

Collaborative Approach To Energy Responses



Captain Chris Greene
Seattle Fire Department
Engine Co. 25 – Capitol Hill



Seattle Fire Department

Fire Station 25 – Capitol Hill, Seattle



Seattle Fire Department

Fire Station 25 – Capitol Hill, Seattle



Seattle Fire Department

Fire Station 25 – Capitol Hill, Seattle



Seattle Fire Department

Fire Station 25 – Capitol Hill, Seattle



Captain Chris Greene
Seattle Fire Department
Engine Co. 25 – Capitol Hill

In quieter times...



**...then an incident
initiated change....**

BROAD ST. SUBSTATION FIRE – Seattle, WA

- Originated in High Voltage Capacitor Bank (in a Substation)
- Initial SFD Engine Co. applied H₂O via deck gun
- Poor communication between SFD & SCL
- Poor Tactics
- Recognized need for better communication



July 23, 2014

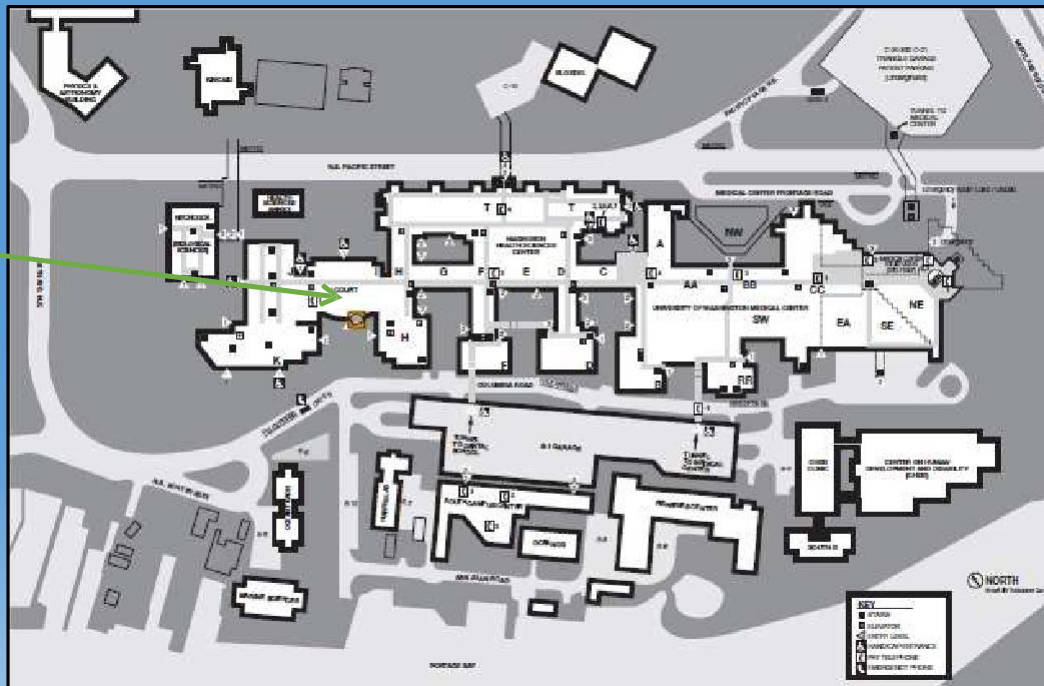
CASE STUDY – Seattle Fire, 2016



5/21/16 – Inc. #16005805

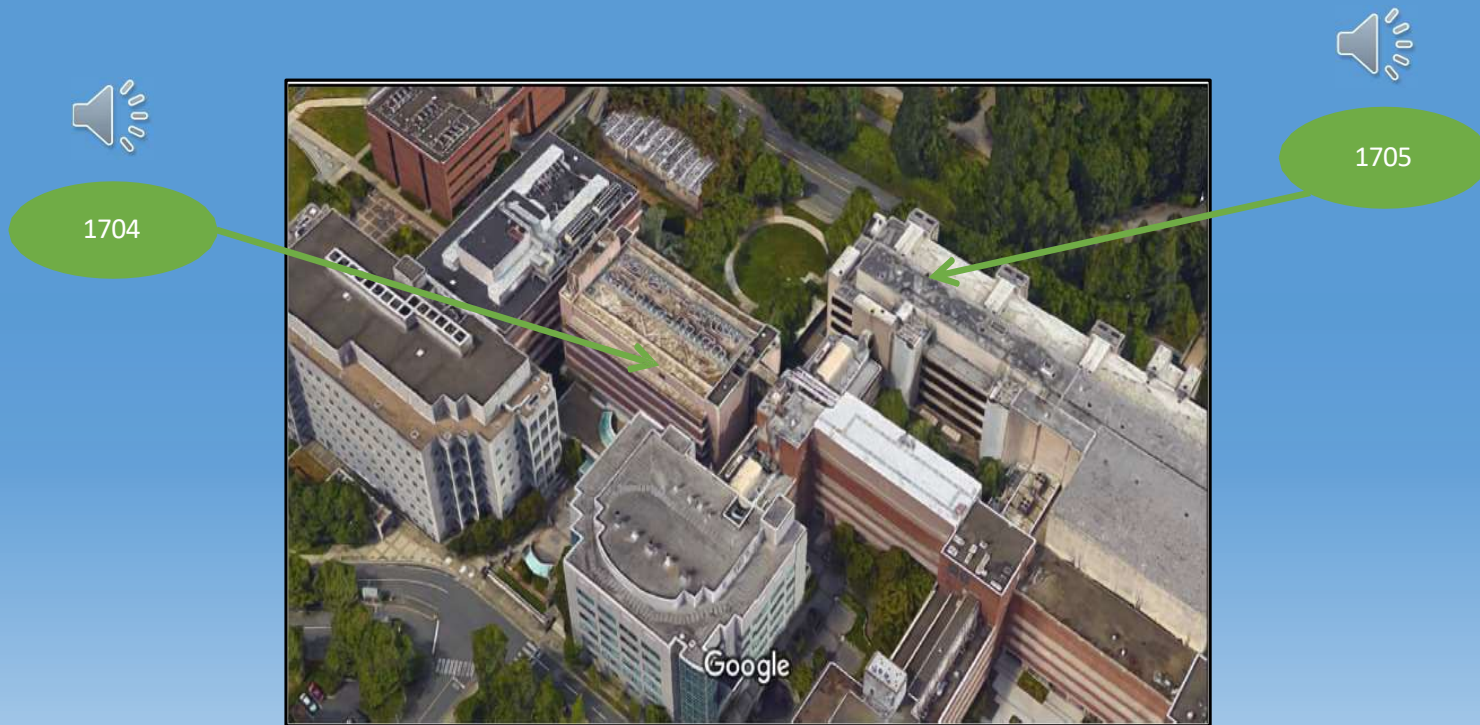
Engine 17 and Ladder 10 are dispatched to 1704 NE Columbia Rd.

I
Wing



E-22 arrives and provides size-up for 1705

E-17 communicates single response



Incident Investigation :

E17 Team B has encountered:

- A *“light haze”* in sub floor 1
- *“Believed to be from a ballast”*



The “Light Haze” was found in this secured access area, behind a locked grate.



Significant Electrical
Hazards were not
identified and/or
mitigated by SFD
Operations companies

This is how the alarm progressed.....

These tactics are
NOT advised and
this is
considered
A NEAR MISS

- Hazard Recognition

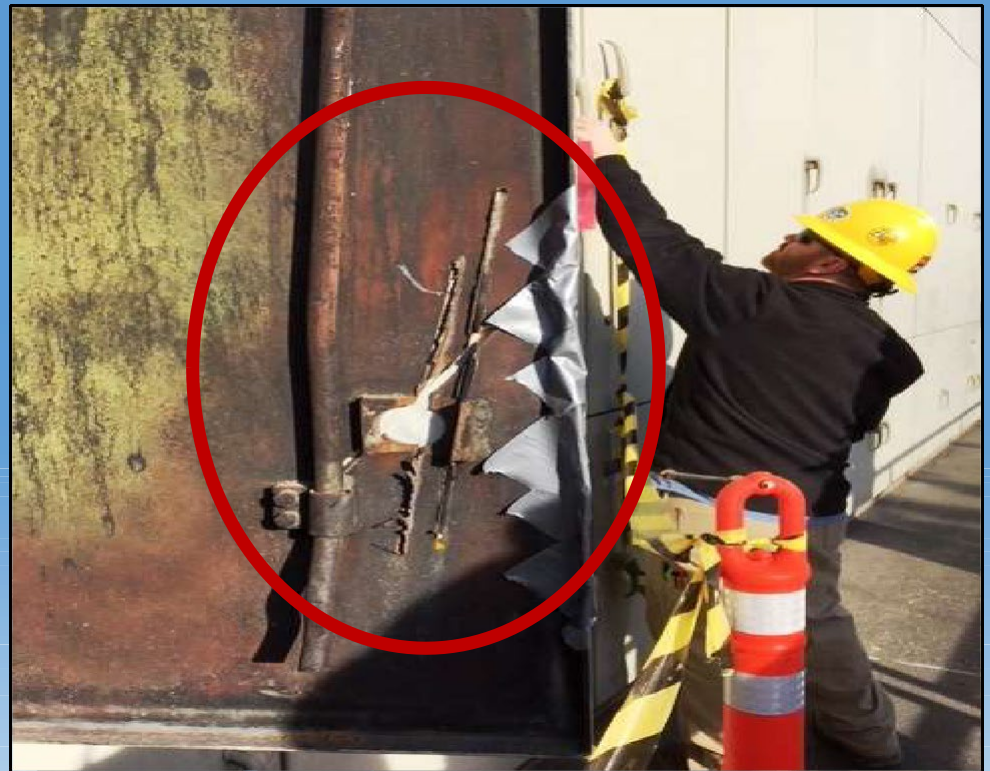
- 13,800V / Feeder Sign
- Power loss reported in Building
- Secured Access to area
- Large Diameter Electrical
- Smoke and Signs of Burn Through. "Fault"



Water from a discharged pump can by SFD member

BROAD ST. SUBSTATION FIRE – Seattle, WA

- 26Kv Switch Gear
- Initial SFD Engine Co. stretched hoselines
- Poor Tactics
- **Very Dangerous Tactics !**



January 20, 2018

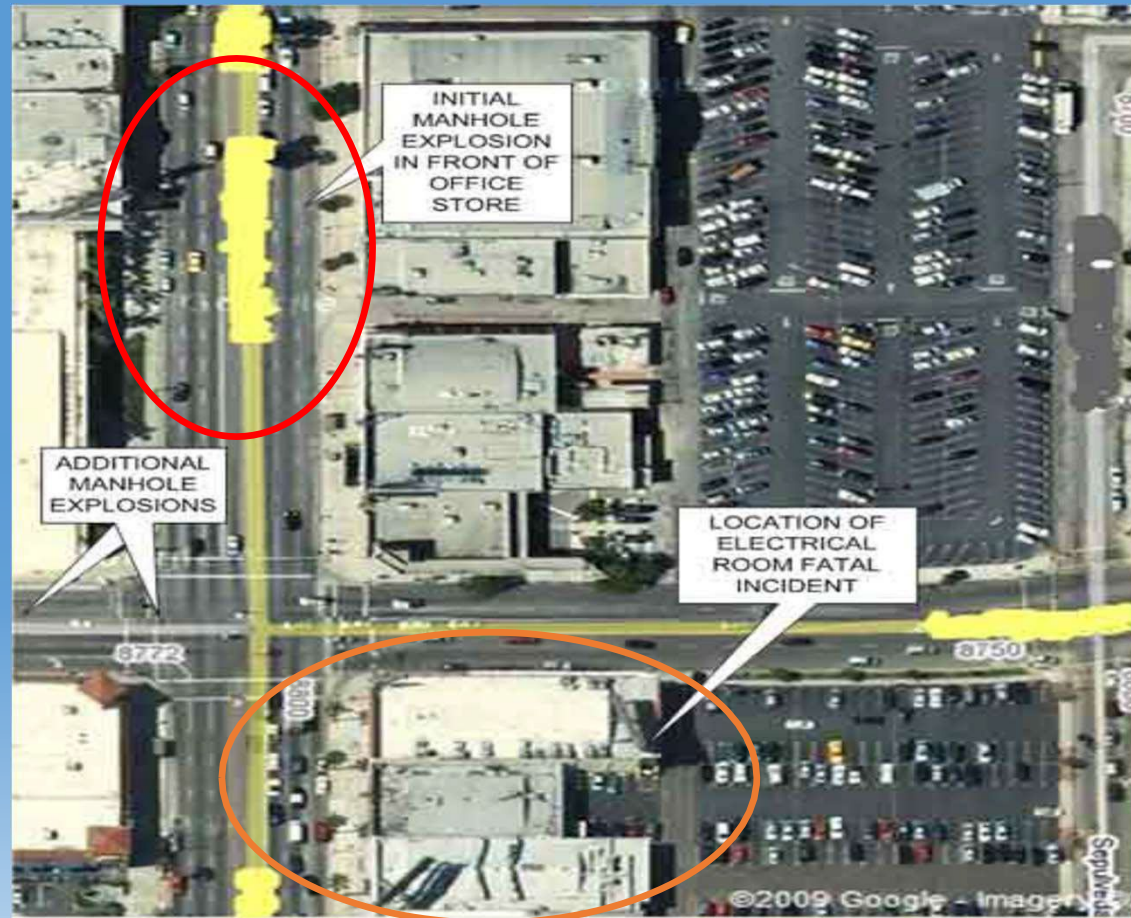
March 26, 2008 – Los Angeles

1-LODD

1-Seriously Injured

Contributing Factors:

- Lack of situational awareness by fire crews
- Lack of proper hazard identification
- Dispatch failed to recognize the relationship between the 2 incidents
- Electrical Space not labeled



Fire Fighter Fatality Investigation
Report F2008-11 | CDC/NIOSH

Our Training Has Prepared us for...



Our Training Has Prepared us for...

- Hazardous Materials



Our Training Has Prepared us for...

- Technical Rescue



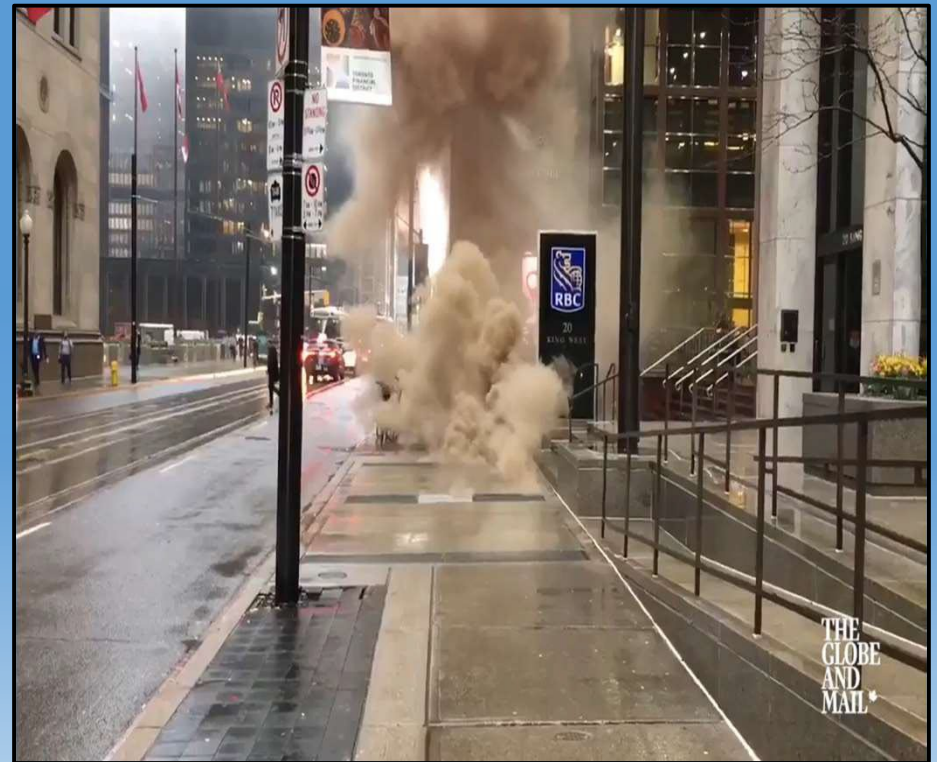
Our Training Has Prepared us for...

- Marine Response



Are You Prepared...

- First consideration
- Hazard Identification
- Where is this incident going
- Mitigation options
- Offensive / Defensive Ops.
- PPE Considerations
- Resources Needed



Energy, you have some explaining to do...

- What do you want fire to do?
- Safety Concerns
 - Electrical? Thermal? Both?
- What is the appropriate extinguishing agent?
(H₂O, Foam, Chemical)



Tunnel Vision...

- Keep your eye on the decommissioned conduit stack attached to the utility pole
- What do you think is going on??
- How would you investigate this fire problem??

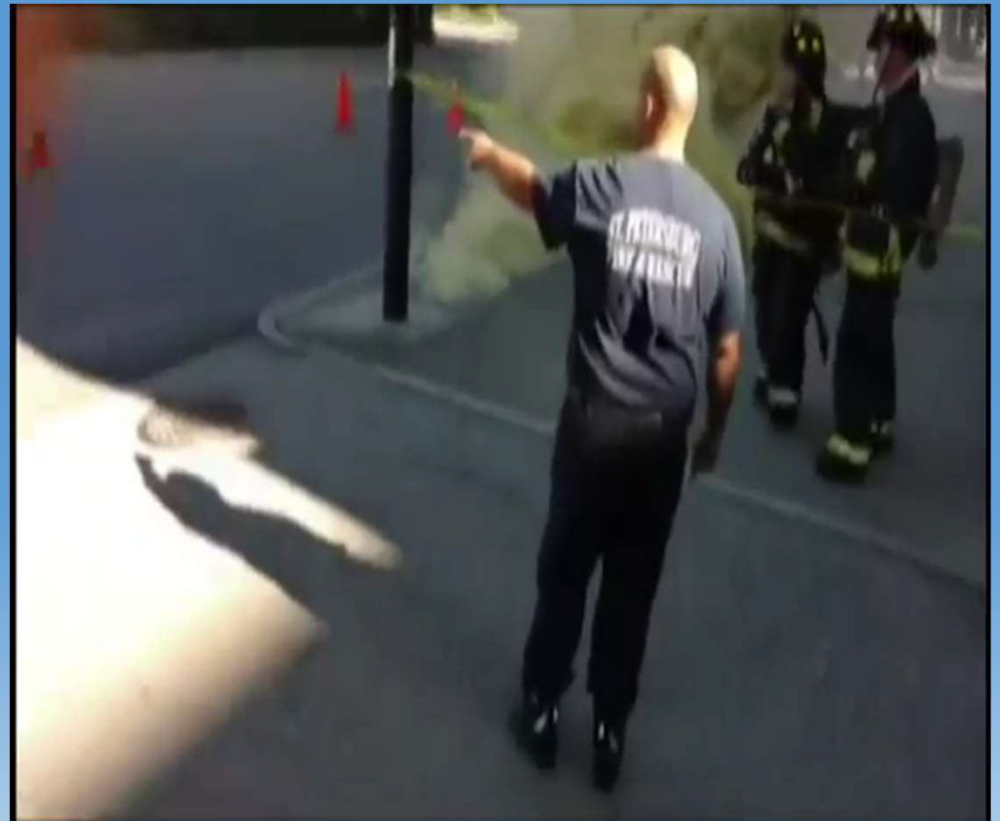


Are our crews
seeing the big
picture?



Situational Awareness

- What are your resources?
- What are the hazards?
- Do you have a plan?
- What can you do while waiting for the Energy provider?



Operational Safeguards and Deployment Ops

- Substations
- Overhead Considerations
- Vaults and Manholes
- Mass Transit
- Solar
- Unique Infrastructure
 - Switchgear
 - Rectifiers
 - etc.



Switchgear Fire – Boston, Ma

- 17 Story Class 1 High Rise Office Building
- Wednesday, 12:14pm



Switchgear Fire – Boston, Ma

- Side Bravo of Building
- Heavy smoke visible on approach



Switchgear Fire – Boston, Ma

- Panel Indicated AC Power Loss
- Generators operating created confusion regarding power loss to this building
 - *Egress lights??*
- Initial Detector Activation was in the basement



Switchgear Fire – Boston, Ma

- Light illumination = problem in this room
- Switchgear = Unusually high electrical concerns
- Electrical Infrastructure for this building
- No other signs indicating Electrical Hazards













DANGER
ELECTRICAL EQUIPMENT
AUTHORIZED PERSONNEL
ONLY

FIRE
EXTINGUISHER

DANGER
**HIGH
VOLTAGE**

TNV 696



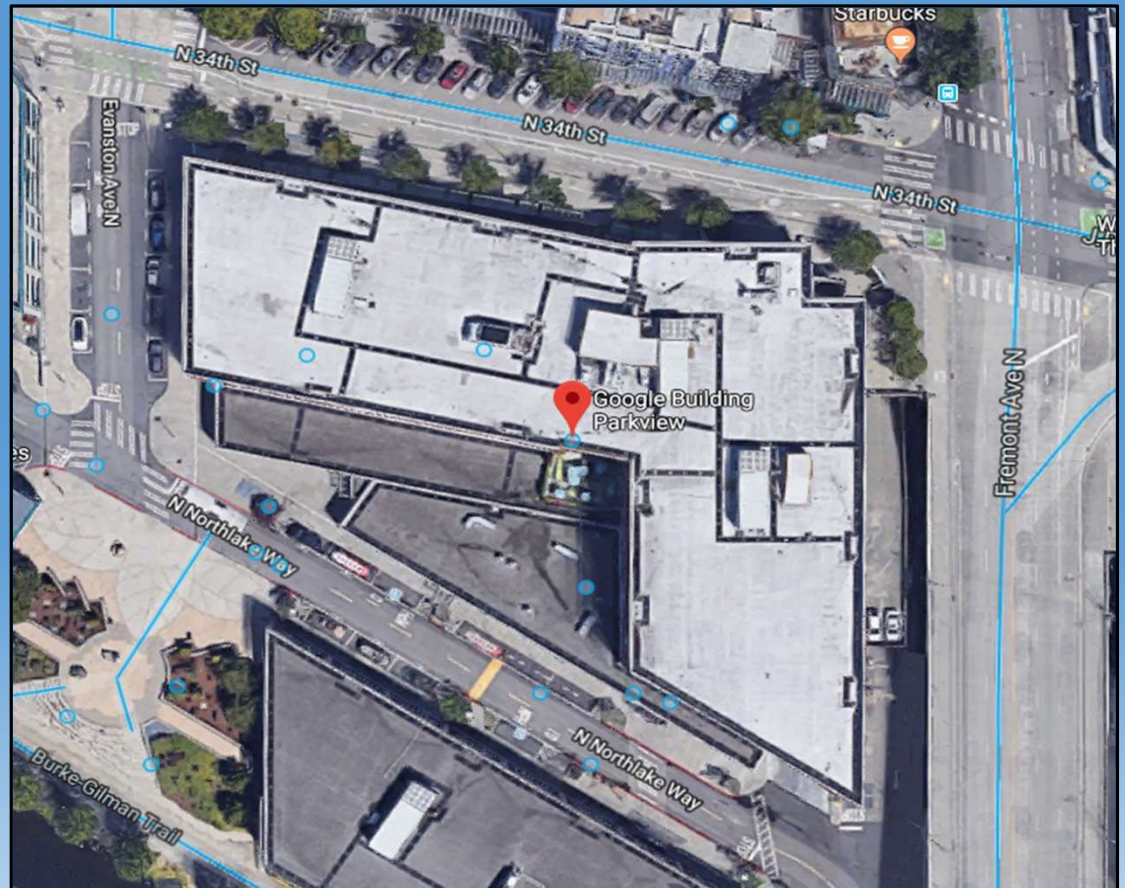
NSTAR EMERGENCY
CALL-617-541-7832

WARNING ⚠️
EMERGENCY EXIT
DO NOT BLOCK

REPAIR
BATTLE

SFD Switchgear Fire - 04/18/2019

- April 18, 2019 – 08:53
- AFA – E9/L8
- 501 N 34 Street (Fremont)
- Engine 9 Short Report:
 - Power loss
 - Bang
 - Elevator entrapment
- Updated Report
 - Hazard Recognition



Fire and Energy Must Work Together



Joint exercise – September 12, 2017

Seattle City Light – Network Division

Seattle Fire Department – Vault Response Group



**Seattle
City Light**

KEYS TO SUCCESS

- Build a living relationship
 - Books and Binders do not work
- Insure all ranks are included – **FAC / Call Centers**
- Know your Hazard and Limitations
- Understand the tools and PPE
- Professional Reference Material
- **Maintain the relationship**



**Seattle
City Light**