

# Engineering Standards

ASTM alignment helps MagnaPlast™ fit the specification, installation, and approval criteria that engineers, contractors, and municipalities already use.

## Engineers

**F1759:** Core HDPE manhole design

**D3350:** HDPE resin requirements

**D2321:** Installation / backfill

**F477:** Gaskets and seals

*Supports design confidence and specification adoption.*

## Contractors

**D2321:** Bedding and embedment

**F1417:** Acceptance air testing

**F2620:** Fusion procedures

**F1055 / D3261 / F2206:** Connection methods

*These standards reduce field risk, inspection friction, and installation disputes.*

## Municipalities

**A48 / F1143:** Frame, cover, watertight cover specs

**C478:** Step spacing reference

**AASHTO M306 / H-20 / HL-93:** Roadway loading expectations

**CSI performance spec:** Approvals and procurement support

*Standards are essential criteria in how cities approve details, products, and bid specs.*

# Why MagnaPlast™ Can't Be Ignored

Concrete may win on first cost. MagnaPlast™ wins where long-term municipal risk is actually created.

Key Evaluation Criteria	MagnaPlast	Precast Concrete
Corrosion resistance	●● Impervious to H <sub>2</sub> S corrosion	X Corrodes in H <sub>2</sub> S environments
Service life	●● 100-year design position	X Avg. ~23 years in corrosive conditions
Lifecycle value / maintenance	●● Nearly maintenance-free; lower long-term burden	X Rehab, bypass, and replacement exposure
Leak risk	●● Factory leak-tested as one unit	X Field joints and long-term leakage risk
Structure	●● One-piece, factory-assembled	X Not monolithic
Installation	●● Lightweight, faster, crane-free	X Heavier, more labor/equipment intensive
Upfront cost	~ Higher initial cost, stronger long-term value	●● Lower initial cost

**Bottom line: If corrosion, maintenance, leakage risk, and installation efficiency are key criteria, MagnaPlast should be evaluated alongside concrete.**

●● = Advantage  
 ~ = Neutral  
 X = Disadvantage