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PROJECT : ICICI BANK ICMC, JAIPUR

CLIENT : ICICI BANK LTD.

AUDIT REPORT

PART 1

REF. RCCPL - ICICI BANK ICMC, JAIPUR / ICMC JAIPUR / AR - 036/R1(Dt. 16-09-2024)

DATE - 2024-08-09

PROJECT: ICICI BANK ICMC, JAIPUR

CLIENT: ICICI BANK LTD.

While visiting the site 'ICMC JAIPUR' 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 (wherever, 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 in time & wherever required to take appropriate decisions on the relocation / remodeling, or necessary rectification works, etc.

Most of the observation points are on huge seepages, cracks, bad workmanship & ignorance in construction sequences & processes. Basic construction norms are perhaps not followed as required. This is an old building chest constructed around 30 years back (as per the details given by ICMC).

BUILDING TITLE: **OWNED***

MAJOR OBSERVATION & ANALYSIS:

1. It is observed that most of the problems are quality related issues, construction work was done 30 years back & perhaps technical lapses might have remained. there may be inadequate technical supervision, so the quality, construction sequences and the basic construction norms were perhaps could not be followed.
2. As built drawings are not available for the buildings at almost all the locations of audit conducted & because of this bank is spending lot of money on the different tests & analysis.
3. The building floor level inside the premises is almost at a difference of 2.5-3' from level of road out side. So seems to be in safer side from flooding conditions point of view.
4. It was observed that concrete surface below the vault room kota stone flooring was hard at the testing/checking location & it is assumed that this will hold good for entire area.
5. Leakage/seepage incidences are observed at few places due to the poor construction/installation quality. Technically correct supervision is necessary, which was perhaps couyld not be managed as required at the time of construction/installation. The regular cleaning and house keeping is not done at terrace plumbing shaft location.
6. The entire outer wall surface of the corridor all around the vault room in basement is getting badly affected due to seepages from positive side, where it was said that filled up soil is there. This seepage is causing the spoiling of paint/putty & inner plaster resulting in recurring expenses for bank and at the same time causing loosening of strength of plaster.
7. Rainwater downtake pipes & AC drain pipes were observed not attended for smooth working for a longer period. This is causing the water to flow on wall surface & accumulation on the ground at wall floor joints. This situation in a longer run some times causes seepages on the other side of wall inside the building.
8. Termite impressions were observed at wall roof junction near vault room in the basement. Looking into the banking business & particularly near the chest/currency location in vault room, it seems to be a very '**SERIOUS**' matter. Termites can find out their way till '**VAULT ROOM**' also underneath & it may cause destroying the currency notes also.
9. At some locations cracks were observed in the ceiling & wall areas in processing room also. Ignorance for a longer period may cause increase in this problem & hence more recurring expenses to bank.
10. Flooring damage was observed at few places. Perhaps the type of flooring adopted for these areas was not as correct as needed. For heavy duty normally the industrial flooring (Ironite Flooring/Trimix Flooring/Kota Stone/Heavy duty Tile flooring) is considered. So that damages are minimised.
11. In the walls & ceilings some placaes huge seepages were observed due to water leakages/seepages from other side water sources. And in result the cement plaster is getting spoiled/damaged.

12. Outer & Inner surfaces of cement plastered walls of 'V**AULT ROOM**' were observed in '**GOOD CONDITION**'. Means no hollow sound in plastered surface, no disintigration or loosening of bonding etc.

13. **'NDT Hammer'** Tests & '**USPV'** Tests were conducted on the vault room walls for in total 5 locations & one at floor inside the vault room. For USPV Test 2 locations - One at both side of vault emergency window & Second on the both sides of a column inside the vault room using direct method & at 3 locations - One on the wall of vault room on inner surface using indirect method & other two on the outer surface of vault room walls. Normally these tests are conducted to know the quality of concrete and on new/base concrete surfaces. But here since the vault room concrete walls are cement plastered from both side and the concrete surface had to be prepared removing the cement plaster. However, in this way prepared surface does not come as smoothly as desired for the test some times, so results are likely to be affected.

14. Test Results of **'NDT Hammer'** test are not uniform but in safe range. The variation is observed from '**24 N/sq mm to 49 N/sq mm'**.This indicates the '**QUALITY OF CONCRETE IS NOT CONSISTENT**'. This may be due to presence of '**CRACKS, VOIDS & IMPERFECTIONS**' in the concrete and this most likely due to poor workmenship at the time of casting this concrete. It may be due to improper & inadequate compaction of concrete, improper/inadequate proportion of constiturnts of concrete. All these **flaws or lackings** are normally observed caused due to **inadequate technical supervision** and when construction sequences were not followed. However, test results are OK except one location.

15. Test results of '**Ultrasonic Pulse Velocity Test'** are near to uniform & variation is observed from '**3.90 KM/S to 4.9 KM/S'**. This indicates haveing few **internal flaws** or **segregation** at the location caused by poor workmenship at the time of casting of this concrete or there could be micro cracks as well. All these flaws or lackings are normally observed caused due to **inadequate technical supervision** and construction sequences & processes were not followed as required. However, results are OK.

16. In all the toilet areas the tile flooring is not provided with '**EPOXY GROUTING**' with the spacer joints so the water seepages through the tiling joints are suspected travelling below the floor & cause seepages at above skirting areas in other areas also.

17. On the terrace the water proofing treatment done is exposed to wheather not covered with any protective layer so due to wheathering effect & due to man & material movement on the water proofing layer it gets damaged/worn out resulting the recurring expenses to the ICICI Bank.

18. It was observed in the battery room that internal cement plaster affecting due to acid fumes. The plaster getting disintigrated & loosing the bonding.

19. In side the '**VAULT ROOM**' room a part of roofing is done it seems using deck sheeting system (concreting above deck sheet) and the panels are applied with M S grill for additional safety.

20. At terrace the mumty slab cracks & cracks between mumty slab & masonry wall are not attended for a longer period & hence due to rusting of inside steel of slab these cracks are increasing & may be shortly refurbishment will be needed.

LIMITATIONS OF THE TESTS (NDT REBOUND HAMMER & USPV):

1. Observations & analysis on ICICI Bank desired NDT Hammer & USPV tests are liImited to the test locations ONLY. Because the consistency of the quality of concreting may vary from location to location in the entire pour of concrete due to various reasons (like inadequate compaction, inadequate proportion, bad quality of construction material (raw material), bad workmenship etc.). But here it is assumed that the test results will hold good for other areas also and interpretations & recommendations are made based on the test result's assumed applicability on entire surface areas.

2. The suggested test results (NDT Rebound Hammer & USPV) normally are advised to be conducted on new concrete surface/mother concrete surface for better results. When the cement plastered concrete surface is exposed as a part of surface preparation using the mechanical means (grinder/cutter, hammer,

chiseling etc.) then the original concrete surface is likely to damage and hence some times the surface is not achieved as good & smooth as it is desired for the test. And in this way the conducted tests may give unrealistic results/vaules also some times.

RECOMMENDATION:

1. *IT IS ADVISED FOR ALL ICMCs, WHERE THE VAULT ROOM IS LOCATED IN THE BASEMENT OR AT GROUND FLOOR, A 2-2.5' HIEGHT LONGITUDINAL PEDESTALS CAN BE COSTRUCTED FOR UP LIFTING THE ENTIRE ROW OF LOCKERS, AS PER NEED OF THE BANK.*
2. *MOST OF THE PROBLEMS ARE OBSERVED DUE TO THE BUILDING BEING 30 YEARS OLD & PERHAPS REQUIRED TECHNICAL SUPERVISION COULD NOT BE DONE PROPERLY WHILE EXECUTION WAS DONE. ATLEAST NOW FOR RECTIFICATION WORK THE TECHNICAL SUPERVISION IS ADVISED TO BE ENSURED & IN FUTURE WHILE CONSTRUCTION ITSELF THE TECHNICAL SUPREVISION NEED TO BE ENSURED FOR CORRECT EXECUTION. THE EXECUTION OF WORK DURING THE NEW CONSTRUCTION & IN RECTIFICATION WORK AS WELL SHOULD BE DONE UNDER ADEQUATE TECHNICAL SUPERVISION, IT SHOULD NOT BE LEFT ON DISCRETION OF TEAM OF VENDORS.*
3. IT IS ADVISED TO CONSULT THE INDUSTRY EXPERTS BEFORE CONCLUDING UPON THE TYPE OF TESTS REQUIRED FOR A BUILDING EVALUATION. EXACTLY FOR WHAT PURPOSE/OUTCOME (AS RESULTS) THE TESTS ARE BEING PROPOSED. THIS WILL HELP MORE IN APPROPRIATION OF APPLICABLE TESTS OR DECIDING THE APROPRIATE TESTS.
4. THE DAMAGED FLOORING AREAS ARE ADVISED FOR REPLACING THE ENTIRE FLOORING BY HARD FLOORING MATERIAL (KOTA STONE/TRIMIX/IRONITE FLOORING etc.) AS PER NEED OF THE BANK.
5. IN THE LEAKAGE/SEEPAGE AREAS IN BASEMENT VAULT ROOM CORRIDOR ALL AROUND, IT IS ADVISED TO FIRST CLOSE THE SOURCE OF WATER/DAMPNESS & THEN SCRAPPING OUT OF ENTIRE AFFECTED AREA PLASTER FOR APPLICATION OF CRYSTALLINE WATER PROOFING SYSTEM & TEHN REDOING OF THE PLASTER USING RMP MATERIAL (READY MIX PLASTER) .
6. A LOT OF RECTIFICATION WORK IS NEEDED IN THE BUILDING AS MENTIONED IN THE OBSERVATION SHEET POINTS. SO THE BANK IS ADVISED TO TAKE THE RECTIFICATION WORK AS EARLY AS POSSIBLE.
7. REFURBISHMENT IS ADVISED AS PER THE METHODOLOGY SUGGESTED WHEREVER STEEL IS EXPOSED & STARTED RUSTING.
8. THE ENTIRE RAINWATER DOWN-TAKE PIPING/PLUMBING SYSTEM IS ADVISED TO SET RIGHT CORRECTLY OR REPLACED BY A WELL DESIGNED SYSTEM BY A GOOD VENDOR KEEPING THE VERTICAL PIPES AT LEAST 2" AWAY FROM WALLS. THIS IS APPLICABLE FOR DOWNTAKE PIPES INSIDE THE PLUMBING SHAFTS ALSO.
9. IN THE TOILET AREAS TILING JOINTS IN THE FLOORS AS WELL SHALL BE PROVIDED WITH EPOXY GROUTING.
10. THE CRACKS IN WALLS & SLABS WHEREVER OBSERVED SHALL BE TREATED WITH THE SUGGESTED CRACK THERAPY.
11. OHWT ARE ADVISED TO PLAN WITH WELL PLANNED OVERFLOW DESIGNED SYSTEM TO ENSURE NO OVERFLOW & OTHER THAN RAIN WATER ACCUMULATION/STAGNATION TAKES PLACE ON THE TERRACE.
12. ON THE TERRACE THE WATER PROOFING LAYER NEEDS TO BE PROTECTED WITH A PROTECTIVE LAYER, WHICH CAN BE SCREED CONCRETE OR RICH CEMENT MORTAR PLASTER. THIS WILL REDUCE THE RECURRING EXPENSES OF WATER PROOFING.
13. A PROTECTIVE LAYER (MAY BE CEMENT SHEET OR SOME OTHER SUITABLE ACID FUMES RESISTIVE MATERIAL) IS ADVISED TO PUT AS A BARRIER BETWEEN BATTERIES & PLASTERED WALL SURFACE.
14. THE ELCTRICAL, AC & OTHER CABLES NEED TO BE SYSTEMATISE WHEREVER LOOSE & HANGING POSITIONS.
15. IT IS ADVISED TO GENERATE & CREAT A RECORD OF AS BUILT DRAWINGS FOR ALL BRANCHES/ROs/ICMCs etc.

PREVENTIVE MEASURES:

Following preventive measures are recommended generally to reduce the threat to structural stability and save the cost of maintenance & improve the quality of work in any proposed new or old building, where relocation is not planned.

1. A proper building audit shall be conducted by the industry expert before buying or taking any premises on lease. The building shall be evaluated on all necessary parameters related to structural stability, plumbing work, seepages, water leakages, cracks, settlement etc. & shall be ensured of required safety from the end use/business point of view.
2. Standardizing the Type of Maintenance Related Problems & Solutions for a better & quick understanding of IFMs & Vendors.
3. Making an Operation Manual with the help of Industry Expert Designed Methodologies, Guide Lines & Check Lists, etc. so that IFMs will get ready solutions & procedures for different type of problems.
4. A strict quality control in technical supervision while construction/rectification work to ensure the correct construction & construction sequence to minimise the recurring maintanance cost.
5. Clear Guide Lines on UGWT & OHWT Connections & Other Plumbing Works including Rain Water Down Take Piping System.
6. Maintenance Check List & Monitoring of House Keeping Staff's Work more attentively & on a daily basis.
7. Annually one Lecture on Maintenance Related Problems & Solutions by Industry Experts for IFMs & Vendors.
8. Inclusion of some important clauses in the agreement document between land lord & ICICI Bank to ensure the scope of work of landlord in terms of maintanance.
9. Generating a Record of "As Built Building & Services Drawings" for all Branches, ICMCs, ROs, etc. for future reference.
10. Once in a 3 years building audit is advised to reassure the building condition is good & safe to work there.

A set of "AS BUILT DRAWINGS" of the building premise shall be maintained/asked in easy traceability mode for the following streams.

- Architectural Drgs.
- Structural Drgs.
- MEP Services Drgs.
- Networking related Drgs.

***CORRECTIVE MEASURES*:**

Following corrective measures are recommended to reduce the risk & in the view of safety of staffs working there along with customers, if this premises are opted to take on/continue on lease.

1. ALL mentioned checkpoints (in the checklist) and observation points (in the observation sheets) need to be read & well understood for taking the rectification execution work. The execution shall be carried out as per the methodologies suggested & under strict

technical supervision. In civil work most of the issues occur at later stages because of lacking in technical supervision at the time of construction, therefore at least the rectification work should be carried out under adequate technical supervision as far as possible.

2. Scrapping out of the entire internal/external plaster of affected wall/ceiling areas for redone using the RMP material after the water source is closed.
3. Other rectifications as advised in respective areas of the building and shown with photographs in the observation sheets pointwise, shall be taken up.
4. Plumbing shaft area at terrace is to be kept neat & clean with properly timely house keeping done. No debris shpuld deposit & cause the continious moist conditions & all plumbing pipes to be kept away from wall surface by 2".
5. Water accumulation & continious moist enviornment at terrace & on other areas needs to be totally stopped.
6. As per recommendation longitudinal RCC pedestals may be cast to up lift the lockers by 2-2.5' & accordingly the functional floor level between the two rows of lockers can also be planned accordingly keeping in to the emergency situation in mind.
7. All toilet tile flooring is to be done with epoxy grouting.
8. All AC drains shall be planned properly deciding the designed route & destination.
9. All points as mentioned in the recommendations, shall be attended as per need of the bank.
10. The terrace water proofing system needs to be protected by a protective layer (which can be screed concrete or rich cement mortar or any tiling system) as per need of the bank.

***SPECIALIZED MATERIALS SUGGESTED*:**

1. Crack Seallers
2. RMP (Ready Mix Plaster) Materials.
3. Epoxy Grouting Material.
4. Cement
5. Sand
6. Ready Mix Concrete
7. Sika Rustoff - 100 (Rust Remover)
8. Sikatop Armatec - 108 Plus (Anti Corrosive Coating)
9. Sikadur - 32 LP (Structural Bonding)
10. Sika - Monotop 122 F (PMM - Polymer Modified Mortar
11. Injection grouting system & material.
12. Trimix & Ironite Flooring Materials, Kota Stone slabs
13. Anti acid fumes or acid fumes resistant barrier for battery room (Cement Sheet or some thing like this).

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*:**

RMP PLASTER THERAPY | RCC MEMBERS STRUCTURAL REPAIR (REFURBISHMENT) | CRACK THERAPY | EPOXY GROUTING | RAINWATER DOWN TAKE PIPES PLANNING | INJECTION GROUTING | CRYSTALLIZATION WATER PROOFING SYSTEM | SCREED CONCRETE/TILING WITH THERMAL INSULATION VALUES

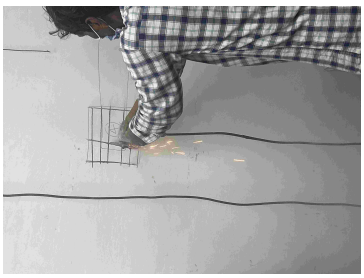
Note:-

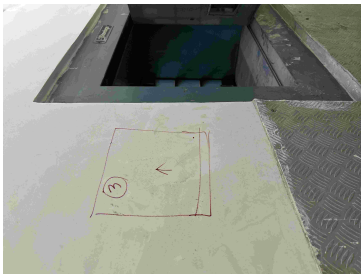
1. The test report for different tests conducted at the site can be submitted as and when needed with in one month of the report submission.
2. If ICICI Bank needs any help in interpretation of recommendations, observation, analysis, corrective - preventive actions, may kindly contact us and we will be happy to help.

PART 2

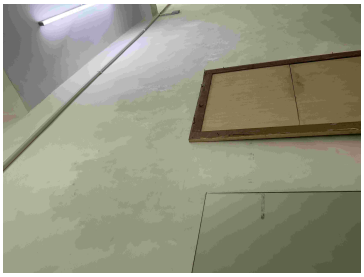
PROJECT OBSERVATION SHEETS

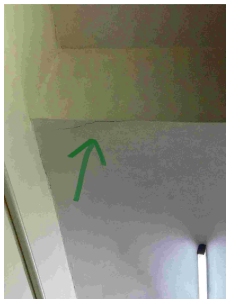
PROJECT: ICICI BANK ICMC, JAIPUR CLIENT: ICICI BANK LTD.

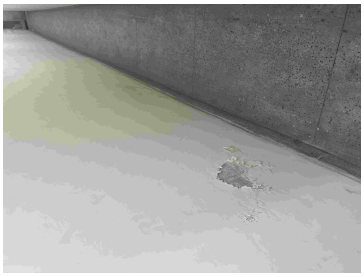
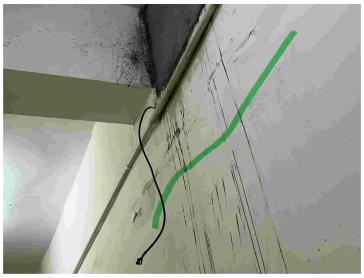
AUDIT OBSERVATION SHEET					
Reference / Rev. No			OBS / 76 (ICICI BANK ICMC, JAIPUR) / August 9, 2024	DATED	2024-08-09
S.No.	OBSERVATION POINTS	DATE	CORRECTIVE / PREVENTIVE MEASURES SUGGESTED	PHOTOGRAPHS	STATUS (For Client Only)
1	This is inside vault room point number one for NDT hammer and ultrasonic pulse velocity test surface preparation is in process.	2024-08-09	Tests are conducted & results are as per report.		
2	This is point number two inside the VAULT ROOM for NDT hammer test and ultrasonic pulse velocity test surface preparation is in process.	2024-08-09	Tests are conducted & results are as per report.		

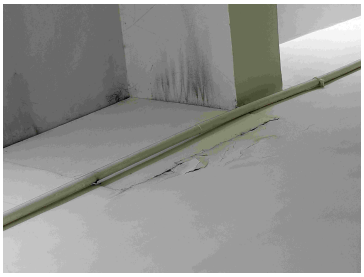
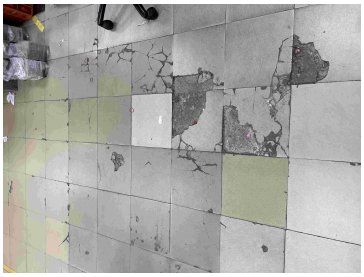
3	This is point number three inside the wall room for NDT hammer and ultrasonic pulse velocity test surface preparation is in process.	2024-08-09	Tests are conducted & results are as per report.		
4	Point number four for ultrasonic pulse velocity test inside the vault room on the column surface preparation will be done for conducting the test.	2024-08-09	Tests are conducted & results are as per report.		
5	This is fifth point for ultrasonic pulse velocity test by direct method. Surface preparation will be done shortly.	2024-08-09	Tests are conducted & results are as per report.		
6	This is corridor location in the left side of vault room main entry in the ceiling termite impression was observed. It is a very serious matter and need to be attended on SOS basis.	2024-08-09	Regular anti termite treatment is advised with documented guarantee from the vendor.		

7	This is also the left side corridor of main entry of vault room. The outer wall of this corridor is showing some problems. This is point number one, there is a crack observed in the beam. This crack might be due to the water seepage from ground floor in the beam, which is rusting the beam steel and that's why cracks are being developed, point number two, this is a junction of slab and wall joint where seepage is appearing and this is also likely to be from the other side. This is spoiling inside plaster of the corridor wall point number three due to the seepage which is from other/positive side of corridor outer wall, the plaster of the wall is already started coming out .	2024-08-09	Source of water from the other side of the wall at ground floor level need to be checked and closed. Water entry is strictly to be stopped from outside surface and thereafter the spoiled Plaster is advised to be removed/scrapped out, and then redone with the RMP material. For the seepages from outer wall positive side the crystalline water proofing is advised & see ghe results for 1 year. Most probably the seepage will be stopped.		
8	This is the left side corridor wall at main entry of ballroom in the basement. It is said that other side of the wall is a filled up area and this seepage is observed through the wall.	2024-08-09	As it is said the other side of the wall is a filled up soil. So the treatment from the outer side is not possible and hence it is advised to use the crystallisation process for this Waterproofing.		

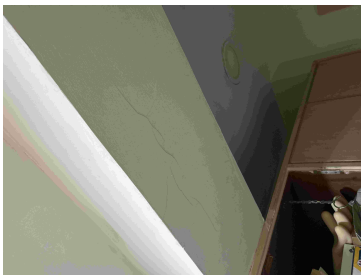
9	In the pic number one is showing the vault room wall and number two is showing the outer wall of corridor. As per the observation, the condition of vault room wall is good, but the condition of outer wall need IMMEDIATE attention on waterproofing and closed cutouts, which are not closed properly & cracks are developed at the edge of these closed cutouts.	2024-08-09	These cutouts needs to be closed properly with a proper joint treatment using fibre mash before the plaster, so that cracks will not reappear. Crystalline Process Water Proofing is advised to this problem.		
10	This is the rear part of vault room corridor where the outer wall is showing huge seepages which is spoiling the inside paint, putty and plaster work as well. This water seepage is causing because the other side of the outer wall it is said it is filled up soil.	2024-08-09	Crystallisation method of Waterproofing is advised on the outer wall of all corridors where other side filled up soil is there.		

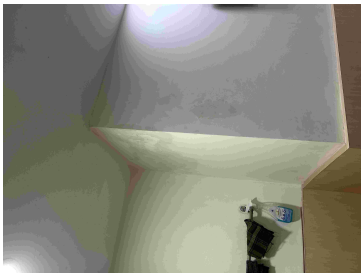
11	This is the ceiling portion of corridor at the rear side of vault room where the beam is showing crack. That means from somewhere from the ground floor level water has started entering into the beam and slab portion and that is causing rusting of steel. If it is not attended immediately, then in the coming time, a huge refurbishment cost will required to be incurred.	2024-08-09	First of all, the water entry from the ground floor or from the out side filled up soil need to be stopped and thereafter initial level refurbishment processes advised.		
12	This is also vault room left side corridor ceiling and wall junction where huge seepage is observed, water is coming from the other side of the outer wall and causing seepage is inside. Slab is also showing seepage, if this seepage is not stopped immediately, then in the coming time, it will start rusting of the steel inside the slab, and then a huge refurbishment cost will be incured.	2024-08-09	Water source need to be closed on SOS basis from outside and for wall portion. The crystallisation process of waterproofing is advised.		

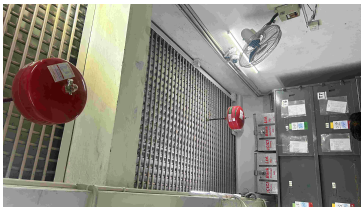
13	This is right side corridor of the vault room where above skirting seepage problem is also observed. It is said that the other side of this corridor outer wall there is a filled up soil so it seems difficult to treat this water source from the outside and hence something will have to be done from the negative side only inside only & that is CERYSTALLINE PROCESS of water proofing.	2024-08-09	Crystallisation method of Waterproofing is advised.		
14	This is right side corridor, outer wall of the vault room where a huge horizontal crack is observed. This crack might be at the masonry and RCC beam joint. Also it can be due to the outer side filled up soil water coming inside and rusting the beam steel rods.	2024-08-09	Outside water source need to be closed first, and then from inside this is to be repaired after scrapping out of entire damaged plaster with a new RMP material. Before doing the new plaster using RMP, the crysatalline water proofing process is advised on the entire coriidor outer wall inside surface.		

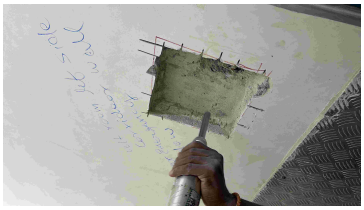
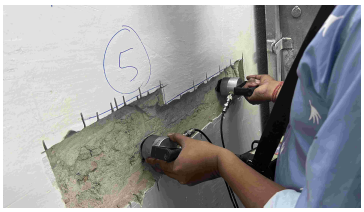
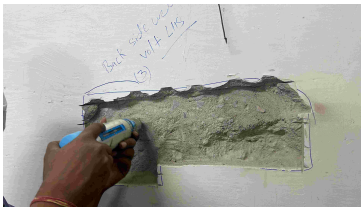
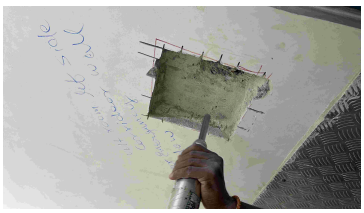
15	This is also in the right side corridor of vault room where a cutout in the outer wall is closed with some ply board or something, which is not advisable. It is showing crack all around the cutout. There are number of such cutouts are closed improperly in the corridor outer wall, and this also becomes a weak point for the vault room safety.	2024-08-09	It is advised to close all the cutouts with the proper construction sequence and methodology using fiber mesh before plaster at the joint of cutout and adjacent wall.		
16	This is corner of the vault room corridor towards the right side of the vault room main entry where, above skirting seepages are observed too much, and this is causing spoiling of the putty paint and plaster work done. This also results in recurring expenses.	2024-08-09	Outside source of water need to be closed properly & if it is not possible, then inside crystallisation process of waterproofing is advised.		
17	Near the vault room & inside the Guard Room, the backside wall is showing huge seepages. It might be due to the fill up soil outside.	2024-08-09	Negative side, waterproofing treatment is advised using the crystallisation process.		
18	This is process room flooring where it is damaged badly and likely to further increase in the damamge area if immediately repairing is not done.	2024-08-09	Hard stone (Like Kota Stone) flooring is advised in place of tile flooring.		

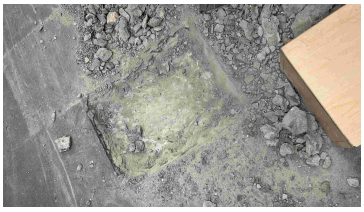
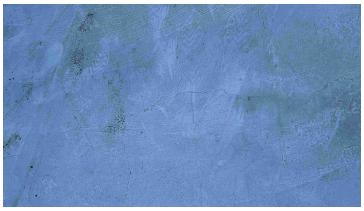
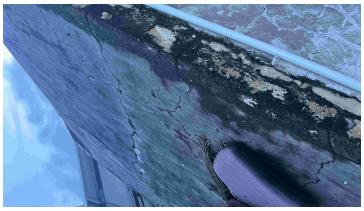
19	This is process room, front wall, showing cracks at the wall surface.	2024-08-09	Crack therapy is advised.		
20	This is also process room, the left side corner on the rear wall showing a vertical crack.	2024-08-09	Crack therapy is advised.		
21	This is also process room in the left side corner ceiling is showing crack. It seems the POP done here is cracking.	2024-08-09	It is advised to use POP fibre net/jali treatment at the joints.		
22	This is it seems improper AC drain problem, which is causing the seepages in the wall in the process room.	2024-08-09	It is advised to plan the AC drains route properly & leak proof.		
23	This is also processing room inside on right side wall is showing a horizontal crack below the ceiling. It seems this is the junction of beam bottom and the masonery level. This type of situation happens when the joint is not treated properly.	2024-08-09	Advised removal of this cracked portion both side of the crack 3 to 4 inch for entire length of crack and check whether the crack is in plaster or it goes through the masonry, and accordingly, the type of crack therapy therapy will be decided.		

24	This is also processing room inside right side corner on the backside wall. A horizontal crack is observed. It might be due to the improper joint treatment of masonry and concrete.	2024-08-09	Crack therapy is advised.		
25	This is change room beam portion which is cracking from the bottom. It seems from somewhere water is entering and steel has started rusting inside the beam and that's why this crack is causing. In case it is not treated immediately, then it may further damage the beam and lead to huge refurbishment cost in coming time.	2024-08-09	First, stopping the water source and then scrapping out and checking the beam portion if the steel is still in condition, then it is to be treated with the Structural motor. And if it is observed steel has rusted 30-40% then refurbishment shall be done.		
26	This is damaged flooring of the corridor at first floor, heading to processing room and ICMC Head cabin.	2024-08-09	It is advised to do the flooring using some hard stone material material like kota stone or some thing. Or else now a days hard tiling material also available.		
27	This is pantry area where everything seems to be okay except improper drainage causing seepage and ot is near the AC indoor unit.	2024-08-09	This AC drain needs to be planned properly and executed well, so that this wall seepage can be stopped at this location.		

28	This is also pantry area inside. Seepages are observed on the shaft wall. That means either some pipes are leaking or water is entering in the shaft from terrace & flowing on the wall surface freely, which is causing this huge seepage on the wall surface inside. This can also be due to the rain/other water down take pipes broken & if touching the shaft wall surface.	2024-08-09	This need to be checked at terrace level, and if the terrace water is entering in the shaft that need to be stopped. Rain water down take piping system needs to be set right coreectly in the shaft away from wall surface by 2-3 inches.		
29	This is male toilet block. It is good to observe that in the wall epoxy grouting is done but unfortunately it was required more on the Flooring so that water entry from this 00 joint in the Tiling floor can be stopped.	2024-08-09	Epoxy grouting in the joints is advised in the Flooring also		
30	This is inside UPS room where the skirting above area is showing huge seepages from the other side of the wall due to filled up soil.	2024-08-09	Since the positive side treatment is not possible, so it is advised to do the crystallisation waterproofing process from negative side inside the UPS room.		

31	This is also UPS/Battery room where from the wall surface is getting spoiled due to acid fumes of the batteries. And needs immediate attention to provide some barrier between the batteries & wall surface.	2024-08-09	It is advised to put some barrier between the acid fumes /battery and wall surface, maybe Cement sheet or something which is resistant to acid fumes.		
32	This is store room area where records & documents are kept and the right side wall of the store room is badly damaged due to excessive seephase from the other side. If immediate attention is not put on this then it may lead to destroying of the record/documents.	2024-08-09	Advise to close the water source from the other side of the wall, which is if not possible then after scraping out of entire affected plaster and then application of the crystalline water proofing material before the plaster redone with RMP material.		
33	This is vault room inside entrance wall, NDT test is being conducted using hammer.	2024-08-09	Analysis is done & results are good as per the report from testing agency.		
34	This is vault room roof, which it seems done using the deck slab technique & in addition to this, the deck slab is protected by a strong iron grill from below.	2024-08-09	If necessary bank can think of applying the shotcreting on the surface of deck slab sheeting from bottom side. It helps to withstand the deck sheet melting in case of fire.		

35	This is NDT Hammer testing on a column inside the vault room.	2024-08-09	Analysis is done & results are OK as per the report from testing agency.		
36	This is point number 5 NDT Hammer testing is in process.	2024-08-09	Analysis is done and results are OK as per the report from testing agency.		
37	This is point number 5 USPV test is in progress near emergency window of vault room.	2024-08-09	Analysis is done and results are OK as per the report from testing agency.		
38	This is point number 3 inside the vault room on right side front wall of vault room main entry.	2024-08-09	Analysis is done and results are OK as per the report from testing agency.		
39	This is point number 3 on inside rear wall of vault & NDT Hammer test being done.	2024-08-09	Analysis is done and results are OK as per the report from testing agency.		
40	This is NDT Hammer test being done on the left side wall of vault in corridor near emergency window.	2024-08-09	Analysis is done and results are OK as per the report from testing agency.		

41	This is the vault room flooring exposed portion for checking the below flooring concrete surface.	2024-08-09	There is solid concrete slab is visible under the kota stone flooring at the location of testing. But concrete strength is approximately M 24 only in comparision to the strength of walls it is less.		
42	This is second pic of same location in the kota stone flooring below concrete slab checking.	2024-08-09	Same as above.		
43	This is terrace floor showing one longitudinal crack, which allows the rain water entry in the slab to cause the seepage in below areas ceilings, this also rusts steel in the slab/beam.	2024-08-09	Crack therapy is advised.		
44	This is parapet wall in good condition.	2024-08-09	As such no rectification is needed as of now.		
45	This is mumty sloped terrace showing severe cracks on the slab top treatment and at the joint of slab & masonry wall.	2024-08-09	Crack therapy with Fibremesh is advised.		

46	This is the plumbing shaft view from terrace. Chocked with debris. And water is flowing on the shaft wall surface in the shaft causing seepage in pantry area wall at below level pantry inside portion.	2024-08-09	Proper house keeping is advised regularly. All vertical plumbing pipes in the shaft are advised to repaire keep 2” away from shaft wall.		
47	This is outer area left side wall of main entry to ICMC Jaipur.	2024-08-09	All cables wires hanging on the wall are advised to be kept in a well arranged manner and in groups.		

PART 3

CHECK LIST

VISIT DATE: 2024-08-09

PROJECT: ICICI BANK ICMC, JAIPUR CLIENT: ICICI BANK LTD.

S.NO	OBSERVATION POINTS FOR SITE INSPECTION	RATING SCALE	RATING	DETAILED DESCRIPTION	LOCATION	REMARK
1	Site History	10	4	It is a RCC frame structure old building while chest was constructed in 1993. Building configuration is basement (Vault Room & Office) + ground floor (Premises Entry, Security Checks etc.) + first floor (Bank Office, Administration & Processing Room)	Banipark, Jaipur	

2	Visual Inspection of Over all Building from Structure Stability Point of View.	10	4	In the Vault Room no problems except corridor outer wall. Vault room roof is M S grill provided deck sheet technique cast RCC slab.	Basement	
3	External Side Observation, if any	10	4	Seems no problem except the loose cabling/wiring hanging on the left side wall of ICMC main entry.	Ground Floor Shed Area left side of main entry to ICMC.	
4	Observation of Foundation	10	4	Foundations could not be seen, but it seems OK as per the visual inspection. It was said that all around the basement filled up soil is there.		
5	Settlement Cracks in Walls.	10	5	Not Observed.		
6	Settlement Cracks in Floors.	10	5	Not Observed.		
7	Moisture / Dampness Visibility in Ceiling Areas.	10	1.5	Yes. Severe dampness was observed at the left side corridor in the basement around vault room.	Basement Corridor around vault room.	
8	Moisture / Dampness Visibility in Wall Areas.	10	2	Yes. Severe dampness was observed at the left side corridor in the basement around vault room.	Basement Corridor around vault room.	
9	Moisture / Dampness Visibility above Skirting Areas	10	3	Yes.	Battery Room & Few Others.	
10	Check for Plaster Strength (Intact or not) - Lighting Hammering Action.	10	3	OK, Except one or two locations.		

11	Visible Uprooting - Floors, If Any.	10	4	Not Observed, but found damaged in vault room and few other areas as per pics in observation sheet.	Basement	
12	Plaster Visible Uprooting - Ceiling Areas, If Any.	10	3	Yes, at some places in the vault corridor areas & in processing room.	Basement & first floor.	
13	Plaster Visible Uprooting - Wall Areas, If Any.	10	3	Yes, at some places in the vault corridor areas + some other areas in processing room.	Basement & First Floor.	
14	Visible Concrete Deterioration in Slabs, If any.	10	4	Not Observed in general, but cracks developed some where in basement vault corridor.	Basement	
15	Visible Concrete Deterioration in Beams, If any.	10	4	Not Observed in general, but cracks developed some where in basement vault corridor.	Basement	
16	Visible Concrete Deterioration in Columns, If any.	10	5	Not Observed.		
17	Any Refurbishment is needed in Columns/Beams/Slabs/Other RCC elements.	10	4	May be at some places as per pics in observation sheet cited points.		
18	Visible Cracks / Deterioration in Stone Patti Roofs, If Any			NA		
19	Visual Stability Check for Parapet Walls, if any.	10	4.5	Seems OK mostly except one or two locations where cracks were observed.	Terrace	
20	Visual Stability Check for Projections / Partitions if any (Horizontal)			NA		
21	Water Leakage through RCC Column / Beam / Slab, if any	10	3	Yes, In vault corridor areas.	Basement	

22	Water leakage through Masonry Structure	10	2	Yes, In vault corridor areas.	Basement	
23	Over head Water Storage Tanks & Plumbing Connection Status.	10	4	Seems OK, except planning of overflow.	Terrace	
24	Plumbing Connection Status in Toilets/Pantry Area.	10	5	OK.	Toilet Block at First Floor.	
25	Rainwater Downtake Piping System Status.	10	3	It was observed these pipes are not fitted away from the wall of shaft & hence causing seepages inside the pantry area.	First Floor Pantry Area.	
26	Any Vegetation Causing Moisture/Cracks.	10	5	Not Observed.		
27	Terrace Area Checking in General.	10	4	OK, Except the Mumty portion, where severe cracks are developed at the junction of wall and sloped slab & in walls also.	Terrace.	
28	Observation on sagging for RCC slabs, if any.	10	5	Not Observed.		
29	Observation - On sagging for RCC beams, if any.	10	5	Not Observed.		
30	Observation on RCC columns for buckling or crack, if any.	10	5	Not Observed.		
31	Frequency of Building Inspection - Check for Regular Visual Inspections (Annually or Biannually).	5	2	In structure audit was conducted earlier in December, 22. But Tests are conducted only this time as desired by the ICICI Bank.	7th Pal Road, Sardar Pura	
32	Observation on Hairline Cracks in Slabs and slab soffits, if Any.	10	4	Not Observed.		

33	Observation on concrete honey combing, if Any.	10	3	Not Observed, except at few locations of vault room wall were seen when surface was exposed for testing.	Vault Room Walls in Basement.	
34	Observation on exposed steel reinforcement due to insufficient concrete cover.			Not Observed, but at few locations in the corridor walls of vault room indications were seen.	Vault Room Walls in Basement.	
35	Observation on column misalignment due to bad formworks during casting.	10	5	Not Observed,		
36	Position of over head water tank & observation on this.	10	4	OK, Except overflow planning.	Terrace	
37	Basement Observation from inside.	10	3	Vault Room Portion is OK. But in vault room corridor outside walls are of serious concern & need attention on priority.	Basement Corridor around vault room.	
38	Check for regular maintanance records.	2	1	It is a new building so maintenances did not observed.	Musakhedi Agrawal Bhawan	
39	Visible Concrete Deterioration in Slabs, If Any	5	3	Not Observed. It is a new building.		
40	Observation on NDT USPV Test.	10	5	As per Report.	Basement Vault Room.	
41	Observation on NDT Concrete Half Cell Potential & Resistivity Test.			NA		
42	Observation on Concrete Scanning Test.			NA		
43	Observation on NDT Rebound Hammer Test on Vault room floor.	10	3	As per Report.	Basement Vault Room.	

44	Observation on Epoxy Grouting in toilet tiling.	10	4	It was observed ONLY done in wall tiling, but floor tiling it was not done although it is more required in flooring areas.	Toilet Block.	
45	Building Outer Area Floor Level V/S Functional Floor Level Inside.	10	5	The said level difference is around 3', so it is OK (Safer Side in case of flooding situation).	Within the Campus but outside the main building.	

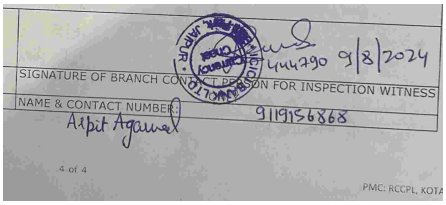
TOTAL RATING SCALE : 382

TOTAL RATING : 150

RATING INDEX: 0.39

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

Arpit Agarwal

9119156868

LANDMARK

Material Testing And Research Laboratory Pvt. Ltd.

NABL Accreditation as per ISO:17025 and ISO:17043

TC-8077

TEST REPORT

Doc No.-QR/08, Issue Date- 01.01.2014
Rev. No.-02, Rev. date- 30.11.2022

ULR-TC807724000001191F
LRL\2024\608

Issue Date: 10.08.2024

1. **Name of Customer & Address** : **Rajshree Consolidated Consulting Pvt. Ltd.**
   No. 101, Shakun Elegance, Karneshwar Housing Yojna,
   MBS Road, Kota (Raj.) - 324005
2. **Name of Client** : ICICI Bank Ltd., ICMC, Jaipur (Raj.)
3. **Name of Work/Project** : -
4. **Material Identification** : Reinforced Concrete Structure
5. **Source/Location** : ICICI BANK LTD.
   Indra Colony, Jhotwara Road, Near Chamatkareshwar Temple, Banipark, Jaipur-302016
6. **Sample Condition when Received** : -
7. **SRF/Letter Reference** : SRF Dated 09.08.2024
8. **Date of Sample Receipt** : -
9. **Date of Sample Tested** : 09.08.2024
10. **Environmental Conditions** : -
11. **Test Performed at** : Site

I. Non-Destructive
A. Building Materials-Reinforced Concrete Structures

TEST RESULTS

Non-Destructive Test by Ultrasonic Pulse Velocity & Rebound Hammer

S. No.	Location	Ultrasonic Pulse Velocity Analysis (IS-516 (Part-5/Section-1)- 2018			Rebound Hammer Analysis (IS-516 (Part-5/Section-4)- 2020		
		Direction of Transmission	Average Pulse Velocity (km/sec)	Concrete Quality Grading	Direction of Testing	Average Rebound Index Value	Compressive Strength (Mpa)
1	Entry Wall	Indirect	4.4	Good	Horizontal	43	47
2	Vault inside Column Ist	Direct	4.0	Good	Horizontal	39	40
3	Back Side Vault Wall (LHS)	Indirect	3.9	Good	Horizontal	38	38
4	Back Side Vault Wall (RHS)	Indirect	3.9	Good	Horizontal	38	38
5	Vault Room Lift side Corridor Near Emergency window	Direct	3.9	Good	Horizontal	44	49
6	Vault Room inside on Flooring Ground	-	-	-	Vertical Downward	26	24

Note: Based on the above results, the compressive strength of the R.C.C. wall varies from 38Mpa to 49Mpa.

For Landmark Material Testing And Research Laboratory Pvt. Ltd.

(Dr. Anil Dixit)
Authorised Signatory

(N.K. Yogi)
Dy. Quality Manager

End of Report

Note:

- This Test Report shall not be reproduced wholly or in part and cannot be used as an evidence in the court of law without written approval of M/S **Landmark Material Testing And Research Laboratory Pvt. Ltd.**
- The results listed refer only to the tested sample and applicable parameters. The results apply to the sample as received.
- The sample will be stored up to one month from the date of issue of test report unless otherwise specified.
- Total liability of this laboratory is limited to the invoiced amount.

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CIN No. U73100RJ2011PTC034607, PAN No. AABCL9797K, GST No. 08AABCL9797K1ZN