
I-95 CORRIDOR COALITION

VIRTUAL INCIDENT MANAGEMENT TRAINING

Training Guide

An overview of recommended training methodology using the I-95 Corridor Coalition's Virtual Incident Management Training application, powered by the Online Interactive Virtual Environment (OLIVE) platform.

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1. PREFACE

This document is written as a recommended guide on how to host a training session utilizing The I-95 Corridor Coalition Virtual Incident Management (I95VIM) program. This document is intended for trainers, moderators, and agencies who will host such training.

2. ABOUT

Training of traffic control personnel, emergency management personnel, and first-responders is a critical element in effectively managing the consequences of road construction, traffic incidents, natural disasters, acts of terrorism, and other large-scale emergencies. While national standards such as the US NIMS (National Incident Management System) Program aim to foster cooperation between individuals and agencies through standardized incident management processes, protocols, and procedures, a planning document is no substitute for realistic, interactive, and collaborative training amongst all responders. However, the sheer number of first responders (and their highly limited availability for live training) poses a significant challenge to consistently providing realistic team-based training. There are over one million firefighters, more than 800,000 full-time employees in local police departments and sheriff's offices, 700,000 physicians, 2.7 million nurses, and thousands of transportation management personnel in the United States. Further, physical settings for team-based training are limited—public reaction to live exercises and the inability to alter or destroy property prevent realistic venues from being used on a regular basis. As such, effectively training these individuals is simultaneously difficult, time consuming, and extremely costly.

Funded and envisioned by the I-95 Corridor Coalition, Virtual Incident Management Training application was developed by the University of Maryland's CATT Lab to be used as a safe, accessible, and low cost alternative to first responders' incident management and safety training. The application is powered by OLIVE (Online Interactive Virtual Environment), a virtual world software platform initially designed for military training simulation purposes. OLIVE was developed by Forterra System Inc.

The I-95 Virtual Incident Management Training features:

- Interchangeable Roles
- Face-to-face and Radio communication
- Emergency vehicles and equipment models
- Traffic AI that reacts to cone placement and donned safety vests
- Various props and geographic locations that enable infinite custom incident scene possibilities

It is actively being used for cross-discipline, cross-agency, first responder training by members of the I-95 Corridor Coalition and beyond.

3. INCIDENT MANAGEMENT CORE COMPETENCIES

As part of the I95VIM training, The I-95 Corridor Coalition has developed Incident Management Core Competencies online course that covers basic scene safety and traffic management core competencies through a series of instructional videos followed by quizzes, and can be used as standalone training for anyone having access to the internet.

The primary objectives of the core competencies course is to ensure that first responders know how to make themselves safe, make the scene safe, and make the victims safe through best practices and quick clearance goals.

This course is available online for free at www.i95vim.com. The first part of the course is open to public and teaches the core competencies. The second part requires special group code access. It teaches the basic of the virtual world user interface techniques and is intended for people who will partake the I95VIM training session.

You can send group code request to training-admin@i95vim.com. Please include the following information in the email:

- Title
- Full Name
- Business E-Mail
- Office Phone Number
- Agency/Organization Name
- Agency/Organization Address
- Estimated Training Dates and Locations

On approval, the provided email may automatically be subscribed to receive future updates notifications. It is recommended that you request a group code for each training group. Note that each user can only have one group code associated to their user account.

4. TRAINING PHILOSOPHY

The core of the learning process is in the cross-discipline group discussion during each training scenario's after action review (also known as *hotwash*). The Virtual Incident Management acts as an effective catalyst to that discussion.

As a 3D virtual world simulation, I95VIM has the capabilities to give an immersive personal experience. In a shared incident scenario, each trainee will have their own unique perspective through their avatars. The thoughts and actions taken by trainees becomes the context for the group discussion that follows.

As trainees become more familiar in using the system, immersion will be easier to achieve and consequently they will learn more from the experience. That experience will benefit the entire group as a whole. It is thus recommended to have the training as a recurrent event.

5. TRAINER QUALIFICATIONS

It is not uncommon for responders of various disciplines to have differing viewpoints on incident management operations. The course's intent is not to resolve all of these issues, but to search for common ground within which the interdisciplinary response may proceed efficiently. An effective trainer will use these opportunities to enlighten participants of the various issues faced by the other disciplines involved in Incident Management. A successful training session will generate respect and understanding of the opposing viewpoints through role-play and discussion.

To get the most out of this training, a trainer is expected to:

- understand The I-95 Corridor Coalition’s Incident Management Core Competencies
- have a wide breadth of experience in incident management
- have the necessary skill to moderate a group discussion
- be proficient with the I95VIM application, able to manipulate training scenarios at ease

6. INTENDED TRAINEE AUDIENCES

A good training session will have trainees from all kind of backgrounds. A well diverse audience will enrich the group discussions. I95VIM supports 13 roles to choose from. Ideally most of the first responder roles should be represented.

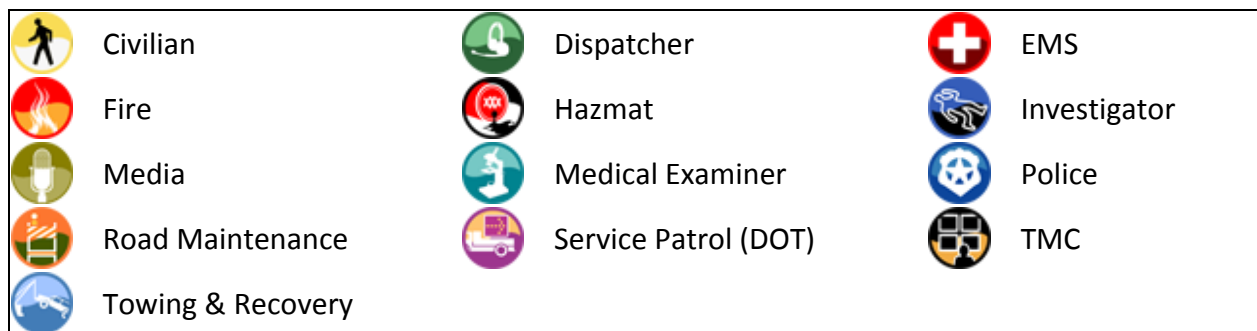


FIGURE 1 - AVAILABLE ROLES

All trainees should have completed the online course. Part one teaches the common foundation for the group discussions. Part two teaches the basic familiarity of the application’s user interface.

Trainers must insist that participants complete the pre training. Historically, class participants who attempt the live classroom course without taking the pre training have significantly

hampered the progress of the other participants. Surveys indicate that class satisfaction with the course (and the trainer) are correlated with the percentage of students who fully completed the pre training online course.

7. HOSTING PREPARATIONS

7.1. SITE REQUIREMENT

To host a local training session successfully, your site needs to have the following:

- I95VIM Server

The I95VIM uses a client-server framework. IT needs to prepare the server and have it readily available for the training. Step by step instructions on how to setup the server are explained in the **I95VIM Server Install Guide**.

- Projector PC

Used for power point presentation and broadcasting I95VIM application.

- Trainer's PC

Used by trainer to manipulate I95VIM training scenarios behind the scene.

- Computer Lab

Room with desktops or laptops setup for trainees should be preinstalled with the application. The **I95VIM Client Install Guide** covers the installation process. Make sure that you can connect to your server. Any issues in setting the system need to be addressed by your IT.

- Projector

Used for power point class presentation.

7.2. TRAINEES LIST

When deciding on whom to send the training invitation to, it is important to remember that a well-mixed group of responders will typically result in a healthy discussion. The ideal group will have a wide range of cross-discipline backgrounds with diverse seniority level. Younger people usually can learn how to use the system in a matter of minutes, while more senior people will bring their years of field experience to the table. A good size group will have enough people to go through your most complex training scenario.

Include the core competencies' group code when sending out the invitation.

Some site requires the list of trainees as registered guests. Make sure your building security know that they are coming.

Create I95VIM user account for each trainee. See **I95VIM Server Guide** for more information on how to do this.

7.3. ONLINE COURSE PREREQUISITE

As mentioned earlier, group discussions will be much more effective when everybody share a same common ground. The core competencies online course (www.i95vim.com) acts as a prerequisite for the training. See [Section 3](#) on how to request a group code for your trainees.

Send reminders to complete the online course before the training day. Reminders should include notice that access to the class will be dependent on completion of the prerequisite.

7.4. REFERENCE DOCUMENTS

Trainers should familiarize themselves with The I95VIM's user interface. Two reference guides are provided as supporting documents:

1. I95VIM User Guide
2. I95VIM Trainer Guide

Take some time and know what can and cannot be done through the application.

7.5. PRINTED COURSE MATERIALS

Some course materials needs to be printed out to be given as hand-outs, including but not limited to:

- Sign-in Sheet
- Name Tents
- Class Schedule Outline
- Core Competencies Checklist
- PowerPoint Notes
- I95VIM Quick Reference Sheet
- Log-in Cards
- Evaluation Form
- Certificate of Completion

Soft copy of past course materials used is provided for your template reference. You might want to adjust the materials to better suit and represent your organization.

7.6. ROOM SETUP

How the room is setup depends on several variables, including but not limited to:

- Computers Setup
- Projector location
- Electrical outlet locations
- Tables and Chairs flexibility

The important key in deciding what room setup works best for your group is to always remember that the training session will be partly computer simulation and partly group discussions. Trainers, or their assistants, should be able to move about the room freely, and assist as needed.

These two room setup diagram listed below are an examples of what works in the past.

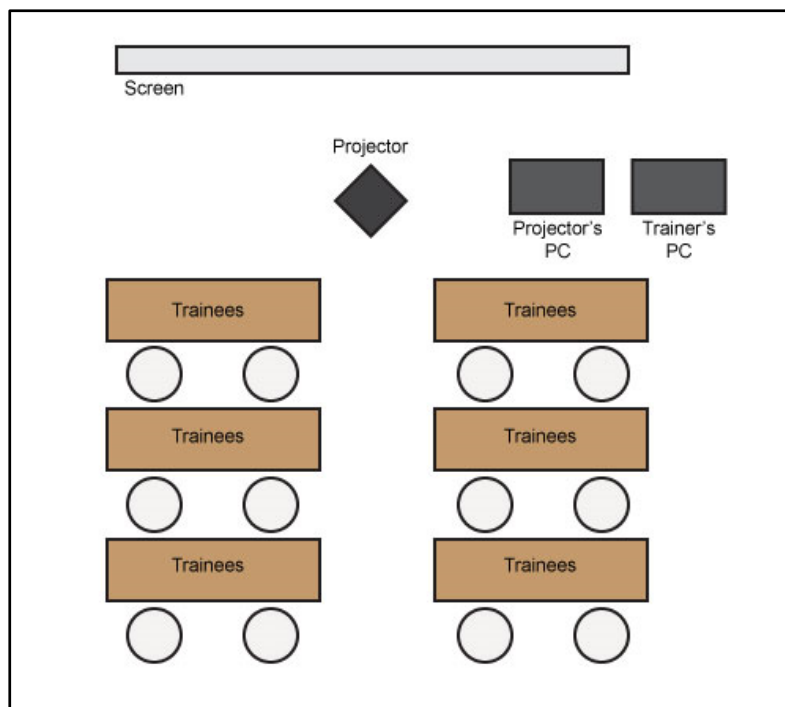


FIGURE 2 - CLASS ROOM SETUP

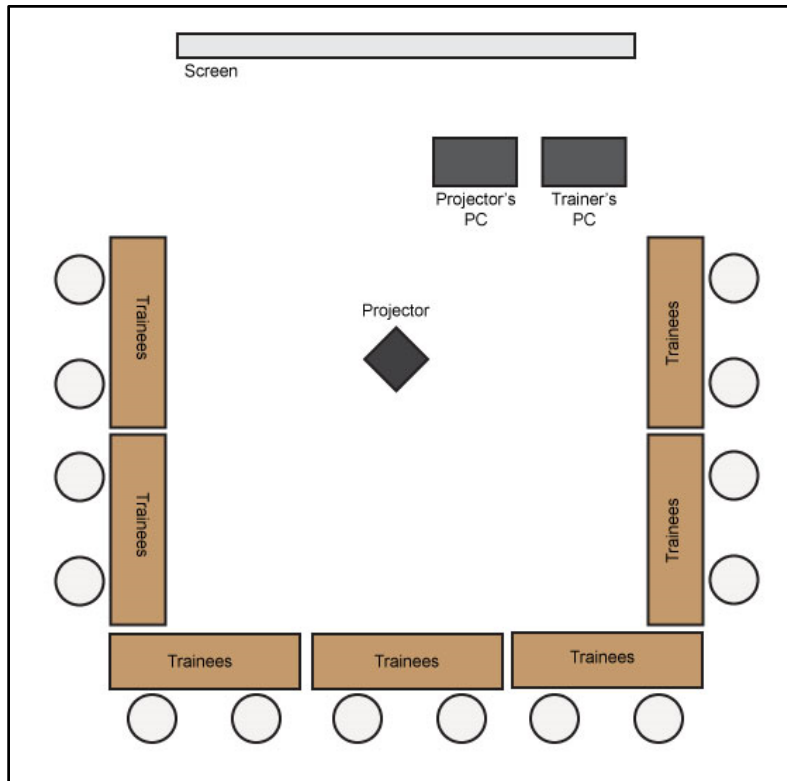


FIGURE 3 - LETTER U ROOM SETUP

7.7. PREPARE TRAINING SCENARIOS

Plan the training scenarios you want to go over. You may use the preset *Actives*, or stage the incident yourself. Write a background story of each incident to be handed out to whoever is taking the Dispatcher role. Prepare an example script of the ideal management actions and outcome for each scenario.

Trainers should be flexible in the presentation of scenarios. It is helpful to gauge the proficiency of the group before increasing the complexity of the scenarios. No two groups are alike; some may get the most out of a series of simple incidents, while others may be able to manage a mass casualty event. It is important for the trainer to know their audience, and be prepared for a variety of proficiency levels.

7.8. LUNCH BREAK

Do not forget to arrange food to be brought in, especially if you are hosting a full day training session. If necessary you might need to make special considerations for vegetarians and common food allergy alternatives.

8. CONDUCTING A TRAINING

Problems should be brought to the attention of the trainer in advance. Last minute "fill-ins" by participating agencies are not acceptable if they are not able to complete the pre training online course. This needs to be clearly communicated to the training coordinators in each participating agency.

Start with a quick get to know each other. Besides names, it is also useful to have everyone introduce a little bit of their background, roles, and experience in incident management. Have the name tents filled, and pass around the sign-in sheet.

Trainer can then proceed with a brief introduction of The I-95 Corridor Coalition, The I95VIM background, and an overview of the Incident Management Core Competencies.

Give some "play time" for trainees to learn how to use the system. Make sure that everyone is able login (using the account created on [Section 7.2](#)), knows how to navigate the world through their avatars, and understand differences between face-to-face and radio communication. Do a quick audio check to ensure that everyone has set their mic sensitivity and speaker volume on a good level. Ask them to retrieve item from their inventory, move them around, and remove world objects. Do an exercise where everyone needs to place cones on a straight line.

Do not expect people to be able to drive and position their vehicles. Due to the limitation of the platform's physics simulation, most new user will find vehicle driving frustrating and detracts everyone from the immersion. Driving is considered "advanced" and should rarely be attempted except for really seasoned gamers.

Start with a small scenario (e.g. fender bender) with just two or three participants. Let everyone else watch, debrief, and discuss. Afterwards, try doing it again with different people in the room.

As people getting more comfortable with the system and class format, ramp up the scenario complexity and have more people taking active roles. Have people try role play as agencies that are not who they are in real life. At the beginning of each scenario, do not forget to hand out the prepared background story script to whoever is the Dispatcher at the moment.

In rare occasion, there will be some people who are really uncomfortable in running the system. Instead of having them struggle all day long with the system, let them contribute as Dispatcher.

During a scenario, it is important to remind trainees to think themselves in a Utopian Society where all agencies are operating under the same Standard Operating Procedures. We are here to practice what is right.

At the end of day, conclude the training and pass out the evaluation form.

9. ONE DAY SCHEDULE EXAMPLE

Below is an example of a one-day training session with people who are unfamiliar with I95VIM.

TABLE 1 - ONE DAY SCHEDULE EXAMPLE

Time	Activity	Instructor's Notes
15mins	Introduction: (ppt) <ul style="list-style-type: none"> Welcome Introduction of Instructors/Staff Today's Schedule Overview I-95 Corridor Coalition Purpose and History of the Training 	<ul style="list-style-type: none"> Emphasize goal of consistent, safe, quick clearance approach to managing incidents in the I-95 corridor
15mins	Introduction to Core Competencies	<ul style="list-style-type: none"> Initial review Confirm working knowledge of NIMS ICS
30mins	Live on the System <ul style="list-style-type: none"> Demo video Logon Avatar setup "Play time" Radio check Suggestions 	<ul style="list-style-type: none"> Logon Demonstrate avatar setup Overview of controls Set-up Active, Training Grounds A Teleport to Training Grounds A - Move around, retrieve items from ground and vehicles/apparatus Perform radio check Review placing cones
10mins	Break	
10mins	Review of Critical Actions for Scenario 1	<ul style="list-style-type: none"> Introduce checklist Review checklist critical actions for scenario 1
60mins	Scenario #1 Level-1 (Simple) <ul style="list-style-type: none"> X5-7 students Pre-positioned vehicles Students start at vehicles Oral Hot Wash 	<ul style="list-style-type: none"> Set-up Active, Utopia Highway A, activate smoke Assign roles: <ul style="list-style-type: none"> Fire x2 Law Enforcement x1-2 Civilian x1-2 Dispatch If role is different than original log-in, instruct participant to change role Participants in role teleport to Utopia Highway A Observers to remain in the training ground

		<ul style="list-style-type: none"> • Confirm all participants ready – kneeling next to vehicle • Start recording – Need support for ‘camera’ to keep moving through scenario during recording • “Start Action” • Dispatch announces all participants arrival on-scene • Add traffic after 3 minutes • “Stop Action” • Stop recording • Oral hot wash • Reset and repeat if needed
30mins	Practice with Vehicles for Scenario 2	<ul style="list-style-type: none"> • Students teleport to Training Ground X • Select location by login # 1-10, or second digit if female 11-20 • Select a drivable vehicle, get in, and practice <i>safe</i> driving • Teleport to Driving Training Grounds – start training
60mins	Lunch	
15mins	Review of Critical Actions for Scenario 2 (from ppt)	<ul style="list-style-type: none"> • We are building on first scenario critical actions • Add these to what you focused on before
60mins	<p>Scenario #2</p> <p>Level-2</p> <ul style="list-style-type: none"> • X10-12 students • Students start in staging and drive • Oral Hot Wash 	<ul style="list-style-type: none"> • Set-up Active,Utopia Highway B, remove response vehicles if students are driving • Stage Firetruck, Ambulance, Tow Truck, Highway Patrol, Sheriff’s Car, DOT Vehicle • Assign roles: <ul style="list-style-type: none"> – Fire x2 – EMS x2 – Law Enforcement x2 – DOT x1-2 – Towing – Dispatch – Victim x1-2 • Participants in role teleport to Utopia Highway C staging and get in assigned apparatus – click on the vehicle and Get In if you are driving, select Right Front if you are not the driver • Observers to remain in training ground • Confirm participants in vehicle/position – roll call • Start recording – Need support for ‘camera’ to keep moving through scenario during recording • “Start Action” • Dispatcher dispatches fire, law and EMS • Add traffic after all responders have gone arrival

		<ul style="list-style-type: none"> • “Stop Action” • Stop recording • Oral hot wash • Reset and repeat if necessary
10mins	Break	
10mins	Review of Critical Actions (from ppt)	<ul style="list-style-type: none"> • Continue to build – more complex scenario
60mins	<p>Scenario #3</p> <p>Level-3</p> <ul style="list-style-type: none"> • X all students • Students start in staging and drive • Oral Hot Wash 	<ul style="list-style-type: none"> • Set-up Active, Flipped Tanker • Stage Firetruck, Fire Command, HazMat Truck, Ambulance, Heavy Towtruck, Highway Patrol, Sheriff’s Car, DOT Vehicle • Assign roles: <ul style="list-style-type: none"> – Fire x2-4 – HazMat x2 – EMS x2 – Law Enforcement x2 – DOT x1-2 – Towing – Dispatch – Victim x1-2 • Participants in role teleport to Utopia Highway C staging and get in assigned apparatus – click on the vehicle and Get In if you are driving, select Right Front if you are not the driver • Observers to remain in training ground • Confirm participants in vehicle/position – roll call • Add traffic • Start recording – Need support for ‘camera’ to keep moving through scenario during recording • “Start Action” • Dispatcher dispatches fire, law and EMS • “Stop Action” • Stop recording • Oral hot wash • Reset and repeat if necessary
15mins	Review of Core Competencies	<ul style="list-style-type: none"> • Review, discuss, answer questions • Challenges within your agency?
10mins	Wrap Up and Training Evaluation (form)	

10. GOING FORWARD

Reflecting back to the [Training Philosophy](#), the potential of I95VIM training can only be maximized if we are able to set it as a recurrent event.

As a client-server platform, The I95VIM training is not bound to a certain geographic location. Thus it is possible to have training with people across the nation (or even globe). While the benefits of training with everyone in the same room cannot be fully replaced by virtual meetings, this option allows more flexibility in scheduling and participations.

Our recommendation is for you to work with other agencies in realizing this. Have other agencies install the client application and set it up so they can connect to your server. Plan and schedule a short training that covers just one scenario, but do this as a weekly or biweekly session.