CITY OF ALBUQUERQUE RFB2007-111-SB
POLICE PURSUIT MOTORCYCLE
SANDIA AUTOMOTIVE GROUP

AGENCY: _____

DEPARTMENT: _____

DIVISION: _____

REQUISITION #: _____ PO #: _____

| | | | |
|---|---|---|---|
| DESCRIPTION: | Police Pursuit Motorcycle | MAKE: | BMW |
| VENDOR: | Sandia Automotive Group | MODEL: | R1200 Rt-P |
| BASE COST PER UNIT: | $ 22,012.25 | ENGINE: | 1200 cc 2 cyz |

Standard Specifications

1. Engine
   - 1.1. The engine shall be a heavy-duty “police package” of the manufacturer’s standard, meeting the following requirements:
     - 1.1.1. Not less than 998 cubic centimeters (cc) displacement.
     - 1.1.2. Minimum of 2 cylinders.
     - 1.1.3. Air or liquid cooled.
     - 1.1.4. Shall be four cycle.
     - 1.1.5. Shall produce not less than 90 horsepower.
     - 1.1.6. Fuel injection with recommended octane rating of 91 AKI
     - 1.1.7. Electronic engine management system with:
       - 1.1.7.1. Automatic choke
       - 1.1.7.2. Individual cylinder pre-ignition
       - 1.1.7.3. Temperature and oxygen sensors.
     - 1.1.8. An oil level indicator light.
     - 1.1.9. Factory installed, thermostatically controlled radiator-cooling fan.
2. Power Train:
   - 2.1. Final Drive:
     - 2.1.1. Shall be maintenance-free shaft drive.
   - 2.2. Clutch
     - 2.2.1. Current model, single or multiple disc, wet or dry type, hand operated.
     - 2.2.2. Hand lever shall be located on the left handlebar with adjustment for size of operator hand.
     - 2.2.3. Hydraulic self-adjusting actuation providing automatic clutch lever free-play adjustment under all service conditions.
   - 2.3. Transmission
     - 2.3.1. Shall be a minimum of 6 speeds.
     - 2.3.2. Gears shall be constant mesh design.
     - 2.3.3. Preferred shift pattern is as follows: Neutral located between first and second gears, shall shift down from neutral to first gear and up from neutral to second, third, fourth, fifth, etc.
     - 2.3.4. Foot peg or board.
     - 2.3.5. Foot shift level shall be located on left side.
     - 2.3.6. An indicator light, readily visible to the rider, shall be provided to indicate when the transmission is in neutral position.
3. Brakes
   - 3.1. Front and rear brakes shall be hydraulic controlled systems with independent rear wheel brake control.
   - 3.2. Anti-lock brake system (ABS) mandatory.
   - 3.3. Front brakes shall be dual disc type, hand operated from the right handlebar with adjustability in lever for size of operator hand.
   - 3.4. Shall provide full modulation to the limit of traction without loss of control.
   - 3.5. Rear brake shall be disc type, foot operated with pedal located on right side.
   - 3.6. Linkage shall be close fitting to eliminate any lost motion.
   - 3.7. Brake pedal shall incorporate a non-skid pedal surface or pad to permit safe application and minimize the possibility of the foot slipping off the brake pedal.
   - 3.8. Hydraulic hoses and metal lines shall be mounted and protected in such a manner so as to prevent them from becoming damaged due to chafing, rubbing, or vibration.

3.9. Brake lines and calipers shall be located away from exhaust heat.

4. Frame/Suspension/Fiberglass/Sheet Metal:

4.1. Frame shall be carbon steel tubing or equal.

4.1.1. Vibration and other naturally occurring forces shall not cause cracking of the motorcycle frame, suspension or body components when subjected to normal police service.

4.2. Rear fork shall be swinging arm type with integral coil spring(s) and hydraulic/gas shock absorber(s).

4.2.1. Rear shock absorber(s) shall have provision for adjustment to accommodate rider's height and weight.

4.3. Front forks to be hydraulic design and adjusted to permit the shortest possible turning radius and designed for best handling characteristics in police service considering weight and weight distribution.

4.3.1. For pre-load shall not be gas pressure adjustable.

4.4. Frame, spring(s) and shock absorber(s) shall be adequate to handle rider plus the added weight of a motorcycle.

4.5. Certified radio transmitter and receiver, radio repeater, carrier and saddlebags as engineered and installed for police service on rear of the motorcycle.

4.6. Motorcycle minimum load-carrying capacity shall be no less than 400 pounds (GVWR minus unladen weight prior to installation of police-specific equipment).

5. Electrical System:

5.1. Shall be 12-volt system with can-bus / circuit breakers / protectors and/or fuses for protection of all circuits from overload or short circuits.

5.2. Shall have a heavy duty alternator (700 watt minimum), with voltage regulator incorporating transient voltage protection.

5.3. Must produce a minimum of 25A at recommended engine idle speed (without special police equipment in operation).

5.4. Battery shall be a linked dual battery system, providing one heavy duty gel maintenance-free primary battery for the operation of the motorcycle and anti-lock brake system, and an identical auxiliary maintenance-free gel battery with 8 special conventionally fused circuits for the operation of specialized police equipment.

5.4.1. Both batteries shall be linked to recharged from the central alternator during motor operation.

5.4.2. A heavy duty relay triggered by alternator output shall disengage the auxiliary battery when the engine is not running (or producing current) to enable all special police equipment to draw only from the auxiliary regardless of the length of the violator stop.

5.5. Starter shall be current model 12-volt starting motor with solenoid and one-way clutch engagement.

5.5.1. Starter button shall be located on right handlebar.

5.5.2. Shall feature a "clutch safety system" that prevents the engine from being started when the clutch is engaged and the transmission is not in neutral.

6. Lighting

6.1. All lighting shall be Federal Signal or equal.

6.2. Headlight to be dual element low beam / single element high beam, quartz halogen-with a high beam indicator light mounted so that it is readily visible to the rider.

6.2.1. High and low beams to be controlled by a switch on the handlebar.

6.2.2. A two-position switch should be located on the handlebar which allows front and rear lighting to be turned "ON" or "OFF" with engine operating independent of ignition switch.

6.2.3. Tail light shall be fitted with dual brake / tail light bulbs with warning to advise the operator if a brake / tail light bulb fails, and brake light shall provide illumination as required by FMVSS.

6.3. Brake light shall and be a dual bulb system with warning to advise the operator if a brake light bulb fails.

6.4. Turn signals designed and/or installed in such a manner as to be visible from the front and rear, two (2) on the front and two (2) on the rear with indicator lights on dash panel.

6.4.1. Rear turn signal lights are to be wired to a heavy-duty switch with indicator light to permit the rear signal lights to flash together, independent of the front signal lights and to operate with the push to lock on type with indicator lights which will operate when the turn signals are in operation.

6.4.2. Side-facing LED additional turn signal lights shall be located in the rear emergency light module to allow motorists to better see signaling intentions when riding along side other motorists.

6.4.2.1. Side turn signals will function when the individual turn signal is engaged as well as the all-way flasher system.

6.5. Two (2) blue identification lights (ref: Truck-Lite #10A) shall be installed on a plate with the license plate.

6.5.1. The lights shall be mounted, one of each side of the license plate, and connected with the tail light circuit.

6.6. Emergency Lights

6.6.1. To be modular LED lighting units which contain multiple LED light heads optimally aimed for high visibility.

6.6.2. Light heads shall be one each forward facing (left and right), one each forward 45 degree, one each forward side facing, one each rear side facing, one each rear facing.

6.6.3. Light heads shall be non-flashing type controlled by processor-controlled flasher system with 12 flash patterns and sequential light switching from rear to front.

6.6.4. Flasher connected to siren InterClear function to enable secondary flashing pattern for seven (7) seconds each time siren mode is changed.

6.6.5. Primary and secondary flasher programming buttons provided in secure location.

6.6.6. Emergency lights shall operate with ignition switch in either the "ON" or "OFF" position, or lockable accessory position.

6.6.6.1. Side-facing front and rear lights shall provide option to activate with rear or front lights.

6.6.6.2. Motor shall include two indicator lights within the operator's field of vision to indicate when rear or front lights are "ON".

6.7. Light color to specified at award.

6.8. Horn must have a minimum of 82 dB output measured at a height of 4 feet and at a distance of 50 feet directly ahead of motorcycle on an asphalt surface, with the engine at idle (SAE J377).

6.8.1. Horn button to be located on the left handlebar switch assembly.

6.8.2. With motorcycle ignition "ON", the horn will activate the siren "air horn" function as well as the normal motorcycle horns.

6.9. Switches for control of all emergency equipment (siren, emergency lights, switches) wired as follows:

6.9.1. Position 1 = Off

6.9.2. Position 2 = Rear emergency lights plus option to activate rear or front side lights.

6.9.3. Position 3 = Code 3 (all emergency lights).

6.9.4. An additional switch accessible from the handlebar is provided to independently cancel the rear emergency lights (those programmed to function in Position 2) to allow use of only front lights under specific situations.

6.10. Ignition switch, headlight switch, rear flashing amber light switch and all other switches not specifically located in this specification, shall be mounted on the dash panel or on the handlebar and conveniently accessible by the rider.

6.11. The ignition, headlight and running light switches shall be designed and wired to permit the engine to run without the headlight or running lights on.

6.12. Dash panel and instrument lights shall be hooded or otherwise designed to prevent glare onto the windshield.

7. Handlebars

7.1. Handlebars shall be chrome plated, stainless steel, or other corrosion resistant finish of the latest approved type suitable for police work and allow the officer to sit in an upright position with both hands on handlebar grips.

7.1.1. Movement of the handlebars shall not be restricted by any accessory equipment or windshield/fairing.

7.2. All exposed wiring to switches shall be encased in plastic loom and clamped to bars.

7.2.1. All wiring subjected to friction to be adequately protected to prevent wear and eventual grounding.

7.3. Handlebar grips to be of firm dark colored plastic and/or rubber which will not discolor hands.

7.4. Throttle control, to be located on right handlebar, shall allow no lost motion or play and shall return to idle when hand is released from grip.

7.5. Handlebar control levers shall contain ball type knobs on the outer ends to minimize the possibility of the hand slipping off the lever.

7.6. Provision shall be made for mounting a radio control head system (including microphone) in the center of the handlebars, gas tank console or fairing.

7.6.1. Fairing dashboard shall contain a radio speaker of 4 Ohms impedance to broadcast radio traffic, pre-wired for connection to mobile radio.

7.6.2. Mounting of the radio control head and microphone shall not obstruct visibility of indicators or accessibility of controls and switches and shall be accessible when seated on the motorcycle.

8. Tires

8.1. Tubeless tires specifically approved by the manufacturer for police service (must meet CHP run-flat protocol).

9. Wheels

9.1. Front and rear wheels shall be alloy type.

9.2. Front and rear wheel shall be designed to prevent tire separation from rim if tire becomes flat.

9.3. Rim shall be equipped with an interior shoulder that does not permit dismounting of the sidewall bead from the shoulder and prevents subsequent movement of the sidewall into center-recess of the rim or to the outside of the rim when tire is run flat. Rim locks are not acceptable as an alternate to this specification.

9.4. Tire pressure valve stem shall be easily accessible for daily check / correction of tire pressure.

10. Mirrors

10.1. Right and left side rear view mirrors are to be installed in such a manner to minimize vibration and shall be:

10.1.1. Rectangular in shape. Minimum 3-½-inch x 5-inch (17 square inches). "True Visor" type.

10.1.2. Short shank, mounted on the handlebars or breakaway design to fairing shell.

11. Speedometer

11.1. Shall be designed for police work.

11.2. Shall be certified accurate ± 2 mph throughout its entire speed and temperature operating range as compared to the true motorcycle speed in which it is installed.

11.2.1. Shall provide illuminated accurate easy-to-read digital display.

11.2.2. Shall provide a handlebar switch to press and lock the (pace) speed, displaying this speed on the digital display adjacent to the primary speed display.

11.2.3. The pace speed shall be retained through ignition sessions until a new pace speed is locked.

11.2.4. Tachometer shall be supplied.

12. Protection Bars (Front and Rear)

12.1. Steel construction to resist corrosion.

12.2. Shall be designed to provide mountings for the siren speaker and other accessories.

13. Fairing
    - 13.1. Shall be equipped with a frame-mounted full fairing and electrically adjustable windshield system to provide stability and protection from the elements.
        - 13.1.1. Windshield shall be a clear polycarbonate, scratch resistant, approved glazing material (Lexan MR-4000 or equivalent), extra tall electric.
        - 13.1.2. Windshield angle should be electrically adjustable via handlebar switch to provide optimal protection / minimal wind noise to the operator.
        - 13.1.3. Fairing and windshield system shall not cause imbalance of the motorcycle at any speed.
14. Seat
    - 14.1. Seat shall be height-adjustable, heavy-duty police type, foam padded adjustable saddle covered with black leather or vinyl material that will breathe.
    - 14.2. Seating shall be a heated, low seat
15. Stands
    - 15.1. Side stand shall be of steel construction and have a minimum of two and one-half square inches of surface on the ground when extended, and mounted on left side.
    - 15.2. Shall be able to be lowered and retracted with foot when seated on the motorcycle, shall not strike ground during hard left turns when retracted.
    - 15.3. Amount of lean of motorcycles shall not exceed 15 degrees from vertical when stand is extended and front wheel is in a straight-ahead position.
    - 15.4. Locking system shall be constructed so that with the weight of the machine on the stand, the stand cannot be folded or retracted.
    - 15.5. Center service stand shall be standard, permanently fitted to motor, raising one wheel off the ground when deployed, to enable operator to rotate – check condition of either tire.
16. Footrests
    - 16.1. Shall be equipped with footrests that will fold in the event of contact with the ground and shall be equipped with skid plates on the bottom outer sides to reduce rapid wear from frequent pavement contact.
17. Sirens
    - 17.1. Electronic BMW/Code 3 or Federal Signal motorcycle 100W siren/public address (PA) system, including radio rebroadcast, shall be supplied and installed, operating only ignition switch is “ON”.
        - 17.1.1. Siren to produce electronic tones wail, yelp, hyper-yelp and air horn.
    - 17.2. PA and radio rebroadcast control system may be interfaced with mobile radio.
    - 17.3. Motorcycle to be fitted with Code 3 100W siren speaker.
    - 17.4. Control switch(s) shall have the following operating modes:
        - 17.4.1. Push-button
            - 17.4.1.1. Single press to activate siren.
            - 17.4.1.2. Additional single press of push-button will scroll through wail, yelp and hyper-yelp (when enabled).
            - 17.4.1.3. Press and hold of push-button shall deactivate siren regardless of position in scroll cycle.
        - 17.4.2. Horn button
            - 17.4.2.1. Siren air horn operates whenever ignition switch is “ON” and horn button is pressed.
18. Muffler
    - 18.1. Shall meet legal sound restrictions.
    - 18.2. Shall be constructed of stainless steel to with polished stainless steel finish.
    - 18.3. Chrome plated stainless steel finish available on special-order.
19. Keys
    - 19.1. To have three keys (two luxury keys and one service key) provided for each motorcycle at time of delivery
    - 19.2. Keys to contain anti-theft security chip to disable ignition system unless the proper ignition key is utilized.
20. Color
    - 20.1. Motorcycle finish and color to be combination of black and white (BMW color code 753) as follows:
        - 20.1.1. Frames: Black
        - 20.1.2. Fenders: Front white on painted area with black texture rain guard, rear black.
        - 20.1.3. Fairing shall be black and white combination.
        - 20.1.4. Saddlebags to have black sides and white lids.
21. Radio Box and Saddlebag System
    - 21.1. To be equipped with a lockable integrated radio storage box with grounded base suitable for mounting of police radio / video system, etc.
    - 21.2. Provide grounded radio plate for attachment to roof of radio box are available.
    - 21.3. Radio box optimal dimensions 17 inches (length) x 12 inches – 10 inches (width) x 6 inches – 4.5 inches (height) (box is tapered front to rear).

21.4. Two (2) law enforcement type utility saddlebags mounted on each side of the rear wheel.

21.4.1. Saddlebags shall be composite construction.

21.4.2. Optimal dimensions: 19.5-inch (length) x 6.75-inch (width) x 10.5-inch (height) / 4-inch (height) (lid).

21.4.3. Tapered rectangular shape with a minimum capacity of 23 liters each.

21.4.4. Boxes shall be sealed against moisture and dirt.

21.4.5. Front hinge / single glove-friendly rear latch should allow operator to open lid while seated on motor.

21.4.6. Latch secures lid without requirement to lock / key lock standard for security.

22. Emergency Tool Kit

22.1. A minimal emergency tool kit shall be supplied with each motorcycle in a plastic/vinyl pouch.

23. Miscellaneous Equipment

23.1. Auxiliary photo-eye controlled rear LED lights fitted to license plate mount provide additional rear lighting.

23.2. Flasher system pre-wired for optional photo-eye to turn off optional low LED light heads to reduce glare during night riding.

23.3. High-mounted supplementary LED brake/tail light shall be fitted to provide additional rear visibility. Supplementary light shall comply with all applicable SAE requirements.

23.4. Side-facing LED rear turn signals

23.5. High mounted LED brake/tail light.

23.6. Gel battery charger for maintenance during off-season.

23.7. Heated hand grips

23.8. Flashlight / PR24 baton holder

23.9. Rocker / head cover protectors

23.10. Map light

23.11. Note pad holder

23.12. Heated adjustable seat in standard or low height versions.

23.13. Low adjustable seat.

23.14. Locking laser gun baskets.

23.15. Fused front and rear waterproof cigarette lighter type power outlet.

24. Performance Requirements

24.1. Motorcycles purchases against this contract shall display outstanding stability, maneuverability, cornering and other handling characteristics necessary for a motorcycle engaged in urban enforcement as well as high-speed traffic law enforcement use which includes operation over various types of road surfaces and operating conditions.

24.2. Motors shall be capable of reaching a top speed of at least 115-mph with no sign of instability, even when riding through curves at high speed.

24.3. Cornering lean angle shall not be less than 43 degrees, providing optimal cornering clearance, improving the ability of the operator to avoid obstacles spotted in a curve.

25. Pre-Delivery Service

25.1. All motorcycles must be completely serviced, inspected, properly adjusted and road tested before delivery, including the proper fill of all fluids and lubricants.

25.2. All motorcycles shall be delivered with a full fuel tank.

25.3. Batteries shall be serviced and fully charged on delivery.

26. Warranty

26.1. Three- (3) year, 36,000 mile bumper-to-bumper. No deductible.

26.2. Manufacturer shall also provide a 39-month / 60,000 mile, no deductible limited warranty.

26.3. The motorcycle shall have 6,000 mile service intervals in the manufacturer's maintenance schedule for meeting the service requirements for obtaining warranty service.

26.4. Oil consumption in excess of one quart per 1,000 miles shall be cause for warranty repair.

27. Technical Support and Information

27.1. The successful bidder shall supply the City with the following technical information:

27.2. Manuals

27.2.1. Each motorcycle shall be delivered with a rider's manuals as well as warranty guide / consumer information guide necessary for proper operation and maintenance of the motorcycle.

27.2.2. Factory service manual covering repair of all components of the motorcycle may be made available electronically.

27.2.3. CD of the repair manual.

27.2.4. Electronic parts catalogue. One (1) copy.

27.2.5. Wiring diagram for police pursuit lighting and siren shall be made available electronically.

| OPTIONS | |
|---|---|
| DESCRIPTION | PRICE *(quantity 1 ea.)* |
| A. Flasher set to a rapid flasher pattern. *(ADD)* | $ No charge |
| B. Push-to-talk PA/radio and body cord attachment and speaker mute control switch. *(ADD)* | $ 835.82 |
| C. Three luxury keys and one service key. *(ADD)* | $ 60.00 |

OPTIONS TOTAL $ _____

BASE PRICE $ 22,012.25

TOTAL COST PER UNIT $ _____

QUANTITY _____

**TOTAL COST $** _____