



Review of the Federal Infrastructure Investments Program

Final Report - September 2016

1850-3-004 (ADM(RS))

Reviewed by ADM(RS) in accordance with the *Access to Information Act*. Information UNCLASSIFIED



Acronyms

ADM(IE)	Assistant Deputy Minister (Infrastructure and Environment)
ADM(RS)	Assistant Deputy Minister (Review Services)
CAF	Canadian Armed Forces
DND	Department of National Defence
FIIP	Federal Infrastructure Investments Program
FY	Fiscal Year
PMO	Program Management Office



Statement of Conformance

The review followed the Institute of Internal Auditors' *International Standards for the Professional Practice of Internal Auditing*. Based on its professional judgment, the review team examined sufficient, relevant evidence and obtained sufficient information to provide a reasonable level of assurance to support the review's conclusions.



Background – FIIP

In November 2014, the Government of Canada announced a \$5.8 billion investment in infrastructure across Canada as part of the Federal Infrastructure Investments Program (FIIP).

- A similar program with limited timeframes was delivered as part of the Economic Action Plan Budget 2009 (see Annex B for highlights of this plan); also, the Auditor General of Canada provided observations and lessons learned in Fall 2010 and 2011.
- The Department of National Defence (DND) did not receive infrastructure funds from the 2009 Economic Action Plan.

DND was awarded \$452 million to spend within a two-year timeframe to repair and upgrade infrastructure in fiscal years (FY) 2015/16 and 2016/17.

- The FIIP was approved February 2015.
- Any yearly unspent allocations must be returned, unless further approved:
 - \$39 million carry forward from Year 1 to Year 2 was approved through Annual Reference Level Update and a further \$11 million is planned to allow for a total of \$50 million of unspent Year 1 funds to be consumed in Year 2.

The Canadian Armed Forces (CAF) and DND have a pre-existing capability to maintain infrastructure across Canada that includes approximately:¹

- 21 000 buildings;
- 2.25 million hectares of land (almost four times the landmass of Prince Edward Island);
- 5500 kilometres of roads (roughly the distance between Calgary and Halifax); and
- 3000 kilometres of water, storm and sewer pipes (roughly the distance between Ottawa and Saskatoon).

1. <http://www.forces.gc.ca/en/business-infrastructure/projects.page>. Last consulted on March 29, 2016.



Background – FIIP

Other departments/agencies² that received funds included the following:

- Parks Canada – \$2.8 billion
- Indigenous and Northern Affairs Canada – \$500 million
- Transport Canada
 - Federally owned airports and VIA Rail – \$204 million
- Canada Border Services Agency – \$440 million
- Public Services and Procurement Canada and custodian departments – \$400 million
- Natural Resources Canada – \$380 million
- Fisheries and Oceans Canada
 - Repair and maintenance of small craft harbours – \$288 million
 - Repair and procurement of vessels and small craft for Canadian Coast Guard and Fisheries and Oceans Canada – \$183 million
- Canadian Heritage – \$191 million

2016 Budget: DND will receive an additional \$200.5 million for infrastructure over two years.

- This includes \$50 million to upgrade/construct military housing across Canada.
- Funding will also address airfields, ramps and armouries.

2. In some instances, funding is split between multiple organizations. In those instances the departments/agencies listed are the primary recipients of the funds.



Background – FIIP Context

Rapid FIIP timeline from announcement to program start: about four months

- November 24, 2014 announcement → February 2015 approval → April 1, 2015 start

At the same time as the FIIP implementation, Assistant Deputy Minister (Infrastructure and Environment (ADM(IE))) has been transitioning DND real property management from multiple custodians to one. This responsibility was centralized in April 2016, thus making ADM(IE) the single real property custodian for the entire department.

During the Assistant Deputy Minister (Review Services) (ADM(RS)) review, the frameworks for governance, risk management and internal controls were concurrently being developed. The FIIP Program Management Office (PMO) worked collaboratively with the review team and addressed some areas of concern during the review period.

- As it matured, the PMO provided documentation to the ADM(RS) review team, while rolling out the implementation of the FIIP.



Background – FIIP Overview

DND has 92 FIIP projects funded under four envelopes:

Envelopes	Number of Projects	Allocation (\$ million)
Health and Safety	27	68.7
Support of CAF Military Operations	19	88.4
Support to Reserves	15	135.8
Support to Troops and Military Families	31	159.3
Total	92	452.2

Table 1. Allocation by Envelopes. This table shows the number of projects and their funds allocation under each of the four envelopes.

Custodians	Number of Projects	Allocation (\$ million)
Canadian Forces Housing Agency	12	102.8
Canadian Army	32	188.9
Royal Canadian Air Force	28	77.5
Real Property Operations – ADM(IE)	20	83.0
Total	92	452.2

Table 2. Allocation by Custodians. This table shows the number of projects and their funds allocation under each of the four custodians.



Background - FIIP Project Schedule

Updates to FIIP Steering Committee – April 2016

Project Status	December 2015 Update	April 2016 Update
Projects in options analysis	2	0
Projects in definition	19	10
Projects in implementation	68	72
Projects completed	3	10

Table 3. Number of Projects per Phase. This table shows the number of projects in each project phase as of December 2015 and April 2016.

Project Completion	As per Initial Allocation	Actual Completed
Identified for completion by 2015/16	24	10
Identified for completion by 2016/17	68	Not yet applicable
Total	92	Not yet applicable

Table 4. Completed Projects. This table shows the actual number of projects completed per fiscal year compared to the expected number of projects to be completed per fiscal year.



Rationale, Objective and Criteria

Rationale

- March 2015 Director General Portfolio Requirements met with Director General Audit to discuss ADM(RS) role in the FIIP.
- The FIIP was added to the ADM(RS) Risk-Based Internal Audit Plan for FYs 2015/16 to 2017/18.

Objective

- To determine whether the governance, risk management, and internal controls are in place for the implementation of the FIIP 2015.

Criteria

- An appropriate governance structure is in place to manage the FIIP.
- Risks related to the FIIP are managed in accordance with departmental policies and guidelines.
- There are appropriate internal controls in place to execute the FIIP.



Scope and Methodology

Scope

- FIIP 2015 activities from Prime Minister's announcement in November 2014 until March 2016
 - Scope exclusion: Project selection process

Methodology

- Reviewed information for 12 sampled projects – \$106 million (23% of total DND FIIP).
- Interviewed stakeholder staff from ADM(IE), Canadian Army, Royal Canadian Air Force, Canadian Forces Housing Authority, Defence Construction Canada, and Vice Chief of the Defence Staff.
- Briefed clients on observations to obtain their feedback: November 2015 and February/March 2016.



Sample Selection

Project	Location	Project Value (\$ million)
Health and Safety		
Roofing and Brick Siding Advanced Deterioration Due to Water Infiltration	St-Jean, Quebec	4.9
Citadelle de Québec Critical Infrastructure Repair and Mould Remediation	Québec City, Quebec	11.3
Road Works (Sewer and road replacements)	Winnipeg, Manitoba	6.6
Support to CAF Military Operations		
Ammunition Transit Facility	Borden, Ontario	12.5
Hangar Repairs - Critical Infrastructure Rehabilitation	Winnipeg, Manitoba	5.5
Airfield Repairs - Critical Infrastructure Rehabilitation	Moose Jaw, Saskatchewan	9.9
Support to Reserves		
Armouries in Ontario, Area 1	Timmins, Ontario	2.5
Armouries in Ontario, Area 1	Sault Ste-Marie, Ontario	2.5
Support to Troops and Military Families		
Health Care Facility - Canadian Forces Base Cold Lake	Cold Lake, Alberta	13.9
Addition to the Wainwright Health Services Centre to Improve Dental Services	Wainwright, Alberta	4.4
Military Housing - Housing Recapitalization	Cold Lake, Alberta	16.0
Military Housing - Housing Recapitalization	Gagetown, New Brunswick	16.0
Total		106.0

Judgemental Sampling

- Selected a sample of 12 high-value projects, which included armouries, airfields and housing.
- \$106 million (23% of total FIIP)

Table 5. Sampled Projects. This table shows the sample of projects selected out of the 92 FIIP projects for further review. The table details the projects by envelope, location and value.



Summary of Results

Criteria	Areas Examined	Rating
Governance	Appropriate resources	○
	Roles and responsibilities	●
	Project approval process	●
	Oversight bodies – FIIP Steering Committee	●
Risk Management	Risk management practices	○
Internal Controls	Necessary tools and information for decision making	○
	Program schedule	○
	Funds allocation and payment	●
	External stakeholders	●
	Contingency and mitigation for price increases	●

● Acceptable
○ Need to continue development in these areas

Table 6. Summary of Results. This table shows the rating given for each area examined under the three criteria during the review.



Governance

① Appropriate Resources

- ✓ Good Practice: Additional internal resources were allocated to bases/wings that experienced increases in value/number of projects from FY 2014/15 to FY 2016/17.
- PMO is not staffed as planned:
 - Established for one program lead, three program managers and one finance manager.
 - Third program manager vacancy was filled in March 2016.
 - Finance manager position was recently vacated.

● Roles and Responsibilities

- ✓ Roles and responsibilities are clear and communicated.
 - The PMO is fulfilling the responsibilities listed in the program approval documentation and the PMO roles and responsibilities documents.



Governance

● Project Approval Process

- Project approval process needed to be modified and those changes approved to accommodate the increased Delegation of Authority and the FIIP timelines.
 - Increase in Delegation of Expenditure Authority for ADM(IE) obtained in July 31, 2015.
 - ADM(IE) now approves Vote 5 projects up to \$15 million, and it modified its project approval processes for projects within its authority.
 - Deputy Minister approval was obtained on Feb 18, 2016 for the modified project approval process to support the increase in delegation of authority.

● Oversight Bodies – FIIP Steering Committee

- ✓ Good Practice: FIIP Steering Committee exists for program oversight. FIIP Steering Committee chair is ADM(IE) --- the level of authority of an assistant deputy minister will allow for quick decisions to be made for the FIIP.
 - Committee meets every four months.
 - Core membership: directors general from Vice Chief of the Defence Staff and Environmental Chiefs of Staff, as well as various ADM(IE) representatives.



Risk Management

○ Risk Management Practices

Some concerns regarding the risk register and the risk management plan were addressed during the review.

- Projects report issues, but not risks to the program.
 - Project risks that could impact on clearly defined program success criteria should be elevated to the PMO for consideration.
- Program Risk Management Plan is not clear on what type of issues or risks the projects have to report to the PMO. It states the following:
 - Issues (not risks) are reported.
 - Issues and risks that are not resolved locally (base/wing level) are reported.
 - All project risks assessed as medium or high level are escalated to the PMO.



Risk Management

- The risk register only includes two active risks and does not include requirements from the Integrated Risk Management Guidelines, such as the following:
 - Probability
 - Impact
 - Risk treatment
 - Residual risk
 - Mitigation strategies are in place for each risk but are very high level:
 - Specific actions are not documented and no timelines have been provided.
- ✓ Risks, probability, impact and mitigation strategies are reported to senior management in dashboards and in the FIIP Steering Committee deck.
 - Issues and issue mitigation strategies are discussed at the FIIP Steering Committee as per meeting minutes.
- Cannot determine if risks/issues are discussed at FIIP management meetings as no meeting minutes are available.



Internal Controls

① Necessary Tools and Information for Decision Making

- ✓ Good Practice: Only four people can change the information in the program database.
- ✓ Good Practice: There are controls in place to support data integrity (i.e., updates are traceable).
- ✓ Information flows from projects to the PMO, as per program database.
- Performance Measurement Reporting
 - Performance Management Plan standard operating procedures exist.
 - Clarity with respect to reporting frequency and audience of reports is required.
 - Not all indicators are reported.
- Data Integrity
 - Discrepancies were observed in the program database.
 - For two out of the twelve sampled projects, there is a difference in the fund allocation/phasing according to project information vs. program database.
 - Of the twelve sampled projects, two had an incorrect completion date.
- Funds Allocation
 - Of the twelve sampled projects, three had greater amount spent + amount committed than the FY 2015/16 allocation.



Internal Controls

● Program Schedule

- Risk of unspent funds at end of Year 2 – \$39 million (8.6%) carry forward from Year 1 to Year 2.
- Key interim milestones for each project are not contained in the program database.
- At time of review, only 30% of planned FY 2015/16 expenditures were spent in first 8.5 months (71% of time).
- ✓ Based on interviews with PMO and sampled project managers, the two-year timeframe for the FIIP program is achievable.

Note: Preliminary Year 1 data as of May 2016, indicates DND is spending 77% of its initially planned Year 1 funding.

- Comparing actual funds spent with other departments' FIIP programs did not yield useful results as this information is not being tracked in a comparable manner in the departments we contacted. As well, this information is not reported centrally to the Treasury Board Secretariat in a coordinated approach that is readily available.



Internal Controls

● Funds Allocation and Payment

- ✓ To ensure payments are for completed work, Section 34 process is in place, work is verified locally, and Canadian Forces Housing Authority construction is repetitive, thereby reducing chances of anomalies.

● External Stakeholders

- ✓ External stakeholders' involvement has been considered for the sampled projects.
 - These are other government departments, such as Public Services and Procurement Canada and Defence Construction Canada.

● Contingency and Mitigation for Price Increases

- ✓ Contingency has been set aside in individual projects should the project's risks warrant it.
- ✓ Price increase for trades had been monitored and is a closed risk.



Conclusions and Recommendations

- Based on the results of the review, the Department has considered and developed a number of controls, governance, and risk management processes to implement the FIIP. However, there are indications that not all the allocated funding will be spent, and continued development in the following areas will help ensure successful implementation of this initiative:
 - **Internal Controls:** While there are controls in place to maintain the integrity of data in the program database, and there is frequent flow of information from the projects to the program, improvements are required to better monitor project completion status, performance measurement reporting/tracking, and accuracy of the program database.

Recommendation 1

ADM(IE) should do the following:

- Continue to monitor the schedule to ensure funding can be expended by requesting that projects report interim milestones in achieving project completion;
- Ensure performance metrics are relevant and reported; and
- Ensure the program database is up to date, complete and accurate.

OPI: ADM(IE)



Conclusions and Recommendations

Risk Management: While risks and mitigation strategies are reported to senior management and captured in a program risk register, the PMO risk management practices may not be effective in identifying emerging risks.

Recommendation 2

PMO should ensure risk management practices continue to develop and risk information is updated, documented and reported; and ensure project risks that could affect the program are elevated and mitigated.

OPI: ADM(IE)

Governance: The PMO staff are aware of their roles and responsibilities. However, the PMO is not fully staffed to perform all activities in a timely fashion. A FIIP project approval process for projects of \$5-15 million was developed by key stakeholders and approved in February 2016. No FIIP projects affected by the change in process were approved prior to February 2016.

Consideration: It is suggested that efforts continue to staff the PMO vacancy.



Annex A—Management Action Plan

Recommendation 1

ADM(IE) should do the following:

- Continue to monitor the schedule to ensure funding can be expended by requesting that projects report interim milestones in achieving project completion;
- Ensure performance metrics are relevant and reported; and
- Ensure the program database is up to date, complete, and accurate.

OPI: ADM(IE)

Management Action Plan	Target Completion Date
Monitoring of the 92 projects continues in Year 2 of the FIIP program. Every project manager was contacted at the end of Year 1 to review the Year 2 forecast, and to identify any road blocks, issues, and reasons for delays. In addition, for major construction projects, a detailed monitoring table is completed by the Program Manager/Program Director at every ADM(IE) financial trimester exercise for validation of milestone completion, and mitigation planning if there is a risk of delay. This monitoring table includes planned and actual dates for milestones, which allows identification of potential project timeline slippage to be addressed with the project manager or project director. Lastly, a project completion percentage has been added to the monitoring reports which will be sent at every trimester in Year 2 of the Program, which, upon receipt, is compared to other milestones such as contract tender, contract award and expenditures. These are used for validation of progress and identification of risks related to completion of projects.	June 2016
The performance management metrics were developed at the beginning of the Program with the information available at that time. Performance indicators include project health, actuals and expenditures, tenders, portion of project completed, and service delivery indicators, with specific targets identified for each indicator. At the Program mid-point, the PMO will reassess targets against each indicator and modify as necessary. The specific audience for each remit will be added to this matrix.	June 2016
Some discrepancies may have been present in the Program database, internally and exclusive to the PMO, due to resource constraints. Priority has been placed on ensuring documents for reporting were up to date and accurate. There are pending human resources staffing actions to augment the PMO to ensure regular updates to the database are performed. Once hired, the new staff will be responsible for weekly database updates.	June 2016



Annex A—Management Action Plan

Recommendation 2

PMO should ensure risk management practices continue to develop and risk information is updated, documented and reported; and ensure project risks that could affect the program are elevated and mitigated.

OPI: ADM(IE)

Management Action Plan	Target Completion Date
<p>Per the FIIP Risk Management Plan, risks are identified, analyzed and managed by the PMO. Risk information is updated, documented and reported as follows:</p> <ul style="list-style-type: none"> • The issues and risks are tracked, monitored and reported throughout the Program lifecycle. • All project change requests are analyzed for their possible impact on Program risks. • Specific actions have been documented for mitigation strategies in the risk register, and a timeline will be added in Year 2. 	June 2016
<p>Risks are added to the risk register and to the monthly Program Executive Dashboards. They are subsequently reported and discussed monthly at the director general level and at FIIP Management Committee meetings, as well as reported at FIIP Steering Committee meetings every four months using a standard briefing deck. Issues and mitigation are added to the issue log and risk register.</p> <p>Every quarter, a project status report had been requested by the PMO for each project. Now that real property custodianship has been centralized under ADM(IE), the Real Property Operations Group plays an oversight role on ADM(IE) infrastructure programs. This will be done on a monthly basis by the Group, who will send the monitoring template to regions, who will in turn send them to the bases and wings. As of April 2016, a request to list risks in the same reporting table has been added to the initial issues and mitigation request.</p> <p>The status of each project is indicated in the database using the rating system: green – on track; yellow – monitoring required; or red – course correction required. This report is reviewed monthly by the Director General Portfolio Requirements. The PMO will develop leading indicators of risk to program fulfillment for monitoring and reporting for the remainder of the Program. Examples of these leading risk indicators will be aligned to the milestone dates requested from the project manager or project director.</p>	July 2016



Annex B

Key Highlights from Canada's Economic Action Plan – Budget 2009⁴

- \$47 billion (additional \$14 billion funded by the provinces and territories).
 - The Plan was initiated to respond to the economic downturn by increasing government spending.
 - The goal was to create jobs, stimulate spending by Canadians, accelerate housing construction, build infrastructure, and support businesses and communities.
- More than 35 federal entities were engaged to deliver close to 90 programs.
 - These were either newly developed, modified or existing programs that received additional funding.
- For most initiatives, funds were available for two years.
 - Any costs incurred beyond March 31, 2011 would not be funded centrally.
- Auditor General of Canada audited the Economic Action Plan in Fall 2010 and 2011.
 - The audits looked at the design and delivery of numerous programs and the compliance to appropriate policies.
 - Fall 2011 report stated that only 70% of the projects had been completed in the two-year timeframe.



Annex B

Key Observations from the Report of the Auditor General of Canada: Canada's Economic Action Plan

- Fall 2010 Economic Action Plan audit (DND not part of the sampled departments):
 - Central agencies accelerated the program design and approval.
 - Departments designed programs to allow for timely implementation.
 - Most programs began implementation in a timely manner. However, some project delays were encountered.
 - Projects funded met program eligibility requirements.
 - Decisions to exempt some projects from environmental assessment were based on insufficient information.
 - Departmental internal auditors provided advice and assurance.
 - Reports were timely but information on job creation was incomplete.
- Fall 2011 Economic Action Plan audit (DND not part of the sampled departments):
 - Federal government monitored the progress and spending of projects. Some projects progressed slower than initially expected.
 - 70% of projects were completed by the March 31, 2011 deadline (some projects were granted an extension based on a central agency analysis).
 - Spending figures as of March 31, 2011 indicated the three programs largely achieved the Economic Action Plan objective within the two-year time frame.
 - Departmental performance reports did not provide an overall picture of Economic Action Plan program performance.



Annex B

Key Lessons Learned from the Report of the Auditor General of Canada: Canada's Economic Action Plan

- Fall 2010 Economic Action Plan audit suggested the following:
 - Review documents for Cabinet committees and submissions for Treasury Board financial approval at the same time.
 - Deliver new programs through existing program and delivery mechanisms.
- Fall 2011 Economic Action Plan audit suggested the following:
 - Project approvals require a detailed project schedule.
 - For large and complex infrastructure projects, engage professionals (engineers, architects) during the approval phase of the projects.
 - Collect timely information (to ensure projects completed as intended, and federal funds allocated are spent).
 - Ensure Parliament obtains an overall picture of Economic Action Plan program performance.