MERCURY

Reading Construction Drawings and Specifications Training Course

17 – 21 October 2027
Online



Dubai - UAE: +971 4 450 5697
Istanbul - Türkiye: +90 539 599 1206
Amman - Jordan: +962 79 712 3347

Reading Construction Drawings and Specifications Training Course

Ref: 27_1082084 **Date:** 17 – 21 October 2027 **Location:** Online **Fees:** 2900 Euro

The Reading Construction Drawings and Specifications Training Course is a one-week professional course for site engineers, quantity surveyors, and project coordinators seeking to interpret complex multi-discipline plan sets and contract documents. Working through architectural layouts, structural details, and engineering schedules, you construct a Drawing and Specification Review Dossier. This course is delivered by Mercury Training Center to ensure thorough technical document control.

About This Course

Design coordination breakdowns and undetected document discrepancies frequently lead to costly jobsite reworks, project delays, and contractual disputes. To follow this course, you must already work with technical project files, basic engineering drafting conventions, or site documentation. Through guided plan reading and discrepancy analysis, you build systematic drawing navigation skills.

Who It Is For

- Professionals responsible for verifying architectural details, structural layouts, and civil site plans against project requirements
- Professionals responsible for cross-referencing engineering schedules and bills of quantities against technical contract documents
- Professionals responsible for drafting requests for information, tracking drawing revisions, and resolving multi-discipline coordination clashes
- Professionals responsible for checking contractor shop drawings and preparing accurate redline records during construction phases

This course is not for manual drafting technicians seeking introductory geometric lettering training, nor is it for senior structural design consultants requiring advanced finite element calculation models.

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Competencies You Will Build

- Plan Navigation: Tracing orthographic projections, sections, callouts, and elevation details across coordinated drawing sets.
- Specification Interpretation: Deciphering technical project manuals, testing criteria, and material classifications following CSI MasterFormat standards.
- Multi-Discipline Coordination: Reconciling spatial and dimensional conflicts between architectural, structural, and mechanical plan disciplines.
- Schedule and Quantities Cross-Referencing: Correlating door, window, finish, and rebar schedules with plan dimensions and takeoff records.
- Document Control: Managing title block registers, delta revision markers, addenda, and redline markup documentation.
- Discrepancy Resolution: Drafting precise technical requests for information and coordination notices from detected plan errors.

What You Will Be Able to Do

By the end of the course you will be able to:

- From multi-sheet architectural and structural sets, interpret coordinate grids, dimension lines, and elevation datums across drawing disciplines.
- Given conflicting plan views and section cuts, apply ISO 128 line conventions to isolate discrepancies and verify geometric alignments.
- Using project manuals structured under CSI MasterFormat, align written technical specifications with corresponding plan drawing notes and symbols.
- From reinforced concrete schedules and structural drawings, verify bar bending details, lapping lengths, and foundation layout requirements.
- Given mechanical, electrical, and plumbing schematics, cross-check spatial routing against architectural ceiling heights and structural beam openings.
- Using standardized markup tools, compile structured requests for information and maintain drawing revision audit logs for site teams.

Course Content

Day 1: Technical Drawing Fundamentals and Standards

- Orthographic Projections, Plan Views, Sections, and Elevations under ISO 128
- Engineering Drawing Practice Standards and Title Block Conventions under ASME Y14.100-2017
- Drawing Scales, Grid Systems, Benchmark Datums, and Dimensioning Rules under ASME Y14.5-2018
- Sheet Index Protocols, Drawing Numbering Systems, and Discipline Classification Codes
- Graphic Symbols, Line Types, Abbreviations, and Material Representation Keys

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Day 2: Architectural and Structural Drawing Sets

- Architectural Floor Plans, Reflected Ceiling Plans, and Exterior Elevation Details
- Wall Sections, Building Envelope Details, Thermal Insulation, and Partition Types
- Structural Foundation Drawings, Column Layouts, and Grade Beam Placement Details
- Reinforced Concrete Drawings, Rebar Schedules, Lap Splicing, and Placement Notes
- Structural Steel General Arrangement Plans, Connection Details, and Assembly Drawings

Day 3: MEP Schematics and Project Specifications

- Mechanical HVAC Ductwork Layouts, Equipment Schedules, and Piping Schematics
- Electrical Power Plans, Lighting Layouts, Panel Schedules, and Circuit Tagging
- Plumbing Drainage Profiles, Water Supply Isometrics, and Vent Riser Diagrams
- Project Manual Organization, Specification Divisions, and Sections under CSI MasterFormat
- Cross-Referencing Drawing Notes, Bills of Quantities, and Material Performance Specifications

Day 4: Multi-Discipline Clash Identification and Document Control

- Spatial Coordination Procedures for MEP Penetrations and Structural Clearances
- Shop Drawing Submittal Reviews and Fabrication Detail Verification Steps
- Drawing Revision Control, Delta Triangles, Addenda Tracking, and Change Logs
- Drafting Technical Requests for Information to Resolve Ambiguous Plan Notes
- Redline Markups, As-Built Record Documentation, and Site Handover Drawing Registers

Day 5: Plan Discrepancy Analysis and Dossier Assembly

- Exercise on Multi-Discipline Clash Detection across Commercial Building Drawing Sets
- Exercise on Reconciling Structural Concrete Schedules with Architectural Room Finishes
- Exercise on Drafting Site Requests for Information from Inconsistent Project Specifications
- Exercise on As-Built Redline Auditing and Revision Delta Register Verification
- Finalization of the Drawing and Specification Review Dossier

Case Studies and Exercises

These suggested activities provide practical application of technical drawing evaluation across diverse sectors:

- Case study: A commercial mixed-use development where you resolve elevation clashes between overhead HVAC ductwork and post-tensioned concrete beams during fit-out coordination.
- Case study: An industrial logistics warehouse where you reconcile inconsistencies between CSI MasterFormat concrete floor coating specifications and structural foundation schedules.
- Exercise: A multi-sheet drawing audit where you examine structural steel framing details against architectural exterior facade anchor points to identify missing callouts.
- Exercise: A technical document control scenario where you assemble an RFI package and update the drawing revision register following unexpected site revisions.

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What You Take Back

The Drawing and Specification Review Dossier equips you to evaluate multi-discipline plan sets, verify contract specifications, and record drawing revisions during your first month back at work. You will use it to catch dimensional conflicts early, streamline engineering submittals, and ensure clear communication across project teams.

- Multi-discipline drawing coordination checklist covering architectural, structural, and MEP details
- Technical request for information template with cross-referencing fields for specifications and plan sheets
- Standard drawing revision log and delta tracking sheet
- Material specification and bill of quantities cross-check rubric based on CSI MasterFormat

Quick Answers FAQ

What background is required before attending the Reading Construction Drawings and Specifications Training Course?

You need basic familiarity with building construction terminology and general technical documentation. Prior exposure to site work, cost estimating, or engineering files will help you follow multi-discipline plan reviews and scheduling exercises effectively.

How does this course differ from computer-aided drafting software training?

Drafting software training focuses on digital drawing commands, software modeling menus, and CAD asset creation. This course develops document analysis, multi-discipline cross-referencing, specification alignment, and field coordination across complete technical drawing packages.

Why must construction drawings be cross-referenced against technical specifications?

Drawings establish the geometry, dimensions, and locations of building elements, while specifications define quality criteria, materials, and testing standards. Cross-referencing prevents uncoordinated installations, scope oversights, and expensive project change orders.

What work product do participants take back from the Reading Construction Drawings and Specifications Training Course?

Participants take back a Drawing and Specification Review Dossier containing discipline coordination checklists, specification cross-referencing guides, RFI templates, and revision tracking registers for immediate use on active project drawing sets.

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For Your Manager

The team member will be able to review multi-discipline engineering drawings, identify plan discrepancies before site execution, and verify technical requirements against contract specifications. They will return with a Drawing and Specification Review Dossier, which will be implemented immediately to streamline submittal reviews, minimize field RFIs, and improve quality control during ongoing project coordination.