

CITY of NOVI CITY COUNCIL

**Agenda Item 4
September 14, 2009**

SUBJECT: Approval to purchase seven (7) 2010 Ford Crown Victoria Police Interceptors for the Novi Police Department Uniform Division from Signature Ford of Owosso, MI through the Macomb County cooperative bid purchase program in the amount of \$146,027.

SUBMITTING DEPARTMENT: Police *DEM*

CITY MANAGER APPROVAL: *[Signature]*

EXPENDITURE REQUIRED	\$146,027
AMOUNT BUDGETED	\$154,000
APPROPRIATION REQUIRED	N/A
LINE ITEM NUMBER	266-266.00-983.000 (Federal Forfeiture)

BACKGROUND INFORMATION:

As part of the FY 2009-2010 budget process, forfeiture funds were allocated for the purchase of seven (7) full-sized marked vehicles for the Police Department Uniform Patrol Division. These vehicles will be replacements for older vehicles in the fleet.

The vehicle model to be purchased is the 2010 Ford Crown Victoria Police Interceptor (CVPI). The purchase would be made through the Macomb County cooperative bid purchase program. The vendor is Signature Ford of Owosso, Michigan. A comparison of the cooperative purchasing prices under the State of Michigan, Macomb County and the Oakland County contracts was done with Signature Ford's price being the lowest. The vendor has indicated that the cut-off date for orders under the current contract will be October 1, 2009. Upon removal of a vehicle from service and depending on the condition of the vehicle at the time, vehicles will either be absorbed by other departments within the City or placed on Bidnet.

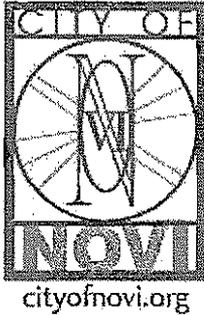
At this point in time, Ford Motor Company has indicated their intention to continue production of the CVPI through the 2011 model year. Beyond 2011, there is a possibility they will replace the CVPI with a Taurus model. Due to the fiscal uncertainty for both GM and Chrysler, dealers are making no production guarantees for patrol vehicles past the current year. Based on this fact, we are recommending the City continue to purchase the CVPI as our marked patrol vehicle. Other models will be evaluated when introduced to determine the fiscal impact, warranty, fuel economy, and performance criteria. The Department will continue to review the Michigan State Police Vehicle Evaluation Report annually and evaluate our operational needs on a continuous basis with regards to our vehicle use and fiscal responsibility.

RECOMMENDED ACTION: Approval to purchase seven (7) 2010 Ford Crown Victoria Police Interceptors for the Novi Police Department Uniform Division from Signature Ford of Owosso, MI through the Macomb County cooperative bid purchase program in the amount of \$146,027.

	1	2	Y	N
Mayor Landry				
Mayor Pro Tem Gatt				
Council Member Burke				
Council Member Crawford				

	1	2	Y	N
Council Member Margolis				
Council Member Mutch				
Council Member Staudt				

MEMORANDUM



TO: DAVID E. MOLLOY, CHIEF OF POLICE
FROM: TOM LINDBERG, DEPUTY CHIEF OF POLICE *yes*
SUBJECT: PATROL CAR EVALUATION
DATE: SEPTEMBER 3, 2009

Recommendation #13 of the ICMA Staffing and Utilization study was to explore police vehicle purchases with specification for fuel economy and warranty. There are nearly 75,000 police vehicles purchased in the United States each year and of those almost 85% are Ford Crown Victoria Police Interceptor (CVPI) 3.55. The other two models used widely by Law Enforcement are the Chevrolet Impala 3.9L and the Dodge Charger 5.7L. Each year the Michigan State Police (MSP) conduct evaluations of the top models used for patrol vehicles and their results are nationally recognized as the accepted law enforcement standards and testing program. It should be noted that of the nearly 800 vehicles in the MSP fleet 90% are the Ford Crown Victoria. For our purposes, staff not only looked at the 2009 MSP study but also obtained price quotes from state and local bids along with looking at the costs required to purchase new interior equipment for vehicles other than the current Ford Crown Victoria.

WARRANTY:

We gathered information on the available warranties for the three possible models. Warranties were not part of the MSP study but the information was readily available and an important element of the ICMA recommendation due to the strategy to extend the service life of each marked vehicle in the fleet through the Collective Bargaining Agreement with the Officers and Sergeants. An extension from 80,000 to 90,000 – 95,000 miles will be addressed during contract negotiations.

TABLE 1.

Vehicle	Complete Warranty	Powertrain Warranty
Ford Crown Victoria	3 years / 36,000 miles	5 years / 60,000 miles
Chevrolet Impala	3 years / 36,000 miles	5 years / 100,000 miles
Dodge Charger	3 years / 36,000 miles	N/A

FUEL ECONOMY:

The information in Table 2 was supplied by the vehicle manufacturer and is certified by the Environmental Protection Agency. The "Label" information is what appears on the sticker of the vehicle and the "Unadjusted" is actual from MSP testing and rounded to the nearest 1/10th mile per gallon. More weight should be given to the City data for the Novi Police purposes as a vast majority of our operation is this type of driving. This does not take into consideration the average amount of vehicle idle time.

TABLE 2.

Vehicle	E.P.A. Miles Per Gallon					
	City		Highway		Combined	
	Label	Unadjusted	Label	Unadjusted	Label	Unadjusted
Ford Crown Victoria	14	17.9	21	29.7	17	21.7
Chevrolet Impala	17	21.2	24	33.8	20	25.5
Dodge Charger	16	19.3	25	34.6	19	24.1

The approximate fuel cost of a vehicle can be calculated by dividing the total miles driven by the estimated MPG then multiplying by fuel cost per gallon. For our purposes we used the 80,000 miles, city "Label" MPG and the cost per gallon \$2.50.

TABLE 3.

Vehicle	Miles Per Gallon (City)	Gallons Used for 80,000 Miles	Total Fuel Cost
Ford Crown Victoria	14	5,714	\$14,286.00
Chevrolet Impala	17	4,706	\$11,765.00
Dodge Charger	16	5,000	\$12,500.00

INTERIOR VOLUME:

The interior volume of a patrol vehicle may not be an issue for small to medium framed officers but is extremely important for an officer with a larger frame. Not only should the front passenger compartment be considered but also the rear passenger compartment for transports of prisoners and citizens. Approximately 10 – 15% of additional leg room is lost in the rear compartment due to the install of the protection shield place behind the front seats.

TABLE 4.

Vehicle	Interior Volume (in cubic feet)		
	Front	Rear	Combined
Ford Crown Victoria	57.6	49.8	107.5
Chevrolet Impala	56.5	55.7	104.8
Dodge Charger	55.5	48.5	104

*Please see pages 17-19 of the MSP Evaluation for a further detailed breakdown of interior volume.

COSTS:

The below information was obtained through State, County and Local Dealership bids and based on the 2010 model year. These numbers are guaranteed through the fall of 2009.

TABLE 5.

Vehicle	Purchase Price	Install Equipment	Cost Difference
Ford Crown Victoria	\$20861.00	\$2645.00	N/A
Chevrolet Impala	\$18214.00	\$6513.23	\$1221.23
Dodge Charger	\$22163.00	\$6612.23	\$5269.23

*Install costs for the Ford Crown Victoria are lower as much of the needed hardware is already on hand in the current patrol vehicles

**Please see the Novi Police Department breakdown of itemized costs for further details

REPAIRS:

In 1998 when front-wheel drive vehicles were just becoming widely used it was estimated that the repair costs would be 30 – 45% higher than repairs on a rear-wheel drive car. This was the accepted standard for both GMC and Chrysler field representatives. Since this time, and the addition of more front-wheel drive vehicles to the roadway, this percentage has decreased to a very limited difference. The most significant additional costs are when there is a new transmission

or front-end alignment needed on front-wheel drive cars. On average, our Fleet Maintenance staff replaces one transmission per budget year to our current Ford patrol fleet. This cost is approximately \$1,500.00 and with a front-wheel drive car the cost is approximately \$3,000.00. The Chevrolet is a front-wheel drive with the Ford and Dodge models being rear-wheel drive.

TRAINING AND FAMILIARITY:

There is a performance difference between rear-wheel and front-wheel drive vehicles, therefore officers would be required to be trained in the handling of a front-wheel drive patrol unit before he/she could consistently operate this type of vehicle during their duty hours. We currently do specific training for staff that drives the existing four-wheel drive Expeditions in our fleet for the same liability reasons. This can be accomplished through our normal routine of precision driving training that each officer is required to attend once every two years. The cost is \$50.00 per officer as long as we supply at least one instructor for every training session that Novi staff attend. If we do not supply an instructor the cost is \$150.00 per student. Additionally, our instructors would need to be trained to teach precision driving with front-wheel drive cars.

A front-wheel drive vehicle performs better on snow covered roads but has less traction on wet pavement. There is a much different feel to a front-wheel drive vehicle when turning around on a roadway due to the vehicle being pulled through the turn compared to a rear wheel drive being pushed through the turn. Again, it is very important that officers be trained and familiar with a front-wheel drive vehicle if the transition is made.

GENERAL INFORMATION:

When the price quotes were obtained for this document each dealership stated they believed the Ford Crown Victoria would stay in production through the 2015 model year. In a Detroit News article dated August 28, 2009 (attached), it appears 2011 may be the last year these cars will be produced. Ford is looking at the possibility of replacing the CVPI police package with the Ford Taurus model in the future due to the profitability of police vehicle sales, however no strong commitments have been made either way from the company itself.

Dealerships have indicated neither Dodge nor Chevrolet can guarantee any future production of their police package vehicles due to their fiscal uncertainty. It should be noted that most of the research done by the ICMA staff took place well before the two major auto producers announced their bankruptcy and reorganization strategies.

RECOMMENDATION:

After a careful analysis of the MSP evaluation, our own current vehicle inventory and other information available on the state of the auto companies, the Novi Police staff recommends we continue, for the time being, to purchase the Ford Crown Victoria Police Interceptor as our marked patrol vehicle. Other models will be evaluated when introduced to determine the fiscal impact, warranty, fuel economy and performance criteria. We will do this on a continuous basis. Staff will look for vehicles that will meet our needs well into the future through the MSP study, information from peers, vendors as well as watching for the stabilization of the auto industry in regards to availability.

It is understood that some funds could be saved up front by purchasing the Chevrolet now but the difference is negligible over the useful life cycle of the vehicles which is approximately 32 months at 80,000 miles. New interior equipment would need to be purchased for each new Chevrolet or Dodge and we do not know how long these models will continue to be produced. The interior equipment such as the rear seat protection shield, rear plastic seat insert, front computer mount and push bumpers are unique sizes to each car model. In the event we were to commit to one of these cars and the companies decide to discontinue their production, we would have to start the transition over again at that time with another size of interior equipment. We do have a strong indication that the Ford Crown Victoria will continue to be produced into the 2011 model year. There would be associated training costs with the transition to a front-wheel drive vehicle and a change over of inventory for replacement parts and maintenance items.

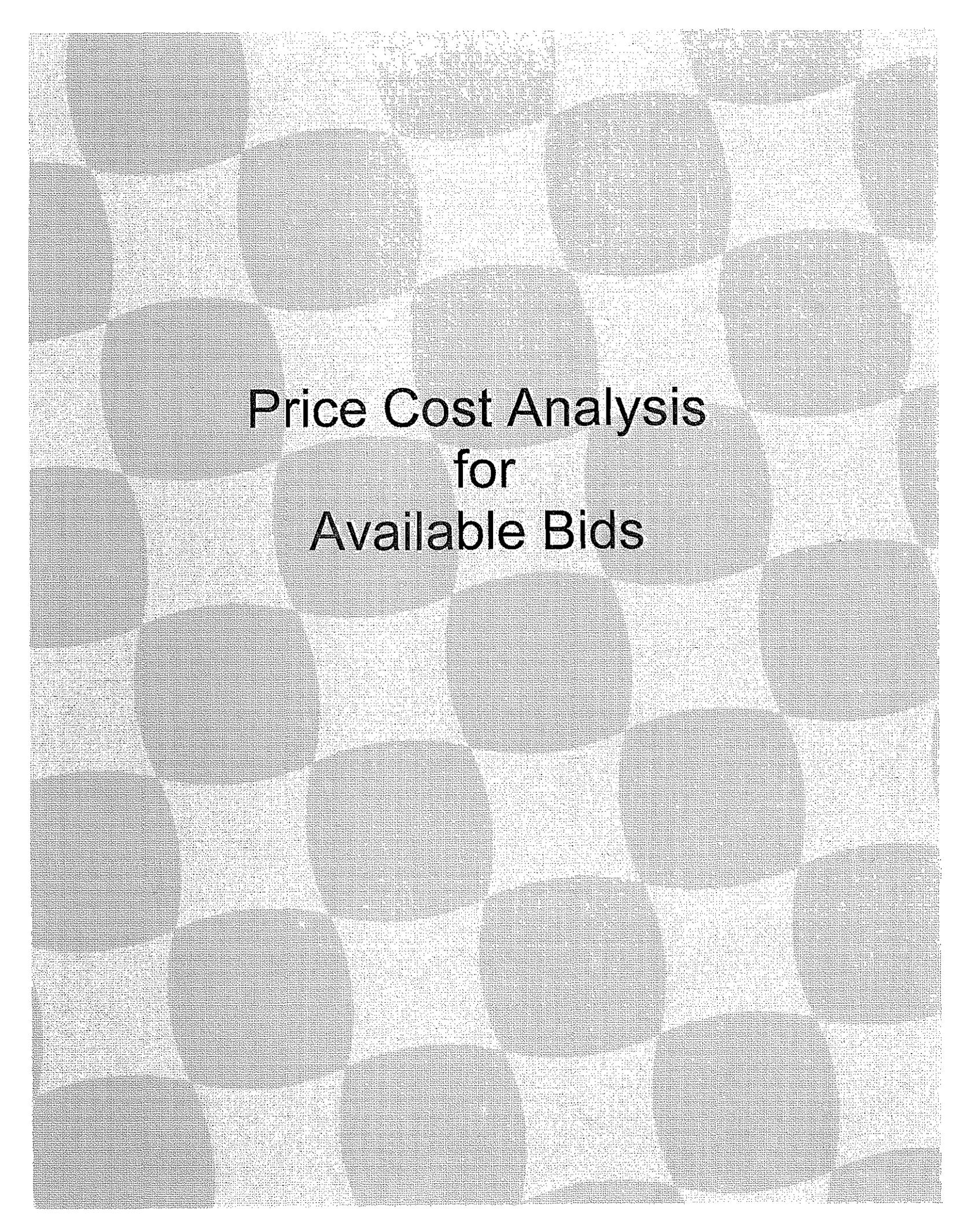
The size of the Ford is another important factor in our recommendation. Our current fleet of 16 is set up almost identical in relation to all the needed equipment. The interior is adequate for all of our larger officers and adjustments can be made for smaller staff. The other two proposed models are significantly smaller and could pose some challenges for an entire 12 hour shift. The rear passenger compartments are smaller and can cause issues when arrests are made of larger suspects as we have learned through informal discussions with other departments who have Chevrolet Impalas in their fleet.

As recommended in the ICMA study and mentioned above, a close look was taken at the vehicle warranties as well as the fuel economy. It would be appealing to have the 5 year / 100,000 mile warranty that Chevrolet offers over the 5 year / 60,000 mile powertrain warranty for Ford. However, given we are not replacing more than one transmission per year in our current Ford fleet we did not

determine that warranty to be a significant cost savings to our investment especially when the higher costs of repairs for front-wheel drive outside the powertrain is factored in. With regard to fuel economy it was determined that there would be a cost savings in gas with the smaller vehicle but with the different size needed for the interior equipment it was determined that savings would be minimal in the near term.

Again, the Novi Police Department staff is consistent in recommending we continue to purchase the Ford Crown Victoria Police Interceptor with the understanding we will continue to give consideration to other available models as they are evaluated. In addition, we will continue to review the MSP report every year and look at our own operational needs with regards to vehicle use and fiscal responsibility.

Please feel free to contact me with any follow up questions on this matter.



Price Cost Analysis for Available Bids

**Novi Police Department
2009-2010 Patrol Vehicles**

	2010 Ford Crown Victoria Police Interceptors			2010 Dodge Chargers			2010 Impalas
	Oakland County Jorgensen Jim LeMarr	Macomb Signature Bill Campbell	State of Michigan Gorno Ford * Eddie Williams	State of Michigan Bill Sneathkamp Tony Sasso	Oakland Golling Steve Kowalski	Macomb Slingerland Dodge Larry Launstein	Oakland Shaheen Cherolet John Fuller
Base	\$ 20,882.00	\$ 20,861.00	\$ 21,006.00	\$ 22,163.50	\$ 22,216.00	\$ 22,443.31	\$ 18,214.00
Vehicles to be purchased	7	7	7	7	7	7	7
Total	\$ 146,174.00	\$ 146,027.00	\$ 147,042.00	\$ 155,144.50	\$ 155,512.00	\$ 157,103.17	\$ 127,498.00
Price in effect until:	9/31/09	10/01/2009	N/A	10/01/2009	Price Rolled-Over	Price Rolled-Over	Price Rolled-Over
Complete Warranty	3 years / 36,000 miles	3 years / 36,000 miles	3 years / 36,000 miles	3 years / 36,000 miles	3 years / 36,000 miles	3 years / 36,000 miles	3 years / 36,000 miles
Powertrain Warranty	5 years / 60,000 miles	5 years / 60,000 miles	5 years / 60,000 miles	N/A	N/A	N/A	5 years / 100,000 miles
Install Per Vehicle							
Strips and installs	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00	\$ 1,500.00
Push Bumper Sets	200.00	200.00	200.00	200.00	200.00	200.00	200.00
Trailer Hitches	250.00	250.00	250.00	250.00	250.00	250.00	250.00
Set of Decals	295.00	295.00	295.00	295.00	295.00	295.00	295.00
Set of Doors Painted	400.00	400.00	400.00	400.00	400.00	400.00	400.00
Ready Buckles	Stock on hand	Stock on hand	Stock on hand	350.00	350.00	350.00	350.00
Front & Rear Flashers	Stock on hand	Stock on hand	Stock on hand	150.00	150.00	150.00	150.00
Prisoner Shields	Stock on hand	Stock on hand	Stock on hand	600.00	600.00	600.00	600.00
Radio Trays	Stock on hand	Stock on hand	Stock on hand	250.00	250.00	250.00	250.00
Rear Seats	Stock on hand	Stock on hand	Stock on hand	325.00	325.00	325.00	325.00
install Per Vehicle:	2,645.00	2,645.00	2,645.00	\$ 4,320.00	\$ 4,320.00	\$ 4,320.00	\$ 4,320.00
Additional Setup Cost to Convert							
Setina PB 100 16" Aluminum	-	-	-	209.99	209.99	209.99	209.99
Fed Sig MS 100 Brkt	-	-	-	31.98	31.98	31.98	31.98
Hook Kit	-	-	-	28.99	28.99	28.99	28.99
Havis 14" Console	-	-	-	283.99	283.99	283.99	189.99
Havis Shields Arm Rest	-	-	-	58.99	58.99	58.99	58.99
Havis Dual External Cup Holder	-	-	-	35.99	35.99	35.99	30.99
Havis 2007 Track Mount	-	-	-	108.99	108.99	108.99	108.99
Setina 10-S Partition	-	-	-	550.00	550.00	550.00	550.00
W/Side Curtain Airbags - Misc Item	-	-	-	35.00	35.00	35.00	35.00
Lower Extension Panel: Pro Gard Rear Seat	-	-	-	318.99	318.99	318.99	318.99
Lower Extension Panel: Havis Trunk Tray	-	-	-	281.35	281.35	281.35	281.35
Lower Extension Panel: Havis Tele Computer Base	-	-	-	112.99	112.99	112.99	112.99
Lower Extension Panel: MW800 Monitor Base	-	-	-	102.99	102.99	102.99	102.99
Lower Extension Panel: Havis Shields 810 Keyboard Mnt	-	-	-	131.99	131.99	131.99	131.99
Total Additional Conversion Cost:	-	-	-	\$ 2,292.23	\$ 2,292.23	\$ 2,292.23	\$ 2,193.23
Total Vehicle Setup	\$ 2,645.00	\$ 2,645.00	\$ 2,645.00	\$ 6,612.23	\$ 6,612.23	\$ 6,612.23	\$ 6,513.23
Subtotal Setup (7 Vehicles)	\$ 18,515.00	\$ 18,515.00	\$ 18,515.00	\$ 46,285.61	\$ 46,285.61	\$ 46,285.61	\$ 45,592.61
Total Cost for Vehicles	\$ 164,689.00	\$ 164,542.00	\$ 165,557.00	\$ 201,430.11	\$ 201,797.61	\$ 203,388.78	\$ 173,090.61
* 2009 Price							

	Budget	
	Per Vehicle	Total
Vehicle	\$ 22,000.00	\$ 154,000.00
Install/setup per vehicle	\$ 3,816.43	\$ 28,715.00
Total per vehicle	\$ 25,816.43	\$ 180,715.00

Crown Vics will be produced through 2011 Model Year
No commitment from GM & Chrysler as to how long models will be produced

Detroit News Article
August 28, 2009



Friday, August 28, 2009

Ford to cops: Crown Vic is out

Automaker faces fight as it pushes replacement Taurus

Bryce G. Hoffman / The Detroit News

Dearborn -- In June, Ford Motor Co. invited the heads of some of the nation's largest police fleets to Dearborn to talk about the future of police cars.

For nearly two decades, that market has belonged to Ford's Crown Victoria -- a vehicle that departments from coast to coast have come to respect for its toughness and reliability. Now the Crown Vic is running out of road.

"They told us that 2011 would be the last year they build the Crown Vic," said Larry Tagawa, commander of the Los Angeles Police Department's Motor Transport Division. "But Ford also made a commitment to support departments with a new vehicle."

Then Ford took the assembled police brass out to its test track and handed them the keys to its new Taurus.

Most motorists would be happy to trade in their old Crown Vic for Ford's latest flagship sedan. It is faster, safer and gets better mileage. But the Taurus, like most modern cars, lacks some of the features that have made the Crown Vic so popular with police.

That is one reason why Ford has yet to make a final decision on the Crown Vic's successor. But there are others: new competition -- not only from Ford's cross-town rivals, but also from a new start-up that promises to give police the vehicle of their dreams -- and the Canadian Auto Workers, which is keen to protect thousands of jobs at the plant in St. Thomas, Ontario, where the Crown Vic is produced.

"We've got some big decisions to make, and we're making them," said Jim Farley, head of global sales, marketing and service for Ford. "We have no intention of walking away from our share of that market."

Ever since General Motors Co. stopped production of the Crown Vic's main competitor -- the Chevrolet Caprice -- in 1996, the Crown Vic has been America's police car. It was crushed by the falling rubble of the World Trade Center and transported Paris Hilton to prison.

About 85 percent of the approximately 75,000 police cars sold in the United States each year are Crown Vics.

That is not a huge number of vehicles, and margins on sales to public agencies are notoriously slim, but analysts say it is still a profitable business for Ford.

"The majority of the investment in the Crown Vic was paid off so long ago that they're basically a license to print money," said auto analyst Jim Hall of 2953 Analytics LLP in Birmingham. "They also have zero marketing cost."

While that would not be the case initially with a vehicle like the Taurus, Hall said it would not take too long for it to replace the Crown Vic's contribution to Ford's bottom line.

But Ford Americas President Mark Fields said the police business provides other benefits to Ford that go beyond the bottom line.

"Every municipality has police, so you have Ford product everywhere across the country," Fields said. "It reinforces that Ford is part of the community."

Desirable features

Ford stopped selling Crown Vics to consumers in 2007, but many police officers say they would prefer to keep the outdated sedan. Though long past its prime and easily outrun by vehicles as mundane as the Honda Accord, it nonetheless offers cops some features they can find in few other vehicles -- most of which are considered liabilities, not assets, by civilian motorists.

It is one of the last body-on-frame cars still in production. That makes them tough and easy to repair, but also less safe because they lack crumple zones. The Crown Vic has a column shifter, which frees up the space between the driver and passenger seats for electronics and guns. And it is big enough to accommodate all of the gear a modern cop might need and still has room for two bad guys in the back seat.

Moreover, most of the aftermarket equipment produced for police vehicles -- everything from computers to light bars -- is designed to fit the Crown Vic. When some departments tried to make the switch to Chevrolet Impalas, they found that their communications equipment and computers did not fit in the narrower vehicle.

Then there is rear-wheel drive. The Crown Vic has it, and many competing vehicles do not. Many officers prefer this configuration because it offers more even weight distribution, better traction during acceleration and better handling, at least on dry roads.

Finally, there is familiarity. Most officers know what the Crown Vic will do and how to make it do it without having to think about it.

For cash-strapped agencies like the LAPD, abandoning the Crown Vic would also pose a serious fiscal challenge. It has millions of dollars invested in not only the cars, but also in parts, equipment and training.

Tagawa, commander of the department's Motor Transport Division, and his team have turned servicing the Crown Vic into a science. When a cop rams a bad guy, LAPD mechanics simply unbolt the damaged body panels, slap on new ones that have already been painted with the department's livery and put the car back on the street. They even have their own shop to refurbish busted parts.

"If they do go to a new platform, it will definitely cause us some grief," Tagawa said. "We would have to start all over."

Challenges growing

Not all departments share the LAPD's affection for the old Ford.

While about 90 percent of the vehicles in the 800-strong Michigan State Police fleet are Crown Vics, Lt. Keith Wilson says it is time for something new. As much as he respects the Crown Vic's track record, Wilson recognizes that vehicle technology -- particularly safety technology -- has come a long way since 1992.

"They have a good track record in terms of service and durability," he said. "But anything that we lose, we are going to gain in officer safety."

Wilson commands the agency's precision driving unit, which is responsible for evaluating new vehicles for Michigan, as well as most other jurisdictions around the country. He said departments have been "spoiled" by the Crown Vic.

Before GM got out of the police business, its ongoing rivalry with Ford meant a steady flow of new police models. Most agencies switched vehicles every two or three years, and many of the larger fleets were an amalgam of Fords and Chevrolets. Wilson said that is the model many will return to once production of the Crown Vic ends.

Chrysler Group LLC has been trying to muscle in on Ford's business with the Dodge Charger, but has had little success to date. Like the Crown Vic, the Charger is a rear-wheel drive vehicle. The police version offers a column shifter, and it boasts a much more powerful engine.

But Tagawa said they have not held up well in the field.

"The Charger is nice looking," he said. "But from a mechanical standpoint, they are not up to par with the Crown Vic."

He said they also are too small.

The Taurus, too, is smaller than the Crown Vic, is of unibody construction and lacks rear-wheel drive. But Tagawa said his department could adapt to it if necessary. He particularly likes the EcoBoost engine, which promises more horsepower and better mileage. Ford told members of its police advisory board that would be an available option.

Wilson has had better luck with the Charger. His agency is also evaluating the Chevrolet Impala.

Then there is Carbon Motors Corp. Last month, it announced plans produce a purpose-built police car at a new plant in Indiana.

Its E7 boasts an impressive array of features, but Hall of 2953 Analytics said other companies have tried to build police cars from scratch and failed for the same reason he believes Carbon will -- the margins are just too slim.

"They asked police what their perfect car was," he said. "They forgot to ask how much they were willing to pay for it."

Carbon did not respond to requests for comment, but Wilson said its products are not slated to be tested by his department.

"They have a unique model," he said. "We wish them well."

An ace up Ford's sleeve

Ford would not discuss its plans for the Taurus because it does not want to make a final commitment before it concludes talks with the CAW.

The company did tell the union that the end of Crown Vic production in 2011 is "non-negotiable," according to CAW President Ken Lewenza. But that was before Ford asked the union to reopen its contract.

Ford wants the CAW to give it the same concessions the union recently gave to GM and Chrysler as part of their Chapter 11 restructurings. Lewenza said that will only happen if Ford matches the product commitments those companies made to Canada.

"Keeping the Crown Vic in production until the end of the contract in 2012," he said, "would go a long way toward satisfying our objectives."

bhoffman@detnews.com (313) 222-2443

Find this article at:

<http://www.detnews.com/article/20090828/AUTO01/908280392/Ford-to-cops--Crown-Vic-is-out>

Check the box to include the list of links referenced in the article.

© Copyright 2008 The Detroit News. All rights reserved.

**MSP Report
Pages 17-19
Vehicle Descriptions**

TEST VEHICLE DESCRIPTION

MAKE Dodge	MODEL Charger	SALES CODE NO. 29A	
ENGINE DISPLACEMENT	CUBIC INCHES 345	LITERS	5.7
FUEL SYSTEM	Sequential Port Fuel Injection	EXHAUST	Dual
HORSEPOWER (SAE NET)	368 @ 5200	ALTERNATOR	160 Amp
TORQUE	391 ft-lbs @ 4150	BATTERY	800 CCA
COMPRESSION RATIO	10.5:1		
TRANSMISSION	MODEL A580	TYPE 5 Speed Electronic Automatic	
	LOCKUP TORQUE CONVERTER? Yes		
	OVERDRIVE? Yes		
AXLE RATIO	2.65:1		
STEERING	Power Rack & Pinion		
TURNING CIRCLE (CURB TO CURB)	38.9		
TIRE SIZE, LOAD & SPEED RATING	Continental ContiProContact P225/60 R 18 99V		
SUSPENSION TYPE (FRONT)	Independent High Arm SLA with Dual Ball Joint Lower, Coil Spring, Sway Bar		
SUSPENSION TYPE (REAR)	Independent Multi-Link, Coil Spring, Sway Bar		
GROUND CLEARANCE, MINIMUM	5.2 in.	LOCATION Fascia Belly Pan	
BRAKE SYSTEM	Power, Dual Piston Front/Single Piston Rear, Anti-Lock		
BRAKES, FRONT	TYPE Vented Disc	SWEPT AREA 282 sq. in.	
BRAKES, REAR	TYPE Vented Disc	SWEPT AREA 242 sq. in.	
FUEL CAPACITY	GALLONS 19	LITERS	72
GENERAL MEASUREMENTS	WHEELBASE 120 in.	LENGTH	200.1 in.
	TEST WEIGHT 4040	HEIGHT	58.2 in.
HEADROOM	FRONT 38.7 in.	REAR	36.2 in.
LEGROOM	FRONT 41.8 in.	REAR	40.2 in.
SHOULDER ROOM	FRONT 59.3 in.	REAR	57.6 in.
HIPROOM	FRONT 56.2 in.	REAR	55.5 in.
INTERIOR VOLUME	FRONT 55.5 cu. ft.	REAR	48.5 cu. ft.
	COMB 104 cu. ft.	TRUNK	16.2 cu. ft.
EPA MILEAGE EST. (MPG) Label	CITY 16	HIGHWAY 25	COMBINED 19
EPA MILEAGE EST. (MPG) Unadjusted	CITY 19.3	HIGHWAY 34.6	COMBINED 24.1

TEST VEHICLE DESCRIPTION SUMMARY

	Ford Police Interceptor 3.27		Chevrolet Impala 9C1		Dodge Charger 3.5L
ENGINE DISPLACEMENT – CU. IN.	281		237		214
ENGINE DISPLACEMENT – LITERS	4.6		3.9		3.5
ENGINE FUEL SYSTEM	SMFI		SPFI		SPFI
HORSEPOWER (SAE NET)	250		233		250
TORQUE (FT. LBS.)	297		240		250
COMPRESSION RATIO	9.4:1		9.4:1		10.0:1
AXLE RATIO	3.27		3.29:1		2.87:1
TURNING CIRCLE – FT. CURB TO CURB	40.3		38.0		38.9
TRANSMISSION	4 Speed elec. auto		4 Speed auto		5 Speed elec. auto
TRANSMISSION MODEL NUMBER	4R70W		4T65E		A580
LOCKUP TORQUE CONVERTER	Yes		Yes		Yes
TRANSMISSION OVERDRIVE	Yes		Yes		Yes
TIRE SIZE	P235/55R		P225/60R		P225/60R
WHEEL RIM SIZE – INCHES	17		16		18
GROUND CLEARANCE – INCHES	5.6		7.1		5.2
BRAKE SYSTEM	Power, ABS		Power, ABS		Power, ABS
BRAKES – FRONT TYPE	Vented Disc		Vented Disc		Vented Disc
BRAKES – REAR TYPE	Vented Disc		Solid Disc		Vented Disc
FUEL CAPACITY – GALLONS	19		17		19
FUEL CAPACITY – LITERS	71.9		64.3		72
OVERALL LENGTH – INCHES	212.0		200.4		200.1
OVERALL HEIGHT – INCHES	58.3		58.7		58.2
TEST WEIGHT – LBS.	4098		3653		3829
WHEELBASE – INCHES	114.6		110.5		120
HEADROOM FRONT – INCHES	39.5		39.4		38.7
HEADROOM REAR – INCHES	37.8		37.8		36.2
LEGROOM FRONT – INCHES	41.6		42.3		41.8
LEGROOM REAR – INCHES	38.0		37.6		40.2
SHOULDER ROOM FRONT – INCHES	60.6		58.7		59.3
SHOULDER ROOM REAR – INCHES	60.0		58.6		57.6
HIPROOM FRONT – INCHES	57.4		56.4		56.2
HIPROOM REAR – INCHES	56.1		57.2		55.5
INTERIOR VOLUME FRONT – CU. FT.	57.6		56.5		55.5
INTERIOR VOLUME REAR – CU. FT.	49.8		55.7		48.5
INTERIOR VOLUME COMB. – CU. FT.	107.5		104.8		104
TRUNK VOLUME – CU. FT.	20.6		18.6		16.2
	Gas	E85	Gas	E-85	Gas
EPA MILEAGE – CITY – MPG Label	14	11	17	12	16
EPA MILEAGE – CITY – MPG Unadjusted	17.9		21.2	15.5	20.9
EPA MILEAGE – HIGHWAY – MPG Label	21	15	24	18	25
EPA MILEAGE – HIGHWAY – MPG Unadjusted	29.7		33.8	24.7	34.1
EPA MILEAGE – COMBINED – MPG Label	17	12	20	15	19
EPA MILEAGE – COMBINED – MPG Unadjusted	21.7		25.5	18.6	25.3

TEST VEHICLE DESCRIPTION SUMMARY

	Dodge Charger 5.7L	Ford Police Interceptor 3.55	Chevrolet Tahoe PPV	
ENGINE DISPLACEMENT – CU. IN.	345	281	327	
ENGINE DISPLACEMENT – LITERS	5.7	4.6	5.3	
ENGINE FUEL SYSTEM	SPFI	SMFI	SPFI	
HORSEPOWER (SAE NET)	368	250	320	
TORQUE (FT. LBS.)	391	297	340	
COMPRESSION RATIO	10.5:1	9.4:1	9.5:1	
AXLE RATIO	2.65:1	3.55	3.73	
TURNING CIRCLE – FT. CURB TO CURB	38.9	40.3	39.0	
TRANSMISSION	5 Speed elec. auto	4 Speed elec. auto	4-Speed Automatic Overdrive	
TRANSMISSION MODEL NUMBER	A580	4R70W	4L60E	
LOCKUP TORQUE CONVERTER	Yes	Yes	Yes	
TRANSMISSION OVERDRIVE	Yes	Yes	Yes	
TIRE SIZE	P225/60R	P235/55R	P265/60R	
WHEEL RIM SIZE – INCHES	18	17	17	
GROUND CLEARANCE – INCHES	5.2	5.6	8.00	
BRAKE SYSTEM	Power, ABS	Power, ABS	Power, ABS	
BRAKES – FRONT TYPE	Vented Disc	Vented Disc	Disc	
BRAKES – REAR TYPE	Vented Disc	Vented Disc	Disc	
FUEL CAPACITY – GALLONS	19	19	26	
FUEL CAPACITY – LITERS	72	71.9	98.4	
OVERALL LENGTH – INCHES	200.1	212.0	202.0	
OVERALL HEIGHT – INCHES	58.2	58.3	73.9	
TEST WEIGHT – LBS.	4040	4075	5274	
WHEELBASE – INCHES	120	114.6	116	
HEADROOM FRONT – INCHES	38.7	39.5	40.3	
HEADROOM REAR – INCHES	36.2	37.8	39.2	
LEGROOM FRONT – INCHES	41.8	41.6	41.3	
LEGROOM REAR – INCHES	40.2	38.0	39.0	
SHOULDER ROOM FRONT – INCHES	59.3	60.6	65.3	
SHOULDER ROOM REAR – INCHES	57.6	60.0	65.2	
HIPROOM FRONT – INCHES	56.2	57.4	64.4	
HIPROOM REAR – INCHES	55.5	56.1	60.6	
INTERIOR VOLUME FRONT – CU. FT.	55.5	57.6	62.9	
INTERIOR VOLUME REAR – CU. FT.	48.5	49.8	57.68	
INTERIOR VOLUME COMB. – CU. FT.	104	107.5	120.58	
TRUNK VOLUME – CU. FT.	16.2	20.6	108.9	
	Gas	Gas	Gas	E85
EPA MILEAGE – CITY – MPG - Label	16	14	14	10
EPA MILEAGE CITY – MPG - Unadjusted	19.3	17.9	17.3	12.7
EPA MILEAGE – HIGHWAY – MPG - Label	25	21	19	13
EPA MILEAGE – HIGHWAY – MPG - Unadjusted	34.6	29.7	26.3	18.6
EPA MILEAGE – COMBINED – MPG - Label	19	17	16	11
EPA MILEAGE – COMBINED – MPG Unadjusted	24.1	21.7	20.4	14.8