

## TRACE 700 + LEED Training

Welcome to our LEED Specific TRACE 700 training course outline.  
Earn 8 GBCI CE Credits and PDHs.



### Load Design Building

This introductory video briefly covers a basic definition of Trace 700, its uses and functionality. Then, we cover all of the main categories and buttons in Trace to provide a basic road map for the software, which we'll build upon in the following lessons of the course.

- Creating a New File in Trace 700
- Templates
- Construction
- Airflow
- Internal Load
- Create Rooms- Setup
- Initial Setup
- Quick Run Through
- Restroom Exhaust
- Second Floor
- Component Tree View
- Create Systems
- Important Ventilation Inputs
- Create Plants
- Heat Pump Setup

### Prepping the Proposed for LEED in Trane TRACE 700

- Crash Course in Trane TRACE 700
- Modeler's Biggest Enemy: Unmet Hours
- 5 Key Details for Trace 700 Modeling
- Feature Highlight Reel

### Details



Unlimited  
Online Access



Watch in-depth  
Video Instruction  
on your own time



Earn LEED CE Hours &  
PDHs



For: Auditors, LEED,  
Architects,  
Materials & Equipment  
Sales,  
Engineers, Building  
Professionals

- Cheat Sheet
- Working Backward in Trace
- A Completed File
- Energy Savings
- Using Thermodynamically Similar Method to Model Unique Situations in Trace
- Room Template Tips
- Starting Your LEED Project in Trace 700
- Proposed Building
- Inputting Rate Structure
- Finding the Square Footage
- Finding Percent Glass
- Detailed Reports
- Simplify the File for the Proposed Building
- Thermal Blocks
- Why Thermal Blocks are Awesome

## Completing the Proposed Building

- Completion of Prepping the Proposed
- Ventilation
- Construction Templates
- Schedules
- Thermal Blocks
- Setting Systems Up for Energy
- Inputs
- Optimum Start and Unmet Hours
- Fans
- Restrooms
- Setting Up Plants
- Setting Up the Heat Pump
- Backup Heat Source for a Boiler
- Assigning Plants
- Heat Pumps and LEED
- Base Utilities
- Parking Lot Lights
- Domestic Hot Water
- Fan Modelling
- Hot Water Generated By Heat Pump
- Hand Calculations and Hot Water from the Heat Pump
- Why Model the Backup Boiler
- Does TRACE 700 Calculate Heating in Warm Climates
- Who to ask for help with Trace
- Custom Equipment and Curves

- Modeling Heat Recovery
- Trane TRACE 700 LEED Baseline Building Process
- LEED Baseline Cheat Sheet

## Baseline Building Process in Trane TRACE 700

- Backup Heat Pump Plant
- LEED Office
- Baseline Building Process
- LEED Process in Trace
- Starting the Baseline Building
- Glass Values for LEED
- Envelope Changes
- Slab on Grade Floors
- Unheated Slab
- Glass Questions
- Percent Glass and LEED
- Glass Types
- Interior Lights for LEED
- Internal Lights Whole Building Method
- Daylighting and Shading
- Airside Systems
- Number of Systems for a LEED Model
- Exceptions in ASHRAE 90.1 for LEED
- Starting with One System
- Standard 62 Calculations
- LEED and Ventilation
- Setting the Climate Zone
- VAV System Rules
- Demand Control Ventilation
- Temperature Differences for LEED
- Why Have a 20 degree delta-T?
- Trane TRACE 700 and CFM for LEED
- Heating and Cooling Coils
- Proposed and Heat Pumps
- Systems in the Proposed and Baseline LEED Building in Trace
- Efficiencies
- Oversizing Equipment
- Equipment and Plants
- Boiler Equipment

# Building Systems and LEED Reports

- Baseline HVAC System Type and Description
- Thermodynamically Similar Clause and Thermal Blocks
- Domestic Hot Water in Trane TRACE
- Exterior Lighting in ASHRAE Standard 90.1 Section 9
- Rate Structures in Trane TRACE
- Checking Reports in Trane TRACE
- How Does TRACE Calculate Fan Power for the Baseline Building
- Why Not Use Static Pressure and then KW per CFM Inch Water Gauge in TRACE
- Why Two Fans in the Baseline Building
- LEED Summary Reports
- Receptacles in TRACE Energy Cost Budget
- Unmet Hours in Trane TRACE
- Building Temperature Profile in Trane TRACE
- COMNET XML for LEED
- Reports for LEED Reviewers
- Energy Modeling LEED Submission Flow Chart
- Less is Best for LEED

Practical Concerns with Trace 700 LEED

## Trace 700 LEED Fan Calculations Demystified

- LEED Fan Calculations in TRACE 700
- What are we Modeling?
- Initialize Fan in TRACE 700
- TRACE Fan Calculation Algorithm
- Number of Baseline Fans
- Trane TRACE 700 Walkthrough
- Extreme Example in Fan Modeling
- Common Mistakes in Fan Modeling
- Exhaust Fans in TRACE 700
- Dedicated Outdoor Air System
- Garage Fans in Trane TRACE
- FAQ Fan Filter LEED Credits

## Final Exam