

solid exterior provided a foil to the luminous interior conceived as the 'soul', much like Kahn's Unitarian church. Yet, as Theron explained, the "articulation of circulation elements and the modulation of the elevations bears a strong resemblance" to Unity Temple (*CREDO*, Oct 1969).

What one should bear in mind is that at Unity Temple the stepped geometry of the exterior corners was achieved first by resorting to a subterfuge, namely the high parapet walls which conceal the pitched roof of the auditorium, then by the pronounced cantilevers of the slabs to the clerestory lighting, and finally in the corner stair towers. The last stand free, sliced away from the mass of the building by full height slit windows to produce sharp shadow lines, and all these elements were unified in concrete. At Welkom-Wes, the equivalents are the castellated brick panels to the roof monitors, slit in the inside corners (Fig 17), those of the clerestory monitors to the galleries, and the stair towers of concrete, and unlike Unity Temple, all forms are simplified, without copings. However, not content with slit windows to produce sharp shadow lines to articulate the staircase towers, Uytenbogaardt exaggerated the junctions and treated the forms of the stair towers and the cloisters as discrete parallel elements, the deep crevices of which must have presented a considerable problem during construction and remain permanently inaccessible. What is more, this stepped corner assembly is the basis for rainwater disposal.

If the aesthetics were an affront, continuous leaking must have shaken the faith of even the most devout parishioners. Clipped eaves to the roofs of the four clerestory monitors, and shallow box gutters to drain both the water from those roofs and the roof of the nave, is hardly responsive to the thunder and hailstorm prone northern Free State. The box gutters discharge onto the square roofs of the interior corner columns before running down the four external corners of the auditorium by way of upright concrete channels to reach the roofs of the stair towers. The clerestory monitors to the galleries were subjected



16 NGK Welkom-Wes. Seating in nave and gallery with construction details (Uytenbogaardt Papers).
17 Drainage details, NGK Welkom-Wes. Clockwise from top left: General view from north-east; Plan detail of a recessed open corner channel (Uytenbogaardt Papers); Square roof of two auditorium corner columns shaped as a sump; Clerestory monitors to auditorium roof; Clerestory monitor on a side gallery showing bend to the box gutter; Details of built-in stormwater pipes (Uytenbogaardt Papers); View from the roof of the oppersaal towards the monitor of the eastern gallery showing various waterproofing attempts; Drainage by way of recessed open corner channels on the exterior of the auditorium.

to similar detailing, exacerbated by the bends to the box gutters to negotiate the side walls before discharging onto the roofs of the same stair towers. Below this level, unlike Kahn, Uytenbogaardt opted not to conceal services in ducts but had downpipes built-in (Fig 17).

In an attempt at dealing with *lekkasie* (incessant leakage), the eaves to the clerestory roofs were extended and the monitor windows permanently sealed at the cost of natural ventilation,

but an option currently mooted is to cover the whole of the complex with a new roof! What is urgently needed is a revisit of the drainage principles and a willingness to infuse any amendments with today's technological advances and Uytenbogaardt's original intentions.

CONTRA MUNDUM

After 19 months, virtually double the anticipated construction time, and although still incomplete, the building