Transportation Engineering Training Program (TETP FY22) BROCHURE

Pre-Construction Engineering/Technical Skills

Adobe Sign Training 1-6 for CDOT Consultant (E-Learning)
Series of online video trainings to assist CDOT consultant engineers and managers with step-by-step instructions on the implementation of electronic signatures for contract documents, and e-stamping of design reports, project specifications, and construction plans.

Applied Roadway Design 3-day ILT class $500
This class for professional engineers and engineers in training with 0-5 years of experience focuses on applying CDOT’s roadway design principles defined in the AASHTO’s ‘Green Book’, as well as other industry-accepted manuals. Computer software programs will not be utilized in the class.

Context Sensitive Solutions 1-day virtual ILT class $100
This course introduces the basic elements and principles of context sensitive solutions. It is designed for participants to work with a multi-disciplinary team to apply context sensitive solutions to project design.

Earthwork Basics and Tabulation (New - E-Learning)
Calculating and communicating with volumes can be challenging, and the Earthwork Tabulation Tool has been developed to assist with this process. This online course introduces earthwork concepts and terms and provides information and practice in using the Earthwork Tabulation Tool to help provide accurate and consistent data to construction contractors. Learners will gain an understanding of the importance of accurate earthwork calculations and the tools available for the contractor, as well as best practices for calculating and communicating this information.

Guardrail Systems for Construction Engineers and Inspectors (E-Learning and Field Guide)
The Guardrail Systems for Construction Engineers and Inspectors training, which was developed in 2017 as a live workshop, is now available as an online learning course. As with the live workshop, the online course is intended to help you: (1) approach the installation, repair, or replacement of guardrail end anchorages to ensure that all elements are compatible and properly installed, and that the basic design is appropriate; and (2) apply context sensitive solutions to project design.

Interchange Planning and Design 2-day ILT class $350
CDOT geometric design engineers and planners, as well as traffic engineers and project managers involved with design and operations of highway interchanges, would benefit from this workshop. The workshop introduces basic traffic operational and geometric design principles for various interchange types. The workshop covers the fundamentals and techniques for planning and designing service interchanges and the process of efficient study for interchange effectiveness.

Interaction Design (New ILT class under development for FY22)
This course is for CDOT geometric design engineers and planners, as well as traffic engineers and project managers involved with design and operations of highway intersections. This course will be developed as a continuation of the Applied Roadway Design class. Course participants are encouraged to prepare for this class by attending the Applied Roadway Design class. Attendees will practice using the CDOT Roadway Design Guide, AASHTO’s Roadside Design Guide, AASHTO’s ‘Green Book’, and other resources to develop design criteria and use those criteria in designing individual elements of a roadway cross section. The course will cover the basic principles of roadway design, the basic elements of roadway design, and function. Attendees will practice using the CDOT Roadway Design Guide, AASHTO’s Roadside Design Guide, AASHTO’s ‘Green Book’, and other resources to develop design criteria and use those criteria in designing individual elements of a roadway cross section.

Lighting Design Guide 2-day ILT class $200
The Lighting Design Guide course emphasizes understanding lighting for motorists by encouraging effective lighting methods and designing for optimal visibility minimizing glare, increasing uniformity, and reducing light pollution. By the end of the course, participants will learn about design guidelines, planning and design principles, and understanding lighting design concepts as well as relevant guidelines, state law, standards, and specifications that are critical to successfully developing lighting plans for transportation projects.

Plan Checking (E-Learning)
A quality set of contract documents results in competitive bids and fewer disputes or claims. The updated process-driven Plan Checking online course provides a basic understanding of how to ensure project documents meet requirements. The updated process-driven Plan Checking online course includes details regarding the utilization of a P56K Checklist.

Reading Structural Plans 2-day ILT class $350
This course prepares engineers and inspectors to read and interpret structural plans in order to provide design input, identify design conflicts and constructability issues, and ensure construction compliance. Participants will use existing CDOT structural design tools for exercises, activities, and group discussion.

Specifications Writing and Development (E-Learning)
Specifications, a critical part of any CDOT contract, communicate the procedures, materials, equipment, and payment terms needed to complete a project. This online course introduces designers to the tools, processes, and best practices for creating specifications packages. There are no prerequisites other than having a basic understanding of CDOT processes and terminology.

Survey Basics for Engineers (E-Learning)
This online course is designed to introduce the fundamentals of surveying as it relates to highway construction projects. The course is segmented into the following modules: Measuring the Earth, Applying Earth Measurements, Land Ownership, Right of Way, and Measurements and Technologies. Topics include coordinate systems, survey plan sheets and survey data, verifying project location, how to request a survey, and the tools and technologies of surveying. This course also covers concepts of selecting the best method, time needed, accuracy, LIDAR, and total station, among others.

Utility Coordination (New virtual ILT class for early FY22)
The Utility Coordination course introduces a new paradigm for collaboration with utilities and other stakeholders throughout a construction project. This course focuses on the importance of communication and providing detailed information for all stakeholders. It teaches and how being proactive and identifying utilities, even before soliciting, affects the design of the project. Additional focus is on assessing and managing risks, coordinating with utilities, and how to develop an effective plan.

Water Quality MS4 (New E-Learning course for early FY22)
The Water Quality MS4 (New E-Learning course for early FY22) course introduces a general overview of the MS4 Permit to increase awareness and how to help employees recognize their roles in meeting permit requirements. This course is targeted toward a diverse audience within CDOT whose duties impact water quality with the goal of providing wider knowledge of the MS4 program, its components, requirements, and the necessary actions that must be taken by employees. These activities may lie within the boundary defined by the Stormwater Management Plan.

Pre-Construction Project Management Skills

Construction Budget Management for Project Managers and Engineers (E-Learning)
This course provides project managers and engineers with a basic understanding of project construction budgets and an overview of their roles in budget allocation. It introduces the software program to manage the financial and planning process and covers the budget management process of projects including the Statewide Transportation Improvement Program (TETP), key terms, different project phases, overs/unders, and indirect costs.

Construction Change Orders (E-Learning)
For Project and Resident Engineers involved with change orders for construction projects, this course provides an overview of why, when, and how of change orders using examples from the simple to the complex. It also explores how change orders are used to adjust contract amounts and explanations of how fees are generated. Examples are provided for both Resident and Project Engineers.

Construction Force Accounts (E-Learning)
For Project and Resident Engineers involved in working with the force account method of payment on construction projects, this course uses examples of force accounts, from simple to complex, to explain the 'who, what, when, where, why, and how' of force accounts.

Construction Manual - Section 100 (E-Learning)
This e-learning course for CDOT project managers, project engineers, construction engineers, and inspectors to best practices in project administration. This includes understanding the contract and its terms and conditions, how to use the CDOT Construction Manual to develop and manage a work program, and how to be proactive in working with the force account method of payment. The course will provide an overview of the force account method of payment and how to manage the force account method of payment. The course will also provide an overview of the force account method of payment and how to manage the force account method of payment.

Construction Project Administration 2-day ILT or virtual ILT class $200
“Construction Project Administration specialty course is intended to introduce CDOT project managers, project engineers, construction engineers, and inspectors to best practices in project administration. This includes understanding the contract and its terms and conditions, how to use the CDOT Construction Manual to develop and manage a work program, and how to be proactive in working with the force account method of payment. The course will provide an overview of the force account method of payment and how to manage the force account method of payment. The course will also provide an overview of the force account method of payment and how to manage the force account method of payment.

Construction Project Administration for Local Agencies 2-day ILT class $100
“The Construction Project Administration for Local Agencies course introduces Local Agency project managers to CDOT’s best practices in project administration. This includes understanding the contract and its terms and conditions, how to use the CDOT Construction Manual to develop and manage a work program, and how to be proactive in working with the force account method of payment. The course will provide an overview of the force account method of payment and how to manage the force account method of payment. The course will also provide an overview of the force account method of payment and how to manage the force account method of payment.

Construction Project Financials (New) (E-Learning)
This online course identifies and explores the Project Financials Statement, more commonly known as Form 65, and how you can Identify, interpret and understand the financial status of your project, focusing on Post-Award.

Construction Work Zone Safety & Mobility (New virtual ILT class for early FY22)
This proposed course is intended to supplement CCA/ATSSA/NHI/HFWA certification training and address issues common/unique to Colorado. The course will focus on the Work Zone Work Zone Mobility Rule Implementation (DOT HP 3620-6 J), Subparts J & K) supporting required planning, design, positive protection for workers and inspectors, and how you can identify, interpret and understand the financial status of your project, focusing on Post-Award.

Disputes and Claims Prevention and Process Two 0.5-day virtual ILT classes $100
This online course introduces project managers and engineers to the basic principles of contract administration, including managing claims and understanding the legal process. The course will cover the legal and technical aspects of claims, including definitions, elements, and remedies.

Managing Contract Time 1-day virtual ILT class $100
This course is an overview of how to manage contract time correctly in order to maximize productivity, minimize delays, and reduce costs to meet project schedules. The course will cover the legal and technical aspects of claims, including definitions, elements, and remedies.
Contact Us:

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Seating is available on a first come first serve basis. Additional offerings may be provided based on demand and resource availability.

Enrollment
To register for any TETP course view program details here: www.codot.gov/programs/tetp
e-learning courses are at no cost

Disclaimer
These educational courses are intended as guidance regarding design, construction and management of transportation projects and do not constitute official rules or regulations of CDOT.

Materials Technician Certification (E-Learning)
This online course is designed for materials testers who are new to working with CDOT, including consulting and new CDOT hires. The course provides information and simulated situations, so students can learn about and practice the CDOT approach to administering testing, documentation and communication on construction projects. By the end of the course, materials testers will understand their role on a CDOT project and be able to find and use available resources, follow best practices, communicate with team members, enter and verify data in the Laboratory Information Management System (LIMS), and follow appropriate documentation procedures. Prerequisites include successful completion of CDOT’s SiteManager Materials (SMM)/LIMS for Samplers and Testers training and at least one current CDOT certification for asphalt, concrete and/or soil testing.

SiteManager 2-day virtual ILT class – No cost
This hands-on construction project documentation and Pay Estimate system course for PEs and Inspectors will teach participants how to define terms and navigate in SiteManager, add subcontracts, create Daily Work Reports and Diaries, create Change Orders, and generate contractor payment estimates. Participants must be currently assigned to an active construction project and have basic Windows navigation knowledge.

SiteManager Materials and LIMS 0.5-day virtual ILT class – No cost
This is an online class for samplers/testers and those looking to learn about the materials workflow. Will teach participants how to create samples in SiteManager and complete the samples in Laboratory Information Management System (LIMS). Content also includes how to navigate and view project and materials information in CDOT Application for Reporting (CAR). Basic instruction on how to get access to SiteManager is also included.

Construction – Project Management Skills

Construction Budget Management for Project Managers and Engineers (E-Learning)
In this online course, project managers and engineers will gain a basic understanding of project construction budgets, resource allocation and the budget management process during each phase of Pre-Construction. The course introduces the software programs used to manage different parts of the financial and planning process as well as the STP key budget terms, overs and unders, and indirect costs.

Critical Path Method (CPM) Scheduling for Construction E-Learning and 1-day ILT class $100
This course teaches the fundamental techniques to create and analyze a Critical Path Method (CPM) schedule. The e-learning course will teach you to use a Microsoft Project schedule. You’ll also learn how to create reasonable, achievable design and construction (Form 859) schedules in Microsoft Project based on the project’s key tasks. Through the instructor led class, you’ll learn how to analyze a complex construction schedule to determine the status of a project and identify slack or float and delays.

Project First 0.5-day virtual ILT class $50
This course will prepare you to successfully use the Project First Program on your projects. Project First formalizes the partnering process to proactively identify and manage risks through collaboration. The goal is to create project wins while maintaining relationships. After you complete this course, you will understand the requirements of the Project First standard provision; how to facilitate Project First worksh; how to manage the Escalation Ladder; how to Manage the Issue Documentation Matrix; how to differentiate when an issue should follow the Project First Escalation Ladder vs. the Disputes and Claims for Contract Adjustments process; and understand all the Project First resources.

Personal Skills for both Pre-Construction & Construction

Negotiation Skills Workshop 1.5-day ILT or virtual ILT class $150
This classroom-based workshop will include both distributive and integrative approaches to negotiation, as well as guidance on situations in which each approach may be most appropriate in the context of CDOT’s work. Target audiences for this learning include design, construction and specialty groups. At the end of this workshop, you will be able to complete all nine steps of the CDOT negotiation process, from assessing the solution to closing the solution. The Negotiation Fundamentals e-learning is a prerequisite.

Writing for Engineering Professionals Series of three 1-day virtual ILT classes $300
This series of three 1-day classes teaches you writing for the engineering world. All training materials are customized for those in civil engineering, the environmental sciences, construction and related fields. Writing is taught as a science, not an art. Metrics and strategies are provided as objective measures of writing’s clarity and conciseness. The training is presented as workshop. Topics include: strategies for adjusting reader perception; methods for improving organization, conciseness and writing flow; using appropriate conventions to express numbers; parallel structure; appropriate use of active and passive voice; problems in agreement; and improving clarity through various punctuation strategies (comma rules, semicolons, hyphens) and more.

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