Critical Incident Mapping Platform PV-CIM-2025

Scope of Work

PREPARED FOR:

PurchasePros

OFFEROR:

CRITICAL RESPONSE GROUP

America's Common Operating Picture®

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Executive Summary

Critical Response Group (CRG) is dedicated to transforming inaccurate, illegible, and inaccessible school floor plans into clear, accurate, and readily available tools that empower public safety during emergencies. CRG understands, meets, exceeds, and will deliver on every requirement in this Request for Proposal. Our end state is that State of Kentucky schools, Public Safety Answering Points (PSAPs), law enforcement agencies, fire/medical departments, emergency managers, and tactical (SWAT) teams have access to accurate, understandable, and standardized critical incident mapping to enhance school safety and emergency response.

Experience

Our company was founded in 2016 by decorated veteran U.S. Military Special Operators to apply lessons learned on the battlefield to improve incident response at home. CRG is unique because our leadership team has spent thousands of hours using critical incident mapping under stress to communicate during complex operations; **no other company has similar experience using maps to support tactical and emergency operations.** Our team of veteran practitioners will work directly with public safety leaders and school administrators to implement the solution in this proposal. **No other company has implemented close to the amount of critical incident mapping CRG has.** CRG has mapped over 20,000 K-12 schools from Hawaii to Maine, and inspired over 20 state-wide mapping initiatives to ensure accurate school maps are accessible to public safety.

CRG's critical incident mapping contains all the details required to communicate in and around a school during an emergency

CRG's mapping platform was inspired from lessons learned overseas using maps on the battlefield. Above, co-founder Alex Carney uses critical incident mapping to provide command in SW Afghanistan, while first responders use CRG critical incident maps to coordinate incident command at a school.

Philosophy

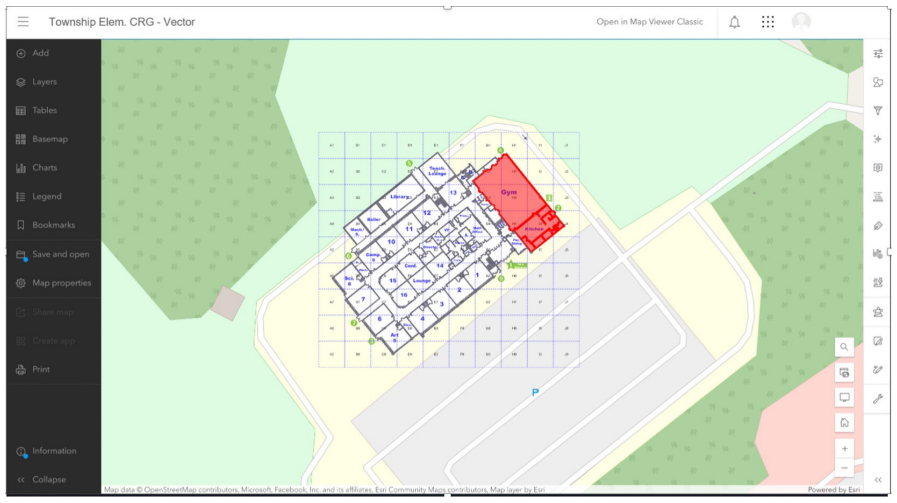
First, CRG has tested our critical incident mapping data in hundreds of active shooter drills across the country. We have incorporated feedback from those drills to ensure that design, sizing, and labeling is readable, understandable, and usable for dispatchers or first responders under stress, many of whom do not have training or background in GIS technology, cartography, or advanced navigation. Our test is if it takes a dispatcher or first responder without special training more than a few seconds to reference a label, the map will not be usable during a real incident, so we constantly improve our critical incident mapping data with those criteria in mind.

Second, CRG believes that critical incident mapping data needs to be integrated into the software systems that public safety and school districts have invested in and use every day – rather than forcing these entities to try to access a new, infrequently used software system during the stress of an emergency. We customize both the file format and delivery method of mapping data to meet the needs of specific school districts and public safety agencies, with a single end state: during the stress of an emergency, a dispatcher or first responder can access accurate mapping data within a few seconds to help make better decisions during a school safety incident.

A tactical team accesses CRG critical incident mapping data for a school in Florida on the side of a command bus during a school safety incident

Outputs

CRG's critical incident mapping data is produced in multiple vector and raster outputs to ensure compatibility across the range of school district and public safety software platforms and to allow ease of access for those with and without specialized GIS software. Our mapping data is currently published as one integrated map as **GeoPDFs, KMZs/KMLs, PNGs, JPEGs, GeoTIFFs, and MBTILEs and others.** We also publish our mapping assets in a variety of vector formats, including **file geodatabases, shape files, SVGs, Indoor Mapping Data Format (IMDF) / GeoJSONs, OGC GeoPackages, KMZs/ KMLs, and others.**



Critical incident mapping data accessible in ArcGIS Online

As the county's largest indoor mapping company, CRG sits on the Next Generation 9-1-1 (NG9-1-1) Indoor Mapping Working Group, so we ensure all our critical incident mapping data conforms to the latest best practices to support future NG 9-1-1 initiatives.

This includes ensuring our mapping assets are formatted in **NENA's Civic Location Data Exchange Format (CLDXF)**, so critical incident mapping data can be used for call routing, 911 location validation, and more by NG9-1-1 core service providers.

Quality and Accuracy

CRG maintains an approximately 90-member cartography/ GIS shop and 60-member operations and implementation team that includes a robust site visit team which regularly visits 700-1000 sites per month across the country. **CRG is the only indoor mapping company that exists with this production and on-site capability.** This experience makes CRG uniquely qualified to build and validate high quality and accurate maps with the precision required by public safety, and complete projects to the required specifications faster than any other company. We understand the needs and sensitivities of schools, and accomplish our work with no disruption to the school.

Our on-site professionals visit every school to ensure mapping data is accurate before sharing with public safety.

Project Management and Implementation

Our operations team coordinates and executes on-site work and map revisions, **without requiring school personnel to do any work to build or verify mapping data.** Simultaneously, our implementation team engages 911 centers, law enforcement/ fire/medical departments, and SWAT elements at the local, regional, State, and Federal level to ensure our critical incident mapping data can be integrated into pre-existing software systems across the state, **without requiring work or support from school personnel.**

CRG is the only mapping company that offers tabletop training for every school district we map. Our team of decorated military special operators facilitate training events for school districts and public safety teams around the country to support map implementation. **These trainings will have a lasting impact on a school's ability to communicate with public safety during a crisis.**

Decorated Special Operations veterans, who have used mapping data to communicate in combat, lead tabletop drills for school districts and their public safety partners to ensure that mapping assets are fully implemented.

This proposal CRG builds accurate and usable critical incident maps for each school we work with; integrates those maps into the software used by the school district and supporting public safety agencies; and trains each school district and public safety team to communicate more effectively using their critical incident maps.

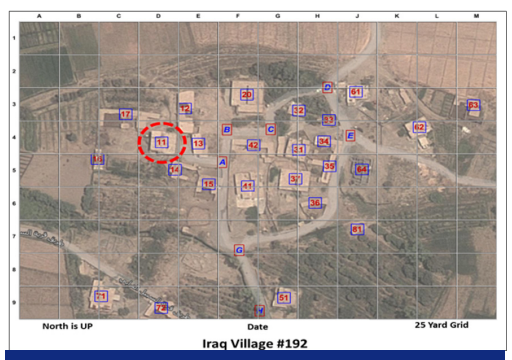
Company Background

i. Registered Name: Critical Response Group, Inc.

ii. History of Company and Key Milestones:

CRG was established in 2016 to create critical incident mapping data as detailed in this solicitation. CRG's founders adapted the principles of military mapping techniques to created gridded critical incident maps of schools.

Navy Seal Rob O'Neill



Sample gridded reference graphic

GRG in use during the Bin Laden raid

CRG's gridded critical incident maps originate from a validated military mapping technique used across the U.S. military to communicate on the battlefield

CRG then built processes to ensure critical incident maps could be integrated into the diverse, preexisting emergency response and safety software systems used by schools and public safety. Our company of 175 employees is now dedicated to the creation and implementation of best-in-class school mapping data. We mapped our first elementary school in 2016, and since then have routinely applied the standards and specifications of this solicitation at tens of thousands of sites around the country.

Delaware

California

Wisconsin

Michigan

West Virginia

New York

Virginia

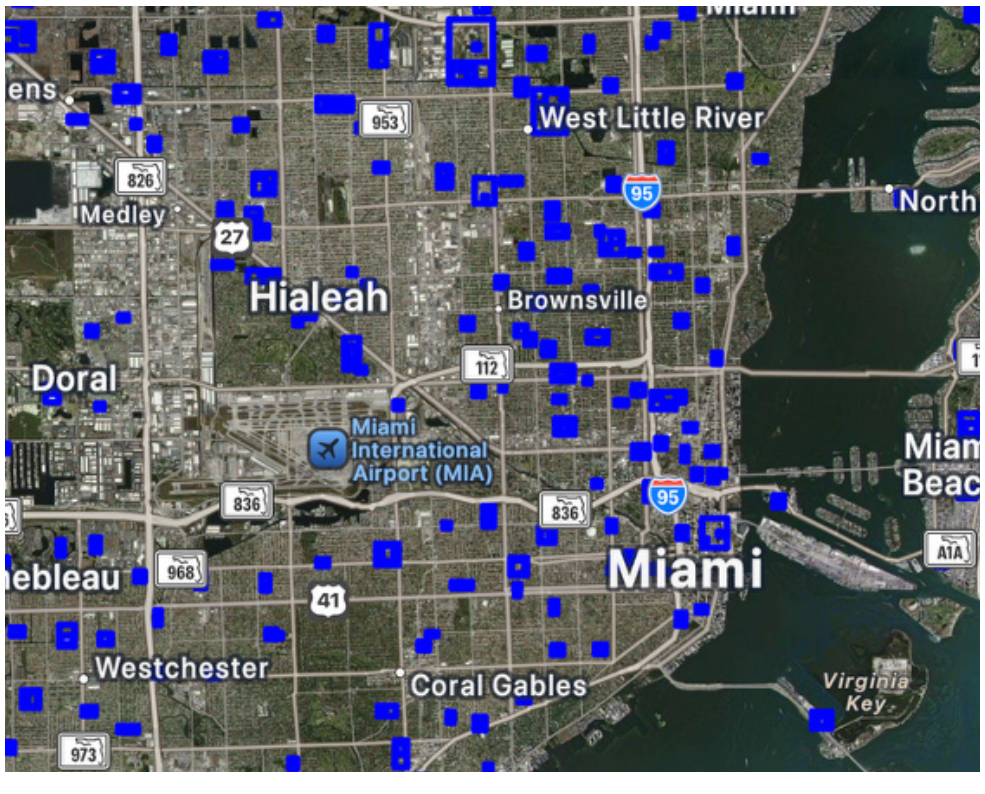
New Jersey

CRG brings educators, PSAPs, and responders together across the country to communicate collaboratively using the mapping data created for schools.

School Infrastructure:

CRG has more experience than any other company managing large projects for school mapping involving 911 Centers, responders, and schools at the regional and/or state level. **The strength of CRG is we combine technology, implementation services, and training together to ensure school maps are accessible and usable to schools, 911 Centers, law enforcement, fire/medical, and tactical teams in each region we work with.** CRG has managed collaborative school mapping projects for almost 50 of the largest school districts in the country, including:

- Greenville
- Miami-Dade
- Houston
- Orange County
- Fairfax
- Gwinnett County
- Montgomery County
- Dallas
- Philadelphia City
- Duval County
- Cypress-Fairbanks
- Pinellas County
- Lee County
- Price William County
- Loudon County
- Austin
- Fort Bend
- Polk County
- Milwaukee
- Brevard County
- Seminole County
- Aldine
- Seminole County
- Volusia County
- Chesterfield County
- Collier County
- Sarasota County
- St. Johns County
- Humble
- Collier County
- San Bernardino
- Detroit
- Hawaii
- Garland
- Klein
- Corona-Norco
- Atlanta
- Lewisville
- Henrico
- Round Rock
- Savannah-Chatham



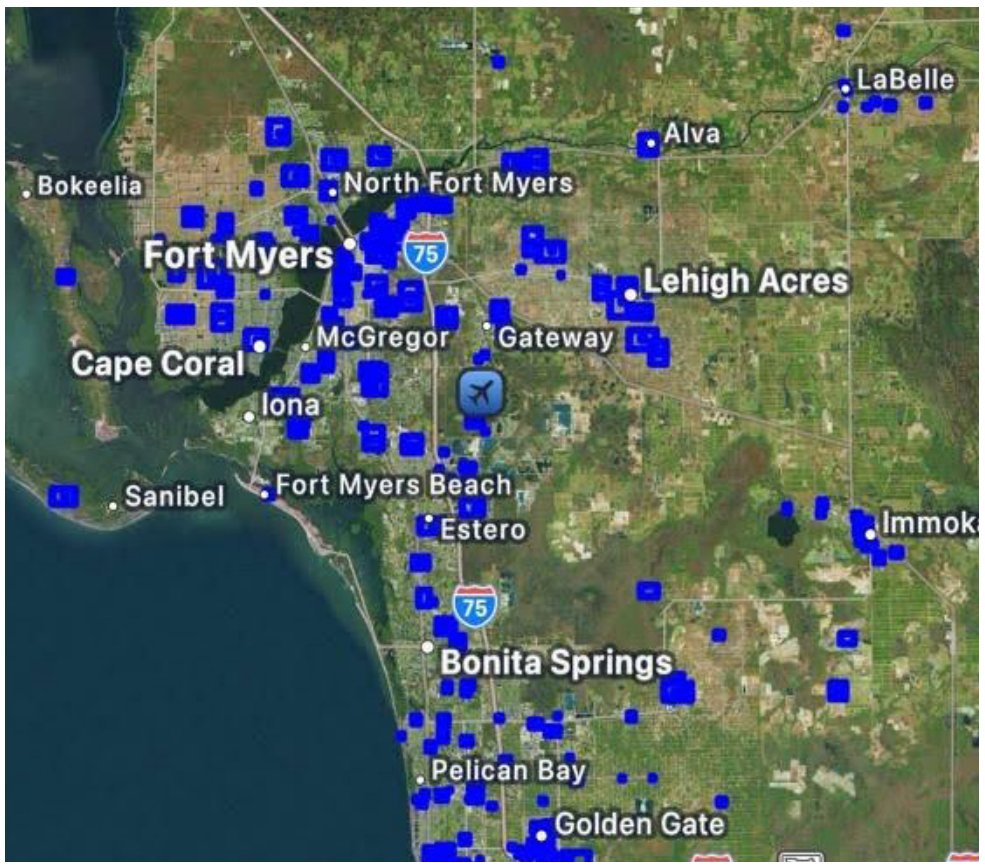
Geofences of CRG mapping data for Miami-Dade County Public Schools, where CRG mapped almost 600 school and administrative campus sites

Statewide Deployments:

- **New Jersey:** CRG has mapped every public and private K-12 school in the State of NJ and has mapped almost every community college, state building, county government complex, hospital, park, and more.
- **South Carolina:** CRG is mapping every public school in the State of South Carolina in support of legislative school mapping initiative.
- **Delaware:** CRG has mapped every K-12 school in the State of Delaware.
- **Commonwealth of Virginia:** CRG has mapped the public schools and many private schools in the Commonwealth of Virginia.

Geofences of CRG mapping data in support in the NJ Statewide Mapping Initiative

- **Wisconsin:** As part of the school mapping grant program in Wisconsin, CRG has mapped 85% of the public and private schools in the state.
- **Michigan:** As part of the school mapping grant program in Michigan, CRG has mapped 90% of the K-12 schools in the State of Michigan, 100% of the community colleges, and half of the public colleges and universities.
- **Florida:** As part of the school mapping grant program in Florida, CRG mapped 45 of the 73 school districts in the State.



Geofences of CRG mapping data in support of the Lee and Collier County Mapping Initiatives in southwest FL

Regional Initiatives:

CRG has completed dozens of county or citywide mapping initiatives designed to standardize mapping for infrastructure across regions. This includes schools, hospitals, government buildings, houses of worship, and public gathering areas in places like St. Johns County FL, Collier County FL, Bergen County NJ, City of Richmond VA, Pinellas County FL, and elsewhere.

Other Infrastructure:

CRG's mapping data is not just used for schools. CRG has mapped Fortune 500 campuses like Google, Molson Coors, Verizon, Altria, BNSF, Snap Inc, and others. Our mapping data is used in some of the highest profile special events in the country, from the Superbowl and Indianapolis 500, to the New Year's Eve "Ball Drop" in Times Square New York to the "Burning Man" event in Nevada. Our mapping data will be utilized in the upcoming FIFA World Cup Final at MetLife Stadium. CRG has mapped hospitals from Reno, NV to New York City, and college campuses from the University of Montana to the University of Michigan. CRG has mapped thousands of government sites, including federal infrastructure like the USDA headquarters, state infrastructure like the government buildings across Hawaii, and local infrastructure like the city buildings in Richmond, VA. CRG mapped some of the largest transit hubs in the country, from Reagan and Dulles Airports in Metropolitan Washington to Grand Central and Penn Station in New York City.

CRG provides outdoor GIS mapping for the largest special events across the country.

iii. Corporate Structure Overview

Our company of 175 employees is dedicated to the creation and implementation of best-in-class critical incident mapping. CRG's corporate structure is comprised of three main functional components to support this goal:

GIS and Cartography Team: A 90-person team staffed by GIS specialists, cartographers, and artists who ensure our mapping data conforms to the latest in industry best practice, meets the highest standards of accuracy, and maintains excellent cartographic presentation.

Operations and Implementation Team: A 60-person team which oversees all project management and outreach to public safety organization for the purposes of mapping data integration. This team is comprised of former public safety executives and educators who specialize in working closely with school personnel, dispatchers, and first responders to ensure projects are completed efficiently and meet the needs of all the users of mapping data.

Sales, Education, and Training Team: A 15-person team comprised of veteran U.S. Military Special Operations officers who have used mapping data to communicate in the most stressful conditions on the battlefield. They provide in-person follow-on training and education for each school district and public safety team through collaborative, scenario-based tabletop formatted after military special operations pre-mission rehearsals.

iv. Location and Contact Details of Corporate Headquarters:

Critical Response Group, Inc.
200 American Metro Blvd, Suite 113
Hamilton, New Jersey 08619
(732) 779-4393
info@crgplans.com

v. Ownership or Supplier Diversity

CRG does not have formal business certifications related to ownership or supplier diversity. CRG does not track supplier spend directed to similarly certificed businesses.

vi. Business Identifier

Dun & Bradstreet number: 08-047-3305

Section iii.v: Short Biographies of Key Team Members

CRG's deep experience with the application of the specific standards and technical abilities required by this RFP is augmented by key personnel that will work on this project. CRG has no peer with respect to the operational experience using maps during dangerous situations. Our team of U.S. Military Special Operations veterans collectively have more than 100 combat deployments where some of the critical incident mapping practices in this RFP originate. Our operations and implementation teams have more than 200 years of collective dispatcher and first responder experience at the municipal, county, and State levels, which ensures critical incident maps of schools are implemented correctly. Key team members include:

- **Chief Executive Officer:** ***Mr. Michael Rodgers*** is a West Point Graduate who left the Army as a Captain after 9 years of service and multiple combat deployments. Michael's assignments include the 82nd Airborne, 75th Ranger Regiment, and Princeton University's ROTC program.
- **Implementation Director:** ***Mr. Zach Querry*** is a U.S. Army veteran with 10 years of special operations experience in the 75th Ranger Regiment and Special Missions Unit. He brings deep expertise in team integration, training, and operational readiness to lead CRG's public safety implementation efforts nationwide.
- **VP of Implementation:** ***Mr. Joe Hanson*** is a Purple Heart-decorated former Marine Special Operations Officer responsible for implementation efforts.
- **Implementation Director:** ***Mr. Andrew Bidwell*** is a U.S. Army Special Forces Officer with 11 years of active duty service as a Green Beret and a graduate of the United States Military Academy at West Point. He brings leadership experience from both military operations and the non-profit sector to support CRG's mission of enhancing public safety and emergency preparedness.
- **GIS and Digital Integration Manager:** ***Mr. John Hindle*** is a U.S. Army Veteran and former digital communications expert for a combat aviation unit, where he specialized in secure signal systems and tactical communications. At CRG, he leads the integration of geospatial data into client and partner technology environments, ensuring seamless workflows and system compatibility. With a Master of Science in Geospatial Technology and deep experience in AWS, OGC services, and custom development using Python, JavaScript, and HTML, John brings technical precision with operational insight to deliver scalable mapping solutions.
- **Implementation Manager:** ***Mr. Joel Crenshaw*** is a military veteran with 20-years of experience with imagery and geospatial analysis, geospatial production and a background in communications and computer networking. He served as a Geospatial Intelligence Chief and Imagery Intelligence Chief and imagery analyst in the Marine Corps. Mr. Crenshaw oversees our outreach to public safety organizations for the purposes of software integration.
- **Implementation Director:** ***Mr. Danny Briley*** retired from the Texas Rangers after a 27-year law enforcement career where he focused on fugitive apprehensions, major violent crime investigations, and special operations deployments.
- **Implementation Director:** ***Mr. Kevin Triplett*** is a 30-year law enforcement professional from Illinois, long-time SRT team leader, National ALICE trainer, and school safety professional responsible for implementation efforts.
- **Implementation Manager:** ***Mr. Bill Eppell*** is a 30-year law enforcement veteran who ensures our mapping projects are nested in the active shooter policies and plans of public safety agencies. Bill also serves as a current instructor for Louisiana State University Active Threat Integrated Response Course (ATRIC).

- **Implementation Manager:** ***Mr. Kevin Burd*** is a 20-year law enforcement veteran, the Director of Training for C3 Pathways, and the lead trainer for the "I Love U Guys" Foundation.
- **Implementation Manager:** ***Mr. Dennis Sims*** is a 26-year law enforcement veteran who retired at the rank of Captain. He has extensive SWAT experience and command experience.
- **Director of Project Management:** ***Mr. Daniel Cinelli*** oversees all project managers. Prior to joining CRG Mr. Cinelli was a school teacher, and rose to the position of Principal. Before working at CRG he worked at the State Department as a Foreign Service Officer.
- **Director of On-Site Data Collection:** ***Mr. Jesse Pomeroy*** was an Intermediate School teacher for nine years. He supervises more than 20 on-site data collection specialists that personally walk between 700-1000 locations per month.
- **Director of Strategic Partnerships:** ***Mr. William LePoidevin*** worked at RapidSOS in the same role until moving to CRG in 2023. Mr. LePoidevin has extensive experience working with technology systems used in field of public safety. He leads CRG's partner outreach program and manages relationships with over 100 third-party companies with which CRG integrates its mapping data.

viii. Name, Contact Information, and Brief Background of Primary Point of Contact

CRG's Vice President of Operations, Chief (ret) Keith Germain, will serve as the dedicated Project Manager for the duration of the contract, with a team of project managers working under him to coordinate outreach to school districts throughout the regions of the project.

Chief Germain has been a part of CRG since the inception of the company in 2016. As a Lieutenant and commander of the regional / county SWAT team, Chief Germain helped design our first tactical mapping products to ensure they were relevant, usable, and accessible to public safety in his county, and some of the first maps built by CRG were to support mass gatherings and high-risk operations for Lieutenant Germain's tactical team. It was feedback from those early use-cases that informed CRG's map design and implementation strategy for years to come.

Lieutenant Germain would later to go on to serve as both the Executive Officer (2016-2018) and Chief of Police (2018-2024) of the Barnegat Police Department, commanding over 70 law enforcement officers and dispatchers and managing an almost $10 million annual budget. Chief Germain then assumed responsibility for CRG's operations shop, where he coordinates state-wide and regional projects to ensure both map creation and implementation meet aggressive timelines.

Chief Germain has overseen school mapping implementation in multiple state-wide projects and dozens of major regional initiatives to the specifications of this RFP. It is this experience that will ensure CRG meets the expectations of this RFP.

Chief Keith Germain

Chief Germain's law enforcement supervisors and tactical dispatchers use CRG's digital GIS maps to provide security for a July 4 celebration.

Contact Information:
Keith Germain
Vice President of Operations
Critical Response Group
(609) 618-0302 | kgermain@crgplans.com

Pricing

Detailed Description	
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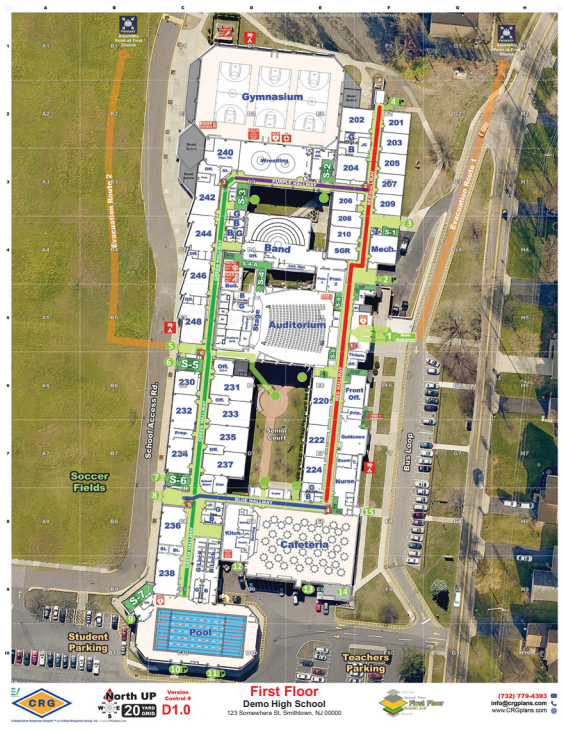
Map Construction

CRG proposes a critical incident mapping platform born from lessons learned by US Special Operation Forces overseas and transitioned home for use by school districts and public safety personnel. **Collaborative Response Graphics, or "CRGs" were designed to meet the requirments solicitation** and were adapted from a mapping technique used by the U.S. Military to plan and communicate during counter-terrorism missions. CRGs are sophisticated yet easy to use collaborative mapping data that combine facility floor plans, high resolution campus imagery and a gridded overlay together into one usable map. They include the accurate labeling of important features like room numbers or descriptions, hallways, external doors, stairwells, key utility locations, parking areas, and locations of security cameras. These unique maps are then converted into a variety of industry standard file types that allow the CRGs to be ingested and integrated into public safety software applications, including computer-aided dispatch platforms, geographic information systems (GIS), emergency management and notification applications, camera management systems, mobile applications, and other software that increases situational awareness for school personnel, dispatchers, and first responders. **CRG's mapping service methodology encompasses building mapping data, implementing and integrating mapping data with schools and public safety agencies, and providing the necessary training to ensure maps are used correctly during real emergencies.**

CRG builds two types of foundational critical incident mapping data to support communication inside and outside of building during an emergency:

Micro Collaborative Response Graphics (Micro CRGs) are "indoor" critical incident maps built for each floor of a structure, combining scaled floor plans, a 20-yard gridded overlay, and high-resolution imagery together into one map. Micro CRGs include site-specific details that a first responder needs to coordinate an emergency response inside a structure. This can include room labels, hallway names, external door/ stairwell numbers, locations of hazards, key utility locations, security cameras, key boxes, AEDs, evacuation routes, trauma kits, and other pertinent information unique to a facility.

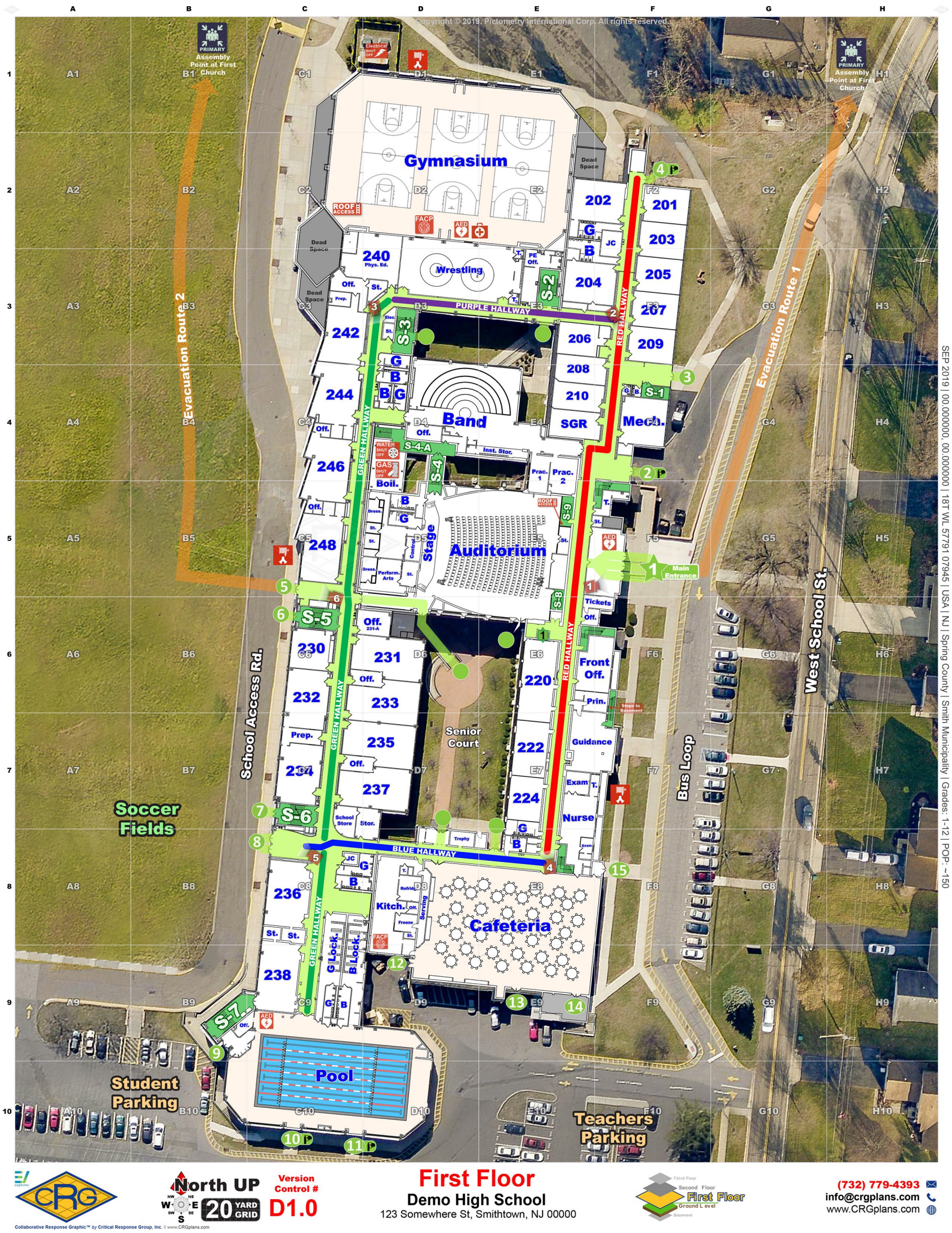


Micro Collaborative Response Graphics are built for each floor of a structure

MACRO Collaborative Response Graphics are built for each campus

MACRO Collaborative Response Graphics (MACRO CRGs) (large-scale) are outdoor "outdoor" critical incident maps built for a structure's overall campus or grounds. Macro CRG's combine a 75-yard gridded overlay and (current) large-scale aerial imagery with accurate labeling for parking areas, athletic fields, surrounding roads, and neighboring properties. First responders and building administrators use a Macro CRG to coordinate crisis response outside a structure, including inner and outer security perimeters, first responder vehicle staging areas, command posts, traffic control points, etc. Buildings that are in proximity may share a Macro CRG. Macro CRG sizing is customized to each site in collaboration with the public safety partners of that building during the proof review phase.

Micro CRG



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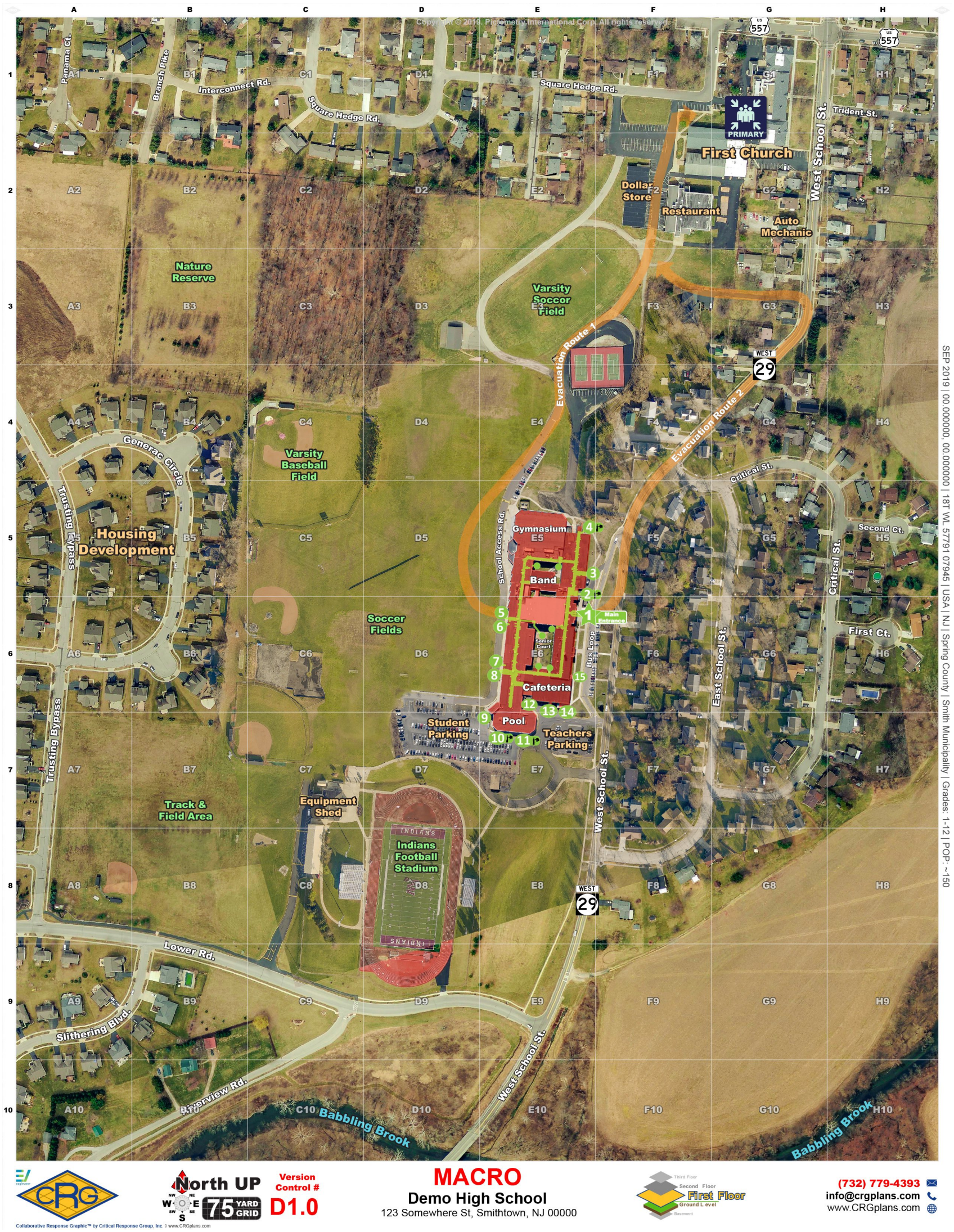
MACRO CRG



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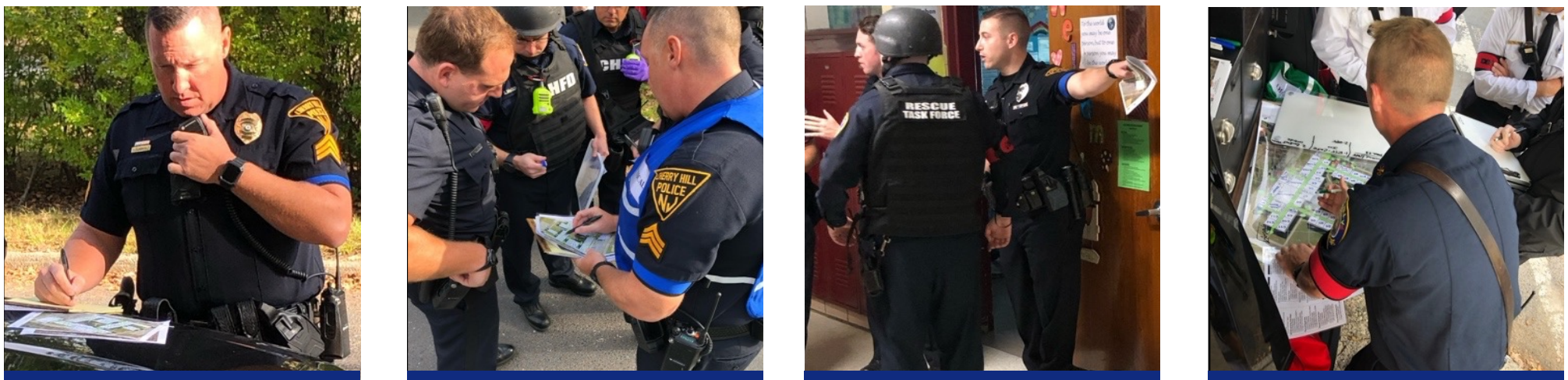
Collaborative Response Graphics are produced in multiple vector and raster file formats to ensure compatibility across the range of school district and public safety software platforms and allow ease of access for those with and without specialized GIS software.

CRG mapping data is designed to be utilized by front line public safety representatives, under stress, in field conditions – whether viewing the maps on cell phones, tablets, large screens or pieces of paper.

Raster outputs: Collaborative Response Graphics currently published as one geo-rectified integrated raster layer as **GeoPDFs, GeoTIFFs, KMZs/KMLs, MBTiles, PNGs, JPEGs and others.** These data files allow for easy printing and allow school districts and public safety personnel that lack access to specialized GIS software to open mapping data in an emergency using an open-source file or imagery reader. They also integrate into software systems, like school camera management systems, that can only utilize raster data.

GeoPDFs: CRG ensures that both the district and their immediate public safety partners receive high quality GeoPDFs or other imagery files (JPEGs, PNGs, etc) that are printable in any size to support printing of map books and posters. Many of our school districts and law enforcement partners choose to work with us to print map books and posters for pre-staging in law enforcement vehicles, in addition to software integrations.



Tactical Command | *Rescue Teams* | *Contact Teams* | *Unified Command*

Many schools and public safety agencies pre-stage printed maps at school security vestibules or in first responder vehicles for easy access during an emergency.

School administrators, law enforcement supervisors, and fire leaders communicate on printed GeoPDFs at an incident command post

Vector Outputs: Collaborative Response Graphics are delivered in multiple attributed vector data formats, **including OGC GeoPackages, File Geodatabases, GeoJSONs, Indoor Mapping Data Format (IMDF), shapefiles, Keyhole Markup Language (KML/KMZs) and others.** This means all school mapping data created for this project can integrate with ESRI's ArcGIS Pro and ArcGIS Online, QGIS, Mapbox, Google Maps API, Apple Maps, and Open Street Map based platforms.

GIS software users can either store and host mapping files within their own servers or can connect to CRG's GIS Web Server to stream mapping data into their GIS platform. As the largest school mapping company, CRG collaborated with ESRI to improve their ArcGIS Indoor Data Model, based off real-world experience mapping schools, to generate the "Public Safety Indoor Mapping GIS Data Model", and CRG will continue to provide real world subject matter expertise to the upcoming NENA working group "Indoor Maps for Public Safety and NG9-1-1 Requirements Working Group". CRG vector data conforms to, and will continue to conform to, the latest developments in GIS best practice. Specifically, CRG provides digital GIS mapping asset data in vector and raster files in a File Geodatabase, or OGC GeoPackages for both ESRI users and non-ESRI users. Each File Geodatabase or OGC GeoPackage contains shape file layers for points and polygons, with each layer including attribute tables that adhere to the Public Safety Indoor Data Model, and all NG9-1-1 GIS Data Models.

GeoTIFFs and GeoPDFs provide best-in-class cartographic presentation and readability, while our vector data conforms to the latest developments indoor GIS and NG9-1-1 data schema requirements.

CRG Critical Incident Mapping Build Process Overview

1 – **Gathering Floor Plans:** To begin each mapping project, CRG gathers the best floor plans that the site currently has on file. On the occasion no floor plan exists, CRG utilizes LiDAR scanners to map the interior building to generate an accurate two-dimensional floor plan. Because floor plans are stored in a multitude of disparate physical and digital formats, CRG utilizes several proprietary workflows to accommodate any floor plan we receive, whether it is a scan of a rolled-up physical "blueprint" or a .dwg file from AutoCAD software.

2 – **Proof Creation:** CRG creates initial Micro and Macro proofs of the facility by combining baseline interior floor plans with high-resolution overhead imagery of the site.

3 – **Site Walk-Through:** Our experienced on-site specialists walk each site with an initial map proof to make refinements. Our on-site labeling process allows us to update or verify floor plan accuracy (both in the structure and labeling of buildings), capture site-specific terms used for locations at a facility and identify and label unique features for each structure. The site visit is unobtrusive. Z-Axis data for the structure is also captured on the site visit.

4 – **Drone Flights:** During our on-site, CRG conducts an ortho-imagery (drone) flight to capture accurate imagery of the site as required.

5 – **CRG Approval:** CRG updates proofs based on data collected during site visits and submits them to a site point-of-contact for feedback. Dispatchers and first responders are also consulted for modifications. Once CRG finalizes proofs, building managers approve them for final publishing.

6 – **Final Publishing:** CRG overlays a grid on mapping data so first responders can quickly and easily orient to any location. The data is published in a variety of geo-spatially relevant industry file types.

Detailed Site Visit Plan

A CRG representative will conduct a site-visit to every building to ensure an accurate map. Our on-site process allows us to update or verify floor plan accuracy (both in the structure and labeling of buildings), capture site-specific terms used for locations at a facility, and identify and label unique features for each structure. Our on-site team visits hundreds of structures per month, and these repetitions lends to our on-site team's superior experience identifying routine labels and features and capturing uncommon or unique features of a building. While other companies attempt to push this responsibility onto the builder owner, entities that already struggle with time, staffing, and technology, CRG has found that a detailed, in-person site-visit from a professional technician is the only way to ensure public safety agencies receive accurate mapping data. The value of working with CRG is school districts will have will have confidence that the team collecting the foundational information for accurate maps is the most competent and experienced in the country.

CRG Portal Access

CRG first provides the distinct mapping files to each school district and supporting public safety agencies in the formats that work best for specific software integration and for printing through our secure product portal. This portal serves as the single verified source of secure and confidential digital mapping data for each participating institution.

CRITICAL RESPONSE GROUP
America's Common Operating Picture®

John Smith,

Thank you for partnering with **CRG** to support public safety in your community. Your organization has been granted access to the **CRG Published Product Portal**, a secure system designed to house and distribute your finalized **Collaborative Response Graphics® (CRGs)**.

You have been successfully added to the portal under the **NJ Ocean - Sunny Coast Public Schools.** To access your account, please use the following link:

Portal Login

Upon logging in, you will find:

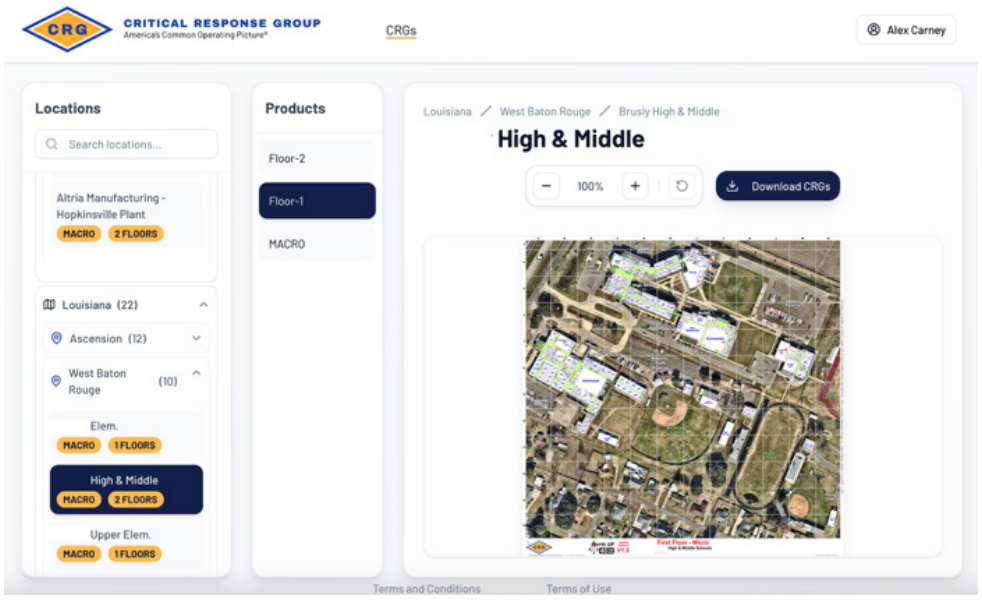
- The final CRGs developed for your location(s)
- A training document outlining the design, functionality, and proper use of CRGs
- Additional resources to support implementation

We recommend downloading and printing these materials so they can be made available in key locations within your facilities. The training document may be shared with staff who may interact with first responders during an emergency.

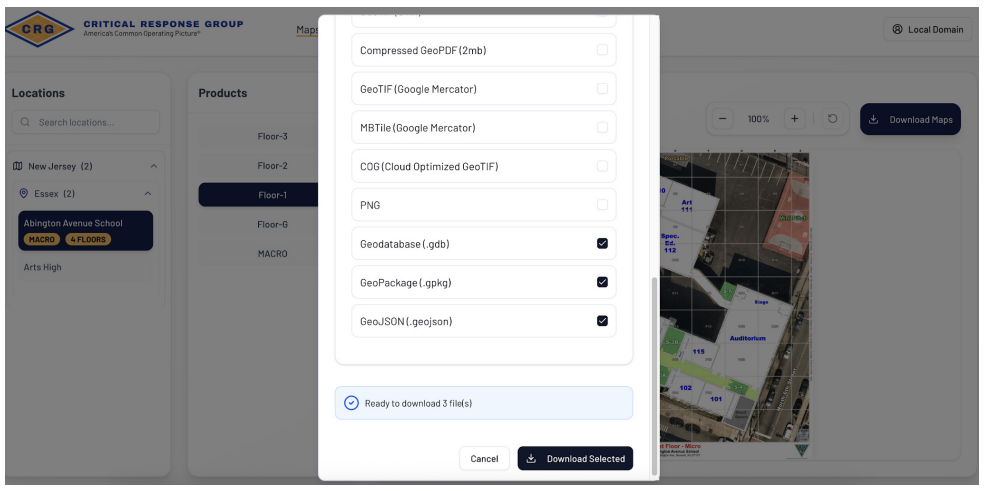
Please Note: The materials accessible through this portal contain sensitive information. Access should be limited to authorized personnel and relevant public safety agencies.

Sincerely,
The CRG Team

Email Sent to School for access to CRG Portal

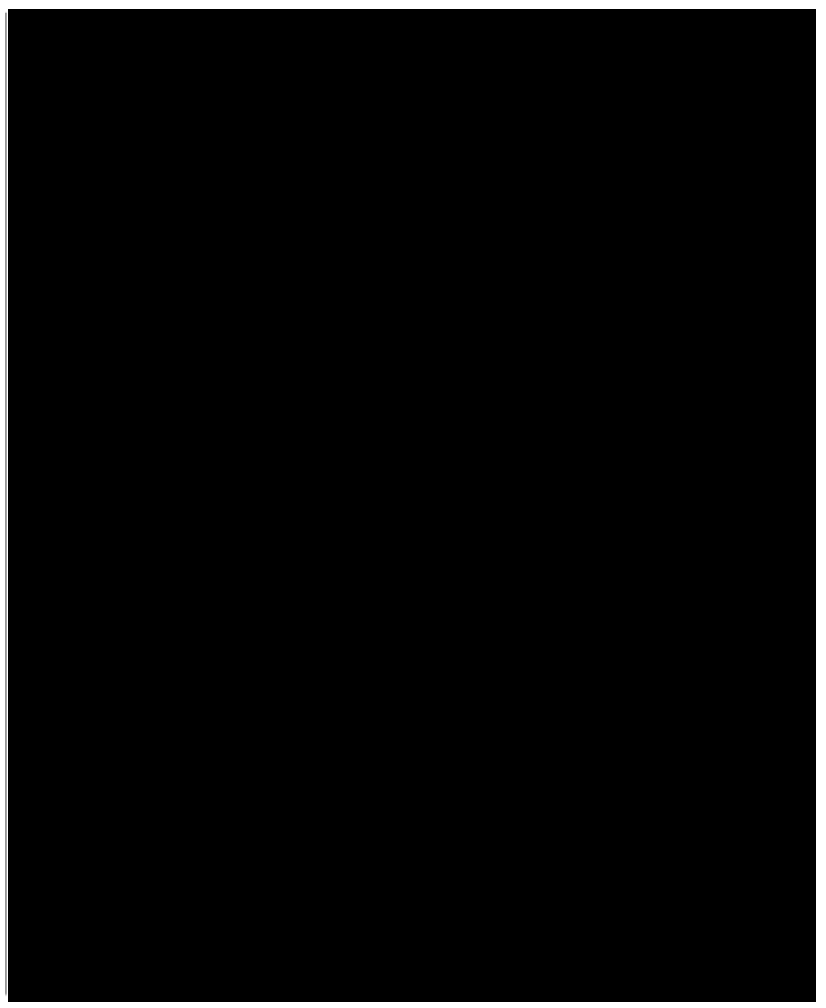


CRG customer portal segmented by school district or region



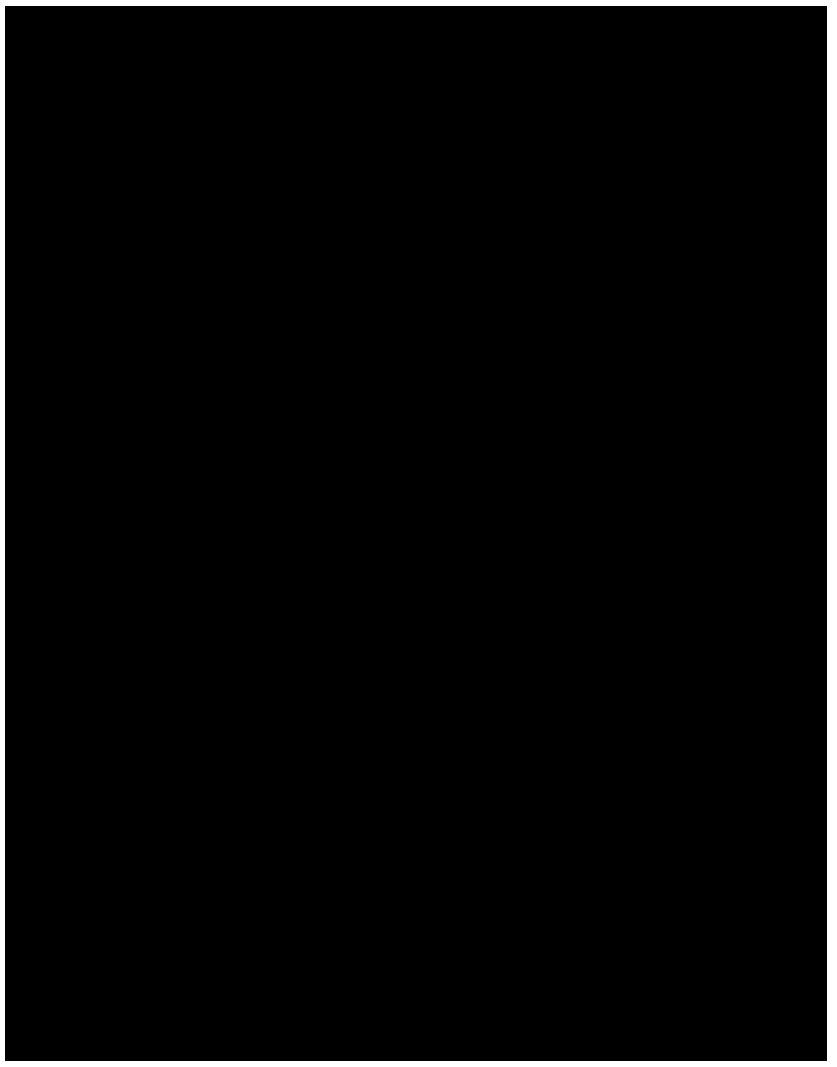
Download Options for School District

[redacted]



Example on-site schedule for a large district.

[redacted]



Pre-approval checklist given to building owners to aid in map review.

[redacted]

CRG's On Site Director reviews map updates with school representative

[redacted]

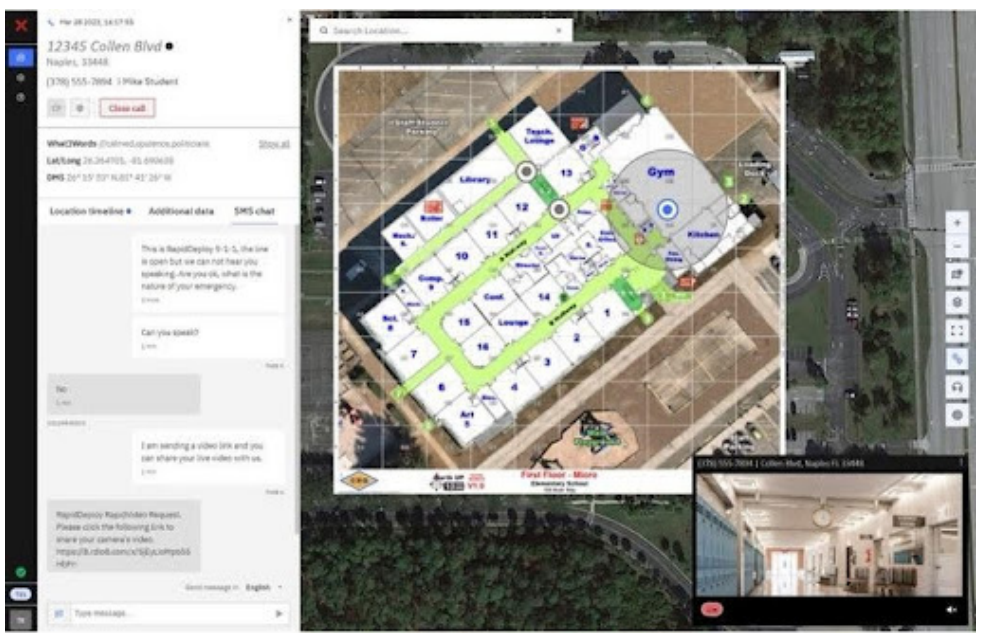
Actual Detailed Labeling Corrections Made by On-site Representative during school walk-through.

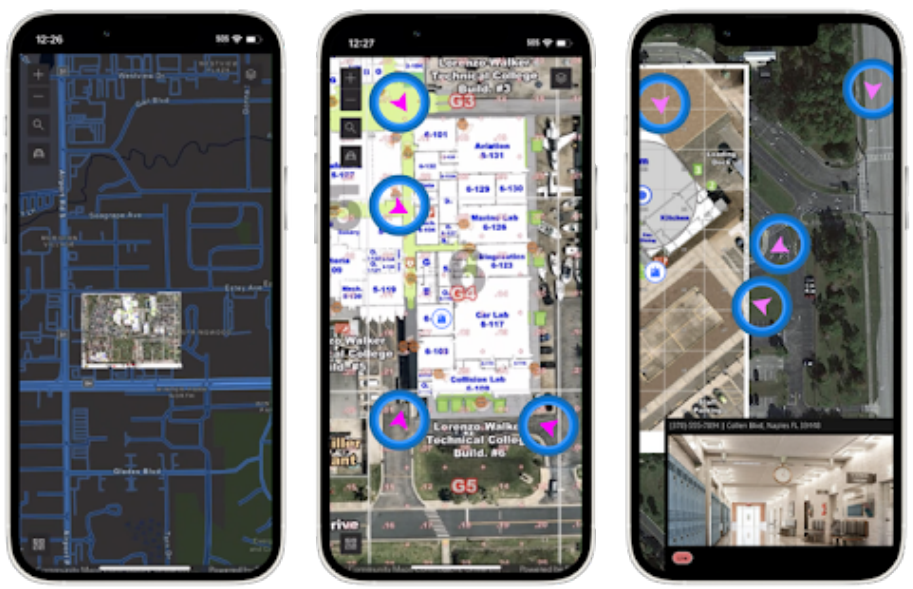
Implementing and Integrating Mapping Data

CRG is the only mapping company that ensures critical incident maps are not just distributed to approved public safety agencies, but integrated into the software platforms used by local, county, state, and federal public safety agencies as part of the normal daily business practice. Public safety does not require new software to access our mapping data and are not charged a fee to access their data. We create mapping data that can be opened in open-source file and imagery readers, as well as specialized GIS software and other public safety software systems. **Our business philosophy is to collaborate and not compete with third-party systems, positioning ourselves as value-add to existing public safety software able to visualize mapping data.** CRG works with each school district to assess what public safety agencies would reasonably respond to an emergency at the specific school district and then liaise with each public safety agency to ensure that they receive the mapping files in formats that integrate with their existing software systems. **We do not require that public safety agencies access a web-portal or CRG-controlled webpage during the stress of an emergency,** as it is unlikely this will allow quick access to a map during crisis. **Instead, we ensure the maps are integrated into the software systems public safety use daily. CRG partners with over 140 software systems used by public safety and we add more each week.**

Integration with PSAPs

CRG integrates mapping data into the State of Kentucky's NG9-1-1 primary call taking map solution RapidDeploy Radius Mapping and the connected Mobile Emergency Response Platform Lightning App. CRG's mapping data is accessible to visualize the location of a 911 caller through the duration of an emergency in these interfaces. CRG works directly with RapidDeploy to share mapping data through a pre-existing cloud-based integration, providing a primary method for PSAPs to access sub-addressable location data for a caller. There is no action required from the PSAPs to integrate school maps into this system, which is enabled through RapidDeploy and CRG's partnership. CRG also integrates into various call handling mapping solutions and Next Generation 9-1-1 Core Service (NGCS) software from vendors like **RapidSOS, Motorola / MSI Vesta, Intrado, ComTech, Carbyne, Datamark, 1Spatial, and others.** CRG works directly with these third-party vendors to share mapping data if needed.



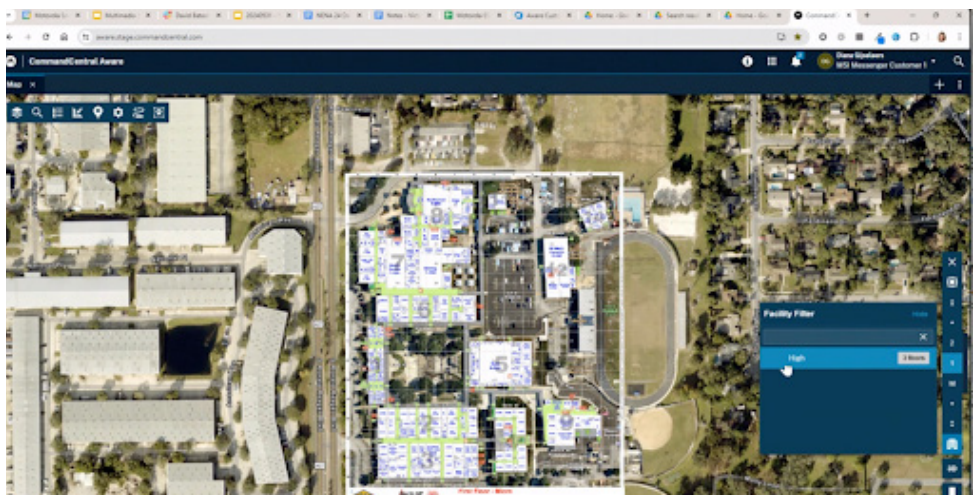


CRG integrates mapping data into Radius Mapping and Lightning Mobile App, ensuring that all mapping data is available in the State of Kentucky's primary 911 call taking mapping solution

Integration with Fusion Centers and Operation Centers:

CRG integrates mapping data in a variety of integrate into a variety of situational awareness tools that allow real-time crime centers and operations centers to access mapping data. This includes **Motorola Command Central Aware, Fusus/ Axon, Everbridge, ESRI, Flock Safety, Strax, LiveEarth, and others.** Most of these software platforms connect to our secure GIS server for their preferred file format for integration. CRG works directly with each of these third-party vendors through pre-existing integrations to ensure school mapping data is accessible to the public safety agencies that use these software platforms.

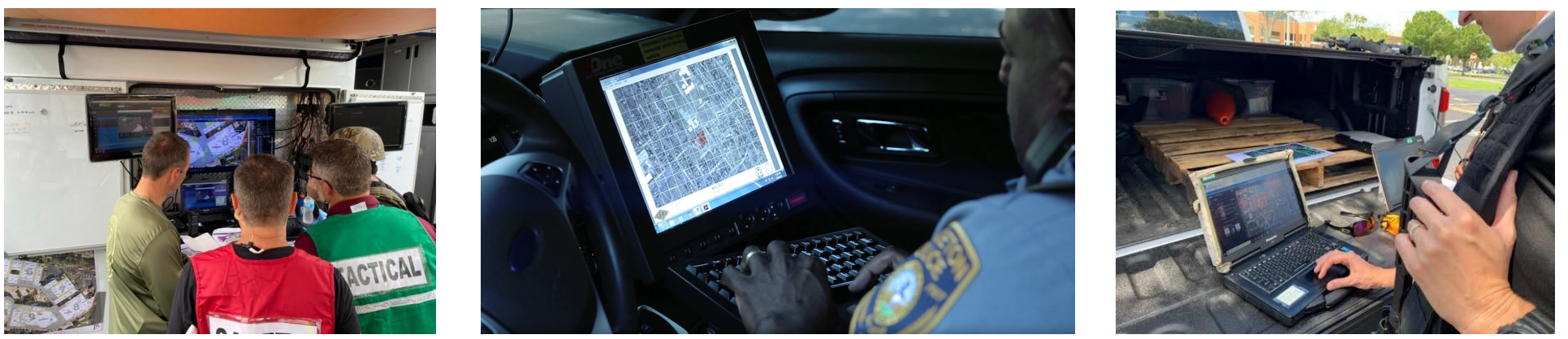
CRG School Maps integrated into FUSUS/AXON



CRG School Maps integrated into Motorola software

Integration into Mobile Data Terminals

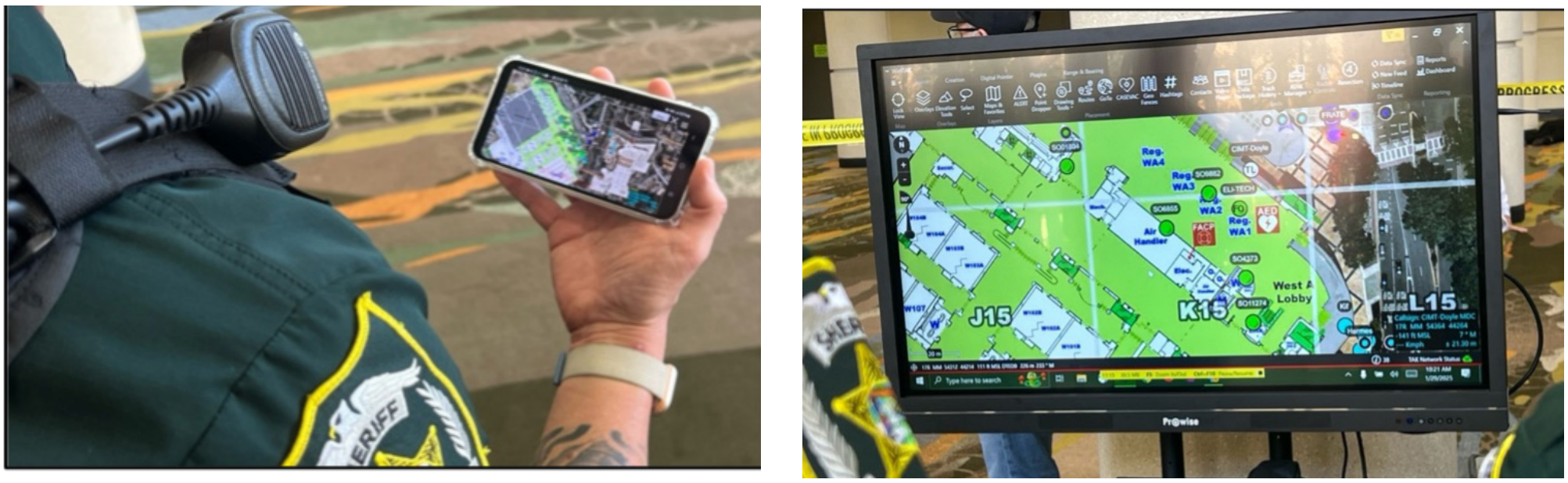
CRGs integrate into a variety of CAD / RMS software that allow easy access to critical incident maps from tablets or laptops in any patrol vehicle, fire apparatus, or ambulance. As CRG can create mapping data in multiple file formats in varying file sizes, critical incident maps will be easily accessible in patrol vehicle utilizing air cards. CRG also integrates into CAD systems used by departments and agencies throughout the State, including **Smart Cop, Motorola, Hexagon, Tyler Technologies, CentralSquare, and many others.** These software systems either utilize our GIS Web server to stream mapping data, or we provide appropriate file types to a public safety agency to manually upload into their software system. We also integrate into software platforms heavily used by fire and EMS agencies, like **FirstDue, Tablet Command, and others.**



CRG integrates digital mapping data into any pre-existing software allowing access to maps in the field

Mobile Devices

CRG integrates mapping data into any software with a mobile application component, particularly software that allows for "blue force tracking" of personnel on top of a map layer. CRG is the only mapping company to integrate school maps into software used by Federal public safety, like the FBI national and regional SWAT teams, through the **U.S. Government-developed Android Team Awareness Kit (ATAK)**. CRG also integrates school mapping data into ESRI's ArcGIS Mission, RapidDeploy Lightning, RapidSOS IamResponding, BAE Systems' GXP OnScene, Drakontas' Dragonforce, and others.



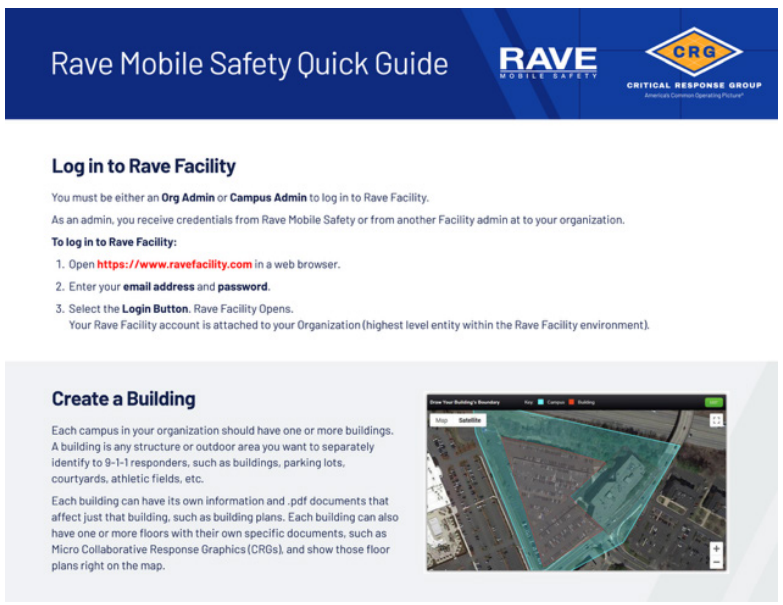
CRG GIS mapping data integrates into any application that provides "blue force tracking" capability.

Integration into School / Building Specific Safety Applications

CRG is the only school mapping company that ensures GIS mapping data is not just distributed to schools but integrated into the software platforms used by schools as part of their normal daily business practice. **School districts do not require new software to access our mapping data and are not charged a fee to access their data.** CRG shares school mapping data with the school district in the file formats that best interface with schools' existing technology platforms. We either work directly with the school safety software vendor to upload the mapping data into the system through our GIS server, or we share the maps directly with the school districts in the preferred file format. We integrate our maps into school safety Emergency Alert technology from **SaferWatch, Verkada, Kokomo 24/7, Rave, Mutualink, EverBridge, Guard 911, Intrado, SaferWatch, Raptor, 911 Cellular, CrisisGo, Singlewire, Centegix, Navigate 360, and many others.** Additionally, school districts utilize our maps in camera management systems and AI camera software such as **Avigilon, Milestone, Genetec, Omnilert, ZeroEyes, Scylla, and others.** CRG works directly with these vendors to integrate mapping data through pre-existing integrations. While we welcome the support of school IT professionals that are interested in the project, CRG will work independently as desired by the school district. In short, CRG creates these integrations routinely without additional help or fees for integrations or licensing.

CRG data in the Avigilon Camera Management System

CRG data in the ZeroEyes Gun Detection software



CRG mapping asset upload instruction for Rave School Safety Software

CRG mapping asset uploaded into Raptor School Safety Software

Timeline

This sample timeline encompasses the steps necessary to create critical incident mapping data for small to large school districts in Kentucky (between 1 and 50+ schools), and implement that mapping data into the school, dispatcher, and first responders community. Most school districts will be completed and implemented within 3 months of contracting, depending on individual variations in complexity and the quality of communication we receive from a school district. Very little assistance will be required from the contracting school district to complete all project milestones.

1. **Project Process:** CRG focuses on three separate lines of effort for the duration of the day period of performance:
   - **Build:** Critical incident maps are built for every facility within the scope of work.
   - **Distribute:** Critical incident maps are made accessible to school districts and public safety agencies through integrations with pre-existing software platforms.
   - **Train:** Public safety agencies and school districts are trained to access and communicate using the mapping data during a critical incident.

2. **Project Milestones:** The project is broken into three phases:
   - **Phase 1:** Initial mapping data is constructed for the school district. Key stakeholders in the police, fire, medical, tactical, and emergency management leadership are educated on the project. CRG identifies the software platforms specifically in use in the selected areas by the school district and public safety for map integration. **CRG will provide "test" mapping asset data (shapefiles, GeoTIFFs, GeoPDF etc) to allow the public safety agencies, schools, or the State 911 Board to provide feedback and request data modifications to the final critical incident mapping data.**
   - **Phase 2:** Site-visits to all schools are completed and mapping data is updated and shared with school administrators and local/county police and fire responders, DASC, and the PSAP for feedback and approval. Plan for distribution and integration for mapping data will be refined based on testing with school district.
   - **Phase 3:** CRG will publish final versions of critical incident mapping data and distribute to school distribute to school districts and public safety agencies through integrations with pre-existing software platforms identified and tested in Phase 1 and Phase 2.

3. Detailed Phase Breakdown

Phase 1	Dates: Week 1 (Date of Award) to Week 4

Purpose: To gather initial source material to create mapping data, educate schools and public safety leadership, and to refine a integration and implementation plan. **CRG is self-reliant and performs all tasks with its current team without the use of sub-contractors**. That provides confidence in the standardization of data that is collected, the quality of on-site interactions with school personnel, and ensures seamless movement of the project through the process.

Key Tasks:

- **Floor plan collection:** CRG will contact each school district and obtain floor plans for each school. If a site is without floor plans, we will schedule a walk-through to draft floor plans using LiDAR scanners.
- **Imagery Collection:** CRG ensures it has current ortho-imagery of each school. Most of our imagery will be derived from various high-resolution imagery providers, and the remainder of our imagery will be collected by unmanned aerial vehicle (drone) flights.

- **Initial Training / Education:** CRG meets with key stakeholders in the first responder community to explain the implementation plan for the project. This may include the the PSAP, the County Sheriff, Public Safety Coordinators/ Directors, leadership from the Office of Emergency Management, the regional SWAT team, the regional rescue task force (RTF), the Police Chief, and Fire Department Chiefs. **The school district administration team is briefed by CRG to ensure they understand the process of developing and implementing their school mapping data.**
- **Refine Distribution and Accessibility Plan:** CRG works with the public safety community to determine what pre-existing software platforms exist in the school district area. This will be broken down by public safety agency. CRG works with schools to determine what pre-existing software systems are in use at each school district. CRG will provide the the school district, the PSAP and regional public safety partners with "test" school mapping data in vector and raster formats to receive feedback and make any requested modifications.

Phase 1 End State: Critical incident mapping data "proofs" are constructed for all sites in the project area. All key stakeholders are educated on the project. Integration and implementation plan refined for software platforms in use in the project area.

Phase 1 Deliverables:

- Initial critical incident mapping data proofs for all schools in the project completed.
- Initial integration and implementation plan completed in preparation for Phase 2.

Phase 2 | **Dates: Week 4 to Week 8**

Purpose: Conduct site visits to schools, complete final drafts of mapping data, test or validate software integrations for final mapping data distribution, and schedule tabletop drills to support implementation.

Key Tasks:

- **Walk-through and Final Proof Creation:** Conduct site visits to all facilities to ensure mapping data is accurate, and refine proofs based off site visit and input from the school.
- **Testing of Integration and Implementation:** Work with school district and public safety agencies to ensure mapping data is accessible in pre-existing software platforms.
- **Schedule Tabletop Drill:** Work with school district and public safety agencies to schedule a tabletop drill date and location and send invites to public safety agencies.

Phase 2 End State: Mapping data is approved for final publishing. Mapping data is prepared for upload into applicable technology platforms. Tabletop drills scheduled and invitations are sent to applicable school and public safety officials.

Phase 2 Deliverables:

- Final critical incident mapping data approved for publishing for all schools.
- Final detailed integration and implementation plan established.
- Tabletop drills scheduled and respective schools and public safety agencies invited.

Phase 3 | **Dates: Week 8 to Week 12**

Purpose: Publish critical incident mapping data of all schools, distribute mapping data to all schools and public safety agencies through pre-existing software platforms, and deliver tabletop training to each school district and public safety partners.

Key Tasks:

- **Final Publishing:** All critical incident maps are published in multiple file types as required by the school district, supporting public safety agencies, and the State 911 Board.
- **Distribution:** Critical incident mapping data is integrated into pre-existing software platforms used by school districts and public safety.
- **Tabletops:** Tabletop training executed for schools and public safety agencies.

Phase 3 End State: 100% of all critical incident mapping data is published and distributed for access to public safety agencies and school districts, and training delivered to all parties.

Phase 3 Deliverables:

- Final critical incident maps in all required file formats distributed to school districts, PSAPs, regional public safety agencies, and any other applicable State public safety agencies.
- Tabletop drills executed for school districts and supporting public safety community.

Project Deliverables

Phase	Deliverable Description	Weeks following receipt of purchase order
Phase 1	Completed initial critical incident map data for 100% of all schools	PO + 4
	Initial integration and implementation plan for school district and public safety agencies refined.	PO + 4
Phase 2	Completed final proofs for 100% of all mapped schools shared with school district and applicable public safety agencies.	PO + 8
	Final integration and implementation plan determined.	PO + 8
Phase 3	Final critical incident mapping data in all in all required file format distributed to school district.	PO + 12
	Final critical incident mapping data in all required in all required file formats distributed to applicable regional and State public safety agencies per the integration and implementation plan.	PO + 12
	Tabletop Drill Training Executed for the school district and public safety teams.	PO + 12

Training

Critical Response Group has the most robust training team of any mapping company.



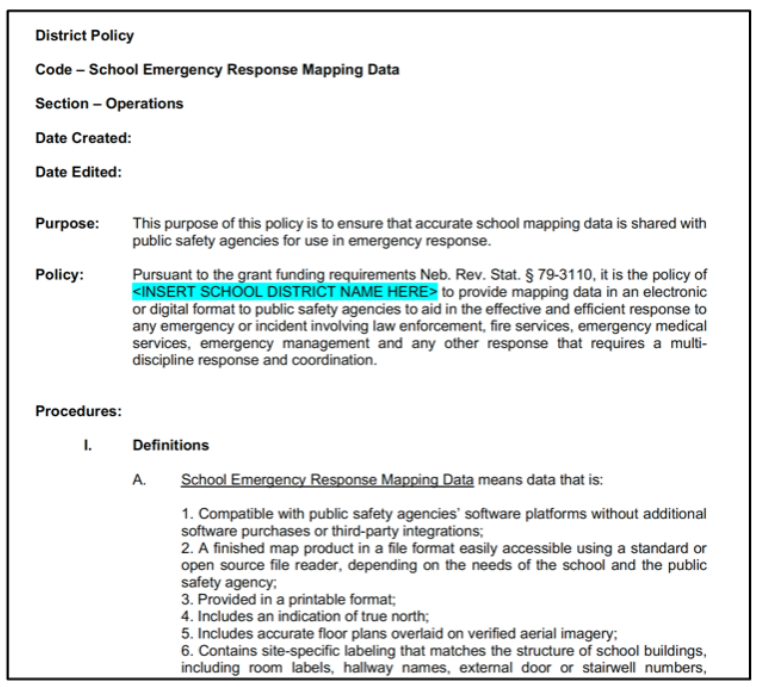
CRG Special Operations veterans facilitate tabletop drills weekly across the country.

First, upon final delivery of critical incident mapping data, CRG shares an online training module that can be incorporated into a variety of school or agency specific Learning Management System platforms. CRG can also provide school map sharing and implementation policies for use at the district, municipal, county, and state level. CRG team members have decades of experience developing policies and providing training to schools and public safety agencies, and are very familiar with the various Learning Management Systems that are used in those fields.

Second, CRG coordinates a virtual implementation meeting for each district and their immediate public safety community. CRG works with the district to ensure a representative from the police department, fire department, emergency medical agency, 911 center, and tactical (S.W.A.T) team is present, along with district representatives. **CRG leads both the outreach to public safety and all meetings on behalf of the school district, which is a strength of our organization**. During this virtual meeting, CRG briefs all representatives on the best practices for critical incident map implementation and ensures all public safety disciplines have a mechanism for accessing maps during an incident. CRG also ensures that we are made aware of all pre-existing software systems with which maps need to integrate with through this call, and work with the representative from each department to ensure maps are accessible to the first responders in their agency.

Third, and most importantly, CRG facilitates one comprehensive tabletop drill for each district that we map to ensure full adoption and implementation of critical incident mapping data. This tabletop is planned, coordinated, and

Digital / Virtual Training Provided to School Districts and Public Safety Agencies



District Policy

Code – School Emergency Response Mapping Data

Section – Operations

Date Created:

Date Edited:

Purpose: This purpose of this policy is to ensure that accurate school mapping data is shared with public safety agencies for use in emergency response.

Policy: Pursuant to the grant funding requirements Neb. Rev. Stat. § 79-3110, it is the policy of <INSERT SCHOOL DISTRICT NAME HERE> to provide mapping data in an electronic or digital format to public safety agencies to aid in the effective and efficient response to any emergency or incident involving law enforcement, fire services, emergency medical services, emergency management and any other response that requires a multi-discipline response and coordination.

Procedures:

I. **Definitions**

A. School Emergency Response Mapping Data means data that is:

1. Compatible with public safety agencies' software platforms without additional software purchases or third-party integrations;
2. A finished map product in a file format easily accessible using a standard or open source file reader, depending on the needs of the school and the public safety agency;
3. Provided in a printable format;
4. Includes an indication of true north;
5. Includes accurate floor plans overlaid on verified aerial imagery;
6. Contains site-specific labeling that matches the structure of school buildings, including room labels, hallway names, external door or stairwell numbers,

Sample Policy Given to School District to support Map Implementation and Sharing

facilitated by CRG. The purpose of the tabletop drill is to gather representatives from school district leadership and the public safety community together to utilize their critical incident maps to communicate during an active threat scenario.

Our tabletop drill is modeled after the pre-mission rehearsals of US Special Operation Forces, which are "by phase" walk-throughs with all participating military units on the actual map to be used during the operation. All leaders talk-through/walk-through their actions and responsibilities find gaps in planning and strengthen communication between military units. **CRG has found this model translates perfectly to public safety practices, and CRG has facilitated facilitated hundreds of such drills around the county**.

CRG's tabletop drills bring school districts and public safety together to improve collaboration using maps

CRG's tabletop drill is inspired by the structure and level-of-detail required during these pre-mission rehearsals, and we utilize the same methodology to train school administrators, police, fire, EMS, 911, and SWAT representatives to communicate on the same critical incident maps. CRG's tabletops mimic the communication required at a command post during a real-world incident, which consists of key leaders gathered around a map on the hood of car, a screen in a command post, or tablet/laptop in the back of a vehicle.

CRG Tabletop Script

[redacted]

[redacted]

[redacted]

[redacted]

The end state of our training:

- School districts and public safety agencies can access critical incident mapping data during an emergency.
- School districts and public safety partners improve communication and collaboration using their critical incident mapping data before an emergency occurs.
- School districts and the public safety agencies that support them will be confident the school mapping data is accurate and standardized, and know how to communicate using critical incident maps during an emergency.

CRG will provide all materials, planning, and facilitation for each tabletop in collaboration with school district and public safety partners.

References

CRG provides the following references from purchasing consortiums of equal or larger size we currently serve:

TIPS – The Interlocal Purchasing System (currently serve)
Karen Walton
Purchase Order Compliance
Direct: (903) 575-2761
TIPS Office: (866) 839-8477
Email: Karen.Walton@tips-usa.com / bids@tips-usa.com
4845 US Hwy 271 N | Pittsburg, TX 75686

New Jersey Cooperative Purchasing Alliance (currently serve)
John Carroll
County of Bergen Division of Purchasing
One Bergen County Plaza
Hackensack, NJ 07601
Phone:(201) 336-7109
Email: johncarroll@co.bergen.nj.us

Putnam Northern Westchester Board of Cooperative Educational Services (BOCES) (currently serve)
Frank Guglieri
Director of Regional Safety Services
200 BOCES Drive
Yorktown Heights, NY 10598
Phone: (914) 248-2457
Email: fguglieri@pnwboces.org

Exceptions

CRG has no requested exceptions and accepts all terms, conditions, and proposal specifications.

Other Services

CRG provides additional mapping services to allow school districts to utilize their critical incident maps for other safety planning purposes:

[redacted]

[redacted]

[redacted]

[redacted]