



Multifamily Housing Finance (MFHF)

Enterprise Architecture (EA) Blueprint

Volume 3: Target Architecture



*Office of Multifamily Housing
Enterprise Architecture Blueprint*

**U.S. Department of Housing and Urban
Development**

March 2, 2006

Revision Sheet

Release No.	Date	Revision Description
Rev. 0	May 4, 2005	Multifamily Housing Enterprise Architecture To-Be Analysis
Rev. 1	Oct 14, 2005	Incorporate changes requested by Department of Housing and Urban Development Enterprise Architecture Team
Rev. 2	March 2, 2006	<p>Modify & Consolidate MFH EA Blueprint from nine volumes to three volumes. The three volumes are – Architecture Management, Baseline Architecture, and Target Architecture.</p> <ul style="list-style-type: none"> – Architecture Management consolidates information from the Architecture Overview and the Communications Plan. – Baseline Architecture contains information from Organization and Roles, Process Maps, and As-is Architecture. – Target Architecture now contains the Organization and Roles, Process Maps, “To-Be” Architecture, Gap Analysis, and Implementation Plan.



**MFH Enterprise Architecture Blueprint
Target Architecture
Authorization Memorandum**

I have carefully assessed the Project Plan for the Multifamily Housing Enterprise Architecture Blueprint project.

This document has been completed in accordance with the requirements of the HUD System Development Methodology.

MANAGEMENT CERTIFICATION - Please check the appropriate statement.

_____ The document is accepted.

_____ The document is accepted pending the changes noted.

_____ The document is not accepted.

We fully accept the changes as needed improvements and authorize initiation of work to proceed. Based on our authority and judgment, the continued operation of this project is authorized.

NAME
Project Leader

DATE

NAME
Operations Division Director

DATE

NAME
Program Area/Sponsor Representative

DATE

NAME
Program Area/Sponsor Director

DATE

Target Architecture

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1.0 INTRODUCTION

1 INTRODUCTION

1.1 MFH Enterprise Architecture – Blueprint Volumes

The Office of Multifamily Housing Programs, working together with the HUD Enterprise Architecture (EA) Team, has developed the *Multifamily Housing Finance (MFHF) Enterprise Architecture (EA) Blueprint*. This document outlines the future business and technology modernization strategies to support HUD’s Multifamily Housing Finance line of business as outlined in HUD’s overall Enterprise Architecture models. The blueprint provides specific direction on IT strategic planning, capital planning, investment control, and systems life cycle planning to aid decision-makers during IT investment management processes, organization development, and the deployment of automated government solutions.

The intent of this blueprint is to ensure that service and product solutions are business-driven and represent Multifamily Housing’s goals. The overall objective of this EA initiative is to identify where the business is today, where it needs to be, and how to get there. This process helps us gain an understanding of the business functions and the information management systems supporting Multifamily Housing’s business operations as a defined line of business. This creates an environment that is flexible to changing needs, both internal and external to the enterprise.

To achieve these goals, an analysis of the business functions was conducted, independent of existing systems. After the business analysis, a systems analysis was conducted to map the business functions to systems, systems to technologies, and technologies to hardware and software configurations. The result was the *MFHF EA Blueprint*.

It is the responsibility of the Multifamily Housing Office of Program Systems Management to maintain and exercise change control over the blueprint documentation. As primary users of the *MFHF EA Blueprint*, many of the change requests will originate from within that division. Other changes may be requested by coordinating offices, including the HUD Enterprise Architecture Team.

The *MFH EA Blueprint* is comprised of three volumes:

- Volume 1: Architecture Management – describes the business case for having a blueprint and outlines the conceptual framework in which the *MFH EA Blueprint* was developed. It then goes on to identify the stakeholders, how they will communicate, and how they will manage the change to the blueprint over time.
- Volume 2: Baseline Architecture – describes the current state of Multifamily Housing’s business, the systems that support the business, and the technology that supports the systems. (This baseline architecture is sometimes referred to as the “As-is” architecture.)
- Volume 3: Target Architecture – describes the envisioned state of Multifamily

Housing’s business a few years down the road. It describes the desired systems and technology to support Multifamily Housing’s business processes. (This architecture is sometimes referred to as the “To-be” architecture.) This document also analyzes the gap between the baseline and the target. It concludes with a strategy and schedule for closing the gap.

1.2 Summary of This Volume

The *MFH EA Blueprint – Target Architecture* details the target state of the Multifamily Housing business and its supporting technologies. The business processes and how they satisfy the goals of HUD and MFH may change over time. Documenting these as a current snapshot makes it possible to reference how these changes occur. Likewise, how the target systems implement those business processes and what technical architectures are used for those systems are identified in their target state as an end state from toward which changes can be implemented.

While this version of the Target Architecture does not outline any significant changes in the overall high-level business functions that make up Multifamily Housing’s business, it does identify some significant changes to the way this business will be conducted. In a time when resources are constrained, we must look for ways to use these resources by the most efficient and cost effective means. A significant proposal in this Target Architecture is the creation of specialty Service Centers to handle specific routine tasks. These Service Centers would consolidate the functions currently performed at every HUD Multifamily Housing field office and take advantage of task specific training. The Service Centers would then free up more field office personnel to handle the project-specific tasks, which are often compliance related, that must be handled at the local level.

[See the Multifamily Housing Enterprise Architecture Blueprint – Gap Analysis in appendix B for a detailed difference between the “As-Is Analysis” and “To-Be Analysis” models!](#)

The proposed architecture also consolidates a large portion of the technology support activities under a single Change Control Board (CCB) and one IT Capital Planning vision (a single Project Cost Accounting System (PCAS)). [NOTE: This excludes the accounting functions and the combined Multifamily Housing/Public Indian Housing Rental Assistance initiatives]. This ensures that IT funding supports the overall business needs of the Multifamily Housing division. The resulting system support will create a more integrated work environment from which the system-modules (formerly the systems) can be maintained, but present a single user presentation. This tighter integration will allow services to be defined and implemented to support numerous different processes performing the same functionality, reducing development and maintenance liabilities.

Since this blueprint represents the business and implementation plan moving forward for Multifamily Housing automation, this information must be accessible and revisable in a timely

manor. It is imperative that the blueprint remains up-to-date with the business and technology changes and to that end a formal process to maintain the blueprint has been established.

This volume, *MFH EA Blueprint – Target Architecture*, is organized as follows:

- *Chapter 2.0 MFH EA Background Information*- presents the sources for the guidance and standards used in the development of the *MFH EA Blueprint*. (The identical chapter is repeated in each of the three volumes for easy reference.)
- *Chapter 3.0 Business Profile* - discusses the business analysis of Multifamily Housing’s business operations.
- *Chapter 4.0 Systems Profile* - discusses the systems analysis of Multifamily Housing’s automated systems being proposed to continue supporting its’ business operations.
- *Chapter 5.0 Architecture Profile* – discusses the technology analysis of Multifamily Housing’s information technologies being proposed to continue supporting its’ automated systems.
- *Chapter 6.0 Implementation Plan* – defines the development methodology and initiatives Multifamily Housing will use to implement its’ proposed business operations, automated systems, and information technologies going forward.
- *Chapter 7.0 Implementation Schedules* – establishes a series of the milestones over multiple fiscal years to be achieved in implementing Multifamily Housing’s proposed business operations, automated systems, and information technologies.
- *Appendix A: Detailed Guidance on MFH Programs* – outlines the housing programs Congress has mandated HUD to implement through the Office of Multifamily Housing.
- *Appendix B: Gap Analysis* – highlights where in the MFH EA Blueprint documentation differences exist between Volume 2 - Baseline Architecture and Volume 3 - Target Architecture.

1.3 Background Information

The requirement for HUD to create an overall Enterprise Architecture is embedded in the law. The Clinger-Cohen Act of 1996 (Public Law 104-106) assigns the Chief Information Officer (CIO) with responsibility to develop, maintain and facilitate the implementation of an information technology architecture. While the HUD Enterprise Architecture (EA) Support Team in the HUD CIO’s office is responsible for the overall Enterprise Architecture model, the Office of Program Systems Management in the Office of Multifamily Housing is the sponsor of the Multifamily Housing Finance “Segment Architecture”. This segment architecture, along

with segments representing other HUD business areas, directly supports the overall HUD Enterprise Architecture. You will see a mapping from the segment architecture to the overall HUD architecture within the blueprint documentation.

In October 2004, Multifamily Housing established a team to develop the Multifamily Housing Finance line of business “segment architecture” blueprint. This team consisted of Housing program area managers, the CIO’s Enterprise Architecture team, subject matter experts from each of the Multifamily Housing program areas, and contractor support. Together, this team analyzed current business processes using existing business documentation, program area “subject matter expert” interviews and workshops, and other support material with the goal to document the current business functions performed within Multifamily Housing. The team also worked with the program areas to identify desired business changes. These changes are documented in a “to-be” business model. In the first edition of this blue print, the “to-be” changes are limited due to time constraints, but are sure to expand over time. The team also created a gap analysis to compare the current business functions and the desired business changes to detail the differences. The *MFH EA Blueprint* was then used to create a strategy for transforming to these future goals.

For additional background information, see *The MFH EA Blueprint, Volume 1 – Architecture Management*.

1.4 Acronym and Abbreviations Used In This Volume

Table 1-1 provides a list of acronyms and abbreviations that are used throughout the *MFH EA Blueprint - Architecture Management* volume.

Table 1-1: Acronyms and Abbreviations

Acronyms	Definition
AC	Architecture Component
ADP	Automated Data Processing
AFS	Annual Financial Statement
ALCP	Assisted-Living Conversion Program
ALF	Assisted-Living Facility
APPS	Active Partner Performance System
ARAMS	Automatic Renewal and Amendment Management Sub-system
ATS	Advanced Technology Systems
BAA	Business Area Analysis
BOP	Business Operating Plan
BPMN	Business Process Modeling Notation
BRM	Business Reference Model
CCB	Change Control Board
CFR	Code of Federal Regulations
CM	Configuration Management
COTS	Commercial Off-The-Shelf software
CPIC	Capital Planning and Investment Control
CSMS	Comprehensive Servicing and Monitoring System

Acronyms	Definition
DAP	Development Application Processing System
DARTS	Departmental Accounts Receivable Tracking System
DEC	Departmental Enforcement Center
DNS	Domain Name System
EA	Enterprise Architecture
EA	DEC Assistant
FASA	Federal Acquisition Streamlining Act of 1994
FASS	Financial Assessment Subsystem
FEA	Federal Enterprise Architecture
FHA	Federal Housing Administration
FHD	Function Hierarchy Diagram
FISMA	Federal Information Security Management Act
FTP	File Transfer Protocol
FY	Fiscal Year
GAO	General Accounting Office
GNMA	Government National Mortgage Association
GSC	Geocoding Service Center
HAP	Housing Assistance Payment Contract
HEREMS	Housing Enterprise Real Estate Management System
HTTP	Hyper Text Transfer Protocol
HUD	Department of Housing and Urban Development
IMF	Institution Master File System
IPA	Independent Public Accountant
IRP	Interest Rate Premium
ISP	Information Strategic Plan
IT	Information Technology
ITIM	Information Technology Investment Management
J2EE	Java 2 Platform, Enterprise Edition
JCL	Job Control Language
LAN	Local Area Network
LAS	Loan Accounting System
LOCCS	Line of Credit Control System
MAHRA	Multifamily Assisted Housing Reform and Affordability Act of 1997
MAP	MF Accel Processing
MDDR	Multifamily Default and Delinquency Reporting
MF	Office of Multifamily Housing
MFH	Office of Multifamily Housing
MFIC	Multifamily Insurance and Claims
MFIS	Multifamily Insurance System
MIP	Mortgagee-in-Possession
MS	Microsoft
MSA	Metropolitan Statistical Area
N/A	Non Applicable
NIST	National Institute of Standards and Technology
OAHP	Office of Affordable Housing Preservation
OCIO	Office of the Chief Information Officer
OIT	Office of Information Technology
OMB	Office of Management and Budget
OMHAR	Office of Multifamily Housing and Assistance Restructuring
OPIIS	On-Line Property Integrated Information Suite

Acronyms	Definition
OS	Operating System
PAS	Program Accounting System (for grants)
PASS	Physical Assessment Sub-System
PBCA	Performance-Based Contract Administrator
PCAS	Project Cost Accounting System
PIH	Public and Indian Housing
PMO	Program Management Office
PRAC	Project Rental Assistance Contracts
QA	Quality Assurance
QPE	Qualified Participating Entity
REAC	Real Estate Assessment Center
REMS	Real Estate Management System
RHA	Rental Housing Assistance
RHAS	Rental Housing Assistance System
SAMA	Site Appraisal and Market Analysis
SDM	System Development Methodology
SME	Subject Matter Expert
SOA	Section of the Act
SQL	Structured Query Language
SRM	Service Component Reference Model
SRO	Single Room Occupancy Projects
SSH	Secure Shell
TAP	Tenant Assistance Policy
TBD	To Be Determined
TIN	Taxpayer ID Number
TPA	Transfer of Physical Assets
TRACS	Tenet Rental Assistance Certification System
TRM	Technical Reference Model
WASS	Web Access Security Subsystem
XML	Extensible Markup Language
Acronym/Initialis m	Definition
AC	Architecture Component

2.0 BUSINESS PROFILE

2 BUSINESS PROFILE

2.1 Overview

The fundamental business drivers behind Multifamily Housing’s business domain are its Programs, Strategic and Business Goals, Business Functions, and Organizational Offices / Divisions. These business drivers determine and define Multifamily Housing operations and, to a certain extent, the information management systems and information technologies that support the operations. Thus, ensuring changes to systems and technology, as a result of the MFH EA, remain business-driven. Ultimately, in response to the public’s need for multifamily rental housing, these business drivers are targeted toward supporting MFH in its’ mission “to assure the ongoing supply of decent, affordable rental housing for all Americans”. For the purpose of the *MFH EA Blueprint - Target Architecture*, the *Business Profile* documents the business drivers and the relationships between them.

Business Impacts resulting from the “To-Be” analysis of the *Business Profile* for Multifamily Housing are reflected in Appendix B- Gap Analysis.

The remainder of this chapter is organized as follows:

- *Business Definitions* defines Multifamily Housing’s business domain in terms of its Programs, Strategic and Business Goals, Business Functions, and Organizational Divisions.
- *Process Maps* decomposes the Business Functions into sub-functions, processes, and workflows. It then goes on to show how the Business Functions relate to the Programs, Strategic and Business Goals, and Organizational Offices / Divisions.
- *HUD Business Reference Model to MFH Functions* maps the Business Functions to the HUD Business Reference Model (BRM) in the HUD Target Architecture to align MFH with the rest of HUD. This enables HUD and MFH to take a broad look and recognize areas of missing or overlapping functional coverage as well as identify areas of improvement in their business delineations.

2.2 Business Definitions

The Multifamily Housing business domain services the public need for decent and affordable rental housing. This section discusses how Multifamily Housing delivers those services to sustain the ongoing supply of multifamily rental housing.

2.2.1 MFH Programs

Multifamily Housing’s programs are set forth by congressional legislation enacted to respond to the American public’s need for multifamily rental housing. MFH Programs are also referred to as “Sections of the Act”, a term indicative of specific sections of the federal housing laws that govern HUD. Where the law applies to multifamily rental housing, HUD fulfills its obligation to comply with federal housing laws by implementing the Sections of the Act via programs administered through the Multifamily Housing business domain.

Table 3-1 highlights the Section of the Act applicable to each MFH Program and defines the purpose of each program. Additional information regarding the MFH Programs is provided in Appendix A – Detailed Guidance on MFH Programs.

Table 2-1: Definition of Multifamily Housing Programs According to Sections of the Act

Program	Definition
Mortgage Insurance for Rental Housing: Section 207	Section 207 insures lenders against loss on mortgage defaults. The intent of the program is to increase the supply of quality and reasonably priced rental housing for middle-income families.
Mortgage Insurance for Manufactured Home Parks: Section 207	Section 207 promotes the creation of manufactured home communities by increasing the availability of affordable financing and mortgages.
Mortgage Insurance for Nursing Homes, Intermediate Care, Board & Care and Assisted-living Facilities: Section 232 and Section 232/223(f)	Section 232 insures lenders against the loss on mortgage defaults. Section 232 insures mortgages that cover the construction and rehabilitation of nursing homes and assisted living facilities for people who need long-term care or medical attention. The program allows for long-term, fixed rate financing (up to 40 years) for new and rehabilitated properties and (up to 35 years) for existing properties without rehabilitation that can be financed with Government National Mortgage Association (GNMA) Mortgage Backed Securities.
Mortgage Insurance for Rental and Cooperative Housing: Section 221(d)(3) and Section 221(d)(4)	Section 221(d)(3) and Section 221(d)(4) insures lenders against loss on mortgage defaults. Section 221(d)(3) is used by nonprofit sponsors and Section 221(d)(4) is used by profit-motivated sponsors. Both programs assist private industry in the construction or rehabilitation of rental and cooperative housing for moderate-income and displaced families by making capital more readily available. The program allows for long-term mortgages (up to 40 years) that can be financed with Government National Mortgage Association (GNMA) Mortgage Backed Securities.
Mortgage Insurance for Single Room Occupancy Projects (SRO): Section 221(d)(3) and 221(d)(4)	Section 221(d)(3)(nonprofit borrowers) and Section 221(d)(4)(profit motivated borrowers) insure lenders against loss on mortgages. The program encourages construction or substantial rehabilitation of single-room apartment buildings with financing insured by HUD, thus enabling people with very limited incomes to find clean and safe housing.

Program	Definition
Mortgage Insurance for Cooperative Housing: Section 213	Section 213 insures lenders against loss on mortgage defaults. Section 213 enables nonprofit cooperative housing corporations or trusts to develop or sponsor the development of housing projects to be operated as cooperatives. Section 213 also allows investors to provide good quality multifamily housing to be sold to non-profit corporations or trusts upon completion of construction or rehabilitation. Alternatively, cooperatives may use Section 221(d)(3) to insure construction or substantial rehabilitation of cooperative projects.
Mortgage Insurance for Rental Housing for Urban Renewal and Concentrated Development Areas: Section 220	Section 220 insures lenders against loss on mortgage defaults. Section 220 provides good quality rental housing in urban areas that have been targeted for overall revitalization. Section 220 insures mortgages on new or rehabilitated housing located in designated urban renewal areas, and in areas with concentrated programs of code enforcement, and neighborhood development.
Mortgage Insurance for Rental Housing for the Elderly: Section 231	Section 231 insures lenders against loss on mortgages. Section 231 was designed to increase the supply of rental housing specifically for the use and occupancy of elderly persons, and/or persons with disabilities. However, few projects have been insured under Section 231 in recent years; non-profits have opted to use Section 221(d)(3), while profit motivated developers have used Section 221(d)(4).
Mortgage Insurance for Construction or Substantial Rehabilitation of Condominium Projects: Section 234(d)	Section 234(d) insures lenders against the loss on mortgage defaults. The program enables sponsors to develop condominium projects in which individual units will be sold to home buyers.
Supportive Housing for the Elderly Program: Section 202	The Section 202 program helps expand the supply of affordable housing with supportive services for the elderly. It provides very low-income elderly with options that allow them to live independently but in an environment that provides support activities such as cleaning, cooking, transportation, etc. The program is similar to Supportive Housing for Persons with Disabilities (Section 811).
Supportive Housing for Persons with Disabilities: Section 811	The Section 811 program allows persons with disabilities to live as independently as possible in the community by increasing the supply of rental housing with the availability of supportive services. The program also provides project rental assistance, which covers the difference between the HUD-approved operating costs of the project and the tenants' contribution toward rent. The program is similar to Supportive Housing for the Elderly (Section 202).
Mortgage Insurance for Two-year Operating Loss Loans: Section 223(d)	Section 223(d) helps avoid insurance claims on HUD-insured multifamily mortgages by insuring separate loans to cover operating losses.

Program	Definition
Mortgage Insurance for Purchase or Refinancing of Existing Multifamily Rental Housing: Sections 207/223(F)	Section 223(f) insures lenders against loss on mortgage defaults. The program allows for long- term mortgages (up to 35 years) that can be financed with Government National Mortgage Association (GNMA) Mortgage-Backed Securities. This eligibility for purchase in the secondary mortgage market improves the availability of loan funds and permits more favorable interest rates.
Mortgage Insurance for Supplemental Loans for Multifamily Projects: Section 241(a)	Section 241(a) insures lenders against loss on mortgage defaults. The program is intended to keep the project competitive, extend its economic life, and to finance the replacement of obsolete equipment. Insured mortgages finance repairs, additions, and improvements to multifamily projects, group practice facilities, hospitals, or nursing homes already insured by HUD or held by HUD. Major movable equipment for insured nursing homes, group practice facilities, or hospitals may be covered by a mortgage under this program.
Risk-sharing Program - Qualified Participating Entities (Qpe): Section 542(b)	The program provides a new insurance authority independent of the National Housing Act. The purpose of the program is to support and encourage the production and preservation of affordable Housing. The program provides insurance and reinsurance for multifamily housing projects whose loans are originated, underwritten, serviced, and disposed of by a QPE and/or its approved lenders.
Housing Finance Agency Risk-sharing: Section 542(c)	The Program provides new insurance authority independent of the National Housing Act. Section 542(c) provides credit enhancement for mortgages of multifamily housing projects whose loans are underwritten, processed, serviced, and disposed of by HFAs. HUD and HFAs share in the risk of the mortgage. The program was originally designed as a pilot to assess the feasibility of risk-sharing partnerships between HUD and qualified State and local HFAs in providing affordable housing.
Mortgage Insurance for HUD Loan Refinance: Section 223(a)(7)	Under Section 223(a)(7) of the National Housing Act, the Federal Housing Administration (FHA) provides mortgage insurance to facilitate the refinance and moderate rehabilitation of existing HUD-insured multifamily properties.
Assisted-living Conversion Program (ALCP) (See Sections applicable to the Elderly and Disabled)	Assisted-Living Facilities (ALFs) are designed to accommodate frail elderly and people with disabilities who can live independently but need assistance with activities of daily living (e.g., assistance with eating, bathing, grooming, dressing and home management activities.) ALFs must provide support services such as personal care, transportation, meals, housekeeping, and laundry.
Mark-to-Market (M2M) (Applicable to all the Sections)	Housing subsidy contracts are expiring on thousands of privately owned multifamily properties with federally insured mortgages. Many of these contracts set rents at amounts higher than those of the local market. As these subsidy contracts expire, the Mark-to-Market program will reduce rents to market levels and will restructure existing debt to levels supportable by these rents.

2.2.2 MFH Strategic and Business Goals

The Multifamily Housing business domain is guided by strategic and business goals set forth by HUD and MFH. These goals are pursued in support of the overall mission of HUD “to increase home ownership, support community development, and increase access to affordable housing

free from discrimination” as Multifamily Housing carries out its’ mission “to assure an ongoing supply of decent, affordable rental housing for all Americans”. The MFH Strategic Goals have been adopted from HUD’s *Programmatic Strategic Goals and Cross-cutting Strategic Goals* established in the HUD Strategic Plan for Fiscal Year 2003 through Fiscal Year 2008.

Programmatic goals reflect the program areas where Multifamily Housing’s efforts benefit families and communities. Cross-cutting goals reflect MFH priorities with a wide cross-cutting impact that affect each of Multifamily Housing’s program areas. For each goal there are key strategic objectives that MFH will use to guide its performance. The MFH Business Goals have been established based upon the responsibility of Multifamily Housing’s business domain to monitor performance in administering the MFH Programs. Similar to the MFH Strategic Goals, MFH Business Goals have key business objectives that MFH will use to further guide performance.

Table 3-2 highlights the MFH Strategic and Business Goals and defines each goal by its key strategic objectives and key business objectives.

Table 2-2: Definition of MFH Strategic and Business Goals

Strategic and Business Goals		Definition
Programmatic Strategic Goals	Increase homeownership opportunities	Expand national homeownership opportunities.
		Increase minority homeownership.
		Make the home-buying process less complicated and less expensive.
		Fight practices that permit predatory lending.
		Help HUD-assisted renters become homeowners.
		Keep existing homeowners from losing their homes.
	Promote decent affordable housing	Expand access to affordable rental housing.
		Improve the physical quality and management accountability of public and assisted housing.
		Increase housing opportunities for the elderly and persons with disabilities.
		Help HUD-assisted renters make progress toward self-sufficiency.
	Strengthen communities	Provide capital and resources to improve economic conditions in distressed communities.
		Help organizations access the resources they need to make their communities more livable.

Strategic and Business Goals		Definition	
		End chronic homelessness and move homeless families and individuals to permanent housing.	
		Mitigate housing conditions that threaten health.	
Cross - Cutting Strategic Goals	Ensure equal opportunity in housing	Resolve discrimination complaints on a timely basis.	
		Promote public awareness of fair housing laws.	
		Improve housing accessibility for persons with disabilities.	
	Embrace high standards of ethics, management and accountability	Rebuild HUD's human capital and further diversify its workforce.	
		Improve HUD's management, internal controls and systems and resolve audit issues.	
		Improve accountability, service delivery and customer service of HUD and its partners.	
		Ensure program compliance.	
		Improve internal communications and employee involvement.	
	Promote participation of faith-based and community organizations	Reduce regulatory barriers to participation by faith-based and community organizations.	
		Conduct outreach to inform potential partners of HUD opportunities.	
		Expand technical assistance resources deployed to faith-based and community organizations.	
		Encourage partnerships between faith-based/community organizations and HUD's traditional grantees.	
	MFH Business Goals	Support the Supply of Multifamily Housing	Provide mortgage insurance for development, acquisitions, and refinancing of rental apartments.
		Serve the Elderly and Disabled	Provide capital advances that support their unique housing needs.
Support the Elderly and Others in Need		Insure mortgages for Nursing Homes, Board and Care, Assisted Living and similar facilities.	
Expand the Affordability of Rental Housing		Provide Rental Housing Assistance Payments on behalf of needy households, enforcement of Use Restrictions and other affordability mechanisms.	
Assure the Continued Availability of Affordable Rental Housing		Provide a variety of housing preservation initiatives (e.g. Refinancing of Older Subsidized Mortgages and 202 Loans, Mortgage Restructuring, and Mark-Up-to-Market).	

Strategic and Business Goals		Definition
	Protect the Taxpayer's Investment	Ensure ongoing strategies of risk management, loss mitigation, and program compliance.
	Improve the Quality of Life of Residents of HUD-Assisted Rental Apartments	Conduct quality improvement programs for housing (e.g. Neighborhood Networks and Service Coordinator Grants)

2.2.3 MFH Business Functions

There are five major business functions implemented within the Multifamily Housing business domain to deliver the MFH Programs and thereby achieve MFH Strategic and Business Goals. These five major business functions include External Partner Management, Asset Development, Asset Management, Rental Housing Assistance, and Asset Disposition.

Note: The function of Rental Housing Assistance is not covered in detail, beyond its definition herein, because the HUD EA Support Team and other organizations directly responsible for administering the Rental Housing Assistance program have already published the [Rental Housing Assistance EA Blueprint](#) prior to the development of the MFH EA and its *MFH EA Blueprint*.

Table 3-3 defines the major business functions for Multifamily Housing.

Table 2-3: Definition of MFH Business Functions

Function	Description
External Partner Management	This function includes all actions performed to obtain and support partners and assure their effectiveness in carrying out Multifamily Housing programs. Partners include Owners, Agents, Consultants, Contractors, Architects, Developers, Sponsors, Mortgagees, Lessees, Contract Administrators, Book Keepers, and Independent Public Accountants/Certified Public Accountants (IPAs/CPAs). The Asset Development and Asset Management business functions utilize Partner Management to ensure end-to-end implementation of programs authorized by the specific sections of the U.S. National Housing Act. Thus, the business drivers for the Partner Management business function are, by definition, inclusive of all programs/sections described for Asset Development and Asset Management.
Asset Development	This function covers, in a functional sense, both the insurance of mortgages under a wide variety of FHA multifamily programs and the approval of capital advances under Section 202 Housing for the Elderly and Section 811 Housing for the Disabled. The administration of FHA mortgage insurance programs has changed dramatically in recent years with the introduction of the Multifamily Accelerated Processing (MAP) alternative, under which FHA-approved lenders perform most processing and underwriting functions, subject to review and monitoring by HUD staff. A business process reengineering (BPR) is currently being conducted to confirm the impact of this significant change on FHA processes and system requirements. The Multifamily Blueprint will be updated to reflect the results of the

	<p>BPR when available. Even prior to completion of the Blueprint, the Office of Multifamily Housing has recognized the need to significantly expand its monitoring and oversight of lenders – recently announcing the creation of a new office to handle this function – and the need is anticipated for expanding the automated support for this critical function. With respect to the Section 202 and Section 811 programs, the new Grants Information Management System (GIMS) is expected to support the 202/811 functions connected with application processing, award, administration, execution, and close out. However, the pending BPR will explore the issue of whether these programs would also need supplemental automated support in the areas of cost analysis, valuation, and underwriting similar to that now being provided for the FHA programs. The lifecycle of MFH Asset Development for Section 202 and Section 811 begins with the Super NoFA (Notice of Funding Availability) to final closing and open/ready for occupancy at which point project oversight is taken over by MFH Asset Management. The Super NoFA is the primary announcement for 99% of HUD’s grant availability. It allows communities to see holistically available funds from HUD. The business calendar for NoFA is Oct 1 to Sep 30, but it can overlap years under special circumstances (e.g., delayed signing of Annual Appropriations). NoFA provides a geographic breakout of available funding according to MFH service center. NoFA applies only to Section 202 and Section 811, not for FHA.</p>
Asset Management	<p>This function covers a wide range of activities designed to assure that owners of the roughly 30,000 apartment complexes receiving support from Multifamily Housing comply with statutory and regulatory requirements, that the projects serve their intended clientele, and provide decent, safe, and affordable housing in a cost-effective fashion. In recent years, HUD has increased its reliance on automation in monitoring the physical, financial and management condition of its rental inventory, and has become much more effective at identifying projects that are high risk, prioritizing its focus on these projects, and promptly and aggressively taking action against owners who have been unable or unwilling to maintain their properties at an acceptable level. The overall portfolio of projects managed by Multifamily Housing covers a wide array of financing mechanisms, and roughly 60% of the portfolio receives some form of rental assistance. The functions directly related to subsidy administration are covered separately in the Rental Housing Assistance Blueprint and are not discussed here. However, Multifamily Housing also needs to be able to manage its entire portfolio as a whole in an effective manner, and thus, the discussion of Asset Management incorporates monitoring and oversight activities that apply to projects regardless of whether or not a subsidy is paid.</p>
Rental Housing Assistance	<p>This function covers the contracting of properties to approve housing for low-income families. See the RHA Blueprint which can be found at the following website:</p> <p>http://www.hud.gov/offices/cio/ea/newea/blueprints/rhblueprint.pdf</p>
Asset Disposition	<p>This function is the formalized process to assess non-performing projects to develop and implement a plan of action that may result in: (1) appropriate measures to correct the problems and aid the long-term stability of the project or (2) asset sales of HUD-held notes or HUD-owned property.</p>

2.2.4 MFH Organizational Offices / Divisions

Multifamily Housing is divided into five (5) offices: the Office of Housing Assistance Contract Administration Oversight, the Office of Multifamily Housing Development, the Office of Asset Management, the Office of Housing Assistance and Grant Administration, and the Office of Program Systems Management. These offices are subdivided into divisions. Each division has its own responsibilities and duties as defined below.

Table 3-4 defines the responsibilities of each Office and their Divisions within the MFH organization.

Table 2-4: Definition of MFH Organizational Offices / Divisions

MFH Offices	
MFH Divisions	Definition
Office of Housing Assistance Contract Administration Oversight	
Financial Operations Division	The Financial Operations Division handles all budget and workload associated with the Section 8 Program, including both HUD-and third-party administered contracts. Funding for new Section 202/811 remains with the Office of Housing Assistance Programs and Grant Administration, which is responsible for grant management. This Division is also responsible for monitoring the timely payment of Section 8 housing assistance to administrators and project owners-in cooperation with the Section 8 Financial Management Center and the accounting staff in the Office of the Chief Financial Officer (CFO). With input on Performance-Based Contract Administrator (PBCA) performance from the Monitoring and Oversight Division, and through coordination with the Financial Management Center, this Division oversees the payment of administration fees to the PBCA s.
Monitoring/Oversight Division	<p>The Monitoring and Oversight Division coordinates activities related to evaluation of the PBCA performance, provides technical assistance to Performance Based Contract Administrators (PBCA)s, prescribes any remedial actions needed to improve PBCA performance, and coordinates efforts between the PBCA s and the Multifamily field office staff. In addition, the Division is responsible for the development of a monitoring and evaluation plan, and coordination of field activities to execute the plan, as well as coordinating audit activities associated with project based Section 8 Contract Administration.</p> <p>While the principal focus of the Division is to monitor the Contract Administrator performance, some staff are tasked with routine project monitoring duties. However, all issues related to the physical and financial condition of the project is the responsibility of the Office of Asset Management. Further, issues related to Section 8 policy, contract renewals, tenant and occupancy, as well as comparability and rent determination is the responsibility of the Office of Housing Assistance Programs and Grant Administration.</p>

MFH Offices	
MFH Divisions	Definition
Office of Multifamily Housing Development	
Housing Development Policy Division	The Policy Division is responsible for development of all policies and procedures related to the origination of Federal Housing Administration (FHA) insured mortgages (except for hospital insurance, which is managed outside the Office of Multifamily Programs). The Division will also be responsible for issues related to new insured debt, and monitoring credit subsidy.
Technical Support Division	The Technical Support Division is responsible for providing specialized expertise (appraisers, architects, cost analysts, mortgage credit analysts) to MFH Offices. Technical staff will provide technical support to other Headquarters Offices and the field offices. This Division also monitors the use of Technical Discipline Contracts (TDC s).
Lender Qualifications and Monitoring Division	The Lender Qualifications and Monitoring Division will include out-stationed lender monitoring field staff who are responsible for evaluating lender qualifications and lender performance. The Division will be responsible for overseeing activities related to Multifamily Accelerated Processing (MAP), as well as those originating in other mortgage insurance programs such as risk-sharing.
Office of Asset Management	
Policy and Participation Standards Division	<p>The Policy and Participation Standards Division has two major functions:</p> <ol style="list-style-type: none"> a) The development of policy for asset management and disposition through the drafting of regulations, handbooks, and notices to implement law, and programmatic policy. The Division's staff performs portfolio analyses of the financial and physical health of the portfolio from data collected by Real Estate Assessment Center (REAC) and other Departmental systems. These analyses are used for strategic planning, budgeting, and policy development. b) Previous Participation review and control. All prospective participants in HUD Multifamily Housing Programs must make certification of their participation in HUD and other housing agency programs. Previous Participation Review is cross-cutting to all of Multifamily Housing's programs, and offices.
Field Asset Management Division	The Field Asset Management Division is responsible for communications related to asset management, both to and from the field offices, and the public. The Division is responsible for all matters affecting the condition of Federal Housing Administration (FHA) involved multifamily properties and the related performance of project management regardless of whether the project is assisted or unassisted, or whether a housing assistance contract is HUD-administered or monitored by a Contract Administrator. The Division receives and responds to requests for interpretation of policy, waiver of regulations, appeals to REAC inspections, HUD property ownership and sales issues. The Division monitors the field office accomplishment of Business and Operating Plan (BOP) performance pertaining to Multifamily Asset Management, audit resolution, default servicing, and mortgage insurance claims.

MFH Offices	
MFH Divisions	Definition
Business Relationships and Special Initiatives Division	The Business Relationships and Special Initiatives Division coordinates the business relationships between Multifamily Housing and other HUD organizations. The Division is the primary liaison with the Real Estate Assessment Center (REAC), the Departmental Enforcement Center (DEC), and the Office of Affordable Housing Preservation (OAHP), formerly OMHAR. The Division works with these organizations and others to see that Housing and the affiliated organizations achieve the goals of the Department. The Division is responsible for the development and maintenance of operating protocols and Memoranda of Understanding between Multifamily Housing and external organizations. The Division also develops and coordinates procedures and processing of new initiatives for the Office of Asset Management.
Office of Housing Assistance and Grant Administration	
Neighborhood Networks Division	The Neighborhood Networks staff directs the administration of the Neighborhood Networks program. It oversees the existing Neighborhood Networks contract, monitors field support for the program, and coordinates with other program areas throughout the Department that have established or will be establishing similar programs.
Housing Assistance Policy Division	The Housing Assistance Policy Division develops, issues, and interprets policies for the preservation of affordable housing. The Division defines and establishes business rules, including implementation of changes in statutes, regulations, and administrative policies, which allow clients (owners, agents, and tenants) to clearly understand the requirements and guidelines for the following project-based assisted programs: Section 8, Section 236 Rental Assistance Payments, Section 221(d)(3) Below Market Interest Rate, and Rental Supplement Payments. The Division develops policies for admission and occupancy requirements for project-based assisted properties, and policies for renewing expiring Section 8 project-based contracts, including contracts administered by the Rural Housing Development Agency and by State housing agencies. The Division is responsible for reviewing existing policies and determining where new policies and procedures are needed for the purpose of reducing errors in the administration of HUD's project-based rental assistance programs.
Grant Policy and Management Division	The Grant Policy and Management Division develops the Notices of Funding Availability (NoFA) and evaluation criteria for all Multifamily Housing grant and capital advance programs, including Service Coordinator grants, Congregate Housing Services grants, Section 202 and 811 Housing Capital Advances, Assisted-Living Conversion Program (ALCP) grants. The Division is also responsible for grant awards. The Division monitors funding and the award of Section 202/811 capital advances through project completion.
Grant and Housing Assistance Field Support Division	The Grant and Housing Assistance Field Support Division provides technical support to the field and Headquarters in the promotion of affordable housing opportunities. The Division monitors Field Office performance against the Management Plan goals, contract renewals, and other activity affecting the day-to-day management of housing assistance/grant programs. This Division responds to technical questions on suspension, abatement, and termination of

MFH Offices	
MFH Divisions	Definition
	housing assistance payments from the field. It monitors owner opt-outs of Section 8 contracts, and the provision of tenant protection vouchers. The Division coordinates MFH policy regarding Tenant issues. It also develops policy on certain issues and handles correspondence with members of Congress, local officials, and the general public regarding housing assistance programs.
Office of Program Systems Management	
Program Systems Management	The Program Systems Management office is responsible for developing and enhancing the automated systems that support MFH programs and coordinating funding contracts for Multifamily Automated Systems. This includes development, maintenance and support for all Multifamily Housing systems.

2.3 Process Maps

The process maps define the MFH Business Functions in terms of their processes and depict the relationships within the Multifamily Housing business functions at the sub-function and process level. The process maps illustrate the interaction between business processes and show how organizations interact as the workflow moves between those organizations. Each business process is identified within the map indicating which processes precede and follow within the workflow, giving a big-picture view of the Multifamily Housing business. Next, the programs are mapped to the business functions. The strategic goals, business goals, and business functions are mapped to show how key strategic objectives and key business objectives are achieved. Finally, the processes are examined to determine the roles that an organizational division might play in a particular process, such as directly performing the work or by directing the work to external personnel.

2.3.1 MFH Business Function Hierarchy Map and Process Definitions

The diagrams of the MFH Business Function Hierarchy, included in this section, breakdown the MFH Business Functions into the processes that make up each of the functions. In some cases there are sub-functions to help further demarcate groups of processes. Each diagram is followed by a table that provides a description for each function and process in the preceding diagram to clarify the business contained within them. For some processes, a sampling of the activities included in that process is supplied to help define the scope of that process.

Note: For purposes of this MFH EA Blueprint, Rental Housing Assistance functionality is not included. To see details of this functionality, see the EA Rental Housing Assistance Blueprint. Also, since the intent of the MFH EA Blueprint is to focus on the main lines of business for Multifamily Housing, a separate diagram for the Other MFH Support Services function is not presented, however, process definitions are provided.

Figure 3-1 presents the MFH High Level Function Hierarchy Diagram (FHD) Map for the Multifamily Housing business domain. Table 3-5 provides Process Definitions for Figure 3-1.

Figure 2-1: MFH High Level Function Hierarchy Diagram (FHD) Map

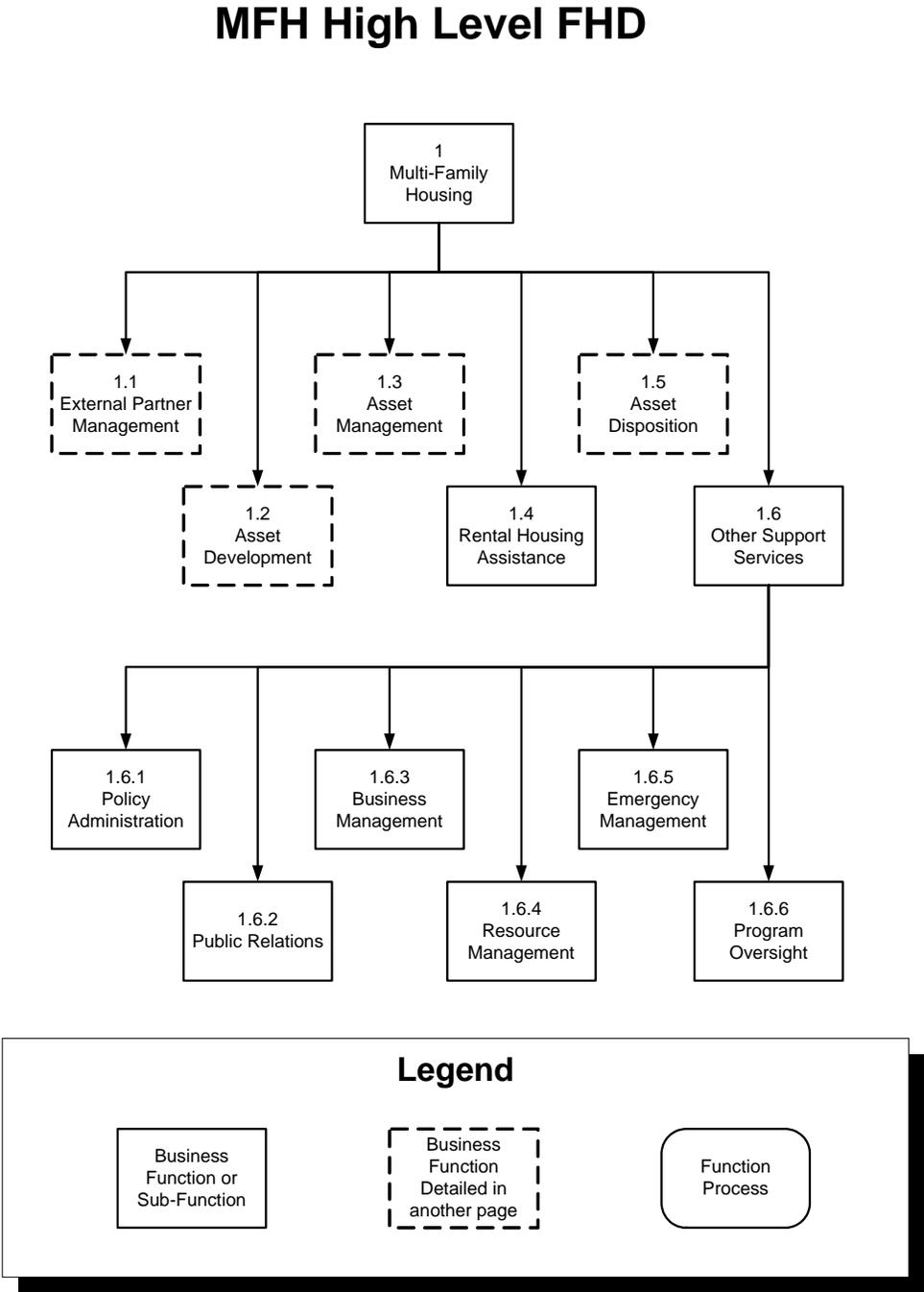


Table 2-5: Process Definition of MFH High Level Function Hierarchy Diagram (FHD)

ID	Name	Definition
1.1	External Partner Management	External Partner Management is all actions performed to obtain and support partners and assure their effectiveness in carrying out Multifamily Housing programs. Partners include Owners, Agents, Consultants, Contractors, Architects, Developers, Sponsors, Mortgagees, Lessees, Book Keepers, and IPA/CPAs.
1.2	Asset Development	Asset Development begins the process of creating Multifamily housing via insurance/guaranty, or direct loan/advance to eligible mortgagors/owners.
1.3	Asset Management	Asset Management assures the effective management of insured, and non-insured assisted properties. This activity utilized servicing peripherals and indicators and asset management techniques to identify projects as untroubled, potentially troubled, and troubled. Emphasis is placed on default prevention techniques and minimizing monetary losses to HUD.
1.4	Rental Housing Assistance	Rental Housing Assistance covers the contracting of properties to provide housing for low-income families.
1.5	Asset Disposition	Asset Disposition is the formalized process to dispose of HUD-held notes or HUD-owned property.
1.6	Other MFH Support Services	These support services are generic business processes that are not specific to MFH. This functionality serves to support MFH's primary business purpose.

Figure 3-2 presents the MFH External Partner Management Map for the Multifamily Housing business domain. Table 3-6 provides Process Definitions for Figure 3-2.

Figure 2-2: MFH External Partner Management Map

MFH External Partner Management

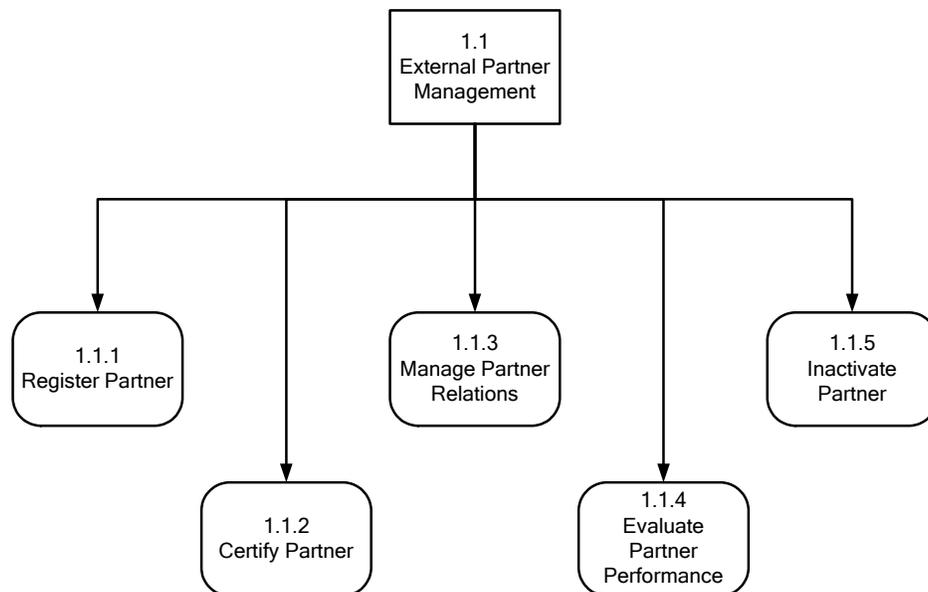


Table 2-6: Process Definition of MFH External Partner Management

ID	Name	Definition
1.1	External Partner Management	External Partner Management is all actions performed to obtain and support partners and assure their effectiveness in carrying out Multifamily Housing programs. Partners include Owners, Agents, Consultants, Contractors, Architects, Developers, Sponsors, Mortgagees, Lessees, Book Keepers, and IPA/CPAs.
1.1.1	Register Partner	Registering Partners for various roles provides oversight capability and partner information while validating minimum standards for all applicants.
1.1.2	Certify Partner	Certifying Partners in their role can maintain a higher standard of quality while ensuring that HUD needs are communicated to partners.
1.1.3	Manage Partner Relations	Managing Partner Relations builds working efficiency and trust, providing better support for other HUD business processes.

ID	Name	Definition
1.1.4	Evaluate Partner Performance	Evaluating Partner Performance is necessary to ensure quality control and validate the working relationship with partners.
1.1.5	Inactivate Partner	Upon completion or termination of partner contracts, Inactivating Partner records keeps HUD partner information up to date.

Figure 3-3 presents the MFH Asset Development Map for the Multifamily Housing business domain. Table 3-7 provides Process Definitions for Figure 3-3.

Figure 2-3: MFH Asset Development Map

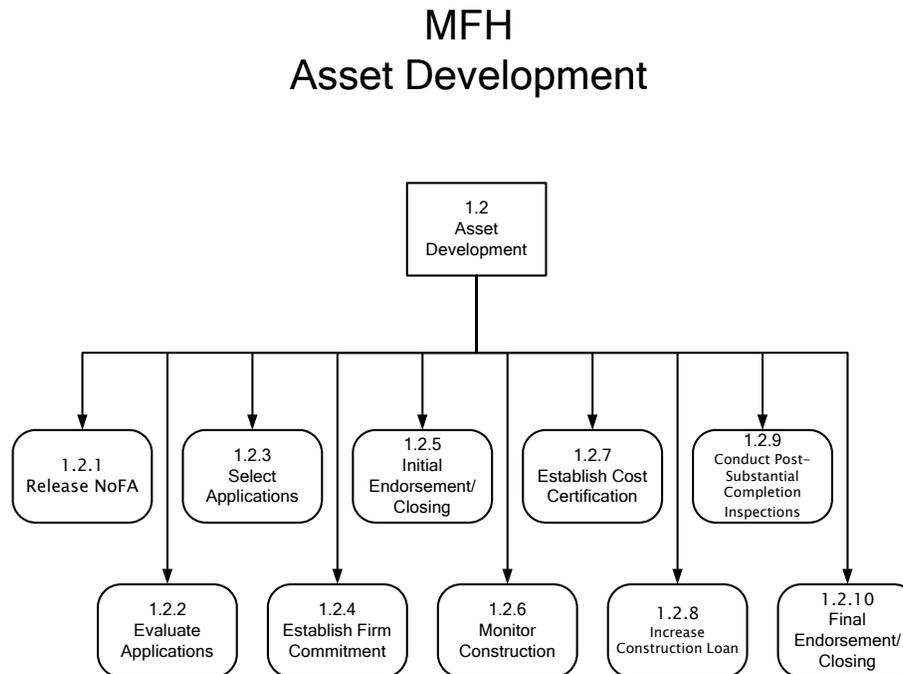


Table 2-7: Process Definition of MFH Asset Development

ID	Name	Definition
1.2	Asset Development	Asset Development begins the process of creating Multifamily housing via insurance/guaranty, or direct loan/advance to eligible mortgagors/owners.
1.2.1	Release NoFA	The Release NoFA process establishes, publishes and informs the public on funding amounts and application schedules for Capital Advances
	Activities Include:	
	<ul style="list-style-type: none"> • Super-NoFA Kickoff Meetings • Departmental Clearances • Publishing the NoFA • Holding Workshops to educate perspective applicants 	
1.2.2	Evaluate Applications	In Evaluating the Applications, the information is confirmed and validated to assess the viability of the application.
	Activities Include:	
	<ul style="list-style-type: none"> • Pre-Application Processing • SAMA Application Processing • Feasibility Application Processing • Technical Processing 	
1.2.3	Select Applications	Once evaluated, applications must be selected for inclusion to receive funds.

ID	Name	Definition
	Activities Include: <ul style="list-style-type: none"> • Rating & Ranking of Applications • Unit Reduction Policy • Competition of Residual Funds • Issuance of Agreement Letter 	
1.2.4	Establish Firm Commitment	Applicants demonstrate their continued interest by submitting a firm commitment application for mortgage insurance/capital advance, which includes detailed drawings and construction cost estimates. HUD reviews and determines whether or not to issue a firm commitment.
	Activities Include: <ul style="list-style-type: none"> • Submission of Firm Commitment Application • Underwriting: A&E, Cost, Valuation, Mortgage Credit Processing • Verify Credit Subsidy (if applicable), Capital Advance/PRAC Funds • Issue Firm Commitment • Final Approval and Endorsement Processing 	
1.2.5	Initial Endorsement/Closing	Initial Endorsement/Closing includes HUD endorsement of the note, legal recording of the title, survey, note and mortgage, collection of premiums and fees due. This includes the establishment of the Insurance-in-Force record for FHA insurance.
	Activities Include: <ul style="list-style-type: none"> • Review Draft Construction Loan Closing Documents • Verify Credit Subsidy • Conduct Closing/Pre-Construction Conference • Endorse Notes • Collect Fees and Premiums • Establish Insurance in Force record for FHA cases. • Process Initial Advance of Mortgage proceeds/Capital advance 	
1.2.6	Monitor Construction	Monitoring Construction deals with the money, inspections, and paperwork of the actual construction of a project.
	Activities Include: <ul style="list-style-type: none"> • Approve any Early Start • Conduct regular inspections • Review inspection reports • Process construction draws • Process Change orders • Process requests to release holdback • Conduct pre-cost certification conference • Conduct final inspection • Notify of Final Completion Date 	
1.2.7	Establish Cost Certification	Mortgagor and general contractor (if applicable) submit actual costs of construction as certified by an accountant.
	Activities Include: <ul style="list-style-type: none"> • Evaluate Cost Certification Submissions • Receive Notification of Cut-Off date • Submission of Cost Certification • Review Cost Certification • Determine Maximum Insurable Mortgage/Capital Advance • Issue Form 2580 	
1.2.8	Increase Construction Loan	Increasing the loan can be important where the borrower faces unanticipated costs like a locality imposing design changes during construction.

ID	Name	Definition
	Activities Include: <ul style="list-style-type: none"> • Review Request for Mortgage Increase along with Cost Certification • Determine Allowable Costs for Mortgage Increase • Review Project Net Operating Income • Request /Receive Credit Subsidy-if applicable 	
1.2.9	Conduct Post-Substantial Completion Inspection	Conduct Post-Substantial Completion Inspection verifies the existence and quality of a project and ensures that any defects due to the construction process are identified within the warranty period.
	Activities Include: <ul style="list-style-type: none"> • Conduct 100% Completion Inspection • Conduct 9 Month Warranty Inspection • Conduct 12 Month Warranty Inspection 	
1.2.10	Final Endorsement/Closing	Final Closing is the verification of a clear title to the project, re-recording of the mortgage (if changed from initial closing), collection of premiums and fees due, and the release of the balance of mortgage proceeds (after approval of cost certification). This includes the establishment of the Insurance-in-Force record if there was no initial endorsement.
	Activities Include: <ul style="list-style-type: none"> • Review Final Closing Documents • Confirm Labor Compliance • Conduct Final Closing • Release final holdback • Endorse Note 	

Figure 3-4 presents the MFH High Level Function Hierarchy Diagram (FHD) Map for the Multifamily Housing business domain. Table 3-8 provides Process Definitions for Figure 3-4.

Figure 2-4: MFH Asset Management Map

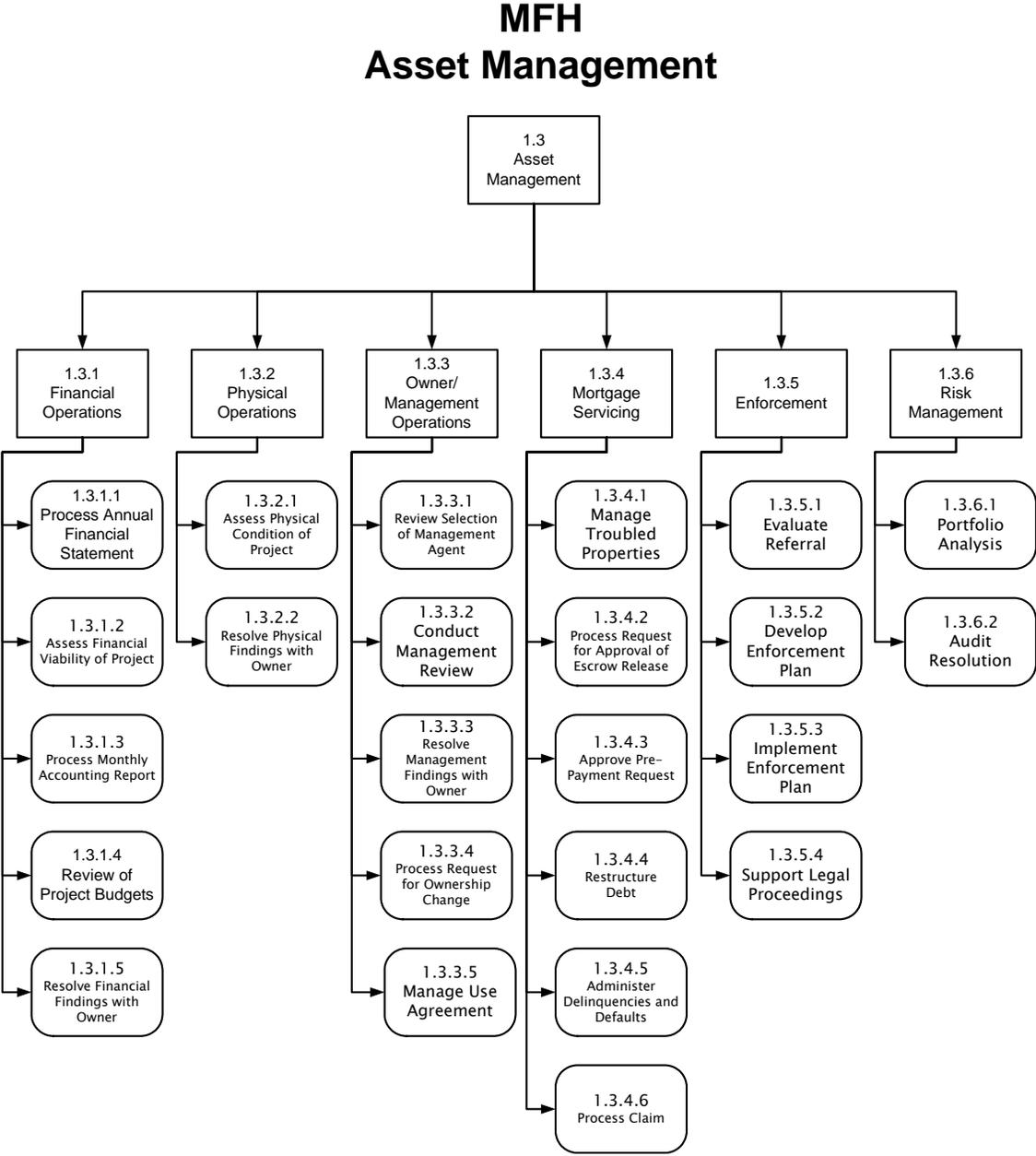


Table 2-8: Process Definition of MFH Asset Management

ID	Name	Definition
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ID	Name	Definition
1.3	Asset Management	Asset Management assures the effective management of insured, and non-insured assisted properties. This activity utilized servicing peripherals and indicators and asset management techniques to identify projects as untroubled, potentially troubled, and troubled. Emphasis is placed on default prevention techniques and minimizing monetary losses to HUD.
1.3.1	Financial Operations	Financial Operations fosters Multifamily Housing's sound fiscal management of its projects.
1.3.1.1	Process Annual Financial Statement	Processing Annual Financial Statements helps determine the financial condition of the project and protects the FHA insurance fund.
	Activities Include: <ul style="list-style-type: none"> • Establish Submission Requirements • Review AFS Submission • Review Request to Extend the Due Date • Review Request to Waive AFS Requirement • Review Request to Defer Partial Year Submission • Identify Overdue AFS Submission 	
1.3.1.2	Assess Financial Viability of Project	Assessing the Financial Viability of a project looks at trends in cash on hand and cash flow to establish financial soundness of a specific project/property. This process serves to protect the FHA insurance fund and ensure compliance with the Regulatory Agreement and subsidy contracts.
1.3.1.3	Process Monthly Accounting Report	Processing Monthly Accounting Reports helps to ensure financial soundness of projects and protects the FHA insurance fund.
	Activities Include: <ul style="list-style-type: none"> • Request Monthly Accounting Report • Review Monthly Accounting Report • Review Monthly Accounting Report Clarification • Review Response to Monthly Accounting Report Finding • Review Request for Extension of Due Date 	
1.3.1.4	Review of Project Budgets	Reviewing project budgets is another step in clarifying the financial condition of a project.
1.3.1.5	Resolve Financial Findings with Owner	Following up on financial findings assures Multifamily Programs' participants' compliance with applicable statutes, regulations and policies, and provides a system to correct any financial problems.
	Activities Include: <ul style="list-style-type: none"> • Review Owner's Response to Findings • Determine if Findings have been Adequately Addressed • Follow Up on Findings Not Responded To • Close Out Findings 	
1.3.2	Physical Operations	Physical Operations assesses and determines the physical well being of Multifamily projects in which HUD has a business interest.
1.3.2.1	Assess Physical Condition of Project	Each asset must maintain a certain level of physical operability, and this process provides the ability to inspect and grade each asset on its physical performance.
	Activities Include: <ul style="list-style-type: none"> • Establish Inspection Requirements • Schedule Inspection • Conduct Inspection • Review Inspection Findings • Review Requests to Cancel Inspection • Review Requests to Delay/Reschedule Inspection • Review Owner Appeal to Inspection Findings 	

ID	Name	Definition
1.3.2.2	Resolve Physical Findings with Owner	Following up on physical findings assures Multifamily Programs' participants' compliance with applicable statutes, regulations and policies, including inspection and maintenance of decent, safe and sanitary housing.
	Activities Include: <ul style="list-style-type: none"> • Review Owner's Response to Findings • Determine if Findings have been Adequately Addressed • Follow Up on Findings Not Responded To • Close Out Findings 	
1.3.3	Owner/Management Operations	Owner/Management Operations provides HUD supervision of owner information and contracts. This includes oversight of management agents
1.3.3.1	Review Selection of Management Agent	While the owner selects a management agent, that selection must be approved by HUD to ensure the efficient and continued management of a project.
	Activities Include: <ul style="list-style-type: none"> • Check Debarment List • Review Management Agent's Eligibility • Review Management Agent's Previous Participation • Review Management Fee Level 	
1.3.3.2	Conduct Management Review	Management reviews compare the information pertaining to procedures and policies, and testing the consistent application of these policies and procedures. This ensures that project management is performing in a sound manner in compliance with HUD handbooks, regulations and policies, and using good business practices.
	Activities Include: <ul style="list-style-type: none"> • Schedule Management Review • Evaluate Adequacy of Accounting Procedures • Evaluate Overall Management Performance 	
1.3.3.3	Resolve Management Findings with Owner	Following up on management findings assures Multifamily Programs' participants' compliance with applicable statutes, regulations and policies regarding the safe and efficient management of projects.
	Activities Include: <ul style="list-style-type: none"> • Review Owner's Response to Findings • Determine if Findings have been Adequately Addressed • Follow Up on Findings Not Responded To • Close Out Findings 	
1.3.3.4	Process Request for Ownership Change	This process assures that the principals' previous participation in federal programs has been consistent and that there has been no suspension or debarment. If acceptable, the assets can be transferred to the new owner. This includes a Transfer of Physical Assets (TPA) and/or Assignment of the Section 8 HAP Contract, as needed.
	Activities Include: <ul style="list-style-type: none"> • Review Previous Participation • Review Request for Transfer for Legal Sufficiency • Review Request for Transfer for Program Requirements • Determine Acceptability for Request for Transfer • Review Recorded Documentation of Transfer for Final Approval 	
1.3.3.5	Manage Use Agreement	Use Agreements are managed against assets to ensure housing in situations where contractual obligations have changed.

ID	Name	Definition
1.3.4	Mortgage Servicing	Mortgage Servicing is the servicing of insured and HUD-held Multifamily mortgages. For insured mortgages, this includes the overall monitoring of insured assets to assure the mortgagor's ability to pay the mortgage and maintaining Insurance-in-Force records.
1.3.4.1	Manage Troubled Properties	This process is to reduce the risk of a claim against the FHA insurance fund and to maintain decent, safe and sanitary housing.
	Activities Include: <ul style="list-style-type: none"> • Perform Triage • Define Project's Problem and Root Causes • Define Potential Loss Mitigation Strategies • Select and Implement Mitigation Strategy • Evaluate Effectiveness of Strategy Plan 	
1.3.4.2	Process Request for Approval of Escrow Release	This process allows owners to request escrow funds in accordance with the HUD Handbooks and field office policy. This includes escrows for Reserve for Replacement and Residual Receipts.
	Activities Include: <ul style="list-style-type: none"> • Review Request for Escrow Release • Evaluate Request for Escrow Release • Release Escrow 	
1.3.4.3	Approve Pre-Payment Request	This process provides the owner with a way to pay the difference in the mortgage balance prior to the contractual ending date. This allows HUD to insure the availability of assistance to families who will be adversely affected by the prepayment.
	Activities Include: <ul style="list-style-type: none"> • Review Notice of Intent to Pre-Pay • Review Request for Termination of Mortgage Insurance • Waive Prepayment Restriction or Penalty • Terminate Mortgage Insurance 	
1.3.4.4	Restructure Debt	This process is used to modify an existing property's debt portfolio in order to improve the asset's financial viability.
	Activities Include: <ul style="list-style-type: none"> • Review Modification of Mortgage • Decouple Interest Rate Premium (IRP) Subsidy from Mortgage Loan • Restructure Mortgage and Reduce Section 8 Rent (e.g., Mark to Market) • Process Partial Payment of Claim • Refinance Insured and 202 Loans • Review Request to Override Lockout 	
1.3.4.5	Administer Delinquencies and Defaults	When mortgage payments are late or absent, the mortgagee is responsible for evaluating the cause of the delinquency and endeavoring to bring the mortgagor into alignment with the loan. Administration of this process includes notifying HUD and the delinquent parties, processing extensions, and development of a reinstatement plan.
1.3.4.6	Process Claim	Processing Claims includes the receipt, evaluation, and authorization of payment resulting from claims for insurance benefits. The activity includes the processing of insured mortgagee's elections to assign defaulted mortgages to HUD.
1.3.5	Enforcement	Once a project has been referred for a deficiency, that project must bring those deficiencies within acceptability or face legal and financial repercussions.
1.3.5.1	Evaluate Referral	Information regarding a referred property must be compiled and evaluated to determine what the underlying problem and correction would be.

ID	Name	Definition
1.3.5.2	Develop Enforcement Plan	A plan to correct a project's deficiencies must be developed. The enforcement center does this in conjunction with the owner and project manager. Enforcement Plans may include: Administrative Proceedings (such as notices and debarments), Legal Proceedings, Civil Proceedings, and Asset Management Tasks.
1.3.5.3	Implement Enforcement Plan	The enforcement plan must be implemented and failing that implementation, must be revised to resolve those failings.
1.3.5.4	Support Legal Proceedings	Both Housing and Enforcement personnel may be called upon to explain aspects of a property's status or history. This may also include legal depositions or testimony in court upon those same matters.
1.3.6	Risk Management	Risk Management provides MFH a means to view collections of properties to analyze data for many purposes, including data corresponding to particular programs or for review/audit purposes.
1.3.6.1	Analyze Portfolio	Portfolio Analysis is the activity involved in analyzing information about Multifamily's portfolio on a Field Office, national, program, or other level. It also includes the identification of insured projects with troubled or potentially troubled mortgages and determines the causes for trouble in order to prevent assignment.
	Activities Include: <ul style="list-style-type: none"> • Determine Universe to be Analyzed • Determine Evaluation Criteria • Calculate Values for Criteria • Analyze Values 	
1.3.6.2	Resolve Audit Findings	A close look at MFH data must be made to audit the process used to manage a property. Auditing these processes helps ensure proper implementation of policy and provides validation for policy practices.

Figure 3-5 presents the MFH High Level Function Hierarchy Diagram (FHD) Map for the Multifamily Housing business domain. Table 3-9 provides Process Definitions for Figure 3-5.

Figure 2-5: MFH Asset Disposition Map

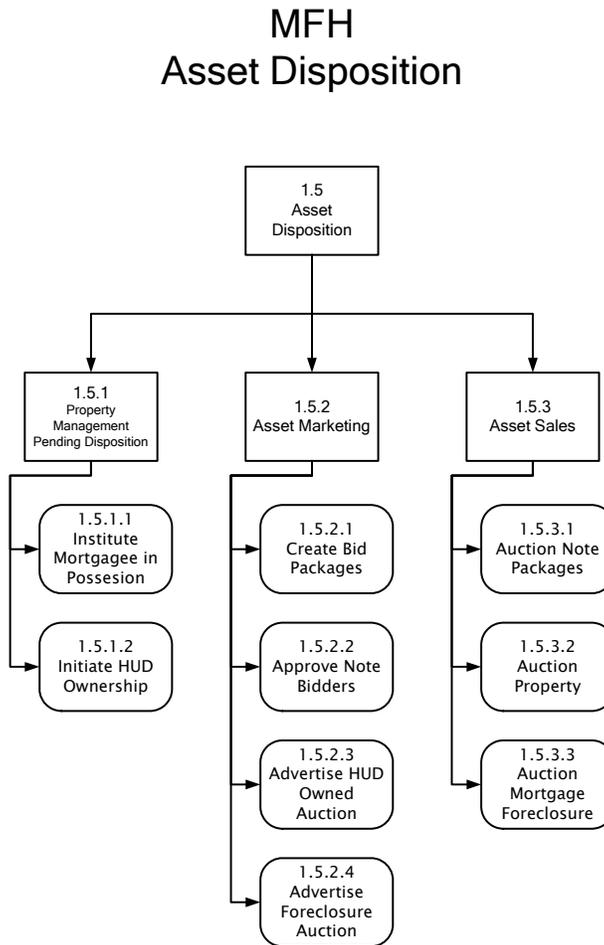


Table 2-9: Process Definition of MFH Asset Disposition

ID	Name	Definition
1.5	Asset Disposition	Asset Disposition is the formalized process to dispose of HUD-held notes or HUD-owned property.
1.5.1	Property Management Pending Disposition	Multifamily HUD-owned and MIP projects must be managed in a manner that will protect the financial interests of the Federal Government and be less costly to the Federal Government than other reasonable alternatives.
1.5.1.1	Institute Mortgagee in Possession	HUD, as mortgagee, may take possession of a multifamily project as part of initiating foreclosure to protect the health and safety of the residents and to preserve the asset.

ID	Name	Definition
1.5.1.2	Initiate HUD Ownership	HUD acquires multifamily projects through foreclosure and non-foreclosure procedures. There are four types of foreclosures: Federal Judicial Foreclosure, Federal Nonjudicial Foreclosure, State Judicial Foreclosure, and State Nonjudicial Foreclosure. In all cases where HUD does not foreclose, proof of clear title is required. There are three procedures for acquisition where HUD does not foreclose: Mortgage conveyance to HUD after mortgagee foreclosure, Mortgage conveyance to HUD after the mortgagee takes a deed-in-lieu of foreclosure, and HUD accepts a deed-in-lieu of foreclosure on a HUD-held mortgage.
1.5.2	Asset Marketing	Asset Marketing is the activities associated with the preparation for sale and the packaging of mortgages and/or properties for sale in the real estate market.
1.5.2.1	Create Bid Packages	Notes are collected together into a package to be bid on by prospective buyers. These notes are sold as a group to prevent the worst properties from staying in HUD possession.
1.5.2.2	Approve Note Bidders	In order to be allowed to bid on a note package, the bidder must be approved. Prior to the Auction to sell a package of notes, HUD will accept and approve applications to ensure that the winner of the auction is capable of managing the properties.
1.5.2.3	Advertise HUD Owned Auction	Prior to Auctioning a HUD owned property, announcements of the auction should be placed in classified newspaper ads, in addition to the Broker's Information Package. The announcement must contain the following: Time, date and place of the auction, List of the properties to be auctioned, Earnest money requirements, and HUD's estimate of market value for each property unless the price is not to be published.
1.5.2.4	Advertise Foreclosure Auction	Prior to Auctioning a foreclosed property, announcements of the auction should be placed in classified newspaper ads, in addition to the Broker's Information Package. The announcement must contain the following: Time, date and place of the auction, List of the properties to be auctioned, Earnest money requirements, and HUD's estimate of market value for each property unless the price is not to be published.
1.5.3	Asset Sales	Asset Sales is the activities associated with accepting offers, completion of sale, and the accounting for proceeds resulting from the sale of HUD-held notes, HUD-owned property, or 221 notes.
1.5.3.1	Auction Note Packages	Auctioning a note package includes the announcements regarding the rules of the auction, the bidding and awarding of the auction, and the transfer of assets to the winner.
1.5.3.2	Auction Property	Auctioning a HUD owned property includes the announcements regarding the rules of the auction, the bidding and awarding of the auction, and the transfer of assets to the winner. Prior to transferring the property to the winner, the winner must be approved as an owner.
1.5.3.3	Auction Mortgage Foreclosure	Auctioning a foreclosed property includes the announcements regarding the rules of the auction, the bidding and awarding of the auction, and the transfer of assets to the winner. Prior to transferring the foreclosed property to the winner, the winner must be approved as an owner.

Table 2-10: Process Definition of Other Support Services

ID	Name	Definition
1.6	Other MFH Support Services	These support services are generic business processes that are not specific to MFH. This functionality serves to support MFH's primary business purpose.
1.6.1	Policy Administration	In order to maintain concise and comprehensive processes, policy must be created and implemented to ensure consistent and repeatable data across all HUD facilities.
1.6.2	Public Relations	Public Relations coordinates, plans and manages activities related to communicating the needs of Multifamily's stakeholders and the general public.
1.6.3	Business Management	Business Management includes the activities to safeguard the financial viability of FHA assets through the application of sound business practices. Activities include planning and establishing long and short term goals and objectives, providing day-to-day guidance and oversight to staff.
1.6.4	Resource Management	Resource Management involves the planning, identification, selection, distribution, and monitoring of resources required to operate Multifamily's offices in support of its mission.
1.6.5	Emergency Management	Emergency Management manages, coordinates and plans the activities related to responding to national, financial and geographical emergencies.
1.6.6	Program Oversight	Program oversight must be maintained to evaluate and validate HUD goals and strategies in particular programs and across all programs.

2.3.2 MFH Business Function Workflows Map

The workflow of how a property tracks through the Multifamily Housing business domain, from being constructed, to being managed and to being disposed of, is graphically depicted in this section. Asset Development is an optional process since a property that doesn't require HUD-assisted financing (insurance or advance) would not need Asset Development support. For all properties that are in the Multifamily Inventory, there are a number of processes that may occur depending on the needs of the property manager, the state of the property assets, and inspections at timed intervals. All these processes radiate out from a complex decision point named Asset Management. Eventually, a property may need to be removed from the inventory, leading that property into the Asset Disposition processes.

Because the External Partner Management function has process connections to the Asset Development and Asset Management functions, that map is depicted last. For purposes of this *MFH EA Blueprint*, Rental Housing Assistance functionality is not included. To see details of this functionality, see the [Rental Housing Assistance EA Blueprint](#). Also, since the intent of the *MFH EA Blueprint* is to focus on the main lines of business for MFH a separate diagram for the Other MFH Support Services function is not presented.

Business process boxes within the maps represent the distinct MFH Functions/processes. These process boxes are linked together by flow arrows indicating the direction that the business follows in its life cycle. In order to better display the Workflow Maps, sections of the maps have

been condensed into a sub-flow indicated by a sub-flow box. Where these sub-flows are used, the sub-flow box will have a '+' sign in them, and where those sub-flows are defined the sub-flow box will have a '-' sign in them. The MFH High Level Function Hierarchy Diagram Workflow Map shows the overall process flow with many sub-flows that are defined in the following Workflow Maps.

Horizontal bars show the work breakdown of an organization within MFH. Each horizontal bar has a title to the left that indicates the organization it represents. These organizations are defined in Section 3.2.4. Process flows that cross these organization bars indicate areas where organizations hands off work from one to another as part of the business life cycle. Sometimes a process box may appear in more than one organizational bar indicating that more than one organization may participate in that process.

For additional details on the methodology used to create these Workflow Maps, refer to the "Business Process Modeling Notation (BPMN) and Business Process Management" which provide an introduction to the new business process-modeling standard.

Figure 3-6 thru Figure 3-13 presents the Workflow Maps for The Multifamily Housing Business Functions/Processes.

Figure 2-6: MFH High Level Workflow Map

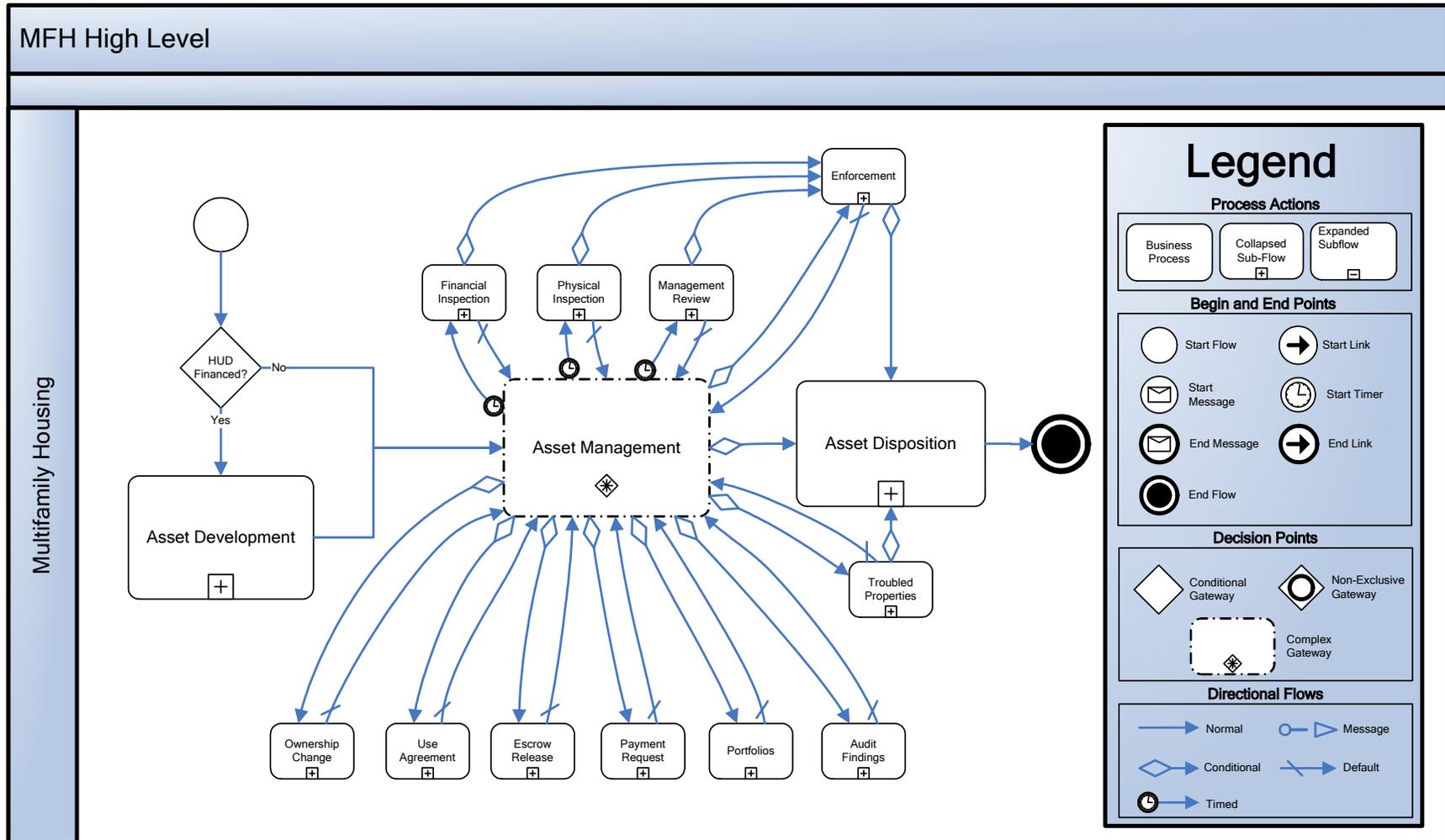


Figure 2-7: MFH Asset Development Workflow Map

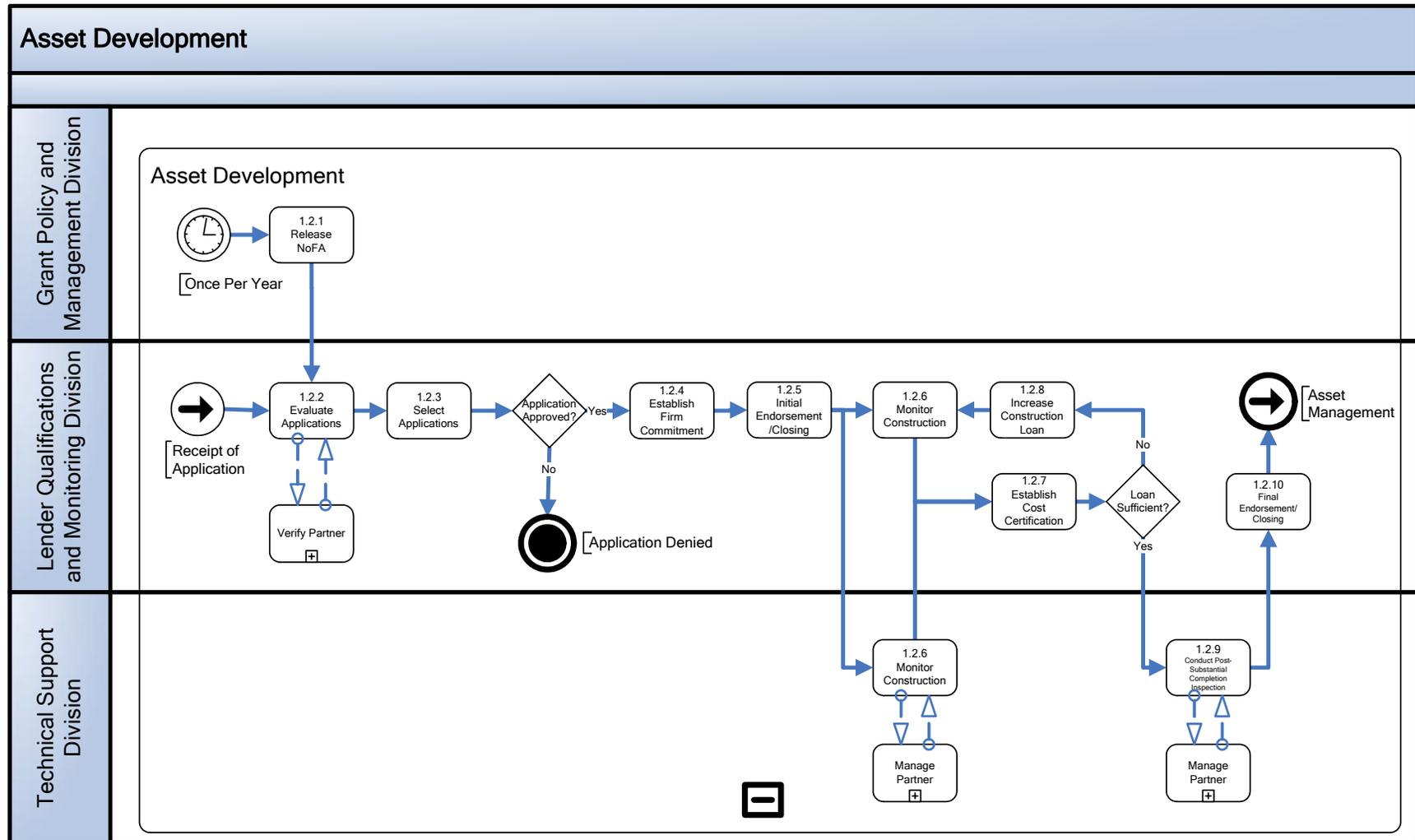


Figure 2-8: MFH Asset Management Workflow Map (part 1)

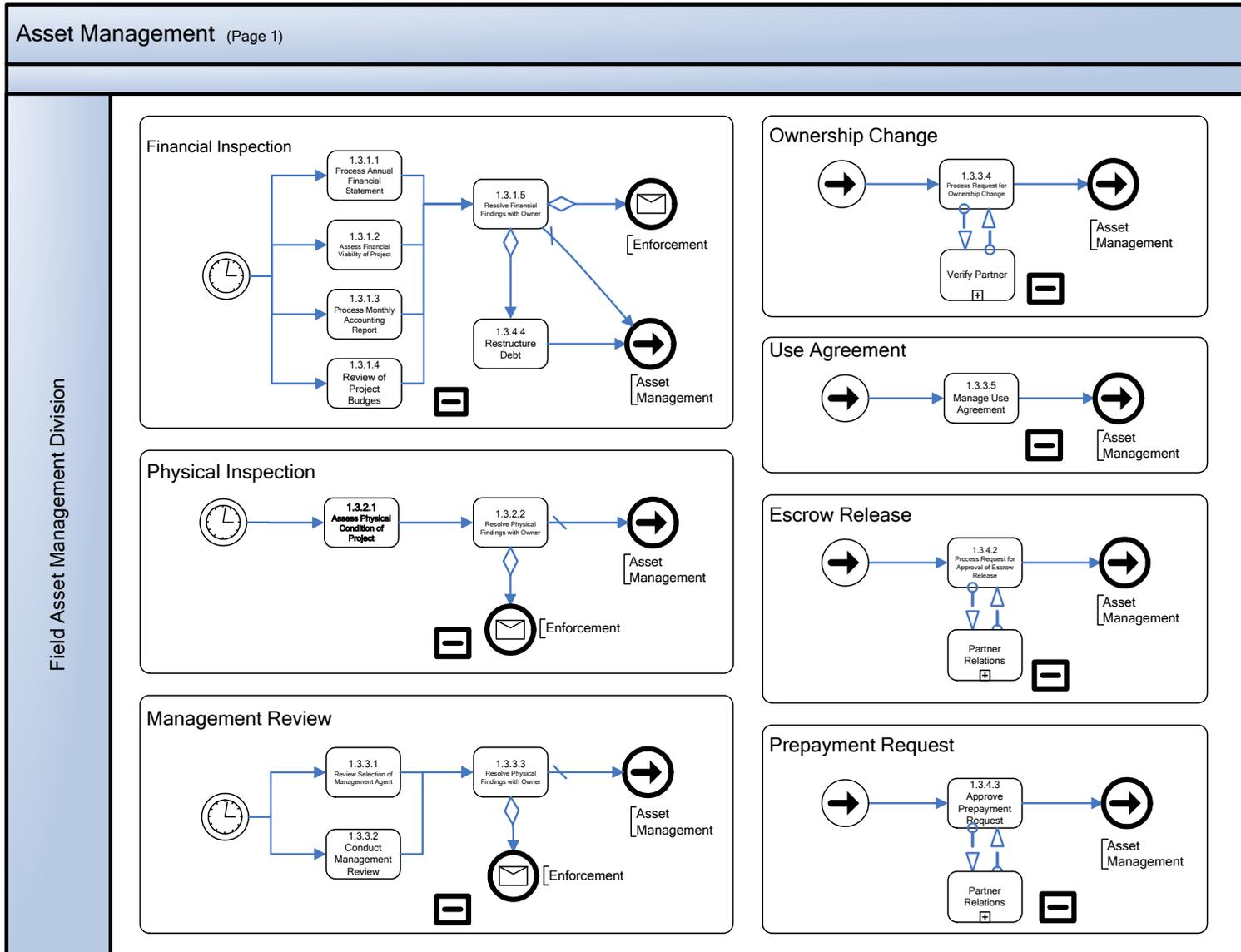


Figure 2-9: MFH Asset Management Workflow Map (part 2)

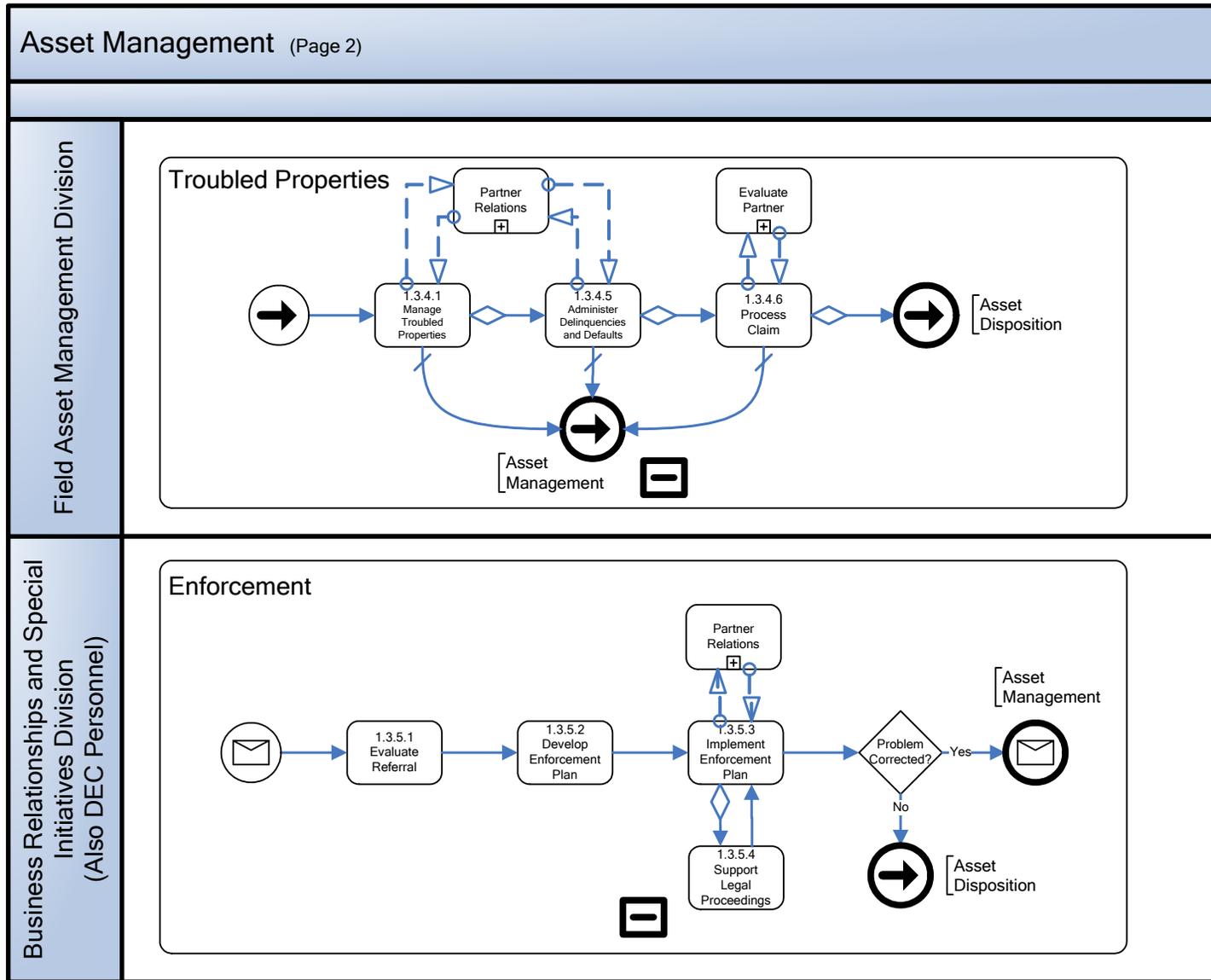


Figure 2-10: MFH Asset Management Workflow Map (part 3)

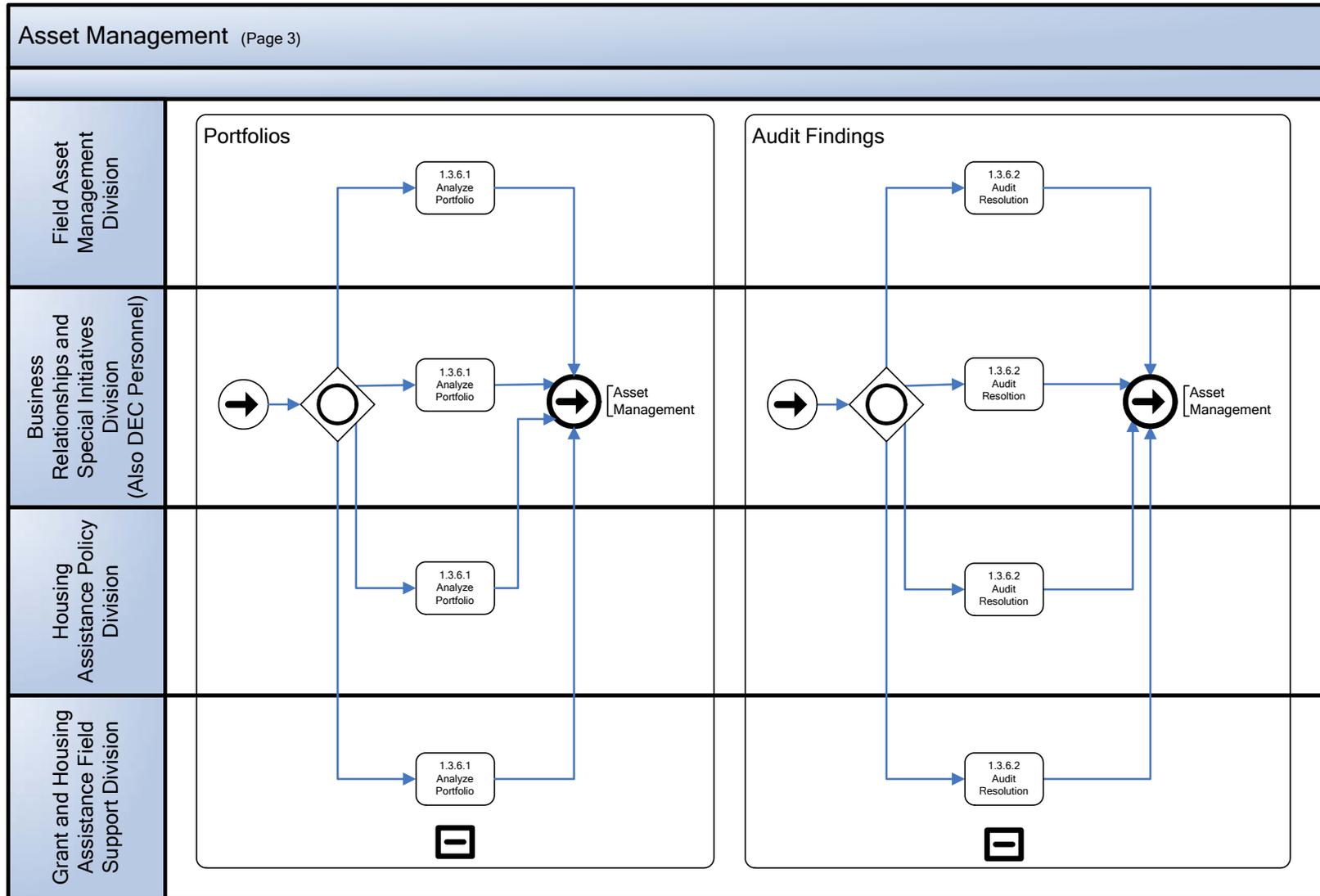


Figure 2-11: MFH Asset Disposition Workflow Map

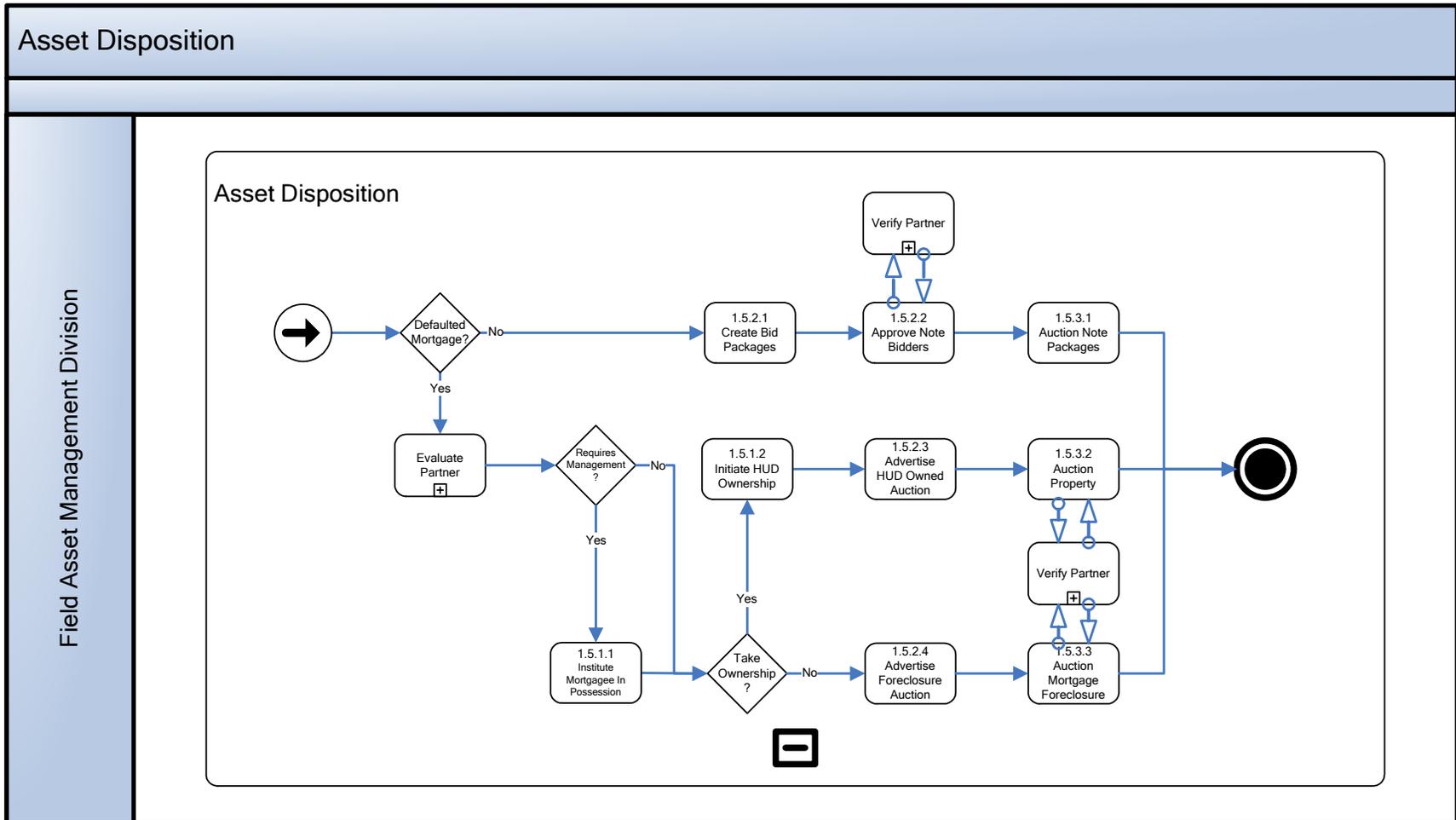


Figure 2-12: MFH Partner Management Workflow Map (part 1)

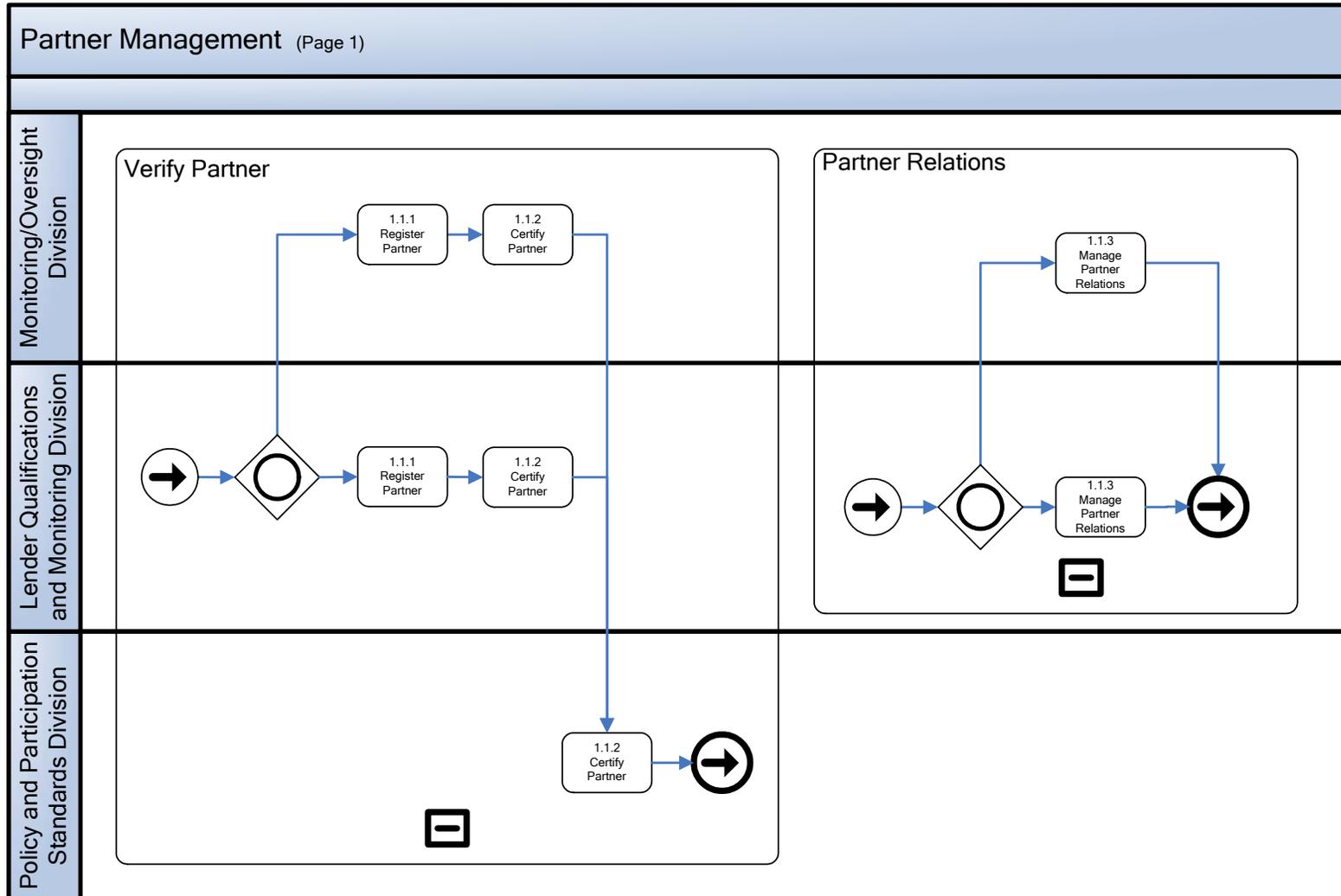
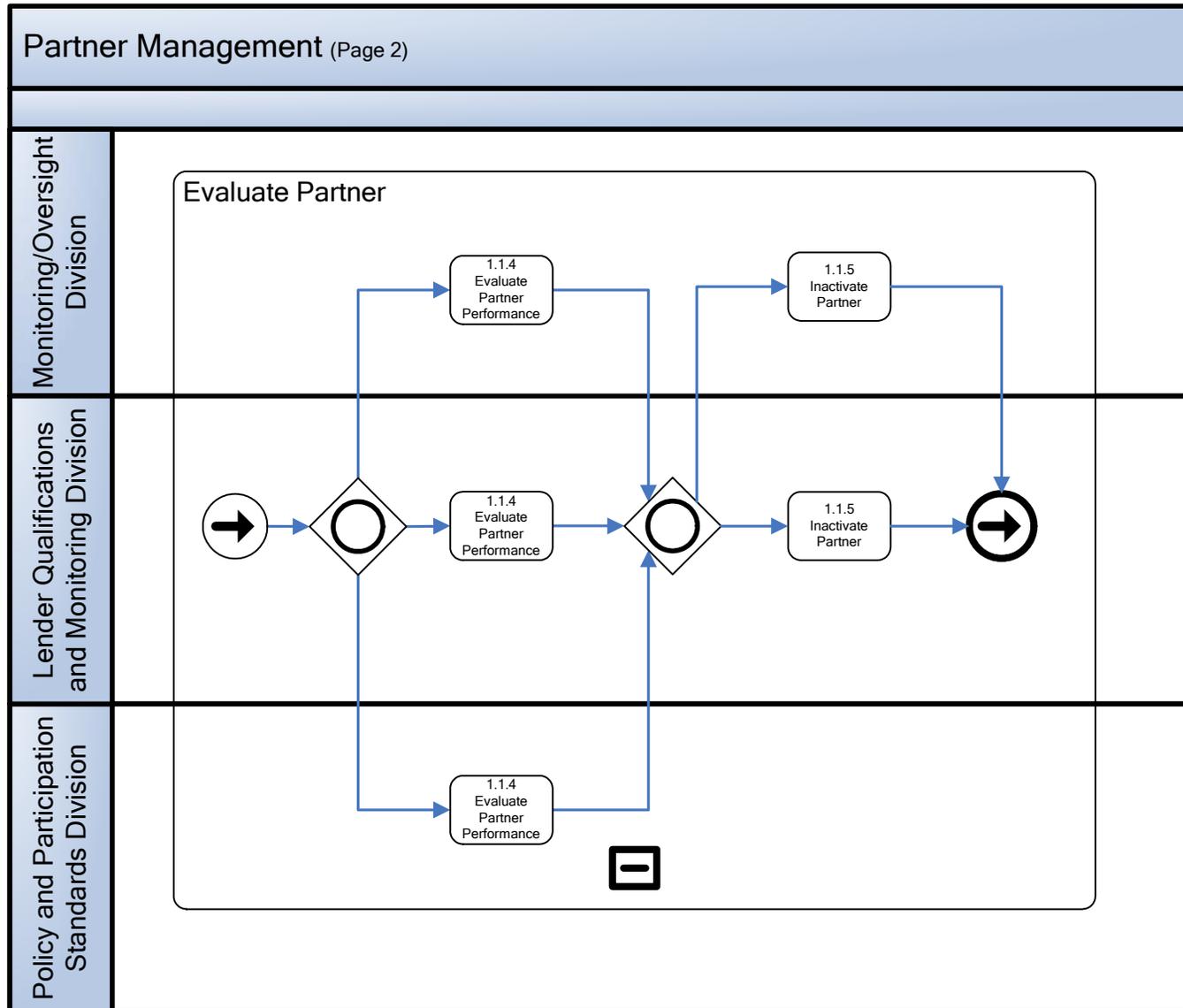


Figure 2-13: MFH Partner Management Workflow Map (part 2)



2.3.3 MFH Programs to MFH Business Functions Map

The MFH Programs are mapped to the MFH Business Functions identifying how these programs are administered within the Multifamily Housing business domain.

Table 3-11 presents how the MFH Programs map to the MFH Business Functions.

Table 2-11: MFH Programs to MFH Business Functions Map

MFH Business Functions →	External Partner Management	Asset Development	Asset Management	Asset Disposition
External Driver				
Function ID	1.1	1.2	1.3	1.5
Mortgage Insurance for Rental Housing: Section 207	X	X	X	X
Mortgage Insurance for Manufactured Home Parks: Section 207	X	X	X	X
Mortgage Insurance for Nursing Homes, Intermediate Care, Board & Care and Assisted-living Facilities: Section 232 and Section 232/223(f)	X	X	X	X
Mortgage Insurance for Rental and Cooperative Housing: Section 221(d)(3) and Section 221(d)(4)	X	X	X	X
Mortgage Insurance for Single Room Occupancy Projects (SRO): Section 221(d)(3) and 221(d)(4)	X	X	X	X
Mortgage Insurance for Cooperative Housing: Section 213	X	X	X	X
Mortgage Insurance for Rental Housing for Urban Renewal and Concentrated Development Areas: Section 220	X	X	X	X
Mortgage Insurance for Rental Housing for the Elderly: Section 231	X	X	X	X
Mortgage Insurance for Construction or Substantial Rehabilitation of Condominium Projects: Section 234(d)	X	X	X	X
Supportive Housing for the Elderly Program: Section 202	X	X	X	
Supportive Housing for Persons with Disabilities: Section 811	X	X	X	
Mortgage Insurance for Two-year Operating Loss Loans: Section 223(d)	X	X	X	
Mortgage Insurance for Purchase or Refinancing of Existing Multifamily Rental Housing: Sections 207/223(F)	X	X	X	
Mortgage Insurance for Supplemental Loans for Multifamily Projects: Section 241(a)	X	X	X	
Risk-sharing Program - Qualified Participating Entities (QPE): Section 542(b)	X	X	X	X
Housing Finance Agency Risk-sharing: Section 542(c)	X	X	X	X
Mortgage Insurance for HUD Loan Refinance: Section 223(a)(7)	X	X	X	
Assisted-Living Conversion Program (ALCP)	X	X	X	
Mark-to-Market (M2M)	X	X	X	

2.3.4 MFH Strategic and Business Goals to MFH Business Functions Map

The MFH Strategic and Business Goals are mapped to the MFH Business Functions identifying how key strategic objectives and key business objectives are achieved within the Multifamily Housing business domain.

Table 3-12 presents how the MFH Strategic and Business Goals map to the MFH Business Functions.

Table 2-12: MFH Strategic and Business Goals to MFH Business Functions Map

MFH Business Functions →			External Partner Management	Asset Development	Asset Management	Asset Disposition
Internal Drivers			1.1	1.2	1.3	1.5
Function ID			1.1	1.2	1.3	1.5
Programmatic Strategic Goals	Increase homeownership opportunities	Expand national homeownership opportunities.	X	X		
		Increase minority homeownership.	X		X	
		Make the home-buying process less complicated and less expensive.	X		X	
		Fight practices that permit predatory lending.	X	X	X	
		Help HUD-assisted renters become homeowners.	X		X	
		Keep existing homeowners from losing their homes.	X		X	
	Promote decent affordable housing	Expand access to affordable rental housing.	X		X	
		Improve the physical quality and management accountability of public and assisted housing.	X		X	
		Increase housing opportunities for the elderly and persons with disabilities.	X	X	X	
		Help HUD-assisted renters make progress toward self-sufficiency.	X			

MFH Business Functions →			External Partner Management	Asset Development	Asset Management	Asset Disposition
Internal Drivers			1.1	1.2	1.3	1.5
Function ID						
	Strengthen communities	Provide capital and resources to improve economic conditions in distressed communities.	X	X		X
		Help organizations access the resources they need to make their communities more livable.	X	X		X
		End chronic homelessness and move homeless families and individuals to permanent housing.	X	X	X	X
		Mitigate housing conditions that threaten health.			X	X
Cross - Cutting Strategic Goals	Ensure equal opportunity in housing	Resolve discrimination complaints on a timely basis.	X		X	
		Promote public awareness of fair housing laws.	X		X	X
		Improve housing accessibility for persons with disabilities.	X	X	X	
	Embrace high standards of ethics, management and accountability	Rebuild HUD's human capital and further diversify its workforce.	X			
		Improve HUD's management, internal controls and systems and resolve audit issues.			X	
		Improve accountability, service delivery and customer service of HUD and its partners.	X		X	X
		Ensure program compliance.	X		X	X
		Improve internal communications and employee involvement.		X	X	X
	Promote participation of faith-based and community organizations	Reduce regulatory barriers to participation by faith-based and community organizations.	X			
		Conduct outreach to inform potential partners of HUD opportunities.	X			

MFH Business Functions →			External Partner Management	Asset Development	Asset Management	Asset Disposition
Internal Drivers			1.1	1.2	1.3	1.5
Function ID			1.1	1.2	1.3	1.5
		Expand technical assistance resources deployed to faith-based and community organizations.	X			
		Encourage partnerships between faith-based/community organizations and HUD's traditional grantees.	X			
MFH Business Goals	Support the Supply of Multifamily Housing	Provide mortgage insurance for development, acquisitions, and refinancing of rental apartments.	X	X	X	
	Serve the Elderly and Disabled	Provide capital advances that support their unique housing needs.	X	X	X	
	Support the Elderly and Others in Need	Insure mortgages for Nursing Homes, Board and Care, Assisted Living and similar facilities.	X	X	X	
	Expand the Affordability of Rental Housing	Provide Rental Housing Assistance Payments on behalf of needy households, enforcement of Use Restrictions and other affordability mechanisms.	X		X	
	Assure the Continued Availability of Affordable Rental Housing	Provide a variety of housing preservation initiatives (e.g. Refinancing of Older Subsidized Mortgages and 202 Loans, Mortgage Restructuring, and Mark-Up-to-Market).			X	X
	Protect the Taxpayer's Investment	Ensure ongoing strategies of risk management, loss mitigation, and program compliance.	X	X	X	X
	Improve the Quality of Life of Residents of HUD-Assisted Rental Apartments	Conduct quality improvement programs for housing (e.g. Neighborhood Networks and Service Coordinator Grants)	X		X	X

2.3.5 MFH Business Functions to MFH Organizational Offices / Divisions Map

The Multifamily Housing organizations defined in Section 3.2.4 have duties and responsibilities to perform within the Multifamily Housing business domain. The role that an organizational division might play in any particular process could be to actually perform that process either by directly doing the work associated with that process or by directing the work to external personnel. In either case, the division is responsible for the completion of the work associated with the process. A division may not be responsible for a process, but may provide support to another division. This may be to provide policy, review documentation, provide automated support, or any other work that supplements the process.

The Multifamily Housing Business Functions and their processes are mapped to one or more divisions that are responsible for completing that function or process. The definitions of the MFH Business Functions are defined in Section 3.2.3, while the Process Definitions are defined in Section 3.3.1.

The Neighborhood Networks Division is included in Table 3-13 for reference purposes but it exclusively supports Rental Housing Assistance, which is not within the purview of this *MFH EA Blueprint*, therefore no process identifications are provided. Also, since the intent of the *MFH EA Blueprint* is to focus on the main lines of business for Multifamily Housing, the Other MFH Support Services function is not presented.

Shaded cells – Represent Offices

Non-shaded cells – Represent Divisions

P – Performs this function/process

S – Supports this function/process

Table 3-13 identifies the function and process that is performed or supported by the MFH Organizational Office / Division.

Table 2-13: MFH Business Functions to MFH Organizational Offices / Divisions Map

Line of Business	Function	Organization/Division →	Function ID	Housing Assistance Contract Administration Oversight	Financial Operations Division	Monitoring/Oversight Division	Multifamily Housing Development	Housing Development Policy Division	Technical Support Division	Lender Qualifications and Monitoring Division	Asset Management	Policy and Participation Standards Division	Field Asset Management Division	Business Relationships and Special Initiatives Division	Housing Assistance and Grant Administration	Neighborhood Networks Division	Housing Assistance Policy Division	Grant Policy and Management Division	Grant and Housing Assistance Field Support Division	Program Systems Management	Program Systems Management		
		Sub-Function/Process																					
Multifamily Housing	External Partner Management	Register Partner	1.1.1	P		P	P			P											S	S	
		Certify Partner	1.1.2	P		P	P			P	P	P										S	S
		Manage Partner Relations	1.1.3	P	S	P	P			P	P	P										S	S
		Evaluate Partner Performance	1.1.4	P		P	P			P	P	P										S	S
		Inactivate Partner	1.1.5	P		P	P			P												S	S
	Asset Development	Release NoFA	1.2.1	S	S			S	S							P			P			S	S
		Evaluate Applications	1.2.2					P	S	S	P					S			S			S	S
		Select Applications	1.2.3					P	S		P					S			S			S	S
		Establish Firm Commitment	1.2.4					P	S		P					S			S			S	S
		Initial Endorsement/Closing	1.2.5					P	S		P					S			S			S	S
		Monitor Construction	1.2.6					P	S	P	P					S			S			S	S
		Establish Cost Certification	1.2.7					P	S		P					S			S			S	S
		Increase Construction Loan	1.2.8					P	S		P					S			S			S	S
		Conduct Post-Substantial Completion Inspections	1.2.9					P	S	P						S			S			S	S
		Final Endorsement/Closing	1.2.10					P	S		P					S			S			S	S
	Asset Management	Financial Operations	1.3.1	S		S						P	S	P								S	S
		Process Annual Financial Statement (AFS)	1.3.1.1									P	S	P								S	S
		Assess Financial Viability of Project	1.3.1.2	S		S						P	S	P								S	S
		Process Monthly Accounting Report	1.3.1.3	S		S						P	S	P								S	S

Line of Business	Function	Organization/Division →	Function ID	Housing Assistance Contract Administration Oversight	Financial Operations Division	Monitoring/Oversight Division	Multifamily Housing Development	Housing Development Policy Division	Technical Support Division	Lender Qualifications and Monitoring Division	Asset Management	Policy and Participation Standards Division	Field Asset Management Division	Business Relationships and Special Initiatives Division	Housing Assistance and Grant Administration	Neighborhood Networks Division	Housing Assistance Policy Division	Grant Policy and Management Division	Grant and Housing Assistance Field Support Division	Program Systems Management	Program Systems Management
		Sub-Function/Process																			
		Review of Project Budgets	1.3.1.4	S		S					P	S	P							S	S
		Resolve Financial Findings with Owner	1.3.1.5								P	S	P							S	S
		Physical Operations	1.3.2	S		S					P	S	P							S	S
		Assess Physical Condition of Project	1.3.2.1	S		S					P	S	P							S	S
		Resolve Physical Findings with Owner	1.3.2.2								P	S	P							S	S
		Owner/Management Operations	1.3.3	S		S					P	S	P							S	S
		Review Selection of Management Agent	1.3.3.1								P	S	P							S	S
		Conduct Management Review	1.3.3.2	S		S					P	S	P							S	S
		Resolve Management Findings with Owner	1.3.3.3								P	S	P							S	S
		Process Request for Ownership Change	1.3.3.4								P	S	P							S	S
		Manage Use Agreement	1.3.3.5								P	S	P							S	S
		Mortgage Servicing	1.3.4								P	S	P							S	S
		Manage Troubled Properties	1.3.4.1								P	S	P							S	S
		Process Request for Approval of Escrow Release	1.3.4.2								P	S	P							S	S
		Approve Pre-Payment Request	1.3.4.3								P	S	P							S	S
		Restructure Debt	1.3.4.4								P	S	P							S	S
		Administer Delinquencies and Defaults	1.3.4.5								P	S	P							S	S
		Process Claim	1.3.4.6								P	S	P							S	S
		Enforcement	1.3.5								P	S	S	P						S	S
		Evaluate Referral	1.3.5.1								P	S	S	P						S	S
		Develop Enforcement Plan	1.3.5.2								P	S	S	P						S	S

Line of Business	Function	Organization/Division →	Function ID	Housing Assistance Contract Administration Oversight	Financial Operations Division	Monitoring/Oversight Division	Multifamily Housing Development	Housing Development Policy Division	Technical Support Division	Lender Qualifications and Monitoring Division	Asset Management	Policy and Participation Standards Division	Field Asset Management Division	Business Relationships and Special Initiatives Division	Housing Assistance and Grant Administration	Neighborhood Networks Division	Housing Assistance Policy Division	Grant Policy and Management Division	Grant and Housing Assistance Field Support Division	Program Systems Management	Program Systems Management		
		Sub-Function/Process																					
		Implement Enforcement Plan	1.3.5.3								P	S	S	P						S	S		
		Support Legal Proceedings	1.3.5.4									P	S	S	P						S	S	
		Risk Management	1.3.6									P	S	P	P	P		P		P	S	S	
		Analyze Portfolio	1.3.6.1									P	S	P	P	P		P		P	S	S	
		Resolve Audit Findings	1.3.6.2									P	S	P	P	P		P		P	S	S	
		Rental Housing Assistance	See RHA Blueprint	1.4																			
		Asset Disposition	Property Management Pending Disposition	1.5.1								P	S	P							S	S	
			Instigate Mortgagee in Possession	1.5.1.1									P	S	P							S	S
			Initiate HUD Ownership	1.5.1.2									P	S	P							S	S
			Asset Marketing	1.5.2									P	S	P							S	S
			Create Bid Packages	1.5.2.1									P	S	P							S	S
			Approve Note Bidders	1.5.2.2									P	S	P							S	S
			Advertise HUD Owned Auction	1.5.2.3									P	S	P							S	S
Advertise Foreclosure Auction			1.5.2.4									P	S	P							S	S	
Asset Sales			1.5.3									P	S	P							S	S	
Auction Note Packages			1.5.3.1									P	S	P							S	S	
Auction Property	1.5.3.2									P	S	P							S	S			
Auction Mortgage Foreclosure	1.5.3.3									P	S	P							S	S			

2.4 HUD Business Reference Model to MFH Business Functions

The HUD Business Reference Model (BRM), as defined in the “HUD Target Enterprise Architecture V1.0”, outlines a common functional base of business for all of HUD. Multifamily Housing business functions and processes are mapped to this HUD BRM to show how MFH fits within the overall business structure of HUD. This mapping facilitates an analysis that cross-cuts segment architectures to identify re-use areas of common functionality. Since the scope of this segment architecture was restricted to the main line of business, the support functions and the rental housing functions were not included in this mapping. HUD identified three business areas that have been represented as three charts below, mapped to the MFH functions.

Table 3-14 presents the how the MFH Business Functions map to the HUD Mode of Delivery Functions. Table 3-15 presents the how the MFH Business Functions map to the Support Delivery of Services Functions and Sub-Functions. Table 3-16 presents the how the MFH Business Functions map to the HUD Management of Government Resources Functions and Sub-Functions.

Table 2-14: HUD BRM: Mode of Delivery Functions Mapping

MFH Business Functions →	External Partner Management	Asset Development	Financial Operations	Physical Operations	Owner/Management Operations	Mortgage Servicing	Enforcement	Risk Management	Property Management Pending Disposition	Asset Marketing	Asset Sales
HUD Mode of Delivery Functions	1.1	1.2	1.3.1	1.3.2	1.3.3	1.3.4	1.3.5	1.3.6	1.5.1	1.5.2	1.5.3
Loan Insurance		X	X	X	X	X	X	X	X	X	X
Issue Insurance		X			X						
Process Application		X			X						
Perform Underwriting		X									
Service Insurance						X					
Manage Claims						X					
Manage Assets			X	X	X		X	X	X	X	X
Service Assigned Loans			X	X	X	X					
Loan Guarantees		X	X	X	X	X	X	X	X		
Design Loan Guarantee Product		X				X					
Manage Risk		X	X	X	X	X	X	X	X		
Manage Securities		X				X	X				
Grants Management		X									
Establish Program		X									
Process Application		X									

MFH Business Functions →	External Partner Management	Asset Development	Financial Operations	Physical Operations	Owner/Management Operations	Mortgage Servicing	Enforcement	Risk Management	Property Management Pending Disposition	Asset Marketing	Asset Sales
HUD Mode of Delivery Functions	1.1	1.2	1.3.1	1.3.2	1.3.3	1.3.4	1.3.5	1.3.6	1.5.1	1.5.2	1.5.3
Award		X									
Administer		X									
Monitor Execution		X									
Closeout		X									
Subsidies Management	X										
Qualify/Requalify Partners	X										
Allocate Subsidy Funds											
Administer Subsidies Program											
Take Corrective Action											
Direct Loans		X	X	X	X	X	X	X			
Account Servicing					X	X					
Loan Origination		X									
Treasury Cross Servicing											
Portfolio Management			X	X	X		X	X			
Delinquent Debt Collection						X					
Other Reporting Requirements			X	X	X			X			
Business Participant Management	X	X	X	X	X		X	X			
Approval	X										
Monitoring	X	X	X	X	X		X				
Enforcement			X	X	X		X	X			
Corrective Action			X	X	X		X				
Program Evaluation			X	X	X		X	X			
Program Monitoring			X	X	X		X	X			

Table 2-15: HUD BRM: Support Delivery Of Services Functions Mapping

MFH Business Functions →	External Partner Management	Asset Development	Financial Operations	Physical Operations	Owner/Management Operations	Mortgage Servicing	Enforcement	Risk Management	Property Management Pending Disposition	Asset Marketing	Asset Sales
Function ID	1.1	1.2	1.3.1	1.3.2	1.3.3	1.3.4	1.3.5	1.3.6	1.5.1	1.5.2	1.5.3
Support Delivery Of Services Functions and Sub-Functions											
Controls and Oversight	X	X	X	X	X	X	X	X	X		
Corrective Action	X					X	X		X		
Program Evaluation	X						X	X			
Program Monitoring	X	X	X	X	X		X	X			
Internal Risk Management and Mitigation							X	X			
Contingency Planning							X	X			
Continuity of Operations											
Service Recovery											
Legislative Relations											
Congressional Liaison Operations											
Legislation Testimony											
Legislation Tracking											
Proposal Development											
Planning and Resource Allocation		X						X			
Budget Execution											
Budget Formulation											
Capital Planning		X						X			
Enterprise Architecture											
Management Improvement											
Strategic Planning											
Workforce Planning											
Public Affairs	X										
Customer Services	X										
Official Information Dissemination	X										
Product Outreach	X										
Public Relations	X										
Regulatory Development	X										
Policy and Guidance Development											
Public Comment Tracking	X										
Regulatory Creation											
Rule Publication											
Revenue Collection						X	X				X
Debt Collection						X	X				
Federal Asset Sales											X

MFH Business Functions →	External Partner Management	Asset Development	Financial Operations	Physical Operations	Owner/Management Operations	Mortgage Servicing	Enforcement	Risk Management	Property Management Pending Disposition	Asset Marketing	Asset Sales
Support Delivery Of Services Functions and Sub-Functions											
Function ID	1.1	1.2	1.3.1	1.3.2	1.3.3	1.3.4	1.3.5	1.3.6	1.5.1	1.5.2	1.5.3
User Fee Collection											
Market Research and Economic Analysis*											

* No sub-functions were identified in the HUD Target Enterprise Architecture V1.0

Table 2-16: HUD BRM: Management of Government Resources Functions Mapping

MFH Business Functions →	External Partner Management	Asset Development	Financial Operations	Physical Operations	Owner/Management Operations	Mortgage Servicing	Enforcement	Risk Management	Property Management Pending Disposition	Asset Marketing	Asset Sales
Management of Government Resources Functions and Sub-Functions											
Function ID	1.1	1.2	1.3.1	1.3.2	1.3.3	1.3.4	1.3.5	1.3.6	1.5.1	1.5.2	1.5.3
Supply Chain Management											
Goods Acquisition											
Inventory Control											
Logistics Management											
Service Acquisition											
Administrative Management											
Facilities, Fleet, and Equipment Management											
Help Desk Services											
Security Management											
Travel											
Workplace Policy Development and Management											
Financial Management	X	X	X			X	X	X	X		
Accounting		X	X								
Asset and Liability Management		X					X		X		
Budget and Finance	X	X				X		X			
Collections and Receivables	X										
Payments	X	X				X					
Reporting and Information			X								
Human Resource											

MFH Business Functions →	External Partner Management	Asset Development	Financial Operations	Physical Operations	Owner/Management Operations	Mortgage Servicing	Enforcement	Risk Management	Property Management Pending Disposition	Asset Marketing	Asset Sales
Function ID	1.1	1.2	1.3.1	1.3.2	1.3.3	1.3.4	1.3.5	1.3.6	1.5.1	1.5.2	1.5.3
Management of Government Resources Functions and Sub-Functions											
Management											
Benefits Management											
Personnel Management											
Payroll Management and Expense Reimbursement											
Resource Training and Development											
Security Clearance Management											
Staff Recruitment and Employment											
Information and Technology Management											
Information Management											
IT Infrastructure Maintenance											
IT Security											
Lifecycle/ Change Management											
System Development											
System Maintenance											
Record Retention											

3.0 SYSTEM PROFILE

3 SYSTEM PROFILE

3.1 Overview

The *Business Profile* outlined in *Chapter 2.0* provides the foundation for mapping to the Integrated MFH System, being built specifically to support the Multifamily Housing business domain, to other MFH Systems (not within the Integrated MFH System), and to other supporting HUD Systems. The *System Profile* will describe the various MFH/HUD systems, the relationships and interfaces between the systems, and the Multifamily Housing functions/processes that the systems support.

Multifamily Housing's goal is to develop one system that supports the core business functions/processes of Multifamily Housing. This system, referred to as the "Integrated MFH System", will be managed under a single Project Cost Account System (PCAS) and single Change Control Board. An integrated property and portfolio management system will include the non-accounting functions and modules of several current initiatives: APPS, DAP, M2M, MDDR, OPIIS, and REMS. The accounting system functions would be targeted towards Commercial Off-The-Shelf (COTS) solutions. Also, those functions supported by the Rental Housing Assistance blueprint would be covered under a separate PCAS that consolidates Multifamily Housing (MFH) and Public & Indian Housing (PIH) rental housing related functions, and will include functionality currently supported by TRACS/ARAMS.

System Impacts resulting from the "To-Be" analysis of the *System Profile* for Multifamily Housing are reflected in Appendix B - Gap Analysis.

The remainder of this chapter is organized as follows:

- *System Definitions* defines Multifamily Housing's systems environment in terms of the Integrated MFH System, Other MFH Systems (not within the Integrated MFH System) and Other HUD Systems that support the Multifamily Housing business domain.
- *System Maps* draws out the relationships between the Integrated MFH System, Other MFH Systems (not within the Integrated MFH System), and Other HUD Systems. It then goes on to show the MFH System Interfaces and how the MFH Business Functions and their processes map to the Integrated MFH System, Other MFH Systems (not within the Integrated MFH System), and Other HUD Systems.
- *HUD Service-component Reference Model to MFH Functions* maps the Business Functions to the HUD Service-component Reference Model (SRM) in the HUD Target Architecture to align MFH with the rest of HUD. This enables HUD and MFH to take a broad look and recognize areas of missing or overlapping software application coverage as well as identify areas of improvement in their system delineations.

3.2 System Definitions

The Multifamily Housing business domain is supported by systems built and maintained by Multifamily Housing and by organizations outside of MFH that support Multifamily Housing business functions. The main focus of this section will be on the Integrated MFH systems and Other MFH Systems but the Other HUD systems are included for reference purposes.

3.2.1 Integrated MFH System

The Integrated MFH System encompasses system functions that are currently performed by existing Multifamily Housing as well as incorporate new system functions to support manual processes that have yet to be automated. At a high level, the Integrated MFH System will consist of modules that mirror the core Multifamily Housing business functions. These modules mirroring the MFH Business Functions are the External Partner Management Module, Asset Development Module, Asset Management Module, and Asset Disposition Module.

Table 4-1 defines each of the proposed modules for the Integrated MFH System.

Table 3-1: Definition of Modules for the Integrated MFH System

Integrated MFH System Modules	Definition
External Partner Management Module	The External Partner Management Module automates the submission, review, and approval of the HUD Previous Participation Certification Process (Form 2530). External Partner Management Module data/processes will support the Asset Management and Asset Development Modules and processing functions utilized by organizations external to MFH.
Asset Development Module	The Asset Development Module automates processing and tracking of HUD Multifamily Housing applications from pre-application through final closing. The module supports all functions of underwriting: Tracking and Administration of projects, Architectural and Engineering (A&E) Analysis, Cost Analysis, Valuation Analysis, and Mortgage Credit Analysis. DAP provides technical processing for 220, 221(d)(3), 221(d)(4), and 223(f) programs. Asset Development Module data/processes will support the Asset Management Module and processing functions utilized by organizations external to MFH.
Asset Management Module	The Asset Management Module is the official source of data on Multifamily Housing's portfolio of insured and assisted properties. It provides automated support to collect/maintain accurate data and enables Program Centers and Hubs, and Enforcement Center staff to perform servicing functions and implement enforcement actions where needed. The module is the project management tool for the Office of Multifamily Housing (MFH), the Departmental Enforcement Center (DEC), and the Real Estate Assessment Center (REAC). It improves fiscal and regulatory control over HUD's multifamily housing portfolio, and ensures compliance with HUD program requirements. The module improves the accuracy of HUD's data that define the portfolio of insured, subsidized, HUD-held, HUD-owned, co-insured, elderly and disabled properties, and provides portfolio management for Section 8 contracts,

	<p>physical inspection follow-up and financial assessment reviews. It also supports:</p> <ul style="list-style-type: none"> ○ Tracking of Mark-to-Market asset assignments of Participating Administrative Entities through the rent reduction and debt restructuring processes performed by the Office of Affordable Housing Preservation (OAHP). ○ Electronic submission delinquency, default, election to assign, and related loan information by lenders, who service HUD-FHA insured loans; and monitoring of FHA defaulted loans and delinquent 202 direct loans. ○ Integration with the Rental Housing Assistance System to support processes related to Multifamily Housing rental units.
Asset Disposition Module	The Asset Disposition Module automates select Asset Disposition business functions/processes.

3.2.2 Other MFH Systems

Other Multifamily Housing Systems are those that provide functions that are not within the scope of the Intergrated MFH System.

Table 4-2 defines Other Multifamily Housing Systems that will not be integrated into the Integrated MFH System.

Table 3-2: Definition of Other MFH Systems

Other MFH Systems	Definition
CSMS	The Comprehensive Servicing and Monitoring System (P085) primarily supports the Asset Management function. It provides property management and mortgage loan status from HUD-held and HUD-owned Multifamily properties. CSMS is an outsourced system that is maintained by an independent contractor. CSMS tracks HUD-held Multifamily properties and certain HUD-held defaulted notes, which are in mortgagee-in-possession (MIP) status. CSMS also performs several management and accounting functions for these properties (e.g., property management, tax servicing, tenant leases, accounts receivable, accounts payable and disbursements processing, financial accounting, and management reports).
MFIC	The Multifamily Insurance Claims (F75) system primarily supports the Asset Management function. It allows a user to create a claim after receiving a letter of intent from a mortgagee who elects to assign the claim to HUD for insurance benefits. MFIC has the capability of tracking claims as they are examined, audited, and reviewed by entering the examiner and reviewer assigned and complete dates. MFIC provides settlement statements for claims processed by the department. The system computes partial, final and supplemental settlement details, and creates a transaction record of all payments that are posted against the claim. For each payment transaction, the system generates a voucher and schedule number. Voucher, schedule and requisition numbers are generated for debenture transactions.
MFIS	The Multifamily Insurance System (F47) system primarily supports the Asset Management function. It provides automated interactive support for HUD's Multifamily mortgage insurance programs. It maintains the inventory of Multifamily

	Housing insurance-in-force cases, and all pertinent and historical data. It produces premium bills and new account receivables monthly.
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3.2.3 Other HUD Systems

Many systems that support Multifamily Housing were not developed by MFH. Organizations external to Multifamily Housing have responsibilities that serve as cross-functions to multiple organizations within HUD. The systems produced/maintained by these organizations support Multifamily Housing and other HUD organizations.

Table 4-3 defines Other HUD Systems interfaced with the Integrated Multifamily Housing System and Other MFH Systems.

Table 3-3: Definitions of Other HUD Systems

Other HUD Systems	Definition
DARTS	The Departmental Accounts Receivable Tracking/Collection System (D21) establishes, tracks, and collects account receivables for residual receipts, excess financing, and miscellaneous payments for the Public Housing Agencies/Indian Housing Authorities and Section 236 program receivables for MF Excess Rental Income.
FASS	The Financial Assessment Subsystem (P092) is an automated system that supports the collection, validation, and assessment of financial data for multifamily housing properties insured and/or subsidized by HUD. It also facilitates management and prioritization of the multifamily housing portfolio by performing automated assessments of the financial data, highlighting projects for which compliance deficiencies are identified.
GSC	The Geocode Servicing Center (A15) provides a reference repository of geographic data, identifying localities where HUD does business, such as HUD Regions, States, Counties, Localities, Congressional Districts, HUD Field Offices, HUD Indian Offices and Regions, Metropolitan Statistics Areas (MSA's), and ZIP Codes.
IMF	The Institution Master File (F51) maintains a file of institutions (Title I lenders and Title II mortgagees) which have been approved by HUD to participate in Mortgage Insurance Programs. This file is used by all mortgagee insurance accounting processes for validation of institutional identification/approval. It is also the source of premium billing addresses, provides claims payee addresses, and validates one-time premium payments transactions for mortgage processing.
LAS	The Loan Accounting System (A21) maintains loan portfolio information for Section 202 Housing for Elderly and Handicapped Loan Program and Flexible Subsidy Program. The integrated Loan Accounting System consists of the Loan Accounting System Module (LAS), the Program Accounting System (PAS), and the Line of Credit Control System (LOCCS). While the system was designed to accommodate the servicing of the Section 202 Loan Program, the Section 106B, Flexible Subsidy, Section 312, Low Rent Public Housing, and other CFO loan programs; currently the system services only the Section 202 Elderly and

	Handicapped loan activity, and the Flexible Subsidy program loan activity.
LOCCS	The Line of Control and Credit System (A67) is the HUD grant disbursement system. It is a payment control system that is used by those requesting payments from HUD. Together, PAS & LOCCS are an accounting system that tracks the reservation, obligation, and expenditure of funds, and it is the department's primary disbursement and cash management system for the majority of HUD programs.
M2M	The Mark-to-Market (F24B) system tracks the asset assignments of Participating Administrative Entities through the rent reduction and debt restructuring processes performed by the Office of Affordable Housing Preservation (OAHP).
OPIIS	The Online Property Integrated Information Suite provides an online environment to analyze loan and property-specific information as well as portfolio level information for the multifamily housing inventory. This includes annual financial statement data submitted through the Multifamily Financial Assessment Subsystem (FASS-MF), physical inspection data collected through the Physical Assessment Subsystem (PASS), and selected contract, loan, and profile data contained in the Office of Multifamily Housing's Real Estate Management System (REMS).
PAS	The Program Accounting System (A96) is the project-level funds control system and is used to record, control, and report on the commitment, obligation, and expenditure of funds. Together, PAS & LOCCS are an accounting system that tracks the reservation, obligation, and expenditure of funds, and it is the department's primary disbursement and cash management system for the majority of HUD programs.
PASS	The Physical Inspection Assessment Subsystem (P109) supports planned multi-family assessment rule and addresses multi-family monitoring material weaknesses. To ensure housing is decent, safe, and sanitary, and in good repair, PASS monitors and assesses annual physical property inspections of approximately 20,000 properties each year.
RHA System	The Rental Housing Assistance System supports both Multifamily Housing and Public and Indian Housing (PIH) rental housing functions.
WASS	The Web Access Security Subsystem (P104) provides a common framework for administering application-level security for many of HUD's web-based systems. WASS centralizes the secure connection and secure access to HUD systems. HUD's internal staff and external trusted business partners require access to many of HUD's proprietary systems.

3.3 System Map

The System Maps captures the relationships within the Multifamily Housing systems environment, interfaces within its' systems environment, and the MFH Business Function they are responsible for implementing as the systems environment supporting the Multifamily Housing business domain. The systems are identified in their future or "To-Be" state and will contribute to achieving the Multifamily Housing's Target Architecture for which changes are being implemented in order to arrive at the future state defined in the *MFH EA Blueprint - Target Architecture* document. This section of Systems Profile chapter goes on to highlight the MFH System Relationships in Section 4.3.1, identify the MFH System Interfaces in Section

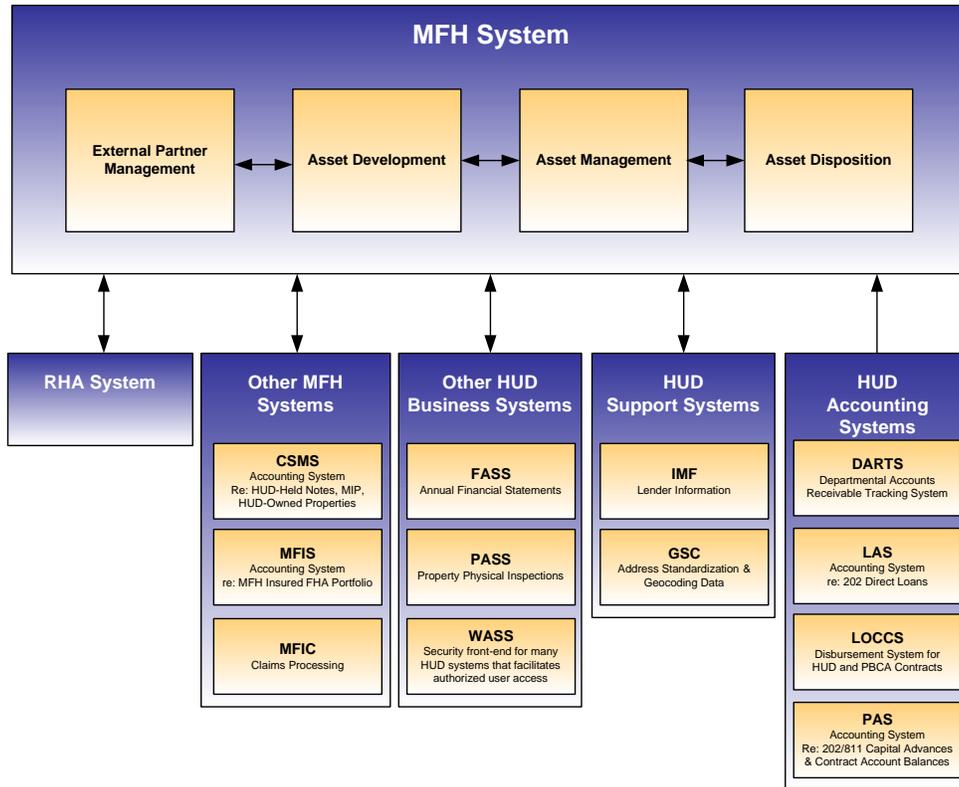
4.3.2, and close with a mapping of the MFH Business Functions and their processes to the MFH Systems.

3.3.1 Intergrated MFH System Relationships

The inter-relationship of Multifamily Housing systems and other HUD systems as described in Section 4.2 is graphically depicted below in Figure 4-1. MFH systems that share the Housing Enterprise Real Estate Management System (HEREMS) database are grouped within the interior box.

Figure 4-1 depicts the relationships between the Integrated MFH System, Other MFH Systems, and Other HUD Systems.

Figure 3-1: MFH System Map



3.3.2 MFH System Interfaces

Because the Integrated MFH system continues to be the central system for Multifamily Housing, relationships are identified primarily in terms of their relationship to the Integrated MFH system. The Project Cost Account System (PCAS) number is included for system reference purposes.

Table 4-5 identifies the interfaces between the Multifamily Housing and HUD systems in terms of support for MFH business processes; therefore the chart does not identify all possible interfaces between the systems.

Table 3-4: MFH System Interfaces Map

System Acronym	System Code	PCAS#	System Owner	Interface
MFH System				
MFH System (Now known as iREMS)	TBD	1768000	MFH	The MFH system will incorporate loan and mortgagee information from MFIC and MFIS. It also provides and receives various property and participant level information to and from other HUD systems. The system will be known as the Integrated Real Estate Management System (iREMS).
Other MFH Systems				
CSMS	P085	N/A	MFH	CSMS provides status from HUD-held and HUD-owned properties to the MFH system.
MFIC	F75	251330	MFH	The MFH system provides loan information utilized by the MFIC.
MFIS	F47	251300	MFH	MFIS provides the MFH database with financing instrument, primary address, holding mortgagee and servicing mortgagee information.
Other HUD Systems				
DARTS	D21	203140	CFO	DARTS provides excess income data to the MFH system.
FASS	P092	307810	PIH-REAC	The MFH system provides property ownership data to FASS and receives financial statement assessment results and follow-up actions from FASS.
GSC	A15	307650	CIO	GSC provides property address geographical data.
IMF	F51	251410	Housing	IMF provides Lender information to the MFH system.
LAS	A21	202740	CFO	LAS provides data on direct loans and Section 202 information to the MFH system.
LOCCS	A67	202540	CFO	LOCCS provides contract payee data to the MFH system.
PAS	A96	202540	CFO	PAS provides information pertaining to 202/811 capital advances to the MFH system.
PASS	P109	307870	PIH-REAC	PASS provides physical inspection results data to the MFH system.
RHA System	TBD	TBD	RHA	The RHA System provides information rental housing data to the MFH System.
WASS	P104	307940	PIH-REAC	WASS provides secure access to web-based applications: the MFH system, FASS, PASS.

3.3.3 MFH Business Functions/Processes to Systems

The Multifamily Housing systems and other HUD systems support certain functions and processes within the MFH business domain. Each system is associated either by assisting in the processing of data (P) or by displaying data (D) as a result of processing from another system. Since the intent of the MFH EA Blueprint was to focus on the main lines of business for Multifamily Housing, the Other MFH Support Services functions is not included.

- D – Displays Data
- P – Processes Data

Table 4-5 identifies how each system contributes to the Multifamily Housing Systems environment.

Table 3-5: Function/Process to System Mapping

Line of Business	Function	System →	Funct ID	Integrated MFH System	External Partner Management Module	Asset Development Module	Asset Management Module	Asset Disposition Module	Other MFH Systems	TRACS/ARAMS	CSMS	MFIC	MFIS	Other HUD Systems	DARTS	FASS	GSC	IMF	LAS	LOCCS	PAS	PASS	RHA	WASS	
		MFH Sub-Function/Process																							
Multifamily Housing	External Partner Management	Register Partner	1.1.1	P	P	P												P							
		Certify Partner	1.1.2	P	P														P						
		Manage Partner Relations	1.1.3	P	P	P	P			P		P	P			P			P	P	P	P		P	P
		Evaluate Partner Performance	1.1.4	P	P		P						P				P						P		
		Inactivate Partner	1.1.5	P	P														P					P	P
	Asset Development	Release NoFA	1.2.1	D		D																			
		Evaluate Applications	1.2.2	P	D	P																			
		Select Applications	1.2.3	P		P	D							P						P		P			
		Establish Firm Commitment	1.2.4	P		P	D																		
		Initial Endorsement/Closing	1.2.5	P	D	P	D										D								
		Monitor Construction	1.2.6	P	D	P	D																		

Line of Business	Function	System →	Funct ID	Integrated MFH System	External Partner Management Module	Asset Development Module	Asset Management Module	Asset Disposition Module	Other MFH Systems	TRACS/ARAMS	CSMS	MFIC	MFIS	Other HUD Systems	DARTS	FASS	GSC	IMF	LAS	LOCCS	PAS	PASS	RHA	WASS		
		MFH Sub-Function/Process																								
		Establish Cost Certification	1.2.7	P	D	P	D																			
		Increase Construction Loan	1.2.8	P	D	P														P		P				
		Conduct Post-Substantial Completion Inspections	1.2.9	P	D	P																				
		Final Endorsement/Closing	1.2.10	P	D	P	D						P				D			P		P				
	Asset Management	Financial Operations	1.3.1	P			P										P									
		Process Annual Financial Statement	1.3.1.1	D			D										P									
		Assess Financial Viability of Project	1.3.1.2	D			D										P									
		Process Monthly Accounting Report	1.3.1.3	P																						
		Review of Project Budgets	1.3.1.4																							
		Resolve Financial Findings with Owner	1.3.1.5	P			P										D									
		Physical Operations	1.3.2	P			P																	P		
		Assess Physical Condition of Project	1.3.2.1	P			P																	P		
		Resolve Physical Findings with Owner	1.3.2.2	P			P																	P		
		Owner/Management Operations	1.3.3	P	D		P																	P		
		Review Selection of Management Agent	1.3.3.1	P	D		P																			
		Conduct Management Review	1.3.3.2	P			P																			
		Resolve Management Findings with Owner	1.3.3.3	P			P																	P		
		Process Request for Ownership Change	1.3.3.4	P	D		P																			
		Manage Use Agreement	1.3.3.5	P			P																			
		Mortgage Servicing	1.3.4	P			P	P				P	P	P			P	D	P	P	P	P				
		Manage Troubled Properties	1.3.4.1	P			P																			

Line of Business	Function	System →	Funct ID	Integrated MFH System	External Partner Management Module	Asset Development Module	Asset Management Module	Asset Disposition Module	Other MFH Systems	TRACS/ARAMS	CSMS	MFIC	MFIS	Other HUD Systems	DARTS	FASS	GSC	IMF	LAS	LOCCS	PAS	PASS	RHA	WASS		
		MFH Sub-Function/Process																								
		Process Request for Approval of Escrow Release	1.3.4.2	P			P																			
		Approve Pre-Payment Request	1.3.4.3	P			P																			
		Restructure Debt	1.3.4.4	P			P																			
		Administer Delinquencies and Defaults	1.3.4.5	P			P					P	P							P						
		Process Claim	1.3.4.6									P								P						
		Enforcement	1.3.5	P			P										D						D			
		Evaluate Referral	1.3.5.1	P			P										D						D			
		Develop Enforcement Plan	1.3.5.2	P			P										D						D			
		Implement Enforcement Plan	1.3.5.3	P			P										D						D			
		Support Legal Proceedings	1.3.5.4	P			P										D						D			
		Risk Management	1.3.6	P			P										D						D			
		Analyze Portfolio	1.3.6.1	D			D										D						D			
		Resolve Audit Findings	1.3.6.2	P			P										D						D			
		Rental Housing Assistance	See RHA Blueprint	1.4	D																			P		
		Asset Disposition	Property Management Pending Disposition	1.5.1	P			D	P			P														
			Instigate Mortgagee in Possession	1.5.1.1	D			D	D			P														
	Initiate HUD Ownership		1.5.1.2	D			D	D			P															
	Asset Marketing		1.5.2																							
	Create Bid Packages		1.5.2.1																							
	Approve Note Bidders		1.5.2.2																							

Line of Business	Function	System →	Funct ID	Integrated MFH System	External Partner Management Module	Asset Development Module	Asset Management Module	Asset Disposition Module	Other MFH Systems	TRACS/ARAMS	CSMS	MFIC	MFIS	Other HUD Systems	DARTS	FASS	GSC	IMF	LAS	LOCCS	PAS	PASS	RHA	WASS
		MFH Sub-Function/Process																						
		Advertise HUD Owned Auction	1.5.2.3																					
		Advertise Foreclosure Auction	1.5.2.4																					
		Asset Sales	1.5.3	D																				
		Auction Note Packages	1.5.3.1	D																				
		Auction Property	1.5.3.2	D																				
		Auction Mortgage Foreclosure	1.5.3.3	D																				

3.4 HUD Service-component Reference Model to MFH Systems

HUD’s Target Applications and Services Layer is detailed in the “HUD Target Enterprise Architecture V1.0”. It describes the capabilities and functionality of HUD’s IT applications. This Service Component Reference Model (SRM) is used to describe application capabilities and functionality. HUD’s SRM consists of a 3-tiered hierarchy, consisting of service domains, types, and components, that describes the information processing capabilities needed to support HUD’s business (i.e. the ability to capture, store, access, and manipulate business data and information). This section maps only the MFH systems to the Service Domains, Service Types and Service Components as defined in the “HUD Target Enterprise Architecture V1.0”. The HUD systems as defined in Section 4.2.3 are identified in the “HUD Target Enterprise Architecture V1.0”.

Table 4-6 defines the service components for Multifamily Housing systems.

Table 3-6: HUD SRM: Service Component Mapping

System Acronym	PCAS #	System Domain	System Type	System Component	Primary Mapping(Y/N)
CSMS	N/A	Back Office Services	Assets / Materials Management	Property / Asset Management	Yes
TBD (Integrated MFH System)	TBD	Customer Services	Customer Relationship Management	Customer Analytics	No

System Acronym	PCAS #	System Domain	System Type	System Component	Primary Mapping(Y/N)
External Partner Management Module		Customer Services	Customer Relationship Management	Partner Relationship Management	Yes
		Support Services	Security Management	Digital Signature	No
TBD (Integrated MFH System) Asset Development Module	TBD	Back Office Services	Data Management	Data Exchange	No
		Digital Asset Services	Knowledge Management	Information Retrieval	No
		Digital Asset Services	Knowledge Management	Information Sharing	No
		Digital Asset Services	Knowledge Management	Knowledge Capture	No
		Business Analytical Services	Reporting	Ad-Hoc	No
		Business Analytical Services	Reporting	Standardized / Canned	No
		Process Automation Services	Tracking and Workflow	Case / Issue Management	No
		Process Automation Services	Tracking and Workflow	Process Tracking	Yes
TBD (Integrated MFH System) Asset Management	TBD	Back Office Services	Assets / Materials Management	Asset Cataloging / Identification	No
		Back Office Services	Assets / Materials Management	Facilities Management	No
		Back Office Services	Assets / Materials Management	Property / Asset Management	Yes
		Back Office Services	Data Management	Data Mart	No
		Back Office Services	Data Management	Extraction and Transformation	No
		Back Office Services	Financial Management	Activity-Based Management	No
		Back Office Services	Financial Management	Billing and Accounting	No
		Back Office Services	Financial Management	Debt Collection	No
		Back Office Services	Financial Management	Internal Controls	No
		Back Office Services	Financial Management	Payment / Settlement	No
		Back Office Services	Financial Management	Revenue Management	No

System Acronym	PCAS #	System Domain	System Type	System Component	Primary Mapping(Y/N)
		Business Analytical Services	Reporting	Standardized / Canned	No
		Business Analytical Services	Reporting	OLAP	No
		Business Management Services	Investment Management	Portfolio Management	No
		Business Management Services	Management of Process	Change Management	No
		Business Management Services	Management of Process	Program / Project Management	No
		Business Management Services	Management of Process	Risk Management	No
		Customer Services	Customer Preferences	Alerts and Notifications	No
		Customer Services	Customer Relationship Management	Surveys	No
		Digital Asset Services	Knowledge Management	Information Retrieval	No
		Digital Asset Services	Knowledge Management	Information Sharing	No
		Digital Asset Services	Knowledge Management	Knowledge Capture	No
		Process Automation Services	Tracking and Workflow	Case / Issue Management	No
		Process Automation Services	Tracking and Workflow	Process Tracking	No
		Support Services	Communication	Community Management	No
		Support Services	Forms Management	Forms Creation	No
TBD (Integrated MFH System) Asset Disposition	TBD	Back Office Services	Assets / Materials Management	Property / Asset Management	Yes
MFIC	251330	Customer Services	Customer Preferences	Alerts and Notifications	No
		Support Services	Forms Management	Forms Creation	Yes
MFIS	251300	Support Services	Communication	Community Management	No
		Back Office Services	Financial Management	Activity-Based Management	Yes

System Acronym	PCAS #	System Domain	System Type	System Component	Primary Mapping(Y/N)
		Back Office Services	Financial Management	Billing and Accounting	No
		Back Office Services	Financial Management	Debt Collection	No
		Back Office Services	Financial Management	Internal Controls	No
		Back Office Services	Financial Management	Revenue Management	No
		Business Management Services	Management of Process	Change Management	No
TRACS	251780	Customer Services	Customer Relationship Management	Surveys	No
		Back Office Services	Financial Management	Billing and Accounting	No
		Back Office Services	Financial Management	Internal Controls	Yes
		Back Office Services	Financial Management	Payment / Settlement	No
		Business Management Services	Management of Process	Program / Project Management	No
		Business Management Services	Management of Process	Risk Management	No

4.0 ARCHITECTURE PROFILE

4 ARCHITECTURE PROFILE

4.1 Overview

The “Future State Enterprise Technical Architecture Version 1.1” document identifies seven services as HUD’s Service Oriented Architectures (SOA). The HUD Enterprise Architecture Team has developed HUD’s Future State Enterprise Technical Architecture to provide the technical guidance to investment managers, systems designers, application developers, and project managers in creating and acquiring information technology products compliant with the long-term technical direction of the Department.

Hardware and software technologies evolve and innovate over time, requiring a constant evaluation of how those technologies could improve Multifamily Housing systems. The technical architecture within a service oriented architecture (SOA) chosen for a system has far reaching implications on areas such as cost, ergonomics, schedule, implementation, maintenance, and support. For these reasons, it is important to document the service oriented architectures with their technical architectures as they are used by the MFH systems

Architecture Impacts resulting from the “To-Be” analysis of the *Architecture Profile* for Multifamily Housing are reflected in Appendix B – Gap Analysis.

Note: Technical architectures have not been determined for six of the seven SOA layers at the time of this revision to the *MFH EA Blueprint*. As the *MFH EA Blueprint* is updated with additional information, subsequent versions of the *MFH EA Blueprint* will include technical architecture specification for the following SOA layers: Presentation Services, Application Services, Middleware and Integration Services, Data and Object Management Services, Communication Services, and Security Services.

The remainder of this chapter is organized as follows:

- *Architecture Definitions* defines Multifamily Housing’s seven SOA layers. It then goes on to define the technical architectures in terms of platforms used by MFH Systems to include a Web Architecture, Mainframe Architecture, and Client/Server Architecture.
- *Architecture Maps* depicts the seven layers of the HUD SOA, on a high level basis, adopted by Multifamily Housing. It then goes on to draw out the relationships inherent within each of Multifamily Housing’s technical architectures in terms of SOA Platform Services which consist of Web Architecture, Mainframe Architecture, and Client/Server Architecture.
- *HUD Technical Reference Model to MFH Systems* maps the MFH Systems to the HUD Technical Reference Model (TRM) in the HUD Target Architecture to align MFH with the rest of HUD. This enables HUD and MFH to take a broad look and recognize areas of missing or overlapping technological coverage as well as identify areas of improvement in their technology delineations.

4.2 Architecture Definitions

The Multifamily Housing systems are supported by multiple SOA layers and utilize various technical architectures. An SOA provides a mechanism for integrating the existing legacy hardware and software of systems and/or two or more systems with differing hardware and software technologies regardless of their platform or language. By contrast, a technical architecture describes the hardware and software environment within which a system resides to provide functionality to users. In general, an architecture accounts for all aspects of how a system is used from the client interface to how the data is stored on servers. Multifamily Housing's SOA, specifically Platform Services, provides the three major technical architectures used by Multifamily Housing systems which are Web Architecture, Mainframe Architecture, and Client/Server Architecture.

Table 5-1 provides the underlying intentions of Multifamily Housing in placing the key technologies of the HUD's Future State Technical Architecture within the context of Service Oriented Architecture.

Table 4-1: MFH Intention for HUD Future State Technical Architecture

SOA References	Sources
Service-oriented Modeling and Architecture How to identify, specify, and realize services for your SOA	http://www-128.ibm.com/developerworks/webservices/library/ws-soa-design1/
Elements of Service-Oriented Analysis and Design An interdisciplinary modeling approach for SOA projects	http://www-128.ibm.com/developerworks/webservices/library/ws-soad1/

Table 5-2 defines the architectures that support Multifamily Housing systems. The definitions for the seven layers of the HUD SOA have been established by the MFH EA Development Team so within each layer of the SOA the technical architectures of the MFH technology environment can be specified.

Table 4-2: Definitions of MFH Service Oriented Architectures and Technical Architectures

Service Oriented Architectures / Technical Architectures	Definitions
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Presentation Services	Presentation Services define the way that data is formatted, presented, converted, and encoded. Provides services to Application Services, enabling it to interpret the data exchanged, as well as to structure data messages to be transmitted in a specific display and control format. Its job is to ensure that a service provider and service client wanting to communicate establish the ground rules for how they can interoperate. Determines protocols for network security, file transfers, and format functions.
Application Services	Application Services are responsible for managing communication between application processes. Provides interfaces to permit applications to request and receives services. Performing the function of connecting an application file or program to a communications protocol. It is responsible for application level protocols such as HTTP, NNTP, FTP, Telnet, DNS, SSH, SMB, and AFP to name a few.
Middleware and Integration Services	Middleware and Integration Services are neither part of the operating system, nor an application. It occupies a layer between the two, providing applications with an interface for receiving services. Acting as the services that “glue together” two or more types of software (e.g. two applications, their operating systems and the network on which everything works), by translating information between them and exchanging this information over a network without both interacting applications being aware of the Middleware and Integration Services. These services enable the integration of services through the introduction of a reliable set of capabilities, such as intelligent routing, protocol mediation, and other transformation mechanisms. Provides a location independent mechanism for integration.
Data and Object Management Services	Data and Object Management Services are concerned with the creation, examination, modification, and deletion of potentially complex information objects. Defining the characteristics and capabilities of a data set or collection of data sets (e.g. the different type of financial reports).
Communication Services	Communication Services establishes, manages, and ends service provider and service client connections and manages the interaction between them. Includes such things as establishing communications and grouping data. Provides the function necessary to ensure reliable communications between service providers and service clients. Establishes, maintains, and terminates communications between service providers and service clients.
Security Services	Security Services provides the capabilities required to

	<p>monitor, manage, and maintain Quality of Service such as security, performance, and availability. This is a background process through sense-and-respond mechanisms and tools that monitor the state of applications, protocols, and standards that implement quality of service for a SOA.</p>
Platform Services	<p>Platform Services provide the framework within which systems operate and leverage various technologies. They may support either hardware or software standards or both together. Providing an environment for hardware and software technology.</p>
Web Architecture	<p>Web Architecture leverages the universal nature of the Intranet/Internet to allow access to authorized users from any location. The client system can be of any configuration as long as it meets the browser requirements. This architecture type allows for large distributions and easier maintenance, significantly reducing rollout costs. The trade-off for this portability is a more generic user interface to facilitate its working across platforms.</p>
Mainframe Architecture	<p>Mainframe Architectures support high-performance and high-volume, processor-intensive computing capable of supporting many hundreds or thousands of users simultaneously. They also support systems capable of organizing and executing multiple processing tasks at high speeds. A mainframe architecture based system often acts as the controlling agent in a centralized computing system.</p>
Client/Server Architecture	<p>Client/Server Architecture can be seen as a network architecture in which processing is split between workstations (clients) and the server. Or a systems architecture that divides functions between two or more computers. The client is the information-requesting machine and the server is the information-supplying machine. The client is the information-requesting machine and the server is the information-supplying machine.</p>

4.3 Architecture Maps

Having defined the architectures, a mapping is made showing how the systems have utilized their SOA layers and implemented their respective technical architectures. Not only showing which architectures are used. But also, the specific key technologies chose for that implementation.

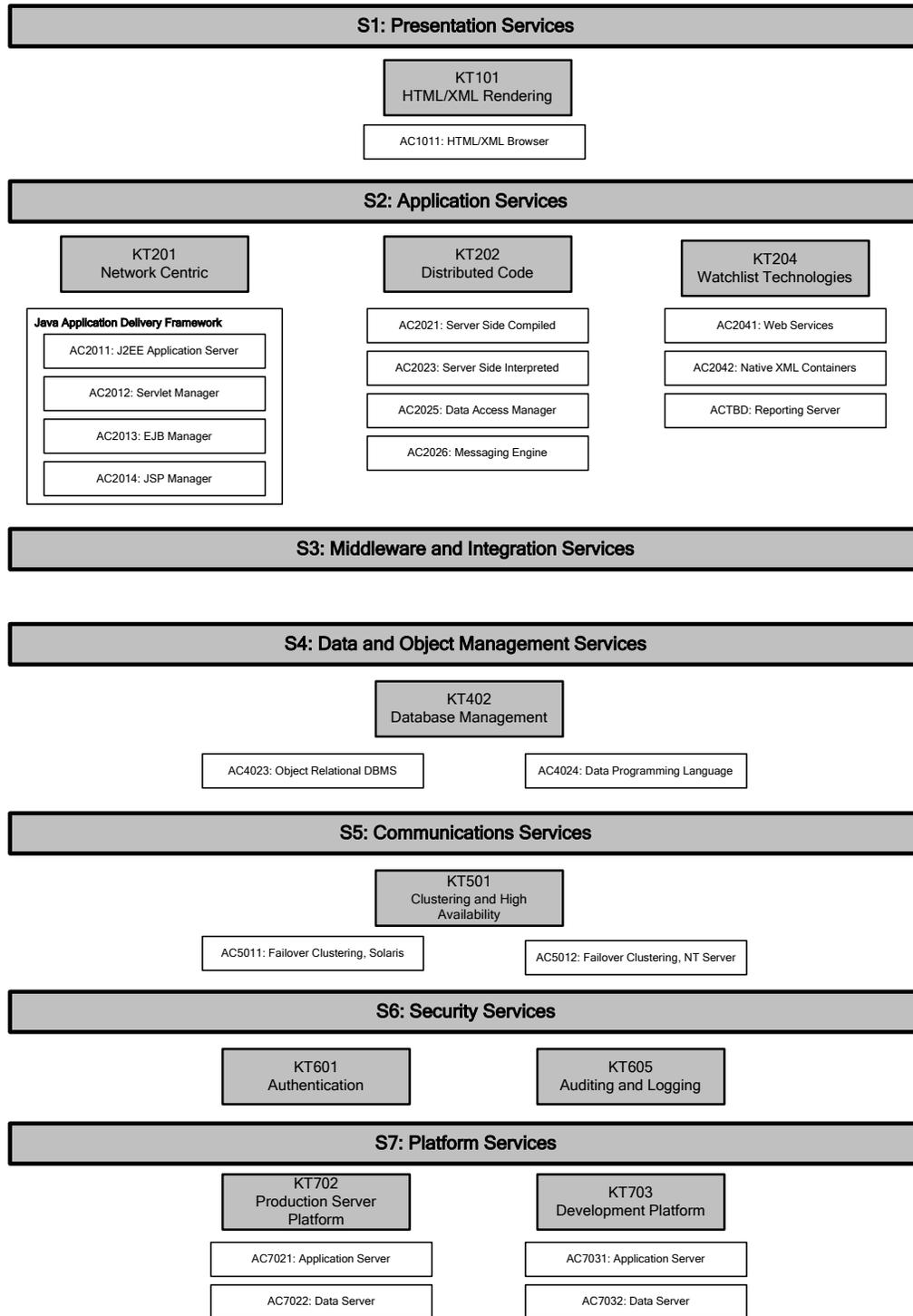
4.3.1 Serviced Oriented Architecture with Defined Key Technologies

The seven layers designated for the HUD SOA are presented with key technologies determined by HUD in their *Future State Technical Architecture*. Multifamily Housing has adopted the HUD SOA consisting of Presentation Services, Application Services, Middleware and Integration Services, Data and Object Management Services, Communication Services, Security Services, and Platform Services. While the HUD SOA is presented herein, it has yet to be applied beyond the Platform Services component. The other six services will be used to further depict the MFH technology environment in subsequent versions of the *MFH EA Blueprint*.

Figure 5-1 depicts the seven layer of the HUD Serviced Oriented Architecture with its defined Key Technologies.

Note: Currently, there are no middleware and integration services. Since these services have been defined for the future state, there are some technologies that have not been assigned an Architecture Control (AC) number. These technologies have been designated as AC/TBD so they may be included.

Figure 4-1: HUD Service Oriented Architecture with Defined Key Technologies



4.3.2 Web Architecture

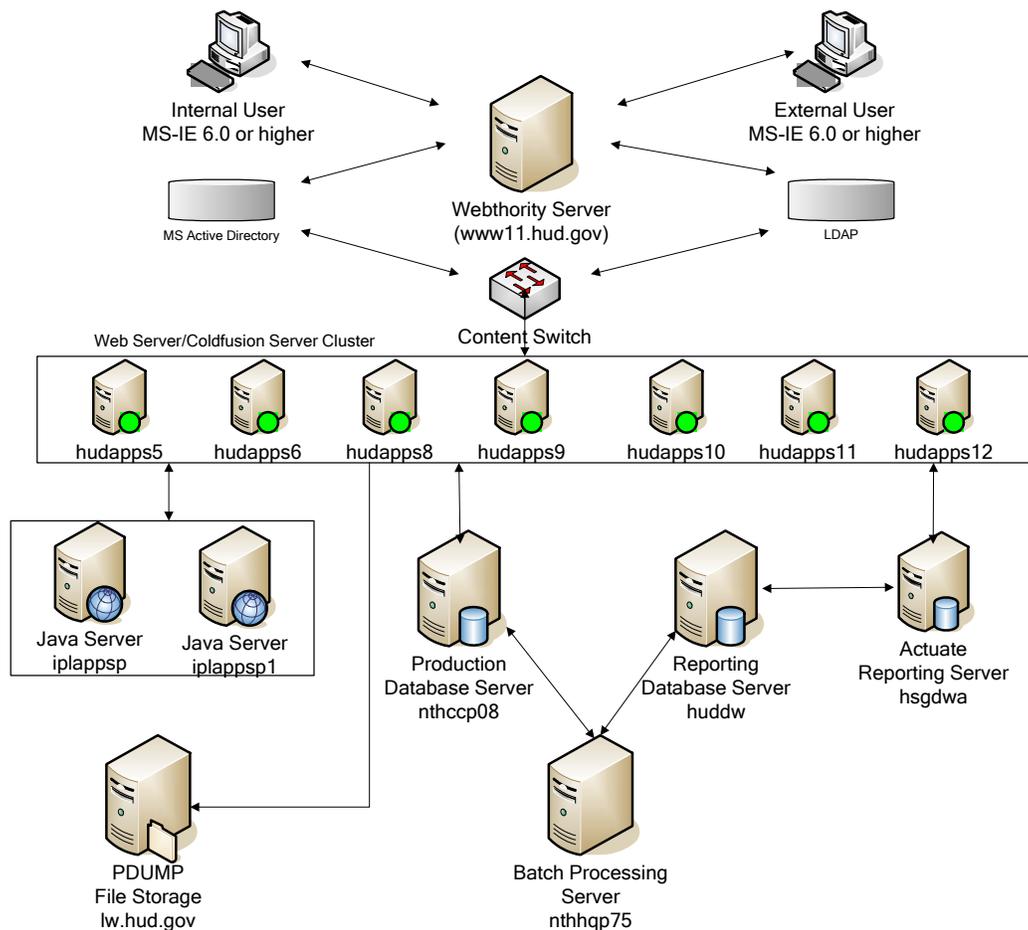
In a Web Architecture environment, the client accesses the user interface through a browser, connecting to a cluster of web servers to process their requests. In some cases an application server is used to process complicated functionality or store environment parameters. The web

(and application) servers access data through a database server, which processes all data transactions and maintains data integrity. Data is aggregated into a reporting database server and report servers use this database in compiling the reports for the users.

The web-based MFH Systems utilize the Web Access Security System (WASS), which provides a generic security subsystem for HUD Internet/Intranet applications. All users are required to adhere to WASS User Access Registration procedures. WASS provides the web-based MFH and HUD systems a common framework for administering application-level security for both internal and external users. WASS serves as a complex filter that sets a framework for different users to access the systems and carry out their functions on behalf of HUD Business Partners and HUD.

Figure 5-2 depicts the first of three technical architectures defined for Multifamily Housing's SOA Platform Services.

Figure 4-2: MFH SOA Platform Services: Web Architecture



4.3.3 Mainframe Architecture

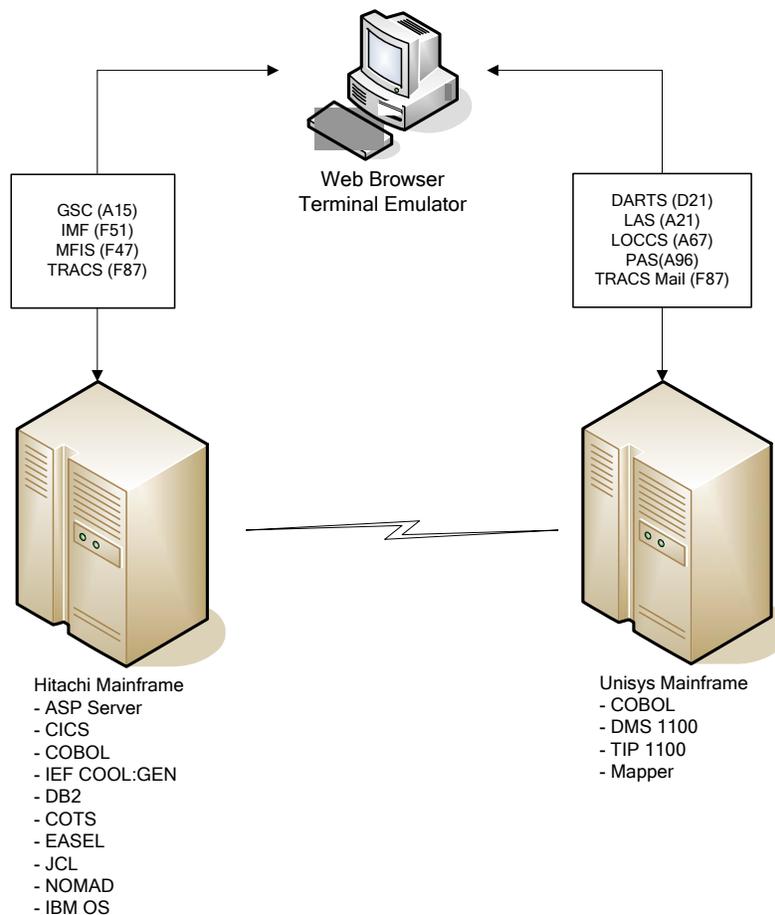
The Mainframe Architecture environment utilizes a more powerful computer to host all the

software related to a system. All processing is done on the mainframe and displayed to the user through the terminal or browser. This architecture type allows for large distributions and easier maintenance significantly reducing rollout costs. In addition, mainframe computers are capable of much faster computing times. The mitigating factors of this type of architecture are cost, since mainframes are often quite costly, and scalability, if the user group grows beyond the ability of the mainframe to handle the throughput, upgrading can sometimes be difficult.

The user accesses the system through the use of a terminal or browser that connects to the mainframe. Systems that utilize this architecture could implement web server software to allow users to access the system from any browser, or they could emulate a terminal that would connect to the mainframe and run an application directly. In this second case, the client machine would need security access to connect to the mainframe.

Figure 5-3 depicts the second of three technical architectures defined for Multifamily Housing's SOA Platform Services.

Figure 4-3: MFH SOA Platform Services: Mainframe Architecture



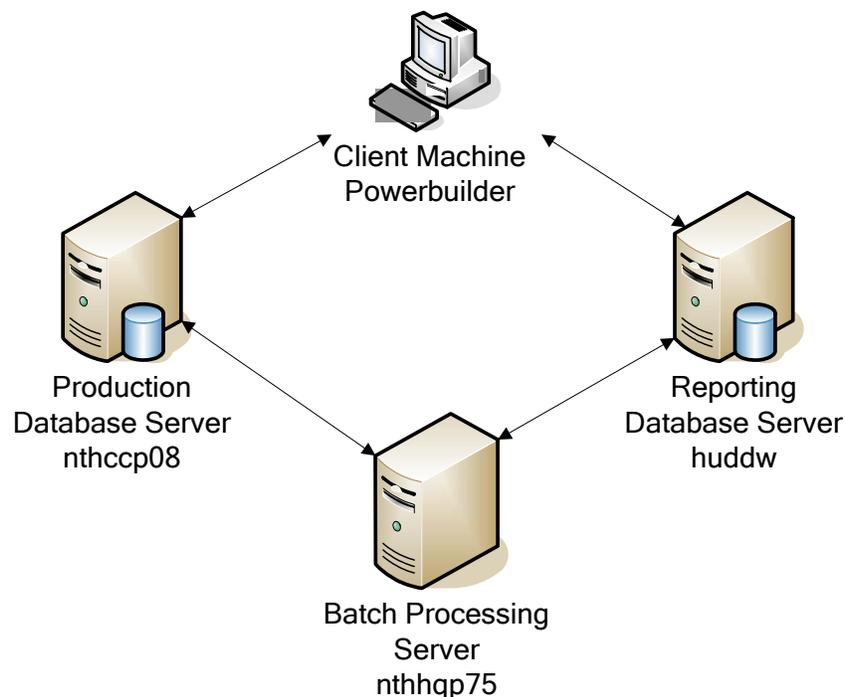
4.3.4 Client/Server Architecture

The Client/Server Architecture environment uses the user's computer to run an application that connects directly with a database server. All processing for the user interface is done on the client machine, requiring a minimum-computing environment for the client machine. The database server performs all the transaction processing and any data intensive processing designated to run there. This architecture type minimizes the server requirements and leverages the computing power of the client machines, reducing the cost of implementation. Additionally, the user interface can take advantage of Operating System (OS) objects to present a more ergonomic environment, allowing for more complex applications. Unfortunately, because the system resides on the client machine, this type of architecture requires specific hardware and software, and complicates the distribution of software updates.

The user accesses the system directly on their machine, which then connects to the database through a Local Area Network (LAN) connection. Security for applications using this architecture type must reside at the system and database levels.

Figure 5-3 depicts the third of three technical architectures defined for Multifamily Housing's SOA Platform Services.

Figure 4-4: MFH SOA Platform Services: Client/Server Architecture



4.4 HUD Technical Reference Model to MFH Systems

The Multifamily Housing systems use one or more of the architecture types identified in Table 5-3. These architectures can be implemented using various technologies. In order to standardize the technologies used across systems, the HUD Enterprise Architecture Team has identified target technologies that are chosen to implement systems. The HUD EA Technical Reference Model (TRM) defines service areas that are broken down to service standards to which each technology can be mapped. The mapping below shows the architecture each system uses and the chosen technologies used to implement that system.

Table 5-3 presents the technical architecture types supporting the MFH Systems environment.

Table 4-3: HUD TRM: Technical Architecture Mapping

System Acronym	System Code	PCAS#	Architecture Platform	Service Standard Name	Service Specification Name	Technology
TBD	TBD	TBD	Web Architecture	Web Browser	MS Internet Explorer	MS Internet Explorer
				Web Servers	Apache	Apache
				Database	Oracle	Oracle
				Platform Dependent	J2EE	J2EE
				Platform Independent	Javascript	Javascript
				Platform Dependent	PL/SQL	PL/SQL
				Data Exchange	XML	XML
				Database Connectivity	J2EE	J2EE
				Reporting and Analysis	Crystal Reports	Crystal Reports
MFIC	F75	251330	Web Architecture / Client-Server Architecture	Web Browser	MS Internet Explorer	MS Internet Explorer
				Database	Oracle	Oracle
				Portal Server	Peoplesoft Portal Server	Peoplesoft Portal Server
				Integrated Development Environment	Peoplesoft	Peoplesoft
				Middleware	Peoplesoft Adapter	Peoplesoft Adapter
				Data Exchange	XML	XML
MFIS	F47	251300	Web Architecture / Client-Server Architecture	Web Browser	MS Internet Explorer	MS Internet Explorer
				Database	Oracle	Oracle
				Portal Server	Peoplesoft Portal Server	Peoplesoft Portal Server

System Acronym	System Code	PCAS#	Architecture Platform	Service Standard Name	Service Specification Name	Technology
				Integrated Development Environment	Peoplesoft	Peoplesoft
				Middleware	Peoplesoft Adapter	Peoplesoft Adapter
				Data Exchange	XML	XML
TRACS/A RAMS	F87	251780	Mainframe Architecture / Web Architecture	Platform Independent	COBOL	COBOL
				Integrated Development Environment	Advantage Gen	Advantage Gen
				Platform Dependent	JCL	JCL
				Reporting and Analysis	NOMAD	NOMAD
				Platform Dependent	EASYTRIEVE	EASYTRIEVE
				Content Rendering	EASEL	EASEL
				Web Servers	Cold Fusion	Cold Fusion Enterprise
				Web Servers	ASP	ASP

5.0 IMPLEMENTATION PLANNING

5 IMPLEMENTATION PLANNING

5.1 Overview

In establishing a current and future state of Multifamily Housing business and system automation, the *MFH EA Blueprint* defined a baseline environment (Baseline Architecture) to which changes can be applied to reach the target environment (Target Architecture). In order to keep technology investments in line with the goals of the *MFH EA Blueprint*, a methodology has been defined by which proposed changes will follow. This methodology will help track the scope and effort of the changes to enhance integration efforts and prevent duplicate or unnecessary effort.

Additionally, listed in Appendix B - Gap Analysis, a breakout of the development initiatives is listed capturing all the differences between the Baseline Architecture and Target Architecture. Each development initiative represents a separate portion of those differences, able to be defined and implemented independent from the rest. With the changes organized into these development initiatives and a methodology in place to ensure those changes match the goals of the MFH EA Blueprint, MFH is confident that the Target Architecture model will be achieved.

The remainder of this chapter is organized as follows:

- *Development Methodology* discusses Multifamily Housing's strategy for implementing its development initiatives.
- *Development Initiatives* discusses Multifamily Housing's purposes for implementing each of the development initiatives, both scheduled and projected.

5.2 Development Methodology

As Multifamily Housing business processes evolve and upgrades to automated systems are planned, consideration must be given to the overall strategy and goals approved in the *MFH EA Blueprint*. Each new development initiative must reference the portion of the Blueprint to which it is making modifications. It is the responsibility of the MFH Change Control Board (CCB), as outlined in the *MFH EA Blueprint – Architecture Management* document, to ensure that each development initiative defines its scope having considered the *MFH EA Blueprint* and to prioritize those initiatives in terms of schedule and resources.

As these development initiatives define the requirements in terms of their respective changes, those requirements should map to the three profiles defined in the *MFH EA Blueprint*, **the Business Profile, System Profile, and Architecture Profile**. Where the *MFH EA Blueprint* is incomplete or requires modification, the MFH CCB will update the *MFH EA Blueprint* to ensure proper mapping with the change management processes discussed in **Chapter 6.0 Change**

Management of the *MFH EA Blueprint – Volume 1: Architecture Management* document.

Requirements for these development initiatives will be mapped to the MFH Business Functions and their processes defined in the *Business Profile* chapter. This mapping will highlight the areas of the business to which changes are taking place, how the development initiative fits within the business cycle and how the work will be organized across divisions. Based upon the requirement, and later revised by the design, a view of how a development initiative fits within the existing systems, defined in the *System Profile* chapter, should be mapped. The interfaces between systems and service components provide an important backdrop to the inclusion of new software. It is at this step that the identification of a new service or the inclusion of an existing one will become evident. The requirements of a development initiative should also be mapped to the environment and technologies defined within the *Architecture Profile* chapter. This indication of the planned technologies may provide insight into how that initiative will integrate with the existing systems. The MFH CCB will review these mappings to ensure that any proposed changes fit within the goals of the Blueprint and do not conflict with any other ongoing development initiatives.

5.3 Development Initiatives

Multifamily Housing has and will continue to plan and scope distinct initiatives to implement the specific items listed in the MFH EA Gap Analysis. These initiatives represent building blocks of functionality that should be implemented as a unit to maximize business and integration considerations while minimizing cost and schedule concerns. This transition of MFH Business Functions and their processes and MFH Systems to the target “To-Be” state will be prioritized and driven by the MFH CCB.

5.3.1 Consolidated Service Centers (or Centers of Excellence)

In an era of increasing workload and decreasing staff, we must look at new ways to get the best benefit from our human resources. One of these ways is to consolidate some of the field office services at Consolidated Service Centers. Candidate services for consolidation are:

- ❖ Tasks which do not require on-site interaction with the property owners or managers
- ❖ Routine tasks which follow standard processing requirements
- ❖ Specialized tasks which are often uncommon and field expertise is limited

Candidate Service Centers are:

- ❖ Client Management
- ❖ Project Servicing – Routine Support Activities
- ❖ Financial Oversight & Follow Up
- ❖ Contract Processing & Funding
- ❖ Management Review
- ❖ Health Care Facilities

❖ Lender Performance

A diverse set of specialty business cases, such as listed above, will be consolidated and handled by a core group of workers whose focus and training would be in a particular specialty. A service center would be established for each specialty enabling that service center to streamline the business process and ensure consistency across the inventory. This change will streamline MFH business processes enhancing the ability of the field offices to manage their properties. Since the field offices would no longer be responsible for these services, they can focus on the daily concerns and maintenance of their assigned projects.

An assessment will be required to determine the scope and complexity of the changes to implement this service center solution. The business decisions for organization and policy will need to be analyzed and a prioritized list of Service Centers will be chosen from the candidates. Once this assessment has been made, further phases will be needed to implement the business and system changes necessary to realize the benefits of Service Centers.

5.3.2 Project Owner/Management Agent Access to the REMS Processes

Multifamily Housing seeks to expand current functionality of Web Access Security Subsystem (WASS) and Real Estate Management System (REMS) to enable registered owners and management agents to view and maintain critical project-level data in REMS about project address, number of units, building type, etc. to verify the accuracy of this data. This is aligned with EA objectives that discover core business competencies, consolidate duplicative business processes, and integrate overlapping functions. A significant amount of data in REMS is provided in hardcopy by project owners and then keyed by HUD field staff. HUD seeks to identify instances where significant time savings would be achieved by having owners submit data electronically, subject to field office review and approval. Possible automation targets include activities such as submission of annual budgets and rent increase requests, data on set-asides for disabled households, requests for release of reserves and reporting follow up actions taken in response to physical inspection deficiencies. While HUD field offices use existing REMS screens and update data manually, the amount of data viewed by owners would need to be limited (some REMS data must remain confidential), and batch updates for owner data may be more feasible for large owners/management agents.

This effort will be performed in three phases:

Phase 1 – In this phase, a detailed analysis of the business changes will be produced. This will show how the business may change to incorporate owner and management agent responsibilities. The function and data requirements for an automated system will be defined and a design to implement those requirements will be completed. The requirements and design cover both of the next phases.

Phase 2 – The portion of the requirements and design having to do with access to existing screens will be implemented in this phase. Since owners and management agents will not have the ability to modify any of this existing information, this phase will

produce display-only functionality to provide oversight of project information to the owners and management agents.

Phase 3 – This phase will implement the remaining portion of the requirements and design defined in Phase 1. This will provide owners and management agents the ability to submit data on-line.

5.3.3 Support Congressional Requirement for Reporting on Housing for the Disabled

HUD currently conducts an annual survey of all Multifamily housing projects (both assisted and unassisted) to determine compliance with several complex legislative provisions concerning admission preferences, set-asides and accessibility features offered to meet the needs of the elderly, the elderly disabled, and the non-elderly disabled. This survey is currently conducted via a hardcopy form that is submitted by project owners for local field offices. This data is then compiled into reports that are submitted to Congress and posted on the HUD web page. An automated tool for entering unit accessibility data for elderly and disabled should be developed to capture the information in this survey.

This effort will be performed in two phases:

Phase 1 – In this phase, a detailed analysis of the business changes will be produced. This will show how the business may change to incorporate the entry of the survey information. The function and data requirements for an automated system will be defined and a design to implement those requirements will be completed.

Phase 2 – This phase will implement the requirements and design defined in Phase 1. With the survey data captured in a database, reporting upon that information can be compiled and displayed in a myriad of formats.

5.3.4 Integrate Risk Rating into Project Management Activities

HUD has recently implemented an automated risk ranking system (OPIIS) that uses a formula to classify each Multifamily project as being “Low”, “Moderate” or “High” risk. Since the resulting risk classification is critical information needed by project managers in the local HUD field office, REMS must be modified to display the OPIIS ranking, along with relevant data identifying the scores for each risk factor. Responsible field office staff will be required to either confirm the risk rating generated by OPIIS or record their disagreement with appropriate comments. This is aligned with EA objectives that discover core business competencies, consolidate duplicative business processes, and integrate overlapping functions. Program officials in Headquarters have also identified the need for field office staff to evaluate the study each project with a “Moderate” or “High” risk rating to determine the underlying root cause of the potential problems, and a recommended strategy for addressing the identified risk.

This effort will be performed in two phases:

Phase 1 – In this phase, a detailed analysis of the business and system changes will be produced. This will show how the business may change to incorporate the study of “Moderate” and “High” properties. The function and data requirements for an automated system will be defined and a design to implement those requirements will be completed.

Phase 2 – This phase will implement the requirements and design defined in Phase 1. With OPIIS and REMS integrated, program managers will have better insight and coordination of potentially troubled properties.

5.3.5 Report HUD Actions on Delinquent and Defaulted Loans

Lenders servicing FHA-insured multifamily loans are required to report monthly delinquencies and defaults through the Multifamily Delinquency and Default Reporting (MDDR) System. Recent legislation now requires HUD to report to Congress on actions taken by lenders in response to rising delinquencies, and also requires information on actions taken by HUD to address the problems of delinquent projects. This is aligned with EA objectives that discover core business competencies, consolidate duplicative business processes, and integrate overlapping functions. REMS must be modified to reflect delinquency and default data now being reported via MDDR, and permit field office users to record actions they are taking with respect to these defaults for the projects they oversee.

This effort will be performed in two phases:

Phase 1 – In this phase, a detailed analysis of the business and system changes will be produced. This will show how the business may change to incorporate the reporting of delinquency and default data and the planning of corrective actions by the field office. The function and data requirements for an automated system will be defined and approved providing the scope for the design in Phase 2.

Phase 2 – This phase will design software to implement the requirements defined in Phase 1. With enhanced integration between REMS and MDDR and the addition of field office actions for delinquencies and defaults, MFH will be better able to compile Congressional reports.

5.3.6 Modify REMS to Reflect the New Rental Housing Assistance System

Under the recently completed Rental Housing Assistance Blueprint, a joint Housing/PIH system will be developed to support all of the business functions directly related to HUD’s programs for rental housing assistance. In order to integrate current MFH systems with this new initiative, MFH will need to document what is now being done in REMS that should be absorbed by the new system, define linkages between REMS and the new RHAS that will be needed when the new system is fully operational, identify what changes will be needed to REMS screens and

functionality when the new system is implemented and develop conversion plans and implementation schedules to support a smooth transition. This effort is aligned with the EA objective to have new development initiatives embrace the strategic direction as specified in the Rental Housing Assistance (RHA) Enterprise Architecture Blueprint. Plans developed under this approach would have to cover necessary backups, adequate periods of duplicate or contingent processing, testing and user training.

Changes to REMS to support the RHAS should progress in multiple phases, with the first defining the scope and complexity of such an effort. Fully documenting the requirements of the necessary changes will allow the design and implementation to be divided into phases that would complement the development of RHAS.

5.3.7 Create a Single Participant Table in HEREMS

The phased implementation of the Active Partner Participation System (APPS) has led to the existence of two tables in the Housing Enterprise Real Estate Management System (HEREMS) database with participant data, one supporting the REMS application and the other supporting APPS. The REAC system that handles registration of HUD business partners (WASS) should update both tables, but is currently not doing so. While current code attempts to keep the data in both tables in sync, the appropriate participant id keys have not properly loaded in all cases, and there are documented instances of newly registered participants being recorded in one table and not the other, or the same Taxpayer Identifier Number (TIN) existing in both tables with inconsistent values.

While REMS identifies past and current project owners and current management agents, APPS also tracks individuals who have only a percentage ownership in projects or who perform other roles. Therefore, there will ultimately be many participants in APPS who would not normally exist in the equivalent table used by REMS. In addition, the external company or individual who files a HUD-2530 report enters data in APPS, while historically REMS participant data is entered by HUD field office staff.

The creation of a single participant table will improve the integrity of this data. This is aligned with EA objectives that discover core business competencies, consolidate duplicative business processes, and integrate overlapping functions.

This effort will be performed in two phases:

Phase 1 – In this phase, a detailed analysis of the system changes will be produced. This will show how the data will need to be cleansed to properly merge the two data sets as well as document any changes to existing systems to allow access to the combined data set. The function and data requirements for an automated system will be defined and approved providing the scope for the design in Phase 2.

Phase 2 – This phase will design software to implement the requirements defined in Phase 1. Database scripts to merge the two existing tables will be produced for a one-

time conversion effort and updated designs for REMS and APPS will be implemented to reference the new participant table.

5.3.8 HUD Enterprise Architecture Compliance

MFH will perform the analysis tasks to reengineer the REMS database and software to align with HUD's enterprise architecture (EA). In this analysis, the blueprint for Multifamily Housing will be identified and defined. The blueprint will identify the programming language tool-sets that will be required for the reengineering effort and a plan will be prepared for reengineering REMS that identifies a step-by-step approach for migrating the legacy Sybase/ColdFusion system components into Oracle/Java system components. The documentation artifacts that require modification as a result of this reengineering process will be identified; this will include modifications to the REMS Operations Manual regarding batch overnight processing that may be operating from a parallel/shadow database that is Oracle-based instead of Sybase. This project aligns with EA objectives for finalizing the Multifamily Housing Enterprise Architecture Blueprint, and aligns to the strategic direction as specified in the Multifamily Housing Enterprise Architecture Blueprint. It also aligns with the EA objective for cross-office collaboration to formulate process and data models that eliminate the risk of creating a stove-piped solution. Having multiple phases of contractor support will help facilitate conceptual integrity of an enterprise solution by providing short-cycle reviews with stakeholders throughout the project, and provide reviews following the completion of SDM life-cycle phases.

This effort will be performed in five phases:

Phase 1 – Phase 1 will cover the completion of the MFH EA Blueprint, detailing the business, system, and architecture profiles for both the current and future states of MFH systems. This blueprint will align with the HUD target blueprint and will provide a baseline to which all future development can be mapped.

Phase 2 – Phase 2 will document the specific requirements necessary to bring REMS in compliance with the target technical architecture, as defined in the MFH EA Blueprint. This encompasses a change in source code from ColdFusion to Java and a change of DBMS from Sybase to Oracle.

Phase 3 – In this phase, a design is documented to port the REMS database into Oracle and modify the existing applications to reference the Oracle database rather than Sybase. Once the design is complete, the conversion will be implemented and the software updated, completing the switch to Oracle.

Phase 4 – In updating the REMS application to use Java, a new user interface will be established to update the ergonomics to a modern look and feel and better utilize Java controls. Before converting the entire system with this new user interface, a prototype will be designed and implemented in this phase to assess and perfect the ergonomics of the user interface.

Phase 5 – Having established the standards for a Java version of REMS, the design will be completed to develop an updated version of REMS using the new development environment. Once the design is completed and the software is implemented, a training plan must be put in place to ensure a smooth transition from the old version to the new one.

5.3.9 Business Performance Monitoring

Multifamily Housing must identify metrics for their business processes and appropriate data will be collected to compare against those metrics. Any metrics must measure the ability of the business processes to achieve the strategic goals for MFH. In order to obtain the data needed for this metric comparison, reporting points must be established within the business process to capture the state of the business at specific points in the life cycle. Once identified, MFH systems can capture the relative performance of the business processes, reporting the results to establish areas of improvement. Capturing the performance of the business will provide valuable insight into the direction that the MFH EA Blueprint should take.

An assessment will be required to determine the scope and complexity of the changes to implement any business performance monitoring. Which metrics and what data is to be collected must be identified prior to any impact analysis to existing systems. Once this assessment has been made, further phases will be needed to implement the business and system changes necessary to capture business performance data.

5.3.10 Enhanced Project Unit Reporting

More detailed information regarding unit specifications for a property is required to expand Multifamily Housing's view of property information. Information about a property will zoom down to the unit level, capturing addresses, rents, inspection information and even a history of tenants. With this enhanced detail level of data, MFH will be better able to manage the financial and physical aspects of their property portfolios as well as being better equipped to detect and prevent fraud.

An assessment will be required to determine the scope and complexity of the changes to implement unit level reporting of properties. The precise information need to be captured must be identified as well as how that data can be incorporated into the existing systems, improving interfaces in areas. Once this assessment has been made, further phases will be needed to implement the business and system changes necessary to capture property information down to the unit level.

5.3.11 Monthly Accounting Reports

Allow for display and follow-up action associated with assessment and referral results from monthly accounting reports that are electronically submitted to FASS, or are delinquent, by owners of troubled property.

Multifamily Housing requires more frequent monitoring of financial activity associated with owners of troubled properties. Owners of troubled properties will be required to electronically submit monthly accounting reports in order for MFH to quickly/frequently (vs. an annual financial statement) better monitor financial stability of a property. Monthly accounting reports will be assessed to provide indications of financial viability. Owners who are required to submit monthly accounting reports, but fail to do so will be identified and referred for follow-up action.

5.3.12 System/Shared Component Interfaces

There are many ongoing initiatives in MFH to provide output to and accept data from external entities. For these automated interfaces, have a single method of interaction is desirable to reduce production and maintenance costs associated with customization support. Using Extensible Markup Language (XML) will enhance data integrity by providing more consistent/reliable data and ensure better understanding of the data through a data definition library. XML can also be used as a middle tier interfacing between internal systems to improve data consistency.

An assessment will be required to determine the scope and complexity of the changes to implement an XML solution. Once this assessment has been made, further phases will be needed to implement those changes.

5.3.13 Pre-payment Request Tracking

There is a need for Multifamily Housing (MFH) to track not only how many loans have been pre-paid, in an effort to continue to ensure the supply of affordable housing, but also how many loans are in the prepayment pipeline. This information is not currently tracked in any MFH system, with the exception of some information pertaining to the fact that a prepayment has occurred. As a result, MFH has requested the automation of the loan prepayment request and approval process.

An assessment will be required to fully determine the requirements, scope, and details related to this effort.

5.3.14 Documentation of Ownership Changes

Field Office Project Managers currently record ownership changes (the owner, address, and related effective dates) in the Real Estate Management System (REMS.) However, no MFH system captures the request for the ownership change and subsequent processing due to a Transfer Physical Assets (TPAs), refinances, and assignments, etc. As a result, MFH would like the tracking of the processes to be automated.

Analysis will need to occur with asset management, other headquarters staff, and field office representatives to determine the requirements and scope for this initiative.

5.3.15 eAuthentication

MFH has identified a need to accept electronic signatures to provide additional security for data submitted to Multifamily Housing. These signatures need to be legally binding and therefore must be unique and secure. eAuthentication will act as a service for all MFH systems and could be used by other HUD organizations that require electronic signatures.

By accepting electronic signatures, a greater number of the documents required to support contract management, including contract renewals, can be automated and will eliminate manual mailing of contract documents. This, in turn, will speed the renewal processes. This could be a very important aspect contributing to the success of Consolidated Service Centers.

This effort will be performed in two phases:

Phase 1 – This phase would analyze the business requirements for an electronic signature and evaluate technologies that could implement such requirements. Having determined the best technical solution, design documentation would be created to detail where and how the technology would be used.

Phase 2 – Phase 2 would implement the design in any systems or processes that require electronic signatures. This will decrease wait times for forms to be mailed and reduce paper requirements.

5.3.16 Interest Reduction Payment/Non-Insured

Automate the Interest Reduction Payment (IRP) decoupling process to allow for approvals and update of MFH data to enhance data quality. Allow for consistent data regarding non-insured loans. The ultimate goal is to better understand the nature of non-insured loans and to create a consistent method of tracking and displaying this information, as appropriate.

Concerning interest reduction payments and the analysis needed to fully automate the 236 decoupling process (both business, process, and system) also needs to be investigated more fully. Field offices should be able to submit an automated request for a 236 decoupling to headquarters. Headquarters should be able to enter and approve or disapprove related data. This analysis should also work with MFH to attempt to define more consistent procedures, since MFH systems will also become a source of verification data for the new interest reduction payment system electronic Line of Credit Control System (eLOCCS) being built by the CFO.

5.3.17 Consolidated Technology Investments

One of the primary goals of following an Enterprise Architecture (EA) model is to align technology investments with the desired business profile and to prioritize these investments to

get the most benefits to the business. Multifamily Housing's goal is to develop a fully integrated system that supports the core business functions/processes of Multifamily Housing. This system will be managed under a single Project Cost Account System (PCAS) and single change control board. An integrated property and portfolio management system will include the non-accounting functions and modules of several current initiatives: Active Partner Performance System (APPS), Development Application Processing (DAP), Mark-to-Market (M2M), Multifamily Default and Delinquency Reporting (MDDR), and Real Estate Management System (REMS). The accounting system functions would be targeted towards Commercial Off-The-Shelf (COTS) solutions. Also, those functions supported by the Rental Housing Assistance blueprint would be covered under a separate PCAS that consolidates Multifamily Housing (MFH) and Public & Indian Housing (PIH) rental housing related functions, and will include functionality currently supported by Tenant Rental Assistance Certification System/ Automated Renewal and Amendment System (TRACS/ARAMS).

Operating under the umbrella of the MFH EA Blueprint, a consolidation of related Multifamily Housing systems would provide a more manageable and maintainable environment. The MFH systems identified for inclusion as this single system concept are: APPS, DAP, M2M, MDDR, and REMS. With a single PCAS support all of MFH systems, costs and schedules are interrelated to allow tighter integration of functionality across what would not be system modules. Those modules could be modified to reflect a single source of data eliminating out-of-sync and inconsistent data allowing for real-time reporting. A single change control board would manage the impacts and prioritize development for all of MFH, ensuring a coordinated strategy for business and system improvements.

Implementation of a single MFH system should progress in phases, the first of which would organize the budget, schedule, and management under a single PCAS. This phase would subsume the existing applications as modules, but would leave the current architectures as they are. At this point analysis would be required to determine the content and complexity of any additional phases to integrate the modules.

5.3.18 Automation of Workflow and Correspondence Tracking

Multifamily Housing field offices now use a variety of custom-built software tools to track routine processing and administrative tasks. Full integration of these tasks will significantly reduce the support workload for IT staff in Headquarters and the field, and assure greater consistency in management oversight from office to office. Emphasis will be on providing the first-line supervisors of each field office with the tools needed to monitor workload and assure timely completion of critical tasks. This support is particularly critical in light of the loss of experienced staff and the continued decline in overall staffing levels.

6.0 IMPLEMENTATION SCHEDULES

6 IMPLEMENTATION SCHEDULES

6.1 Overview

Having defined the development initiatives to cover the changes in Appendix B – Gap Analysis, an implementation schedule has been developed to prioritize and sequence those initiatives. Many of these development initiatives require further analysis during their first phase before being able to plan any subsequent phases. Each of the phases that have been defined is placed into a fiscal year grouping to be completed. Since many of these efforts require more than a year to conclude, the groups have been divided into two-year periods, one for Fiscal Year (FY) 2005-2006 and another for FY 2007-2008.

The remainder of this chapter is organized as follows:

- *Fiscal Years 2005-2006* outlines the development initiatives needed to realign and integrate the systems into modules that are representative of the MFH business functions.
- *Fiscal Year 2007-2008* projects the development initiatives to be implemented during this timeframe.

6.2 Fiscal Years 2005-2006

Some of the initiatives have already begun or are about to begin. These development items are more fully defined and scoped. The development initiatives in this 2005-2006 period represent necessary changes to realign and integrate the systems into modules that are representative of the MFH business functions.

The development initiatives planned for the implementation period of FY 2005-2006 are:

- ❖ Project Owner/Management Agent Access to REMS Screens
- ❖ Support Congressional Requirement for Reporting on Housing for the Disabled
- ❖ REMS Support for Risk Rating
- ❖ Reporting HUD Actions on Delinquent and Defaulted Loans
- ❖ Modify REMS to Reflect the New Rental Housing Assistance System
- ❖ Create a Single Participant Table in HEREMS
- ❖ HUD Enterprise Architecture Compliance

6.3 Fiscal Years 2007-2008

During the creation of the MFH EA Blueprint, a number of development initiatives were identified to modify the business processes and associated MFH systems. Many of these efforts have not been fully analyzed or scoped and thus less information is known about the complexity and schedule demands for their implementation.

The development initiatives planned for the implementation period of FY 2007-2008 are:

- ❖ Consolidated Service Centers
- ❖ Business Performance Monitoring
- ❖ Enhanced Project Unit Reporting
- ❖ Monthly Accounting Reports
- ❖ System/Shared Component Interfaces
- ❖ Pre-payment Request Tracking
- ❖ Documentation of Ownership Changes
- ❖ Automation of Workflow and Correspondence Tracking

APPENDIX A – Detailed Guidance on MFH Programs

APPENDIX A – DETAILED GUIDANCE ON MFH PROGRAMS

The following table lists the legislation that establishes Multifamily Housing Programs and impact the Multifamily Housing business domain.

MFH Programs	Summary	Purpose	Technical Guidance
Mortgage Insurance for Rental Housing: Section 207	Section 207 Program insures mortgage loans to finance the construction or rehabilitation of a broad range of rental housing. Section 207 mortgage insurance, although still authorized, is no longer used for new construction and substantial rehabilitation. It is however, the primary insurance vehicle for the Section 223(f) refinancing program. Multifamily new construction and substantial rehabilitation projects are currently insured under the Section 221(d)(3) and Section 221(d)(4) programs.	Section 207 insures lenders against loss on mortgage defaults. The intent of the program is to increase the supply of quality and reasonably priced rental housing for middle-income families.	Section 207 was authorized by the National Housing Act. Regulations are found at 24 CFR, Section 200 and Section 207. The basic program instructions are in HUD Handbook 4400.1 - Project Mortgage Basic Section 207 Instructions available on www.HUDCLIPS.org . The program is administered by the Office of Multifamily Housing Development.
Mortgage Insurance for Manufactured Home Parks: Section 207	Section 207 Program insures mortgage loans to facilitate the construction or substantial rehabilitation of multifamily manufactured home parks.	Section 207 promotes the creation of manufactured home communities by increasing the availability of affordable financing and mortgages.	The program is authorized under Section 207 of the National Housing Act (12 U.S.C. 1713), Public Law 84-345. Program regulations are in 24 CFR Part 207.33. The basic program instructions are in HUD Handbook 4545.1, Mobile Home Park Program available on www.HUDCLIPS.org . The program is administered by the Office of Multifamily Housing Development .

MFH Programs	Summary	Purpose	Technical Guidance
<p>Mortgage Insurance for Nursing Homes, Intermediate Care, Board & Care and Assisted-living Facilities:</p> <p>Section 232 and Section 232/223(f)</p>	<p>Section 232 insures mortgage loans to facilitate the construction and substantial rehabilitation of nursing homes, intermediate care facilities, board and care homes, and assisted-living facilities. Section 232/223(f) allows for the purchase or refinancing with or without repairs of existing projects not requiring substantial rehabilitation.</p>	<p>Section 232 insures lenders against the loss on mortgage defaults. Section 232 insures mortgages that cover the construction and rehabilitation of nursing homes and assisted living facilities for people who need long-term care or medical attention. The program allows for long-term, fixed rate financing (up to 40 years) for new and rehabilitated properties and (up to 35 years) for existing properties without rehabilitation that can be financed with Government National Mortgage Association (GNMA) Mortgage Backed Securities.</p>	<p>This program is authorized by Section 232 of the National Housing Act (12 U.S.C. 1715w). Regulations are found in 24 CFR 232. The basic TAP program instructions are in HUD Handbook "Section 232 Mortgage Insurance for Residential Care Facilities" 4600.1, Rev-1 available on www.HUDCLIPS.org. Refer to the MAP web-site for guidelines and instructions, lender approval requirements, and MAP Coordinators. The program is administered by the Office of Multifamily Housing Development.</p>
<p>Mortgage Insurance for Rental and Cooperative Housing:</p> <p>Section 221(d)(3) and Section 221(d)(4)</p>	<p>Section 221(d)(3) and 221(d)(4) insures mortgage loans to facilitate the new construction or substantial rehabilitation of multifamily rental or cooperative housing for moderate-income families, elderly, and the handicapped. Single Room Occupancy (SRO) projects may also be insured under this section.</p>	<p>Section 221(d)(3) and Section 221(d)(4) insures lenders against loss on mortgage defaults. Section 221(d)(3) is used by nonprofit sponsors and Section 221(d)(4) is used by profit-motivated sponsors. Both programs assist private industry in the construction or rehabilitation of rental and cooperative housing for moderate-income and displaced families by making capital more readily available. The program allows for long-term mortgages (up to 40 years) that can be financed with Government National Mortgage Association (GNMA) Mortgage Backed Securities.</p>	<p>The 221(d)(3) and 221(d)(4) programs are authorized by the National Housing Act (12 U.S.C. 17151(d)(3) and (d)(4)). Program regulations are found at 24 CFR 221, subparts C and D. Basic TAP program instructions are in HUD handbook 4560.01 - Mortgage Insurance for Multifamily Moderate Income Housing Projects available on www.HUDCLIPS.org. Refer to the MAP web-site for guidelines and instructions, lender approval requirements, and MAP coordinators. The program is administered by the Office of Multifamily Housing Development.</p>

MFH Programs	Summary	Purpose	Technical Guidance
<p>Mortgage Insurance for Single Room Occupancy Projects (SRO):</p> <p>Section 221(d)(3) and 221(d)(4)</p>	<p>Section 221(d)(3) and 221(d)(4) program insures mortgage loans for multifamily properties consisting of single-room occupancy (SRO) apartments. There are no Federal rental subsidies involved with this SRO program. It is aimed at those tenants who have a source of income but are priced out of the rental apartment market. SRO projects generally require assistance from local governing bodies or charitable organizations in order to reduce the rents to affordable levels. Although SRO housing is intended for very low-income persons, the program does not impose income limits for admission.</p>	<p>Section 221(d)(3)(nonprofit borrowers) and Section 221(d)(4)(profit motivated borrowers) insure lenders against loss on mortgages. The program encourages construction or substantial rehabilitation of single-room apartment buildings with financing insured by HUD, thus enabling people with very limited incomes to find clean and safe housing.</p>	<p>This program is authorized by Section 221(d) (12 U.S.C. 1751(d)) and pursuant to Section 223(g) (12 U.S.C.17151 (d)) of the National Housing Act, pursuant to Section 223(g) of the National Housing Act (12 U.S.C. 1715n(g)). Program regulations are found in 24 CFR 221.565. The basic program instructions are in HUD Handbook "Mortgage Insurance for Single Room Occupancy (SRO) Projects, Section" 4560.3 available on www.HUDCLIPS.org. The program is administered by the Office of Multifamily Housing Development.</p>
<p>Mortgage Insurance for Cooperative Housing:</p> <p>Section 213</p>	<p>Section 213 insures mortgage loans to facilitate the construction, substantial rehabilitation, and purchase of cooperative housing projects. Each member shares in the ownership of the whole project with the exclusive right to occupy a specific unit and to participate in project operations through the purchase of stock.</p>	<p>Section 213 insures lenders against loss on mortgage defaults. Section 213 enables nonprofit cooperative housing corporations or trusts to develop or sponsor the development of housing projects to be operated as cooperatives. Section 213 also allows investors to provide good quality multifamily housing to be sold to non-profit corporations or trusts upon completion of construction or rehabilitation. Alternatively, cooperatives may use Section 221(d)(3) to insure construction or substantial rehabilitation of cooperative projects.</p>	<p>This program is authorized by Section 213 of the National Housing Act (12 U.S.C. 1715e). Program regulations are found in 24 CFR 213. The basic program instructions are in HUD Handbook 4550.1 - Basic Cooperative Housing Insurance available on www.HUDCLIPS.org. The program is administered by the Office of Multifamily Housing Development.</p>

MFH Programs	Summary	Purpose	Technical Guidance
<p>Mortgage Insurance for Rental Housing for Urban Renewal and Concentrated Development Areas:</p> <p>Section 220</p>	<p>Section 220 insures loans for multifamily housing projects in urban renewal areas, code enforcement areas, and other areas where local governments have undertaken designated revitalization activities.</p>	<p>Section 220 insures lenders against loss on mortgage defaults. Section 220 provides good quality rental housing in urban areas that have been targeted for overall revitalization. Section 220 insures mortgages on new or rehabilitated housing located in designated urban renewal areas, and in areas with concentrated programs of code enforcement, and neighborhood development.</p>	<p>This program is authorized by Section 220(a) and (h), National Housing Act (12 U.S.C. 1715k. Regulations are in 24 CFR 200 et seq., 24 CFR 220.1 et seq. The basic program instructions are in HUD Handbook 4555.1. - Rental Housing in Urban Renewal Areas for Project available on www.HUDCLIPS.org. Refer to the MAP web site for guidelines, instructions, lender approval requirements, and MAP coordinators. The program is administered by the Office of Multifamily Housing Development.</p>
<p>Mortgage Insurance for Rental Housing for the Elderly:</p> <p>Section 231</p>	<p>The Section 231 insures mortgage loans to facilitate the construction and substantial rehabilitation of multifamily rental housing for elderly persons (62 or older) and/or persons with disabilities.</p>	<p>Section 231 insures lenders against loss on mortgages. Section 231 was designed to increase the supply of rental housing specifically for the use and occupancy of elderly persons, and/or persons with disabilities. However, few projects have been insured under Section 231 in recent years; non-profits have opted to use Section 221(d)(3), while profit motivated developers have used Section 221(d)(4).</p>	<p>This program is authorized by Section 231 of the National Housing Act, as amended, Public Law 86-372 (73 U.S.C. 654 and 12 U.S.C. 1715 (V))). Program regulations are found in 24 CFR 231. The basic program instructions are in HUD Handbook 4570.1 - Housing for the Elderly for Project Mortgage on www.HUDCLIPS.org. The program is administered by the Office of Multifamily Housing Development.</p>

MFH Programs	Summary	Purpose	Technical Guidance
<p>Mortgage Insurance for Construction or Substantial Rehabilitation of Condominium Projects:</p> <p>Section 234(d)</p>	<p>Section 234(d) insures blanket mortgages for the construction or substantial rehabilitation of multifamily projects to be sold upon completion as individual condominium units.</p>	<p>Section 234(d) insures lenders against the loss on mortgage defaults. The program enables sponsors to develop condominium projects in which individual units will be sold to home buyers.</p>	<p>The 234(d) program is authorized by the National Housing Act (12 U.S.C. 1715y), as amended; Housing Act of 1964, as amended, Section 234(d). Regulations are found in 24 CFR 234. The basic program instructions are in HUD Handbook 4580.1-Mortgage Insurance for Condominium Housing Insured under Section 234(d) available on www.HUDCLIPS.org. The program is administered by the Office of Multifamily Housing Development.</p>
<p>Supportive Housing for the Elderly Program:</p> <p>Section 202</p>	<p>HUD provides capital advances to finance the construction, rehabilitation or acquisition with or without rehabilitation of structures that will serve as supportive housing for very low-income elderly persons, including the frail elderly, and provides rent subsidies for the projects to help make them affordable.</p>	<p>The Section 202 program helps expand the supply of affordable housing with supportive services for the elderly. It provides very low-income elderly with options that allow them to live independently but in an environment that provides support activities such as cleaning, cooking, transportation, etc. The program is similar to Supportive Housing for Persons with Disabilities (Section 811).</p>	<p>The program is authorized under the Housing Act of 1959; Section 210 of the Housing and Community Development Act of 1974 P. L. 86-372 (12 U.S.C. 1701q, 73 Stat. 654, 667); the National Affordable Housing Act, P. L. 101-625 (42 U.S.C. 12701); the Housing and Community Development Act of 1992 (P.L. 102-550); the Rescissions Act (P.L. 104-19); and the American Homeownership and Economic Opportunity Act of 2000 (P.L. 106-569). Program regulations are in 24 CFR Part 891. To learn more about the Section 202 program, see Supportive Housing for the Elderly (HUD Handbook 4571.3) and Supportive Housing for the Elderly--Conditional Commitment--Final (HUD Handbook 4571.5) which are available on the Internet at http://www.hudclips.org or from the HUD Multifamily Clearinghouse at 1-800-685-8470. Also see notice H96-102 REV 00-23 (HUD).</p>

MFH Programs	Summary	Purpose	Technical Guidance
<p>Supportive Housing for Persons with Disabilities:</p> <p>Section 811</p>	<p>HUD provides funding to nonprofit organizations to develop rental housing with the availability of supportive services for very low-income adults with disabilities, and provides rent subsidies for the projects to help make them affordable.</p>	<p>The Section 811 program allows persons with disabilities to live as independently as possible in the community by increasing the supply of rental housing with the availability of supportive services. The program also provides project rental assistance, which covers the difference between the HUD-approved operating costs of the project and the tenants' contribution toward rent. The program is similar to Supportive Housing for the Elderly (Section 202).</p>	<p>This program is authorized by Section 811 of the National Affordable Housing Act of 1990 (P.L. 101-625) as amended by the Housing and Community Development Act of 1992 (P.L. 102-550), the Rescission Act (P.L. 104-19) and the American Homeownership and Opportunity Act of 2000 (P.L. 106-569). Program regulations are in 24 CFR Part 891. To learn more about the Section 811 program, see Section 811 Supportive Housing for Persons with Disabilities (HUD Handbook 4571.2) and Supportive Housing for Persons with Disabilities, Conditional Commitment to Final Closing (HUD Handbook 4571.4) which are available on HUDclips.</p>
<p>Mortgage Insurance for Two-year Operating Loss Loans:</p> <p>Section 223(d)</p>	<p>Section 223(d) insures two-year operating loss loans that covers operating losses during the first 2 years after completion (or any other 2-year period within the first 10 years after completion) of multifamily projects with a HUD-insured first mortgage.</p>	<p>Section 223(d) helps avoid insurance claims on HUD-insured multifamily mortgages by insuring separate loans to cover operating losses.</p>	<p>This program is authorized by Section 223(d) (12 U.S.C. 1715n) of the National Housing Act 1937, as amended; Public Law 90-448, as amended; and Public Law 91-152, 12 U.S.C. 1715x. Program regulations are found in 24 CFR 207.4(f). The basic program instructions are in HUD Handbook "Mortgage Credit Analysis for Project Mortgage Insurance" 4470.1, Rev-2. (Chapter 17) available on www.HUDCLIPS.org. The program is administered by the Office of Multifamily Housing Development.</p>

MFH Programs	Summary	Purpose	Technical Guidance
<p>Mortgage Insurance for Purchase or Refinancing of Existing Multifamily Rental Housing:</p> <p>Sections 207/223(F)</p>	<p>Section 207/223(f) insures mortgage loans to facilitate the purchase or refinancing of existing multifamily rental housing. These projects may have been financed originally with conventional or FHA insured mortgages. Properties requiring substantial rehabilitation are not eligible for mortgage insurance under this program. HUD permits the completion of non-critical repairs after endorsement for mortgage insurance.</p>	<p>Section 223(f) insures lenders against loss on mortgage defaults. The program allows for long-term mortgages (up to 35 years) that can be financed with Government National Mortgage Association (GNMA) Mortgage-Backed Securities. This eligibility for purchase in the secondary mortgage market improves the availability of loan funds and permits more favorable interest rates.</p>	<p>Section 223(f) of the National Housing Act was added by Section 311(a) of the Housing and Community Development Act of 1974. Regulations are found at 24 CFR, Part 200. For processing and underwriting instructions refer to HUD Handbook 4565.1- Mortgage Insurance for the Purchase of Existing Multifamily Housing Projects available on www.HUDCLIPS.org. Refer to the MAP web site for guidelines and instructions, lender approval requirements, and MAP coordinators. The program is administered by the Office of Multifamily Housing Development.</p>
<p>Mortgage Insurance for Supplemental Loans for Multifamily Projects:</p> <p>Section 241(a)</p>	<p>Section 241(a) insures mortgage loans to finance repairs, additions, and improvements to multifamily rental housing and health care facilities with FHA insured first mortgages or HUD-held mortgages.</p>	<p>Section 241(a) insures lenders against loss on mortgage defaults. The program is intended to keep the project competitive, extend its economic life, and to finance the replacement of obsolete equipment. Insured mortgages finance repairs, additions, and improvements to multifamily projects, group practice facilities, hospitals, or nursing homes already insured by HUD or held by HUD. Major movable equipment for insured nursing homes, group practice facilities, or hospitals may be covered by a mortgage under this program.</p>	<p>This program is authorized under the National Housing Act, as amended, Section 241, Public Law 90-448 (12 U.S.C. 1715) and Public Law 94-375 (12 U.S.C. 1715Z-6). The program regulations are found in 24 CFR 241. The basic program instructions are in HUD Handbook 4585.1- Supplemental Loans for Project Mortgage Insurance available on www.HUDCLIPS.org. The program is administered by the Office Multifamily Housing Development.</p>

MFH Programs	Summary	Purpose	Technical Guidance
Risk-sharing Program - Qualified Participating Entities (Qpe): Section 542(b)	The Department of Housing and Urban Development (HUD) provides reinsurance on multifamily housing projects whose mortgage loans are originated, underwritten, serviced, and disposed of by Qualified Participating Entities (QPEs) and/or their approved lenders. Section 542(b) encourages the development and preservation of affordable housing. The program was developed as a demonstration program to test innovative mortgage insurance and reinsurance products to provide affordable multifamily housing through a partnership between the QPEs and HUD. HUD's mortgage credit enhancements are used to support the underwriting and production strengths of Fannie Mae, Freddie Mac, and other qualified Federal, State, and local public financial and housing institutions.	The program provides a new insurance authority independent of the National Housing Act. The purpose of the program is to support and encourage the production and preservation of affordable Housing. The program provides insurance and reinsurance for multifamily housing projects whose loans are originated, underwritten, serviced, and disposed of by a QPE and/or its approved lenders.	The program is authorized by the Housing and Community Development Act of 1992, Section 542(b), Public Law 102-550, 12 U.S.C. 1707. There are no program regulations; requirements are set forth in risk-sharing agreements with the QPEs. Section 235 of HUD's FY 2001 Appropriations Act, Public Law 106-377, amended Section 542, which changed the Risk Sharing Pilot Program to a permanent multifamily insurance program. The program is administered by the Office of Multifamily Housing Development.

MFH Programs	Summary	Purpose	Technical Guidance
<p>Housing Finance Agency Risk-sharing: Section 542(c)</p>	<p>Section 542(c) enables the U.S. Department of Housing and Urban Development (HUD) and State and local housing finance agencies (HFAs) to provide new risk-sharing arrangements to help those agencies provide more insurance and credit for multifamily loans.</p>	<p>The Program provides new insurance authority independent of the National Housing Act. Section 542(c) provides credit enhancement for mortgages of multifamily housing projects whose loans are underwritten, processed, serviced, and disposed of by HFAs. HUD and HFAs share in the risk of the mortgage. The program was originally designed as a pilot to assess the feasibility of risk-sharing partnerships between HUD and qualified State and local HFAs in providing affordable housing.</p>	<p>This program is authorized by Section 542(c) of the Housing and Community Development Act of 1992 (12 U.S.C. 1707). Section 235 of HUD's FY2001 Appropriation Act, Public Law 106-377, amended Section 542, which changed the Risk Sharing Pilot Program to a permanent multifamily insurance program. Regulations are in 24 CFR Part 266. The basic program instructions are in HUD Handbook 4590.01 - Housing Finance Agency Risk Sharing Pilot Program available on www.HUDCLIPS.org. The program is administered by the Office of Multifamily Housing Development.</p>
<p>Mortgage Insurance for HUD Loan Refinance: Section 223(a)(7)</p>	<p>The benefits of this program include loan terms of up to 12 years beyond the remaining term of the existing HUD-insured first mortgage, competitive fixed rates, and eligibility for securitization by Ginnie Mae. The loans are non-recourse, allow higher loan-to-cost ratios, and lower debt service coverage than other financing programs. The unique demands and processes of HUD/ FHA multifamily financing are generously offset by the advantages. ARCS' streamlined internal procedures and staff of FHA dedicated professionals bring greater speed and efficiency to meet the accelerating needs of today's market.</p>	<p>Under Section 223(a)(7) of the National Housing Act, the Federal Housing Administration (FHA) provides mortgage insurance to facilitate the refinance and moderate rehabilitation of existing HUD-insured multifamily properties.</p>	<p>The basic program instructions are available on www.HUDCLIPS.org. The program is administered by the Office of Multifamily Housing Development.</p>

MFH Programs	Summary	Purpose	Technical Guidance
Assisted-living Conversion Program (ALCP)	To provide private nonprofit owners of eligible developments with a grant to convert some or all of the dwelling units in the project into an Assisted Living Facility (ALF) for the frail elderly. The facility must be licensed and regulated by the State (or if there is no State law providing such licensing and regulation, by the municipality or other subdivision in which the facility is located).	Assisted-Living Facilities (ALFs) are designed to accommodate frail elderly and people with disabilities who can live independently but need assistance with activities of daily living (e.g., assistance with eating, bathing, grooming, dressing and home management activities.) ALFs must provide support services such as personal care, transportation, meals, housekeeping, and laundry.	The Program is authorized under Section 202b of the Housing Act of 1959, as amended. HUD's Office of Multifamily Housing is responsible for administering the Assisted-Living Conversion Program.
Mark-to-Market (M2M)	The Department of Housing and Urban Development (HUD) has established a new office, the Office of Affordable Housing Preservation (OAHP) effective October 1, 2004. The Office of Affordable Housing Preservation was established to assure the smooth continuation of the Mark-to-Market (M2M) program utilizing authorities that continue after the legislative sunset of OMHAR on September 30, 2004. OAHP will also provide assistance to affordable housing areas in the oversight and preservation of a wide spectrum of affordable housing programs. OAHP will be charged with important projects and programs while continuing the success of the M2M program. OAHP will continue to work with property owners, Participating Administrative Entities (PAEs), tenants, lenders, and others with a stake in the future of affordable housing.	Housing subsidy contracts are expiring on thousands of privately owned multifamily properties with federally insured mortgages. Many of these contracts set rents at amounts higher than those of the local market. As these subsidy contracts expire, the Mark-to-Market program will reduce rents to market levels and will restructure existing debt to levels supportable by these rents.	The Office of Affordable Housing Preservation (OAHP) was established by the Multifamily Assisted Housing Reform and Affordability Act of 1997 (MAHRA) to administer the Mark-to-Market program until sunset on September 30, 2004. Effective October 1, 2004 the Office of Affordable Housing Preservation (OAHP) was established to assure the smooth continuation of the Mark-to-Market (M2M) program.

APPENDIX B – GAP ANALYSIS

APPENDIX B – GAP ANALYSIS

The purpose of the Gap Analysis shown here in Appendix is to highlight the differences between the current state of the MFH environment as detailed in the MFH EA Blueprint – Baseline (As-Is) Architecture and the desired future state of the MFH environment as reflected in the MFH EA Target (To-Be) Architecture and to identify the business benefits of achieving the desired future state MFH environment. Most changes will be additions or updates to existing definitions or mappings; however there will be some cases where items have been removed, as they no longer apply. The changes indicated in this document represent the direction Multifamily Housing’s intentions in defining and automating their business to achieve their Target Architecture..

1. Business Profile Overview

Changes in the *Business Profile* reflect legislative or policy changes to the way Multifamily Housing conducts business, which can have a far-reaching affect. These changes not only affect existing automation that may need to up updated, expanded, or even realigned with other systems, but may also require adjustments to the MFH Programs, MFH Strategic and Business Goals, MFH Business Functions, and MFH Organizational Offices / Divisions.

1.1. Business Impacts

- ❖ **Consolidated Service Centers** – In an era of increasing workload and decreasing staff, we must look at new ways to get the best benefit from our human resources. One of these ways is to consolidate some of the field office services at Consolidated Service Centers. Candidate services for consolidation are:
 - Tasks which do not require on-site interaction with the property owners or managers
 - Routine tasks which follow standard processing requirements
 - Specialized tasks which are often uncommon and field expertise is limited

Candidate Service Centers are:

- Client Management
- Project Servicing – Routine Support Activities
- Financial Oversight & Follow Up
- Contract Processing & Funding
- Management Review
- Health Care Facilities
- Lender Performance

A diverse set of specialty business cases, such as listed above, will be consolidated and handled by a core group of workers whose focus and training would be in a particular specialty. A service center would be established for each specialty enabling that service

center to streamline the business process and ensure consistency across the inventory. This change will streamline MFH business processes enhancing the ability of the field offices to manage their properties. Since the field offices would no longer be responsible for these services, they can focus on the daily concerns and maintenance of their assigned projects.

An assessment will be required to determine the scope and complexity of the changes to implement this service center solution. The business decisions for organization and policy will need to be analyzed and a prioritized list of Service Centers will be chosen from the candidates. Once this assessment has been made, further phases will be needed to implement the business and system changes necessary to realize the benefits of Service Centers.

- ❖ **Business Performance Monitoring** – In order to evaluate the success of Multifamily Housing business processes, metrics must be identified and data must be collected to compare against those metrics. Any metrics must measure the ability of the business processes to achieve the strategic goals laid out for MFH. In order to obtain the data needed for this metric comparison, reporting points must be established within the business process to capture the state of the business at specific points in the life cycle. This data can then be analyzed to ascertain the best possible changes to make to the business process or the way in which that process is implemented to improve performance in achieving the strategic goals.
- ❖ **Enhanced Project Unit Reporting** – There is a need to track more detailed information to expand Multifamily Housing’s view to include unit specific information for a property. Units can then be assigned specific rent amounts and physical inspections as well as identifying each unit to the inhabiting household. With a more accurate picture of unit rents, vacancies, and special housing needs, such as disabled and elderly care, MFH will be better able to ensure safe, affordable housing and will have better visibility to prevent fraud.
- ❖ **Owner and Management Agent Access** – The business processes regarding owners and management agents should be expanded to enable registered owners and management agents to view critical project-level data about project address, number of units, building type, etc. to verify the accuracy of this data. This is aligned with EA objectives that discover core business competencies, consolidate duplicative business processes, and integrate overlapping functions. Also, a significant amount of data is provided in hardcopy by project owners and then keyed by HUD field staff. HUD seeks to identify instances where significant timesavings would be achieved by having owners submit data electronically, subject to field office review and approval. Possible automation targets include activities such as submission of annual budgets and rent increase requests, data on set-asides for disabled households, requests for release of reserves and reporting follow up actions taken in response to physical inspection deficiencies.
- ❖ **Reporting HUD Actions on Delinquent and Defaulted Loans** – Lenders servicing FHA-insured multifamily loans are required to report monthly delinquencies and defaults

through the Multifamily Delinquency and Default Reporting (MDDR) System. Recent legislation now requires HUD to report to Congress on actions taken by lenders in response to rising delinquencies, and also requires information on actions taken by HUD to address the problems of delinquent projects. This is aligned with EA objectives that discover core business competencies, consolidate duplicative business processes, and integrate overlapping functions.

- ❖ **Monthly Accounting Reports** – Multifamily Housing requires more frequent monitoring of financial activity associated with owners of troubled properties. Owners of troubled properties will be required to electronically submit monthly accounting reports in order for MFH to quickly/frequently (vs. an annual financial statement) better monitor financial stability of a property. Monthly accounting reports will be assessed to provide indications of financial viability. Owners who are required to submit monthly accounting reports, but fail to do so will be identified and referred for follow-up action. Automating of monthly accounting reports will allow Multifamily Housing to more frequently and efficiently monitor troubled properties and allow HUD field staff to assist project owners in ensuring continued financial stability.

1.2. Summary of Changes

The Business Impacts defined in this section represent business initiatives that modify Multifamily Housing business domain in some way. However, these changes have no impact on the Business Profile as defined in the MFH EA Blueprint – Target (To-Be) Architecture. Rather, these initiatives affect the business at a level lower than what has been captured in that document. While these business initiatives do not modify the MFH EA business documentation, the changes associated with these initiatives will require detailed specification to ascertain the necessary adjustments to policy, responsibilities, and automated systems.

2. Systems Profile Overview

The System Profile can show the most dramatic change between the Business, System and Architecture Profiles since the systems can be the most dynamic component. The changes identified primarily result from the introduction of a consolidated Multifamily Housing system and known major development items.

2.1. System Impacts

- ❖ The MFH System iREMS will incorporate existing functions of APPS, DAP, M2M, MDDR, OPIIS, and REMS into one comprehensive system along with following known initiatives. Consolidation of the independent Multifamily Housing systems into one concise system will enhance MFH's ability to integrate similar functions and modify the

system to match Multifamily Housing's future business needs.

- Consolidated Service Centers. Align system functions to support consolidation of routine business functions into service centers. Cost and time-savings will be realized by removing repetitive activities from HUD field. (Note: Additional analysis and discussion is required.)
- Provide Project Owners/Management Agents Access. Allow project owners and management agents to access to select MFH data and provide functionality that allows for submission of data and approval by HUD personnel. This will reduce the workload of HUD field staff and provide more consistency to the process of updating and approving information.
- Support Congressional Requirement for Reporting on Housing for the Disabled. Provide an automated tool for entering unit accessibility data for elderly and disabled and provide reporting capability to comply with Congressional annual reporting requirements. This will fulfill congressionally mandated requirements as well as provide MFH with additional data that will provide a better understanding of Multifamily Housing properties are being utilized.
- Support for Risk Rating. Display OPIIS risk rankings for projects, along with relevant data identifying the scores for each risk factor. This will allow Project Managers to more readily assess the status of the project and identify problem areas.
- Reporting HUD Actions on Delinquent and Defaulted Loans. Include monthly delinquencies and defaults reported by lenders who service Federal Housing Administration (FHA)-insured multifamily loans. This will allow Project Managers to more readily assess the status of the project and identify problem areas.
- Modify to Reflect the New Rental Housing Assistance System. Establish interfaces and functionality with the new Rental Housing Assistance System to support processes related to Multifamily Housing rental data. This will allow Multifamily Housing to access data from a central location for rental housing data.
- Create a Single Participant Table. Develop and maintain one source of participant data related to organizational participants and distinct individuals associated with those organizations. This provides for one reliable location for participant information rather than referring to multiple locations, as is currently the case.
- Business Performance Monitoring. Provide functions to capture, analyze and report metrics that will be established to measure MFH's towards achieving strategic goals.
- HUD Enterprise Architecture Compliance. Develop the system in accordance with the HUD's Target (To-Be) Architectureutilizing Java 2 Enterprise Edition (J2EE) based client application accessed through a browser connecting to an Oracle database management system. Aligns MFH with HUD EA's Target Architecture.
- Enhanced Project Unit Reporting. Capture additional project unit data to allow for better analysis and assist in more effective determination of how different types of units are being utilized.
- Monthly Accounting Reports. Allow for display and follow-up action associated with assessment and referral results from monthly accounting reports that are electronically submitted to the Financial Assessment Subsystem (FASS), or are delinquent, by owners of troubled property. This will provide for more efficient/frequent monitoring of the financial viability of troubled properties.

- System/Shared Component Interfaces. Enhance data integrity by providing more consistent/reliable data capture through the use of Extensible Markup Language (XML).
 - Pre-payment Request Tracking. Automate the loan prepayment request and approval process. This will provide for more efficient processing of prepayments.
 - Documentation of Ownership Changes. Automate tracking of changes in ownership such Transfer of Physical Assets (TPAs), refinances, and assignments. This will allow for more reliable/consistent data that will provide more details regarding the duration of an owner's responsibility for a property.
 - eAuthentication. Accept electronic signatures to provide additional security for data submitted to Multifamily Housing. This provides for increased reliability on the source of the information provided.
 - Interest Reduction Payment/Non-Insured (IRP/NI). Automate the IRP decoupling process to allow for approvals and update of MFH data to enhance data quality. Allow for consistent data regarding non-insured loans. This provides for increased data quality and consistency regarding IRPs and NIs.
 - Automation of Workflow and Correspondence Tracking. Multifamily field offices now use a variety of custom-built software tools to track routine processing and administrative tasks. Full integration of these tasks will significantly reduce the support workload for IT staff in Headquarters and the field, and assure greater consistency in management oversight from office to office. Emphasis will be on providing the first-line supervisors of each field office with the tools needed to monitor workload and assure timely completion of critical tasks. This support is particularly critical in light of the loss of experienced staff and the continued decline in overall staffing levels.
- ❖ **Enterprise Resource Planning Solutions** – Two Multifamily Housing systems are being implemented using a PeopleSoft Enterprise Resource Planning (ERP) system. This environment can be implemented as Client-Server, Web Based, or both to maximize user performance as required. This solution represents a customizable Commercial Off-The-Shelf (COTS) product to allow some custom tailoring to better match the business process. PeopleSoft ERP matches HUD Business procedures and provides the maximum benefit from the least amount of customization.

2.2. Summary of Changes

Section 3.1 – Overview

The overview introduces the concept of consolidating Active Partner Performance System (APPS), Development Application Processing (DAP), Mark-to-Market (M2M), Multifamily Default and Delinquency Reporting (MDDR), Online Property Integrated Information Suite (OPIIS), and Real Estate Management System (REMS) into one Multifamily Housing system.

Section 3.2 – System Definitions

- ❖ Section 4.2.1 – MFH System. Incorporation of existing functions of APPS, DAP, M2M, MDDR, OPIIS, and REMS into one comprehensive broken into functional modules.
 - External Partner Management – APPS
 - Asset Development – DAP
 - Asset Management – M2M, MDDR, OPIIS, and REMS
 - Asset Disposition

Section 3.3 – System Map

- ❖ Section 3.3.2 – System Interfaces
 - Consolidates the interfaces of the existing systems (APPS, DAP, M2M, MDDR, OPIIS, and REMS) into the new MFH System and defines relationships in terms of interactions with the MFH System.
 - Adds RHA System and its relationship to MFH System. The Rental Housing Assistance (RHA) System will incorporate functionality from Tenant Rental Assistance Certification System/Automated Renewal and Amendment System (TRACS/ARAMS).
- ❖ Section 3.3.3 – MFH Business Functions/Processes to Systems.
 - The new development items identified previously in Section 2.1 System Impacts will support or enhance existing MFH Business Functions/Processes. For Gap Analysis purposes, the development items from Section 2.1 – System Impacts have been identified in Table B-1 to indicate how the development items relate to the existing business functions/processes.
 - The MFH EA Blueprint - Target (To-Be) Architecture of the MFH System and its four modules are a result of combining existing functionality from the MFH EA Blueprint - Baseline (As-Is) Architecture of APPS, DAP, M2M, MDDR, OPIIS, and REMS and distributing them to the four component modules, as detailed in Section 4.2.1 above, as well as incorporating the impact of the new development items. At the level for which Multifamily Housing business functions/processes have been defined, the only new process that is being automated from what has been identified for major development to date is 1.3.1.3 Process Monthly Accounting Report under the Asset Management function. All other major development items are enhancements to MFH Business functions/processes that are already supported in some fashion.
 - Additional analysis and discussion is required for the following items which have been excluded from Table B-1:
 - Consolidated Service Centers
 - Business Performance Monitoring
 - Enhanced Project Unit Reporting
 - System/Shared Component Interfaces
 - Automation of Workflow and Correspondence Tracking
 - Each development item is associated either by assisting in the processing of data (P) or by displaying data (D) as a result of processing from another system.
 - D – Displays Data
 - P – Processes Data

Table B-1: Function/Process to Development Item Mapping

Line of Business	Function	Development Item →													
	MFH Sub-Function/Process	Funct ID	Project Owners/Management Agents Access	Reporting on Housing for the Disabled	Support for Risk Rating	Actions on Delinquent and Defaulted Loans	New Rental Housing Assistance System	Single Participant Table in HEREMS	HUD EA Compliance	Monthly Accounting Reports	Pre-payment Request Tracking	Documentation of Ownership Changes	eAuthentication	IRP/NI	
Multifamily Housing	External Partner Management	Register Partner	1.1.1					P	P						
		Certify Partner	1.1.2					P	P			P			
		Manage Partner Relations	1.1.3	D	P			P	P			P	P		
		Evaluate Partner Performance	1.1.4		P	P	P	P	P						
		Inactivate Partner	1.1.5					P	P			P			
	Asset Development	Release NoFA	1.2.1							D					
		Evaluate Applications	1.2.2							P					
		Select Applications	1.2.3							P					
		Establish Firm Commitment	1.2.4							P					
		Underwrite Initial Endorsement/Closing	1.2.5							P					
		Monitor Construction	1.2.6							P					
		Establish Cost Certification	1.2.7							P					
		Increase Construction Loan	1.2.8							P					
		Conduct Post-Substantial Completion Inspections	1.2.9							P					
		Complete Final Endorsement/Closing	1.2.10							P					
	Asset Management	Financial Operations	1.3.1	D		P				P	P	P		P	
		Process Annual Financial Statement	1.3.1.1	D						P		P		P	
		Assess Financial Viability of Project	1.3.1.2			P				P					
		Process Monthly Accounting Report	1.3.1.3							P	P				
		Review of Project Budgets	1.3.1.4												

Line of Business	Function	Development Item → MFH Sub-Function/Process	Funct ID	Project Owners/Management Agents Access	Reporting on Housing for the Disabled	Support for Risk Rating	Actions on Delinquent and Defaulted Loans	New Rental Housing Assistance System	Single Participant Table in HEREMS	HUD EA Compliance	Monthly Accounting Reports	Pre-payment Request Tracking	Documentation of Ownership Changes	eAuthentication	IRP/NI
		Resolve Financial Findings with Owner	1.3.1.5			P				P					
		Physical Operations	1.3.2	D	P	P				P					
		Assess Physical Condition of Project	1.3.2.1	D	P	P				P					
		Resolve Physical Findings with Owner	1.3.2.2			P				P					
		Owner/Management Operations	1.3.3	D		P			D	P					
		Review Selection of Management Agent	1.3.3.1	D					D	P					
		Conduct Management Review	1.3.3.2							P					
		Resolve Management Findings with Owner	1.3.3.3			P				P					
		Process Request for Ownership Change	1.3.3.4	P						P			P		
		Manage Use Agreement	1.3.3.5							P					
		Mortgage Servicing	1.3.4	P			P			P		P			
		Manage Troubled Properties	1.3.4.1							P					
		Process Request for Approval of Escrow Release	1.3.4.2							P					
		Approve Pre-Payment Request	1.3.4.3	P						P		P			
		Restructure Debt	1.3.4.4							P					
		Administer Delinquencies and Defaults	1.3.4.5				P			P					
		Process Claim	1.3.4.6				D			P					
		Enforcement	1.3.5							P					
		Evaluate Referral	1.3.5.1							P					
		Develop Enforcement Plan	1.3.5.2							P					
		Implement Enforcement Plan	1.3.5.3							P					

Line of Business	Function	Development Item →														
	MFH Sub-Function/Process		Funct ID	Project Owners/Management Agents Access	Reporting on Housing for the Disabled	Support for Risk Rating	Actions on Delinquent and Defaulted Loans	New Rental Housing Assistance System	Single Participant Table in HEREMS	HUD EA Compliance	Monthly Accounting Reports	Pre-payment Request Tracking	Documentation of Ownership Changes	eAuthentication	IRP/NI	
		Support Legal Proceedings	1.3.5.4							P						
		Risk Management	1.3.6			D				P						
		Analyze Portfolio	1.3.6.1			D				P						
		Resolve Audit Findings	1.3.6.2							P						
	Rental Housing Assistance	See RHA Blueprint	1.4					P		P						
	Asset Disposition	Property Management Pending Disposition	1.5.1								P					
		Instigate Mortgagee in Possession	1.5.1.1								D					
		Initiate HUD Ownership	1.5.1.2								D					
		Asset Marketing	1.5.2													
		Create Bid Packages	1.5.2.1													
		Approve Note Bidders	1.5.2.2													
		Advertise HUD Owned Auction	1.5.2.3													
		Advertise Foreclosure Auction	1.5.2.4													
		Asset Sales	1.5.3								D					
		Auction Note Packages	1.5.3.1								D					
		Auction Property	1.5.3.2								D					
		Auction Mortgage Foreclosure	1.5.3.3								D					

Section 3.4 – HUD SRM to MFH Systems

Table 3-5 of the MFH EA To-Be incorporates the SRM components from the As-Is of the individual systems that make up the MFH System (APPS, DAP, M2M, MDDR, OPIIS, and REMS) and consolidates the service components for the one system.

3. Architecture Profile Overview

As technology changes over time, the Multifamily Housing architecture must change to reflect the industry standards and best practices. Improvements in development environments and maintenance tools have dramatic affects on the performance and usability of MFH systems. It is also important that the user interfaces reflect the standards set by the industry to enhance ergonomics and reduce training times as users are familiar with the look and feel. The differences between the technologies of the Baseline (As-Is) Architecture and Target (To-Be) Architecture are detailed to bring visibility to the scope and effort needed to realize these changes.

3.1. Architecture Impacts

- ❖ **HUD Enterprise Architecture Compliance** – In an effort to reduce the number of operating environments and improve integration, the HUD EA team identified target technologies with which systems should be developed. MFH is embracing this initiative by converting existing systems to use these technologies. The new environment for MFH systems uses a J2EE based client application accessed through a browser connecting to an Oracle database management system. The alignment of the current systems with the HUD EA Target (To-Be) Architecture ensures that maintenance efforts are minimized while improving the ability of MFH to take advantage of innovations in software implementation.
- ❖ **Enterprise Resource Planning Solutions** – Two Multifamily Housing systems are being implemented using a PeopleSoft Enterprise Resource Planning (ERP) system. This environment can be implemented as Client-Server, Web Based, or both to maximize user performance as required. This solution represents a customizable Commercial Off-The-Shelf (COTS) product to allow some custom tailoring to better match the business process. PeopleSoft ERP matches HUD Business procedures and provides the maximum benefit from the least amount of customization.
- ❖ **System/Shared Component Interfaces** – With the number of systems that both require and accept data from MFH, a universal data definition must be established so that those systems, whether internal or external to HUD, can implement a means to provide or receive the data. Extensible Markup Language (XML) offers an industry standard universal vocabulary for expressing the business data. By switching all system interfaces to use XML, those interfaces are no longer platform or system specific allowing more freedom to upgrade or reorganize the environment. Exploiting the power of XML to act as a middle tier in interfacing MFH systems with external systems serves the dual goals of providing accessibility and reducing implementation and maintenance costs.

3.2. Summary of Changes

Section 4.4 – HUD TRM to MFH Systems

- ❖ The consolidation of Active Partner Performance System (APPS), Development Application Processing (DAP), Mark-to-Market (M2M), Multifamily Default and Delinquency Reporting (MDDR), Online Property Integrated Information Suite (OPIIS), and Real Estate Management System (REMS) into a single system requires an integration of the architecture and the technologies used to implement them. Moving forward, a web architecture should be used to implement this consolidated MFH system using Java 2 Enterprise Edition (J2EE) to access an Oracle database. Crystal Reports will be used as a means of producing reports for the user. This new implementation will then satisfy the requirement to use HUD EA approved technologies.
- ❖ Using PeopleSoft to implement an ERP solution for Multifamily Insurance and Claims (MFIC) and Multifamily Insurance System (MFIS) and leverages a COTS product to quickly automate the business processes and leaves some wiggle-room to customize for MFH specific business practices. This represents a service-based solution that could be expanded to incorporate other MFH or HUD processes. The technologies used to realize this effort reflect a combination of HUD EA approved technologies and the proprietary technologies required to implement a COTS solution.
- ❖ All three of these systems would utilize XML as the data exchange protocol to enable a consistent approach to external interfaces. As the industry standard, XML offers a universal vocabulary to enable businesses to define their data requirements, meaning that any business entity, regardless of language or interest, can use that data definition to read data from or provide data to MFH.

Section 4.3.1 – Service Oriented Architecture with Defined Key Technologies

- ❖ The major difference in the use of key technologies is the addition of middleware and integration services. Utilizing XML will increase integration performance providing a more accessible and customizable environment.