



Access & Flexibility:

The Keys to Efficient Stormwater Maintenance

Presented by Stormwater Compliance, LLC

Wednesday, August 19, 2026 • 1-Hour Webinar (40-Min Presentation + 20-Min Q&A)

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About Stormwater Compliance, LLC



Introductions



- Full-service stormwater BMP inspection & maintenance provider — bioretention to underground vaults.
- Serving property owners, developers, and municipalities nationwide since 2006.
- We see every system through three lenses: designer, crew, and owner.

ABOUT THE PRESENTER

Nathan Marles has been with Stormwater Compliance, LLC since 2008, working every role from the field to the office. He now serves as COO of parent company Low Impact Development Technologies (LID Tech). LID Tech owns a suite of stormwater companies selling & servicing stormwater product.

What We'll Cover Today

Roadmap

- **Topic 1**— Design: five focused topics on getting access right on paper.
- **Topic 2** — Once Built: focused topics on solving access after the fact.
- Every topic ends with a Recommended Fix you can act on



Two Moments Where Access Gets Decided

Why This Matters



- **Design** - when access is still a decision on paper.
- **Construction** – when access changes might be available
- **Post Construction** - everything after — access has to be solved creatively.
- Most systems we inspect never had the chance to get access correct.

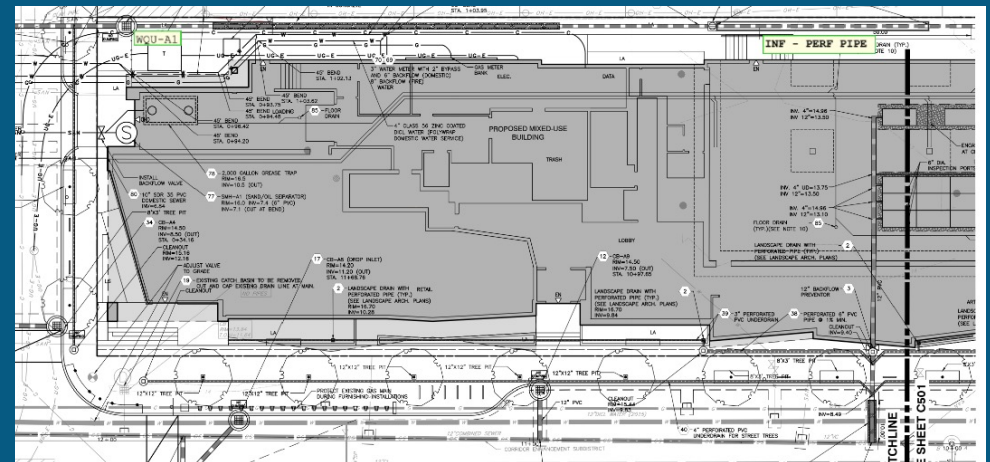
RECOMMENDED FIX

Whichever moment you're in right now, today's fixes are organized so you can jump straight to your act — design-phase fixes first, then in-field fixes.

Q Topic 1

Design: The Starting Point

Five focused fixes for getting access right on paper.



Site Layout & Access Routes

Topic 1 · Design

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- Access treated as an afterthought is the #1 cause of long-term problems.
- A shared driveway or a lawn crossing should not be the default access option.
- Manhole, hatch, and cleanout spacing needs to support real inspection & maintenance.

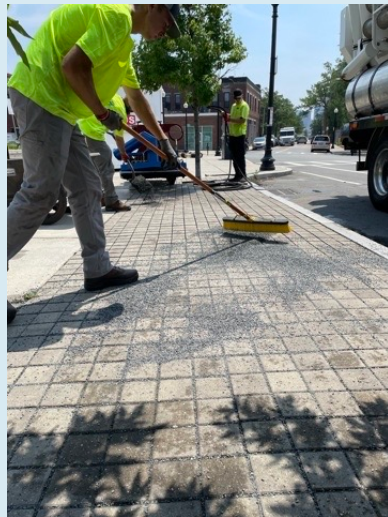
RECOMMENDED FIX

Put a **dedicated maintenance access route** on the site plan before grading begins — give it its own easement and its own line item, the same as any other utility.



Sizing Access for Real Equipment

Topic 1 · Design



- A vactor truck needs far more room than a code-minimum drive (without additional costs)
- Small urban lots and large regional facilities need different equipment strategies.
- Undersized turning radii force crews to improvise — sometimes infrastructure has to be replaced or repaired as part of the project increasing costs.

RECOMMENDED FIX

Pull the actual specs — turning radius, width, weight — for the equipment needed, and design the access route to those numbers, not a generic standard.

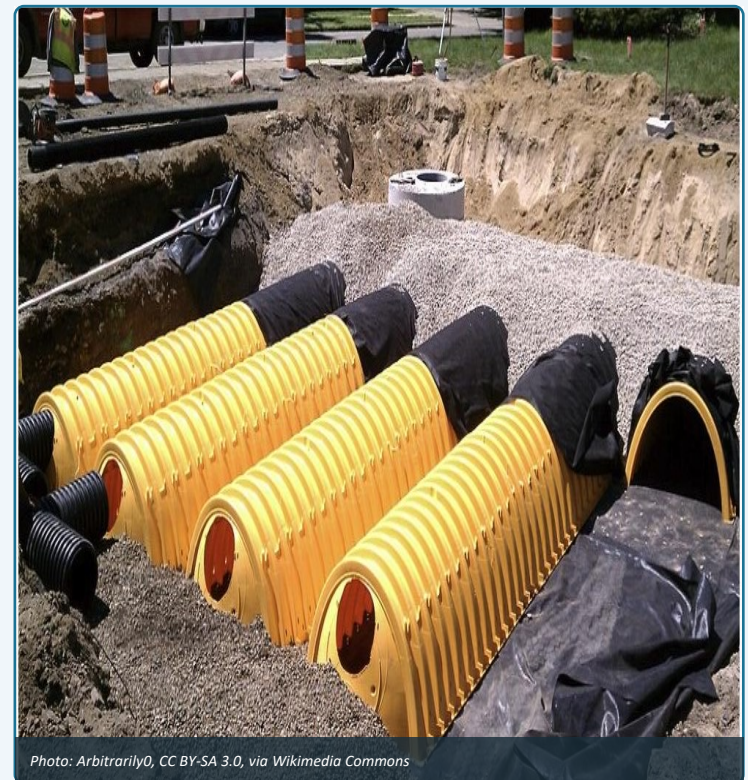
Surface vs. Underground Trade-offs

Topic 1 · Design

- Undersized pipe diameters make access/cleaning effectiveness limited.
- A cleanout or manhole belongs at both ends of most runs, not just one.
- Runs longer than a hose reach need mid-line access.
- Inlet and outlet structures need their own clear access — sediment collects there first, not mid-pipe.

RECOMMENDED FIX

Loop in your local stormwater inspection & maintenance provider during design – not after. They can advise on pipe lengths and cleanout locations. They are often the ones services the system once it is built.



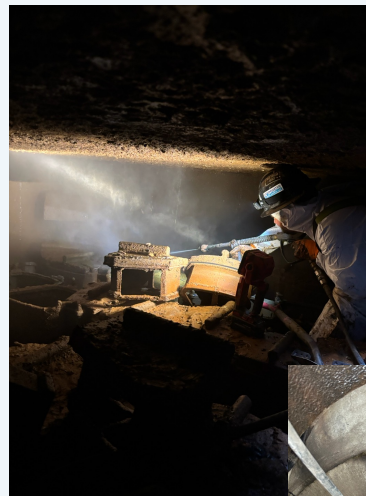
Confined Space & Worker Safety by Design

Topic 1 · Design

- Any vault deep or enclosed enough to trap air triggers OSHA confined-space rules.
- Retrofitting access
- Two-person entry needs different hatch sizing than solo access.

RECOMMENDED FIX

Decide the entry protocol — solo vs. two-person, permit-required or not — at design time, and size hatches, ladders, and ventilation to that protocol from day one.



Q Topic 2

Design Is Complete

Seven focused fixes for solving access after the fact.



Modular & Swappable Systems

Topic 1 · Design



- A system that fits cleanly on the site plan doesn't guarantee anyone can actually reach it once fences, landscaping, parking, or walls are installed.
- Paper access and physical access are two different things — an easement line on a survey means nothing if the path it describes isn't walkable with tools or equipment.
- What worked for the original installer may not work for whoever inherits the maintenance contract — a design reviewed only on paper hides that gap until someone's standing in front of it.

RECOMMENDED FIX

Specify modular, cartridge-based media wherever possible, so routine maintenance is a swap-out measured in minutes — just ensure proper access. Consult an I&M expert.

Creative Access

Topic 2 · Creative Access

- Most existing systems were never given a real access plan.
- Tight parking lots and medians call for narrower, creative footprints.
- A retrofit has to keep the system working mid-project, not just add access.

RECOMMENDED FIX

Map the tightest equipment that can realistically do the job, then design the retrofit's access footprint around that equipment — not the other way around.



Access Examples Across Green Infrastructure

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Topic 2 · Creative Access

Bioretention & Rain Gardens



Photo: EmilyBlueGreen, CC BY-SA 3.0, via Wikimedia Commons

Permeable Pavement

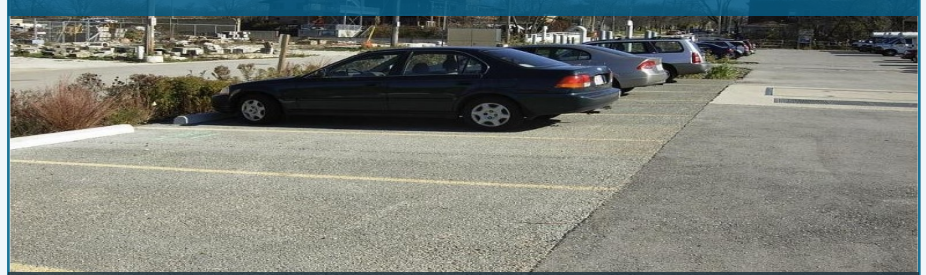


Photo: Aaron Volkening, CC BY 2.0, via Wikimedia Commons

Green Roofs



Treatment Swale / Stormwater Trench



Seasonal Access Windows

Topic 2 · Creative Access



- Snow storage and frozen ground can close a route that works fine all summer.
- Wet-season access failures are predictable — and preventable.
- A maintenance plan that ignores the calendar isn't really a plan.

RECOMMENDED FIX

Build a seasonal access calendar for every site, flag the months when the primary route is unreliable, and pre-identify a backup route or timing window.

Ownership, Easements & Succession

Topic 2 · Creative Access



- Access squeezed between houses or commercial buildings often has no recorded right to be there at all — just a gap someone can currently walk through.
- HOA-held easements are only as good as their upkeep: unrecorded amendments, lapsed boards, and skipped annual meetings all put access at risk.
- A system's ownership can outlive the paperwork that documents access to it — recorded easements need periodic review, not a one-time filing.

RECOMMENDED FIX

Record a transferable maintenance easement against the deed — with a named responsible party.

Communicate access plan & timeline early in the properties infancy

Smart Technology & Remote Monitoring

Act 2 · Creative Access

- Remote sensors can tell you a visit isn't needed yet — saving a trip.
- Drone and camera inspection reach structures that are hazardous or hard to access.
- Predictive maintenance flags which hard-to-access sites need attention first.

RECOMMENDED FIX

Instrument your hardest-to-access sites first — that's where remote monitoring pays for itself fastest by cutting unnecessary physical visits.



Photo from NexSens

Emergency & Rapid-Response Access

Act 2 · Creative Access

- A mid-storm clog needs faster access than routine maintenance ever does.
- A single access point is a single point of failure in an emergency.
- Improvising access during a crisis costs more than planning for it.

RECOMMENDED FIX

Design at least one redundant access point per critical system, and coordinate emergency-access plans with other utilities before you need them — not during the storm.



Lifecycle Cost & Asset Management

Act 2 · Creative Access



- The cheapest access solution is prior to construction completion.
- Deferred access investment shows up later as emergency repair cost.
- Access can be added during a maintenance event if necessary

RECOMMENDED FIX

Work with your local stormwater inspection & maintenance provider to come up with site specific solutions for long term access.

Track access constraints per facility in a shared asset-management system, and price routine access difficulty into your long-term maintenance budget up front.

THREE THINGS TO REMEMBER

1 Design is the cheapest place to solve access.

Site layout, equipment fit, and safety decided on paper cost far less than fixing them after construction.

2 Once built, access has to be solved creatively.

Retrofits, real-world constraints, and smart technology all give you ways to maintain access on systems that already exist.

3 Every access issue has a fix.



Questions & Discussion

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THANK YOU!!

- Drop questions in the chat/Q&A panel.
- Priority topics: confined-space safety, retrofit access, smart monitoring.
- Didn't get to your question? Contact us!

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A graphic featuring the text "Q&A" in a large, white, sans-serif font. The text is set against a blue square background that has a slight gradient and a long, dark blue shadow cast to the right. This square is centered within a larger, light blue rectangular area that is outlined by a dashed blue border.