

Rapid Intervention Teams

Firefighter Survival and Rescue



Session 1




Suffolk County Fire Academy

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House-Keeping


- Instructors
- Students
- Paperwork
- Student Manuals
- Exits
- Cell Phones and Pagers.



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Course Overview

- **5 Sessions**
 - **Session 1** - Firefighter Survival, Air Management, RIT's, FAST Pak, Pak Tracker, TIC, Bringing It Home (Lecture Only Class)
 - **Session 2** - Room Orientation, Emergency Communications, Mask Confidence
 - **Session 3** - Firefighter Rescue Tactics - Packaging, Drags, and Carries
 - **Session 4** - Firefighter Rescue Tactics - Above Grade
 - **Session 5** - Firefighter Rescue Tactics - Below Grade



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Course Objectives

- Describe the functions of a Rapid Intervention Team (RIT) / Firefighter Assist and Search Team (FAST), their functions within the incident command system and responsibility for size-up while standing fast, and the need to continually monitor fireground operations and progress of the incident (NFPA 1407)
- Explain the instances when emergency communication is warranted, MAYDAY and URGENT transmissions, and demonstrate the ability to use such communications (NFPA 1407 7.5).

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Course Objectives (Cont'd)

- Demonstrate the ability to perform an oriented search using tools and experience to efficiently and effectively locate a downed firefighter (NFPA 1407 7.6)
- Describe and implement various methods to access and extricate a downed firefighter as well as identification and control of hazards encountered during a search which may require self-extrication (NFPA 1407 7.7).

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Course Objectives (Cont'd)

- Demonstrate self-rescue procedures including SCBA emergency profiles and individual air management (NFPA 1407 7.13)
- Describe methods for air management and emergency procedures used during SCBA failure (NFPA 1407 7.8)
- Explain and demonstrate the procedure for air management of a downed firefighter (NFPA 1407 7.8).

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Course Objectives (Cont'd)

- Demonstrate the ability to properly package a downed firefighter using acceptable methods as well as ropes, slings, and harnesses (NFPA 1407 7.10)
- Describe instances when it is necessary to protect a downed firefighter in place or move a downed firefighter to a safe location and/or out of the structure (NFPA 1407 7.11).

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Course Objectives (Cont'd)

- Demonstrate the movement of a downed firefighter using basic lifts, drags, and carries as follows (NFPA 1407 7.12):
 - Horizontally with or without a mechanical advantage
 - Vertically up or down a flight of stairs
 - Through a window (lower and upper level)
 - Up and out of a hole
 - From above and below grade.



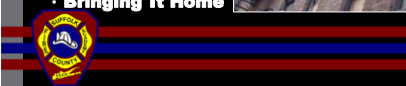
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Rapid Intervention Teams

Firefighter Survival and Rescue

Session 1

- Firefighter Survival
- RIT's
- FAST Pak
- Pak Tracker
- Thermal Imaging Cameras (TIC's)
- Bringing It Home




Suffolk County Fire Academy

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Session Objectives

- **Upon Completion of This Session, Students Will Understand:**
 - Situational awareness and it's relation to firefighter survival
 - Firefighter self-rescue and survival techniques
 - Air supply and air management
 - RIT crews and associated staffing
 - RIT tools and equipment.



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Firefighter Survival



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Firefighter Survival


- **Training and Preparation Will Help To Keep You Part of The "Solution"**
 - *If you don't train for yourself, train for those who will have to come and get you*
- **Size-up Begins Upon Notification of The Alarm**
- **Remember, Someone Sacrificed Their Life In Order For You To Have The Equipment You Wear. Wear It Properly.**



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Firefighter Survival

- **Understand Fire Dynamics (Heat, Smoke, Flame) and What They Are Conveying**
- **Building Construction Will Tell You Where The Fire Is and Where It Is Going**
- **If You Find Yourself In A Bad Position; Stop, Think, Communicate, and Be An Active Participant In Your Survival**
- **If You Put The Fire Out, You Won't Have To Jump Out The Windows.**




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Firefighter Survival




SCBA Emergency Profiles



Wall Breach / Swim Maneuver




Bail-out System




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Firefighter Survival



Portable Ladder Use




Water On The Fire




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Firefighter Survival





Wear Your Gear Properly!



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Firefighter Survival


Not Just For You,
But For Everyone
Who Depends On
You

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Self-Rescue Steps



- Get Down And Stay Low
- Conserve Air
- Notify Partner And Command Of **MAYDAY**
- Activate **PASS**
- Remain Calm, Stay Low, Take A Breath And Begin To Correct The Problem.



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Self-Rescue Steps

- Large Lugs Lead Out
- Go To The Light
- Listen. What Do You Hear Around You?
- Get To A Secondary Exit
- Formulate Your Plan
- Exit The Building.

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Air Management

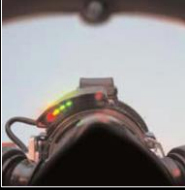



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Air Management

• 5 Discussion Topics

- SCBA limitation
- Firefighter limitation
- Panic avoidance techniques
- Physical fitness
- Air conservation and emergency procedures.

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SCBA Limitation


- 30 Minute Cylinder
- 45 Minute Cylinder
- Vibra-alert Activation
 - 1/4 cylinder
 - 1/3 cylinder.




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SCBA Limitation

- Working Time
- Escape Time
- What Does The Vibra-alert Indicate?
 - Out of air?

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Firefighter Limitation

- Psychological
 - Can control
 - Mental performance
- Experience
 - Comes with time.




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Psychological Affects

- **Anxiety**
 - Bodles alarm system
 - Normal Reaction
 - Helps to get things done
- **Panic**
 - Extreme anxiety
 - Beyond feeling of fear
 - Panic Attack.

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Psychological Affects

- **Signs and Symptoms of Anxiety Leading To Panic**

<ul style="list-style-type: none"> ◦ Sensation of a lack of oxygen ◦ Loss of focus, mind races ◦ Choking feeling ◦ Chest pressure or pain ◦ Pounding heart ◦ Racing pulse ◦ Dizziness or light headedness 	<ul style="list-style-type: none"> ◦ Shortness of breath ◦ Sweating ◦ Trembling or shaking ◦ Nausea ◦ Tingling or numbness in hands or feet ◦ Hot flashes or chills ◦ Loss of reality, dreamlike state.
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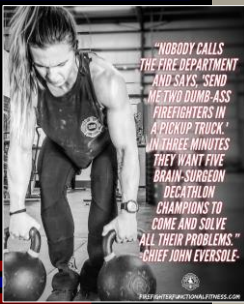
Panic Avoidance

- **Stop All Activity**
- **Focus** On What's Really Happening
- **Focus** On A Calming Technique
- **Focus** On Your Training
- **STOP, BREATHE, LISTEN, THINK, and ACT.**
- **Train Often and In A Realistic Environment.**

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Physical Fitness

- Exercise regularly
- Get plenty of sleep
- Avoid alcohol/drug abuse
- Avoid tobacco products
- Limit caffeine
- Train through visualization.



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Air Conservation

- Emergency Procedures
 - All procedures begin with notifying a partner (tapping shoulder)
 - The partner **should not hesitate** to take physical control of the member in distress
 - All procedures are for **emergencies only**
 - Should only be used while exiting the building, staying low
 - Should a **MAYDAY** be called?



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Emergency Procedures



- Chinning Method - Filter Breathing
 - Used for no air supply (consumption / failure)
 - Leave facepiece on and call a **MAYDAY**
 - Ensure seal of facepiece is covered with Nomex hood
 - Lift facepiece from chin just enough to allow a small amount of air in
 - Stay low
 - Leave building with partner.



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Emergency Procedures



- **Damaged Facepiece Lens**
 - Notify partner
 - Leave facepiece on and call a **MAYDAY**
 - Place gloved hand over facepiece
 - Leave building with partner.

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Emergency Procedures



- **Severed Low Pressure Hose**
 - Notify partner
 - Leave facepiece on and call a **MAYDAY**
 - Grab severed hose
 - Leave building with partner.

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Emergency Procedures



- **Regulator Malfunction**
 - Notify partner
 - Leave facepiece on and call a **MAYDAY**
 - Operate by-pass or purge valve
 - Leave building with partner.

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Emergency Procedures

- **Severed High Pressure Hose**
 - Notify partner
 - Leave facepiece on and call a **MAYDAY**
 - Complete air loss is imminent = chinning method
 - Leave building with partner.

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The Rapid Intervention Team



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Rapid Intervention Team
Why?

- **NFPA 1550 – Standard for Emergency Responder Health and Safety**
 - “The fire department **shall** provide personnel for the rescue of members operating at emergency incidents”
(NFPA 1550, 10.8.1)




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Rapid Intervention Team
How?

- **NFPA 1407 – Standard for Training Fire Service Rapid Intervention Crews**

“A dedicated crew of at least one officer and three members, positioned outside the IDLH, trained and equipped as specified in NFPA 1407, who are assigned for rapid deployment to rescue lost or trapped members” (NFPA 1407)



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Rapid Intervention Team

- **Team Members**
 - Minimum of 6 firefighters (recommended)
 - Function as 2 teams
 - Can conduct a search rope operation
 - Experienced firefighters only (probles?)
 - Good physical/mental condition
 - Positive, can-do attitude
 - CFR or EMT trained

AKA: RIC, FAST




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RIT Skills

- Declaring MAYDAY
- Search Techniques
- Access and Extrication
- Air Supply
- Ropes
- Protecting Downed Firefighters (In Place)
- Moving Downed Firefighters To Safety
- Firefighter Self-Rescue Techniques.




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RIT Tools

- 6' hooks
- Halligans
- Maule
- Rabbit Tool
- Search Rope
- Rotary Saw(s)
- SCBA's (Extra?)
- Stokes Basket
- Rescue Rope
- T.I.C.
- Portable Radios
- Hand-lights.



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RIT Tools



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But Remember...



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RIT Operations

- **Report** To Command Post (Equipped)
- **Remind** I.C. That You Are The R.I.T.
- **Size-up / 360** (No Freelancing, but "soften" the building)
- **I.C. Brief**
 - Location of fire
 - Progress
 - Searches.

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RIT Operations (Cont'd)

- **Location of Additional Tools**
 - Saws
 - Ropes
 - Lights
 - EMS
- **Aerials, Tower Ladders, Portable Ladders**
- **Monitor Radio** (Frequency?)
- **Note Hose Line Placement.**




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RIT Size-Up

You Are Part of The RIT - Size It Up!



RonKortome

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RIT Size-Up

You Are Part of The RIT - Size It Up!



Sag Harbor

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RIT Size-Up

You Are Part of The RIT - Size It Up!



North Amityville

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RIT Activation



- All Members Should Be Dressed, Ready To Work
- Consider The Need For A Hose Line
- Consider Switching Channels On Portable Radios (Acquire 2nd Radio?)
- 6 Sided Approach
- Where Might/Should The MAYDAY Be Operating Based On Their Original Riding Position.



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Locate A Downed Member

- **PASS Activated?** – Reset
- **Status of Air**
- **Communicate – MAYDAY, MAYDAY, MAYDAY**
 - **C – onditions** – heat, fire, smoke
 - **A – ctions** – protect or move
 - **N – eeds** – hose line, additional help
- **Nearest Exit** – May Not Be The Way You Came In.

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FAST Pak



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FAST Pak



- **45 Minute SCBA Cylinder**
- **Low/High Pressure Assemblies**
- **5' High Pressure Hose With UAC Fitting**
- **20' Low Pressure Hose With Regulator/Face-piece**
- **Carrying Bag.**

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FAST Pak



- 5 Methods For Getting Downed Firefighter More Air
- RIT's Should Report In With FAST Pak or Spare SCBA
- This Emergency Air Supply Should Be Used For **Downed Firefighters Only**
- RIT Member Must Be Assigned To Pak To Monitor Air Supply (Cylinder Gauge)
 - No remote gauge
 - No Vibra-alert
 - No heads-up display.

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UAC (Universal Air Connection)


- 5' High Pressure Hose
- Equalizes Pressure Between Member's SCBA And FAST Pak
- Equalization Within 60 Seconds
- Built In Check Valve
- Disconnect After Equalization.


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Regulator Replacement

- 20' Low Pressure Hose
- Remove Member's Regulator
- Attach FAST Pak Regulator
- If Inhalation Valve Does Not Activate, Operate The Purge



Purge Valve Down, Rotate Counter-clockwise To Lock.



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Face-piece Replacement

- 20' Low Pressure Hose
- Member's Helmet, Hood, And Face-piece Must Be Removed
- Lengthy Process
- Used If Face-piece Is Compromised
- If Inhalation Valve Does Not Activate, Operate The Purge.



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Hansen Fitting

- 20' Low Pressure Hose
- Attachment To Members Low Pressure Hose
- Can Be Passed To Member In Distress Without Regulator Or Face-piece
- May Be Difficult To Operate If Member(s) Are Not Familiar With Its Use.



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Hansen Fitting



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Schrader Connection

Used By Technical Rescue Teams Only.



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Pak Tracker



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Pak Tracker



- Used To Locate A Downed Firefighter's Activated PASS Alarm
- Will Display Activated Pack Identification
- Bar Graph Displays Relative Proximity of Downed Member To Tracker
- Can Select One of Multiple Activations Displayed
- Department Specific.**



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Pak Tracker

- Does Not Account For Elevation
- Signal Strength Dependent On Building Material
- Will Activate For **Any** PASS Alarm Activation.

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Thermal Imaging Cameras (TIC's)



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Thermal Imaging Cameras (TIC's)

- Should Be Included In Every RIT's Cache Of Equipment
- RIT Members Assigned TIC's Must Be Versed On It's Proper Use
- Useful In Finding A Downed Member And Monitoring RIT Progress
- Vital During Search Rope Operations.




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Thermal Imaging Cameras (TIC's)

How Might A Downed Firefighter Look?

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Bringing It Home

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Bringing It Home

- Firefighter Edward Bellefontaine (18) and Richard Sycz (27) – Greenport Fire Department, 6/13/1977
- Overcome by smoke while searching for a 10 y/o girl

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Bringing It Home

- **Captain John Tate Jr. (28) and Firefighter Michael Moran (23) – Valley Stream Fire Department, 11/30/1979**
- **Roof collapse at a Synagogue fire**

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Bringing It Home

- **Lt. Robert H. Dayton (28) – Port Washington Fire Department, 10/26/1988**
- **Trapped, ran out of air while conducting a search in “maze like conditions.”**





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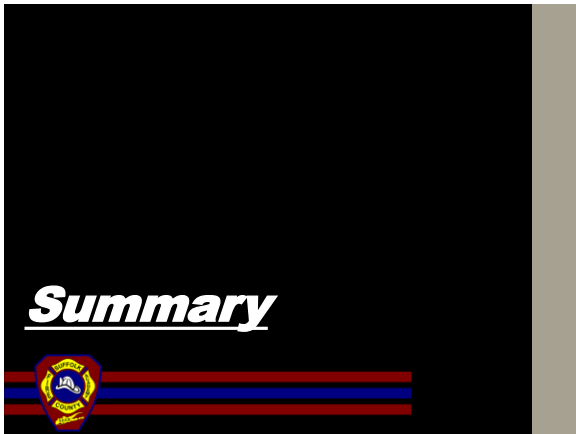
Bringing It Home

- **Assistant Chief Joe Sanford Jr. (42) – Inwood Fire Department, 12/19/2014**
- **Found unconscious in basement, possibly fell through the floor**






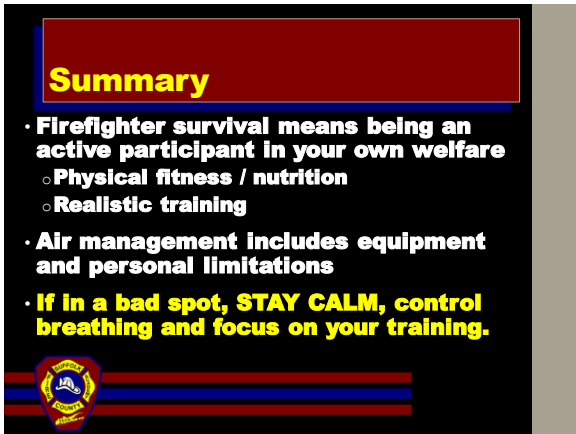
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Summary




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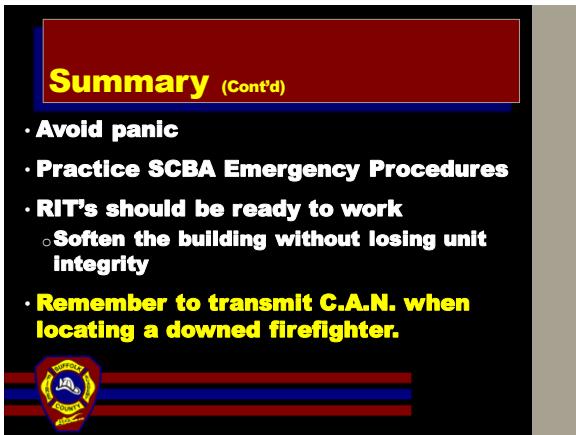


Summary

- Firefighter survival means being an active participant in your own welfare
 - Physical fitness / nutrition
 - Realistic training
- Air management includes equipment and personal limitations
- If in a bad spot, **STAY CALM, control breathing and focus on your training.**




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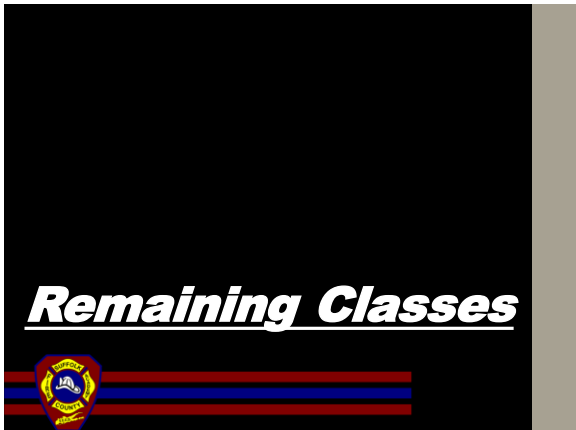


Summary (Cont'd)


- Avoid panic
- Practice SCBA Emergency Procedures
- RIT's should be ready to work
 - Soften the building without losing unit integrity
- Remember to transmit **C.A.N.** when locating a downed firefighter.



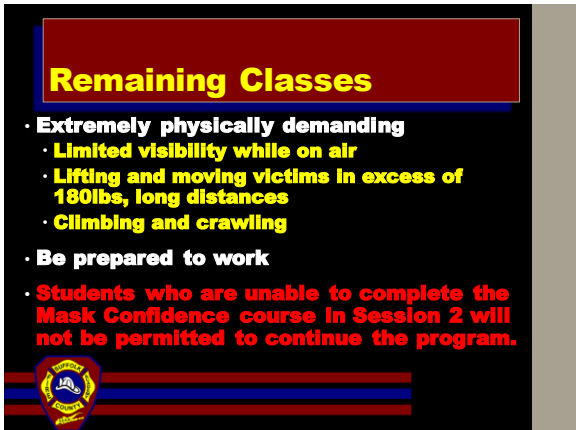
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Remaining Classes




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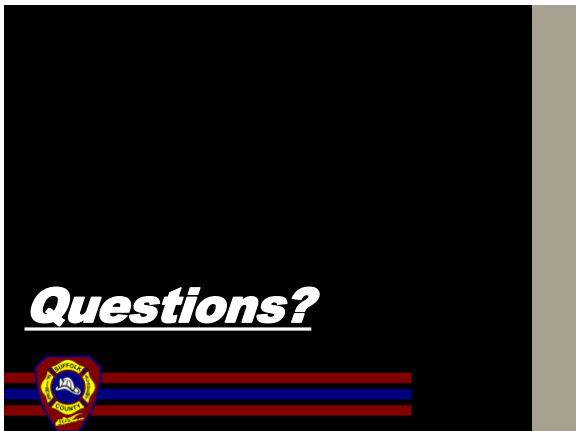


Remaining Classes


- **Extremely physically demanding**
 - **Limited visibility while on air**
 - **Lifting and moving victims in excess of 180lbs, long distances**
 - **Climbing and crawling**
- **Be prepared to work**
- **Students who are unable to complete the Mask Confidence course in Session 2 will not be permitted to continue the program.**



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Questions?



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