

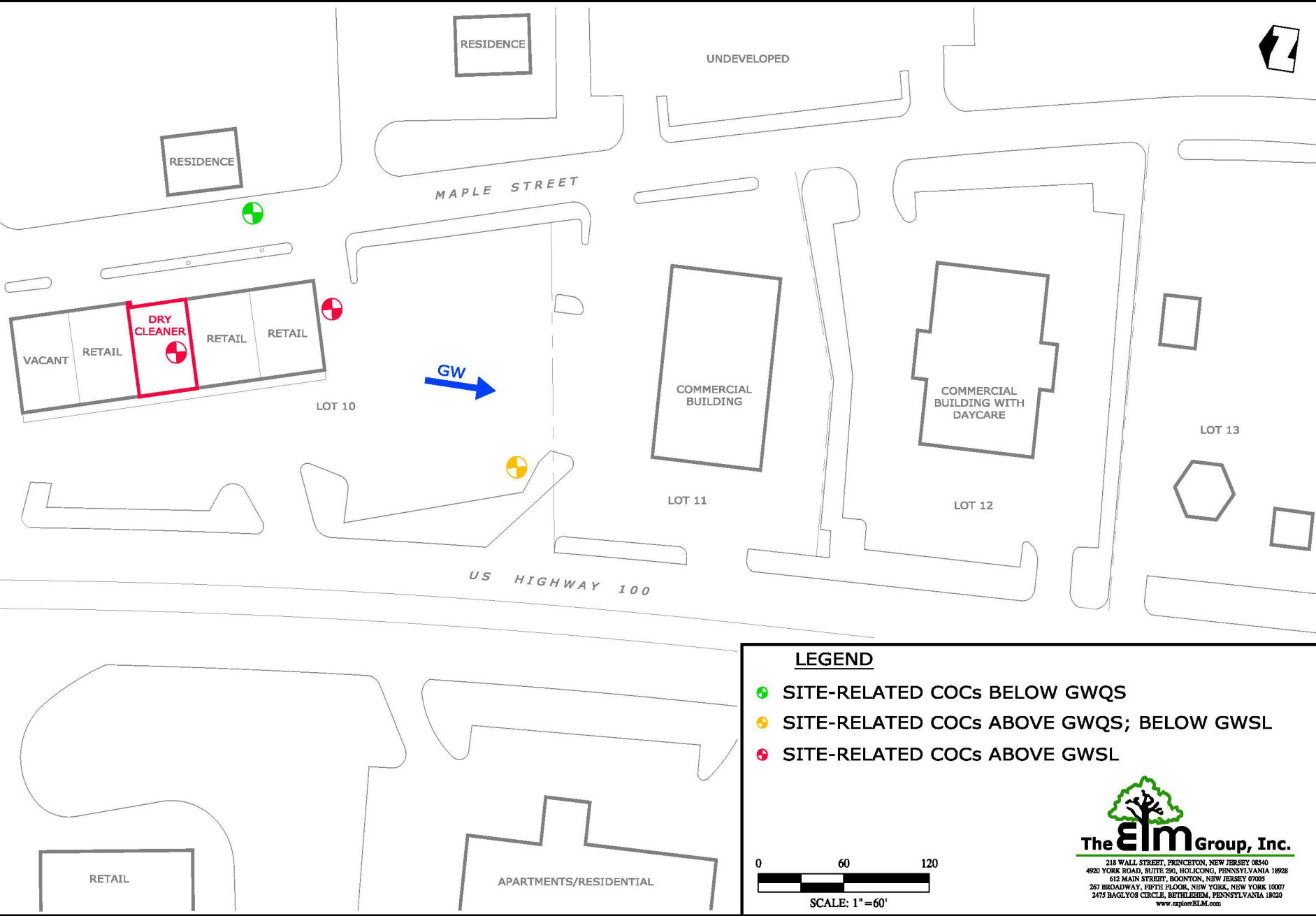
IEC CASE STUDY

PRESENTED BY:

Mark D. Fisher, CHMM, LSRP
Principal – The ELM Group, Inc.

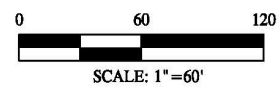
Site Background

- Operating dry cleaner in strip mall
- Confirmed release with soil and ground water impacts
- Site related contaminants of concern (COCS)
 - PCE and degradation compounds
- Remedial investigation initiated, but not completed
- Initial Receptor Evaluation completed



LEGEND

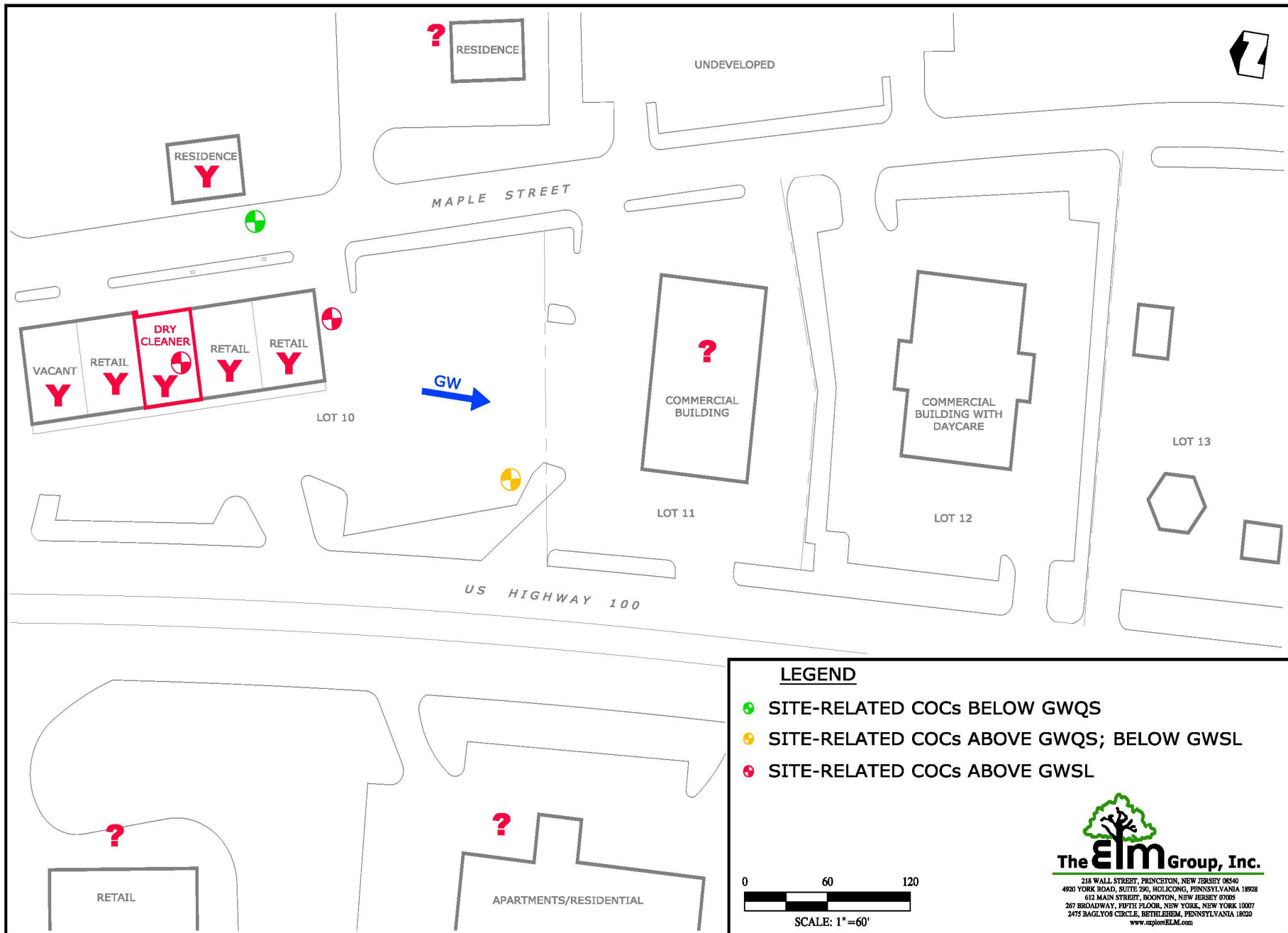
- SITE-RELATED COCs BELOW GWQS
- SITE-RELATED COCs ABOVE GWQS; BELOW GWSL
- SITE-RELATED COCs ABOVE GWSL




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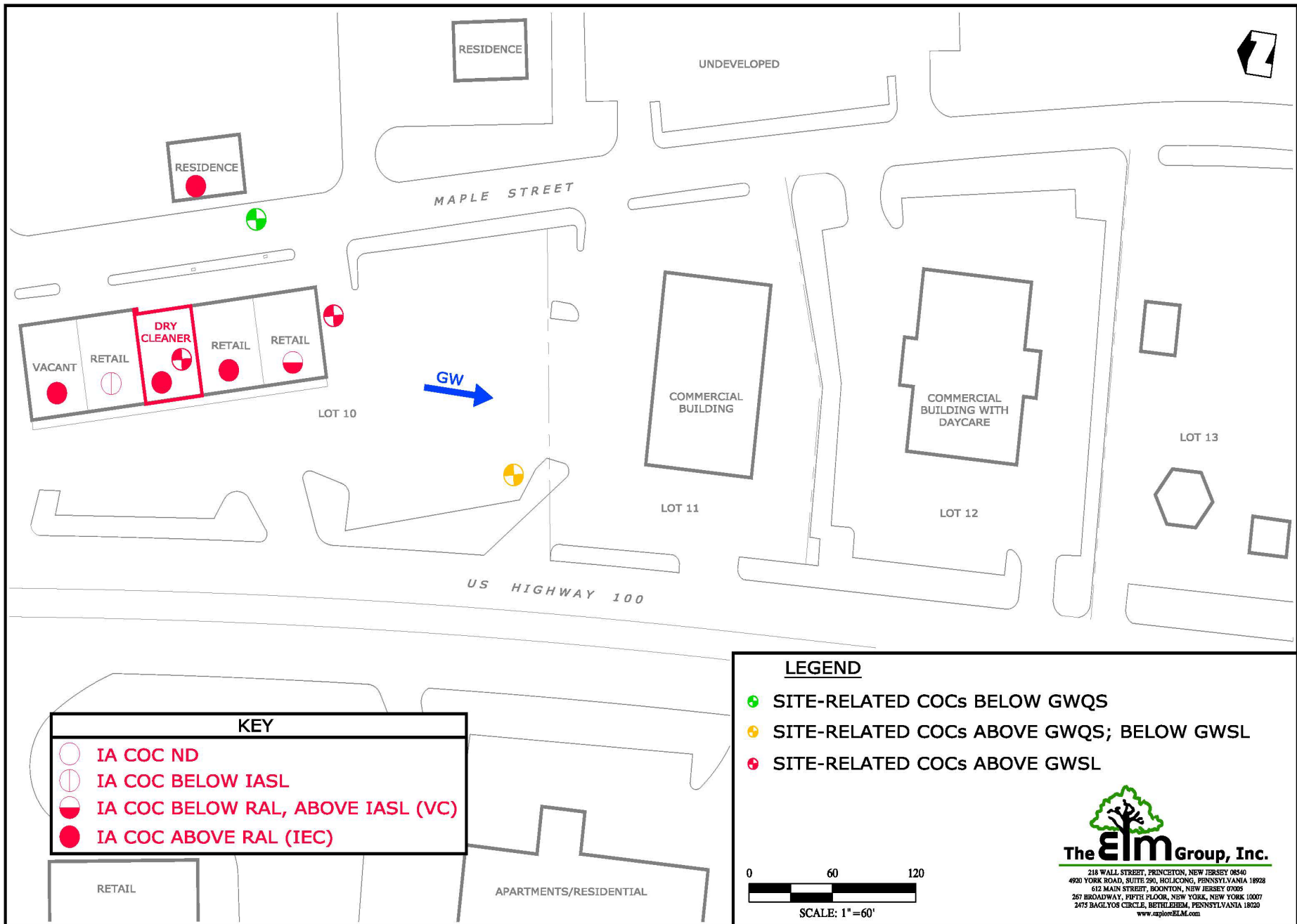
Initial Phase of VI Investigation

- Receptor Evaluation information
- Soil and ground water data
- Determination of structures to be included in VI sampling
- VI sampling – subslab (SS) with contingent indoor air (IA)



IEC Confirmed

- PCE above Rapid Action Levels (RALs) in several retail and at residence
- Operational considerations for active dry cleaner leasehold
- IEC regulatory/mandatory time frame (RTF/MTF) clock starts at confirmation of VI IEC
- Immediate notification to DEP Hotline and Case Manager (if any) — (IEC RTF)

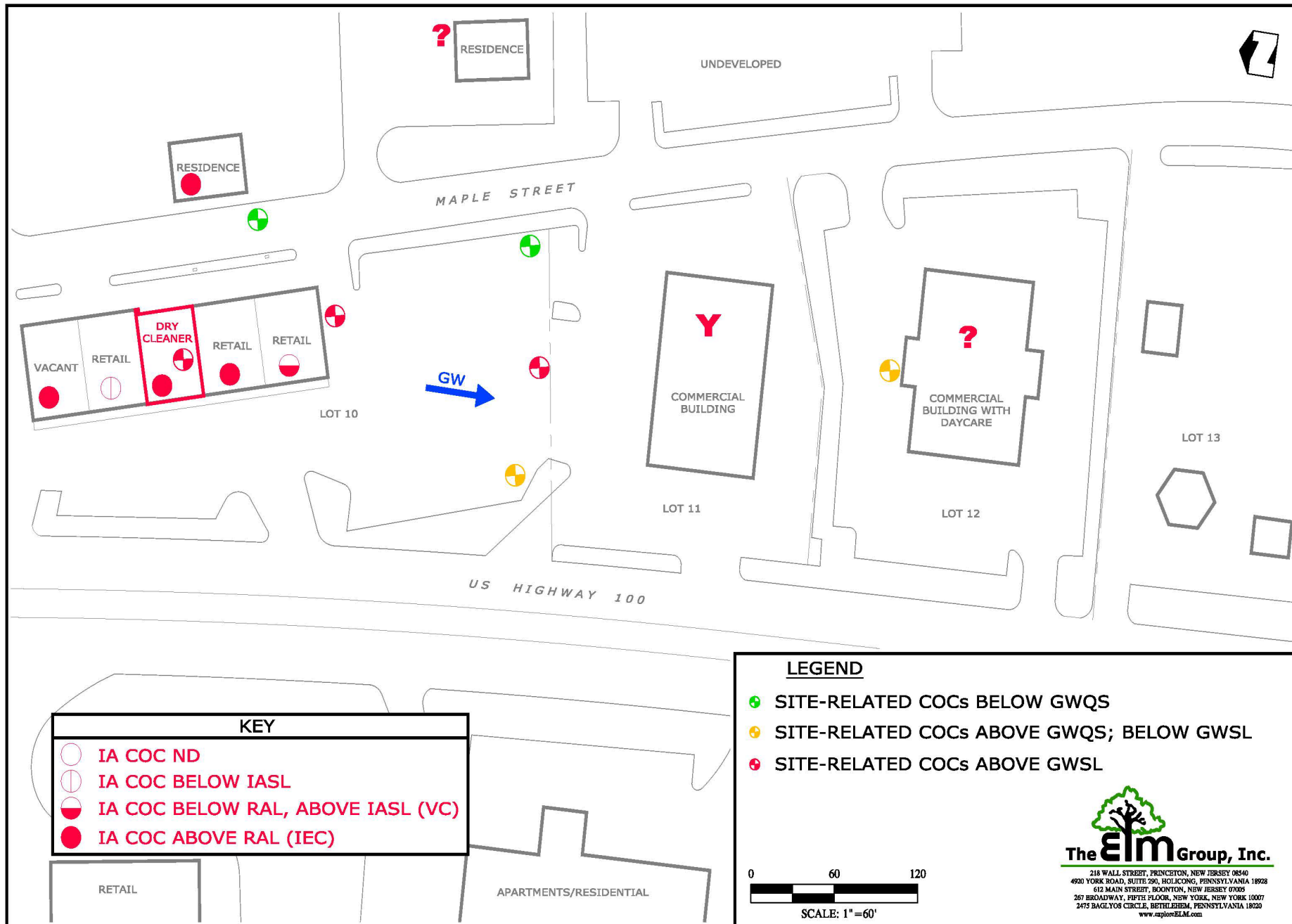


Interim Response Actions – 14 Days

- Evaluate interim response actions – dry cleaner, retail leaseholds, residence
- Options – air purifier, seal cracks/obvious subsurface pathways, ventilation/HVAC mod.
- Implement interim response actions
- Submit IEC form, info & notifications within 14 days of VI IEC confirmation (IEC RTF)

Interim Response Actions – 14 Days

- Communicate with DEP IEC Case Manager
- Begin planning of engineered system response action (next IEC RTF)
- Begin planning of additional receptor/site characterization
- Protection of receptors is the primary concern



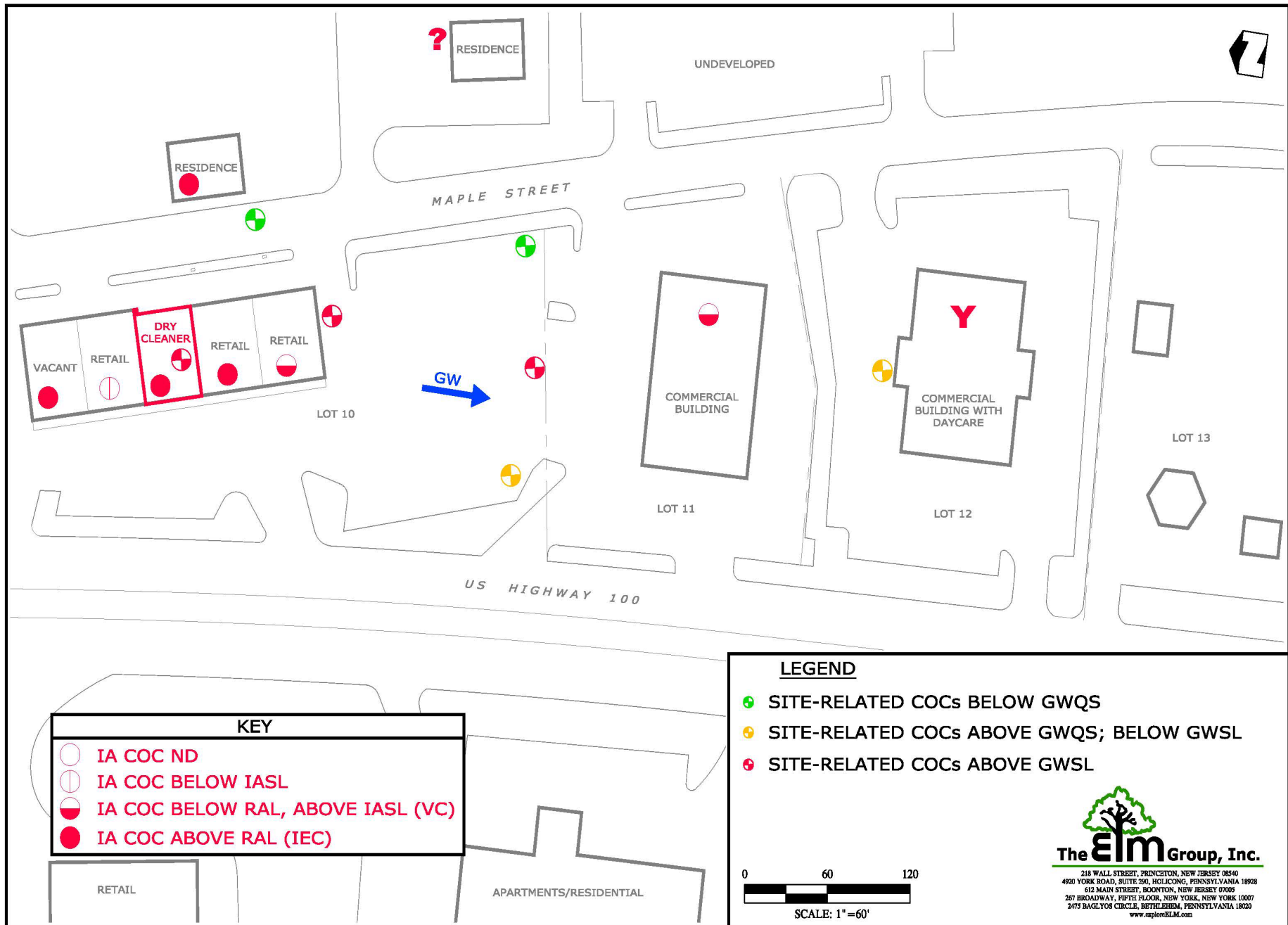
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Subsequent Phase of VI Investigation – 60 Days

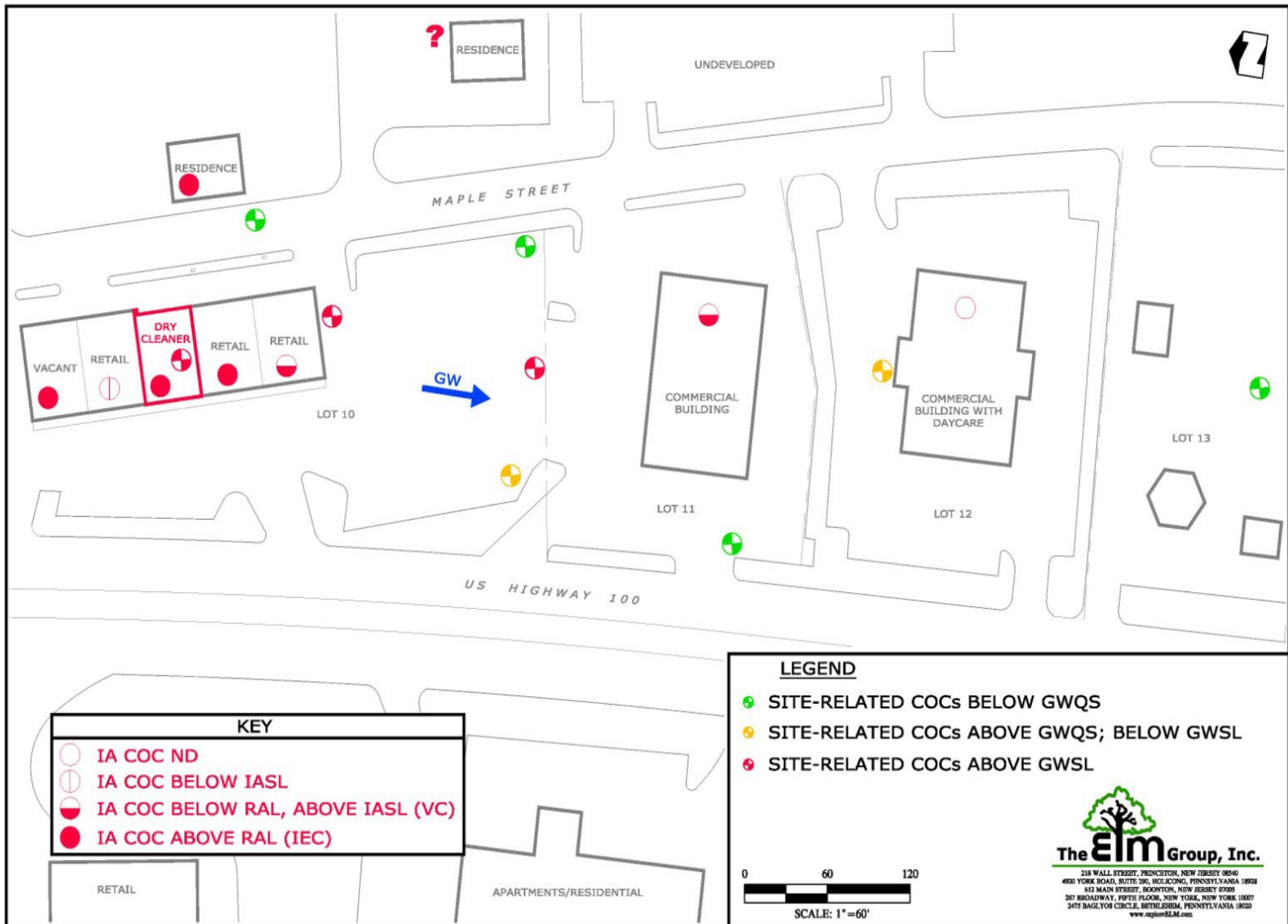
- Additional step out sampling based upon existing data (SS, IA, GW) within 60 days (IEC/Receptor Evaluation RTF)
- Continue with iterative process as needed based upon data & professional judgment
- Goal is to complete VI investigation & relevant components of remedial investigation ASAP

Subsequent Phase of VI Investigation – 60 Days

- Communicate with DEP IEC Case Manager to eliminate potential non-compliance situation
- Evaluate need for extension requests



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Engineered System Response Action – 60 Days

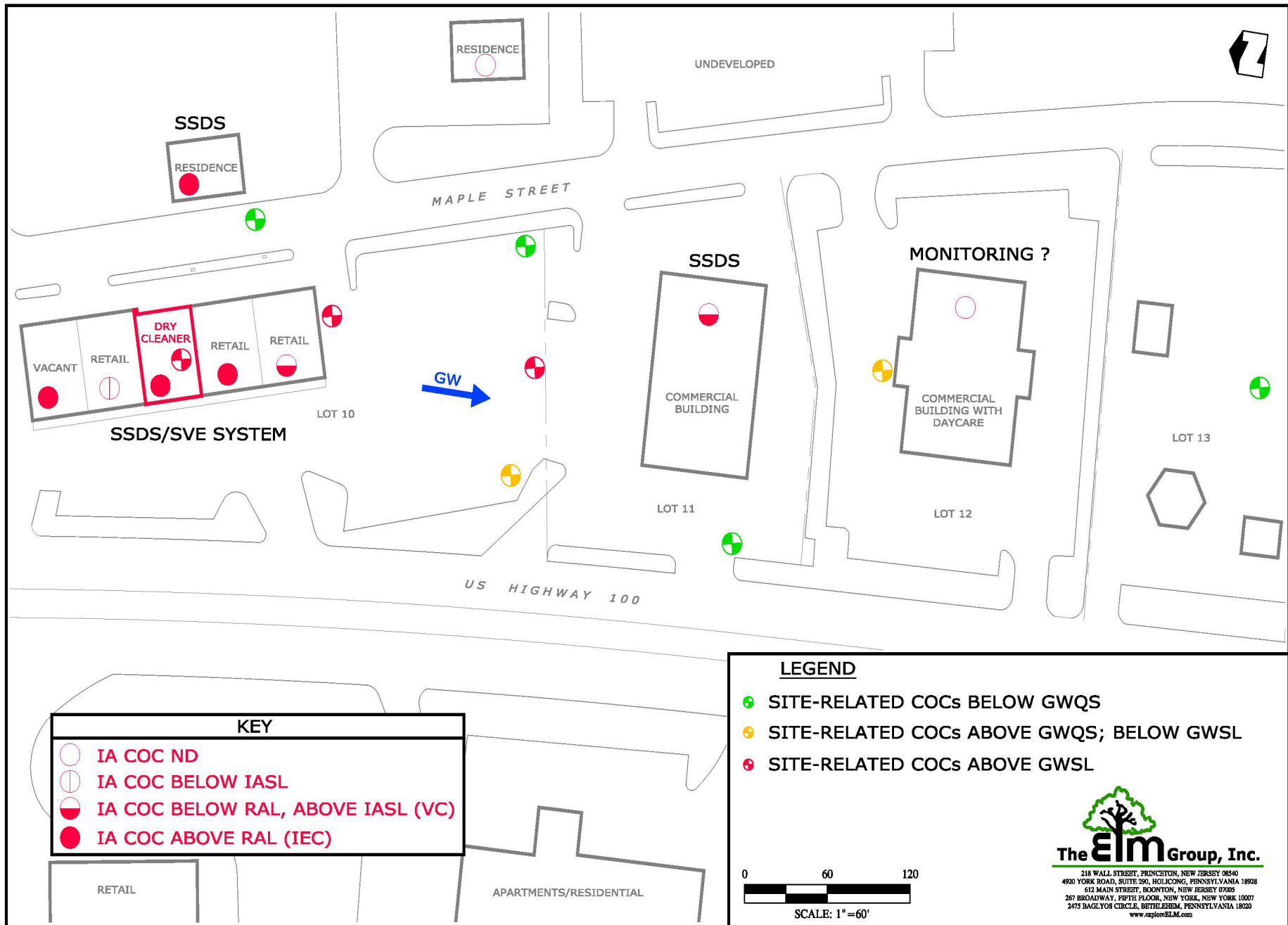
- Engineered System Response Action needs to be initiated and form submitted within 60 days of VI IEC confirmation (IEC RTF)
- Multiple IECs and/or VCs will have separate clocks/time frames
- Typically requires prioritization of actions based upon sensitivity of receptors – work with DEP IEC Case Manager to establish extensions to time frames

Engineered System Response Action Report – 120 days

- Updated report, forms, tables and maps must be submitted within 120 days of VI IEC confirmation (IEC RTF)
- If multiple IECs/structures, include all available info/data with initial report, and then provide updates as needed

Engineered System Response Action Report – 120 days

- DEP does not want formal work plans for Engineered System Response Action Reports – **keep it simple**
 - Verbal and email communication
 - Presumption is subsurface depressurization for IEC structures
 - Other “engineered systems” will likely require more detailed DEP IEC Case Manager review/approval



KEY

- IA COC ND
- ◐ IA COC BELOW IASL
- ◑ IA COC BELOW RAL, ABOVE IASL (VC)
- IA COC ABOVE RAL (IEC)

LEGEND

- SITE-RELATED COCs BELOW GWQS
- SITE-RELATED COCs ABOVE GWQS; BELOW GWSL
- SITE-RELATED COCs ABOVE GWSL

0 60 120

SCALE: 1" = 60'

Initiation of IEC Source Control – 1 Year

- Initiate control of the IEC contaminant source and submit report and form within 1 year of VI IEC confirmation (IEC RTF with associated mandatory time frame)
- “Source control” not specifically defined
 - Focus/DEP expectation is removal or initiate remediation of gross mass/source material
 - Dissolved phase GW contamination is not part of “source control”
 - Communicate DEP IEC Case Manager to reduce potential for non-compliance
- Establish monitoring and maintenance plan for systems and affected structures



QUESTIONS?



IEC Program Status

Andrew Sites, NJDEP





IEC Program Status

- 72 LSRP IECs & VCs
- 70 Publicly Funded IECs
- 85% of LSRP cases are VI





Problems & Misconceptions

- IECs become VCs when levels decrease
- Reporting IEC or VC with no pathway
- Sampling when COC is used in building
- IEC complete after receptor control
- No information submitted with IEC form
- No Receptor Delineation for IECs





Future Changes

- New Technical Rules for May 2012
- IEC Guidance will be revised for May 2012
- Revised VIG: Expanded Operation, Maintenance & Monitoring





Questions?

