

The Rashtrapati Bhawan has two open Courts, North and South to reach inside the palatial building designed by Sir Edwin Lutyens. The South Court, situated on the southern side, is used by the visiting dignitaries as promenade during their stay. The south Court which was constructed in early twentieth century, houses in its basement several essential household units like kitchen, bakery etc.

The Court, which is open to the sky, is about 100 ft. by 200 ft. The portion of the large court which is used by vehicular traffic has got 100x100x100 mm size granite cobble stones which were laid over a waterproofing system are basically lime concrete system. There are four major horizontal gutter drains which are covered with cast iron gratings. The gutters which are lead lined, are situated above the brick wall of the basement and discharge into 6" diameter rain water pipes. The non-cobbled portion of the court has diamond shaped large sandstone slabs.

The court has also a large oblong fountain roughly 25 ft. x 80 ft. in size, situated in the centre, which also serves as a divider for incoming and outgoing vehicular traffic.

With the passage of time, the waterproofing layer situated below the cobbles stones lost its efficacy and water started percolating through the lime concrete base layer. This resulted in wet patches in the roof of the basement household units. As these units were acting as false ceiling, the percolation of water in this portion went somewhat unnoticed. The lead lined main gutter drains which are situated over thick bricks walls also started leaking due to of the lining and also due to accumulation of water on top of the drains after heavy downpours.

Moreover, the central fountain also developed cracks due to age and gradual deterioration of the protective quality and started leaking from its bottom. The operation of the fountain had been suspended for the last few years because of the leakage. During the unusual heavy downpour in Sept. 1995, large leakages were observed below the South Court and interim measures were taken by the authorities to provide temporary solution. Subsequently the causes of the distress were investigated and search was on for suitable contracting agency to carry out emergency rectification measures of the roof system which were of many types such as twin M.S.joists, brick jack arches, RCC slabs for short spans. Due to continuity over support, tensile cracks had formed on the top portions of the slabs which allowed passage of water.

CICO, backed by their technical expertise was selected for carrying out the emergency rectification of the waterproofing of the basement units below the South Court.

The rectification work consisted of :

- Pressure grouting with non-shrinking cement grouts in a grid pattern.
- Providing waterproofing layer of 3 coats of Tapecrete P-151 system including fibre glass reinforcement.
- Repair of cracks in the fountain and maindrains and other areas.
- Repair of existing cobble stone flooring by sawing the existing cobble stones to widen the gap and seal the gaps with Tapecrete Polymer modified cementing material.

During the execution of the work, many unforeseen distresses were also detected which were rectified. Modification of system of repairs and proper co-ordination were essential requirements for the project.

CICO executed the job to the satisfaction of CPWD President's Estates Division.