



## BALANCING RESERVE FORCE AND REGULAR FORCE CAPABILITIES WITH REVISED OCCUPATIONAL STRUCTURES

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### **JCSP 47**

## **Service Paper**

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# BALANCING RESERVE FORCE AND REGULAR FORCE CAPABILITIES WITH REVISED OCCUPATIONAL STRUCTURES

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**References:** See Annex A

#### **AIM**

1. The aim of this service paper is to propose an optimization of occupation structures of the reserves to improve the balance of full- and part-time capabilities. This paper will start with an examination of the Primary Reserve (PRes) to bring out salient points relevant to requirements. It will then present a model developed to examine Regular Force (Reg F) production throughputs but used here as a construct to design PRes occupations. Due to space limitations, this paper will focus on non-commissioned occupations.

#### THE PRIMARY RESERVE

- 2. The National Defence Act (NDA) states that there "shall be a component of the Canadian Forces, called the reserve force, that consists of officers and non-commissioned members who are enrolled for other than continuing, full-time military service when not on active service." The Queen's Orders and Regulations (QR&O) 2.03 divides the reserve force into four subcomponents<sup>2</sup> of which the PRes is of significance to this paper. The role of the Reserve Force was described by the government in the 1990s as consisting of three parts<sup>3</sup> that are:
  - a. Augmenting the Regular Force with individuals, small formed bodies of personnel, or specialist skills;
  - b. Providing a mobilization base in times of war or emergency; and
  - c. Serve as a link between the Canadian Armed Forces and communities across the country.
- 3. While the assignment of these roles is dated, they are still found in the mission statement of the Naval Reserve (NavRes) "to generate trained sailors for Canadian Armed Forces (CAF) operations, both domestically and abroad, while at the same time supporting the Navy's efforts in connecting with Canadians through positive interactions in the community"<sup>4</sup> and in the assigned role of the Army Reserve (ARes) to be "a professional part-time force that provides local engagement and a responsive integrated capability, at home or abroad in support of the Army

<sup>&</sup>lt;sup>1</sup> Canada. National Defence Act, R.S.C., c. N-5, s. 15(3) (1985).

<sup>&</sup>lt;sup>2</sup> Canada. National Defence. Queens Regulations and Orders Section 2.03. viewed 01 Feb 21. https://www.canada.ca/en/department-national-defence/corporate/policies-standards/queens-regulations-orders/vol-1-administration/ch-2-government-organization/table-contents.html

<sup>&</sup>lt;sup>3</sup> Canada. Library of Parliament. Political and Social Affairs Division. McDonald, Corinne. *The Canadian Armed Forces: The Role of the Reserves*. 29 November 1999. http://publications.gc.ca/collections/Collection-R/LoPBdP/BP/prb9911-e.htm;

<sup>&</sup>lt;sup>4</sup> Canada. Defence Wide Area Network. Naval Reserve Vision, Mission, and Tasks. Accessed 01 February 2021. http://navres-resnav.mil.ca/office-comd-cabinet-cmdt/mission-vision-roles/index-eng.asp.

mission."<sup>5</sup> The Air Reserve also still references the 1994 Defence White paper for its primary role "to augment, sustain, and support deployed forces" while acknowledging additional roles of providing a mobilization base and connecting with Canadians.<sup>6</sup> The utility of the PRes as a mobilization base for war or even against domestic terrorist has been questioned,<sup>7</sup> but in the face of domestic emergencies the PRes has repeatedly contributed to the mobilization of a CAF response.<sup>8</sup> Therefore, the three roles of the PRes are still relevant and applied today.

- 4. Adding new direction to these roles is Canada's Defence Policy Strong Secure Engaged (SSE) which mandates that the reserve force shall "provide full-time capability through part-time service" while being an "integrated component of the total force" and "ready to contribute to operations at home and abroad." As part of SSE's "full-time capability," PRes are being assigned new roles such as pioneers, mortar operators, cyber operators, and linguists. It is also important to note that SSE calls for military careers to become more flexible and the CAF is directed to make "it easier to transition between full- and part-time military service in order to retain valuable military skills and accommodate changing career paths." Getting "full-time capability through part-time service" must be achieved without violating the statutory obligation that the reserves are not "continuing, full-time military service." For that same statutory obligation, simplifying transition between full- and part-time military service requires simplifying transition between Reg F and PRes.
- 5. The Air Reserve is uniquely set-up to deliver this mandate of facilitating movement between full- and part-time service. It is distinct from the ARes and NavRes because all RCAF units are "total force" units that combine reserve and regular force. <sup>11</sup> This means that in addition to three flying squadrons and four construction engineering flights that are "reserve heavy", the RCAF has Class A PRes positions established through all of its operational units. <sup>12</sup> In contrast, a review of army establishments finds Class A PRes positions only in designated PRes units and in the headquarters that oversee such units. <sup>13</sup> With its unique structure, the Air Reserve "targets occupationally qualified personnel such as former members of the regular force, or civilian candidates whose qualifications equate to those of the required military trades." <sup>14</sup> As a result, the Air Reserve not only generates capability for the RCAF, it also serves as a reservoir to retain capability. Capability retention should be seen as a fourth PRes role, and a role relevant for all

<sup>&</sup>lt;sup>5</sup> Canadian Army Headquarters. *3350-1 (Dir ARes 2), Canadian Army Operation Order – Strengthening the Army Reserve*. 28 June 2016.

<sup>&</sup>lt;sup>6</sup> Canada. Defence Wide Area Network. *Air Reserve Organization*. Accessed 01 February 2021. http://rcaf.mil.ca/en/air-reserve/structure.page.

<sup>&</sup>lt;sup>7</sup> Misha Boutilier. *The Purpose of the Reserve: Mobilization, Augmentation, or Integration?* NATO Association of Canada. 07 March 2014. https://natoassociation.ca/the-purpose-of-the-reserve-mobilization-augmentation-or-integration/.

<sup>&</sup>lt;sup>8</sup> C.H. Marvin, Canada's Army Reserve in a Lead Role within a Whole of Government Approach to Domestic Operations. Toronto, ON: Canadian Forces College, 2014. pg 2-3.

<sup>&</sup>lt;sup>9</sup> Canada. National Defence. Strong, Secure, Engaged. Ottawa: DND Canada. 2017. pg 67-69.

<sup>&</sup>lt;sup>10</sup> Canada. Strong Secure Engaged. pg 22.

<sup>&</sup>lt;sup>11</sup> DWAN Page. Air Reserve Organization.

<sup>&</sup>lt;sup>12</sup> DWAN Site. Director Human Resources Information Management System. *Unit Position Lists Custom Reports*. Accessed 2019. http://img-dcb-ioutpro.forces.mil.ca/engraph/dynamic/poslist/page1\_e.asp?Rep\_Type=1.

<sup>&</sup>lt;sup>13</sup> DWAN Site. Director Human Resources Information Management System. *Unit Position Lists Custom Reports*.

<sup>&</sup>lt;sup>14</sup> DWAN Page. Air Reserve Organization.

environments. With those four roles in mind, it is possible to now consider balancing the force between Reg F and PRes.

#### **BALANCING CAPABILITIES**

- 6. The Reg F requires sufficient capacity to sustainably maintain the high readiness contingency forces that will be first to respond to a national level threat or to an international requirement while also continuing institutional functions (recruiting, training, capability development, etc). As described in the latest version of *Advancing with Purpose*, posturing for concurrent operations cannot be done with the same organization always in high readiness. <sup>15</sup> There must be depth to rotate forces through training, readiness, and employment. We can imagine the first response for a major intervention will likely require a surged theatre activation capability, the core of Canada's mission contribution capability (be that air, land, sea, special operations, or joint) and a support element.
- 7. Once the core requirements of the Reg F are determined, all other capabilities can be balanced between Reg F and PRes according to where they are most sustainably generated and able to achieve a sustainable critical mass for operations. For a significant portion of the PRes, the ability to deliver requisite individual training is a critical path for a capability to be sustainably generated.
- 8. Many new reservists are students in high school, college, or university. Summer break offers an ideal window to complete all training to Operationally Functional Point (OFP) so that the reservist is employable for unit training through the following school year. For the post-secondary student that means a path to OFP of not more than four months and desirably not more than three months to allow for a brigade or division field training exercise (FTX) in August.

The state of		Total	Expected Tr	raining Days
Training Months	Student Audience	Calendar Days	7 day weeks (5 on, 2 off)	14 day weeks (12 on, 2 off)
May-July	Post Secondary with summer FTX	91	65	78
May-August	Post Secondary without summer FTX	122	86	103
July-Aug	Highschool without summer FTX	61	42	51

Table 1: Potential Summer Training Days for Students<sup>16</sup>

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<sup>&</sup>lt;sup>15</sup> Canada. National Defence. Canadian Army. Advancing with Purpose. v4. 2021. pg 31.

<sup>&</sup>lt;sup>16</sup> Average work days per month is calculated without consideration for leave or statutory holidays in accordance with the math demonstrated at this site: https://averages.ca/how-many-working-days-in-a-month/

#### **Achieving Balance with Existing Occupations**

9. A detailed though incomplete map has been developed, by the Basic Training List (BTL) Management Staff in Directorate Military Personnel (D Mil Pers), to show the training path required to get a new Reg F recruit from enrollment to OFP.<sup>17</sup> The general accuracy of the document was confirmed against the qualification standard (QS) and training plan (TP) manuals listed at Annex A.<sup>18</sup> Annex B contains the OFP paths 34 non-commissioned occupations and 11 commissioned occupations. The research of the BTL Management Staff shows that several common support trades as well as many navy and army operator trades can be qualified in 80 to 150 training days (4 to 7 months). However, the technical trades of every environment exceeded 150 days of training and many exceeded 200 training days (10 months). While postal technician and steward are viable to be completely trained during a reserve summer training window, it is unlikely there are other Reg F occupations for which the complete training path can be followed by the PRes. Fortunately, many PRes occupations do not follow the analogous Reg F occupation OFP path.

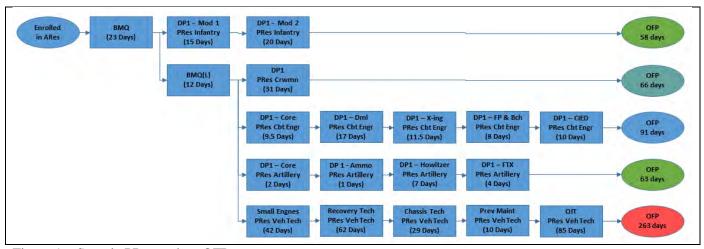


Figure 1 – Sample PRes path to OFP

10. Many PRes occupations have more constrained occupational requirements that can be satisfied by training fewer core functions as compared to the analogous Reg F occupation. Figure 1 depicts an OFP map for five ARes occupations based upon the applicable QS and TP manuals at Annex A.<sup>19</sup> This OFP map is reflective of many ARes occupations already being optimized for student summer training. Infanteer, reconnaissance crewman, and artillery gunner can all be trained in the three months that allows a post-secondary student to complete the full training path and participate in a summer training concentration. These three OFP paths also allow a high school student to achieve OFP by the end of summer provided that basic military qualification (BMQ) is completed on weekends beforehand. The path to OFP for combat engineer is problematic but still fully achievable in a post-secondary summer period provided trainees forgo

 $cmp. forces. mil. ca/sites/MPG/PERSGEN/PERSGEN_Documents/Production \% 20 Planning \% 20 Vs \% 20 LOO \% 201-2\% 20 Vs \% 20 BTL \% 20 Mgt. pptx.$ 

<sup>&</sup>lt;sup>17</sup> Canada. National Defence. Basic Training List Management Staff. *Production Planning vs BTL Management Presentation*. Draft. Accessed 30 January 2021. https://collaboration-

<sup>&</sup>lt;sup>18</sup> See Annex A, references M through MM

<sup>&</sup>lt;sup>19</sup> See Annex A, references M-S, NN, and PP.

a summer FTX with their parent formation. The OFP path for vehicle technician is completely unachievable by a post-secondary student in a single summer even if BMQ is achieved in the preceding school year and on-job training (OJT) is conducted through the ensuing school year.

11. Not only is the vehicle technician OFP path unachievable with a unique PRes plan, some occupations do not have PRes training paths. Examination of the apprentice level QS and TP for Construction Technician (Const Tech), Electrical Generation Systems Technician (EGS Tech), Electrical Distribution Technician (ED Tech), Plumbing and Heating Technician (PH Tech), Refrigeration and Mechanical Technician (RM Tech), and Water, Fuel, and Environmental Technicians (WFE Tech) shows that the PRes training path for these occupations is the same as the Reg F training path. Despite the existence of four PRes heavy construction engineering flights, none of these trades can be trained without continuous full-time employment because these occupations can take anywhere from 180 to 290 training days to reach OFP, as shown in Annex B. Either these skills should be removed from the PRes, or a new way to generate these skills is required.

#### **Achieving Balance with New Occupations**

- 12. An examination of various occupation specifications with the Canadian Armed Forces Military Employment Structure<sup>20</sup> provides another possible mechanism for generating specialized skillsets within the PRes. Most occupations contain a single Reg F occupation and a matching PRes occupation though a few occupations are divided into Reg F sub-occupations with matching PRes occupations, and still a few others have only one Reg F occupation but a few PRes sub-occupations. Several older specifications also contain a list of sub-occupations specific to the Special Force, and most specifications contain a list of comparable civilian occupations. The very purpose of the Special Force sub-occupations was to allow for focused, quick training to prepare a recruit for a very narrow range of employment. Adopting a narrower focus for some reserve occupations could allow for the viability of more technical skills in the PRes as well as direct entry of skilled recruits.
- 13. The civilian equivalencies and all-component sub-occupations for 16 occupations have been compiled at Annex C based on the applicable occupation specification. <sup>21</sup> It can be seen from this that the construction trades each contain a broad range of skills to meet CAF employment requirements, but which do not conform to civilian occupations. The Const Tech is a mix of carpenter, bricklayer, drywaller, and more. The PH Tech is a mix of heating, ventilation and air conditioning (HVAC) technician, plumber, and gas fitter. If military occupations can be broken into sub-occupations (or even sub-sub occupations) that align with civilian trades, then it becomes possible to establish direct entry paths to bring skilled personnel into the PRes and make them available for operations.
- 14. More focused sub-occupations can not only make technical trades viable in the PRes, they may also make specializations viable. Instead of trying to produce reservists who are both

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<sup>&</sup>lt;sup>20</sup> Canada. National Defence. A-PD-055-002/PP-001 The Canadian Armed Forces Military Employment Structure. Volume 2 Occupational Specifications, Part 1 Officer Occupations. Various Dates; Canada. National Defence. A-PD-055-002/PP-002 The Canadian Armed Forces Military Employment Structure. Volume 2 Occupational Specifications, Part 2 Non-Commissioned Member Occupations. Various Dates.
<sup>21</sup> Ibid

infanteers and mortar operators or both infanteers and pioneers (and to annually maintain the skills of both the core occupation and the specialization), it may be more viable to divide these into sub-occupations that will allow specific focus on skill sets. In an analysis of optimizing engineer establishments, 1 Combat Engineer Regiment (1 CER) concluded that the ability of PRes combat engineers to field formed groups for international operations was inadequate to differences in the level of individual training. That same analysis also suggested PRes combat engineers might be well suited to focusing on the tasks of pioneers, bridging or support to the enhanced route opening capability (EROC). To illustrate this hypothetical OFP paths have been created, using applicable QS and TP, and TP, are figure 2 for infantry pioneers, infantry mortar operators, combat engineer pioneers, combat engineer bridgers, combat engineer EROC supporters, and artillery mortar operators.

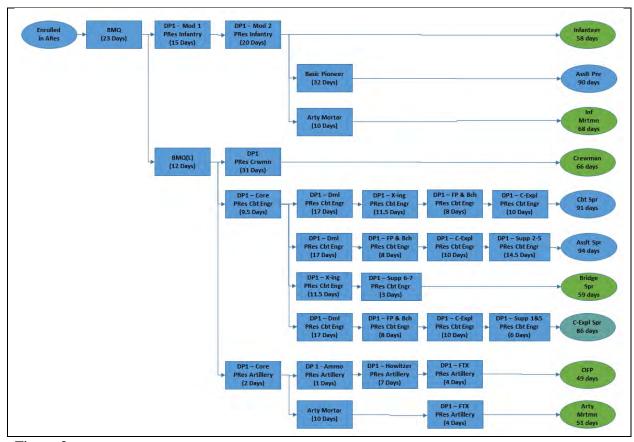


Figure 2: PRes path to OFP with hypothetical sub-occupations

15. The infantry course structure as documented in the applicable QS and TP<sup>24</sup> does not lend itself to offering a shortened path to training a sub-occupation. However, the artillery gunner path (49 days) and hypothetical artillery mortar operator path (51 days) demonstrate the potential through sub-occupations to introduce more skillsets into the PRes without expanding training

<sup>&</sup>lt;sup>22</sup> Canada. National Defence. 1 Combat Engineer Regiment. *1901-1(DCO) Analysis for the Optimization of the Engr Reg F Establishment*. 07 Jan 2019. pg 9-10

<sup>&</sup>lt;sup>23</sup> See Annex A references M to S, and RR to WW.

<sup>&</sup>lt;sup>24</sup> Canada. National Defence. A-P3-002-000/PG-B01 National Defence Qualification Standard and Training Plan DP1 Infanteer. 03 Nov 2020.

windows. The hypothesis that PRes CERs might be able to mission focus on supporting EROC is supported by this OFP model, as is the possibility of bridging sappers. Finally, we see that pioneers are not suited to generation in the PRes due to a long path to OFP and so that capability should probably be generated from the Reg F.

16. Unfortunately, development of a similar hypothetical OFP map for technical sub-occupations cannot readily be done from QS and TP manuals. Experts of these technical occupations need to potentially operationally-relevant sub-occupations through consideration of old Special Force sub-occupations and related civilian occupations. The training path then needs to be estimated to decide if such sub-occupations are viable to be generated in the PRes based on potential student summer training windows. These maps should not stop at OFP. The drafters of the Reg F OFP maps observed that these could be extended beyond OFP to show a full career progression in a "skills tree." The PRes career map should be plotted out to four years, consistent with government commitment to four years of full-time summer employment for new reservists, <sup>26</sup> to see that a journeyman level qualification can be achieved.

#### **Occupations to Capture Latent Potential**

17. Desirably, PRes sub-occupations are designed more closely to civilian career paths than to past Special Force occupations. Many professionals and skilled tradespersons join the PRes to do something different than their full-time civilian occupation. Despite that, these members' civilian occupations may provide more value to the CAF and the members may be willing to perform those jobs on operations.

#### **CONCLUSION**

18. A new approach to PRes occupations can improve the CAF balance of capability by shifting generation responsibilities to the Reg F for skills the PRes cannot sustainably develop while increasing PRes responsibilities for those skills they can produce. More technical occupations can be made viable in the PRes by developing sub-occupations that are more narrowly focused, and new specializations can be made viable by introducing them to the PRes as sub-occupations instead of being specializations.

#### RECOMMENDATION

- 19. The following general recommendations are made:
  - a. Complete occupation maps to the journeyman level for all existing PRes occupations, sub-occupations, and mission-tasked specializations then identify any path that cannot viably generate a service member qualified to OFP (less any OJT requirements) by the end of one summer and identify any path that cannot viably generate a qualified journeyman (less any OJT requirements) by the end of four years of FTSE.

<sup>&</sup>lt;sup>25</sup> Basic Training List Management Staff. *Production Planning vs BTL Management Presentation*. Slide 17.

<sup>&</sup>lt;sup>26</sup> Canada. Strong Secure Engaged. pg 9

- b. For all non-viable paths, convene the appropriate experts to determine if the occupation can be split into one or more sub-occupations that remain operationally relevant while being achievable in FTSE. Where this cannot be achieved, remove the occupation as an entry option in the PRes.
- c. Identify new sub-occupations or sub-sub occupations that can be used as secondary occupations to allow the CAF to employ PRes members in areas where they hold professional certifications and licencing.
- d. To facilitate skill retention and movement between components, allow Reg F members to retain Reg F occupations on transfer to the PRes until such time as they are required to take a PRes career course for progression.
- e. Create Class A positions Combat Training Centre schools and Division Training Centres to provide a flexible work cadre that supports the total force while retaining critical skills.
- 20. The following specific recommendations are made:
  - a. Create a sub-occupation for PRes mortar operators.
  - b. Ceate a sub-occupation for PRes pioneers or migrate this capability to the Reg F.

#### **Annexes**:

Annex A - References.

Annex B - Regular Force OFP Maps

Annex C – Selection of Component Specific Occupations

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- TT. Canada. National Defence. A-PG-002-000/PG-001 National Defence Qualification Standard and Training Plan Infantry Advanced Mortar. Ottawa: DND Canada. 02 Nov 2020
- UU. Canada. National Defence. A-P9-002-S13/PG-B01 National Defence Qualification Standard and Training Plan Basic Assault Pioneer. Ottawa: DND Canada. 03 December 2020.
- VV. Canada. National Defence. A-PD-002-APC/PG-B01 National Defence Qualification Standard and Training Plan Assault Pioneer Commander. Ottawa: DND Canada. 02 Nov 2020
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  - a. Construction Engineering Occupation. 10 June 2010.
  - b. Engineer Officer Occupation. 06 November 2017.

- YY. Canada. National Defence. A-PD-055-002/PP-002 The Canadian Armed Forces Military Employment Structure. Volume 2 Occupational Specifications, Part 2 Non-Commissioned Member Occupations. Ottawa: DND Canada. Various Dates.
  - a. Combat Engineer. Change Unknown. 06 November 2017.
  - b. Construction Engineering Superintendent. Change 5. 21 August 2019.
  - c. Construction Technician. Change 6. 21 August 2019.
  - d. Drafting and Survey Technician. Change 8. 23 April 2019.
  - e. Electrical Distribution Technician. Change 6. 23 August 2019.
  - f. Electrical Generation Systems Technician. Change 7. 23 August 2019.
  - g. Fire Fighter. Change Unknown. 04 July 2019.
  - h. Geomatics Technician. Change 2. 10 February 2016.
  - i. *Military Police*. Change Unknown. 13 March 2020.
  - j. Mobile Support Equipment Operator. Provisional. 14 July 2016.
  - k. Plumbing and Heating Technician. Change 5. 26 August 2019.
  - 1. Refrigeration and Mechanical Technician. Change 4. 26 August 2019.
  - m. Vehicle Technician. Change Unknown. 12 May 2015.
  - n. Water, Fuels, and Environment Technician. Change 1. 12 July 2018.
- ZZ. Marvin, C.H. Canada's Army Reserve in a Lead Role within a Whole of Government Approach to Domestic Operations. Toronto, ON: Canadian Forces College, 2014.

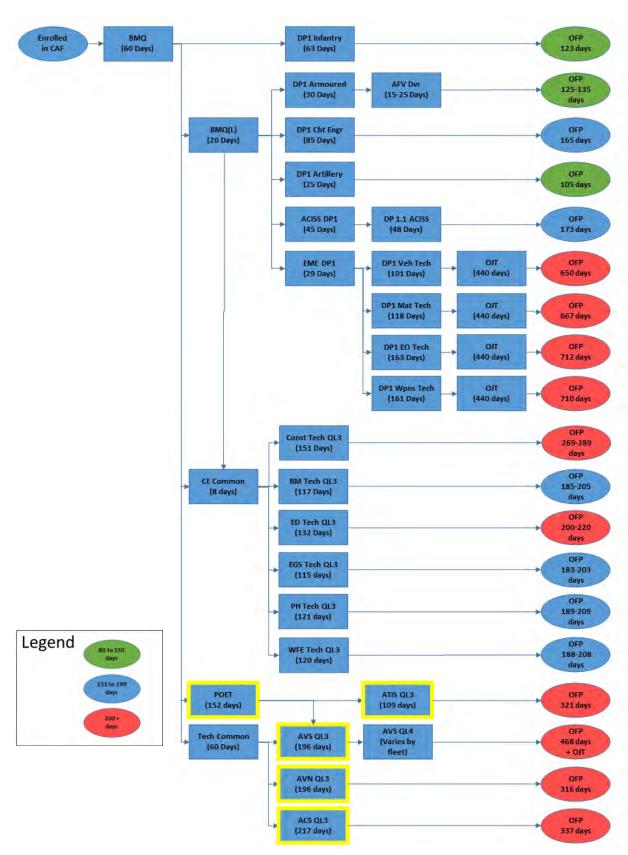
#### OPERATIONALLY FUNCTIONAL POINT MAPS - REGULAR FORCE

The Regular Force operationally functional point maps in this annex were originally created at reference L by the Basic Training List Management Staff in Directorate Military Personnel, to show the training path required to get a new Reg F recruit from enrollment to OFP. This analysis was compared against the applicable qualification standard and training plan manuals (references M through M). While some errors were found in the cross-referenced occupations, the document was found to be generally accurate.

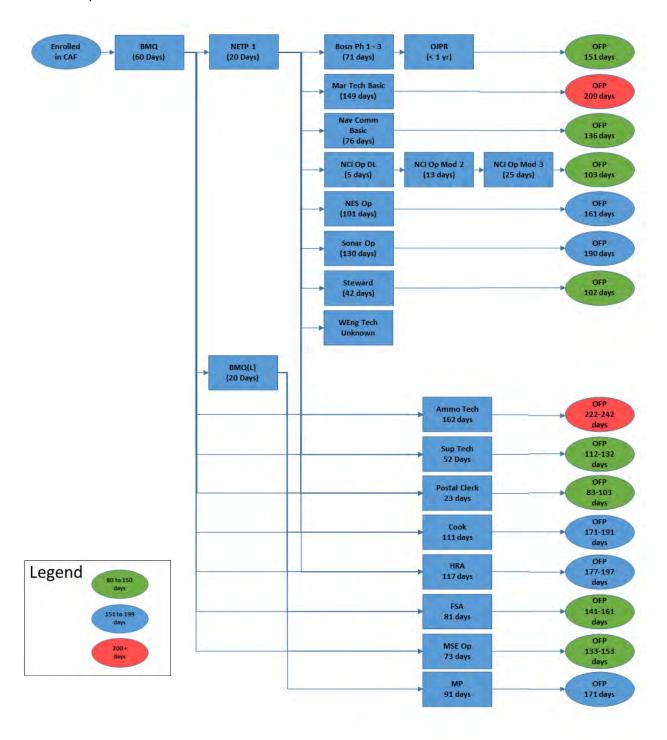
The maps for 34 non-commissioned occupations and 11 commissioned occupations have been recreated from reference XXX into this annex with noted errors corrected. Additionally, some nodes were converted from months (which were inclusive and training and non-training days) to training days only

. The annex shows that several common support trades as well as navy and army operator trades that can be qualified in 80 to 150 training days (4 to 7 months). However, the technical trades of every environment exceeded 150 days of training and many exceeded 200 training days (10 months). While postal technician and steward are viable to be completely trained during a reserve summer training window, it is unlikely there are other Reg F occupations for which the complete training path can be followed by the PRes.

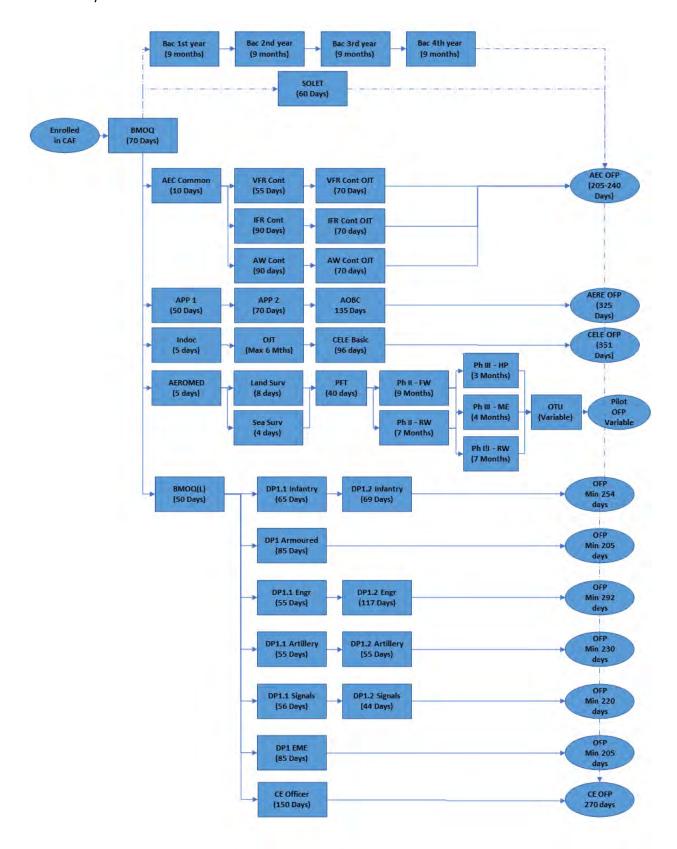
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# List of Occupations by Component

Regular Force Occupation	Reserve Force Occupation	Special Force Occupation	Comparable Civilian Occupation According to Occupation Specification
<ul> <li>Engineer</li> </ul>	Engineer	<ul> <li>Engineer – Combat</li> </ul>	<ul> <li>Senior Manager, Construction/Utilities</li> </ul>
		<ul> <li>Engineer – Infrastructure</li> </ul>	Engineering Managers
		<ul> <li>Engineer - Geospatial</li> </ul>	Construction Managers
			Utility Managers
			Forestry Professionals
			Civil Engineers
			Environmental Engineers
			Mechanical Engineers
			Electrical and Electronic Engineers
			Chemical Engineers
			<ul> <li>Industrial and Manufacturing Engineers</li> </ul>
			<ul> <li>Metallurgical and Materials Engineers</li> </ul>
			Mining Engineers
			Geological Engineers
			<ul> <li>Other Professional Engineers, N.E.C.</li> </ul>
			Architects
			Land Surveyors
			<ul> <li>Geological and Mineral Technologists and Technicians</li> </ul>
			<ul> <li>Civil Engineering Technologist and Technicians</li> </ul>
			<ul> <li>Mechanical Engineering Technologist and Technicians</li> </ul>
			<ul> <li>Industrial Engineering and Manufacturing Technologist and Technicians</li> </ul>
			<ul> <li>Electrical and Electronic Engineering Technologist and Technicians</li> </ul>
			<ul> <li>Architectural Technologist and Technicians</li> </ul>
			<ul> <li>Drafting Technologist and Technicians</li> </ul>
			<ul> <li>Mapping and related Technicians and Technicians</li> </ul>

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Regular Force Occupation	Reserve Force Occupation	Special Force Occupation	Comparable Civilian Occupation According to Occupation Specification
Construction Engineer	Construction Engineer	<ul> <li>Construction Engineering -Operations</li> </ul>	<ul> <li>Senior Managers, Construction/Utilities</li> </ul>
		<ul> <li>Construction Engineering - Design and</li> </ul>	Engineering Managers
		Construction	<ul> <li>Fire Chiefs and Senior Firefighting Officers</li> </ul>
		<ul> <li>Construction Engineering - Facility</li> </ul>	Construction Managers
		Operation and Maintenance	<ul> <li>Facility Operation and Maintenance Managers</li> </ul>
		<ul> <li>Construction Engineering - Explosive</li> </ul>	Utilities Manager
		Ordnance Disposal	Forestry Professionals
		<ul> <li>Construction Engineering - Fire Protection</li> </ul>	Civil Engineers
		Engineering	Environmental Engineer
			Mechanical Engineer
			Electrical and Electronics Engineers
			Chemical Engineers
			Fire Prevention Engineer
			<ul> <li>Industrial and Manufacturing Engineers</li> </ul>
			<ul> <li>Metallurgical and Materials Engineers</li> </ul>
			Mining Engineers
			Geological Engineers
			Other Professional Engineers, N.E.C.
			<ul> <li>Architects</li> </ul>
			Town Planner
			Land Surveyors
			<ul> <li>Geological &amp; Mineral Technologists &amp; Technicians</li> </ul>

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Regular Force Occupation	Reserve Force Occupation	Special Force Occupation	Comparable Civilian Occupation According to Occupation Specification
Combat Engineer	Combat Engineer	<ul> <li>Combat Engineer - Close Support</li> <li>Combat Engineer - General Support</li> </ul>	Civil Engineer Technicians     Contractors and Supervisors, Heavy Construction Equipment Crews
		Combat Engineer - Explosive Ordnance     Discoval	Carpenters     Crane Operator
		<ul> <li>Combat Engineer - Heavy Equipment</li> </ul>	Drillers and Blasters – Surface Mining, Quarrying and Construction
		Operator	Commercial Divers
		<ul> <li>Combat Engineer - Armoued Engineer</li> </ul>	Truck Drivers
		Operator	Heavy Equipment Operators
			Public Works Maintenance Equipment Operators
			Supervisors, Logging and Forestry
			Supervisors, Mining and Quarrying
			Logging Machinery Operators
			Underground Mine Service and Support Workers
			Chainsaw and Skidder Operators
			Forestry Technologist
			Landscape and Hort Technologist
			Police Diver
			Explosive Ordnance Detector
			Explosive Handler
Geomatics Technician	Geomatics Technician	Geomatics Technician	None Listed
<ul> <li>Construction Technician</li> </ul>	Construction Technician	Construction Technician	Contractors and Supervisors, carpentry trades     Carpenter
			Cabinetmakers
			Bricklayers
			Concrete Finishers     Poster and Chinales
			Painters and Decorators (except for interior decorators)

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Regular Force Occupation	Reserve Force Occupation	Special Force Occupation	Comparable Civilian Occupation According to Occupation Specification
<ul> <li>Electrical Distribution Technician</li> </ul>	Electrical Distribution Technician	Electrical Distribution Technician	<ul> <li>Electrician Power Line and Cable Workers</li> <li>Electrical &amp; Electronics Engineering Technologists-Technicians</li> <li>Electrical Fire Alarm Installer and Service/Security</li> <li>Flertrical Draftsperson</li> </ul>
			<ul> <li>Electrical Draftsperson</li> <li>Contract Inspectors</li> <li>Contractors and Supervisors, electrical trades and occupations</li> <li>Electrical Contractor</li> </ul>
			Electrical Appliance Repair Technician     Electricians
			<ul> <li>Electrician Power Line and Cable Workers</li> <li>Electrical &amp; Electronics Engineering Technologists-Technicians</li> </ul>
<ul> <li>Electrical Generation Systems Technician</li> </ul>	<ul> <li>Electrical Generation Systems Technician</li> </ul>	<ul> <li>Electrical Generation Systems Technician</li> </ul>	<ul> <li>Power System and Power Station Operators</li> <li>Construction Millwright and Industrial Mechanic</li> <li>Heavy-Duty Equipment Mechanic</li> <li>Motor Vehicle Mechanic, Technician and Mechanical Repairers</li> <li>Electrical Mechanics</li> <li>Industrial Electrician</li> </ul>
			<ul> <li>Power System Electrician</li> <li>Contractors and Supervisors, Electrical Trades</li> </ul>
<ul> <li>Plumbing and Heating Technician</li> </ul>	<ul> <li>Plumbing and Heating Technician</li> </ul>	<ul> <li>Plumbing and Heating Technician</li> </ul>	<ul> <li>Mechanical engineering technologists and technicians</li> <li>Architectural technologists and technicians</li> <li>Welders and related machine operators</li> <li>Plumbers</li> <li>Steamfitters, pipefitters and sprinkler system installers</li> </ul>
			<ul> <li>Oil &amp; solid fuel heating mechanics</li> <li>Waterworks and gas maintenance workers</li> </ul>

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Regular Force Occupation	R	Reserve Force Occupation	Special Force Occupation	Comparable Civilian Occupation According to Occupation Specification
<ul> <li>Refrigeration and Mechanical Technician</li> </ul>	l Technician •	Refrigeration and Mechanical Technician	<ul> <li>Refrigeration and Mechanical Technician</li> </ul>	<ul> <li>Mechanical Engineering Technologists and Technicians</li> <li>Industrial Instrument Technicians and Mechanics</li> <li>Construction Millwrights and Industrial Mechanics (Except Textile)</li> <li>Refrigeration and Air Conditioning Mechanics</li> <li>Electric Appliance Service and Repairers</li> </ul>
<ul> <li>Water, Fuels, and Environment Technician</li> </ul>	nt Technician	Water, Fuels, and Environment Technician	<ul> <li>Fuels Technician</li> <li>Water Technician</li> <li>Waste Water Technician</li> <li>Environmental Technician</li> </ul>	<ul> <li>Petroleum, Gas and Chemical Process Operators</li> <li>Supervisors, Petroleum, Gas and Chemical Processing &amp; Utilities</li> <li>Applied Chemical Technologists and Technicians</li> <li>Civil Engineering Technologists and Technicians</li> <li>Inspectors in Public and Environmental Health and Occupational Safety</li> <li>Water and Waste Treatment Plant Operators</li> <li>Waterworks and Gas Maintenance Workers</li> <li>Supervisors, Oil &amp; Gas Drilling Services</li> </ul>
<ul> <li>Drafting and Survey Technician</li> </ul>	an	Drafting and Survey Technician	<ul> <li>Drafting and Survey Technician</li> </ul>	<ul> <li>Land Survey Technologists and Technicians</li> <li>Land Surveyors</li> </ul>
Construction Engineering Superintendent	oerintendent •	Construction Engineering Superintendent	<ul> <li>Construction Engineering Superintendent</li> </ul>	Construction Managers Residential Home Builders and Renovators Facility Operation and Maintenance Mangers Contractors and Supervisors, Electrical Trades and Occupations Contractors and Supervisors, Pipefitting Trades Contractors and Supervisors, Carpentry Trades Contractors and Supervisors, Mechanic Trades Utilities Manager Utilities Manager Civil Engineering Technologists and Technicians Mechanical Engineering Technologists and Technicians Construction Estimators Electrical and Electronics Engineering Technologists and Technicians Construction Inspectors

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Regular Force Occupation	Reserve Force Occupation	Special Force Occupation	Comparable Civilian Occupation According to Occupation Specification
Fire Fighter	Fire Fighter	Fire Fighter – Basic	Firefighters
		<ul> <li>Fire Fighter - Crash Fire Rescute</li> </ul>	<ul> <li>Fire Chiefs and Senior Firefighting Officers</li> </ul>
		<ul> <li>Fire Fighter – Structural</li> </ul>	<ul> <li>Inspectors in Public and Environmental Health and Occupational Health and</li> </ul>
		<ul> <li>Fire Fighter - Crash Fire Rescue &amp;</li> </ul>	Safety
		Structural	<ul> <li>Industrial and Manufacturing Engineers</li> </ul>
		<ul> <li>Fire Fighter – Shipboard</li> </ul>	<ul> <li>Industrial Engineering and Manufacturing Technologists and Technicians</li> </ul>
		<ul> <li>Fire Fighter - Fire Safety Inspector</li> </ul>	Other Protective Service Occupations
			Other Repairers and Servicers
			Senior Government Managers and Officials
Vehicle Technician	Vehicle Technician	<ul> <li>Vehicle Technician- Wheeled</li> </ul>	Heavy-Duty Equipment Mechanics
		<ul> <li>Vehicle Technician - Armoured Fighting</li> </ul>	Automotive Mechanics
		Vehicle	<ul> <li>Motorcycle and Other Related Mechanics</li> </ul>
		<ul> <li>Vehicle Technician – Recovery</li> </ul>	<ul> <li>Other Small Engine and Equipment Mechanics</li> </ul>
		<ul> <li>Vehicle Technician - Engineer Equipment</li> </ul>	Tow Truck Driver
		<ul> <li>Vehicle Technician - Tire Repair</li> </ul>	Tire Repairer
		<ul> <li>Vehicle Technician - Technical Support</li> </ul>	Accounting and Related Clerk
			Storekeepers and Parts Clerks
<ul> <li>Mobile Support Equipment Operator</li> </ul>	Mobile Support Equipment Operator -	Mobile Support Equipment Op – Crane	Dispatchers and Radio Operators
	Land Operations	<ul> <li>Mobile Support Equipment Op - Heavy</li> </ul>	Ambulance Driver
	<ul> <li>Mobile Support Equipment Operator - Air</li> </ul>	Equipment Operator	<ul> <li>Foremen/Women, General Construction and Heavy Equipment</li> </ul>
	Operations Support	<ul> <li>Mobile Support Equipment Op - Airfield</li> </ul>	<ul> <li>Foremen/Women, Motor Transport Operations</li> </ul>
		Refuelling Vehicle	Crane Operators, All Types
		<ul> <li>Mobile Support Equipment Op - Special</li> </ul>	<ul> <li>Truck Driver, Light and Heavy, All Types</li> </ul>
		Purpose Vehicle	Bus Drivers
		<ul> <li>Mobile Support Equipment Op - Field</li> </ul>	Chauffeurs, Taxi and Limousine Drivers
		Force Vehicle	Heavy Equipment Operators
		<ul> <li>Mobile Support Equipment Op - Field</li> </ul>	
		Force Heavy Vehicle	
		<ul> <li>Mobile Support Equipment Op - General</li> </ul>	
		Purpose Vehicle Cargo	
		Mobile Support Equipment Op - General	
		Purpose Vehicle Passenger	

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Regular Force Occupation	Reserve Force Occupation	Special Force Occupation	Comparable Civilian Occupation According to Occupation Specification
<ul> <li>Military Police</li> </ul>	<ul> <li>Military Police – Army</li> </ul>	<ul> <li>Military Police - Field Operations</li> </ul>	Commissioned Police Officers
	<ul> <li>Military Police - Air Operations Support</li> </ul>	<ul> <li>Military Police – Police Operations</li> </ul>	Computer Systems Analysts
		<ul> <li>Military Police - Investigations</li> </ul>	Computer Programmers
		<ul> <li>Military Police - Resource Protection</li> </ul>	Probation and Parole Officers
		<ul> <li>Military Police - Counter Intelligence</li> </ul>	<ul> <li>Police Officers (Except Commissioned)</li> </ul>
			Sheriffs and Bailiffs
			Correctional Service Officers
			By-Law Enforcement/Regulatory Officers
			Other Protective Service Officers
			<ul> <li>Security Guards and Related Occupations</li> </ul>