



The following is a topic summary from the US FHWA's Concrete Pavement Preservation Workshop that was held in St Louis, Missouri in April 2009. It was attended by Ben Murray and Arvo Tinni from Abigroup and Rick Koschel from RTA.

### **RETRO-FITTING EDGE DRAINS**

In the US, pavement drainage was not considered for most of the 60,000 km of the original concrete pavements of the Interstates built after the war and for many years subsequently.

It is only in the relatively recent times that their pavement research studies have shown that proper pavement drainage can extend the pavement life from several (?) years to twice that of a conventional "undrained" pavement.

Nowadays provision of pavement drainage is part of their standard pavement design (*as it has always been in Australia*). Retro-fitting side drains and sealing of the pavement joints and cracks is now a major annual maintenance expenditure that involves thousands of kilometres. They use both conventional subsoil drains and also "panel drains" (*rigid strip filters*). Emphasis is given to having the outlets with proper headwalls (screened) and having suitable outlet markers. Twice annual inspection of the latter is mandatory. (*I wonder how often do we actually inspect subsoil drain outlets?*).

Most States have a Drainage Maintenance Plan which covers:

- Placement of outlet markers
- Mowing around drainage outlets
- mandatory inspections at least twice a year:
  - inspection of outlets
  - removal of vegetation and debris at outlets
  - replacement of missing rodent screens, outlet markers and repair of eroded headwalls
  - flushing and rodding of drains, and
  - inspection of ditches.

*I believe that a similar Plan should also be mandatory by and for RTA. I have noted that RTA has now eliminated the need for clean out points. (Youdale paper at the RTA November 2009 Paving Conference).*