

Earthwork Training

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Earthwork Training Agenda

8:00 – 8:30	Introduction & Agenda
8:30 – 9:00	General Soils Discussion
9:00 – 9:45	Earthwork Design
9:45 – 10:00	Break
10:00 – 10:15	Regional Soils Engineer
10:15 – 11:45	Earthwork Construction
11:45 – 12:45	Lunch
12:45 – 2:00	Structures
2:00 – 2:15	Break
2:15 – 3:30	Culvert Pipes & Storm Sewers
3:30 – 3:45	Erosion Control
3:45 – 4:00	Questions / Discussion

Objectives

- Present General Knowledge of Proper Earthwork and Culvert Pipe Construction and Inspection
- Not intended to take the place of the Soil Engineer

This Training is a Very Short Version of the Following Trainings:

- Grading Technician – 4 days
- Earthwork Design – 1 day
- Storm & Culvert Pipe – 1 day
- Pile Driving Training – ½ day
- Erosion Control Training – ½ day

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Training Outline

- General Soil Knowledge
- Design
- Construction
- Walls, Box Culverts, Bridges
- Culvert Pipes and Storm Sewers
- Erosion Control

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General Soil Knowledge

1. Sand, Silt, Clay, Rock, Marsh, Topsoil
2. Texture, Grain size, Liquid Limit, Plastic Limit
3. Moisture and Density Relationship

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Design

1. Soils Report
2. Computing Earthwork
3. Topsoil, Marsh and Rock
4. The Design Group Index (DGI) and Soil Support Value (SSV)
5. Excavation Below Subgrade (EBS)
6. Subgrade Improvement

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Construction

1. What Type of Soils Am I Dealing With?
2. Standard Compaction or QMP Subgrade
3. Embankment Construction (Lifts, Compaction, Moisture)
4. Subgrade Inspection (When to EBS, Require Soil Drying)
5. Accepting the Subgrade (Ready for Gravel/Base?)
6. Walls, Ponds, Signs

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Box Culverts, Bridges, Walls

1. Box Culvert Foundation and Backfill
2. Bridge Pile and Spread Footings
3. Bridge Approaches
4. Retaining Wall Types and What to Look For

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Culvert Pipes and Storm Sewers

1. Pipe Trenches
2. Pipe Bedding
3. Pipe "Template"
4. Pipe Joints
5. Backfill Material and Compaction
6. Placing Pipes in Rock

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Erosion Control

1. The Erosion Control Implementation Plan (ECIP)
2. Types of Devices and Their Uses
3. Maintenance

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