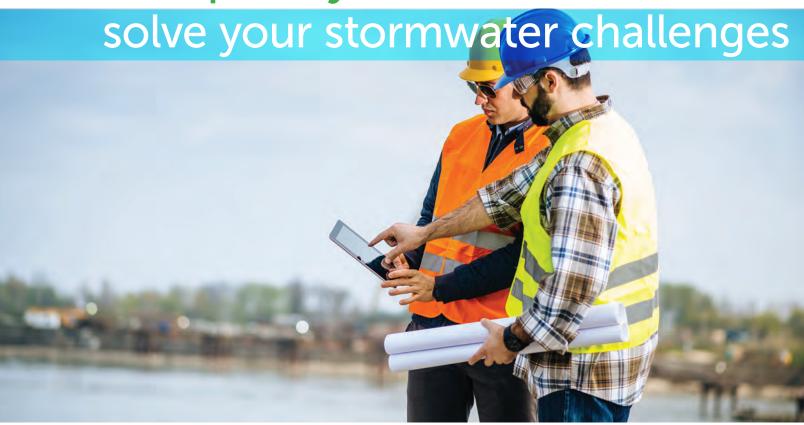






# The experts you need to



Contech is the leader in stormwater solutions, helping engineers, contractors and owners with warehouse, data center, and distribution projects throughout North America. With our responsive team of stormwater experts, local regulatory expertise and flexible solutions, Contech is the trusted partner you can count on for stormwater management solutions.

## **Your Contech Team**



STORMWATER CONSULTANT

I work with you to recommend the best solution to meet permitting requirements.



STORMWATER DESIGN ENGINEER

I help develop your final design and deliverables.



**REGULATORY MANAGER** 

I understand the local stormwater regulations and what solutions will be approved.



**SALES ENGINEER** 

I make sure our solutions meet the needs of the contractor during construction.



#### **PROJECT COORDINATOR**

I manage all of the manufacturing and delivery logistics of your project.



#### FIELD CONSULTANT

I work with the contractor to ensure a smooth, trouble free installation.

Contech is your partner in stormwater management solutions

# Large-Scale Stormwater Management Solutions

E-commerce continues to fuel the demand for large warehouses, data and distribution centers, and other infrastructure to support our nation's need for a resilient supply chain. These large facilities have one thing in common – the need for stormwater management systems that are much larger than those found on a typical commercial site.

Designing, manufacturing and installing stormwater detention and treatment systems of this size requires expert engineering, planning, and logistical support to manage costs and keep the project on schedule and under budget. When you need a proven, large scale stormwater management system, "Go Big" with Contech.

## *E-commerce infrastructure is driving the need for larger stormwater detention systems.*



#### **FOR OWNERS**

Our knowledge and experience will reduce your total installed costs and enable you to meet your construction timeline.

#### **FOR ENGINEERS**

Our collaborative tools and stormwater expertise result in efficient designs and allow us to react to design changes faster than anyone in the industry.

#### **FOR CONTRACTORS**

Our supply chain network, manufacturing footprint, and logistic resources enable us to reduce lead times and help meet your installation goals.

Contech's MOBILE PIPE® mill manufactures corrugated metal pipe onsite, allowing for quick installation and a safer, more organized job site.





These large scale projects often have accelerated construction timelines, with designs and requirements that are subject to change. You need a partner that has the expertise and resources that can move just as fast as you can. Based on our interactive collaboration tools and our extensive team of Stormwater experts, you can be assured that when you work with Contech, you will get the answers you need when you need them.

Contech's collaborative, online design tools were used to design this uniquely-shaped 72-inch diameter CMP underground stormwater detention system.

- Collaborative online tools to speed initial design, share information, generate professional project deliverables, and react to design changes faster than anyone in the industry.
- Stormwater experts with years of experience with treatment design and large scale detention systems to answer questions that arise throughout the life of the project.
- The ability to design layouts that optimize material production processes, and the installation capabilities of the contractor, to achieve faster installation rates.
- Risk management and contingency planning by bringing design, contractor, and manufacturing functions together to meet the critical path deliverables.

## Even Small Changes Can Have a Big Impact



We get it. The scale of these projects means that even small changes in design have a big impact on installation timelines and costs. A design that uses just one inch of additional cover means more material, more trucks, and more manpower. Based on our knowledge and experience with large scale detention systems, our team of engineers and installation experts know what questions to ask and what features to explore to design a detention system with the fastest installation time at the lowest installed cost.

- Recommendation for the optimal pipe size and configuration to maximize storage and optimize system footprint.
- Pipe size, backfill, and handling efficiency analysis.
- Configure manifolds to reduce fabrication, lead times, and installation times.
- Fast updated quotes of our design.

This detention system was constructed from 545,000' of 18", 24", 28", 36", & 42" perforated CMP. This variable diameter pipe strategy required no stone bedding and only 12-inches of cover resulting in approximately 24,000 tons of stone savings.



### The Value of Experience

Rialto Fulfillment Center | 1,012,433 square foot Class A Industrial Building



Contech's knowledge and experience with large scale detention projects allows us to know "What's it really going to take?" It provides a depth of knowledge that allows us to draw upon multiple sources to quickly assess a project, recommend a solution, and anticipate potential problems and pitfalls.

The Rialto Fulfillment Center site in southern California is over 120 acres and includes two buildings, each with over 1 million square feet of building space. Contech worked closely with the engineering firm throughout the project, providing value engineering estimates and storage calculations for multiple pipe diameters. Contech worked closely with the contractor on the staging of the CMP material on-site to facilitate a seamless fabrication and delivery. The coordinated effort was to ensure enough material was available onsite to meet the goal of installing a minimum of 500 LF of the 162" diameter CMP per day.

11,100 LF of 162" diameter, perforated CMP was used, providing 1,588,038 CF of storage in the pipe. An additional 1,368,742 CF of storage is provided from the stone backfill.

Total: 2,956,780 CF of Storage

#### Flamingo Crossings | 45-Acre Mixed-Use Development



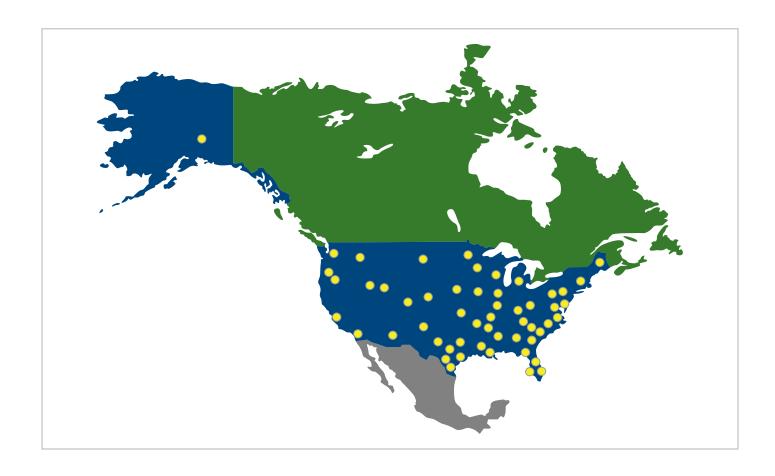
Contech's variable diameter design strategy was used at this 45-acre development in central Florida to maximize vertical storage space and minimize stone bedding and cover. Three different sizes of CMP were used, saving 9,484 cubic yards of stone compared to a plastic solution. This resulted in 2,000 fewer truck deliveries of stone and over \$500,000 in stone cost savings. Contech's MOBILE PIPE® mill was used to produce a large portion of pipe on site. This reduced transportation costs, and allowed for the production of longer pipe lengths (50' vs. the traditional 25'), allowing the contractor to reach their installation goal of 2,700 feet of pipe per day.

Twenty nine basins were constructed from 74,439' of 66", 28" and 42" diameter CMP, at a mixed use development in central Florida.

Total: 750,000 CF of Storage



## Resources to Make it Happen



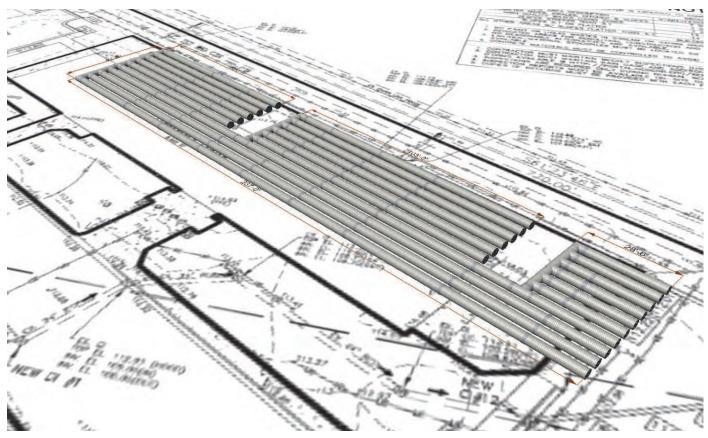
Making a plan is one thing, but executing it is another. The scale of these large stormwater projects means that even a small delay can slow construction timelines and add thousands of dollars in extra expenses. With our extensive network of resources, Contech has the knowledge, experience, and resources to ensure that your project stays on schedule and on budget.

- The industries' largest corrugated metal pipe manufacturing footprint and supply chain network to reduce lead times and meet your installation schedules with optional onsite manufacturing of detention systems to facilitate just in time deliveries and eliminate offloading time.
- Project Coordinators to synchronize production, shipping, and staging schedules so there are no surprises.
- Regulatory Managers that maintain current knowledge of local regulations, product approval plans and formulate regulatory strategies for projects.
- Field Consultants to provide on-site consultation, technical, and field installation support to help you meet installation rate goals.

Contech manufacturing plants are available throughout the nation for quick turnaround delivered directly to your site.

For remote site applications or large system manufacturing, MOBILE PIPE® modular mill can be delivered to the site and assembled on-site for fast and cost-effective steel pipe manufacturing.

# Online Collaboration with Contech's Design Your Own Detention System (DYODS®)



Learn More: www.ContechES.com/dyods

#### Quickly prepare designs for estimates and project meetings ...

This collaborative, online tool allows engineers to speed initial design, share information, generate professional project deliverables, and react to design changes faster than anyone in the industry.

- "Drag and drop" feature allows users to customize layout
- A 2D/3D design environment with high-resolution graphics including BIM model output
- Optimize designs for the storage requirement or maximize storage for a given footprint
- Import a PDF site plan, scale and design a system over the plan and view the overlay in 2D
- Digital collaboration with co-workers or Contech design engineers using the "Project Collaboration" feature
- Produces professional project deliverables including project drawings, CAD and BIM models, and specifications

A free, online tool that fully automates the layout process for stormwater detention systems.



## **Treatment Options**

Hydrodynamic Separation (HDS) provides a basic level of treatment by capturing and retaining trash, debris and sediment before it enters the detention system.

#### **CDS®**

The CDS uses swirl concentration and continuous deflective separation to screen, separate and trap trash, debris, sediment, and hydrocarbons from stormwater runoff. CDS captures and retains 100% of floatables and neutrally buoyant debris 4.7 mm or larger, effectively removes sediment, and incorporates a non-blocking screen.

#### **The Cascade Separator®**

The Cascade's opposing vortices enhance particle settling. A unique skirt design allows for sediment transport into the sump while reducing turbulence and resuspension of previously captured material. These two factors enable the Cascade to treat high flow rates in a small footprint, resulting in an efficient and economical solution for any site.



CDS® Hydrodynamic Separator



The Cascade Separator®

## **Filtration Systems**

Stormwater Filtration systems offer a higher level of treatment, removing the most challenging pollutants from stormwater runoff, including total suspended solids, hydrocarbons, nutrients and metals.

#### The Stormwater Management StormFilter®

The StormFilter uses rechargeable, media-filled cartridges that trap particulates and adsorb pollutants from stormwater runoff. The StormFilter is available in various configurations and can be customized using different filter media to target site-specific pollutants.

#### Jellyfish® Filter

The Jellyfish Filter includes high-flow pretreatment and membrane filtration in a compact stand-alone system. Jellyfish removes floatables, trash, oil, debris, TSS, fine silt-sized particles, and a high percentage of particulate-bound pollutants, including phosphorus, nitrogen, metals and hydrocarbons.

#### Filterra® Bioretention

Filterra is an engineered high-performance bioretention system. While it operates similarly to traditional bioretention, its high flow media allows for a reduction in footprint of up to 95% versus conventional bioretention practices. Filterra provides a Low Impact Development (LID) solution for tight, highly developed sites.



The Stormwater Management StormFilter®



Jellyfish® Filter



Filterra® Bioretention



## A partner

# you can rely on









Few companies offer the wide range of highquality stormwater resources you can find with us — state-of-the-art products, decades of expertise, and all the maintenance support you need to operate your system cost-effectively.

#### THE CONTECH WAY

Contech® Engineered Solutions provides innovative, cost-effective site solutions to engineers, contractors, and developers on projects across North America. Our portfolio includes bridges, drainage, erosion control, retaining wall, sanitary sewer and stormwater management products.

#### TAKE THE NEXT STEP

For more information: www.ContechES.com

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