RBA Engineering Consultancy

Client: Network Rail Works Delivery
Location: West Allerton Station, Liverpool
Role: Designer (Structural / M&E)
Completed: October 2022

CASE STUDY
STRUCTURAL ENGINEERING
Footbridge Refurbishment

PROJECT OVERVIEW

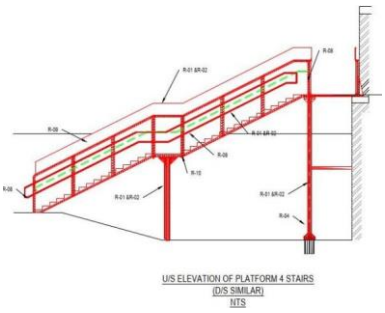
West Allerton Station Footbridge is a 2 span rivetted plate steel half through structure on steel trestles with 3 No. steel half through staircases. The footbridge provides main point of access/egress from the roadside ticket office to platforms 1 to 4 of West Allerton Station.

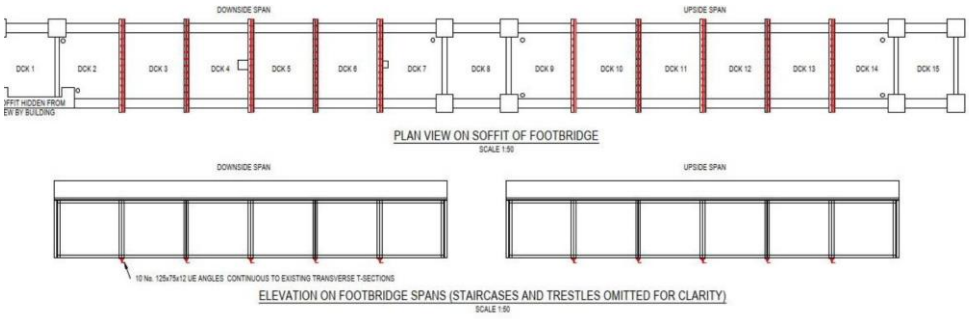
The main spans of the bridge comprise a transverse spanning reinforced concrete deck supported on the inside of bottom flanges of longitudinal steel riveted edge girders. Steel transverse T-sections run transversely between the bottom flanges of the edge girders forming a u-section with coinciding web stiffeners.

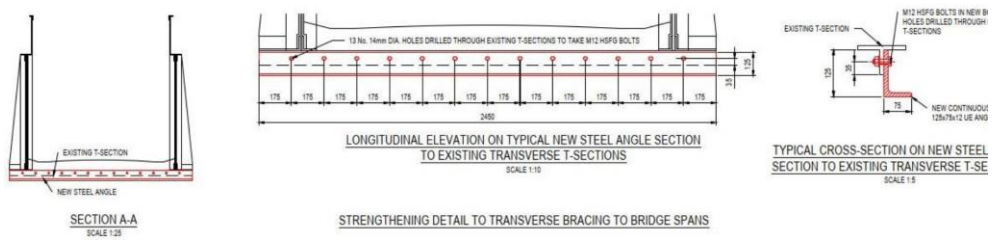
RBA Ltd were appointed by Network Rail to carry out the following tasks as the Lead Design organisation: -

- Review the previous level 1 assessment report and verification of assessment results and recommendations as part of due diligence process
- Undertake further surveys/investigations where required to complete the further structural analysis as identified in the previous assessment report
- Review and confirm extent of defects with drawings produced for proposed remedial works
- Assess non-conformities to NR/DfT standards
- Undertake Building Services survey
- Incorporate a cost-effective lighting solution to the refurbishment proposals
- Assess impact of proposed works on pedestrian access
- Provide AFC details, drawings and specifications for the implementation of the works

RBA also provided site support to the appointed Principal Contractor following the contract award and assisted with early clarifications in addition to follow-up survey work to confirm any deterioration in condition since the initial surveys, and any associated impact on scope of works.







Services Snapshot

- Structural Survey
- Review of Structural Assessment
- Structural appraisal and design of remedial works
- Lighting Design