



# CITY OF LODI

## COUNCIL COMMUNICATION

**AGENDA TITLE:** Advertisement of Bid for Purchase of Rifles for Police Department

**DATE:** June 18, 1997

**PREPARED BY:** LARRY D. HANSEN, CHIEF OF POLICE

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**RECOMMENDED ACTION:** Authorization for advertisement of bid to purchase Colt .223 AR-15 Rifles and install into Patrol and Detective Units is requested.

**BACKGROUND INFORMATION:** Recent events during a Los Angeles bank robbery have served to illuminate the threat to responding police officers when suspects have armed themselves with automatic high powered rifles. During this high profile bank robbery LAPD officers quickly found themselves out-gunned and extremely vulnerable.

The police shotgun currently carried in patrol vehicles is no match in accuracy or range to the numerous rifles available to criminals. The attached staff report has outlined the advantages and disadvantages of the shotgun and AR-15 .223 Rifle.

**FUNDING:** Community Oriented Policing (COPS) Grant

Larry D. Hansen  
Chief of Police

cc: City Attorney

APPROVED: \_\_\_\_\_

H. Dixon Flynn -- City Manager

# LODI POLICE DEPARTMENT

## MEMORANDUM

To: Captain Jerry Adams

From: Sergeant Chet Somera 

Date: June 2, 1997

Subject: Use of .223 Caliber Carbine

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Attached you will find the staff report on the use  
of the .223 Caliber Carbine.

This report was presented to Department Management Staff at the last staff meeting, Wednesday, April 30, 1997. There was unanimous support to proceed with the proposal. I have found this type of support not only with the management staff but, also with the line personnel.

If you have any questions please call me at your convenience.

# LODI POLICE DEPARTMENT

## Staff Report

To: Chief Larry Hansen  
Captain Jerry Adams

From: Sergeant Chet Somera  
Officer Steve Carillo

Date: April 25, 1997

Subject: Use of .223 Caliber Carbine

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### INTRODUCTION

Since the early 1900's, the police shotgun has been a common tool of urban law enforcement. Its ability to throw many projectiles at close fighting range made it an ideal defensive weapon. However, in today's populated cities it poses a dangerous situation. In the past ten years there have been incidents where citizens and officers have either been injured or killed by pellets that were intended for suspects. This has occurred even when several of the pellets struck the suspect, but others had missed their mark.

During one incident which occurred in 1989, in San Jose, California, a police officer lost his life after being struck by an errant pellet. This officer was killed by friendly fire from an officer firing "00 buck" at a suspect from approximately 50 yards away. The victim officer was 20 yards past the suspect and was struck by one pellet. He died a couple of days later from the gun shot wound.

In the mid 1980's, a southern California officer shot a Kidnapper/Robber. The suspect was chasing the hostage victim when the officer, thinking the victim was outside the shotgun range fired at the suspect. The suspect was killed by the main shot pattern but, the victim was hit by a single pellet and died as a result of the wound.

A couple of years ago, a San Francisco patrol officer was killed by a suspect that was in a building shooting at citizens. The officer was pinned behind his vehicle attempting to reload his sidearm, when he was struck by a high caliber round and was killed.

In addition, just a couple of months ago, Los Angeles Police patrol officers interrupted a bank robbery and immediately came under fire by suspects carrying high powered rifles and wearing body armor. The police were out-gunned. We have all seen what took place as it was captured by news cameras.

### PROBLEM

As lethal weapons, the Lodi Police Department is currently using the Glock .40 caliber semi-automatic pistol and the Remington, model 870, 12 gauge pump shotgun. Both of these weapons would be deficient if challenged by high powered rifles, such were the cases in San Francisco and Los Angeles.

Furthermore, the shotgun has several shortcomings for use in urban police work. The sights on the shotguns are a standard bead sight, the weapon only carries four, standard issue, 00 buck rounds, and effective range.

## RESEARCH

The 00 buck round has a limited effective range of 12-20 yards, due to the spread pattern. Anything over this distance could allow errant pellets to strike unintended targets. The 00 buck round *does not* penetrate soft body armor. Soft body armor is being worn more frequently by suspects, especially those involved in the drug trade. There are also those that use it to protect themselves while committing robberies, case in point, the above mentioned Los Angeles incident.

The 00 buck round is either the standard 00 buck with nine pellets or the 00 buck maximum with 12 pellets. The average rate of spread is one inch (1") per yard. At 20 yards, this would mean the spread be approximately 20 inches in diameter, much larger than the average torso, causing errant pellets.

Some law enforcement agencies have tried to limit the problem of the pellets by going to rifled slugs. The effective range again is limited due to the sights. There are other sights available but, again the recoil of the slug reduces its effectiveness by most officers. The rifled slug will over penetrate most targets, creating an additional hazard. Rifled slugs will not penetrate soft body armor.

When firing a slug from the shotgun we are attempting to use the shotgun as a rifle. The projectile being fired is a .72 caliber slug traveling at 1400 feet per second, weighing 437 grains. This results in a tremendous impact of energy, that will over penetrate. Case in point, Santa Clara Police Department, an officer shot a suspect with a rifled slug while in a residence. The round passed through the suspect and exited the exterior wall of the residence. Fortunately, no one else was injured.

One of the biggest drawbacks of the slug and shotgun in general is the recoil. The shotgun firing 00 buck round has a recoil of 29 foot pounds and a rifled slug produces 60 foot pounds of recoil. The carbine chambered for the .223 caliber has a recoil of five foot pounds.

Many law enforcement agencies have either replaced the shotgun or gone with an additional weapon, being the carbine. After speaking with representatives from several different agencies, I found that they have either gone to the carbine as a department issue or allowed officers to qualify and carry their own.

The advantages found in the .223 caliber carbine were the increased distance and accuracy by the officers. This allows officers to place themselves further away from the immediate threat and yet still feel confident in the weapon and their abilities. The increased penetration without over-penetration. The .223 caliber is able to penetrate soft body armor while reducing the potential for over-penetration of other objects. The fact that the weapons have less recoil makes them easy to shoot and manipulate. They also provide the officer with the increased ammunition supply. There is also the over-all increased level of confidence by the officer.

Penetration of the .223 round has always been a concern. However, after discussing this issue with several other agencies and receiving studies of the round and its penetration, it is evident that the .223 caliber round is suited very well for the use in urban police work.

Supporting documentation for the ballistic information on the .223 caliber round can be provided. In short, it was found that the .223 caliber round did not over penetrate and even performed better than the 9mm and the .40 caliber.

In one study, by Special Agent Robert Kong of the Department of Defense, Defense Criminal Investigation Service, Agent Kong found that the best practical rifle round for the police rifle is the .223 caliber round. He believes that the bullet needs a minimum length of 14 1/2 inches with a 1/7 or 1/9 twist ratio in order to reach the optimum velocity, stability in flight and terminal wound ballistics. A barrel length less than 14 1/2 inches, he contends, will cause the round to yaw (wobble) and not allow it to fragment correctly in the body of its intended recipient. The yaw characteristic of the round, once in soft tissue, is one of its strong points. The forgoing information is was located through the Association of Firearm and Tool Mark Examiners, which deals with weapons and ammunition.

The Mesa Police Department's Tactical Team Committee regarding ammunition tests compares the 9mm to the .223 round for penetration characteristics in walls. This study found, "the 9mm pistol bullets have greater potential for penetration after going through these (interior) walls." Furthermore, "hollow point pistol bullets pose more of a penetration potential threat than do high velocity .223 caliber bullets."

The question of using a .40 caliber rifle versus a .223 caliber was raised with other agencies. Many of them referred the penetration studies and the advances of the .223 caliber over the .40 caliber. The end result was still the same, the round will not penetrate soft body armor, and you still over-penetrate with limited range.

The majority of agencies that have gone to the carbine have mounted it in an upright position between the front bucket seats. The agencies allow their officers to use the carbine at their discretion as they did with the shotguns in the past. The Santa Clara Police Department has a company that is currently fabricating such a mount for their patrol units. This information is available upon request.

The types of rifles were discussed and some of the agencies were using the Ruger Mini 14. These agencies were not satisfied with the durability, advising the weapons did not hold up well. The H&K line of rifles were also looked into as a possibility but, found to be in the area of \$1,500 each. The Colt rifles cost approximately \$600 each depending on the model.

There are a variety of .223 rounds available. One agency uses a 62 grain "Boattail" round, while other agencies use the 55 grain FMJ Boattail round. Ballistic information can be provided upon request.

In conclusion, the agencies that have switched to the carbine or are in the process of switching have noticed an increased accuracy with their officers. These agencies are making the switch by replacing the shotgun in every unit and providing training to the entire patrol division.

#### RECOMMENDATION

At the conclusion of this study, it is our recommendation that the Lodi Police Department purchase Colt .223 caliber AR-15 rifles for each police vehicle. That a committee of rangemasters create a draft policy and procedure for the use of the AR-15, specified ammunition will be included. That training for the officers commence as soon as possible.