Foley Police Department

Over the past two months I have spent a lot of my shift and off time researching squad cars, talking to dealerships, talking with mechanics, Xcel, talking with other departments and other officers, talking with electricians, and I have been talking with our own staff to find the best next squad for the City of Foley.

Costs:

Brand	Equipment Cost	Graphics	Own	SouthGate Lease 2024
Dodge Durango	$20,000	$676	$40,356.00	$1,527.09/month (73,300.32)
Ford Interceptor	$20,000	$676	$43,386.94	$1,563.79/month (75,061.92)
Chevy Tahoe	$20,000	$676	$50,037.52	$1,579.53/Month (75,817.44)
Electric Ford Mustang	$20,000	$676	$51,157	
Electric Ford Lighting F150	$20,000	$676	$57,271	
Electric Chevy Blazar	$20,000	$676	$60,684.68	

- Avg. New Battery cost for Electric = $20,0000
- Note: Lease does not include a service plan. We would still have to pay for all service.
- When talking to the people in the community, they do not want us to have an EV vehicle.

Charging Station Cost:

- Prices vary depending on the charge needed.
- Level 2 Charge = couple thousand (charges over night)
- Level 3 Charge = $25,000-$50,000 (Charges in a few hours)

Being we have officers on 20 hours or more a day we would need the Level 3.
Costs above does not include electrician labor or supplies see below that that.

251 4th Ave. North Foley, MN 56329
Office (320) 968-0800 Fax (320) 968-0801

Foley Police Department

Dodge Durango:

The V6 are not having engine problems. It is the V8s and the hemi's. We would get the V6.
Smaller than the Chevy Tahoe.
Will have less wear on the tires being a smaller vehicle.
Sheriff's Office has had them for a few years now and have not ran into many issues or recalls.
Deputies prefer Durango over the Ford.

Ford Interceptor:

Sheriff's Office has had them for a while now. Some issues and have had a lot more recalls than the Dodge.
About the same size as the Durango.

EV Ford Mustang:

I have seen this vehicle in person and it is very small.
Front seating appear is small. I have bigger built officers that this would be an issue for.
Having them get in and out of too small of vehicles will increase the risk of back injuries. Which will affect the Cities Workman's Comp.
There is hardly any room in the back seat for people who have to sit back there.
We would also need a rear partition due to the trunk area is set up like an SUV. This will take up trunk space.
There is not enough room for all our equipment.

EV Chevy Blazer:

We have had nothing but issues with our current Chevy Tahoes
The Blazer is smaller than the Dodge Durango
Smaller trunk area again and will also need the rear partition.

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Electrical:

I have also contacted 2 electrical companies for quotes and to see if we are even if our building will be able to handle this power draw.

I have contacted Design Electric and Granite Ledge Electric. They each came out and looked at the building to see if the building would even handle an EV charging station.

They also provided quotes. **See Quotes for details.**

Design Electric:

Design Electric did provide me with a quote for a high-quality level 2 charger. Quote is for $2,970. Note: Design quoted me for a smaller charger. We need a 19.2kW charger. I have requested a quote to match Granite Ledge Electric 19.2 kW charger. I have not received an updated quote yet. This quote will be more.

Granite Ledge Electric:

Granite Ledge Electric provide me with a quote for a high-quality level 2 charger. Quote is for $5,250.00.

For a Level 3 charger which is preferred for we do not have much time in between shifts for charging will cost **tens of thousands more** for a major upgrade to our building will need to be done.

When speaking with them they informed me they have a business that will not drive their EV vans from St Cloud to Foreston and back for they are not reliable.

Xcel:

I have spoken with Xcel and they informed me that there is a big concern on if the grid can even support the EV vehicles. They are still looking into if our building can even handle EV charging unit and not affect surrounding businesses or home.

8/14/24 : After speaking with Xcel, it **should be** possible. They are working on updating the line coming into town, but that won't be completed until next year sometime. I am concerned with the word should. I do not want to affect surrounding businesses or homes.

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Battery Life:

Per Murphy Chev: all electric components have a 8 year/100K mile warranty.
If they have to replace the whole battery it will cost up to $20,000.
They often can take out the bad cells and just replace those.

Charge Life:

When talking with surrounding agencies Police Chief's, Officers, Sheriff's, Deputies, they also stated they are concerned with how well/long the battery will hold a charge.

We would have all the following items running off the battery when we would have to go lights and sirens:

-Am/FM Radio
-Police Radio
-Laptop
-In squad Camera
-Lights
-Siren
-AC or Heat
-High Rates of Speed

When I ask if the battery can handle all of this, I get the answer it should. This concerns me, for what it we are going to a medical call of an individual having a heart attack. We activate lights, siren, camera, on top of everything that is already running off the battery and then it drains the battery down to zero. We then would be stuck along the road and not being able to help the individual.

Our trips to St Cloud Hospital or Detox usually do not come at the beginning of our shifts. They usually come at the end, when we will not have a full charge.

We also assist the County on a lot of calls in the county and they assist us.

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Where to Charge EV:

I have been told by several people that one should not charge an EV in confined space due to the increase risk of fire. Our PD garage is small. I do not like keeping our squads outdoors for all of the equipment we have in them.

Insurance:

Cost to insurance the EV will cost pretty much the same as a regular vehicle.

See attached Building Code Toolkit from our insurance.

Grant:

The grant that Sartell received is now closed. It will open again sometime next Spring. However, the earliest we would possibly receive any money would be July of 2026 for the fiscal year 2027. Just because we apply for a grant does not mean we will get it. Applying for grants take a lot of time. This is a concern for we do not have much staff time with the increase calls. I do not want to spend money on an EV with not knowing if we have a grant or not.

The 2019 Squad car needs to be replaced sooner than later. Sartell will not be seeing theirs until December/January. We will need to order our squad at our next meeting.

Sartell vs Foley:

- Sartell has a larger fleet of squads
- Sartell has more than one officer on at a time.
- Sartell has a bigger tax base and can afford the squads
- Sartell has a bigger tax base and can afford the debt until their grant money comes in
- Sartell can rotate their EV squads to admin or investigations if not work for patrol.
- Sartell has a new PD that can handle the power draw.
- Sartell has a larger budget

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I have come up with a Pros and Cons list for EV squads:

Pro:

- Quiet
- Less Maintenance
- No Fuel
- Possible Grant

Cons:

- Cost w/out grant
- Unknown of Charge
- Unknown how weather conditions will affect
- Liability
- Smaller
- Less cargo room
- Less passenger room
- Guinee Pig – we have had enough issues with squads I do not want to be one of the first in our area tackle EV
- Expensive battery
- If in crash, have to take to body shop where they are approved to fix electric vehicles
- If in crash, more likely to total out vehicle due to expense to repair.
- Cost of electrician to install charging station
- Cost of SEH or someone to assist with writing grant.
- Increase risk of fires
- Power Grid cannot handle EV
- Increase electric bill (similar to AC or stove running all day long)
- Increase changes of Workman's Comp Claims

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In conclusion:

As the Police Chief, I recommend the City goes with a regular vehicle at this time and not EV.

I like the concept of EV, but there are too many unknowns at this point in time. I do not want something bad to happen to someone for we were not able to respond for the squad ran out of charge. Especially when seconds count. It needs to be reliable.

I have spoken with many people in the community, officers, deputies, chief's and sheriff's, all of our department heads and they all have said we should wait on this due to the same concerns I have.

Also, with the grant not being until next year and the funds are not available until the following year, the City cannot afford to be in debt this long. We simply do not have the budget for it.

Waiting on EV vehicles at this time and purchasing a regular squad car will give us the chance to see how the squads work for Sartell and then explorer the option again if it is working for them. My other officers could also go and personally look at Sartell's squads to see if they would work for them.

Thank you,

Katie McMillin
Chief of Police

251 4th Ave. North Foley, MN 56329
Office (320) 968-0800 Fax (320) 968-0801

Date

Purchaser

Dodge of Burnsville
12101 Hwy 35W South
Todd Prissel
tprissel@dodgeofburnsveille.com
952-767-2702

State Contract # 184131 Release # A-174(5)
Allow TBD weeks for delivery from order date
Order Cutoff TBD

2025 Durango Pursuit AWD
V6 WDEE75 2BZ Package

Note: Please select options

Base Vehicle Contract Price $ 39,405.00

		Copy and Paste Price to add options	Options
Seat Options			
Cloth Bucket Seats W/Rear Vinyl/Black	A7X9	$ 145.00	$ 145.00
Cloth Bucket Seats w/ Shift Insert/Black	C5X9	$ -	
Functional Packages:			
Technology Group	ADG	$ 2,619.00	
Skid Plate Group	ADL	$ 333.00	
18X8.0 Painted Aluminum Wheels	WP1	$ 387.00	
Additional Features			
Floor Carpet	CKD	$ 145.00	
Full Length Floor Console	CUF	$ 333.00	
Police Floor Console	CUG	$ 1,076.00	
Deactivate Rear Doors/Windows	CW6	$ 130.00	$ 130.00
Entire Fleet Alike Key (FREQ 2)	GXA	$ 410.00	
Entire Fleet Alike Key (FREQ 3)	GXE	$ 410.00	
Entire Fleet Alike Key (FREQ 1)	GXF	$ 410.00	
Entire Fleet Alike Key (FREQ 4)	GXG	$ 410.00	
Power Liftgate	JRC	$ 432.00	
Black Right LED Spot Lamp	LNA	$ 676.00	
Black Left LED Spot Lamp	LNF	$ 676.00	$ 676.00
Security Alarm	LSA	$ 171.00	
Delete Liftgate Badge	MT8	$ -	$ -
Uconnect 5 Nav w 10.1" Display (USA)	UBN	$ 986.00	
Passenger Side Ballistic Door Panel	XDG	$ 2,696.00	
Driver Side Ballistic Door Panel	XDV	$ 2,696.00	
Color Options			
Baltic Grey Metallic Clear Coat	PAS	$ 356.00	
Blu By You Clear Coat	PBU	$ 540.00	
DB Black Clear Coat	PXJ	$ -	
Destroyer Grey Clear Coat	PDN	$ 356.00	
Ember Pearl Coat	PHC	$ 356.00	
Frostbite Pear Coat	PCA	$ 356.00	
Michigan State Police Blue	P79	$ 540.00	
Midnight Sky	PCQ	$ 356.00	

Date

Purchaser

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Todd Prissel
geofburnsveille.com
952-767-2702

Octane Red Pearl Coat	PRV	$ 356.00	
Silver Metallic Clear Coat	PSE	$ 356.00	
White Knuckle Clear Coat	PW7	$ -	$ -
Dealer Installed Options			
Engine Block Heater	DBH	$ 460.00	
Extra OEM Key	EOK	$ 340.00	
3 Lock Remote Start	DRS	$ 660.00	
Rust Proof & Undercoating	R&U	$ 1,395.00	

Total Delivered Price with options Per Contract $ 40,356.00

Dodge Of Burnsville
12101 Hwy 35W South
Burnsville MN 55337
Todd Prissel
tprissel2dodgeofburnsville.co
952-767-2702

2025 Ford Utility 3.3v6 non hybrid

		BASE PRICE		$44,975.94

Police Interceptor Utility AWD K8A S

AWD 3.3L V6 Direct-Injection Hybrid Engine System with 10-Speed Automatic Transmission (136-MPH Top Speed)	99W	STD		-
99W/44B S				
AWD 3.3L V6 Direct-Injection FFV with 10-Speed Automatic Transmission (136-MPH Top Speed) Note: Deletes Regenerative Braking and Lithium-Ion Battery Pack; adds 250-Amp Alternator, replaces H7 AGM battery (800 CCA/80-amp) with H7 SLI battery (730 CCA/80-amp) and replaces 19-gallon tank with 21.4-gallon tank	99B	(2,191.00)	x	$(2,191.00)
AWD 3.0L V6 EcoBoost® with 10-Speed Automatic Transmission – (148-MPH Top Speed) Note: Deletes Regenerative Braking and Lithium-Ion Battery Pack; adds 250-Amp Alternator, replaces H7 AGM battery (800 CCA/80-amp) with H7 SLI battery (730 CCA/80-amp) and replaces 19-gallon tank with 21.4-gallon tank)	99C	893.00		-
Vermillion Red	E4	N/C		-
Iconic Silver	JS	N/C		-
Dark Blue	LK	N/C		-
Royal Blue	LM	N/C		-
Silver Grey Metallic	TN	N/C		-
Sterling Grey Metallic	UJ	N/C		-
Agate Black	UM	N/C		-
Oxford White	YZ	N/C	x	N/C
Carbonized Gray	M7	N/C		-
				-
Late Availablity Colors				-
Arizona Beige	E3	N/C		-
Kodiak Brown	J1	N/C		-
Light Blue Mettalic	LN	N/C		-

Police Green	F1	N/C		-
				-
				-

Police Interceptor Utility Police Interceptor Utility Interior Color Charcoal Black Cloth Front Buckets / Vinyl Rear Front – Unique Heavy-Duty Cloth, Front Bucket Seats Driver 6-way Power track (fore/aft.up/down, tilt with manual recline, 2-way manual lumbar) Passenger – 2-way manual track (fore/aft. with manual recline) Rear – 35/30/35 Split Vinyl.	9W	N/C	x	N/C
Cloth Front Buckets / Cloth Rear Front – Unique Heavy-Duty Cloth, Front Bucket Seats Driver 6-way Power track (fore/aft.up/down, tilt with manual recline, 2-way manual lumbar). Passenger – 2-way manual track (fore/aft. with manual recline) Rear – 35/30/35 Split Cloth	FW	65.00		-

EQUIPMENT GROUP

Interior Upgrade Package • 1st and 2nd Row Carpet Floor Covering • Cloth Seats – Rear • Center Floor Console less shifter w/unique Police console finish plate • Includes Console and Top Plate with 2 cup holders • Floor Mats, front and rear (carpeted) • Deletes the standard console mounting plate (85D)	65U	367.00		-

• SYNC® 3 – Enhanced Voice Recognition Communications and Entertainment System 18" Aluminum Wheel – AppLink® – 911 Assist® Note: SYNC® AppLink® lets you control some of your favorite compatible mobile apps with your voice. It is compatible with select smartphone platforms. Commands may vary by phone and Applink® software. Note: Not available with options: 67H, 67U, 85R			
Front Headlamp Lighting Solution • Includes LED Low beam/High beam headlamp, Wig-wag function and Red/Blue/White LED side warning lights (driver's side White/Red / passenger side White/Blue) • Includes pre-wire for grille LED lights, siren and speaker (60A) • Wiring, LED lights included. Controller "not" included Note: Not available with option: 67H Note: Recommend using Ultimate Wiring Package (67U)	66A	846.00	-
Tail Lamp / Police Interceptor Housing Only • Pre-existing holes with standard twist lock sealed capability (does not include LED strobe) (eliminates need to drill housing assemblies) Note: Not available with options: 66B and 67H	86T	STD	-
Tail Lamp Lighting Solution • Includes LED lights plus two (2) rear integrated hemispheric lighthead white LED side warning lights in taillamps • LED lights only. Wiring, controller "not" included Note: Not available with option: 67H Note: Recommend using Ultimate Wiring Package (67U)	66B	405.00	-
Rear Lighting Solution • Includes two (2) backlit flashing linear high-intensity LED lights (driver's side red / passenger side	66C	432.00	-

blue) mounted to inside liftgate glass • Includes two (2) backlit flashing linear high-intensity LED lights (driver's side red / Passenger side blue) installed on inside lip of liftgate (lights activate when liftgate is open) • LED lights only. Wiring, controller "not" included Note: Not available with option: 67H Note: LED lights only – does "not" include wiring or controller Note: Recommend using Ultimate Wiring Package (67U)			
Ready for the Road Package: All-in Complete Package – Includes Police Interceptor Packages: 66A, 66B, 66C, plus • Whelen Cencom Light Controller Head with dimmable backlight • Whelen Cencom Relay Center / Siren / Amp w/Traffic Advisor control (mounted behind 2nd row seat) • Light Controller / Relay Cencom Wiring (wiring harness) w/additional input/output pigtails • High current pigtail • Whelen Specific WECAN Cable (console to cargo area) connects Cencom to Control Head • Pre-wiring for grille LED lights, siren and speaker (60A) • Rear console plate (85R) – contours through 2nd row; channel for wiring • Grille linear LED Lights (Red / Blue) and harness • 100-Watt Siren / Speaker • Hidden Door-Lock Plunger w/Rear-door controls inoperable (locks, handles and windows) (52P) Note: Not available with options: 66A, 66B, 66C, 67U and 65U	67H	3,572.00	-
Ultimate Wiring Package Includes the following: • Rear console mounting plate (85R) – contours through 2nd row; channel for wiring • Pre-wiring for grille LED lights, siren and speaker (60A) • Wiring harness I/P to rear cargo area (overlay) – Two (2) light cables – supports up to six (6) LED lights (engine compartment/grille) – One (1) 10-amp siren/speaker circuit engine cargo area • Rear hatch/cargo area wiring – supports up to six (6) rear LED lights	67U	602.00	-

• Does "not" include LED lights, side connectors or controller – Recommend Police Wire Harness Connector Kit 67V Note: Not available with options: 65U, 67H				
Police Wire Harness Connector Kit – Front/Rear For connectivity to Ford PI Package solutions includes: • Front – (2) Male 4-pin connectors for siren – (5) Female 4-pin connectors for lighting/siren/speaker – (1) 4-pin IP connector for speakers – (1) 4-pin IP connector for siren controller connectivity – (1) 8-pin sealed connector – (1) 14-pin IP connector • Rear – (2) Male 4-pin connectors for siren – (5) Female 4-pin connectors for lighting/siren/speaker – (1) 4-pin IP connector for speakers – (1) 4-pin IP connector for siren controller connectivity – (1) 8-pin sealed connector – (1) 14-pin IP connector Note: Note:See Upfitters guide for further detail www.fordpoliceinterceptorupfit.com	67V	188.00		-
KEY EXTERIOR OPTIONS				
Engine Block Heater	41H	179.00		-
License Plate Bracket – Front	153	N/C	x	N/C
Lamps / Lighting				
Dark Car Feature – Courtesy lamps disabled when any door is opened	43D	STD	x	STD
Daytime Running Lamps	942	47.00		-
Switchable Red/White Lighting in Cargo Area (deletes 3rd row overhead map light)	17T	STD	x	STD

Front Warning Auxiliary LED Lights (Red, Blue, White)	21L	546.00	-
Rear Auxiliary Liftgate Lights	43A	376.00	-
Front Interior Visor Light Bar (LED) • Super low-profile warning LED light bar fully integrated into the top of the windshield near the headliner – fully programable. (Red/Red or Blue/Blue operation. White "take down" and "scene" capabilities) Note: Recommend using Ready for the Road Package (67H) or Ultimate Wiring Package (67U) (when not ordering the Interior Upgrade Package [65U]) Note: Front Console Plate no longer required; can be ordered with Interior Upgrade Package (65U)	96W	NA	-
Pre-wiring for grille LED lights, siren and speaker 60A O / P-66A / P-67H / P-67U	60A	STD	-
Rear Quarter Glass Side Marker LED Lights (Driver side – Red / Passenger side – Blue)	63L	546.00	-
Rear Spoiler Traffic Warning Lights (LED) • Fully integrated in rear spoiler for enhanced visibility • Provides red/blue/amber directional lighting – fully programmable Note: Rear Console Plate no longer required; can be ordered with Interior Upgrade Package (65U) Note: Recommend using Ready for the Road Package (67H) or Ultimate Wiring Package (67U) (when not ordering the Interior Upgrade Package [65U])	96T	1,410.00	-
Side Marker LED – Sideview Mirrors (Driver side – Red / Passenger side – Blue) • Located on exterior mirror housing • LED lights only. Wiring, controller "not" included Note: Recommend using Ready for the Road Package (67H) or Ultimate Wiring Package (67U) (will add 60a)	63B	320.00	-
Spot Lamp Prep Kits			
Spot Lamp Prep Kit, Driver Only Note: Does not include spot lamp housing and bulb	51P	132.00	-
Spot Lamp Prep Kit, Dual Driver and Passenger Note: Does not include spot lamp housing and bulbs	51W	264.00	-

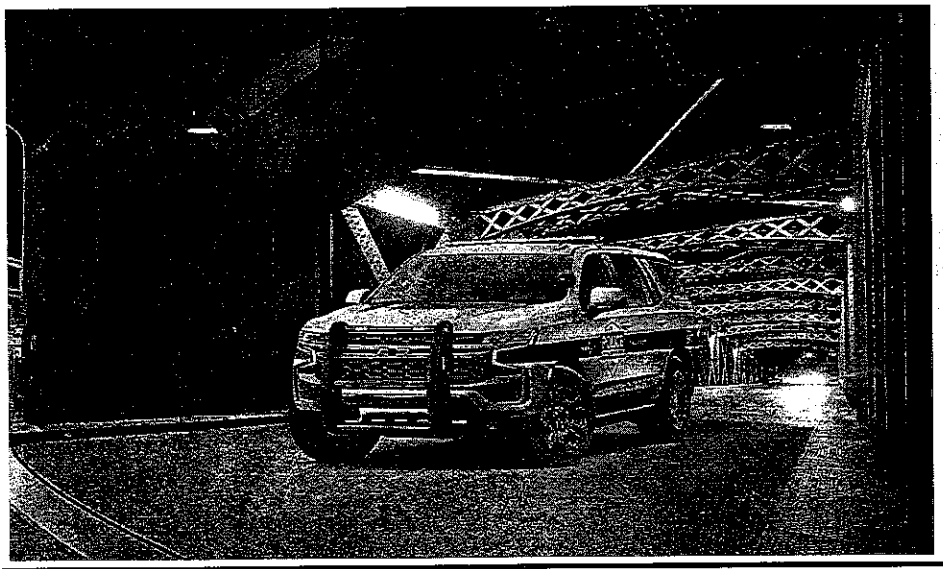
Spot Lamp – LED Bulb:				
Driver Only (Unity)	51R	376.00	x	$376.00
Driver Only (Whelen)	51T	394.00		-
Dual (driver and passenger) (Unity)	51S	582.00		-
Dual (driver and passenger) (Whelen)	51V	629.00		-
Body				
Glass – Solar Tint 2nd Row door glass, Rear Quarter and Liftgate Window (Deletes Privacy Glass)	92G	112.00		-
Glass – Solar Tint 2nd Row Only door glass, Privacy Glass on Rear Quarter and Liftgate Window	92R	85.00		-
Underbody Deflector Plate (engine and transmission shield)	76D	320.00		-
Wheels				
Wheel Covers (18" Full Face Wheel Cover) Note: Only available with the standard Police wheel, not available with 64E	65L	65.00		-
18" Painted Aluminum Wheel Note: Spare wheel is an 18" conventional (Police) black steel wheel. Not available with 65L.	64E	NA		-
Audio / Video				
Rear View Camera displayed in rear view mirror (Includes Electrochromic Rear View Mirror)	87R	NA		-
84 Rear Backup Camera, If Selected Image Will Show In Entire 8" Screen/If Not Image Will Show Upper Left Corner	87M	N/C		-
Doors / Locks				
Hidden Door-Lock Plunger w/Rear-door controls inoperable Note: Not available with 68G. Note: Can manually remove window or door disable plate with special tool Note: Locks/windows operable from driver's door switches	52P	150.00	x	$150.00
Rear-Door controls Inoperable / Locks Inoperable (with 52P no charge included)				
Rear-Door controls Inoperable/Locks Inoperable (without 52P $76)	68G	76.00	x	$76.00

Global Lock / Unlock feature (Door-panel switches will lock/unlock all doors and rear liftgate. Eliminates overhead console liftgate unlock switch and 45-second timer. Also eliminates the blue liftgate release button if ordered with Remote Keyless)	18D	N/C		-
Remote Keyless-Entry Key Fob (w/o Keypad, less PATS) – (includes 4-key fobs) Note: Available with Keyed Alike, however, key fobs are "not" fobbed alike when ordered with Keyed-Alike	55F	STD	x	STD
Keys (Note: Can be ordered with Remote Keyless-Entry – 55F)				
Keyed Alike – 1435x	59E	47.00		-
Keyed Alike – 1284x	59B	47.00		-
Keyed Alike – 0135x	59D	47.00		-
Keyed Alike – 0576x	59F	47.00		-
Keyed Alike – 1111x	59J	47.00		-
Keyed Alike – 1294x	59C	47.00		-
Keyed Alike – 0151x	59G	47.00		-
Flooring / Seats				
1st and 2nd row carpet floor covering (includes floor mats, front and rear) 16C O / P-65U	16C	141.00		-
2nd Row Cloth Seats has to be ordered with F6	88F	65.00		-
Power passenger seat (8-way) w/2-way manual recline and lumbar)	87P	STD	x	STD
Front and Second Row Carpet With Floor Matts Front and Rear	16C	118.00		-
Front Console Plate Delete-Note: Not available with option: 67H, 67U, 85R	85D	N/C		-
Rear Center Seat Delete (includes center seat delete tray) *Rear Center Seat Delete* Note: Not available with 65U or vinyl rear seats	85S	NA		-
Rear Console Plate Note: Not available with option: 65U, 85D	85R	56.00		-

Safety & Security				
Ballistic Door-Panels (Level III+) – Driver Front-Door Only1	90D	1,495.00		-
Ballistic Door-Panels (Level III+) – Driver & Pass Front-Doors1	90E	2,979.00		-
Ballistic Door-Panels (Level IV+) – Driver Front-Door Only2	90F	2,274.00		-
Ballistic Door-Panels (Level IV+) – Driver & Pass Front-Door Only2	90G	4,541.00		-
BLIS® – Blind Spot Monitoring with Cross-traffic Alert (Requires 54Z) Note: Includes manual fold-away mirrors, w/heat, w/o memory, w/o puddle lamps	55B	STD	x	STD
Police Perimeter Alert – detects motion in an approximately 270-degree radius on sides and back of vehicle; if movement is determined to be a threat, chime will sound at level I. Doors will lock and windows will automatically go up at level II. Includes visual display in instrument cluster with tracking.	68G	STD	x	STD
Pre-Collision Assist with Pedestrian Detection (includes Forward Collision Warning and Automatic Emergency Braking and unique disable switch for Law Enforcement use) Note: Not available with option 96W *Note: Not available with option 96W Note: Not available with option 96W*	76P	STD		-
Mirrors – Heated Sideview Note: Not required when ordering BLIS® (heated mirror is included with BLIS®)	549	STD	x	STD
Perimeter Anti-Theft Alarm • Activated by Hood, Door or Liftgate; when unauthorized entry occurs, system will flash the headlamps, parking lamps and sound the horn *NEW headlamps, parking lamps and sound the horn* • Requires Keyless-Entry Key Fob (55F)	593	STD		-
Police Engine Idle feature • This feature allows you to leave the engine running and prevents your vehicle from unauthorized use when outside of your vehicle. Allows the key to be removed from ignition while vehicle remains idling.	47A	STD		-
Reverse Sensing System	76R	STD		-

Misc				
Aux Air Conditioning Note: Now available with Cargo Storage Vault	17A	STD		-
Badge Delete • Deletes the "Police Interceptor" badging on rear liftgate • Deletes the "Interceptor" badging on front hood (EcoBoost®)	16D	N/C		-
12.1"12.1" Integrated Computer Screen Includes 12.1" touchscreen display in center stack and allows for operation of laptop in remote location to free up cabin space in front passenger area Includes Audio Video Extender (AVX) box, (2) AVX cables, (2) USB cables and (1) HDMI cable Includes SYNC 3	47E	3,478.00		-
Cargo Storage Vault (includes lockable door and compartment light) Note: Now available with Aux Air Conditioning	63V	253.00		-
Rear Bumper Step Pad	16P	94.00		-
OBD II Split Connector Highly Recomeneded by Up Fitters/UIS Will Now Be Standard Better Connection	61B	STD		-
Class III Trailer Tow Lighting Package (4-pin and 7-pin connectors and wiring) now standard	52T	STD		-
H8 AGM Battery (900 CCA/92-amp)	19K	STD		-
Noise Suppression Bonds (Ground Straps)	60R	94.00		-
100 Watt Siren/Speaker (includes bracket and pigtail)	18X	329.00		-
				-
				-
				-
		Total Per Unit		43386.94

*Non Contracted State Items



North Country GM

To handle the dynamic load of police pursuits, Chevrolet worked with Bridgestone to develop a pursuit-rated all-season tire. ***The Firestone Firehawk Pursuit tires, mounted to 20-inch steel wheels, were tested by Chevrolet at multiple race tracks and play a large role in the PPV's improved stopping distance, which has been reduced by 11 feet from 62 to 0 mph on dry surfaces compared to the 2020 model.***

Both PPV and SSV packages benefit from the SUV's completely new design, which offers class-leading interior space. ***The new Tahoe police-specific front seats provide additional hip room, allowing officers' utility belts to fit more comfortably.*** *2021 Tahoe police vehicles offer 70.3 cubic feet of cargo volume behind the second-row seat, which is 18.3 cubic feet more than the next largest pursuit-rated SUV competitor. Rear door openings are now 13 percent (3.5 inches) wider than the previous generation to ease the loading of handcuffed passengers.*

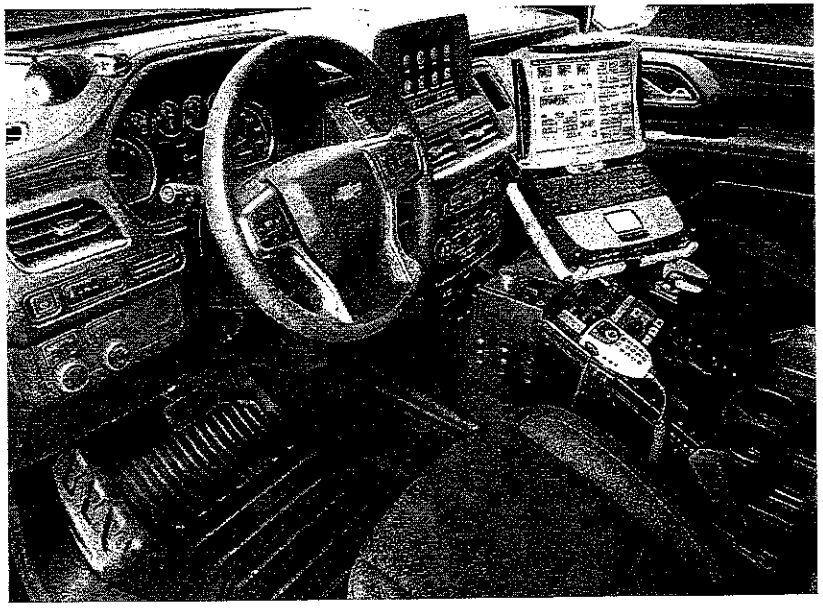
The all-new independent rear suspension and longer wheelbase dramatically improve handling and ride smoothness *for both civilian and law enforcement applications, particularly on uneven pavement and unpaved surfaces. The exterior design is based on the new Tahoe Z71 trim, which features a rugged front grille, higher approach angle and front skidplate.*

2024 Tahoe PPV

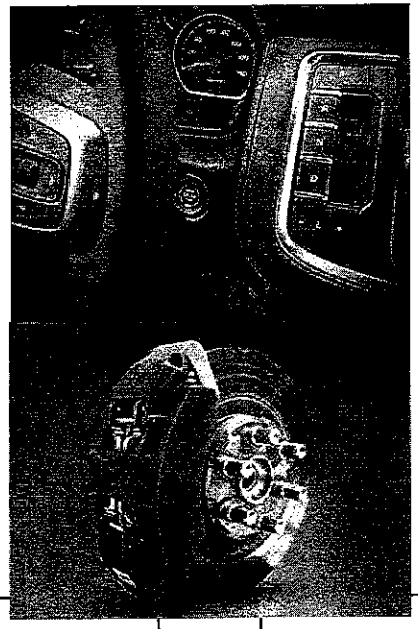
Contact

Bob O'Hara

218-349-8955



Technology is more important than ever as officers can get work done while parked using an available 4G LTE Wi-Fi® Hotspot. Standard HD Rear Vision Camera and Rear Park Assist* can help officers prevent collisions when backing up, while standard Hitch Guidance* helps officers attach a trailer. Unlike pursuit-rated SUV competitors, Tahoe offers an available Rear Camera Mirror* to provide a wide, less obstructed view behind the vehicle compared to a traditional rearview mirror. It is especially helpful with police cabin obstructions like cargo partitions, passengers and K9 kennels common in police vehicles. New to 2021 Tahoe police vehicles is standard keyless entry and push-to-start ignition, which allow police officers to leave their keys on their belts for simpler and quicker use.*



New Standard feature is Protected idle allows vehicle engine to remain idling and vehicle immobilized while FOB is outside vehicle (Included and only available (9C1) Police Vehicle or (5W4) Special Service Vehicle.)A $250.00 option on Ford Utility.

Rear Air and Heat needed for K-9's. A $573.00 extra on Ford. Skid Plates are also standard a $315.00 upcharge. Dual Batteries system also standard and not available on the Utility.

All-new 10-speed transmission with on-dash button selector creates more space for emergency equipment and upfits†

Brembo™ 6-piston front brake calipers with 16-inch rotors and eBoost antilock brakes PPV only
Increased trailering capacity[3] — now 6,000 lbs. for 2WD & optional 4WD
Extensive electrical architecture to reduce upfitting[4] time

	CUTOMER NAME:			
	CONTACT:			
	PHONE:			
	EMAIL:			
	2024 TAHOE PPV PRICING	CK10706		48,400.20
	SUSPENSION PKG			

Z56	Suspension Package, heavy-duty, police-rated front, independent torsion bar, and stabilizer bar and rear, multi-link with coil springs (Included and only available with (9C1) Police Vehicle only.)	INC	X	INC
R9L	Deleted 3 Years of Remote Access OnStar Fleet inc N/A UE0 OnStare Delete	(241.00)	X	(241.00)
	EMISSIONS			
FE9	Emissions, Federal requirements	STD	X	STD
	ENGINE			
L84	Engine, 5.3L EcoTec3 V8 with Dynamic Fuel Management, Direct Injection and Variable Valve Timing, includes aluminum block construction (355 hp [265 kW] @ 5600 rpm, 383 lb-ft of torque [518 Nm] @ 4100 rpm) (STD)	STD	X	STD
	TRANSMISSION			
MQC	Transmission, 10-speed automatic electronically controlled with overdrive, includes Traction Select modes including tow/haul (STD)	STD	X	STD
	GVWR			
C6H	GVWR, 7500 lbs. (3402 kg) (Standard on 4WD models with (L84) 5.3L EcoTec3 V8 engine	INC	X	INC
	AXLE			
GU5	Rear axle, 3.23 ratio	INC	X	INC
	PREFERRED EQUIPMENT GROUP			
1FL	Commercial Preferred Equipment Group Includes Standard Equipment	INC	X	INC
	WHEEL TYPE			
RNQ	20" STEEL WHEELS INCL SPARE TO MATCH	INC	X	INC
	TIRES			
XCS	ALLSEASON 275/55R20 SL 113V BW ALS 5 TIRES INCL	INC	X	INC

	SPARE TIRE			
ZAK	ALL SEASON 275-55R20 SL 113V BW ALS	INC	X	INC
	PAINT SCHEME			
ZY1	Paint scheme, solid application	$0.00	X	-
	PAINT			
GSK	Cherry Red Tintcoat (Additional charge.)	$435.60		-
GLU	Midnight Blue Metallic	N/C		-
G9K	Satin Steel Metallic	N/C		-
GJW	Empire Beige Metallic	N/C		-
GJI	Shadow Gray Metallic	N/C		-
GAZ	Summit White	N/C	X	N/C
GBA	Black	N/C		-
GS6	Graywood Metallic	N/C		-
TGK	Victory Red Special Paint	$396.00		-
5T4	Victory Red Bumper Part to match (required with TGK red)	$220.00		-
	SEAT TYPE			
A50	Seats, front bucket, with Premium Cloth passenger seat includes power fore/aft, power recline and power lumbar, 10-way power driver seat includes 6-way power cushion, 2-way power lumbar control and power recline (Includes (AYQ) frontal and side-impact for driver and front passenger airbags and (D07) front center console. With (9C1) Police Vehicle or (5W4) Special Service Vehicle includes Cloth seats.)	$308.00		-
AZ3	Seats, front 40/20/40 split-bench with Vinyl (1FL) or Premium Cloth (1FL and 1LS), 3-passenger, includes 6-way power driver and 2 way front passenger seat adjuster, driver and front passenger power lumbar control and power reclining, center fold-down armrest with storage (includes auxiliary power outlet, USB port and input jack for audio system), storage compartments in seat cushion, adjustable outboard head restraints and storage pockets (With (9C1) Police Vehicle or (5W4) Special Service Vehicle includes lockable storage compartment.) (STD)	STD	X	STD
	SEAT TRIM			

H1T	Jet Black, cloth seat trim (Requires (9C1) Police Vehicle or (5W4) Special Service Vehicle.)	STD	X	STD
	RADIO			
IO5	Audio system, Chevrolet Infotainment 3 system, 8" diagonal color touchscreen AM/FM stereo. Additional features for compatible phones include: Bluetooth audio streaming for 2 active devices, voice command pass-through to phone, Apple CarPlay and Android Auto capable. (STD)	STD	X	STD
	ADDITIONAL EQUIPMENT - PACKAGE			
9C1	Identifier for Police Package Vehicle includes, (K47) high-capacity air cleaner, (KX4) 250 amp high output alternator, (K6K) 760 cold-cranking amps auxiliary battery, electrical power & vehicle signals for customer connection located at the center front floor. Auxiliary battery circuit for customer connection located in the rear cargo area, (Z56) heavy-duty, police-rated suspension, front independent torsion bar, and stabilizer bar and rear, multilink with coil springs, (XCS) 275/55R20SL all-season tires, (RAV) P275/55R20 all-season spare tire, Police brakes, (RC1) front skid plate, (PXT) 20" steel wheels, Certified speedometer, SEO (5J3) Surveillance Mode interior lighting calibration, (V53) delete luggage rack side rails, (ATD) third row seat delete, (NP0) active single-speed transfer case (4WD only). *CREDIT*	INCL	X	INCL
PQA	1FL Safety Package includes (UEU) Forward Collision Alert, (UHX) Lane Keep Assist with Lane Departure Warning, (UHY) Automatic Emergency Braking, (UKJ) Front Pedestrian Braking and (UE4) Following Distance Indicator (Requires (9C1) Police Vehicle or (5W4) Special Service Vehicle. Not available with (DRZ) Rear Camera Mirror.)	$347.60		-
	ADDITIONAL EQUIPMENT - MECHANICAL			
—	Capless fuel fill (Included and only available with (9C1) Police Vehicle or (5W4) Special Service Vehicle only.)	INC	X	INC
WUA	Fascia, front high-approach angle (Included and only available with (9C1) Police Vehicle or (5W4) Special Service Vehicle.)	INC	X	INC
—	Power supply, 100-amp, auxiliary battery, rear electrical center (Included and only available with (9C1) Police Vehicle or (5W4) Special Service Vehicle only.)	INC	X	INC

___	Power supply, 120-amp, (4) 30-amp circuit, Primary battery relay controlled, passenger compartment harness wiring (Included and only available with (9C1) Police Vehicle or (5W4) Special Service Vehicle only.)	INC	X	INC
___	Power supply, 50-amp, power supply, auxiliary battery passenger compartment wiring harness (Included and only available with (9C1) Police Vehicle or (5W4) Special Service Vehicle only.)	INC	X	INC
KX4	Alternator, 250 amps (Included and only available with (9C1) Police Vehicle or (5W4) Special Service Vehicle only.)	INC	X	INC
NQ0	Transfer case, active, single speed electronic Autotrac with rotary controls, includes neutral position for dinghy towing (Requires 4WD models. Included with (9C1) Police Vehicle, (5W4) Special Service Vehicle and (NHT) Maximum Trailering Package.)	INC	X	INC
NZZ	Skid Plate Package with (9C1) Police Vehicle or (5W4) Special Service Vehicle, includes frame-mounted shields, includes front underbody shield starting behind front bumper and running to first cross-member, protecting front underbody, oil pan, differential case and transfer case (Requires 4WD models and a Fleet or Government sales order type. Included with (9C1) Police Vehicle or (5W4) Special Service Vehicle.)	INC	X	INC
V76	Recovery hooks, 2 front, frame-mounted, Black (Standard on 4WD Commercial models. Available on 2WD, Police and Special Service models. Required on all models going to Alaska, Guam, Hawaii, Puerto Rico and Virgin Islands. All Tahoe (9C1) and (5W4) vehicles include front fascia with recovery hook openings.)	$44.00	X	44.00
	ADDITIONAL EQUIPMENT - EXTERIOR			
___	Door handles, body-color (Included and only available with (9C1) Police Vehicle or (5W4) Special Service Vehicle only.)	INC	X	INC
___	Exterior ornamentation delete (Included and only available with (9C1) Police Vehicle or (5W4) Special Service Vehicle only.)	INC	X	INC
___	Luggage rack, delete (Included and only available with (9C1) Police Vehicle or (5W4) Special Service Vehicle only.)	INC	X	INC
CWA	Rear Camera Mirror Washer (Included and only available with (DRZ) Rear Camera Mirror.) Provides Vision from back of Vehicle N?A with PQA	Req DRZ	X	Req DRZ

DRZ	Rear Camera Mirror, inside rearview auto-dimming with full camera display (When ordered with (9C1) Police Vehicle or (5W4) Special Service Vehicle, includes (CWA) Rear Camera Mirror Washer. Not available with (PQA) 1FL Safety Package.)	$418.00	X	418.00
AKP	Glass, solar absorbing *CREDIT*	($259.60)		-
VK3	License plate front mounting package	$0.00	X	-
	ADDITIONAL EQUIPMENT - INTERIOR			
—	Instrumentation, analog with certified 150 mph speedometer (PPV), 140 mph speedometer (Special Service), odometer with trip odometer, engine hour meter, fuel level, voltmeter, engine temperature, oil pressure and tachometer (Included and only available with (9C1) Police Vehicle or (5W4) Special Service Vehicle only.)	INC	X	INC
—	Power outlets, 4 auxiliary, 12-volt includes 1 on the instrument panel, 1 in armrest, and 2 in the cargo area (Included and only available with (9C1) Police Vehicle or (5W4) Special Service Vehicle.)	INC	X	INC
—	Theft-deterrent system, vehicle, PASS-Key III (Included and only available with (9C1) Police Vehicle or (5W4) Special Service Vehicle only.)	INC	X	INC
AMF	Remote Keyless Entry Package includes 4 additional transmitters, NOTE: programming of remotes is at customer's expense. Programming remotes is not a warranty expense (Requires (9C1) Police Vehicle or (5W4) Special Service Vehicle.)	$66.00	X	66.00
ATD	Seat delete, third row passenger (Deletes rear storage compartment and (AP9) rear cargo net. Included with (9C1) Police Vehicle or (5W4) Special Service Vehicle.) *CREDIT*	INC	X	INC
B30	Floor covering, color-keyed carpeting	$171.60		-
B58	Floor mats, color-keyed carpeted first and second row, removable (Included and only available with (B30) color-keyed carpeting, floor covering.)	$70.40		-
BTV	Remote vehicle start	$264.00		-
BCV	Auto Lock Disable	$44.00	X	44.00
D07	Console, floor with storage area, cup holders and auxiliary jack (Included and only available with (A50) front bucket seats.)	$0.00		-
	ADDITIONAL EQUIPMENT - SAFETY-MECHANICAL			
UHY	Automatic Emergency Braking (Included and only available with (PCW) Enhanced Driver Alert Package.)	Incl w/PQA		-

	ADDITIONAL EQUIPMENT - SAFETY-INTERIOR			
——	Safety belts, 3-point, driver and front passenger in all seating positions (Included and only available with (9C1) Police Vehicle or (5W4) Special Service Vehicle.)	INC		-
UE0	OnStar, delete (Requires a Fleet or Government sales order type. *CREDIT* N/A w/ R9L	($74.80)		-
UEU	Forward Collision Alert (Included and only available with (PCW) Enhanced Driver Alert Package.)	Incl w/PQA		-
UHX	Lane Keep Assist with Lane Departure Warning (Included and only available with (PCW) Enhanced Driver Alert Package.)	Incl w/PQA		-
	ADDITIONAL EQUIPMENT - LPO			
VQK	LPO, Molded splash guards (dealer-installed) (Requires (BVE) Black assist steps.)	$220.00	X	220.00
	SPECIAL EQUIPMENT OPTIONS			
UN9	Radio Suppression Package, with ground straps (Requires (9C1) Police Vehicle or (5W4) Special Service Vehicle.)	$83.60	X	83.60
UT7	Ground Studs, auxilary, cargo area inside liftgate opening, left and right sides (Requires (9C1) Police Vehicle or (5W4) Special Service Vehicle.)	STD	X	STD
01U	Special Paint	$0.00		-
5T4	Exterior body colored parts, Victory Red Provides Victory Red special paint WA9260 and Victory Red special painted exterior body parts in lieu of glossy Black color normally installed with special paint. Victory Red painted parts will consist of front fascia, rear bumper fascia, rear liftgate handle, and door handles. Mirrors, rear D-pillar applique and liftgate spoiler will remain Black (Requires SEO (TGK) special paint and (V76) recovery hooks.)	$220.00		-
6J3	Wiring, grille lamps and siren speakers (Requires (9C1) Police Vehicle or (5W4) Special Service Vehicle.)	$80.96		-
6J4	Wiring, horn and siren circuit (Requires (9C1) Police Vehicle or (5W4) Special Service Vehicle.)	$48.40		-
6J7	Flasher system, headlamp and taillamp, DRL compatible with control wire (Requires (9C1) Police Vehicle or (5W4) Special Service Vehicle. Includes SEO (5J9) taillamp flasher calibration, Red/White and SEO (5LO) taillamp flasher calibration, Red/Red.)	STD	X	STD

7X3	Spotlamp, left-hand (Requires (9C1) Police Vehicle or (5W4) Special Service Vehicle. Not available with (7X7) left and right-hand spotlamps.)	$704.00	X	704.00
7X2	Spotlamps, left- and right-hand (Requires (9C1) Police Vehicle or (5W4) Special Service Vehicle. Not available with (7X6) left-hand spotlamp.)	$1,179.20		-
9V2	Exterior body colored parts, MSP Blue WA-5665. Provides font and rear fascia that will be MSP Blue, WA-5665 all other non-metal body parts will be the same as (TGK) special paint solid (Requires SEO (TGK) special paint solid and (9C1) Police Vehicle or (5W4) Special Service Vehicle.)	$242.00		-
TGK	Special Paint, Solid, one color All normally body colored non-sheet metal parts will be gloss Black. This includes front and rear fascias, liftgate handle, 'D' Pillars, mirrors and liftgate spoiler. Door handles will be flat Black. Body-side moldings will be deleted. May require extended lead time. (Requires (01U) Special Paint with any SEO paint selection.	$374.00		-
WX7	Wiring, auxiliary speaker. For upfitter connection to front door and windshield pillar speakers. (Requires (9C1) Police Vehicle or (5W4) Special Service Vehicle.)	$52.80		-
5T5	Seats, front cloth and second row vinyl (Not available with (A50) front bucket seats.)	N/C		-
6C7	Lighting, red and white front auxiliary dome Red and white auxiliary dome lamp is located on headliner between front row seats (red is LED, white is incandescent). The auxiliary lamp is wired independently from standard dome lamp (Requires (9C1) Police Vehicle or (5W4) Special Service Vehicle.)	$149.60		-
"6E2	Key common, complete vehicle fleet provides a single key with a specific code that is common to the door locks of all the vehicles in the vehicle fleet. Key code is an alternate to SEO (6E8) complete vehicle fleet common key. NOTE: NOT COMPATIBLE with previous model years (Requires (AMF) Remote Keyless Entry Package, (AU7) fleet common key and (9C1) Police Vehicle or (5W4) Special Service Vehicle. Not available with SEO (6E8) complete vehicle fleet common key.)	$22.00		-
"6E8	Key common, complete vehicle fleet provides a single key with a specific code that is common to the door locks of all the vehicles in the vehicle fleet. Key code is an alternate to SEO (6E2) complete vehicle fleet common key. NOTE: NOT COMPATIBLE with previous model years (Requires (AMF) Remote Keyless Entry Package, (AU7) fleet common key and (9C1) Police Vehicle or (5W4) Special Service Vehicle. Not available with SEO (6E2) complete vehicle fleet common key.)	$22.00		-

6N5	Switches, rear window inoperative (rear windows can only operate from driver's position) (Requires (9C1) Police Vehicle or (5W4) Special Service Vehicle.)	$50.16	X	50.16
6N6	Door locks and handles, inside rear doors inoperative (doors can only be opened from outside) (Requires (9C1) Police Vehicle or (5W4) Special Service Vehicle.)	$54.56	X	54.56
5Y1	Seats, Driver and passenger front individual seats in cloth trim Power driver and passenger bucket seats in base cloth trim. Derived from RPO (AZ3) 40-20-40 split bench seat with the 20% section removed which also removes the auxiliary power outlet, USB port and input jack for audio system. Does not include a floor console. All exposed floor area will remain untrimmed. (Requires (AZ3) 40/20/40 split bench seat, trim code (H0U) Jet Black cloth.)	N/C	X	N/C
UTQ	Theft-deterrent system, content, disable the alarm and horn become non-functional in an attempt of theft to the vehicle	$44.00		-
9G8	Headlamps, Daytime Running Lamps and automatic headlamp control delete deletes standard Daytime Running Lamps and automatic headlamp control features (Requires (9C1) Police Vehicle or (5W4) Special Service Vehicle.)	$44.00	X	44.00
NEW	Protected idle allows vehicle engine to remain idling and vehicle immobilized while FOB is outside vehicle (Included and only available (9C1) Police Vehicle or (5W4) Special Service Vehicle.)	STD	X	STD
T53	Lamps, alternate flashing Red & Blue rear compartment lid warning (visible when liftgate is open) and controlled by momentary liftgate mounted switch or ground wire (Requires (9C1) Police Vehicle or (5W4) Special Service Vehicle.)	$497.20		-
KERR	Ship through for upfitting. Required with Special Wiring or Spotlight install	$150.00	x	150.00
	TOTAL COST PER UNIT			50,037.52

TENVOORDE FORD, INC
P O BOX 1045
ST CLOUD, MN 56302

Invoice No.

INVOICE

Customer

Name Foley PD
Address
City State ZIP
Phone

Misc

Date 8/6/2024
Order No. 1
Rep
FOB

Qty	Description	Unit Price	TOTAL
1	2024 Mach E GT	$51,157.00	$ 51,157.00

SubTotal	$	51,157.00
Shipping		
Tax Rate(s) 0.00%	$	-
TOTAL	$	51,157.00

Payment Select One...

Comments
Name
CC #
Expires

Office Use Only

TENVOORDE FORD, INC, PO BOX 1045, ST CLOUD, MN 56302

Preview Order 1040 - K4S GT eAWD: Order Summary Time of Preview: 08/06/2024 09:55:56 Receipt: NA

Dealership Name: Tenvoorde Ford, Inc. **Sales Code :** F58584

Dealer Rep.	Jade Aanenson	**Type**	Fleet	**Vehicle Line**	Mustang Mach-E	**Order Code**	1040
Customer Name	foley	**Priority Code**	K1	**Model Year**	2024	**Price Level**	440

DESCRIPTION	MSRP	DESCRIPTION	MSRP
K4S0 MACH-E GT AWD	$54995	MAGNERIDE DAMPING SYSTEM	$0
.117.5 INCH WHEELBASE	$0	STRIPE & DOOR GRAPHIC DELETE	$0
TOTAL BASE VEHICLE	$54995	FRONT LICENSE PLATE BRACKET	$0
STAR WHITE MET TRI-COAT	$995	FLEET EV NET INVOICE CREDIT	$0
ACTIVEX SEATING W/MIKO PERF	$0	24 MME FLEET ORDER DISCOUNT	$0
PERFORMANCE GRAY	$0	PRICE CONCESSION INDICATOR	$0
EQUIPMENT GROUP 400A	$0	REMARKS TRAILER	$0
.PFM/91KWH USBL EXT NCM BATT	$0	SPECIAL DEALER ACCOUNT ADJUSTM	$0
.SINGLE-SPEED TRANSMISSION	$0	SPECIAL FLEET ACCOUNT CREDIT	$0
245/45R20 A/S BSW TIRES	$0	FUEL CHARGE	$0
JOB #2 ORDER	$0	NET INVOICE FLEET OPTION (B4A)	$0
REAR SPOILER	$0	PRICED DORA	$0
BLUECRUISE EQUIP: 90DAY TRIAL	$0	ADVERTISING ASSESSMENT	$0
20" ALUM WHLS W/PKTS&AERO CVR	$0	DESTINATION & DELIVERY	$1995

	MSRP
TOTAL BASE AND OPTIONS	$57985
DISCOUNTS	NA
TOTAL	$57985

ORDERING FIN: QS031 **END USER FIN:** QS031

INCENTIVES DISCOUNTS:

Acc. Code ID :10 Contract/Ref # :30-711R Bid Date :02/09/24State : MN $-100.00

Customer Name: Customer Email:

Customer Address: Customer Phone:

Customer Signature Date

STANDARD EQUIPMENT

ALL SELECT SERIES EQUIPMENT PLUS:

MECHANICAL

- 91kWh Usable Capacity Extended Range High-Voltage Battery
- Dual eMotor (Rear/Upgraded Front) (eAWD)
- ★ MagneRide® Damping System
- Brembo™ Front Brakes
- Red Painted Front and Rear Brake Calipers

EXTERIOR

- Unique Front/Rear Fascia – Body-Color Upper / Black-Painted Lower
- ★ Body Color Steel Roof
- GT Series Badges
  - — GT Badge on Liftgate
  - — Illuminated Front Pony Badge
- Tires – All-Season (A/S) (245/45R20)
- Wheels – 20" Machined-Face Aluminum with High Gloss Black-Painted Pockets and Aero Cover
- Wheellip Moldings, Front and Rear – Body-Color Painted

INTERIOR/COMFORT

- Ambient Lighting – Multi-Color
- Instrument Panel – Aluminum Applique with Unique Design
- Unique City Silver Accent Stitching on Seats, IP, and Center Console Lid
- Seats
- ★ Ford Performance Front Seats – Performance Gray ActiveX® Trimmed with Unique Miko® Perforated Reflective Insert[1] and City Silver Stitching
- ★ 10-Way Power Driver (Fore/Aft, Up/Down,Tilt, Power Lumbar, Power Recline)
  - — 8-Way Power Passenger (Fore/Aft, Up/Down, Power Lumbar, Power Recline)
- Steering Wheel – City Silver Stitching

SAFETY/SECURITY

- Front Row Head Restraints – Fixed Position
- Mirrors, Sideview – Power-Folding with Power and Heated Glass, LED Turn Signal Indicators, Pony Projection Puddle Lamps and Black Painted Caps

[1] Sueded Cloth

FUNCTIONAL

- Audio
  - — B&O® Sound System by Bang & Olufsen® featuring B&O Beosonic® with 10 Speakers including Subwoofer

PACKAGES

- **Comfort Package**
  - — Power Liftgate
  - — Heated Front Row Seats
  - — Heated Steering Wheel
  - — Memory – Driver's Seat and Sideview Power-Folding Mirrors

★ = New for this model year

EQUIPMENT GROUP

Series	Order Code	GT
Mustang Mach-E GT eAWD	K4S	S
• Dual eMotor (Rear/Upgraded Front) • 91kWh Usable Capacity Extended Range High-Voltage Battery	99X	S
Single-Speed Transmission	44A	S
Entities (Series, Drive, Motor/Battery, Transmission) (This section is for WBDO users only)		
• Mustang Mach-E GT eAWD • Dual eMotor (Rear/Upgraded Front) 91kWh Usable Capacity Extended Range High-Voltage Battery • Single-Speed Transmission	K4S 99X 44A	400A
Equipment Group		**Standard Package (400A)**
Free Standing Packages & Options (FSO)		
★**Mustang Mach-E Rally** • High Gloss Oxford White 19" Wheels with Black Printed Graphics • Michelin CrossClimate2 All-Season Performance Tires (235/55R19) • Black Painted Steel Roof • Aluminum Underbody Protective Shield – Front • Rallycross-tuned MagneRide® Damping System • Front Recovery Hook • Sport Pedals • RallySport Drive Mode • Mustang Mach-E GT Performance Upgrade • Unique Front Splitter in Dark Carbonized Gray • Unique Rear Spoiler in Dark Carbonized Gray • Unique Grille Shield in Dark Carbonized Gray with Integrated LED Fog Lamps • Door, Wheel, Roof, and Bumper Trim in Dark Carbonized Gray • Hood and Decklid Stripes • Clear Paint Protective Film on Lower Body Sides • "Mach-E Rally" Door Graphics • Oxford White Steering Wheel, Door, and IP Interior Trim • Ford Performance Front Seats with Exclusive Debossed Logos and Oxford White Seatback Trim **Note:** "Mach-E Rally" Door Graphics replace standard door badges **Note:** GT Logo is removed from the Center Console Lid **Note:** Not Available with Bronze Appearance Package (55S) **Note:** When Shadow Black Paint (G1) is selected the Steel Roof is Body Color	55Q	O
★Hood and Decklid Stripe Delete **Note:** Requires Mustang Mach-E Rally (55Q)	66C	O
★Hood and Decklid Stripe & "Mach-E Rally" Door Graphics Delete **Note:** Requires Mustang Mach-E Rally (55Q) **Note:** Not available with Hood and Decklid Stripe Delete (66C)	66D	O
★**Bronze Appearance Package** • 20" Sinister Bronze Painted Wheels • Sinister Bronze Outlined "Mach-E 4X" door badges and rear GT Badge • Bronze Mesh Front Grille Shield **Note:** Not Available with Mustang Mach-E Rally (55Q)	55S	O
★20" Machined-Face Aluminum Wheels with Carbonized Gray-Painted Pockets **Note:** Not available with Mustang Mach-E Rally (55Q) or Bronze Appearance Package (55S)	64B	O

★ = New for this model year

I = Included in Equipment Group, S = Standard Equipment, O = Optional, M = Mandatory, A = Automatically Added

EQUIPMENT GROUP

Equipment Group		Standard Package (400A)
Free Standing Packages & Options (FSO) (continued)		
20" Summer Tires (245/45R20)[1] **Note:** Not available with Mustang Mach-E Rally (55Q) **Note:** Requires Mustang Mach-E GT Performance Upgrade (41G) **Note:** Requires Bronze Appearance Package (55S) or 20" Machined-Face Aluminum Wheels with Carbonized Gray-Painted Pockets (64B)	**THE**	O
★Mustang Mach-E GT Performance Upgrade **Note:** Included with Mustang Mach-E Rally(55Q)	**41G**	I/O
Panoramic Fixed-Glass Roof with Infrared Reflective (IRR) Windshield **Note:** Not available with Mustang Mach-E Rally (55Q)	**43B**	O
Eruption Green Metallic	**FA**	O
★Glacier Gray Metallic Tri-coat **Note:** Not Available with Bronze Appearance Package (55S)	**R7**	O
Grabber Blue Metallic **Note:** Not Available with Bronze Appearance Package (55S)	**AE**	O
Rapid Red Metallic Tinted Clearcoat **Note:** Not Available with Bronze Appearance Package (55S)	**D4**	O
Star White Metallic Tri-coat	**AZ**	O
Front License Plate Bracket **Note:** See "Emissions" section for additional information	**153**	O
BlueCruise Equipped (3-year Plan) • See ford.com/bluecruise for version details **Note:** Select option to purchase 3 years of BlueCruise access at time of vehicle order. After this initial duration, customers need to purchase a subscription to continue using Bluecruise. See subscription options and pricing on ford.com/bluecruise. **Note:** Not available with BlueCruise Equipped (90-day Trial) Removal (19H)	**18B**	O
Mobile Power Cord (120V/240V) • Switchable cord end to allow customer charge functionality with 120V (NEMA 5-15) up to 15 Amps or 240V (NEMA 14-50) up to 32 Amps	**18D**	O
BlueCruise Equipped (90-day Trial) Removal **Note:** Required when standard feature is unavailable	**19H**	O
Ford Accessories (Custom Accessories, Pre-Installed)		
Interior Protection Package • Cargo Area Cover • Cargo Floor Liner • 1st and 2nd Row Floor Liners (without Carpet Floor Mats) **Note:** Deletes standard Front and Rear Carpeted Floor Mats	**17P**	O
Dealer Installed Options (DIO) – Shipped separately from the vehicle for dealer installation **Note: These features are ordered through WBDO only**		
Wheel Lock Kit		O
Exterior Bumper Protector		O
Roadside Assist Kit		O
First Aid Kit		O
Fleet Only Options (with valid FIN code)		
Daytime Running Lamps (DRL) (Non-Configurable) **Note:** Replaces the standard Configurable Daytime Running Lamps (DRL)	**942**	O

[1] Designed to optimize driving dynamics and provide superior performance on wet and dry roads. Ford does not recommend using summer tires when temperatures drop below approximately 45 deg F (7 deg C) or in snow/ice conditions. If the vehicle must be driven in these conditions, Ford recommends using mud and snow, All-season or snow tires.

★ = New for this model year

I = Included in Equipment Group, S = Standard Equipment, O = Optional, M = Mandatory, A = Automatically Added

COLOR & TRIM AVAILABILITY

Model	Material	Interior Description
Select	Black Onyx ActiveX® Seating Material	• Front Row Bucket Seats, 8-Way[1] Power Driver and 4-Way Manual Passenger • Second Row 60/40 Split-Fold-Flat
Select with Comfort Package Lite	Black Onyx ActiveX® Seating Material	• Front Row Heated Bucket Seats, 8-Way[1] Power Driver with Memory and 4-Way Manual Passenger • Second Row 60/40 Split-Fold-Flat
Premium	Light Space Gray or Black Onyx Perforated ActiveX® Seating Material	• Front Row Heated Bucket Seats, 10-Way[2] Power Driver with Memory and 8-Way[1] Power Passenger • Second Row 60/40 Split-Fold-Flat
GT	Performance Gray ActiveX® Trimmed with Unique Miko® Perforated Reflective Insert[3] and City Silver Stitching	• Front Row Heated Ford Performance Bucket Seats, 10-Way[2] Power Driver with Memory and 8-Way1 Power Passenger • Second Row 60/40 Split-Fold-Flat
Mustang Mach-E Rally (55Q)	Performance Gray ActiveX® Trimmed with Unique Miko® Perforated Reflective Insert[4] and City Silver Stitching	• Front Row Heated Ford Performance Bucket Seats, 10-Way[2] Power Driver with Memory and 8-Way1 Power Passenger with Exclusive Debossed Logos and Oxford White Seatback Trim • Second Row 60/40 Split-Fold-Flat

COLOR OFFERINGS

		SELECT 100A	PREMIUM 300A		GT 400A	GT Bronze Appearance Package (55S)	MUSTANG MACH-E RALLY 400A (55Q)
Cabin Environment		Black Onyx	Light Space Gray	Black Onyx	Performance Gray with City Silver Stitching	Performance Gray with City Silver Stitching	Performance Gray with City Silver Stitching
Seats		ActiveX® Seating Material	Perforated ActiveX® Seating Material		ActiveX® Trimmed with Unique Miko® Perforated Reflective Insert[3]	ActiveX® Trimmed with Unique Miko® Perforated Reflective Insert[3]	ActiveX® Trimmed with Unique Miko® Perforated Reflective Insert[4]
		Black Onyx	Light Space Gray	Black Onyx	Performance Gray with City Silver Stitching	Performance Gray with City Silver Stitching	Performance Gray with City Silver Stitching
Paint Name	Order Code	SJ	MY	MJ	35	35	3D
Grabber Blue Metallic[4]	AE	■	■	■	■		■
Star White Metallic Tri-coat[4]	AZ	■	■	■	■	■	■
★Grabber Yellow	CB				■		■
Rapid Red Metallic Tinted Clearcoat[4]	D4	■	■	■	■		■
★Eruption Green Metallic[4]	FA	■	■	■	■	■	■
Shadow Black	G1	■	■	■	■	■	■
Vapor Blue Metallic	K1	■	■	■	■		■
★Glacier Gray Metallic Tri-coat[4]	R7	■	■	■	■		■

[1] Fore/Aft, Up/Down, Power Lumbar, Power Recline
[2] Fore/Aft, Up/Down, Tilt, Power Lumbar, Power Recline
[3] Sueded Cloth
[4] Extra Charge
★ = New for this model year

■ = Available

TENVOORDE FORD, INC
P O BOX 1045
ST CLOUD, MN 56302

Invoice No.

INVOICE

Customer

Name Foley PD
Address
City State ZIP
Phone

Misc

Date 8/6/2024
Order No. 1
Rep
FOB

Qty	Description	Unit Price	TOTAL
1	2024 Ford Pro SSV Extended Range	$ 57,271.00	$ 57,271.00

SubTotal		$ 57,271.00
Shipping		
Tax Rate(s)	0.00%	$ -
TOTAL		$ 57,271.00

Payment Select One...

Comments
Name
CC #
Expires

Office Use Only

TENVOORDE FORD, INC, PO BOX 1045, ST CLOUD, MN 56302

Preview Order 0001 - W1B - 4x4 Pro SuperCrew: Order Summary Time of Preview: 08/06/2024 11:44:29 Receipt: NA

Dealership Name: Tenvoorde Ford, Inc. **Sales Code :** F58584

Dealer Rep.	Jade Aanenson	**Type**	Fleet	**Vehicle Line**	F-150	**Order Code**	0001
Customer Name	foley	**Priority Code**	J3	**Model Year**	2024	**Price Level**	455

DESCRIPTION	MSRP	DESCRIPTION	MSRP
F150 4X4 SUPERCREW PRO - 145	$54995	TOW TECHNOLOGY PACKAGE	$1950
145 INCH WHEELBASE	$0	.MIRROR MAN FOLD W/POWER GLASS	$0
TOTAL BASE VEHICLE	$54995	.LED SIDE-MIRROR SPOTLIGHTS	$0
OXFORD WHITE	$0	FLT ORDER CREDIT-PRO SERIES	$0
SSV HEAVY-DUTY CLOTH 40/CON/40	$0	18" MACH BLACK HIGH GLOSS WHL	$0
MEDIUM DARK SLATE	$0	PRO SSV PACKAGE	$145
EQUIPMENT GROUP 110A	$0	.8-WAY POWER DRIVERS SEAT	$0
.PRO SERIES	$0	PRICE CONCESSION INDICATOR	$0
.ZERO EMISSIONS VEHICLE	$0	REMARKS TRAILER	$0
131KWH EXT BAT-SINGLE CHGR	$10000	SPECIAL DEALER ACCOUNT ADJUSTM	$0
SINGLE-SPEED TRANSMISSION	$0	SPECIAL FLEET ACCOUNT CREDIT	$0
275/65R18 BSW ALL-TERRAIN TIRE	$0	FUEL CHARGE	$0
8550# GVWR PACKAGE	$0	NET INVOICE FLEET OPTION (B4A)	$0
JOB #2 ORDER	$0	PRICED DORA	$0
FLEET EV NET INVOICE CREDIT	$0	ADVERTISING ASSESSMENT	$0
FRONT LICENSE PLATE BRACKET	$0	DESTINATION & DELIVERY	$2095

	MSRP
TOTAL BASE AND OPTIONS	$69185
DISCOUNTS	NA
TOTAL	$69185

ORDERING FIN: QS031 **END USER FIN:** QS031

INCENTIVES DISCOUNTS: $-100.00

Acc. Code ID :10 Contract/Ref # :33-857R Bid Date :01/03/24State : MN

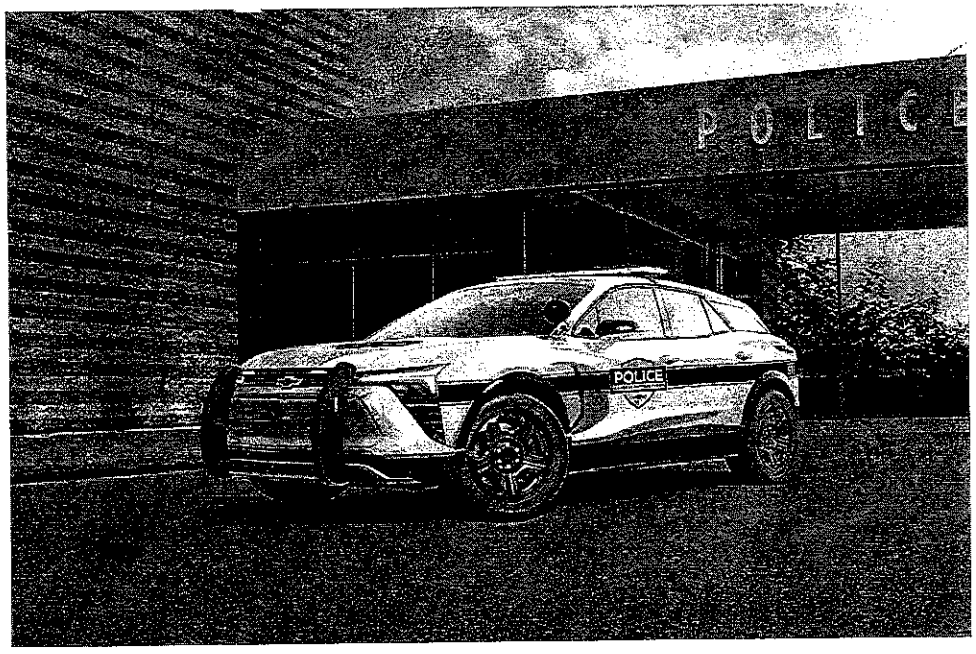
Customer Name:

Customer Address:

Customer Email:

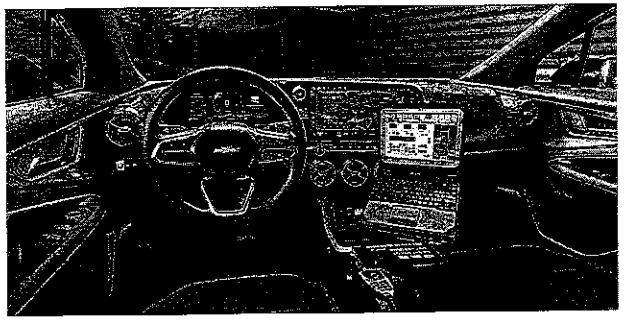
Customer Phone:

North Country GM



Bob O'Hara
218-349-8955
rwohara01@aol.com

2024 CHEVROLET BLAZER EV PPV and SSV MODELS



note: BASE STARTING PRICE DOES NOT INCLUDE OPTIONS

Dual Level Charge Cord, dual-mode, portable, 120-volt (1.4 kW) and 240-volt (7.7 kW) capability, swappable NEMA 5-15 and NEMA 14-50 plugs with SAE J1772 vehicle connection (STD)

Battery, 12V/60AH, 680 ENCCA
AC Charging, 19 kW capable
Charge port, illuminated
Propulsion, performance two-motor AWD

Battery, Ultium Propulsion, 105 kWh Battery Rated Energy, 190 kW DC fast charging capable

Basic Years: 3 Basic Miles/km: 36,000 Corrosion Years (Rust-Through): 6 Corrosion Years: 3 Corrosion Miles/km (Rust-Through): 100,000 Corrosion Miles/km: 36,000 Hybrid/Electric Components Years: 8 Hybrid/Electric Components Miles/km: 100,000 Roadside Assistance Years: 8 Roadside Assistance Miles/km: 100,000

Police specific content includes (GM code - 9C1): • Full underbody skid plates

• Police-rated tires with black steel wheels

• Brembo brakes for superior stopping power

• Police specific front seats designed to accommodate duty belts and wearable gear

• Un-programmed steering wheel buttons for upfitters to connect "Push to Talk" functions for dept radios and fingertip operation of emergency equipment

• Police level electrical loads with upfitter1 wiring harnesses
• Standard upfitter vehicle module which can provide1 necessary signals and communication to your aftermarket equipment

• Standard Rearview Camera mirror2

• Standard Center Console Delete to make it easy to add your aftermarket1 police specific center console

• Vinyl flooring

• Law enforcement lighting options such as spotlamp, dome lights

BOB OHARA

NORTH COUNTRY GM

218-349-8955

THIS ALL NEW POLICE VEHICLE HAS MANY STANDARD **FEATURES** THAT IF AVAILABLE ARE EXTRA COST ON OTHER POLICE UNITS

REMOTE START, KEYLESS OPEN AND START with SMARTPHONE APP
8 WAY POWER DRIVERS SEAT wPOWER LUMBAR, 6 WAY POWER PASSENGER SEAT w/POWER LUMBAR
MIRRORS,POWER HEATED AND REMOTE CONTROL and POWER FOLDING w/DRIVERS SIDE AUTO DIMMING
REAR CAMERA MIRROR ALLOWS REAR VISION WITH PARTIONS INSTALLED
BREMBO FRONT PERFORMANCE BRAKES

	DEPARTMENT : STOCK UNITS		*ADDRESS*			
	CONTACT NUMBER:		*CITY, ZIP*			
	EMAIL:					
	2024 BLAZER EV AWD		"x" IN YELLOW CELLS OPTION REQUESTED TOTAL PRICE WILL CALCULATE			
	ALL OPTIONS					
		Option Price	VEHICLE SPEC	SSV	VEHICLE SPEC	PPV
	Base Starting Price does not include any options			*$59,037.00*		*$59,425.00*
	AIR CONDITIOING Dual-zone Automatic Climate Control	STD	X	STD	X	STD
4	Tires, 265/50R20, all-season Firestone Firehawk Pursuit blackwall	STD	X	STD	X	STD
	Rear Camera Mirror includes (CWA) Rear Camera Mirror Washer	STD	X	STD	X	STD
9C1	Identifier for Marked Police Package Vehicle includes (DLE) front console delete, (BG9) Black rubberized vinyl floor covering and (EPT) Black Cloth front/Vinyl rear seating	STD		-	X	STD
9C3	Identifier for Detective Police Package Vehicle includes (D06) retail floor console with armrest, (B30) color-keyed carpeting in occupant area and (EKV) Black Cloth front/rear seating	STD	X	STD		-
MF1	Transmission, none (electric drive unit) (STD)	STD	X		X	

PSC	Dual Level Charge Cord, dual-mode, portable, 120-volt (1.4 kW) and 240-volt (7.7 kW) capability, swappable NEMA 5-15 and NEMA 14-50 plugs with SAE J1772 vehicle connection (STD)	STD	X	STD	X	STD
URW	Audio System, 17.7" diagonal advanced color LCD display with Google built-in compatibility (select service plan required, terms and limitations apply), including navigation capability, connected apps, personalized profiles for each driver's settings, Natural Voice Recognition and Phone Integration	STD	X	STD	X	STD
6J8	White Left/White Right Whelen LED ION Lamp Package two ION light heads mounted on each exterior corner (Not available with SEO (6J9, 6JE, 6JG) Whelen LED ION Lamp Packages.)	1,891.50		-		-
6J9	Red Left/Red Right Whelen LED ION Lamp Package two ION light heads mounted on each exterior corner (Not available with SEO (6J8, 6JE, 6JG) Whelen LED ION Lamp Packages.)	1,891.50		-		-
6JE	Blue Left/Blue Right Whelen LED ION Lamp Package two ION light heads mounted on each exterior corner (Not available with SEO (6J8, 6J9, 6JG) Whelen LED ION Lamp Packages.)	1,891.50		-		-
6JG	Red Left/Blue Right Whelen LED ION Lamp Package two ION light heads mounted on each exterior corner (Not available with SEO (6J8, 6J9, 6JE) Whelen LED ION Lamp Packages.)	1,891.50		-		-
7X3	Spotlamp, left-hand, LED	776.00		-	X	$776.00
T53	Lamps alternate flashing Red & Blue rear compartment lid warning (visible when liftgate is open) and controlled by momentary liftgate mounted switch or ground wire	548.05		-		-
	-					
UTQ	Calibration, keyless remote panic button and exterior lights/horn disable	48.50		-	X	$48.50
6C7	Lighting Red and white LED auxiliary dome lamp is located on headliner between front ro	164.90		-		-
"6E2	Fleet Calibration provides a single key and calibration with a specific code that is common to the driver door lock of the entire Blazer EV fleet with the same code. Key code is an alternate to SEO (6E8) Fleet Calibration. Includes (AU7) common fleet key (Requires (AMF) Remote Keyless Entry Package. Not available with SEO (6E8) complete vehicle fleet common key.	24.25		-		-

"6E8	Fleet Calibration provides a single key and calibration with a specific code that is common to the driver door lock of the entire Blazer EV fleet with same code. Key code is an alternate to SEO (6E2) Fleet Calibration. Includes (AU7) common fleet key (Requires (AMF) Remote Keyless Entry Package. Not available with SEO (6E2) complete vehicle fleet common key.)	24.25		-		-
"6E5	Switches, rear window inoperative (rear windows can only operate from driver's position)	55.29		-	X	$55.29
"6N5	Door locks and handles inside rear doors inoperative (doors can only be opened from outside)	60.14		-	X	$60.14
6J3	Wiring, grille lamps and siren speaker circuit	89.24		-		-
6J4	Wiring, horn and siren circuit	53.35		-		-
WX7	Wiring, auxiliary speaker. For upfitter connection to front door and windshield speakers	58.20		-		-
AMF	Remote Keyless Entry Package includes 4 additional transmitters, NOTE: programming of remotes is at customer's expense. Programming remotes is not a warranty expense	72.75		-	X	$72.75
AU7	Key common, fleet (Included and only available with SEO (6E2) or SEO (6E8) complete vehicle fleet common key.)	48.50		-	X	$48.50
CG9	Floor covering, color-keyed carpeting in occupant area (Requires (9C3) Identifier for Detective Police Package Vehicle.)	STD	X	STD		-
DD7	Floor covering, Black rubberized vinyl (with plastic capped access covers) (Requires (9C1) Identifier for Marked Police Package Vehicle.	STD		-	X	STD
9G8	Headlamps, Daytime Running Lamps and automatic headlamp control delete deletes standard Daytime Running Lamps and automatic headlamp control features, also disables automatic interior courtesy lighting	48.50		-	X	$48.50
R1A	LPO, All-weather floor liners, front and rear (Replaces standard floor mats.)	213.14		-		-
CTT	Hitch Guidance (Included and only available with (V92) trailering provisions	incl WV92		-		-
PZ8	Hitch View (Included and only available with (V92) trailering provisions.)	incl WV92		-		-
V92	Trailering provisions, wiring includes (CTT) Hitch Guidance and (PZ8) Hitch View	48.50		-		-
SDE	LPO, Trailer hitch, removable includes (VLG) trailer hitch closeout panel, LPO	868.15		-		-

VLG	Closeout panel, LPO 0.00 lbs 0.00 lbs W/A VLG LPO, Trailer hitch, closeout panel (Included and only available with (SDE) trailer hitch, LPO.)	48.50		-		-
5T4	Special paint, Victory Red WA 9260 (SEO Paints are not available to order at this time. May require extended lead time. Requires SEO (TGK) special paint solid. Required with Victory Red special paint WA-9260.)	242.50		-		-
TGK	SPECIAL PAINT COLORS	N/C		-		-
9V7	Special Paint DARK BLUE METALLIC n/a at start of production	242.50		-		-
9W5	Special Paint SILVER ICE METALLIC n/a at start of production	242.50		-		-
G7C	*Red Hot*	N/C		-		-
GA0	*Riptide Blue Metallic*	N/C		-		-
GAN	*Galaxy Gray Metallic*	N/C		-		-
GAZ	*Summit White*	N/C		-	x	N/C
GBA	Black	N/C		-		-
GNK	Radiant Red Tintcoat (Extra Cost)	480.15		-		-
GJ1	*Sterling Gray Metallic*	N/C		-		-
KERR	Ship throught to Kerr for Spotlights and Lighting	150.00	x	$150.00	x	$150.00
				-		
	TOTAL FOR VEHICLE WITH OPTIONS IDENTIFIED: per unit	TOTAL		$59,187.00		$60,684.68

SPECIAL DEALER OPTIONS NEEDED:

SOUTHGATE LEASE SERVICES
2385 S 179th St, New Berlin, WI 53146 (414) 529-2992 southgatelease.com

Customer

Foley Police Department
251 4th Ave N
Foley, MN 56329

Quote No: Q302637
Date: 7/10/2024
Prepared By: Chris Goodman

Description

2024 DODGE DURANGO- POLICE

VIN Number:

Southgate 48-Month Lease Program

Asset Location:

Capitalized Cost		Description
$47,132.00	**Purchase Price**	Southgate Purchase Price
$17,945.00	**Upfit / Accessories**	POLICE UPFIT
$0.00	**Incentives / Discounts**	
$0.00	**Other**	
$942.64	**SLS Acquisition Fee**	Markup
$0.00	**Down Payment**	
$0.00	**Equity / Shortfall**	
Total **$66,019.64**		

Monthly Rental

$1,527.09	Depreciation / Interest / Lessor Fee
$0.00	Fleet Management Fee
$0.00	Monthly Tax: 0.000%
Total **$1,527.09**	

$1,208.74	Monthly Depreciation: 1.831%
$8,000.12	Residual Value

Lease Term

48	Months
20,000	Estimated Annual Mileage
80,000	Estimated Total Miles

Does not include tax title license registration document or transport fees

Acceptance:

LESSEE Foley Police Department

Lessee hereby authorizes this order and agrees to lease the asset per the terms set forth in the Master Lease Agreement.

By: _____ Print Name: _____ Title: _____ Date: _____

1. Monthly lease charge based upon current finance rates and will be adjusted to reflect the interest rate at the time of delivery.
2. All tax and license fees to be billed to lessee as they occur.

SOUTHGATE LEASE SERVICES

2385 S 179th St, New Berlin, WI 53146 (414) 529-2992 southgatelease.com

Customer

Foley Police Department
251 4th Ave N
Foley, MN 56329

Quote No: Q302673
Date: 7/25/2024
Prepared By: Chris Goodman

Description

2024 FORD EXPLORER -INT

VIN Number:

Southgate 48-Month Lease Program

Asset Location:

Capitalized Cost		Description
$47,200.00	**Purchase Price**	Southgate Purchase Price
$17,945.00	**Upfit / Accessories**	POLICE UPFIT
$0.00	**Incentives / Discounts**	
$0.00	**Other**	
$944.00	**SLS Acquisition Fee**	Markup
$0.00	**Down Payment**	
$0.00	**Equity / Shortfall**	
Total **$66,089.00**		

Monthly Rental

$1,563.79	Depreciation / Interest / Lessor Fee
$0.00	Fleet Management Fee
$0.00	Monthly Tax: 0.000%
Total **$1,563.79**	

$1,251.67	Monthly Depreciation: 1.894%
$6,008.84	Residual Value

Lease Term

48	Months
25,000	Estimated Annual Mileage
100,000	Estimated Total Miles

Does not include tax title license registration document or transport fees

Acceptance:

LESSEE Foley Police Department

Lessee hereby authorizes this order and agrees to lease the asset per the terms set forth in the Master Lease Agreement.

By: _____ Print Name: _____ Title: _____ Date: _____

1. Monthly lease charge based upon current finance rates and will be adjusted to reflect the interest rate at the time of delivery.
2. All tax and license fees to be billed to lessee as they occur.

SOUTHGATE LEASE SERVICES

2385 S 179th St, New Berlin, WI 53146 (414) 529-2992 southgatelease.com

Customer

Foley Police Department
251 4th Ave N
Foley, MN 56329

Quote No: Q302659
Date: 7/18/2024
Prepared By: Chris Goodman

Description

2024 CHEVROLET TAHOE- POLICE

VIN Number:

Southgate 48-Month Lease Program

Asset Location:

Capitalized Cost		Description
$43,400.00	**Purchase Price**	Southgate Purchase Price
$22,342.00	**Upfit / Accessories**	POLICE UPFIT
$0.00	**Incentives / Discounts**	
$0.00	**Other**	
$868.00	**SLS Acquisition Fee**	Markup
$0.00	**Down Payment**	
$0.00	**Equity / Shortfall**	
Total	**$66,610.00**	

Monthly Rental

$1,579.53	Depreciation / Interest / Lessor Fee
$0.00	Fleet Management Fee
$0.00	Monthly Tax: 0.000%
Total **$1,579.53**	

$1,241.87	Monthly Depreciation: 1.864%
$7,000.24	Residual Value

Lease Term

48	Months
20,000	Estimated Annual Mileage
80,000	Estimated Total Miles

Does not include tax title license registration document or transport fees

Acceptance:

LESSEE Foley Police Department

Lessee hereby authorizes this order and agrees to lease the asset per the terms set forth in the Master Lease Agreement.

By: _____ Print Name: _____ Title: _____ Date: _____

1. Monthly lease charge based upon current finance rates and will be adjusted to reflect the interest rate at the time of delivery.
2. All tax and license fees to be billed to lessee as they occur.

Advanced Graphix Inc.

3600 Labore Road Suite 3
Vadnais Heights, MN 55110
Phone: (651)-490-3221
Toll Free: (888)-388-3221
Fax: (651)-490-3193
Email: sally@advancedgraphix.com

Quote

QUOTE #	DATE
072324A	7/23/2024

CUSTOMER INFORMATION

FOLEY POLICE DEPARTMENT
251 4TH AVENUE PO BOX 709
FOLEY, MN 56329
KMCMILLIN@CI.FOLEY.MN.US
320-968-0800
CHIEF KATIE MCMILLIN

DESCRIPTION OF WORK

2025 DODGE DURANGO, 2025 FORD EXPLORER,
2025 CHEVY BLAZER EV, 2025 FORD MUSTANG EV

ITEMIZED COSTS	QTY	UNIT PRICE	AMOUNT
COMPLETE REFLECTIVE/ NONREFLECTIVE CUSTOM GRAPHIC KITS	4	357.50	1,430.00
REFLECTIVE CHEVRONS (1 PER KIT)	4	75.00	300.00
NONREFLECTIVE LICENSE PLATES (2 PER KIT)	8	18.50	148.00
APPLICATIONS	4	150.00	600.00
TRAVEL CHARGE	1	75.00	75.00
			-
			-
			-
			-
			-
			-
			-
			-
Thank you for your business!		**SUBTOTAL**	**2,553.00**
		SHIPPING	
SHIPPING COST MAY VARY DEPENDING ON WEIGHT		**TOTAL QUOTE**	**$ 2,553.00**

Please fax or mail the signed quote to the phone number/address listed above.

Customer Acceptance

X		
Signature	Printed Name	Date

If you have any questions, please contact Sally Knoche or Chloe Dousette at (651)-490-3221.

PROPOSAL

DESIGN ELECTRIC INC.

Design Electric, Inc.
4807 Heatherwood Road
PO Box 1252
St Cloud, MN 56301-56302

COMMERCIAL INDUSTRIAL TRANSPORTATION

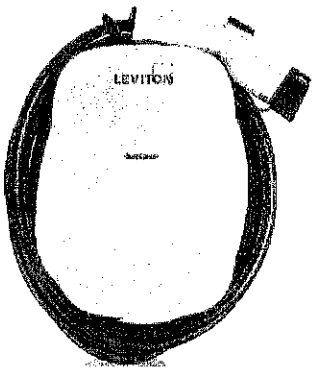
Phone: (320) 252-1658 www.DesignElect.com Fax: (320) 252-4276

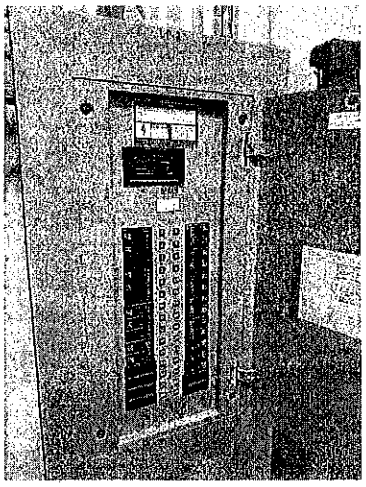
PROPOSAL SUBMITTED TO:		PHONE	DATE
FOLEY POLICE DEPARTMENT			8/14/2024
STREET		JOB NAME EV CHARGER	
CITY, STATE AND ZIP CODE		JOB LOCATION FOLEY	
FAX	DATE OF PLANS	ATTN: KATIE	JOB PHONE

We hereby submit specifications and estimates for:

-FURNISH AND INSTALL (1) LEVEL 2 EV CHARGER IN PD GARAGE.

-FEED POWER FROM EXISTING PANEL 'LP-2'.





All work performed during Normal working hours.

Normal working hours Mon-Fri 7 am to 5 pm

We propose hereby to furnish material and labor – complete in accordance with the above specifications, for the sum of:
Dollars $ 2,970.00

Payment to be made as follows:

All material is guaranteed to be as specified. All work to be completed in a professional manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Worker's Compensation Insurance. Price above is based on standard AGC contract and insurance limits. We reserve the right to charge for any attorney fees that would be associated with collecting any money owed on this contract. **There is no bond included unless noted otherwise.**

Authorized Signature:
Kevin Zabinski
Kevin Zabinski
Note: This proposal may be withdrawn by us if not accepted within **30** days.

Acceptance of Proposal – The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payments will be made as outlined above.

Signature: _____

Date of Acceptance: _____

Signature: _____

Granite Ledge
Electrical Contractors Inc.
Foreston, MN
320-294-5557

Proposal

Project: City of Foley PD

Date: August 8, 2024

Item No.	Contract Item	Amount
1	Electrical Base Bid	$5,250.00

Notes-

- Includes electrical permit.
- Includes (1) Leviton 19.2kW Level 2 Charge Station mounted on South wall of garage. 100 Amp circuit will be fed from existing panel LP-2.
- Does not include any upgrades to the electrical service.
- Depending on which model of vehicle you choose we could make adjustments to either raise or lower this estimate. For example: Katie stated a chev blazer was a possibility. Base models of Blazers Can charge ata max rate of 11.5kW where as the RS and SS models can charge at 19.2kW. This proposal includes the higher option. A base model would require a smaller charge station.
- A DC fast charger is another possibility that would greatly increase your charging capabilities. This option however would require a service upgrade for your building or an entirely new service dedicated to this charge station. In total this would add tens of thousands to this project. If this is something you would be interested in please let us know and we will work on a proposal for that.

Matt Anderson

Commercial Projects Manager
Cell: 320-980-7666
Office: 320-294-5557

LEVITON®

Electric Vehicle Charge Time Comparison

VEHICLE MAKE AND MODEL LISTING UTILIZING LEVITON CHARGERS

Type of Vehicle	Type	Battery Capacity (kWh)	LEVITON ELECTRIC VEHICLE CHARGER OPTIONS (Charge Time in Hours)			
			EV40P @ 9.6 kW	EV320, EV32W @ 7.6 kW	EV480, EV48W, EV48S, EV48G @ 11.5 kW	EV800, EV80W, EV80S, EV80G @ 19.2 kW
Audi A8L	PHEV	14	2.5	2.5	2.5	2.5
Audi e-tron (all e-trons)	BEV	95	14.5	14.5	14.5	14.5
Audi A3 Sportback e (2016-2019)	PHEV	9	3	3	3	3
Audi Q5 PHEV (2016-2019)	PHEV	14.1	4.5	4.5	4.5	4.5
Audi Q5, A6, A7 PHEV (2016-2019)	PHEV	17.4	3	3	3	3
BMW i3 60 Ah (2014-2016)	BEV	22	3.5	3.5	3.5	3.5
BMW i3 94 Ah (2017-2018)	BEV	33	5.5	5.5	5.5	5.5
BMW i3 120 Ah (2019-2022)	BEV	42	6.5	6.5	6.5	6.5
BMW iX xDrive40	BEV	71	8.5	10.5	7.5	7.5
BMW iX xDrive50 & M60	BEV	105	12.5	15.5	11	11
BMW iX3	BEV	111	13	16.5	11.5	11.5
BMW i4	BEV	84	10	12.5	8.5	8.5
BMW i8 7.1kW (2014-2017)	PHEV	7.1	2.5	2.5	2.5	2.5
BMW i8 11.6kW (2018-2020)	PHEV	11.6	3.5	3.5	3.5	3.5
BMW 330e (2016-2018)	PHEV	7.6	2.5	2.5	2.5	2.5
BMW X3 xDrive30e	PHEV	12	4	4	4	4
BMW xDrive40e	PHEV	9	3	3	3	3
BMW xDrive 330e, 530e, 745e	PHEV	12	4	4	4	4
BMW 740e xDrive (2017)	PHEV	9	3	3	3	3
Bentley Bentayga Hybrid	PHEV	17.3	3	3	3	3
Cadillac LYRIQ (2023)	BEV	100	12	15	10	6
Cadillac ELR (2014-2016)	PHEV	17	6	6	6	6
Cadillac CT6 Plug-in (2017-2018)	PHEV	18.5	6.5	6.5	6.5	6.5
Chevrolet Bolt (2017-2019)	BEV	60	9.5	9.5	9.5	9.5
Chevrolet Bolt (2020-2022)	BEV	65	10	10	10	10
Chevrolet Bolt w/11kW onboard (2022)	BEV	65	7.5	9.5	7	7
Chevrolet Bolt EUV	BEV	65	7.5	9.5	7	7
Chevrolet Spark EV	BEV	23	8	8	8	8
Chevrolet Volt	PHEV	18	6	6	6	6
Chevrolet Silverado EV (2022-2023)	BEV	200	23.5	29.5	22.5	22.5
Chevrolet Silverado EV (2024)	BEV	400	46.5	58.5	44.5	44.5
GMC Hummer EV	BEV	213	25	31.5	21	21
Chrysler Pacifica Plug-in Hybrid	PHEV	16	3	3	3	3
Fiat 500E (2013-2019)	BEV	24	4	4	4	4
Fiat 500E (2020-2022)	BEV	42	7.5	7.5	7.5	7.5

NOTE: Estimated charge time was calculated using data provided by the individual auto manufacturer's websites regarding on-board charger and battery capacity. Data is subject to change.

ELECTRIC VEHICLE CHARGE TIME COMPARISON

LEVITON

Type of Vehicle	Type	Battery Capacity (kWh)	LEVITON ELECTRIC VEHICLE CHARGER OPTIONS (Charge Time in Hours)			
			EV40P @ 9.6 kW	EV320, EV32W @ 7.6 kW	EV480, EV48W, EV48S, EV48G @ 11.5 kW	EV800, EV80W, EV80S, EV80G @ 19.2 kW
Ford F-150 Lightning 120kW	BEV	120	14	17.5	12.5	12.5
Ford F-150 Lightning 155kW	BEV	155	18	23	16	16
Ford Focus EV (2012-2016)	BEV	23	4	4	4	4
Ford Focus EV (2017-2022)	BEV	34	6	6	6	6
Ford C-Max Energi (2013-2017)	PHEV	7.5	2.5	2.5	2.5	2.5
Ford Fusion Energi (2013-2017)	PHEV	7.5	2.5	2.5	2.5	2.5
Ford Fusion Energi (2019-2020)	PHEV	9	3	3	3	3
Ford Escape Plug-in (2020-2022)	PHEV	14.5	5	5	5	5
Ford Mustang Mach-e 70kW	BEV	70	8.5	10.5	7.5	7.5
Ford Mustang Mach-e 91kW	BEV	91	10.5	13.5	10	10
Ford E-Transit	BEV	68	8	10	7	7
Honda Clarity Plug-in (2018-2021)	PHEV	17	3	3	3	3
Honda Accord Plug-in (2014)	PHEV	17	5.5	5.5	5.5	5.5
Harley Davison Livewire	BEV	16	9.5	9.5	9.5	9.5
Hyundai IONIQ 5 58kW	BEV	58	7	8.5	6	6
Hyundai IONIQ 5 77kW	BEV	77	9	11.5	8	8
Hyundai Ioniq EV sedan (2017-2019)	BEV	28	5	5	5	5
Hyundai Ioniq EV sedan (2020-2022)	BEV	38	6	6	6	6
Hyundai Ioniq Plug-in Hybrid	PHEV	8.9	3	3	3	3
Hyundai Kona EV	BEV	64	10	10	10	10
Hyundai Sonata Plug-in	PHEV	10	3.5	3.5	3.5	3.5
Hyundai Tucson Plug-in	PHEV	14	2.5	2.5	2.5	2.5
Hyundai Santa Fe Plug-in	PHEV	14	2.5	2.5	2.5	2.5
Genesis GV60 (2023)	BEV	77.5	9	11.5	8	8
Jaguar I-Pace (2019)	BEV	90	14.5	14.5	14.5	14.5
Jaguar I-Pace (2020-2023)	BEV	90	10.5	13.5	9.5	9.5
Jeep Wrangler PHEV	PHEV	17.5	2.5	3	2.5	2.5
Jeep Grand Cherokee PHEV	BEV	17.5	2.5	3	2.5	2.5
Kia Niro EV	BEV	64	10	10	10	10
Kia Niro Plug-in	PHEV	9	3	3	3	3
Kia Soul EV 27kW (2015-2017)	BEV	27	4.5	4.5	4.5	4.5
Kia Soul EV 30kW (2018-2022)	BEV	30	5	5	5	5
Kia EV6 58kW	BEV	58	7	8.5	6	6
Kia EV6 77.4kW	BEV	77.5	9	11.5	8	8
Kia Sorento Plug-in	PHEV	14	5	5	5	5
Land Rover Range Rover PHEV HSE (2019)	PHEV	12.5	2	2	2	2
Land Rover Range Rover PHEV (2022-2022)	PHEV	12.5	2	2	2	2
Land Rover Range Rover SE PHEV (2023)	PHEV	38	6	6	6	6
Lexus NX Plug-in	PHEV	18	3	3	3	3
Lincoln Aviator Grand Touring	PHEV	13.5	2.5	2.5	2.5	2.5
Lincoln Corsair Plug-in (2021-2022)	PHEV	14.5	2.5	2.5	2.5	2.5
Lucid Air 112kW	BEV	112	13	16.5	11	6.5
Lucid Air 118kW	BEV	118	14	17.5	11.5	7
Mazda MX-30	BEV	35.5	6	6	6	6
Mercedes-Benz Class B250e	BEV	28	3.5	4.5	3.5	3.5
Mercedes-Benz EQS	BEV	110	13	16.1	11.1	11.1
Mercedes-Benz EQB	BEV	70.5	8.5	10.5	7.5	7.5
Mercedes-Benz B-Class (2014-2017)	BEV	31	4	4.5	3.5	3.5
Mercedes-Benz S550e (2015–2017)	PHEV	9	3	3	3	3
Mercedes-Benz GLE550e 4matic	PHEV	9	3	3	3	3
Mercedes-Benz GLC350e 4matic (2017-2019)	PHEV	9	3	3	3	3
Mercedes-Benz GLC350e 4matic (2020-2022)	PHEV	13.5	2	2	2	2
Mercedes-Benz C350e	PHEV	6.5	2	2	2	2

NOTE: Estimated charge time was calculated using data provided by the individual auto manufacturer's websites regarding on-board charger and battery capacity. Data is subject to change.

ELECTRIC VEHICLE CHARGE TIME COMPARISON

LEVITON

Type of Vehicle	Type	Battery Capacity (kWh)	LEVITON ELECTRIC VEHICLE CHARGER OPTIONS (Charge Time in Hours)			
			EV40P @ 9.6 kW	EV320, EV32W @ 7.6 kW	EV480, EV48W, EV48S, EV48G @ 11.5 kW	EV800, EV80W, EV80S, EV80G @ 19.2 kW
Mini Cooper SE Countryman ALL4	PHEV	10	3	3	3	3
Mini Cooper SE	BEV	29	4.5	4.5	4.5	4.5
Mitsubishi i-MIEVE	BEV	16	5.5	5.5	5.5	5.5
Mitsubishi Outlander Plug-in	PHEV	14	4.5	4.5	4.5	4.5
Nissan Leaf w/3.3kW charging (2010-2017)	BEV	24	8.5	8.5	8.5	8.5
Nissan Leaf w/3.3 kW charging (2017-2022)	BEV	40	13.5	13.5	13.5	13.5
Nissan Leaf w/6.6 kW charging (2010-2017)	BEV	24	4	4	4	4
Nissan Leaf w/6.6 kW charging (2017-2022)	BEV	40	7	7	7	7
Nissan Leaf plus (2019-2022)	BEV	62	10.5	10.5	10.5	10.5
Nissan Leaf SL & SV (2016-2017)	BEV	30	5.5	5.5	5.5	5.5
Nissan Ariya 63kW	BEV	66	10.5	10.5	10.5	10.5
Nissan Ariya 87kW	BEV	87	13.5	13.5	13.5	13.5
Polestar 2	BEV	75	9	11	8	8
Porsche Cayenne S E-Hybrid 11kW (2015-2018)	PHEV	11	2	2	2	2
Porsche Cayenne S E-Hybrid 18kW (2019-2022)	PHEV	18	3	3	3	3
Porsche Panamera S E-Hybrid 9.5kW (2014-2016)	PHEV	9.5	1.5	1.5	1.5	1.5
Porsche Panamera S E-Hybrid 14kW (2018-2019)	PHEV	14	2.5	2.5	2.5	2.5
Porsche Panamera S E-Hybrid 18kW (2020-2022)	PHEV	18	3	3	3	3
Porsche Taycan 79kW	BEV	79	9.5	11.5	8	5
Porsche Taycan 93kW	BEV	93	11	14	9	5.5
Porsche 918 Spyder	BEV	6.8	2.5	2.5	2.5	2.5
Rivian R1T, R1S, & EDV 700	BEV	135	16	20	14	14
Smart EQ fortwo	BEV	18	3	3	3	3
Subaru Crosstrek Hybrid	PHEV	9	3	3	3	3
Subaru Soltera	BEV	75	13	13	13	13
Tesla Model 3 50kW	BEV	50	6	7.5	5.5	5.5
Tesla Model 3 82kW	BEV	82	9.5	12	8.5	8.5
Tesla Model S 60 Dual	BEV	100	12	15	10	6.5
Tesla Model S 60 Single	BEV	60	7	9	7	7
Tesla Model S 70 Dual	BEV	60	7	9	7	7
Tesla Model S 70 Single	BEV	70	8.5	10.5	7	4.5
Tesla Model S 85 Dual	BEV	58	7	8.5	6	6
Tesla Model S 85 Single	BEV	85	10	12.5	8.5	5
Tesla Model S 90 Dual	BEV	85	10	12.5	10	10
Tesla Model S 90 Single	BEV	90	10.5	13.5	9	5.5
Tesla Model S 100 Single	BEV	100	12	15	12	12
Tesla Model S 100 Dual	BEV	100	12	15	10	10
Tesla Model X 60 Dual	BEV	90	10.5	13.5	10.5	10.5
Tesla Model X 60 Single	BEV	100	12	15	10	6.5
Tesla Model X 75 Dual	BEV	100	12	15	10	10
Tesla Model X 75 Single	BEV	100	12	15	10	6.5
Tesla Model X 90 Dual	BEV	100	12	15	10	10
Tesla Model X 90 Single	BEV	100	12	15	10	6.5
Tesla Model X 100 Single	BEV	100	12	15	10	10
Tesla Model X 100 Dual	BEV	100	12	15	10	6.5
Tesla Model Y Long range	BEV	82	9.5	12	8.5	8.5
Tesla Model Y Standard Plus	BEV	75	9	11	8	8
Tesla Roadster Orginal	BEV	56	6.5	8.5	5.5	4
Tesla Roadster 2020	BEV	200	23.5	29.5	19.5	12
Tesla Semi	BEV	600	69.5	88	58	40.5

NOTES: Estimated charge time was calculated using data provided by the individual auto manufacturer's websites regarding on-board charger and battery capacity. Data is subject to change.

* Tesla vehicles require an adapter to use any non-Tesla charging station. That adapter is provided by or can be purchased from Tesla.

ELECTRIC VEHICLE CHARGE TIME COMPARISON

LEVITON®

Type of Vehicle	Type	Battery Capacity (kWh)	LEVITON ELECTRIC VEHICLE CHARGER OPTIONS (Charge Time in Hours)			
			EV40P @ 9.6 kW	EV320, EV32W @ 7.6 kW	EV480, EV48W, EV48S, EV48G @ 11.5 kW	EV800, EV80W, EV80S, EV80G @ 19.2 kW
Toyota bZ4X	BEV	71	11	11	11	11
Toyota RAV4 (2012-2014)	BEV	42	5	6.5	5	5
Toyota RAV4 Prime (SE & XSE)	PHEV	18.1	6.5	6.5	6.5	6.5
Toyota RAV4 Prime (XSE-Premium)	PHEV	18.1	3	3	3	3
Toyota Prius Plug-in Hybrid (2012-2015)	PHEV	4.4	1.5	1.5	1.5	1.5
Toyota Prius Prime	PHEV	8.8	3	3	3	3
Volkswagen ID 4	BEV	77	9	11.5	8	8
Volkswagen e-Golf 3.6 kW	BEV	24	7.5	7.5	7.5	7.5
Volkswagen e-Golf 7.2 kW	BEV	24	4	4	4	4
Volkswagen ID BUZZ	BEV	82	9.5	12	8.5	8.5
Volvo Recharge Pure Electric C40 & XC40	BEV	78	9	11.5	8	8
Volvo S60 & S90 10.5kW	PHEV	10.5	3.5	3.5	3.5	3.5
Volvo S60, S90, & V60 11.5kW (2020-2022)	PHEV	11.5	3.5	3.5	3.5	3.5
Volvo S60, S90, & V60 19kW (2022)	PHEV	19	6	6	6	6
Volvo XC60, XC90 11.5kW (2018-2020)	PHEV	11.5	3.5	3.5	3.5	3.5
Volvo XC60, XC90 19kW (2022)	PHEV	19	6	6	6	6

NOTES: Estimated charge time was calculated using data provided by the individual auto manufacturer's websites regarding on-board charger and battery capacity. Data is subject to change.

Visit our Website at:
leviton.com/evcharging
email: evrgreen@leviton.com

Q-1159G 042624

Leviton Manufacturing Co., Inc.
201 N Service Rd, Melville, NY 11747
Telephone: 1-800-323-8920 • FAX: 1-800-832-9538
Tech Line: 1-800-824-3005 (M-F 8AM-10PM; Sat 9AM-7PM; Sun 9AM-5PM)

EV CHARGING FOR ALL COALITION

Electric Vehicle Building Codes Toolkit

A Guide For Adopting Equitable US Codes

Table of Contents

Introduction

This toolkit is an educational resource to help electric vehicle (EV) advocates and policymakers understand and facilitate the process of adopting equitable EV readiness building codes in cities, states, and territories throughout the US. It contains best practices for thinking about equitable EV code policy; model code language; a spreadsheet listing codes and resources for all 50 states, insular areas (Puerto Rico, Guam, CNMI, USVI, American Samoa) and the District of Columbia; a video illustrating the need for equitable EV charging access; a slide deck; and a recorded webinar with tips on how to use the toolkit.

The US Model EV Codes Toolkit was created by the EV Charging for All Coalition (EVCAC). It was made possible by a grant from General Motors and Plug In America. For more information, please visit chargingforall.org.

What are building codes, and why do they matter?

Building codes are regulations that set minimum requirements for the design and construction of our built environment. The systems covered include structural, electrical, plumbing, heating and air conditioning as well as EV charging infrastructure. EV charging readiness codes set minimum quantity, safety, and performance requirements for EV charging equipment installed during new construction and, in some cases, in the event of significant alterations to existing buildings and parking facilities.

This is particularly important to residential construction, as over eighty percent of EV charging is done at home, and lack of home charging is now cited as the biggest barrier to EV adoption. This barrier is most acutely felt by residents of multi-family homes, as described in more detail in the Equity Considerations section below.

By far the least expensive time to install EV charging infrastructure is during new construction. Adding EV charging later as a retrofit can cost four to ten times as much as it would have cost if installed during the original construction. Adopting EV readiness codes is a critical tool to expand EV access in a cost-effective manner. Figure 1 illustrates the relative costs of installing make-ready infrastructure to enable the installation of Level 2 EV Supply Equipment (EVSE).

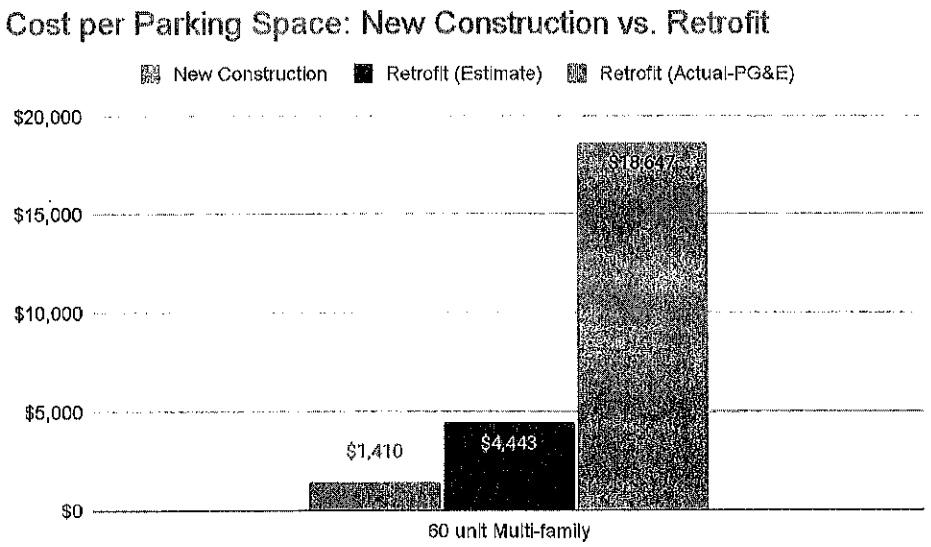


Fig 1: The least expensive time to install EV infrastructure is during new construction.[1]

[1] Data sources:
https://www.pge.com/pge_global/common/pdfs/solar-and-vehicles/your-options/clean-vehicles/charging-stations/program-participants/EV-Charge-Network-2020-Q2-Report.pdf

https://bayareareachcodes.org/wp-content/uploads/2020/03/PCE_SCVE-EV-Infrastructure-Report-2019.11.05.pdf

https://ww2.arb.ca.gov/sites/default/files/2020-08/CARB_Technical_Analysis_EV_Charging_Nonresidential_CALGreen_2019_2020_Intervening_Code.pdf

https://docs.google.com/document/d/1vtGgAlbJdEA5UfOgb_KD4ExYcyO6TfWEedhP59JrM5I/edit

Who writes the building codes?

In the U.S., there is no federal building code – instead, codes fall under the purview of state and/or local governments, depending on each state's or territory's code-making power:

Home Rule states delegate code-making authority to local jurisdictions. Some home-rule states, such as Colorado, provide model codes and technical assistance to municipalities to assist with implementation.

Reach Code, or Minimum Standard states have the authority to set minimum code standards statewide, and grant local jurisdictions the power to create stretch or reach codes that exceed the state requirements.

Dillon's Rule states (sometimes called Min-Max) reserve the sole authority to determine codes. Local jurisdictions in these states typically do not have the power to create their own codes; however the state may also offer municipalities the option to adopt specific alternative pre-crafted 'stretch' codes that exceed the state minimum, or even the authority to exceed a specified metric within the state code.

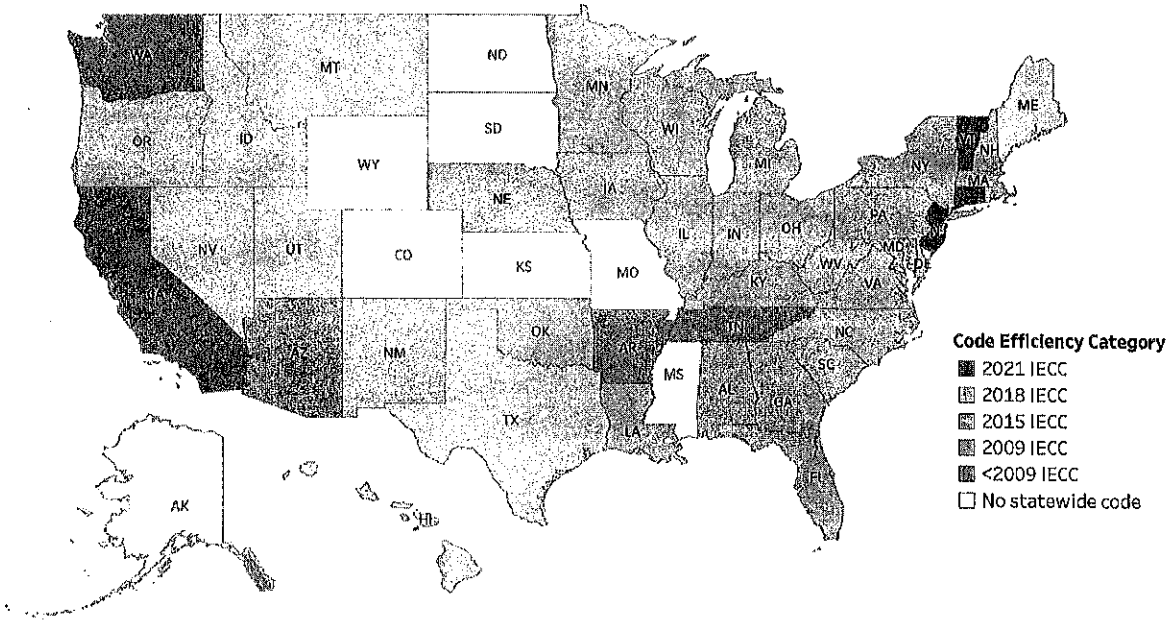


Fig. 2: Residential code efficiency varies significantly by state.[2]

Whether at the state or local level, lawmakers and government officials usually do not build their codes from scratch. Instead, they start with common draft language — called a model code — which they may adjust to suit local needs and priorities. The model codes are produced primarily by the nonprofit International Code Council (ICC) through a stakeholder consensus process; these model codes often reference additional standards developed by other organizations such as the National Fire Protection Association (NFPA) and the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).

The ICC model code that would typically include EV infrastructure is the International Energy Conservation Code (IECC), which is updated every three years. Despite many efforts to include EV readiness provisions in the IECC, the most recent (2021) published IECC still does not include model codes for EV infrastructure. The draft 2024 IECC contains some EV provisions, but as of this publication date, these provisions are being

[2] US Dept. of Energy Building Energy Codes Program, Status of State Energy Code Adoption.

threatened with appeal and it is not clear if they will actually make it into the final 2024 IECC.

In the absence of a national model EV code, states, counties, territories and cities around the country have crafted their own EV readiness codes. These range in scope and stringency, and sometimes in definitions; however, virtually all of them treat single-family and multi-family housing differently – with multi-family homes often receiving only a small fraction of the EV charging access provided to single-family homes. This unequal treatment builds on a long history of systemic inequities in US housing policy; the net result is that the vast majority of parking built for multi-family housing – even brand-new housing – continues to lack EV charging infrastructure. It is therefore not surprising that most EV drivers currently live in single-family homes.

The EV Charging for All Coalition works to expand equitable access to EV infrastructure for all residents, regardless of the type of housing they live in. Establishing equitable EV readiness building codes is an important place to start.

Best practices for EV charging at multifamily housing

Definitions

Charging Equipment

Electric Vehicle Supply Equipment (EVSE), more commonly known as an EV charger or charging station, transfers electricity from the power source into the EV.

Cordsets are portable EVSEs; they typically come with every Electric Vehicle and can be carried in the car. One end of the cordset plugs into the car's charge port; the other end plugs into a wall socket, or receptacle. Cordsets come in L1, LPL2, and L2 configurations (see definitions below).

Readiness

Make-Ready refers to infrastructure (panel capacity, breaker, conduit, wiring, and/or junction box) that precedes and supports future installation of either a charging receptacle or EVSE.

As illustrated in Figure 3, there are broadly three levels of EV charging readiness:

EV Capable is typically defined as having panel capacity and conduit (at least through construction *pinch points*) to the parking space; however it lacks the breaker, wire and outlet or EVSE necessary for a driver to plug in and charge. It is "capable" of being upgraded at a later date to ready-to-charge status.

EV Ready is typically defined as having panel capacity, installed breaker, and an associated completed circuit that terminates at either an EVSE or a **receptacle** (colloquially referred to as a *socket* or *wall plug*). Some EV Ready definitions allow for the circuit to terminate in a junction box – requiring an electrician to install either a receptacle or EVSE to make the circuit fully operable. See the recommended residential and commercial model code language below for exact definition wording.

EVSE Installed is an EV Ready circuit that includes installation of a hard-wired EV charging station.

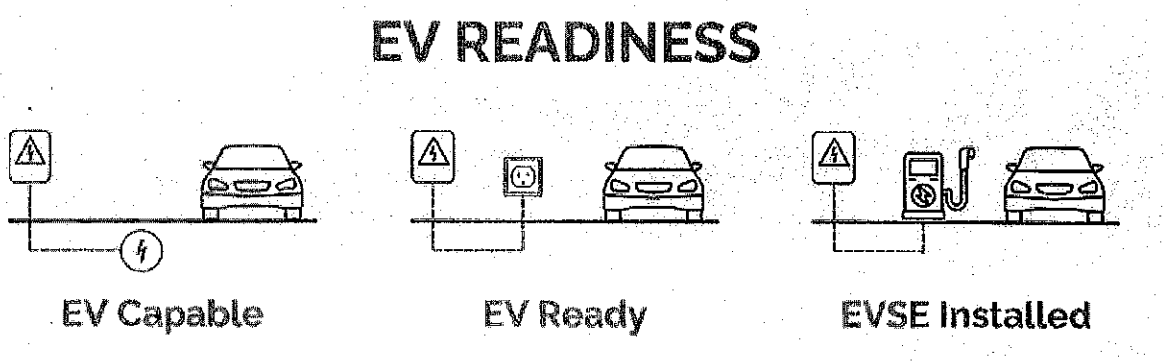


Figure 3: EV charging definitions

Power Delivery

All three levels of readiness, described above, can support differing amounts of electrical power delivered. Power delivery for EV charging is typically understood as follows:

Level 1 (L1) – alternating current, 110/120v, 20a at the breaker. Delivers approximately 3.5 miles of driving range per hour of charging.

Low Power Level 2 (LPL2) – alternating current, 208/240v, 20a at the breaker. Delivers approximately 13 miles per hour of charging.

Level 2 (L2) – alternating current, 208/240v, 40a at the breaker. Delivers approximately 25 miles per hour of charging.

Direct Current Fast Charging (DCFC) – Direct current, ranging from 120 to 1000 VAC 3φ, and from 75A to 525A at the breaker. Delivers between 150-500 miles per hour of charging. As automobile companies increase the ability of their EVs to accept DCFC, this is subject to change.

Equity considerations

Residents of multi-family housing (MFH) often lack access to the convenience, cost savings and reliability of home-based EV charging – either because they lack off-street parking or because their off-street parking lacks access to an electrical receptacle or EVSE, more commonly known as an EV charger. This lack of access translates into a cascading lack of financial, health, and environmental benefits which fall largely along racial and economic lines.

In the US, Black and Latinx drivers are disproportionately low-income, less likely to own their home, more likely to live in multifamily housing, and more likely to live in segregated neighborhoods. The challenges for multi-family residents to gain access to EV infrastructure are also formidable.

Landlords are less incentivized than single-family homeowners to provide EV charging in residential parking spaces, not least of all because they would then be obligated to manage what might be an unprofitable system for charging their residents' vehicles. Despite the passage of so-called *right-to-charge* laws like California's SB1016, residents of condominiums also face similar challenges to access, even when a certain percentage of parking is EV Capable. Common obstacles to both apartment and condominium residents wanting to install EV charging include: determining the availability of EV wiring and panel capacity; obtaining permission from the landlord or Home Owners Association (HOA); hiring a qualified electrician; ensuring access for their unit to wired spaces; securing a permit; and paying for installation of the wiring, circuit breaker, and receptacle or EV Service Equipment (EVSE - colloquially referred to as charging stations). Renters have a further disincentive, as they are making this investment on someone else's property, and leaving it behind when they move. These are often insurmountable hurdles, even for the most determined resident.

Changing the building codes for multi-family housing to provide more ubiquitous EV charging at the time of initial construction is therefore one important step in dismantling the structural inequities that perpetuate racial and class disparities in health and economic well-being in the US.

Additional Considerations

Building Costs

Adding EV charging infrastructure as a retrofit is a difficult and often expensive process. By far the least expensive and easiest time to install EV charging is during new construction: installing infrastructure to support a full Level two[3] (L2) EVSE, for example, typically costs approximately $1400, If installed as a retrofit, that same L2 EVSE space

[3] Level 2 is typically understood to be 208/240v, 40a at the breaker while Low Power Level 2 (LPL2) is 208/240v, 20a at the breaker. Level 1 is typically 110/120v, 20a.

can cost up to 12 times more. Installing Low Power Level 2 (LPL2) EV-Ready[4] receptacles in lieu of the L2 EVSE will achieve further cost savings. Overall, installing one LPL2 receptacle per unit costs less than 0.5% of a building's typical construction budget.

Battery Life

With current battery technology, repeated use of DCFC may have negative effects on battery life, reducing the lifetime value of the EV. While frequent low depth of charging (DOD) extends battery life significantly, full charging (DOD 100%) can lead to 27% loss of capacity after 2.5 years. Route-based DCFC is critical for enabling long-distance travel, however relegating MFH residents without home-based charging to rely on nearby DCFC charging is not an equitable solution.

Dwell Time

Even the fastest EV charging takes time. Placing EV charging where cars are typically parked for long stretches (like they are at home and at work) enables lower-cost, lower-powered, more convenient charging solutions.

Electrical Grid Constraints

While the electric grid is capable of supplying enough electricity to meet the current demands of EVs, it will be critical to design charging infrastructure that balances grid load as EV adoption accelerates. Providing Low Power L2 and Level 1 residential charging is one strategy to minimize negative impacts to the electrical grid.

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[4] See the bottom of page 7 of the CALGreen 2022 ISOR for cost estimates by California Department of Housing and Community Development.

Load Management

Energy Management Systems, or EMS, (Also called Automated Load Management Systems, or ALMS) are another tool for managing energy demands from EV charging. Load management enables calibration of how much electricity each charging station uses when multiple EVSE units are connected to the same circuit, ultimately keeping electrical loads under the building's capacity, and removing the hassle factor of needing to shuffle parking spaces – effectively sharing *power* rather than sharing parking *space*.

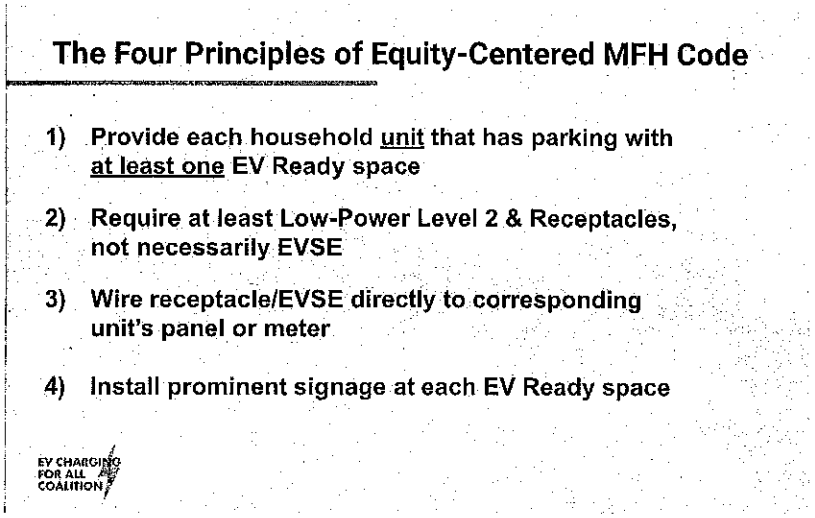
There are both hardware and software load management solutions. On the hardware side, on-site battery storage can be used to store power during off-peak hours and avoid expensive demand charges. On the software side, technology plays a similar role in distributing energy across spaces – allowing more chargers to be installed for the same given electrical service while ensuring all EVs are charged and ready to go by morning.

While EMS can help to minimize the additional cost of electrical infrastructure upgrades by spreading the same amount of power out over more parking spaces, it also requires a third-party entity to manage it, which necessarily adds both upfront capital costs and ongoing operational costs. For these reasons, EMS may be an appropriate solution for commercial and workplace structures, where economic incentives align to ensure equitable pricing for drivers; with appropriate pricing controls in place, it may also be useful for retrofitting older multi-family housing, particularly when the cost to bring in additional electric capacity is exorbitant. In some instances, however, it may be most cost-effective to simply install extremely low-cost non-networked chargers and either give the power away or collect a small fixed monthly amount.

Planning for Vehicle-to-Home Resilience

To help avoid power outages during times of strain on the grid, EVs can provide additional resilience by powering homes directly with the electricity stored in their batteries. In places where multi-family units have individual home electric meters, directly wiring an EV charging circuit to the corresponding home meter – rather than

through the building's commercial common meter[5] – is critical to ensuring all residents the life-saving benefits offered by bidirectional vehicle-to-home charging.



Four Principles of Equity-Centered Multifamily Housing EV Codes

The EVCAC has developed four equity-centered, low-cost principles to follow when developing EV readiness codes for multi-family housing. These principles ensure equitable charging access for residents while simultaneously minimizing costs for builders. They are:

1. Provide each household unit that has parking with at least one EV Ready space.

Most existing EV codes mandate one EV charging space for every single-family home, but only a small percentage of charging spaces for multi-family homes. Electricity for EV charging needs to be distributed equally to everyone, the way hot water is now required, by code, to be provided in all residences – regardless of the type of housing. Equity also requires mandating *plug-and-play* EV Ready spaces for multi-family homes,

[5] Multifamily buildings, even in regions with individually-metered apartments or condominiums, typically have a common house meter for shared electrical loads such as hallway and parking lighting, swimming pool heaters, etc. When run through this common commercial meter, EV loads without EMS can also trigger high *demand charges* from the utility when multiple EVs charge at the same time.

since these residents typically lack the authority, awareness, incentives and resources to call in an electrician and upgrade any potentially EV Capable spaces to EV Ready.

2. Require at least Low-Power Level 2 (vs. Full Power Level 2) and Receptacles (not necessarily EVSE).

These are cost-saving measures for builders that align incentives and deliver sufficient range for the vast majority of driving needs. Receptacles are much less expensive than full EVSEs, and most EVs come with cordsets that drivers can simply plug into a receptacle. Many EV-driving MFH residents prefer to use their own charging cordsets, which can go with them if and when they move out and can be sold with the car. Similarly, more spaces can be served by delivering Low-Power Level 2 vs. Full-Power Level 2 with the same electrical panel capacity. For example, overnight, a car plugged in at Low-Power Level 2 can expect to add about 90 miles of range – far more than the 37-mile US daily average. This means that Low-Power Level 2 charging is adequate for the vast majority of MFH residents.

3. Wire the receptacle/EVSE directly to the corresponding unit's electric panel or meter.

At properties where charging is added as a retrofit, apartment and HOA managers typically bring in a third-party commercial provider to manage the charging service. This arrangement puts residents into a near-captive, monopolistic home-charging situation, and results in charging costs to the driver that are typically three to five times higher than the residential utility rates paid by single-family residents. Direct wiring has multiple benefits for the resident, the builder and the HOA/ complex manager, and guarantees that multi-family residents can pay the same regulated utility rate as those living in single-family housing.

4. Install prominent signage at each EV Ready space.

Having signage at the space – not just hidden in the electrical panel – communicates to residents that these spaces are pre-wired for charging an EV. This encourages EV

adoption and increases the likelihood that the investment in charging infrastructure is put to use. Prominent signage is important for EV Ready spaces served with a receptacle, which residents may not otherwise understand is capable of charging an EV; and it is especially important for EV Capable spaces.

Model Code Language

Proposed Model Codes

The 2024 IECC model codes will likely contain some EV provisions; however, they are insufficient for the current explosive growth in EV adoption, and inequitable to multi-family residents. EVCAC recommends the following amendments to the proposed 2024 Residential and Commercial IECC to ensure equitable and affordable access:

- IECC 2024 Residential Amendments
- IECC 2024 Commercial Amendments

The 2023 National Electrical Code contains a provision requiring 40A panel service for all EV branch circuits. At present, this provision denies builders the option of Level 1 or LPL2 EV circuits, adding to the cost of construction. EVCAC recommends updating state electrical codes to ensure panels are sized appropriately for installed EV infrastructure. Low-Power Level 2 (208/240V, 20 A) service should be the minimum standard for new construction, and L1 service should be the minimum for retrofits.

NEC Proposed EV Comment

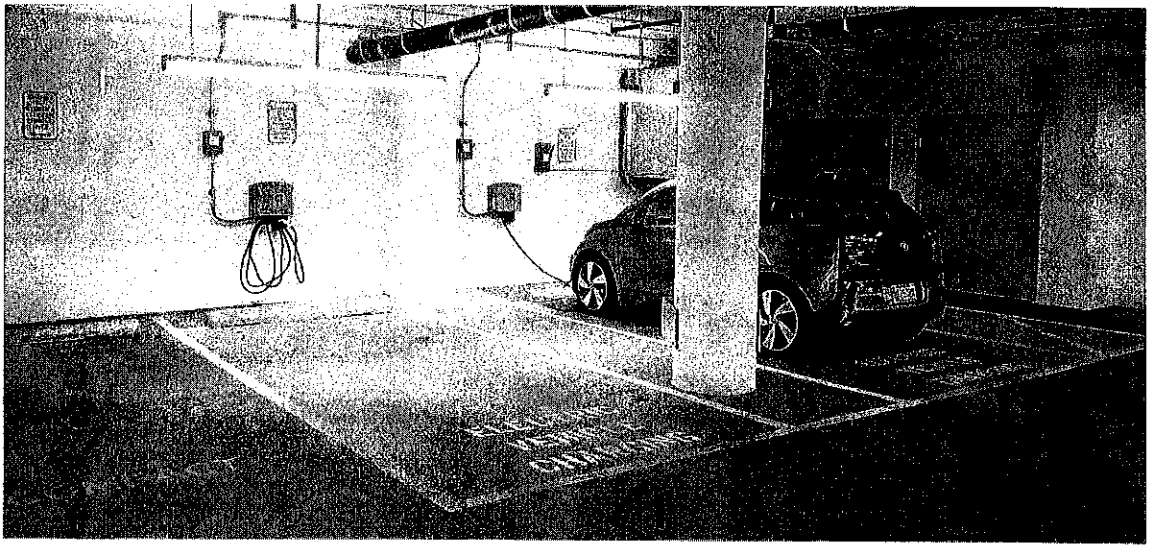


Photo credit: Georgetown University

Existing EV Readiness Codes

The following are some sample existing EV readiness codes already implemented in cities and states around the country. See the Fifty-State+ Spreadsheet for contact information to learn more, and for a complete summary of codes in all fifty states and territories.

California (Reach Code state)

Statewide:

- Final approved 2022 CALGreen Triennial EV code (took effect January 1, 2023)
- Approved 2022 CALGreen Intervening EV Code (to take effect July 1, 2024) – see in particular the voluntary *Tier I, Option B* (Initial Statement of Reasons)

Cities:

- San Jose, California 2023 (proposed) - provides EV charging access to 100% of multi-family housing units with assigned parking. This proposed reach code update is expected to be voted on by the San José City Council in the fall of 2023.

Connecticut (Dillon's Rule state)

Statewide:

- Connecticut's Mandatory Electric Vehicle (EV) Charging Station Building Standards, enacted May 10, 2022 and effective Jan. 1, 2023, require new state buildings with project costs greater than $100,000 to install Level 2 EV charging stations at a minimum of 20% of light-duty vehicle (LDV) parking spaces. New commercial or multi-unit dwelling buildings with at least 30 LDV parking spaces must be capable of supporting Level 2 or direct current fast charging (DCFC) stations at 10% of such spaces. See CT EV Codes Resources for more information.

Colorado (Home Rule state)

Statewide:

- The Colorado General Assembly passed the Building Energy Codes law in 2023, establishing an Energy Code Board to review, approve, and recommend energy codes for new buildings and retrofits to existing buildings. On Jun 1, 2023 the Energy Code Board published the Colorado Model Electric Ready and Solar Ready Code, which requires one EV Ready space delivering 40A/240V per unit for single-family and duplex housing. It also requires some EV Readiness in commercial parking structures. See CO EV Codes Resources for more information.

Cities:

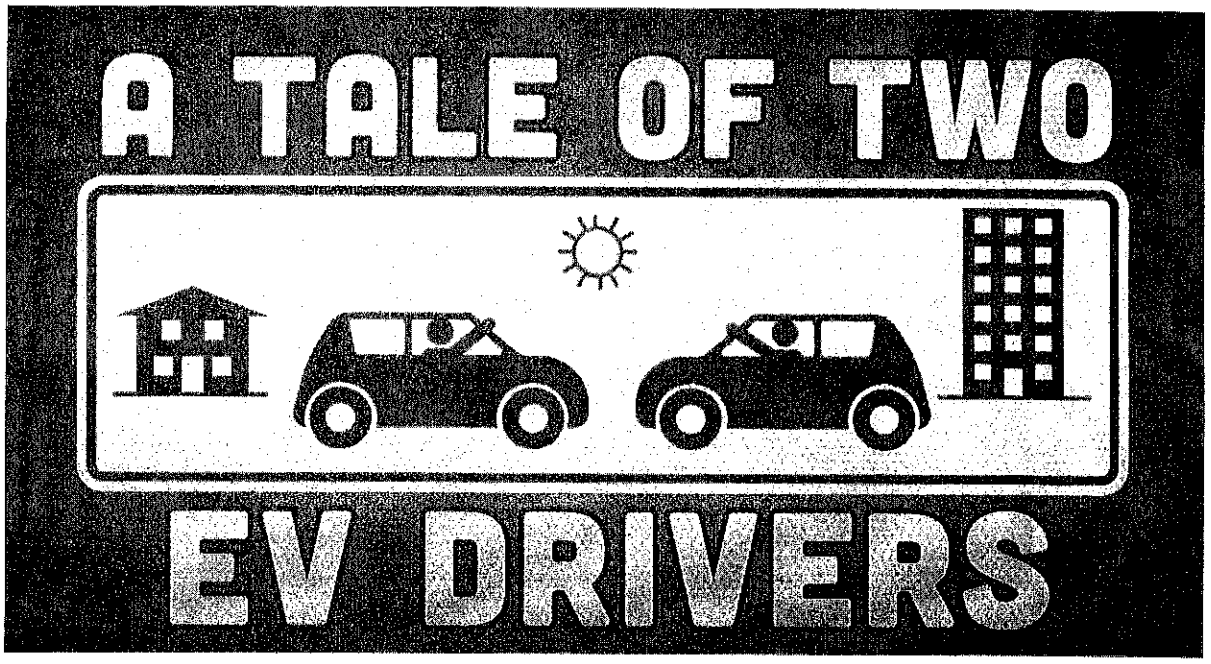
- Denver, CO 2022 Building Code requires a mix of EVSE, EV Ready and EV Capable in commercial and residential structures. (Note that it uses different definitions of EV Capable and EV Ready.)

District of Columbia (Non-State/Insular Area)

Washington, DC Electric Vehicle Readiness Amendment Act of 2020. Requires new construction or substantial improvement of a commercial building or a multi-unit building that includes three or more off-street parking spots to include EV make-ready infrastructure for at least 20% of the parking spaces; requires the Mayor to issue rules to implement the provisions of this act, including rules to establish a waiver process when a property owner demonstrates severe financial hardship; and requires the Department of Energy and Environment to establish incentives for property owners to install electric vehicle make-ready infrastructure in a greater percentage than required under the act.

Additional Resources

1. Video: A Tale of Two EV Drivers



This short video clearly illustrates the differences in cost and convenience between charging at a single-family home and charging at an apartment complex without an assigned charging space. Organizations advocating for EV codes in their communities

are encouraged to download the video and use it to support their outreach efforts. We provide two versions:

1) Version One ends with the EVCAC website link.
2) Version Two includes an additional blank tail at the end – feel free to use this longer version and add your local information and call to action at the end.

2. Fifty-state+ spreadsheet

This compendium lists current building codes in all fifty states plus Washington, DC and US Insular Areas (Puerto Rico, Guam, Commonwealth of the Northern Mariana Islands, US Virgin Islands, American Samoa).

3. Webinar recording: how to use the toolkit

On October 5, 2023, EVCAC presented a webinar introducing this toolkit, called *Creating Better EV Building Codes: What You Need to Know*. Watch the webinar here.

4. Slide deck for community education

This slide deck is used in the webinar; feel free to download a copy and use any or all of these slides to educate your community about the importance of EV readiness building codes.

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While reviewers were critical to improving the quality of this analysis, views expressed in this report are not necessarily a reflection of their or their organization's opinions.

ENERGY & ENVIRONMENT

Written by **Sarah Montalbano** | May 6, 2024

Metro Transit doubles down on EV bus failures

The *Minneapolis Star Tribune* reported last week that Metro Transit is ordering 20 new electric buses before 2026. Perhaps Metro Transit has forgotten the sorry saga of electric buses in Minnesota, but we haven't.

Electric buses first stumbled in 2019 as the eight buses on the newly-formed C Line were taken out of service due to defective charging mechanisms. Metro Transit idled its fleet of electric buses in March 2021, and it took about a year to resolve ongoing charging issues. The transit agency reported a "high number of service calls compared to its diesel buses," and "blown fuses and premature transformer failure," on the chargers.

Recognizing these problems, Metro Transit stepped back from EV buses and proposed a contract to employ biodiesel buses instead, although "the majority of the mix is diesel." The impact of switching diesel for EV buses on Minnesota's carbon emissions will be negligible, and biodiesel would do even less, considering Metro Transit's emissions constitute only 0.4% of 0.7% of the state's greenhouse gas emissions.

In Duluth, electric buses were pulled from service because they struggled on Duluth's hills and the cold weather put heavy demands on the buses' heaters. The buses have since been fitted with diesel heaters (which, of course, produce carbon emissions themselves).

In exchange for less-reliable service and dubious climate benefits, 20 EV buses will be acquired at an enormous cost, per the *Star Tribune*:

> *"The new shorter buses will be Metro Transit's first 40-foot buses, the type used on most local routes. The Met Council last week approved a $34 million contract with California-based bus manufacturer Gillig to build the buses and provide charging equipment. A grant from the Federal Transit Administration is covering $21 million of the cost."*

That comes out to an average cost of $1.7 million per bus and associated charging equipment — though federal taxpayers will foot all but $620,000 of each through the Federal Transit Administration's grant. The *Star Tribune* also notes that "the agency also plans for 20% of new 40-foot buses it buys in the future to be electric," so expect costs to multiply.

The COO of Metro Transit, Brian Funk, admits that the "savings on fuel haven't offset the extra costs of the buses themselves." It seems he'd agree with us that the technology isn't ready for primetime, since he acknowledges that "the technology is not quite there yet."

Metro Transit should remember its primary goal is reliable transit service. While new EV purchases will double down on failure, there are better uses of taxpayer money than purchasing more expensive and less reliable transport — simply to virtue-signal about one's "green" initiatives.

Sarah Montalbano is a Policy Fellow at Center of the American Experiment.
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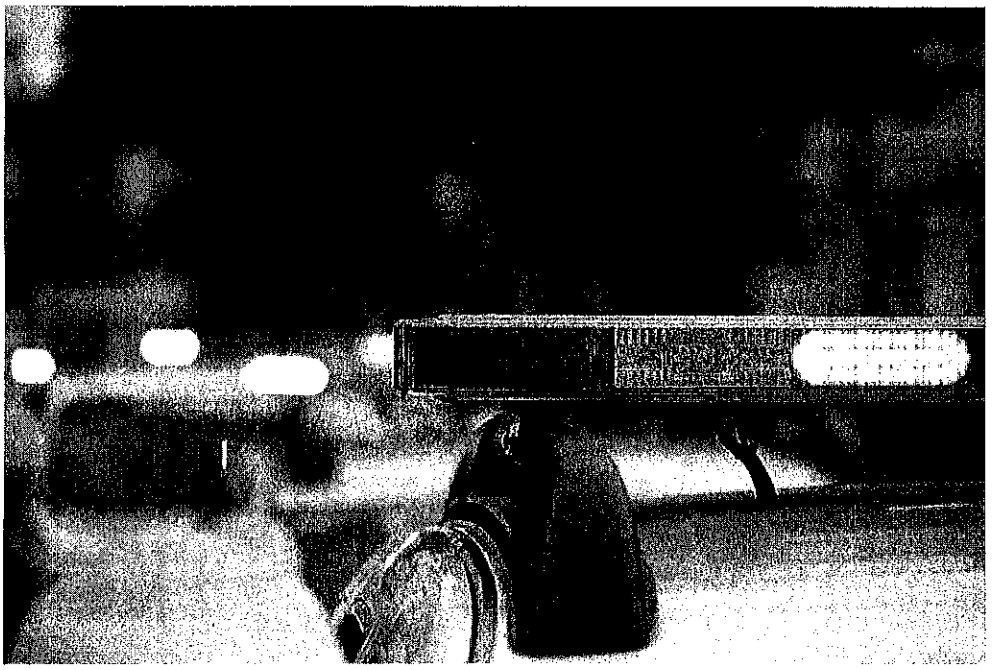
Tags: Duluth, electric buses, Electric Vehicles, metro transit

POLICE

EV Patrol Vehicle Transition: The Good, the Bad, and the Ugly

March 16, 2023 • Robert Martinez •



Things to consider before going electric include — but are not limited to — duty cycle, charge time, take-home vehicles, understanding that charge time means down time, available electric power, as well as funding and grants.

Photo: Pixabay

There are many things to consider before going down the road of electrifying (https://www.government-fleet.com/10178662/leading-the-charge-3-ways-to-succeed-with-fleet-electrification) a patrol fleet. Every department has unique characteristics like fleet size, landscape, force size, duty cycle, and political philosophy, that all play a role with fleet transitioning.

Over the past year, more local, state, and federal government agencies have been issuing mandates and executive (https://www.government-fleet.com/10194661/the-electrification-push-why-are-governments-buying-evs) orders to move to electric vehicles (https://www.government-fleet.com/10188966/electric-connected-fleet-managers-face-new-responsibilities) (EVs). By 2035,

all new vehicles sold in California (https://www.government-fleet.com/10179613/california-approves-plan-to-ban-the-sale-of-new-gas-fueled-cars-by-2035) and New York (https://www.government-fleet.com/10158758/six-states-now-committed-to-zero-emission-truck-rules) will have to be EVs. Additional states will likely follow suit in the near future.

Therefore, whether in agreement or not, the time has come to learn and understand what it will take to move toward electrifying our police fleets (https://www.government-fleet.com/10193734/what-to-consider-when-buying-new-police-vehicle-models), as well as the required charging infrastructure.

Before the EV Transition

Things to consider before going electric include — but are not limited to — duty cycle, charge time, take-home vehicles, understanding that charge time means down time, available electric power, as well as funding and grants. The two biggest caveats are availability of vehicles meeting the mission that are safe (https://www.government-fleet.com/10144821/why-the-nypd-values-fleet-salvaging-safety), and electric power required for charging. EVs (https://www.government-fleet.com/10192467/going-green-police-departments-debut-zevs) need to operate the same way as non-electric vehicles. The mission of the agency should be paramount to transition and govern what vehicles to purchase.

Weighing the Positives and Negatives of Electrification

What Fleet Managers Say they Need to Electrify (https://www.government-fleet.com/10138303/in-our-own-words-what-we-need-to-electrify)

Pros of greening your fleet include reducing dependence on fossil fuels & foreign oil, supporting alternative fuels, and the utilization of the U.S. farming industry. Fleet operation costs are lower per mile (https://www.government-fleet.com/10187672/how-to-calculate-ev-vs-ice-vehicle-cost-per-mile) in EVs versus internal combustion vehicles (ICE). Other cost reductions will be in preventive maintenance, such as the elimination of oil changes and tune-ups. The first service on EVs is usually made once the vehicle reaches over 100,000 miles.

Some cons include increased vehicle acquisition price, limited range, charge time equaling out-of-service time, and the fact that there are no pursuit-rated law enforcement EVs on the market. Though they are coming down the pipeline. In 2022, Ford announced the F-150 Lightning Pro SSV, while Chevrolet announced the Blazer EV PPV. Read more about the vehicles here (https://www.government-fleet.com/10183176/its-electric-a-look-at-the-latest-police-evs).

Funding Fleet Electrification

The Bipartisan Infrastructure Law (https://www.government-fleet.com/10184565/biden-administration-to-award-2-8-billion-boost-for-ev-batteries) (BIL) was passed, which funds the National Electric Vehicle Infrastructure (NEVI) formula program. This makes available $5 billion for the U.S. Department of Transportation (DOT) to distribute funding among states to deploy EV charging infrastructure. An additional $2.5 billion in funding for a discretionary grant program for charging deployment throughout the U.S. One of the requirements for states to receive this funding is to construct charging stations having a minimum of four 150Kw chargers per site. Some positive news is the most recently enacted bills will have a point of sale credit, not just a tax rebate. This is very important to government agencies and non-for-profit organizations that do not have tax liabilities.

In order for the transition to EV to have an effect on climate change, the U.S. needs to produce green electricity. Gov. Kathy Hochul wants New York State to be 100% green electric generation by 2050. Currently, NYS Electric power is 24% hydroelectric, 25% nuclear, 9% wind and solar, with the remaining production from natural gas and oil.

Some useful resources to navigate available funding include:

- Alternative Fuels Data Center (https://afdc.energy.gov/)
- Argonne National Laboratory's AFLEET Tool (https://afleet.es.anl.gov/home/)
- Argonne National Laboratory's JOBS EVSE Tool (https://www.anl.gov/esia/jobs-evse)

Likely, one of the best resources for information is your local Clean Cities Coalition and Network.

What's Involved When Implementing EVSE?

Understanding charging infrastructure (https://www.government-fleet.com/10174136/ev-infrastructure-how-to-start-how-to-expand) requirements will be critical for any department to transition (https://www.government-fleet.com/10194571/lead-the-way-to-sustainability-with-electric-fuel) to an electric patrol fleet to meet the needs of the community it serves. Vehicles today have three different levels of charging available for light-duty electric vehicles:

- Level 1 — a standard 110V to 120V outlet.
- Level 2 — 220-240V standard dryer or electric stove outlet or charging station.
- Level 3 — 440-480V outlet.

Level 1 charging can take days to fully charge. Level 2 may take six to eight hours to fully charge an EV depending on battery size. With both level 1 and 2 charging, the vehicle utilizes the onboard charger that converts alternating current AC to direct current DC. The rate of charge is governed by the output of the onboard charger.

Level 3 DC fast charging requires an electric supply of 440-480 volts with 100 to 300 Amps. Not all DC fast chargers charge at the same rate. For example, a 50kW charger could take up to 2.5 hours to fully charge a Ford Mustang Mach-E (https://www.government-fleet.com/10162639/is-fords-electric-mustang-suv-a-game-changing-patrol-vehicle-option) with a 98-Kilowatt hour battery (kWh). In comparison, a 100kW charger can charge to 80% in less than one hour.

One of the first things many departments will realize is they do not have the necessary voltage and amperage required for fast charging. This is where some of the biggest costs and investment will incur. A large percentage of locations will need transformers and additional electric service installed. Basic calculations for charging stations is:

Voltage x Amperage for Wattage (Watts = VxA).

Why is this important to understand? Most departments will run into operational concerns with available electric supply issues and delays in construction and permitting. Charge times will greatly affect how quickly EVs can be charged and available for patrol. Determining what type of charging levels your patrol fleet will need will depend upon adequate downtime or dwell time for each vehicle in comparison to charging.

Some good news is that other than Tesla, all American made and imported electric vehicles into this country will have a standard Combine Charging System Connector (CCS). The top portion is for type 2 connectors for AC charging. During DC fast charging, both the top and bottom sections are utilized to carry high power. Level 3 DC fast charging come in many different names and programs. Tesla has its own proprietary chargers with special plug for Tesla owners, but Tesla owners can use an adapter to use other band or types of chargers.

Calculating EVSE Requirements

EV batteries also come in many different sizes and internal materials that seem to be rapidly changing. Battery size will play a role in the operational range of the vehicle and the amount of time to recharge a drained battery. The battery charger in the car converts the AC electricity into DC to charge the battery. If a vehicle has a 10kW onboard charger and a 100kWh battery pack, it takes about 10 hours to fully charge.

Time=Battery capacity's KWh number/Changer power rating

When the vehicle battery's State-of-Charge (SoC) is greater than 80%, the DC fast charger rate slows considerably; this optimizes battery life and limits the risk of overcharging. This is why manufacturers often claim that fast charging will get you 80% percent in 30 minutes, if charging at 200 kWh. The last 20% could double the time you are hooked up to the fast charger.

Rapid 150kW	Rapid 100kW	Rapid 50kW	Fast 22kW	Fast 7kW	Slow 3kW
30 mins *0-80%*	50 mins *0-80%*	1.5 hours *0-80%*	9 hours *0-100%*	14 hours *0-100%*	33 hours *0-100%*

Approximate time to charge a Ford Mustang Mach-E extended range RWD.

Photo: Courtesy of Robert Martinez

The Ford Mustang Mach-E is fitted with an 11kW on-board charger for type 1 & 2 charging. Due to voltage differences, the charge (https://www.government-fleet.com/10188739/building-a-connected-charging-ecosystem) time will increase if plugged into a 110/120v outlet or decrease when plugged into a 220/240v outlet or level 2 charger. To step up or step down voltage, a transformer will be necessary; some locations that do not have 440/480 volts will need a transformer installed.

To increase a location's available electrical current (amps), additional service will likely required. The easiest way to understand amperage flow is to think of amps as water. As wire size increases, more amps can be delivered. This is where some of the biggest time delays will come from with permitting and construction.

While initially testing with the New York City Police Department (NYPD), the Mach-E energy usage was between 3 to 5 miles per kWh. EVs will have energy usage data readily available.

Factors we had to consider: the climate percentage for heat and air conditioning, vehicle percentage for propulsion, percentage for accessories, and percentage for external temperature, which is energy used for battery temperature control. Actual recharge for the Mustang Mach-E on a 50kW fast charger was 2.5 hours from 15% to fully charging a 98kWh battery.

EV range changes constantly depending on speed, braking (regen), payload, outside temperature, geographic hill or grade changes, and any other battery energy use during operation. Equipment upfitted on law enforcement vehicles that requires power, like roof lights, computers, and radios will reduce range. A vehicle with a 98kWh battery that gets 3 miles per kWh should get just under 300 miles per full charge. This will be dependent on regenerative braking and other components and equipment utilized.

Why Electric?

You may be asking yourself: why Electric? What is the hype? Efficiency is the primary driver of cleaning up the transportation sector. Electric motors make vehicles substantially more efficient than ICE vehicles. Electric motors convert over 85% of electrical energy into mechanical energy, or motion, compared to less than 40% for gas combustion engines.

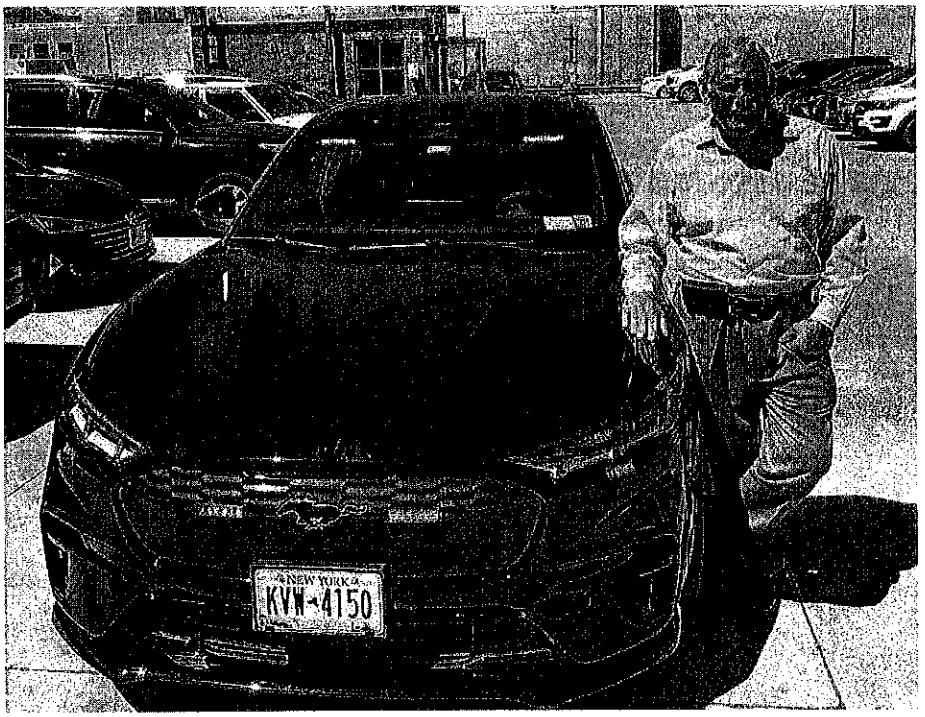
These efficiencies are even lower after considering losses as heat in the drivetrain, which is the collection of components that translate the power created in an electric motor or combustion engine to the wheels.

According to the Department of Energy (DOE), in an EV, about 59-62% of electrical energy from the grid goes to turning the wheels, whereas gas combustion vehicles only convert about 17-21% of energy from burning fuel into moving the car. This means that an EV is roughly three times as efficient as an ICE vehicle. Needing less energy to power your vehicle also helps brings down the cost.

EVs are fun to drive because of lots of horsepower and torque. Instant torque is generated by an electric current and magnetic fields in the electric motor, whereas a gas engine takes much longer to combust gas and turn the crankshaft. This instant torque in an EV is what throws you back against the seat when you accelerate from stoplight to stoplight.

EVs for Police Use

Other than charging infrastructure, the biggest delay in the transition to fully electric vehicles (https://www.government-fleet.com/10183145/the-drive-toward-evs-two-fleet-managers-tales) is the availability of EVs, as well as EVs that meet the law enforcement mission. Currently there are no pursuit-rated or special service package EVs for law enforcement or police service. Ford brought the Mach-E GT to Michigan State Police Vehicle Testing (https://www.government-fleet.com/10188380/testing-the-2023-patrol-vehicles), and performance was impressive. What was not impressive was the 30% reduction in battery charge after 18 miles of high-speed track testing.



NYPD received its first Ford Mustang Mach-E in August 2022. This vehicle is used for administrative duties.

Photo: Courtesy of Robert Martinez

Currently, the NYPD only has two EV models in service: the Chevrolet Bolt and the Mach-E. A fleet of 32 Bolts is assigned to Traffic Control, School Safety, and other non-patrol units. They have been in service for three years now, with very good reviews from both operators and mechanics. An order of 148 Ford Mach-Es was delivered, 40 unmarked, and 108 fully marked units. There has not been enough data collected to do any type of fair comparison of cost per mile or maintenance cost as of this time.

In addition to the 2023 Ford F-150 Lightning Pro SSV (https://www.government-fleet.com/10177763/ford-unveils-americas-first-electric-pickup-truck-purpose-built-for-police) and 2024 Chevrolet Blazer (https://www.government-fleet.com/10177164/chevrolet-reveals-all-electric-blazer) PPV, there is a rumor that Volvo will be releasing a police model for the United States. The automaker is already offering (https://www.government-fleet.com/10174158/volvo-enters-police-market-with-ev-offerings) several 2023 model-year vehicles for police agencies.

Tesla models keep popping up at various departments throughout the U.S., but that automaker has not confirmed that it will have a pursuit-rated model anytime soon. Ford is producing E-Transit vans that might be useful for prisoner transport or as a small command post.

With the gauntlet of variables transitioning to EVs, departments will have to study vehicle utilization. In most cases, it will not be one size fits all for police fleets. A vehicle that would meet the mission for community patrol might not meet the mission for highway patrol.

EVs would probably have a better fit on the administrative side and detective squads for now. EVs and their charging infrastructure counterparts are extremely dynamic and fluid. Within the next couple of years, the crystal ball may become clearer. My suggestion to all fleet managers is to start a pilot program and get your feet wet with EVs and collect your own data.

About the Author

Robert Martinez (https://www.government-fleet.com/10190644/nypds-finest-lessons-learned-managing-the-nations-largest-police-fleet-1) retired from his position as deputy commissioner of support services for the New York City Police Department at the end of 2022. Martinez helped the NYPD become the first department in the nation to use hybrids for patrol duties. He was also one of the first to introduce EVs for law enforcement use. In 2015, Martinez was given *Government Fleet's* Legendary Lifetime Achievement Award (https://www.government-fleet.com/129809/martinez-receives-legendary-lifetime-achievement-award).

EV Patrol Vehicle Transition: The Good, the Bad, and the Ugly

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The Pros and Cons of Electrifying Your Fleet

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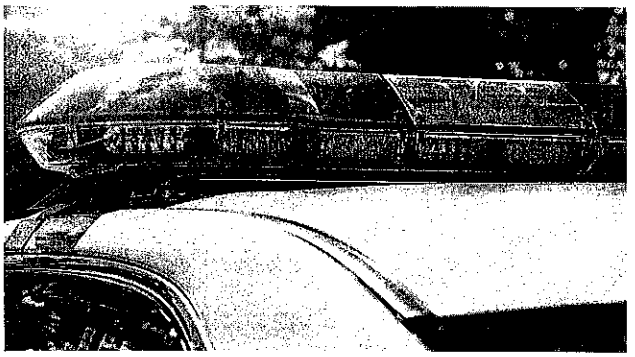
As gasoline prices rise, an increasing number of police departments are adding electric vehicles (EV) and hybrid electric vehicles (HEV) to their fleets. Though purchasing an EV or HEV would seem to be a "no-brainer" for both financial and environmental reasons, there are pros and cons for doing so, most of which are related to their intended use.

Charging Requirements

Powered by lithium batteries, EVs need to be recharged at intervals that vary according to the size of the battery and speed of the charger.



Most agencies use the 240 Volt Level 2 chargers, which can refill a large battery that is half full up to 80 percent in a few hours. Direct current (DC) chargers are much faster than regular alternating current (AC) chargers and can take less than 20 minutes to charge an electric car up to 80 percent.

Says Todd Bertram, chief of the Bargersville (Indiana) Police Department (https://www.townofbargersville.org/departments/police/mission/), "We've been using Tesla EV's as patrol cars since 2019, and charging has never been a problem. But this is because our typical patrol shift is 80 to 150 miles, which is easily covered by a fully charged car.

"And we require that all cars be recharged when they drop to 50 percent power, which is the same requirement for gas fueled vehicles, which must be refilled at half a tank.

"All cars have to be up to 80 percent before they go out, and powering up our Teslas from 50 to 80 percent with their fast chargers takes about 20 to 30 minutes. Our officers can do that while they are back at the department doing paperwork."

But there is a difference between the mileage and the operating time an EV can get from one charge, because most battery power is used by the drive motor. When the car is stationary, even if it's using lights, heat, or air conditioning, it consumes much less power.

Said Chief Bertram, "I'd recommend electric vehicles for most police departments. But not as patrol cars for state police who may pursue 10 to 15 cars at high speed every day. They would use a lot of battery power and be unable to recharge often enough."

Mileage and Time Range

Though the average EV can travel about 250 miles on a charge today, there are others that can go much farther (https://phev.ucdavis.edu/about/faq-phev/#:~:text=Current%20electric%20vehicles%20travel%20about,range%20and%20even%20faster%20charging.), and it is predicted that their range will be up to 500 miles in the near future.

Photo Courtesy of Hyattsville (Maryland) Police Department

But though this range may work for vehicles that stay at the station for an extended time between shifts, it would be a problem if officers share cars, switching off after their shifts.

This is the case for the Hyattsville (Maryland) Police Department (https://www.hyattsville.org/837/Police) (HPD), which operates a fleet that includes a fully-electric 2017 Chevrolet Bolt and three Ford hybrids. Said HPD Patrol Commander Lieutenant Zachary Nemser, "The Bolt has about 230-mile range, which, as far as administrative capacity goes, is fine. And that is what it is used for.

"But if it takes 30 mins to two hours to fully charge a car, this doesn't work for our patrol officers who are going from call to call on 12-hour shifts. Our guys don't come into headquarters to do their paperwork; they write reports in the field. So there is no time for extra charging."

Major Mike McNab of the Spokane City (Washington) Police Department (https://my.spokanecity.org/police/), which has Tesla cruisers, agrees. "If the car is assigned to one officer, that may work. But we do hot seating in our patrol vehicles, meaning that they're shared. So each car runs almost 24 hours a day."

For this reason, Spokane transferred use of their EV cruisers to detectives. However, they are considering hybrid cars as cruisers, and are now testing Ford Interceptors.

Fuel and Maintenance Savings

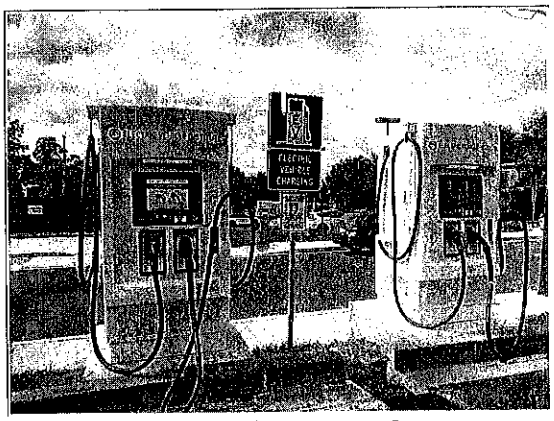


Photo Courtesy of Hyattsville (Maryland) Police Department

Though purchase price plus additional upfitting costs may be high, the long-term fuel and maintenance savings can greatly offset it.

According to Bertram, his department has been saving up to $6,700 on fuel costs every year on each of Bargersville's five electric patrol cars, the first of which they purchased in 2019. And these savings are increasing as gasoline prices rise.

Though HVEs require gas as well as electric power, Nemser has found that HPD's Ford Fusion and Ford Interceptor conserve fuel. What's more, the light bar, heat, air conditioning and electronics operate for long periods on battery power if an officer has to stay on site for hours at a time during an accident investigation or traffic light outage.

In addition to fuel savings, EVs and HEVs require less maintenance. Lieutenant Nemser estimates the savings on brake replacements and oil changes, which are not necessary on their Chevy Bolt, have added up to about $600 per year.

"Since we got it in 2017, the only thing we've replaced is the 12-volt battery, the one that runs the accessories. We've also rotated the tires. Overall, we've saved about 75 percent on energy and maintenance costs."

As for battery lifespan, Consumer Reports (CR) estimates the average EV battery's lifespan to be at around 200,000 miles (https://www.consumerreports.org/hybrids-evs/your-ev-questions-answered-electric-vehicle-faq/). In the same February 2020 report, CR also stated that EVs are generally more mechanically reliable than gasoline models because there are fewer parts.

Upfitting and Other Costs

But there are costs to upfitting these cars with dashboard electronics, sirens, lights, a push bar, and other necessities. Even purpose-built electric police vehicles lack some necessary components.

Said Major McNab, "I think it would be valuable for other departments to understand the increased cost due to custom fabrication for upfitting civilian designed vehicles for police work. We experienced a 100 percent increase in upfitting costs for our Teslas.

"We also ran into problems installing the in-car patrol computer because it competes with the vehicle control screen for space.

"It's a significant factor that can offset the total cost calculation. Though EVs typically cost less than internal combustion vehicles, upfitting costs results in the EV being the same or greater price than an ICE vehicle."

Another cost consideration is charging stations, both the number required and the power level. Fast chargers can be very expensive. But the HPD's chargers were paid for by a grant from the Maryland Energy Administration, and other agencies may be able to find similar funding.

Pursuit Capability and Safety

Said Bertram, "Our EV can go from zero to 60 in 5.2 seconds, and the top speed is 140 mph. Even if we're chasing somebody going 100 miles mph, we're going to catch them, and it's likely to be a shorter pursuit because we're so much faster."

EV and HEV cars are also very safe. Like all light duty cars and trucks sold in the United States, they must meet the Federal Motor Vehicle Safety Standards (https://www.govinfo.gov/content/pkg/CFR-2017-title49-vol6/xml/CFR-2017-title49-vol6-part571.xml), which require an extensive testing process. EV battery packs must meet their own testing standards, which require safety features that shut down the electrical system when they detect a collision or short circuit.

These cars also have 5-star safety ratings from the National Highway Traffic Safety Administration (https://www.nhtsa.gov/), which rates them on how well they protect occupants in frontal and side as well as rollover crashes.

But there are other safety considerations as well. According to McNab, SPD's Tesla model is not situationally safe in some circumstances.

"Approaching a call, you may want to drive unseen and park silently, but the settings don't allow you to drive without lights. The car beeps when you lock it too, but you can turn that feature off," he said.

All three officers agreed that EVs and HEVs are definitely the future. But as McNab said, "We need to take a very careful approach, taking time to do research, test the cars, and build the charging infrastructure too.

"We wanted to purchase a fast charger, for instance, and the local electric company agreed to help us. But then we found out the local grid wouldn't support it."

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COPS Office

Post