

**UNCLASSIFIED**

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2014 Army	<b>DATE:</b> April 2013
---	-------------------------

<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603747A: <i>Soldier Support and Survivability</i>
---	---

COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO <sup>##</sup>	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	13.720	29.933	6.703	-	6.703	14.468	12.794	11.011	11.611	Continuing	Continuing
610: <i>Food Adv Development</i>	-	3.720	4.014	5.188	-	5.188	5.213	4.892	4.974	5.574	Continuing	Continuing
C08: <i>Rapid Equipping Force</i>	-	10.000	25.919	1.515	-	1.515	9.255	7.902	6.037	6.037	Continuing	Continuing

<sup>#</sup> FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

<sup>##</sup> The FY 2014 OCO Request will be submitted at a later date

**Note**

Change Summary Explanation: FY14 OCO in the amount of \$26625 supports PEO Soldier. Not reporting OCO for this budget cycle.

**A. Mission Description and Budget Item Justification**

This program element supports component development and prototyping for organizational equipment, improved individual clothing and equipment that enhance Soldier battlefield effectiveness, survivability, and sustainment. This program element also supports the component development and prototyping of joint service food and combat feeding equipment designed to reduce logistics burden.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014 Base</b>	<b>FY 2014 OCO</b>	<b>FY 2014 Total</b>
Previous President's Budget	13.903	29.933	11.051	-	11.051
Current President's Budget	13.720	29.933	6.703	-	6.703
Total Adjustments	-0.183	0.000	-4.348	-	-4.348
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-0.183	-	-4.348	-	-4.348

# UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability				PROJECT 610: Food Adv Development			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO <sup>##</sup>	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
610: Food Adv Development	-	3.720	4.014	5.188	-	5.188	5.213	4.892	4.974	5.574	Continuing	Continuing
Quantity of RDT&E Articles												
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
A. Mission Description and Budget Item Justification												
This project provides for the advanced component development and prototyping of joint service food and combat feeding equipment designed to reduce the logistics burden and Operation and Support (O&S) costs of subsistence support to service personnel. Project supports development of rations and rapidly deployable field food service equipment. Project conducts demonstration and validation of improved subsistence and subsistence support items used to enhance soldier effectiveness and quality of life in all four Services, as part of an integrated Department of Defense (DoD) Food Research, Development, Test, Evaluation and Engineering Program. The Program is reviewed and validated twice annually by the DoD Combat Feeding Research and Engineering Board (CFREB) as part of the Joint Service Food Program. This project develops critical enablers that support the Joint Future Force Capabilities and the Joint expeditionary mindset by maintaining readiness through fielding and integrating new equipment. This equipment enhances the field soldier's well-being and provides the soldier with usable equipment, in addition to reducing sustainment requirements, related Combat Support/Combat Service Support (CS/CSS) demands on lift, combat zone footprint, and costs for logistical support.												
This PE/Project supports Field Feeding Programs for all the services.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: Solid Waste Remediation  Articles:  Description: Provides environmentally friendly incineration system for solid waste.  FY 2012 Accomplishments: Evaluate solid waste remediation hardware/systems and transition into System Development and Demonstration.									0.100 0	0.000	0.000	
Title: Fielded Individual Ration Improvement Project (FIRIP)  Articles:  Description: Continuous product improvement project for the Meal, Ready to Eat (MRE)  FY 2012 Accomplishments: Continue to identify suitable COTS/NDI candidate items and conduct in-house product development of food components for fielded individual operational rations (MRE 2015 DOP) to enhance acceptability, increase consumption and improve nutritional									0.845 0	0.900 0	1.052	

# UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability		PROJECT 610: Food Adv Development
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
intake. Conduct pilot scale in-house production to support engineering design, technology insertion, and producibility. Work with vendors and assemblers as needed to ensure feasibility and technology transition. Develop, integrate, and validate state-of-the-art science and technology, food processing and primary/secondary packaging innovations into individual ration platforms to increase operational effectiveness, functionality and improve logistics. processing and packaging to introduce targeted component items into individual ration platforms for enhanced acceptability, nutrition and performance.  <b>FY 2013 Plans:</b> Continue to conduct in-house product development of food components and identify suitable COTS/NDI candidate items for fielded individual operational rations (e.g., Meal, Ready-to-Eat 2016 date of pack (DOP)) to enhance Warfighter acceptability, increase consumption and improve nutritional intake; Conduct pilot scale in-house production to support engineering design, technology insertion, and commercial producibility; Develop, integrate and validate state-of-the-art science and technology, food processing and primary/secondary packaging innovations into individual ration platforms to increase operational effectiveness; Optimize food component processing and packaging to introduce targeted items/capabilities into individual ration platforms for enhanced acceptability, nutrition and performance; Transition to 6.5 for testing.  <b>FY 2014 Plans:</b> Continue to conduct in-house product development of food components and identify suitable COTS/NDI candidate items for fielded individual operational rations (e.g., Meal, Ready-to-Eat 2016 date of pack (DOP)) to enhance Warfighter acceptability, increase consumption and improve nutritional intake; Conduct pilot scale in-house production to support engineering design, technology insertion, and commercial producibility; Develop, integrate and validate state-of-the-art science and technology, food processing and primary/secondary packaging innovations into individual ration platforms to increase operational effectiveness; Optimize food component processing and packaging to introduce targeted items/capabilities into individual ration platforms for enhanced acceptability, nutrition and performance; Transition to 6.5 for testing.				
<b>Title:</b> Assault/Special Purpose Ration Improvement Project (ASPIP)  <b>Articles:</b>  <b>Description:</b> Continuous product improvement of special purpose rations by the insertion of new technologies in nutrition, processing and packaging.  <b>FY 2012 Accomplishments:</b> Continue identification and selection of new candidate items. Conduct in-house product development as needed; assemble test menus, select test site, and transition to 6.5 for field test. Complete procurement documents for new items and new assembly documentation for FSR and MCW/LRP. Conduct production testing of new components.  <b>FY 2013 Plans:</b>		0.375 0	0.382 0	0.413

# UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability	PROJECT 610: Food Adv Development		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
Continue to identify COTS/NDI components for the Meal, Cold Weather/Long Range Patrol and First Strike Ration to enhance acceptability, variety, consumption and nutritional value of combat rations. Identify new components based upon user feedback, focus groups, emerging products and technologies and user requirements. Conduct accelerated and long term storage studies on candidate components. Work with industry partners to facilitate producibility and technology transition. Transition to 6.5 for Warfighter testing.  <b>FY 2014 Plans:</b> Continue to identify COTS/NDI components for the Meal, Cold Weather/Long Range Patrol and First Strike Ration to enhance acceptability, variety, consumption and nutritional value of combat rations. Identify new components based upon user feedback, focus groups, emerging products and technologies and user requirements. Conduct accelerated and long term storage studies on candidate components. Work with industry partners to facilitate producibility and technology transition. Transition to 6.5 for Warfighter testing.				
<b>Title:</b> Fielded Group Ration Improvement Project (FGRIP)  <b>Articles:</b>  <b>Description:</b> Continuous product improvement project to continuously update/improve group ration components, menus, and packaging by integrating state-of-the-art military/commercial packaging and technology base transitions.  <b>FY 2012 Accomplishments:</b> Improve family of UGRs (H&S (2014/2015), A (2013/2014), B and E (2014/2015)) to increase overall Warfighter acceptability, and consumption. Based on Warfighter recommendations, incorporate COTS, NDI, and developmental components into prototype menus. Select field test site and transition to 6.5 for field testing. Complete draft procurement documents. Integrate state of the art packaging and combat ration processing technologies for improved operational and functional performance.  <b>FY 2013 Plans:</b> Continue efforts to update/improve components, menus and packaging to increase consumption and overall nutritional intake of the family of Unitized Group Rations (UGRs) for UGR-A (FY15 menus), B, E and H&S (2015/16 DOP). Identify COTS/NDIs and/or develop new food components in-house, conduct in-house testing, down-select items and develop test menus for Warfighter evaluation. Develop, integrate and validate state-of-the-art science and technology, food processing and primary/secondary packaging innovations into group ration platforms to increase operational effectiveness, functionality and improve logistics. Transition to 6.5 for Warfighter testing.  <b>FY 2014 Plans:</b> Continue efforts to update/improve components, menus and packaging to increase consumption and overall nutritional intake of the family of Unitized Group Rations (UGRs) for UGR-A (FY15 menus), B, E and H&S (2015/16 DOP). Identify COTS/NDIs and/or develop new food components in-house, conduct in-house testing, down-select items and develop test menus for Warfighter		0.785 0	1.007 0	1.019

# UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability	PROJECT 610: Food Adv Development		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
evaluation. Develop, integrate and validate state-of-the-art science and technology, food processing and primary/secondary packaging innovations into group ration platforms to increase operational effectiveness, functionality and improve logistics. Transition to 6.5 for Warfighter testing.				
<b>Title:</b> US Navy Standard Core Menu Continuous Product Improvement Project (NSCM) <b>Articles:</b> <b>Description:</b> Provide recommendations for upgrading/improving Navy Standard Core Menu components by introducing new preparation techniques to enhance menu acceptance and effectiveness while reducing labor requirements. <b>FY 2012 Accomplishments:</b> Provide NAVSUP with continuous product identification, evaluations and menu development to support NSCM upgrades and revision changes. <b>FY 2013 Plans:</b> Continue to identify and validate COTS and NDI candidate enhancements to the NSCM. Provide recommendations for improving menu components by introducing new commercial items and state-of-the-art food preparation and feeding techniques to enhance menu acceptance and reduce labor requirements. Transition product summaries and results/recommendations to Naval Supply Systems Command (NAVSUP) for adoption and procurement. <b>FY 2014 Plans:</b> Continue to identify and validate COTS and NDI candidate enhancements to the NSCM. Provide recommendations for improving menu components by introducing new commercial items and state-of-the-art food preparation and feeding techniques to enhance menu acceptance and reduce labor requirements. Transition product summaries and results/recommendations to Naval Supply Systems Command (NAVSUP) for adoption and procurement.		0.175 0	0.180 0	0.225
<b>Title:</b> Quality Kinetics/Rapid Fielding of Ration Components <b>Articles:</b> <b>Description:</b> Confirm or optimize current accelerated storage protocols. Validate a predictive model for food degradation. <b>FY 2013 Plans:</b> Continue development of baseline predictive model. Complete storage studies, data collection and analysis. Validate model and implement updated storage protocols for operational ration components, where feasible. Transfer updated protocols to food technologists to support future in-house product development efforts. Generate tech report summarizing results and facilitating tech transfer of model to food technologists and developers of COTS/NDI components. <b>FY 2014 Plans:</b>		0.000	0.082 0	0.100

# UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability	PROJECT 610: Food Adv Development		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
Transition and implement quantitative kinetics models utilizing analytical markers (fat oxidation calorimetry, etc) to 6.4 Assault/ Special Purpose Ration Improvement Program (ASPIP) and Fielded Individual Ration Improvement Program (FIRIP). Integrate optimized quality kinetics models into current sensory evaluation system and adjust and optimize storage protocols and conditions using analytical testing/temperature kinetics and defined and recommended guidelines for conduction accelerated storage studies equivalent to Military storage requirements. Streamline and enhance evaluation process for identified new ration components (entrees, sides, snacks, bakery items) that fall within guidelines specified by the quality kinetics model, accelerate rapid fielding of specific ration component, decrease/minimize engineering support cases for quality related issues, and enhance development efficiency. Modify and transition technical data to Defense Logistics Agency - Troop Support.				
Title: Joint Service Refrigeration Container System (JSRCS)  Articles:  Description: Develop a joint service refrigerated container system that will support all military field feeding platforms.  FY 2012 Accomplishments: Develop a Joint Service Refrigerated Container System (JSRCS) to support group ration distribution and storage for multiple services.		0.510 0	0.000	0.000
Title: Basic Expeditionary Airfield Resources (BEAR) Kitchen Support Enhancements  Articles:  Description: Provide Air Force new electric food service equipment; and implementation plan to support the initial (i) / follow-on (f) systems to support AF BEAR field feeding.  FY 2012 Accomplishments: Air Force Basic Expeditionary Airfield Resources (BEAR) - Kitchen System Enhancements, provide AF with enhanced, state of the art all electric food service equipment; and continue to refine modular field feeding system.		0.330 0	0.000	0.000
Title: UGR-A for Expeditionary Basecamps  Articles:  Description: Provides an optimized number of servings for use by Tactical Small Units (TSUs) in contingency basing operations for both the UGR-A (Army) and UGR-B (Marine Corps) with austere field feeding equipment.  FY 2012 Accomplishments:		0.133 0	0.000	0.000

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability		PROJECT 610: Food Adv Development		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2012	FY 2013	FY 2014
Conduct Warfighter evaluation to validate proposed configuration, coordinate recommendations with Joint Culinary Center of Excellence and obtain Joint Service Operational Ration Forum (JSORF) approval, and update and transition revised procurement documents to Defense Logisitics Agency Troop Support (DLA-TS).						
<b>Title:</b> Barrier Coating for Optimized Package Performance  <b>Articles:</b>  <b>Description:</b> Provides low-cost, non-foil, high performance packaging materials for incorporation into existing and future combat ration packaging systems, such as the Unitized Group Ration (UGR) and Meal, Ready-to-Eat (MRE).  <b>FY 2013 Plans:</b> Complete in-house studies of pilot scale pouches and demonstrating filling, sealing, and processing capabilities. Conduct verification testing (accelerated storage, rough handling, and field utility). Draft Technical Data Package (TDP) for incorporation into ration component performance specifications. Conduct validation trials with industrial partners to ensure materials indentified in TDP can be run on production scale equipment and converted into conforming preformed pouches. Verify industry capability of producing retort and non-retort pouches in both preformed and horizontal-form-fill-seal configurations. Transition new/revised procurement documents to DLA - Troop Support.  <b>FY 2014 Plans:</b> Determine optimal barrier structure and scale-up to pilot-scale production of prototype samples. Evaluate prototype packaging system for barrier and mechanical properties, and shelf life and rough handling.				0.000	0.240 0	0.140
<b>Title:</b> Autonomous Shipboard Cleaning System (ASDS)  <b>Articles:</b>  <b>Description:</b> There is a need to develop an automated and innovative foodservice cleaning system for Navy legacy and future ships due to the planned reductions of Food Service Attendants (FSA), and Culinary Specialists (CS), required under the Navy Transformation Goal of optimized crewing.  <b>FY 2013 Plans:</b> Accept delivery of the contractor developed ASDS Phase II Small Business Innovation Research (SBIR) prototype, initiate a Phase III development effort. Conduct land-based testing at Natick Soldier Research Development and Engineering Center (NSRDEC) and coordinate enhanced simulation testing and demonstrations of the upgraded prototypes at Naval Surface Warfare Center's test facilities.				0.000	0.283 0	0.000
<b>Title:</b> Integration of Selected Ration Components Using Novel Food Processing Technology to Individual Ration Platforms  <b>Articles:</b>				0.000	0.103 0	0.103

# UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability	PROJECT 610: Food Adv Development		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
<p><b>Description:</b> Develop operational concept for integration of specific novel processed ration components into individual (as well as group and assault/special purpose) ration platforms. Establish baselines for nutrition retention, producibility and package utility. Evaluate baselines for novel processed components against key performance parameters of known thermally processed ration components. Generate draft technical requirements and/or revised documents for novel processed ration components.</p> <p><b>FY 2013 Plans:</b> Develop operational concept for integration of specific novel processed ration components into individual (as well as group and assault/special purpose) ration platforms. Establish baselines for nutrition retention, producibility and package utility. Evaluate baselines for novel processed components against key performance parameters of known thermally processed ration components. Generate draft technical requirements and/or revised documents for novel processed ration components.</p> <p><b>FY 2014 Plans:</b> Develop operational concept for integration of specific novel processed ration components into individual (as well as group and assault/special purpose) ration platforms. Establish baselines for nutrition retention, producibility and package utility. Evaluate baselines for novel processed components against key performance parameters of known thermally processed ration components.</p>				
<p><b>Title:</b> Containerized Ice Making System</p> <p><b>Articles:</b></p> <p><b>Description:</b> Develop a containerized ice making system to support a 600 person base camp for cooling drinking water in extreme arid conditions and support other ice requirements for those on the base camp and for soldiers going out on missions/patrols.</p> <p><b>FY 2012 Accomplishments:</b> Conduct major subcomponent testing. Perform design analysis review. Award Phase III prototype effort. Fabricate System prototype.</p>		0.200 0	0.000	0.000
<p><b>Title:</b> Multi-Functional Secondary Packaging</p> <p><b>Articles:</b></p> <p><b>Description:</b> Integrate alternative secondary packaging technologies into current ration packaging systems so as to reduce cost and waste generation, while maintaining required field performance. Production and insertion of new packaging technologies into individual, assault/special purpose and group ration systems. Provide lighter weight, lower cost, recyclable MRE and Unitized Group Ration shipping containers.</p> <p><b>FY 2012 Accomplishments:</b></p>		0.150 0	0.000	0.000



# UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability	PROJECT 610: Food Adv Development		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
Prototype fiberboard container demonstrated during the FY11 MRE Field evaluation will be further evaluated in comparison to the existing military fiberboard container. Scale-up of prototype MRE and UGR secondary shipping containers will be performed and containers evaluated at full production levels using existing assembler's equipment.				
<b>Title:</b> Co-Extruded Alternate Nutrient System (CANS)  <b>Articles:</b>  <b>Description:</b> Provide the Warfighter with functional multi-component bars and single matrices? pastes that serve as vehicles for optimizing nutrient delivery. Develop matrices that are best suited to deliver nutrients/performance optimizers that are stable, functional and organoleptically appealing. Increase quality and variety of performance bars utilizing co-extrusion technologies.  <b>FY 2013 Plans:</b> Validate producibility; finalize development of mature products (based on sensory analysis, accelerated shelf life test and testing in a relevant environment); and finalize packaging requirements.  <b>FY 2014 Plans:</b> Finalize FDA approval of selected performance optimizers. Coordinate remaining field testing with Individual Ration program. Validate manufacturing base and long term shelf life studies in coordination with production base. Generate draft technical requirements.		0.000	0.100 0	0.157
<b>Title:</b> Alternative Polymer Processing Technology (APPT)  <b>Articles:</b>  <b>Description:</b> Improve ration packaging by enhancing package performance through the use of advanced polymer processing technologies, such as orientation, co-extrusion, and layer multiplying co-extrusion. Reduce packaging weight and waste. Improve packaging performance through enhanced mechanical and barrier properties.  <b>FY 2013 Plans:</b> Prototype packages will be fabricated and storage stability and rough handling studies will be conducted to demonstrate performance in a simulated environment. Contracts will be initiated for insect infestation studies. The technical risk associated with this project is minimized, given that several congressionally funded programs have laid the ground work for this research through current and past projects. Producibility studies and field testing will be performed on Prototype packaging structures.		0.000	0.280 0	0.000
<b>Title:</b> Transition of Advanced Appliances for Field Kitchens  <b>Articles:</b>  <b>Description:</b> Provide the Warfighter with JP-8-fueled appliances that save fuel, are simple to use, provide a safe kitchen environment, and can easily be moved into buildings when necessary. Warfighters benefit from a safer, healthier, more		0.000	0.457 0	0.000

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability		PROJECT 610: Food Adv Development
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
comfortable kitchen environment, and equipment that facilitates preparation of quality A-ration meals. Existing appliances are only about 15-40% efficient; new burner technologies have demonstrated 75% efficiency, typical of stationary gas-fired equipment.  <b>FY 2013 Plans:</b> Validate producibility and finalize development of mature JP-8 appliances which have been successfully demonstrated in a relevant environment in a 6.3 technical demonstration; finalize performance requirements. Perform cost evaluation of relevant appliances and JP-8 burner technologies. Finalize integration of appliances into modular cabinet interface for kitchen platforms.				
<b>Title:</b> Innovative Packaging Concepts (InnoPac) for Group Rations  <b>Description:</b> Innovative technologies and designs will be utilized to develop packaging systems offering lighter weight, down-gauged components that provide enhanced durability and easy-to-open features. Retort cartons made from laminated paperboard based structures will be investigated as a replacement for #10 cans.  <b>FY 2014 Plans:</b> Storage stability and rough handling studies will be conducted to demonstrate performance in simulated environments as part of demonstration efforts to evaluate system functionality, potential design risks and technology maturity of developed systems. Field evaluations with Warfighter collaboration will be also conducted. Technical report containing all test data, product specifications and technology assessment reports detailing material characteristics and end item attributes.		0.000	0.000	0.145
<b>Title:</b> Permeability Modeling of Advanced Packaging Systems (PMAPS)  <b>Description:</b> Expand upon the current film based permeability prediction model to allow for permeability prediction of packaging systems. Determine the total barrier effect of combined packaging technologies developed under research programs.  <b>FY 2014 Plans:</b> Conduct pilot-scale production runs to produce packaging films for conversion into pouches and filling with selected food items. Conduct storage study to include sensory and analytical testing such as water activity and headspace analysis to validate model. A validation report will be prepared at the end of the storage study.		0.000	0.000	0.140
<b>Title:</b> Packaging Optimization with Polymeric Microspheres (POPM)  <b>Description:</b> Develop production base for polymeric films containing expandable microspheres for use in reduced-weight, high-performance ration packaging applications which will provide reduced density, enhanced thermal properties and cost savings.  <b>FY 2014 Plans:</b>		0.000	0.000	0.225

# UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability	PROJECT 610: Food Adv Development		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
Collaboration will occur with industrial partners (material suppliers and converters) to produce material at the pilot-scale level, and to fabricate Flameless Ration Heater pouches and Meal Ready-to-Eat® entree bags. Collaboration will also occur between technical teams, DLA-Troop Support, and industrial partners. Cost validation analyses will be performed to confirm affordability.				
Title: Navy Food Service Analysis Tool  Description: Develop a software analysis tool for Navy Foodservice that performs the following tasks: Automatically calculate all storage space factors and requirements for naval vessels based off the specific Navy Standard Core Menu (NSCM), crew size, Naval Ship's Technical Manual 096, Weights and Stability, Naval Vessel Requirements Food Service Facility Design Manual, Build Specifications 671, 672, and Type Commander established endurance levels.  FY 2014 Plans: Develop automated subsistence inventory management, tracking and direct routing for all storage areas with mobile scanning technology capability; Conduct in-house tests & evaluation; Coordinate software Navy AIT approval/certification		0.000	0.000	0.489
Title: Joint Inter-service Field Feeding Burner  Description: Develop a Joint-Service, government owned JP-8 fuel fired burner for field kitchen appliances. Government will control configuration, procurement, and support decisions. Establish parts list using widely supportable supply chain in field operations.  FY 2014 Plans: Build Design Validation (DV) units using a supportable, commercial bill of materials. Test in a high fidelity, realistic operating environment and conduct supportability validation. Prepare Technical Data Package.		0.000	0.000	0.490
Title: Diesel/Electric Powered TriCon Refer Container System  Description: To develop a standalone diesel/electric powered TriCon Refrigerated Container System (TRCS) to provide carriage of deep frozen, frozen, and chilled cargo in remote locations.  FY 2014 Plans: Complete prototype evaluations. Revise MIL Performance Specification; Develop Engineering Change Proposal. Insert via an Engineering Change Proposal into current TRCS contract.		0.000	0.000	0.490
Title: SBIR+STTR  Description: SBIR+STTR		0.117 0	0.000	0.000
Articles:				

# UNCLASSIFIED

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2014 Army								<b>DATE:</b> April 2013			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603747A: <i>Soldier Support and Survivability</i>				<b>PROJECT</b> 610: <i>Food Adv Development</i>			
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>								<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	
<b>FY 2012 Accomplishments:</b> SBIR+STTR											
<b>Accomplishments/Planned Programs Subtotals</b>								3.720	4.014	5.188	
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014 Base</b>	<b>FY 2014 OCO</b>	<b>FY 2014 Total</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• RDT&E 654713.548: <i>Military Subsistence System</i>	2.008	2.132	1.939		1.939	2.234	2.273	2.239	2.475	Continuing	Continuing
• OPA M65801: <i>Refrigerated Containers</i>	22.133	22.441	22.584		22.584	22.486	22.470	22.851	23.232	Continuing	Continuing
<b>Remarks</b>											
<b>D. Acquisition Strategy</b> Project development will transition to System Development & Demonstration and production.											
<b>E. Performance Metrics</b> Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

**UNCLASSIFIED**

<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2014 Army</b>												<b>DATE:</b> April 2013			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>						<b>R-1 ITEM NOMENCLATURE</b> PE 0603747A: <i>Soldier Support and Survivability</i>						<b>PROJECT</b> 610: <i>Food Adv Development</i>			
<b>Management Services (\$ in Millions)</b>				<b>FY 2012</b>		<b>FY 2013</b>		<b>FY 2014 Base</b>		<b>FY 2014 OCO</b>		<b>FY 2014 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>All Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Combat Feeding Program Management	Various	RDECOM, Natick, MA:Natick, MA	4.026	0.458		0.454		0.535		-		0.535	Continuing	Continuing	Continuing
SBIR+STTR	TBD	Various:Various	0.000	0.117		-		-		-		-	0.000	0.117	0.000
<b>Subtotal</b>			4.026	0.575		0.454		0.535		0.000		0.535			
<b>Product Development (\$ in Millions)</b>				<b>FY 2012</b>		<b>FY 2013</b>		<b>FY 2014 Base</b>		<b>FY 2014 OCO</b>		<b>FY 2014 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>All Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Joint Service Food/Combat Feeding Equipment	Various	RDECOM, Natick, MA:Natick, MA	33.198	1.227		1.457		1.952		-		1.952	Continuing	Continuing	Continuing
Joint Service Food/Combat Feeding Equipment	Various	Various:Various	21.282	1.382		1.549		2.066		-		2.066	Continuing	Continuing	Continuing
<b>Subtotal</b>			54.480	2.609		3.006		4.018		0.000		4.018			
<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2012</b>		<b>FY 2013</b>		<b>FY 2014 Base</b>		<b>FY 2014 OCO</b>		<b>FY 2014 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>All Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Joint Service Food/Combat Feeding Equipment	Various	DTC/AEC:National Capitol Region	8.592	0.536		0.554		0.635		-		0.635	Continuing	Continuing	Continuing
<b>Subtotal</b>			8.592	0.536		0.554		0.635		0.000		0.635			
<b>Project Cost Totals</b>			67.098	3.720		4.014		5.188		0.000		5.188			
<b>Remarks</b>															

# UNCLASSIFIED

<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2014 Army			<b>DATE:</b> April 2013		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>			<b>R-1 ITEM NOMENCLATURE</b> PE 0603747A: <i>Soldier Support and Survivability</i>		
			<b>PROJECT</b> 610: <i>Food Adv Development</i>		

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Integrate control systems for diagnostics/ prognostics of the automated scullery																												
Review Marine Corp Field Feeding Doctrine identify capability of current systems																												
Conduct DT on JP8 Fired Commerical Appliances																												
USMC Field Kitchen Modernization Effort																												
Establish baseline, evaluate and transition novel processed ration components t																												
Field Testing of Multi-Functional Secondary Packaging																												
Transition of Advanced Appliances for Field Kitchens- OT of Prototypes																												
Finalize Packaging Requirements Based on Producibility Tests																												
Field Tests of Alternative Polymer Processing Technology (APPT)																												
Modify Production Change Request (PCR) of APPT and Transition to DLA-TS																												
Draft SOW and award contract for Navy Food Service Analysis Tool																												
Conduct in-house tests & evaluation for Navy Food Service Analysis Tool																												
Identify candidate burner technology for potential integration into comm																												
Identify, procure, and evaluate candidate burners for tray ration heater reset																												

**UNCLASSIFIED**

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army																							DATE: April 2013								
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)												R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability												PROJECT 610: Food Adv Development							
	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018						
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
Technical evaluation for heat exchangers in EFK; procurement of nesting sinks																															
Test Joint Inter-Service Burner in a high fidelity, realistic operating environm																															
Develop Engineering Change Proposal for Diesel/Electric TriCon Refer System																															
Build standalone capability for Diesel/Electric powered TRCS																															
Award contract to integrate improved refer unit with MTRCS platform																															
Coordinate packaging specifications with ration assemblers/producers																															

# UNCLASSIFIED

**Exhibit R-4A, RDT&E Schedule Details:** PB 2014 Army

**DATE:** April 2013

**APPROPRIATION/BUDGET ACTIVITY**

2040: *Research, Development, Test & Evaluation, Army*  
BA 4: *Advanced Component Development & Prototypes (ACD&P)*

**R-1 ITEM NOMENCLATURE**

PE 0603747A: *Soldier Support and Survivability*

**PROJECT**

610: *Food Adv Development*

## Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Integrate control systems for diagnostics/prognostics of the automated scullery	2	2012	4	2012
Review Marine Corp Field Feeding Doctrine identify capability of current systems	2	2012	4	2012
Conduct DT on JP8 Fired Commerical Appliances	2	2014	4	2014
USMC Field Kitchen Modernization Effort	1	2014	4	2015
Establish baseline, evaluate and transition novel processed ration components t	1	2013	4	2014
Field Testing of Multi-Functional Secondary Packaging	4	2012	4	2013
Transition of Advanced Appliances for Field Kitchens- OT of Prototypes	3	2013	2	2014
Finalize Packaging Requirements Based on Producibility Tests	1	2013	4	2013
Field Tests of Alternative Polymer Processing Technology (APPT)	1	2013	4	2013
Modify Production Change Request (PCR) of APPT and Transition to DLA-TS	4	2013	4	2013
Draft SOW and award contract for Navy Food Service Analysis Tool	3	2014	3	2014
Conduct in-house tests & evaluation for Navy Food Service Analysis Tool	2	2015	2	2015
Identify candidate burner technology for potential integration into comm	1	2015	2	2015
Identify, procure, and evaluate candidate burners for tray ration heater reset	1	2015	2	2015
Technical evaluation for heat exchangers in EFK; procurement of nesting sinks	3	2015	4	2015
Test Joint Inter-Service Burner in a high fidelity, realistic operating environm	3	2014	3	2014
Develop Engineering Change Proposal for Diesel/Electric TriCon Refer System	4	2014	4	2014
Build standalone capability for Diesel/Electric powered TRCS	1	2015	3	2015
Award contract to integrate improved refer unit with MTRCS platform	3	2015	4	2015
Coordinate packaging specifications with ration assemblers/producers	3	2014	2	2015



# UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability				PROJECT C08: Rapid Equipping Force			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO <sup>##</sup>	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
C08: Rapid Equipping Force	-	10.000	25.919	1.515	-	1.515	9.255	7.902	6.037	6.037	Continuing	Continuing
Quantity of RDT&E Articles												
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
<b>Note</b> Equipment mix and configuration may change based on changes in operational environment and circumstances.												
<b>A. Mission Description and Budget Item Justification</b> The United States Army Rapid Equipping Force (REF) harnesses current and emerging technologies to provide rapid solutions to the urgently required capabilities of US Army forces employed globally. The REF combines and integrates functions that cross several Army staff elements and Army Service Component Commands (ASCC) to accelerate materiel solutions and technology insertion to forces on a global scale. The REF provides the Army's rapid response capability to develop, prototype, acquire and integrate Commercial-Off-The-Shelf (COTS) and Government Off-The-Shelf (GOTS) solutions to meet urgent combat requirements for deployed forces. It develops and inserts selected future force technologies, capabilities and surrogate material solutions into committed, deploying and transformational forces for operational evaluation, assessment and spiral development. It plans and executes assessments and studies of Army practices and issues concerning operational needs, desired future force capabilities and relevant Army business practices to provide feedback to Senior Army Leaders.  The REF bridges the gap between the lengthy acquisition process and immediate equipping needs. We pursue tangible solutions that can be equipped within a goal of 90 days. The REF focuses on finding effective game-changing capabilities to increase Soldier effectiveness, protection and lethality in any operational environment. The REF process provides the mechanism to respond rapidly to an adaptive enemy who changes in days and months, not years. The REF Teams deployed in theater work with Army Service Component Commands of the Combatant Commands (COCOMs) to understand their urgent needs, for which the REF acquisition capability may identify, procure and deliver solutions to the deployed units. A key element of this process is fiscal flexibility, permitting the REF to allocate funds against emerging threats and requirements in the year of fiscal execution.  The REF works directly with Operational Commanders at Brigade and below to find solutions to identified equipping requirements. These solutions may result in procurement of new or existing military/commercial materiel equipment, or accelerated development of a Future Force materiel solution for insertion into the current force now. The REF key tasks are: - Be responsive to tactical unit commanders engage Brigade Combat Team/Brigade Commanders (BCT/BDE CDRs) early and often - Bridge specific Operational Needs Statement/Joint Urgent Operational Needs Statement (ONS/JUONS) Gaps to meet urgent needs - In coordination with Asymmetric Warfare Group (AWG) develop materiel solutions to counter Asymmetric Threats - Ensure adequate training and sustainment are provided with every capability - Cultivate and rapidly insert emerging technologies into Soldiers hands												

# UNCLASSIFIED

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2014 Army		<b>DATE:</b> April 2013
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603747A: <i>Soldier Support and Survivability</i>	<b>PROJECT</b> C08: <i>Rapid Equipping Force</i>
<ul style="list-style-type: none"> <li>- Conduct operational assessments to provide useful operator feedback to the Army</li> <li>- Transition effective projects through Capability Development for Rapid Transition (CDRT) to support long-term sustainment</li> <li>- Be aggressive and push the acquisition envelope, but operate within the law</li> <li>- Integrate with existing Army organizations and systems to enable them to recognize and solve problems for tactical units</li> </ul> <p>The REF Integrated Priority list (RIPL) consists of the REF top ten priorities based on requirements received from deployed units, and drives all REF efforts. The priorities with associated metrics, as of 06 February 2013, are:</p> <ol style="list-style-type: none"> <li>1. Dismounted Improvised Explosive Device (IED) Defeat (46 Requirements/42 Projects)</li> <li>2. Small Combat Outpost (COP)/Patrol Base (PB) Force Protection and Sustainment (60 Requirements/52 Projects)</li> <li>3. Dismounted Operations Support (40 Requirements/34 Projects)</li> <li>4. Intelligence, Surveillance, and Reconnaissance (ISR) Shortfalls in Environmentally Inhospitable Operating Environments (OEs) (42 Requirements/42 Projects)</li> <li>5. Dismounted Blue Force Tracking and Mission Command (24 Requirements/16 Projects)</li> <li>6. Counter Ambush (Precision against Small Arms Fire (SAF) and Rocket Propelled Grenade (RPG) (4 Requirements/6 Projects)</li> <li>7. Advanced Escalation of Force and Non-Lethal Messaging (10 Requirements/7 Projects)</li> <li>8. Entry Control Point (ECP) Operations and Vehicle Search Operations (10 Requirements/5 Projects)</li> <li>9. Route Clearance Support (8 Requirements/5 Projects)</li> <li>10. Other (61 Requirements/60 Projects)</li> </ol> <p>Total: 305 Requirements/269 Projects</p> <p>The REF FY14 RDT&amp;E Request of \$1.515 million (Base) integrates, coordinates, deploys and provides urgent material capabilities to deployed and pre-deploying units in support of Joint and Army Forces Commanders to enhance the combat effectiveness of the operating force and enable the defeat of asymmetric threats. The emphasis for RDT&amp;E funding is on Testing and Evaluation that supports projects in the areas of Force Protection, Improvised Explosive Device (IED) Detection and Defeat, enhanced Intelligence, Surveillance and Reconnaissance (ISR) capabilities, Tactical Command, Control and Communication tools.</p> <p>RDT&amp;E funding also provides the REF the flexibility to invest in near-term, innovative solutions. RDT&amp;E funds are necessary in the vast majority of all REF projects. REF uses RDT&amp;E funds to work with industry and Other Governmental Agencies (OGAs) in order to further develop high (&gt;6) Technology Readiness Level (TRL) or advanced technologies that often only need small amounts of funding in order to help them achieve a maturity level that is suitable to solve deployed US Army Forces problems with low investments for high payoffs. REF requires RDT&amp;E funds to integrate several different Commercial-Off-The-Shelf/Government-Off-The-Shelf (COTS/ GOTS) technologies into one capability that solves the tougher and more complex problems. REF uses RDT&amp;E funds to conduct demonstrations and tests to validate technology solutions. REF requires RDT&amp;E funds in order to modify existing technologies that were developed for one purpose but now may be suitable to solve another problem. REF Expeditionary Labs use RDT&amp;E funds to develop and adapt technologies that meet immediate requirements forward in the theaters of operation</p>		

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability	PROJECT C08: Rapid Equipping Force		
with the active assistance of the Soldier in the solution development process. REF requires RDT&E funds to test technologies in order to ensure suitability and safety before equipping the Soldier- any modified Commercial-Off-The-Shelf/Government-Off-The-Shelf (COTS/GOTS) item has to be tested.				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
Title: Rapid Equipping Force		10.000	25.919	1.515
Articles:		0	0	
Description: Funding is provided for the following effort				
FY 2012 Accomplishments: Provide the Army's rapid response capability to develop, prototype, acquire and integrate Commercial-Off-The-Shelf/ Government-Off-The Shelf (COTS and GOTS) solutions to meet urgent combat requirements for deployed forces. Develop and insert selected future force technologies, capabilities and surrogate materiel solutions into committed, deploying and transformational forces for operational evaluation, assessment and spiral development. Plan and execute assessments and studies of Army practices and issues concerning operational needs, desired future force capabilities and relevant Army business practices to provide feedback to Senior Army Leaders.				
FY 2013 Plans: The pace of requirements is expected to continue at FY12 levels based on the increased tempo of transitioning brigades in Operation Enduring Freedom (OEF) with 9 month deployments; the expansion of brigades' operational environments (OE's) that will require smaller units to operate in more isolated areas; the expansion of Army Special Operations Forces Village Stability Operations (VSO) efforts; and finally the introduction of Security Force Advisory Assistance Teams (SFAATs) - a new force structure and role in Operation Enduring Freedom (OEF).				
FY 2014 Plans: REF mission expands to perform Direct Support (DS) to globally deployed Soldiers, Army Service Component Commands of the Combatant Commands, regionally aligned Brigade Combat Teams and other Department of Defense (DoD) organizations. During the same period we expect to see an increase in requirements submitted by Army Special Operations Forces (SOF) in other areas of the world as well as from brigades employed in more global roles, such as the regionally aligned Brigade Combat Teams. REF's Expeditionary Labs are deployed to provide engineer support directly to Battalion and Brigade Forward Operating Bases/ Combat Outposts/Patrol Bases and work side-by-side with Soldiers as they execute their missions. Engineers connect directly to Army, Department of Defense (DoD) and National Labs to conduct prototype design while including the users' immediate feedback. We also expect to play a much more deliberate role in providing support to the Army's Global Reaction Force (GRF) as they prepare for a wider range of response missions.				
Accomplishments/Planned Programs Subtotals		10.000	25.919	1.515

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603747A: Soldier Support and Survivability				PROJECT C08: Rapid Equipping Force			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• M08101: Other Procurement Army	26.923	103.245	5.110		5.110	4.800	4.300	4.400	4.400	Continuing	Continuing
• 121018000: Operations and Maintenance, Army	137.400	127.912	7.248		7.248	7.370	7.639	7.699	7.838	Continuing	Continuing
Remarks											
As of 21 February 2013: FY12 - OPA REF Base (\$4.923 million), OPA REF OCO (\$22.0 million) FY12-OMA REF Base (\$6.788 million), REF OCO (\$180.695 million)											
D. Acquisition Strategy											
The United States Army Rapid Equipping Force harnesses current and emerging technologies to provide rapid solutions to the urgently required capabilities of US Army Forces employed globally. The REF focus is on rapidly placing game-changing capabilities into Soldiers' hands. This mission is accomplished in one of two ways: rapidly adapting Commercial-Off-The-Shelf (COTS) and Government-Off-The-Shelf (GOTS) equipment to meet operational needs and developing emerging deployable capability via interaction with research and development organizations and academia. All capabilities are safety tested prior to insertion into operational environments. Training and sustainment is provided for every capability until it is transitioned to an approved program of record or terminated through the Capabilities Development for Rapid Transition (CDRT) process. Operational assessments are conducted to provide feedback in support of Army equipping and fielding decisions. REF capabilities routinely serve to bridge specific Operational Needs Statement (ONS) and Joint Urgent Operational Needs Statement (JUONS) gaps to meet urgent requirements.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

**UNCLASSIFIED**

<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2014 Army</b>												<b>DATE:</b> April 2013			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>						<b>R-1 ITEM NOMENCLATURE</b> PE 0603747A: <i>Soldier Support and Survivability</i>						<b>PROJECT</b> C08: <i>Rapid Equipping Force</i>			
<b>Product Development (\$ in Millions)</b>				<b>FY 2012</b>		<b>FY 2013</b>		<b>FY 2014 Base</b>		<b>FY 2014 OCO</b>		<b>FY 2014 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>All Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Dismounted Improvised Explosive Device (IED) Defeat	C/FFP	Various:Various	0.000	1.022		2.439		-		-		-	Continuing	Continuing	Continuing
Dismounted Operations Support	C/FFP	Various:Various	0.000	1.086		2.591		-		-		-	Continuing	Continuing	Continuing
Intelligence, Surveillance, and Reconnaissance (ISR) Shortfalls in Environmentally Inhospitable OE's	C/FFP	Various:Various	0.000	1.885		4.496		-		-		-	Continuing	Continuing	Continuing
Small Combat Outpost (COP) / Patrol Base (PB) Force Protection and Sustainment	C/FFP	Various:Various	0.000	1.853		4.420		-		-		-	Continuing	Continuing	Continuing
Other-REF RIPL Priorities (5-10)	C/FFP	Various:Various	0.000	4.154		9.908		-		-		-	Continuing	Continuing	0.000
Base: Various Projects-Protect the Force in Counter Insurgency	C/FFP	TBD:TBD	11.841	-		-		-		-		-	0.000	11.841	0.000
Base: Various Projects-Enhance Intelligence Surveillance Recon	C/FFP	TBD:TBD	9.009	-		-		-		-		-	0.000	9.009	0.000
Base: Various Projects-Logistics/Medical in Counterinsurgency Ops	C/FFP	TBD:TBD	1.639	-		-		-		-		-	0.000	1.639	0.000
Base: Various Projects-Timeliness of Analysis and Information Dissemination	C/FFP	TBD:TBD	6.961	-		-		-		-		-	0.000	6.961	0.000
Congressional Add-Squad Mission Support System (SMSS)	C/FFP	TBD:TBD	1.600	-		-		-		-		-	0.000	1.600	0.000
SSTR/Economic Assumptions/FFRDC and SBIR	C/FFP	TBD:TBD	1.090	-		-		-		-		-	0.000	1.090	0.000

**UNCLASSIFIED**

<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2014 Army													<b>DATE:</b> April 2013		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)							<b>R-1 ITEM NOMENCLATURE</b> PE 0603747A: Soldier Support and Survivability					<b>PROJECT</b> C08: Rapid Equipping Force			

  

Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
OCO: Rapid Equipping Force	C/FFP	TBD:TBD	19.190	-		-		-		-		-	0.000	19.190	0.000
<b>Subtotal</b>			51.330	10.000		23.854		0.000		0.000		0.000			

  

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ATEC (REF Integrated Priority List 1-10)	C/FFP	Various:Various	7.779	-		2.065		1.515		-		1.515	Continuing	Continuing	Continuing
<b>Subtotal</b>			7.779	0.000		2.065		1.515		0.000		1.515			

  

			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>			59.109	10.000		25.919		1.515		0.000		1.515			

  

**Remarks**