RAJSHREE CONSOLIDATED
CONSULTING PRIVATE LIMITED

No.101, Shakun Elegance, MBS Highway, Kota - 324005
Rajasthan, India

+91 9351715093 | +91 9116634040

rcc.1ho@gmail.com | info@rccpl.org

PROJECT : ICICI BANK ICMC BRANCH, BHOPAL

CLIENT : ICICI BANK LTD.

AUDIT REPORT

PART 1

REF. RCCPL - ICICI BANK ICMC BRANCH, BHOPAL / ICICI BANK LTD, I Bhopal Parmalli Wallac, Hoshangabad Road, 4/5/6 Quality Globus - 462011, (MP) / AR - 039

DATE - 2023-01-13

PROJECT: ICICI BANK ICMC BRANCH, BHOPAL

CLIENT: ICICI BANK LTD.

While visiting the site (ICMC, BHOPAL), we observed a lot of points on various aspects as listed in the attached observation sheet in detail and submitted herewith our views/opinion in brief & in elaborated form with visual aids (where ever necessary) to M/S ICICI Bank Ltd, for their needful. We feel that this report will help ICICI BANK to take necessary Corrective/Preventive measures timely, and where ever required take appropriate decisions on the **relocation**, remodeling, or necessary rectification works, etc.

At most of the branches/audit locations, the problems are observed due to bad workmanship, poor plumbing connections & inadequate technical supervision at the time of construction. Basic construction norms are ignored. This is an old building.

This structure audit was done around 20 months back & therefore this regeneration of report from the available data may give some variance with the earlier submitted report with the currently being regenerated report on request from ICICI Bank. However, earlier the bank desired tests were not conducted since there was no requirement of these tests at that time (January, 23) from bank side.

Major problems in the building were observed due to improper/incorrect drainage system for soil waste & rain water plumbing system. Things were not done technically correct.

BUILDING TITLE: RENTED*

MAJOR OBSERVATION & ANALYSIS:

1. In the left hand side of the ICMC main building in the outer area the chambers & plumbing work done is not correct as needed. The chambers are made on the ground in place of as desired under neath and hence these chambers are causing leakages/seepage through the joint between chamber walls and the floor below. This water continiously round the clock spreads on the areas of building wall vicinity, which further allows this water to enter into building wall & floor joint and causes seepages in the basement. Excessive seepage is causing HAVOC in the basement vault & vault corridor areas as per pics in observation sheet.
2. In the rear & left side a planter type structure was observed all along the length of the building. This planter type area was full of debris/garbage/other waste materials. The seepage water from the chambers, when gets accumulated here then this area remains wet/moist for almost full time and water percolates continiously in the building wall to cause huge/heavy seepages in the basement.
3. In some areas near the plants diagonal cracks were also observed in the building wall. The diagonal cracks were normally observed as settlement cracks. These cracks needs to be viewed seriously on root cause analysis & CA/PA shall be carried out.
4. Inside the vault room & outer corridor area is badly affected with huge/heavy seepage from outer wall of corridor. In side the vault room the iron items like lockers and safes/vaults are getting rusted due to continious moist/wet enviornment in side the vault room. When customer enters into the vault room for locker operation will definitely get bad impression about the bank.
5. In the corridor out side the vault room seepages are upto the extent of seepage water observed flowing in the corridor. These are not normal conditions. This is also rusting the steel inside the RCC components and ultimately reducing the strength of building. Cement plaster on outer wall of vault corridor was observed almost lost bonding between the masonry & plaster and with in the plaster itself. On touching the surface the plaster material is falling down.
6. Termite impressions were observed in the corridor arround vault room. It is to be viewed very seriously, because termite can make it's way to vault room also and there are chances of spoiling of currency notes.

7. The plumbing work for rain water down take pipes & other plumbing pipes were observed badly damamged causing leakages & holes made in chhajjas or balcony for these pipes were not closed/packed properly at the same time these piping systems observed were not attended for a long time. This has resulted in vegetation growth and existing plaster disintegration. In some places, cracks are also developed.
8. The rainwater & other area plumbing system was found mostly disrupted and unattended for a long time for the building. This has caused vegetation growth in planter type area and disintegration of the outer plaster in some areas.
9. Outside the building the latakan from above balcony/RCC pardi was observed cracking. This means rain or other water is entering to this pardi and steel has started rusting. As the corrective measures delay these cracks will increase further rusting will increase and ultimately this RCC component will loose the strength.
10. Inside the building, a lot of places walls & ceilings were observed with huge seepages, cracks & hollow sounds on plasters. All this is happening mostly due to water seepages and spoiling the painting/putty work as well.
11. The epoxy grouting was not observed in the toilets & pabtry areas.
12. A timely & regularly proper house keepig was observed not done outside in the left side maximum seepages area & in planter type structure area, which is causing the all seepages problems in the basement.
13. The flooring was observed done with tiles. In fact for the heavy duty areas flooring should be of harder material like Kota Stone/Trimix/Ironite Flooring ETC.

RECOMMENDATION:

1. OBSERVATIONS & ANALYSIS POINTS IN LINE WITH THE OBSERVATION POINTS IN THE OBSERVATION SHEET SHALL BE READ & UNDERSTOOD PROPERLY/CAREFULLY TO DECIDE THE ACTION PLAN FOR RECTIFICATION.
2. IT IS ONLY OUR ADVISE THAT ALL THE VAULTS/LOCKERS/SAFES SHALL BE LIFTED UP BY CONSTRUCTING A LONGITUDINAL PLATFORM ON THE VAULT ROOM FLOOR KEEPING THE HEIGHT CONSTRAINT IN MIND BY ARROUND 2'.
3. A LOT OF RECTIFICATION WORK IS NEEDED IN THE BUILDING AS MENTIONED IN THE BELOW LISTED POINTS. SO IF THE BANK IS NOT WILLING TO "**RELOCATE**" THEN THESE CORRECTIONS SHALL BE CARRIED OUT ON SOS BASIS.
4. THE ENTIRE NETWORK OF PLUMBING PIPES (ALL TYPES) & CHAMBERS OUT SIDE THE BUILDING IN OUTER AREA NEEDS TO BE SET RIGHT SYSTEMATICALLY & CORRECTLY. CHAMBERS SHALL BE MADE BELOW THE FLOOR LEVEL & SLIGHTLY AWAY FROM BUILDING WALLS. ALL PLUMBING PIPES NEED TO BE KEPT 2" AWAY FROM WALL SURFACE.
5. IT IS ADVISED TO MAKE A WELL DESIGNED WELL PLANNED SEPTIC TANK AWAY FROM BUILDING WALL BUT NEAR BOUNDARY WALL UNDERNEATH THE OPEN AREA FLOOR. AND ALL SOIL WASTE PIPES JOINING IN ONE CHAMBER SHALL BE CONNECTED TO SEPTIC TANK. AND ALL EXISTING CHAMBERS ABOVE THE GROUND LEVEL & PIPING ABOVE THE GROUND LEVEL SHALL BE REMOVED. THE FLOOR & BUILDING WALL JOINT SHOULD BE COVERED WITH PLINTH PROTECTION (SLOPED OUTSIDE) & KEPT ALWAYS DRY.
6. THE ENTIRE AFFECTED EXTERIOR WALL SURFACE PLASTER IS ADVISED TO BE SCRAPPED OUT (THE OLD PLASTER MATERIAL) FOR REDOING WITH NEW & RMP MATERIAL. SIMILARY THE ENTIRE AFFECTED INTERIOR CEMENT PLASTER ALSO SHALL BE SCRAPPED OUT FOR REDONE WITH RMP MATERIAL.
7. WHEREVER NEEDED THE CRACKS SHALL BE TREATED USING THE CRACK THERAPY AS PER THE SUGGESTED METHODOLOGY.
8. EPOXY GROUTING IN THE TOILET WALLS/FLOOR TILING IS ADVISED.
9. FLOORING IN VAULT ROOM, CORRIDOR & OTHER HEAVY DUTY AREAS ARE ADVISED TO BE DONE WITH HARDER MATERIAL LIKE KOTA STONE/TRIMX(V D FLOORING)/HARD TILING/IRONITE FLOORING ETC.

10. ATT (ANTITERMITE TREATMENT) NEEDS TO BE DONE REGULARY WITH A DOCUMENTED GURANTEE FROM VENDOR.

PREVENTIVE MEASURES:

Following preventive measures are recommended to reduce the threat to structural stability and save the cost of maintenance & improve the quality of work in the future, where relocation is not planned.

1. Standardizing the Type of Maintenance Related Problems & Solutions for a better & quick understanding of IFMs & Vendors.

2. Making an Operation Manual with the help of Industry Expert Designed Methodologies, Guide Lines & Check Lists, etc.

3. Clear Guide Lines on UGWT & OHWT Connections & Other Plumbing Work including Rain Water Down Take Piping System.

4. Maintenance Check List & Monitoring of House Keeping Staff's Work more attentively & on a daily basis.

5. Annually one Lecture on Maintenance Related Problems & Solutions by Industry Experts for IFMs & Vendors.

6. Generating a Record of "As Built Building & Services Drawings" for all Branches, ROs, etc. for future reference.

7. Once in a 3 years building audit is advised to reassure the building condition is good.

***CORRECTIVE MEASURES*:**

Following corrective measures are recommended to reduce the risk & in the view of safety of staffs working there, where relocation is not planned.

1. Scrapping out of the entire external & internal affected surface plaster of walls for redone with RMP plaster material is advised.
2. The entire open area outside the building in left & rear side shall be cleaned removing all the structures made above ground near the building wall including the chambers & concrete covered plumbing lines to make building wall vicinity area neat, clean & dry for full time.
3. Cracks wherever developed are required to be treated using the prescribed crack therapy as per the methodology suggested.
4. Timely ATT (Anti termite treatment) shall be done regularly with documented guarantee from vendor.
5. It is advised to read and understood all the observation points carefully and take up the rectification work accordingly, if relocation is not opted.
6. A septic tank is advised near the boundary wall underneath the floor with proper soil waste connections.

***SPECIALIZED MATERIALS SUGGESTED*:**

1. Sika Rustoff - 100 (Rust Remover)
2. Sikatop Armatec - 108 Plus (Anti Corrosive Coating)

3. Sikadur - 32 LP (Structural Bonding)
4. Sika - Monotop 122 F (PMM - Polymer Modified Mortar)
5. RMP (Ready Mix Plaster) Materials.
6. Epoxy Grouting Material.
7. Cement.
8. Sand.
9. Concrete.

NOTE:- If any help is needed in getting these materials, we may be contacted. The above materials are prescribed for reference only, however, other companies' similar results-giving materials can also be used.

***METHODOLOGY*:**

RCC MEMBERS STRUCTURAL REPAIR (REFURBISHMENT) | CRACK THERAPY A (FOR PUTTY & PLASTER LEVEL CRACKS) | EPOXY GROUTING | RAINWATER DOWN TAKE PIPES PLANNING | RMP PLASTER TREATMENT |

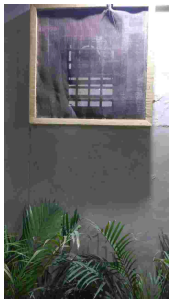
Note:- * Building Title taken as rented may kindly be cross verified/checked.

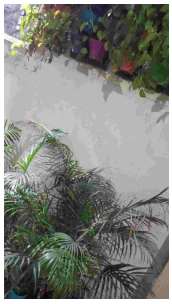
PART 2

PROJECT OBSERVATION SHEETS

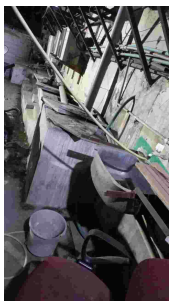
PROJECT: ICMC BRANCH CLIENT: ICICI BANK LTD.

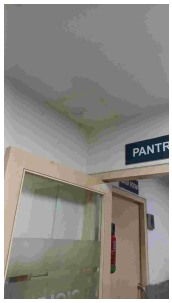
AUDIT OBSERVATION SHEET					
Reference / Rev. No			OBS 23	DATED	2023-01-13
S.No.	OBSERVATION POINTS	DATE	CORRECTIVE / PREVENTIVE MEASURES SUGGESTED	PHOTOGRAPHS	STATUS (For Client Only)
1	This is seepage was observed in the ceiling of washroom area & this is most likely from floor above.	2023-01-13	It is advised that first the water source is to be closed and then scrapping out of entire affected area plaster for redoing with RMP material is advised.		

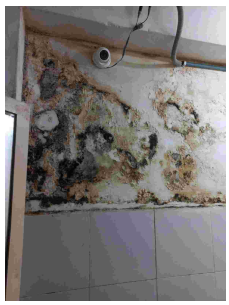
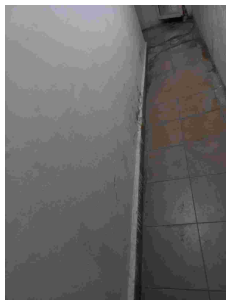
2	This is rear side open area at ground floor and planter was observed created alongthe rear side wall. Here the plumbing leakages & rainwater get accumulated and almost full time this area near the building wall remains in wet conditions. This way the water finds it's own way to seepage inside the wall resulting the severe seepage in basement.	2023-01-13	The entire rear area planter needs to be modified in such a way that water does not accumulate. The entire piping system for AC drains, cables and other plumbing pipes to be set right correctly/systematically.		
3	These are the ventilators/windows with planters growing at bottom level causing continious seepages in the wall. This in a long run results inside the building also the seepage spoiling the plaster badly.	2023-01-13	Planters are advised not to be placed near the building wall. This causes seepage in the wall due to continuous wet/moist conditions.		
4	Same as above.		Same as above.		

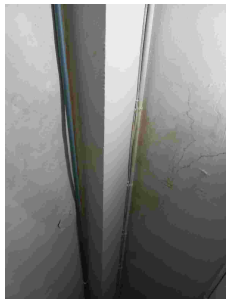
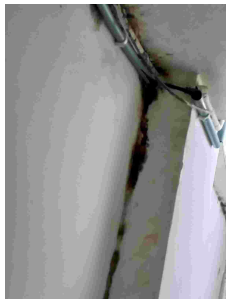
5	This is suspended pardi (latakan) showing cracks longitudinally. This happens when water starts entering into the pardi/RCC wall, which further starts rusting the steel inside and this finally results in cracking of the RCC wall/pardi. Next stage will be falling down of this cracked concrete. Which may cause some casulty also.		Refurbishment is advised at this location as per the methodology suggested.		
6	This is also seepage causing on the wall due to leakages and this is causing deterioration of plaster ultimately loosing the bonding with masonry & in itself to finally disintegrate and starts falling down. This is at first floor level and above.	2023-01-13	1. It is advised first to close the water source & then scrapping out of entire affected plaster is advised for redone with RMP material. 2. For the areas where cracks are developed, crack therapy is advised.		
7	This is a diagonal crack in the wall near planters outside in open area. Mostly it is a settlement crack due to continious moist conditions.		1. First all planters to be removed from adjacent to wall areas. 2. Normall crack therapy shall be applied as per the methodology suggested.		

8	This is it seems a sewage chamber built on ground above floor and observed non stop leaking spreading the water on the floor outside and inside the planter also. This continious moist/wet conditions allow the water seepage through walls inside the basement, where it is causing HAVOC as per the pics. Chambers & septic tanks are normally built below the ground level.		It is advised to make the chamber below ground floor with properly planned sloped piping system to septic tank or public drain as applicable.		

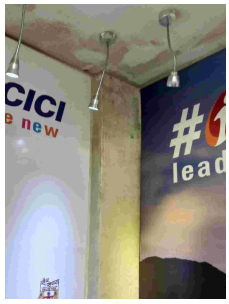
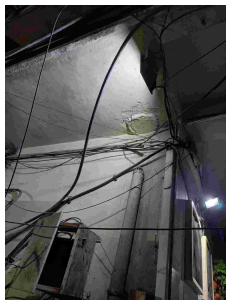
9	This is outer area left hand side with following observations: 1. Sink/Wash Basin without waste pipe resulting the water flow directly on the wall & floor junction causing seepages in the wall in basement part also. 2. The chamber was made above the ground with one wall of the chamber as building wall/touching building wall, resulting in direct seepages to building wall. Normally these chambers are made below ground level, but here these are above ground level. 3. A longitudinal planter type structure along the wall as inner wall as building wall. Here rain water and other drainage leaked water gets accumulated in the garbage filled up in the planter results	2023-01-13	It is advised : 1. Waste pipe shall be fixed in sink/wash basin. 2. To make all the chambers below ground level in the outer areas with proper treatment inside and keeping away from building wall directly. 3. The longitudinal planter type structure to be removed completely. 4. Set right the all damamges/leaked plumbing piping system horizontally and vertically installed. 5. AC drains to be planned properly with drian water channelised to a designated place rather than allowing to spread at it's own. 6. A septic tank shall be made away from building wall rather near to boundary wall & in under ground with properly planned overflow to public drain directly.		

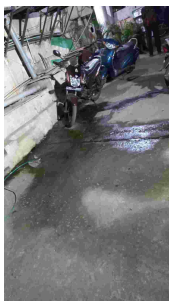
	in continious moist/wet enviornment at the junction of the building wall & outer area floor. 4. Plumbing pipes are made to run horizontally to reach to chamber with leakages & breakages observed. 5. AC drains also directly falling in this planter type structure resulting the accumulation of water in planter type structrure causing seepages in side the building through the wall in basement.				
10	Pantry ceiling seepage was observed & this is most likely from floor above.		It is advised that first the water source is to be closed and then scrapping out of entire affected area plaster for redoing with RMP material is advised.		

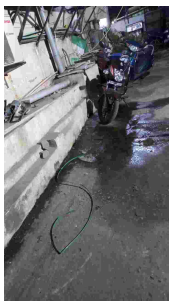
11	This is vault room corridor outer wall observed badly affected with huge seepage. The cement plaster done on the wall is badly disintegrated and lost the bonding with in itself and with masonry underneath. It seems tiling work is installed on this outer wall, but it is "ONLY AN EYE WASH", that is hidding of the problem and not resolving of the problem. Seepage extent is upto the level of rotten. This all is happening due to the continious seepage from ground floor outer area left hand side.	2023-01-13	It is advised to resolve the water leakage/seepage problem at ground floor outer area as per suggestions give.		
12	This is also same corridor area outside the vault room, where heavy/huge seepages the water is flowing in the corridor, which is reaching to the vault room wall also and causing seepage inside the vault room as well resulting the rusting of iron lockers & vaults.	2023-01-13	Closing the outer area ground floor water leakages/seepages at ground floor. And then scrapping out of the entire spoiled cement plaster and redoing of plaster with RMP is advised.		
13	Seepage Water flowing was observed in the vault room corridor.		Same as above.		

14	Thisis also vault room corridor area, where termite development impressions were observed as shown in the photograph. This is also a serious matter. In this type of building the termites can travel and enter into vault room also and there are chances of spoiling the currency notes also.	2023-01-13	Termite treatment is advised regularly with documented guarantee from vendor.		
15	This is also corridor area, where the wall plaster above tiling area was observed badly affected/spolied by huge seepages upto the extent that on toching itself the already disintegrated cement plaster falls down like dry clay/earth, means completly lost the bonding.	2023-01-13	1. First the seepages from ground floor outer area needs to be stopped completely. 2. Then the entire affected cement plaster to be scrapped out/removed completely for redone with RMP material.		
16	This is fallen down dry plaster material which has lost bonding with wall masonry & within plaster itself.	2023-01-13	Same as above.		
17	The continious seepages has caused alge formation as shown in the pic.		Same as above.		

18	Thermal insulated copper piping through the PVC conduit/pipe was observed. The condensed water due to poor thermal insulation, causes the water condensation and causing the seepages on the wall.	2023-01-13	AC vendor needs to be tightened up with documented guarantee for proper functioning of entire AC system including the inner split unit, out door unit and draiange pipes and copper piping.		
19	This is the ceiling condition of the pantry/cafeteria and risky as well, it may fall down at any time on somebody's head.	2022-12-06	Scrapping out of the entire affected ceiling plaster including cleaning of whitewash coating & then the following procedure can be followed: 1. If steel is visible & rusted then REFURBISHMENT is advised. 2. Or else normal ceiling plaster is advised after fixing fiber mesh/chicken mesh using the RMP material.		
20	This is inside the vault room condition case - 001. The vault and other iron items are getting rusted due to continious moist enviornment in the strong/vault room and this is apart from the damaged cement plaster inside the vault room due to excessive seepage.	2023-01-13	Source of seepage to be closed at ground floor outer area as explained in earlier observation points.		

21	This is inside the vault room condition case - 002. Seepages on the wall between iron lockers in the vault room.		Source of seepage from groud floor outer area needs to be closed.		
22	This is inside the vault room condition case - 003. This is coins demarcated area inside the vault room affected with huge seepage.		Same as above.		
23	This is out side the vault room wall portion above the steel sheet showing the seepages.		Same as above.		
24	This is office area affected with seepage in walls & ceilings.	2023-01-13	Seepage source to be closed.		
25	This is out side area, where unarranged, hanging, distracted electrical cables, networking cables & other pipes shown.	2023-01-13	Advised to rearrange them properly and systematically.		

26	This is outside open area in left side where huge water seepages were onserved due to leakages from chambers & planter type structure. This water is flowing round the clock and penetrating in the basement wall from ground floor to cause seepages and triggering effects.	2023-01-13	Seepage source shall be closed from ground floor.		
27	These are glimpses of debris/garbage collected in the planter type structure, where rain, AC drainage and other water is getting accumulated for full time at the junction of building wall and floor of outer area. This is the basement wall, which is getting badly affected due to the excessive seepage.		Same as above.		
28	Tree growth at the terrace is observed. This causes a regular moisturized atmosphere in the building element where roots are entered.	2023-05-01	Regular cleaning/housekeeping shall be ensured to avoid vegetation growing.		
29	This is also outer open area left side of the building near DG location, where seepage water is observed due to seepage/leakage from plater type structure.	2023-01-13	Same as above.		

30	This is also clearly visible the longitudinal planter typr structiure from which the seepages are onserved outside.	2023-01-13	Same as above.		

PART 3

CHECK LIST

VISIT DATE: 2023-01-13

PROJECT: ICMC BRANCH CLIENT: ICICI BANK LTD.

S.NO	OBSERVATION POINTS FOR SITE INSPECTION	RATING SCALE	RATING	DETAILED DESCRIPTION	LOCATION	REM
1	Visual Inspection of Over all Building from Structure Stability Point of View.	10	3.5	OK, Except severe seepage problem in/around vault room from out side.		
2	External Side Observation, if any	10	2.5	Open area is affected badly with leakages from sewage lines and septic tank.	GF Outer Open Area	
3	Observation on Foundation.	10	4	OK, Seems no visible problem except seepage related issues.		
4	Settlement Cracks in Walls	10	4	Not Observed.		
5	Settlement Cracks Floors	10	4	Not Observed.		
6	Moisture / Dampness Visibility in Ceiling Areas.	10	3	Yes, It was observed in entry area room & pantry at GF.	Pantry Area + Entry Room	
7	Moisture / Dampness Visibility in Walls Areas	10	2	Yes, It was observed in vault room & surrounding areas.	Vault Room & Surrounding Corridor Areas.	
8	Moisture / Dampness Visibility above Skirting Areas	10	2	Yes, It was observed in vault room & surrounding areas.	Vault Room & Surrounding Corridor Areas.	

9	Check for Plaster Strength (Intact or not) - Lighting Hammering Action.	10	1	In the vault room corridor outer wall plaster bonding is almost gone. Plaster is disintigrated & falling down due to excessive seepage effect.	Corridor Area around Vault Room.	
10	Floor - Visible Up Rooting, If Any	10	4	Not Observed.		
11	Plaster - Visible Up Rooting in Ceiling Areas, If Any	10	4	Not Observed.		
12	Plaster - Visible Up Rooting in Walls Areas, If Any	10	1.5	In vault room corridor outer walls plaster disintegration due to excessive sewage seepage from outside ground floor area.	Vault Room Surrounding Areas.	
13	Visible Concrete Deterioration in Slabs, If Any	10	4	Not Observed.		
14	Visible Concrete Deterioration in Beams/Columns, If Any	10	4	Not Observed.		
15	Any Refurbishment is needed in Columns/Beams/Slabs/Other RCC elements.	10	4	Not Observed.		
16	Visible Cracks / Deterioration in Stone Patti Roofs, If Any			NA		
17	Visual Stability Check for Parapet Walls, if any.			NA		
18	Visual Stability Check for Projections / Partitions if any (Horizontal).			NA		
19	Water Leakage through RCC Column / Beam / Slab, if any	10	4	Not Observed.		
20	Water leakage through Masonry Structure	10	2	Yes, It was observed in the vault room surrounding corridor outer walls.	Vault Room Corridor.	
21	Over head Water Storage Tanks & Plumbing Connection Statu			NA		
22	Plumbing Connection Status in Toilets/Pantry Area.	10	2.5	OK, Except few locations seepages were observed.	Toilets/Pantry Areas.	

23	Rainwater Downtake Piping System Status.	10	2	Rainwater down take piping system was observed not in good condition & seems to have been causing the seepages due to leakages/breakages/damages along with toilet plumbing piping system also.	Outer Side at GF open areas.	
24	Any Vegetation Causing Moisture/Cracks.	10	2	Vegetation was observed at ground floor outer/open areas, where the leakages/seepages caused due to improper piping installation & chamber works.	Outer/Open Area at GF.	
25	Terrace Area Checking in General			NA		

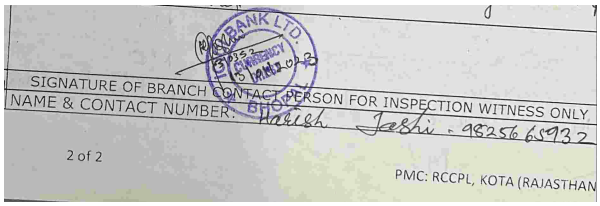
TOTAL RATING SCALE : 200

TOTAL RATING : 60

RATING INDEX: 0.30

RECOMMENDATION : As mentioned in the recommendations given in the part 1 of the audit report.

SIGNATURE OF AUDITOR



SIGNATURE OF BRANCH CONTACT PERSON FOR INSPECTION WITNESS ONLY

HARISH JOSHI

9825665932