<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter(s)</th>
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<tbody>
<tr>
<td>8:00</td>
<td><strong>WELCOME To PCA and CTL</strong></td>
<td>Michelle Wilson</td>
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<tr>
<td></td>
<td><strong>FUNDAMENTALS OF CONCRETE</strong></td>
<td>Michelle Wilson</td>
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<tr>
<td>8:30</td>
<td>- Materials Selection</td>
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<td></td>
<td>- Fresh &amp; Hardened Concrete Properties</td>
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<td>9:00</td>
<td><strong>CEMENTITIOUS MATERIALS</strong></td>
<td>Michelle Wilson</td>
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<td></td>
<td>- Portland Cement</td>
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<td>- SCMs</td>
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<td>10:30</td>
<td><strong>BREAK</strong></td>
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<td>10:45</td>
<td><strong>AGGREGATES</strong></td>
<td>George Seegebrecht</td>
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<tr>
<td></td>
<td>- ASTM C33 (CSA A23.1)</td>
<td>CCE</td>
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<td>- Characteristics of Aggregates</td>
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<td>- Grading</td>
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<td>12:00</td>
<td><strong>LUNCH</strong></td>
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<td>1:00</td>
<td><strong>CHEMICAL ADMIXTURES</strong></td>
<td>Michelle Wilson</td>
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<td></td>
<td>- Air Entrainment</td>
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<td>- Water Reducers &amp; Super-plasticizers</td>
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<td>- Set Modifying Admixture</td>
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<td>- Specialty Admixtures</td>
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<td>2:00</td>
<td><strong>SKIN SAFETY W/ CEMENT &amp; CONCRETE</strong></td>
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<td>- Safety Video</td>
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<td>2:30</td>
<td><strong>BREAK</strong></td>
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<tr>
<td>2:45</td>
<td><strong>LABORATORY EXERCISE</strong></td>
<td>Michelle Wilson/</td>
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<tr>
<td></td>
<td>- Use of Chemical Admixtures</td>
<td>Jeff Pyc</td>
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<tr>
<td></td>
<td>- Use of SCMs</td>
<td>CTLGroup</td>
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<td>- Use of Fibers</td>
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<td>4:30</td>
<td><strong>EVALUATION &amp; ADJOURN</strong></td>
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Design and Control of Concrete

Mixtures Tuesday, October 15

8:00 BATCHING, MIXING, & TRANSPORTING & HANDLING CONCRETE
   • Checklist for Concrete Placement
   • Delivery Considerations
   • Placing Equipment
   • Vibration & Consolidation

Michelle Wilson

8:45 PLACING AND FINISHING CONCRETE
   • Finishing Methods
   • Jointing Procedures

George Seegebrecht

10:00 BREAK

10:15 CURING
   • Methods & Materials
   • Period & Temperature

George Seegebrecht

11:00 TOUR OF CTLGROUP

12:00 LUNCH

1:00 CONTROL TESTS FOR CONCRETE
   • Demonstration- Fresh Concrete Tests-
     - Slump, Air, Unit Weight, Temperature

George Seegebrecht/ Jeff Pyc

2:30 BREAK

2:45 HOT & COLD WEATHER CONCRETING
   • Effects of High Concrete Temperatures
   • Cooling Concrete Materials
   • Effect of Freezing on Fresh Concrete, Maturity Method
   • Strength Gain of Low Temperature Concrete

George Seegebrecht

3:45 VOLUME CHANGES OF CONCRETE
   • Early Age Volume Changes
   • Moisture Changes (Drying Shrinkage)
   • Thermal Changes
   • Curling (Warping)
   • Elastic and Inelastic Deformation
   • Chemical Changes and Effects

Michelle Wilson

4:30 EVALUATION & ADJOURN
Design and Control of Concrete Mixtures Wednesday, October 16

8:00  HIGH-PERFORMANCE CONCRETE  Michelle Wilson
• Reinforced Concrete
• High-Early
• High-Strength
• High-Durability

10:00  BREAK

10:15  DESIGNING CONCRETE MIXTURES  Michelle Wilson
• Factors to Be Considered
• Selecting Mix Characteristics

12:00  LUNCH

1:00  PROPORTIONING CONCRETE MIXTURES
• Absolute Volume Procedure
• Group Projects

2:45  BREAK

3:00  PROPORTIONING CONCRETE MIXTURES (Cont.)
• Laboratory

4:30  EVALUATION & ADJOURN
Design and Control of Concrete Mixtures

Thursday, October 17

8:00 OTHER TYPES OF CONCRETE  
- Flowable Fill (CLSM)  
- Soil Cement  
- Roller Compacted Concrete (RCC)  
- Pervious Pavement  
- Shotcrete  
- Lightweight Cellular Concrete  
- Self-Consolidating Concrete (SCC)  
- Ultra-High Performance Concrete (UHPC)  
- Self-Cleaning Concrete  
- Translucent Concrete  
- 3D Printing  

George Seegebrecht

10:00 BREAK

10:15 BREAK-OUT SESSION  
- What Have We Learned??  

Michelle Wilson/

11:15 CLOSING REMARKS  

George Seegebrecht

11:30 EVALUATION & ADJOURN