

Q41 BARRIERS/GUARDRAILS

To be read with Preliminaries/ General conditions.

PRELIMINARY INFORMATION/ REQUIREMENTS

001 CONTRACTOR'S DESIGN: ENTRANCE GATES

- Design responsibility: Automatic entrance gates.
- Drawing reference: 312_SF_303&304.
- Design standard: In accordance with BS 7818.
- Requirements:
 - Generally: As clause 110.
 - Design: Complete the design in accordance with the designated code of practice to satisfy specified performance criteria.
- Design and production information: Submit proposals.
- Timing of submissions: To be confirmed.

TYPES OF BARRIERS/ GUARDRAILS

110 PEDESTRIAN RESTRAINT SYSTEMS IN METAL

- Standard: To BS 7818.
- Drawing reference: 312_SF_303&304.
- Height above datum (minimum): 1100mm.
- Components:
 - Top rail: 12x60mm galvanised MS flat bar.
 - Balusters: 10mm galvanised MS rods.
- Component material and finish as delivered: As section Z33.
 - Top rail: hot dip galvanised to 140 microns.
 - Balusters: hot dip galvanised to 140 microns.
- Foundations: RC Slab & Upstand.
- Fixings:
 - Materials for fixings: Similar material or coating to connected items, or isolating washers/ bushes provided to prevent bimetallic corrosion.
 - Continuous MS rod surface mounted with welded steel base plate. Minimum concrete strength B25.
- Performance verification: Submit a certificate of the restraint system's conformity to BS 7818, issued by a United Kingdom Accreditation Service (UKAS) independent laboratory,
prior to ordering materials.
- Other requirements: Non shrink grout.

PERFORMANCE/ INSPECTION/ TESTING

300 CONTRACTOR'S STRUCTURAL DESIGN

- Design responsibility: Pedestrian restraint system.
- Requirement:
 - Generally: As section B51. Submit drawings and schedules in accordance with the designated code of practice and to satisfy the performance criteria specified in section B51.
- Member sizes and locations: As clause 110.
- Design and production information: Submit proposals.
- Timing of submissions: To be confirmed.

330 VERIFICATION OF ANCHORAGES

- Certification: Four weeks prior to installation, submit certificates from a United Kingdom Accreditation Service (UKAS) independent laboratory, stating that for tests in accordance with BS 5080-1.
- Tolerance: Certification must include the maximum tolerance of hole size and evidence that load can be supported when anchor is installed in holes having these tolerances.

INSTALLATION

405 COMPETENCE

- Operatives: Contractors must employ competent operatives.
- Qualifications: Submit certification of training.
 - UKAS Sector Scheme 2A sub categories: Submit proposals.
 - UKAS Sector Scheme 2C sub categories: Submit proposals.

410 WORK ON OR ADJACENT TO HIGHWAYS

- Requirement: Comply with the Department for Transport's 'Safety at street works and road works. A code of practice'. Retain a copy of this document on site at all times during the course of the works.

420 ALIGNMENT

- Erection: Fences/ barriers to present a flowing alignment. Tops of posts to follow ground profile.
- Tolerance: ± 30 mm of prescribed alignment and, within any 10 m length, ± 15 mm from the straight or required radius.

430 ERECTION GENERALLY

- Protection: Coat all internal and external surfaces of aluminium and steel posts below and up to 150 mm above ground level, with two coats of bituminous paint to BS 6949 type 2, unless other applied surface finish is specified.
- Prevention of electrolytic corrosion: Isolate dissimilar metals.
- Steel components: Do not drill, cut or weld after galvanizing.

COMPLETION

900 DOCUMENTATION

- Contents:
 - General product information.
 - Installation information.
 - Inspection and maintenance reports.
- Number of copies: 1.



External handrail