

**PROVIDING FIRE PROTECTION SERVICES
 FOR PRIVATE, PUBLIC, AND GOVERNMENT
 FACILITIES FOR MORE THAN 30 YEARS**

We are your direct line to an expert.

Our Services Include:

- Analyze existing suite configurations for compliance with NFPA 101 Life Safety Code
- Case Support Research
- Code Consulting
- Codes and Standards Development
- Codes and Standards Client Advocacy
- Codes Committee Participation
- Commissioning
- Construction Administration Support
- Egress map development
- Egress Modeling
- Engineering Analysis
- Evacuation program development and training
- Expert Witness Testimony
- Fire Alarm System Design
- Fire Modeling
- Fire Protection Asset Management review
- Fire Protection Documentation review and organization
- Fire Protection Water tank design and analysis
- Fire pump performance analysis
- Fire Suppression System Design
- Generate NFPA 101 Life Safety Code equivalency /waivers for submission to accrediting organizations / CMS
- Hazard Materials Analysis
- Life Safety Assessment using electronic survey tool
- Litigation Support
- Mass Notification System Design
- NFPA 25 Inspection, Testing, and Maintenance program gap analysis
- Perform existing locking arrangement assessment per requirements of NFPA 101 and State / City Building Code
- Performance-Based Design
- Plan review services
- Product Development Support
- Product Testing & Evaluation / Representation
- Risk Analysis
- Seminar Development
- Smoke Control System Modeling
- Staff training
- Stair Pressurization System Modeling
- Systems Design
- Third Party Review
- Water flow testing support (standpipe, main drain, etc.)
- Water supply analysis and design
- Zoned evacuation program implementation

Since 1986, we've been meeting our clients' needs with focus and innovation. As our client, you get the best of both worlds—the best of a large and a small company. You'll receive the superior fire protection and life safety engineering design and consulting services you would expect from the industry's renowned authority on codes and standards, delivered in a uniquely responsive and personal package.



EXPERTLY ENGINEERING SAFETY FROM FIRE®

Company Capability Statement

CORPORATE OVERVIEW:

Koffel Associates, Inc. is an independent fire protection engineering and code consulting firm established in Maryland in 1986, specializing in a broad range of fire protection engineering design and code consulting services, locally, nationally, and internationally. Our fire protection engineering design and consulting expertise results from years of experience and the extensive list of NFPA Technical Committee positions either currently or recently held by our engineers. As codes and standards continue to change, this close involvement in the development process enables us to develop innovative engineering solutions and assists us in our ability to understand and negotiate with code enforcement officials.

A small business, several of our engineers previously served as code officials and fire protection engineers for regulatory agencies, including the Maryland State Fire Marshal's Office. One of our engineers serves as NFPA *Life Safety Code*® (LSC) instructors, worldwide. Two of our engineers co-authored the Statement of Conditions Manual, 2000 *Life Safety Code*® Workbook and Study Guide for Health Care Facilities. Our thorough knowledge of the model building codes and the LSC, along with our ability to incorporate the rationale of these codes and standards, are essential to our work and clients.

We provide design and consulting services for new, expansion and renovation public and private health care construction projects, as well as Joint Commission Statement of Conditions. Our high repeat client ratio is directly related to our established track record, proven capacity to complete multiple concurrent tasks in different geographical locations, responsiveness, quality, and knowledge.

Some of our services include:

- Fire protection system design and analysis, including fire alarm, mass notification systems, automatic sprinkler and standpipe, fire pump and clean agent, and integration with architectural features
- Surveys and evaluations of existing buildings to ensure compliance with industry best standards; use of digital survey tool with customize software to maximize efficiency during our life safety assessments for Joint Commission accreditation compliance
- Analysis of existing fire protection systems
- Application of the Fire Safety Evaluation System and development of other equivalencies
- Preparation of code compliance plans and reports
- Building and fire code consulting, including performance-based building design and evaluation, and fire modeling and evaluation for development of equivalencies or for support of performance-based code applications
- Fire, life safety and building code reviews of designs, including those on behalf of Authority Having Jurisdiction (AHJ)
- Construction Administration services including site surveys, punch list development, commissioning, testing and acceptance, third party surveys
- Negotiations with code officials
- Building codes, fire protection and Life Safety Code® course development and instruction

EXPERTISE:

All fire protection engineers have BS Fire Protection Engineering degrees from the University of Maryland.

CODES

Small Business; CAGE: 1J873; NAIC: 541330; SIC: 8711

Principals:

William E. Koffel, P.E., FSFPE, Senior Director of Special Projects:

BS Fire Protection Engineering, University of Maryland, College Park 1979; known internationally as an expert in the NFPA 101® Life Safety Code®, building codes, and fire protection systems. **Committees:** Several Committees of the Life Safety Code,

NFPA 101 and NFPA 5000 including: Chair Life Safety Correlating Committee; Technical Committee on Means of Egress (Past Chair); Correlating Committee on Health Care Facilities; Technical Committee on Automatic Sprinkler Discharge Criteria; Technical Committee on ITM for Water-Based Fire Protection Systems (Chair); Technical Committee on Fire Doors and Windows; Technical Committee on Fundamentals of Fire Alarm and Signaling (Principal); Technical Committee on Contents and Furnishings; Technical Committee on Fire Tests; ICC Means of Egress and Existing Buildings Code Development Committees; American Society for Hospital Engineering Codes and Safety Committee; Tau Beta Pi; West Friendship Volunteer Fire Department, and Advisory Committee on Structural Safety of Dept. of V.A. Facilities, Board of Director for the National Council of Governments on Building Codes and Standards.

Sharon S. Gilyeat, P.E., Director:

BS Fire Protection Engineering, University of Maryland, College Park 1979; served for eight years as the fire protection engineer and manager for the Bureau of Engraving and Printing and the U.S. Printing Office; is active in the NFPA Codes and Standards development process and a past Maryland State Fire Commissioner. **Committees:** NFPA 45 Laboratories Using Chemicals (LAB-AAA); NFPA 82 Incinerator and Waste and Linen Handling Systems; NFPA 99 Health Care Facilities: HealthCare Emergency Management and Security (Current Chair); NFPA 115 Laser Fire Protection; NFPA 101 Fundamentals; NFPA 5000 Fundamentals; National Fire Protection Association's Industrial Section; Fire Protection Engineering Academic Honorary Society; Maryland Building Rehabilitation Code Council, Commission Representative; President, Chesapeake Chapter, Society of Fire Protection Engineers, 1990-1991

Clay P. Aler P.E., Director:

BS Fire Protection Engineering, University of Maryland, College Park 1987, and M. Eng Fire Protection Engineering in 2002; served as the fire protection engineer for almost eight years with the state of Maryland. **Committees:** National Fire Protection Association (NFPA) Technical Committees on: NFPA 101® & 5000, Detention and Correctional Facilities (Principal); NFPA 101 & 5000, Education and Daycare Facilities (Principal); NFPA 101 & 5000, NFPA 150 Animal Housing Facilities (Principal); NFPA 214 Water Cooling Towers (Principal).

RECREATION FACILITY EXAMPLES:

Orioles Park Suite Level Rehab - Consulting, Baltimore, MD

The project involved a partial rehabilitation of the suite level of Orioles Park in Baltimore, MD. Several existing suites were gutted to create two (2) open air bars located at opposite ends of the suite level. Concurrent to this rehabilitation, the existing exterior seats on the suite level were replaced with wider more comfortable seating. Koffel provided fire protection and code consulting services to evaluate the proposed rehabilitation project for compliance with the MBRC and its referenced documents, i.e. 2006 International Existing Building Code (IEBC) and 2009 Life Safety Code® (LSC), as adopted by the State of Maryland.

M&T Bank Stadium Phase 2 Renovations - Consulting, Baltimore, MD

The project consisted of general renovations throughout the common areas of the Upper Concourse and Press levels and included two mobile team store locations and five fixed concession's locations. The Upper Concourse and the Concessions renovations were submitted as two separate permits to Baltimore City. The 2013 Building, Fire, and Related Codes of Baltimore City, including adoption and amendment of the 2012 International Building Code, applied to this project. Koffel provided fire protection and code consulting services. More specifically, the scope of services included conducting a cursory review of the proposed 80-90% renovation drawings and preparation of a code summary addressing the specific fire protection and life safety phase requirements. Additionally, a backcheck review of the completed drawings was conducted.



M&T Bank Stadium, Baltimore, MD

Laurel Park Racetrack Grandstand Permit Assistance, Laurel, MD

The Laurel Park Racetrack consisted of an existing grandstand constructed of wood construction. Based on a meeting with Anne Arundel County, the existing appeared to be constructed of Type IIIB construction and will continue to be used as a mixed-use structure containing Assembly (A-4), Business (B) and Storage (S-1) occupancies. The building was partially sprinkler protected. Koffel provided fire protection and code consulting services to assist the architect with obtaining the applicable permits from the Anne Arundel County Code Officials. Scope of services included site survey of the existing building and use of combustible construction, preparation of an egress analysis of the change from fixed seating to platforms in the existing grandstand, and preparation of code modifications providing modifications and proposed equivalencies for the use of combustible construction in the building.



Laurel Park Racetrack

CORPORATE OVERVIEW

INTRODUCTION

Koffel Associates is an independent fire protection engineering and code consulting firm established in Maryland in 1986, specializing in a broad range of fire protection engineering design and code consulting services, to public and private clients worldwide. As a small business we deliver superior fire protection and life safety engineering design and consulting services in a uniquely responsive and personal package to our clients.

Our fire protection engineering design and consulting expertise results from years of experience and the extensive number of NFPA and ICC Technical Committee positions either currently or recently held by our engineers. Several of our engineers previously served as code officials and fire protection engineers for regulatory agencies, including the Maryland State Fire Marshal's Office, and currently serve as certified instructors for the National Fire Protection Association, worldwide. Our thorough knowledge of the building, life safety, and fire codes and standards, along with our ability to incorporate the rationale of these codes and standards, are essential to our clients.

Koffel Associates provides design and consulting services for new, expansion, and renovation construction projects in the public and private sector. Our services include:

- Building, life safety and fire code consulting, including performance-based building design and evaluation, and fire modeling
- Building, life safety, and fire code reviews for new construction and renovation projects
- Surveys and evaluations of existing buildings to ensure compliance with industry best standards and applicable building and fire codes
- Code compliance plans and reports preparation
- Code equivalencies or waivers preparation
- Negotiations with code officials
- Fire protection system analysis and design, including fire alarm and detection, mass notification, automatic sprinkler and standpipe, water supply, fire pump, and clean agent
- Fire protection water supply testing and evaluation
- Fire protection system third party design review and approval
- Existing fire protection systems analysis and evaluation
- Smoke control system evaluation and design, including atrium, zoned, and stair pressurization systems
- Construction Administration services including shop drawing review and approval, site surveys and punch list development, commissioning, testing and acceptance, and third party surveys
- Development and presentation of fire protection and life safety course material

RESOURCES

Koffel Associates' technical and computer aided design services are accompanied by our in-house team of professionals:

- 10 Fire Protection Engineers, all of whom are Professional Engineers, licensed in multiple states.
- 1 Registered Mechanical Engineer/Design Engineer
- 2 Fire Protection Engineers

CODE DEVELOPMENT EXPERIENCE

One of the factors that sets Koffel Associates' personnel apart from our competitors is our active participation in the codes and standards development process — effecting change, developing design guidelines, and protecting people and structures. The knowledge gained by this active participation is what makes Koffel Associates qualified to bring innovative fire protection approaches to our projects. By incorporating the rationale of the codes and standards, the most current philosophy and requirements can be applied to all projects. Our engineers are very active in the development of building and fire codes and in particular, *NFPA 101[®]*, *The Life Safety Code[®]*.

Koffel Associates actively participates in the following professional codes and standards-making organizations:

- American Association of Engineering Society (AAES) *Former Executive Director, Board of Directors*
- National Council of Governments on Building Codes and Standards (NCGBCS) *Board of Directors*
- Automatic Fire Alarm Association (AFAA) *Board of Directors, Vice President*
- American Society for Healthcare Engineering (ASHE)
- American Society for Testing and Materials (ASTM)
- International Code Council (ICC)
- International Code Council Code Technology Committee (ICC CTC)
- National Fire Protection Association (NFPA)
- Society of Fire Protection Engineers (SFPE)
- Underwriter's Laboratory (UL)

An overview of the relevant code development activity, as well as design guidelines generated from our involvement in numerous SFPE and industry task groups, is as follows:

American Society for Testing and Materials (ASTM)

- E-5 Fire Standards
- E-6 Performance of Buildings
- Technical Advisory Committee on Certification of Firestop Personnel

International Code Council (ICC)

- Means of Egress Code Development (IEBC, IBC, IFC)
- Existing Building Code Development (IEBC)
- ICC Standard Consensus Committee on Commissioning
- Code Technology Committee (CTC)
- Technical Committee on Commissioning and Integrated Testing

Koffel Associates' fire protection engineering professionals also work with, attend, and appear before the International Code Council Evaluation Services (ICC-ES) Committee, the United States' leader in evaluating building products for compliance with code.

National Fire Protection Association (NFPA)

- NFPA Correlating Committees
 - NFPA 13, Automatic Sprinkler System
 - NFPA 72, Signaling Systems for the Protection of Life and Property
 - NFPA 99, Health Care Facilities Code
 - *NFPA 101[®], Safety to Life, Chair*
 - *NFPA 5000[®], Building Construction and Safety Code[®]*
- NFPA Technical Committees
 - NFPA 1, Fire Code
 - NFPA 3, Commissioning of Fire Protection and Life Safety Systems
 - NFPA 4, Integrated Testing of Fire Protection and Life Safety Systems
 - NFPA 10, Portable Fire Extinguishers
 - NFPA 13, Sprinkler System Discharge Criteria
 - NFPA 25, Inspection, Testing and Maintenance of Water-Based Systems, *Chair*
 - NFPA 30, Flammable and Combustible Liquids Code
 - Storage and Warehousing of Containers and Portable Tanks
 - NFPA 72, National Fire Alarm and Signaling Code
 - Fundamentals of Fire Alarm and Signaling Systems
 - Emergency Communication Systems
 - NFPA 75, Electronic Computer Systems
 - NFPA 80 and NFPA 105, Fire Doors and Windows
 - NFPA 82, Incinerators and Waste and Linen Handling Systems, *Former Chair*
 - NFPA 92 & NFPA 204, Smoke Management Systems
 - NFPA 99, Health Care Facilities
 - Health Care Emergency Management and Security
 - Fundamentals
 - Piping Systems, *Chair*
 - NFPA 101[®], Life Safety Code[®]
 - Board and Care Facilities, *Former Chair*
 - Detention & Correctional Occupancies
 - Fire Protection Features
 - Fundamentals
 - Furnishings and Contents
 - Health Care Occupancies
 - Means of Egress, *Two Former Chairs*
 - Residential Occupancies, *Chair*
 - Business and Mercantile Occupancies
 - Education Occupancies: Educational and Daycare Facilities
 - NFPA 101A, Alternative Approaches to Life Safety (FSES), *Former Chair*
 - NFPA 115, Laser Fire Protection, *Chair*
 - NFPA 130, Fixed Guideway Transit and Passenger Rail Systems
 - NFPA 150, Animal Housing Facilities
 - NFPA 214, Water Cooling Towers
 - NFPA 251 through 290, Fire Tests
 - NFPA 555, 556, 557, Hazard and Risk of Contents and Furnishings
 - NFPA 1122, 1123, 1124, 1125, Pyrotechnics Committee, *Former Chair*
 - NFPA 1037, Fire Marshal Professional Qualifications
 - *NFPA 5000[®], Building Construction and Safety Code[®]*
 - Board and Care Facilities, *Former Chair*
 - Detention & Correctional Occupancies
 - Fire Protection Features
 - Fundamentals
 - Furnishings and Contents

- Health Care Occupancies
- Means of Egress, *Two Former Chairs*
- Residential Occupancies, *Former Chair*
- Business and Mercantile Occupancies
- Education Occupancies: Educational and Daycare Facilities

OTHER POSITIONS AND COMMITTEES

NFPA

- Health Care Section Codes and Standards Committee

NFPA Research Foundation

- Project Technical Panel (PTP) "Fire Pump Field Data Collection and Analysis" Study
- Project Technical Panel (PTP) "Developing a Quantitative Method for Height and Area Limitations" Study
- Project Technical Panel (PTP) "Validation of the Fire Safety Evaluation System (FSES) in the 2013 Edition of NFPA 101A" Study
- Project Technical Panel (PTP) "Evaluating Occupant Load Factors for Ambulatory Health Care Facilities" Study

Underwriters Laboratory

- UL 1994 STP The Standard for Safety of Low Level Path Marking and Lighting Systems
- UL 1821 STP Thermoplastic Sprinkler Pipe and Fittings for Fire Protection Service

Society of Fire Protection Engineers (SFPE)

- Board of Directors, *Former President*
- Design Fire Scenarios
- Education Committee, *Former Chair*
- Educational Advisory Board
- Engineering Registration Committee
- Fire Service Task Group Committee, *Chair*
- Fire Safety in High-Rise Buildings Task Group Committee
- Standards-Making Committee on Design Fire Scenarios
- Fire Protection Engineering and Building Information Modeling (BIM) Task Group Committee
- Corporate 100 Committee, *Chair*
- Editorial Advisory Board

As building and fire codes continue to change, this close involvement in the code development process enables us to develop innovative engineering solutions to many code compliance problems that may occur during design and construction. In addition, our involvement in this process assists us in our ability to understand and negotiate with code enforcement officials.

QUALITY ASSURANCE

Quality Assurance is essential to ensure we honor our commitment to our clients for a quality product. Projects are reviewed by a senior level engineer in accordance with our in-house Quality Assurance Program before being released.

RECREATIONAL FACILITY EXPERIENCE

Koffel Associates has provided all aspects of fire protection and life safety services for the modification, renovation, rehabilitation, and new construction of Recreational Facilities. Some of our projects include:

Design

- FBI William Webster Auditorium Renovation - Design, Washington, DC
- Merriweather Post Pavilion Phase 4B - Performance Based Design, Columbia, MD
- CMS Childcare Center & Auditorium Fire Alarm Modifications - Design, Woodlawn, MD
- Merriweather Post Pavilion Reno Phase 4 - Performance Based Design, Columbia, MD
- Ravens Stadium New Main Distribution Frame Room - Design, Baltimore, MD
- Willows of Potomac Clubhouse Dry Pipe Sprinkler System Replacement - Design
- Wisp Resort New Yurt Structures - Study, Design



Merriweather Post Pavilion, Columbia, MD

Design and Consulting

- UMBC New Event Center and Arena - Design, Consulting, Baltimore, MD
- SSA Woodlawn Annex Fitness Center Expansion - Consulting, Design, Woodlawn, MD



New Events Center & Arena, Baltimore, MD

Consulting

- American Dream Meadowlands Sports Complex Bldgs B&C Str Pressurization - Consulting, East Rutherford, NJ
- Austin Landin Regal Cinema Property Line Review - Consulting
- Baltimore Country Club Citation - Consulting
- Bowie Ice Arena FPEDE Services - Consulting, Bowie, MD
- Catholic University of America Dufour Center Reno - Consulting
- Claret Hall Occupant Load Review - Consulting
- Dejon Winery Rehab - Consulting
- Drama Learning Center Bldg Permit- Consulting, Columbia, MD
- Fairways Towson Community Center Rehab - Consulting
- Hillel @ UMCP FPEDE Services - Consulting
- Homespun Drive Day Care Fire Code Analysis - Consulting
- ION International Training Center Bleacher Separation - Consulting, Leesburg, VA
- Jeffers Hill, Locust Park, Phelps Luck Daycare/Community Center Upgrades - Consulting
- Lanham Skate Center Renovation - Consulting
- Launch Trampoline Park Columbia Hazard Analysis- Consulting
- Laurel Park Racetrack Permit Assistance - Consulting, Survey, Laurel, MD
- Liberty Mountain Ski Resort New Mixed-use Conference Center - Consulting, Carroll Valley, PA
- Longfellow Daycare/Community Center Upgrades - Consulting
- M&T Bank Stadium Phase 2 Renovations - Consulting, Baltimore, MD
- M&T Bank Stadium Reno - Consulting, Baltimore, MD
- Madison Beach Club LSA & Systems Evaluation-Survey, Consulting, Madison, CT
- Merriweather Post Pavilion Expansion Phase 4 - Consulting, Columbia, MD
- Navy Marine Corps Stadium Luxury Suite Addition - Consulting, Annapolis, MD
- New Bleacher @ Georgetown University Cooper Field - Consulting, Washington, DC
- New Hyper Kidz Amusement Center - Code Consulting
- New Kentland Community Center - Consulting
- New Ninja Warrior NinjaBe Gym LS Assessment - Consulting



**Liberty Mountain Resort,
Carroll Valley, PA**



**New Bleachers at Georgetown University
Cooper Field**

- New TopGolf Entertainment Facility National Harbor - Consulting
- New Towson Center Arena Smoke Control Acceptance Testing - Consulting, Towson, MD
- New Towson Center Arena - Consulting, Towson, MD
- New Towson University West Village Commons Phase 1 - Consulting, Towson, MD
- Northwest University New Ryan-Walter Athletics Center - Consulting, Evanston, IL
- Ocean City Convention Ctr New Ballroom Addition - Consulting, Ocean City, MD
- Orioles Park Suite Level Rehab - Consulting, Baltimore, MD
- Ripley's Believe It or Not Harbor Place - Plan Review, Consulting
- Silver Spring Planet Fitness Fit-out - Consulting
- The Performance Barn Athletic Facility Rehab Woodbine - Consulting
- Top Golf Proposed Facility Guarding - Consulting
- Towson Center Racquetball Court Conversion Reno - Consulting, Towson, MD
- Washington College Fitness Center Addition - Consulting, Chestertown, MD
- Xfinity Center Hazardous Room Analysis - Consulting, College Park, MD



M&T Bank Stadium, Baltimore, MD

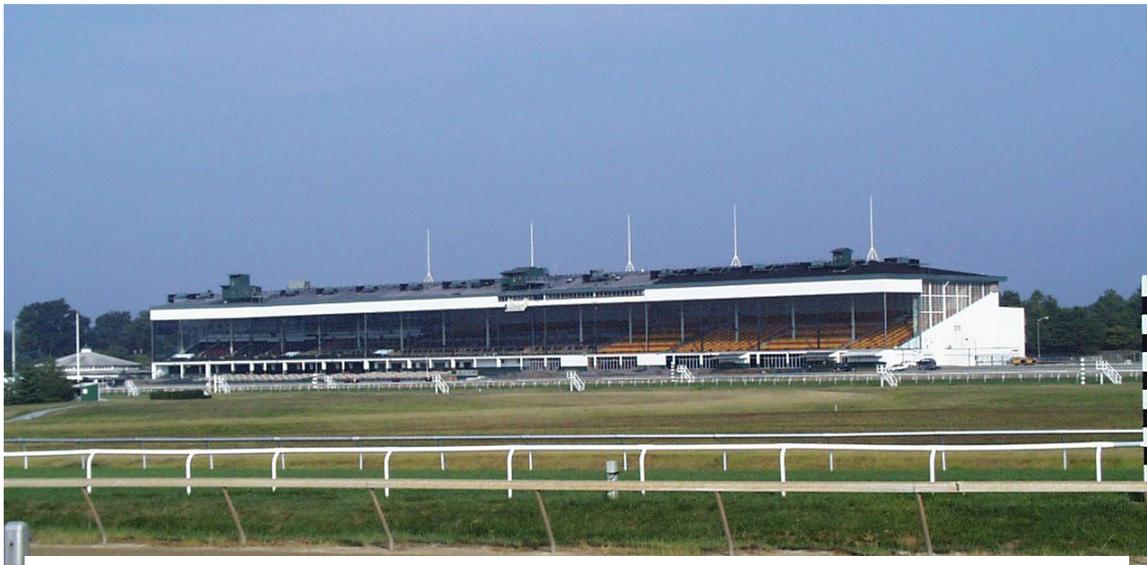
Peer Review

- Disney World Dumbo the Flying Elephant Ride Smoke Control Design - Peer Review
- Disney World Seven Dwarfs Mine Train Ride Smoke Control Design - Peer Review
- King Abdullah Sports City Fire Alarm - Third Party Review
- New Animal Kingdom FOLK Building Smoke Control Design - Peer Review Services
- New Balk Hill Community Center - Peer Review
- Sky Zone Bowie Fire Alarm - Peer Review

MARYLAND STADIUM AUTHORITY EXPERIENCE

Laurel Park Racetrack Grandstand Permit Assistance, Laurel, MD

The Laurel Park Racetrack consisted of an existing grandstand constructed of wood construction. Based on a meeting with Anne Arundel County, the existing appeared to be constructed of Type IIIB construction and will continue to be used as a mixed-use structure containing Assembly (A-4), Business (B) and Storage (S-1) occupancies. The building was partially sprinkler protected. Koffel provided fire protection and code consulting services to assist Bignell Watkins Hasser Architects with obtaining the applicable permits from the Anne Arundel County Code Officials. Scope of services included site survey of the existing building and use of combustible construction, preparation of an egress analysis of the change from fixed seating to platforms in the existing grandstand, and preparation of code modifications providing modifications and proposed equivalencies for the use of combustible construction in the building.



Laurel Park Racetrack

Laurel Park Racetrack Consulting, Laurel, MD

The original grandstand at the Laurel Park Racetrack was constructed in 1911 and an addition was constructed in the 1950's. The existing building appeared to be constructed of Type III-B construction and will continue to be used as a mixed-use structure containing Assembly (A-2 and A-4), Business (B) and Storage (S-1) occupancies. The building was partially sprinkler protected. Based on a recent meeting with Anne Arundel County, it was decided Koffel Associates would provide fire protection and code consulting services to assist Bignell Watkins Hasser Architects with evaluating the existing facility. Scope of Services included two analyses', one to address a short-term plan and a second to address long-term solutions. Each analysis was signed and sealed by a Professional Engineer licensed in the State of Maryland. The services for the Short-Term Plan (Analysis #1) included surveying the existing building egress, fire alarm system, and smoke evacuation system, as well as providing an analysis of the existing construction and fire protection features. The services for the Long-Term Plan (Analysis #2) included providing a second analysis for the long-term plan, detailing possible recommendations to enhance the level of life safety within the existing building without providing sprinkler protection throughout such as provide fire-rated enclosures at stairs that are currently open, providing an additional smoke evacuation systems, providing an additional natural ventilation, upgrades to the existing fire alarm system, and providing an additional means of egress from the building.

Orioles Park Suite Level Rehab - Consulting, Baltimore, MD

The project involved a partial rehabilitation of the suite level of Orioles Park in Baltimore, MD. Several existing suites were gutted to create two (2) open air bars located at opposite ends of the suite level. Concurrent to this rehabilitation, the existing exterior seats on the suite level were replaced with wider more comfortable seating. Koffel provided fire protection and code consulting services to evaluate the proposed rehabilitation project for compliance with the MBRC and its referenced documents, i.e. 2006 International Existing Building Code (IEBC) and 2009 Life Safety Code® (LSC), as adopted by the State of Maryland.

M&T Bank Stadium Phase 2 Renovations - Consulting, Baltimore, MD

The project consisted of general renovations throughout the common areas of the Upper Concourse and Press levels and included two mobile team store locations and five fixed concession's locations. The Upper Concourse and the Concessions renovations were submitted as two separate permits to Baltimore City. The 2013 Building, Fire, and Related Codes of Baltimore City, including adoption and amendment of the 2012 International Building Code, applied to this project. Koffel provided fire protection and code consulting services. More specifically, the scope of services included conducting a cursory review of the proposed 80-90% renovation drawings and preparation of a code summary addressing the specific fire protection and life safety phase requirements. Additionally, a backcheck review of the completed drawings was conducted.



M&T Bank Stadium, Baltimore, MD

M&T Bank Stadium Reno - Consulting, Baltimore, MD

The project consisted of general renovations throughout the Lower Concourse, Team Stores, Talon Pub, and Bacardi Pub at M&T Bank Stadium. Koffel provided fire protection and code consulting services. Scope of services included review of the design drawings and providing a code summary addressing the specific fire protection and life safety phase requirements.

Ravens Stadium New Main Distribution Frame Room - Design, Baltimore, MD

The project involved creation of a new MDF room for AT&T Wi-Fi services in M&T/Ravens Stadium in Baltimore, Maryland. This new MDF room was approximately 400 gsf and housed equipment similar to two existing MDF rooms for two other service providers. The two existing MDF rooms were protected by a dedicated clean agent system for each room. Koffel provided fire protection design services to prepare a clean agent system specification that were consistent with the existing clean agent systems currently protecting the two existing MDF rooms. More specifically, the Scope of Services include site investigation and preparation of clean agent specifications and bid documents, Construction Cost: \$5M