

Village of Bensenville
Board Room
12 South Center Street
DuPage and Cook Counties
Bensenville, IL, 60106

MINUTES OF THE COMMUNITY DEVELOPMENT COMMISSION

June 16, 2014

CALL TO ORDER: The meeting was called to order by Chairman Moruzzi at 6:30p.m.

ROLL CALL : Upon roll call the following Commissioners were present:
Moruzzi, Janowiak, Rodriguez, Pisano, Weldon
Absent: Caira, Rowe
A quorum was present.

STAFF PRESENT: V. Benham, M. Rysavy, S. Viger, C. Williamsen, B. Dooley,

JOURNAL OF PROCEEDINGS:

The minutes of the Community Development Commission Meeting of May 19, 2014 were presented.

Motion: Commissioner Weldon made a motion to approve the minutes as presented. Commissioner Pisano seconded the motion.

All were in favor. Motion carried.

Public Hearing: CDC Case Number 2014-10
Petitioner: Devil Dawg Firearms
Location: 520-522 North York Road
Request: Conditional Use Permits to Allow an Indoor Firing Range and Gunsmith

Motion: Commissioner Janowiak made a motion to open CDC Case No. 2014-10. Commissioner Weldon seconded the motion.

ROLL CALL : Upon roll call the following Commissioners were present:
Moruzzi, Janowiak, Rodriguez, Pisano, Weldon
Absent: Caira, Rowe
A quorum was present.

Chairman Moruzzi opened the Public Hearing at 6:32 p.m.

Chairman Moruzzi held a mass swearing in for those who planned to speak during the Public Hearing.

Village Planner, Victoria Benham, stated a legal notice was published in the Daily Herald on May 31, 2014 and that a certified copy of the legal notice is maintained in the CDC file and available for viewing. Mrs. Benham also stated that Village Staff posted a notice of the Public Hearing sign on the property on May 30, 2014. Mrs. Benham stated on May 30, 2014 Village Staff mailed first class notice of the Public Hearing to taxpayers of record within 250 feet of the property in question.

Commissioner Cairra entered the meeting at 6:34 p.m.

Marshall J. Subach of Hunt, Kaiser, Aranda & Subach, Ltd. was present and previously sworn in by Chairman Moruzzi. Mr. Subach stated he was present reprinting Devil Dawg Firearms. Mr. Subach stated his client plans to have retail gun sales at the shop if approved by the Village. Mr. Subach stated the proposed location is 10,000 square feet. Mr. Subach stated out of the proposed plan, there will be a firing range, gunsmith and a retail shop. Mr. Subach stated his client has submitted a proposed plan that would allow for twenty-four firing stalls, 1,000 square foot retail shop and 1,200 square foot classroom. Mr. Subach stated the operations will occur six days a week from 11:00 am – 11:00 pm with the majority of the business occurring on weekends. Mr. Subach stated there will be no re-loading of ammunition at the facility. Mr. Subach stated inventory will be stored and locked in a steel safe at night. Mr. Subach submitted information pertaining to the proposed firing range into the record. The documents have been attached to the minutes as “Exhibit A”. Mr. Subach also submitted a memo from Carey’s Small Arms Range Ventilation into the record. The memo has been attached to the minutes as “Exhibit B”. Mr. Subach stated a range master will be on site at all times. Mr. Subach stated noise will meet the requirements of those set forth in the I-2 Industrial District. Mr. Subach stated all air requirements will meet those of the IPA. Mr. Subach read the findings of facts into the record.

Mr. Subach stated he agreed with Staff’s recommendation to require all garbage cans be corralled on the subject property. Mr. Subach stated his client does not have control over other tenants in the building and asked that the requirement be amended to require his client to be responsible for corralling his dumpster.

Thomas Yackley of 435 Rance Road, Oswego, Illinois was present and previously sworn in by Chairman Moruzzi. Mr. Yackley stated he begun firearm training in 1998 and progressed into a master firearm trainer. Mr. Yackley stated he had trained Mr. Berges in class and stated he has a great attitude toward safety by a firearm. Mr. Yackley shared his support of the proposed condition use permits.

Chris Williams of 8201 West 183rd Street, Suite B, Tinley Park, Illinois was present and previously sworn in by Chairman Moruzzi. Mr. Williams reviewed the proposed ventilation system. Mr. Williams stated the proposed ventilation system is the exact same design of the proposed firing range at the new Bensenville Police Station. Mr. Williams stated the system operates on 100% outdoor air and 100% exhaust air.

Commissioner Rodriguez asked how the petitioner planned to mitigate noise in the building. Mr. Williams reviewed the proposed build-out and stated the same build will occur as other facilities nationwide. Mr. Williams stated noise has never been an issue at other facilities.

Commissioner Rodriguez asked if there are plans for additional lighting or surveillance for the property. Mr. Berges stated if the proposed plans are approved, he plans to ask for pylons to be installed on the outside of the building to prevent someone from ramming a vehicle through the building. Mr. Berges also stated there will be an alarm system installed. Mr. Berges stated he was in favor of installing surveillance cameras if that was the Village's preference.

Commissioner Rodriguez asked why the hours of operation was selected from 11:00am – 11:00pm. Mr. Berges stated he has received interest from airport employees along with others who may get off work at 8:00pm and not be able to attend classes. Mr. Berges stated firearm sales will end at 8:00pm due to the Illinois State background check being unavailable after 8:00pm.

Public Comment:

Chairman Moruzzi asked if there was any member of the Public that would like to give testimony for CDC Case No. 2014-10.

Brian Dozinskas – 4N485 Briar Lane, Bensenville, Illinois

Mr. Dozinskas was present and sworn in by Chairman Moruzzi. Mr. Dozinskas stated he was in full support of the proposed conditional use permit and stated he planned on taking a class if approved.

Mrs. Benham reviewed the Staff Report and stated Staff recommends approval of the proposed conditional use permits with the following conditions:

1. The Conditional Use Permit Amendment be granted solely to Devil Dawg Firearms, LLC and shall be transferred only after a review by the Community Development Commission (CDC) and approval of the Village Board. In the event of the sale or lease of this property, the proprietors shall appear before a public meeting of the CDC. The CDC shall review the request and in its sole discretion, shall either; recommend that the Village Board approve of the transfer of the lease and / or ownership to the new proprietor without amendment to the Conditional Use Permit, or if the CDC deems that the new proprietor contemplates a change in use which is inconsistent with the Conditional Use Permit, the new proprietor shall be required to petition for a new public hearing before the CDC for a new Conditional Use Permit.
2. The Conditional Use Permits shall cease July 1, 2021.
3. The hours of operation be limited to between 11:00 AM and 11:00 PM.
4. The operation of the firing range and gunsmith is prohibited until fire, life-safety, accessibility and building code requirements are met.
5. Trash enclosures shall be installed to accommodate all tenants.

Commissioner Pisano suggested amending condition number five to require Devil Dawg to enclose their trash container and not be liable for other tenants.

Commissioner Weldon asked if the parking lot was its own P.I.N. or if it was part of the property. Mrs. Benham stated the parking lot and building are its own P.I.N.

Commissioner Caira stated he was in favor with Commissioner Pisano in regards to amending condition number five.

Chairman Moruzzi asked if the Police Department had any objections to the proposed conditional use permits. Detective Dooley was present and previously sworn in by Chairman Moruzzi. Detective Dooley stated the Police Department had no issued with the proposed operations.

Chairman Moruzzi asked the petitioner to review the parking on site.

Chairman Moruzzi asked if Staff had received any concern from tenants of the building in regards to the proposed use. Mrs. Benham stated Staff had received calls regarding the posted notice but did not receive any objections to the proposed operations.

Chairman Moruzzi asked if the Police Department planned to review surveillance footage on a monthly basis. Detective Dooley stated that has not been a practice of the Police Department but if the petitioner wanted assistance from the Police Department, they will be willing to assist. Mr. Berges stated he was supportive of the idea and that he planned to hire an off duty Police Officer as a security office on site when the business is closed.

Motion: Commissioner Weldon made a motion to close CDC Case No. 2014-10. Commissioner Caira seconded the motion.

ROLL CALL: Ayes: Moruzzi, Caira, Janowiak, Rodriguez, Pisano, Weldon

Nays: None

All were in favor. Motion carried.

Chairman Moruzzi closed the Public Hearing at 7:19 p.m.

Motion: Commissioner Janowiak made a motion to approve the findings of facts for the conditional use permit for a gunsmith consisting of:

1. **Traffic:** The proposed use will not create any adverse impact of types or volumes of traffic flow not otherwise typical of permitted uses in the zoning district has been minimized. Gunsmith: There will not be a negative impact on traffic based on the proposed firing range as it will generate volumes of traffic flow similar to permitted use in the zoning district.
2. **Environmental Nuisance:** The proposed use will not have negative effects of noise, glare, odor, dust, waste disposal, blockage of light or air or other adverse environmental effects of a type or degree not characteristic of the historic use of the property or permitted uses in the district. Gunsmith: The proposed use as a gunsmith will not generate any negative effects.
3. **Neighborhood Character:** The proposed use will fit harmoniously with the existing character of existing permitted uses in its environs. Any adverse effects on environmental quality, property values or neighborhood character beyond those normally associated with permitted uses in the district have been minimized. Gunsmith: The operation of a gunsmith will fit harmoniously with the similar industrial uses found within the subject building.
4. **Use Of Public Services And Facilities:** The proposed use will not require existing community facilities or services to a degree disproportionate to that normally expected of permitted uses in the district, nor generate disproportionate demand for new services or facilities in such a way as to place undue burdens upon existing development in the area. Gunsmith: The proposed use will not require additional public services or provide a strain on the existing public facilities.
5. **Public Necessity:** The proposed use at the particular location requested is necessary to provide a service or a facility which is in the interest of public convenience, and will contribute to the general welfare of the neighborhood or community. Gunsmith: Due to the recent passage of the Concealed Carry law, there is a new public necessity for training and certification facilities for firearms.
6. **Other Factors:** The use is in harmony with any other elements of compatibility pertinent in the judgment of the commission to the conditional use in its proposed location. At CDC's discretion to include and discuss other factors.

Commissioner Weldon seconded the motion.

ROLL CALL: Ayes: Moruzzi, Caira, Janowiak, Rodriguez, Pisano, Weldon

Nays: None

All were in favor. Motion carried.

Motion: Commissioner Weldon made a motion to approve the findings of facts for the conditional use permit for a firing range consisting of:

1. **Traffic:** The proposed use will not create any adverse impact of types or volumes of traffic flow not otherwise typical of permitted uses in the zoning district has been minimized. Firing Range: There will not be a negative impact on traffic based on the proposed firing range. The applicant has indicated that a maximum of 34 people will be at the subject location at any given time. Adequate parking can be found on site and therefore will not negatively impact any traffic traveling along York Road or Beeline Drive.
2. **Environmental Nuisance:** The proposed use will not have negative effects of noise, glare, odor, dust, waste disposal, blockage of light or air or other adverse environmental effects of a type or degree not characteristic of the historic use of the property or permitted uses in the district. Firing Range: The proposed firing range will fully comply with State and Federal regulations and will be self-contained within the interior of the existing building. A separate ventilation system with HEPPA filters for the range that will meet the existing EPA and OSHA air quality standards for ranges. Due to the sound proofing of the firing range, it will not negatively impact any neighboring tenants.
3. **Neighborhood Character:** The proposed use will fit harmoniously with the existing character of existing permitted uses in its environs. Any adverse effects on environmental quality, property values or neighborhood character beyond those normally associated with permitted uses in the district have been minimized. Firing Range: The operation of a firing range will fit with the existing character of industrial uses found in proximity to the subject location.

4. **Use Of Public Services And Facilities:** The proposed use will not require existing community facilities or services to a degree disproportionate to that normally expected of permitted uses in the district, nor generate disproportionate demand for new services or facilities in such a way as to place undue burdens upon existing development in the area. Firing Range: The proposed use will not require additional public services as it will be located within the existing masonry building.
5. **Public Necessity:** The proposed use at the particular location requested is necessary to provide a service or a facility which is in the interest of public convenience, and will contribute to the general welfare of the neighborhood or community. Firing Range: Due to the recent passage of the Concealed Carry law, there is a new public necessity for training and certification facilities for firearms.
6. **Other Factors:** The use is in harmony with any other elements of compatibility pertinent in the judgment of the commission to the conditional use in its proposed location. At CDC's discretion to include and discuss other factors.

Commissioner Caira seconded the motion.

ROLL CALL:

Ayes: Moruzzi, Caira, Janowiak, Rodriguez, Pisano, Weldon

Nays: None

All were in favor. Motion carried.

Motion:

Commissioner Weldon made a motion to approve the conditional use permit for a gunsmith with the amended conditions:

1. The Conditional Use Permit Amendment be granted solely to Devil Dawg Firearms, LLC and shall be transferred only after a review by the Community Development Commission (CDC) and approval of the Village Board. In the event of the sale or lease of this property, the proprietors shall appear before a public meeting of the CDC. The CDC shall review the request and in its sole discretion, shall either; recommend that the Village Board approve of the transfer of the lease and / or ownership to the new proprietor without amendment to the Conditional Use Permit, or if the CDC deems that the new proprietor contemplates a change in use which is inconsistent with the Conditional Use Permit, the new proprietor shall be required to petition for a new public hearing before the CDC for a new Conditional Use Permit.
2. The Conditional Use Permits shall cease July 1, 2021.
3. The hours of operation be limited to between 11:00 AM and 11:00 PM.
4. The operation of the firing range and gunsmith is prohibited until fire, life-safety, accessibility and building code requirements are met.
5. Trash enclosure shall be installed to accommodate Devil Dawg Firearms, LLC.

Commissioner Janowiak seconded the motion.

ROLL CALL:

Ayes: Moruzzi, Caira, Janowiak, Rodriguez, Pisano, Weldon

Nays: None

All were in favor. Motion carried.

Motion:

Commissioner Weldon made a motion to approve the conditional use permit for a firing range with the amended conditions:

1. The Conditional Use Permit Amendment be granted solely to Devil Dawg Firearms, LLC and shall be transferred only after a review by the Community Development Commission (CDC) and approval of the Village Board. In the event of the sale or lease of this property, the proprietors shall appear before a public meeting of the CDC. The CDC shall review the request and in its sole discretion, shall either; recommend that the Village Board approve of the transfer of the lease and / or ownership to the new proprietor without amendment to the Conditional Use Permit, or if the CDC deems that the new proprietor contemplates a change in use which is inconsistent with the Conditional Use Permit, the new proprietor shall be

required to petition for a new public hearing before the CDC for a new Conditional Use Permit.

2. The Conditional Use Permits shall cease July 1, 2021.
3. The hours of operation be limited to between 11:00 AM and 11:00 PM.
4. The operation of the firing range and gunsmith is prohibited until fire, life-safety, accessibility and building code requirements are met.
5. Trash enclosure shall be installed to accommodate Devil Dawg Firearms, LLC.

Commissioner Pisano seconded the motion.

ROLL CALL:

Ayes: Moruzzi, Caira, Janowiak, Rodriguez, Pisano, Weldon

Nays: None

All were in favor. Motion carried.

Public Hearing:

CDC Case Number 2014-12

Petitioner:

American Tower Corporation on Behalf of Verizon Wireless

Location:

515 Thomas Drive

Request:

Conditional Use Permit to Allow Antenna Installation over 35' in Height.

Motion:

Commissioner Caira made a motion to open CDC Case No. 2014-11. Commissioner Pisano seconded the motion.

ROLL CALL :

Upon roll call the following Commissioners were present:

Moruzzi, Caira, Janowiak, Rodriguez, Pisano, Weldon

Absent: Rowe

A quorum was present.

Chairman Moruzzi opened the Public Hearing at 7:26 p.m.

Village Planner, Victoria Benham, stated a legal notice was published in the Daily Herald on May 31, 2014 and that a certified copy of the legal notice is maintained in the CDC file and available for viewing. Mrs. Benham also stated that Village Staff posted a notice of the Public Hearing sign on the property on May 30, 2014. Mrs. Benham stated on May 30, 2014 Village Staff mailed first class notice of the Public Hearing to taxpayers of record within 250 feet of the property in question.

Courtne Swearingen of 10700 West Higgins Road, Suite 240, Rosemont, Illinois was present and previously sworn in by Chairman Moruzzi.

Ms. Swearingen stated the proposed conditional use permit would allow for the installation of an additional three antennas to help increase data service for Verizon Wireless in the area. Ms. Swearingen read the findings of fact into the record.

There were no questions from the Commissioners.

Chairman Moruzzi asked if there was any member of the audience that would like to speak on behalf of CDC Case No. 2014-12. There were none.

Mrs. Benham reviewed the Village Staff report and stated Staff recommends approval of the proposed conditional use permit with the following conditions:

1. The Conditional Use Permit Amendment be granted solely to American Tower Corporation on behalf of Verizon Wireless and shall be transferred only after a review by the Community Development Commission (CDC) and approval of the Village Board. In the event of the sale or lease of this property, the proprietors shall appear before a public meeting of the CDC. The CDC shall review the request and in its sole discretion, shall either; recommend that the Village Board approve of the transfer of the lease and / or ownership to the new proprietor without amendment to the Conditional Use Permit, or if the CDC deems that the new proprietor contemplates a change in use which is inconsistent with the Conditional Use Permit, the new proprietor shall be required to petition for a new public hearing before the CDC for a new Conditional Use Permit.
2. The antennas be erected in substantial compliance with the plans submitted with the application prepared by Edge Consulting Engineers, Inc. dated 02.27.14.

Motion: Commissioner Janowiak made a motion to close CDC Case No. 2014-12. Commissioner Pisano seconded the motion.

ROLL CALL: Ayes: Moruzzi, Caira, Janowiak, Rodriguez, Pisano, Weldon

Nays: None

All were in favor. Motion carried.

Chairman Moruzzi closed the Public Hearing at 7:37 p.m.

Motion:

Commissioner Janowiak made a motion to approve the findings of facts for the conditional use permit consisting of:

1. **Traffic:** The proposed use will not create any adverse impact of types or volumes of traffic flow not otherwise typical of permitted uses in the zoning district has been minimized. **No unusual increase in traffic volume is expected from the proposed additional antennas on the property.**
2. **Environmental Nuisance:** The proposed use will not have negative effects of noise, glare, odor, dust, waste disposal, blockage of light or air or other adverse environmental effects of a type or degree not characteristic of the historic use of the property or permitted uses in the district. **There are no environmental nuisances or adverse environmental effects envisioned from the proposed additional antennas. As antennas already exist on the subject property the expansion of the use does not deviate from the previous use of the property.**
3. **Neighborhood Character:** The proposed use will fit harmoniously with the existing character of existing permitted uses in its environs. Any adverse effects on environmental quality, property values or neighborhood character beyond those normally associated with permitted uses in the district have been minimized. **As antennas have been previously located at this site, the additional antennas will fit harmoniously with the existing character of the environs.**
4. **Use Of Public Services And Facilities:** The proposed use will not require existing community facilities or services to a degree disproportionate to that normally expected of permitted uses in the district, nor generate disproportionate demand for new services or facilities in such a way as to place undue burdens upon existing development in the area. **There will be no unusual demands placed upon the municipal services or facilities.**

5. **Public Necessity:** The proposed use at the particular location requested is necessary to provide a service or a facility which is in the interest of public convenience, and will contribute to the general welfare of the neighborhood or community. **The Village is quite desirous of enhancing our residents' quality of life and the additional antenna will provide enhanced cell phone reception for those utilizing the Applicant's services.**
6. **Other Factors:** The use is in harmony with any other elements of compatibility pertinent in the judgment of the commission to the conditional use in its proposed location. **Other factors are subject to the Commission's judgment.**

Commissioner Weldon seconded the motion.

ROLL CALL:

Ayes: Moruzzi, Caira, Janowiak, Rodriguez, Pisano, Weldon

Nays: None

All were in favor. Motion carried.

Motion:

Commissioner Caira made a motion to approve the conditional use permit with the following conditions:

1. The Conditional Use Permit Amendment be granted solely to American Tower Corporation on behalf of Verizon Wireless and shall be transferred only after a review by the Community Development Commission (CDC) and approval of the Village Board. In the event of the sale or lease of this property, the proprietors shall appear before a public meeting of the CDC. The CDC shall review the request and in its sole discretion, shall either; recommend that the Village Board approve of the transfer of the lease and / or ownership to the new proprietor without amendment to the Conditional Use Permit, or if the CDC deems that the new proprietor contemplates a change in use which is inconsistent with the Conditional Use Permit, the new proprietor shall be required to petition for a new public hearing before the CDC for a new Conditional Use Permit.
2. The antennas be erected in substantial compliance with the plans submitted with the application prepared by Edge Consulting Engineers, Inc. dated 02.27.14.

Commissioner Weldon seconded the motion.

ROLL CALL: Ayes: Moruzzi, Caira, Janowiak, Rodriguez, Pisano, Weldon

Nays: None

All were in favor. Motion carried.

Report from Community Development

Mrs. Benham reviewed both recent CDC cases along with upcoming cases.

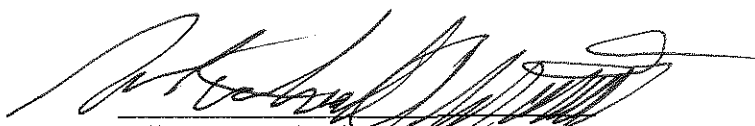
ADJOURNMENT:

There being no further business before the Community Development Commission, Commissioner Caira made a motion to adjourn the meeting. Commissioner Rodriguez seconded the motion.

All were in favor

Motion carried.

The meeting was adjourned at 7:48 p.m.

A handwritten signature in black ink, appearing to read 'Mike Moruzzi', is written over a horizontal line.

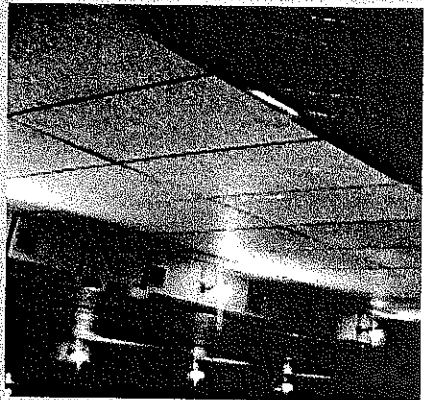
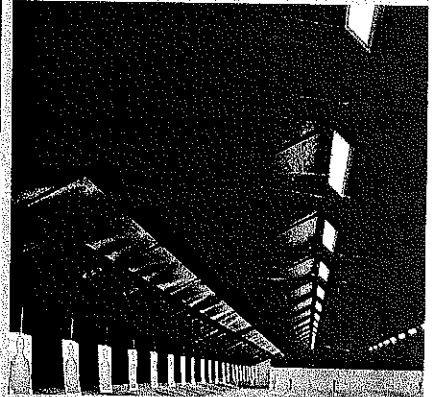
Mike Moruzzi, Chairman
Community Development Commission

INDOOR RANGES

U.S. PATENT # 5822936

SAFETY BAFFLES™

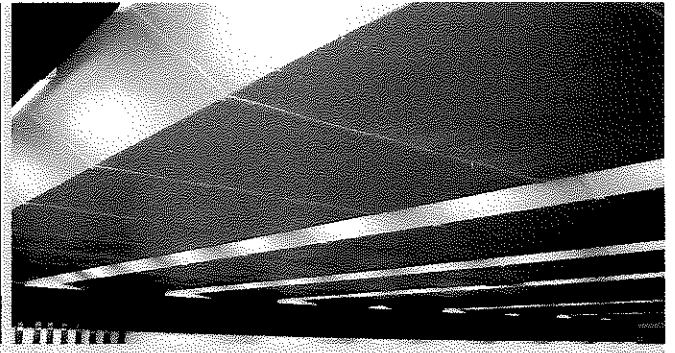
In addition to keeping fired bullets from exiting the range, baffles offer protection for overhead lights, pipes, ventilation ducts, and other structures.



Safety concern on any indoor range is making sure bullets cannot escape the range. Using an innovative combination of steel, wood, and acoustical material, Action Target Safety Baffles provide ballistic protection, sound abatement, and a professional appearance.



To ensure you get exactly what you need for your specific range requirements, Action Target Safety Baffles come in four levels of protection.

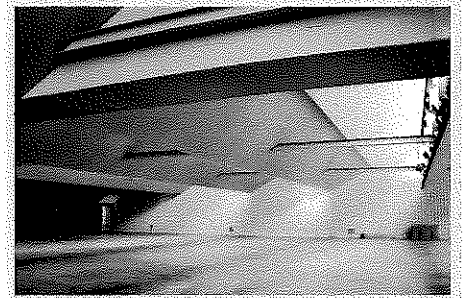
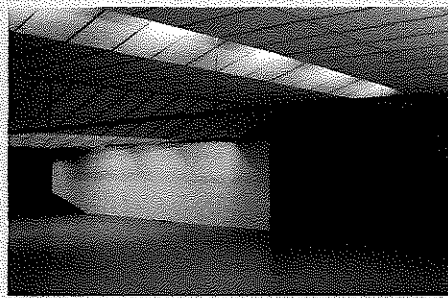


LEVEL 1: Baffles are made of 10-gauge steel and will deflect and contain most standard handgun rounds fired at an angle of at least 45 degrees from perpendicular. Some damage to the steel plate may occur. Repeated rounds impacting in the same area may breach the baffle.

LEVEL 2: Baffles are made of 1/4" mild steel and will deflect and contain standard handgun rounds fired at an angle of at least 45 degrees from perpendicular with little or no damage to the steel plate. Baffle will also deflect and contain standard handgun rounds fired at a perpendicular angle with some potential damage to the steel plate.

LEVEL 3: Baffles are made of 1/4" AR steel and will deflect and contain standard handgun rounds fired at a perpendicular angle with no damage to the steel plate. Baffle will also deflect and contain high power rounds (.223 and .308) fired at an angle of at least 45 degrees from perpendicular. Some damage to the steel plate may occur.

LEVEL 4: Baffles are made of 3/8" AR steel and will deflect and contain standard handgun rounds fired at a perpendicular angle with no damage to the steel plate. Baffle will also deflect and contain high power rounds (.223 and .308) fired at a perpendicular angle. High power rounds fired at a perpendicular angle will cause damage to the steel plate. Repeated high power rounds fired at a perpendicular angle impacting in the same area may breach the baffle.



Performance Characteristics

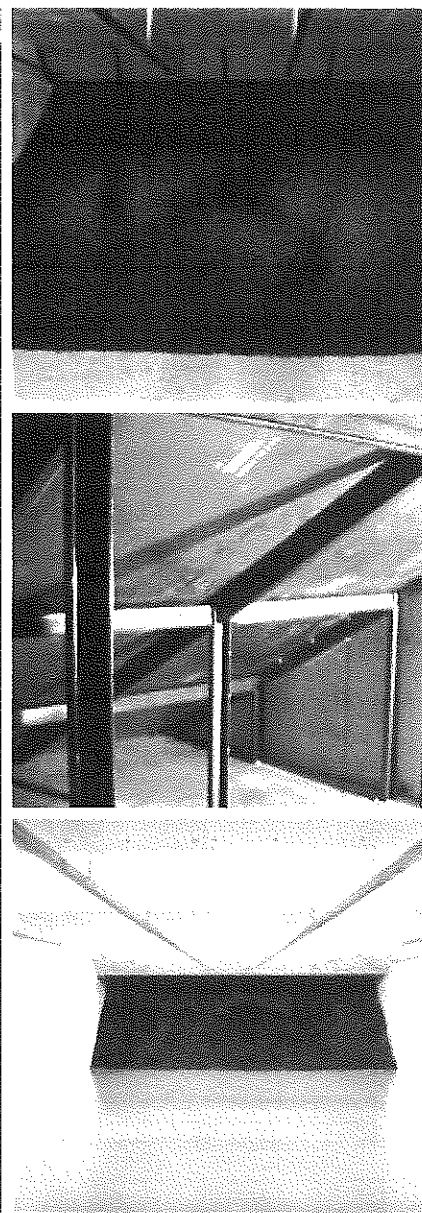
- Nearly impenetrable barrier
- Protect lighting, ventilation, and other utilities and equipment
- Help control acoustics and other sound issues
- Match the grade of baffles to the scope of the range be it handguns or rifles.
- Fixed firing line baffles: calculate line of sight from standing, kneeling, and prone positions
- Tactical movement baffles: entire ceiling must be completely protected
 - not just certain areas
- Baffles are different than deflectors

BULLET TRAPS

U.S. PATENT #'S 6378870 & 6533280

RUBBER BERM TRAP™

Action Target's Rubber Berm Trap (RBT) takes advantage of the practical and beneficial properties of rubber, while eliminating the weaknesses and unnecessary elements of other designs.



When you shoot into a dirt berm, the friction of passing through the dirt is what ultimately stops the bullet. A Rubber Berm Trap works exactly the same way, with the obvious difference being the use of chopped rubber instead of dirt or sand. Because the rubber is a softer collection medium, ricochet and lead dust can be significantly reduced in some applications. Cross-range firing is safer as is firing at extremely close distances. Such benefits make this trap an excellent choice for certain indoor ranges and other low-volume ranges where lead dust is of paramount concern.





8201 W 183rd St; Suite B
 Tinley Park, IL 60487
 Phone: 708-532-2449
 Fax: 708-429-2150
 Website: careyscentral.com

The mechanical systems for the small arms range will be designed to maintain a laminar or even air flow at the shooters respiratory zone throughout the tactical firing range. This design will provide this air flow with a lack of turbulence at all of the shooting positions. There are three primary considerations for the design of small arms ranges:

1. The primary purpose for the ventilation of an indoor firing range is to remove from the respiratory zone of the occupants harmful contaminants created during the firing of a weapon. Exploding primers containing lead styphnate and friction from the lead slug against the gun barrel create airborne lead. There is also carbon monoxide as well as other contaminants created during the firing of a weapon.
2. The second and equally important reason for the properly designed and installed ventilation and control system is to keep the range at a negative pressure to the surrounding base building space. Contaminates created on a small arms range need to be contained within the range space. This will prevent the ingestion of contaminants as well as keeping the surfaces free of contaminants in non-range spaces of the base building.
3. The final purpose is to remove the smoke from the range for properly seeing the targets.

The standards followed and required are summarized below:

NIOSH (National Institute of Occupational Safety and Health) has set the standard for range design. This suggested design criteria has been found to consistently produce conditions that keep exposure in the respiratory zone below the allowable limits for lead exposure.

The following is a summary of the EPA, NIOSH and OSHA standards as they apply to small arms range ventilation:

EPA:

TITLE 40--PROTECTION OF ENVIRONMENT CHAPTER I--ENVIRONMENTAL PROTECTION AGENCY PART 50--NATIONAL PRIMARY AND SECONDARY AMBIENT AIR QUALITY STANDARDS--Table of Contents Sec. 50.12 National primary and secondary ambient air quality standards for lead. National primary and secondary ambient air quality standards for lead and its compounds, measured as elemental lead by a reference method based on appendix G to this part, or by an equivalent method, are: 1.5 micrograms per cubic meter, maximum arithmetic mean averaged over a calendar quarter. (Secs. 109, 301(a) Clean Air Act as amended (42 U.S.C. 7409, 7601(a))) On November 12th, 2008, the EPA issued a final rule that revised the NAAQS for lead and associated ambient air lead monitoring requirements strengthening the requirement to 0.15 micrograms per cubic meter as total suspended particles measured as a three-month rolling average. (73 FR 66964, codified at 40 CFR part 58)

NIOSH and OSHA:

Established by NIOSH, the performance intent for firing range ventilation systems shall meet all the requirements outlined as recommendations and design considerations in HEW publication no. (NIOSH) 76-130, dated December, 1975, entitled "Lead Exposure Design Considerations for Indoor Firing Ranges". This design standard prefers an air flow velocity of 75 feet per minute average on the empty range. This design has consistently provided for the compliance within the established federal standards for airborne inorganic lead concentration limits.

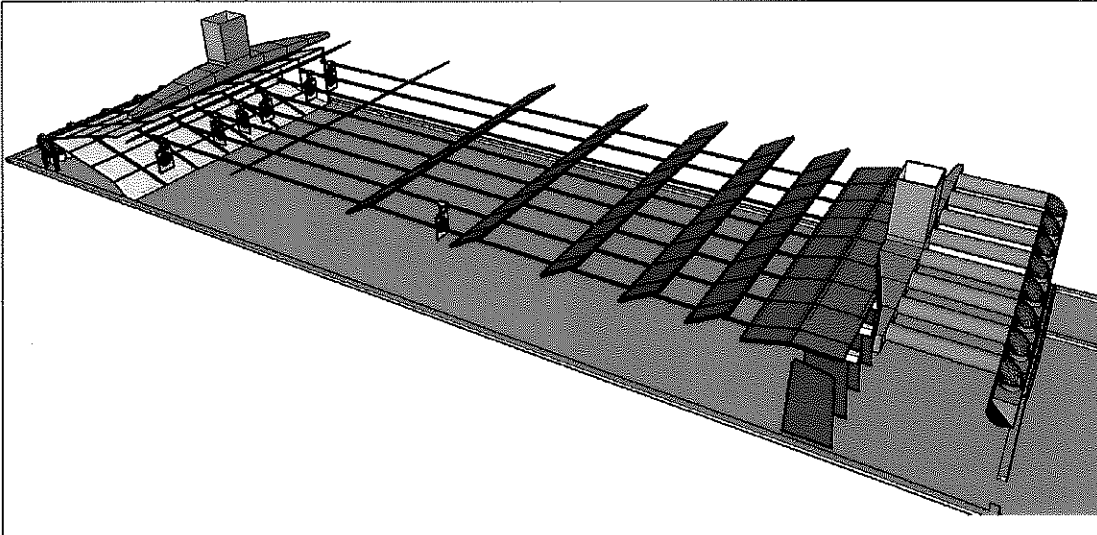
When properly executed, lead concentrations are consistently maintained below the action level of 30 micrograms per cubic meter (30ug/m³) in an area where the limit shall not exceed 50 micrograms of lead per cubic meter (50ug/m³) of air over a time weighted average of eight hours as measured at the respiration zone of the shooters and the range officer when firing from the firing booths per OSHA 29 CFR. 1910.1025 and 1926.62.

The air flow in the range is designed to maintain an average velocity of 75 feet per minute at the firing lines over the entire cross sectional areas. The safety of the occupants is the primary focus of the design for the range mechanical system. The system maintains a negative pressure in the range of 0.05" of static pressure. This is measured between the range and the base building area.

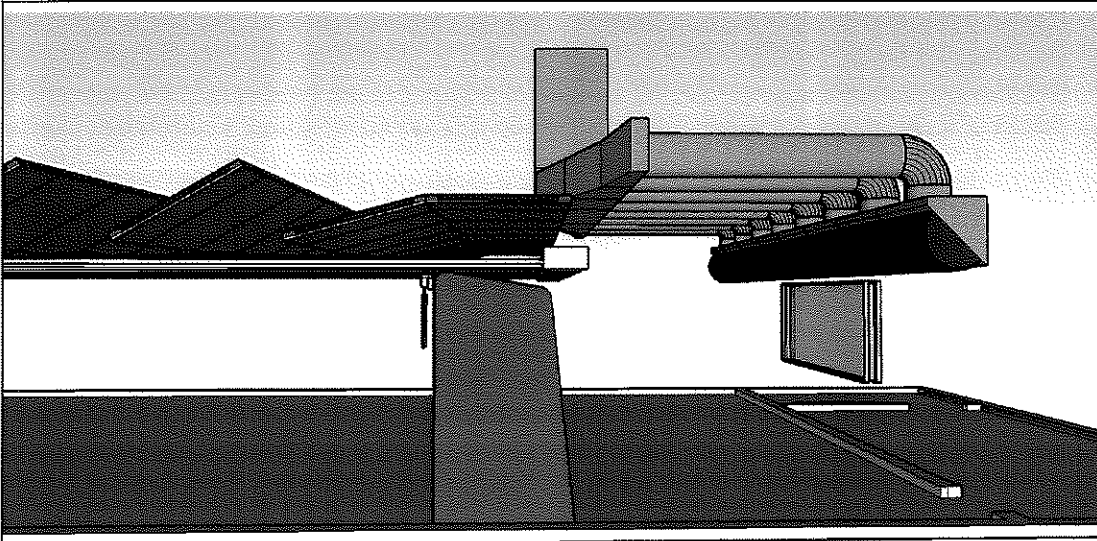
The distribution systems are designed to provide a laminar air flow over the cross sectional area. The design provided by Carey's on this project has been used on over hundreds of ranges that have met and exceeded the NIOSH, EPA, OSHA, United States Navy Unified Force Criteria (UFC), Engineering Technical Letter (ETL), and Government Service Administration (GSA) range design standards for small arms range ventilation.



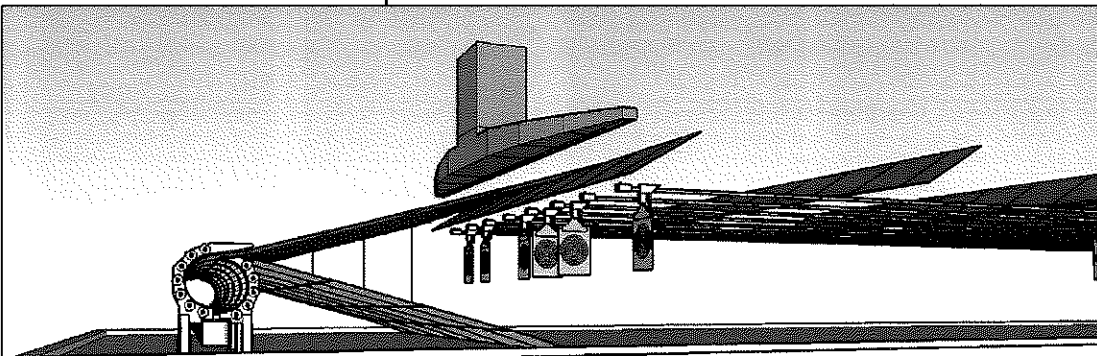
Overview Of Range System



Graduated Supply duct, Round Crossovers, Radial Diffuser Plenum Assembly



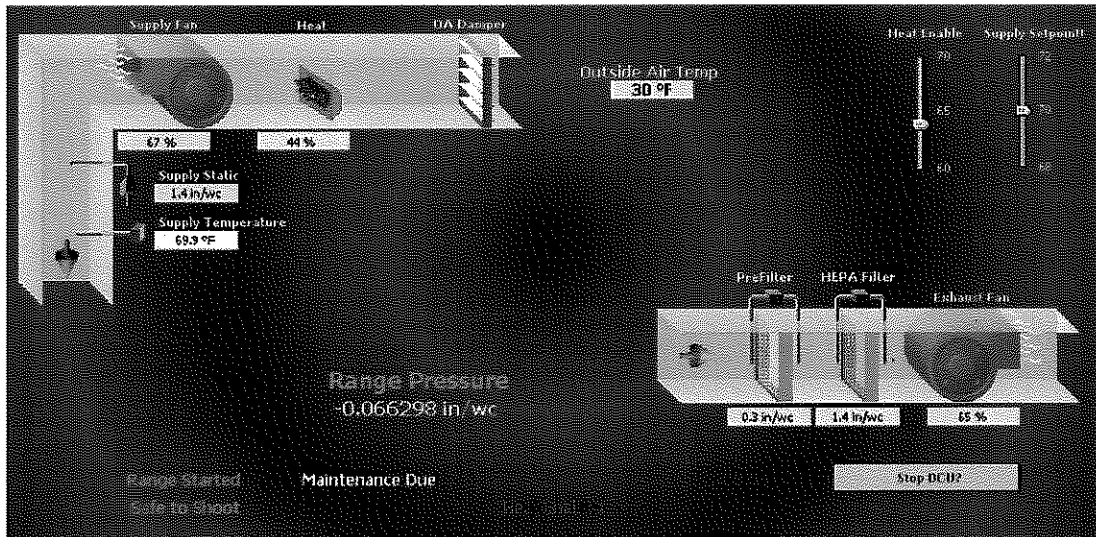
Graduated Exhaust Duct Over Trap Area





Range Ventilation System Controls System

The range ventilation DDC control system is programmed to automatically operate the range ventilation to provide safe conditions for users. The control system will warn users of any maintenance issues and will alarm if the range conditions were to become unsafe. The control system interface will allow users with the proper login credentials to access and view the operation of the range ventilation system. Users can view the system remotely, check set points, check alarms, reset maintenance alarms, or simply view the overall system operation. Below are screen shots of a typical purge style system interface. The system will produce maintenance messages and warning messages of any faults that may occur. This allows field personnel to quickly identify and resolve any and all issues. The system also allows Carey's Technical Support Staff to remotely view and provide support to field personnel. Carey's Technical Support Staff are available 24 hours a day / 7 days a week.



Start Switch: Start	Range Occupied: Yes	Greasy State: Yes	Shutdown: OK	Cover: Closed	System Running: Reset	614.62 hr	300 Hr Maint: Reset	198.75 hr	600 Hr Maint: Reset	614.61 hr	2400 Hr Maint: Reset	614.61 hr	HEPA Filter Running: Reset	423.44 hr	Range Pressure: -0.053229 in/wc	Supply Static: 1.4 in/wc	PreFilter: 0.3 in/wc	HEPA Filter: 1.4 in/wc	Outside Air Damper: Open	Supply Command: 67 %	Supply Frequency: 39.9 Hz	Supply Current: 32.0 A	Supply Voltage: 139 V	Supply Speed: 1184 rpm	Supply Power: 5.8 kW	Supply Total Power: 3812 kW-hr	Supply Fan: OK	Supply Reset: Reset	Last Fault: None	Outside Air: 30 °F	Supply Air: 70.6 °F	Heat Command: 42 %	Exhaust Command: 65 %	Exhaust Frequency: 38.5 Hz	Exhaust Current: 45.6 A	Exhaust Voltage: 134 V	Exhaust Speed: 1149 rpm	Exhaust Power: 6.8 kW	Exhaust Total Power: 4494 kW-hr	Exhaust Fan: OK	Exhaust Reset: Reset	Last Fault: None
---------------------	---------------------	-------------------	--------------	---------------	-----------------------	-----------	---------------------	-----------	---------------------	-----------	----------------------	-----------	----------------------------	-----------	---------------------------------	--------------------------	----------------------	------------------------	--------------------------	----------------------	---------------------------	------------------------	-----------------------	------------------------	----------------------	--------------------------------	----------------	---------------------	------------------	--------------------	---------------------	--------------------	-----------------------	----------------------------	-------------------------	------------------------	-------------------------	-----------------------	---------------------------------	-----------------	----------------------	------------------