

One Consultant's Opinion

A Consultant Can Help the Roofing Contractor and Building Owner

By Ernie Orchard, Orchard Roofing Consultant

(Editor's Note: Ernie Orchard has been in the roofing industry for over fifteen years and has worked both nationally and internationally as an installer and consultant. He currently wears two hard hats as he is the owner of Orchard Roofing Consultants and the general manager of the Roofing Division at Twining Laboratories, Long Beach, Calif.)

DESPITE ALL of the technological changes in roofing materials and application procedures, leaky roofs continue to be a common building maintenance headache and a major cause of construction litigation. Simple as it may seem, the major source of the problem occurs in the application phase of roofing and is directly related to the quality control for the system's application.

In order to understand why problems originate in the roofing application, it is important to understand how a roof is put together. The roof is one of the few major parts of a structure that is actually fabricated on site. That means there is no "in house" quality control program for actual application. Proper application is left to a crew who may not have received proper direction or guidance in installing the particular roof system. Worse yet, they may not have seen the original plans or specifications and so are installing the roof without regard to details peculiar to the particular building. Since the roof is fabricated on site, its application is easily affected by such job site conditions as:

- Weather and failure to take proper precautions to guard against bad weather.
- On site detail changes made by the general contractor.
- Lack of communication between subcontractors and the general contractor.
- Time restraints which result in changes not in the owner's best interest.
- Subtrade damage to the roofing membrane.

Once the roof system has been applied,

especially in the case of a built-up roof system (BUR), any problems with poor workmanship are covered and not immediately visible. Thus, problems have the potential of becoming large and expensive to repair before any indications of a problem are present.

There are a number of ways that problems with roofing application can be avoided. The first resolution and also the most obvious is to devise a set of plans and specifications that are detailed, accurate and up-to-date. When in doubt, call in the experts. Twining Laboratories Roof Consulting Division receives many calls for roof system recommendations. A roof consultant can put you in touch with the appropriate manufacturers of roofing systems, as well as the industry associations (such as the NRCA or WSRCA) that present the most up-to-date practices and procedures for roofing details.

The next step is to review submittals from the roofing contractor. All submittals should be approved by the original specifier. This insures that the architect and/or specifier's original intentions are kept intact. Any field change orders should be approved as well.

However, even the most detailed and accurate specifications won't work if they are not adhered to in the field. This is where one of the key services of a roofing consultant proves most valuable. A roof consulting firm can provide qualified, experienced inspectors for on-site quality control inspections during the entire course of roofing. For a daily fee, an Inspector will be on the roof each day while the roofing crew is working.

The inspector's job is to monitor the roofing application and compare it to the construction documents. The inspector's field notes include periodic temperature checks of the asphalt, verification of the number of plies and interply moppings, deck conditions, flashing installation and drainage systems, as well as related sheet metal components. The

inspector is responsible for noting any deviations from specification documents and to make sure they are brought to the attention of the appropriate responsible parties. Resolutions are then entered into the field notes to confirm that the problem(s) were solved.

The inspector's daily log provides an audit trail for future reference should any questions arise about the roof system's integrity. In many cases, because of the report detail, a case may end up in arbitration rather than in a costly court case.

Roof consulting and inspection services may also result in indirect cost savings. Construction litigation, as many people know from past experience, is second only to medical malpractice in terms of awarded settlements. Roofing litigation is a major source of construction cases. Roof consulting makes no claim to prevent litigation. However, the quality assurance reports, copies of correspondence and changes generated during application, all presented in a complete job package, provide enough documentation to answer questions that may arise later.

Thousands of owners, developers, architects and general contractors have realized the value of full time roofing inspection services. Everyone in the construction industry will eventually come in contact with a roof consultant, so it is important to understand that a roofing consultant is there to take some of the roofing burden off you.

A full service roof consultant should be able to provide specification review, bid administration, pre-bid and pre-job meetings, daily in-site quality control observers, analysis and recommendations for existing roofs, roof systems selection and life cycle costing, in-house laboratory analysis, pull-out tests and litigation support.