

Public Value in Privatization:
The Military Housing Privatization Initiative of 1996

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DEDICATION

I dedicate this dissertation to my wife Nina, my life's gift, to my daughter Stephanie,
and to my son Jonathan.

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ABSTRACT

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Bob Helwig

This case study examines the public value created by the Military Housing Privatization Initiative (MHPI) of 1996. It applies Moore's (2005) theoretical proposition that public managers should create public value to one example of social infrastructure privatization, military family housing. Under the MHPI, the United States Department of Defense conveyed its domestic inventory of largely inadequate family housing to private entities in order to accelerate revitalization of the housing and to reduce the long-term costs of operations and management. This study examines whether the program's public purpose, public-private governance, and public value measurement were appropriately aligned and whether any misalignment of those program elements caused problems, which in turn reduced public value creation. The key findings are identified and an analytical framework in which to evaluate public and private co-production of infrastructure is provided.

TABLE OF CONTENTS

LIST OF TABLES	iv
INTRODUCTION	1
REVIEW OF THE LITERATURE	4
Public Purpose	4
Infrastructure Gap	5
Co-Production	14
Public-Private Governance	22
Public-Private Interface	23
Privatization	26
Military Housing Privatization Initiative (MHPI) of 1996	33
Public Value.....	42
Uncertainty and Risk.....	45
Valuation.....	48
METHOD	60
Research Design.....	60
Researcher.....	62
Evidence.....	62
Analysis.....	65
RESULTS	73
Evidence.....	73
Analysis.....	75
Accelerating Housing Revitalization	76
Leveraging Budgetary Appropriations	81

Costs and Benefits.....	88
Sustainment.....	94
Corrections.....	99
DISCUSSION	109
Public Value Creation.....	109
Contribution to the Discipline.....	111
Future Implications	111
APPENDIX A MHPI EVIDENCE.....	113
APPENDIX B MHPI TIMELINE	118
APPENDIX C MHPI STATUTE	120
APPENDIX D MILITARY TENANT BILL OF RIGHTS.....	153
APPENDIX E MHPI EVIDENCE SHEET.....	155
REFERENCES	157

LIST OF TABLES

1.	The United States Infrastructure Gap	8
2.	Hierarchy of Program Element Documents	64
3.	Government Branch and Level Classification	66
4.	Program Element and Government Level (Sample)	67
5.	Program Problems (Sample)	70
6.	Possible Program Elements (Sample)	71
7.	Key MHPI Document Collection	74
8.	Acceleration of Housing Revitalization	81
9.	Leveraging Budgetary Appropriations	87
10.	Costs and Benefits	93
11.	Sustainment	98
12.	Program Corrections	106

INTRODUCTION

A country's infrastructure is critical to its prosperity and well-being. Its transportation and water systems enable the movement of commercial goods and enjoyment of private activities by the general public. Energy systems power the economy and individual residences. Environmental systems preserve public health and safety. Social infrastructure provides shelter for businesses, governments, families, and individuals. Unfortunately, the infrastructure in the United States is in bad shape. The American Society of Civil Engineers (2017) recently issued a report card on the country's sixteen infrastructure sectors and gave them an overall grade of D+. The cost to revitalize all of these systems is estimated to be \$1.5 trillion.

Infrastructure in the United States is co-produced by the private sector and different levels of government. Private producers in a market economy can efficiently and effectively produce the infrastructure systems which people need and for which they are willing to pay. In return, private producers make a profit providing infrastructure to their customers. However, infrastructure is a public good for which private firms sometimes find it difficult to make a profit. In such cases, the private market fails to meet the general public's needs.

When private markets fail, governments often intervene attempting to correct the failure. In doing so, they attempt to create public value by producing those systems and structures for which the private sector could not make a profit. However, due to lack of expertise or budget constraints, governments often also fail in their efforts. The result is

an infrastructure gap between what the private and public sectors produce and what the general public needs (Gruber, 2011). The costs of this gap are not limited to the goods and services which are not provided. There are very large social costs, or externalities “outside” the transaction between the producer and the consumer. These costs include reduced economic productivity, environmental degradation, lost time due to congestion on transportation systems, and harm to public health and safety.

Privatization is often proposed as a means of shrinking the infrastructure gap by utilizing private sector expertise and capital (Savas, 1987). By moving the production, or “rowing” function from the government back to the private sector, the government can “steer” infrastructure provision to where it is most needed. Privatization thereby creates public value by shrinking the infrastructure gap, saving budgetary resources, reducing negative externalities, such as congestion and pollution, and increasing positive externalities, such as economic performance and public health.

This study examined one example of infrastructure privatization, the Military Housing Privatization Initiative (MHPI) of 1996 (10 USC 2871 *et seq*). Under MHPI, from 1996 to 2014, the military services privatized their largely inadequate inventories of 200,000 houses across approximately 150 installations in the United States. Private housing developers and operators took ownership of the housing and utilized private capital and government subsidies to greatly accelerate housing revitalization.

Theoretically, infrastructure privatization programs create public value if their program elements (public purpose, public-private governance, and public value) are adequately aligned. However, if they are misaligned, problems can occur, which reduce public value creation. This study applied this theoretical proposition to the MHPI. The

research question was simply whether the MHPI has created public value. The study was designed to explore implementation of the program elements, describe program impacts, and explain how such impacts affect public value creation. This analytical framework of three program elements, four approaches to public value, and five program impacts can be applied to assess any privatized or co-produced infrastructure project or program. The target audiences for this study include the community of scholars, public managers involved in the privatization of infrastructure, and any private individual who utilizes one or more of the infrastructure systems discussed herein.

Finally, the conceptual and diagnostic framework for this study is Mark Moore's (2015) basic proposition that public managers should create public value. The study was also heavily influenced by two other temporally diverse sources. The Republic of Plato (ca. 380 B.C.E./1968) provided the concepts of the ship of state parable and the idea of the good. The classical liberal perspective of public governance (Aligica et al, 2019) provided the concepts of co-production, polycentricity, and the heterogeneity of values. At the end of the day, all three sources address the public value which public managers should create.

REVIEW OF THE LITERATURE

Public Purpose

This study is based on Mark Moore's (1995) proposition that public managers should create public value. This section of the literature review focuses on the *creation* of public value, or the public purpose. The second section focuses on public managers, or governance arrangements. The third section focuses on the concept and measurement of public value.

Moore's proposition provides a useful philosophical and diagnostic framework for examining governmental policies, programs, projects, and activities (Bennington & Moore, 2011). It supports the theoretical proposition that a privatized infrastructure program or project will be successful if program elements are sufficiently aligned. Theoretically, such a program or project will successfully create public value if public managers (1) clearly and consistently identify the public purpose(s), (2) implement governance arrangements which support those public purpose(s), and (3) appropriately calculate the public value created by the program or project. To the extent that program managers misalign these program elements, projects and programs can encounter problems. Such problems represent a probable reduction in public value creation. Public managers should therefore ensure that the public purpose is clearly and consistently identified when implementing public policies, programs, and projects.

Infrastructure Gap

A country's infrastructure consists of its capital structures and systems which support public and private commercial and recreational activities. In the United States, these facilities are provided at the federal, state, and local levels of government, and by the private sector (CBO, 2015). The total U.S. infrastructure inventory is vast, including transportation networks, dams and waterways, environmental protection systems, energy systems, and social infrastructure (buildings). The monetary costs of constructing, operating, and maintaining U.S. infrastructure are enormous (ASCE, 2017).

In market economies, the private sector largely supplies the capital structures and systems demanded by the general public. There is a strong argument that private markets improve the *scale* of goods and services produced for the general public (Friedman, 2002). By providing information in the form of prices and incentives in the form of profit, markets enable producers to maximize output (Aligica et al., 2019). Infrastructure, however, is a public good, which tends to be under-produced by the private market (Mikesell, 2011). Public goods may be defined as goods which benefit the entire community. In economic terms, public goods are those whose nature is both nonexcludable and nonrivalrous (Mikesell, 2011). They are considered nonexcludable because, once supplied, personal consumption cannot be prevented by the supplier. They are considered nonrivalrous because consumption by one party does not reduce consumption by another. An example would be a lighthouse which once constructed may be used by everyone without paying a fee. Given these characteristics, private firms find it difficult to make a profit supplying certain types of infrastructure.

When the private sector fails to supply a good needed by the general public, the government often steps in to provide it. For example, governments provide transportation and water infrastructure for reasons related to both efficiency and promoting equity for their citizens (CBO, 2015). However, the cost of constructing infrastructure may be so great that governments with constrained budgets are unable to provide it. The failure of both the market and the government to provide needed capital structures constitutes an infrastructure gap. The infrastructure gap consists of the unsupplied capital structures demanded by the general public and for which it would be willing to pay (Gruber, 2011).

The costs of the infrastructure gap are not limited to the specific goods that the general public must do without. The existence or absence of needed infrastructure causes social outcomes “outside” of a transaction between a supplier and consumer (Gruber, 2011). These outcomes are considered economic externalities because they represent costs or unrealized benefits which are external to the primary transaction. They may be negative such as pollution, causing a cost that is not borne by the parties to the transaction, or they may be positive, causing benefits in health, communications, and transportation because the supplier is uncompensated. Negative and unrealized positive externalities are a classic example of market failure (Gruber, 2011). When roads, bridges, storm-water treatment systems, schools, hospitals, and the like are constructed, they create social benefits beyond the price paid by the parties to the economic transaction which built them.

The infrastructure gap represents public value “left on the table.” When the government (federal, state, or local) steps in to provide infrastructure which the general public demands, it provides public value beyond its monetary cost (Gruber, 2011). Less

air and water pollution, less congestion of transportation and freight networks, safer and healthier facilities, and social infrastructure which serves its intended purposes are outcomes with value to the general public beyond the mere outputs of a transaction.

The American Society of Civil Engineers (ASCE, 2017) is an organization which evaluates the state of U.S. infrastructure. Since 1988, the ASCE has issued a report card on the state of its infrastructure, giving each of sixteen industrial sectors a separate grade. The ASCE's overall grade for the sixteen sectors of American infrastructure in 2017 is D+. The report card evaluates each industrial sector in depth and assigns it a letter grade from A to F based upon eight different evaluation factors. The technical evaluation factors are:

1. Capacity: Does the facility's capacity meet current and future demands?
2. Condition: What is the existing and near-term condition?
3. Funding: What is the level of governmental funding compared to estimated need?
4. Future Need: What is the cost of improvements and is there identified funding?
5. Operations/Maintenance: Can the owner maintain the system within regulations?
6. Public Safety: Would public safety be jeopardized by system failure?
7. Resilience: How fast can the facility recover from multi-hazard incidents?
8. Innovation: What new technologies and materials would improve the facilities?

Table 1 below shows the scale of the infrastructure gap. The total cost of restoring United States infrastructure is estimated to be 1.5 trillion dollars. These specific costs are inconsistent across time, revenue source, and other factors, and thus they merely provide a very rough estimate.

Table 1

The United States Infrastructure Gap

Infrastructure Sector	Grade	Deficiency	Cost
Roads	D	6.9 billion hours delayed in traffic	\$ 420,000,000,000
Bridges	C+	9.1% of bridges are structurally deficient	123,000,000,000
Transit	D-	\$90 billion maintenance backlog	90,000,000,000
Rail	B	\$27 billion in improvements in 2015	0
Aviation	D	Airports serve 2 million passengers daily	42,000,000,000
Ports	C+	99% of overseas trade passes through ports	0
Waterways	D	49% of vessels experience delays	4,900,000,000
Dams	D	17% of dams are high-hazard potential	45,000,000,000
Levees	D	41.3 in property value lies behind levies	80,000,000,000
Waste Water	D+	Treatment plant demand growing rapidly	271,000,000,000
Solid Waste	C+	258 million tons generated per year	0
Hazardous Waste	D+	53% live within 3 miles of a waste site	0
Drinking Water	D	6 billion gallons of treated water lost daily	1,000,000,000,000
Energy	D	3,571 power outages reported in one year	0
Schools	D+	53% of schools need improvements	38,000,000,000
Parks	D+	\$11.9 billion in deferred maintenance	11,900,000,000
TOTAL	D+	2017 Overall Grade	\$1,500,000,000,000

Note. Source: American Society of Civil Engineers (ASCE), 2017.

Based on the nature of the structure or system, infrastructure inventory may be classified in any number of ways, including location, ownership, deal structure, method

of financing, or legal framework. The nature of each infrastructure sector is such that they share or have different characteristics such as types of physical plant, operations, intended users, financing methodology, and available revenue stream. One common way of classifying infrastructure is by industrial or economic sector.

This study uses the ASCE's industrial classification methodology but consolidates the individual sectors into five overarching sectors. Those consolidated sectors are (a) transportation, (b) water management, (c) environmental preservation, (d) energy, and (e) social infrastructure (buildings). Any classification methodology is somewhat arbitrary. For example, ports may be classified as water management even though they have important transportation, environmental, social infrastructure impacts. However, a method of simplifying the great breadth of this subject is necessary.

The subsections below briefly provide an overview of the inventory of the sixteen infrastructure sectors with the ASCE's grade for each sector. It describes each sector's impact on public well-being, ASCE's determination of its infrastructure gap, and an estimated cost of filling that gap.

Transportation

The broad transportation sector comprises five specific sectors identified by ASCE. The transportation sector supports the movement and mobility of people and economic goods. Good transportation systems enable people to move smoothly and quickly to and from work and recreation. They also support the efficient transport of goods and services.

Roads (D): Four million miles of roads crisscross the United States, including local roads, collectors, and arterials (DOT, 2015). In 2014, Americans spent 42 hours per

driver (6.9 billion total hours) on average delayed in traffic. This wasted 3.1 billion gallons of fuel, not to mention time. The cost to close this infrastructure gap is \$420 billion.

Bridges (C+): The United States has 614,387 bridges, four out of ten of which are fifty years or older. In 2016, 9.1% of the country's bridges were considered structurally deficient, meaning they require significant maintenance, rehabilitation, or replacement. However, structurally deficient bridges are not necessarily unsafe. The cost to close the infrastructure gap is \$123 billion to fix the backlog of bridge rehabilitation.

Transit (D-): Transit refers to citywide transportation systems which allow Americans to take 10.5 billion trips per day. There are 15 heavy rail (subway/metro) systems in the United States. Most of this infrastructure consists of rail tracks, but it also includes passenger stations and signals. The major source of funding (45%) is fare revenue, and 55% of infrastructure costs are paid from state and local public funds. The cost to close the gap is \$90 billion to fix the rehabilitation backlog.

Rail (B): The U.S. has roughly 140,000 miles of rail miles, divided between freight rail and passenger rail. The system serves both private freight transportation and intercity passengers, and it is operated almost exclusively by Amtrak. Amtrak runs on tracks owned by the freight rail industry and pays the infrastructure owner for its use. The cost to close the infrastructure gap is \$28 billion to fix the state-of-good-repair backlog.

Aviation (D): The U.S. aviation network includes 3,345 airports, including 514 that provide commercial service. These airports serve 2.25 million passengers daily in almost nine million flights per year. Furthermore, about a quarter of the country's imports and exports flow through airports. Congestion as well as security and passenger safety are

of increasing concern in these airports. The cost to close the infrastructure gap is \$42 billion, funding the gap between 2016 and 2025.

The total infrastructure gap for the five specific sectors within the broad transportation sector is \$703 billion.

Water Management

Ports and water systems are similar to on-land transportation systems in that they are critical to the movement and mobility of individuals and economic goods. Their primary differences are in their medium of movement and their physical plants. Therefore, they tend to be administered and financed differently.

Ports (C+): The United States has 926 ports through which 99% of overseas trade passes. This represents \$4.6 trillion in economic activity. Inside ports, there are cranes and warehouses, and operation centers. Security from terrorism is a particular concern. Technical evaluation factors appear to be reasonably secure, and there is no infrastructure gap.

Inland Waterways (D): The United States has 25,000 miles of waterways and 239 locks used for commerce. Vessels use the waterways to deliver 575 million tons of cargo. The system is aging and delays are common. The cost to close the infrastructure gap is \$5 billion over the next 20 years.

Dams (D): There are 90,580 dams in the United States. Dams provide drinking water, irrigation, hydropower, flood control, and recreation. The cost to close the infrastructure gap is \$45 billion to repair aging, critical, high hazard potential dams.

Levees (D): Levees are earth banks and floodwalls which contain, control, or divert the flow of water to avoid flooding. They protect millions of people in homes,

businesses and property, including colleges, universities, sports venues, and breweries, Levees protect an estimated \$1.3 trillion in property. The cost to close the infrastructure gap due to needed system repairs is \$80 billion in the next ten years.

The total infrastructure gap for four specific sectors within the broad water management sector is \$130 billion.

Environmental Preservation

Environmental preservation infrastructure protects human health and safety and ensures the well-being of the country's rivers, forests, mountains, and wildlife.

Wastewater (D+): The United States wastewater network includes 800,000 miles of public sewers and 500,000 miles of lateral sewers. This infrastructure includes 14,748 plants which protect public health by removing toxins which harm individuals and pollute rivers, lakes, and oceans. Storm water runoff from roads and parking lots is also a particular concern (EPA, 2015). The cost to close the infrastructure gap is \$271 billion to meet current and future demands.

Solid Waste (C+): 258 million tons of municipal solid waste (trash) are generated per year. Of the total solid waste, 53% goes into landfills. Another 34.6% is recycled, and 12.8% is combusted for energy. There are 1,908 landfills in America. There are 633 material recovery facilities sorting and processing recyclables. Technical evaluation factors appear to be reasonably secure, and there is no infrastructure gap.

Hazardous Waste (D+): There are over 18,000 hazardous waste sites in the United States covering 22 million acres of land. Technical evaluation factors appear to be reasonably secure, and there is no infrastructure gap.

Drinking Water (D): The United States uses 42 billion gallons of water per day for cooking, bathing, use in factories offices and factories. Of that water, 80% comes from surface sources such as rivers, lakes, reservoirs, and oceans. The remaining 20% comes from aquifers. There are 51,356 community water systems, delivered through 1 million miles of pipes. Upgrading water systems to meet drinking water needs over the next 25 years is estimated to cost \$1 trillion, but funding is reasonably secure.

The total infrastructure gap for the four specific sectors within the broader environmental preservation sector is \$271 billion.

Energy

The ASCE report focuses on electricity, gas and oil, and it gives the United States a D+ as a grade. Energy infrastructure includes 640,000 miles of high voltage transmission and distribution lines. These systems suffer from aging equipment, capacity bottlenecks, and increased demand. Reliability is a particular concern with the energy infrastructure as is fluctuating commodity prices due to economic supply and demand shifts. The total infrastructure gap for the energy sector appears negligible.

Social Infrastructure

Social infrastructure is a term that comprises capital structures, including government office buildings, where people gather for public purposes. The ASCE report card only examines and estimates the cost of U.S. schools and national parks. A complete inventory of U.S. social infrastructure would include all government buildings, prisons, military installations, public libraries, municipal sports stadiums, and public housing. The general public gathers in social infrastructure, so it often requires higher standards of

public health and safety. It may also require enhanced modernization for energy efficiency and technology infrastructure.

Schools (D+): Approximately 100,000 public school buildings support 50 million K-12 children and teachers and administrators. Schools have the normal construction and operation and maintenance requirements with additional high standards for health and safety. The school's infrastructure inventory also includes ancillary facilities such as parking lots, bus lanes, athletic fields, auditoriums, and cafeterias. The cost to close the infrastructure gap is \$380 billion over the next 10 years.

Public Parks (D+): A vast network of roads, bridges, trails, campsites, boat ramps and other facilities that support roughly seven billion outdoor recreational outings. Many of these parks serve as historic or cultural sites, monuments, and battlefields, and they represent critical roles in American life. The average local park and recreation agencies provide 9.5 acres of park land for every 1,000 residents. The cost to close the infrastructure gap is \$11 billion in deferred maintenance.

The gap for the two specific sectors within the broader social infrastructure sector is \$391 billion. The total cost of closing the infrastructure gaps for all five broad sectors in the United States is \$1.5 trillion. These costs are not uniform or consistent in measurement, but they roughly support commonly stated estimations of the national infrastructure gap (ASCE, 2017).

Co-Production

When private markets fail to provide the infrastructure demanded by the general public, governments often step in attempting to correct the failure. Infrastructure which is required but not provided can result in massive economic costs to the public and

unsatisfied social requirements (U.S. Treasury, 2015). Governments possess a number of powers to increase the scale of infrastructure provided. Governments can thus create public value by increasing both the quality and quantity of provided infrastructure.

First, governments can fully produce the structures and systems themselves by owning, constructing, and operating the structures and systems. Under this traditional model, governments attain funding either through taxation and budgeting or through public debt issuance (Joseph, 1994). Governments which are unable to raise construction funding through taxation may be able to borrow necessary funding in private capital markets and pay off the debt over time with taxes or fees. Major capital projects generally have two distinct phases, construction and operations (Joseph, 1994). The construction phase usually includes the design and build functions. Finance generally supports the construction but may extend throughout the life of a capital project. The operations phase includes operations and maintenance functions and may extend for several decades. After a project is constructed, revenue is often required to support operations and management of the project. Depending on the type of project, revenue may come from a variety of sources including, user fees, tolls, and rents.

Second, governments can use privatization arrangements to co-produce systems and structures by funding or subsidizing the private firms who would have produced them but did not due to market failure. The availability of construction funding enables implementation of projects which might otherwise not be undertaken due to budget funding or expertise. Such co-production creates public value, including generating positive economic externalities and avoiding negative externalities.

Third, governments can guide the market's provision of infrastructure through its power to regulate or administer. Each of these three co-production approaches reflects a different degree of involvement, control, efficiency, and effectiveness. Traditional government production reflects full control, but may sacrifice the expertise of the private market. Funding reduces the infrastructure gap, but may sacrifice control, and such funding may not even be available due to budget constraints. Regulation and administration allow the government to "steer" market production but lack control and funding. Since the nature and production technology of each infrastructure sector is different, the government's role as co-producer in each sector must also be different.

Across the sixteen industrial sectors, infrastructure is co-produced by the public and private sectors in a variety of ways for a variety of economic, political, and historic reasons. The structures and systems may be largely private with government regulation, such as rail systems or the energy sector, or largely public such as water management systems. When private markets fail, public managers determine which projects to undertake and how much money to spend on them (Shirley, 2015). In the United States, the legislative body (Congress, state legislature, or local councils) appropriates funding and determines staffing, while public managers in the executive branch implement infrastructure programs and projects.

Transportation

The federal government funds about one quarter of highway infrastructure and mass transit systems, and the states fund the other three quarters (Shirley, 2015). Most projects are paid for with current state or federal revenues. Most federal funding comes

from the Highway Trust Fund. That fund is an accounting mechanism in the federal budget that includes two separate accounts for highways and mass transit (Shirley, 2015).

Bridges are owned, administered, and funded at all levels of government. Federal investment is largely paid from the Highway Trust Fund. In 2012, for example, \$6 billion in bridge capital projects was paid by the federal government, and \$11.5 billion came from states and localities for a total of \$17.5 billion. Bridge toll revenues also provide a source of revenue. Transit systems are owned by states and localities and funded by passenger fares and directly generated revenues (parking and advertising and public funds). In 2015, for example, 45% of operating expenses came from passenger fares and 55% were paid from public funding.

There are two categories of rail systems. Freight rail systems, such as Union Pacific or BNSF Railway, are privately owned, operated, and funded from freight costs. Intercity passenger rail systems are largely owned and operated by AMTRAK, which is a quasi-public corporation. The passenger rail system is regulated by the Department of Transportation and is funded by passenger fares and federal and state subsidies. Federal grants are available under the Fixing America's Surface Transportation (FAST) Act of 2015 (Pub. L. No. 114-94). The private freight industry owns most of the country's rail infrastructure. As such, they are responsible for a majority of the country's track, bridges, and port connections.

Airports are regulated by the Federal Aviation Agency and funded through four sources; cash flow; revenue and general obligation bonds; federal, state, and local grants; and passenger facility charges (ASCE, 2017). Other funding methods include, issuing

tax-preferred government bonds, obtaining federal loans or guarantees, or joining with the private sector to obtain private financing (ASCE, 2017).

Water Management

Most ports are owned, operated, and funded at the state and local levels. The Department of Homeland Security, the Coast Guard, and the Transportation Security Administration share responsibility for keeping the ports secure. However, a number of federal statutes provide some regulation on how the ports are operated and provide some funding for infrastructure projects. Under the FAST Act (Pub. L. No. 114-94), the federal government requires states to have freight plans and provides competitive grants for infrastructure construction. Additionally, grants under the Transportation Investment Generating Economic Recovery (TIGER) program administered by the Department of Transportation Act are available to states for port infrastructure projects.

The U.S. Corps of Engineers has responsibility administering and regulating the country's inland waterways. Infrastructure funding is provided by waterway users and the federal government on a 50/50 basis under the Inland Waterways Trust Fund (Pub. L. 95-502). Additional funding has been provided by the Water Resources Development Act (WRDA) of 2014 (Pub. L. 113-121).

Half of all dams are owned by the private sector. The federal government owns 3,381 dams of which the Corps of Engineers operates 709. For privately owned dams, states provide dam safety programs, including permitting, inspection, and enforcement. The Water Infrastructure Improvements for the Nation (WINN) Act of 2016 (Pub. L. 114-322) provides funding at the federal level. Many states offer grants or low-interest loans for infrastructure repairs.

Levees are owned, administered, and regulated by all levels of government. The Corps of Engineers controls 13,700 miles of levees, but more than half are owned by the states and localities. Funding is largely provided by the government level that controls the specific levee.

Environmental

In the environmental sector, infrastructure is administered at multiple levels. Waste water systems are overseen by local utility or public works departments. Regulation is shared by the federal government and local governments, and funding comes from rate-payers. The National Environmental Policy Act (NEPA) (1969) is the primary statute concerning environmental preservation regulation. It establishes the President's Council on Environmental Quality (CEQ) and sets forth the procedures for performance of environmental studies.

Wastewater is regulated under the Clean Water Act (CWA) of 1972 (33 U.S.C. 1251 – 1387) which comprises a specific series of laws governing water pollution. The CWA grants authority to the Environmental Protection Agency to set water quality standards.

Solid waste transport and disposal is often funded and managed by the private sector through trash collection fees. Such activities are regulated for public health, safety, and environmental preservation by the federal and state governments. Over 27,000 organizations or private companies provide solid waste collection and disposal (ASCE, 2017).

Hazardous waste infrastructure is regulated by the federal government under the Resource Conservation and Recovery Act (RCRA) of 1976 (42 U.S.C. 6901 *et seq*) and

the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (Superfund Act) (42 U.S.C. 9601 – 9675). CERCLA authorizes the Environmental Protection Agency to seek compensation from parties responsible for hazardous waste contamination and use such funds to clean up those sites. Seventy percent of funding for hazardous waste clean-up comes from the Superfund.

Drinking water infrastructure is largely owned and administered by states, localities, and public utilities. Infrastructure construction and operations are funded with revenue generated by ratepayers. The federal government offers financial support through low interest loans through the Drinking Water State Revolving Fund, which is administered and regulated by the Environmental Protection Agency under the Safe Drinking Water Act (SDWA) of 1974 (42 U.S.C. Sect. 300f).

Energy

In the energy sector, infrastructure is owned, operated, and funded by the private sector. The systems are largely privately-owned, but highly regulated as natural monopolies. Regulatory guidelines are largely aimed at public safety and are administered by the states and the federal government, particularly the Department of Energy.

Social Infrastructure

Public schools are owned, administered, regulated, and funded at the state and local levels. Five states, including Alabama, Hawaii, Kentucky, New Jersey, and Tennessee, pay for almost all of their capital costs (ASCE, 2017). Twelve states provide almost no support, and the remaining states have some degree of sharing, including grants, debt reimbursement, bond repayment subsidies, and loans (ASCE, 2017). The

federal government provides almost no support and private schools are largely owned, administered and funded privately though states and localities regulate minimal standards.

Public parks are provided at multiple governmental levels. The federal government owns U.S. national parks. The National Park Service, the U.S. Forest Service, and the Army Corps of Engineers administer the parks with funding provided in their respective budgets. Some additional funding is provided through the Federal Lands Transportation Program, established under the Moving Ahead for Progress in the 21st Century (MAP-21) Act (P.L. 112-141) and the FAST Act (Pub. L. No. 114-94), and the National Park Service Centennial Act of 2016 P.L. 114-289). Local parks are largely owned, administered, regulated, and funded at the state and local levels.

Though it is not included in the ASCE report card, certain types of housing in the United States should be considered social infrastructure where certain citizens reside for public purposes. The Department of Housing and Urban Development is a cabinet level agency in the federal executive branch which funds and regulates low-income housing which in turn is owned and operated by state and local governments. Additionally, the Department of Defense (DOD) has constructed, owned, operated, and continues to be deeply involved in co-producing over 200,000 houses on domestic military installations for military service members and their families.

In sum, the scale of U.S. infrastructure is enormous. Despite co-production by the private and public sectors, the general public's infrastructure requirements have remained unsatisfied. The twin themes of market and government failure have resulted in an

infrastructure gap of \$1.5 trillion. This shortfall affects every state, county, and city across the country. And it is expensive.

Public-Private Governance

Public governance consists of (a) selecting the proper methods of providing service and enforcing the law, (b) directing, supervising, and carrying out the work of policy execution, and (c) settling disputes and claims arising from those activities (Ibele, 1971). Public managers are the individuals who perform these functions. Public managers in Moore's (1995) conception include any public employee, from the highest elected official, to political appointees, to staff-level civil servants. Just as the purpose of private managers is to create private value, i.e., profit, the purpose of public managers is to create public value by improving social outcomes. Working within specific institutional frameworks of authority, with appropriate degrees of discretion, constraint, reward, and motivation, public managers should make decisions and implement policies that create value for the general public. This second section focuses on the institutional frameworks within which public managers create public value. To adequately align program elements in infrastructure programs and projects, public managers should implement governance arrangements, from enabling statutes to legal instruments with private co-producers, which support their identified public purposes.

Plato's Republic (ca. 380 B.C.E./1968) was the first source of political theory to point out that various institutional frameworks and political processes often do not result in the optimal creation of public value. This is known as the ship of state parable. Captains (public managers) controlling the ship of state may not always steer it to the best destination. Plato's solution to this problem was the abolition of the family structure

and use of eugenics to identify philosopher kings to steer the ship. In modern republics like the United States, there is no one ship captain, but rather a functional variety of public managers across the institutional framework, each with their own distinct and well-meaning understanding and interest in public purpose, governance, and value. Public managers with different functional responsibilities share responsibility for steering the ship of state. In modern republics, “ship captains” sharing steering authority include politicians, senior executives, budgeteers, staff level managers, and evaluators. These public managers must successfully align their efforts in order to support the public purpose and create public value.

Public-Private Interface

The first section above described how the public and private sectors interact to co-produce infrastructure. This interaction may be referred to as the public-private interface (Aligica et al., 2019). The field of public administration has concerned itself with this interaction or interface for a couple of centuries, and it has gone through a number of broad phases in its understanding of the subject (Khan, 2008). During the 1980s, the field of public administration became deeply interested in optimal functioning and sharing of responsibilities at the interface (Friedman, 2002). While public sector utilization of the private sector is as old as the family, deliberate use of the private sector to improve the provision of public goods and services had become a recent development (Savas, 2000). During the nineties, this became known as the New Public Management (NPM). Beginning with the Thatcher government in the United Kingdom and with the Reagan administration in the United States and continuing through the Clinton administration, western countries began to rely substantially on the private sector to meet their public

requirements (Shafritz & Hyde, 2012). The approach was reflected in the Clinton Administration's National Performance Review (Gore, 1993) and the notion that public agencies and managers should be more entrepreneurial (Osborne & Gaebler, 1992).

Not everyone was comfortable with this new governance arrangement. For example, in his classic article on the limits of privatization, Moe (1987) criticized the idea that the public sector is supposed to try to accomplish the same things as the private sector. Moe asserted that the public and private sectors are not intended to be alike, and that the proper purpose of the public sector is not that it function efficiently and economically. Rather, the essentials of public law, i.e., the constitutions, statutes, processes, and procedures are intended to protect citizens from the rough edges of the private sector's pursuit of profit through greater efficiency and economy.

With such reservations, co-production at the private-public interface tended to evolve into a framework known as Collaborative Governance. Collaborative governance may be defined as the "processes and structures of public policy decision-making and management that engage people across the boundaries of public agencies, levels of government and or the public, private, and civil spheres to carry out a public purpose that could not otherwise be accomplished" (Emerson & Nabatchi, 2015, p. 18).

The key attribute of collaborative governance regimes, after the shift back from the wholehearted privatization of the NPM, is shared discretion between participants (Donahue & Zeckhauser, 2012). In fact, collaborative activities should not be confused with simple, conventional government contracting. They are intended not just to satisfy a government mandate, but to amplify the government's ability to accomplish its mission (Donahue & Zeckhauser, 2012). Such activities create an agency relationship with the

government as the principal and the private party as the agent. Donahue and Zeckhauser (2012) contend that there are four rationales for undertaking a collaborative governance regime: productivity, information, legitimacy, and resources. Critically, the government must have the appropriate means to monitor its agent.

Many observers have been skeptical of public-private governance under both the New Public Management and Collaborative Governance movements. Some responsibilities do seem inherently governmental, including, for example, the administration of justice or national security. However, co-production of infrastructure is a much more limited undertaking. First, the focus of the activities is on structures, not people's rights or liberties *per se*. Second, designing, building, financing, operating, and managing structures is a largely market or private activity, which the government assumes to attempt to correct private market failure. Infrastructure co-production is therefore primarily about the government improving its capacity to correct market failure, not providing inherently governmental goods and services.

The interface of the private and public sectors seems to be dynamic, with arrangements for providing goods and services evolving over time depending on technological and social developments (Aligica et al., 2019). The classical liberal perspective of public governance refers to this phenomenon as polycentricity (Aligica et al., 2019). With its long tradition in political theory and philosophy the classical liberal perspective is arguably the “center of gravity” or centerline for some more modern movements in the field of public administration which advocate polycentric approaches (Aligica et al., 2019).

Paul Dragos, Aligica, Peter J. Boettke, and Vlad Tarko (2019) set forth the classical liberal perspective on public governance. Rooted in the Enlightenment and American Constitution, the perspective is founded on two principles: (a) bottom-up approach of normative individualism and skepticism of collective action, and (b) a strong preference for dynamic policies based on comparative institutional analysis (Aligica et al., 2019). In terms of governance, it routinely poses the question: What institutional frameworks make it possible for individuals with heterogeneous values to peacefully coexist and self-govern? (Aligica et al., 2019).

The principles of the classical liberal perspective are reflected in public, private, and “third sector” co-production, polycentric institutional frameworks, and respect for heterogeneous values. Rather than ideological market or state idealization, the classical liberal perspective asserts that public administration begins where economic calculation ends. While the classical liberal perspective embraces the primacy of voluntary exchanges, agreements, associations, it recognizes that private markets occasionally fail, and governments may need to intervene to satisfy social needs (Aligica et al., 2019). However, it continues to recognize that institutionalization and public governance solutions are not free in terms of monetary costs or personal authority. Finally, the classical liberal perspective does not blindly advocate privatization. It is more about government “steering” rather than “rowing” in order to optimize co-production of public value within polycentric frameworks.

Privatization

The ASCE’s infrastructure gap calculation of \$1.5 trillion represents a failure of both private markets and governments to provide the systems and structures that the

general public needs and for which it is willing to pay. Therefore, some form of privatization is often proposed as a solution for reducing the infrastructure gap.

Privatization is a concept without a precise definition. In classical liberal terms, it is polycentric co-production at the private-public interface. It involves shifting some functions, activities, or assets from the public to the private sector. Such transfers may vary greatly in form and substance and may involve a full or merely partial shift of control or ownership. According to proponents of privatization like E. S. Savas (1987), market efficiencies and expertise allow the private sector to deliver and operate capital structures cheaper, faster, and better than the public sector. By assuming responsibility for ownership, administration, funding, or regulation, governments may play a larger role than is efficient or effective. Privatization is about a directional shifting of some responsibility for those functions from the government back to the private sector (Savas, 1987).

Accomplishing public purposes with private input is nothing new (Savas, 1987). Privatization can be broadly defined as greater reliance on society's institutions and less on the government to satisfy people's needs (Savas, 2000). This reliance can include anything from the government's contracting for janitorial services to a broad reliance on the private sector for social services such as health, education, and public housing (Savas, 2000). The fact that a government accepts responsibility for *providing* certain capital structures does not mean it must *produce* the structure itself. Infrastructure production is often not a governmental strong suit, and it can come with a high "bureaucratic cost" (Savas, 1987).

Privatization represents a significant departure from what might be termed the six-function traditional institutional framework by which governments ordinarily produce infrastructure. Under the traditional framework, a government first identifies an infrastructure requirement, or purpose, and determines what specific facilities should be constructed to satisfy that requirement. Second, it budgets the necessary funding for the new construction using either a pay-as-you-go taxation model or a bond issuance in the private capital markets to raise the needed capital (Joseph, 1994). Third, the government conducts a solicitation and selects a private firm to design and construct the required system or structure. Fourth, the selected entity constructs the project and turns it over to the government to operate over the life of the structure. Fifth, the government operates and manages the facility and pays maintenance expenses out of budget appropriations. Sixth, the government is responsible for performance, i.e., operations and maintenance of the facility and when recapitalization is required, it again budgets and selects a private firm to do the work. The government may provide the facility to the general public without charge or charge a user fee or toll to cover operations and recapitalization. This traditional model may be thought of as one with minimal co-production since control is largely with the government and private entities generally work under contract.

Privatized arrangements shift some governance functions away from this traditional framework (Savas, 2000). First, the government identifies a requirement, or purpose, but stops short of making a full determination of what facilities to construct to satisfy the requirement. Second, it arranges the budget authority, if any, which may be required to undertake the project. Third, the government conducts a solicitation and selects a private firm(s) with which to co-produce the system or structure for a period of

time. Fourth the government and the firm(s) form a special purpose entity (partnership), within which they will share responsibility—including uncertainty and risk—for constructing and operating the facility. Fifth, the special purpose entity—not the government--enters the private capital markets to arrange funding for the project. Sixth, the special purpose entity constructs, operates, and recapitalizes the facility as though it were a private project for an extended term. To a large degree, the special purpose entity is responsible for project performance. As responsibilities become polycentric, the government's role shifts from production to provision, from rowing to steering, i.e., enforcing its rights and fulfilling its duties with the special purpose entity and reporting on program performance.

This description is, of course, very basic and the terminology is very general. The terms of the arrangement including project performance standards, return on investment, and risk allocation must be negotiated either during the procurement process or after selection. Other aspects can vary from project to project. For example, arranging funding often includes identifying debt and equity sources, attaining bond ratings from one of the rating agencies (Moody's, Standard and Poor's, or Fitch), and securing insurance. Depending on the facility and the degree to which it is considered private, project cash flows may also be affected by state and local taxes (Savas, 2000). Revenue to service the debt and equity sources, operate the facility, and recapitalize the facility may come from either a government payment raised from taxation, or from private tolls, fees, or rents charged to system users by the special purpose entity.

Governments generally privatize infrastructure for two reasons: (a) to gain access to private capital and (b) to gain access to private expertise. With constrained budgets,

governments are often not able to fund or borrow capital to pay for needed infrastructure facilities. In such cases, needs of the general public go unmet and positive externalities may be forgone. Though the government's cost of capital is often less than that of the private sector, governments are often constrained by budget or borrowing limitations. Utilizing privatization for the provision of infrastructure means relying more upon the private sector and less upon the government. If utilized effectively, privatization can increase public value creation in the following manner.

Under privatization, a private party often assembles the private capital through debt and equity needed to fund a project. Repayment of the financing becomes the responsibility of the private borrower and the government shifts roles from purchaser of an asset to purchaser of operational services (Grimsey & Lewis, 2002). There may be several parties involved in the financing process, including governments, firms, lenders (including bond issuers), bond raters, insurers, and guarantors.

Privatization can also utilize private sector expertise to transform how systems or facilities are constructed in a number of ways. First, market information and incentives can drive more contemporary, innovative, efficient, and effective designs. Second, accessing private capital may allow for full, rather than incremental funding and generate economies of scale. This in turn can allow for more efficient energy systems and broad construction of structures and systems, rather than just limited or incremental undertakings.

Under the traditional model, the construction phase is usually funded from the capital budget, and the operations phase is funded annually from the operating budget. This budgeting methodology often results in long-term under-funding of project

operations and maintenance. Under privatized arrangements, private owners leverage a long-term revenue stream to assess private capital to plan and recapitalize facilities when it is operationally needed.

After a project is constructed, revenue is required to (a) pay off any debt incurred for construction, (b) support operations and management of the project, and (c) provide a profit to the private party. In a privatization arrangement, revenue to repay capital sources may come from a variety of sources. Depending on the project, revenue may come from a variety of sources including, user fees, tolls, and rents. Revenue risk is usually of greatest concern to the private parties (Grimsey & Lewis, 2000).

Privatized projects and programs may be structured in a wide variety of ways, each with different allocations of cost, benefit, and uncertainty (risk) among the parties to the arrangement (DOT, 2015). This deal structuring is often called “bundling.” Capital projects can be broken down into a number of project elements often referred to as design (D), build (B), finance (F), operate (O), and maintain (M). These elements can be bundled in various ways according to the nature of the project and how it is being provided to the general public. Accordingly, privatization projects are often informally described with some combination of letters, such as a D-B for a design-build or DBFOM for an almost completely private project.

One privatization model that is becoming increasingly popular across the sixteen infrastructure sectors is the public-private partnership (P3). Public-private partnerships are often proposed as an effective and efficient model for shrinking the infrastructure gap by increasing and improving the provision of capital structures and systems which the public needs (Treasury, 2016). Public-private partnerships are legal arrangements in

which traditionally public activities are partially or wholly performed by the private sector (Savas, 2000).

Public-private partnerships are used around the world to deliver infrastructure projects. In the British Commonwealth, including Great Britain, Australia, and Canada, P3 utilization is fairly standardized, formalized, structured, and consistent in terminology. This approach may informally be referred to as the international model. Many projects, particularly those implemented under international model, are paid off primarily with availability payments from the government. If the private party keeps a facility available according to the agreed upon legal terms, the government pays the private party according to the deal terms. For example, in the United Kingdom, where the government is authorized to access private capital off-budget, government contracts awarded under their Private Finance Initiative (PFI) constitute seven percent of gross domestic product and comprise one third of its off-budget liabilities.

Public-private partnerships may be used to renovate or revitalize existing structures and systems (brownfield projects) as well as constructing new projects (greenfield projects). For example, the U.S. Environmental Protection Agency (2015) has identified the P3 arrangement as an important mechanism for states and localities to meet their storm water requirements for both existing and new structures and systems. Recognizing that they can be “complex and difficult to structure,” the U.S. Department of the Treasury (2016) concludes that by lowering costs or raising quality, a P3 may be a more suitable form of procurement than conventional methods. They continue, that P3 utilization requires strengthening public sector expertise with highly skilled staff.

In the United States, the use of public-private partnerships is more *ad hoc*, less uniformly structured, and less consistent in terminology and methodology (DOT, 2015). A project in the United States can be implemented using the international model--but it need not be (DOT, 2018). Many U.S. states are adopting the international model to implement public-private partnerships. There is no general P3 authority at the federal level, though P3 authority for specific programs and projects does exist. One such federal program is the Military Housing Privatization Initiative (MHPI) of 1996 (10 USC 2871 *et seq*).

Military Housing Privatization Initiative (MHPI) of 1996

Having set forth the classical liberal perspective of co-production and polycentric institutional frameworks, this section of the literature review describes how public managers within the U.S. Department of Defense and the federal government have attempted to create public value by shifting from a traditional model of providing military family housing to a polycentric, co-production model under the Military Housing Privatization Initiative.

MHPI Purpose

The Department of Defense considers it to be the agency's responsibility to make quality affordable housing available to its service members and their families. Thus, as of 1995, the military services owned and operated over 200,000 houses in the continental United States. The agency had not always owned and operated housing. Members of the colonial army under George Washington lived in their own houses and traveled to battle sites during the Revolutionary War (Fisher, 2004). However, as the United States expanded across the North American continent, the military services established

installations in remote locations where private markets failed to provide sufficient housing for service members, many of whom were serving under conscription. Therefore, the military services assumed responsibility for providing housing to military service members who could not find affordable housing near the remote installations. Under the traditional model known as Military Construction, or MILCON, the military services constructed, owned, and operated an increasing inventory of housing. Such government-provided housing may be considered one type of social infrastructure.

Sustaining and recapitalizing MILCON housing had always been a challenge for the military services. First, it is not central to their military missions, and annual budgeting for housing tends to get redirected to fund higher defense priorities. Second, the extended federal budget process is not designed for effective housing management. Third, housing is budgeted incrementally with a short-sighted perspective. Fourth, housing sustainment and recapitalization often lose out in the budget process to higher profile defense activities. Delayed spending on facilities creates a vicious cycle of deferred maintenance, premature structural failure, and crowding out of funding for recapitalization (GAO, 2012).

Military housing is not a typical example of a nonexcludable, nonrivalrous public good. Rather, the infrastructure gap results from the fact that adequate, affordable housing does not exist around remote installations. Where such housing does exist in the private market, military salaries including housing allowances may not be sufficient for service members with lower rank but larger families to find suitable housing. DOD further believes that adequate, affordable military family housing provides positive externalities both by supporting an on-base military community and by improving

recruitment and retention of service members. The agency thus believes providing adequate, affordable housing creates public value beyond its monetary cost.

Over the years, the military services employed a number of programs to transfer a degree of family housing responsibility and funding to the private sector. The Capehart, Wherry, and Section 801 and 802 housing programs, enacted in the fifties, allowed the services to attain housing up front and pay for it over time, but sustainment and recapitalization proved to be unsuccessful under these programs (Baldwin, 1996).

By the 1990's, two thirds of the houses were considered to be in inadequate condition with an estimated cost of \$26 billion to revitalize the entire housing inventory (Note: expected revitalization costs and duration are not consistent across all the MHPI documents examined). The inventory was inadequate across all of the AFCE's (2017) eight technical evaluation factors. Given historic MILCON budgeting, it would have taken two decades to revitalize the housing. In fact, DOD was in a budgetary death spiral, and it would never have been able to construct housing fast enough to stay ahead of the deteriorating inventory. The agency's failure to construct and renovate its housing inventory constituted a social infrastructure gap of \$26 billion. A new framework of co-production was needed to fill this gap.

MHPI Governance

In 1996, Congress enacted the Military Housing Privatization Initiative (10 USC 2871 *et seq*) to authorize the military services to utilize private sector capital and expertise to revitalize its housing inventory. The new legislation provided DOD numerous new authorities to team with private housing companies to eliminate its social infrastructure gap in military family housing and to sustain it in adequate condition for

the long term. Congress enacted the MHPI as a pilot program. There was no prescribed structure, like the international P3 model, but rather there was a “toolbox” of financial, real property, and management authorities which could be flexibly interchanged to find the optimal combination. The resulting deal structures with private parties were very complex. The authorities could be used to revitalize or renovate existing housing or to construct new housing as was needed.

Under the new co-production model, title to family housing on military installations within the United States would be conveyed to private housing firms with expertise providing housing. The land supporting the housing would usually be outleased rather than conveyed by fee title, so the military services could retain some legal control over the real property located on their installations. Military service members occupying the houses would be paid the same basic housing allowance (BAH) that they would have received if they were living in the private housing market, and they would become rent-paying tenants. The revenue stream from tenant rents would create debt capacity for the private housing firms to obtain the private financial capital to revitalize the inadequate housing and sustain it for the fifty-year term of the outleased land. Finally, because tenant rents would be capped below market rates, the projects would require financial subsidies (gap financing) from the government to be financially viable.

Implementation of the new MHPI authorities resulted in a major shift of the public-private interface from the public to private side. This interface shift required major adjustments in DOD’s governance framework from the traditional minimal co-production model to a polycentric, co-production model. The shift from the traditional to the privatized model of infrastructure provision also had a great impact on the roles of the

various DOD managers, steering the ship of state in the provision of military family housing. The shift also had significant impacts on other governance functions (politics, budgeting, accounting/auditing, and evaluation) across the federal government, each of which held different opinions about entrepreneurial government (Osborne & Gaebler, 1992), collaboration (Emerson & Nabatchi, 2015), public purpose (Moe, 1987), and privatization (Savas, 1987). This dynamic shift sharply highlighted the fundamental classical liberal question: What institutional frameworks would make it possible for individuals with heterogeneous values to peacefully coexist and self-govern? (Aligica et al., 2019).

The Department of Defense (DOD) is a federal agency comprised of three military departments: Army, Air Force, and Navy. Together with the Marines, which is a military service within the Department of the Navy, these four military services implement national defense policies, programs, and projects. Each military service manages its own housing inventory. The Office of Secretary Defense (OSD) exercises oversight through issuance of policy and guidance. Under the Military Housing Privatization Initiative, the policy and program management focus of OSD and the military services was intended to shift from building and operating structures to managing complex financial and legal arrangements, steering rather than rowing.

The first major shift at the public-private interface was in requirements determination, i.e., what housing should be constructed under MHPI and where should it be constructed? Though it has transferred title of the housing to private owners, DOD has continued to consider it the agency's responsibility to ensure adequate and affordable housing for military families. Approximately one million individuals serve in the active

duty military. Two thirds of military families live in the local community, and one third live on military installations. DOD's policy is to look to the private sector first to house service members. But as time has passed, local communities have developed around many of its installations and can satisfy the housing needs of military families. Also, since 1976, the United States has had a voluntary military, so service members are not forced to live unaffordably in remote sites.

The MHPI model was intended to be market-driven with private owners having a primary interest in maintaining high tenant occupancy. Tenant rents would fund operations and maintenance, private debt repayment, and profit for the owners. Thus, they would want to provide the right product, for the right price, in the right quantity. Service members are not assigned to military housing and may live where they choose. Members who live in the private sector receive a basic allowance for housing (BAH) based on their rank, geographic location, and marital status. Military families live on base for a variety of reasons, but much of the requirement is generated by service members who receive a low BAH based on their rank but have families larger than comparably earning civilians. The impact of MHPI is that while the military services continue to determine the *number* of houses, they think they need, they no longer design specific houses or neighborhoods.

The second major shift in governance was program funding. Under MHPI, the primary funding source shifted from annual budget appropriations to private finance. To finance construction, the new owners borrowed private capital from private lenders based upon the revenue stream created by tenant rents. Under MHPI, the military services are authorized to make direct loans, loan guarantees, or make investments in private firms.

These subsidies are required to support the perceived DOD purpose of housing low-BAH, large families. These financial contributions are the only MHPI budgetary costs under executive branch transactional scoring rules.

The third major shift in governance was selection of an entity to produce or provide the facility. Under MHPI, the role of public managers shifted dramatically from determining what to build to determining how best to structure complex financial and legal arrangements with private housing developers, lenders, and bond rating agencies. Source selection for these public managers shifted from identification of the best builder at the best price to selection of an entity to own, operate, recapitalize, and share the risk for the new housing model. During the pilot stage of the program, each military service tested different methods of source selection. Each project was individually solicited and negotiated as “one offs” over the course of a couple years.

The fourth major shift in governance was deal structuring. As a general principle, the military services tried to align the government’s interests with normal market incentives. MHPI deals are structured as private property ownerships, not as government contracts. Under the new deal terms, the responsibilities of the private owners could not easily be shifted to the government. Private debt is borrowed by the private owner and secured by the property (housing). If the debt is not repaid on schedule, the lender’s remedies are against the firm, not the government. Like any landlord, the owner’s profit comes from good operation and management of the housing, not payment from the government. If houses remain vacant because they are not desirable, the new owner reduces its profit. Fourth, military members are potential tenants referred to MHPI housing, but are not mandatorily assigned to live in the housing. Private owners must

compete for tenants in the marketplace. Occupancy risk is on the private owner, under the watchful eye of its private lender.

Beyond trying to align interests with the market, the services adopted two basic MHPI deal structures to deal with cost and risk. These two approaches can be characterized as the *partnership* and the *arm's length* structures. In the partnership structure the military service acquires an equity interest in the firm or new owner of the housing. The firm becomes the general partner with general management control. The military service becomes the limited partner without management control, but it retains a veto power over major business decisions. This major decision veto is to protect the government's interests, since much of the housing is sited on the installation. The underlying assumption for the partnership model is that as problems inevitably arise, the government and the private partner will work through them cooperatively. The downside is that the government may be unable to detach itself from the liabilities of the general partner and may wind up absorbing business responsibility simply because it is the "deep pocket." The partnership model is the preferred deal structure of the Army and the Navy, including the Marines.

In the arm's length structure, the military service leases housing to a firm, but remains outside the formal deal structure. Cash subsidies are provided as direct loans, usually in a second lien position, since the goal is to obtain as much private debt as possible under normal underwriting standards. Under the Federal Credit Reform Act (FCRA) of 1990 (P.L. 101-508, 10 U.S.C 661), the scored amount for a government direct loan is the sum of the interest rate subsidy and the default risk. Because government loans must be regularly repaid, the score is less than the face value of the

cash contribution. Therefore, the leveraging effect of making a loan is better than that of an equity contribution. This expands financial sources to the project and generates more initial housing revitalization. Under the arm's length model, the new owner has total management control, and the military service is an *informal* partner working toward the common goal of providing housing. However, if something goes wrong, the government should more easily be able to detach itself from liability incurred by the new owner. The arm's length model is the preferred deal structure of the Air Force.

The fifth major shift in governance was in on-going operations and maintenance (O&M) or sustainment. In the traditional model, the military services either performed or contracted out O&M and paid for the costs out of annual appropriations. Under the MHPI model, both O&M and recapitalization were to be funded with project revenues and private finance over the normally fifty-year term of the project. As modeled financially by public managers, if member housing allowances were high and occupancy was sustained, rent revenue would easily cover the costs of O&M, repay any private debt, and provide the owners a good profit. However, if allowances were underfunded, vacancy were high, rent revenue would decrease and owners might look for ways to cut costs.

The sixth major shift in governance was project performance, i.e., how well the housing is actually constructed, operated, maintained, and renovated. Under the traditional model this is entirely the responsibility of the government to perform work in-house, contract out, and budget timely to ensure facilities are well maintained. Under the MHPI co-production framework, the special purpose entity is expected to construct, operate, and recapitalize the military family housing inventory for an extended period of time. In other words, changes in requirements or purpose determination, allocation of

public resources, selection of co-producer, negotiation of complex deal structures, and access to private capital, are intended to improve social outcomes and the perceived state of affairs.

Implementation of the MHPI program was widely viewed in the federal facilities community as being innovative and successful, employing private sector expertise and capital to revitalize federal facilities. However, these shifts in public governance from a traditional to a privatized model, combined with different functional perspectives on public purpose by public managers across the federal government greatly increased the risk of misalignment and problems, which can affect public value creation.

Ideally, if all three program elements are successfully aligned, the MHPI should create public value by (1)(a) greatly accelerating (b) replacement and revitalization of the inventory of military family housing and (c) maintaining it in good condition for (d) up to fifty years; (2)(a) providing the housing at lower life cycle costs which are (b) appropriately reflected in the comprehensive budget, with (c) favorable opinions from beneficiaries and public managers, with (d) few if any costly corrections; and (3) by instituting (a) governmental arrangements and (b) deal structures which (c) protect the government's interests and (d) minimize risk and uncertainty.

Public Value

Having reviewed the literature on the subject (public managers) and the verb (create), we turn to the direct object (public value). Moore (1995) again provides the conceptual framework for thinking about the value created by governmental undertakings. For Moore, public value means the attainment of the best social outcome for the total cost to the public. He posits that “the aim of managerial work in the public

sector is to create public value” (1995, p. 28). Just as the aim of managerial work in the private sector is to create private value, or profit, managers in the public sector should endeavor to increase desirable social outcomes.

Attaining the best social outcome means adding *fairness* to scale as a central value. In fact, for Moore (1995), scale and fairness are only two justifications for moving a function from the private to the public sector. Scale is the provision of a good or service in a greater quantity or quality. Fairness is the distribution of costs and benefits in a more equitable manner than the private market. Moore asserts that to the extent that a causal connection between governmental outputs and desired social outcomes is uncertain, the justification for government intervention is weakened.

Moore’s (1995) definition of public value includes six elements. Public value (1) is rooted in the desires and perceptions of individuals, not societies; (2) includes both (a) provision of goods and services and (b) fairness and justice in their distribution; (3) has dual responsibility to both beneficiaries and citizens; (4) economizes the use of authority as well as money; (5) maintains accountability; and (6) is innovative and experimental.

Creating public value comes with an associated cost in public resources (Moore, 1995). Calculating the cost of public expenditures is less precise than the calculation of private expenditures, which can be represented in dollars and cents. That is because there are two types of costs associated with government activities (Moore, 1995). The first is the simple budgetary cost, i.e. the revenue that is derived by taxation of the citizenry. The second, is the expenditure of public authority. Public authority may be defined as the power of the state to “compel individuals to contribute directly to the achievement of public objectives” (Moore, 1995, p. 29). This shift from individual liberty and pursuits to

public achievement of collective goals represents a cost that should be considered in any public value calculation. For every use of public funding, there is a private alternative, and when activities are made public, the private provision tends to atrophy (Moore, 1995).

There are detractors from Moore's public value theory. Rutger (2015) for example, has reviewed the public value literature and attempted to develop an encompassing definition of public value. He concludes that it is a "fuzzy concept" and that treating it as a "valuable core concept is not entirely convincing" (Rutger, 2015, p. 45).

Questions of value and fairness are highly contentious issues. Political philosophers and theorists over the ages have disagreed wildly about the appropriate role of the government in our lives. Plato (ca. 380 B.C.E./1968, 505a) believed that the "Idea of the Good" was the "greatest study," but that it was ultimately inaccessible, like staring directly at the sun. From Plato to the present, political philosophers have argued over the best form of governance (Strauss & Cropsey, 1987). And from Karl Marx (1867) to Robert Nozick (1974), they have disagreed about the equitable distribution of rights and entitlements owed by governments to socio-economic classes or individuals.

The classical liberals would agree that public value is a subjective concept that can mean anything from efficiency to resilience, fairness, participation rate, stability, social cohesion, common good, responsiveness, adaptability, productivity, or effectiveness (Aligica et al., 2019). This conception of public value is quite compatible with that of Moore. For the classical liberals, the eternal question is, "given that their personal preferences and opinions about social norms differ greatly, how can individuals

with heterogeneous, incommensurable, and incomparable values peacefully coexist and self-govern?” (Aligica et al., 2019) To answer this question, the classical liberal perspective suggests a flexible, robust, and theoretical framework. Public managers should seek to “create a state of affairs in a social system that as many people as possible consider to be an improvement over the previous state” (Aligica et al., 2019, p. 131). Accordingly, state solutions should provide more public value than markets or the third sector (Aligica et al., 2019). Unpacking this question and response requires extended inquiries into at least four separate concepts: values, evaluation, state of affairs, and the observed system. Unfortunately, these inquiries are outside the scope of this study.

However, the concept of public value does lend itself nicely to discussions of the infrastructure gap. Social outcomes are obviously improved when the *scale* of infrastructure is increased. As the 1.5 trillion-dollar gap is reduced, commuting times are shortened, freight costs are reduced, public health and safety are enhanced, and the environment is preserved. *Fairness* is another matter. First, how the costs and benefits of infrastructure provision are shared is important. Second, if implemented inequitably or illegally, the privatization of infrastructure systems and structures may substantively or procedurally weaken democratic values. These issues are addressed further below under the section on valuation.

Uncertainty and Risk

Any measurement of beneficial transactional impacts or democratic values must also include some calculation for unexpected occurrences. The sharing of responsibility, authority, discretion, and control between the government and the private sector increases the possibility that results will differ from expectations. Neither traditional government

procurements nor privatization arrangements always go as planned. Even a well-designed program with perfectly aligned co-production elements is subject to external forces such as epidemics, domestic and international violence, and natural disasters.

Risk and uncertainty are actually distinct economic concepts (Knight, 1921). Uncertainty is a basic condition of life caused by a constantly changing world. Risk on the other hand is a matter of fixed and measurable probabilities. Under the law of large numbers, risk can be measured and, to some extent, priced. Risk also lies on the private sector (Pagdadis et al., 2008). Risk then is sort of fixed cost for which private managers with private expertise can plan, control, allocate, and insure.

Uncertainty and risk often enter the privatization process causing outputs or outcomes to deviate from early expectations. Such deviations may be positive or negative. On the positive side, delivery of the service may actually exceed expectations, for example when the privatization arrangement performs beyond expectations. But of course, the grave concern is underperformance. Public managers always face the possibility that their efforts to provide public value will deviate from expectations. An assessment of public value in any activity must address the fact that outputs may not be delivered or expected social outcomes may not be experienced. Concerns also arise that such actions will adversely impact democratic values. These occurrences all reduce public value creation.

There are numerous ways of classifying risk. For privatized infrastructure projects, Savas (2000) classifies risk into three groups: business, financial, and political. Business risk comprises those elements which occur during performance or operation of the project itself, such as cost overruns or delays. Such risk includes less than expected

demand for the good or service and thus revenue shortages or risk. Financial risk reflects the inability to service debt or changes from assumptions in the financial markets such as exchange rates or interest rates on capital. Political risk stems from adverse decisions made by government authorities that adversely affect projects or programs. These three risk types, along with the technical risks associated with the ASCE's eight evaluation factors above, form a fairly comprehensive listing of what can go wrong with a privatized infrastructure arrangement.

Grimsey and Lewis (2000) identify nine types of risk inherent in any privatized arrangement: technical (engineering and design), construction (technique, cost escalation, and delay), operating (operating and maintenance costs, including labor), revenue (price and demand uncertainty), financial (inadequate hedging and financial costs), force majeure (war and acts of God), regulatory/political (legal changes and unsupportive government policies), environmental (adverse environmental impacts) project default (failure due to a combination of the above risks).

Lonsdale (2005) argues that a complete public-private contract cannot be developed *a priori* and post-contractual renegotiation is inevitable. This is a particular problem in the case of arrangements where the power relationships between the public and private parties may not be symmetrical. Lonsdale asserts that many P3 contracts are “relational contracts” which merely describe how the parties are supposed to act, as opposed to “classical contract” which more definitively spells out the rights and duties of the parties. In customer-supplier contracts, power is based on three elements (utility), (scarcity), and (information).

Murphy (2008) argues that public-private partnerships can deliver public infrastructure more efficiently and effectively if risk is allocated to the party best able to handle it. This is because private managers can structure the business entity to limit its liability. They can attain insurance against many of the risks identified above. The private lender can perform due diligence on the borrower, engage in rigorous underwriting, and secure the debt against the subject property or the private manager.

Finally, Kettl (1988) posits, that at the end of the day, if a privatization arrangement goes awry and a public need goes unmet, the government will inevitably face responsibility for fixing the problem.

The risks above must be anticipated in any privatized--or traditional governmental--project. As Knight (1921) points out, they can be evaluated, measured, and to some extent priced in structuring program elements (public purpose, public-private governance, and public valuation). Conversely, when uncertainty and risk are not evaluated, they can arise and generate problems which overwhelm the successful implementation of a program or project. Finally, misalignment of program elements by public managers across the ship of state can create what might be considered management risk, causing problems which reduce public value creation. Consideration of risk and uncertainty should be included in each of the four approaches to measuring public value creation discussed below.

Valuation

To adequately align program elements, program managers should identify the most appropriate method for calculating public value for a specific infrastructure program or project. Public value is about social outcomes and must be assessed or measured in

terms of both beneficial transactional impacts (scale) and protection of democratic values (fairness). Each transactional benefit derived from utilization of privatization arrangements comes with a possible cost or a trade-off. First, access to private capital may undermine allocative efficiency within the budgetary process. Second, expanded provision of infrastructure and improved operations may involve a loss of governmental control and threaten democratic fairness. Third, expanded sources of revenue may unfairly burden the private payer. And, of course, all of these transactional benefits come with the uncertainty and risk that outputs and outcomes will deviate significantly from policy expectations.

What then should be the criteria for judging public value? Savas (2000) submits that privatized programs and projects should be judged according to three criteria: (a) efficiency, (b) effectiveness, and (c) equity (both economic and demographic). Moore (1995) provides a different set of four criteria: (a) achieving mandated objectives efficiently and effectively, (b) customer service and client satisfaction, (c) analytic techniques for assessing public value, and (d) politically neutral competence.

The privatization literature identifies four broad approaches to measuring public value in privatized infrastructure projects and programs. Opinions determined by surveys, interviews, and political decisions can provide insight into equity, political neutrality, and the preservation of democratic values. A budget approach can shed light on efficient public resource allocation. Cost-benefit analyses provide an analytic technique for determining project effectiveness and efficiency. Finally, an analysis of political, statutory, and legal actions can identify the costs of correcting program or project problems caused by misalignment of program elements.

Opinion

One method of calculating public value is to simply look to the assessments of politicians, policy makers, managers, evaluators, intended beneficiaries, and the general public. Opinion is initially reflected in the authorization process. Moore (1995) takes the position that politics is always the final arbiter of questions of public value. It is in the authorizing process that public value is legitimized and solidified. It is in the authorization process that private interest groups as well as public managers deliberate. Therefore, what emerges from the authorization process is the best reflection of what the general public values.

Decisions of public managers, including politicians, are reflected in enabling statutes, including privatization authorization statutes. According to Moore, (1995), the authorization process has three characteristics. First, it is in this process that citizens spend their freedom as well as their money by authorizing the government to operate on their behalf. Second, citizens buy some product for everyone's benefit according to a political view of what is desirable for the society as a whole. Third, citizens buy whole enterprises rather than individual products of an enterprise. Enacted statutes are important because they represent important value trade-offs of the general public. When program enabling statutes are amended or when appropriations are increased, costs also increase, and the expected public value is reduced.

Opinion may also be discerned by asking or surveying people, both public managers and program beneficiaries as to what they think. This may take the form of surveys of either project users or surveying public managers on program performance. Of

course, more in depth understanding can be gained by interviewing participants. Such an approach can get at questions of fairness and the upholding of democratic values.

Reynaers (2014) has used a qualitative inductive case study design to address the broad issue of whether public-private partnerships weaken or strengthen the upholding of public values. The author conducted nineteen semi-structured interviews with public managers and private consortium members during 2011-2012 for a project whose term extended until 2025. During the interviews, she asked the interviewees to reflect on their experiences during three project phases: contracting, construction, and operation.

Van Slyke (2003) conducted semi-structured interviews with county-level public managers and nonprofit managers to examine whether their social services contracting was implemented in a competitive environment and whether the government retained sufficient public-management capacity to oversee the contracts. He conducted a total of 35 interviews involving 15 questions, which were tape recorded, transcribed, and coded based on the participants' responses. The study included archival evidence, including contracts, agency fiscal reports, and internal memos on the proposal process.

Interviewing is sensible because it can provide insight into the understanding of the stakeholders, intended beneficiaries, or evaluators as to whether democratic values were upheld. However, it should be noted that the responses are only the subjective opinions of the respondents concerning public value creation. Whether those public values have objectively been upheld or whether the project would remain sound over its entire term remains unknown.

Finally, evaluation reports by the General Accountability Office (GAO) or agency Inspectors General ((IG) reflect some measure of opinion since the public managers

making the evaluations must choose and weigh various sources of evidence according to their personal or institutional conceptions of relative importance.

Cost-Benefit Analysis

One of the most common methods of evaluating public-private partnerships is the cost-benefit analysis (CBA) (Donahue & Zeckhauser, 2012). A cost-benefit analysis is a broad comparison of costs, benefits, and risks of a project or program (Gruber, 2011). A cost-effectiveness analysis is sometimes used where costs or benefits are difficult to calculate. A cost-benefit analysis identifies all the costs and benefits of a project over its expected term and discounts them to net present value. The purpose of cost-benefit analysis is to institute rational analysis into the decision-making process (Chen, 2008). The beauty of a cost-benefit analysis is that it reduces all factors to a single number for each alternative which can be compared to single numbers for other alternatives. In this case, the cost of privatization or co-production arrangements can be compared to those of traditional procurements.

The problem with cost-benefit analyses is that they involve a highly normative and political process (Chen, 2008). What benefits should be included in a cost-benefit analysis is a much disputed economic, legal, and philosophical issue (Adler & Posner, 2001). Issues include calculating cost assumptions, the choice of an appropriate discount rate, scoping of benefits, inclusion and measurement of positive and negative economic externalities, calculating the costs and benefits of doing nothing, calculating risk and uncertainty, the absence of any assessment of social equity, and absence of consideration of public administration values.

A comprehensive cost-benefit analysis should include consideration of externalities or costs and benefits “outside” the transaction (Mikesell, 2011). Calculating and valuing externalities is no doubt far more speculative than calculating benefits “inside” a transaction; however, they may represent the public value that tips the balance in favor of a particular alternative. Mikesell (2011) argues that a CBA may include a “consumer surplus” in the analysis. This means that an analyst or decision-maker should consider, for example, not only the savings of operating a park, but also the value of people relaxing in the park and how much they would be willing to pay for that opportunity.

Cost-benefit analyses tend to focus on the supply side of an alternative reflecting economy, efficiency, and effectiveness. An argument can be made that they should also look at the demand side. That is, if a good is a public good with a relatively large externality, demand will not be fully revealed (Burger & Hawkesworth, 2013). A properly scoped CBA should identify and monetize demand issues as benefits.

In the federal government, OMB Circular A-94 (2013) sets forth the methodology for calculating long-term costs of government functions. A-94 requires agencies to use a constant dollar analysis, assuming that current documented costs remain stable for the project’s duration and discounting the costs back to net present value. The agency’s preferred alternative then is the one which provides the identical benefit at the least cost.

Budgeting

Budgeting is a second “dollars and cents” method of calculating public value. While cost-benefit analyses compare alternatives for expending public resources to solve infrastructure problems, they do not answer questions as to whether projects reducing the

infrastructure gap should be funded in the first place. This is the problem of costs (Aligica et al., 2019). Programs or projects which may be ideal or desirable, may not be sustainable in terms of resources or energy. Infrastructure projects must compete in the budget process against all other demands on public resources including social welfare, public health, administration of justice, and national security. This is part of the reason why the United States has a \$1.5 trillion infrastructure gap.

A primary role of a government's budget is to provide allocative efficiency with limited public resources most efficiently among the myriad of possible public projects and programs (Chen, 2008). Good budgeting practices allow governments to plan and record their efforts to maximize the welfare of its citizens (Burger & Hawkesworth, 2013). However, the field of public administration struggles with the question of how best to allocate resources among the many competing purposes of the government, and no definitive policy dictates how public revenues should be expended on delivery of public goods, services, or transfers (Key, 1940).

How a government treats, or scores, private funding (debt and equity) in its budget is critical in determining whether or not a privatization project is pursued (CBO, 2005). Scoring is the determination of the cost of a governmental action which must be recorded as an obligation in the federal budget. Before an agency may obligate funds, appropriations sufficient to cover scored costs must be authorized by Congress. In most cases, this means appropriating the exact cost of a project. For example, the acquisition of a building that costs one million dollars to build is scored at \$1 million in the agency's budget allocation.

The U.S. federal government operates under a philosophy of a comprehensive budget. This philosophy is best expressed in the report of the President's Commission on Budget Concepts (1967) which indicates the efficient allocation of resources in the private sector of the economy is best performed in a decentralized fashion by the disciplines of the marketplace. In the public sector, however, it is the budget process which performs the resource allocation function. The comprehensive budget philosophy is reflected in two fundamental principles of federal budgeting.

- The budget should be comprehensive, capturing all financial activities of the federal government; and
- Federal financial commitments should be recognized up front in the budget at the time those commitments are made

This comprehensive budget philosophy is reflected in the Budget Enforcement Act (BEA) of 1990 (P.L.101-508). The BEA requires that the total amount of an agency's estimated legal obligations be scored in the initial year they occur. Prior to enactment of the BEA, agencies had been able to obligate the government for long-term payments without reflecting them in the budget. At the federal level for example, under OMB Circular A-11 (2018), all so-called third-party financing must be recognized in an agency's budget in the first year it is obligated. This rule has the practical effect of eliminating privatization at the federal level. Such costs often greatly exceeded the costs of paying for an acquisition up front.

Under BEA, there are two types of budget scoring: legislative scoring and transactional scoring. Whenever legislation is proposed in Congress, the Congressional Budget Office (CBO) determines whether the legislation creates a governmental

obligation for payment and estimates any costs from the obligation. That cost is included in an agency's budget allotment for that year, and the agency must identify funds to offset the amount. If the cost estimate is substantial it may cause the agency to forgo an important project or program. For transactional scoring on the other hand, agencies work with The Office of Management and Budget (OMB) at the top of the executive branch to determine the budgetary cost of particular transactions already authorized by Congress.

Agency and staff level public managers who determine such costs are known as budget scorekeepers. Located within the OMB, the Congressional Budget Office (CBO), and the Congressional Budget Committees, the scorekeepers apply the rules to agency activities to determine what must be recognized in the budget. Though they often do not agree on details, scorekeepers share a fundamental faith that the budget process is the optimal means of allocating public resources to create public value. For scorekeepers, the budget's purpose is to provide Congress and federal managers all information concerning costs of a public activity, so they can make fully informed decisions. Scorekeepers believe that only a comprehensive budget process requiring full accounting of a program's costs can provide the discipline for making good allocation decisions. This comprehensive budget principle is closely related to a second principle, that agencies must record all costs up front to ensure the costs are considered by decision-makers.

Though scorekeepers at OMB and CBO are in regular communication, they do not always agree on how a particular legislative proposal or a specific transaction should be scored in the budget. The executive and legislative branches at the political level make scoring determinations that are inconsistent, or even misaligned with broader public purposes.

The comprehensive budget philosophy and the scoring rules carry substantial weight in the debate over the optimal allocation of public resources. Whether this process actually enables public managers at the political level to create public value bears examination. Efficient allocation of static public resources may not be consistent with dynamic public value creation. Such a determination requires a broader more dynamic view of the desired state of affairs, costs, benefits, risk, and the economic externalities of the proposed undertaking. The scorekeepers at both CBO and OMB have long struggled with how to score co-production arrangements. Such programs do not fit well into either of their two traditional approaches to scoring transactions: pricing government leases of traditional government facilities production.

Finally, the private cost of capital is usually higher than the government's cost. Therefore, cost savings due to private expertise for equivalent levels of service must be sufficient to overcome a natural public sector advantage in constructing a project (Posner et al., 2009).

Problems

The fourth method of calculating public value looks at the cost of correcting problems when risk, uncertainty, or misalignment of program elements comes into play. When privatization programs and projects go awry and social needs go unmet, public managers inevitably face responsibility in the eyes of the general public (Kettl, 1988). Public managers in the political or judicial arenas may summon public managers in one or more of the branches of government to correct the problem. This may come as a call to change the policy or implement a statutory fix. It may be a call to increase the budgetary cost of the system, thereby reducing the originally expected public value creation.

If politics is the final arbiter (Moore, 1995), it might be argued that the courts are the final arbiters of politics. That is because statutes enacted by state and federal legislative branches and actions taken by executive branches are subject to judicial review. When problems, risk, or uncertainty raise their ugly heads or when the legitimacy of decisions by public managers is questioned, judicial review by the courts becomes critical (Rosenbloom et al., 2010). It is often the courts which must make the difficult decisions between collective action supporting society in general and individual rights and liberties, which are paramount in the Constitution (Rosenbloom et al., 2010). Lack of funds or high costs do not relieve the government of its Constitutional obligation to individuals.

Rosenbloom et al. (2010) contended that while contemporary American public administration “orthodoxy” is rooted in management, rather than governance, application of constitutional and statutory principles and values enables the courts to play a large role in supervising public managers. As the states and federal government have taken on more responsibility for providing services such as infrastructure, it was only logical to assess how well those services were provided.

Rosenbloom et al. (2010) noted that under the New Public Management and Collaborative Governance frameworks, individuals are not only citizens, but customers. Modern jurisprudence has expanded notions of equal protection under the law and treating public benefits as a form of property protected by the due process clause (Rosenbloom et al., 2010). There is however a limit. The federal courts have been careful to declare there is no Constitutional right to public benefits *per se*. In other words, no one is entitled as a customer of infrastructure before it is provided by the government.

Each of the four approaches to public value is essential, but unsatisfactory by itself in informing public managers on how best to create public value by reducing the infrastructure gap. Therefore, it is necessary to combine the approaches while recognizing that each has its shortcomings and trade-offs. At the end of the day, if we combine all four approaches, public value is the sum of all transactional benefits, including positive externalities, minus (1) detrimental transactional impacts, including problems, risk, and uncertainty, and (2) social outcomes, including impacts on democratic values, as determined by (a) analytic techniques, (b) budgetary decisions, (c) opinions of users and public managers, including politicians, and (d) corrections, including court rulings—as determined by a different set of public managers, evaluators at the Government Accountability Office (GAO) and inspectors general (IG) of the various military agencies.

METHOD

Research Design

We turn now to the public value created by public managers implementing an actual infrastructure privatization program. Theoretically, infrastructure privatization programs and projects should create public value if program elements (public purpose, public-private governance, and public value) are appropriately aligned. The misalignment of program elements causes problems, which reduce public value creation. Specifically, a privatized infrastructure program or project will create public value if public managers (a) clearly and consistently identify the public purpose(s), (b) implement public-private governance arrangements which support those public purpose(s), and (c) appropriately calculate the public value created by the program or project. Therefore, from a research point of view, the alignment or misalignment of program elements is the independent variable and program problems are the dependent variable.

This case study applied this theoretical proposition to the Military Housing Privatization Initiative of 1996 (10 USC 2871 *et seq*). As discussed above in the review of the literature, the MHPI is an example of the privatization of social infrastructure. The initiative is a unique and complex privatization program at the United States federal level. Under the MHPI, between 1996 and 2014, program managers in the military services implemented fifty-year, public-private governance arrangements to revitalize their entire inventories of approximately 200,000 houses on domestic military installations. The services had originally constructed, owned, operated, and managed the housing in order

to correct a failure of local markets to provide affordable housing to military service members and their families. In 1995, after years of underinvestment due to budget constraints, two thirds of the housing inventory were considered inadequate by the military services' own housing standards with a renovation price tag of approximately twenty-six billion dollars. The Department of Defense (DOD) would no doubt have earned a failing grade if the eight evaluation factors of the American Society of Civil Engineers (2017) scorecard had been applied to its housing inventory. Under the MHPI, the military services took advantage of available private capital and expertise to revitalize their housing inventories. However, in the last several years, the program has experienced sustainment problems and program corrections which reduce public value creation.

The research question for this study was whether the MHPI has created public value. The hypothesis was that misalignment of some MHPI program elements has caused some problems, but that the overall program continues to create public value. To analyze the research question, the study used a qualitative methodology to examine the evidence. Its approach was exploratory, descriptive, and explanatory (Yin, 2014). The study systematically identified, collected, classified, and analyzed available and ascertainable documents over the twenty-seven-year history of the program to both identify problems and analyze the alignment or misalignment of program elements. The unit of analysis for the study was the MHPI at the program, not the project level. While every project comprising the MHPI involves unique and distinct features, decisions made by political and agency level public managers have had critical impacts at the program level.

The conceptual and diagnostic framework for this study is Moore's (2005) proposition that public managers should create public value. The study was also heavily influenced by the Republic of Plato (ca. 380 B.C.E./1968) and the classical liberal perspective of public governance (Aligica et al., 2019).

Researcher

I have experience implementing and managing the Military Housing Privatization Initiative of 1996. From 1995 to 1997, I was the Air Force's lead representative to the Office of the Secretary of Defense Housing Revitalization Support Office (HRSO), which established initial guidelines for the new MHPI authorities. In 1997, I returned to the Air Force, where I led the team that awarded the first project solicited and awarded under the MHPI. In 1999, I moved to the financial management office within the Air Force Secretariat where I developed financial policy for the MHPI. In 2000, I moved to the Office of the Secretary of Defense where I served as Deputy Director for Housing and Privatization until 2014. In the latter role, I was responsible for establishing MHPI policy and guidance and for obtaining approval from the Office of Management and Budget (OMB) for the individual MHPI projects.

Evidence

Evidence for the study consisted of available and ascertainable documents concerning the Military Housing Privatization Initiative across United States legislative, executive, and judicial branches of government. Such documents included but were not limited to, reports by the U.S. Government Accountability Office (GAO) and Inspectors General (IG) within the Department of Defense, statutes, legislative history, Congressional testimony and reports, official correspondence, executive orders and

regulations, budget scoring memoranda, cost-benefit analyses, program evaluation reports, legal instruments to which the government is party, policy memoranda, and reported judicial rulings and opinions. The evidence also included MHPI studies performed by credible research associations outside the government, such as the Center for Naval Analysis. The data included documents from 1995 to 2021.

The evidence was identified using the Safari and University of Baltimore JSTOR search engines. I systematically searched the government documents database by typing in the following keywords: MHPI, GAO, Inspector General, military housing, privatization, public-private partnerships, public purpose, public-private governance, and public value. The list was further refined by adding (a) documents referenced in other documents but not identified in earlier internet searches, and (b) relevant documents from both the government and academic institutions. Identification of evidence included searches of data bases of three think tanks across a broad political spectrum: Brookings Institution, Cato Institution, and American Enterprise Institute; however, none of these institutions had publications specifically on MHPI.

The identified documents were collected in a three-phase process. The first phase was problem identification. During this phase, I collected reports published by the GAO or any of the Inspectors General (IG) of the Office of the Secretary of Defense (OSD) or the four separate military services concerning the MHPI or other military housing. Public managers at the GAO and IG offices are the program evaluators, and their reports often identify program problems.

In the second phase, I collected other available MHPI documents issued by any of the three branches of the federal government. This was the program element phase.

Document collection in the second phase was largely hierarchical, from top to bottom. Public managers implement privatization programs on a hierarchical basis which may reflect different perspectives and purposes. The highest level in the United States is the political level and includes the U.S. President and the Office of Management and Budget (OMB), Congress, and the federal judiciary. Just below is the agency leadership which develops program policy. The third is the staff level which implements political and leadership decisions. In the second phase, I conducted an internet search to first identify political level documents, then agency level documents, and finally staff-level documents. Table 2 reflects the hierarchy of the “program element” portion of the document collection.

Table 2

Hierarchy of Program Element Documents

Executive	Legislative	Judicial
Executive Orders	Statutes	Reported Cases and Opinions Concerning the Military Housing Privatization Initiative (MHPI)
Regulations	Legislative History	
Office of Management and Budget (OMB) Guidance	Congressional Testimony	
Agency-Level Military Housing Privatization Initiative (MHPI) Policy	Congressional Report	
Guidance	Language	
Program Evaluation Reports	Congressional Budget Office (CBO) Reports	
Official Correspondence	Official Correspondence	
Cost-Benefit Analyses		
Legal Instruments Between the United States and Private Parties		

The third phase of evidence collection was evolutionary. This case study was intended to be exploratory and data collection evolved as relevant problems or program elements were identified. Evidence collected in the third phase included studies performed by credible, nongovernmental sources or official government documents already in the possession of the researcher, but not identified in previous internet searches. The documents identified and collected in these three phases constituted the evidence of available and ascertainable documents for the study.

In addition to the three phases of evidence collection, I used daily Google Alerts, starting on January 17, 2019, to stay abreast of MHPI developments. The Google Alert search terms were privatization, public-private partnerships, and MHPI.

Analysis

Case study analysis involves examining evidence to produce empirically based findings (Yin, 2014). There are few fixed formulas or cookbook recipes for analyzing qualitative evidence, but a good starting point is classifying the evidence in a matrix of categories (Yin, 2014). This case study was intended to determine whether the decisions and actions of functionally different program managers resulted in misalignment of MHPI program elements causing program problems which reduced public value creation. This was performed by (a) classifying and analyzing program problem documents (dependent variable in GAO and IG reports); (b) classifying and analyzing program element documents (independent variable) from the three levels of the three branches of government; and (c) analyzing whether the independent variable caused the dependent variable. The analysis describes and explains how misalignment of program elements

caused program problems which, to some extent, reduced public value creation. The analysis also determines whether, despite problems, MHPI has created public value.

Program element documents were then classified by document type and the branch of government: executive, legislative, or judicial. This categorization supported evaluation of public purpose. These collected documents were also classified by political level. This classification supported analysis of different levels of the governance framework and the different roles and perspectives of the various public managers implementing the MHPI. That matrix is shown in Table 3.

Table 3

Government Branch and Level Classification

Levels	Executive	Legislative	Judicial
Political	Office of Management (OMB) Budget Scoring Guidelines	Congressional Reports	Reported Cases and Rulings
Agency-Level	Program Policy Memoranda and IG Reports	GAO Reports	n/a
Staff-Level	Project Decisions or Legal Instruments with Private Parties	n/a	n/a

Third, the content of collected documents was classified by level of public management and program element. This step was intended to be a “rough cut.” This categorization began to support analysis of the alignment and misalignment of program elements between public managers with different perspectives and interests in the implementation of the program. This classification is shown in Table 4.

Table 4

Program Element and Government Level (Sample)

Level	Public Purpose	Public-Private Governance	Public Value
Political	Improve recruitment and retention	Avoid risk to the budget	Reduce the budgetary cost of housing
Agency Level	Improve quality of life of service member families	Reduce costs of satisfying mandates	Satisfy cost-benefit requirements
Staff Level	Execute projects to benefit organization and personal careers	Award projects while satisfying policy requirements	Award projects within budget limits

For every document collected, an “evidence sheet” like the one at Appendix E was prepared by word processor or by hand.

After the documents were collected and classified, they were analyzed to determine cause and effect. As documents were collected, key events in MHPI implementation were identified. These events were inserted in the MHPI Timeline (see Appendix B) to assist in the program analysis techniques described below. Yin (2014) suggests four general strategies for analyzing case studies. The four general strategies are (a) relying upon theoretical propositions, (b) working the data from the “ground up,” (c) developing a case description, and (d) examining plausible rival explanations.

This case study relied on the theoretical proposition that misalignment of program elements causes program problems, which reduce public value creation. It analyzed the collected evidence to explore, describe, and explain cause and effect. Testing this proposition required examination of the following five preliminary questions for each impact concerning alignment and misalignment of program elements:

1. Was the public purpose of MHPI consistently and clearly identified?

2. Did the MHPI governance arrangements adequately support the public purpose?
3. Did the MHPI governance arrangements adequately address uncertainty and risk?
4. Was the expected public value for MHPI appropriately calculated?
5. Were public purpose, public-private governance, and public value aligned or misaligned?

Yin (2014) also suggests five analytic techniques for exploring case study evidence: (a) pattern matching, (b) explanation building, (c) time-series analysis, (d) logic models, and (5) cross-case synthesis.

Pattern matching compares patterns in the evidence from the researcher's evidence with one predicted before data was collected. Here, MHPI problems would be pattern-matched with problems from other infrastructure privatization programs and projects.

Explanation building stipulates a presumed set of causal links about how or why something happened. Based on pattern-matching, it is an iterative process of making theoretical statements and comparing findings of an initial case, revising the theoretical statements, and comparing the details of the case against the revision. Here, the researcher stipulates the causal links between elements misalignment and problems and then revises them and retests them.

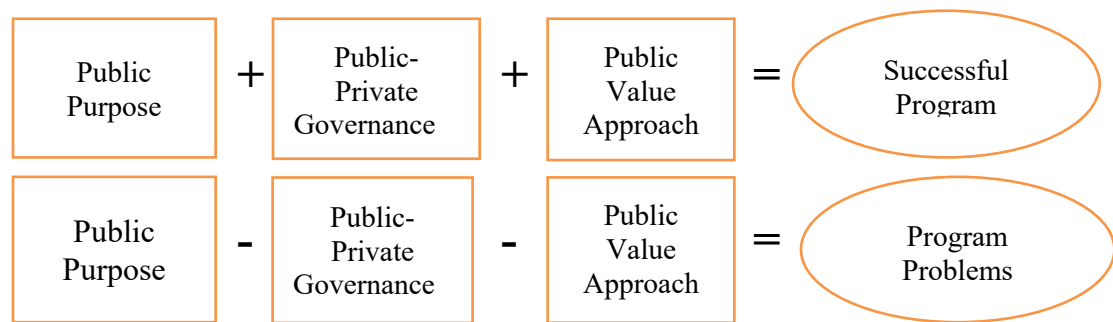
Time series analysis matches observed trends in evidence with either a prior theorized or some rival trend specified earlier. This technique might have been useful at the beginning of the MHPI program or going ahead for the next two or three decades of

the program's existence, but this case study examines the evidence of the past twenty-five years. So, this technique seems inapplicable.

Logic models, such as those displayed in Figure 1, stipulate and operationalize complex chains of occurrences or events over an extended period of time. They match empirically observed events with theoretically predicted events. This method can serve as a useful tool for examining the alignment or misalignment of program elements as causes of program problems.

Figure 1

Logic Models



Cross-case synthesis compares different cases and only applies to the analysis of multiple cases. This case study examines only one case, the MHPI therefore this analytic technique is not applicable.

Given the range of analytic techniques above, this study sequentially utilized three of Yin's (2014) analytic techniques: (a) logic modeling, (b) pattern-spotting, and (c) explanation building to test the theoretical proposition that misalignment of program elements causes program problems which reduce public value creation. First, categorized data was set forth in a logic model. Second, patterns in the evidence were spotted. Third,

these patterns of good alignment or misalignment in the evidence were described and explained.

Yin's (2014) general strategy of relying on theoretical propositions and the three specific analytic techniques were applied in the following way. First, program problems (dependent variable) were identified in GAO and IG reports, described on individual evidence sheets, and classified as in Table 5. GAO and IG reports usually focus on one or two concerns or problems in government activities.

Table 5

Program Problems (Sample)

Problem	Cause
Construction timelines are delayed	
Construction quality is bad	
Housing management is unresponsive	
Occupancy is low	
Housing rents are too low	
Financing is delinquent	
Environmental problems	
Agency oversight is inadequate	
Increased demand on the federal budget	

Second, documents from the second collection phase were classified and analyzed by level and governmental branch as indicated in Table 6. Misalignment can occur both between different branches and different levels of government. Different agencies in the institutional framework, with their own needs and perspectives, may implement policies in a different manner or staff-level public managers may do the same. Public managers at all levels can be expected to act in their own interests which may or may not be aligned with program elements (Aligica et al., 2019).

Table 6

Possible Program Elements (Sample)

Public Purpose	Public-Private Governance	Public Value Measurement
Improve quality of life	Collaboration with private sector experts	Cost-benefit analysis
Increase recruitment and retention	Access to private capital	Preservation of democratic values
Fix the housing inventory	Avoidance of financial risk	Efficient budget allocation
Reduce the housing budget	Avoidance of construction and operations risk	Avoidance of political conflict
Improve operations	Adequate oversight in project management	Avoidance of legal conflicts
Get out of the housing business	Repayment of governmental financial contribution	Avoidance of critical GAO and IG reports
Increase housing inventory	Understandable legal relationships	Good tenant surveys
Improve housing efficiency	Degree of control over housing maintenance	Maximize positive economic externalities
Award projects	Housing occupancy remains voluntary	Minimize negative economic externalities

When the evidentiary documents were classified in accordance with the tables above, they were inserted into the logic model. Evaluation reports were inserted first since they would directly specify problems. Program element documents then were inserted to spot patterns of misalignment of purpose, governance, and valuation. When individual problems were identified, they were classified to see if a pattern existed.

Explanation building was the third step in the process after logic modeling and pattern matching. This was an iterative process of making theoretical statements and comparing findings of an initial case, revising the theoretical statements and comparing the details of the case against the revision. Here, the study stipulated the causal links between misalignment and problems and then revises them and retests them.

The intent of this case study was to create an analytical framework which could serve to examine any infrastructure privatization program or project. Four tests are commonly used to establish the quality of qualitative research in the field of public administration.

- Construct validity assesses the validity of the operational measures used in the analysis.
- Internal validity tests the casual relationship between the variables.
- External validity tests whether findings are generalizable beyond the immediate study.
- Replicability and reliability mean that later research following the same procedures will arrive at the same findings. When conducting qualitative research, replicability takes on a heightened role.

RESULTS

Below are the results of this case study of the Military Housing Privatization Initiative to determine whether this example of social infrastructure privatization has created public value.

Evidence

The research design resulted in the identification and collection of a total of 86 documents, for which 86 evidence sheets were prepared. Of the total documents, 14 were collected in phase 1; 67 documents were collected in Phase 2; and 5 documents were collected in Phase 3. Starting on January 17, 2019, 50 additional documents were collected using Google Alerts on such topics as military tenant mold lawsuits against private owners, DOD's promulgation of a Military Tenant Bill of Rights, Congressional hearings, legislation, tenant lawsuits, criminal trials, and MHPI bond downgrades.

Of the total documents, the executive branch of government generated 59 documents; the legislative branch generated 26 documents; and 1 document was generated by the judicial branch. Finally, 5 documents were generated at the political level; 69 documents were generated at the agency leadership level, and 12 documents, including studies, were generated at the staff-level.

The MHPI is arguably the most significant example of federal infrastructure privatization, and there is no shortage of documentary evidence about program developments. It became necessary to systematically narrow the inquiry by choosing the most significant events and developments which best captured public value creation. This

systematic inquiry was conducted by applying the logic model to the documentary evidence and choosing the 47 key evidentiary sources across five identified program impacts: accelerating housing revitalization (public purpose accomplishment), leveraging budgetary appropriations, costs and benefits, sustainment (program problems), and corrections (additional costs). These program impacts are discussed in detail in the analysis section. The 47 key MHPI document numbers are reflected in Table 7.

Table 7

Key MHPI Document Collection

Program Impacts	Executive	Legislative	Judicial
Political	0	5	0
Agency Leadership	21	16	1
Staff Level	4	0	0
TOTAL	25	21	1

Of these 47 key documents, 14 were evaluation reports prepared by public managers at the Government Accountability Office (GAO), and two were evaluation reports prepared by public managers at the Inspectors General (IG) at DOD and the military services. These were classified as program evaluation documents, presenting program problems. The remaining 31 key documents were classified as a program element documents. I used the evaluation reports generated by the GAO and IGs and Congressional hearings to identify evaluations of public value and to identify program problems. All the documents were categorized by program impact, program element, and approach to value in order to plug them into the logic model. I modeled program purposes as the policy and guidance decisions of agency leadership. I modeled the public-private governance element as the six major governance shifts from the traditional MILCON model to a privatization co-production model, as discussed in the review of the

literature above. For public value creation, I used the four approaches to public value discussed in the review of the literature. Program cost estimates in the documents were dynamic and inconsistent over the 24-year period examined. For example, MHPI total development costs for ranged from \$26 billion to \$40 billion. The following analysis uses the amounts stated in each specific document.

Analysis

The research question for this case study was whether the MHPI has created public value. Theoretically, if a program's elements (public purpose, public-private governance, and public valuation) are well aligned, a program will create public value. Misalignment of program elements causes problems, which in turn reduce public value creation. The case study hypothesis was that misalignment of some MHPI program elements had caused problems, which reduced public value, but the program continues to create public value overall. The study utilized three analytic techniques: (a) logic modeling, (b) pattern spotting, and (c) explanation building to test the hypothesis (Yin, 2014).

I spotted patterns of both good alignment and misalignment of program elements under the MHPI. Misalignment resulted largely from functional differences among the various public managers sharing governance of the program, i.e., control of Plato's (ca. 380 B.C.E./1968) ship of state. These various public managers included politicians, agency leadership, budget managers and scorekeepers, accountants/auditors, program and project managers, and evaluators. Ineffective governance arrangements, or deal structures, and actions by private managers also caused some program problems.

Five key public value impacts, or outcomes, were identified (patterns spotted). The first three outcomes related directly to program goals stated by DOD leadership in their policy and guidance. The first two were the short-term goals of accelerating housing revitalization and leveraging budget appropriations. The third was the long-term goal of keeping overall costs under those of MILCON. I identified two other patterns in the evidence outside these short- and long-term goals. They were the problems with long-term sustainment of the program and costly corrections to address those problems.

Pattern spotting focused on the following framework: (a) intended public purpose and expected public value, (b) alignment of public purpose with governance arrangements, including deal structures and valuation criteria; (c) analysis of the evidence, and (d) resulting assessment of public value creation. The impacts examined below are distinguishable but interrelated. For example, program problems tend to lower the opinions of managers and the general public, resulting in program corrections which increase budget costs and negatively affect cost-benefit ratios, all of which reduce public value creation.

Accelerating Housing Revitalization

The first impact or pattern was the actual accomplishment of the public purpose of accelerating housing revitalization. MHPI was intended to greatly hasten DOD's ability to provide adequate, affordable housing to military service members and their families. Accomplishing this purpose was expected to create public value by supporting military readiness and improving recruitment and retention. It would also enable DOD public managers to avoid criticism from government evaluators and politicians for operating run-down housing. The appropriate approach to public value for this impact is

opinion. The authorization process is the enactment of the opinions of politicians and the general public as to what should be done (Moore, 1995). Accelerating housing revitalization is the implementation of those opinions.

Successfully accelerating housing revitalization required alignment of shifts in governmental functions committed to revitalizing the housing inventory, including legal authority to take privatization actions, adequate federal budgetary funding, and engagement by various private functions to undertake, finance, and insure the MHPI program.

The evidence for the acceleration of housing revitalization follows below:

1. In May 1995, the DOD general counsel sent draft legislation seeking legal authority to Al Gore, President of the Senate and Newt Gingrich to provide “alternative means of acquiring and improving housing and supporting facilities” (DOD/GC, 1995). The purpose of the draft legislation was to obtain new and improved family housing and supporting facilities using private capital and expertise in a timelier and more cost-effective manner.
2. On the same day, the Secretary of Defense issued a news release announcing the innovative legislative proposal to improve housing for service members and their families. The news release said that military readiness depended upon member retention, which depended upon “decent and affordable housing” (OSD/PA, 1995). The DOD proposal would use market forces to help solve its housing problem. Using new private financing tools and commercial standards and practices would help drive down housing costs and accelerate the solution from 30 down to 10 years.

3. In June 1995, the Office of the Assistant Secretary of Defense for Economic Security briefed DOD leadership on the benefits of utilizing the private sector to solve the agency's housing problems (OSD/ES, 1995). Housing is key to service member retention, but unfortunately, 60% of the housing inventory was "substandard" with a \$30 billion dollar cost to revitalize it. Under current funding levels, it would take 40 years to solve this problem. Commercial construction is faster and less costly. With private investment, the agency could leverage public funds and fix the housing in 10 years. The inadequate housing inventory constituted a social infrastructure gap of \$30 billion that was unlikely to be closed anytime soon under existing budgetary expectations. Access to private capital under MHPI enabled housing construction at a greatly accelerated pace.
4. In January 1996, the President signed the Military Housing Privatization Initiative into law as part of the 1996 National Defense Authorization Act (P.L. 104-106, Feb 10, 1996).
5. It took the military services a little time to sort out the new "toolbox" of privatization authorities, financially model projects, and do site visits to military installations. In May 1996, OSD coordinated actions of the agency by requiring OSD HRSO (Housing Revitalization Support Office) involvement in all installation site visits and OSD approval for every proposed MHPI project (OSD, 1996a).

6. In December 1996, OSD further elaborated on the process with continued HRSO involvement from site nomination to solicitation and award (OSD, 1996b).
7. In July 1998, the GAO weighed in with its first report on the MHPI. The GAO (1998) reported that implementation of the new program was off to a slow start because, as a new program, there were many legal, financial, contractual, and budget scoring issues to be worked out. Recognizing the potential benefits of the MHPI program, the GAO raised concerns that the program was not being well-integrated into other elements of the housing program, particularly the housing requirements process and housing allowance system.
8. The OSD then issued detailed program guidance including proper use of program authorities, competitive solicitation, property tax treatment, utilities treatment, budget scoring, and Congressional notification (OSD, 1998). This latter document set forth the short-term goal of accelerating housing revitalization at a rate of at least 3 to 1. To meet this goal, the military services had to show they could generate three times more housing construction using the MHPI authorities than they could have under MILCON. For example, with an appropriation of \$1 million, an MHPI project would have to deliver at least \$3 million dollars in housing construction during the initial development phase (IDP). The IDP is the upfront period when the inadequate housing must be returned to adequate condition.
9. By 2002, the pace of housing privatization had quickened, and 10 projects had been awarded. The GAO (2002) issued another report. In this report, the GAO

iterated its position that privatization projects were not supported by reliable housing requirement assessments. The problem was that the department may be entering into long-term deal structures which may not be needed.

10. In 2010, at the request of OSD, the Logistics Management Institute (LMI) (Bissell, et al., 2010) conducted an extensive study of service member families to determine their housing preferences to ensure correct sizing of housing inventories when occupancy would be based upon market forces and housing demand. The study found that approximately one-third of the one million military families would prefer to live on the economy no matter what. One-third would choose on base housing no matter what. And the final third would base their housing choices on cost and other considerations.

11. Over the next few years, the military services developed their implementation strategies, governance arrangements, and solicitation methodologies.

According to the MHPI Program Evaluation Plan Report (PEP) (OSD, 2014), as of September 30, 2014, they had privatized over 200,000 houses, constituting 99% of the housing inventory. With an average initial development period of 4 years, all the housing would all be revitalized and restored to adequate condition by 2018.

Program success for the housing revitalization impact is demonstrated in Table 8 by the number of privatization projects awarded and the houses actually revitalized. Here, the evidence indicates that the Department of Defense successfully aligned program elements and accomplished its short-term goal of accelerating housing revitalization. Public managers at the agency level, accurately assessed the housing requirement. Public

managers at the political level provided effective authority and appropriations for the military services to engage the private sector commercially. Agency leadership instituted policies and procedures and set goals aligned with the program purpose. Staff level managers teamed up to design, solicit, select, and implement projects. The LMI study expressing service member housing choices supported the idea of improving housing to increase retention and military readiness (Bissell et al., 2010). Functionally diverse public managers, such as budget managers and evaluators, were aligned in support of the program purpose.

Table 8

Acceleration of Housing Revitalization

Military Service	Privatization Projects		
	Awarded	Number of Installations	Houses Privatized
Army	34	48	88,223
Air Force	32	46	53,602
Navy/Marines	16	32	64,451

Note. Source is MHPI Program Evaluation Report (OSD 2014).

In conclusion, MHPI public managers clearly and consistently identified the goal of accelerating housing revitalization and implemented well-aligned governance shifts which accomplished that goal. Having accomplished the objectives emanating from the authorization process, under an opinion approach to value, the program successfully created public value.

Leveraging Budgetary Appropriations

The second impact was leveraging budgetary appropriations. Leveraging appropriations is the “dollars-and-cents” side of accelerating housing revitalization, reflected in budget scoring and accounting. This impact was intended to create public

value by utilizing private capital and expertise to hasten DOD's ability to provide adequate, affordable housing to military service members and their families.

Accomplishing this goal was expected to support military readiness and improve recruitment and retention. The appropriate approach to public value for this impact is, of course, budgeting as discussed in the review of the literature above. In the United States, budget expenditures are expected to be completely accounted for and in compliance with federal budgetary rules and principles (President's Commission on Budget Concepts, 1967).

Successful budget leveraging requires alignment of (1) public development gap financing, (2) an understanding and accounting of program expenditures, (3) appropriate treatment of public funding and private finance by budget managers scorekeepers) in the OMB and the CBO, (4) annual budget authority and appropriations enacted by Congress, and (5) available private capital.

Leveraging appropriations by accessing private capital arguably creates public value by allowing managers to undertake public purposes much more quickly, actually to undertake purposes which would otherwise never be funded because of budgetary constraints. However, leveraging should be accomplished within legitimate budget rules and principles. Simply moving expenditures "off-budget" does not necessarily create public value. In other words, public value creation for this impact should be determined by whether (a) adequate funding was provided, (b) it was appropriately treated in the budget, and (c) accounting was complete and transparent.

How private capital for MHPI projects was treated, or "scored," in the federal budget became of crucial importance. It must be noted at the outset that short-term

leveraging of appropriations does not represent a direct savings to the government agency. Upon privatizing the housing, DOD had to start paying housing allowances to the service members who previously had lived in the government-owned housing at no cost. This additional cost was offset, to some degree, by the military services' avoidance of operations and maintenance (O&M) costs. This long-term effect is discussed in more detail below in the section on costs and benefits. The benefit of leveraging appropriations is the short-term accomplishment of accelerated revitalization and the positive economic externalities that generates.

The evidence for the leveraging of budgetary appropriations follows below:

1. Congress initially enacted the MHPI (10 USC 2871 *et seq*) program as a “pilot” with a one-billion-dollar budget cap, meaning the military services could only spend up to one billion dollars in appropriations on MHPI pilot projects before legislation would have to be enacted to eliminate the cap. The legislation did not include any provisions on how use of financial authorities such as direct loans, loan guarantees, or investments would be treated in the budget and thus require a budget appropriation. On this initial point, there was disagreement between budget managers and scorekeepers in the executive branch OMB and those in the CBO.
2. For several months after enactment, officials in DOD negotiated with budget managers and leadership in OMB over appropriate budgetary treatment of financial and real property authorities. Ultimately, in correspondence between the Secretary of Defense William Cohen and the Director of OMB Franklin Raines, new rules were promulgated (OMB, 1997). Budget managers in the

OMB decided to *transactionally* score use of each authority for each project separately. The “Raines rules” required DOD to record only the cost of the government’s cash contributions to the new project owners. The effect of these transactional scoring rules meant that the military services could test the program and award a sizeable number of projects before they bumped into the budget cap and had to seek statutory amendment from Congress to eliminate it.

3. With scoring rules finally in place, the Deputy Secretary of Defense directed the military services to submit their plans by May 1998 for the elimination of inadequate housing by fiscal year 2010 (OSD, 1997). In brief, MHPI would allow the military services to provide “gap financing.” Gap financing is the difference between what a project owner could borrow in the private capital markets based upon tenant rent revenue and what it would take to revitalize the housing. This financial gap could be filled by government direct loans and loan guarantees or investments in the partnership. Under the Raines Rules, loans and guarantees would be scored in accordance with the Federal Credit Reform Act of 1990 (2 U.S.C. 661), and investments would be scored at 100% of the investment amount. Both of these methods would result in amounts much less than a project’s total development costs.
4. Budget managers at CBO did not agree with this method of transactional scoring and believed projects should be *legislatively* scored for each awarded project at 100% of the total development cost. This approach greatly reduces the ability of the military services to leverage budgetary appropriations. In fact, it eliminates almost any budgetary leveraging advantage. In 2003, CBO (2003)

published a paper in which they argued that agencies were merely using public/private ventures as a means to avoid recording their full costs as obligations up front in a comprehensive budget in accordance with the President's Commission on Budget Concepts (1967). The budget managers at CBO argued that because the housing was largely used for the public purpose of housing military service members, the private debt was simply *government* borrowing accomplished outside the budget. They also argued that such private borrowing was an inefficient way of funding government projects because owners paying market interest of around 7% when the government, because of its low risk of repayment, could borrow at much lower rates near 2%.

5. The military services were able to award twenty-five projects by 2003 under executive branch transactional scoring, but ultimately, they had to request an elimination of the cap through the legislative process. Using legislative scoring methods, CBO issued a cost estimate for eliminating the \$1 billion MHPI budget cap of at \$11.8 billion which came out of the agency's overall budget appropriation—though not out of MILCON--for that year (CBO, 2004).
6. In a budget bulletin, the Senate Budget Committee Republican Staff (2004) largely supported the CBO position that elimination of the MHPI budget cap should be legislatively scored in the budget as if it were a traditional construction project at the amount of the CBO cost estimate above.
7. The CBO (2005) iterated its position in another publication in what it called third-party financing of all federal projects. They did not accept the argument that accessing private capital and private expertise to construct and manage

housing was more economically efficient. Rather, in accord with their budgetary philosophy, they believed that such transactions weakened the valuable information available for decision-makers and skewed the effective allocation of budgetary resources.

8. Subsequent to the “great cap debate,” OMB budget managers came to accept CBO’s position on scoring MHPI. The shift first appeared in a memorandum from OMB Director Bolton in 2005 (OMB, 2005). While conceding that MHPI greatly improved the condition of DOD’s housing inventory, the new “Bolton rules” indicated the program would return to traditional scoring rules starting in October 2010. Specifically, the services would no longer be able to enter into limited liability corporations (partnerships). Additionally, any private borrowing by co-owned partnerships would be scored in the budget up front as a government cost.
9. Despite the restrictions in the Bolton rules, the military services were able to leverage MILCON appropriations under the existing transactional scoring rules at a rate of over eight to one (OSD, 2012). At the end of 2009, the services had generated \$30 billion in MHPI housing construction with a government cash contribution of only \$3.6 billion. Despite the \$11.8 billion cost to remove the budget cap, this represents an overall leveraging of only 2 to 1 across agency appropriations, but 10 to 1 in terms of MILCON appropriations.
10. With the increase in public-private, co-production methods of providing infrastructure, the Federal Accounting Standards Advisory Board (2016) issued Accounting Standards 49, providing the rules for how federal agencies must

financially account for their public-private partnerships. Whereas budget scoring concerned P3 treatment in annual budgets, Accounting Standards 49 dictated how they would be treated long-term in federal accounting and auditing records.

Program success for the leveraging budgetary appropriations impact is reflected in positive externalities generated by accelerated housing revitalization. These include improved recruitment and retention, family quality of life, military readiness, and reduced criticism for poor housing management. It is demonstrated by the housing development and construction generated by budgetary appropriations. In terms of MHPI, it is demonstrated by the ratio of those appropriations to the cost of the revitalized housing. Here, the evidence in Table 9 indicates that leveraged appropriations at a ratio of 9 to 1 under transactional scoring rules. However, the cost of eliminating the MHPI budget cap reduced the leveraging to ratio of closer to 2 to 1 across the agency, though still 10 to 1 in terms of MILCON appropriations.

Table 9

Leveraging Budgetary Appropriations

		Government Contribution	Private Contribution
Total Development Costs	\$30,000,000,000	\$3,000,000,000	\$27,000,000,000
Transactional Scoring		\$3,000,000,000	\$27,000,000,000
Transactional Leveraging of Appropriations	9 to 1		
Legislative Scoring of Cap Elimination	\$11,800,000,000		
Total Government Score		\$14,800,000,000	\$27,000,000,000
Resulting Leveraging of Appropriations	2 to 1		

Note. Source of total development costs is MHPI Program Evaluation Report (OSD 2012).

Unlike the other four impacts, program problems for this study were not identified in evaluation reports of the GAO and inspectors general. Instead, they reflect fundamental conflict and disagreement concerning budgeting philosophy between public managers of the budget and those seeking to reduce an infrastructure gap. In the case of MHPI, despite misaligned budgetary treatment of private capital, DOD was still able to leverage agency appropriations. However, misalignment in public purpose and public governance did reduce public value creation. Functionally different public managers did not share the same interests or philosophy of budgeting. They also had vastly different views on the complex workings of MHPI deals. Requiring the military services to use appropriations to cover the cost of eliminating the budget cap significantly impacted the goal of leveraging scarce budgetary appropriations and reduced public value creation accordingly. Those appropriations could have been employed for improving national security, other installation functions, or other aspects of service member quality of life.

In conclusion, leveraging of budget appropriations created some public value, but not as much as it could have, had program elements been better aligned.

Costs and Benefits

Improving long-term costs and benefits was intended to create public value by using private capital and expertise to build, manage, and operate housing better, faster, and cheaper than the traditional governmental model. By utilizing private capital and expertise to operate the housing more efficiently and effectively, MHPI was expected to reduce costs for the government and increase benefits for service member beneficiaries. The appropriate approach to public value here is cost-benefit analysis.

Improved costs and benefits require alignment of (a) the purpose of revitalizing and sustaining the housing, (b) appropriate allocation of budgetary and personnel resources, (c) governmental arrangements including deal structures with private parties, and (d) an appropriate approach to valuing costs and benefits, including positive and negative externalities, (e) support of program managers responsible for budgeting, (f) annual budget authority and appropriations, (g) minimal program corrections, and (h) an appropriate management of risk and uncertainty.

Some background knowledge is needed on the effects of governance shifts on budget costs. Under traditional MILCON, the military services pay for housing construction and O&M out of annual budgetary appropriations. When deficits occur, the federal government borrows money in private capital markets. Similarly, military service members receive a basic housing allowance (BAH) from personnel appropriations as part of their compensation. Under the traditional model, if they are provided a house at no cost, they forfeit their BAH. Two shifts with cost impacts occur when a project is privatized. First, private owners borrow funds at a cost that is higher than the government's borrowing cost. Second, the costs of paying BAH, is about 50% higher than the costs of housing O&M, particularly if O&M is underfunded. This means that in order to reduce long-term costs of privatization below those of MILCON, the benefits of private capital, private expertise, and the avoidance of bureaucratic costs (Savas, 1987) must more than offset the increased costs of private borrowing and paying BAH

The evidence for long-term costs and benefits follows below:

1. In 1995, the Defense Science Board Task Force on Outsourcing and

Privatization found that the department needed a revolution in its business

affairs in order to support development of military technology and force effectiveness (OSD, 1995). It was necessary to free up resources for modernization by dramatically reducing support costs. It recommended privatization of all military housing, which is not a DOD core competency, in order to reduce costs and improve the provision of housing.

2. The next year, the GAO found that DOD's policy of relying primarily on the private sector for housing was cost-effective (GAO, 1996). The GAO found that the government's overall housing costs are significantly less when military families are paid housing allowances and reside in private housing. The problem with DOD's traditional model of providing housing, according to GAO, was a faulty requirements determination process and a flawed housing allowance system, which led to oversized on-base inventories. The GAO recommended reducing the government housing inventory to only locations where no private housing alternative exist or where on-base housing was a military necessity.
3. Upon enactment of MHPI, OSD (1998) issued a policy and guidance memo establishing the reduction of life-cycle costs as the long-term MHPI goal. Under this goal, long-term costs to the government of sustaining the housing in good condition under MHPI had to be less than or equal to the traditional MILCON alternative. The stated long-term purpose and public value proposition were thus about improving the costs and benefits of DOD's housing.
4. A GAO report issued in 2000 raised concerns about how DOD performed cost-benefit analyses for MHPI projects (GAO, 2000). According to GAO, the

problem was that the military services had been including what they *should* be spending on MILCON O&M, not what they actually did spend. The GAO took issue with this approach to cost-benefit analysis. Recall that CBA preparation is a highly normative and political exercise (Chen, 2008). What costs should be included and what benefits, including externalities, is full of economic, legal, and philosophical issues (Adler & Posner, 2001). As a result of GAO's report, DOD agreed to revise its policy and guidance for preparing initial project approval CBA reports to include an agreed upon definition of "should" costs.

5. Understanding cost drivers and differences in how the military services calculated their O&M costs had long been a governance question. The Department contracted with Logistics Management Institute (LMI) to conduct an in-depth study determine spending disparities among the military services (Bissell et al., 2010). For example, while annual upkeep of a typical Marine house was around \$5,000 per year, it was around \$10,000 per year for a typical Navy house. Bissell identified eight factors explaining 62% of the disparities, including different area costs, management accounting, and maintenance standards.
6. In 2003, the GAO (2003a) recommended that the military services conduct a focused and coordinated effort to determine the feasibility of privatizing their military barracks. The MHPI included authority to privatize barracks and 200,000 unmarried, enlisted service members live on base, but up to that point the services had focused almost all of their attention on privatizing family

housing. GAO believed residential construction practices held great cost-saving opportunities.

7. Later that year, the GAO recommended that program status and costs be reported to Congress on a periodic basis (GAO, 2003b). They added that the reports should include privatization support costs, i.e., the cost of outside consultant advisors on MHPI, which the GAO believed to be significant.
8. After the negotiations with GAO, DOD (2005) published the final life cycle cost policy. The policy reflected compromises with GAO on how costs should be calculated.
9. By 2013, almost all of the projects had been awarded and it was possible to be a realistic calculation of long-term MHPI costs and benefits in comparison to MILCON. In response to an FY13 OMB budget pass-back, DOD contracted with A&M (2013) to conduct an in-depth study of MHPI costs compared to MILCON. Their findings were that original and updated life cycle cost differentials all supported the trend of MHPI cost savings. The total life-cycle costs for all projects awarded under MHPI (\$79,209.2 million) had a cost savings of 17% over an identical program constructed and operated under MILCON (\$95,243.4 million).

If this pattern and cost assumptions were to hold over the 50-year term of most projects, it would demonstrate successful accomplishment of the long-term public purpose. In terms of governance shifts, it would indicate a clear requirement, appropriate authority and funding, effective solicitation and deal-structuring, and an appropriate approach to risk and uncertainty. Public value would have been successfully created.

However, the MHPI is only half-way through its expected 50-year duration and sustainment problems and costly corrections have arisen. These issues are discussed in the sections on the next two impacts. Table 10 shows the cost factors that go into preparing an MHPI life-cycle estimate.

Table 10

Costs and Benefits

	MILCON	Privatization	Cost Effect
Construction Costs	Eliminated	Funded by private capital and “gap financing”: loans, guarantees, and investment from the government	Government’s cost is the scored amount of the gap financing subsidies
Operations and Maintenance (O&M)	Eliminated	Funded by rent revenues from military family tenants	No direct costs to the government for operations and management
Basic Allowance for Housing (BAH)	Additional agency personnel cost paid to each military service member tenant in MHPI housing	na	Government’s costs increase above the amount paid for construction and O&M
Bureaucratic Costs, Including Administration, Personnel, and Tenant Support	Costs change depending on the degree of program oversight	na	With the 2020 NDAA mandates, government costs may grow significantly
Additional Payments Mandated by the 2020 National Defense Authorization Act	Costs increase depending upon required payments to private owner/partners	na	With the 2020 NDAA mandates, government costs may grow significantly
TOTAL	More costly as of 2013	Less costly as of 2013	Future costs remain to be seen

Note. Source is Alvarez and Marsal Public Sector Real Estate Services (A&M), 2013.

Sustainment

The results from the first three impacts demonstrate significant public value creation, at least through the project award and construction phases (1996 – 2014). Accelerated housing revitalization, budget leveraging, and favorable cost-benefit expectations are good public value indicators. But most of the projects have 50-year terms, and we are currently only halfway through the program. Long-term public value creation requires sustained alignment of program elements. Misalignment of long-term purpose and governance may result in problems, requiring costly corrections which reduce overall public value creation. All four approaches to public value come into play for this impact because poor sustainment ultimately causes problems which result in adverse opinions of key evaluators, politicians, and beneficiaries, increase costs, reduce benefits, and increase budget expenditures. Successful sustainment of housing construction, operations, and maintenance requires alignment of (a) skilled developers and builders, (b) adequate capital and revenue to maintain the housing, and (c) effective deal structures between the government and private owners to ensure performance.

The evidence for program sustainment follows below:

1. In 2004, the MHPI program was selected for the General Services Administration Achievement Award for Real Property Innovation (GSA, 2004). By 2014, all the MHPI projects had been awarded, comprising 80 privatization deals, 120 installations, and 200,000 housing units (OSD 2014). However, program sustainment concerns had begun to arise.
2. In 2013, the GAO issued a report on the need for improved guidance for estimating the liabilities of alternatively financed projects, including MHPI

projects (GAO, 2013). The report was largely focused on installations subject to Base Realignment and Closure (BRAC), against which MHPI could offer loan guarantees at a small percentage of the total loan amount calculated for risk under the Federal Credit Reform Act of 1990 (P.L. 101-508, 10 U.S.C 661). Nonetheless, the report raised issues of long-term liabilities for alternatively financed projects such as MHPI.

3. Significantly, the 2016 National Defense Authorization Act (NDAA) (P.L. 114-92) authorized DOD to reduce basic housing allowances (BAH) by up to five percent. This cost savings measure in personnel governance caused immediate sustainment problems in the MHPI housing program. Where tenant rents are tied to BAH by policy and constitute the primary source of project income, a five percent reduction in BAH directly impacts project revenues which pay for O&M, debt service, and owner profit. The effects of this misalignment of program purpose and governance no doubt contributed significantly to future sustainment problems.
4. In March 2018, at the request of Congress, GAO issued a report on MHPI sustainment. They were concerned about the effects that the recent 5% reductions in the basic allowance for housing would have on housing and financial sustainability. The report found that each service had different approaches to assessing future sustainability (GAO, 2018). Additionally, while DOD guidance stated that it was essential that these long-term projects be attentively monitored, the services had not closely monitored sustainment funding or condition. The GAO made eight recommendations for DOD to

increase MHPI project monitoring.

5. By 2019, MHPI sustainment concerns had come to the forefront regarding housing condition, health and safety issues, tenant complaints, and housing owner responsiveness. The Army Inspector General issued a report indicating that (1) project oversight and governance were insufficient, (2) senior military and tenants had expressed concern over roles and responsibilities, and (3) military staff were insufficiently trained in MHPI deal structures. The IG made 20 recommendations for greater Army involvement in the projects (Army IG, 2019).
6. In 2019, Congress held hearings on the MHPI sustainment problems with testimony from DOD leadership, the GAO, and a range of unhappy stakeholders. The GAO testified at the hearing that while DOD did collect maintenance and financial data on MHPI projects, the data is often inconsistent and unreliable (GAO, 2019).
7. The Congressional hearings resulted in a large number of MHPI amendments (10 USC 2871 *et seq*) included in the 2020 National Defense Authorization Act (P.L.116-92). The amendments largely mandated significantly greater DOD oversight, if not control of the MHPI program and projects. These mandates are discussed below in the section on corrections. Echoing Kettl's (1988) comments on risk above, if a privatization project experiences problems, the government will inevitably step in and assume responsibility for correcting them.
8. In 2020, the DOD Inspector General issued a report on the agency's management of health and safety hazards in both privatized and government-

owned housing, much of which is located outside the continental United States (DODIG, 2020). It found systematic deficiencies in management of health and safety hazards in both types of housing.

9. In June 2021, two managers at Company 1, a housing management firm employed by project owners, pleaded guilty of conspiring to manipulate and falsify information maintenance reports from 2013 to 2015 in order to reflect that the company had met maintenance-related performance objectives when they had not in fact met them (DOJ, 2021). In the case, the Air Force Office of Special Investigations (AFOSI) had worked closely with the Department of Justice on the case to bring charges of conspiring to defraud the Air Force.
10. In July 2021, the private financial markets reacted to the program's sustainment problems. Fitch, one of three bond rating agencies, downgraded bonds used to finance an Air Force MHPI project from AA- to A, with a negative rating outlook (Fitch, 2021). The reasons cited by Fitch for the negative rating outlook were continued depletion of reinvestment accounts used for sustainment, downward pressure on occupancy rates, elevated environmental expenses, and declining BAH rates.

Table 11 sets forth a brief summary of stakeholder complaints.

Table 11

Sustainment

Problem	Cause
Construction timelines are delayed	Insufficient funding and/or poor private management
Construction quality is bad	Insufficient funding and/or poor private construction standards
Housing management is unresponsive	Insufficient funding and/or poor private management
Occupancy is low	Housing quality is poor or better alternative housing choices exist in the private market, representing problems in the requirements process
Housing rents are too low	The revenue stream is capped at the basic allowance for housing and family size
Financing is delinquent	Insufficient rent revenue to cover all expenses
Environmental problems	Existing conditions or poor private management, mold, and pest infestation
Agency oversight is inadequate	Inadequate deal structures or inadequate government expertise, staffing, or experience with MHPI
Increased demand on the federal budget	Congressional or agency demands for increased DOD oversight, if not control

Note. Source is Congressional Hearings and Pertinent GAO and IG Reports.

Program success for the sustainment impact is demonstrated by identifying and listing the problems identified by program evaluators in reports and their causes. Long-term sustainment requires continued focus on keeping program elements aligned, particularly for a program as complex as MHPI. The evidence above indicates that some governance actions including reduction in housing allowances and staffing issues have been quite misaligned with the program purpose. Such problems reduce public value creation and lead to costly program corrections which are discussed below.

In conclusion, it is too early to determine whether MHPI will create significant public value for the sustainment impact. The oversight and control mandates put in place by Congress seem to significantly alter the original privatization co-production model from one of reliance on market forces and private expertise back to one of government

control. Whether this shift leads to program success and public value creation remains to be seen. The costs of correcting sustainment problems are addressed in the section below.

Corrections

Alignment of public purpose and governance arrangements create public value by addressing uncertainty and risk with organizational frameworks and deal structures which create public value by maintaining program costs and benefits within expectations. The corrections impact is closely related to the sustainment impact above, but the focus is on cost and governance. The corrections impact requires alignment and continued focus of various governmental functions on the primary purposes of the program, which are (a) the long-term sustainment of adequate, affordable housing, (b) government arrangements and deal structures which are flexible enough to optimize private expertise, but which also protect the government's interests, (c) proper allocation of roles, responsibilities, and risks, and (d) and adequate long-term funding and allocation of resources.

Recall that while risk can be anticipated and “priced” into a deal structure, uncertainty involves future problems that are not anticipated. However, problems that generate widespread adverse opinion and high costs of correction can greatly reduce expected public value creation. Much of this question involves whether the military services and other public managers of the ship of state put into place effective governance arrangements and co-production deal structures to deal with uncertainty and risk.

The evidence for program corrections includes:

1. In 2018, CBO issued a cost estimate for legislation to create performance incentive fees which were included in the 2019 NDAA to address revenue shortfalls caused by BAH reductions in the 2016 NDAA (P.L 114-92). CBO

estimated the cost of this legislation, which is discussed below in the Acting Assistant Secretary's testimony to Congress, to be \$2 billion over the next four years (2019 – 2023) (CBO, 2018). Over the next 25 years of the program, this could amount to a considerable sum.

2. The Congressional hearings in 2019 led to the 2020 National Defense Authorization Act (NDAA) (P.L. 116-92), which included 39 new statutory sections, including 100 new provisions on MHPI governance. The new provisions mandated significant shifts back from the original market-driven privatization model to a more traditional governmental model. These shifts included development of a Tenant Bill of Rights, increased government staffing to oversee the program, and direct payments under certain circumstances from the government to the private owners. Many of the mandated provisions have created challenges for DOD leadership because they create government requirements which conflict with negotiated deal terms and which could impair project O&M, interfere with the rights of private owners under existing deal structures, or impair the rights of the private lenders, largely bond holders who provided the billions of dollars which funded the projects.
3. On February 25, 2020, the Department of Defense (2020A) issued an initial Tenant Bill of Rights covering only 15 of 18 provisions mandated by Congress in the 2020 NDAA (see Appendix D). Three Congressionally mandated provisions were not included in the initial Bill of Rights due to private lender concerns: (a) a process for dispute resolution, (b) a mechanism

for withholding BAH payments (rent) when disputes arise between companies and tenants, and (c) a means by which to make a housing unit's maintenance history accessible to tenants. A fourth right was included in the Bill of Rights but remained unavailable on May 1, 2020: a universal landlord-tenant lease to be used across all MHPI projects.

4. On March 3, 2020, the Acting Assistant Secretary of Defense for Sustainment testified before the House Appropriations Subcommittee on Military Construction, Veterans Affairs and Related Agencies (OSD, 2020). His statement provided a good overview of all the governance corrections the agency had made on its own and in response to the 2020 National Defense Authorization Act (NDAA, 2020) and their relative costs. This testimony is discussed in detail below.
5. On the same day, GAO testified, making further recommendations for DOD to strengthen its oversight and monitoring of the privatized housing (GAO, 2020a).
6. Following its testimony, the GAO issued a substantial detailed report again recommending that DOD strengthen its oversight, adding that the Department needs to clarify its role in the management of privatized housing (GAO, 2020b).
7. In October 2020, following DOD's promulgation of the Tenant Bill of Rights, Senators Warner, Kaine, and Feinstein wrote to the Secretary of Defense and issued a press release requesting an update on the Congressionally mandated reforms (Senate, 2020). The senators stated their opinions that from MHPI

inception, DOD had placed far too much trust in private companies implementing the program. Furthermore, the MHPI deal structures had “stacked the deck against servicemembers and their families” (U.S. Senate, para 2). These statements reflected the opinions of political public managers faced with problems caused by program element misalignment.

8. The next year, GAO again testified before Congress on MHPI. Their findings were that the DOD had taken key steps to strengthen its oversight, but that more action was needed in certain areas (GAO, 2021). Specifically, GAO recommended that DOD review its BAH processes. In prepared remarks, the GAO Director of Defense Capabilities and Management stated that while private developers maintain primary responsibility for the housing they own, “DOD maintains responsibility for overseeing privatized housing,” (GAO, 2021, p. 14). This reflected a significant governance shift from the original market driven, limited partnership and arms-length, co-production structures back to a traditional government procurement model. The Director then ran through a list of DOD’s implementation of Congressional mandates in the 2020 NDAA.
9. On August 1, 2021, DOD made a revised Tenant Bill of Rights (OSD, 2021), including all 18 Congressional mandates, available for all tenants residing in MHPI housing. The revised document is not available on search engines.
10. In October 2021, two of the major MHPI owners, Clark Realty Company and Lincoln Military Housing, sold their military housing properties (Jowers 2021). Clark sold its properties, comprising 15,000 houses on eight bases

across three military services to Michaels Organization, another MHPI owner and a previous property management firm working for Clark. Lincoln sold its properties comprising 36,000 houses to Liberty Military Housing, a firm comprised of its own employees. It was unclear whether the two sales were normal market transactions by private firms or a reaction to an altered co-production framework mandated by Congress.

The evidence above indicates that the MHPI program is incurring additional costs and governance shifts due to sustainment problems. The above cited testimony (March 3, 2020) of the Assistant Secretary of Defense provides a good framework for understanding the costs and effects of the Congressionally mandated program corrections. As framed by the Assistant Secretary, the program corrections have occurred in five key areas.

First, senior leader engagement was greatly increased, including (a) weekly MHPI Task Force meetings comprised of military service secretaries and (b) quarterly meetings with the private housing owners. Importantly, military installation leadership was again collaborating with leadership in personnel and readiness to review the process for computing housing allowances and correcting misalignments in MHPI housing. This correction goes to the proper allocation of roles, responsibilities, and risks. MHPI is an extraordinarily complicated program with unique governance shifts due to corrections in response to sustainment problems. It is arguable that these measures should have been in place all the time to avoid adverse sustainment impacts cited above. The cost of these corrections can be calculated in the increased time and attention required of senior public managers and their staffs.

Second were efforts to rebuild military tenant trust, including instituting the 18-provision Tenant Bill of Rights. At the time of this testimony, DOD had been able to institute only 15 of the 18 congressionally mandated rights. The effects of this impact come in terms of governance shifts and perhaps minimal additional cost. Increasing tenant trust is no doubt a positive objective, but the original intent was to take advantage not only of private capital, but private expertise and market forces to improve the provision of residential housing, which is not a DOD core competency. The two-thirds of service member families living in the local economy do not have access to a Tenant Bill of Rights with their private landlords. Enforcing a Tenant Bill of Rights shifts the governance structure significantly back on the government, which had previously failed to provide adequate housing. Unilaterally imposing landlord-tenant rules probably does not increase costs directly. Enforcing that policy could be another matter legally and financially.

The third area of corrections was identified as accountability, including (a) the institution of tenant fee payments from the government to private housing owners where tenant revenue streams were inadequate, and (b) stronger audits to identify bad behavior by private owners. The effects of this correction highlight a significant aspect of program element misallocation. Recall that the basic allowance for housing (BAH) is supposed to track local housing rental rates for comparably earning civilians. When various personnel and political public managers in DOD and Congress respectively reduce the BAH by up to 5%, they are reducing project revenues by up to 5%. This directly impacts revenue for renovation, O&M, debt repayment, and profit. Tenant fee payments were a political correction to correct these misalignments. The budgetary cost is probably a wash because

it offsets reductions in personnel accounts which pay BAH, but the governance responsibility again shifts toward the government.

The fourth area of corrections was transparency and communication, including (1) tenant surveys and town hall meetings, and (2) the hiring of about 500 new housing staff members and tenant advocate positions. Here, it appears that financial and personnel resources were misaligned, or inadequate to support the requirements of sustaining the program purpose and governance framework as structured by the Department of Defense. As GAO pointed out in several reports above, despite its privatized business and financial structure, most of the housing remained on-base for military services members with capped rents based on rank and family size. The budgetary cost of tenant surveys is probably nominal, but the personnel costs of 500 tenant advocates, at say \$100,000 for salary and benefits could total an additional two or three billion dollars over the next 25 years. This is an additional budgetary expenditure and reduces original cost and benefit expectations. Arguably, these expenditures should have been included in preliminary cost-benefit analyses.

The fifth effect of legislatively mandated corrections was identified as financial viability. Here, the Acting Assistant Secretary highlighted the great program success at accelerating housing revitalization to 10 years and leveraging \$4 billion in appropriations to achieve \$32 billion in total housing development. (This statement is largely accurate though as indicated above, lifting the budget cap cost the agency—but not MILCON accounts--\$8 billion totaling \$11 billion leveraged). Nonetheless, some of the projects faced financial issues, some caused by agency decisions and some by market uncertainty and risk. Because the agency had limited rents to the tenants' basic allowance for

housing, regardless of housing or family size, and then deliberately cut the allowance by 5% over 5 years, in certain cases, revenue did not cover project costs, including sustainment, O&M, debt service, and profit. In some cases, the agency had been able to restructure loans and guarantees subject to the credit reform formulas.

Program success for the corrections impact is demonstrated by minimizing unanticipated current and future costs. The evidence in Table 12 indicates that the Department of Defense faces some additional costs over the next 25 years.

Table 12

Program Corrections

Correction	Estimated Cost	Cost Calculation
Senior Leadership Involvement	Nominal	Part of salaries of agency leaders
Computing Housing Allowances	Depends on increases and decreases over time	Funded in annual appropriations
Tenant Bill of Rights	Depends on additional time and resource requirements for private owners	O&M cost
Performance Incentive Fee Payments to Private Owners	\$2 billion over 4 years from 2019 - 2023	CBO cost estimate
Tenant Surveys and Town Hall Meetings	Nominal	Part of the salaries of staff-level managers
500 New Manpower Authorizations	\$50 million or \$2.5 billion over 25 years	If estimated at \$100,000/Year for salary and benefits
Subsidy Payments to Offset 5% BAH reduction Over 5 Years	\$2 billion over the 2019 - 2023 period; since it offsets expected bah increases, the cost is arguably a wash	Funded in annual appropriations to offset BAH reduction
Greatly Increased Oversight if not Control of MHPI Projects by DOD	Difficult to estimate	Cost savings come from private housing expertise. this may be impacted by increased government control outside its core competency

Note. Source is CBO Cost Estimates.

The corrections to program problems cited above increase program costs and reduce public value creation. These costs are reflected in additional budget expenditures and negatively impacted cost-benefit ratios. The Alvarez and Marsal Public Sector Real Estate Services (A&M) study (2013) cited above indicated that the total life-cycle costs for all projects awarded under MHPI (\$79,209.2 million) had a cost savings of 17% over an identical program constructed and operated under MILCON (\$95,243.4 million). The costs of increased staff time, town hall meetings, tenant surveys, and enforcement of the Tenant Bill of Rights should not create significant new costs. Additional costs incurred from direct payments to project owners to offset BAH reductions represent an additional budgetary expenditure, but do not change cost-benefit ratios. The hiring of 500 new housing staff members and tenant advocate positions represents a significant new budget expenditure, but it will not significantly alter cost-benefit ratios. The impact of the congressionally mandated governance shifts in the 2020 NDAA (P.L. 116-92) remains to be seen. The sale by Clark Realty Company and Lincoln Military Housing may represent a change of heart in major private firms with housing expertise. On the other hand, it may simply represent a better polycentric, co-production fit for the MHPI at the public-private interface. Only time will tell.

In sum, the cumulative monetary costs of program corrections will likely be calculated in the billions of dollars over the next twenty-five years. This no doubt negatively affects budget appropriations and cost-benefit ratios. But that said, the public value created by the MHPI will likely amount to several times that amount (Alvarez & Marsal, 2013). Furthermore, if one considers economic externalities such as increased focus on core defense competencies, military readiness, force modernization, improved

member recruitment and retention, and family quality of life, public value creation only increases.

DISCUSSION

Public Value Creation

I posited above that public value is the sum of all transactional benefits, including positive externalities, minus (1) detrimental transactional impacts, including problems, risk, and uncertainty, and (2) social outcomes, including impacts on democratic values, as determined by (a) analytic techniques, (b) budgetary decisions, (c) opinions of users and public managers, including politicians, and (d) political corrections, including court rulings—as determined by the a different set of public managers, evaluators at the Government Accountability Office (GAO) and inspectors general (IG) of the various military agencies.

It should be noted that this definition of public value is applied only half way into a 50-year program. There will no doubt be more exciting developments under MHPI. I would contend, at this point, that despite some problems caused by some misalignment of program elements, the Military Housing Privatization Initiative of 1996 has created significant public value. In short, by shifting from the traditional MILCON model to a privatized co-production model for a largely nonmilitary function, public managers successfully created significantly more value for roughly the same cost.

Private markets occasionally fail to provide the infrastructure that society needs and is willing to pay for. Governments often intervene to correct the failure but fail to meet the public's needs, resulting in an infrastructure gap. Facing an infrastructure gap, public managers often turn back to the private sector to co-produce the required systems

and structures. If successful, these public managers create public value. However, the extent to which they provide public value depends upon how well they align public purpose, public-private governance, and public valuation.

This study concludes that MHPI has created substantial public value by accelerating the revitalization of the military family housing inventory, bringing market forces and private expertise to a largely private activity, and improving service member quality of life. However, the misalignment of program elements reduced short-term leveraging of appropriations and long-term cost/benefit expectations. Further, misaligned governance arrangements resulted in weak approaches to risk and uncertainty, inadequate revenue, and costly government corrections.

The very concept of privatization can trigger deep ideological preconceptions concerning the private-public interface. A wide variety of political positions are available concerning the appropriate roles of markets and governments or equity versus efficiency. Such determinations represent a broad heterogeneity of values (Aligica et al., 2019). Such varied value orientations would no doubt give rise to different interpretations of the evidence. For example, some observers might find that cost overruns or inadequate oversight represent a total failure of the program to create public value. Others might compare MHPI with its various problems to the MILCON status quo ante and consider it a great success in public value creation.

I believe that the primary strength of this study is that it employs four approaches to value in order to value to take a more comprehensive look at the program. Such an analysis does not provide a black and white conclusion. The second strength was to break

down Moore's (2005) theoretical proposition into its three components: Public managers (governance) should create (purpose), public value, however measured.

It is often heard at privatization conferences that "if you've seen one privatization project, you've seen one privatization project." For this reason, I used a case study methodology which was exploratory, descriptive, and explanatory (Yin, 2014). That broad methodology should be transferable, arguable, and optimal, in analyzing any infrastructure privatization program or project.

Contribution to the Discipline

As the review of the literature indicates, theory and research concerning infrastructure privatization tend to look at one aspect of public value. Results and conclusions focus more narrowly on cost, benefit, performance, risk, or corrections. Like much of life, most of these are trade-offs. The more you get of one; the less of the other. The intent of this study was to combine the primary approaches to public value measurement in infrastructure into a comprehensive framework. As the literature review, indicates all of the four approaches to value have been used in the field, but used separately.

Future Implications

The intent in this case study was to develop an epistemic framework for examining any privatized arrangement for the provision of infrastructure. The methodological framework may be applied to any study or for that matter to any infrastructure privatization project or program. This study relied on official and public documents to capture evidence of program cost, benefit, performance, risk, opinion, and corrections. Public or private managers tasked with implementing such a project or

program should be able to apply this methodological framework in assessing public value creation.

APPENDIX A MHPI EVIDENCE

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APPENDIX B MHPI TIMELINE

June 1995	OSD/ES Recommends Privatization of DOD Housing
May 1995	DOD Sends Draft MHPI Legislation to Congress
May 1995	SECDEF Press Release Announces MHPI Proposal
June 1995	OSD/ES Briefs Senior Staff on Privatization Benefits
February 1996	President Signs 1996 Defense Authorization Act
May 1996	OSD Issues Initial MHPI Policy and Guidance
September 1996	GAO Report (DOD Should Reduce Housing Costs)
August 1996	DOD Task Force Endorses DOD-Wide Privatization
June 1997	OMB Issues Rules (Raines Memo) on MHPI Scoring
July 1997	OSD Requires Services' MHPI Plans by May 1998
July 1998	GAO Report (MHPI Off to a Slow Start)
October 1998	OSD Issues Program Guidance on MHPI Goals
March 2000	GAO Report (MHPI Implementation Concerns)
July 2001	LMI Issues Study on Services' Spending Differences
February 2003	CBO Paper Calls for <i>Legislative</i> Scoring for All P3s
June 2002	GAO Report (DOD Management Needs Improvement)
June 2003	GAO Report (MHPI for Unaccompanied Members)
October 2003	GAO Report (Better Reporting on Costs Needed)
November 2004	GSA Recognizes MHPI for Program Innovation
May 2004	CBO Issues Cost Estimate for Eliminating Cap (\$11.8B)
August 2004	Senate Budget Committee Concurs with CBO on Cap
June 2005	CBO Issues Brief on Federal Third-Party Financing
August 2005	OMB Issues Memo (Bolton) Restricting MHPI Scoring
November 2005	OSD Issues Final Life-Cycle Cost Policy
February 2010	LMI Study on Service Member Housing Choices
March 2012	OSD PEP Report Indicates 8 to 1 Budget Leveraging
April 2013	GAO Report (Need Guidance for Estimating Liabilities)
July 2013	A&M Study Finds Long-Term MHPI Cost Savings
October 2014	OSD PEP Report Indicates All MHPI Projects Awarded
April 2016	FASAB Issues Guidance on Accounting for Federal P3s

November 2016	2016 NDAA Authorizes 5 Percent BAH Reductions
May 2018	CBO Cost Estimate on Performance Incentive Fees
March 2018	GAO Report (Concerns on MHPI Risk/Sustainment)
March 2019	Army IG Report (Poor MHPI Oversight)
December 2019	Congressional Hearings on Sustainment Problems
December 2019	GAO Testimony (Poor DOD Oversight)
December 2019	2020 NDAA (Includes 100 New MHPI Provisions)
March 2020	OSD Testimony on MHPI Corrections
March 2020	GAO Testimony (Recommendations for Oversight)
March 2020	GAO Report (Strengthen Oversight and Clarify Roles)
February 2020	OSD Issues Initial Tenant Bill of Rights (15 Rights)
October 2020	Senators' Press Release Requesting MHPI Update
February 2021	GAO Testimony (Steps Taken, More Action Needed)
June 2121	MHPI Managers Plead Guilty to Defrauding Air Force
July 2021	Fitch Downgrades MHPI Bonds
August 2021	OSD Issues Revised Tenant Bill of Rights (18 Rights)
September/October 2021	Two Private Owners Sell Their Projects

APPENDIX C MHPI STATUTE

10 USC Subtitle A, PART IV, CHAPTER 169, SUBCHAPTER IV: ALTERNATIVE AUTHORITY FOR ACQUISITION AND IMPROVEMENT OF MILITARY HOUSING

From Title 10—ARMED FORCES

Subtitle A—General Military Law
PART IV—SERVICE, SUPPLY, AND PROCUREMENT
CHAPTER 169—MILITARY CONSTRUCTION AND MILITARY FAMILY HOUSING

SUBCHAPTER IV—ALTERNATIVE AUTHORITY FOR ACQUISITION AND IMPROVEMENT OF MILITARY HOUSING

Sec.

- 2871. Definitions.
- 2872. General authority.
 - 1. 2872a. Utilities and services.
 - 2. 2872b. Treatment of breach of contract.
- 2873. Direct loans and loan guarantees.
- 2874. Leasing of housing.
- 2875. Investments.
- 2876. Rental guarantees.
- 2877. Differential lease payments.
- 2878. Conveyance or lease of existing property and facilities.
- 2879. Window fall prevention devices in military family housing units.
- 2880. Unit size and type.
- 2881. Ancillary supporting facilities.
- 2881a. Pilot projects for acquisition or construction of military unaccompanied housing.
- 2882. Effect of assignment of members to housing units acquired or constructed under alternative authority.
- 2883. Department of Defense Housing Funds.
- 2883a. Funds for housing allowances of members of the armed forces assigned to certain military family housing units.
- 2884. Reports.
- 2885. Oversight and accountability for privatization projects.
- [2886. Repealed.]

AMENDMENTS

2019—Pub. L. 116–92, div. B, title XXX, §§3014(d)(2), 3033(b), Dec. 20, 2019, 133 Stat. 1926, 1936, added item 2872b and struck out item 2886 "Prohibiting collection of amounts in addition to rent from members assigned to units".

2018—Pub. L. 115–232, div. A, title X, §1081(c)(5), Aug. 13, 2018, 132 Stat. 1985, made technical amendment to directory language of Pub. L. 115–91, §2817(a)(2), effective as of Dec. 12, 2017, and as if included in Pub. L. 115–91 as enacted. See 2017 Amendment note below.

2017—Pub. L. 115–91, div. B, title XXVIII, §2817(a)(2), Dec. 12, 2017, 131 Stat. 1852, as amended by Pub. L. 115–232, div. A, title X, §1081(c)(5), Aug. 13, 2018, 132 Stat. 1985, added item 2879.

Pub. L. 115–91, div. A, title VI, §602(b), Dec. 12, 2017, 131 Stat. 1418, added item 2886.

2008—Pub. L. 110–417, div. B, title XXVIII, §2805(a)(2), (e)(2), Oct. 14, 2008, 122 Stat. 4722, 4724, added items 2882 and 2885 and struck out former item 2882 "Assignment of members of the armed forces to housing units".

2004—Pub. L. 108–375, div. B, title XXVIII, §2805(b)(2), Oct. 28, 2004, 118 Stat. 2122, struck out item 2885 "Expiration of authority".

2002—Pub. L. 107–314, div. B, title XXVIII, §§2802(b)(3), (c)(2), 2803(a)(2), Dec. 2, 2002, 116 Stat. 2703, 2705, struck out "to be constructed" after "Leasing of housing" in item 2874, struck out item 2879 "Interim leases", and added item 2881a.

2001—Pub. L. 107–107, div. B, title XXVIII, §2804(b), Dec. 28, 2001, 115 Stat. 1306, added item 2883a.

2000—Pub. L. 106–398, §1 [div. B, title XXVIII, §2805(b)], Oct. 30, 2000, 114 Stat. 1654, 1654A–415, added item 2872a.

1999—Pub. L. 106–65, div. B, title XXVIII, §2803(h)(2), Oct. 5, 1999, 113 Stat. 849, added item 2875 and struck out former item 2875 "Investments in nongovernmental entities".

§2871. Definitions

In this subchapter and subchapter V of this chapter:

(1) The term "ancillary supporting facilities" means facilities related to housing units, including facilities to provide or support elementary or secondary education, child care centers, day care centers, child development centers, tot lots, community centers, housing offices, dining facilities, unit offices, and other similar facilities for the support of military housing.

(2) The term "child development center" includes a facility, and the utilities to support such facility, the function of which is to support the daily care of children aged six weeks old through five years old for full-day, part-day, and hourly service.

(3) The term "construction" means the construction of housing units and ancillary supporting facilities or the improvement or rehabilitation of existing units or ancillary supporting facilities.

(4) The term "contract" includes any contract, lease, or other agreement entered into under the authority of this subchapter. The fact that an agreement between an eligible entity and the Secretary concerned is designated as an agreement rather than a contract shall not be construed to exclude the agreement from the term "contract" for purposes of this subchapter and subchapter V.

(5) The term "eligible entity" means any private person, corporation, firm, partnership, company, State or local government, or housing authority of a State or local government that is prepared to enter into a contract as a partner with the Secretary concerned for the construction of housing units and ancillary supporting facilities.

(6) The term "Fund" means the Department of Defense Family Housing Improvement Fund or the Department of Defense Military Unaccompanied Housing Improvement Fund established under section 2883(a) of this title.

(7) The term "housing document" means a document developed by the Secretary of Defense under section 2890 of this title and known as the Military Housing Privatization Initiative Tenant Bill of Rights or the Military Housing Privatization Initiative Tenant Responsibilities.

(8) The term "housing unit" means a unit of family housing or military unaccompanied housing acquired or constructed under this subchapter.

(9) The term "incentive fees" means any amounts payable to a landlord for meeting or exceeding performance metrics as specified in a contract with the Department of Defense.

(10) The term "landlord" means an eligible entity that enters into, or has entered into, a contract as a partner with the Secretary concerned for the acquisition or construction of a housing unit under this subchapter. The term includes any agent of the eligible entity or any subsequent lessor who owns, manages, or is otherwise responsible for a housing unit. The term does not include an entity of the Federal Government.

(11) The term "military unaccompanied housing" means military housing intended to be occupied by members of the armed forces serving a tour of duty unaccompanied by dependents and transient housing intended to be occupied by members of the armed forces on temporary duty.

(12) The term "tenant" means a member of the armed forces, including a reserve component thereof in an active status, or a dependent of a member of the armed forces who resides at a housing unit, is a party to a lease for a housing unit, or is authorized to act on behalf of the member under this subchapter and subchapter V of this chapter in the event of the assignment or deployment of a member.

(13) The term "United States" includes the Commonwealth of Puerto Rico.

(Added Pub. L. 104–106, div. B, title XXVIII, §2801(a)(1), Feb. 10, 1996, 110 Stat. 544; amended Pub. L. 105–261, div. B, title XXVIII, §2803, Oct. 17, 1998, 112 Stat. 2202; Pub. L. 106–65, div. B, title XXVIII, §2803(a), Oct. 5, 1999, 113 Stat. 848; Pub. L. 107–314, div. B, title XXVIII, §2803(b), Dec. 2, 2002, 116 Stat. 2705; Pub. L. 108–136, div. A, title X, §1043(c)(6), Nov. 24, 2003, 117 Stat. 1612; Pub. L. 109–163, div. B, title XXVIII, §2805(b), Jan. 6, 2006, 119 Stat. 3507; Pub. L. 110–417, div. B, title XXVIII, §2805(c), Oct. 14, 2008, 122 Stat. 4723; Pub. L. 116–92, div. B, title XXX, §§3001(b)–3011(a), Dec. 20, 2019, 133 Stat. 1916, 1917.)

AMENDMENTS

2019—Pub. L. 116–92, §3011(a), inserted "and subchapter V of this chapter" after "this subchapter" in introductory provisions.

Pars. (1), (3). Pub. L. 116–92, §3001(c), struck out "military" before "housing units".

Par. (4). Pub. L. 116–92, §3001(b)(1), inserted at end "The fact that an agreement between an eligible entity and the Secretary concerned is designated as an agreement rather than a contract shall not be construed to exclude the agreement from the term 'contract' for purposes of this subchapter and subchapter V."

Par. (5). Pub. L. 116–92, §3001(c), struck out "military" before "housing units".

Pars. (7) to (10). Pub. L. 116–92, §3001(b)(3), added pars. (7) to (10). Former pars. (7) and (8) redesignated (11) and (13), respectively.

Par. (11). Pub. L. 116–92, §3001(b)(2), redesignated par. (7) as (11).

Par. (12). Pub. L. 116–92, §3001(b)(4), added par. (12).

Par. (13). Pub. L. 116–92, §3001(b)(2), redesignated par. (8) as (13).

2008—Par. (5). Pub. L. 110–417 inserted before period at end "that is prepared to enter into a contract as a partner with the Secretary concerned for the construction of military housing units and ancillary supporting facilities".

2006—Par. (1). Pub. L. 109–163, §2805(b)(1), inserted "child development centers," after "day care centers,". Par. (2). Pub. L. 109–163, §2805(b)(2), added par. (2).

2003—Par. (2). Pub. L. 108–136 struck out par. (2) which read as follows: "The term 'base closure law' means the following:

"(A) Section 2687 of this title.

"(B) Title II of the Defense Authorization Amendments and Base Closure and Realignment Act (Public Law 100–526; 10 U.S.C. 2687 note).

"(C) The Defense Base Closure and Realignment Act of 1990 (part A of title XXIX of Public Law 101–510; 10 U.S.C. 2687 note)."

2002—Par. (7). Pub. L. 107–314 inserted "and transient housing intended to be occupied by members of the armed forces on temporary duty" before period at end.

1999—Pars. (5) to (8). Pub. L. 106–65 added par. (5) and redesignated former pars. (5) to (7) as (6) to (8), respectively.

1998—Par. (1). Pub. L. 105–261 inserted "facilities to provide or support elementary or secondary education," after "including".

PROMULGATION OF GUIDANCE TO FACILITATE RETURN OF MILITARY FAMILIES DISPLACED FROM PRIVATIZED MILITARY HOUSING

Pub. L. 116–283, *div. B, title XXVIII, §2816, Jan. 1, 2021*, 134 Stat. 4328, provided that:

"(a) **GUIDANCE REQUIRED.**—The Secretary of Defense shall promulgate guidance for commanders of military installations and installation housing management offices to assist such commanders and offices in facilitating and managing the relocation and return of tenants of privatized military housing when tenants are displaced from such housing—

"(1) as a result of an environmental hazard or other damage adversely affecting the habitability of the privatized military housing; or

"(2) during remediation or repair activities in response to the hazard or damages.

"(b) **FINANCIAL IMPACT OF DISPLACEMENT.**—As part of the promulgation of the guidance, the Secretary of

Defense shall consider—

"(1) the extent to which displaced tenants of privatized military housing under the circumstances described in subsection (a) incur relocation, per diem, or similar expenses as a direct result of such displacement that are not covered by a landlord, insurance, or claims process; and

"(2) the feasibility of providing reimbursement for uncovered expenses.

"(c) **CONSULTATION.**—The Secretary of Defense shall promulgate the guidance in consultation with the Secretaries of the military departments, the Chief Housing Officer, landlords, and other interested persons.

"(d) **IMPLEMENTATION.**—The Secretaries of the military departments shall be responsible for implementation of the guidance at military installations under the jurisdiction of the Secretary concerned, while recognizing that the guidance cannot anticipate every situation in which tenants of privatized military housing must be displaced from such housing under the circumstances described in subsection (a).

"(e) **DEFINITIONS.**—In this section, the terms 'landlord', 'privatized military housing', and 'tenant' have the meanings given those terms in section 3001(a) of the Military Construction Authorization Act for Fiscal Year 2020 (division B of Public Law 116–92; 133 Stat. 1916; 10 U.S.C. 2821 note)."

UNIFORM CODE OF BASIC STANDARDS FOR PRIVATIZED MILITARY HOUSING AND PLAN TO CONDUCT INSPECTIONS AND ASSESSMENTS

Pub. L. 116–283, *div. B, title XXVIII, §2818, Jan. 1, 2021*, 134 Stat. 4329, provided that:

"(a) **UNIFORM CODE OF BASIC STANDARDS FOR MILITARY HOUSING.**—The Secretary of Defense shall expand the uniform code of basic housing standards for safety, comfort, and habitability for privatized military housing established pursuant to section 3051(a) of the Military Construction Authorization Act for Fiscal Year 2020 (division B of Public Law 116–92; 133 Stat. 1941; 10 U.S.C. 2871 note) [set out below] to include Government-owned and Government-controlled military family housing located inside or outside the United States and occupied by members of the Armed Forces.

"(b) **INSPECTION AND ASSESSMENT PLAN.**—The Secretary of Defense shall expand the Department of Defense housing inspection and assessment plan prepared pursuant to section

3051(b) of the Military Construction Authorization Act for Fiscal Year 2020 (division B of Public Law 116–92; 133 Stat. 1941; 10 U.S.C. 2871 note) [set out below] to include Government-owned and Government-controlled military family housing located inside or outside the United States and occupied by members of the Armed Forces and commence inspections and assessments of such military family housing pursuant to the plan."

Pub. L. 116–92, *div. B, title XXX, §3051, Dec. 20, 2019*, 133 Stat. 1941, provided that:

"(a) UNIFORM CODE.—Not later than February 1, 2021, the Secretary of Defense shall establish and implement a uniform code of basic housing standards for safety, comfort, and habitability for privatized military housing, which shall meet or exceed requirements informed by a nationally recognized, consensus-based, model property maintenance code.

"(b) INSPECTION AND ASSESSMENT PLAN.—Not later than February 1, 2020, the Secretary of Defense shall submit to the congressional defense committees [Committees on Armed Services and Appropriations of the Senate and the House of Representatives] a Department of Defense plan to contract with qualified home inspectors to conduct a thorough inspection and assessment of the structural integrity and habitability of each unit of privatized military housing. The plan shall include the implementation plan for the uniform code to be established under subsection (a).

"(c) IMPLEMENTATION OF INSPECTIONS AND ASSESSMENTS.—

"(1) IMPLEMENTATION.—Not later than February 1, 2021, the Secretary of the military department concerned shall commence conducting inspections and assessments of units of privatized military housing pursuant to the plan submitted under subsection (b) to identify issues and ensure compliance with applicable housing codes, including the uniform code established under subsection (a).

"(2) REPORT.—Not later than March 1, 2021, the Secretary of Defense shall submit to the congressional defense committees [Committees on Armed Services and Appropriations of the Senate and the House of Representatives] a report on the findings of the inspections and assessments conducted under paragraph (1).

"(d) QUALIFIED HOME INSPECTORS DESCRIBED.—For purposes of this section, a qualified home inspector must possess the appropriate credentials for the work the inspector will perform, as defined by the respective State in which the work will be performed. A qualified home inspector may not be an employee or in a fiduciary relationship with—

"(1) the Federal Government; or "(2) an individual or entity who owns or manages privatized military housing." [For definition of "privatized military housing" as used in section 3051 of Pub. L. 116–92, set out above, see section 3001(a) of Pub. L. 116–92, set out as a note under section 2821 of this title.]

RADON TESTING OF PRIVATIZED MILITARY HOUSING

Pub. L. 116–92, *div. B, title XXX, §3061, Dec. 20, 2019*, 133 Stat. 1946, provided that:

"(a) REPORT.—Not later than March 1, 2020, the Secretary of Defense shall submit to the congressional defense committees [Committees on Armed Services and Appropriations of the Senate and the House of Representatives] a report identifying the installations of the Department of Defense that have privatized military housing that should be monitored for levels of radon at or above the action level.

"(b) TESTING PROCEDURES AND STANDARDS.—The Secretaries of the military departments shall ensure that landlords providing privatized military housing at installations identified under subsection (a) establish testing procedures that are consistent with then current national consensus standards and are in compliance with applicable Federal, State, and local radon regulations in order to ensure radon levels are below recommended levels established by the Environmental Protection Agency, whether through—

"(1) regular testing of privatized military housing by persons who possess certification pursuant to the proficiency program operated under section 305(a)(2) of the Toxic Substances Control Act (15 U.S.C. 2665(a)(2)); or

"(2) the installation of monitoring equipment in privatized military housing.

"(c) NOTIFICATION REGARDING NEED FOR MITIGATION.—If, as a result of testing described in subsection (b), a

unit of privatized military housing needs radon mitigation to ensure radon levels are below recommended levels, the landlord providing the housing unit shall submit to the Secretary of the military department concerned, not later than seven days after the determination of the need for radon mitigation, the mitigation plan for the housing unit."

[For definitions of "landlord" and "privatized military housing" as used in section 3061 of Pub. L. 116–92, set out above, see section 3001(a) of Pub. L. 116–92, set out as a note under section 2821 of this title.]

MILITARY HOUSING PRIVATIZATION INITIATIVE

Pub. L. 115–232, div. A, title VI, §606, Aug. 13, 2018, 132 Stat. 1795, as amended by Pub. L. 116–92, div. B, title XXX, §§3036(a), 3037, Dec. 20, 2019, 133 Stat. 1938, 1939; Pub. L. 116–283, div. B, title XXVIII, §2811(i), Jan. 1, 2021, 134 Stat. 4326, provided that:

"(a) USE OF FUNDS IN CONNECTION WITH MHPI.—"(1) PAYMENTS TO LESSORS GENERALLY.—

"(A) PAYMENT AUTHORITY.—Each month beginning with the first month after the date of the enactment of the National Defense Authorization Act for Fiscal Year 2020 [Dec. 20, 2019], each Secretary of a military department shall use funds, in an amount determined under subparagraph (B), to make monthly payments to lessors of covered housing in the manner provided by this subsection, as in effect on the day before the date of the enactment of the National Defense Authorization Act for Fiscal Year 2020.

"(B) CALCULATION OF MONTHLY PAYMENTS.—For purposes of making payments under subparagraph (A) for a month, the Secretary of the military department concerned shall determine the amount equal to 2.5 percent of the aggregate of the amounts calculated under section 403(b)(3)(A)(i) of title 37, United States Code, for covered housing under the jurisdiction of the Secretary for that month.

"(2) ADDITIONAL PAYMENTS TO LESSORS RESPONSIBLE FOR UNDERFUNDED PROJECTS.—

"(A) PAYMENT AUTHORITY.—Each month beginning with the first month after the date of the enactment of the National Defense Authorization Act for Fiscal Year 2020, each Secretary of a military department shall use funds, in an amount determined under subparagraph (B), to make additional monthly payments, under such terms and in such amounts as determined by the Secretary, to one of [sic] more lessors responsible for underfunded MHPI housing projects

identified pursuant to subparagraph (C) under the jurisdiction of the Secretary for the purposes of future sustainment, recapitalization, and financial sustainability of the projects.

"(B) CALCULATION OF MONTHLY PAYMENTS.—For purposes of making payments under subparagraph (A) for a month, the Secretary of the military department concerned shall determine the amount equal to 2.5 percent of the aggregate of the amounts calculated under section 403(b)(3)(A)(i) of title 37, United States Code, for covered housing under the jurisdiction of the Secretary for that month.

"(C) IDENTIFICATION OF UNDERFUNDED PROJECTS.—The Chief Housing Officer of the Department of Defense, in conjunction with the Secretaries of the military departments, shall assess MHPI housing projects for the purpose of identifying all MHPI housing projects that are underfunded. Once identified, the Chief Housing Officer shall prioritize for payments under subparagraph (A) those MHPI housing projects most in need of funding to rectify such underfunding.

"(3) ALTERNATIVE AUTHORITY IN EVENT OF LACK OF UNDERFUNDED PROJECTS.—

"(A) IN GENERAL.—Subject to subparagraph (B), if the Chief Housing Officer determines that

no MHPI housing projects for a military department require additional funding under paragraph (2) for a month, the Secretary of the military department concerned, in consultation with the Chief Housing Officer, may allocate the funds otherwise available to the Secretary under such paragraph for that month to support improvements designed to enhance the quality of life of members of the uniformed services and their families who reside in MHPI housing.

"(B) CONDITIONS.—Before the Secretary of a military department may allocate funds as authorized by subparagraph (A), the Chief Housing Officer shall certify to the Committees on Armed Services of the Senate and the House of Representatives that there are no MHPI housing projects for the military department that require additional funding under paragraph (2). The certification shall include sufficient details to show why no projects are determined to need the additional funds.

"(4) BRIEFING REQUIRED.—Not later than March 1, 2020, and each year thereafter, the Secretary of Defense shall provide a briefing to the Committee on Armed Services of the Senate and the House of Representatives detailing the expenditure of funds under paragraphs (2) and (3), the MHPI housing projects receiving funds under such paragraphs, and any other information the Secretary considers relevant.

"(b) PLAN FOR MHPI HOUSING.—Not later than December 1, 2018, the Secretary shall submit to the congressional defense committees [Committees on Armed Services and Appropriations of the Senate and the House of Representatives] a long-range plan to develop measures to consistently address the future sustainment, recapitalization, and financial condition of MHPI housing. The plan shall include—

"(1) efforts to mitigate the losses incurred by MHPI housing projects because of the reductions to BAH under section 603 of the National Defense Authorization Act for Fiscal Year 2016 (Public Law 114-92; [which amended] 37 U.S.C. 403(b)(3)(B)); and

"(2) a full assessment of the effects of such reductions (in relation to calculations of market rates for rent and utilities) on the financial condition of MHPI housing.

"(c) REPORTING.—The Secretary shall direct the Assistant Secretary of Defense for Energy, Installations, and Environment to take the following steps regarding reports under section 2884(c) of title 10, United States Code:

"(1) Provide additional contextual information on MHPI housing to identify any differences in the calculation of debt coverage ratios and any effect of such differences on their comparability.

"(2) Immediately resume issuing such reports on the financial condition of MHPI housing. "(3) Revise Department of Defense guidance on MHPI housing—

"(A) to ensure that relevant financial data (such as debt coverage ratios) in such reports are consistent and comparable in terms of the time periods of the data collected;

"(B) to include a requirement that the secretary of each military department includes measures of future sustainment into each assessments of MHPI housing projects; and

"(C) to require the secretary of each military department to define risk tolerance regarding the future sustainability of MHPI housing projects.

"(4) Report financial information on future sustainment of each MHPI housing project in such reports.

"(5) Provide Department of Defense guidance to the secretaries of the military departments to

"(A) assess the significance of the specific risks to individual MHPI housing projects from the reduction in BAH; and

"(B) identify methods to mitigate such risks based on their significance.

"(6) Not later than December 1, 2018, finalize Department of Defense guidance that clearly defines—

"(A) the circumstances in which the military departments shall provide notification of housing project changes to the congressional defense committees; and

"(B) which types of such changes require prior notification to or prior approval from the congressional defense committees. "(d)

DEFINITIONS.—In this section:

"(1) The term 'BAH' means the basic allowance for housing under section 403 of title 37, United States Code.

"(2) The term 'covered housing' means a unit of MHPI housing that is leased to a member of a uniformed service who resides in such unit.

"(3) The term 'MHPI housing' means housing procured, acquired, constructed, or for which any phase or portion of a project agreement was first finalized and signed, under the alternative authority of subchapter IV of chapter 169 of title 10, United States Code (known as the Military Housing Privatization Initiative), on or before September 30, 2014."

[Pub. L. 116–92, [div. B](#), [title XXX](#), [§3036\(b\)](#), [Dec. 20, 2019](#), 133 Stat. 1939, provided that: "The amendment made by this section [amending section 606 of Pub. L. 115–232, set out above] shall take effect on the date of the enactment of this Act [Dec. 20, 2019] and shall apply with respect to months beginning after that date."]

§2872. General authority

In addition to any other authority provided under this chapter for the acquisition or construction of military family housing or military unaccompanied housing, the Secretary concerned may exercise any authority or any combination of authorities provided under this subchapter in order to provide for the acquisition or construction by eligible entities of the following:

- (1) Family housing units on or near military installations within the United States and its territories and possessions.
- (2) Military unaccompanied housing units on or near such military installations.

(Added Pub. L. 104–106, div. B, title XXVIII, §2801(a)(1), Feb. 10, 1996, 110 Stat. 545; amended Pub. L. 106–65, div. B, title XXVIII, §2803(b), Oct. 5, 1999, 113 Stat. 849.)

AMENDMENTS

1999—Pub. L. 106–65 substituted "eligible entities" for "private persons" in introductory provisions.

§2872a. Utilities and services

(a) **AUTHORITY TO FURNISH.**—The Secretary concerned may furnish utilities and services referred to in subsection (b) in connection with any military housing acquired or constructed pursuant to the exercise of any authority or combination of authorities under this subchapter if the military housing is located on a military installation.

(b) **COVERED UTILITIES AND SERVICES.**—The utilities and services that may be furnished under subsection (a) are the following:

- (1) Electric power. (2) Steam.
 - (3) Compressed air. (4) Water.
 - (5) Sewage and garbage disposal. (6) Natural gas.
 - (7) Pest control.
 - (8) Snow and ice removal.
 - (9) Mechanical refrigeration.
 - (10) Telecommunications service.
 - (11) Firefighting and fire protection services. (12) Police protection services.
 - (13) Street sweeping.
 - (14) Tree trimming and removal.
- (c) **REIMBURSEMENT.**—(1) The Secretary concerned shall be reimbursed for any utilities or services furnished under subsection (a).
- (2) The amount of any cash payment received under paragraph (1) as reimbursement for the cost of furnishing utilities or services shall—
- (A) in the case of a cost paid using funds appropriated or otherwise made available before October 1, 2014, be credited to the appropriation or working capital account from which the cost of furnishing utilities or services concerned was paid; or

(B) in the case of a cost paid using funds appropriated or otherwise made available on or after October 1, 2014, be credited to the appropriation or working capital account currently available for the purpose of furnishing utilities or services under subsection (a).

(3) Amounts credited under paragraph (2) to an appropriation or account shall be merged with funds in such appropriation or account, and shall be available to the same extent, and subject to the same terms and conditions, as such funds.

(Added Pub. L. 106–398, §1 [div. B, title XXVIII, §2805(a)], Oct. 30, 2000, 114 Stat. 1654, 1654A–414; amended Pub. L. 107–314, div. B, title XXVIII, §2802(a), Dec. 2, 2002, 116 Stat. 2703; Pub. L. 113–66, div. B, title XXVIII, §2804, Dec. 26, 2013, 127 Stat. 1007; Pub. L. 116–92, div. B, title XXX, §3032, Dec. 20, 2019, 133 Stat. 1936.)

AMENDMENTS

2019—Subsec. (b)(13), (14). Pub. L. 116–92 added pars. (13) and (14).

2013—Subsec. (c)(2), (3). Pub. L. 113–66 substituted "under paragraph (1) as reimbursement for the cost of furnishing utilities or services shall—" for "under paragraph (1) shall be credited to the appropriation or working capital account from which the cost of furnishing the utilities or services concerned was paid.", added subpars. (A) and (B), designated second sentence of par. (2) as par. (3), and substituted "Amounts credited under paragraph (2)" for "Amounts so credited".

2002—Subsec. (b)(11), (12). Pub. L. 107–314 added pars. (11) and (12).

§2872b. Treatment of breach of contract

(a) **RESPONSE TO MATERIAL BREACH.**—In the case of a material breach of contract under this subchapter by a party to the contract, the Secretary concerned shall use the authorities available to the Secretary, including withholding amounts to be paid under the contract, to encourage the party to cure the breach.

(b) **RESCINDING OF CONTRACT.**—If a material breach of the contract is not cured in a timely manner, as determined by the Secretary concerned, the Secretary may—

(1) rescind the contract pursuant to the terms of the contract; and

(2) prohibit the offending party from entering into a new contract or undertaking expansions of other existing contracts, or both, with the Secretary under this subchapter.

(Added Pub. L. 116–92, div. B, title XXX, §3033(a), Dec. 20, 2019, 133 Stat. 1936.)

§2873. Direct loans and loan guarantees

(a) **DIRECT LOANS.**—(1) Subject to subsection (c), the Secretary concerned may make direct loans to an eligible entity in order to provide funds to the eligible entity for the acquisition or construction of housing units that the Secretary determines are suitable for use as military family housing or as military unaccompanied housing.

(2) The Secretary concerned shall establish such terms and conditions with respect to loans made under this subsection as the Secretary considers appropriate to protect the interests of the

United States, including the period and frequency for repayment of such loans and the obligations of the obligors on such loans upon default.

(b) **LOAN GUARANTEES.**—(1) Subject to subsection (c), the Secretary concerned may guarantee a loan made to an eligible entity if the proceeds of the loan are to be used by the eligible entity to acquire, or construct housing units that the Secretary determines are suitable for use as military family housing or as military unaccompanied housing.

(2) The amount of a guarantee on a loan that may be provided under paragraph (1) may not exceed the amount equal to the lesser of—

(A) the amount equal to 80 percent of the value of the project; or (B) the amount of the outstanding principal of the loan.

(3) The Secretary concerned shall establish such terms and conditions with respect to guarantees of loans under this subsection as the Secretary considers appropriate to protect the interests of the United States, including the rights and obligations of obligors of such loans and the rights and obligations of the United States with respect to such guarantees.

(c) **LIMITATION ON DIRECT LOAN AND GUARANTEE AUTHORITY.**—Direct loans and loan guarantees may be made under this section only to the extent that appropriations of budget authority to cover their cost (as defined in section 502(5) of the Federal Credit Reform Act of 1990 (2 U.S.C. 661a(5))) are made in advance, or authority is otherwise provided in appropriation Acts. If such appropriation or other authority is provided, there may be established a financing account (as defined in section 502(7) of such Act (2 U.S.C. 661a(7))), which shall be available for the disbursement of direct loans or payment of claims for payment on loan guarantees under this section and for all other cash flows to and from the Government as a result of direct loans and guarantees made under this section.

(Added Pub. L. 104–106, div. B, title XXVIII, §2801(a)(1), Feb. 10, 1996, 110 Stat. 545; amended Pub. L. 106–65, div. B, title XXVIII, §2803(c), Oct. 5, 1999, 113 Stat. 849.)

AMENDMENTS

1999—Subsec. (a)(1). Pub. L. 106–65, §2803(c)(1), substituted "an eligible entity" for "persons in the private sector" and "the eligible entity" for "such persons".

Subsec. (b)(1). Pub. L. 106–65, §2803(c)(2), substituted "an eligible entity" for "any person in the private sector" and "the eligible entity" for "the person".

§2874. Leasing of housing

(a) **LEASE AUTHORIZED.**—The Secretary concerned may enter into contracts for the lease of housing units that the Secretary determines are suitable for use as military family housing or military unaccompanied housing.

(b) **USE OF LEASED UNITS.**—The Secretary concerned shall utilize housing units leased under this section as military family housing or military unaccompanied housing, as appropriate.

(c) **LEASE TERMS.**—A contract under this section may be for any period that the Secretary concerned determines appropriate and may provide for the owner of the leased property to operate and maintain the property. (Added Pub. L. 104–106, div. B, title XXVIII, §2801(a)(1), Feb. 10, 1996, 110 Stat. 546; amended Pub. L. 107–314, div. B, title XXVIII, §2802(b)(1), (2), Dec. 2, 2002, 116 Stat. 2703.)

AMENDMENTS

2002—Pub. L. 107–314, §2802(b)(2), in section catchline struck out "to be constructed" after "Leasing of housing".

Subsec. (a). Pub. L. 107–314, §2802(b)(1)(B), added subsec. (a) and struck out heading and text of former subsec. (a). Text read as follows: "The Secretary concerned may enter into contracts for the lease of military family housing units or military unaccompanied housing units to be constructed under this subchapter."

Subsecs. (b), (c). Pub. L. 107–314, §2802(b)(1), added subsec. (b) and redesignated former subsec. (b) as (c).

§2875. Investments

(a) INVESTMENTS AUTHORIZED.—The Secretary concerned may make investments in an eligible entity carrying out projects for the acquisition or construction of housing units suitable for use as military family housing or as military unaccompanied housing.

(b) FORMS OF INVESTMENT.—An investment under this section may take the form of an acquisition of a limited partnership interest by the United States, a purchase of stock or other equity instruments by the United States, a purchase of bonds or other debt instruments by the United States, or any combination of such forms of investment.

(c) LIMITATION ON VALUE OF INVESTMENT.—(1) The cash amount of an investment under this section in an eligible entity may not exceed an amount equal to 33 1/3 percent of the capital cost (as determined by the Secretary concerned) of the project or projects that the eligible entity proposes to carry out under this section with the investment.

(2) If the Secretary concerned conveys land or facilities to an eligible entity as all or part of an investment in the eligible entity under this section, the total value of the investment by the Secretary under this section may not exceed an amount equal to 45 percent of the capital cost (as determined by the Secretary) of the project or projects that the eligible entity proposes to carry out under this section with the investment.

(3) In this subsection, the term "capital cost", with respect to a project for the acquisition or construction of housing, means the total amount of the costs included in the basis of the housing for Federal income tax purposes.

(d) COLLATERAL INCENTIVE AGREEMENTS.—The Secretary concerned shall enter into collateral incentive agreements with eligible entities in which the Secretary makes an investment under this section to ensure that a suitable preference will be afforded members of the armed forces and their dependents in the lease or purchase, as the case may be, of a reasonable number of the housing units covered by the investment.

(Added Pub. L. 104–106, div. B, title XXVIII, §2801(a)(1), Feb. 10, 1996, 110 Stat. 546; amended Pub. L. 105–85, div. B, title XXVIII, §2805, Nov. 18, 1997, 111 Stat. 1991; Pub. L. 106–65, div. B, title XXVIII, §2803(d), (h)(1), Oct. 5, 1999, 113 Stat. 849; Pub. L. 108–136, div. A, title X, §1031(a)(50), Nov. 24, 2003, 117 Stat. 1602; Pub. L. 113–66, div. B, title XXVIII, §2805, Dec. 26, 2013, 127 Stat. 1008.)

AMENDMENTS

2013—Subsec. (e). Pub. L. 113–66 struck out subsec. (e). Text read as follows: "Amounts in the Department of Defense Family Housing Improvement Fund or the Department of Defense Military Unaccompanied Housing Improvement Fund may be used to make a cash investment under this section in an eligible entity only after the end of the 30-day period beginning on the date the Secretary of Defense submits written notice of, and justification for, the investment to the appropriate committees of Congress or, if earlier, the end of the 14-day period beginning on the date on which a copy of the notice and justification is provided in an electronic medium pursuant to section 480 of this title."

2003—Subsec. (e). Pub. L. 108–136 inserted before period at end "or, if earlier, the end of the 14- day period beginning on the date on which a copy of the notice and justification is provided in an electronic medium pursuant to section 480 of this title".

1999—Pub. L. 106–65, §2803(h)(1), struck out "in nongovernmental entities" after "Investments" in section catchline.

Subsec. (a). Pub. L. 106–65, §2803(d)(1), substituted "an eligible entity" for "nongovernmental entities".

Subsec. (c). Pub. L. 106–65, §2803(d)(2), substituted "an eligible entity" for "a nongovernmental entity" in pars. (1) and (2) and "the eligible entity" for "the entity" wherever appearing in pars. (1) and (2).

Subsec. (d). Pub. L. 106–65, §2803(d)(3), substituted "eligible" for "nongovernmental".

Subsec. (e). Pub. L. 106–65, §2803(d)(4), substituted "an eligible entity" for "a nongovernmental entity".

1997—Subsec. (e). Pub. L. 105–85 added subsec. (e).

§2876. Rental guarantees

The Secretary concerned may enter into agreements with eligible entities that acquire or construct military family housing units or military unaccompanied housing units under this subchapter in order to assure—

- (1) the occupancy of such units at levels specified in the agreements; or
- (2) rental income derived from rental of such units at levels specified in the agreements.

(Added Pub. L. 104–106, div. B, title XXVIII, §2801(a)(1), Feb. 10, 1996, 110 Stat. 546; amended Pub. L. 106–65, div. B, title XXVIII, §2803(e), Oct. 5, 1999, 113 Stat. 849.)

AMENDMENTS

1999—Pub. L. 106–65 substituted "eligible entities" for "private persons" in introductory provisions.

§2877. Differential lease payments

Pursuant to an agreement entered into by the Secretary concerned and a lessor of military family housing or military unaccompanied housing to members of the armed forces, the Secretary may pay the lessor an amount in addition to the rental payments for the housing made by the members as the Secretary determines appropriate to encourage the lessor to make the housing available to members of the armed forces as military family housing or as military unaccompanied housing.

(Added Pub. L. 104–106, div. B, title XXVIII, §2801(a)(1), Feb. 10, 1996, 110 Stat. 547; amended Pub. L. 106–65, div. B, title XXVIII, §2803(f), Oct. 5, 1999, 113 Stat. 849.)

AMENDMENTS 1999—Pub. L. 106–65 substituted "a lessor" for "a private lessor".

§2878. Conveyance or lease of existing property and facilities

(a) CONVEYANCE OR LEASE AUTHORIZED.—The Secretary concerned may convey or lease property or facilities (including ancillary supporting facilities) to eligible entities for purposes of using the proceeds of such conveyance or lease to carry out activities under this subchapter.

(b) INAPPLICABILITY TO PROPERTY AT INSTALLATION APPROVED FOR CLOSURE.—The authority of this section does not apply to property or facilities located on or near a military installation approved for closure under a base closure law.

(c) COMPETITIVE PROCESS.—The Secretary concerned shall ensure that the time, method, and terms and conditions of the reconveyance or lease of property or facilities under this section from the eligible entity permit full and free competition consistent with the value and nature of the property or facilities involved.

(d) TERMS AND CONDITIONS.—(1) The conveyance or lease of property or facilities under this section shall be for such consideration and upon such terms and conditions as the Secretary concerned considers appropriate for the purposes of this subchapter and to protect the interests of the United States.

(2) As part or all of the consideration for a conveyance or lease under this section, the purchaser or lessor (as the case may be) shall enter into an agreement with the Secretary to ensure that a suitable preference will be afforded members of the armed forces and their dependents in the lease or sublease of a reasonable number of the housing units covered by the conveyance or lease, as the case may be, or in the lease of other suitable housing units made available by the purchaser or lessee.

(e) INAPPLICABILITY OF CERTAIN PROPERTY MANAGEMENT LAWS.—The conveyance or lease of property or facilities under this section shall not be subject to the following provisions of law:

(1) Section 2667 of this title.

(2) Subtitle I of title 40 and division C (except sections 3302, 3501(b), 3509, 3906, 4710, and 4711) of subtitle I of title 41.

(3) Section 1302 of title 40.

(4) Section 501 of the McKinney-Vento Homeless Assistance Act (42 U.S.C. 11411).

(Added Pub. L. 104–106, div. B, title XXVIII, §2801(a)(1), Feb. 10, 1996, 110 Stat. 547; amended Pub. L. 105–85, div. A, title X, §1073(a)(60), Nov. 18, 1997, 111 Stat. 1903; Pub. L. 106–65, div. B, title XXVIII, §2803(g), Oct. 5, 1999, 113 Stat. 849; Pub. L. 107–107, div. A, title X, §1048(d)(1), Dec. 28, 2001, 115 Stat. 1227; Pub. L. 107–217, §3(b)(23), Aug. 21, 2002, 116 Stat. 1297; Pub. L. 110–417, div. B, title XXVIII, §2805(d), Oct. 14, 2008, 122 Stat. 4723; Pub. L. 111–350, §5(b)(50), Jan. 4, 2011, 124 Stat. 3846.)

AMENDMENTS

2011—Subsec. (e)(2). Pub. L. 111–350, which directed substitution of "division C (except sections 3302, 3501(b), 3509, 3906, 4710, and 4711) of subtitle I of title 41" for "title III of the Federal Property and Administrative Services Act of 1949 (41 U.S.C. 251 et seq.)" in subsec. (d)(2), was executed by making the substitution in subsec. (e)(2) to reflect the probable intent of Congress and the amendment by Pub. L. 110–417. See 2008 Amendment note below.

2008—Subsecs. (c) to (e). Pub. L. 110–417 added subsec. (c) and redesignated former subsecs. (c) and (d) as (d) and (e), respectively.

2002—Subsec. (d)(2). Pub. L. 107–217, §3(b)(23)(A), substituted "Subtitle I of title 40 and title III of the" for "The" and "(41 U.S.C. 251 et seq.)" for "(40 U.S.C. 471 et seq.)".

Subsec. (d)(3). Pub. L. 107–217, §3(b)(23)(B), substituted "Section 1302 of title 40" for "Section 321 of the Act of June 30, 1932 (commonly known as the Economy Act) (40 U.S.C. 303b)".

2001—Subsec. (d)(4). Pub. L. 107–107 substituted "McKinney-Vento Homeless Assistance Act" for "Stewart B. McKinney Homeless Assistance Act".

1999—Subsec. (a). Pub. L. 106–65 substituted "eligible entities" for "private persons". **1997**—Subsec. (d)(4). Pub. L. 105–85 substituted "11411" for "11401".

§2879. Window fall prevention devices in military family housing units

(a) **REQUIRING USE OF DEVICES ON CERTAIN WINDOWS.**—

(1) **REQUIREMENT.**—The Secretary concerned shall ensure that if a window in any military family housing unit acquired or constructed under this chapter is described in subsection (c), including a window designed for emergency escape or rescue, the window is equipped with fall prevention devices described in paragraph (3).

(2) **EFFECTIVE DATE.**—Paragraph (1) shall apply with respect to the following military family housing units: (A) A unit for which the contract for the construction of the unit is first entered into after October 1, 2019. (B) Any other unit which is subject to a whole-house renovation project for which the contract is entered into on or after October 1, 2019.

(3) **FALL PREVENTION DEVICE DESCRIBED.**—A fall prevention device is a window screen or guard that complies with applicable standards in ASTM standard F2090–13 (or any successor standard).

(b) **RETROFITTING OR REPLACING EXISTING WINDOWS.**—

(1) **PROGRAM TO RETROFIT EXISTING WINDOWS.**—The Secretary concerned shall carry out a program under which, in military family housing units acquired or constructed under this chapter

which are not subject to the requirements of subsection (a), windows which are described in subsection (c), including windows designed for emergency escape or rescue, are retrofitted to be equipped with fall prevention devices described in paragraph (3) of subsection (a) or are replaced with windows which are equipped with fall prevention devices described in such paragraph.

(2) GRANTS.—The Secretary concerned may carry out the program under this subsection by making grants to private entities to retrofit or replace existing windows, in accordance with such criteria as the Secretary may establish by regulation.

(3) USE OF OPERATIONS FUNDING.—The Secretary may carry out the program under this subsection during a fiscal year with amounts made available to the Secretary for family housing operations for such fiscal year.

(c) WINDOWS DESCRIBED.—A window is described in this subsection if the bottom sill of the window is within 42 inches of the floor, as measured in the interior of the unit, and is more than 72 inches above the ground, as measured on the exterior grade of the building.

(d) RECORD OF INCIDENTS; ANNUAL REPORT.—The Secretary concerned shall keep a record of each incident (as defined in Department of Defense Instruction 6055.7 series) in which a minor child is injured or killed as the result of an unintentional window fall in a military family housing unit. Not later than 90 days after the end of each calendar year (beginning with 2017), the Secretary of Defense shall submit a report to the Committees on Armed Services of the House of Representatives and Senate on all such window falls occurring in the previous year.

(Added Pub. L. 115–91, div. B, title XXVIII, §2817(a)(1), Dec. 12, 2017, 131 Stat. 1851; amended Pub. L. 115–232, div. A, title X, §1081(a)(28), div. B, title XXVIII, §2823(a), Aug. 13, 2018, 132 Stat. 1985, 2269; Pub. L. 116–92, div. A, title XVII, §1731(a)(57), div. B, title XXX, §3034, Dec. 20, 2019, 133 Stat. 1815, 1936.)

PRIOR PROVISIONS

A prior section 2879, added Pub. L. 104–106, div. B, title XXVIII, §2801(a)(1), Feb. 10, 1996, 110 Stat. 547, related to interim leases of completed units pending completion of a project to acquire or construct military family housing units or military unaccompanied housing units, prior to repeal by Pub. L. 107–314, div. B, title XXVIII, §2802(c)(1), Dec. 2, 2002, 116 Stat. 2703.

AMENDMENTS

2019—Subsec. (a)(1). Pub. L. 116–92, §3034(a)(1), substituted "described in paragraph (3)" for "that protect against unintentional window falls by young children and that are in compliance with applicable International Building Code (IBC) standards".

Subsec. (a)(2)(A). Pub. L. 116–92, §3034(a)(2)(A), substituted "October 1, 2019" for "December 11, 2017". Pub. L. 116–92, §1731(a)(57), struck out comma before period at end.

Subsec. (a)(2)(B). Pub. L. 116–92, §3034(a)(2)(B), substituted "October 1, 2019" for "September 1, 2018". Subsec. (a)(3). Pub. L. 116–92, §3034(a)(3), added par. (3).

Subsec. (b)(1). Pub. L. 116–92, §3034(c), substituted "paragraph (3)" for "paragraph (1)". Subsec. (c). Pub. L. 116–92, §3034(b), substituted "42 inches" for "24 inches".

2018—Subsec. (a)(1). Pub. L. 115–232, §2823(a)(1), substituted "subsection (c)" for "subsection (b)". Subsec. (a)(2)(A). Pub. L. 115–232, §1081(a)(28), substituted "after December 11, 2017," for "on or after the date of the enactment of this section". Subsecs. (b) to (d). Pub. L. 115–232, §2823(a)(2), (3), added subsec. (b) and redesignated former subsecs. (b) and (c) as (c) and (d), respectively.

EFFECTIVE DATE OF 2018 AMENDMENT

Pub. L. 115–232, div. B, title XXVIII, §2823(b), Aug. 13, 2018, 132 Stat. 2269, provided that: "The amendments made by this section [amending this section] shall apply with respect to fiscal year 2019 and each succeeding fiscal year."

§2880. Unit size and type

(a) CONFORMITY WITH SIMILAR HOUSING UNITS IN LOCALE.—The Secretary concerned shall ensure that the room patterns and floor areas of military family housing units and military unaccompanied housing units acquired or constructed under this subchapter are generally comparable to the room patterns and floor areas of similar housing units in the locality concerned.

(b) INAPPLICABILITY OF LIMITATIONS ON SPACE BY PAY GRADE.—Sections 2826 and 2856 of this title shall not apply to military family housing or military unaccompanied housing units acquired or constructed under this subchapter.

(Added Pub. L. 104–106, div. B, title XXVIII, §2801(a)(1), Feb. 10, 1996, 110 Stat. 548; amended Pub. L. 108–136, div. B, title XXVIII, §2806, Nov. 24, 2003, 117 Stat. 1722; Pub. L. 109–364, div. B, title XXVIII, §2807(b), Oct. 17, 2006, 120 Stat. 2469.)

AMENDMENTS

2006—Subsec. (b). Pub. L. 109–364 substituted "Sections 2826 and 2856" for "(1) Section 2826", inserted "or military unaccompanied housing" after "military family housing", and struck out par. (2) which read as follows: "The regulations prescribed under section 2856 of this title shall not apply to any military unaccompanied housing unit acquired or constructed under this subchapter."

2003—Subsec. (b)(2). Pub. L. 108–136 struck out "unless the unit is located on a military installation" before period at end.

§2881. Ancillary supporting facilities

(a) AUTHORITY TO ACQUIRE OR CONSTRUCT.—Any project for the acquisition or construction of military family housing units or military unaccompanied housing units under this subchapter may include the acquisition or construction of ancillary supporting facilities for the housing units concerned.

(b) RESTRICTION.—A project referred to in subsection (a) may not include the acquisition or construction of an ancillary supporting facility (other than a child development center) if, as determined by the Secretary concerned, the facility is to be used for providing merchandise or services in direct competition with—

(1) the Army and Air Force Exchange Service; (2) the Navy Exchange Service Command; (3) a Marine Corps exchange; (4) the Defense Commissary Agency; or (5) any nonappropriated fund

activity of the Department of Defense for the morale, welfare, and recreation of members of the armed forces. (Added Pub. L. 104–106, div. B, title XXVIII, §2801(a)(1), Feb. 10, 1996, 110 Stat. 548; amended Pub. L. 106–65, div. B, title XXVIII, §2804, Oct. 5, 1999, 113 Stat. 849; Pub. L. 109–163, div. B, title XXVIII, §2805(a), Jan. 6, 2006, 119 Stat. 3507.)

AMENDMENTS

2006—Subsec. (b). Pub. L. 109–163 inserted "(other than a child development center)" after "ancillary supporting facility" in introductory provisions.

1999—Pub. L. 106–65 designated existing provisions as subsec. (a), inserted heading, and added subsec. (b).

CONSTRUCTION OF 2006 AMENDMENT

Pub. L. 109–163, div. B, title XXVIII, §2805(c), Jan. 6, 2006, 119 Stat. 3507, provided that: "Nothing in the amendment made by subsection (a) [amending this section] may be construed to alter any law and regulation applicable to the operation of a child development center, as defined in section 2871(2) of title 10, United States Code."

§2881a. Pilot projects for acquisition or construction of military unaccompanied housing

(a) **PILOT PROJECTS AUTHORIZED.**—The Secretary of the Navy may carry out not more than three pilot projects under the authority of this section or another provision of this subchapter to use the private sector for the acquisition or construction of military unaccompanied housing in the United States, including any territory or possession of the United States.

(b) **TREATMENT OF HOUSING; ASSIGNMENT OF MEMBERS.**—The Secretary of the Navy may assign members of the armed forces without dependents to housing units acquired or constructed under the pilot projects, and such housing units shall be considered as quarters of the United States or a housing facility under the jurisdiction of the Secretary for purposes of section 403 of title 37.

(c) **BASIC ALLOWANCE FOR HOUSING.**—(1) The Secretary of Defense may prescribe and, under section 403(n) of title 37, pay for members of the armed forces without dependents in privatized housing acquired or constructed under the pilot projects higher rates of partial basic allowance for housing than the rates authorized under paragraph (2) of such section.

(2) The partial basic allowance for housing paid for a member at a higher rate under this subsection may be paid directly to the private sector source of the housing to whom the member is obligated to pay rent or other charge for residing in such housing if the private sector source credits the amount so paid against the amount owed by the member for the rent or other charge.

(d) **FUNDING.**—(1) The Secretary of the Navy shall use the Department of Defense Military Unaccompanied Housing Improvement Fund to carry out activities under the pilot projects.

(2) Subject to 30 days prior notification to the appropriate committees of Congress in an electronic medium pursuant to section 480 of this title, such additional amounts as the Secretary of Defense considers necessary may be transferred to the Department of Defense Military Unaccompanied Housing Improvement Fund from amounts appropriated for construction of military unaccompanied housing in military construction accounts. The amounts so transferred

shall be merged with and be available for the same purposes and for the same period of time as amounts appropriated directly to the Fund.

[(e) Repealed. Pub. L. 115–91, [div. A, title X, §1051\(a\)\(25\)](#), Dec. 12, 2017, 131 Stat. 1562.]

(f) EXPIRATION.—The authority of the Secretary of the Navy to enter into a contract under the pilot programs shall expire September 30, 2009.

(Added Pub. L. 107–314, [div. B, title XXVIII, §2803\(a\)\(1\)](#), Dec. 2, 2002, 116 Stat. 2703; amended Pub. L. 109–163, [div. A, title X, §1056\(c\)\(10\)](#), Jan. 6, 2006, 119 Stat. 3440; Pub. L. 109–364, [div. B, title XXVIII, §2812](#), Oct. 17, 2006, 120 Stat. 2473; Pub. L. 111–383, [div. B, title XXVIII, §2803\(f\)](#), Jan. 7, 2011, 124 Stat. 4459; Pub. L. 115–91, [div. A, title X, §1051\(a\)\(25\)](#), [div. B, title XXVIII, §2801\(d\)\(1\)](#), Dec. 12, 2017, 131 Stat. 1562, 1844.)

AMENDMENTS

2017—Subsec. (d)(2). Pub. L. 115–91, [§2801\(d\)\(1\)](#), inserted "in an electronic medium pursuant to section 480 of this title" after "Congress".

Subsec. (e). Pub. L. 115–91, [§1051\(a\)\(25\)](#), struck out subsec. (e) which required reports describing certain proposed contracts, conveyances, or leases.

2011—Subsec. (e)(2). Pub. L. 111–383 inserted before period at end "or, if earlier, a period of 20 days has elapsed from the date on which a copy of the report is provided in an electronic medium pursuant to section 480 of this title".

2006—Subsecs. (d)(2), (e)(2). Pub. L. 109–364, [§2812\(a\)](#), substituted "30 days" for "90 days". Subsec. (f). Pub. L. 109–364, [§2812\(b\)](#), substituted "2009" for "2007". Pub. L. 109–163 substituted "The" for "Notwithstanding section 2885 of this title, the".

§2882. Effect of assignment of members to housing units acquired or constructed under alternative authority

(a) TREATMENT AS QUARTERS OF THE UNITED STATES.—Except as provided in subsection (b), housing units acquired or constructed under this subchapter shall be considered as quarters of the United States or a housing facility under the jurisdiction of a uniformed service for purposes of section 403 of title 37.

(b) AVAILABILITY OF BASIC ALLOWANCE FOR HOUSING.—A member of the armed forces who is assigned to a housing unit acquired or constructed under this subchapter that is not owned or leased by the United States shall be entitled to a basic allowance for housing under section 403 of title 37.

(c) LEASE PAYMENTS THROUGH PAY ALLOTMENTS.—The Secretary concerned may require members of the armed forces who lease housing in housing units acquired or constructed under this subchapter to make lease payments for such housing pursuant to allotments of the pay of such members under section 701 of title 37.

(Added Pub. L. 104–106, [div. B, title XXVIII, §2801\(a\)\(1\)](#), Feb. 10, 1996, 110 Stat. 548; amended Pub. L. 105–85, [div. A, title VI, §603\(d\)\(2\)\(C\)](#), Nov. 18, 1997, 111 Stat. 1783; Pub. L. 110–417, [div. B, title XXVIII, §2805\(e\)\(1\)](#), Oct. 14, 2008, 122 Stat. 4723.)

AMENDMENTS

2008—Pub. L. 110–417 amended section generally. Prior to amendment, section related to assignment of members of the armed forces to housing units by the Secretary concerned, treatment of such housing as quarters of the United States, entitlement to a basic allowance for housing, and making of lease payments through pay allotments.

1997—Subsec. (b)(1). Pub. L. 105–85, §603(d)(2)(C)(i), substituted "section 403" for "section 403(b)".

Subsec. (b)(2). Pub. L. 105–85, §603(d)(2)(C)(ii), substituted "basic allowance for housing under section 403 of title 37" for "basic allowance for quarters under section 403 of title 37 and, if in a high housing cost area, a variable housing allowance under section 403a of that title".

EFFECTIVE DATE OF 1997 AMENDMENT

Amendment by Pub. L. 105–85 effective Jan. 1, 1998, see section 603(e) of Pub. L. 105–85, set out as a note under section 5561 of Title 5, Government Organization and Employees.

§2883. Department of Defense Housing Funds

(a) **ESTABLISHMENT.**—There are hereby established on the books of the Treasury the following accounts: (1) The Department of Defense Family Housing Improvement Fund.
(2) The Department of Defense Military Unaccompanied Housing Improvement Fund.

(b) **COMMINGLING OF FUNDS PROHIBITED.**—(1) The Secretary of Defense shall administer each Fund separately.

(2) Amounts in the Department of Defense Family Housing Improvement Fund may be used only to carry out activities under this subchapter with respect to military family housing.

(3) Amounts in the Department of Defense Military Unaccompanied Housing Improvement Fund may be used only to carry out activities under this subchapter with respect to military unaccompanied housing.

(c) **CREDITS TO FUNDS.**—(1) There shall be credited to the Department of Defense Family Housing Improvement Fund the following:

(A) Amounts authorized for and appropriated to that Fund.

(B) Subject to subsection (f), any amounts that the Secretary of Defense transfers, in such amounts as provided in appropriation Acts, to that Fund from amounts authorized and appropriated to the Department of Defense for the acquisition, improvement, or construction of military family housing.

(C) Proceeds from the conveyance or lease of property or facilities under section 2878 of this title for the purpose of carrying out activities under this subchapter with respect to military family housing.

(D) Income derived from any activities under this subchapter with respect to military family housing, including interest on loans made under section 2873 of this title, income and gains realized from investments under section 2875 of this title, and any return of capital invested as part of such investments.

(E) Any amounts that the Secretary of the Navy transfers to that Fund pursuant to section 2814(i)(3) of this title, subject to the restrictions on the use of the transferred amounts specified in that section.

(F) Any amounts that the Secretary concerned transfers to that Fund pursuant to section 2869 of this title. (2) There shall be credited to the Department of Defense Military Unaccompanied Housing Improvement Fund the following:

(A) Amounts authorized for and appropriated to that Fund.

(B) Subject to subsection (f), any amounts that the Secretary of Defense transfers, in such amounts as provided in appropriation Acts, to that Fund from amounts authorized and appropriated to the Department of Defense for the acquisition or construction of military unaccompanied housing.

(C) Proceeds from the conveyance or lease of property or facilities under section 2878 of this title for the purpose of carrying out activities under this subchapter with respect to military unaccompanied housing.

(D) Income derived from any activities under this subchapter with respect to military unaccompanied housing, including interest on loans made under section 2873 of this title, income and gains realized from investments under section 2875 of this title, and any return of capital invested as part of such investments.

(E) Any amounts that the Secretary of the Navy transfers to that Fund pursuant to section 2814(i)(3) of this title, subject to the restrictions on the use of the transferred amounts specified in that section.

(F) Any amounts that the Secretary concerned transfers to that Fund pursuant to section 2869 of this title.

(d) USE OF AMOUNTS IN FUNDS.—(1)(A) In such amounts as provided in appropriation Acts and except as provided in subsection (e), the Secretary of Defense may use amounts in the Department of Defense Family Housing Improvement Fund to carry out activities under this subchapter with respect to military family housing, including activities required in connection with the planning, execution, and administration of contracts entered into under the authority of this subchapter. The Secretary may also use for expenses of activities required in connection with the planning, execution, and administration of such contracts funds that are otherwise available to the Department of Defense for such types of expenses.

(B) The Secretary of Defense shall require that eligible entities receiving amounts from the Department of Defense Family Housing Improvement Fund prioritize the use of such amounts for expenditures related to asset recapitalization, operating expenses, and debt payments before other program management-incentive fee expenditures. In the case of asset recapitalization, the primary purpose of the expenditures must be to sustain existing housing units owned or managed by the eligible entity or for which the eligible entity is otherwise responsible.

(2) In such amounts as provided in appropriation Acts and except as provided in subsection (e), the Secretary of Defense may use amounts in the Department of Defense Military Unaccompanied Housing Improvement Fund to carry out activities under this subchapter with respect to military unaccompanied housing, including activities required in connection with the planning, execution, and administration of contracts entered into under the authority of this subchapter. The Secretary may also use for expenses of activities required in connection with the planning, execution, and administration of such contracts funds that are otherwise available to the Department of Defense for such types of expenses.

(3) Amounts made available under this subsection shall remain available until expended. The Secretary of Defense may transfer amounts made available under this subsection to the Secretaries of the military departments to permit such Secretaries to carry out the activities for which such amounts may be used.

(e) **LIMITATION ON OBLIGATIONS.**—(1) The Secretary may not incur an obligation under a contract or other agreement entered into under this subchapter in excess of the unobligated balance, at the time the contract is entered into, of the Fund required to be used to satisfy the obligation.

(2) The Funds established under subsection (a) shall be the sole source of funds for activities carried out under this subchapter.

(f) **NOTIFICATION REQUIRED FOR TRANSFERS.**—A transfer of appropriated amounts to a Fund under subparagraph (B) of paragraph (1) or subparagraph (B) of paragraph (2) of subsection (c) may be made only after the end of the 14- day period beginning on the date the Secretary of Defense submits notice of, and justification for, the transfer to the appropriate committees of Congress in an electronic medium pursuant to section 480 of this title.

(Added Pub. L. 104–106, div. B, title XXVIII, §2801(a)(1), Feb. 10, 1996, 110 Stat. 548; amended Pub. L. 104–201, div. B, title XXVIII, §2804, Sept. 23, 1996, 110 Stat. 2788; Pub. L. 106–65, div. B, title XXVIII, §2802(b), Oct. 5, 1999, 113 Stat. 848; Pub. L. 108–136, div. A, title X, §1031(a)(51), div. B, title XXVIII, §2805(c), Nov. 24, 2003, 117 Stat. 1603, 1721; Pub. L. 108–375, div. B, title XXVIII, §2805(a), Oct. 28, 2004, 118 Stat. 2122; Pub. L. 109–163, div. B, title XXVIII, §2806(a), (b), Jan. 6, 2006, 119 Stat. 3507; Pub. L. 110–181, div. B, title XXVII, §2705, Jan. 28, 2008, 122 Stat. 533; Pub. L. 112–239, div. B, title XXVII, §2711(c)(5), Jan. 2, 2013, 126 Stat. 2144; Pub. L. 115–91, div. B, title XXVIII, §2801(d)(2), Dec. 12, 2017, 131 Stat. 1844; Pub. L. 116–283, div. B, title XXVIII, §2813(a), Jan. 1, 2021, 134 Stat. 4327.)

AMENDMENTS

2021—Subsec. (d)(1). Pub. L. 116–283 designated existing provisions as subpar. (A) and added subpar. (B).

2017—Subsec. (f). Pub. L. 115–91 substituted "14-day period" for "30-day period" and struck out "written" before "notice" and "or, if earlier, the end of the 14-day period beginning on the date on which a copy of the notice and justification is provided" before "in an electronic medium".

2013—Subsec. (c)(1)(G). Pub. L. 112–239, §2711(c)(5)(A)(i), struck out subpar. (G), which read as follows: "Subject to subsection (f), any amounts that the Secretary of Defense transfers to that Fund from amounts in the Department of Defense Base Closure Account 2005."

Subsec. (c)(2)(G). Pub. L. 112–239, §2711(c)(5)(A)(ii), struck out subpar. (G), which read as follows: "Subject to subsection (f), any amounts that the Secretary of Defense transfers to that Fund from amounts in the Department of Defense Base Closure Account 2005."

Subsec. (f). Pub. L. 112–239, §2711(c)(5)(B), struck out "or (G)" after "subparagraph (B)" in two places in first sentence, and struck out second sentence which read: "In addition, the notice required in connection with a transfer under subparagraph (G) of paragraph (1) or subparagraph (G) of paragraph (2) shall include a certification that the amounts to be transferred from the Department of Defense Base Closure Account 2005 were specified in the conference report to accompany the most recent Military Construction Authorization Act."

2008—Subsec. (c)(1)(G). Pub. L. 110–181, §2705(a)(1), added subpar. (G).
Subsec. (c)(2)(G). Pub. L. 110–181, §2705(a)(2), added subpar. (G).
Subsec. (f). Pub. L. 110–181, §2705(b), substituted "subparagraph (B) or (G) of paragraph (1) or

subparagraph (B) or (G) of paragraph (2)" for "paragraph (1)(B) or (2)(B)" and inserted at end "In addition, the notice required in connection with a transfer under subparagraph (G) of paragraph (1) or subparagraph (G) of paragraph (2) shall include a certification that the amounts to be transferred from the Department of Defense Base Closure Account 2005 were specified in the conference report to accompany the most recent Military Construction Authorization Act."

2006—Subsec. (c)(1)(B). Pub. L. 109–163, §2806(b), substituted "acquisition, improvement, or construction" for "acquisition or construction".

Subsec. (e). Pub. L. 109–163, §2806(a), designated existing provisions as par. (1) and added par. (2).

2004—Subsec. (g). Pub. L. 108–375 struck out heading and text of subsec. (g). Text read as follows: "The total value in budget authority of all contracts and investments undertaken using the authorities provided in this subchapter shall not exceed—

"(1) \$850,000,000 for the acquisition or construction of military family housing;
and

"(2) \$150,000,000 for the acquisition or construction of military unaccompanied housing." **2003**—Subsec. (c)(1)(F). Pub. L. 108–136, §2805(c)(1), added subpar. (F).
Subsec. (c)(2)(F). Pub. L. 108–136, §2805(c)(2), added subpar. (F).
Subsec. (f). Pub. L. 108–136, §1031(a)(51), inserted before period at end "or, if earlier, the end of the 14-day period beginning on the date on which a copy of the

notice and justification is provided in an electronic medium pursuant to section 480 of this title".

1999—Subsec. (c)(1)(E). Pub. L. 106–65, §2802(b)(1), added subpar. (E).

Subsec. (c)(2)(E). Pub. L. 106–65, §2802(b)(2), added subpar. (E).

1996—Subsec. (d)(1), (2). Pub. L. 104–201 inserted at end "The Secretary may also use for expenses of activities required in connection with the planning, execution, and administration of such contracts funds that are otherwise available to the Department of Defense for such types of expenses."

EFFECTIVE DATE OF 2021 AMENDMENT

Pub. L. 116–283, [div. B, title XXVIII, §2813\(b\)](#), [Jan. 1, 2021](#), 134 Stat. 4327, provided that: "The requirements set forth in subparagraph (B) of section 2883(d)(1) of title 10, United States Code, as added by subsection (a), shall apply to appropriate legal documents entered into or renewed on or after the date of the enactment of this Act [Jan. 1, 2021] between the Secretary of a military department and a landlord regarding privatized military housing. In this subsection, the terms 'landlord' and 'privatized military housing' have the meanings given those terms in section 3001(a) of the Military Construction Authorization Act for Fiscal Year 2020 (division B of Public Law 116–92; 133 Stat. 1916; 10 U.S.C. 2821 note)."

EFFECTIVE DATE OF 2013 AMENDMENT

Amendment by Pub. L. 112–239 effective on the later of Oct. 1, 2013, or the date of the enactment of an Act authorizing funds for military construction for fiscal year 2014 (div. J of Pub. L. 113–76, approved Jan. 17, 2014), see section 2711(d) of Pub. L. 112–239, set out as a note under section 2701 of this title.

§2883a. Funds for housing allowances of members of the armed forces assigned to certain military family housing units

(a) **AUTHORITY TO TRANSFER FUNDS TO COVER HOUSING ALLOWANCES.**—During the fiscal year in which a contract is awarded for the acquisition or construction of military family housing units under this subchapter that are not to be owned by the United States, the Secretary of Defense may transfer the amount determined under subsection (b) with respect to such housing from appropriations available for support of military housing for the armed force concerned for that fiscal year to appropriations available for pay and allowances of military personnel of that same armed force for that same fiscal year.

(b) **AMOUNT TRANSFERRED.**—The total amount authorized to be transferred under subsection (a) in connection with a contract under this subchapter may not exceed an amount equal to any additional amounts payable during the fiscal year in which the contract is awarded to members of the armed forces assigned to the acquired or constructed housing units as basic allowance for housing under section 403 of title 37 that would not otherwise have been payable to such members if not for assignment to such housing units.

(c) TRANSFERS SUBJECT TO APPROPRIATIONS.—The transfer of funds under the authority of subsection (a) is limited to such amounts as may be provided in advance in appropriations Acts.

(Added Pub. L. 107–107, div. B, title XXVIII, §2804(a), Dec. 28, 2001, 115 Stat. 1305.)

§2884. Reports

(a) PROJECT REPORTS.—

(1) The Secretary concerned shall transmit to the appropriate committees of Congress a report describing— (A) each contract or agreement for the acquisition or construction of family housing units or unaccompanied housing units under this subchapter; and (B) each conveyance or lease proposed under section 2878 of this title.

(2) A report required by paragraph (1) shall include the following:

(A) A description of the contract, agreement, conveyance, or lease, including a summary of the terms of the contract, agreement, conveyance, or lease.

(B) A description of the authorities to be utilized in entering into the contract, agreement, conveyance, or lease and the intended method of participation of the United States in the contract, agreement, conveyance, or lease, including a justification of the intended method of participation.

(C) A statement of the scored cost of the contract, agreement, conveyance, or lease, as determined by the Office of Management and Budget.

(D) A statement of the United States funds required for the contract, agreement, conveyance, or lease and a description of the source of such funds, including a description of the specific construction, acquisition, or improvement projects from which funds were transferred to the Funds established under section 2883 of this title in order to finance the contract, agreement, conveyance, or lease.

(E) An economic assessment of the life cycle costs of the contract, agreement, conveyance, or lease, including an estimate of the amount of United States funds that would be paid over the life of the contract, agreement, conveyance, or lease from amounts derived from payments of government allowances, including the basic allowance for housing under section 403 of title 37, if the housing affected by the project were fully occupied by military personnel over the life of the contract, agreement, conveyance, or lease.

(3)(A) In the case of a contract or agreement described in paragraph (1) proposed to be entered into with a private party, the report shall specify whether the contract or agreement will or may include a guarantee (including the making of mortgage or rental payments) by the Secretary to the private party in the event of—

(i) the closure or realignment of the installation for which housing will be provided under the contract or agreement;

(ii) a reduction in force of units stationed at such installation; or

(iii) the extended deployment of units stationed at such installation.

(B) If the contract or agreement will or may include such a guarantee, the report shall also—
(i) describe the nature of the guarantee; and
(ii) assess the extent and likelihood, if any, of the liability of the United States with respect to the guarantee.

(4) The report shall be submitted in an electronic medium pursuant to section 480 of this title not later than 21 days before the date on which the Secretary issues the contract solicitation or offers the conveyance or lease.

(b) **ANNUAL REPORTS TO ACCOMPANY BUDGET MATERIALS.**—The Secretary of Defense shall include each year in the materials that the Secretary submits to Congress in support of the budget submitted by the President pursuant to section 1105 of title 31 the following:

(1) A separate report on the expenditures and receipts during the preceding fiscal year covering each of the Funds established under section 2883 of this title, including a description of the specific construction, acquisition, or improvement projects from which funds were transferred and the privatization projects or contracts to which those funds were transferred. Each report shall also include, for each military department or defense agency, a description of all funds to be transferred to such Funds for the current fiscal year and the next fiscal year.

(2) A report setting forth, by armed force, the following:

(A) An estimate of the amounts of basic allowance for housing under section 403 of title 37 that will be paid, during the current fiscal year and the fiscal year for which the budget is submitted, to members of the armed forces living in housing provided under the authorities in this subchapter.

(B) The number of units of military family housing and military unaccompanied housing upon which the estimate under subparagraph (A) for the current fiscal year and the next fiscal year is based.

(3) A description of the plans for housing privatization activities to be carried out under this subchapter—

(A) during the fiscal year for which the budget is submitted; and

(B) during the period covered by the then-current future-years defense plan under section 221 of this title.

(4) A report identifying each family housing unit acquired or constructed under this subchapter that is used, or intended to be used, as quarters for a general officer or flag officer and for which the total operation, maintenance, and repair costs for the unit exceeded \$50,000. For each housing unit so identified, the report shall also include the total of such operation, maintenance, and repair costs.

(c) **ANNUAL REPORT ON PRIVATIZATION PROJECTS.**—The Secretary of Defense shall submit to the congressional defense committees a semi-annual report containing an evaluation of the status of oversight and accountability measures under section 2885 of this title for military housing privatization projects. To the extent each Secretary concerned has the right to attain the information described in this subsection, each report shall include, at a minimum, the following:

(1) An assessment of the backlog of maintenance and repair at each military housing privatization project where a significant backlog exists, including an estimation of the cost of eliminating the maintenance and repair backlog.

- (2) If the debt associated with a privatization project exceeds net operating income or the occupancy rates for the housing units are below 75 percent for more than one year, the plan developed to mitigate the financial risk of the project.
- (3) An assessment of any significant project variances between the actual and pro forma deposits in the recapitalization account, to specifically include any unique variances associated with litigation costs.
- (4) The details of any significant withdrawals from a recapitalization account, including the purpose and rationale of the withdrawal and, if the withdrawal occurs before the normal recapitalization period, the impact of the early withdrawal on the financial health of the project.
- (5) An assessment of the extent to which the information required to comply with paragraphs (1) through (4) has been requested by the Secretaries, but has not been made available.
- (6) An assessment of cost assessed to members of the armed forces for utilities compared to utility rates in the local area.
- (7) An assessment of the condition of housing units based on the average age of those units and the estimated time until recapitalization.
- (8) An assessment of tenant complaints.
- (9) An assessment of maintenance response times and completion of maintenance requests.
- (10) An assessment of the dispute resolution process under section 2894(c) of this title, which shall include a list of dispute resolution cases by installation and the final outcome of each case.
- (11) An assessment of overall customer service for tenants.
- (12) A description of the results of any no-notice housing inspections conducted.
- (13) The results of any resident surveys conducted.
- (14) With regard to issues of lead-based paint in housing units, a summary of data relating to the presence of lead-based paint in such housing units, including the following by military department:
- (A) The total number of housing units containing lead-based paint.
- (B) A description of the reasons for the failure to inspect any housing unit that contains lead-based paint.
- (C) A description of all abatement or mitigation efforts completed or underway in housing units containing lead-based paint.
- (D) A certification as to whether military housing under the jurisdiction of the Secretary concerned complies with requirements relating to lead-based paint, lead-based paint activities, and lead-based paint hazards, as described in section 408 of the Toxic Substances Control Act (15 U.S.C. 2688).
- (Added Pub. L. 104–106, div. B, title XXVIII, §2801(a)(1), Feb. 10, 1996, 110 Stat. 550; amended Pub. L. 108–136, div. B, title XXVIII, §2807, Nov. 24, 2003, 117 Stat. 1722; Pub. L. 108–375, div. B, title XXVIII, §2806, Oct. 28, 2004, 118 Stat. 2122; Pub. L. 109–163, div. B, title XXVIII, §2806(c), Jan. 6, 2006, 119 Stat. 3507; Pub. L. 110–417, div. B, title XXVIII, §2805(b), (f), Oct.

14, 2008, 122 Stat. 4723, 4724; Pub. L. 111–383, div. A, title X, §1075(h)(6), div. B, title XXVIII, §2803(g), Jan. 7, 2011, 124 Stat. 4377, 4459; Pub. L. 112–239, div. B, title XXVIII, §2803(b), Jan. 2, 2013, 126 Stat. 2148; Pub. L. 113–66, div. B, title XXVIII, §2806, Dec. 26, 2013, 127 Stat. 1008; Pub. L. 113–291, div. A, title X, §1071(f)(26), Dec. 19, 2014, 128 Stat. 3511; Pub. L. 115–91, div. B, title XXVIII, §2801(d)(3), Dec. 12, 2017, 131 Stat. 1844; Pub. L. 116–92, div. B, title XXX, §3016(d), Dec. 20, 2019, 133 Stat. 1929; Pub. L. 116–283, div. B, title XXVIII, §§2803(c), 2811(h), Jan. 1, 2021, 134 Stat. 4320, 4326.)

AMENDMENTS

2021—Subsec. (a)(1). Pub. L. 116–283, §2803(c)(1)(A), substituted "The Secretary concerned" for "The Secretary of Defense" in introductory provisions.

Subsec. (a)(1)(A). Pub. L. 116–283, §2803(c)(1)(B), inserted "or agreement" after "each contract" and struck out "that the Secretary proposes to solicit" after "unaccompanied housing units".

Subsec. (a)(2). Pub. L. 116–283, §2803(c)(2), substituted "A report required by paragraph (1)" for "For each proposed contract, conveyance, or lease described in paragraph (1), the report required by such paragraph" in introductory provisions and inserted "agreement," after "contract," wherever appearing.

Subsec. (a)(3). Pub. L. 116–283, §2803(c)(3), inserted "or agreement" after "contract" wherever appearing.

Subsec. (c)(10). Pub. L. 116–283, §2811(h), amended par. (10) generally. Prior to amendment, par. (10) read as follows: "An assessment of the dispute resolution process, which shall include a specific analysis of each denied tenant request to withhold rent payments and each instance in which the dispute resolution process resulted in a favorable outcome for the landlord."

2019—Subsec. (c)(7) to (14). Pub. L. 116–92 added pars. (7) to (14).

2017—Subsec. (a)(4). Pub. L. 115–91 added par. (4) and struck out former par. (4) which read as follows: "The report shall be submitted not later than 30 days before the date on which the Secretary issues the contract solicitation or offers the conveyance or lease or, if earlier, a period of 20 days has elapsed from the date on which a copy of the report is provided in an electronic medium pursuant to section 480 of this title."

2014—Subsec. (c). Pub. L. 113–291 substituted "an evaluation" for "on evaluation" in introductory provisions.

2013—Subsecs. (b), (c). Pub. L. 112–239 added subsecs. (b) and (c) and struck out former subsec. (b) which required the Secretary of Defense to provide annual reports to Congress. Subsec. (c)(3). Pub. L. 113–66 inserted ", to specifically include any unique variances associated with litigation costs" before period at end.

2011—Subsec. (a)(4). Pub. L. 111–383, §2803(g), inserted before period at end "or, if earlier, a period of 20 days has elapsed from the date on which a copy of the report is provided in an electronic medium pursuant to section 480 of this title".

Subsec. (b)(1). Pub. L. 111–383, §1075(h)(6), made technical correction to directory language of Pub. L. 109–163, §2806(c)(2)(A). See 2006 Amendment note below.

2008—Subsec. (b)(7). Pub. L. 110–417, §2805(b), added par. (7).
Subsec. (b)(8). Pub. L. 110–417, §2805(f), added par. (8).

2006—Subsec. (a)(2)(D). Pub. L. 109–163, §2806(c)(1), inserted before period ", including a description of the specific construction, acquisition, or improvement projects from which funds were transferred to the Funds established under section 2883 of this title in order to finance the contract, conveyance, or lease".

Subsec. (b)(1). Pub. L. 109–163, §2806(c)(2)(B), (C), substituted "covering each of the Funds" for "covering the Funds" and inserted before period at end ", including a description of the specific construction, acquisition, or improvement projects from which funds were transferred and the privatization projects or contracts to which those funds were transferred. Each report shall also include, for each military department or defense agency, a description of all funds to be transferred to such Funds for the current fiscal year and the next fiscal year".

Pub. L. 109–163, §2806(c)(2)(A), as amended by Pub. L. 111–383, §1075(h)(6), substituted "A separate report" for "A report".

2004—Subsec. (a)(2). Pub. L. 108–375, §2806(a), amended par. (2) generally. Prior to amendment, par. (2) read as follows: "The report shall describe the proposed contract, conveyance, or lease and the intended method of participation of the United States in the contract, conveyance, or lease and provide a justification of such method of participation."

Subsec. (b)(5), (6). Pub. L. 108–375, §2806(b), added par. (5) and redesignated former par. (5) as (6).

2003—Subsec. (a)(2) to (4). Pub. L. 108–136, §2807(a), designated second sentence of par. (2) as par. (4) and added par. (3).

Subsec. (b)(2). Pub. L. 108–136, §2807(b)(1), inserted before period at end ", and such recommendations as the Secretary considers necessary for improving the extent and effectiveness of the use of such authorities in the future".

Subsec. (b)(3) to (5). Pub. L. 108–136, §2807(b)(2), added pars. (3) to (5) and struck out former par. (3) which read as follows: "A description of the objectives of the Department of Defense for providing military family housing and military unaccompanied housing for members of the armed forces."

EFFECTIVE DATE OF 2011 AMENDMENT

Pub. L. 111–383, [div. A, title X, §1075\(h\)](#), [Jan. 7, 2011](#), 124 Stat. 4377, provided that amendment by section 1075(h)(6) is effective as of Jan. 6, 2006, and as if included in Pub. L. 109–163 as enacted.

TERMINATION OF REPORTING REQUIREMENTS

For termination, effective Dec. 31, 2021, of provisions in subsecs. (b) and (c) of this section requiring submittal of reports to Congress, see section 1061 of Pub. L. 114–328, set out as a note under section 111 of this title.

FINAL REPORT

Pub. L. 104–106, div. B, title XXVIII, §2801(b), Feb. 10, 1996, 110 Stat. 551, provided that, not later than Mar. 1, 2000, the Secretary of Defense was to submit to the congressional defense committees a report on the use by the Secretary of Defense and the Secretaries of the military departments of the authorities provided by subchapter IV of chapter 169 of this title.

§2885. Oversight and accountability for privatization projects

(a) OVERSIGHT AND ACCOUNTABILITY MEASURES.—Each Secretary concerned shall prescribe regulations to effectively oversee and manage military housing privatization projects carried out under this subchapter during the course of the construction or renovation of the housing units. The regulations shall include the following requirements for each privatization project:

(1) The installation asset manager shall conduct monthly site visits and provide quarterly reports on the progress of the construction or renovation of the housing units. The reports shall be submitted quarterly to the assistant secretary for installations and environment of the respective military department.

(2) The installation asset manager, and, as applicable, the resident construction manager, privatization asset manager, bondholder representative, project owner, developer, general contractor, and construction consultant for the project shall conduct meetings to ensure that the construction or renovation of the units meets performance and schedule requirements and that appropriate operating and ground lease agreements are in place and adhered to.

(3) In the case of a project for new construction, if the project is 90 days or more behind schedule or otherwise appears to be substantially failing to adhere to the obligations or milestones under the contract, the assistant secretary for installations and environment of the respective military department shall submit a notice of deficiency to the Assistant Secretary of Defense for Energy, Installations, and Environment, the Secretary concerned, the managing member, and the trustee for the project.

(4)(A) Not later than 15 days after the submittal of a notice of deficiency under paragraph (3), the Secretary concerned or designated representative shall submit to the project owner, developer, or general contractor responsible for the project a summary of deficiencies related to the project.

(B) If the project owner, developer, or general contractor responsible for the privatization project is unable, within 60 days after receiving a notice of deficiency under subparagraph (A), to make progress on the issues outlined in such notice, the Secretary concerned shall notify, in an electronic medium pursuant to section 480 of this title, the congressional defense committees of the status of the project and include a recommended course of action to correct the problems.

(b) REQUIRED QUALIFICATIONS.—The Secretary concerned or designated representative shall ensure that the project owner, developer, or general contractor that is selected for each military housing privatization initiative project has construction experience commensurate with that required to complete the project.

(c) BONDING LEVELS.—The Secretary concerned shall ensure that the project owner, developer, or general contractor responsible for a military housing privatization initiative project has sufficient payment and performance bonds or suitable instruments in place for each phase of a construction or renovation portion of the project to ensure successful completion of the work in

amounts as agreed to in the project's legal documents, but in no case less than 50 percent of the total value of the active phases of the project, prior to the commencement of work for that phase.

(d) **REPORTING OF EFFORTS TO SELECT SUCCESSOR IN EVENT OF DEFAULT.**—In the event a military housing privatization initiative project enters into default, the assistant secretary for installations and environment of the respective military department shall submit, in an electronic medium pursuant to section 480 of this title, a report to the congressional defense committees every 90 days detailing the status of negotiations to award the project to a new project owner, developer, or general contractor.

(e) **EFFECT OF NOTICES OF DEFICIENCY ON CONTRACTORS AND AFFILIATED ENTITIES.**—(1) The Secretary concerned shall keep a record of all plans of action or notices of deficiency issued to a project owner, developer, or general contractor under subsection (a)(4), including the identity of each parent, subsidiary, affiliate, or other controlling entity of such owner, developer, or contractor.

(2) Each military department shall consult all records maintained under paragraph (1) when reviewing the past performance of owners, developers, and contractors in the bidding process for a contract or other agreement for a military housing privatization initiative project.

(f) **FINANCIAL INTEGRITY AND ACCOUNTABILITY MEASURES.**—(1) The regulations required by subsection (a) shall address the following requirements for each military housing privatization project upon the completion of the construction or renovation of the housing units:

(A) The financial health and performance of the privatization project, including the debt-coverage ratio of the project and occupancy rates for the housing units.

(B) An assessment of the backlog of maintenance and repair of the housing units.

(2) If the debt service coverage for a military housing privatization project falls below 1.0 or the occupancy rates for the housing units of the project are below 75 percent for more than one year, the Secretary concerned shall require the development of a plan to address the financial risk of the project.

(Added Pub. L. 110–417, div. B, title XXVIII, §2805(a)(1), Oct. 14, 2008, 122 Stat. 4721; amended Pub. L. 112–239, div. B, title XXVIII, §2803(a), Jan. 2, 2013, 126 Stat. 2147; Pub. L. 113–66, div. A, title X, §1084(a)(3), Dec. 26, 2013, 127 Stat. 871; Pub. L. 113–291, div. A, title IX, §901(n)(2), Dec. 19, 2014, 128 Stat. 3469; Pub. L. 115–91, div. B, title XXVIII, §2801(d)(4), Dec. 12, 2017, 131 Stat. 1844.)

PRIOR PROVISIONS

A prior section 2885, added Pub. L. 104–106, div. B, title XXVIII, §2801(a)(1), Feb. 10, 1996, 110 Stat. 551; amended Pub. L. 105–85, div. A, title X, §1073(a)(61), Nov. 18, 1997, 111 Stat. 1903; Pub. L. 106–398, §1 [div. B, title XXVIII, §2806], Oct. 30, 2000, 114 Stat. 1654, 1654A–415; Pub. L. 107–107, div. B, title XXVIII, §2805, Dec. 28, 2001, 115 Stat. 1306, related to expiration of authority to enter into a contract under this subchapter, prior to repeal by Pub. L. 108–375, div. B, title XXVIII, §2805(b)(1), Oct. 28, 2004, 118 Stat. 2122.

AMENDMENTS

2017—Subsec. (a)(4)(B). Pub. L. 115–91, §2801(d)(4)(A), inserted ", in an electronic medium pursuant to section 480 of this title," after "notify" and substituted "and include" for "and shall provide".

Subsec. (d). Pub. L. 115–91, §2801(d)(4)(B), inserted ", in an electronic medium pursuant to section 480 of this title," after "submit".

2013—Subsec. (a). Pub. L. 112–239, §2803(a)(2), in introductory provisions, inserted "during the course of the construction or renovation of the housing units" before period at end of first sentence.

Subsec. (a)(3). Pub. L. 113–66 substituted "In the case of a project for new construction, if the project" for "If a project".

Subsec. (f). Pub. L. 112–239, §2803(a)(1), added subsec. (f).

CHANGE OF NAME

"Assistant Secretary of Defense for Energy, Installations, and Environment" substituted for "Deputy Under Secretary of Defense (Installations and Environment)" in subsec. (a)(3) on authority of section 901(n)(2) of Pub. L. 113–291, set out as a References note under section 131 of this title.

[§2886. Repealed. Pub. L. 116–92, div. B, title XXX, §3014(d)(1), Dec. 20, 2019, 133 Stat. 1926]

Section, added Pub. L. 115–91, div. A, title VI, §602(a), Dec. 12, 2017, 131 Stat. 1417, prohibited collection of amounts in addition to rent from members assigned to military family housing units or military unaccompanied housing units. See section 2891a(e) of this title.

APPENDIX D MILITARY PRIVATIZATION INITIATIVE TENANT BILL OF RIGHTS



Military Housing Privatization Initiative Tenant Bill of Rights

The Department of Defense is fully committed to ensuring our Nation's most valued resource—its military service members and their families—have access to safe, quality, and wellmaintained homes and communities on DOD installations.

The National Defense Authorization Act for Fiscal Year 2020 set out eighteen rights of military service members and their families (Tenants) residing in privatized housing. The Department of Defense commits to ensuring that privatized housing Tenants receive quality housing and fair treatment from the Military Housing Privatization Initiative project owners (MHPI companies) that operate and maintain privatized housing.

It is paramount that residents receive the full benefit of each right. The Department of Defense, through each of its Military Departments, will work diligently and expeditiously to develop the processes and procedures needed to implement these rights and make Tenants aware of them. However, many of the rights set forth by Congress pertain to legal matters that do not lend themselves to unilateral action by the Department. To the extent it is not already the case, the Military Departments commit to working with the MHPI companies to incorporate these rights and procedures into appropriate project legal documents. In some cases, more work is required before the benefits of these rights are fully available to tenants.

The Department commits to providing the full benefit of the following 15 rights by May 1, 2020.

1. The right to reside in a housing unit and a community that meets applicable health and environmental standards.
2. The right to reside in a housing unit that has working fixtures, appliances, and utilities and to reside in a community with well-maintained common areas and amenity spaces.
3. The right to a written lease with clearly defined rental terms to establish tenancy in a housing unit, including any addendums and other regulations imposed by the Landlord regarding occupancy of the housing unit and use of common areas.
4. The right to a plain-language briefing, before signing a lease and 30 days after move-in, by the installation housing office on all rights and responsibilities associated with tenancy of the housing unit, including information regarding the existence of any additional fees authorized by the lease, any utilities payments, the procedures for submitting and tracking work orders, the identity of the military tenant advocate, and the dispute resolution process.
5. The right to have sufficient time and opportunity to prepare and be present for move-in and move-out inspections, including an opportunity to obtain and complete necessary paperwork.
6. The right to report inadequate housing standards or deficits in habitability of the housing unit to the Landlord, the chain of command, and housing management office without fear of reprisal or retaliation, including reprisal or retaliation in the following forms: (A) unlawful recovery of, or attempt to recover, possession of the housing unit; (B) unlawfully increasing

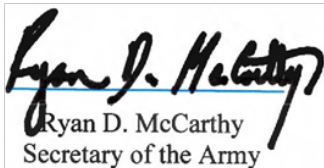
the rent, decreasing services, or increasing the obligations of a Tenant; (C) interference with a Tenant's right to privacy; (D) harassment of a Tenant; (E) refusal to honor the terms of the lease; or (F) interference with the career of a Tenant.

1. The right of access to a Military Tenant Advocate or a military legal assistance attorney, through the housing management office of the installation of the Department at which the housing unit is located to assist in the preparation of requests to initiate dispute resolution.
2. The right to receive property management services provided by a Landlord that meet or exceed industry standards and that are performed by professionally and appropriately trained, responsive and courteous customer service and maintenance staff.
3. The right to have multiple, convenient methods to communicate directly with the Landlord maintenance staff, and to receive consistently honest, accurate, straightforward, and responsive communications.
4. The right to have access to an electronic work order system through which a Tenant may request maintenance or repairs of a housing unit and track the progress of the work.
11. With respect to maintenance and repairs to a housing unit, the right to the following: (A) prompt and professional maintenance and repair; (B) to be informed of the required time frame for maintenance or repairs when a maintenance request is submitted; and (C) in the case of maintenance or repairs necessary to ensure habitability of a housing unit, to prompt relocation into suitable lodging or other housing at no cost to the Tenant until the maintenance or repairs are completed.
12. The right to receive advice from military legal assistance on procedures involving mechanisms for resolving disputes with the property management company or property manager to include mediation, arbitration, and filing claims against a Landlord.
13. The right to have reasonable, advance notice of any entrance by a Landlord, installation housing staff, or chain of command into the housing unit, except in the case of an emergency or abandonment of the housing unit.
14. The right to not pay non-refundable fees or have application of rent credits arbitrarily held.
15. The right to expect common documents, forms, and processes for housing units will be the same for all installations of the Department, to the maximum extent applicable without violating local, State, and Federal regulations.

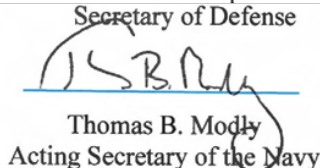
With respect to the remaining three rights—access to maintenance history, process for dispute resolution, and withholding of rent until disputes are resolved—the Department will continue to work with the MHPI companies and, as necessary, Congress to ensure the benefits of these rights are fully available. While the Department develops standardized, formal processes for these rights, service members and their families will be able to leverage the support available from their respective Military Departments to address and resolve relevant housing issues. Tenants seeking assistance should continue to engage their housing office, installation leadership, or chain of command.



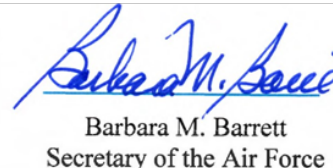
Mark T. Esper
Secretary of Defense



Ryan D. McCarthy
Secretary of the Army



Thomas B. Modly
Acting Secretary of the Navy



Barbara M. Barrett
Secretary of the Air Force

APPENDIX E MHPI EVIDENCE SHEET

PROGRAM IMPACT:

PAGES:

AUTHOR:

DATE:

TITLE:

SOURCE:

CLASSIFICATION:

Document Type (Statute, Report, Correspondence, etc.)

Management Level (Political, Agency Leadership, Staff-Level)

Program Element (Independent Variable) or Program Problem (Dependent Variable)

ANALYSIS:

Was there a program problem? Cause?

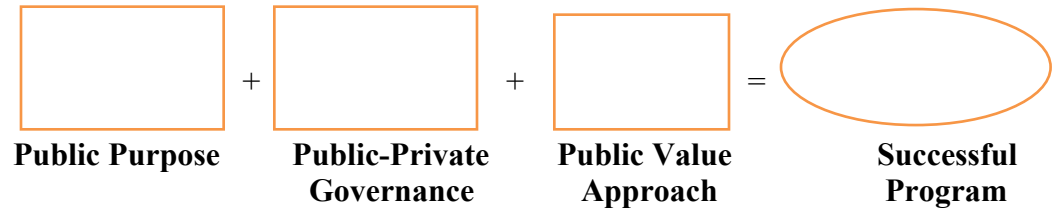
Was the public purpose of MHPI consistently and clearly identified?

Did the MHPI governance arrangements adequately support the public purpose?

Did the MHPI governance arrangements adequately address uncertainty and risk?

Was the expected public value for MHPI appropriately calculated?

Were public purpose, governance, and value aligned/misaligned?



EXPLANATION:

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