

BURIED UNDERGROUND DOWNSPOUT SYSTEMS



Protecting Your Home's Foundation — the Right Way

PROFESSIONAL DRAINAGE SOLUTIONS FOR:

- Residential & Commercial Properties
- Foundation Water Management
- Landscaping & Yard Drainage
- Drainage System Upgrades
- Northern Climate / Freeze-Thaw Installs
- Multi-Downspout Configurations

WHY BURY YOUR DOWNSPOUTS?

Surface downspout extensions leave water pooling right at your foundation — a leading cause of basement seepage, erosion, and freeze-thaw damage in central North Dakota. A buried system carries roof runoff completely underground and releases it safely in the yard via a pop-up emitter.

Problems with surface extensions:

- Water dumps directly at the foundation wall
- Extensions knocked off by mowers or kids
- Ice & freeze-thaw damage at footings
- Tripping hazard across driveways & walks
- Standing water and soggy turf near house
- Unsightly plastic ruins curb appeal

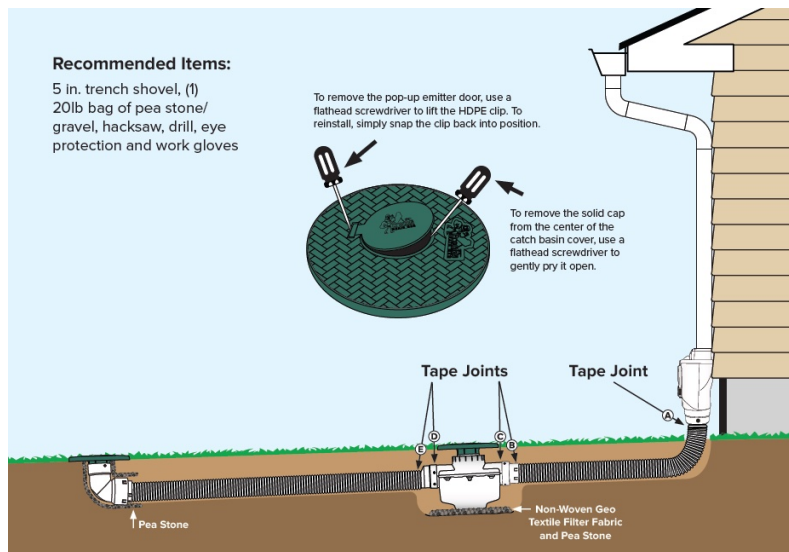


Kit 10 installed with optional catch basin

Most foundation water problems start at the gutters.

Burying your downspouts is one of the highest-return drainage upgrades a homeowner can make.

HOW THE SYSTEM WORKS



Cleanout at downspout (A) → optional inline catch basin (B–D) → solid 3½ in. corrugated pipe on consistent downhill slope → pop-up emitter flush in the lawn. Pea stone and geotextile fabric bed the pipe.

PRO TIP The pop-up emitter opens automatically under rain flow pressure and closes when dry — keeps out rodents and backflow year-round with zero manual operation.

KEY COMPONENTS

Vented Cleanout — Open



Installed at the downspout base. Hinged door gives direct access to the leaf filter basket — no tools required.

Features:

- Removable leaf filter basket
- Hinged access door for quick cleaning
- Vented design prevents vacuum lock
- Fits 2x3 and 3x4 downspouts

Leaf Filter Cleanout — Closed



Black recommended for northern climates — absorbs solar heat to thaw ice faster in spring.

Features:

- Heavy-duty, Made in USA
- Absorbs heat for faster spring thaw
- Fully sealed when closed
- Easy annual inspection

FDM TORRENTIAL RAIN™ KIT 10 — WHAT'S INCLUDED

Single Downspout Kit (~19 ft.):

- Vented cleanout & leaf filter
- ~19 ft. 3½ in. solid extreme-duty corrugated pipe
- HDPE couplers (cleanout + emitter ends)
- Pop-up emitter & turf restrictor plate
- 3 ft. x 4 ft. non-woven geotextile fabric

Two Downspout Kit (~38 ft.):

- (2) cleanouts & leaf filters
- (2) ~19 ft. coils of solid corrugated pipe
- 3½ in. corrugated wye fitting
- 3½ in. external coupler
- Pop-up emitter & turf restrictor plate

Optional add-ons: inline catch basins with risers and fabric, FDM 200-Year tape. Adapter sized to your downspout (2x3 or 3x4).



Kit 10 Pictured with Basin

FDM Torrential Rain™ Kit 10 — all components

PRO TIP	Black cleanouts thaw faster in spring. The 3½ in. diameter is intentional — it increases water velocity vs. 4 in. pipe (mass flow rate principle), helping the line self-flush sediment and debris.
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INSTALLATION OVERVIEW

- 1 Site Walk & Planning**
 We walk the perimeter, identify downspout locations, mark the outlet zone, and confirm slope. Utility locates called in before any digging.

- 2 Trench Excavation**
 A shallow trench cut from downspout base to outlet on a consistent downhill slope — minimum 1/8 in. per foot, ideally 1/4 in. Depth typically 8–12 inches.

- 3 Pipe & Component Installation**
 Cleanout fitted at downspout base. Pipe laid in trench on pea stone and geotextile fabric. Couplers and wye fittings connected. Pop-up emitter set at outlet.

- 4 Backfill & Surface Restoration**
 Trench backfilled and compacted. Turf or surface materials restored. Only visible pieces when finished: cleanout cap at downspout + flush emitter in the lawn.

- 5 Verification**
 We run a hose test to confirm the emitter opens and water flows freely with no backup at the cleanout.

MAINTENANCE & COMMON QUESTIONS

Annual Maintenance Checklist

- ✓ Clear leaf filter each fall after leaves drop
- ✓ Inspect pop-up emitter each spring
- ✓ Confirm emitter lid opens and closes freely
- ✓ Keep grass/mulch from burying the emitter lid
- ✓ Backup at cleanout = filter needs cleaning
- ✓ Avoid heavy equipment over pipe run

Frequently Asked Questions

- Q: Can multiple downspouts share one pipe?**
 A: Yes — two into one 3½ in. line with a wye fitting (included in the two-downspout kit). Three downspouts are achievable with proper slope.
- Q: What happens in a hard ND freeze?**
 A: The extreme-duty corrugated pipe handles freeze-thaw well. The vented cleanout prevents standing water from trapping and blocking the line.
- Q: What if my yard has no slope?**
 A: We assess every site first. Trench depth can be adjusted to create slope in flat areas. We won't install a system that won't drain.
- Q: Why 3½ in. instead of 4 in. pipe?**
 A: Smaller diameter increases water velocity — the mass flow rate principle. Faster water self-flushes sediment and debris.
- Q: Can this tie into a French drain?**
 A: Usually kept separate to protect foundation drainage. We'll evaluate your specific site and advise.

Ready to protect your foundation? Call or text Dakota Earthworks for a free site assessment. **701-773-DIRT**

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