

Following is the complete list of projects that Congresswoman Tsongas requested:

Tsongas Appropriations Requests for FY 2009

Air Force Chief Information Officer Process Reengineering Support Project Department of the Air Force

The Air Force is facing many evolving challenges including how to deal with unconventional threats, workforce reduction, an aging fleet, and infrastructure pressures. Consequently, the Air Force is undertaking essential efforts to make their internal business practices more efficient and to find and eliminate waste. Air Force Chief Information Officer John Gilligan is leading his service's campaign to design and implement an effective and up-to-date business information technology architecture. Air Force business processes in every core function are slated for evaluation as part of the Air Force Business Management Modernization Program. By supporting this project, the Air Force would be able to continue working to make its internal processes more efficient, which would allow for dramatic savings. This project is being developed in Sudbury and would create 15 new jobs.

Affordable Robust Mid-Sized Unmanned Ground Vehicle Department of Defense

The development of Unmanned Ground Vehicles (UGVs) provides the individual warfighter with the ability to remain a safe distance away when executing dangerous missions, such as disrupting vehicle-borne improvised explosive devices and clearing convoy routes. By utilizing Unmanned Ground Vehicles during battlefield operations, the lives of military personnel in combat, as well as the equipment they use to carry out their missions, could be saved. The Naval Seas Systems Command and Technical Support Working Group have started to integrate UGVs into their standard operations for urban warfare and counter-terror operations. Due the development of UGVs is key to ensuring the protection of our military personnel from non-traditional enemy threats. This project is being developed in Tyngsborough.

Appleton Mills – City of Lowell, MA Department of Housing and Urban Development, Economic Development Initiative

The funds requested will be used to redevelop Appleton Mills, a historic mill integral to economic redevelopment in the Hamilton Canal District. The Hamilton Canal Project will receive over \$60 million from non-federal sources, will redevelop a neglected multi-acre site in the heart of the city's commercial area, and will create over 400 jobs. Lowell National Historical Park has received federal funding to prepare designs for canalside walkways along the Hamilton Canal along with pedestrian bridges over the Pawtucket Canal and over Thorndike Street.

Ayer Downtown Transit Parking Initiative – Town of Ayer, MA Department of Transportation

The funds requested will be used to complete the construction of a 350-space commuter rail parking facility and related improvements in downtown Ayer. This project is a TEA-21 High

Priority Project and additional funding has been appropriated by the Commonwealth of Massachusetts.

**Ayer Kiddie Junction Site Remediation Project
Environmental Protection Agency**

This money would be used to remove arsenic contaminated soil and pressure treated wood in the primary playground for the children of the Town of Ayer and replace the existing structure with updated playground equipment.

**Biometric Terrorist Watch-List Data Base Management Development
Department of Defense**

This project would continue work by the interagency Technical Support Working Group (TSWG), to enhance and improve biometrics-based identification tracking and analysis systems. These systems include fingerprint and retinal identification, allowing for the warfighter to obtain real-time intelligence on captured terrorists or enemy combatants. This project is being developed in Billerica.

**BuckEye Aerial Surveillance Advanced Technology Development
Department of the Army**

BuckEye is an airborne-mounted detection system, which rapidly produces better imagery of areas in order to identify intelligence for the warfighter. BuckEye was first deployed to Iraq in November 2004, to support Operation Iraqi Freedom. The BuckEye also currently plays a pivotal role in Afghanistan supporting aerial survey missions. The request for additional funding in FY2009 is aimed at improving the warfighters knowledge of natural and/or manmade cave structures in the area of operations. Data collected by this technology will not only provide the warfighter with the improved knowledge of cave structures, but will also immediately make available intelligence to support operations to clear the caves of enemy combatants. BuckEye was the recipient of the 2006 "Army Greatest Invention of the Year" award.

**City of Hope Center – Somebody Cares New England, Haverhill, MA
Department of Housing and Urban Development, Economic Development Initiative**

The funds requested will be used to purchase and renovate a house for the center that would include a food thrift store, a homeless day shelter for all state and national holidays, a community youth and meal outreach center, food storage, office space, a training center, and a Red Cross certified emergency shelter.

**Civil Support Team Imagery Archive Tracking / Communications System
Army National Guard**

This project would allow for better tracking of personnel and equipment when a National Guard Weapons of Mass Destruction - Civil Support Team (WMD-CST) is deployed. The WMD Civil Support Teams were established to be the first military responders on the ground to support local

and state authorities in protecting their citizens against the growing threat of chemical and biological terrorism. The teams are able to deploy rapidly, assist local first-responders in determining the nature of an attack, provide medical and technical advice, and pave the way for the identification and arrival of follow-on state and federal military response assets. This project will allow the WMD-CST to have better emergency response, communications, and training leading up to a mass casualty event. This project is being developed in Lowell.

Cold Weather Layering System (CWLS)
Department of the Navy, Marine Corps

This funding would provide warfighters with clothing to help them operate in mountainous and cold weather environments. The Cold Weather Layering System would reduce the weight and volume that a Marine operating on the ground must carry. Current cold weather clothing items are outdated. Existing items were not developed to be compatible with standard issue body armor, helmets, or load bearing equipment. The CWLS improves individual mobility, survivability and sustainability of U.S. Marines in cold weather combat by incorporating the latest in textile technology. The CWLS is currently being fielded by the Marine Corps, but remains underfunded. This system has already been validated by the Marine Corps and represents superior levels of manufacturing and materials technology for the warfighter. Also, the manufacturer of these materials, Polartec, Inc. is one of the largest employers in the District and is located in an area that has experienced significant manufacturing job loss in recent years. This project is being developed in Lawrence.

Comprehensive Abuse Education and Treatment Program
Essex County Sheriff's Department; Essex County, MA
Department of Justice, Office of Juvenile Justice and Delinquency Prevention

The Essex County Sheriff's Department is requesting federal funds to continue the planning and execution of "Project Towards No Drug Abuse" - a model education and treatment program that will support at least 75 students in its first year. Abuse of oxycontin and other prescription drugs was responsible for a 600 percent increase in drug-related deaths in Massachusetts between 1990 and 2003. Heroin continues to be the Commonwealth's biggest drug problem. This interactive classroom-based substance abuse prevention program will provide on-site, on-demand counseling and treatment for students and will include a year-long post-treatment assessment of former participants.

DDG-51 Class Permanent Magnet Hybrid Electric Propulsion System
Department of the Navy

Hybrid propulsion drive for Navy ships presents a strategic advantage in today's world of increasing fuel prices and reliance upon foreign oil. The DDG-51 class of warships currently uses four large gas turbines to power the propulsion system and has three separate gas turbine generators for ship's service power. Development and demonstration of a prototype DDG-51 hybrid electric drive system will allow for increased fuel savings and would allow ships to remain at sea longer utilizing the same fuel load. The requested funding will design and build a

hybrid electric drive system for insertion into DDG-51 class destroyers. This project is being developed in Hudson.

DDG-1000 Zumwalt Class Destroyer
Department of the Navy

DDG-1000, a next generation warship, is the centerpiece of the U.S. Navy's future surface fleet transformation. The DDG-1000 will have a reduced-size crew (compared to the Navy's current destroyers and cruisers) to permit reduced operating and support costs and will incorporate a significant number of new technologies. Furthermore, several major technologies developed for the DDG-1000 will be used on other future Navy ships, which will reduce future costs. This project has already been validated by the Navy, which is reflective of its inclusion in the President's FY09 Defense request. This request is vital, as Raytheon Company employs more than 8,000 people in the Massachusetts 5th Congressional District. This project is being developed in Andover.

Emerson Hospital, Maternal Fetal Medicine Program
Department of Health and Human Services

Emerson Hospital in Concord, MA seeks to develop a comprehensive Maternal-Fetal Medicine service. These services are designed for women who have medical or pregnancy complications and/or who are considered "high-risk" pregnancies. Emerson Hospital represents the only obstetric service in our primary service area, serving an OB population of over 26,000 women. This specialty program would be offered at the Emerson Hospital Birthing Center in a private, newly-constructed area offering maximum patient comfort and convenience with access to advanced technologies and specialized clinical experts. The center would be staffed by high risk obstetricians who will work in collaboration with obstetricians from Emerson Hospital.

Essex National Heritage Area
National Parks Service, National Recreation and Preservation

Congress designated the Essex National Heritage Area in 1996. It is managed by the Essex National Heritage Commission, a non-profit corporation that implements preservation, education, and heritage development programs under a cooperative agreement with the National Park Service. This funding would help the Commission continue its educational programs and increase visitor center programs and facilities, creating jobs and helping to showcase the area's many historical sites in Essex County.

Eye-safe Laser Weapon System (ELAWS)
Department of the Navy

The Navy is seeking technology that utilizes lasers in order to provide protection for ships at sea. By supporting this project, research and development could continue that would produce a laser that would be eye-safe for the warfighter, but also be able to generate enough energy to protect

ships from sea-based or air-based threats. This project would lead to more efficient weapons by using less energy. This project is being developed in Andover.

**The Fifth Meetinghouse Restoration - First Church of Christ Unitarian; Lancaster, Massachusetts
National Park Service, Save America's Treasures**

The National Historic Landmark Fifth Meetinghouse of the First Church of Christ Unitarian in Lancaster has been widely recognized since its construction in 1816, as the crowning expression of the architectural genius of Charles Bulfinch. Because of its importance in American history and the history of architecture, it is imperative that the structure and its interior and associated systems be preserved or rehabilitated. This and St. Stephen's in Boston are the only two remaining Bulfinch churches. The funds would be used to restore the church to its original state.

**Haverhill Boardwalk – City of Haverhill, MA
Department of Transportation**

The funds requested will be used to complete design and construction of a boardwalk along the Merrimack River atop the floodwall in downtown Haverhill's business district, thereby integrating the riverfront into the city's downtown and greatly enhancing economic redevelopment in the heart of downtown.

**High Temperature Superconductor Navy Propulsion Motor for DDG-1000 and CG(X)
Department of the Navy**

The Navy has spent in excess of \$100 million developing and building the world's first High Temperature Superconductor (HTS) ship propulsion motor (48,900 horsepower) for application aboard the U.S. Navy's DDG-1000 (destroyer) and CG(X) (next generation aircraft carrier) surface ships. HTS technology will change the way all-electric war ships are designed, and add unprecedented mobility and high energy firepower to our fleet. HTS propulsion motors are designed and manufactured in the United States, and will allow the development of an U.S.-based electric propulsion industrial base to support current and future Navy needs. This funding is needed to complete preliminary design and risk reduction of the tactical motor in order to initiate detailed design and fabrication of the motor in 2010. This project is being developed at Devens.

**Horizons for Homeless Children Playspace Program
Department of Health and Human Services
Administration for Children and Families, Child Abuse Prevention and Treatment**

Horizons for Homeless Children (HHC) operates a network of Playspace Programs in the Fifth Congressional District and throughout Massachusetts, providing homeless children in shelters with the opportunity to benefit from developmentally-appropriate play opportunities, mitigating the harmful lifelong impact of homelessness on those children. HHC has served over 10,000 homeless children since 1990 through its Playspace Programs, through which it installs Playspaces in family shelters throughout Massachusetts, and trains volunteers to provide

nurturing, stimulating play opportunities for the children in the shelters. Over 900 active volunteers currently serve 2,000 children in more than 130 Playspaces in shelters each week. This federal funding will result in homeless children in my District being served by an estimated 100 volunteers each week.

**Integrated Vehicle Health Monitoring System
Department of the Army**

The U.S Army has identified the need for technologies that provide real-time knowledge of combat vehicle health status. This program will see if commercial technologies can diagnose, in real time, problems with military ground vehicles, thus reducing the time and cost associated with fixing the vehicles and keeping the vehicles safer for our servicemembers. The Army and U.S. taxpayers will benefit from the significant investment in vehicle health monitoring which can also be used by the commercial automotive industry. This project is being developed in Littleton.

**Intermodal Transit Parking Facility – Merrimack Valley Regional Transit Authority
(MVRTA), Haverhill, MA
Department of Transportation**

The funds requested will be used to construct an Intermodal Transit Parking Facility to provide expansion of commuter rail parking and support transit-oriented development in downtown Haverhill. The facility will address the demand for parking associated with nearby residential construction and meet the commercial needs of downtown Haverhill, providing a platform from which to launch other economic development initiatives in the future. The project has received over \$7 million in federal funds through previous appropriations.

**John Greenleaf Whittier Birthplace
National Park Service, National Recreation and Preservation**

The Whittier Homestead is an outstanding example of the Early Settlement Period farm, and a local and national historic treasure. It was added to the National Register of Historic Places on July 30, 1975. Located on its original site, it is substantially the same as when the Poet lived there from 1807 until 1836. The homestead is the setting of Whittier's most famous and beloved poem *Snow-Bound*. The requested funds will be used for the restoration of windows and doors, and repair and painting of decaying clapboards to eliminate infiltration of water. Also, a stone walkway will be restored to reduce the possibility of injury to visitors.

**Katydid Foundation Housing Trust – Katydid Foundation Inc., Haverhill, MA
Department of Housing and Urban Development, Economic Development Initiative**

The Katydid Foundation Inc. will launch a housing trust to provide services for adults with autism-related disorders. The funds requested will be used to acquire a house and property for the trust. According to the CDC, one child out of 150 born this year will suffer from an autism spectrum disorder and approximately 1.5 million adults with autism will require services. The Katydid trust will allow residents to choose where they live, with whom they live, and how they

spend their time in order to best meet the disorder's sensory and other highly specific needs. The foundation has also received funding from the Massachusetts Department of Mental Retardation.

**Law Enforcement Communications, Essex County Sheriff's Department
Department of Justice, Office of Community Oriented Policing Services**

The Essex County Sheriff's Department requests federal funds to upgrade its internal communication systems and increase involvement with external entities and regional public safety organizations. The information sharing system will be available to all 34 Essex County police departments, the Massachusetts State Police, and any federal agency that wishes to utilize the network. This network will be accessible from desktop workstations, personal digital assistants, laptop computers, and any other web-enabled device.

**Law Enforcement Video Sharing (LEVIS)
Lowell Police Department; Lowell, MA
Department of Justice, Office of Community Oriented Policing Services**

The Lowell Police Department requests federal funds to support Phase 1 of the Law Enforcement Video Sharing program to allow for video surveillance and transmission of video data from remote sites, along with the purchase and installation of 14 new cameras in identified criminal hotspots to better ensure public safety. The new cameras will be mobile, with their location reviewed quarterly. This project will serve as a vital investigative tool, as many crimes including burglary and motor vehicle thefts occur when the victim is not present. The collected information could then be e-mailed throughout the region to various police departments as a way of increasing information sharing. As well as helping to prevent and investigate crime, the cameras will be used to monitor natural disasters, such as flooding, and help with proper deployment of emergency services personnel.

**Lawrence Gateway Project – City of Lawrence, MA
Department of Housing and Urban Development, Economic Development Initiative**

The Lawrence Gateway Project (LGP) is a series of integrated public and private sector investments designed to revitalize the city's economic, environmental, residential, infrastructural, cultural and historical characteristics. The requested funds will be used to implement the LGP's Quadrant Area Re-Use plan along the Merrimack and Spicket Rivers, specifically for the construction of a passive park at the former Oxford Paper site and the construction of a surface parking facility with direct transportation and transit-oriented enhancements. The Quadrant Area is within the city's designated HUD Renewal Community zone and the requested funds will enhance the security of an existing HUD Section 108 loan being applied to the project.

**Lighting Energy Savings Project - Andover High School
Department of Energy**

This project will replace inefficient lighting fixtures and systems with more efficient models. The new and renovated fixtures will provide more light, a better quality of light, and at less cost. In addition, motion sensors and controls systems will be installed to ensure that lights are turned off when they are not required and maintenance costs will be reduced. Escalating energy costs are placing an increased burden on school administrators and the community's taxpayers. The implementation of this project will inform this environmentally conscious community that their largest electricity user is being operated as efficiently as is possible.

Lightweight Machine Gun Barrel Initiative
Department of the Navy, Marine Corps

The Lightweight Machine Gun Barrel Initiative would allow for the development of a machine gun barrel that would be superior to any current machine gun barrel currently in use. This program would greatly improve the reliability, accuracy and life expectancy of all machine guns. It will also reduce the weight that machine gunners must carry into combat and could eliminate the requirement for each Marine to carry extra barrels to swap out after every 200 rounds are fired. This technology, if properly funded, could greatly benefit our servicemen and women on the front lines. This technology is being developed in Billerica.

Low Cost Shipboard Titanium Pipe
Department of the Navy

Low Cost Shipboard Titanium Pipe prototypes are currently being produced for test and evaluation by the Naval Surface Warfare Center (NSWC), Carderock, Maryland. NSWC is validating the production methods and the suitability of the pipe for shipboard installation. This technology is important to Navy ships because titanium is virtually immune to seawater and is unsurpassed in its corrosion resistance abilities in a marine environment. Because the pipes are lighter than normal shipboard pipes, the installation of these pipes on Navy ships may reduce the consumption of fuel by each Navy ship and reduce lifetime maintenance costs. Titanium pipes will last more than 30 years. This technology is being developed in Billerica.

Lowell Community Health Center, Lowell, MA
Department of Health and Human Services

Lowell Community Health Center is seeking federal funds to expand operations and consolidate its multiple sites in one centralized facility. This will allow the Center to better meet the growing health care needs of low-income, multi-cultural, medically underserved residents of Greater Lowell. The Lowell Community Health Center provides quality health care services for residents of Greater Lowell who are medically underserved, uninsured and low income. Seventeen percent of Lowell residents live below the federal poverty line, and the uninsured comprise over a quarter of Lowell's population. The Center is the only provider with access to Free Care and is one of the largest medical physician groups in the City.

Lowell General Hospital Expansion Project
Department of Health and Human Services

The Lowell General Hospital Expansion Project is designed to enhance the hospital and provide contemporary, clinically efficient facilities. The green-design six-story expansion project includes a new emergency department, private rooms, access to outpatient services, and growth areas for surgical services. Lowell General Hospital is one of the community's most venerable institutions, contributing to the health, welfare, vitality, and economic success of the City. It serves more than a quarter of a million patients each year. In addition, Lowell General Hospital is one of the City's largest employers.

**Lowell Riverwalk Extension Construction – Lowell National Historical Park
Department of Transportation, Federal Highway Administration**

The funds requested for fiscal year 2009 will be used to continue construction of the proposed extension to the “Mile of Mills” Riverwalk from the historic Boott Mills complex to the Lowell Memorial Auditorium and Lower Locks area. The Riverwalk involves the development of a linear walkway constructed above the city’s sewer interceptor, linking several access points and rest nodes. The project will include development of railings, lighting, seating systems, canopies, benches and trash receptacles.

**Lowell Small Business Assistance Center
Department of Education**

The Lowell Small Business Assistance Center is a program of Community Teamwork, Incorporated in collaboration with Middlesex Community College, the Division of Economic Development and the University of Massachusetts Lowell. The Center has an impact on the economic vitality of Lowell and the surrounding communities, enabling low-income individuals to move towards economic self-sufficiency through the medium of small business. The requested funding would increase the level of support provided to Portuguese speaking entrepreneurs and existing businesses in Lowell and the surrounding communities through outreach and the creation and delivery of Portuguese language curriculum and to support the activities of the Center.

**Lowell Western Canalway Ecumenical Park Construction – Lowell National Historical Park
Department of Transportation, Federal Highway Administration**

The funds requested will be used to develop a pedestrian walkway along the edge of Western Canal; specifically, funds will provide for handicapped accessibility at street crossings, replacement of iron picket fence with code compliant canal railing, and general landscape and site improvements. The project is part of the LNHP urban greenway system along Lowell’s historic power canal system, located in the Ecumenical Plaza section of the Western Canal.

**Magnesium Diboride (MgB₂) Medium Temperature Superconductors for Navy Power Applications
Department of the Navy**

Future Navy ships are being designed with electric propulsion and electronic weapon systems because this increases their flexibility of operation. However, this also increases the requirement

for electricity on board. The use of superconductors to mitigate these problems is attractive due to their ability to conduct electricity with less energy loss than normal conductors such as copper wire. The objective of the Magnesium Diboride (MgB₂) Superconductors for Navy Power Applications program is to continue research and development on future power application needs aboard Navy ships and to identify technologies that would better carry electricity from the power source to the system utilizing that power. This project is being developed in Lowell.

**Marine Corps Electronic Security System (Access Control)
Department of the Navy, Marine Corps**

This system produces photo-like images of the contents of a container or vehicle, highlighting explosives, illegal drugs, agricultural products, currency, etc at security checkpoints. By supporting this project, commanders at Camp Pendleton and Camp Lejeune would have the capability to screen large/commercial vehicles for illegal material as they enter the installations. Such illegal material includes, but is not limited to: 1) car and truck bombs; 2) explosives, plastic weapons, and other organic threats; 3) radioactive threats, including nuclear devices and dirty bombs, 4) illegal drugs; 5) stowaways, such as illegal immigrants and terrorists; and 6) trade fraud items, such as alcohol, tobacco, and other legal goods smuggled to evade duties. The funding would be used to purchase the equipment, installation costs (including labor), and for a maintenance contract with the product's manufacturer. In addition to the military applicability, this technology also brings tremendous commercial possibilities and could also be used to improve our port and border security. This project is being developed in Billerica.

**Massachusetts Maritime Academy, Final Conversion of the Training Ship *Enterprise*
Department of the Navy**

With more than 1,000 cadets in uniform, Massachusetts Maritime Academy (MMA) is one of the largest maritime academies in the United States. In 1999, the U.S. Government acquired a 1967 vintage cargo ship, converted it into the U.S. Training Ship *Enterprise*, and delivered it to MMA in 2003 to help fulfill the cadet requirements to train at sea. Although originally designed to carry 600 cadets and 110 officers and crew, federal budget shortfalls eliminated 90 cadet and 20 officer berths from the final configuration. This additional funding would go towards completing the conversion of the training ship to its original planned cadet and officer/crew accommodation level. Fifth-three students from the Fifth Congressional District attend the Mass Maritime Academy and nearly 175 students from the Fifth District are alumni.

**Massachusetts Sheriff's Info-Sharing Project
Massachusetts Sheriff's Association (MSA); Middlesex County, MA and 13 other MA
counties
Department of Justice, Office of Community Oriented Policing Services**

The Massachusetts Sheriff's Association requests federal funds with the objective to establish an identity-based, biometric information-sharing and criminal booking system for all Massachusetts

sheriffs' departments. FY 08 funding has allowed for introduction of this program in three of the 14 Massachusetts county jails. Upon completion of this program, Massachusetts would have the nation's first state-wide law enforcement information-sharing system that utilizes state-of-the-art face recognition biometrics technology and identity-based information management systems. The completed project would ensure that every Massachusetts sheriff has real-time actionable information on incarcerated criminals and other mobile criminal elements at large in the community, including gang-members and others who may pose homeland security risks.

Mass 2-1-1

Department of Health and Human Services

The requested funding would support the establishment in Massachusetts of the 2-1-1 dialing code. 2-1-1 is the national abbreviated dialing code for free access to health and human services information and referral that makes a critical connection between those seeking services or volunteer opportunities and the appropriate community-based organizations and government agencies.

Maynard Police IT Upgrade

Maynard Police Department; Maynard, MA

Department of Justice, Office of Community Oriented Policing Services

The Maynard Police Department is seeking federal funds to support technical upgrades for a new public safety building. The town has raised over 90 percent of the funds required for the construction of their new building - requesting the remaining 10 percent. The Maynard PD has substantial ties to the federal government as one of nine of the Federal Emergency Management Agency (FEMA) regional bunkers is located within its jurisdiction. Police officers have routinely responded to calls for assistance from FEMA, including routine patrols of the greater region and responding to suspicious vehicles. The police department needs to update all communication and computer systems to combat any potential threat posed to FEMA or other targets in the community.

Maynard Waste Water Treatment Plant Upgrade

Environmental Protection Agency

The Town of Maynard, Massachusetts has prepared a Comprehensive Wastewater Management Plan/Environmental Impact Report (CWMP/EIR) to address short-term and long-term regional issues relating to the wastewater treatment and disposal and nutrient loading in the Assabet River, on a basin-wide basis. The goal of the CWMP/EIR is to identify environmentally-sustainable treatment alternatives that respond to Maynard's needs, meet water quality and public health standards, reduce phosphorous loading, and increase water levels in the river and its tributaries as mandated by the DEP and the EPA. The result is a project proposed to meet these mandated goals for the next 20 years. It will involve a Waste Water Treatment Plant upgrade primarily designed to reduce phosphorous emissions to levels of .01 mg/l. This project has already received approval from the State Department of Environmental Protection for a low-interest SRF loan.

Micro-Electrical Mechanical System (MEMS) Demonstration Radar System

Department of the Army

MEMS is a powerful new micro technology that has numerous applications and the MEMS Demonstration Radar System has been critical to the development of key technologies that support the soldier. This technology combines modern electronics with mechanical systems on a small scale to sense, control, and act on changing events. Funding for the MEMS Demonstration Radar System (MEMS DRS) would allow for a real-time test of technology to demonstrate how MEMS DRS could be used in reducing or mitigating the threat posed by improvised explosive devices (IEDs) and better protect our troops. IEDs are one of the leading causes of debilitating injury, including Traumatic Brain Injury (TBI). This radar system would provide continuous information to warfighters to protect from enemy attack and mitigate the risks from IEDs. This project is being developed in Stow.

Middlesex Community College Health Education Expansion Project Department of Health and Human Services

Middlesex Community College is seeking federal funds to expand and modernize the college's health education programs. The funding would equip a new, state-of-the-art nursing education laboratory and upgrade training equipment for medical and dental assistant education programs. The nursing and dental programs are two of the most popular education programs offered by the college. However, because of limited space and lack of proper equipment, the college is forced to turn many interested students away.

Mill Pond Ecosystem Restoration, Littleton, MA U.S. Army Corps of Engineers

The restoration of Mill Pond is significant not only to improve the region's water quality, but also to help ensure that these waterways are operational for recreational and economic purposes. Funding will allow the Army Corps of Engineers to complete its study of alternatives to restore Mill Pond's aquatic habitat. Mill Pond was once heavily fished for pickerel and perch and was a refuge for a wide variety of birds and waterfowl. However, its condition has degraded significantly. The Pond's shallowness and excessive nutrient loads from the surrounding 4,508-acre watershed have resulted in dense summertime growth of aquatic weeds, particularly duckweed. Finishing the study will allow the Army Corps of Engineers to arrive at a final design, and determine construction alternatives. This project was specifically authorized to be carried out under 206 of the Water Resources Development Act of 1996.

Multi Climate Protection System (MCPS) Department of the Navy

The Multi Climate Protection System (MCPS) is a key uniform component for Navy and Marine Corps aviation personnel. These protective garments provide superior protection from the elements; have increased flame protection technology; and replace outdated garments that are bulky, do not fit aircrew personnel, and do not provide enough protection from wind and water during missions. This technology not only increases the readiness of our military personnel, the manufacturing of these materials only occurs in the United States and would require the

manufacturer to add approximately 40 additional jobs in order to meet the requirement. This system has already been validated by the Army and represents superior levels of manufacturing and materials technology for the warfighter. Also, the manufacturer of these materials, Polartec, Inc. is one of the largest employers in the District and is located in an area that has experienced significant manufacturing job loss in recent years. This project is being developed in Lawrence.

Multifunctional Particles for Defeating Chemical and Biological Warfare Agents **Department of Defense**

Chemical and biological warfare agents (CBWA) present a real and growing threat to the U.S. Armed Forces. Protective clothing is the most commonly used defense against CBWA, but added layers of clothing results in more instances of heat-related illness. In 2005, the Department of the Army, Office of the Surgeon General, reported that over 1,700 heat injuries occurred in the Army, including 258 cases of heat stroke and 1,467 cases of heat exhaustion. Over the past 20 years, 5,246 Army soldiers were hospitalized and 37 died due to heat related illness. Greater rates of hospitalization and heat stroke are now being seen among infantry soldiers, gun crewmen, and women. To overcome this heat, personal cooling systems are being used on a limited basis, but available approaches are large, heavy, and consume a lot of power. This technology has the potential to achieve a greater level of CBWA protection while at the same time providing a cost effective, lighter weight fabric, which will lead to more breathable and comfortable uniforms for the soldiers in the field and reductions in heat-related illness. This project is being developed in Chelmsford.

Nanomanufacturing of Multifunctional Sensors **Department of the Army: UMass Lowell**

Nanotechnology holds unprecedented promise to create extremely small sensors that could provide instant feedback on the health of soldiers engaged in battle and to monitor the structural integrity of mechanical systems, such as bridges and aircraft. The University of Massachusetts - Lowell, in conjunction with the Army Research Laboratory, is working to improve the manufacturing processes necessary in order to build nano sensors that can be introduced into a battlefield environment. This funding would assist in further developing these highly effective sensors. In addition to the high military value associated with this technology, this funding would support 22 faculty members, 15 Post-Doctoral, 15 Graduate Students and 4 Research Staff at the University of Massachusetts - Lowell.

Naval Flywheel Energy Storage System **Department of the Navy**

The Naval Flywheel Energy Storage System (FESS) project will build an advanced energy storage system for applications aboard Navy ships - essentially, the next generation battery. The proposed Shipboard FESS, which could have commercial applicability, will provide the Navy a proven, reliable, maintenance-free, and long-life alternative energy storage system to overcome the many shortcomings of lead-acid batteries. As the Navy continues to move towards electric

propulsion systems and advanced sensors and weapons, the need for a reliable “energy storage module” continues to grow. This project is being developed in Tyngsborough.

**New Interchange for Interstate 93 in Massachusetts – Merrimack Valley Economic Development Council
Department of Transportation, Federal Highway Administration**

This funding will be used for the design and construction of a new and urgently required interchange on Interstate 93 in Andover, Tewksbury and Wilmington. The I-93 interchange project will dramatically alleviate existing traffic congestion on the local roadway system and allow for significant job creation through expansion of local businesses and the introduction of numerous new facilities. It will also provide a major economic stimulus in the affected communities. The area to be served by the new interchange is presently home to such global industry leaders as Wyeth, Proctor and Gamble/Gillette, Charles River Laboratories and others. The interchange will allow for the potential expansion of these companies and the new development of hundreds of acres of landlocked or poorly accessed industrial land. This funding is a priority for the Commonwealth of Massachusetts.

**New Ladder Truck, Lawrence Fire Department; Lawrence, MA
Department of Homeland Security**

In January, the city of Lawrence suffered from a devastating fire that destroyed more than a dozen buildings. The rapid response of the Lawrence Fire Department was impressive, however it also made even more clear that the department needed some equipment upgrades to keep their department running safely and efficiently. The Lawrence Fire Department requests federal funds to purchase a new ladder fire truck, as well as 3 staff support vehicles. The department's current ladder truck is 17 years old. The recommended lifespan for a ladder truck is seven to ten years. The department requires a ladder truck with an articulating boom to cope with the densely populated city environment and is a necessity for life safety and firefighting tactics. This funding would also replace the Deputy Chief's command vehicle, which responds to over 6,000 incidents annually, as well as two support staff vehicles. These support vehicles, because of their age, cannot be used for active service.

**Northern Essex Community College Allied Health and Technology Center
Department of Health and Human Services**

For a number of years, Northern Essex Community College has made it a priority to drastically upgrade the services and programs provided to the Lawrence Community. The creation of the Allied Health and Technology Center in the city of Lawrence holds tremendous promise as the much-needed, long-term solution to the obstacles encountered by Northern Essex Community College as it attempts to meet the educational, training, and economic needs of the population it is meant to serve. The Center would expand the college's space and enhance its ability to provide training to more students, preparing them for meaningful careers in related fields. Funding will support students from the city of Lawrence, where there is double-digit unemployment and a quarter of the population lives below the federal poverty line.

Passive Materials for Infrared Spectral Shifting
Department of the Navy

Commercial infrared technology is becoming more common and can be easily acquired by potential enemies. As these devices become better and more widely available, the ability of U.S. forces to mask their presence becomes harder. This technology allows U.S. forces to better conceal heat signatures using materials (e.g., tape) that can be easily applied to a heat source (e.g., a small boat engine). This would allow U.S. forces to continue to approach under cover of darkness and not be detected by an infrared camera by the enemy. This project is being developed in Billerica.

PEM Fuel Cell Auxiliary Power Units for Army Ground Systems
Department of the Army

The on-going transformation of the U.S. Army envisions a force that is lighter and more maneuverable. A key element of this transformation is the development and deployment of advanced communications systems. Those systems, however, require a power source that can run the systems, but not reveal the positions of U.S. soldiers to the enemy because of the noise and emissions associated with power generators. This project seeks to develop a highly efficient power generator that generates very little noise, reduces the amount of fuel necessary to run it, and is readily deployable by our military. This project, which has tremendous commercial possibilities, is reflective of the high-tech energy development industry in the 5th Congressional District and would be supporting a high-tech workforce in the Merrimack Valley. This project is being developed in Lowell and Billerica.

PATRIOT Mods & "Grow the Army Initiative"
Department of the Army

PATRIOT is the only fielded air and missile defense weapons system in the United States Army. However, upgrades are needed in order to respond to potential air and missile threats to deployed U.S. forces. With only 13 deployable battalions in the current force, the Army's operational and personnel capacity to respond to a range of global air and missile threats is severely stressed. Senior Army leadership has concluded that the force should increase by two battalions to a total 15 PATRIOT systems. This system has already been validated by the Army, which is reflective of its inclusion in the President's FY09 Defense request. This request is vital, as Raytheon Company, located in Andover, employs more than 8,000 people in the Fifth Congressional District.

Point of Entry Lead Toy Screening
Consumer Product and Safety Commission

Thermo Fisher Scientific requests federal funds to provide Consumer Product Safety Commission inspectors with up to 80 more "X-Ray Fluorescence" (XRF) analyzers, including staffing and research. This extra equipment will provide the ability to scan up to two million toys annually. This number represents ten percent of the Chinese imports recalled from March to August 2007. The Consumer Product Safety Commission is pleased with the eight devices they

have and has recommended the Thermo Fisher technology to the U.S. Department of Homeland Security's Customs and Border Patrol (CBP). Indications are that CPSC will utilize these scanners to test consumer goods at the border before products are released for domestic distribution. This project is being developed in Billerica.

**Protein Microarray Technology for Food Safety Testing
Department of the Army**

Many perishable food products cannot practically be shipped into conflict regions from the U.S. or elsewhere. U.S. Armed Forces and their civilian support staff are forced to rely on locally available sources. However, naturally occurring pathogens (e.g. e-coli, salmonella) and intentionally introduced pathogens on or in food products present a significant health and security threat to U.S. personnel in the field. Beyond the present encouragement/enforcement of sanitary procedures by local suppliers, affirmative testing of the safety of the food supply would greatly reduce the present risk. This program would lead to the development and demonstration of affordable test kits and detection instruments that will permit effective food safety screening for U.S. forces in the field. This project is being developed in Billerica.

**Public Safety Communications Upgrade, Haverhill Police Department
Department of Justice, Office of Community Oriented Policing Services**

The Haverhill Police Department is requesting federal funds to update and replace its existing public safety communications system. Replacing handheld and cruiser radios will dramatically increase the department's ability to protect the citizens of Haverhill as well as provide a reliable lifeline for officers. The Department answers over 33,000 calls annually. Their current radios fail to meet federally established standards as they operate in the analog mode. The new radios will enable the Department to comply with the interoperability component for homeland security. Cross-dispatching will enable public safety officers to provide a coordinated multi-jurisdictional response to emergencies in and outside of Haverhill, replacing hand-held and cruiser radios with compliant equipment. The Haverhill Police Department regularly provides mutual aid assistance to over forty-five communities in the Commonwealth and New Hampshire, serving an estimated population of over 1.3 million people.

**Regional Technical Training Law Enforcement Collaborative
Middlesex Community College; Lowell, MA
Department of Justice, Office of Community Oriented Policing Services**

Middlesex Community College, the Northeastern Massachusetts Law Enforcement Council (NEMLEC), and the Massachusetts Association of Crime Analysis (MACA) are seeking federal funds to complete the Regional Technical Training Law Enforcement Collaborative, a state-of-the-art education and training program for public safety officials. This program would complete a state-of-the-art education and technology training program for public safety officials, as well as create two additional staff positions. Since 2006, this program has served nearly 800 law enforcement personnel, in four dozen classes and workshops, trained in the use of new and emerging technologies for crime analysis, cyber crime, prevention, response, and forecasting. The requested funds will be used to purchase the remaining technology and infrastructure

equipment necessary to outfit the MCC-provided classroom, materials and supplies, promotional materials, personnel and administrative support, and other contractual costs.

Saints Medical Center, Cardiac Center of Excellence
Department of Health and Human Services

In 2008, Saints Medical Center will break ground on a multi-story, state of the art Outpatient Cardiac Center of Excellence. Located on the main campus, the Center will provide outpatient cardiac treatment and diagnostic services to Greater Lowell and the Merrimack Valley. Saints Medical Center is poised to become a regional leader in cardiac care but requires the appropriate facilities. Currently, the Center requires interventional labs, treatment rooms, and reception and waiting areas.

Software Reconfigurable Payload (SRP)
Department of the Navy

The Software Reconfigurable Payload (SRP) project could give the Navy and Marine Corps the ability to improve intelligence, surveillance, and reconnaissance missions using existing air, sea, and land-based vehicles. By modifying the ways these vehicles are used by utilizing SRP, the Navy and Marine Corps may be able to deliver real-time information to our forces engaged in combat. This project is being developed in Carlisle.

Solar Panels for the Haverhill Citizens Energy Efficiency Project
Department of Energy

The Haverhill Citizens Center serves hundreds of citizens every day, including many of Haverhill's elderly population. It houses Haverhill's Council on Aging, Cultural Council, Veterans Offices, Recreational and Youth Services Programs. The building suffers from tremendous energy inefficiency, yet its original 1960's design was supposed to capitalize on cutting edge energy efficiency measures, including solar and geothermal possibilities which were never realized. The project would renovate the Haverhill Citizens Center, which could be used as an energy efficiency demonstration project that preserves its infrastructure. The Citizens Center has previously received funding from the City of Haverhill and through State grants through the Division of Energy Resources for energy audits.

Special Operations Visual Augmentation Systems Hand Held Imager/Long Range
Department of Defense

This system is a thermal camera that can be mounted on the rear of a vehicle or on an inflatable, retractable mast, and can also be utilized as a handheld device. The system allows U.S. Special Operations Forces to conduct their missions from positions of relative safety and to operate 24 hours a day, seven days a week in all climate and battlefield conditions. This additional funding would ensure that our Special Operations Forces would be able to receive the equipment they need for military operations. This project is being developed in North Billerica.

Station Avenue Priority Development Site Parking – Town of Groton, MA
Department of Housing and Urban Development, Economic Development Initiative

The funds requested will be used to acquire a parcel of vacant land in order to construct a municipal parking lot for the Station Avenue Overlay District, which provides for retail, commercial, professional offices, and residential development. The project has received funding from the Town of Groton and the Massachusetts Department of Environmental Protection, and is a designated Priority Development Site.

Superconducting DC Homopolar Motor
Department of the Navy

The U.S. Navy is pursuing a new application using smaller pod-mounted propulsion systems to provide new, more flexible propulsion alternatives for future electric ships. Pod-mounted propulsion, which will be used to power ships at lower speeds, will provide greater fuel efficiency and lower the acoustic signature of the ship. This technology provides an option for a smaller, lighter and quieter propulsion motor for future electric ships, such as CG(X). The funding will allow for the development of this technology to meet the schedule requirements for future ship development. This project is being developed in Billerica.

Tactical Metal Fabrication (TacFab)
Department of the Army

This program provides the Army with a mobile, manufacturing capability to provide deployed forces with critical spare and replacement parts to keep tanks, helicopters, guns and other systems operating under extreme battlefield conditions. This system would shorten the amount of time necessary to repair many systems. By fielding the Tactical Metal Fabrication (TacFab) System, parts could be made in the field, instead of waiting for parts from a repair depot. This project is being developed in Billerica.

Thermal Weapons Sight (TWS)
Department of the Army

Thermal Weapon Sight (TWS) scopes provide warfighters with tremendous day/night advantage to detect, identify, and engage hostile targets independent of darkness, smoke, or “dirty battlefield” conditions. The Army currently has a requirement for 212,000 Thermal Weapon Sight scopes. BAE Systems is producing 1,500 TWS units per month and has been asked by the U.S. Army to increase production rates to 3,000 per month to meet critical Army fielding requirements in support of ongoing operations in Iraq and Afghanistan. This project has already been validated by the Army, which is reflective of its inclusion in the President's FY09 Defense request. This is a critical program for both the warfighter, as well as the many employees who work on this important program. Hundreds of these employees reside in 5th Congressional district and are proud to be working on a program that provides this capability to U.S. forces.

Tewksbury Sewer Program

Environmental Protection Agency

In October 2002, residents of Tewksbury approved funding for an \$81 million sewer expansion program that, over an eight year period, would provide sewer service to all Tewksbury residents. Due to dramatic increases in construction costs from 2004 to 2007, driven largely by increases in energy and materials costs (such as pipe and asphalt), industry-wide shortages of resources due to the impact of natural disasters (Hurricanes Katrina and Rita), and increased global competition, the program approved in 2002 is now estimated to cost \$98 million to complete. This funding requested would be for assistance in the design of the project.

Torpedo Composite Homing Array Department of the Navy

In order to improve the ability of torpedoes to operate in shallow water, the Navy is seeking to upgrade Mk-48 and Mk-54 torpedoes. According to the Navy, should this project be funded, the Navy may save approximately eight percent of its total torpedo cost, or about \$50 million dollars. The project also has applicability to other Navy ships that utilize torpedoes, including destroyers and the next generation aircraft carrier. This project is being developed in Littleton.

Town Hall – Town of Dracut, MA Department of Housing and Urban Development, Economic Development Initiative

The funds requested will be used to design and construct a new town hall for the Town of Dracut. The current town hall was converted from an elementary school constructed in 1893. Studies have concluded that the current building, and the buildings now housing several other town offices, are unsafe and fail to adequately provide for either disabled accessibility or security. The new facility would house all town offices, and provide for disabled accessibility, security, storage space, public queues, and conference rooms.

Union Crossing – Lawrence CommunityWorks, Lawrence, MA Department of Housing and Urban Development, Economic Development Initiative

The funds requested will be used to transform a former textile mill into a mixed-use development to include family and workforce housing, commercial space, and community facilities. A walkway and deck will allow pedestrian and bike access to the Lawrence community. The project will create approximately 200 permanent jobs and has received funding from a variety of private sources.

University of Massachusetts, Urban Transformation Project Department of Education

The Lawrence, Massachusetts high school is being transformed from a single 2,500 student institution into a multifaceted facility of six distinct schools serving up to 500 students each. The Urban Transformation Project will infuse researchers and graduate students into the Lawrence transformation process to document, study, and implement this undertaking. The study will produce an array of vastly beneficial data for university curriculum, education professionals, administrators, and local school districts. The study will benefit administrators, teachers, and

students and will further develop the tools and curriculum necessary to prepare teachers and administrators for a successful transformation.

**Upper Merrimack Street Revitalization Initiative – The Coalition for a Better Acre, Lowell
Department of Transportation, Federal Highway Administration**

The funds requested will be used for the reconstruction of 1200 linear feet of Merrimack Street, beginning at the Aiken Street/Merrimack Street intersection and ending at the newly reconstructed University Bridge. The project will include roadway reconstruction, new lighting, street trees, pedestrian amenities, street furniture, and drainage upgrades aimed at preserving neighborhood character. This project has received funds from the City of Lowell, the Commonwealth of Massachusetts, and the Lowell Community Foundation.

**Youth Center Building Project – United Teen Equality Center (UTEC), Lowell, MA
Department of Housing and Urban Development, Economic Development Initiative**

The UTEC program provides a national model for educating at-risk young adults about the danger of gangs, while providing them with alternative activities. The funds requested for fiscal year 2009 will be used to renovate the former St. Paul's United Methodist Church building to serve as UTEC's new youth center building. The center (designed as a green building) will include a computer room, computer repair room, classroom space, lounge area, meditation room, and staff office space. The project will receive 80% of its funds from private and state sources.

**YWCA of Lawrence, Health and Wellness Initiative
Department of Health and Human Services**

The Health and Wellness Initiative is designed to address health issues in Lawrence, lack of access to education and the prevalence of obesity, among the Latina population through fitness and aquatic activities, safety training, education, and personalized case management and counseling.