

ATLB-2380: TRAFFIC CONTROL SUPERVISOR

Cuyahoga Community College

Viewing: ATLB-2380 : Traffic Control Supervisor

Board of Trustees:

March 2020

Academic Term:

Fall 2020

Subject Code

ATLB - AIT-Construct/Hazard Material

Course Number:

2380

Title:

Traffic Control Supervisor

Catalog Description:

Advanced course covering highway construction safety and traffic control. Included are the establishment of work zones developed from traffic control plans and documentation procedures used for legal purposes.

Credit Hour(s):

1

Lecture Hour(s):

1

Requisites

Prerequisite and Corequisite

Departmental approval: admission to Construction Tending and Hazardous Material Abatement apprenticeship program.

Outcomes

Course Outcome(s):

I. Explain the principles of temporary traffic control and develop a traffic control plan for roadway construction safety.

Essential Learning Outcome Mapping:

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

Objective(s):

1. Demonstrate a working knowledge of the regulations and procedures for setting up and maintaining temporary traffic work zones.
2. List guidelines for traffic control that are implemented and integrated into all road construction projects.
3. Identify four zones of a traffic control plan.
4. Discuss the importance of advanced warning areas and how they impact the safety of the worker, motorist and pedestrian.

Course Outcome(s):

II. Explain the different traffic work zone tapers, compute the length of each and identify the various roadway signs and channeling devices and the required spacing of each.

Essential Learning Outcome Mapping:

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

Objective(s):

1. List and explain the use of five different types of work zone tapers.
2. Explain how tapers are used in conjunction with flashing arrow panels on expressways.

3. Calculate merging taper lengths for traffic speeds ≤ 40 miles per hour and ≥ 45 miles per hour.
4. Calculate lengths for tapers based on merging taper lengths.
5. List three categories of roadway signs.
6. Explain the use of roadway signs based on categories including advanced warning, actual construction zone and work zone end.
7. List four major types of channeling devices and explain how each is used.
8. Determine the proper placement of roadway signs and channeling devices.

Course Outcome(s):

III. Discuss the importance of jobsite documentation and identify procedures used to write daily logs pertaining to environmental conditions and construction equipment and personnel.

Objective(s):

1. Discuss the legal aspects of jobsite documentation.
2. Compile a list of daily log entries.
3. Explain the importance of photo and video documentation logs.
4. Discuss litigation applications of daily logs and retention periods.

Course Outcome(s):

IV. Interpret traffic maintenance drawings including sections and details used for traffic control.

Objective(s):

1. Evaluate state highway standards for determining required signage and channeling devices.
2. Establish locations of barrier walls that are installed for worker safety.
3. Interpret traffic control drawings to establish traffic control zones.
4. Calculate construction materials and list required traffic control equipment.
5. Examine all roadway construction specifications and notes relative to establishing safe traffic work zones.

Methods of Evaluation:

1. Final Exam
2. Daily Quizzes
3. Practical Application
4. Participation & Safety

Course Content Outline:

1. Traffic control principles
 - a. Regulations
 - i. Manual of Uniform Traffic Control Devices MUTCD
 1. Guiding principles
 2. Specifications for devices
 - a. Cones, barrels and barricades
 - b. Flagging procedures
 - ii. OSHA
 1. Signage
 2. Worker apparel
 3. Inference
 - b. Control plan
 - i. Safety
 1. Motorist
 2. Pedestrian
 3. Worker
 - ii. Sequencing of zones
 - c. Traffic zones
 - i. Advance warning area
 - ii. Transition
 - iii. Activity
 - iv. Termination

- d. Safety impact
 - i. Zone warnings
 - ii. Separation
 - 1. Worker
 - 2. Motorist
 - iii. Pedestrian guidance
- 2. Work zone tapers
 - a. Types
 - i. Merging
 - ii. Shifting
 - iii. One lane/two way
 - iv. Downstream
 - b. Tapers and flashing arrow panels
 - i. Merging functions
 - ii. Panel selection
 - 1. Size
 - 2. Light configuration
 - iii. Determination of location
 - c. Merging taper lengths
 - i. Less than 40 miles per hour (mph)
 - 1. (Width times (speed squared))
 - 2. Application
 - ii. Greater than or equal to 45 mph
 - 1. Width times (speed squared)
 - 2. Calculations
 - d. Taper length and merging taper length
 - i. Merging standard
 - ii. Shifting taper calculation
 - iii. Shoulder taper length
 - e. Roadway sign categories
 - i. Regulatory
 - ii. Guide
 - iii. Warning
 - f. Roadway sign uses
 - i. Regulatory
 - 1. Speed
 - 2. Stopping
 - 3. Yield
 - ii. Guide
 - 1. Detour
 - 2. Route markers
 - 3. Informational
 - iii. Warning
 - 1. Road construction
 - 2. Narrowing lanes
 - 3. Merge
 - 4. Flagger
 - g. Channel devices
 - i. Types
 - 1. Cones
 - 2. Barrels
 - 3. Barricades
 - 4. Concrete barrier walls
 - ii. Uses
 - 1. Night work
 - 2. Guidance
 - 3. Hazard indicators
 - 4. Road closures
 - 5. Separation of motorist and worker
 - h. Placement

- i. Roadway signs
 - 1. Spacing
 - 2. Distance from edge of road
 - 3. Height above roadway
 - ii. Channeling devices
 - 1. Positioning
 - 2. Device intervals
 - 3. Speed limits
- 3. Jobsite documentation
 - a. Legal aspects
 - i. Litigation evidence
 - ii. Accident reporting
 - iii. Updating
 - b. Daily logs
 - i. Weather
 - ii. Personnel
 - iii. Works cope
 - iv. Equipment
 - v. Supervision
 - c. Photo and video documentation
 - i. Before and after photos
 - ii. Damage
 - iii. Traffic flow video
 - d. Litigation applications
 - i. Daily logs
 - 1. General documentation
 - 2. Working evidence
 - 3. Secure storage
 - ii. Retention period
- 4. Traffic maintenance drawings
 - a. Highway standards
 - i. Signage requirements
 - ii. Channeling devices
 - b. Sectional drawings
 - i. Barricade construction
 - 1. Dimensions
 - 2. Materials
 - 3. Device uses
 - ii. Sign placement
 - 1. Height above roadway
 - 2. Curb distances
 - c. Details
 - i. Time constraints
 - ii. Control personnel
 - iii. General notes
 - iv. Special considerations
 - d. Barrier walls
 - i. Material
 - ii. Dimensions
 - iii. Placement
 - iv. Time frames
 - e. Control drawings and traffic zones
 - i. Work location
 - ii. Lane dimensions
 - iii. Access and exit ramps
 - f. Calculations
 - i. Materials
 - 1. Base material
 - 2. Stone

- 3. Asphalt
- 4. Paint
- ii. Equipment
 - 1. Signage
 - 2. Flashing arrow panels
 - 3. Barrier walls
 - 4. Cones, barrels and barricades
- g. Construction specifications and notes
 - i. Expressways
 - ii. Local routes
 - iii. Urban
 - iv. Rural

Resources

Ohio Laborers Training and Apprenticeship Fund . *Maintenance of Traffic Trainee Manual*. 25721 Coshocton Road, Howard, Ohio 43028 , 2008.

LIUNA Training and Education Fund . *Traffic Control*. 37 Deerfield Road, Pomfret Center, Connecticut 06259 , 2006.

Ohio Department of Transportation. *Book of Typical Standard Drawings*. 1980 W. Broad St. Columbus, OH 43223 ,

Ohio Department of Transportation. *Route 4 re-alignment project plans*. 1980 W. Broad St. Columbus, OH 43223 , 1994.

Top of page

Key: 4756