Food Safe Facility Drainage Design

Viking Kristjansson

Global Drain Technologies

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Welcome

VIKING'S SESSION

FOOD SAFE FACILITY DRAINAGE DESIGN

Tuesday Oct 9, 2025

11:00 AM

Webinar

FOODSAFE DRAINS

A division of Global Drain Technologies

Food Safe Facility Drainage Design

WHAT YOU SHOULD KNOW ABOUT EFFECTIVE DRAIN SELECTION

FOODSAFE DRAINS
A division of Global Drain Technologies

Viking Kristjansson, CET

Viking is the Vice President of Sales Engineering and also leads the Product Development Team at Global Drain Technologies, Slot Drain Systems & FoodSafe Drains. He graduated with Honors from Red River College in the Civil Engineering C.E.T. program and has over 25 years of professional sales experience and 15 years of design-build and engineering expertise.

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Existing Food and Beverage Facilities Face Multiple Drainage Challenges

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Erosion & Corrosion

Insufficient, non-resistant materials lead to damaged plant Infrastructure.

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Outdated Drainage Infrastructure

Outdated & Insufficient Drainage systems always snowball into **higher costs** and **higher risks** for everyone

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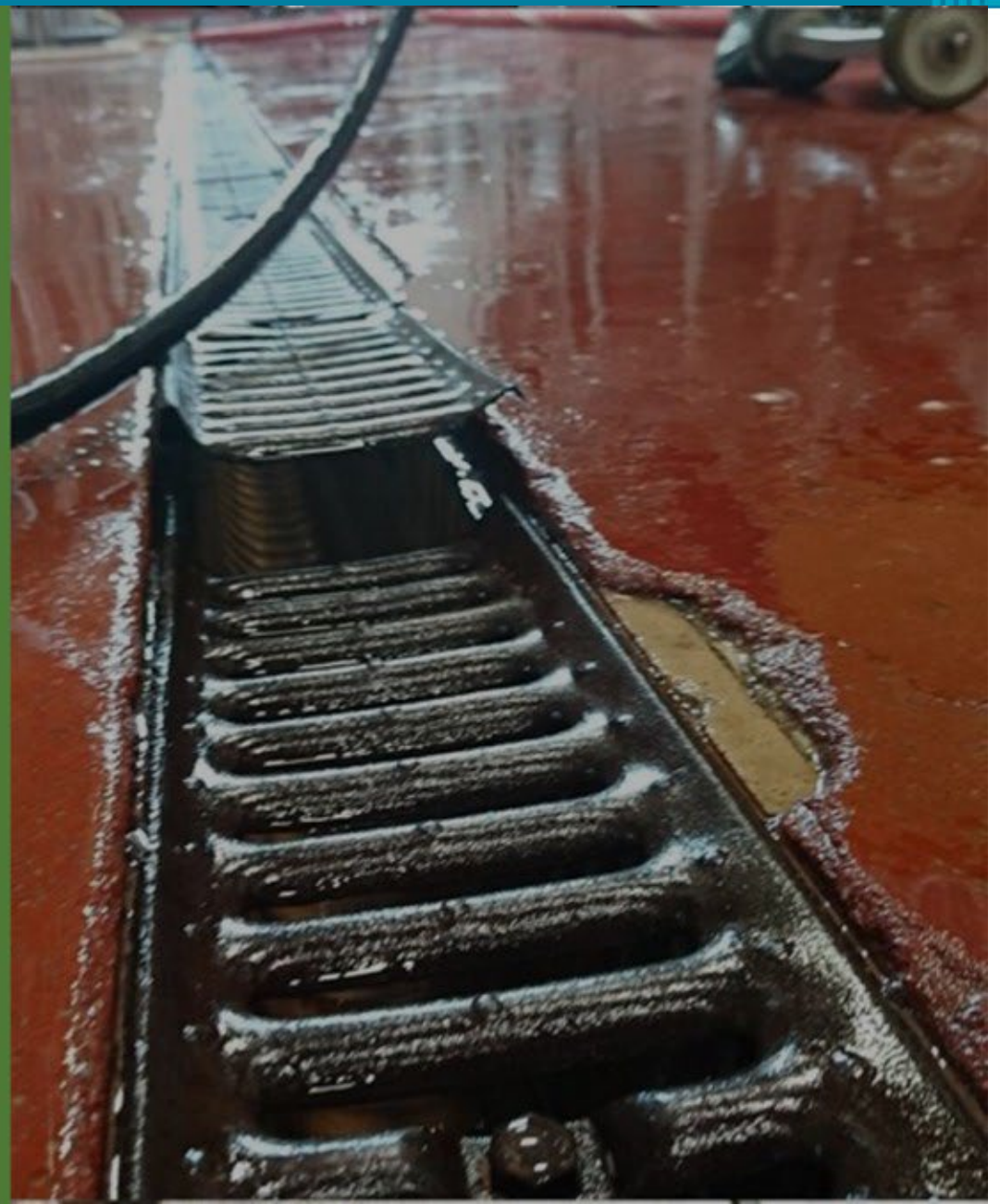
Poorly Chosen Materials

Lead to **damaged drains** and **unsafe, cumbersome work areas.**

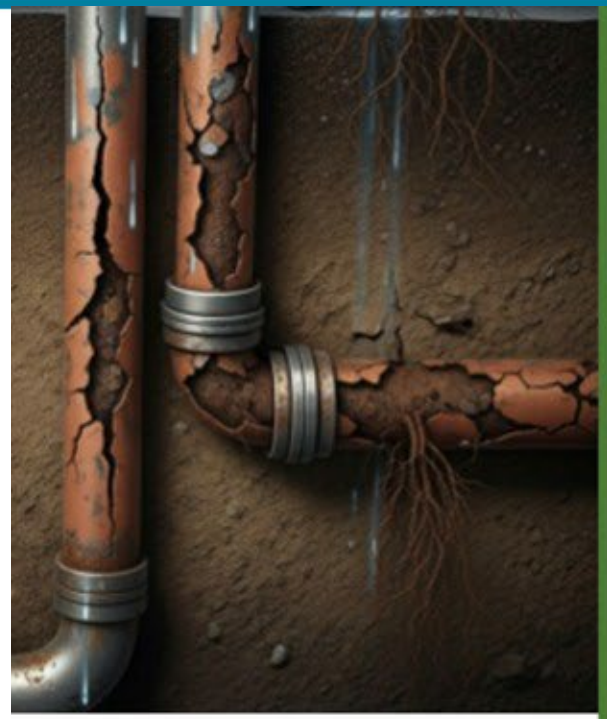


Underground Piping Challenges

Older Facilities encounter significant problems with underground piping

Plant Managers run scopes into old, corroded pipes, and find nothing but mud

More Underground = More Headaches



Underground Pipes Are Difficult To Access and Inspect

Expensive and disruptive excavation is required to identify leaks, corrosion, or blockages.

Negligence = a sudden failure, necessitating a complete overhaul.

Unplanned expenses are far more costly than a proactive, phased replacement.

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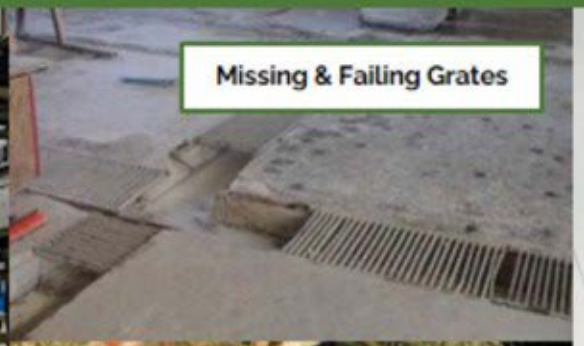
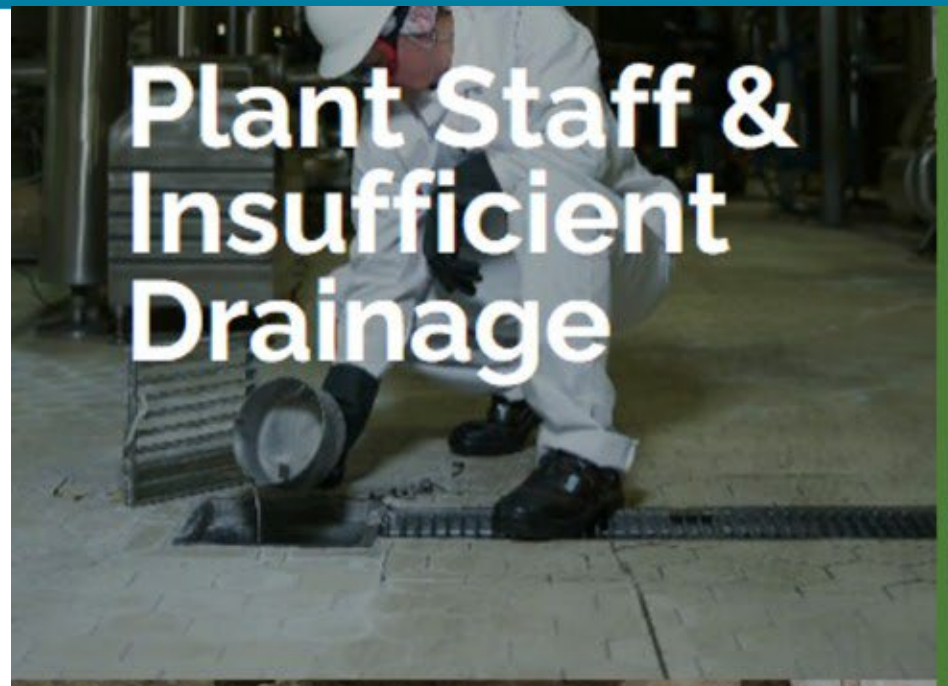
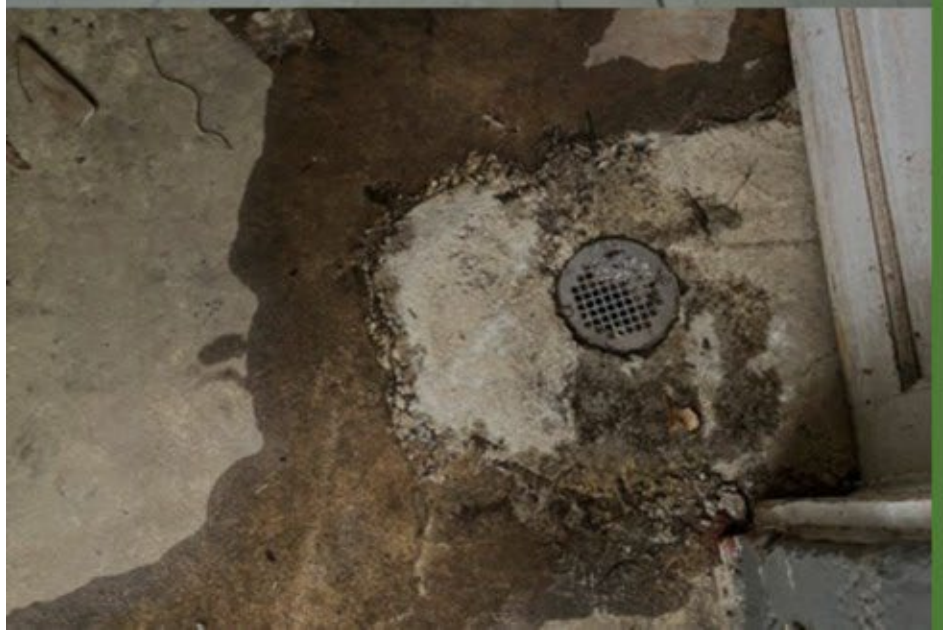
Headaches For Staff

More issues, less time spent on production







Insufficient Drainage Sets Up Plant Staff for Failure

Corroded drains harbour **bacteria** and **pathogens**

The best training cannot avoid insufficient drainage infrastructure

Bad drains lead to **bad habits**, which snowballs into **massive problems later on**

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Dispose of heavy solids directly into the drains

Damage heavy equipment due to complex floor sloping

Avoid consistent cleaning due to inconvenient drainage layout

Improvise cleaning, leading to risk of damage & contamination

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Broken Equipment, Clogged Drains, Bacteria, Catastrophic Failures, Corroded Drains....

All of this leads back to one key issue....

An outdated drainage layout


Let's Talk About Solutions
Bell & Evans, 2022

3 Key Renewal Considerations

1

Is Your Design Optimized?

2

Is it Sanitary and Accessible?

3

Ease of Installation

An Optimized Design Means a Comprehensive Drainage Assessment

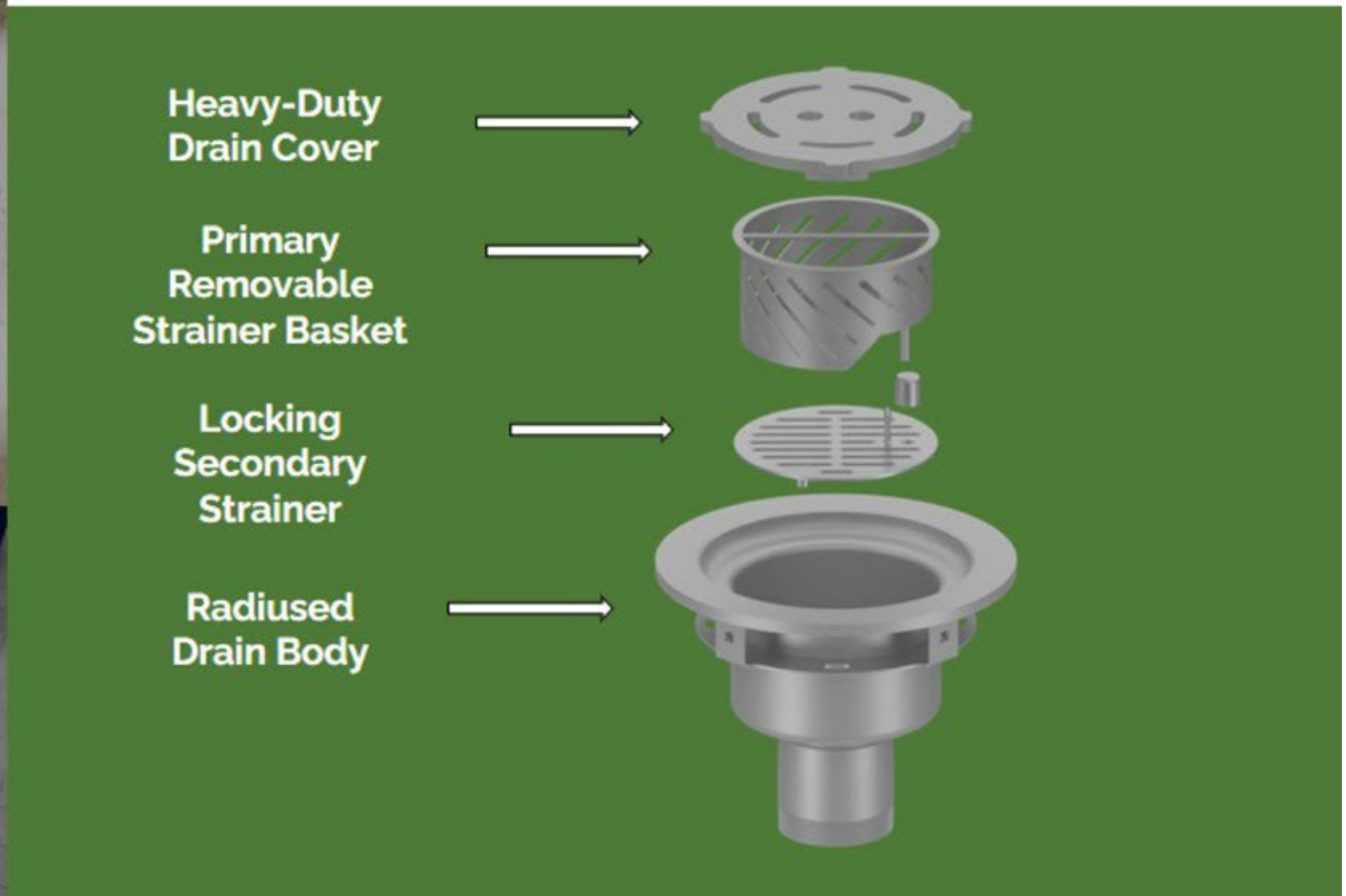
Who's the best person to assess and diagnose the problems in a specific facility?

What types of drains should I be using? In which areas? What's the least costly but most effective option?

How do I eliminate underground piping effectively?

What are the risks associated with staying status quo?

A Convenient Design That Mandates **Honest Maintenance**



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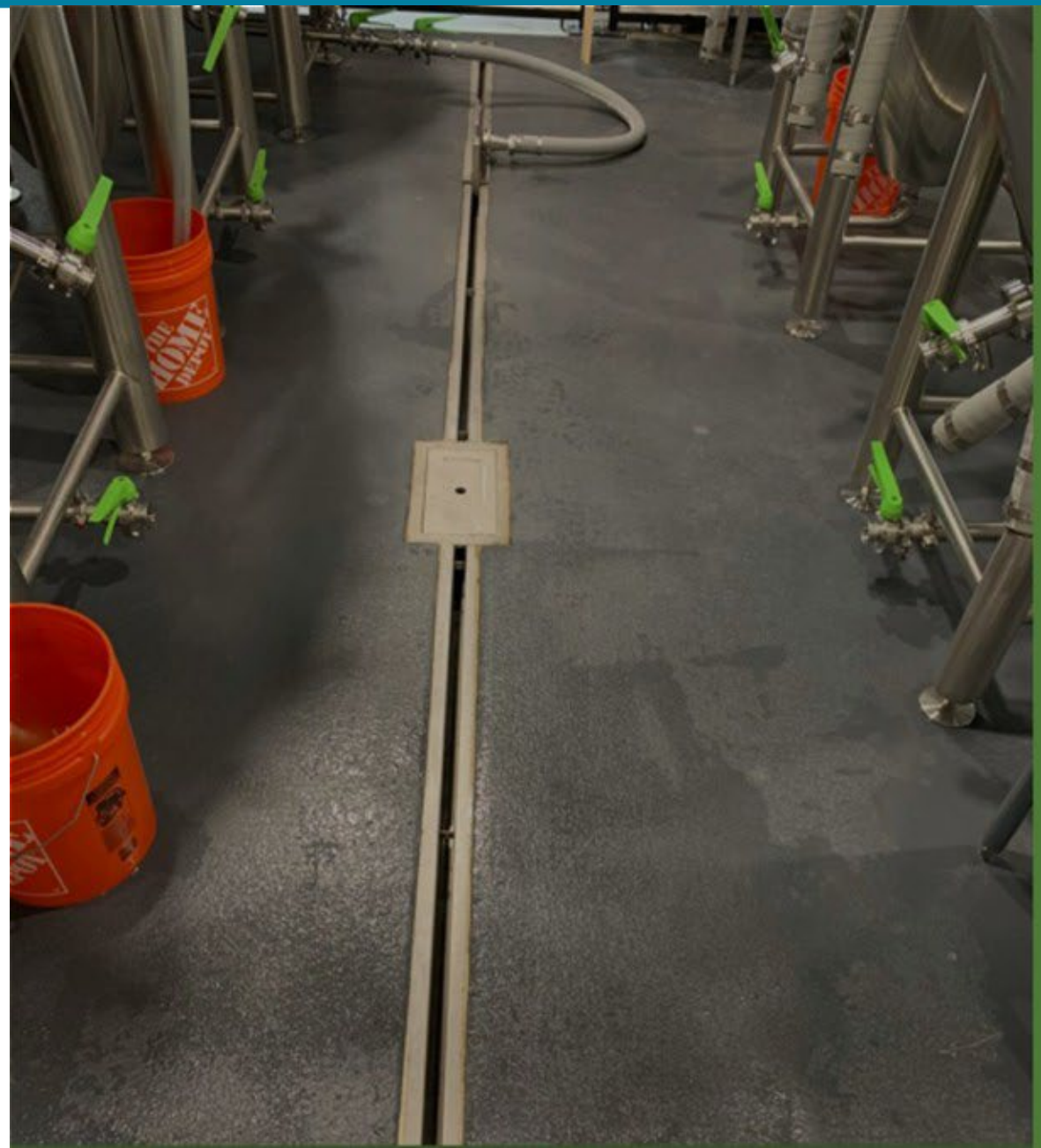
- The **round bottom design** eliminates sharp corners, which are known to harbor bacteria
- Withstands heavy traffic and corrosion
- Pre-sloped design ensures a consistent flow of high volume liquids and solids
- Wide-open channel and load-rated grates

Trench Drains



Slot Drain

- Sleek, Stainless, Sanitary, Safe
- Easy to Maintain - No Cumbersome Parts
- Significantly Reduces Underground Piping and Floor Slopes

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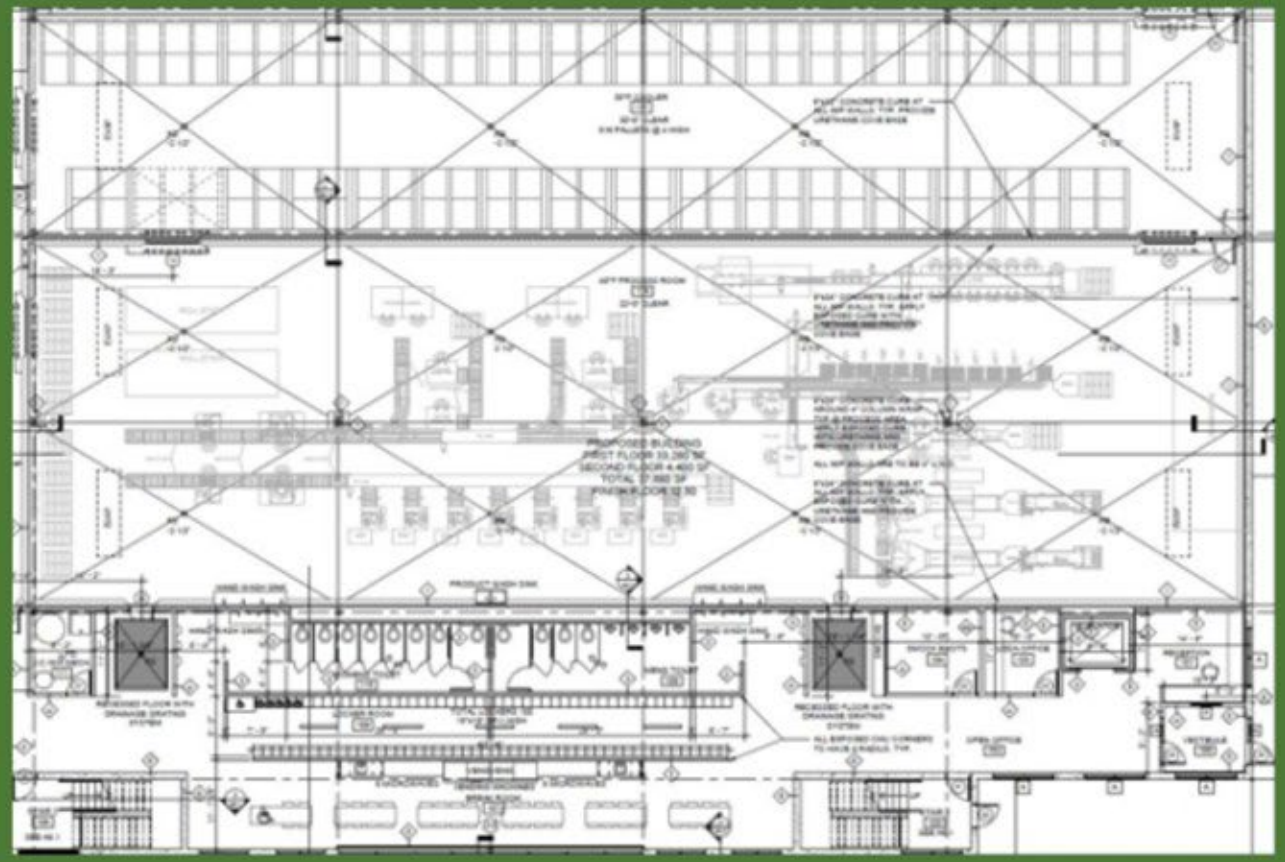
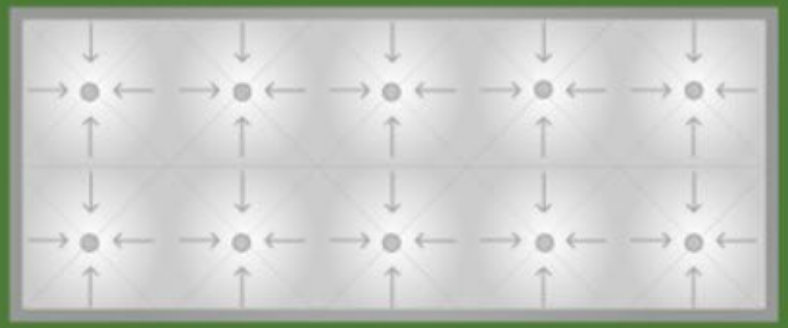
Area Drain Approach





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Mitigating The Risks of Underground Piping

Sometimes Underground Piping is Unavoidable, But It Can Be Managed

Some areas require underground piping

Stainless Steel P-Traps prevent cracking and corrosion, providing a final line of defense

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Eliminating Floor Slopes and Complex Underground Piping

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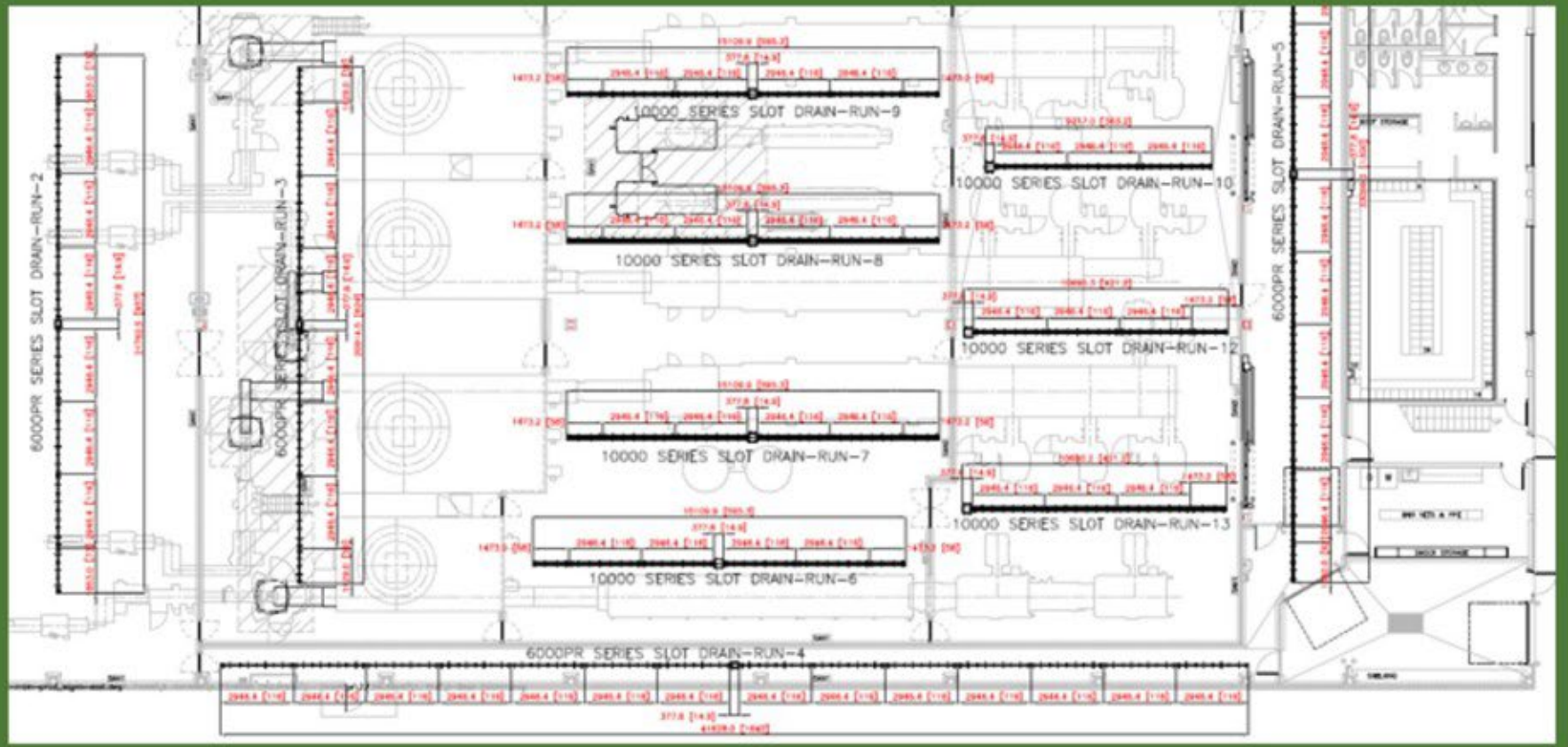
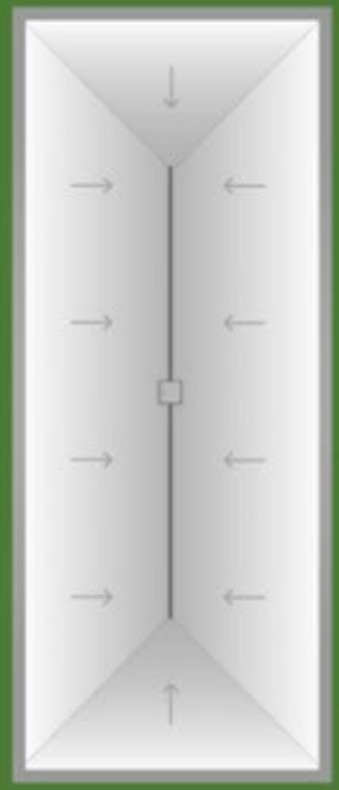
Linear Only Approach





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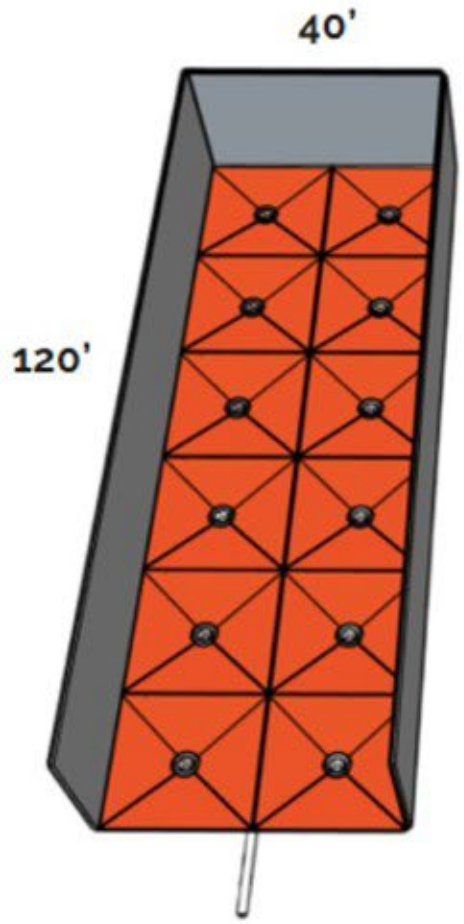
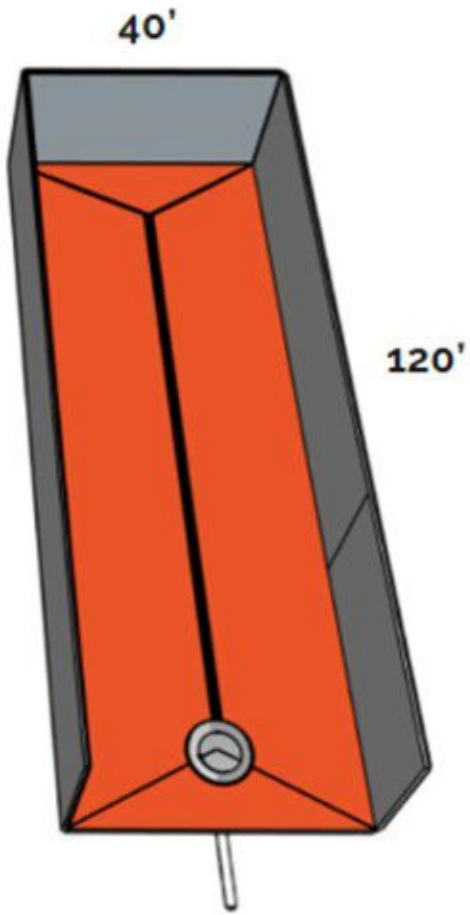
AREA DRAIN



12 Area Drains

AREA DRAIN		LINEAR DRAIN
48	Floor Slopes	4
48	P-Traps	1
24	Couplers	2
6	Y-fittings	1
120'	4" in Pipe	10'
100'	6-8" Pipe	-

LINEAR DRAIN



100' of Linear Drains

COMPARISON SHOWN OF A 4,800 SQ FT AREA

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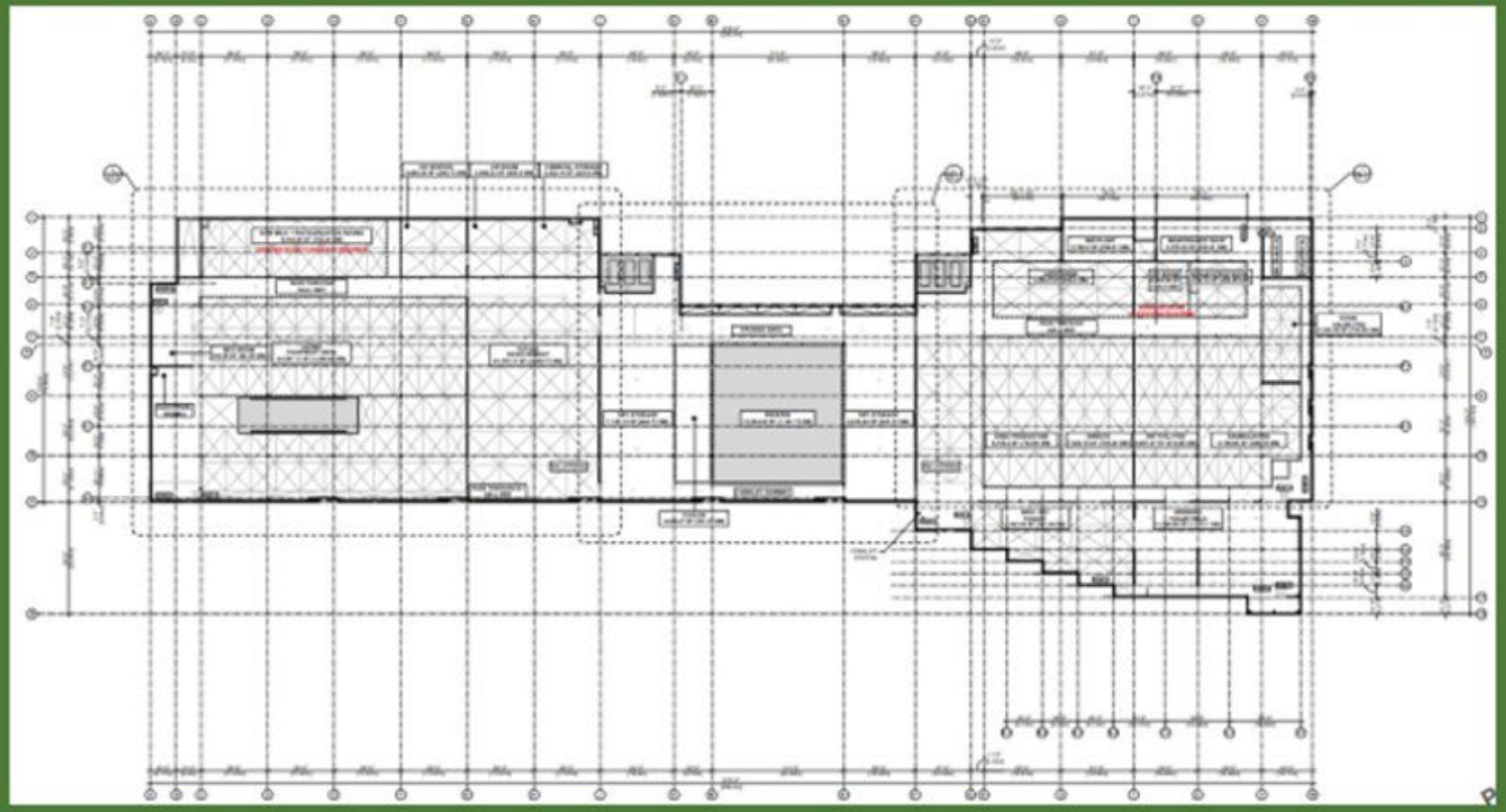
Consultative Linear Approach



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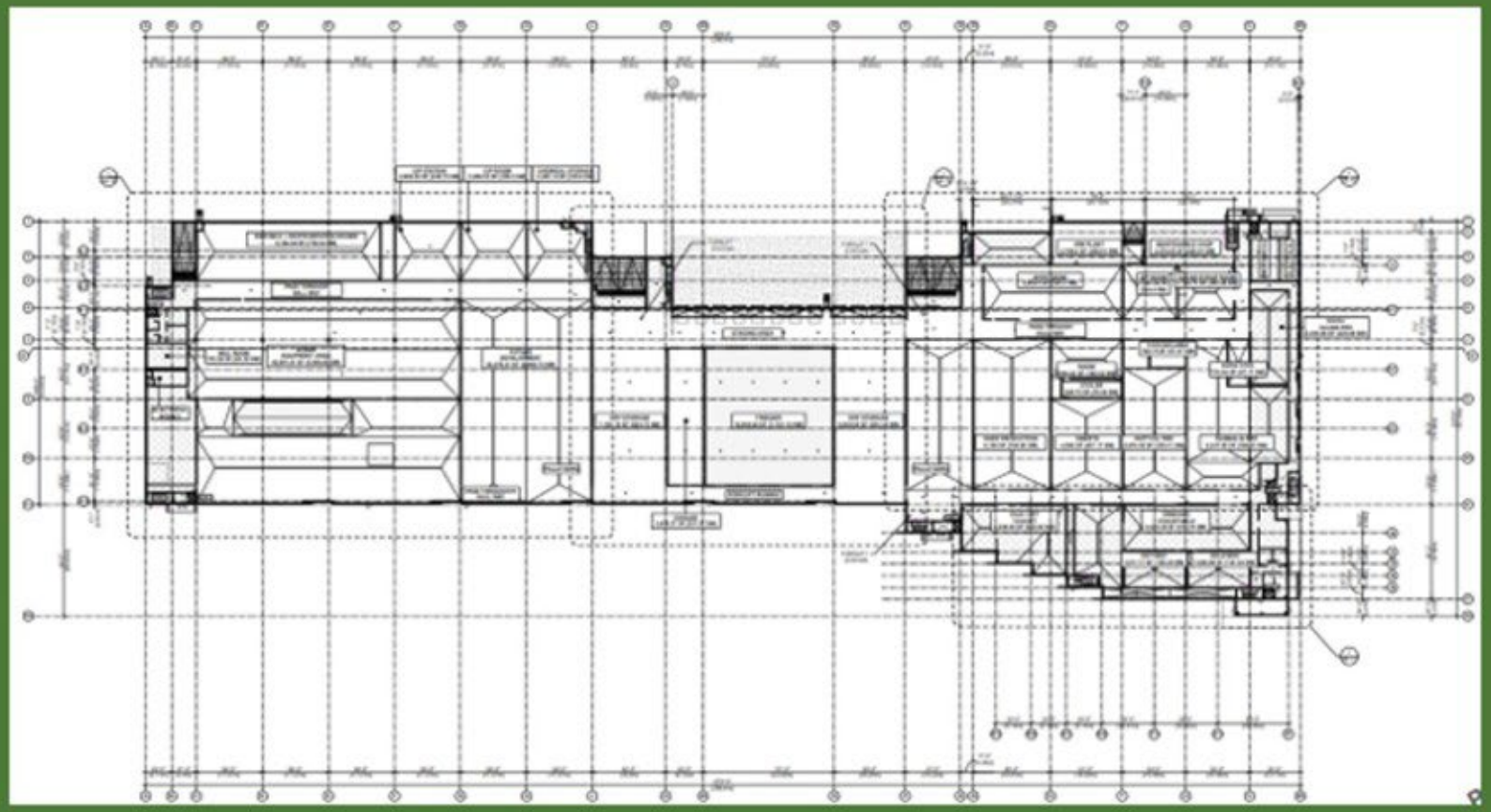
Consultative Linear Approach



Whole Facility Approach Savings

- 171 Fewer P-traps
- 684 Fewer Unique Floor Slopes
- 30% Less Underground Pipe Required
- Less Material & Labor
- $500K+ Savings

Slot & Trench Drains Significantly Reduce Floor Slopes

Due to their Linear Design, Trench and Slot Drains make the floor installation stage simpler

Staff encounter fewer tripping hazards

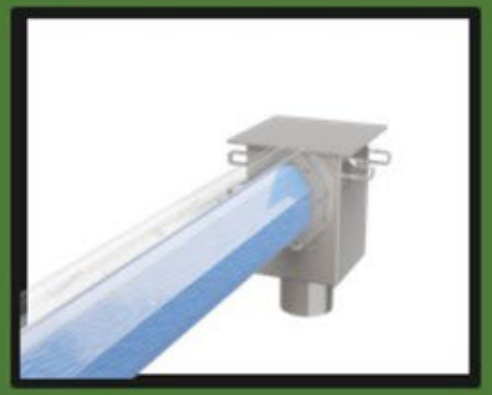
Installers have fewer design concerns to manage

More Linear Drains... Less Underground Piping

Cleaning Solutions

SlotHog: Designed to connect hoses directly to slot drains to **eliminate any messy liquids directly on the floor.**

SlotDog: High pressure 180 degree nozzle cleaning tool to aid in sanitation and help prevent splash, splatter, and particulate transfer.



The **CIP Catch Basin** comes with a plug which allows you plug and fill the system without concerns of overflowing and flooding.

- Cleaning is faster
- Poses less of a chemical exposure risk to people
- No hazardous trench openings

Pan Lids that masks the catch basin cover. Built to withstand heavy traffic. Can match any flooring style. **Compatible with FlushFlo Systems**

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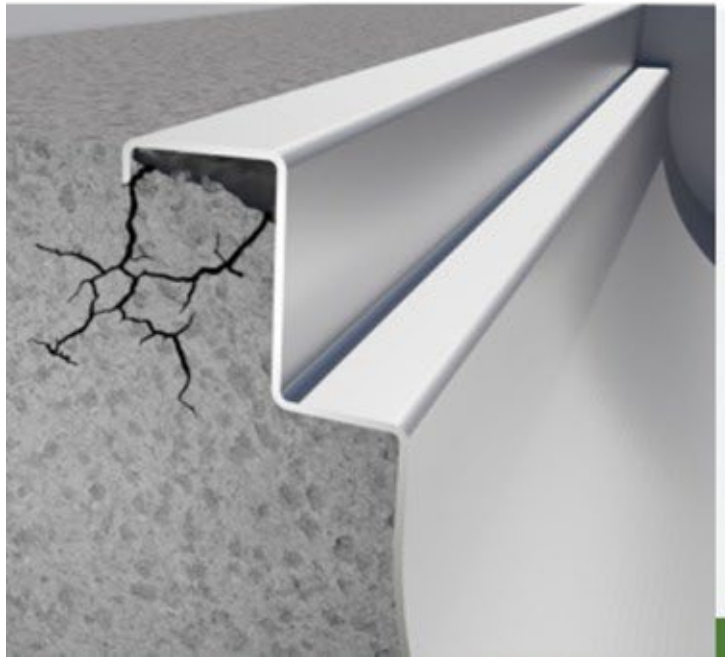
Cleaning Tools

Our specialized cleaning tools allow you to clean your systems in minutes:

Cleaning Brush: A flexible brush that helps you clean every inch of the drainage channel.

Cleaning Paddle: Our fitted cleaning paddle allows your staff to move solid debris along the channel and into the catch basin for easy removal.

KeyForms: Simplifying and Optimizing Installations

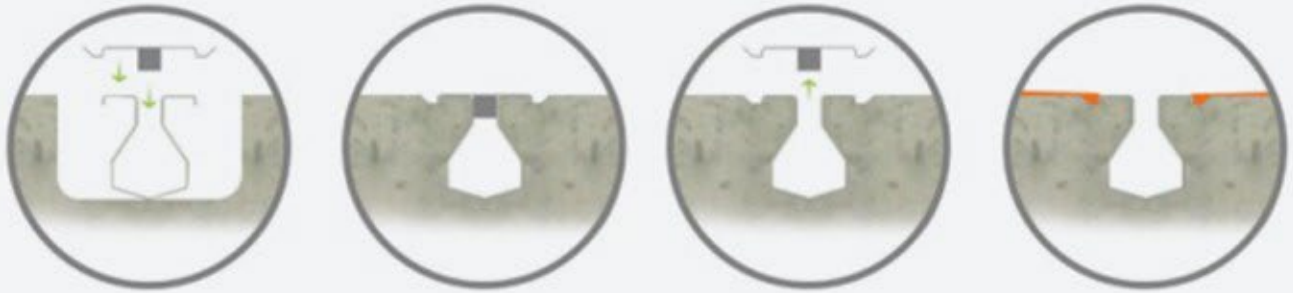


KeyForm

Epoxy Floor and Drain Adhesion System

Alleviate Cracking During Installation

How it works?



The KeyForm proprietary keyway cover is designed to snap in place on Slot Drain Systems allowing for tool free installation.

The KeyForm cover protects the drain from damage during concrete pour while forming a keyway or rabbet along the drain.

Removal of the Keyway system is achieved with a small pry bar prior to full concrete cure. This exposes the formed keyway ready for the application of a commercial floor coating.

Floor Coating adhesion is improved due to the greater surface area at the interface between floor and drain combined with our proprietary drain pretreatment nanotechnology.

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If You're Designing a New Facility...

What to Consider

Optimize your design through a comprehensive drainage assessment.

Prioritize sanitary and accessible drainage solutions for easy maintenance.

Ensure ease of installation with suitable materials and expert coordination.

What to Avoid

Outdated and insufficient drainage systems that lead to higher costs.

Reliance on extensive underground piping which causes access and inspection problems.

Choosing materials prone to erosion and corrosion, leading to damaged infrastructure.

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The Right Partner for Your Renovation

You Can Have:

A Great Product

A Great Design

A Full-Facility Solution Planned

BUT...

It can be rendered totally **ineffective if installation is done improperly**

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Installation Considerations: The Right Way with The Right People

Precision Planning:
Accurate assessment of existing slopes and layout is the foundation for a seamless, precisely cut drainage retrofit.

Navigating Existing Infrastructure:
Connecting new drains to old plumbing requires careful navigation of existing pipes and utilities to avoid damage.

Choosing the Right Materials:
Stainless Steel Drains protect against pathogens more effectively than any material on the market

A Coordinated Approach:
Effective coordination between designers, contractors, and engineers ensures a compliant, safe, and functional installation.

The Right Partner for your Retrofit

A Network of Expertise

The GDT Alliance Partner Program:

- Connects you with a specialized, curated network of installation and design professionals in the food and beverage industry.
- Ensures your project is handled by vetted experts who understand the nuances of hygienic design and regulatory compliance.
- Offers a full suite of services, including site analysis, design consultation, and on-site guidance.
- **Provides Reduced Risk, Guaranteed Results:** By leveraging the collective knowledge and experience of our Alliance Partners, you mitigate the risks associated with complex renovation projects.

To Summarize...

A Full Facility, Conscious Drainage Design Approach:

- **Dramatically Reduces the Risks** of Listeria, Foodborne Illness, Liability, and Plant Shutdowns.
- **Minimizes Erosion, Corrosion, and Buildup.**
- **Provides Higher Load Ratings** for Day-to-Day traffic in any context.
- **Significantly Reduces Material, Construction, and Development Costs** thanks to the elimination of **extra P-Traps, Unnecessary Sloping, excessive underground piping, and additional infrastructure.**
- Provides a **long-term, legacy solution** that makes drainage headaches a thing of the past.

Thank You

Questions or Comments?

Feel free to reach out to me at:
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