ERH communications & civil engineering

Project Reference

Conwy Tunnels Passive Fire Protection

North& Mid Wales Trunk Road Association

Background

Following a case study of the tunnel element and dilation joints, it was concluded that the current level of fire protection was not sufficient to protect the omega seals in the event of a fire. A solution to this issue was found and the new design commissioned by the Welsh Government.

Works

The new design required the removal of the existing fire protection to tunnel element joints and replacement to meet the requirements of the new design. ERH was Principal Contractor for the project and carried out the following works:

- Tunnel misalignment survey;
- Factory testing of fire protection boards and fixings, prior to install;
- Optimise design, to allow maximum yield from the raw product (resulting in a saving of circa £350,000 to the project);
- Procure and prepare fire protection boards to strict design criteria;
- Remove Mechanical & Electrical equipment at joint locations, to allow fire protection work;
- Remove existing fire protection from joints;
- Pack out joints with super-wool;
- Install new fire protection boards, making allowances for misalignment and thermal movement within the tunnel;
- Inspect and test 100% of fixings used to secure board;
- Replace Mechanical & Electrical equipment.

Outcome

The project had its challenges due to the design being a world first, however we worked closely with the client and designer at all times to ensure the project was delivered on time, within budget and to the full satisfaction of all parties involved.

"Proactive approach during the construction Phase of the project to deliver the product under exceptional and demanding programme and delivery constraints" Project Manager, NMWTRA

Date: January - April 2017

Value: £1.7m