# Safety and Security Risk and Vulnerability Assessment

## Worcester, MA

**Prepared By:**

Good Harbor Techmark, LLC

**Prepared For:**

Worcester Public Schools

**Date:**

November 30, 2015

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November 30, 2015

Dr. Marco Rodrigues
Interim Superintendent
Worcester Public Schools
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Dr. Rodrigues:

Good Harbor Techmark, LLC (GHT) is pleased to provide our school security findings and recommendations for the City of Worcester Public Schools (WPS, District). GHT has determined that while one incident within a school can be considered too many, overall positive and effective efforts exist throughout the District. WPS stakeholders have expressed confidence in recent changes and schools remain vigilant and relatively willing to adapt to new ideas as safety standards and benchmarks continue to evolve and improve.  This is evident by a vast majority of interviewed parents that felt safe sending their child to school and students who expressed a feeling of safety while at school.   Further, students expressed positive relationships with teachers and administrators and the courage to raise concerns, regardless of how slight, as evident by the trend in reporting.

As budgets remain constrained and threats continue to manifest, members of WPS cannot become complacent with the successful start of the 2015-16 school year.  Opportunities for improvement remain and standards cannot be relaxed.  Continuous collaborative work must be applied by the entire community to continue to enhance safety and security.

To begin, the District, City of Worcester (City) and public must seek to define what it truly means to be a "safe school". While many tend to focus strictly on physical security features (i.e. 'we need more cameras'), a broader definition and focus is necessary.  There are lower cost preventative and foundational measures that can be created, instead of installing costly and reactive security devices.   Families and students must be given opportunities to become involved and then take responsibility for fostering a culture and climate of community involvement and ownership.  The expectation of schools solving all security problems with additional personnel or security devices is simply unsustainable.

Next, opportunities exist for improvements regarding the planning, preparedness, response and recovery from incidents at both the District level and through further integration between the City and State of Massachusetts (State).   Individually, most schools and emergency response organizations understand their immediate response, and the District meets or exceeds State mandates for multi-hazard and medical planning, however uncertainty exists at all levels on how to maximize a coordinated and integrated response and recovery.

Finally, facility master planning integrated with cost effective physical security enhancements, such as classroom locks and improvements to main entrances at each school, is necessary to deter and mitigate risk. Enhancements are critical in older facilities where basic security principles are extremely difficult to implement.   In these particular cases, the City must aggressively seek the Massachusetts School Building Authority's (MSBA) immediate support to

relocate from antiquated facilities. These facilities should not be reviewed for "Accelerated Repair Programs", but rather "Replacement Projects" only.

GHT is grateful for the opportunity to contribute to the protection of WPS and we hope this report will add to an increase in safety and security for the entire community. We also hope our process has enhanced, or in some cases, rebuilt communication and collaboration among City and school members. We strongly believe that only through unified efforts and community ownership of initiatives to improve safety and security, can a "*safe school*" be truly achievable.

Sincerely,

Frank Gallagher
Principal

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# 1. Findings and Recommendations

## 1.1 Project Overview

Under the guidance of the City of Worcester Public Schools District (WPS District) Superintendent's Office and the Chief Academic and Chief Finance and Operations Officers, Good Harbor Techmark (GHT) was tasked to conduct a broad and comprehensive safety and security risk and vulnerability assessment of fifteen (15) schools and make recommendation based findings. This included:



Safe School Environment

- A review of existing physical and technical safety and security features;
- Recommend standards to be used in all existing WPS facilities and new construction; and
- Development of a standardized safety and security risk and assessment tool to be used by the District to conduct school based reviews in the rest of the district.
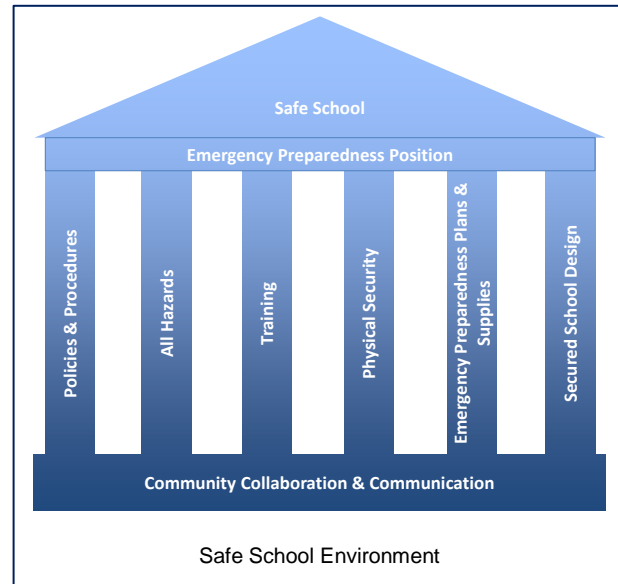
To meet the District's requirements, GHT incorporated a proven security risk methodology, based on ISO 31000 and international best practices, to identify and develop likely threat scenarios (design basis threats) in which to measure current security operational procedures and countermeasures against.[1]  To then accurately assess the entire District, GHT executed the following from September through November 2015:

- Day and nighttime site assessments of 15 schools and associated neighborhoods throughout the City of Worcester (City) that accurately represented all public schools within the City;
- Stakeholder interviews with District and school administrators, faculty, staff, students, parents and community members;
- A review and observation of busing operations, school drop-off and dismissals at each school;
- Stakeholder interviews with City emergency services including fire, police, EMS and emergency management; and
- Benchmarking assessments of school districts within Massachusetts and the United States with similar characteristics as WPS to understand best practices and how the District measures.

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[1] ISO 31000 – http://www.iso.org/iso/home/standards/iso31000.htm

With evolving threats and past occurrences of violence, WPS is challenged with a need to maintain a secure learning environment despite significantly constrained resources. GHT has determined that the District is performing well when it comes to seeking ways to make schools safe and secure. Recent efforts to unify and standardize physical security systems, while simultaneously creating programs and positions within schools to focus on safety and security, have created positive results and demonstrate the District's renewed focus.

The District's efforts are recognized by the overwhelming response from engaged stakeholders to feeling safe. Additionally, recent data demonstrates a decrease in suspensions. While improvements continue, they must be sustained through vigilant and proactive measures to treat the most significant risks. Based on the projected increase in student population, the District must continue to adopt and enforce a long-term unified approach to integrate all schools and the City with expanded operational policies and procedures, and the implementation of cost effective security measures.

### 1.2 Sustainment

WPS has made important gains to improve operational security and incorporate physical security systems into the new and existing facilities in a unified and deliberate approach. Additionally, WPS is undertaking initiatives related to community involvement and the expansion of behavioral and after school programs to support collaboratively building a culture focused on safety and active roles by students and parents. Recommended areas for sustainment include:

New Axis Cameras

- **School Liaison Officers –** Daily involvement of officers within the District at secondary schools is effective despite gaps created at middle, elementary and alternative schools.

- **Lead Teacher for School Safety and Accountability at North High –** The dedicated staff administrative position focused on unifying and improving safety and security enables a review of current procedures and then the implementation of new and/or refined programs.

- **Video Assessment Unification and Standardization –** Standardizing the use of industry leading technologies, such as the Genetec video management platform and Axis IP cameras for all new and replaced systems is cost effective. A multi-function video management system that is operator friendly will enable all schools and the City to integrate viewing capabilities and the incorporation of other security devices.

- **Hazard Planning –** A positive foundation of response plans exists and individual schools frequently rehearse basic events making the process easy to adapt and build upon.

- **Medical –** Increased medical and behavioral health teams and training, including the pilot program of mobile teams, and medical programs like District-wide influenza vaccines, AED upgrades and medical training enable problems to be addressed early and often.

- ***Staff Tenure –*** Infrequent turnover of senior administrative staff within most schools, to include alumni of the WPS System, enables cohesion and refined planning and implementation.

- ***School Behavioral Programs*** - Positive Behavioral Interventions & Support (PBIS), Circle of Trust, Student Advisory Groups (SAG) and various school and after school programs are improving ways for students to take ownership of problems, recommend solutions and keep students socially and academically involved in positive environments.

- ***Busing Cameras & GIS Capabilities*** – The continued integration of onboard video assessment and GIS capabilities enables the District to actively respond to incidents and improve busing.

- ***Resources within the City of Worcester*** – The District has access to tremendous capabilities within close proximity for incident and crisis response, including trauma facilities and first responder capabilities. Additional volunteer assistance from local higher education institutes and public-private partnerships provides additional resources.

- ***Nutrition–*** All schools and after school programs are providing students with meals including breakfast and snacks creating a safe haven for students. Other schools, including Quinsigamond Elementary and South High Community School, have established food pantries and clothing distributions within the schools for students.

### 1.3 Opportunities

While the initiatives and approaches to safety and security highlighted in 1.2 above are positive, and in some cases exceeding best practices amongst similar districts, opportunities are still available to expand them and further increase the resiliency of the District. Based on our site surveys, assessments and stakeholder interviews, GHT developed several recommendations related to operational, policy and procedures and technological and infrastructure findings. The recommendations apply to over 30 different categories including organization (staffing, resource officers versus liaison, training, drills and exercises, etc.), policies and procedures (lock downs, shelter in-place, etc.) security systems (access control, video assessment, intercoms, public address, etc.), and infrastructure (doors and hardware, power, etc.). This includes the following priorities:

- ***Unify Safe School Efforts –*** A safe and secure school environment does not simply involve the latest technology devices. (i.e. cameras), Rather, a broader view focused on culture and climate and the impact of internal and external events throughout the City is necessary. Parents and students ***must*** play an active role and share in this responsibility as opposed to just faculty and administration. Making the school not only a destination for education, but transforming it into a community asset and an integral part of the fabric of the community, is necessary to building a foundation for safety and security.

> "*There's no silver bullet when it comes to protecting schools. **Keeping students safe is the responsibility of the entire community.**"*
>
> **-Justine Brown, emergencymgmt.com**

- ***Redefine and Align District Safety and Security Organizational Structure –*** The current School Safety Liaison position at the District level should be overseen by a newly created position at the Officer/Manager level within the District. The new position should take on a much broader responsibility for oversight and implementation of planning, preparedness, response, and recovery programs for the District and act as the District's liaison for City Emergency Operations. Included with this restructuring should be the refinement of budgets and financial responsibilities for security and physical security infrastructure under Information Systems (IS) and Facilities.

- ***Refine and Integrate All Hazard Planning –*** District All Hazard and Medical plans should be unified along with additional Continuity of Operations Plans between each school, the District and the City. While each entity understands their basic response requirements, uncertainty exists with roles, responsibilities and capabilities between organizations. Further, the District should begin evolving plans to incorporate Department of Homeland Security (DHS), State of Massachusetts (State) and other best-practice recommendations for *Run, Hide, Fight / ALICE* type response based actions. Finally, the District needs to clarify Incident Command Structure (ICS) and Emergency Operation Center (EOC) roles and responsibilities among District leadership and the District's integration into the City's EOC.

- ***Improve the Quality of Training vs. Quantity of Events –*** Schools conduct and even exceed required monthly and quarterly supported fire drills with WFD, lock-down drills, and medical planning. However, all events are basic and held at times convenient for everyone. Few appear to involve movement to primary and alternative evacuation sites or the full complement of first responders and collective interagency table-top and functional exercises, which have not occurred collectively "in a few years". While still remaining compliant with State mandates, fewer, robust drills can occur that are more likely to benefit organizations and aid in City-wide planning efforts, than frequent routine drills.

- ***Improve Main Entrances*** – The majority of schools contain a secure vestibule style main entrance at the immediate front door, yet most contain antiquated technology and supporting procedures. Internal and external vestibule areas need to adopt layered security measures to eliminate full access within the main areas of school prior to complete identification and screening.

- ***Reinforce Interior Doors and Door Hardware*** – Facilities contain ineffective doors and antiquated door hardware that needs to be upgraded and, long-term, enhanced and integrated with access control, intrusion detection and cameras.

- ***Secure Exterior Perimeter Doors and Improve Alarms*** – Schools contain varying secure perimeters with limited functioning door contacts. Instances of propped doors and easily breachable secondary entrances fail to lock or latch properly, and alarms and notifications fail when opened. Faculty with exterior doors cannot allow doors to be propped despite the need for ventilation or ease of access back into the school.

- ***Shelter in Place*** – In addition to improving lock-down and lock-out capabilities through effective doors and door hardware, rooms need the ability to conceal interior spaces through shades and other sheltering devices on doors and windows.

- *School Zones* – Virtually all schools face hazardous traffic congestion during peak hours of drop-off and pick up. Increased traffic mitigation measures are necessary through a combination of public awareness outreach, random police presence, signage, lighting, enforcement of no parking, and adjustments to crossing guards and one-way traffic designations.

- *Internal Communications –* Improvements are needed for mass-notification capabilities and the migration to smart-phone / mobile application technology. Further, handheld devices (radios and repeaters) and two-way room-to-room intercoms are necessary within each school and across the District, including the ability to talk from evacuation sites back to a school via radio.

- *External Communications -* Expedited external communication from the District is needed during incidents to counter the growing use of social media to mitigate false information and prevent escalations and disruptions to response. Further, the promotion of positive events within WPS is needed to reduce negative perceptions becoming reality.

- *Expand Transportation –* While school areas are safe, pedestrian movement to and from schools is a concern due to neighborhood activity. In other areas, particularly during the winter months, access to schools is difficult due to lack of sidewalks or cleared paths. Benefits from additional transportation would mitigate these concerns and increase attendance at afterschool programs including clubs, sports and community sponsored programs.

### 1.4 Costs

GHTs recommendations and associated costs for operational planning and physical security device implementation are summarized below. GHT believes that while some costs are considerable and will require capital investments over an extended period, many improvements can occur in the near term based on the investment of time and the sharing of information and support. Each cost varies in total based on the number of devices needed per school (e.g. one school may require more access controlled doors or cameras than another). Further related cost-per-unit information and actual vendor quotes for various systems is provided to enable the District to extrapolate estimates for all 54 schools and administrative buildings.

| Summary of Recommendations | Priority | # of Recommendations | Estimated Cost |
|---|---|---|---|
| Recommendations deemed Critical - Implement Immediately | Critical | 33 | $1,025,210.31 |
| Recommendations deemed High - Implement within the next 6-12 Months | High | 60 | $1,896,526.07 |
| Recommendations deemed Medium - Implement within the next 12-24 Months | Medium | 44 | $2,114,177.16 |
| Recommendations deemed low - Implement within the next 24-36 months | Low | 19 | $121,876.21 |
| TOTAL | | 156 | $5,157,789.76 |

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| GENERAL RECOMMENDATIONS | Rec # | Priority | Estimated Cost | Total Costs |
|---|---|---|---|---|
| 1.1.1 - Organizational Recommendations | | | | |
| Expand Safe School Definition | 1 | Critical | $0 | |
| Organizational Structure - District Level Security Liaison | 2 | Critical | $194,300 | |
| Security Infrastructure Responsibility | 3 | Critical | $0 | |
| Align Security Budgeting | 4 | Critical | $0 | |
| Expand School Liaison Program and Re-Allocate Private Security | 5 | High | $1,088,750 | |
| Public Affairs and Communication | 6 | High | $0 | |
| Special Education and Behavioral Health Integration | 7 | Medium | $11,792 | |
| Information Sharing – Proactive vs. Reactive Posture | 8 | Medium | $0 | |
| Expand Fire/Life Safety Classes | 9 | Medium | $41,808 | |
| Expand After School Programs | 10 | Medium | $174,200 | $1,510,850 |

Costs are based on MSRP rate and include average labor costs for the Worcester area.

## 2. WPS Organizational Findings and Recommendations

Section 2.0 contains key organizational findings and recommendations that are consistent for all schools and should be implemented universally. Ultimately, Good Harbor Techmark (GHT) believes organizational recommendations are the most critical to address. Once the District and City is unified, policies, procedures and physical security systems can be implemented in a more efficient manner across all schools and departments. Additionally, organizational recommendations less expensive to implement and carry a greater long-term return on investment.

Recommendations are classified as *Low, Medium, High* and *Critical* based on priority of effort for organizational and security needs. Areas assessed as Critical and High should be the initial focus for Worcester Public Schools (WPS, District) and inform the City of Worcester's (City) enterprise approach to risk and capital improvement plans both internally and under the direction of the Massachusetts School Building Authority (MSBA). Medium and Low recommendations should be considered for long-term implementation as further resource alignment becomes available.

It is important to note that most recommendations are not exclusively independent, but rather mutually supportive.

**1   Expand What It Means To Be A "*Safe School*" - Community Ownership for Safety and Security within Schools – <span style="color:red">Critical</span>**
When discussing or defining "safe schools" many within the District and City focus only on physical devices such as cameras, radios and door locks. Many also believe it is simply the District's "job" to provide students with a safe school environment. While all play a substantial role in school safety, devices and the District are only effective with the responsibility and support from school administrators, parents, students and the entire community.

In implementing enhancements to the District's safety and security at each school, a broader definition of what it means "to be safe" needs to be developed. Then, ownership and support must come from everyone. Specifically:

- Communities should be encouraged to take ownership of their surroundings (adopt a school) and assist each neighborhood school with maintaining the property and helping to prevent crime;
- WPS should expand outreach and use of community leaders, social groups and other locally based community groups to increase student support, neighborhood programs and the support and use of schools. This includes:
  - Utilizing community groups for grant writing support, translation services and other curriculum development
  - Support to teachers to aide in understanding the ethnic culture, customs and traditions.
  - Providing community based groups with a clear expectation on curriculum so they can provide the right after school tutoring and academic assistance.
  - Expanding playgrounds and playing fields and access to school play areas.
- Before and after school programs and the requirements for developing and implementing these programs need to be streamlined. Doing so will enable the District to capitalize on community partners who want to become involved but quickly lose interest after exhaustive

bureaucratic implementation processes.
- The District needs to be consulted with City actions where second and third order effects have an impact within a school. (i.e. City Housing changes and enforcement disrupt student populations);
- Utilize parent volunteers for crossing points, reception duties and monitoring functions.
- Encourage parent/teacher information sharing including effective use of social media tools to share information for parents new to the District or a school.

Long-term implementation should occur to expand Vocational and Academy programs so students who struggle with traditional classroom environments, yet cannot gain access to Worcester Vo-Tech or programs can remain engaged in school.

## 2 Organizational Structure – Reorganize and Redefine District Level Security Liaison Responsibilities – Priority – Critical

Under the current District organizational structure, overall responsibility for school safety and security is disjointed. For example, the Chief Financial and Operations Officer maintains some responsibility for Incident Command, while the School Safety Liaison maintains an indirect report to the Superintendent based on the need for an independent hearing agent for school discipline appeals. Further, responsibilities for behavioral health and school nurses reside within two different departments. Finally, responsibilities and the analysis and distribution of incident reports are contained in different offices. The result is often disjointed roles and responsibility and even associated budget allocations. Additionally, limited or untimely coordination between the Quadrant Office, District leadership and City response organizations occurs.

To spearhead the District's Safety and Security Master Planning and elevate responsibilities for incident planning, preparedness, response and recovery, GHT recommends the District create a new administrative position at the District Officer or Manager level by appointing an *Emergency Preparedness* officer position. This individual will be responsible for unifying and coordinating preparedness efforts with both the City and each school, acting as a liaison with City command level emergency functions, and providing oversight and implementation of security designs to include conducting trend analyses to measure effectiveness.



Proposed Organizational Chart
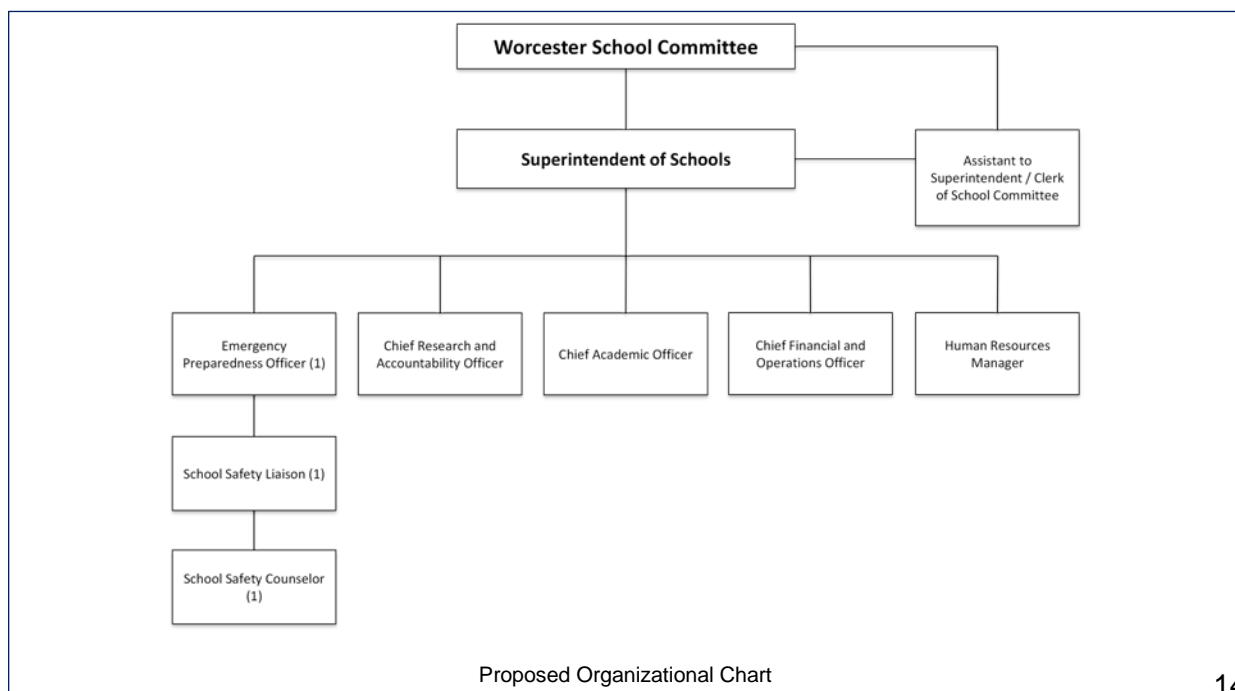
During a crisis, the individual will represent the District at the incident, while also assisting in the coordination of the Emergency Operation Center (EOC) that is established away from the crisis location.  The individual will also coordinate School Resource Officers, School Safety Positions and the Lead Teacher for School Safety and Security modeled after the North High position. The District's current Safety Liaison will aid this position by reporting directly to it.  Further, the Safety Liaison should still maintain the status of a neutral party in discipline hearings, however a more active role in the due diligence surrounding each case, vetting state and federal legal requirements, and assisting the legal and compliance office should be performed with assistance from the newly created position and group.

## 3   Security Infrastructure Responsibility – Priority – Critical

As more security infrastructure becomes technologically advanced and Internet Protocol (IP) based, ownership of security systems is heavily dependent on information technology.  In alignment with Recommendation 2 described above, GHT recommends WPS assign all physical security systems (video assessment, access control, etc.) to Information Systems (IS). IS should then work collaboratively with the newly defined position for the Emergency Preparedness Officer, along with other stakeholders, for implementation.  IS should maintain the authority for maintenance, troubleshooting, and system training.  Further, policies with regard to training, operation, retention, access and overall systems management needs to be established prior to a district-wide implementation of physical security systems. (ex. who is authorized to view recorded video or in real-time and on what device).

## 4   Align Security Budgeting – Priority – Critical

In the FY2016 budget, WPS allocated $75,000 for Security, an increase of $25,000 from FY15.[2] Within *Miscellaneous Educational OM 3000 O. School Safety Equipment* line-items, many areas of "security" are designated, yet the responsibilities and oversight of each differs greatly. As organizational and system recommendations discussed throughout this document are implemented, the District's annual and capital budgets must properly align with these changes and reflect the needs of broader physical and operational security programs. This includes:

- Systems purchased through Grant programs without aligned maintenance and sustainment plans should not be purchased.
- Facilities and IS need funding alignments for systems, including general door hardware and upgraded classroom locks, before they are integrated into to card access systems.
- Budgets need to be established for long-term maintenance and training of systems.  For example, IS received only a 6% increase, yet when a security camera breaks and/or maintenance is required on a security system, funds are allocated from IS and not *Miscellaneous Educational OM 3000*.
- Funding for continuous training is needed.  Networked based security systems and the use of them are "perishable skills".  This means that when an operator does not frequently use the system (summer vacation), they can no longer operate the system as effectively or, even

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[2] WPS 2015-16 Budget, "Other School Services (3000)".
http://worcesterschools.org/sites/default/files/Department/Chief%20Financial%20and%20Operations%20Office/FY2016/FY16_WPS_Budget.pdf

more importantly, troubleshoot it. This results in the need for costly service calls and retraining.

## 5  Expand School Liaison Program and re-allocate Private Security – Priority – High

Changes were recently made to the WPS school liaison program in which officers were moved to permanent positions at secondary schools and two additional officers were added as liaisons for all middle and elementary schools. This has proved positive at the secondary schools, however interaction and support from police varies at alternative, middle and elementary schools due to limited staffing and competing priorities from both liaison and route patrol officers.

> "*Our Officer is great – he walks around smiling all day and talks to us. We know we can go to him with concerns…and he volunteers as a football coach*"
>
> *-Secondary School Student*

Based on continued annual evaluations of the program and a much needed update to the current Memorandum of Understanding (MOU) between WPS and the Worcester Police Department (WPD), GHT recommends further expansion of the program including:

- The program should convert from "Liaison" Officers to "Resource" Officers and add additional positions at alternative, middle and elementary levels. As a true "*resource*" to the schools, officers can take a more active role in security planning, life and health awareness classes and even assist with community based learning.
- The program should be better aligned with WPD's Community Impact Unit and include additional support from WFD.
- Officers should wear a modified uniform and seek to build a foundation for outreach and community policing, particularly at the elementary and middle school levels.
- The role of a *Resource Officer* can enable police to assist administrators with incidents without a mandatory and immediate elevation to criminal arrest requirements currently in place; something that currently causes administrators hesitation to calling for assistance.
- As part of the realignment, WPS should be provided input into decision making authority on who is assigned to the schools. Positions should not be short-term or officers who cannot fill patrol routes, but rather qualified volunteer officers.
- Officers assigned should receive additional focused school training and be involved in summer programs and planning and preparedness efforts with administrators as opposed to rotating back to patrols.
- Officers should be bilingual, much like they are now.

As the role is redefined and expanded, GHT believes the District can realize a cost savings by assigning officers to multiple schools based on time and distance between them. (i.e. one officer can support Burncoat High and Middle, South and Sullivan, etc.) Primary cost savings can also occur through the absorption of functions currently administered by private security officers where the District is spending approximately $116,258 annually. [3] The quality of this

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[3] WPS contract with Securitas America for private security.

program varies significantly across all schools with the limited ability to measure effectiveness. Improvements to main entrances and secure vestibules can further mitigate the need for security guards and thus these funds can be better served to hire officers or additional part-time administrators.

## 6   Public Affairs/ Communication – Priority – High

One of the primary functions within All-Hazard response planning and incident command is the role of communications or public affairs.  In most incidents, individual schools will simply defer all communications related to the incident to the District.  However, which individual within the District is responsible for delivering messages related to an incident and when to deliver those messages remains unclear.  During recent incidents, the lack of timely communication and the inability to rapidly counter misinformation through the use of social media and alerts resulted in further escalation.  The right messages must also be delivered to the public to ensure proper compliance with the litany of regulations (FERPA, HIPA, PII, etc.) is protected.

Equally important, communications related to safety and security and the overall well-being of schools should not just occur during or immediately following an event.  Communications during planning and preparedness phases are often of greater importance.   This includes the continuous promotion of positive events and the tremendous efforts and accomplishments of students, faculty and administration to people within the District and the public at large. If the only messages being distributed and heard from administrators and elected officials is negative, then efforts to build a positive climate and culture are already limited and perception starts to become reality.

## 7   Special Education and Behavioral Health Integration – Priority – Medium

As the District's student population continues to grow, so too does the requirements and needs for behavioral health and special education requirements. While the student population and administrative requirements continuously outpace and strain the District's annual budget, the highest frequency of safety incidents occurs directly against teachers or within classrooms from students who suffer from behavioral health challenges.   Additionally, events that are low frequency, yet very high severity (i.e. active threat) can often be identified and even prevented from behavioral health identification.

The District currently has a dedicated Manager of English Language Learners (ELL) and Supplemental Support Services which maintains oversight for School Psychologists and Adjustment counselors, along with responsibility for the development and implementation of after school and evening programs. Separate from this department, oversight of Nurses within the District falls under the Division of Special Education.   The functionality between the two departments appears to be working due primarily to the efforts of individuals to collaborate. Moving forward, this must be sustained, particularly in regards to budgeting. GHT believes the new Emergency Preparedness position can act as a conduit between the two in regards to planning and preparedness efforts as outlined above.  Additional improvements include:

- Teachers need continuous support and training to coincide with evolving special education curriculums as the result of behavioral health advancements. Further training will enable the de-escalation of situations involving students and parents and further protect the entire classroom.
- Training is needed to understand legislative changes environment where regulations, such as Chapter 222, require changes to response plans for dealing with troubled individuals.

- The Youth Mobile Health Crisis Team pilot program should be closely monitored for effectiveness.  GHT is supportive of this program and believes it to be a best practice that should be expanded throughout the District.  However, the reality is, can the team mobilize and respond in a timely manner as opposed to internal teams?  Similar to a tactical team or an individual officer within the school, most incidents take 3-10min, thus requiring first line teachers and administrators to respond.  The District must also closely monitor contractual language for outcome measures where upon contract award after the pilot, response times may decrease.
- Community based groups should actively be sought to assist schools with troubled youths and aide in the Districts understanding of cultural sensitivities.

**8    Information Sharing – *Proactive vs. Reactive Posture* – Priority – Medium**
While some information and data sharing is already occurring throughout the District and a commitment to use data analysis to measure effectiveness is being applied, more collaboration both internally and externally should occur.    Information sharing is an inexpensive but extremely effective way to learn what is working and not working and share ideas throughout the District.   Further, it offers an ability to identify emerging threats, identify patterns, and develop consistent approaches to addressing security issues.  Led by the refined Emergency Management role, this includes:

- Incorporate a safety component into the Senior Leadership Team – LEAP Team.
- Expand sharing of information related to WPD's effective gang-task force collaboration with schools. Specifically, more sharing and education should occur with teachers and not just administrators.  (teachers expressed concerns that they do not know what to look for as information is "need to know only") Parents should also be included in various educational exchanges of information.
- Collectively review incident data for the effectiveness of safety and security programs beyond the Quadrant Office.
- Expand student and parent advisory groups.
- Incorporate student governments into planning and development of policies and procedures.
- Expand training opportunities and coordination as outlined below.
- Peer-to-Peer Networking – The District should initiate joint working groups with other similar teams in the County to share best practices and lessons learned including the local Colleges and Universities.   Additional information should be exchanged on current threats, vulnerabilities and emerging trends. (ex. the recent participation in State All Hazard training by District members should be replicated)
- Formal and informal hosting of School Committee meetings within each school – There is a belief among many faculty, school based administrators and stakeholders interviewed that members have never visited their school.  Hosting meetings within each school on a rotating basis will change this perception (or fact) and encourage members of the public and City to also visit the schools.

**9    Expand Fire-Life Safety Classes – Priority – Medium**
Elementary students currently receive life skills training related to fire safety procedures. As part of the national level curriculum, these courses seek to introduce students to basic life safety skills. WFD has excellent resources under Lt. Picket that should be expanded and utilized throughout the District. While most school districts tend to focus on school resource officer or police liaison officers, WFD offers an excellent opportunity to expand interaction and community outreach, particularly at the middle school ages. Aligned with District All Hazard preparedness, these programs can then further contribute to climate and culture and even "see something, say

something" and active threats.

## 10 Expand After-School Programs – Priority – Medium

The District currently runs limited after-school programs beyond normal athletic programs. Keeping students engaged in a safe environment beyond normal school hours and during the summer minimizes exposures in neighborhoods and further supports operational recommendations listed above.

- Programs are being reduced to one day per week vs. multiple days due to transportation and budgetary constraints.
- Course size is usually dictated around the capacity of a full bus as opposed to who is interested.
- The District does not have a formal checklist for developing programs, only a "mental checklist".   This is based on the ideas on what is needed for grant funds and logistics. Typically, a school or community partner will have a different idea or want to do something different.   Then grant funding, outcome measurements, etc. are needed.   Often this takes a tremendous amount of time and meetings.   A formal streamlined checklist should be created to allow organizers to develop a program prior. This includes obtaining outcome measurements where the research and data office, safety liaisons and others can provide standardized KPIs and MOEs. Simply put, a child being a child actively engaged with a smile on their face in a safe environment is a simple outcome.
- Summer programs are being impacted by reduced funding resulting in shorter classes in terms of both the number of weeks and the length of day a program is offered.
- Programs are often driven by transportation. While older kids can use WRTA bus passes, they still need to get home from the nearest bus stop.
- Expand partnerships with community organizations for ideas and solutions to logistics and costs.

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## Appendix A - Methodology

In order to focus the findings and recommendations and follow a methodical assessment process, GHT used the components of Security Risk that is generally accepted to consist of three components: threat, vulnerability, and consequence. For the purposes of this report, GHT defines each as:

- **Threat:** The definition of threat focuses on the potential "*bad actors*" that could knowingly and intentionally target personnel or infrastructure. All other potential impact events or sources are termed "hazards" and are not specifically included.

- **Vulnerability**: Vulnerability is the ascertaining of where the protective or procedural weaknesses exist that may make it easier for potential adversaries, the threat, to exploit or damage the asset (entity, person, object or facility) that is being protected. Vulnerability can include things like fences, doors/walls, or access control systems as well as response procedures, security guard or monitor procedures, threat detection capabilities, as well as the ability to withstand and recover quickly from an incident or intrusion.

- **Consequence**: Consequence is the potential result of a successful incident or intrusion by an adversary due to the exploitation of one or more vulnerabilities. Consequences may include the disruption of operations, the loss of life or resources and assets, the loss of services, and damage to property.

GHT's methodology is consistent with the risk assessment methodology developed by the International Organization for Standards (ISO 31000). [4] The methodology also incorporates concepts in Design Basis Threat (DBT) development. This methodology first evaluates the seriousness of each threat, determines the critical assets likely to be targeted by the threat actor(s), and then analyzes the vulnerability of those assets to the evaluated threats. The combination of the rankings provided against each threat and vulnerability are combined to determine the likelihood that these threats will manifest. Likelihood is then combined with an assessment of the consequence to the organization, infrastructure and the surrounding area if these threats do manifest, to provide an overall 'Risk Rating'.

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[4] http://www.iso.org/iso/home/standards/iso31000.htm

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## Appendix B – Benchmarking

In order to complete the security assessment and truly understand how the District measures in terms of best practices, Good Harbor Techmark (GHT) completed benchmark assessments of similar school districts within Massachusetts and across the United States. The table below offers an overall comparison of schools benchmarked. For the purposes of this published report and confidentiality agreements, benchmarked Districts are listed anonymously.

Similar to WPS, each district struggles to find a compromise of maintaining safe and secure facilities with constrained resources and evolving threats. Additionally, all districts are faced with varying degrees of community ownership and the responsibility students and parents take in contributing to a safe and secure environment. Finally, districts within New England that utilize facilities dating back to the early 1900s face similar challenges with poor entrances and classroom sheltering capabilities.



Considerations for linkages to Federal, State and Local laws, regulations and best practices.

In conducting the benchmarks, GHT found WPS ranks higher than peers regarding:
- Path for standardized security platforms;
- Administrative positions focused on security within schools;
- Medical staffing and planning including nutrition and immunization; and
- Foundational all hazard response planning.

Where WPS lags peers is:
- Primary leadership role at District level;
- Integration of crisis response plans;
- School Resource Officers; and
- Community based programs.

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**Worcester Public Schools**
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| | City/Town | Worcester, MA | School District in Western MA | School District in Western MA | Southern MA District | Southern MA District | Norther NY State District | South Shore MA District School | Norther NY State District | Norther NY State District | Rhode Island District |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **District School Information** | Total School Buildings in City/Town | 45 | 52 | 13 | 26 | 17 | 55 | 22 | 35 | 50 | 23 (Public) |
| | Sector | Public | Public | Public | Public | Public | Public | Public | Public | Public | Private |
| | # of Elementary Schools | 33 | 31 | **8 | 19 | 11 | 44 | 13 | 20 | 37 | 3 |
| | # of Middle Schools | 4 | 11 | **7 | 3 | 4 | 0 | 8 | 6 | 0 | 3 |
| | # of High Schools | 7 | 10 | 2 | 3 | 2 | 11 | 1 | 5 | 13 | 16 |
| | # of Alternative Schools | 1 | 0 | 0 | 1 | 0 | 0 | 0 | | 4 | 1 |
| | School Budget | $369,184,365 | $450,439,469 | $64,130,544 | $120,411,973 | $101,397,542 | $825,813,270 | $172,655,028 | $392,683,824 | $798,077,304 | $163,127,659 |
| | % of Budget for Security | 0.10% | 0.67% | 0.14% | 0.00% | 0.62% | 0.41% | 1.79% | 0.75% | 0.50% | 0.04% |
| | Vandalism Reimbursements | $0 | $0 | $1,500 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| | $ Spent on Building Security Systems | $75,000 | | $87,190 | | $0 | $106,112 | $30,000 | $0 | $0 | $60,500 |
| | $ Spent for SROs | $120,000 | $0 | $0 | | $0 | $2,361,925 | $680,953 | $566,000 | $41,316 | $0 |
| | $ Spent on School Monitors | $0 | $0 | $0 | | $0 | $0 | $2,289,157 | $2,341,935 | $0 | $0 |
| | $ Spent on Security | $0 | $2,109,545 | $0 | | $627,820 | $865,377 | $62,000 | $30,000 | $991,564 | $0 |
| | $ Spent on Security Guards | $116,258 | Incl. | $0 | | $0 | $0 | $0 | $0 | $2,624,862 | $0 |
| | $ Spent on Safety and Training, Supplies/Equipment | $75,000 | $888,400 | $0 | | $0 | $25,000 | $30,000 | $5,000 | $320,000 | $0 |
| | Total Security Costs | $386,258 | $2,997,945 | $88,690 | $0 | $627,820 | $3,358,414 | $3,092,110 | $2,942,935 | $3,977,742 | $60,500 |
| | Population (approx.) | 182,000 | 154,000 | 40,000 | 95,000 | 89,000 | 259,000 | 94,000 | 145,000 | 210,000 | 82,000 |
| | Students in the District (approx.) | 25,191 | 25,500 | 5,900 | 12,500 | 9,800 | 34,000 | 17,000 | 20,500 | 37,877 | 10,000 |
| | Crime Index at time of Assessment (100 = best, 1 = worst) | 11 | 5 | 2 | 9 | 16 | 4 | 10 | 6 | 5 | 29 |

| | | Worcester, MA | School District in Western MA | School District in Western MA | Southern MA District | Southern MA District | Norther NY State District | South Shore MA District School | Norther NY State District | Norther NY State District | Rhode Island District |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **School Access Control** | Access Control System in High Schools | Many of the high schools have, but most do not utilize the system except for some areas which include garage access. | Limited | Vo Tech only | None - Keys only | None - Keys only | Limited | Yes | An electronic access control system is implemented to regulate access to District school buildings and facilities. | Limited | Limited |
| | Access Control System in Middle Schools | Most middle schools rely on basic key system. The master key system varies from school to school based on age of building and upgrades. | Limited | None | None | None | Limited | Limited | An electronic access control system is implemented to regulate access to District school buildings and facilities. | Limited | None |
| | Access Control System In Elementary Schools | Most elementary schools rely on basic key system. The master key system varies from school to school based on age of building and upgrades. | Limited | Keys only, Poor master keys | None - Keys only | None - Keys only | Limited | None - Keys only | An electronic access control system is implemented to regulate access to District school buildings and facilities. | Limited | None |
| | Key Management System | Each school has their own method of master key system. | Yes. A master key system is in place. The system is not electronic. | Each school has their own master key system. | Yes. A master key system is in place. The system is not electronic. | Yes. A master key system is in place. The system is not electronic. | Yes. A master key system is in place. The system is not electronic. | Yes. A master key system is in place. The system is not electronic. | An electronic access control system is implemented to regulate access to District school buildings and facilities. | Yes. A master key system is in place. The system is not electronic. | Yes |

| | City/Town | Worcester, MA | School District in Western MA | School District in Western MA | Southern MA District | Southern MA District | Norther NY State District | South Shore MA District School | Norther NY State District | Norther NY State District | Rhode Island District |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **School Video Assessment** | Unified CCTV System | Yes - Axis | Yes | Yes - Cisco | No | No | No | Yes | Department of Public Safety responsible for the direction of the security surveillance camera network and can collaborate with the Police Dept. | No | Yes |
| | District Common Platform | Yes, Genetec | Yes | Cisco | No | No | No | No | Department of Public Safety responsible for the direction of the security surveillance camera network and can collaborate with the Police Dept. | No | No |
| | High School CCTV System | Limited | Yes | Yes, but not all work | Not disclosed | Not disclosed | Yes | Yes | Yes | Yes | Yes |
| | Middle School CCTV System | Limited | Limited | None | Varies. Genetec is one of the systems utilized. | Not disclosed | Yes | limted | Yes | Yes | No |
| | Elementary School CCTV System | Limited - main entrance only | Limited | None | Not disclosed | Varies. Pelco is Primary systems utilized. | Yes | Limted | Yes | Yes | No |
| | District Security Command Center | None | Limited - Integrated with PD | None | None | None | None | None | Department of Public Safety responsible for the direction of the security surveillance camera network and can collaborate with the Police Dept. | None | None |
| **Emergency Management Plan(s)** | Emergency Management Plan | There is a district template available for school to utilize for a common design | Developed under Safety & Security Department | Yes | Was not assessed | Was not assessed | Yes | Yes | Each school and the District maintains an emergency operations plan | Yes | Yes |
| | Emergency Plan Method | Schools create plans based on school policy and procedures | All Hazard | Red, White, & Blue | Was not assessed | Was not assessed | Yes | Yes | | Yes | Yes |
| | EMP District Template Availability | Yes | Developed under Safety & Security Department | No | Was not assessed | Was not assessed | Based on Comprehensive State Plan | Limited | Based on Comprehensive State Plan; Developed under Safety & Security Department | District has an emergency plan established that schools are able to utilize to create their emergency plans | Yes; Incorporate State planning tool and Crowd Management |
| | Lockdown Plan | Shelter In Place | Shelter In Place | Red, White, & Blue | Shelter In Place | A.L.I.C.E. | Shelter In Place | Shelter In Place | Shelter In Place | Shelter In Place | Limted |
| | Fire Drill Plan | Exceed State Mandate | Yes, compliant with state requirements | Yes, compliant with state requirements | Yes, compliant with state requirements | Yes, compliant with state requirements | Exceed State Mandate | Yes, compliant with state requirements | Exceed State Mandate | Exceed State Mandate | Yes |
| | Medical Plan | Schools create plans based on school policy and procedures | Yes, compliant with state requirements | Limited | Was not assessed | Was not assessed | Exceed State Mandate | Yes, compliant with state requirements | Exceed State Mandate | Exceed State Mandate | Exceed State Mandate |

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| Security Obervations | City/Town | Worcester, MA | School District in Western MA | School District in Western MA | Southern MA District | Southern MA District | Norther NY State District | South Shore MA District School | Norther NY State District | Norther NY State District | Rhode Island District |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Intrusion System | Varies based on school | Yes | Yes, but not all function | Yes. The high school was recently upgraded in 2012 | Yes | Yes, but not all function | Active Monitor by Stanley | Yes, but not all function. | | Yes |
| | Visitor Management | Sign In Sheet in most schools; Visitor Check-in on computers in others | Sign In Sheet in most schools | Basic sign in sheet; based on the honor system | Sign in sheets are typical. New schools use an electronic system that verifies visitors records on file with the state for sex offenders. | Sign in sheet | Limted | Sign in sheets | Utilize Raptor Ware for visitor management for easy registration. Visitors are given temporary visitor badge once cleared through the Raptor system. It is a temporary sticker that the visitor must wear during the time of visit and return when leaving. | Sign in sheets | Sign in sheets |
| | School Resource Officer (SRO) | Liasion Officers - Limted | Student Support Officers | None | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| | School Resource Officer (SRO) | 7 | 26+ | 0 | 8 | 15 | 11+ | 1 | 70 | approx. 100 | 4 |
| | Exterior Lighting at High Schools | Varied upon school | Good | Varied upon school | Yes | Yes | Good | Good | Varied upon school | Varied upon school | Varied upon school |
| | Exterior Lighting at Middle Schools | Lighting is Poor either around building and/or exterior of building | Good | Lighting is Poor either around building and/or exterior of building | Yes, but not consistant. New schools have better coverage. | Yes, but not consistant. New schools have better coverage. | Good | Good | Varied upon school | Varied upon school | Varied upon school |
| | Exterior Lighting at Elementary Schools | Lighting is Poor either around building and/or exterior of building | Good | Lighting is Poor either around building and/or exterior of building | Yes, but not consistant. New schools have better coverage. | Yes, but not consistant. New schools have better coverage. | Good | Good | Varied upon school | Varied upon school | Varied upon school |
| | Exterior Lighting at Other Buildings | Varied | Varied | Poor | Good | Good | Good | Good | Varied | Varied | Varied |
| | Secured Entry Vestibule with 2-Way Communication | Limited among all schools. New schools lacking inner perimeter. Older buildings have main door only. | Limited among all schools. New schools lacking inner perimeter. Older buildings have main door only. | Inadequate at all schools. | Yes, in new school designs | Inadequate at all schools. | Yes | Yes | Yes | Limited | No |

*Note:
Many schools have elementary and middle school grades in one building; the numbers reflect the count

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## Appendix C – About Good Harbor

*Good Harbor Techmark (GHT)* is a registered small business headquartered in Norwell, MA. GHT is the product of the merger of two established and highly regarded companies, Good Harbor Consulting, LLC (Good Harbor) and Techmark Security Integration, Inc. (Techmark).

In 2002, Richard Clarke, Roger Cressey, and John Tritak, all of whom served in senior National Security advisory positions at the White House, founded Good Harbor as a boutique security and risk management consultancy. The firm leveraged its' national security and broader security expertise to build a strategic consulting practice that gave clients a more informed understanding of risk management.



GHT provides effective vendor neutral consulting
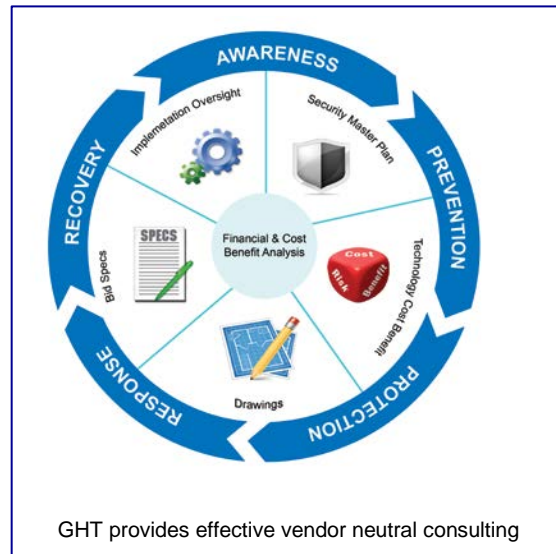
Techmark was founded as an independent security design and engineering services company. For over 20 years, the organization grew to become a premier leader in designing and implementing exclusive vendor-neutral security concepts to clients throughout the world.

In 2009, Good Harbor acquired Techmark to create a more holistic approach to organizational resiliency that emphasized the mitigation of both physical and logical threats to enterprise assets. Due to unparalleled growth and the need to increase efficiencies, Good Harbor recently created four independently owned and operated companies who operate collectively and consistently with the organization's core competencies. One of these entities was Good Harbor Techmark.

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