



Industrial Pedestrian Guardrail Installation & Inspection Guide

A project-controlled sequence for survey, drilling, anchoring, alignment, inspection and handover

Document	Value
Document code	QY-IGR-INS-01
Revision / date	Rev. 1.0 / 24 Jul 2026
Intended use	Installation planning for QY non-highway pedestrian separation barriers
Status	Controlled customer reference; project data remains subject to approved submittals

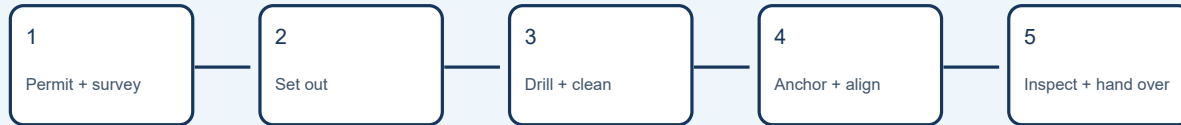
Evidence boundary. This guide supplies a workflow, not universal anchor sizes, drill diameters, embedment, torque or capacity. The approved project drawing and anchor manufacturer instructions govern.

Use rule: Never release a quotation, fabrication drawing, installation instruction or compliance statement from this guide without a project-specific technical review.

Engineering clarity • RFQ completeness • traceable evidence



1. Installation sequence



Stop work for unknown substrate, embedded services, damaged concrete or missing anchor data.

Responsibilities before mobilization

Role	Minimum responsibility
Customer/site	Permit, shutdown, access, floor records, service information and exclusion zone
Designer	Loads, layout, substrate acceptance, anchor design and approved drawing
Installer	Competent supervision, calibrated tools, drilling controls and inspection records
QY / supplier	Correct labeled components, approved submittals and replacement-part identification

Stop if the delivered part IDs, drawing revision or site geometry do not match the approved package.



2. Safety and concrete drilling controls

- Complete task risk assessment, permit and lockout/isolation as required.
- Scan for embedded electrical, water, gas, post-tensioning and reinforcement before drilling.
- Control respirable crystalline silica using the applicable regulatory method, local exhaust/wet method, housekeeping and respiratory program.
- Use eye, hearing, hand, foot and respiratory protection based on the risk assessment and SDS.
- Barricade the work zone; control sparks, trip hazards, dust and overhead work.
- Do not dry sweep or use compressed air where it can disperse hazardous dust unless specifically permitted by the applicable control method.

Silica warning: Drilling concrete can generate respirable crystalline silica. The employer must select controls and respiratory protection that comply with the applicable law and exposure-control plan. In the United States, consult OSHA 29 CFR 1926.1153.

Tool and document readiness

Item	Check
Approved drawing and anchor data	Current revision at workface
Scanner / locator	Suitable for substrate and interpreted by competent person
Drill and bit	Correct type/diameter; dust-control attachment ready
Hole-cleaning equipment	As required by anchor instructions
Torque tool	Correct range; calibration in date
Survey equipment	Baseline, level, plumb and clearance checks
Repair materials	Approved coating repair and grout/sealant if specified



3. Receipt, survey and set-out

Receipt inspection

- Check packing list, part IDs, quantities, finish and transport damage.
- Quarantine bent, cracked, deeply scratched or incorrectly drilled parts.
- Protect galvanized or coated components from wet, unventilated stacking.

Site survey

- Confirm run length, gates, corners, clear aisle and equipment envelopes.
- Identify joints, slab edges, drains, slopes, weak topping and damaged concrete.
- Confirm base plates lie fully on sound substrate; obtain designer disposition for shims or grout.
- Mark every post center and verify end conditions before drilling the first hole.

Hold point HP-1	Acceptance
Drawing / site match	Layout checked against current approved drawing
Substrate	Type, thickness, strength/condition and edge distances accepted
Services	Scan completed and marked; hazards resolved
Geometry	Clearances, gates and interfaces confirmed



4. Drilling and hole preparation

- Use the anchor manufacturer's approved drill diameter, depth and equipment.
- Maintain drill perpendicularity unless the approved detail states otherwise.
- Do not enlarge or slot base-plate holes in the field without written approval.
- Clean each hole exactly as required: blow/brush/blow, vacuum or approved alternative.
- Prevent water, dust or debris from remaining where the anchor system prohibits it.
- Record abandoned holes and obtain a repair/disposition instruction.

Inspection field	Record
Post / base ID	_____
Anchor product / lot	_____
Drill diameter / depth	_____
Edge distance / spacing	_____
Hole cleaning method	_____
Substrate anomaly / disposition	_____



5. Anchoring, assembly and alignment

Anchor installation

- Install only the anchor product, embedment and accessories on the approved schedule.
- Observe adhesive anchor temperature, hole condition, working time and cure time where applicable.
- Tighten with the specified sequence and calibrated tool; record final value if required.
- Do not load adhesive anchors before the stated cure condition is achieved.

Barrier assembly

- Set posts plumb and base plates fully supported as detailed.
- Install rails, couplers, bolts and caps in the approved orientation.
- Maintain required rail gaps, expansion provision and gate clearances.
- Use only approved fasteners; do not substitute grade, coating or locking method.

Geometry	Project tolerance / result
Post plumb	_____
Post spacing	_____
Rail height and continuity	_____
Base plate bearing / grout	_____
Gate operation / latch	_____



6. Final inspection and nonconformance

Check	Acceptance basis
Component identity	Matches approved bill of materials
Fasteners	Correct type, complete and secured
Anchors	Correct product, embedment, cure and tightening record
Geometry	Layout, plumb, height and clearances within approved tolerance
Finish	Damage repaired by approved method; no sharp edges
Function	Gates/removable sections operate and lock as designed
Housekeeping	Dust/debris removed using safe method; work area released

Nonconformance rule

Do not conceal, grout over or release a deviation before the responsible party records the condition and approves repair, replacement or use-as-is disposition.

Damage after impact

- Isolate the area and inspect the complete load path, not only the visibly damaged rail.
- Replace parts that exceed approved damage limits; do not heat-straighten without authorization.
- Inspect anchors and substrate for cracking, pullout, rotation or hidden damage.



7. Handover record

Field	Entry
Project / location	_____
Approved drawing revision	_____
Installed quantity / run IDs	_____
Anchor product / lot	_____
Torque / cure records	_____
Nonconformance references	_____
As-built changes	_____
Installer / date	_____
Inspector / date	_____
Customer acceptance	_____

Maintenance handover

- Provide inspection frequency based on exposure and traffic risk.
- Keep compatible repair coating and identified spare parts.
- Record impacts, corrosion, loose fasteners, anchor movement and modifications.
- Revalidate the system after layout or equipment changes.

Technical contact: sales@qymetaltech.com | qymetaltech.com/contact/