge. It is desirable that suitable provision is specifically made in the new contracts regarding factory made windows etc.

Commonly observed defects in items of steel work in windows, ventilators etc. notified vide Circular No. 97 dated 19.08.1988 (Copy enclosed) may also be taken care of alongwith up-to-date correction slips.

Deepak Narayan 24/4/93
(DEEPAK NARAYAN)
CHIEF ENGINEER(QC)

Copy to :-

1: Vice-Chairman, DDA.

Sub :- STEEL DOORS AND WINDOWS.

The following defects have been commonly observed in the item of steel work for door & windows during the inspections by Quality Control Cell. The same have been reviewed with C.P.W.D. specification Vol 1, 1977 as applicable to D.D./ works and its relevant para are mentioned against each below :--

1. The Brass striking plates are either not fixed at all or M.S. plates are used instead (Para 10.10.2.3).
2. The fixing lugs are generally not provided at the top and bottom. They do not conform to the relevant specifications and the lugs/screws are not located at the standard distances prescribed in the I.S. 1038 of 1983 as indicated in fig. 29 therein. The lugs/screw/dash fasteners/rawl plugs are not fixed at top and bottom (Figure 15 of specifications 1977 Vol. 1).
3. Wide gaps between steel window and brick work/RCC work are noticed (C.P.W.D.) specification 1977 Volume 1 para 10.10.5.2 Specifies that gap should not be more than 12.5 mm wide if steel spacers or templates is used for door/window opening at the time of B.W. such defects could be avoided.
4. Cement concrete block for hold fasts are of size lesser than stipulated i.e. 15x10x10 cm. The lugs are invariably not fixed in the centre of the cement concrete block.
5. As per C.P.W.D. specification 1977 (para 10.10.2.3.) the steel hinges are to be welded to the frame after cutting a slot in the frame and inserting the hinge therein. However, the hinges are generally being welded directly on the frames without cutting any slot.
6. The hinge pins have to be made of electro galvanised steel (para 10.10.2.3. b) whereas these are found provided simply of mild steel affecting the movement of shutters.
7. The window frames are to be applied with a coat of approved primer (Zinc chromate yellow) before erection and after

proper cleaning and some times after fixing in position leaving the inaccessible portion without any primer.

8. C.P.W.D. specification 1977 volume. I (stipulated in D.D.A. Agreements) Para 10.10 specifies the use of window section in frame of weight 1.532 kg./m. It has been observed that window sections in frames, though of I.S.I. mark, are less in weight and require cost adjustment while accepting such under weight sections.
9. For steel window of composite patterns, having ventilators of fixed glazing above the openable portion, as per C.P.W.D. specification 1977 volume-I para 10.10.2.5 a horizontal transome coupling bar (K-12B) is required to be provided between two F-7 B Sections, but instead just a mullion (K-4B) is used horizontally replacing the 2 No. F-7B and K-12B sections.
Similarly the coupling section is not being provided at the junction of openable door on one side and fixed glazing or windows on the other in the composite section.
10. The corners of fixed and openable frames are required to be mitred and welded to achieve a solid fused welded joints either by "flash butt welding" or any other suitable method. These have also to be properly ground. It has been observed that welding is not done all along the place of meeting the members but only tack welding is done.
11. Frames are some times deformed/damaged by resting scaffolding members and hinges are jammed by mortar droppings, resulting in improper or inadequate opening/closing of shutters which is one of the major irritants to the allottees. This defect occurs mainly due to not following the precautions as provided in para 10.10.6 of C.P.W.D. specifications 1977 Vol I. The fittings and hinges have to be protected by alkathene sheets during execution, as provided in this para.
12. The peg stay is required to be fixed in proper relation to the peg & the hinge. Proper care is not taken and this affects the operation of the window.
The field staff should ensure that such defects are not permitted in their works and wherever noticed, rectifications are carried out immediately.

OFFICE OF THE CHIEF ENGINEER(QC)
DELHI DEVELOPMENT AUTHORITY.

NO. CE(3)QC/Circular/DDA/958

Dated :- 22/6/93

CIRCULAR NO. 120

Sub :- Testing of water supply, Sanitary and drainage
pipe installations.

It has been observed in several cases that testing of water supply line, sanitary stacks and sewer lines are not being done in conformity with the relevant specifications. This leads to complaints of inefficient water supply and sanitary system, drainage arrangements alongwith problem of seepage in D.D.A. houses. The contractor is supposed to deliver fully functional and tested work as per specifications, so not getting the lines tested would result in over payment to the contractor.

It is enjoined upon all field officers that they should strictly follow relevant provisions of testing as contained in various paras of C.P.W.D. Specifications, 1977, Vol. II briefly described below :-

18.6.3 All sand cast iron/cast iron (spun) pipes and fittings including joints shall be tested by smoke test to the satisfaction of the Engineer-in-charge and left in working order after completion.

Smoke shall be pumped into pipes at the lowest end from a smoke machine. The material usually burnt in it is greasy cotton waste which gives out pungent smoke. This is easily detectable by sight as well as by smell if there is leak at any point of the drain.

19.3.8 This pertains to hydraulic test in water supply lines. After a new pipe has been laid, jointed and back filled (or any valved section thereof), it shall be subjected to the following two tests.

- a) Pressure test at a pressure of at least double the maximum working pressure, pipe and joints shall be absolutely water tight under the test.
- b) Leakage test (to be conducted after satisfactory completion of the pressure test) at a pressure to be specified by the authority for a duration of two hours.

19.5.6 This pertains to C.I. pipes and fittings (external work). Pressure Test and Leakage Test are to be conducted as per procedure given in Appendix F in CPWD Specifications, Vol. II, 1977.

19.6.6 This pertains to testing of G.I. pipes (external work). The hydraulic test is to be conducted at a pressure of 6 Kg./Cm.². After laying and jointing, the pipes and fittings shall be inspected under working conditions of pressure and flow. Any joint found leaking shall be redone and all leaking pipes removed and replaced without extra cost.

19.10.3 This pertains to making connection of G.I. Distribution Branch with G.I. main. The pipes and fittings after they are laid shall be tested to hydraulic pressure of 6 Kg./Cm².

20.6.4 This pertains to testing of cement concrete pipes and specials in drainage work. For pressure pipes, the completed pipe line shall be tested for pressure not less than the maximum pipe line operating pressure plus the calculated surge pressure, but in no case exceeding the hydraulic test pressure.

For non-pressure pipes, the joints shall be tested as per procedure laid down under para 20.7.4 of C.P.W.D. specifications, Vol. II, 1977.

20.7.4 This pertains to testing of joints of stone-ware pipes. Stone-ware pipes used for sewer shall be subjected to a test pressure of 2.5m head of water at the highest point of the section under test. The test shall be carried out by suitably plugging the lowest end of the drain and the ends of the connection if any and filling the system with water. A knuckle bend shall be temporarily jointed in at the top end and a sufficient length of vertical pipe jointed to it to provide required test head.

It should be ensured by the field staff that the contractor arranges water and other necessary materials, labour machinery etc. required for testing at an appropriate time so that testing of the lines are completed well before handing over of buildings. A register keeping testing details should also be maintained at site in support of testing having been conducted satisfactorily in respect of all lines. AEs/JEs should fill the details of testing in the register and these should at least be partly test checked by the EEs during inspection of the work.

It is necessary to with-hold adequate sums of money from the contractors bills till complete testing of water supply, sanitary and drainage lines are completed so that in cases where original contractor fails to do the testing, this testing could be got done by an independent agency at risk and cost of the original contractor.

Deepak Narayan 21/6/93
(DEEPAK NARAYAN)
CHIEF ENGINEER(QC)

Copy of :-

1. V.C.
2. E.M.
3. All CEs.
4. All SEs.
5. All EEs.

OFFICE OF THE CHIEF ENGINEER (QC)
DELHI DEVELOPMENT AUTHORITY

No. CE(3)QC/Circular/DDA/1039

Dated :

CIRCULAR No. 121

A meeting was held with Sh. S.K. Sharma, Director (Marks) BIS., B.S. Zafar Marg, (Tel. No. 3317401) to explore ways and means to ensure supply of materials of appropriate quality with ISI certification by DDA store/sites.

It has been decided consequently that before accepting the material the following checks are to be exercised by the Executive Engineer (Field/DDA store).

1. Latest renewal of the licence by B.I.S. of the supplier should be examined.

(Note: The Licence is renewed by BIS every year).

2. Certificate from the manufacture that their marking has not been placed under stoppage by B.I.S. should be taken.

3. For steel sections, the licence is issued specifying the particular section. It is to be verified by the Ex. Engineer that the particular sections received at site are duly included in the licence issued by B.I.S.

4. Director (MM)/E.I.'s shall inform to the Director (Marks), BIS, whose address is given above about the receipt of the ISI marked materials in DDA Central Stores/sites for major works. BIS shall thereafter collect samples to be tested free of cost by BIS with a view to ensure quality of ISI Marked/product.

5. The Ex. Engineer (store/site) will maintain a proper record of the documents regarding ISI certification in respect of all material brought to site by contractors.

6. It is pertinent to mention that the material from the firms whose latest renewal is not made or certificate of marking is under stoppage, should not be accepted.

7. The latest list of the licences of ISI materials can be had from Director (Technical Information) B.I.S., B.S. Zafar Marg, New Delhi. All CE's may collect this list from ISI and keep their respective staff informed.

Copy to:-

CHIEF ENGINEER(QC)/DDA

1. Vice-Chairman,
2. E.M. DDA

DELHI DEVELOPMENT AUTHORITY
QUALITY CONTROL CELL

No.CE(QC/3/93/DDA/1571

Dated: 01/10/93

C O R R I G E N D U M

Sub: Acceptance of Sub Standard work/ Reduction
Item Statements.

The words " on behalf of the Chairman, DDA" mentioned in last para of Circular No.122 issued vide this office No.CE(3)QC/93/DDA/1188 dated 28.7.1993, may be read as "on behalf of Delhi Development Authority." This is in confirmity with instructions issued vide Standing Instruction No. 350 from the office of E.M., D.D.A.

Deepak Narayan 30/9/93
(DEEPAK NARAYAN)
CHIEF ENGINEER(QC)

Copy to:-

1. V.C.
2. E.M.
3. All CEs/SEs/EEs.

DELHI DEVELOPMENT AUTHORITY
QUALITY CONTROL CELL. I

No. CE(3)QC/93/DDA/1188

Dated 28.7.93.

CIRCULAR NO-122

Subject: Acceptance of Sub-standard Work/Reduction Item Statements.

In order to avoid situation where acceptance of substandard work with reduction in rates becomes necessary, it is essential that the defects are noticed by departmental officers during the progress of the work and timely action taken to get these rectified then and there rather than overlooking the same and proposing to accept such work at reduced rates later. A notice for the defective work should be given to the contractor in writing during the progress of the work asking him to rectify the defects and in case of failure on the part of the contractor, the defects should be got rectified by employing skilled labourers departmentally. Proper supervision alone can prevent occurrence of defects which will be difficult to rectify later on like hollow vertical joints in bricks masonry, improper lines and levels in structure and plaster, lesser size and weight of fittings, improper finish of floors, structural steelwork in windows and ventilators, etc.

It will be the duty of the field staff particularly AEs/JEs to point out such defects in the work in time during the progress of the work. These defects should also be brought to the notice of the Ex. Engineer immediately so that he may take timely action to issue notices to the contractor either to rectify the defects or get the work dismantled and redone where feasible. EE/SE shall also inspect works from quality control viewpoint at least once in three months and issue written inspection notes regarding their findings and take appropriate action on defects noticed. Frequent inspections of works by EE/SE have also been emphasised vide E.M. Circular No. 213 dt. 27.11.87. Reduction Item statements shall not merely be as per Q.C. observations but also as per detailed inspections of officers at different levels. In the case of acceptance of sub-standard work, Superintending Engineer is the Competent Authority who will also determine the reduced rates thereof.

It is incumbent on the Executive Engineer that after getting the approval of substandard work by the competent authority, he should write a letter to the contractor on behalf of the Chairman, DDA regarding acceptance of the same at the provisional rates and should also obtain the consent of the contractor for the same. Reduction Item Statement should be initiated promptly and amount recovered from running bills. Sufficient amount should be withheld in anticipation of sanction of Reduction Item Statement. It is also imperative that superintending Engineer examines the proposals for sanction of reduction of rates sent by the Ex. Engineer properly including suitability of rate of reduction and its quantum and ensure that formalities for acceptance of sub-standard work are appropriately followed.

Deepak Narayan 28/7/93

(DEEPAK NARAYAN)
CHIEF ENGINEER(QC)

Copy to :-

1. V.C.
2. E.M.
3. All C Es/SEs/EEs.

OFFICE OF THE CHIEF ENGINEER(QC)
DELHI DEVELOPMENT AUTHORITY.

NO. CE(3)93/QC/DDA/ 1377

Dated 26.8.93

CIRCULAR NO. 123

Subject: QUALITY ASSURANCE IN D.D.A. WORKS.

Quality Assurance methodology has become increasingly important for construction industry to check deterioration of quality. The handbook for D.D.A. Site Engineers for effecting quality control at site was accordingly issued up to Junior Engineers level. But somehow the desired effect on the quality of construction is yet to be seen.

The need for proper quality control has been emphasised by the Hon'ble L.G. in no uncertain terms as contained in his directions as under :

" THERE IS NO ROOM FOR COMPROMISE IN CASES
OF SUB-STANDARD WORK, MATERIALS ETC."

All CEs/SEs/Es are requested to ensure implementation of above instructions scrupulously in all construction works, both for acceptance criterion of materials and quality of construction.

All the engineers upto the level of JEs and the builders engaged in construction may be apprised of directions of Hon'ble L.G.

Deepak Narayan 26/8/93
(DEEPAK NARAYAN)
CHIEF ENGINEER(QC).

Copy to :-

1. V.C.
2. E.M.
3. All CEs/SEs/Es.

DELHI DEVELOPMENT AUTHORITY

No. F-CE(3)94/QC/DDA/ 46

14/1/94

CIRCULAR NO. 124

Subject: Extension of time in DDA contracts.

The attention of Executive Engineers and Superintending Engineers is drawn to Section 33 of CPWD Manual, Vol. II regarding interpretation of Clause 2 of the contract.

During inspections it has been observed that most of the construction works get abnormally delayed for some reason or the other. It is also noticed that:-

- (a) The required notices for non commencement, slow progress and non observance of time allowed for completion of the work are not issued to the contractors at the appropriate time.
- (b) The bills are also finalised in some cases without getting the extension of time case finalised and also without withholding sufficient amount for imposition of levy under Clause '2' resulting into over payment and consequent loss to the department.
- (c) There is inadequate monitoring of requirement of cement and steel at site specially at EE/SE level.

It is, therefore, enjoined upon all the Executive Engineer and Superintending Engineers to monitor and ensure progress commensurate with stipulated time an contract during exection of work. The Engineer in charge shall issue Registered A.D. notices to the contractor at the appropriate stage for non commencement, slow progress, and in case when the contractor fails to complete:-

- (i) One eighth of whole work before the fourth of whole time has elapsed.
- (ii) Three eighth of work before one half of such time has elapsed.
- (iii) Three fourth of work before three fourth of such time has elapsed.

Extension of time case should be processed both at stage (ii) & (iii) in case work does not look likely to be getting completed within stipulated time, and extension of time granted upto expected time of completion with or without levy of compensation as the case may be.

Since under Clause '2' of the contract S.E. alone is competent to levy compensation, it is expected of S.E.'s to keep a watch on the non commencement, slow performance or delay in the completion of the work and take appropriate action to get removed any hinderances if there on the part of the Department. Superintending Engineers shall take timely action for issue of notice under Registered A.D. to the contractor as given in Annexure-II of Section 33 of C.P.W.D. Manual Vol. II.

In case of specialised jobs, a mutually agreed time schedule prior to commencement of the work shall be followed, and monitored by SE/EE.

At every stage till extension of time case is finalised adequate amount in lieu of probable levy of compensation shall be withheld from the contractor's bill, commensurate with the progress of the work.

While finalising the bill of the contractor it shall be ensured that the extension of time cases get finalised so that the full amount of the levy if imposed, is recovered in time. A close watch shall have to be kept by the Executive Engineer on the recoveries to be effected so that the Department is not put to loss at a later date.

Deepak Narayan 17/1/94
(DEEPAK NARAYAN)

CHIEF ENGINEER (QC)

Copy to:-

1. VC, DDA
2. EM, DDA
3. All Chief Engineers
4. All S.E.s/ Director (Horticulture)
5. All Executive Engineers.

OFFICE OF THE CHIEF ENGINEER (QC)
DELHI DEVELOPMENT AUTHORITY

No. CE(3)94/QC/DDA/114

Dated: 25/1/94

CIRCULAR 125

It has been noticed during the inspection of works by the undersigned that instructions contained for quality assurance in the 'HANDBOOK FOR DDA SITE ENGINEERS' are not being implemented adequately resulting in sub-standard work.

It is, therefore enjoined upon all concerned field staff to keep this book handy with them at site of work and implement the instructions meticulously for achieving good quality work.

All contractors carrying out work of more than Rs. 5 lac value should be asked to possess the quality control Handbook for DDA site engineers for quality control measures.

Deepak Narayan 24/1
(DEEPAK NARAYAN)

CHIEF ENGINEER (QC)/DDA

Copy to:

1. Vice-Chairman, DDA;
2. E.M., DDA;
3. All CRs/SEs/EEs

CHIEF ENGINEER (QC)/DDA