Ethics (Don Conrad, P.E. - Forterra Drainage Pipe & Precast)
The study of professional ethics is more than a hypothetical exercise; it is the very foundation of engineering practice. As engineers, it is our responsibility to understand it, develop it, and live it on a daily basis. This class explores the history of professional ethics; the ethical canons upheld by national engineering societies; and the narrow line that separates legal and professional responsibilities. Case studies on real events, including the Challenger disaster, the Hyatt Regency Walkway Collapse, and the Florida International University (FIU) foot bridge collapse, bring to life the unethical choices that jeopardized public safety. It is an engineer's responsibility to put the safety of the public first. Every decision engineers make must support the public's expectations that they have made ethical choices to ensure their safety.

Role Play: How to Handle Objections (Michael Kusch - Foley Products Company)
This class will walk you through several different scenarios common to a technical marketer's day, from meeting with contractors to working to help with specifications for DOTs. You will be able to see (and play) different roles to hopefully open your mind to different view points. Come to learn and engage with the group!

A Day in the Life of a Salesman (Nick Turner - Foley Products Company)
This is an interactive class for sales professionals of all levels as well as Marketing Reps. We will ask ourselves, what does customer loyalty mean in your area? How do we acquire customer loyalty? What can we do to improve our position in the Engineering community in your city? This class is relevant to anyone who is a Sales Rep or Technical Marketer.

How to Engage your Audience (Jason Allen, P.E. - Mountain States Concrete Pipe Association)
If you had told me even three months ago when I opened my business that I would be sharing the stage with this amazing musician, I would have called you crazy. I'd listened to his albums hundreds of times. He was the reason I started writing music in the first place. When I got the idea to open a music venue, I figured I'd meet some cool people, but I never imagined I'd be having an intimate conversation with one of my musical heroes. After his set, we spoke for an hour about shared interests in music and sports. But I'll never forget what he told me as grabbed his acoustic guitar and stepped onto the tour bus…
If you want to know what Chris Carrabba, the lead singer of Dashboard Confessional, told me that night, you'll have to come to my class called "How to Engage Your Audience." We will discuss different techniques that you can use to keep people on the edge of their seats and leave them wanting more.

Specification Change - What, Why and How (Derek Light, P. Eng. - Rinker Materials)
This is going to be an interactive session. Bring a specification you wish to review. Construction specifications provide the rules of engagement for any construction project. DOTs, municipalities, consultants, contractors, and suppliers are bound by these documents. What makes a good specification? It depends who you ask, a DOT might look to maximize value, a consultant might desire less risk, and a producer might want a level playing field. The objective of this session is to discuss key specification issues as they pertain to buried infrastructure. You will leave with a clear understanding on how to access your local specifications. It is open to all attendees.

Manufacturing Differences Between C76 and M294 (Devin Zipperer - Diamond Concrete Products, LLC)
This course will cover the manufacturing process of RCP. It will help give an understanding of the test and inspections RCP goes through to prove it is a solid, and dependable structure before leaving the plant. The course will also cover the production of thermoplastic pipe and their testing requirements.

Pipe Installations – ASTM D2321 or ASTM C1479 (Don McNutt, P.E. - American Concrete Pipe Association)
There are several similarities and then quite a few significant differences in the requirements for proper installation of reinforced concrete pipe and thermoplastic pipe products. Concrete pipe installations are based on ASTM C1479 and thermoplastic pipe installations are based on ASTM D2321. This class will provide a side by side comparison of these two unique specifications.

History of Reinforced Concrete Pipe Design (Chris Macey, P. Eng. - AECOM)
Much has transpired since the invention of precast pipe in France in 1896 to its introduction into the North American market in 1905. Like most products, its invention pre-dated standardized design approaches and our understanding of best installation practices seriously lagged behind the need to use the product and our understanding of its design limit states by a considerable margin. As end users inevitably want to know how long their installed pipes will last (as well as how long the pipes they are installing today will last) it is important to review the products that are in the ground in the context of what the prevailing practice was at the time of installation as well as what the pipe has actually been used for over time (e.g. its exposure conditions both in terms of environmental applied loads). This type of focus tells us much about what can should expect for effective design life from a condition assessment perspective as well as improving the way we do design today into a more forward looking process and one that respects the limitations of what we know. The class provides a recap on the evolution of concrete pipe design in North America, the benefits of understanding regional variations from minimum required standards, and the use of a vulnerability of era approach in two large diameter RCP case studies to better understand longevity, condition assessment approach, and how to improve the design, manufacture and installation process going forward.

Alternative Bidding (Aimee Connerton - Rinker Materials)
Over the last 20 years, owners and developers have increasingly elected to use alternate project delivery systems such as design-build, construction manager at-risk and integrated project delivery (IPD) to best value alternative design for constructing complex capital projects. As a result, many in the past had worked almost exclusively under the more traditional design-bid-build model have been asked to bid on, and deliver projects, under these alternative project delivery systems.
The decision as to which project delivery system is optimal is a complex one, and much has been written to advise owners on how to select from among the available options. The rewards of working under an alternate delivery system may be attractive if the associated risks can be appropriately managed. This class is intended to give a high-level overview of the most common project delivery systems, as well as some of the newer FHWA approved methods. We will highlight some of the issues one should consider when bidding on and working under an alternate delivery system

Hydraulics – Hydrology (Jennifer Schaff, P.E. - County Materials Corporation)
This session will present some basics of hydraulics design including inflow and outflow control, tail water conditions, and manning's N. In addition, we will look at current engineering practices and how we can educate the engineering community about concrete pipe.

Eriksson Culvert 101 (Josh Beakley - American Concrete Pipe Association)
The design of precast box culverts involves the consideration of several load conditions, and potentially the application of several different live load configurations. The designs can become even more complex when load rating of the structure must be considered. The time required to perform these designs can be greatly reduced through the use of the Eriksson Culvert program. With only 1 hour and 20 minutes of allotted time for this course we cannot possibly go through all of the complexities of precast box culvert design. However, we will provide the attendee with an understanding of the utilization of the input options in Eriksson Culvert and guidance on interpreting the output.

Understanding ASTM/AASHTO (Al Hogan, P.E. - American Concrete Pipe Association & Angel De Jesus, P.E. - County Materials Corporation)
We will briefly discuss the role of two important specification/standard writing organizations- The American Society of Testing and Materials (ASTM) and The American Association of State Highway Transportation Officials (AASHTO). We will also the strategic importance these groups and the developing the right relationship with these groups is so important to the health of our industry. Walk with us through the process of joining ASTM and how, when, and where ACPA member involvement takes place in the ASTM process. We cannot join AASHTO as a member, however, we do have an important role to play in that group of DOT professionals as well. We will explain our historical involvement with AASHTO activities and the different ways our industry participates in AASHTO events.

Engineering for Non-Engineers (Tryg Hoff, P.E. - American Concrete Pipe Association)
Engineering for Non-Engineers: aka Engineering for Dummies. This course will cover some of the basic concepts that were discussed at Pipe School 2019, with a continuation of the discussion at a 102 level for easy understanding and in a format that can be used when discussing our product and our competitors' products. The course is intended for those in Sales and Marketing, and perhaps those Engineers looking for a refresher.

Influencing Techniques - Flipping This Project (Lukas Salyer, P.E. - Forterra)
An intense session that focuses on after-bid actions that can be pursued to close a sale. It looksat tactics that a salesperson might be able to follow to help a designer or contractor build a better project, if concrete is specified before the deal is closed. Many advantages of concrete pipe are reexamined, along with bedding choices, cost-comparison tools and comparing the poured-in-place method and precast for constructing structures. Precast concrete box sections are reviewed for a wide variety of applications and site conditions. The presenter will give an overview of pipeline and culvert hydraulics to demonstrate arguments for downsizing with concrete.

Utility Conflict Resolution (Corey Fraser, P.E. - American Concrete Pipe Association & Sarah Matin, P.E. - Rinker Materials)

What was the biggest headache on your last project? Many engineering and construction project managers will say utilities. A determination will be made prior to or during utility field inspections to identify aerial and underground facilities within project limits that are a potential conflict and could require relocation versus those facilities that may not be in conflict and may possibly be allowed to remain if their location is in compliance with the current accommodation policy and clear zone requirements. Utilities certainly impact design, it's the unknown utilities that cause unwanted impacts to design and at time that are sometimes critical. Utilities impact construction as well, and unknown utilities discovered on the job site during construction can create significant impacts to the project budget and timeline.