



DEEP DIVE: THE MUSES APARTMENTS BOND

*Heron Investment Retrospective
The Muses Apartments in New Orleans, Louisiana
Fannie Mae Pool 470020*



In 1996, Heron first made the commitment to begin using our investment portfolio (and not only our grant dollars) to serve our mission. Some of our earliest impact investments were in our fixed income portfolio, in partnership with Community Capital Management (CCM), where Barbara VanScoy was our portfolio manager. She partnered closely with Heron to find fixed income investments that met our financial needs while also seeking out a positive social impact.

The impact investing market has come a long way since then, and it's important to learn from where we've been. We asked Barbara in her role as principal at Alpha Impact Advisors (she has since joined Heron as a Fellow), to do a series of retrospective deep dives into a broad selection of those early fixed income investments and help us learn from those experiences. Her work provides an opportunity to explore ways to seek better impact through our future fixed income investments.

In part, this process has been an opportunity to view these past investments through a "net contribution" lens, which invites us to explore impacts across all involved stakeholders. This lens was in its early stages of development at the time these deep dives were written, and Barbara's work helps us to elucidate several areas of further exploration.

We invite you to learn with us.

EXECUTIVE SUMMARY

Issue Date:	January 1, 2012	Maturity Date:	January 1, 2030
Bond Coupon:	4.20%	Rating:	AAA/AA+
CUSIP:	31381TDZ0	Pool Number:	470020
No. of Units:	211		

The Muses is an award-winning, environmentally conscious, affordable rental community trying to revitalize the Central City neighborhood of New Orleans.

In the aftermath of the mortgage crisis and Hurricanes Katrina and Rita, working families in the area needed quality, affordable rental properties. Construction of the Muses in 2010 resulted in more than 260 units of high-quality housing. It was built over two phases on 4.8 acres, which previously sat vacant for over ten years after plans for a grocery store fell through. The multifamily property offers residents extensive amenities, including a fitness center, a business center, and playgrounds.

Heron purchased part of a Fannie Mae-issued mortgage security that refinanced a loan to build The Muses, phase I (211 units). The investment in The Muses was among Heron’s earlier investments in rental housing, and reflected a change in how Heron’s mission was pursued through the fixed income portfolio.

The Muses was a collaborative effort by for-profit and nonprofit developers that utilized both public and private financing. In addition to private investment from for-profit and non-profit developers, the project was funded through a combination of [Gulf Opportunity \(GO Zone\) tax credits and Road Home Piggyback Community Development Block Grant \(CDBG\) funds](#), both federal programs to help revitalize communities damaged by Hurricane Katrina in 2005. During the construction phase, developers adapted the property to address neighborhood concerns.

Overall Performance: On net, this investment succeeded in rejuvenating a community previously devastated by natural disaster.

The project was a net positive contribution for New Orleans because it provided much-needed affordable housing that generated positive contributions across all four capitals.

ASSET OWNER CONTEXT FROM HERON

Then:

When we started to invest with CCM, and prior to the housing crisis, our goal within this portfolio was to support family wealth creation through homeownership and enterprise development. Heron did not believe that home rental was a path to generational wealth creation for low-income people, and thus rental housing had been specifically precluded from investment. In light of the changes in the U.S. housing market after the mortgage crisis, Heron's views changed. The collapse of the housing market wiped out wealth creation for many families, and disproportionately affected minority households. Rising prices for single-family and rental housing brought about displacement and gentrification, destabilizing neighborhoods and families, and negatively affecting their health, safety and educational attainment. [As of 2007](#), "All sectors of the economy [in the hurricane-affected areas had] reported a workforce shortage due to a lack of affordable housing."

Adding affordable rental housing to the portfolio allowed us to diversify both socially and financially. Socially, investing in the construction of high-quality, affordable rental properties was a way to alleviate the shortage of affordable housing for working class families — especially this investment, in a city doubly impacted by a natural disaster and the mortgage crisis. This particular investment was also a good early foray into rental housing as an impact investment because it was refinancing a loan, which meant we were able to see The Muses Apartments' track record of positive community impact and environmental sustainability. From a financial perspective, this change brought the portfolio more in line with its benchmark, the Barclays U.S. Aggregate Bond Index, by making it easier to [approximate the terms](#) of treasury and agency-backed bonds while having a clearer line of sight to the impact of the investment itself. Remaining in line with the benchmark was important to Heron at the time, as it supported comparisons of impact investing to traditional methods.

Now:

A broader focus: Looking at our investments through the lens of [net contribution](#) is a way of broadening our focal point to the impacts on all involved stakeholders. Sometimes, we find that a narrow focus on one positive impact has overshadowed a more negative impact happening elsewhere. In this case, pulling back from the affordable housing lens, we found positive impacts from an environmental standpoint.

Refinancing and secondary markets: How do we think about the impact of refinancing, and who benefits when we refinance? Heron has not traditionally shied away from secondary markets (and has a sizable public equities portfolio), and we have come to believe that we are complicit in the impact of whatever we own. Still, it's important to follow the trail of where the money goes and who benefits from liquidity. In this case, buying into a smaller pool that would not get snapped up by large traditional investor may have allowed developers to go on to create further affordable housing where it is needed.

Fixed-income impact visibility: By replacing one asset class in the Barclays Agg with another, Barbara took us from an investment without visibility to the impact (as the government doesn't disclose which activities are financed by a particular bond) to a much higher level of clarity, within similar financial parameters. How can investors use this technique to seek impact throughout their bond portfolios?

Measuring community change: It was hoped that The Muses would be a catalyst for revitalization in its neighborhood, but without low-income people being gentrified out. If we aren't relying on income data, what are the best ways to tell if a community is revitalizing? Furthermore, is that even the right bar? It may be that catalyzing revitalization is too much to ask, when the initial goal was simply to provide quality, affordable housing.

BOND DETAILS

Fannie Mae issued Pool 470020 totaling \$9,550,000 to refinance an existing loan to The Muses, Phase I. The refinance loan was structured as an 18-year [balloon mortgage](#), with a 35-year [amortization](#) and 15 years of [yield maintenance](#). Fannie Mae Pool 470020 was issued under Fannie Mae's [Delegated Underwriting and Servicing \(DUS\)](#) program, which is Fannie Mae's principal line for purchasing and securitizing individual multifamily loans.

At pool issuance in 2012, the property had an occupancy rate of 89.10%. The [debt-service coverage ratio \(DSCR\)](#) on the property was 1.27 times. As of year-end 2015, DSCR increased to 1.67 times and occupancy rose to 99.00%. The increased number of tenants and strong financial performance of the property meant that it was in a much stronger financial position by 2016 than when the pool was issued, even as it upheld strict requirements for providing affordable housing to low-income tenants. Through the second quarter of 2016, occupancy remained at 99.00% and there were no reported delinquencies on the property.

GULF OPPORTUNITY (GO) ZONE TAX CREDITS, COMMUNITY DEVELOPMENT BLOCK GRANTS, & THE ROAD HOME PIGGYBACK PROGRAM

In 2005, Hurricanes Katrina, Rita, and Wilma devastated the Gulf Coast in Alabama, Florida, Louisiana, Mississippi, and Texas, destroying wide swaths of housing, key infrastructure, and numerous private businesses. In response to the Gulf Coast devastation, the federal government committed a historically high level of resources through an array of grants, loans, subsidies, and federal tax incentives.

The bulk of federal rebuilding assistance from 2005 through 2008 came from two key programs—the Federal Emergency Management Agency's (FEMA) Public Assistance program and the U.S. Department of Housing and Urban Development's (HUD) [Community Development Block Grant \(CDBG\)](#) program. CDBG funds are granted on an annual basis to communities around the United States by the federal government to support affordable housing, job creation and services. In general they are allocated based on local need; some communities get CDBG grants every year.

In addition, to assist with recovery from the Gulf Coast hurricanes, the [Gulf Opportunity \(GO\) Zone Act of 2005](#) provided a range of federal tax relief and incentives for individuals and businesses in disaster areas known as the GO Zones. The relevant states were authorized to allocate these federal [GO Zone tax incentives](#), which included things like low-income housing tax credits ([LIHTC](#)) and tax-exempt bond financing. (These tax credits and incentives were in addition to regular, annual allocations available to the affected states.)

[The Low Income Housing Tax Credit \(LIHTC\) Piggyback Program](#) was developed to replace lost rental housing due to hurricanes Katrina and Rita by financing multi-family workforce rental housing. It was developed by [The Road Home](#), a program funded by HUD. The Piggyback program connects [Community Development Block Grant \(CDBG\)](#) funds with GO Zone LIHTC projects using tax-exempt private activity bonds and 4 percent LIHTCs. In addition to the grant funding and tax credits, the program makes low-interest [gap financing loans](#) to developers, which get paid back and re-invested into more affordable housing for storm-affected areas. This new model for housing development was designed by following best practices models for workforce housing development. The program supported the development of mixed income communities and the restoration of rental housing in the [most heavily impacted parishes](#).

THE BOND STORY

Context, Intentions, and Execution

In the wake of the mortgage crisis, Heron's investment in The Muses Apartment project was one of its first attempts to support affordable rental housing for low- and middle-income families.

The Muses Apartment project, in particular, presented an opportunity to support an economically diverse neighborhood that had suffered catastrophic housing loss due to two devastating hurricanes. An urban infill project, it was built over two phases on 4.8 acres of land that had previously sat vacant for over ten years after plans for a grocery store fell through.

When Hurricanes Katrina and Rita hit Louisiana in 2005, over 200,000 housing units suffered damages. Orleans Parish sustained over 50% of the damage statewide, including an estimated 51,700 rental units (more than half of the parish's rental housing) that were so badly damaged as to be deemed uninhabitable. [Katrina was the costliest](#) and among the deadliest Atlantic hurricanes ever recorded, and both storms remain among the costliest Atlantic hurricanes to date, with [estimated damages in 2017 dollars](#) of \$160 billion for Katrina and \$24 billion for Rita. The recovery needs of Louisiana in the wake of these two storms was well beyond what government alone was going to provide, and trailers provided by FEMA as short-term housing were "[built fast, and not to last](#)," many with toxic levels of formaldehyde.

In response to the widespread damage, Congress passed the [Gulf Opportunity \(GO\) Zone Act of 2005](#), which authorized special allocations of additional [Low Income Housing Tax Credit \(LIHTC\)](#) authority to address the rebuilding and affordable housing needs of the Gulf Coast after Hurricanes Katrina and Rita.

In December 2006, the Louisiana Housing Finance Agency allocated \$1.5 million in GO Zone credits

TIMELINE

2005 [August-September] Hurricanes Katrina and Rita devastated Louisiana's housing stock. Throughout the State, over 200,000 units suffered severe damage. Orleans Parish sustained over 50% of the damage statewide, including losing an estimated 51,700 rental units.

[December] Congress passed the GO Zone Act, which authorized special allocations of tax credits to encourage the rebuilding and affordable housing needs of the Gulf Coast after Hurricanes Katrina and Rita.

2006 [December] Louisiana Housing Finance Agency (LHFA) allocates \$1.5 million of GO Zone tax credits for the construction of The Muses, a mixed-income affordable property in Orleans Parish.

2007-2012 The subprime mortgage crisis sparks a global financial crisis and ultimately The Great Recession.

2008 [December] LHFA allocates additional GO Zone credits to construct The Muses, Phase II.

2009 [May] GCHP receives \$3.6 million of [HOME funding](#) from the City of New Orleans at below-market rates.

[July] Construction begins on The Muses, Phase I.

2010 [Fall] The Muses Phase I is completed, offering affordable, energy efficient housing across a range of incomes.

2012 [January] Fannie Mae issues and Heron invests in a bond to refinance an existing loan to The Muses, Phase I.

The Muses receives the first LEED Silver Certification for an apartment building in Louisiana.

for the construction of The Muses Apartments, a mixed-income development. The project received an additional \$16 million in Community Development Block Grant funds.

The allocation of GO Zone credits was originally slated to build 230 units in Eastern New Orleans. Due to density concerns and zoning issues, LDG Development, the for-profit developer, identified an alternative site for The Muses Development, a 4.8-acre parcel of land cleared ten years previously in anticipation of an Albertson's grocery store that was never built. Nonprofits Gulf Coast Housing Partnership, a Heron grantee, and Jericho Road Episcopal Housing Initiative recently had purchased the vacant parcel in Orleans Parish. LDG Development partnered with Gulf Coast Housing and Jericho Road to build and co-own The Muses.

Initially, the City Planning Commission voted against the project, citing design, parking, and density concerns. Developers worked with the City Council and the neighborhood to amend the design plans to win local support. The development was both highly accessible by public transportation, and highly walkable (with a [Walk Score of 90](#), indicating that daily errands for Muses residents do not require a car), thus reducing the need to provide additional parking. In addition to replacing lost housing stock, The Muses brought new affordable rental housing construction to a moderate-income area of the city where the housing stock averaged 71 years of age.

The project's unique public/private funding structure utilized a combination of Gulf Opportunity (GO Zone) tax credits and Road Home Piggyback CDBG funds ([see inset](#)) to leverage investments by for-profit developer LDG Development and nonprofit developers Gulf Coast Housing Partnership and Jericho Road Episcopal Housing Initiative.

Phase I of The Muses offered 211 apartments, all of which are set aside as affordable housing in accordance with the Low Income Housing Tax Credit (LIHTC) program that helped fund The Muses. The income restrictions on these homes range from 20% to 80% of area median income.¹ Heron's investment in this bond supported the refinancing of Phase I, post-completion. Phase II offered an additional 52 units, of which [23 have rental restrictions](#). These rental restrictions are in effect for decades.

Outputs & Outcomes

Much consideration was given to environmental factors in designing and building The Muses. The apartment complex is a Leadership in Energy and Environmental Design (LEED)-certified urban infill development, and was the first LEED-Silver-certified apartment complex in Louisiana. The Muses met LEED criteria, including low- and no-VOC paints, sealants and adhesives, whole-building optimization, compact density and reduced parking, and infill development with existing infrastructure.

The noteworthy landscape design features a storm water design that reduces water runoff by 50% and pollutant runoff by as much as 90%. The design incorporates pervious parking lot paving and planted

¹ According to Fannie Mae Mortgage-Backed Securities Program Supplement to Prospectus Dated October 01, 2010 for CUSIP 31381TDZ0 and Pool Number HY 470020:

"The mortgaged property is a multifamily affordable housing property subject to a regulatory agreement which places income restrictions on tenants as follows: 22 of the units must be leased to tenants with household incomes at or below 20% of the area median income; 22 of the units must be leased to tenants with household incomes at or below 30% of the area median income; 32 of the units must be leased to tenants with household incomes at or below 50% of the area median income; and 135 of the units must be leased to tenants with household incomes at or below 80% of the area median income."

drainage bioswales. Landscaping includes over 40 species of sustainable water-efficient native and adapted plants.

Site development used partially recycled and locally produced materials to reduce the project's carbon footprint. To control construction waste, only 15% of construction materials went off site, and of that, only 3% went to the landfill. (By comparison, [2003 data estimated](#) that 60% of construction and demolition waste went to landfills.) Recyclable material was sorted on site.

The outcome for tenants is important as well. The Muses Apartments is conveniently located near the Central Business District and blocks from the St. Charles Avenue Streetcar line. Residents have access to on-site covered bicycle storage and a wide variety of other amenities, and live in a socially and economically integrated building.

In terms of job creation, LDG Development, The Muses Apartments co-owner, cites that for every 100 units of housing it builds, there are an average of 122 short-term contractors hired and 38 permanent positions created. In addition, the construction team taught green building methods throughout the construction process, [even inviting outside contractors](#) to the site to learn proper techniques.

Specific, causal data on whether The Muses proved to be “a catalyst” for revitalizing the Central City neighborhood as a whole is hard to come by. There is some [anecdotal evidence](#) that the neighborhood is improving, and mixed reviews from tenants, who generally [affirm the low rents](#) but sometimes complain of [unresponsive management](#) and [amenities that sit in disrepair](#). (Also of note from an environmental standpoint, tenant reviews mention energy-efficient appliances, but a conspicuously lacking recycling program.)

What is confirmed is that all of the units in Phase I of the development (which Heron's investment refinances) provide affordable housing units in a neighborhood that greatly needed them, created through a process that addressed blight and was responsive to neighborhood concerns regarding density and design. According to [data from Fannie Mae](#), the vacancy rate at The Muses at the time of Heron's investment was around 11% (compared to about 10% rental vacancy rate data for New Orleans at that time), and in the recent years has dropped to about 1% (compared to 7.2% for the city in 2015). In 2010, Novogradac Journal of Tax Credits gave The Muses Project a [Development of Distinction Award](#) in the “Overcoming Significant Obstacles” category and an honorable mention as a “LIHTC Project That Best Exemplifies Major Community Impact.” In 2011, the Louisiana chapter of the American Society of Landscape Architects awarded The Muses Apartments the President's Award of Excellence.

However, “responsive to neighborhood concerns” and an award for “Overcoming Significant Obstacles” do speak to some challenges with the original project. In 2016 the City of New Orleans Office of Community Development did [an assessment of fair housing](#) which noted (p. 34-35):

Community opposition to low-income or mixed-income housing in higher opportunity neighborhoods has been a constant presence throughout New Orleans' rebuilding efforts. Intense neighborhood association opposition stymied a project in the Lower Garden District and led to the downsizing of the Muses Apartments. ... The Muses Apartments generated some division between neighborhoods on either side of St. Charles Avenue. Central City residents, merchants, and church leaders said it would restore badly needed affordable housing to the neighborhood, while a number of Coliseum Square residents criticized both its design and its density.

ANALYSIS

Rationale at the Time of Investment

Single-loan multifamily mortgage-backed securities (MBS) such as Fannie Mae Pool 470020 typically have small issue sizes, making them less attractive to larger institutional investors—and meaning that Heron has the opportunity to provide capital where the broader market doesn't serve as well. The portfolio was constructed using the Barclays U.S. Aggregate Bond Index (the "Barclays Agg") as a benchmark, with [certain asset classes replaced by others](#) of similar financial structure but greater social impact.

Structurally, multifamily MBS can act as a surrogate for Treasury- and Agency-backed bonds, which serve no specific social purpose aside from financing the activities of government. Multifamily MBS have similar financial profiles, but provide greater visibility to the use of funds, and investors can make a more informed decision as to whether a given investment is in line with their values. Thus, increasing the exposure to specific multifamily MBS brought the portfolio more in line with its benchmark, allowing for better tracking of financial performance relative to peers (which was important to Heron at the time).

At the same time, it allowed Heron to participate in a mortgage pool that provided housing designed to be affordable, socially and economically integrated, and environmentally sustainable within an area dramatically impacted by Hurricanes Katrina and Rita during the record-breaking 2005 hurricane season. Heron was contributing to recovery through their grantee Gulf Coast Housing Partners, a partner on the project, so this investment was a way to compound Heron's efforts in this still-recovering region.

Additionally, making the purchase from Fannie Mae's Delegated Underwriting and Servicing (DUS) program allowed the inclusion of affordable housing without increasing allocations and exposures to either single-family MBS or taxable municipal bonds. As the Fannie Mae DUS program has a risk-sharing agreement with their lenders, there are very few mortgage defaults.

Did the Bond Produce a Net Contribution to Society?

Civic Capital – Net Contribution

- State and federal tax incentives encouraged **affordable housing** production;
- **City and neighborhood engagement** contributed to design and construction of mixed-income housing complementary to the neighborhood;
- Added **much-needed housing** back to Orleans Parish;
- **In-fill development** transformed a long empty parcel into award-winning housing; and
- The Muses acts as an **anchor for redevelopment**.

Human Capital – Net Contribution

- **Jobs Creation:** LDG Development, The Muses Apartments co-owner, cites that for every 100 units of housing it builds, there are an average of 122 short-term contractors hired and 38 permanent positions created.;
- The Muses **avoided** pushing low-income residents out of the neighborhood by being an economically integrated property; and
- The Muses construction team **taught green building methods** throughout the construction process, even [inviting contractors](#) outside of The Muses' construction team to the site to learn proper techniques.

Natural capital – Net Contribution

- Easy **access to local transportation** and [walkscore](#) of 90;
- The Muses is a **LEED-certified** urban infill development and was the first LEED-Silver-certified apartment complex in Louisiana;
- The **award-winning landscape design** features an innovative storm water design that reduces storm water runoff by 50% and pollutant runoff by as much as 90%. The design incorporates pervious parking lot paving and planted drainage bioswales; and
- Site development used partially recycled and locally produced materials to **reduce the project's carbon footprint**. To control construction waste, only 15% of construction materials went off site, and of that, only 3% went to the landfill.

Financial Capital –Net Contribution

- LDG Development's access to the capital markets allowed the loan to be **refinanced at a lower interest rate**, benefitting the developer and potentially supporting future housing development.

Overall: NET CONTRIBUTOR



GLOSSARY

Adapted from definitions by [Investopedia](#) and other sources as noted.

Amortization is the paying off of debt with a fixed repayment schedule in regular installments over a period of time.

Balloon Mortgage requires a lump-sum payment of principal due at the end of the term.

Community Development Block Grant (CDBG) is a program that provides annual grants on a formula basis to 1209 general units of local government and States to address community development needs (*from US Department of Housing & Urban Development*).

Debt Service Coverage Ratio (DSCR) is a measure of the cash flow available to pay current debt obligations. On a mortgage loan it is the ratio of the underwritten Net Operating Income (NOI) of a mortgaged property on an annualized basis to the total annual principal and interest payments due on the related mortgage loan (debt service).

Fannie Mae Delegated Underwriting and Servicing (DUS) MBS pool is a mortgage-backed security option backed by multifamily loan pools that often consist of one single loan and provides prepayment protection to investors (*from Fannie Mae*).

Gulf Opportunity (GO) Zone delineated the counties and parishes in Louisiana, Mississippi and Alabama hurt by Hurricane Katrina that were awarded tax incentives to help revitalize and rebuild these communities. (*For more, see inset.*)

Leadership in Energy and Environmental Design (LEED) is the most widely used third-party verification for green building standards (*from U.S. Green Buildings Council*).

Low Income Housing Tax Credit (LIHTC) Program encourages public and private investors to build and rehabilitate low-income residential housing. Each state awards federal tax credits annually to developers and investors through competitive funding rounds.

The Road Home Piggy-back Program paired **Community Development Block Grant (CDBG)** dollars with **GO Zone tax credits** and gap financing loans to developers to support the rebuilding of affordable workforce housing in the wake of the 2005 hurricanes. (*For more, see inset.*)

Yield Maintenance is a prepayment premium that is due if a borrower voluntarily prepays a mortgage loan. It is calculated so that investors attain the same yield as if the borrower made all scheduled payments until maturity.

APPENDIX: BENCHMARKING AGAINST THE BARCLAYS U.S. AGGREGATE BOND INDEX

Using a standard benchmark as a gauge for financial performance was important to Heron at the time, as it supported comparisons of impact investing to traditional methods. Benchmarking the Heron portfolio against the “Barclays Agg” means including some investments (though within particular guidelines), and substituting others with investments that have similar financial characteristics but offer greater potential for social impact.

Asset-backed securities are backed by non-housing assets such as credit card receivables.

In the Heron portfolio these were replaced with small business loans, especially Small Business Administration (SBA) 7(a), which specifically fund small businesses that have not been able to obtain traditional bank financing. These are further reduced in risk by a 70% guarantee provided by the government. SBA product allowed the Foundation to invest in high credit-quality pools that supported their mission of enterprise development and access to credit for low-income communities.

Agency Single-Family Mortgage-Backed Securities (MBS): Securitized pools of single-family homes are issued by agencies backed by the U.S. government (Ginnie Mae, Fannie Mae and Freddie Mac).

The Heron portfolio includes agency single-family MBS, with the added requirement that they include only 30-year fixed-rate mortgages that are indexed as affordable to low- and moderate-income borrowers at the time of origination for the full 30 years. This ensured that only loans to low- and moderate-income families with the ability to repay their loans were pooled for purchase.

Treasury & Agency-backed bonds are structured in such a way as to have semi-annual coupon payments through the life of the bond, and then repayment of principal upon maturity.

For Heron these are replaced with multi-family MBS as surrogates, because they have a similar structure in terms of maturity, duration and call features. Multi-family MBS (generally apartment complexes) typically pay out a coupon plus a small portion of the principal over time, and then have a balloon payment. Heron’s multifamily MBS portfolio consisted of affordable rental properties for low- income families and the elderly.

Corporate bonds bear a higher level of risk than treasury- and agency-backed bonds, based on the creditworthiness of the issuing enterprise.

These are approximated for Heron with municipal bonds, which are rated in part based on the varying creditworthiness of the issuing municipality. For impact, the portfolio utilized bonds that supported affordable housing, community revitalization and job training and creation.