

APPENDIX A
Description of Materials, Supplies, Equipment and Bid Price

Contractor _____

SCHEDULE OF ITEMS

EQUIPMENT	Quantity	Unit Price	Total Price
C-18 Caterpillar EPA Tier II Marine propulsion engines including all Standard Equipment Specs & Requirements listed in Appendix A, pg 1-3	2	\$	\$
All Auxiliary Equipment & Particulars listed in Appendix A, pg. 3-4	2	\$	\$
PROJECT TOTAL→	→	→	\$

Description

The successful bidder will supply the following equipment and provide technical support for installation and warranty work.

Bidders will submit a detailed quote sheet listing all standard & auxiliary equipment listed above.

Contractor shall provide the following standard and optional equipment:

Standard Equipment specifications & requirements:

Two (2) C-18 Caterpillar EPA Tier II Marine propulsion engines each developing 454 horsepower @ 1800 rpm and operated through marine transmissions with a 3.5:1 reduction ratio and be ZF Model W650. The shafts and engines will be equipped with Mathers Clear Command controls and brakes. Engines shall be configured with inboard service points and instrumentation. Each engine shall be configured for keel cooling (not including coolers).

The *M/V Governor Curtis* is based in Rockland, Maine at the Maine State Ferry Service Rockland Terminal. The vessel was constructed in 1968 and has been repowered one previous time in 1986. The vessel is currently equipped with Caterpillar 3408B Marine Engines.

AIR INLET SYSTEM-

Air cleaner/fumes disposal (closed system)
Turbocharger, jacket water cooled
Turbocharger inlet, 152 mm (6 in) OD straight connection

CONTROL SYSTEM-

Electronic governing
Programmable low idle
Electronic diagnostics and fault logging
Engine and transmission monitoring (speed, temperature, pressure)
Fuel/air ratio control

COOLING SYSTEM-

Thermostat and housing
Jacket water pump, gear driven.
Keel cooling - separate circuit for after cooler

EXHAUST SYSTEM-

Manifold & Turbocharger to be water cooled
152 mm (6 in) round flanged outlet

FLYWHEELS & FLYWHEEL HOUSINGS-

Flywheel, SAE No. 1, 113 teeth
Flywheel housing, SAE No. 1
SAE standard rotation

FUEL SYSTEM-

Fuel filter, RH service on Port, LH service on Starboard
Fuel transfer pump
Fuel priming pump
Flexible fuel lines

INSTRUMENTATION-

Instrument panel (24V)
Electric service meter
Start/stop switch
Emergency stop button
Maintenance due light
Diagnostic light
Warning light
Maintenance clear switch
15A and 3A breakers

LUBE SYSTEM-

Crankcase breather
Oil cooler

Oil filter, spin-on, RH service on Port, LH service on Starboard
Deep Oil Pan, center sump
Oil filler RH service on Port, located in front on Starboard
Dipstick, RH service on Port, LH service on Starboard
Oil pump, gear driven

MOUNTING SYSTEM-
Front support - adjustable

POWER TAKE-OFFS-
Hydraulic pump drive, SAE A, 11 tooth spline,
46 ft-lbs max torque, counterclockwise as viewed
from the front of the engine looking into the
drive and it turns 1.41 x engine speed

GENERAL-
Vibration damper
Lifting eyes
RH or LH service options
Literature
Variable engine wiring
Upper rear-facing customer wiring connector and
Service Tool connection

CERTIFIED TO 2007 EPA MARINE TIER II COMMERCIAL EMISSIONS
STANDARDS

TURBOCHARGED AFTERCOOLED

Auxiliary Equipment & Particulars to be included:

GENERAL-

Keel Cooling Configuration (2)
Marine Gear Sensors (2)
Pilot House Instrument Panel (1)
Air Motor Starters (2)
Oil Filters Inboard Mounted (2)
Oil Pan Drain Valve (2)
Lubricating Oil & Deep Sump Oil Pan Included (2)
Heavy Duty Front Support (2)
6" Dry Exhaust Elbow (2)
Fuel Priming Pump Left Hand Mounted (2)
Flexible Fuel Lines (2)
Common Ground Wiring Harness to Pilot House Panel. Length TBD. (2)

MARINE TRANSMISSION-

ZF MODEL W650 (2), 3.5:1 Reduction

Transmission will be mounted to the engine(s) and include the following:

24 Volt Electric Shift Solenoids (2)

Torsional Input Coupling (2)

Standard ZF Mounting Brackets (2)

Propulsion Shaft Flange & Bolt Set (2)

ENGINE CONTROLS & SHAFT BRAKES-

96202 CLEAR COMMAND-Elect Eng, Sol Gear, 2 Stati (2)

760P Control Head, Dual, Heavy Duty, Pluggable (2)

13552-30 Wire Harness-Power Start in, Clutch Press (2)

15719-40 Wire Harness, Clutch Ahead/Astern 40 FT (2)

13533-40 Wire Harness - Throttle, PWM, 40 FT (12,19m) (2)

15544-15 Wire Harness -Serial Com/Multi Screw-15' (1)

14261-50 Control Head Cable, Double Ended- 50 FT. (2)

14261-120 Control Head Cable, Double Ended - 120 FT. (2)

810ETA Circuit Breaker, 10 Amp, UL1500 (2)

13505 Automatic Power Selectors (2)

SB30-06612 Disc Brake (24 -1 Caliper) (2)

MS452-4600 Circuit Panel-Reference Drawing (2)

2458C-1 Shuttle Valve, 3/8 NPT (2)

AT11-1100 Air Treatment Panel, One Regulator (2)

R0010 Manuals (2)

10250T3011 Selector- 2 Position, Black Lever (1)

10250T51 Switch- Contact Block, Normally Closed (2)

70434-225 Clutch Pressure Switch Kit- Preset Switch (2)

70179 Display- LCD, ABS Indication/Transfer (2)

70186 Wire Harness -Cantrak, 9000 Premium, SER CO (2)

70422-50 Wire Harness - Cantrak Serial, CLEARCOMMA (1)

70422-125 Wire Harness - Cantrak Serial, CLEARCOMMA (1)

Start-up and Sea-trial Assistance (3 days) with a ZF technician (travel & labor included)

Technical support for installation and warranty The Contractor shall provide technical support during installation and for all warranty work. The Contractor shall be an authorized Caterpillar dealer. The Contractor shall ensure that all equipment installation will be done in accordance with U.S. Coast Guard regulations applicable to this work and is performed so as to ensure optimum performance of each individual piece of equipment. The Contractor shall conduct a pre-inspection prior to initial start up and confirm suitability of installation. Upon initial start up, the Contractor shall adjust engine speeds, confirm operational parameters are met, and adjust as necessary to bring within parameters. During first post installation sea trial, the Contractor will be in attendance for a minimum of four hours during full power test trials.

After bid opening and as a condition for Award of a Contract, the Department may require an apparent successful Bidder to demonstrate to the Department's satisfaction that the Bidder is responsible and qualified to supply the materials and perform the technical support.

Contractor must:

- Be an authorized Caterpillar dealer
- Have authorized access to software for electronic engine set up
- Be able to perform highly complex electrical, electronic, mechanical, and computer tasks
- Be able to read, interpret and construct a project from plans and specifications
- Have a reliable vehicle (Service Truck) assigned to provide transportation to and from employee's place of residence and/or workplace during normal work hours. Vehicle must carry all tools, supplies, and equipment needed for job duties
- Have all tools and necessary equipment needed to perform required duties
- Have knowledge of all codes, OSHA requirements and Department safety policies as they relate ferry vessels
- Knowledge of US Coast Guard regulations as they pertain to subchapter H & K ferry vessels
- Have and use properly, all Personal Protective Equipment needed to perform job duties and comply with established safety guidelines and procedures
- Be able to work effectively with minimum supervision
- Be equipped with a pager and cell phone with the ability to be contacted at all times.

Delivery The Contractor shall deliver the materials to the Installation Site, Rockland Marine Corporation Shipyard, located at 79 Mechanic Street, Rockland, Maine, on or before March 1st, 2012. The Contractor shall notify MaineDOT, Dennis Putansu, Ferry Service Port Engineer, 207-596-5429 or cell phone 207-446-1124 a minimum of one week prior to delivery for delivery coordination. Alternative contacts are: Jim MacLeod, Ferry Service Manager @ (207) 596-5422. The Contractor shall deliver the materials only during the following times: Monday through Friday, 7:00 AM through 3:30 PM except for deliveries may not be made on holidays, or government closure days. The Department will not off-load the materials at the delivery site.

Contract Administrator The contract administrator for this contract will be:

Name: Dennis Putansu
Title: Ferry Service Port Engineer
Address: Maine Department of Transportation/Maine State Ferry Service
517a Main St., P.O. Box 645 , Rockland, ME 04841-0645
Phone: (207) 596-5429

The Contract Administrator shall be the Department's representative during the period of this Contract. The Contract Administrator has authority to curtail services if necessary to ensure proper execution of the Contract, to take actions needed to assure that the Contractor's Work and Materials conform with the Contract, to decide questions regarding quality and acceptability of Work and Materials, to reject Unacceptable or Unauthorized Work or Materials and to refuse to

approve Progress and Final Payments until acceptable. The Contract Administrator shall certify to the Department when payments under the Contract are due and the amounts to be paid. He/she shall make decisions on all claims of the Contractor. Unless authorized by the Contract Administrator, other Departmental employees are not authorized to alter or waive the provisions of the Contract or to issue instructions contrary to the Contract. All progress reports, correspondence and related submissions from the Contractor shall be submitted to the Department's Project Manager who is designated as the Contract Administrator on behalf of the Department for this Contract, except where specified otherwise in this Contract.

Invoices and Payments The Contractor shall submit an itemized bill to the Department for materials following delivery for approval and payment. Invoices shall include the following minimum information:

Contractor name, address & Contract Number
Invoice Date & Number
Dates of Delivery

The Department will pay based upon prices bid and the invoices provided and accepted. No such payment will be made if, in the judgment of the Department, the Materials are not in accordance with the provisions of the Contract.

The Acceptance by the Contractor of the final payment, as evidenced by cashing of the final payment check, constitutes a release to the Department from all claims and liability under the Contract. Upon Final Acceptance, the Contractor is released from further obligation, except for warranty obligations provided for in this Contract. Payments to the Contractor shall be full compensation for furnishing all labor, equipment, materials, services, and incidentals used to supply the materials under the Contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of any kind arising from the nature or prosecution of the Work. No payments due the Contractor will be adjusted for inflation. No interest shall be due and payable on any payment due the Contractor.

Conformity with Standards Unless otherwise provided in the contract, all materials shall conform to the following standards as applicable:

46 CFR/Supchapter H & F
EPA Tier II
American Bureau of Shipping

Material Quality Materials and manufactured products shall be new unless otherwise specified, free from defect, and in conformity with the contract. If there is no applicable standard set forth in this Contract for a particular item, then the item shall be in accordance with industry standards prevailing at the time of bid. The Department has the authority to inspect all Materials and every detail of the Work.

When material is fabricated or treated with another material or where any combination of materials is assembled to form a finished product, any or all of which are covered by

specifications, the Department may reject the finished product if any of the components do not comply with the specifications. The Department may reject materials not conforming to the Specifications at any time.

The Contractor hereby assigns to the Department the right to enforce all manufacturer's warranties or guarantees on all materials, equipment or products purchased for the work that exceed the nature or duration of the warranty obligations assumed by the Contractor under this Contract. The Contractor agrees that the warranty obligations provided by this Contract shall be reported as an outstanding obligation in the event of bankruptcy, dissolution, or the sale, merger, or cessation of operations of the Contractor.

Insurance The Contractor shall provide signed, valid, and enforceable certificate(s) of insurance complying with this Section. All insurance must be procured from insurance companies licensed or approved to do business in the State of Maine by the State of Maine, Bureau of Insurance. The Contractor shall pay all premiums and take all other actions necessary to keep required insurances in effect for the duration of the Contract obligations, excluding warranty obligations.

Workers' Compensation For all Work performed by the Contractor and any subcontractor, the Contractor and each subcontractor shall carry Workers' Compensation Insurance or shall qualify as a self-insurer with the State of Maine Workers' Compensation Board in accordance with the requirements of the laws of the State of Maine. If maritime exposures exist, coverage shall include United States Long Shore and Harbor Workers coverage.

Commercial General Liability With respect to all Work performed by the Contractor and any subcontractors, the Contractor and any subcontractors shall carry commercial general liability insurance in an amount not less than \$400,000.00 per occurrence and \$2,000,000.00 in the Aggregate. The coverage must include products, completed operations, and Contractual liability coverages. The Contractual liability insurance shall cover the Contractor's obligations to indemnify the Department as provided in this Contract. The coverage shall also include protection against damage claims due to use of explosives, collapse, and underground coverage if the Work involves such exposures. The Department shall be named as additional insured on the Commercial General Liability insurance policies carried by the Contractor that are applicable to the Work.

Automobile Liability The Contractor shall carry Automobile Liability Insurance covering the operation of all motor vehicles including any that are rented, leased, borrowed, or otherwise used in connection with the Project. The minimum limit of liability under this Section shall be \$400,000.00 per occurrence.

Claims. Each insurance policy shall include a provision requiring the insurer to investigate and defend all named insured's against any and all claims for death, bodily injury or property damage, even if groundless.

Dispute Resolution If, in the performance of this Agreement, there arises a dispute between the Contractor and MaineDOT that cannot be resolved by the parties to the Contract, the parties may agree to submit the dispute to non-binding Alternate Dispute Resolution. All disputes shall be governed by Maine law, and all actions shall be filed in the Kennebec Superior Court, in Augusta Maine.