

Outdoor Ranges Background Information



Monmouth County range had a 10dB or 50% noise reduction with the Troy System

Troy Acoustics Corporation, a small business, incorporated in the State of Nevada in 1998, is a major supplier of shooting range acoustics for the US military, Federal, Municipal and commercial indoor and outdoor shooting range acoustics.

The patented Troy System is designed to stand up to the elements.

- The Portland Cement based wood-fiber board is waterproof and does not support mold and mildew.
- The system has anti-ricochet and anti-splatter capabilities for errant 5.56 and 7.62 rounds.
- Only acoustic system to receive an EXCELLENT acoustic rating by the USACE Case Study for range noise reduction.

In addition to the basics such as UL approval and Riverbank Acoustics Lab testing, the Troy System has gone through a formal approval process by the US Air Force and was tested by the US Army Corps of Engineers. All certifications and Riverbank Acoustics Lab testing are available at

www.troyacoustics.com

To better assist you this document includes:

- A case history of Monmouth County NJ
- Summary of Certifications
- Past Performance references Outdoor Ranges
- Prequalification Information
- Key Staff Experience
- Past Performance (with photos & test data)

CASE HISTORY:

Monmouth County NJ
Outdoor Range; sidewalls only

PROBLEM: 3 dB reduction required to meet ordinance



SOLUTION: Use of Troy System which resulted in a 10dB or 50% noise reduction.

When Monmouth County NJ had a court order to reduce their noise levels 3 dB on their 30 year old range that was just upgraded, they turned to the Troy Team to provide a solution. According to the General Contractors bidding the job, only Troy Acoustics would guarantee the results. Not only was the Troy System within budget, the noise was reduced 10 dB or half the noise level. The County as well as the neighbors was most pleased.

As mentioned, that range was upgraded with a trap and 3 wooden sidewalls. The major change in addition to the upgrades was the increase in use of the range and the types of new weapons being fired including 5.56 and 7.62 rounds.

Summary of the Patented Troy System Certifications

US Army Corps of Engineers	Received the ONLY acoustic system EXCELLENT ACOUSTIC RATING for use in a shooting range. This is the result of a major Case Study on shooting range acoustics
US Air Force	Only acoustic system approved for anti-ricochet and anti-splatter for 5.56 and 7.62 errant rounds which allows the Troy System to replace two layers of plywood; the current mandate for anti-splatter.
UL approved	Flame spread 0 and smoke developed 0. It is noted that the Fire Marshal must approve this design.
NRC	.85
OUTDOOR USE	The Troy system is designed for outdoor use.

All certification documentation is available at www.troyacoustics.com

In addition to municipalities, over the past several years Troy Acoustics has been working to improve noise levels in US Air Force US Navy shooting range installations as well as US Army Special Forces ranges nationwide. Some of these ranges and other Federal installations had already been treated with non-compliant acoustic solutions. These installations include:

US Army Corps of Engineers	Fort Bragg, Fort Campbell, Fort Carson, Fort Drum, Fort Lewis
US Navy	Coronado; Newport, RI; Dam Neck, VA; Little Creek, VA; Groton, CT
US Air Force	Andrews AFB; Barksdale AFB; Eglin AFB; Keesler AFB; Maxwell AFB; Misawa AB; Whiteman AFB; Wright Patterson AFB
Federal installations	FBI Headquarters DC; US Secret Service MD; US Customs and Border Protection, multiple ranges at Harpers Ferry, WVA
Municipalities	Fairfax County; LAPD; Lewisville, Rockwall and Wichita Falls TX Police Depts.; Chandler AZ Police Dept.



**SECTION 09 83 13
ACOUSTICAL PANEL SYSTEM**

PAST PERFORMANCE References- Outdoor range Installations

In alphabetical order; blue shaded entries represent police departments; beige shaded entries are military installations.

REFERENCES Name/	Contact	Type Work Performed	Project type
1. Council Bluffs (2008)	Robert Brietzke (712) 366-2172	Design and Materials	Outdoor Range
2. Fairfax County VA (2011)	Theresa Carter (703) 324-3282	The County was cited by their environmental health and safety personnel due to concerns about noise levels impacting their range personnel and trainees.	Outdoor Range
3. Lewisville TX (2007)	Scott Pedigo, Training Officer (972) 219-3608 spedigo@cityoflewisville.com	Noise control design, manufacturer and acoustical evaluation & engineering for Troy System	Outdoor Range
4. Los Angeles Police Dept. (1999)	Lou Salseda (retired) 818-339-1078 lousalseda@gmail.com	Design and materials	Outdoor Range
5. Monmouth County, NJ (2010)	rracano@co.monmouth.nj.us (732) 683-8588	The County required a guaranteed 3 Db reduction; design and materials; 10 Db was the actual result. Troy was the only firm that would guarantee the results.	Outdoor Range
6. Nassau County, NY (2013)	David Wenger, Wenger Construction 516-575-0100	Design, Materials. (materials have been Delivered)	Outdoor Range
7. Rockland County, NY (2012)	Chip Tiso (845) 364-3846	Design and materials	Outdoor Range
8. Rockwall Police Dept. TX (2011)	Chief Kirk Riggs (972) 772-6454	Design and materials	Outdoor Range
9. Sykesville MD (2012)	Barbara Roth Abby Enterprises, LLC (410) 335-7650 ext. 105	Materials	Outdoor Range
10. US Customs and Border Protection (March-August 2007)	540-303-1989 crossmanconsulting@yahoo.com Ronald Crossman (POC)	Noise control design, manufacture and acoustical evaluation & engineering for Troy System	Multiple indoor and Outdoor ranges



11. USAF – Andrews AFB (2013)	Blazer Construction Dave Boyden (240) 925-0914	Design and materials for new range. Required to meet ETL 1.5 seconds reverb time	Outdoor Range
12. USAF – Barksdale AFB (2014)	UCS -UNITY CONTRACTOR SERVICES [mailto:lenzyucs@swbell.net]	Design and materials to correct noise problems on existing range. Had to meet ETL reverb time	Outdoor Range
13. USAF – Maxwell AFB (2010)	Trey Anderson Anderson Construction (229) 768-2555 trey@acco.cc	Design and Materials	Outdoor Range
14. USAF – Maxwell AFB (2010)	Trey Anderson Anderson Construction (229) 768-2555 trey@acco.cc	Design and Materials	Outdoor Range
15. USAF – Whiteman AFB (2011)	Chris O'Bannon, Architect, USACE Whiteman AFB (816) 389-2267	Design and Materials	Outdoor Range
16. Wichita Falls, TX (2010)	steve.beggs@wfpd.net Steve Beggs 940-720-5038	Design and materials	Outdoor Range



Prequalification information

Troy Acoustics is a small business registered with CCR and ORCA and has done extensive work for municipalities, state and federal government.

Troy Acoustics is the premier provider of acoustical design for shooting ranges. What makes this firm unique is that they offer a guarantee that the shooting range will have a 1.3 seconds or less reverb time provided the system is installed in accordance to Troy engineered site-specific drawings for the patented Troy System™. As a result, the patented Troy System™ has been sole sourced oft times due to rigid compliance issues.

I. CONTRACTOR CONTACT INFORMATION

Tax ID: 73-1694786 DUNS #: 145057910 Contractor License: N/A

Firm Name: Troy Acoustics Corporation

Business Address: 2580 Sidney Lanier Drive

City, State, Zip: Brunswick, GA 31525

Business Phone Number: 800-987-3306

Primary POC: Joan Terry Drucker Title: VP, Marketing and Business Development

Contact Number: 800-987-3306 Ext 400 E-Mail Address: joan.drucker@troyacoustics.com

TYPE OF ORGANIZATION

 Corporation Incorporated in the State of Nevada

Year Incorporated February 2004

Years under present management Since 1997

STATEMENT OF QUALIFICATIONS

General Information

Organizational and Staff Experience

Bill Bergiadis, Chief Executive Officer

- Inventor and patent holder of the Troy System™ sound wall design
- Has provided acoustical consulting and design/engineering services for: City of Los Angeles, LAPD, NYPD, Santa Monica Police Department, City of Pasadena, Pasadena Police Department, Chula Vista Police Department, FBI, NASA Ames, US Navy, US Army Corps of Engineers, US Secret Service, Lawrence Livermore National Laboratory, Lawrence Berkeley Nation, US Air Force, City of Manhattan Beach Fire Department, the City of West Hollywood, City of Thousand Oaks and many various private Fortune 500 Companies.
- Established more sophisticated criteria for shooting range acoustic performance
- Lecturer: Environmental Sound Module for the NRA Range Development and Operations Conference

Bob Bledsoe, Chief Operating Officer

- COO of Troy Acoustics, Bledsoe has overall responsibility for operations, including construction design review, materials handling and installation of the Troy System.
- Bledsoe brings over 30 years of executive management experience in construction and manufacturing.
- Bledsoe is owner of Coastal Building Systems and was a distributor of aerated concrete systems and builder of specialty homes for several years.
- Bledsoe was also organizer and president of Brunswick Foreign Trade Zone, Inc. in Brunswick GA and past president and chief executive officer of Concrete Products, Inc. in Brunswick. GA. They manufactured cement/wood fiber roof deck and pre-cast concrete roof decks, a product similar to the Troy Board.
- He served in various management positions with Ideal Cement Company and worked for the Tennessee Valley Authority in Tennessee
- Project manager for major shooting range acoustic solution installations including US Customs and Border Protection, Harper's Ferry WVA; US Secret Service, MD; Niagara Falls Police Dept.; Ankeny Iowa Police Dept., US Army, US Navy, Eglin AFB, Fairfax County and Wright Patterson AFB installations



Joan Terry Drucker, Vice President, Marketing and Business Development

- Over 25 years business management experience in environmental products and services
- Former Vice President, General Manager, Savage Range Systems: manufacturer and developer of shooting range equipment
- Former President, founder of Environmental Visions, Inc.
- Former senior management of division of United Technologies Corporation
- Over 15 years of experience in firearms related industry
- Developed a series of Architectural Seminars: Design and Development of Shooting Ranges
- National Committee Member of the NRA Range Development and Operations Committee; Former Chairperson NRA Range Development and Operations Conference, Vendor Night

Sergeant Louis Salseda (LAPD Ret), Vice President Ballistic Engineering and Range Development

- 34 years law enforcement experience including range development and management, firearms and tactics training, ballistic testing, ammunition testing, less lethal weapons and training curriculum development
- For over a decade Lou was responsible for directing and managing seven shooting ranges, 5 sergeants, 50 instructors and 11 civilian personnel with duties that included maintenance, design, O.S.H.A. compliance, community support, scheduling, staffing and budgeting. He was directly responsible for implementing less than lethal munitions, Remington 870 shotguns, AR-15 rifles and 45 caliber handguns for patrol officers.
- During his tenure, Lou was tasked with the design of the 30 million-dollar LAPD Edward M. Davis Training Facility, which encompassed three, multi-use 11,000 square foot shooting ranges. • This training facility with its state-of-the-art design and equipment is nationally recognized as one of the premier police training facilities in the United States and Canada. The facility incorporates a number of innovative training tools and safety elements that have significantly contributed to the success of training thousands of officers annually.
- Member of National Tactical Officers Association, Life member of the National Rifle Association, Life member California Rifle and Pistol Association, Life member California Police Pistol Association, member of International Law Enforcement Educators and Trainers Association, member of Force Science Institute
- Homeland Security consultant and course manager/trainer contracted through S.A.I.C. for Incident Command System (NIMS), Counter Terrorism and First Responder Operations training
- Superior and federal court qualified expert witness in police practices and procedures
- Chief Instructor TAC-1, Tactical Advanced Combat Defensive Firearms Training
- Extensive experience in shooting competition which includes National and World championship titles



PAST PERFORMANCE References and Installations



TYPE OF FACILITY: Shooting Range

SYSTEM INSTALLED: Troy Acoustics

Owner: US Navy

General Scope:

The US Navy asked Troy Acoustics to develop an acoustic design which would reduce the reverb in the range to meet OSHA noise exposure limits. However, more importantly, they had a requirement to isolate the noise levels so that they could utilize the nearby classrooms. The results exceeded their expectation for noise reduction. Sound testing was performed to assure compliance.

Subcontractor: Acoustic design, manufacture and installation of the Troy System, shop drawings sound testing

Date: February 7-March 2007

Point of Contact: Randy Jackson ,US Navy NAVFAC Mid-Atlantic,randy.m.jackson@navy.mil

Telephone: (757) 544-2367

TYPE OF FACILITY: Shooting Range



SYSTEM INSTALLED: Troy Acoustics

Owner: US Customs & Border Protection

General Scope: The Harpers Ferry W VA ATC facility is designed to train 12,000 law enforcement officers each year. Troy was asked to design a system that guaranteed a 1.25 second reverb time in the range. Ronald Crossman was concerned about the health and safety of their employees and requested a written guarantee that the range was in compliance with OSHA regulations for noise exposure limits. All the criteria met or exceeded their expectations.

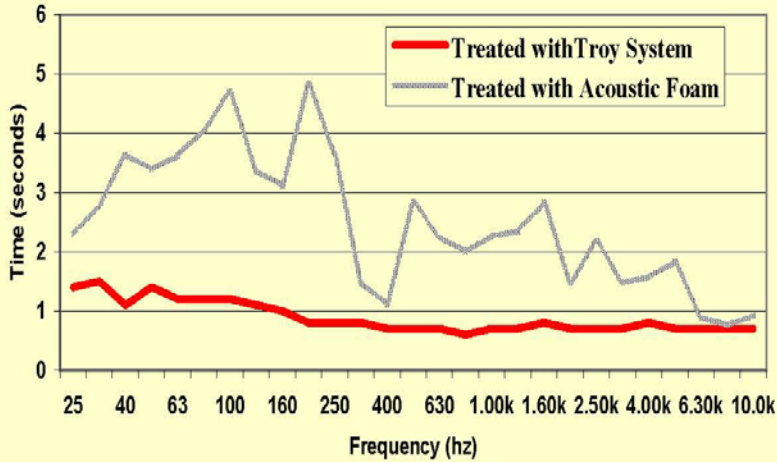
Subcontractor: Acoustic Design, Manufacturer, Shop drawings, Sound Testing

Date: March-August 2007

Point of Contact: Ron Crossman



RT60 of 12 Lane Indoor Range Troy System Treated Versus Same Range Treated with Wedge Acoustic Foam



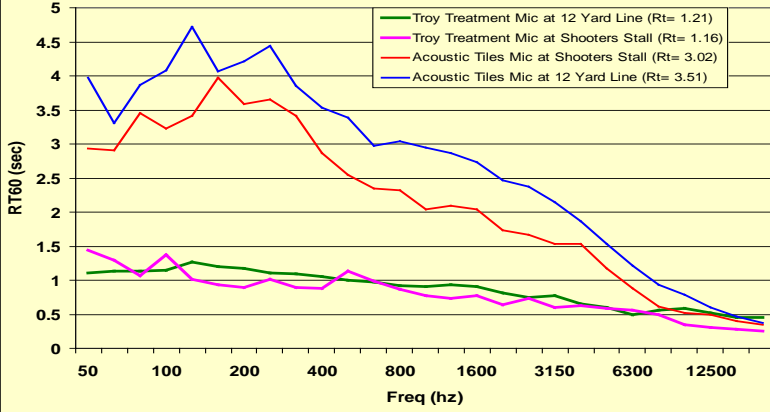
TYPE OF FACILITY: Shooting Range
SYSTEM INSTALLED: Troy Acoustics
Owner: US Secret Service

General Scope: This training facility was cited for high noise exposure limits in the range and control booth. Immediate corrective action was required in order to meet OSHA guidelines under CFR Section 29 in order to continue operating on a waiver. Troy was responsible for the acoustic design, installation of the Troy System, and sound testing for this range. They required a written guarantee that they would meet OSHA guidelines for noise exposure limits, which is similar to the requirement referenced in the RFP and ETL document. They were met.

Subcontractor: Acoustic Design, Manufacturer of Troy System, Shop Drawings, Sound Testing

Date: March-August 2007
Point of Contact: Fred Wyatt frederic.wyatt@uss.s.dhs.gov
Telephone: (240) 624-3020

WPAFB Large Range Pre & Post Troy Noise Reduction



TYPE OF FACILITY: Shooting Range
SYSTEM INSTALLED: Troy Acoustics
Owner: USAF

General Scope: Since the facility was opened there have been numerous complaints about noise hazard inside the two ranges and in the adjoining offices and class rooms.

This chart shows the comparative reverb time (RT60) for the large range (21 lanes) at Wright Patterson Air Force Base, Dayton OH, before and after treatment with the Troy System. The range was built with acoustic tile on the baffles, the side and rear wall were smooth concrete. It can be seen the Troy System reduced the reverb time RT60 in the large range from 3.51 seconds measured in the bay to

1.21 seconds, and from 3.02 seconds in the shooters stall (lane 11) to 1.16 seconds.

Subcontractor: Acoustic Design, Manufacturer of Troy System, Shop Drawings, Sound Testing

Date: 2010
Point of Contact: Terry Wallace terry.wallace@WPAFB.AF.mil
Telephone: (937) 257-2309



TYPE OF FACILITY: Shooting Ranges

SYSTEM INSTALLED: Troy Acoustics

Owner: US Army at Fort Lewis & others

General Scope: The Ft Lewis shooting range was one of four acoustic design, materials and sound testing range facilities awarded under a sole source contract by the US Army Corps of Engineers. This project required an ASTM RT60 1.3 second reverb time to assure the health and safety of the troops for Fort Lewis, Fort Bragg, Fort Carson and Fort Campbell. The range size alone at Fort Lewis is 89' x 175' = 15,575 sq. ft. plus range control offices, class room, storage, clean room bath rooms = >20,000 sq. ft. The other 3 facilities are of the same magnitude

Contractor: Acoustic Design, Manufacturer, Shop drawings, Sound Testing

Date: Completed in July 2011

Point of Contact: Sgt. Joseph A. Iampaglia

Telephone: (910)396-0409



TYPE OF FACILITY: Shooting Ranges

SYSTEM INSTALLED: Troy Acoustics

Owner: US Army at Eglin AFB

General Scope: The Eglin AFB shooting range acoustic design, materials, installation and sound testing range facility required an ASTM RT60 1.3 second reverb time to assure the health and safety of the troops .The Eglin indoor range dimensions are 90' x 175' = 15,750 sq. ft. plus the range control office, classrooms, storage room, cleaning room, bathroom = >20,000 sq. ft.

Subcontractor: Acoustic Design, Manufacturer, Shop drawings, Installation, Sound Testing

Date: Completed in June 2011

Point of Contact: Sgt. Joseph A. Iampaglia

Telephone: (910)396-0409

Personnel

William Bergiadis (Design Project Management, Sound engineering)	CEO
Bob Bledsoe (Operations, Materials and Installation management)	COO
Joan Terry Drucker (Contracts Administration and Proposal)	VP Marketing and Business Development

Staffing plan

Project design is based on site specific Troy Acoustics engineered drawings. (Note: Drawings are typically listed as a separate line item and are not considered in our per square foot pricing.)

Bergiadis is responsible for the design and project management and sound testing for this installation. Bob Bledsoe, COO, based out of our Brunswick, GA home office and warehouse, has overall responsibility for materials and installation (if required) The certified Troy System installers are based in Brunswick, GA. In the event that the end user opts to use a local installer, Bledsoe is the designated interface with the installer. Bill Bergiadis is responsible for sound testing procedure and documentation.

Shop Drawings are completed by engineering staff members.

Contracts management and proposal are overseen by Joan Terry Drucker, VP Marketing and Business Development.