



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0016

JOHN ELIAS BALDACCI
GOVERNOR

DAVID A. COLE
COMMISSIONER

September 11, 2009
Subject: **Fleet Services Roofing**
Location: Augusta
Amendment No. 2

Dear Sir/Ms:

Make the following changes to the Bid Document:

In the Bid Book (pages 28 through 32), **REMOVE** the existing "Appendix A, Special Provision, Specifications of Work to be Performed" dated July 10, 2009, five pages total and **REPLACE** with the attached updated "Appendix A, Special Provision, Specifications of Work to be Performed" dated September 9, 2009, five pages total.

In the Bid Book (pages 33 and 34), **REMOVE** the existing "Special Provision, Roof #1 Fleet Service" dated July 10, 2009, two pages total and **REPLACE** with the attached updated "Special Provision, Roof #1 Fleet Service" dated September 10, 2009, two pages total.

In the Bid Book (pages 35 and 36), **REMOVE** the existing "Special Provision, Roof #2 Fleet Service" dated July 10, 2009, two pages total and **REPLACE** with the attached updated "Special Provision, Roof #2 Fleet Service" dated September 10, 2009, three pages total.

In the Bid Book (pages 37 and 38), **REMOVE** the existing "Special Provision, Roofs #3,4,5 Fleet Service" dated July 10, 2009, two pages total and **REPLACE** with the attached three updated Special Provisions; "Special Provision, Roof #3 Fleet Service" two pages dated September 9, 2009, "Special Provision, Roof #4 Fleet Service" two pages dated September 9, 2009, and "Special Provision, Roof #5 Fleet Service", two pages dated September 9, 2009.

In the Bid Book, prior to page 39, **ADD** the attached Asbestos Report titled "Project K-531", 18 pages dated August 6, 2009.

The following questions have been received:

Question: Page 28 of the specifications indicates the existing roofing systems have been found to contain asbestos. What part of the system contains asbestos? i.e. the shingles, the felt paper, the roof deck, the ceilings, the pipe insulation below the ceilings, the insulation in the ceilings?

Response: The information that the Department has can be found in the attached Report, test results and email.



PRINTED ON RECYCLED PAPER

Question: Specifications, page 35, Special Provision Roof #2. The last sentence on the page says “the completed installation for the roof and rafters shall conform to all applicable national, state and local codes.” Your design provisions do not seem to meet any codes or applicable standards. Have you had a structural engineer verify the specified rafters “2 x 6” capacity, especially with the upper roof snow load sliding down on this roof?

Most shingle manufacturers don’t recommend shingles on a 2” slope. Your onsite contact person indicated the existing ceilings and pipe insulation would need to be removed to replace any roof rafters, and they contain asbestos. Is this accurate and how do we include this in the bid item? Please provide a detail for the roof tie-in to the higher building wall for this roof.

Response: See the new Special Provisions which clarify the Work.

Question: Specifications, page 29, Roof 3, 4 and 5 all seem to describe the same roof area, none of which resemble, in area or existing conditions, the areas I was shown by the onsite contact person. Please provide a plan view, indicating the areas we are to bid on. Please provide a detail of what you consider metal flashing to be replaced, do you mean new drip edge; replace the existing 3’ metal apron on the high roof? Please clarify.

Response: See the new Special Provisions which clarify the Work.

Consider these changes and information prior to submitting your bid on **September 16, 2009**.

Sincerely,

A handwritten signature in dark ink, appearing to read "S. Bickford" with a stylized flourish at the end.

Scott Bickford
Contracts & Specifications Engineer

APPENDIX A
SPECIAL PROVISION
SPECIFICATIONS OF WORK TO BE PERFORMED

Contract Administrator The contract administrator for this contract will be:

Name: Dan Howlett
Title: Fleet Services Technical Advisor
Address: Maine Department of Transportation
105 Capitol St. Augusta Me. 04330

The contractor shall contact Dan Howlett, Fleet Service, in order to coordinate the work

The Contractor shall submit invoices to the Fleet Services Office as described in this contract.

Scope and Specifications of Work

The existing roofing systems have been found to contain asbestos.

Prospective bidders may view the work on Tuesday, August 25 at 10:00 unless otherwise approved by the Department.

Roof #1 Fleet Services Sign Shop Description This work consists of removing existing roofing, preparing the surface, replace roof sheathing as needed, installing new insulation and EPDM roofing system and disposing of existing roofing, replaced sheathing and other construction debris. Existing roof consists of a wood deck, a nailed base sheet, 1" perlite, 4- piles of felt set in hot asphalt, 1/2" fiberboard and an adhered .045" firestone EPDM (rubber) membrane. Roof is approximately 3900 Sq. Ft. and is attached to an existing building and roof line.

Roof #2 Fleet Services, Fleet M. Description This work consists of removing existing shingles and underlayment, preparing the surface, replace roof sheathing as needed, installing underlayment and new shingles, installing ice and water shield around all vents, around the bottom edge, installing metal flashing around the bottom edge and sides, installing membrane flashing on the top edge and replacing rafters on the designated roof Fleet M Services Garage at the Maine DOT Maintenance lot in Augusta and disposing of existing roofing, replaced sheathing and other construction debris. Existing roof consists of a wood deck, felt paper, asphalt shingles and metal flashing. Roof is approximately 3400 Sq. Ft. and is attached to an existing building.

Roof #3 Fleet Services. Near Fleet Entrance. Description This work consists of removing existing shingles and underlayment, preparing the surface, replace roof sheathing as needed, installing underlayment and new shingles, installing ice and water shield around all vents, around the bottom edge and installing metal flashing in the designated valley on the roof near the Fleet entrance of the Fleet Services Garage at the Maine DOT Maintenance lot in Augusta and disposing of existing roofing, replaced sheathing and other construction debris. Existing roof consists of a wood deck, felt paper, asphalt shingles and metal flashing. Portion of the roof to be reroofed is approximately 250 Sq. Ft. and is attached to an existing building.

Item 4 Roof #4 Fleet Services. Adjacent to former Transit Building. Description This work consists of removing existing membrane roofing in valley and the shingles and underlayment necessary to replace the membrane roofing, preparing the surface, replace roof sheathing as needed, installing underlayment and new membrane roof and shingles on the designated portion of the roof near the Former Transit Building of the Fleet Services Garage at the Maine DOT Maintenance lot in Augusta and disposing of existing roofing, replaced sheathing and other construction debris. Existing roof consists of a wood deck, felt paper, asphalt shingles, and membrane roofing. Portion of existing roof to be reroofed is approximately 250 Sq. Ft. and is attached to an existing building.

Roof #5 Fleet Services. Fabrication floor. Description This work consists of removing existing shingles and underlayment, preparing the surface, replace roof sheathing as needed, installing underlayment and new shingles, installing ice and water shield around all vents, around the bottom edge and installing metal flashing along the bottom edge on the designated roof over the Fabrication Floor of the Fleet Services Garage at the Maine DOT Maintenance lot in Augusta and disposing of existing roofing, replaced sheathing and other construction debris. Existing roof consists of a wood deck, felt paper, asphalt shingles and metal flashing. Roof is approximately 3800 Sq. Ft. and is attached to an existing building.

Management, Containment and Disposal. The existing roofing systems have been found to contain asbestos. The Contractor shall manage, collect, store, and dispose of all hazardous, special and solid waste in compliance with relevant OSHA, Federal, State and local laws, regulations and requirements.

The Contractor shall provide a management, containment and disposal plan to the Department for review and acceptance prior to the initiation of on site work. No existing roofing may be disturbed until review by the Department has been completed and the plan accepted. All Plans and Submittals from the Contractor will be reviewed by the Department in accordance with Section 105.7, Working Drawings, of the Department's Standard Specifications. The Contractor is responsible for ensuring the management, containment and disposal meets all OSHA, Federal and State regulations. The Contractor shall also obtain approval for acceptance of the waste from the selected facility prior to transport. All waste, hazardous or special, shall be transported to the permitted management facility by a properly licensed transporter. All manifests and/or bills of lading associated with transport shall be reviewed and signed by MaineDOT. All

manifests and bills of lading for transport shall be provided to MaineDOT for recordkeeping purposes. Any evidence of improper management, containment, storage and handling shall be cause for immediate suspension of work in progress, and work will not be allowed until corrective actions are taken.

While performing the Work, the Contractor shall provide adequate safety measures for the protection of the state employees and the public. The Contractor is fully responsible for property damage or personal injury which may result from operations incidental to the Work.

All penalties assessed shall be in addition to any fines assessed by DEP/EPA for failing to comply with the Federal, State, or local regulations. The Contractor shall not be granted additional time for suspensions of work due to noncompliance.

Allowable Work Times The Contractor shall perform work only during the following times Monday through Friday, 6:30 AM through 4:30 PM except for they may not work on holidays as defined in Appendix B nor August 7, September 4, October 9. The Contractor is solely responsible for the planning and execution of Work in order to complete the Work within the Contract Time.

Construction The existing buildings will remain in use throughout the project. The building and its contents must be kept dry at all times. The existing surface shall be smooth and free of protrusions prior to placing insulation and roofing. Insulation shall be protected from wetting at all times. Insulation that becomes wet whether being stored or already installed shall be discarded and not reused at no extra cost to the Department. Materials and shop drawings must be submitted to the Department for review prior to start of work. Insulation, roof board and membrane shall be mechanically attached. All materials shall be stored, handled and installed in accordance with manufacturer's recommendations. The completed installation for the roofing materials and underlayment shall conform, to all applicable National, State and local codes. The Contractor shall remove all construction debris and dispose of it in accordance with federal, state and local regulations.

Quality and Standards The Contractor shall comply with all contract requirements in performance of the work. If there is no applicable standard set forth in this Contract for a particular item of work, then the Contractor shall perform that item of work in accordance with industry standards prevailing at the time of bid.

Materials and manufactured products incorporated into the work shall be new unless otherwise specified, free from defect, and in conformity with the contract. 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 conduct Quality Assurance inspections for all phases of the work to verify that the work meets the Specifications and standards. The Contractor shall facilitate the inspection as required, allowing ample notice of inspections (minimum of ½ hour notice), adequate time for inspections, and providing access to the work together with all necessary safety equipment needed by the Department to perform the inspections. If the Department determines that non-conforming work substantially conforms to the Contract, the Department may accept the non-conforming work, provided that the Department may require a credit to the Department to be deducted from amounts otherwise due the Contractor. If the Department and Contractor cannot agree to the amount of the credit, the work shall be unacceptable work.

The Contractor shall remove, replace, or otherwise correct all unacceptable work as directed by the Department at the expense of the Contractor, without cost or liability to the Department.

The Contractor shall warranty their Work for one year from date of final acceptance.

Responsibility for Damage to Work Except for damage to Project caused by Uncontrollable Events, the Contractor shall bear all risk of loss relating to the Work until Final Acceptance, regardless of cause, including completed Work, temporary Structures, and all other items or Materials not yet incorporated into the Work.

The Contractor shall, at its sole expense, rebuild, repair, restore, or replace such damaged Work or otherwise make good any losses that arise from such damage ("rebuilding, etc."). If the Contractor fails to Promptly commence and continue such rebuilding, etc., the Department may, upon 48 hours advance written notice, commence rebuilding, etc. of the damaged property without liability to the Department with its own forces or with Contracted forces and all costs will be deducted from amounts otherwise due the Contractor.

Responsibility for Property of Others The Contractor shall be responsible for all damage to public or private property of any kind resulting from any act, omission, neglect, or misconduct of the Contractor until Final Acceptance. The preceding sentence includes damage to vehicles passing through the Work area.

The Contractor shall, at its sole expense, rebuild, repair, restore, or replace such damaged property or otherwise make any good losses that arise from such damage ("rebuilding, etc."). If the Contractor fails to commence and continue such rebuilding, etc. in a timely manner, the Department may, upon 48 hours advance written notice, commence rebuilding, etc. of the damaged property without liability to the Department with its own forces or with Contracted forces, and all costs will be deducted from amounts otherwise due the Contractor.

Invoices and Payments The Department will pay based upon prices bid and the invoices provided and approved by the Department. Invoices shall be submitted by the Contractor

to the Department for payment. The Contractor shall submit an itemized bill to the Department for services at the completion of the project for approval and payment. Invoices shall include the following minimum information:

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

The Department may request that the Contractor submit backup documentation including copies of receipts, invoices, and itemized payments to Subcontractors. The Contractor agrees to waive all claims related to the timing and amount of such estimates.

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 perform all Work 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.

Special Provision Roof # 1 Fleet Service

Description: This work consists of removing existing roofing, preparing the surface, replace roof sheathing as needed, installing new insulation and EPDM roofing system and disposing of existing roofing, replaced sheathing and other construction debris.

Materials: All material shall be new and unused.

0.060 E.P.D.M. membrane system shall have a ten year minimum manufacturer's warranty. All materials such as bonding adhesives, splicing cement, lap sealant and other accessories shall be furnished by the manufacturer of the membrane.

General: The Contractor shall remove the existing roofing and underlayment down to the deck. The Contractor shall replace decking designated by the Department to be repaired or replaced. Removal of existing materials shall be accomplished without damage to the portion of the structure that is to remain. Replacement of decking shall match the existing decking material or shall be an approved equal approved by the Department. The existing surface shall be smooth and free of protruding nails. The Contractor shall install new wooden nailers at perimeters as required. The Contractor shall install a layer of 1.5 inch polyisocyanurate insulation mechanically fastened to the deck roof system manufacturer approved screws and plates and fully adhere a .060" EPDM membrane roofing material to the polyisocyanurate insulation and deck in accordance with manufacturers recommendations. The Contractor shall install new 30 gauge white colored steel drip edge at all perimeters, new flashing at all walls and roof penetrations in accordance with manufacturer's recommendations. Siding shall be removed and replaced, as required, to install new flashing at all walls. The Contractor shall install new vent stack boots to existing vent stacks, new V-type snow wedges behind all plumbing vents and a single row of ice protection pads under the eaves of existing roof line and tie into existing roof. Create a proper tie-in to the existing abutting wall in accordance with manufacturer's recommendations. Rubber membrane system shall have a minimum 10 year warranty from the manufacturer. The completed installation for the roof shall conform, to all applicable National, State and local codes.

After Contract Execution, the Department will consider a change proposal for Work in this area that is intended to improve durability and maintainability without impairing essential characteristics of the project.

Method of Measurement Roof work will be measured for payment as one lump complete, in place and accepted.

The removal and replacement of sheathing will be measured by the square foot, complete, in place and accepted.

Basis of Payment The accepted quantity of roofing work will be paid for at the contract lump sum unit price each roof complete in place and accepted. No price adjustments will be made to the unit price for the actual size of the roof area. It will be the responsibility of the Contractor to verify the dimensions prior to submitting bid documents. Covering the fascia with aluminum, removing and replacing siding, furnishing and installing flashing, drip edge, water shield, ice protection pads, underlayment and all other materials will be incidental to related contract items.

The accepted quantity of sheathing will be paid for at the contract unit price.

The payment for each contract item will also be full compensation for furnishing all materials, labor equipment management, containment and disposal of Special Waste or Hazardous Waste materials, protection of public and private property, and for all other incidentals necessary to complete the work. The satisfactory disposal of all removed materials shall be considered incidental to related contract items. Any staging, lifts or temporary supports shall be considered incidental to related contract items.

Payment will be made under:

Pay Item	Pay Unit
Roof #1 Work	Lump Sum
Replacing Sheathing	Square Foot

Special Provision Roof # 2 Fleet Service

Description: This work consists of removing existing shingles and underlayment, patch materials, preparing the surface, replace roof sheathing as designated, installing underlayment and new shingles, installing ice and water shield around all vents, around the bottom edge and installing metal flashing around the bottom edge, replacing designated rafters and disposing of existing roofing, replaced sheathing and other construction debris .

Materials: All material shall be new and unused.

Shingles - 30 year fiber glass reinforced, mineral-granule surfaced, self sealing, three-tab regularly spaced, ASTM D 3462, black.

Roofing -Underlayment Roof Top Guard II or approved equal.

Self Adhered roofing underlayment-Cold applied, self-adhering, high strength polyethylene film, Grace Ice & Water Shield or approved equal.

Drip edge-8" galvanized, 30 gage

Trim covering-PVC Coil stock, Dark Green.

Rafters – sized to match existing which are approximately 2" x 6"

General: The existing roofing and underlayment and patch materials shall be removed down to the deck. The Contractor shall replace decking designated by the Department to be replaced. Removal of existing materials shall be accomplished without damage to the portion of the structure that is to remain. The existing roofing, underlayment, decking and other materials shall be removed and disposed of in accordance with applicable National, State and local laws. Removal of existing materials shall be accomplished without damage to the portion of the structure that is to remain. Replacement decking shall match the existing decking material or shall be an approved equal, approved by the Department. After removal of the existing roofing and underlayment and patch materials, the Department will designate rafters to be replaced. The Contractor shall replace roof rafters that will be designated by the Department and as well designated parts of the inside ceiling, including any insulation. Replacement ceiling shall match the existing. The insulation shall have a value of R-19. The decking surface shall be smooth and free of protruding nails. Drip edge shall be installed at the base of the roof and up each side. Grace Ice & Water Shield shall be applied 36" wide along the bottom edge and 18" wide around all vents and fan housing. Grace Ice & Water Shield shall be applied in accordance with the manufacturer's recommendations. The Contractor shall install 36" metal flashing along bottom edge. Ice protection pads shall be installed under eaves of existing roof line. Roof Top Guard II or approved equal shall be applied over the entire roof in accordance with the manufacturer's recommendations. The Contractor shall install new vent stack boots on plumbing and install new flashing at all walls and roof penetrations. The Contractor shall install three tab shingles using nails which shall be large head galvanized and shall be nailed into the shingles according to standard industry practices. The Contractor shall install flashing

at abutting vertical surfaces. All fascia shall be covered with dark green, aluminum coil stock. The Department may increase or decrease quantities from the estimated quantities shown in the bid documents and such increase or decrease shall not be considered Extra Work. The Contractor shall be paid for actual quantities designated by the Department, in place and accepted at the Unit Prices contained in the Contractor's Bid. Removal of existing materials and replacement with new materials shall be accomplished with minimal damage to the portion of the structure that is to remain. The Contractor shall repair any damage to the portion of the structure that is to remain and payment will be incidental to related contract items. The existing building will remain in use throughout the project. The building and its contents must be kept dry at all times. Insulation shall be protected from wetting at all times. Insulation that becomes wet whether being stored or already installed shall be discarded and not reused at no extra cost to the Department. All materials shall be installed in accordance with manufacturer's recommendations. The completed installation for the roof and underlayment shall conform, to all applicable National, State and local codes.

Method of Measurement Roof work will be measured for payment as one lump complete, in place and accepted.

The removal and replacement of sheathing will be measured by the square foot, complete, in place and accepted.

The removal and replacement of the rafters will be measured by each, complete, in place and accepted.

Basis of Payment The accepted quantity of roofing work will be paid for at the contract lump sum unit price each roof complete in place and accepted. No price adjustments will be made to the unit price for the actual size of the roof area. It will be the responsibility of the Contractor to verify the dimensions prior to submitting bid documents. Covering the fascia, furnishing and installing flashing, drip edge, water shield, ice protection pads, underlayment and all other materials will be incidental to related contract items.

The accepted quantity of sheathing will be paid for at the contract unit price.

The accepted quantity of rafters will be paid for at the contract unit price. Removal and replacement of any ceiling and insulation and attached items will be incidental to related contract items.

The payment for each contract item will also be full compensation for furnishing all materials, labor equipment management, containment and disposal of Special Waste or Hazardous Waste materials, protection of public and private property, and for all other incidentals necessary to complete the work. The satisfactory disposal of all removed materials shall be considered incidental to related contract items. Any staging, lifts or temporary supports shall be considered incidental to related contract items.

Payment will be made under:

Pay Item

Pay Unit

Roof #2 Work	Lump Sum
Replacing Sheathing	Square Foot
Replacing Rafters, Roof #2	Each

Special Provision
Roofs # 3 Fleet Service
Near Fleet Entrance

Description: This work consists of removing existing shingles and underlayment in the valley area designated by the Department, preparing the surface, replace roof sheathing as needed, installing underlayment and new shingles, installing ice and water shield over the entire area, installing metal flashing 3 feet wide in the valley, tying into, reusing or replacing the existing flashing on the vertical walls and disposing of existing roofing, replaced sheathing and other construction debris.

Materials: All material shall be new and unused.

Shingles - 30 year fiber glass reinforced, mineral-granule surfaced, self sealing, three-tab regularly spaced, ASTM D 3462, black.

Self Adhered roofing underlayment-Cold applied, self-adhering, high strength polyethylene film, Grace Ice & Water Shield or approved equal.

0.060 E.P.D.M. membrane system. All materials such as bonding adhesives, splicing cement, lap sealant and other accessories shall be furnished by the manufacturer of the membrane.

General: The existing building will remain in use throughout the project. The building and its contents must be kept dry at all times. In the valley area designated by the Department, the Contractor shall remove the existing roofing and underlayment down to the deck. The Contractor shall replace decking designated by the Department to be repaired or replaced. The existing roofing and underlayment shall be removed and disposed of in accordance with applicable National, State and local laws. Removal of existing materials shall be accomplished without damage to the portion of the structure that is to remain. Replacement of decking shall match the existing decking material or shall be an approved equal approved by the Department. The existing surface shall be smooth and free of protruding nails. Grace Ice & Water Shield shall be applied 36" wide over the entire designated valley area. Grace Ice & Water Shield shall be applied in accordance with the manufacturer's recommendations. The Contractor shall install 36" wide metal flashing in the valley. The Contractor shall install new vent stack boots on plumbing and roof penetrations and install reused or new flashing at all walls. The Contractor shall install three tab shingles using nails which shall be large head galvanized and shall be nailed into the shingles according to standard industry practices. The completed installation for the roof shall conform, to all applicable National, State and local codes.

Method of Measurement Roof work will be measured for payment as one lump complete, in place and accepted.

The removal and replacement of sheathing designated by the Department to be removed will be measured by the square foot, complete, in place and accepted.

Basis of Payment The accepted quantity of roofing work will be paid for at the contract lump sum unit price each roof complete in place and accepted. No price adjustments will be made to the unit price for the actual size of the roof area. It will be the responsibility of the Contractor to verify the dimensions prior to submitting bid documents. Covering the fascia, furnishing and installing flashing, drip edge, water shield, ice protection pads, underlayment and all other materials will be incidental to related contract items.

The accepted quantity of sheathing will be paid for at the contract unit price.

The payment for each contract item will also be full compensation for furnishing all materials, labor equipment, management, containment and disposal of Special Waste or Hazardous Waste materials, protection of public and private property, and for all other incidentals necessary to complete the work. The satisfactory disposal of all removed materials shall be considered incidental to related contract items. Any staging, lifts or temporary supports shall be considered incidental to related contract items.

Payment will be made under:

Pay Item	Pay Unit
Roof #3 Work	Lump Sum
Replacing Sheathing	Square Foot

Special Provision
Roofs # 4 Fleet Service
Adjacent to former Transit Building

Description: This work consists of removing existing rubber roof, shingles and underlayment, preparing the surface, replace roof sheathing as needed, installing underlayment, new EPDM membrane roofing material and new shingles and disposing of existing roofing, replaced sheathing and other construction debris.

Materials: All material shall be new and unused.

Shingles - 30 year fiber glass reinforced, mineral-granule surfaced, self sealing, three-tab regularly spaced, ASTM D 3462, black.

Self Adhered roofing underlayment-Cold applied, self-adhering, high strength polyethylene film, Grace Ice & Water Shield or approved equal.

0.060 E.P.D.M. membrane system. All materials such as bonding adhesives, splicing cement, lap sealant and other accessories shall be furnished by the manufacturer of the membrane.

General: In the valley area designated by the Department, the Contractor shall remove the existing roofing and underlayment down to the deck. The Contractor shall replace decking designated by the Department to be repaired or replaced. The existing roofing and underlayment shall be removed and disposed of in accordance with applicable National, State and local laws. Removal of existing materials shall be accomplished without damage to the portion of the structure that is to remain. Replacement of decking shall match the existing decking material or shall be an approved equal approved by the Department. The existing surface shall be smooth and free of protruding nails. Where there is an existing membrane roofing system, the Contractor shall fully adhere a .060" EPDM membrane roofing material to the deck and walls in accordance with manufacturer's recommendations. The membrane roofing system shall be attached in a positive manner to the abutting vertical walls in such a manner to prevent leaks. Where shingles are removed, the Contractor shall install Roof Top Guard II or approved equal over the entire area in accordance with the manufacturer's recommendations. The Contractor shall install new vent stack boots on plumbing and install new flashing at all walls and roof penetrations. The Contractor shall install three tab shingles using nails which shall be large head galvanized and shall be nailed into the shingles according to standard industry practices. The completed installation for the roof shall conform, to all applicable National, State and local codes.

After Contract Execution, the Department will consider a change proposal for Work in this area that is intended to improve durability and maintainability without impairing essential characteristics of the project.

Method of Measurement Roof work will be measured for payment as one lump complete, in place and accepted.

The removal and replacement of sheathing will be measured by the square foot, complete, in place and accepted.

Basis of Payment The accepted quantity of roofing work will be paid for at the contract lump sum unit price each roof complete in place and accepted. No price adjustments will be made to the unit price for the actual size of the roof area. It will be the responsibility of the Contractor to verify the dimensions prior to submitting bid documents. Covering the fascia, furnishing and installing flashing, drip edge, water shield, ice protection pads, underlayment and all other materials will be incidental to related contract items.

The accepted quantity of sheathing will be paid for at the contract unit price.

The payment for each contract item will also be full compensation for furnishing all materials, labor equipment, management, containment and disposal of Special Waste or Hazardous Waste materials, protection of public and private property, and for all other incidentals necessary to complete the work. The satisfactory disposal of all removed materials shall be considered incidental to related contract items. Any staging, lifts or temporary supports shall be considered incidental to related contract items.

Payment will be made under:

Pay Item	Pay Unit
Roof #4 Work	Lump Sum
Replacing Sheathing	Square Foot

Special Provision
Roofs # 5 Fleet Service
Fabrication floor

Description: This work consists of removing existing shingles and underlayment, preparing the surface, replace roof sheathing as needed, installing underlayment and new shingles, installing ice and water shield around all vents, around the bottom edge and installing metal flashing around the bottom edge and disposing of existing roofing, replaced sheathing and other construction debris.

Materials: All material shall be new and unused.

Shingles - 30 year fiber glass reinforced, mineral-granule surfaced, self sealing, three-tab regularly spaced, ASTM D 3462, black.

Roofing -Underlayment Roof Top Guard II or approved equal.

Self Adhered roofing underlayment-Cold applied, self-adhering, high strength polyethylene film, Grace Ice & Water Shield or approved equal.

Drip edge-8" galvanized, 30 gage

Trim covering-PVC Coil stock, Dark Green.

General: The existing roofing and underlayment shall be removed and disposed of in accordance with applicable National, State and local laws. Removal of existing materials shall be accomplished without damage to the portion of the structure that is to remain. The existing surface shall be smooth and free of protruding nails. Drip edge shall be installed at the base of the roof and up each side. Grace Ice & Water Shield shall be applied 36" wide along the bottom edge and 18" wide around all vents and fan housing. Grace Ice & Water Shield shall be applied in accordance with the manufacturer's recommendations. Roof Top Guard II or approved equal shall be applied over the entire roof in accordance with the manufacturer's recommendations. The Contractor shall install new vent stack boots on plumbing and install new flashing at all walls and roof penetrations. The Contractor shall install three tab shingles using nails which shall be large head galvanized and shall be nailed into the shingles according to standard industry practices. The Contractor shall install metal flashing 36 inches wide along the bottom edge. All fascia shall be covered with dark green, coil stock. The completed installation for the roof shall conform, to all applicable National, State and local codes.

Method of Measurement Roof work will be measured for payment as one lump complete, in place and accepted.

The removal and replacement of sheathing will be measured by the square foot, complete, in place and accepted.

Basis of Payment The accepted quantity of roofing work will be paid for at the contract lump sum unit price each roof complete in place and accepted. No price adjustments will be made to the unit price for

the actual size of the roof area. It will be the responsibility of the Contractor to verify the dimensions prior to submitting bid documents. Covering the fascia, furnishing and installing flashing, drip edge, water shield, ice protection pads, underlayment and all other materials will be incidental to related contract items.

The accepted quantity of sheathing will be paid for at the contract unit price.

The payment for each contract item will also be full compensation for furnishing all materials, labor equipment, management, containment and disposal of Special Waste or Hazardous Waste materials, protection of public and private property, and for all other incidentals necessary to complete the work. The satisfactory disposal of all removed materials shall be considered incidental to related contract items. Any staging, lifts or temporary supports shall be considered incidental to related contract items.

Payment will be made under:

Pay Item	Pay Unit
Roof #5 Work	Lump Sum



Project K-531

August 6, 2009

Mr. Dan Howlett
Mr. Dwight Doughty, Jr.
Maine Department of Transportation
16 SHS
Augusta, ME 04333-0016
Via e-mail: dan.howlett@maine.gov and dwight.doughty@maine.gov

Re: Asbestos Survey of 5 Roofs at MDOT's Facilities in Augusta, Maine

Dear Dan and Dwight:

Klane's Education Information Training Hub, LLCSM performed a survey for asbestos-containing (building) materials (ACM) of 5 roofs at MDOT's Augusta, Maine Fleet Services and Sign Shop facilities. Jonathan Klane, M.S.Ed., CIH, CHMM, CET performed the survey and material sample collection. AmeriSci Boston Lab performed the asbestos bulk analyses. We have recently and previously forwarded to you the laboratory reports and Excel table of results. This letter and report serves as a summary of our work, results, and report.

SUMMARY OF RESULTS

Several types of ACM were found at MDOT's Augusta, Maine facilities. These include:

1. Engine Shop - pipe insulation debris in boxes at ceiling
2. Roof 2 (over Engine Shop) - tar layer in building edge flashing on lower/left roof
3. Roof 2 (over Engine Shop) - Flashing around roof vent stack on right/upper roof
4. Roof 2 (over Engine Shop) - Small patch on right/upper roof
5. Roof 4 Survey Shop - Roofing below rubber membrane
6. Roof 5 Fab Shop - Shingles, etc. around vent stack
7. Roof 5 Fab Shop - Shingles, etc. in open roof area
8. Roof 1 Sign Shop - Built-up open area roofing
9. Roof 1 Sign Shop - Roofing around penetration
10. Roof 1 Sign Shop - Upper (building) edge flashing

Results are detailed in the lab reports and results table previously forwarded. All of these should be consulted together by knowledgeable persons to evaluate spaces or materials for asbestos presence and/or content. You'll notice (in the table) that positive materials are in a colored font (red for pipe insulation and brown for roofing) whereas negative materials are in black.

BACKGROUND INFORMATION

Our understanding of the project parameters and requirements included the following details:

1. We provided the required labor to perform the work.
2. MDOT provided someone at the site knowledgeable on the roof reconstruction scope of work (i.e., Dan Howlett) who provided access to the building, roof areas, ladders, lifts, etc.
3. MDOT provided an operator (again Dan Howlett) for and the necessary ladders and/or lifts suitable to safely and properly access necessary parts of the facilities' roofs.
4. Mr. Klane was *not* required to enter any sumps, pits, or other confined or "permit" spaces to accomplish this work.
5. We did *not* survey the building interiors (except for pipe insulation debris in the Engine Shop). Our roof surveys included materials on top of the roof "decking" or "underlayment". The underside of the decking (e.g., interior ceiling materials) was not included.
6. We did *not* survey the exterior siding.
7. The intent of the project was to identify ACBM that may be present in building roof materials so that they may be safely abated prior to or as part of planned roof repairs or replacement.
8. The structure is presently occupied and was in use during the survey.
9. We were *not* required to patch, seal, or repair damage due to sampling as described above. This included potential roof leaks. We will *not* be responsible for any roof leaks directly or directly resulting from our work including our sampling (holes) in the roof materials. MDOT had personnel (i.e., Dan Howlett) who performed necessary patching of our sample locations. They were advised to *not* use ACM for the patches.
10. Our sample locations were *not* taped or otherwise labeled.
11. This project already commenced and will continue until completed. The schedule was mutually determined. We anticipated and used one day for the site work (Thurs., July 30, 2009).
12. We did *not* visit the site to assess the possible types of suspect materials and thereby the number of potential samples to be collected. Instead we relied on information you have kindly provided us in the form of pictures and descriptions of the five roofs to be surveyed.

SCOPE OF SERVICES

Our scope of services was detailed in our proposal K-531 of July 7, 2009. We have previously sent it to you. It should be reviewed for details on the project scope of work. In general, we performed a survey of exterior building roof materials (and one interior pipe insulation debris material) for asbestos. Samples were analyzed by an AIHA-accredited and Maine DEP-licensed lab (AmeriSci Boston) and lab report and results table have been previously submitted for your review, use, and records.

CONCLUSIONS AND RECOMMENDATIONS

MDOT's Augusta, Maine facilities' roofs have ACM in various forms. It should be maintained in an intact, undamaged condition. Removal of the ACM is not required until such time as it would be disturbed by building maintenance, renovation, demolition, and/or other activities. We

Project K-531
Dan Howlett and Dwight Doughty, Jr.
August 6, 2009
Page 3

understand that the 5 roofs leak and are due to be repaired or replaced before this winter. MDOT will need to have the positive ACM roof materials removed by a roofing contractor trained and licensed to remove roofing materials. As an option, MDOT can have a Maine DEP-licensed asbestos abatement firm remove the roof materials. MDOT will need to have a Maine DEP-licensed asbestos abatement firm remove the pipe insulation debris from the Engine Shop.

MDOT should continue to inform its employees and contractors about the presence and location of the ACM and instruct them to not disturb it. MDOT also obvious needs to comply with OSHA regulatory requirements of 29 CFR Part 1910.1001 – Asbestos. Materials were mostly in good condition with some of the roofing shingles being broken and needing replacement, roof 1 insulation saturated with (rain) water, and of course the Engine Shop pipe insulation debris in disrepair. This has been previously communicated verbally and Dan observed this during our survey.

LIMITATIONS

All scientific endeavors have limitations. Limitations for this study include:

1. Agreed to project scope of work in our proposal K-531 of July 7, 2009.
2. Access provided by MDOT.
3. We collected and analyzed only certain samples (of certain materials).
4. The samples were analyzed by an accredited laboratory.
5. Not all samples were analyzed. Once a sample is found to be positive, the remaining samples in that group of 3 samples are typically not analyzed. Typically all of the materials represented by the group of 3 samples are considered positive.
6. We did not open up roofs, ceilings, etc. to either look for or access hidden materials.
7. We only surveyed exterior spaces (with the exception of one interior material, i.e., pipe insulation debris).

If you have any questions, please feel free to contact us directly at (207) 453-KEITH (5348) or by email at jonathan@trainerman.com. We look forward to working with MDOT on future projects and appreciated the opportunity to assist you in providing and ensuring a healthy and safe work site for your employees and others.

Sincerely,
Klane's Education Information Training Hub, LLC SM
Jonathan Klane
Jonathan Klane, M.S.Ed., CIH, CHMM, CET

jtk (C:\My Documents\Health & Safety\Asbestos\DOT and MDOT\MDOT Asbestos Surveys of 5 Roofs in Augusta Report - 2009.doc)

MDOT Augusta 5 Roofs Asbestos Survey Lab Results.xls
Sample and Analysis Info

Sample #	Collected on	Roof #	Roof Name	Roof Material	% Chrysotile	% Amosite	% Crocidolite	% Tremolite	Total %	ACM?
K-531-MDOT-01	7/30/2009	Under 2	Under Engine Shop	Pipe insulation debris	2	0	0	0	2	Yes
K-531-MDOT-02	7/30/2009	Under 2	Under Engine Shop	Pipe insulation debris	N/A	N/A	N/A	N/A	N/A	Yes
K-531-MDOT-03	7/30/2009	Under 2	Under Engine Shop	Pipe insulation debris	N/A	N/A	N/A	N/A	N/A	Yes
K-531-MDOT-04	7/30/2009	2	Engine Shop	Left/lower roof shingles	0	0	0	0	0	No
K-531-MDOT-05	7/30/2009	2	Engine Shop	Left/lower roof shingles	0	0	0	0	0	No
K-531-MDOT-06	7/30/2009	2	Engine Shop	Left/lower roof shingles	0	0	0	0	0	No
K-531-MDOT-07	7/30/2009	2	Engine Shop	Left/lower roof building edge flashing	0	0	0	0	0	No
K-531-MDOT-08	7/30/2009	2	Engine Shop	Left/lower roof building edge flashing	0	0	0	0	0	No
K-531-MDOT-09	7/30/2009	2	Engine Shop	Left/lower roof building edge flashing/tar	10	0	0	0	10	Yes
K-531-MDOT-10	7/30/2009	3	Survey Shop - left valley	Valley Shingles	0	0	0	0	0	No
K-531-MDOT-11	7/30/2009	3	Survey Shop - left valley	Valley Shingles	0	0	0	0	0	No
K-531-MDOT-12	7/30/2009	3	Survey Shop - left valley	Valley Shingles	0	0	0	0	0	No
K-531-MDOT-13	7/30/2009	4	Survey Shop - right edge	Roofing layers below rubber membrane	2	0	0	0	2	Yes
K-531-MDOT-14	7/30/2009	4	Survey Shop - right edge	Roofing layers below rubber membrane	N/A	N/A	N/A	N/A	N/A	Yes
K-531-MDOT-15	7/30/2009	4	Survey Shop - right edge	Roofing layers below rubber membrane	N/A	N/A	N/A	N/A	N/A	Yes
K-531-MDOT-16	7/30/2009	5	Fab Shop - Upper roof	Shingles around vent stack	5	0	0	0	5	Yes
K-531-MDOT-17	7/30/2009	5	Fab Shop - Upper roof	Shingles around vent stack	N/A	N/A	N/A	N/A	N/A	Yes
K-531-MDOT-18	7/30/2009	5	Fab Shop - Upper roof	Shingles around vent stack	N/A	N/A	N/A	N/A	N/A	Yes
K-531-MDOT-19	7/30/2009	5	Fab Shop - Upper roof	Shingles in open roof area	5	0	0	0	5	Yes
K-531-MDOT-20	7/30/2009	5	Fab Shop - Upper roof	Shingles in open roof area	N/A	N/A	N/A	N/A	N/A	Yes
K-531-MDOT-21	7/30/2009	5	Fab Shop - Upper roof	Shingles in open roof area	N/A	N/A	N/A	N/A	N/A	Yes
K-531-MDOT-22	7/30/2009	2	Engine Shop	Ice + Snow Water Shield	0	0	0	0	0	No
K-531-MDOT-23	7/30/2009	2	Engine Shop	Ice + Snow Water Shield	0	0	0	0	0	No
K-531-MDOT-24	7/30/2009	2	Engine Shop	Ice + Snow Water Shield	0	0	0	0	0	No
K-531-MDOT-25	7/30/2009	2	Engine Shop	Right/upper roof shingles	0	0	0	0	0	No
K-531-MDOT-26	7/30/2009	2	Engine Shop	Right/upper roof shingles	0	0	0	0	0	No
K-531-MDOT-27	7/30/2009	2	Engine Shop	Right/upper roof shingles	0	0	0	0	0	No
K-531-MDOT-28	7/30/2009	2	Engine Shop	Right/upper roof building edge flashing	0	0	0	0	0	No
K-531-MDOT-29	7/30/2009	2	Engine Shop	Right/upper roof building edge flashing	0	0	0	0	0	No
K-531-MDOT-30	7/30/2009	2	Engine Shop	Right/upper roof building edge flashing	0	0	0	0	0	No
K-531-MDOT-31	7/30/2009	2	Engine Shop	Right/upper roof vent stack flashing	5	0	0	0	5	Yes
K-531-MDOT-32	7/30/2009	2	Engine Shop	Right/upper roof vent stack flashing	N/A	N/A	N/A	N/A	N/A	Yes
K-531-MDOT-33	7/30/2009	2	Engine Shop	Right/upper roof vent stack flashing	N/A	N/A	N/A	N/A	N/A	Yes
K-531-MDOT-34	7/30/2009	2	Engine Shop	Right/upper roof small patch	0	0	0	0	0	No
K-531-MDOT-35	7/30/2009	2	Engine Shop	Right/upper roof small patch	2	0	0	0	2	Yes
K-531-MDOT-36	7/30/2009	2	Engine Shop	Right/upper roof small patch	N/A	N/A	N/A	N/A	N/A	?
K-531-MDOT-37	7/30/2009	1	Sign Shop	Built up open area roofing	5	0	0	0	5	Yes
K-531-MDOT-38	7/30/2009	1	Sign Shop	Built up open area roofing	N/A	N/A	N/A	N/A	N/A	Yes
K-531-MDOT-39	7/30/2009	1	Sign Shop	Built up open area roofing	N/A	N/A	N/A	N/A	N/A	Yes
K-531-MDOT-40	7/30/2009	1	Sign Shop	Roof flashing around penetration	5	0	0	0	5	Yes
K-531-MDOT-41	7/30/2009	1	Sign Shop	Roof flashing around penetration	N/A	N/A	N/A	N/A	N/A	Yes
K-531-MDOT-42	7/30/2009	1	Sign Shop	Roof flashing around penetration	N/A	N/A	N/A	N/A	N/A	Yes
K-531-MDOT-43	7/30/2009	1	Sign Shop	Upper building edge flashing	10	0	0	0	10	Yes
K-531-MDOT-44	7/30/2009	1	Sign Shop	Upper building edge flashing	N/A	N/A	N/A	N/A	N/A	Yes
K-531-MDOT-45	7/30/2009	1	Sign Shop	Upper building edge flashing	N/A	N/A	N/A	N/A	N/A	Yes

N/A means "not analyzed".
ACM means "asbestos-containing material".



Please Reply To:

AmeriSci Boston

8 SCHOOL ST.

WEYMOUTH, MA 02189

TEL: (781) 337-9334 • FAX: (781) 337-7642

FACSIMILE TELECOPY TRANSMISSION

To: Jonathon Klane
Klane's Education Information Training Hub
Fax #: 8 66-384-9635
Email: jonathon@trainerman.com

From: Bryan H. Clark
AmeriSci Job #: 509071361
Subject: PLM 5 day Results
Client Project: K-531; MDOT5 Roofs Survey;
Fleet Service, Augusta, ME

Date: Wednesday, August 05, 2009
Time: 13:49:44

Number of Pages: 12
(including cover sheet)

Comments:

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PLM Bulk Asbestos Report

Klane's Education Information Training
Attn: Jonathon Klane
93 Norridgewock Road
Fairfield, ME 04937

Date Received 07/31/09 **AmeriSci Job #** 509071361
Date Examined 08/05/09 **P.O. #**
Page 1 of 9
RE: K-531; MDOT5 Roofs Survey; Fleet Service, Augusta, ME

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
K-531-MDOT-01 1 Location: Engine Shop	509071361-01	Yes	2 % (by CVES) by Bryan H. Clark on 08/05/09
Analyst Description: Off-White, Homogeneous, Fibrous, Pipe Insulation Asbestos Types: Chrysotile 2.0 % Other Material: Fibrous glass 93 %, Non-fibrous 5 % Comment: Layer of Paint			
K-531-MDOT-02 1 Location: Engine Shop	509071361-02		NA/PS
Analyst Description: Pipe Insulation Asbestos Types: Other Material:			
K-531-MDOT-03 1 Location: Engine Shop	509071361-03		NA/PS
Analyst Description: Pipe Insulation Asbestos Types: Other Material:			
K-531-MDOT-04 2 Location: Roof #2 (Over Engine Shop)	509071361-04	No	NAD (by CVES) by Bryan H. Clark on 08/05/09
Analyst Description: Black, Heterogeneous, Fibrous, Roofing Shingle Asbestos Types: Other Material: Cellulose 30 %, Non-fibrous 70 %			

Client Name: Klane's Education Information Training Hub

PLM Bulk Asbestos Report

K-531; MDOT5 Roofs Survey; Fleet Service, Augusta, ME

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
K-531-MDOT-05 2	509071361-05 Location: Roof #2 (Over Engine Shop)	No	NAD (by CVES) by Bryan H. Clark on 08/05/09
Analyst Description: Black, Heterogeneous, Fibrous, Roofing Shingle Asbestos Types: Other Material: Cellulose 30 %, Non-fibrous 70 %			
K-531-MDOT-06 2	509071361-06 Location: Roof #2 (Over Engine Shop)	No	NAD (by CVES) by Bryan H. Clark on 08/05/09
Analyst Description: Black, Heterogeneous, Fibrous, Roofing Shingle Asbestos Types: Other Material: Cellulose 30 %, Non-fibrous 70 %			
K-531-MDOT-07 3	509071361-07 Location: Roof #2 (Over Engine Shop)	No	NAD ¹ (by CVES) by Bryan H. Clark on 08/05/09
Analyst Description: Black, Heterogeneous, Fibrous, Building Edge Flashing Asbestos Types: Other Material: Cellulose 15 %, Non-fibrous 85 %			
K-531-MDOT-08 3	509071361-08 Location: Roof #2 (Over Engine Shop)	No	NAD ¹ (by CVES) by Bryan H. Clark on 08/05/09
Analyst Description: Black, Heterogeneous, Fibrous, Building Edge Flashing Asbestos Types: Other Material: Cellulose 15 %, Non-fibrous 85 %			
K-531-MDOT-09 3	509071361-09 Location: Roof #2 (Over Engine Shop)	Yes	10 % ¹ (by CVES) by Bryan H. Clark on 08/05/09
Analyst Description: Black, Heterogeneous, Fibrous, Building Edge Flashing Asbestos Types: Chrysotile 10.0 % Other Material: Cellulose 20 %, Non-fibrous 70 %			
K-531-MDOT-10 4	509071361-10 Location: Roof #3 Valley	No	NAD (by CVES) by Bryan H. Clark on 08/05/09
Analyst Description: Black, Heterogeneous, Fibrous, Valley Shingles Asbestos Types: Other Material: Fibrous glass 15 %, Non-fibrous 85 %			

PLM Bulk Asbestos Report

K-531; MDOT5 Roofs Survey; Fleet Service, Augusta, ME

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
K-531-MDOT-11 4	509071361-11 Location: Roof #3 Valley	No	NAD (by CVES) by Bryan H. Clark on 08/05/09
<p>Analyst Description: Black, Heterogeneous, Fibrous, Valley Shingles Asbestos Types: Other Material: Fibrous glass 15 %, Non-fibrous 85 %</p>			
K-531-MDOT-12 4	509071361-12 Location: Roof #3 Valley	No	NAD (by CVES) by Bryan H. Clark on 08/05/09
<p>Analyst Description: Black, Heterogeneous, Fibrous, Valley Shingles Asbestos Types: Other Material: Fibrous glass 15 %, Non-fibrous 85 %</p>			
K-531-MDOT-13 5	509071361-13 Location: Roof #4 Survey Shop	Yes	2 % ² (by CVES) by Bryan H. Clark on 08/05/09
<p>Analyst Description: Silver/Black, Heterogeneous, Fibrous, Rubber Membrane/Roofing Below Asbestos Types: Chrysotile 2.0 % Other Material: Non-fibrous 98 % Comment: Asbestos Containing Material is in Paint</p>			
K-531-MDOT-14 5	509071361-14 Location: Roof #4 Survey Shop		NA/PS
<p>Analyst Description: Rubber Membrane/Roofing Below Asbestos Types: Other Material:</p>			
K-531-MDOT-15 5	509071361-15 Location: Roof #4 Survey Shop		NA/PS
<p>Analyst Description: Rubber Membrane/Roofing Below Asbestos Types: Other Material:</p>			

PLM Bulk Asbestos Report

K-531; MDOT5 Roofs Survey; Fleet Service, Augusta, ME

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
K-531-MDOT-16 6	509071361-16 Location: Roof #5 Over Fab Shop	Yes	5 % ¹ (by CVES) by Bryan H. Clark on 08/05/09
<p>Analyst Description: Black, Heterogeneous, Fibrous, Shingles Around Vent Stacks Asbestos Types: Chrysotile 5.0 % Other Material: Cellulose 25 %, Non-fibrous 70 %</p>			
K-531-MDOT-17 6	509071361-17 Location: Roof #5 Over Fab Shop		NA/PS
<p>Analyst Description: Shingles Around Vent Stacks Asbestos Types: Other Material:</p>			
K-531-MDOT-18 6	509071361-18 Location: Roof #5 Over Fab Shop		NA/PS
<p>Analyst Description: Shingles Around Vent Stacks Asbestos Types: Other Material:</p>			
K-531-MDOT-19 7	509071361-19 Location: Roof #5 Over Fab Shop	Yes	5 % ¹ (by CVES) by Bryan H. Clark on 08/05/09
<p>Analyst Description: Black, Heterogeneous, Fibrous, Shingles In Open Roof Area Asbestos Types: Chrysotile 5.0 % Other Material: Cellulose 30 %, Non-fibrous 65 %</p>			
K-531-MDOT-20 7	509071361-20 Location: Roof #5 Over Fab Shop		NA/PS
<p>Analyst Description: Shingles In Open Roof Area Asbestos Types: Other Material:</p>			
K-531-MDOT-21 7	509071361-21 Location: Roof #5 Over Fab Shop		NA/PS
<p>Analyst Description: Shingles In Open Roof Area Asbestos Types: Other Material:</p>			

Client Name: Klane's Education Information Training Hub

PLM Bulk Asbestos Report

K-531; MDOT5 Roofs Survey; Fleet Service, Augusta, ME

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
K-531-MDOT-22 8	509071361-22 Location: Roof #2 Over Engine Shop	No	NAD (by CVES) by Bryan H. Clark on 08/05/09
Analyst Description: Black, Homogeneous, Non-Fibrous, Ice Snow Water Shield Asbestos Types: Other Material: Non-fibrous 100 %			
K-531-MDOT-23 8	509071361-23 Location: Roof #2 Over Engine Shop	No	NAD (by CVES) by Bryan H. Clark on 08/05/09
Analyst Description: Black, Homogeneous, Non-Fibrous, Ice Snow Water Shield Asbestos Types: Other Material: Non-fibrous 100 %			
K-531-MDOT-24 8	509071361-24 Location: Roof #2 Over Engine Shop	No	NAD (by CVES) by Bryan H. Clark on 08/05/09
Analyst Description: Black, Homogeneous, Non-Fibrous, Ice Snow Water Shield Asbestos Types: Other Material: Non-fibrous 100 %			
K-531-MDOT-25 9	509071361-25 Location: Roof #2 Over Engine Shop	No	NAD (by CVES) by Bryan H. Clark on 08/05/09
Analyst Description: Black, Heterogeneous, Fibrous, Roofing Shingle Asbestos Types: Other Material: Cellulose 15 %, Fibrous glass 15 %, Non-fibrous 70 % Comment: There are multiple types of "Different Shingles" in sample bag			
K-531-MDOT-26 9	509071361-26 Location: Roof #2 Over Engine Shop	No	NAD (by CVES) by Bryan H. Clark on 08/05/09
Analyst Description: Black, Heterogeneous, Fibrous, Roofing Shingle Asbestos Types: Other Material: Cellulose 15 %, Fibrous glass 15 %, Non-fibrous 70 % Comment: There are multiple types of "Different Shingles" in sample bag			

PLM Bulk Asbestos Report

K-531; MDOT5 Roofs Survey; Fleet Service, Augusta, ME

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
K-531-MDOT-27 9	509071361-27 Location: Roof #2 Over Engine Shop	No	NAD (by CVES) by Bryan H. Clark on 08/05/09
<p>Analyst Description: Black, Heterogeneous, Fibrous, Roofing Shingle Asbestos Types: Other Material: Cellulose 15 %, Fibrous glass 15 %, Non-fibrous 70 % Comment: There are multiple types of "Different Shingles" in sample bag</p>			
K-531-MDOT-28 10	509071361-28 Location: Roof #2 Over Engine Shop	No	NAD ¹ (by CVES) by Bryan H. Clark on 08/05/09
<p>Analyst Description: Black, Heterogeneous, Fibrous, Building Edge Flashing Asbestos Types: Other Material: Cellulose 15 %, Fibrous glass 15 %, Non-fibrous 70 %</p>			
K-531-MDOT-29 10	509071361-29 Location: Roof #2 Over Engine Shop	No	NAD ¹ (by CVES) by Bryan H. Clark on 08/05/09
<p>Analyst Description: Black, Heterogeneous, Fibrous, Building Edge Flashing Asbestos Types: Other Material: Cellulose 5 %, Non-fibrous 95 %</p>			
K-531-MDOT-30 10	509071361-30 Location: Roof #2 Over Engine Shop	No	NAD (by CVES) by Bryan H. Clark on 08/05/09
<p>Analyst Description: Black, Heterogeneous, Fibrous, Building Edge Flashing Asbestos Types: Other Material: Cellulose 15 %, Fibrous glass 15 %, Non-fibrous 70 %</p>			
K-531-MDOT-31 11	509071361-31 Location: Roof #2 Over Engine Shop	Yes	5 % ¹ (by CVES) by Bryan H. Clark on 08/05/09
<p>Analyst Description: Black, Heterogeneous, Fibrous, Roof Vent Stacks Asbestos Types: Chrysotile 5.0 % Other Material: Fibrous glass 20 %, Non-fibrous 75 %</p>			

Client Name: Klane's Education Information Training Hub

PLM Bulk Asbestos Report

K-531; MDOT5 Roofs Survey; Fleet Service, Augusta, ME

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
K-531-MDOT-32 11	509071361-32 Location: Roof #2 Over Engine Shop		NA/PS
Analyst Description: Roof Vent Stacks Asbestos Types: Other Material:			
K-531-MDOT-33 11	509071361-33 Location: Roof #2 Over Engine Shop		NA/PS
Analyst Description: Roof Vent Stacks Asbestos Types: Other Material:			
K-531-MDOT-34 12	509071361-34 Location: Roof #2 Over Engine Shop	No	NAD (by CVES) by Bryan H. Clark on 08/05/09
Analyst Description: Black, Homogeneous, Fibrous, Small Patch Asbestos Types: Other Material: Cellulose 10 %, Non-fibrous 90 %			
K-531-MDOT-35 12	509071361-35 Location: Roof #2 Over Engine Shop	Yes	2 % ¹ (by CVES) by Bryan H. Clark on 08/05/09
Analyst Description: Black, Homogeneous, Fibrous, Small Patch Asbestos Types: Chrysotile 2.0 % Other Material: Cellulose 13 %, Fibrous glass Trace, Non-fibrous 85 %			
K-531-MDOT-36 12	509071361-36 Location: Roof #2 Over Engine Shop		NA/PS
Analyst Description: Small Patch Asbestos Types: Other Material:			
K-531-MDOT-37 13	509071361-37 Location: Sign Shop Roof	Yes	5 % ¹ (by CVES) by Bryan H. Clark on 08/05/09
Analyst Description: Black, Heterogeneous, Fibrous, Built-up Open Area Roofing Asbestos Types: Chrysotile 5.0 % Other Material: Cellulose 55 %, Non-fibrous 40 %			

PLM Bulk Asbestos Report

K-531; MDOT5 Roofs Survey; Fleet Service, Augusta, ME

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
K-531-MDOT-38 13 Location: Sign Shop Roof	509071361-38		NA/PS
Analyst Description: Built-up Open Area Roofing Asbestos Types: Other Material:			
K-531-MDOT-39 13 Location: Sign Shop Roof	509071361-39		NA/PS
Analyst Description: Built-up Open Area Roofing Asbestos Types: Other Material:			
K-531-MDOT-40 14 Location: Sign Shop Roof	509071361-40	Yes	5 % ¹ (by CVES) by Bryan H. Clark on 08/05/09
Analyst Description: Brown/Black, Heterogeneous, Fibrous, Penetration Roofing Asbestos Types: Chrysotile 5.0 % Other Material: Cellulose 10 %, Non-fibrous 85 %			
K-531-MDOT-41 14 Location: Sign Shop Roof	509071361-41		NA/PS
Analyst Description: Penetration Roofing Asbestos Types: Other Material:			
K-531-MDOT-42 14 Location: Sign Shop Roof	509071361-42		NA/PS
Analyst Description: Penetration Roofing Asbestos Types: Other Material:			
K-531-MDOT-43 15 Location: Sign Shop Roof	509071361-43	Yes	10 % (by CVES) by Bryan H. Clark on 08/05/09
Analyst Description: Brown/Black, Heterogeneous, Fibrous, Building Edge Flashing Asbestos Types: Chrysotile 10.0 % Other Material: Cellulose 30 %, Fibrous glass Trace, Non-fibrous 60 %			

Client Name: Klane's Education Information Training Hub

PLM Bulk Asbestos Report

K-531; MDOT5 Roofs Survey; Fleet Service, Augusta, ME

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
K-531-MDOT-44 15	509071361-44		NA/PS
Location: Sign Shop Roof Analyst Description: Building Edge Flashing Asbestos Types: Other Material:			
K-531-MDOT-45 15	509071361-45		NA/PS
Location: Sign Shop Roof Analyst Description: Building Edge Flashing Asbestos Types: Other Material:			

Reporting Notes:

- (1) Physically inseparable layers in sample - sample composited for analysis
- (2) Result is for one layer of a multi-layer sample.

Analyzed by: Bryan H. Clark *Bryan Clark*; Date Analyzed: 08-05-09
 NAD = no asbestos detected; CVES = Calibrated Visual Estimate; NA = not analyzed; NA/PS = not analyzed / positive stop; "Present" or NVA = "No Visible Asbestos" are observations made during a qualitative analysis; PLM Bulk Asbestos Analysis by EPA 600/M4-82-020 per 40 CFR 763 (NVLAP Lab #102079-0) or NY ELAP PLM Analysis Protocol 198.1 for New York friable samples (198.6 for NOB samples) (NY ELAP Lab # 10982); Note: PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos-containing in New York State (also see EPA Advisory for floor tile, FR 59, 146, 38970, 8/1/94). NIST Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the laboratory. This PLM report relates ONLY to the items tested.
 Reviewed By: _____

Chain-of-Custody Record

Lab Location: Ameri Sci - Boston

509071361

residue on pipes

Project #	K-531	Project Name	MDOT's Roots Survey	Project Location	Flow Rates	Localities	August 12	ME	Sampler:	Analysis	Water	Wipe	Remarks/Comments/Material
Sample #	Date	Times	Flow Rates	Localities	Localities	Localities	Localities	Localities	Bulk Soil	PUM	Water	Wipe	Remarks/Comments/Material
MDOT-01	7/30/09	8:07 AM	N/A	Engine Shop	Engine Shop	Engine Shop	Engine Shop	Engine Shop	✓	u	u	u	Pipe insulation in boxed enclosure
02	u	8:15 AM	u	u	u	u	u	u	✓	u	u	u	u
03	u	8:23 AM	u	u	u	u	u	u	✓	u	u	u	u
04	u	8:44 AM	u	u	u	u	u	u	✓	u	u	u	u
05	u	9:00 AM	u	u	u	u	u	u	✓	u	u	u	u
06	u	9:04 AM	u	u	u	u	u	u	✓	u	u	u	u
07	u	9:07 AM	u	u	u	u	u	u	✓	u	u	u	u
08	u	9:13 AM	u	u	u	u	u	u	✓	u	u	u	u
09	u	12:25 PM	u	u	u	u	u	u	✓	u	u	u	u
10	u	9:26 AM	u	u	u	u	u	u	✓	u	u	u	u
11	u	9:35 AM	u	u	u	u	u	u	✓	u	u	u	u
12	u	9:44 AM	u	u	u	u	u	u	✓	u	u	u	u
13	u	10:07 AM	u	u	u	u	u	u	✓	u	u	u	u
14	u	10:17 AM	u	u	u	u	u	u	✓	u	u	u	u
15	u	10:25 AM	u	u	u	u	u	u	✓	u	u	u	u
16	u	10:40 AM	u	u	u	u	u	u	✓	u	u	u	u
17	u	10:51 AM	u	u	u	u	u	u	✓	u	u	u	u
18	u	11:04 AM	u	u	u	u	u	u	✓	u	u	u	u
19	u	11:13 AM	u	u	u	u	u	u	✓	u	u	u	u
20	u	11:16 AM	u	u	u	u	u	u	✓	u	u	u	u
21	u	11:21 AM	u	u	u	u	u	u	✓	u	u	u	u
22	u	12:31 PM	u	u	u	u	u	u	✓	u	u	u	u
23	u	2:36 PM	u	u	u	u	u	u	✓	u	u	u	u
24	u	2:44 PM	u	u	u	u	u	u	✓	u	u	u	u
25	u	2:45 PM	u	u	u	u	u	u	✓	u	u	u	u
26	u	2:48 PM	u	u	u	u	u	u	✓	u	u	u	u
27	u	2:52 PM	u	u	u	u	u	u	✓	u	u	u	u
28	u	17:57 PM	u	u	u	u	u	u	✓	u	u	u	u
29	u	1:00 PM	u	u	u	u	u	u	✓	u	u	u	u
30	u	1:06 PM	u	u	u	u	u	u	✓	u	u	u	u

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Date/Time: 7/30/09 3:40
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32089 5 TAF Stop at first positive.
 Klane's Education Information Training Hub (KEITH)
 98 Norrignewock Road
 Fairfield, Maine 04937
 (207) 453-KEITH (5348)
 Fax: 207-453-4422

Do not dispose of samples - please return to KEITH

Chain-of-Custody Record

Lab Location: *Argent Sci - Boston*

509071361

Project #:		Project Name:		MDOT - Roads Survey		Sample #		Sample Date		Sample Time		Sample Location		Sample Analysis		Sample Remarks/Comments/Material	
Sample #	Date	Time	Flow Rate	Location	Analysis #	ME	Air	Bulk	Soil	Water	Wipe	Analysis	PLM	Wipe	Analysis	PLM	Remarks/Comments/Material
31	7/30/09	1:10 pm	N/A	Roof #2 (over parking)	1												Right upper roof vent stacks
32	u	1:15 pm	u	u	u												u
33	u	1:18 pm	u	u	u												u
34	u	1:21 pm	u	u	u												Small patch
35	u	1:24 pm	u	u	u												u
36	u	1:26 pm	u	u	u												u
37	u	1:46 pm	u	Sign Gump Roof	1												Build up open area roofing
38	u	1:50 pm	u	u	u												u
39	u	1:54 pm	u	u	u												u
40	u	2:01 pm	u	u	u												Penetration roofing
41	u	2:04 pm	u	u	u												u
42	u	2:10 pm	u	u	u												u
43	u	2:12 pm	u	u	u												Upper bldg edge flashing
44	u	2:15 pm	u	u	u												u
45	2:18 pm	7/30/09	u	u	u												u

Jonathan Flan

Date/Time: 7/30/09 2:40
 Date/Time: Comments:
 Date/Time: Comments:
 Date/Time: Comments:
 Date/Time: Comments:
 Date/Time: Comments:

KLANE'S Education Information Training Hub (KEITH)
 85 Norridgewock Road
 Fairfield, Maine 04937
 (207) 453-KEITH (5348)
 Fax: (207) 453-5226

Do not dispose of samples - please return to KEITH

-----Original Message-----

From: Jonathan Klane [<mailto:trainerman@roadrunner.com>]

Sent: Monday, August 10, 2009 1:22 PM

To: Doughty, Dwight

Cc: Howlett, Dan

Subject: Re: MDOT Aug's asbestos survey of 5 roofs - results

Importance: High

Hi Dwight and Dan!

Here's what you're looking at roof by roof for specific areas that are ACM:

1. Roof #1: All of the roof area sampled is ACM based on each of the three roof material types sampled tested positive (one each vent stack flashing, open area, and upper edge flashing). The drawing would show the entire (front lower) roof area hatched (not other untested roof parts obviously) It will all need to be abated by either a licensed roofer or fully licensed abatement contractor.
2. Roof #2. All of the boxed pipe residue inside the Engine Shop. One area of flashing between the two air conditioners at the far left rear part of the lower left roof. Other areas of flashing tested negative. One vent stack on the front area of the right upper roof. One patch in the approximate middle of the right upper roof. Other patches tested negative. You should be able to have these three relatively small roof areas/materials abated (by a licensed roofing contractor or a full abatement contractor) without abating the rest of Roof #2. Obviously the boxed pipe insulation residue will need to be abated by a fully licensed abatement contractor. The drawing would show three small areas shaded - area between and around the two ACs, the area around the front right vent stack, and the area around a patch in the rough center of the right upper roof. I did not draw out the boxed pipe as they'd either be all positive (which they are) or all negative.
3. Roof #3: All three samples tested were negative - no ACM found. Drawing would show only sample #s. No ACM, no hatching.
4. Roof #4: One sample tested positive which the lab reports that the asbestos was in the paint layer (as opposed to the roofing) I can have them also test the other two samples if you'd like so we

see if that is consistent - please let me know. Drawing would show all as positive is confirmed by the other two or otherwise if we know confidently the extent of the paint.

5. Roof #5: Both materials sampled (open area and vent stack flashing) were positive. This means that the entire roof is ACM and needs to be handled as such (by a licensed roofer or full abatement firm) The drawing would show the entire area hatched as ACM.

Separating ACM layers from non-ACM layers is difficult at best and often infeasible and a waste of time and effort. Further the analyses do not allow for a "layer-by-layer" analysis of ACM vs. non-ACM except where indicated for roof #4 paint as mentioned previously.