



**AMERICAN**  

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**CONCRETE PRODUCTS**

**HDPE-LINED CONCRETE  
SANITARY PIPE**





To Whom it May Concern,

We are pleased to introduce the “Perfect Pipe” system, a High-Density Polyethylene (HDPE) lined concrete sanitary pipe for gravity sewer that protects against Microbial Induced Corrosion (MIC) and Inflow and Infiltration (I&I).

Perfect Pipe builds upon the existing concept of using high strength reinforced concrete pipe (6,000 PSI compressive strength) combined with the corrosion, abrasion, and chemical resistance of HDPE. The Perfect Pipe system solves the challenge posed by flexible-wall pipe in deep-bury installations. While non-corrosive, flexible-wall pipe requires a concrete-encasement or slip-lining to prevent buoyancy and deflection when placed in overarching soils.

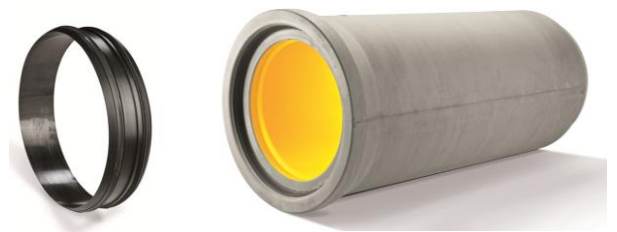
American Concrete Products (ACP) acquired the technology to produce Perfect Pipe for the U.S. market in 2018. Prior to entering the concrete sanitary pipe market, Ameron’s “Amerplate” T-lock product, a flexible PVC liner, was the only approved concrete pipe lining product in many jurisdictions. T-lock was problematic due to the complexity and cost of the joint welding required, and over time delamination in pipelines began occurring under operating head pressure. These factors contributed to Ameron’s subsequent divestiture of the T-Lock product in 2019, creating a void in the structural concrete sanitary pipe market.

The T-Lock obsolescence helped ACP secure State of Iowa approval through the Statewide Urban Design and Specifications institute (SUDAS) in 2021 and ACP has since supplied Perfect Pipe on (3) Iowa projects, (1) Missouri project and (3) City of Omaha projects. The innovative thermoplastic coupler, rated at 36 PSI, eliminates joint welding and creates a water-tight system that prevents inflow and infiltration of gravity trunk sewer pipelines. Additionally, the coupling system eliminates confined space risk associated with welding conventional lined concrete pipe and offers construction companies a considerable cost advantage via simplified installation and testing.

Sincerely,

A handwritten signature in black ink, appearing to read "Charles Moses".

Charles Moses, CDT  
AMERICAN CONCRETE PRODUCTS  
(402) 250-6545  
[cmoses@amconco.com](mailto:cmoses@amconco.com)





## ACP STATEMENT OF QUALIFICATIONS



American Concrete Products (ACP) is a manufacturer of precast concrete utility products routinely engaged in supplying public works and water/wastewater infrastructure projects throughout the Midwest. Enclosed for your review is a summary of our capabilities.

### NEBRASKA:

[8707 North 300th Street](#)  
[Valley, NE 68064](#)  
[402-331-5775](#)

### TEXAS:

[4040 Singleton Blvd](#)  
[Dallas, TX 75212](#)  
[214-631-7006](#)

### KANSAS:

[6945 Inland Drive](#)  
[Kansas City, KS 66106](#)  
[913-353-9850](#)

## Exact Standards and Consistent Quality

Our plants are proud to carry the highest level of certifications in the precast/prestressed concrete industry.

### Nebraska Plant

- PCI – Certified Plant B1, B1A, C1, C1A
- ACPA – Q-Cast Certified
- AAR M1003 - Certified
- NDOT – Nebraska Department of Transportation
- IDOT – Iowa Department of Transportation
- KCMMB – Approved Producer
- KCMO – Prequalified Plant
- KDOT – Kansas Department of Transportation
- MoDot – Missouri Department of Transportation

### KANSAS PLANT

- KDOT – Kansas Department of Transportation
- MoDot – Missouri Department of Transportation
- KCMMB – Approved Producer
- KCMO – Prequalified Plant

### Texas Plant

- PCI PLANT CERTIFIED B4 & C3 – Prestressed Concrete Institute
- AAR M1003 – American Association of Railroads

## QUALITY ASSURANCE & CONTROL | ACPA Q-CAST CERTIFICATION

American Concrete Product's Valley, NE facility undergoes a yearly, unannounced audit by a third-party firm to ensure they meet the requirements of the Q-Cast manual and must receive a minimum overall score of 80 out of a possible 100 and pass all critical elements to receive certification. These critical items include reinforcing inspections, concrete testing and three-edge bearing testing - which is the AASHTO "D-Load" type of structural load test on pipe. Additionally, many state DOT's require pipe producers be Q-Cast certified. We and our industry at-large strongly recommend any producers with intent to supply reinforced concrete pipe on public works projects carry this certification.

### Audit Summary:

- Requirements for calibration and certification of production tooling, testing, and inspection equipment and instrumentation.
- Requirements for ongoing plant (internal) inspection and test documentation
- Requirements for product tests and documentation
- Requirements for raw material certification documentation
- Requirements for third party audit verification
- Requirements for product design documentation
- Requirements for product storage, handling, and repair



## IN-HOUSE ENGINEERING

**Enterprise Properties**, the parent company of American Concrete Products, maintains an experienced full-time Engineering Department consisting of 3 Registered Engineers, 1 Engineer In Training (EIT) and 8 Detailers and Modelers. This staff is located at the Enterprise Properties Corporate Headquarters in Omaha, NE. and is lead by our VP of Engineering, Sam Kakish, P.E. PhD, MBA

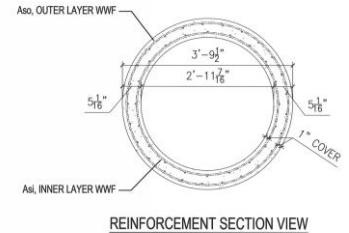
**Sam Kakish, P.E., PhD, MBA**

**Education:** PhD Structural Engineering, University of Nebraska  
 MS Structural Engineering, University of Nebraska  
 BS Civil Engineering, Jordan University  
 MBA, University of Nebraska

**Experience:** 2010– Present, Vice President of Engineering, Enterprise Properties  
 1997-2010, Engineering Manager, Enterprise Properties

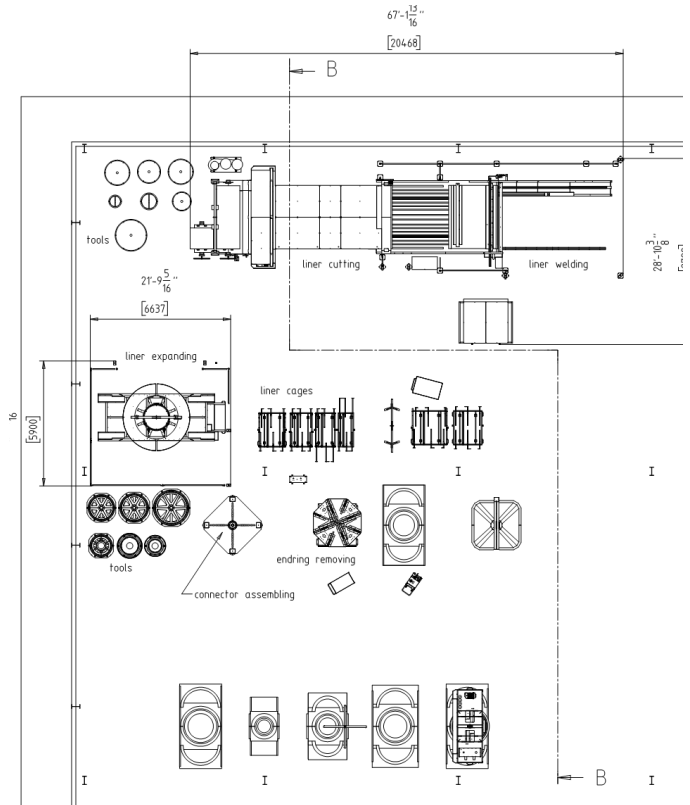
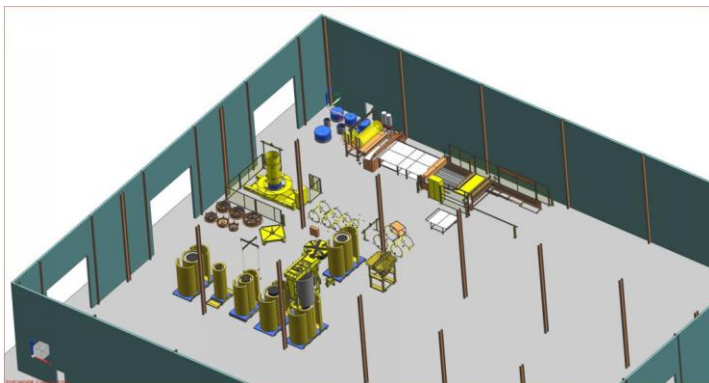
Current Member of Prestressed Concrete Institute (PCI) committees on Engineering and Development.  
 Current Technical Director of Altus Group

**Enterprise Engineering** has been modeling precast concrete projects since 2009 and currently models all projects using the latest version of Revit running concurrently with other sophisticated industry programs such as Edge.



## MANUFACTURING CAPABILITIES

- 9,000 SQFT of dedicated manufacturing space for HDPE-Lined RCP in Valley, NE plant.
- Ability to pour 24 molds of either 24" – 60" Ø
- 240 LF per-day standard shift
- Up to 480 LF per-day double-pour/2<sup>nd</sup> shift





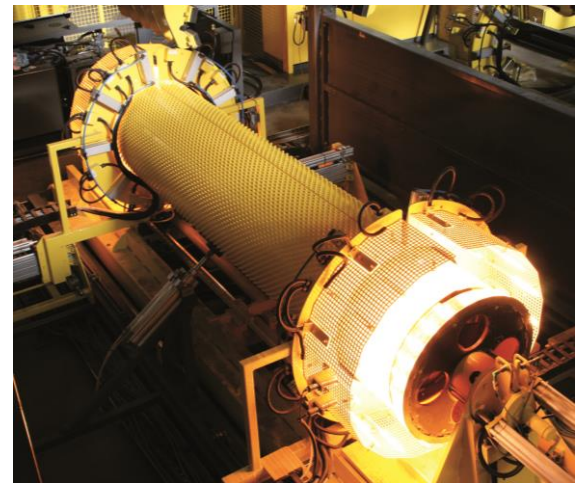
## PRODUCTION EQUIPMENT AND MOLDS

### PERFECT PIPE

Founded in 1964 the Austrian technology developer Schlüsselbauer Technology has been a global supplier of innovative systems and plants for the production of precast concrete products for more than 50 years. Schlüsselbauer is the developer of the “Perfect Pipe” HDPE-Lined Concrete Sanitary Pipe technology and production process, and produces the equipment and automation used to manufacture Perfect Pipe for American Concrete Products.

The use of Self Consolidating Concrete (SCC) creates a product differentiated from conventionally manufactured precast concrete pipe in terms of strength (6,000 PSI), density and finish. Unlike drycast concrete pipe production, SCC is a highly flowable, non-segregating concrete with a slump flow of 20 to 30 inches that can spread into place, fill the formwork, encapsulate the reinforcement and stud-anchors of the HDPE-protective lining without introducing vibration.

The Schlüsselbauer production molds are machined and assembled in Austria by experienced technicians. The tooling produced for American Concrete Products is laser-cut with tolerances within  $\pm 0.036$  inches and machined to the U.S. ASTM C-76 “C-Wall” standard. The production molds are designed and manufactured for a lifecycle of 100,000 pours.



## HDPE-LINED RCP | NORTH AMERICAN PROJECT SUMMARY

### HDPE-Lined Concrete Sanitary Pipe Installations (North America)



Location	Year Installed	Dia.	Footage	Trenchless/Open-Cut	Owner	Project Name
Tucson, AZ	2017	15"	380	Open-Cut	Pima County Regional Wastewater Reclamation	Black Wash Augmentation Project
Kansas City, MO	2019	36"	400	Open-Cut	City of Smithville, MO	Smithville Wastewater Treatment Facility
Omaha, NE	2019	48"	700	Open-Cut	City of Omaha	CSO Fontenelle Lake James/Paxton Basin
Omaha, NE	2019	30"	700	Open-Cut	City of Omaha	CSO Fontenelle Lake James/Paxton Basin
Omaha NE	2020	42"	1100	Open-Cut	City of Omaha	Riverview Lift Station
Washington, IA	2020	24"	384	Open-Cut	City of Washington	N. 4th Avenue Improvements
Fairfield, IA	2020	24"	380	Open-Cut	City of Fairfield	Step 2 Sanitary Sewer Improvements
Omaha, NE	2020	60"	710	Open-Cut	City of Omaha	Saddlecreek Retention
Iowa City, IA	2021	30"	1,100	Open-Cut	City of Iowa City	Scott Blvd. Trunk Sanitary Sewer Extension
Iowa City, IA	2021	24"	3,496	Open-Cut	City of Iowa City	Scott Blvd. Trunk Sanitary Sewer Extension
Omaha, NE	2021	60"	650	Open-Cut	City of Omaha	OPW54003 NFM Dodge St. & 77th Street
Des Moines, IA	2022	48"	50	Open-Cut	Des Moines Metropolitan Water Reclamation Authority	Birdland Pump Station Improvements
Des Moines, IA	2022	36"	30	Open-Cut	City of Des Moines	Des Moines Levee Alteration Phase B
Emporia, KS	2022	48"	1,040	Open-Cut	City of Emporia	South Arundel Sewer Interceptor Improvements
Kaysville, UT	2022	24"	1,900	Open-Cut	Central Davis Sewer District	950 N. Sewer Expansion
Kaysville, UT	2022	30"	1,500	Open-Cut	Central Davis Sewer District	950 N. Sewer Expansion
Logan, UT	2022	42"	95	Trenchless	City of Logan, UT	1800 N. Sewer 600 West
Toronto, ON	2017	24"	675	Open-Cut	Town of Brampton	Scottish Heather Installation - Brampton Peel Region
Toronto, ON	2020	24"	748	Open Cut	Town of Brampton	Scottish Heather Installation Phase 4- Brampton Peel
Toronto, ON	2018	48"	2,625	Open-Cut	Town of Richmond Hill, ON	West Gormley - External Sanitary Sewer
Toronto, ON	2018	36"	3,938	Trenchless	Town of Richmond Hill, ON	Leslie St. - Town of Richmond Hill
Toronto, ON	2020	24"	1,214	Open-Cut	West Gwillimbury, ON	Bond Head North Sub. in West Gwillimbury
Kitchener, ON	2020	42"	2,726	Trenchless	Kitchener, ON	Middle Strasburg Sanitary Trunk Sewer
Ottawa, ON	2017	48"	136	Open-Cut	City of Ottawa, ON	Katimavik Rd - Kanata West PS
Ottawa, ON	2018	48"	6,536	Open-Cut	City of Ottawa, ON	North Kanata Trunk Sewer Phase 2
Calgary, AB	2021	36"	2,362	Open-Cut	City of Calgary, AB	Glacier Ridge West Basin Sanitary Trunk Sewer
Vaughan, ON	2021	24"	1,880	Open-Cut	City of Vaughan, ON	Jane Street Sanitary Sewer
Vaughan, ON	2021	32"	1,615	Open-Cut	City of Vaughan, ON	Jane Street Sanitary Sewer

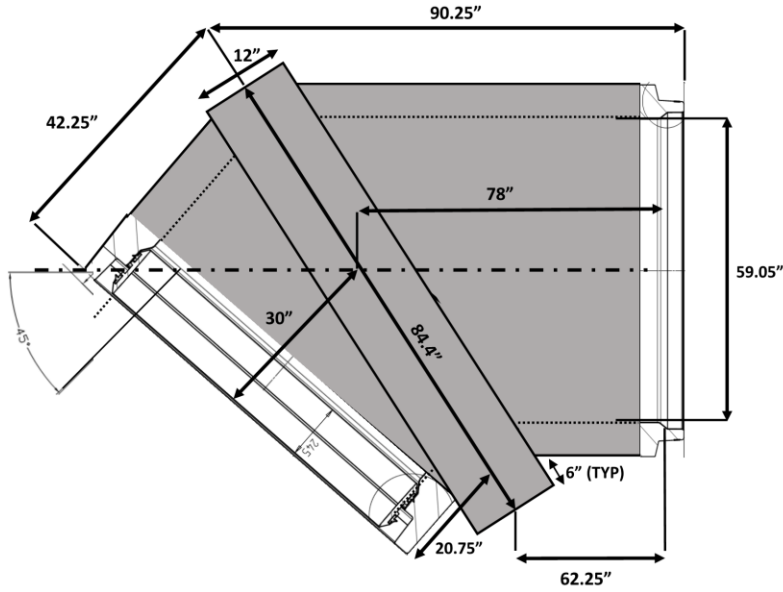
## HDPE-LINED RCP | SPECIALS & CUSTOM PRODUCTS




(Photo Left) 108" Dia. 45-Degree Elbow for Saddlecreek Retention Project, Omaha NE.

(Photo Bottom) 60" Dia. 45-Degree Elbow for Indian Creek Interceptor Phase II, Marion IA.

### 60" Perfect Pipe Elbow | 45-Degree Horizontal Left



\*\*\* PRELIMINARY NOT FOR PRODUCTION \*\*\*

Page 1 of 1	
Indian Creek Interceptor Phase III	
(1 qty) Units Required	
60" HDPE P.P. Elbow 45	
Date: 2-26-20	