Request For Proposals
Iqaluit Airport Utilidor Demolition, Abatement And Asbestos Removal Specifications
Iqaluit, Nunavut

Transport Canada
Prairie and Northern Region
Programs
Environmental Affairs
15 April 2006

1.0 GENERAL

1.1 General and Related Work

.1 Read this Section in conjunction with all drawings and all other sections so as to comply with the requirements of Division 1 and the General Conditions of the Contract.

.2 Related work specified elsewhere:

Division 2,	Section 02000	Existing Conditions and Scope
Division 2,	Section 02060	Demolition
Division 13,	Section 13083	Asbestos Abatement – Type 3

.3 This Section shall govern over all work of the Contract which will, or may, disturb ACMs or surfaces or materials which may have been or become contaminated by ACM either during or prior to work of this Contract.

.4 It is the intent that work performed as per this Section will result in the removal of all ACM and the decontamination of all surfaces or materials which may have been or become contaminated by ACM prior to demolition of the Utilidors.

1.2 Outline of Work

.1 Refer to Section 13083 of the Specification for a specific outline of work and specified personnel protective measures for the safe handling, removal and clean-up of asbestos specific to each phase or work area.

.2 Visit the site prior to tender close to confirm the location and extent of any asbestos-containing or asbestos-contaminated materials.

.3 Isolate the Asbestos Work Area from adjoining Areas via the placement of a series of perimeter barricades positioned parallel to the Utilidors and at a minimum distance of 9 metres.

.4 Identify and relocate any live electrical cables on a temporary basis to facilitate demolition of the Utilidors.

.5 Divert water away from the culverts running under roadways to facilitate work within the Culverts.

.6 Perform selective demolition of mechanical and electrical equipment, building components, materials and items scheduled for demolition at locations required to facilitate asbestos removal. Section 02060 shall remain responsible for all other demolition required under the Contract. Section 02060 shall also be responsible for the disposal of non-asbestos debris or rubble able to be segregated from asbestos materials during selection demolition as performed by Section 13080.

.7 Remove and dispose of as asbestos-containing waste, building components, materials and items contaminated by asbestos that cannot be effectively cleaned.

.8 Final clean work area to remove visible signs of asbestos, other debris or settled dust.

.9 Apply lock-down agent to exposed surfaces to surfaces from which any asbestos had been removed.

.10 Unless otherwise specified, the handling, removal, clean-up or repair of ACMs or surfaces contaminated with asbestos is to be performed following wet removal techniques.

1.3 Existing Conditions

.1 Pipewrap insulation known to contain Chrysotile asbestos is present on straight runs and fittings of mechanical services within and adjacent the Utilidors.

.2 Tar impregnated compound on the interior and exterior surface of the culverts running inside of the Utilidors is known to contain Chrysotile asbestos.

.3 Asbestos-containing debris is present within the Utilidors.

.4 Fibreglass or other types of non-asbestos pipe insulation present on straight runs and fittings of any abandoned mechanical services located within or adjacent the Utilidors is to be treated, handled and disposed of as ACM.

.5 Interior surfaces of the Utilidors is known to be contaminated with asbestos.

.6 Immediately stop work in the area and notify the Asbestos Abatement Consultant should unexpected materials, or materials suspected of containing asbestos be encountered. Do not resume work in the area until it has been determined if the material encountered contains asbestos and authorization to resume work is given.

1.4 Definitions

.1 Airlock: Temporary chamber which permits ingress or egress from an Asbestos Work Area without permitting air movement through to non-contaminated areas.

.2 Amended Water: Water with wetting agent added for the purpose of reducing surface tension to allow thorough wetting of ACM.

.3 Asbestos-Containing Material (ACM): Material identified under Existing Conditions including any debris, overspray, fallen material and settled dust.

.4 Asbestos Work Area: Area where work takes place which will, or may, disturb ACM.

.5 Authorized Visitors: Building Owner, Asbestos Abatement Consultant, or designated representative, and persons representing regulatory agencies.

.6 Contaminated Waste: Material identified under Existing Conditions including fallen material, settled dust, other debris and materials or equipment deemed to be contaminated by the Asbestos Abatement Consultant.

.7 Curtained Doorway: Doorway consisting of two (2) overlapping flaps of rip-proof polyethylene arranged to permit ingress and egress from one room to another while permitting minimal air movement between rooms.

.8 DOP Test: A testing method used to determine the integrity of the Negative Pressure unit or vacuum using dioctyl phthalate (DOP) HEPA filter leak test.

.9 Fitting: Individual segments or pieces of a mechanical service line which may include but is not limited to the hangers, tees, elbows, joints, valves, unions, etc.

.10 Friable Material: Material that when dry can be crumbled, pulverized or powdered by hand pressure and includes such material that is crumbled, pulverized or powdered.

.11 Glove Bag: Prefabricated bag which provides a completely sealed envelope surrounding a given section of piping to permit the removal of asbestos-containing insulation from within the bag while maintaining the integrity of the bag and preventing the spread of airborne asbestos fibres.

.12 HEPA Filter: High Efficiency Particulate Aerosol filter that is at least 99.97 percent efficient in collecting a 0.3 micrometre aerosol.

.13 Milestone Inspection: Inspection of the Asbestos Work Area at a defined point in the abatement operation.

.14 Negative Pressure: A reduced pressure within the Asbestos Work Area ($\geq$0.04 in.) established by extracting air directly from Asbestos Work Area and discharging it to exterior of building. Volume of air extracted must be sufficient to provide one (1) air change every 20 minutes during wet removal and once every 15 minutes during dry removal while ensuring that at all times, air movement flows into the Asbestos Work Area as determined by visual or smoke testing to the satisfaction of the Asbestos Abatement Consultant.

.15 Non-Friable Material: Material that when dry cannot be crumbled, pulverized or powdered by hand pressure. Including but not limited to the following ACM: vinyl tiles, asbestos cement tiles, gaskets, seals, select packings, friction products, drywall joint compound and asbestos cement products. Exclude from the above categorization, any material that is or may become crumbled, pulverized or powdered by handling as described herein.

.16 Occupied Area: Any area of the building or adjoining space outside the Asbestos Work Area.

.17 Pipewrap: Any thermal or vapour covering present on straight runs and/or fittings of mechanical services. Include with the above, metal or other rigid jacketing associated straps, ties, fastenings, etc.

.18 Polyethylene: 6 mil polyethylene sheeting or 10 mil rip-proof polyethylene sheeting with tape along edges, around penetrating objects, over cuts and tears, and elsewhere as required to provide protection to underlying surfaces and to prevent the escape of airborne fibres.

1.5 Regulations

.1 Comply with Federal, Territorial, and local requirements, provided that in any case of conflict among those requirements or with these Specifications, the more stringent requirements shall apply. Work shall be performed under regulations in effect at the time work is performed.

1.6 Quality Assurance

.1 Removal and handling of asbestos-containing or asbestos-contaminated materials is to be performed by persons trained in the methods, procedures and industry practices for Asbestos Abatement.

.2 Ensure work proceeds to schedule, meeting all requirements of this Specification.

.3 Complete work so that at no time airborne dust, visible debris, or water runoff contaminate areas outside the Asbestos Work Area.

.4 Any contamination of surrounding area (indicated by visual inspection or air monitoring) shall necessitate the clean-up of affected area, and in the same manner applicable to an Asbestos Work Area at no cost to the Owner.

.5 All work of this Section involving electrical, mechanical, carpentry, etc., shall be performed by licensed persons experienced and qualified for the work required.

1.7 Inspection

.1 From commencement of work until completion of clean-up operations, the Asbestos Abatement Consultant is empowered by the Owner to inspect for compliance with the requirements of governing authorities, adherence to specified procedures and materials, and to inspect for final cleanliness and completion.

.2 The Asbestos Abatement Consultant is empowered by the Owner to order a shutdown of work when leakage of asbestos from the controlled work area has occurred or is likely to occur.

.3 Any deviation from the requirements of the Specifications or governing authorities that is not approved in writing may result in a stoppage of work, at no cost to the Owner.

.4 Additional labour or materials expended by the Contractor to rectify unsatisfactory conditions and to provide performance to the level specified shall be at no additional cost to the Owner.

.5 Inspection and air monitoring performed as a result of Contractor's failure to perform satisfactorily regarding quality, safety, or schedule, shall be back-charged to the Contractor.

.6 Facilitate inspection and provide access as necessary. Make good work disturbed by inspection and testing at no cost to the Owner.

.7 Refer to Section 13083 of the Specification for specified milestone inspections which are to take place at defined points throughout the abatement operation specific to each phase or work area.

.8 Provide 24 hours written notice to the Asbestos Abatement Consultant of any request for scheduling of milestone inspections or transportation of waste through Occupied Areas.

.9 Do not proceed with next phase of work until written approval of each milestone is received from the Asbestos Abatement Consultant.

1.8 Air Monitoring

.1 Air monitoring will be performed using Phase Contrast Microscopy (PCM) following the National Institute for Occupational Safety and Health Method 7400.

.2 Co-operate in the collection of air samples, including providing workers to wear sample pumps for up to full-shift periods. Contractor will be responsible for the cost of testing equipment repairs or resampling resulting from the actions of the Contractor's forces.

.3 Results of PCM samples of 0.05 fibres per millilitre of air (fibre/mL) or greater, outside an Asbestos Work Area or from within the Asbestos Work Area during or following Glove Bag Work will indicate asbestos contamination of these areas. Respond as follows:

.1 Suspend work within the adjoining Asbestos Work Area until written authorization to resume work has been received from the Asbestos Abatement Consultant.

.2 Isolate and clean area in the same manner applicable to the Asbestos Work Area.

.3 Maintain work area isolation, and repeat clean-up operations until visual inspection and air monitoring results are at a level equal to that specified.

.4 At the discretion of the Asbestos Abatement Consultant provide additional negative air units at locations specified in response to elevated fibre levels being detected in the Clean Change Room or Occupied Areas.

.4 Results of PCM samples in excess of 0.01 fibres per millilitre of air (fibre/mL), collected within the Asbestos Work Area enclosure after the site has passed a visual inspection, and an acceptable coat of lock-down agent has been applied, will indicate asbestos contamination of these areas. Respond as follows:

.1 Maintain work area isolation and re-clean entire work area. Then apply another acceptable coat of lock-down agent to exposed surfaces throughout the work area.

.2 Repeat above measures until visually inspected and air monitoring results are at a level equal to that specified.

.5 Where results of PCM sampling exceed 20.0 fibre/mL within a Type 3 Asbestos Work Area, respond as follows:

.1 Immediately stop work within the Asbestos Work Area.

.2 Instruct workers to exit the Asbestos Work Area via the Worker Decontamination Facility while observing specified personnel exiting procedures.

.3 Contractor's forces shall not re-enter the Asbestos Work Area for a period of 8 hours or until authorized by the Asbestos Abatement Consultant.

.4 Upon re-entry to the Asbestos Work Area, mist the air, any fallen debris or exposed surfaces with amended water using an airless sprayer.

.6 Additional labour or materials expended by the Contractor to rectify unsatisfactory conditions and to provide performance to the level specified shall be at no additional cost to the Owner.

.7 Cost of additional inspection and sampling performed as a result of elevated fibre levels in areas outside the Asbestos Work Area or from within the work area following completion of work, will be back-charged to the Contractor.

1.9 Supervision

.1 Provide on site for each work shift, a Shift Superintendent who has authority regarding all aspects related to manpower, equipment and production.

.2 Supervisory personnel must hold a recognized certificate proving attendance at an asbestos removal training course (2 day minimum duration) and have performed supervisory functions on at least five (5) other asbestos abatement projects of similar size and complexity.

.3 At all times during work at risk of disturbing asbestos, the Shift Superintendent must be on site. Failure to comply with this requirement will result in a stoppage of all work, at no cost to the Owner.

.4 Replace supervisory personnel, with approved replacements, within three (3) working days of a written request from the Owner. Owner reserves the right to request replacement of supervisory personnel without explanation.

.5 Do not replace supervisory personnel without written approval from the Owner.

1.10 Notification

.1 Not later than ten (10) days before commencing work on this project, notify the following in writing. Provide telephone notification again immediately prior to start of work.

.1 Regional or Zone Director of Medical Services Branch, Health & Welfare Canada.

.2 Regional Officer of Labour Canada.

.3 Territorial Department of Labour.

.2 Notify sanitary landfill for disposal of asbestos-containing materials outside of Nunavut territory

.3 Inform all trades on site of the presence and location of ACMs identified in the Contract documents.

1.11 Submittals

.1 Submit prior to starting work:

.1 Proof of required licensing for transportation of asbestos waste.

.2 Names and credentials of the Overall Superintendent.

.3 Proof in the form of a certificate that supervisory personnel have attended training courses on asbestos removal (2 day minimum duration) and have performed supervisory function on at least five (5) other asbestos projects of similar size and complexity.

.4 Proposed schedule (prepared in chart format) detailing the following:

.1 Duration of site preparation, contaminated preparation, removal, clean-up and site dismantlement for each phase area.

.2 Proposed average daily work force and shifting.

.5 Shop drawings for each Temporary Asbestos Work Area detailing the following:

.1 Location of Temporary Asbestos Work Area and Waste and Worker Decontamination Facilities.

.2 Any proposed deviation from specifications, procedures, or drawings.

.3 Installation of negative air discharge panels.

.6 Documentation including test results, fire and flammability data, samples, and Material Safety Data Sheets for chemicals or materials used in the course of the Asbestos Abatement project including or not limited to:

.1 Encapsulants.

.2 Wetting agents.

.3 Lock-down agent.

.4 Rip-proof polyethylene.

.5 Polyurethane foam.

.6 Chemicals or materials used in the course of asbestos abatement.

.7 Negative air unit performance data and results of DOP tests as required.

.8 Proof that all employees have been fit-tested for the respirator appropriate for the work being performed.

.9 Proof that all employees have had instruction on hazards of asbestos exposure, use of respirator and all aspects of work procedures and protective measures.

.10 Proof that all employees are listed on an asbestos work report and have been given required medical examinations.

.11 Copy of notification to governing authorities of commencement of work.

.2 Submit at completion of work:

.1 Completed Waste Manifest forms.

1.12 Worker Protection

.1 General

.1 Instruct workers before allowing entry to the Asbestos Work Area. Instruction shall include training in use of respirators, dress, showering, entry and exiting from an Asbestos Work Area, and all other aspects of work procedures and protective measures.

.2 Workers shall not eat, drink, smoke or chew gum or tobacco except in established locations outside the Asbestos Work Area.

.3 Workers shall be fully protected at all times when possibility of disturbance of asbestos exists.

.4 Provide and post at access points to the Asbestos Work Area, the procedures described under Worker Protection.

.2 Respiratory Protection

.1 Refer to Section 13083 of the Specification for specified type of respiratory equipment specific to each phase or work area.

.2 Provide and ensure the use of respiratory equipment appropriate for the work being performed for persons who are required to enter the Asbestos Work Area.

.3 Respiratory protective devices shall be certified by the National Institute of Occupational Safety and Health (NIOSH) or other testing agency acceptable to governing authorities.

.4 Maintain respiratory equipment in proper functioning and clean condition or remove from site.

.5 Respiratory equipment shall be identified with permanent markings with current list of persons utilizing such equipment displayed in a clean area on site.

.6 Filters used shall be tested following each use in accordance with manufacturer's specifications or replaced at the following minimum frequency:

.1 Replace cartridge filters for negative pressure respirator every 16 hours of wear unless tested on site.

.2 Replace PAPR cartridge filters every 8 hours of wear unless tested on site.

.3 Mark filters for rotation and regular replacement. Once worn in an Asbestos Work Area filters may not be removed from the project site except for disposal.

.7 Ensure that no person required to enter an Asbestos Work Area has facial hair which affects the seal between respirator and face.

.8 Store respirators, and tested filters that will be reused, in an established clean area on site. Charge batteries in this area.

.3 Protective Clothing and Equipment

.1 All personnel required to enter the Asbestos Work Area must use disposable full body coveralls with attached head covering. Once coveralls are worn, treat and dispose of as asbestos-contaminated waste.

.2 Use hard hats, safety shoes and other protective apparel required by applicable construction safety regulations.

.4 Asbestos Abatement Work Area Entry and Exit Procedures

.1 Refer to Section 13083 of the Specification for specified work area entry and exit procedures specific to each phase or work area.

1.13 Visitor Protection

.1 Provide clean protective clothing, equipment and approved respirators to Authorized Visitors.

.2 Instruct Authorized Visitors in the use of protective clothing, respirators, and Asbestos Work Area entry and exit procedures.

1.14 Signage/Labelling

.1 Work Area Signs: Post signs in both official languages at access points to the Asbestos Work Area. Where possible, provide signage immediately prior to entering Asbestos Work Area but out of public view. Letters on signs shall be in upper case "HELVETICA MEDIUM" and read as follows:

.1 CAUTION (25 mm high).
.2 Asbestos Hazard Area (19 mm high).
.3 Unauthorized Entry Prohibited (19 mm high).
.4 Wear Assigned Protective Equipment (19 mm high).
.5 Breathing Asbestos Dust May Cause Serious Bodily Harm (19 mm high).

.2 Container Signs: Label containers for the disposal of asbestos as follows:

.1 CAUTION CONTAINS ASBESTOS FIBRES (25 mm high).
.2 Do Not Mishandle (19 mm high).

1.15 Waste and Material Handling

.1 Provide the Owner with a copy of each completed waste transportation manifest verifying the safe transportation of waste to an authorized disposal site.

.2 Refer to Section 13083 and 01355 of the Specification for specified waste and material handling procedures specific to each phase or work area.

.3 Asbestos-containing or asbestos-contaminated materials removed during the work shall be treated, packaged, transported and disposed of as asbestos-contaminated waste.

.4 Materials that could tear or puncture a 6 mil (0.15mm) polyethylene bag shall be packaged and disposed of in sealed rigid waste containers specified.

.5 Redundant non-ACMs, rubble and debris removed during contaminated work shall be treated, packaged and disposed of as asbestos-contaminated waste. With written approval of the Asbestos Abatement Consultant, non-porous materials may be cleaned, sprayed with a sealer and left behind for final disposal by Section 02060 as clean waste.

1.16 Dump Monitoring

.1 Ensure each shipment of containers is accompanied by a representative who will supervise dumping of containers and ensure all guidelines and regulations are followed.

.2 Equip each shipment of containers with full personal protective equipment and tools required to properly clean-up spilled asbestos in the case of a failure in an Asbestos Waste Container.

2.0 PRODUCTS AND FACILITIES

2.1 Materials and Equipment

.1 Refer to Section 13083 of the Specification for specified materials, equipment or facilities specific to each phase or work area.

.2 Materials and equipment must be in good condition and free of asbestos, asbestos debris and fibrous materials. Disposable items must be of new materials only.

.3 Asbestos Waste Container: Impermeable container acceptable to disposal site. Labelled as required, comprised of the following:

.1 A sealed 6 mil (0.15 mm) polyethylene bag or glove bag, inside a second 6 mil (0.15 mm) sealed polyethylene bag.

.2 A sealed 6 mil (0.15 mm) polyethylene bag or glove bag, positioned inside or outside a rigid sealed container of sufficient strength to prevent perforation of the container during filling, transportation and disposal.

.4 HEPA Vacuum: Vacuum with necessary fittings, tools and attachments. Discharged air must pass through a HEPA filter.

.5 Lock-down Agent: Sealant for purpose of trapping residual dust and shall be capable of withstanding surface temperature of substrate. Product must be compatible with replacement materials and must have flame spread and smoke development ratings of less than 50 and shall leave no stain when dry. Acceptable product: Serpiflex Shield or approved equal.

.6 Negative Air Exhaust Ducting (Flexible): Airtight tubing with metal reinforcement or approved equal. Mechanically affix each exhaust duct to the unit's exhaust with metal hose clamp. Diameter of duct to equal negative air discharge. Acceptable product: Thermalflex S-LP 10 flexible ducting as manufactured by Flexible Technologies.

.7 Negative Air Unit: Portable air handling system which extracts air directly from the Asbestos Work Area and discharges air to exterior of building. Equipped as follows:

.1 Pre-filter and HEPA filter. Air must pass HEPA filter before discharge.

.2 Pressure differential gauge to monitor filter loading.

.3 Auto shut off and warning system for HEPA filter failure.

.4 Separate hold down clamps to retain HEPA filter in place during change of pre-filter.

.8 Polyethylene Sheeting: 6 mil (0.15 mm) minimum thickness unless otherwise specified, in sheet size to minimize joints.

.9 Protective Coveralls: Disposable full body coveralls complete with hoods. Acceptable material: Tyvek coveralls or approved equal.

.10 Rip-Proof Polyethylene Sheeting: 8 mil (0.20 mm) fabric made up from 5 mil (0.13 mm) weave and two (2) layers of 1.5 mil (0.05 mm) poly laminate or approved equal. In sheet size to minimize on-site seams and overlaps.

.11 Shower Hose: Water lines for supply of hot and cold water to shower facilities to be rated for use at 200 psi (1380 kPa) or twice the working pressure whichever is greater. Supply lines to be continuous and free of fittings, joints or couplings. Acceptable Product: No. 71-92 Daco; as available from MacMor Industries, Winnipeg, Manitoba.

.12 Wetting Agent: Non-sudzing surface active agent. Acceptable product: Aqua-Gro or approved equal.

3.0 EXECUTION

.1 Refer to Section 13083 of the Specification for specified procedures for work area preparation, maintenance, site dismantlement, waste handling, application of lock-down agent and all other procedures for the safe handling, removal and clean-up of asbestos specific to each phase or work area.

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End of Section

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1.0 GENERAL

1.1 General and Related Work

.1 Read this Section in conjunction with all other sections so as to comply with the requirements of Division 1 and the General Conditions of the Contract.

.2 Related work specified elsewhere and procedures to execute the work specified:

Division 2,	Section 02060	Demolition
Division 13,	Section 13080	Asbestos Abatement – General Provisions
Division 13,	Section 13083	Asbestos Abatement – Type 3

.3 The intent of these Specifications is to demolish the existing Utilidors including up to the First Air Nose Dock, Maintenance Garage and the Residence buildings as well as associated piping and transfer shacks.

1.2 Schedule

.1 Provide within ten (10) days after award of Contract, schedule showing anticipated work progress stages.

.2 Contractor will not commence site work until receipt of written permission by the Project Manager to do so.

1.3 Co-ordination

.1 Co-ordinate all work with Transport Canada representative or designee.

.2 Co-ordinate with other Contractors working on the site. Other trades working on the site may include trades performing asbestos removal.

1.4 Existing Conditions

.1 The Utilidors are abandoned and were once used to house electrical and mechanical services for various buildings. The Utilidors are a stand alone structure constructed with metal walls, ceiling and floor. Fibreglass insulation insulates the walls, ceiling and floor. Some sections of the Utilidors are within steel or concrete culverts that run under existing roadway and apron crossings.

.2 Asbestos-containing pipe insulation, culverts and debris are known to be present within and adjacent to the Utilidors. Refer to Section 13080, Asbestos Abatement – General Provisions, for additional information and requirements.

.3 Abandoned mechanical piping and culverts are within and outside of the Utilidors.

.4 Where Utilidors travel to various buildings, a transfer shack is present. Asbestos-containing materials and piping are present within these shacks. These transfer shacks form a part of the Utilidors and are included in the scope of the work.

.5 The Utilidors are situated on Iqaluit Airport property.

.6 Portions of the Utilidors are located within existing drainage ditches and are subject to flooding. Flowing water is also known to be present under sections of Utilidors running under roadways and apron crossings.

.7 Utilidors running under sections of roadway and apron crossings are within steel or concrete culverts.

2.0 SCOPE OF WORK

2.1 General

.1 Investigate site and structures to determine dismantling, processing and storage logistics required prior to commencement of work.

.2 Employ necessary means to assess existing conditions and structures to determine quantity and location of hazardous materials.

.3 Develop strategy for demolition to facilitate optimum salvage of reusable and recyclable materials.

.4 Prepare and provide copies to the engineer a detailed safety plan for all work.

.5 Maintain all appropriate signage and project controls for the duration of the project.

.6 Locate all underground or aboveground services on or adjacent to property.

.7 Do not disrupt active or energized utilities traversing premises designated to remain operational.

.8 Remove hazardous materials and demolish existing Utilidors in accordance with project specifications.

2.2 Waste Disposal

.1 Handle waste materials not reused, salvaged or recycled in accordance with appropriate regulations and codes.

.2 All waste materials are to be segregated.

.3 Asbestos-containing materials (ACMs) are to be disposed of at an approved hazardous materials landfill facility outside of Nunavut TerritoryAll other hazardous materials are to be removed off site to an approved hazardous materials handling facility outside of Nunavut Territory. All metals to be slavaged for recycling outside of Nunavut Territory

.4 Other waste to be disposed of at a regulated landfill site.

.5 Burying of rubbish and waste materials on site is prohibited.

.6 Disposal of waste volatile materials, mineral spirits, oil paint thinners, etc., into waterways, storm or sanitary sewers is prohibited.

.7 Fires and burning of waste or materials is not permitted on site.

2.3 Storage Handling

.1 Store and handle hazardous materials and wastes in accordance with applicable Federal and Territorial laws, regulations, codes and guidelines.

.2 Store materials to be reused, salvaged or recycled in locations as directed by the Engineer.

.3 Abide by the following storage requirements for quantities of hazardous materials and wastes in excess of 5 kg for solids and 5 litres for liquids.

.1 Store hazardous materials and wastes in closed and sealed containers that are in good condition.

.2 Label containers of hazardous materials and wastes in accordance with WHMIS.

.3 Store hazardous materials and wastes in containers compatible with that material or waste.

.4 Segregate incompatible materials and wastes.

.5 Ensure that different hazardous materials or wastes are not mixed.

.6 Store hazardous materials in a secure storage location.

.7 Package and store hazardous materials in a manner and location which will prevent them from spilling into the environment.

.8 Have appropriate emergency response equipment available near the storage area, including personal protective equipment.

.9 Maintain an inventory of hazardous materials and wastes, including product name and quantity.

.4 Ensure personnel have been trained in accordance with Workplace Hazardous Materials Information System (WHMIS) requirements.

.5 Report spills or accidents immediately to the Engineer. Submit a written spill report to the Engineer within 24 hours of incident.

.6 Unless otherwise specified, salvaged or recyclable materials are the possession of the Demolition Contractor and are to be removed off site at completion of work.

.7 On-site sale of salvaged materials is not permitted.

.8 Separate non-salvageable materials from salvageable materials. Transport and deliver non-salvageable materials to licensed disposal facility.

2.4 Site Remediation

.1 At the completion of demolition activities and the removal and disposal of demolished debris, clean up all other debris and landscape area to match existing. No wood, drywall, steel, concrete or other miscellaneous demolition debris is allowed.

.2 Reinstall tops of steel culverts under roadways after demolition of Utilidors, replace overburden from roadway and apron crossings and compact to 90% Standard Proctor density.

.3 Work involving the concrete Utilidor under taxiways and road crossings will have to be coordinated with Airport and Civil Works Contractor.

2.5 Supervision

.1 Provide on site, an Overall Superintendent, with authority to oversee all aspects of the work, including but not limited to, estimating and negotiation of changes to the contract, update of submission requirements, scheduling, manpower and equipment requirements, and direct communication and co-ordination with Transport Canada representative.

.2 Replace supervisory personnel, with approved replacements, within three (3) working days of a written request from the Project Manager. Project Manager reserves the right to request replacement of supervisory personnel without explanation.

2.6 Regulations

.1 Comply with Federal, Territorial, and local requirements, provided that in any case of conflict among those requirements or with these Specifications the more stringent requirements shall apply. Work shall be performed under regulations in effect at the time work is performed.

.2 Perform all work in accordance with all provincial health and safety regulations as set out by the territory of Nunavut

2.7 Permits

.1 Obtain all permits required for the disconnection of services, demolition, and site restoration from all authorities having jurisdiction.

2.8 Submittals

.1 Submit prior to starting work:

.1 Necessary permits for transportation of all wastes specified in this Contract.

.2 Names and credentials of the Overall Superintendent.

.2 Submit Worker's Compensation Board status and transcription of insurance.

.3 Proposed schedule of work showing:

.1 Duration of asbestos abatement, demolition, and restoration work.

.4 Location of all waste disposal sites to be used for work of this Contract.

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END OF SECTION

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1.0 GENERAL

1.1 General and Related Work

.1 Read this Section in conjunction with all other sections so as to comply with the requirements of Division 1 and the General Conditions of the Contract.

.2 Related work specified elsewhere:

Division 2,	Section 02000	Existing Conditions and Scope
Division 2,	Section 02000	Existing Conditions and Scope
Division 13,	Section 13080	Asbestos Abatement – General Provisions
Division 13,	Section 13083	Asbestos Abatement – Type 3

1.2 Existing Conditions

.1 Refer to Section 02000, Existing Conditions and Scope.

.2 Take over structures to be demolished based on their condition on date that Bid is accepted. Reference Section 02000 for Existing Conditions. Structures to be demolished to be based on their condition at time of examination prior to tendering.

1.3 Outline of Work

.1 Refer to Section 02000, Existing Conditions and Scope.

1.4 References

.1 Reference CSA S350-M1980, Code of Practice of Safety in Demolition of Structures.

.2 Canadian Federal Legislation:

.1 Canadian Environmental Protection Act (CEPA) 1998.

.2 Canadian Environmental Assessment Act (CEAA) 1995.

.3 Transportation of Dangerous Goods Act (TDG Act) 1992, (T-19.01).

.4 National Fire Code of Canada.

.5 Transportation of Dangerous Goods Regulations (TDGR), (SOR/85-585, SOR/85-609, SOR/86-526).

1.5 Protection

.1 Take precautions to guard against movement, settlement or collapse of adjacent services, sidewalks, roadways or driveways. Be liable for such movement, settlement or collapse caused by failure to take necessary precautions. Promptly repair such damage.

.2 Maintain and protect active site services.

.3 Prevent erosion of existing site soils to areas outside of contract limits. Prevent eroded soils from entering on-site or adjacent catchbasins, drainage systems, sumps, pits, etc.

.4 Keep public roadways and sidewalks clean of mud, soil, debris and garbage. Wash tires of all vehicles leaving the site as necessary.

.5 Ensure demolition work does not adversely affect adjacent watercourses, groundwater and wildlife.

2.0 EXECUTION

2.1 Preparation

.1 Before commencing work, establish location and extent of existing services and utilities, above and below ground at the site. Disconnect existing services and utilities at locations entering any buildings.

.2 Whenever it is necessary to cut, interfere with, or connect to existing services or facility, do so at hours and times recommended by governing authorities and approved by Project Manager, and with minimum disturbance to occupants, pedestrian and vehicular traffic and public and private property. Obtain written permission and permits from applicable utility.

.3 If unknown services are encountered, immediately notify the Engineer and confirm findings in writing and/or on drawings. Obtain Engineer's written direction if such services require cutting, capping or relocation to do the work.

.4 Do not disrupt active or energized utilities designated to remain undisturbed.

2.2 Demolition

.1 Prior to the start of any demolition work, remove and dispose of contaminated or hazardous materials (ie. asbestos) prior to any demolition activities.

.2 Remove all piping and culverts. Culverts running under the roadways to the buildings can remain in place.

.3 At locations where Utilidors terminate at buildings, cut and cap all services. Where Utilidors enter the building, demolish Utilidors to the underside of the floor of the building and restore floor to match existing conditions.

.4 Demolish entire Utilidor structure including spurs to the Federal Residence Building, the Maintenance Garage and First Air's Nose Dock. Include all associated piping, insulation and any other non-hazardous materials.

.5 Provide areas as approved by the Project Manager for collection and storage of reused, salvaged or recycled materials.

.6 Notify in writing of any materials identified as not suitable for disposal. Provide written reasons prior to approval for disposal.

.7 Demolish to minimize dust generation. Keep materials wetted. Dust suppression methods must meet the approval of the Engineer. Keep all materials contained in defined work area. Do not allow materials to migrate to other areas of the Airport property.

.8 Do not perform exterior demolition work during high winds that could cause dust or debris to blow off-site.

.9 Contain all fibrous materials (ie. cellulose or fiberglass insulation) to minimize release while being handled or transported.

.10 Remove stockpiled materials as directed by the Engineer when it interferes with the operations of the Airport or other construction.

.11 Remove any remaining debris, rubble or crushed material from the site after completion of the work.

.12 At the end of each day's work, leave work area in a safe and stable condition.

.13 Remove tools at completion of work and leave work area in a clean and orderly fashion.

.14 Blasting operations not permitted during demolition.

.15 Do not sell or burn materials on-site.

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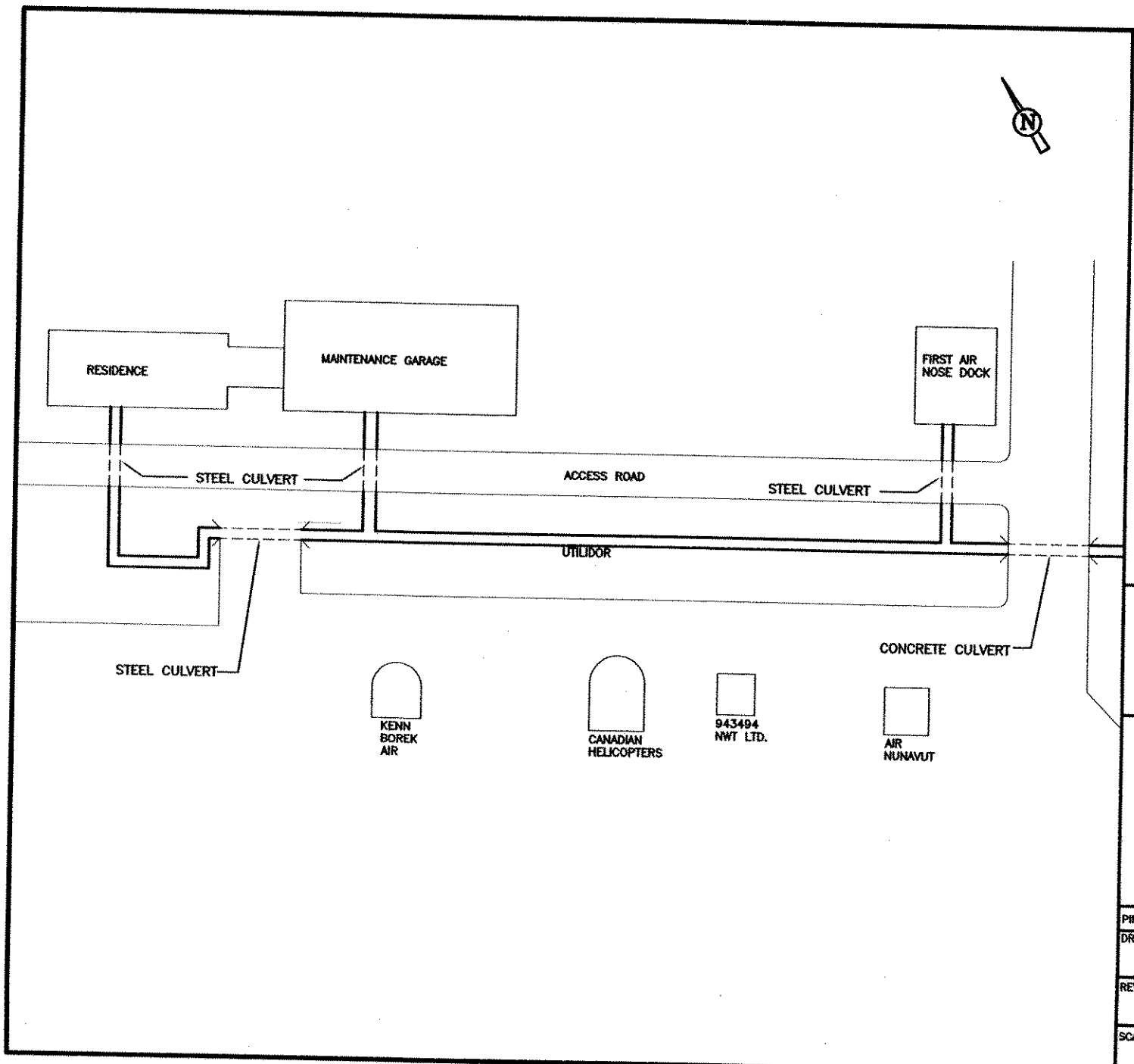
END OF SECTION



LEGEND

PINCHIN
ENVIRONMENTAL
172 MARION STREET, WINNIPEG, MANITOBA R2H 0T4
PHONE:(204) 452-0983 FAX:(204) 453-0788

IQALUIT AIRPORT UTILIDORS ASBESTOS ABATEMENT & DEMOLITION

SITE PLAN INDICATING LOCATION OF UTILIDORS

PINCHIN PROJECT NO. 30636	
DRAWN BY: BA	DATE: 09/06/05
REVIEWED BY: VD	CLIENT: TRANSPORT CANADA
SCALE: NTS	DRAWING NO.: 1