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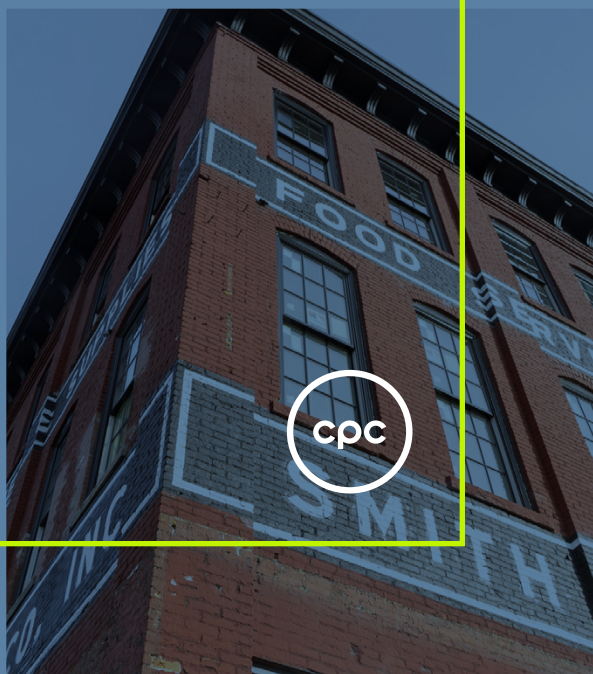
THINK BIG

A GUIDE TO STRATEGIC PORTFOLIO PLANNING AND ASSET MANAGEMENT



cpc

INTRODUCTION

CPC has a history of financing small buildings, helping entrepreneurial mission-driven owners grow their portfolios and their business. One major challenge of growing a portfolio is ensuring owners have a sustainable plan for maintaining and optimizing performance.

Think about owning property as juggling balls. With just one or two balls, the juggling is manageable. You are aware of where each ball is at any given moment. As you acquire additional balls, the juggling becomes exponentially more complex and suddenly you are scrambling to keep them in the air. Less attention is paid to each individual ball because you only have so much capacity. As portfolios scale, owners have less time and less capacity to deal with each issue across multiple properties.

That is why a portfolio management plan is critical. It ensures none of the balls drop to the floor.

The following will help you construct that safety net. This guide offers steps to collect information about your portfolio, assess performance, and develop a plan for improving and sustaining it. This will require collaboration with your Lenders, property managers, and sometimes your tenants. While it will be an investment, going through the process will pay long-term dividends, ensuring your properties remain healthy and resilient.

Since our founding in 1974, CPC has always worked to be more than just a Lender to our customers and partners. Our mission goes beyond simply financing multifamily housing. We help our borrowers grow, create thriving communities, and ensure the longevity of the affordable and workforce housing we are helping to foster.

Understanding your portfolio better will unlock opportunities for potential financing options, prepare for capital events at your buildings, and build economies of scale. We hope this guide equips you with the tools to do this for your own portfolio.

Sincerely,
The CPC Team

cpc Community Preservation Corporation

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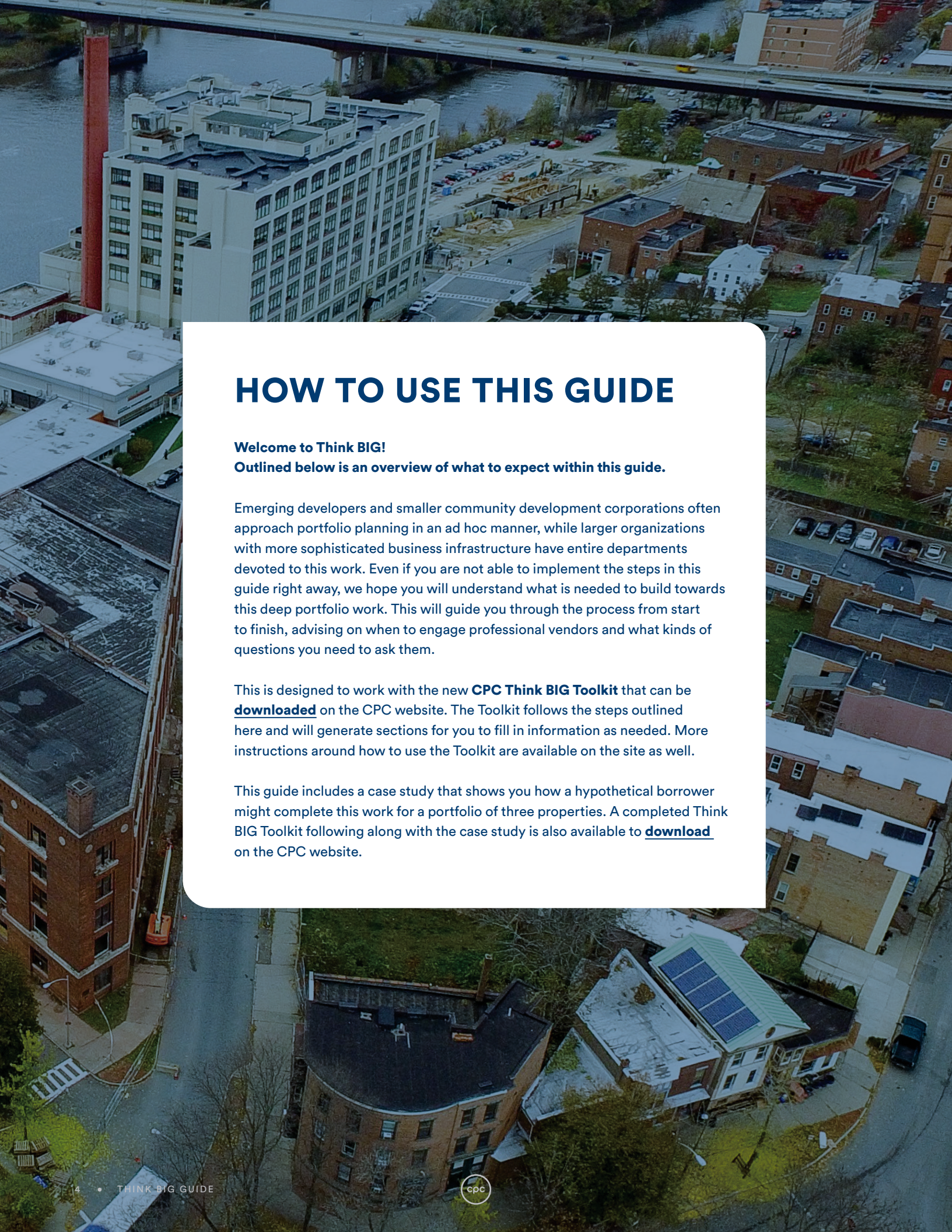


HOW TO USE THIS GUIDE

Welcome to Think BIG!
Outlined below is an overview of what to expect within this guide.

Emerging developers and smaller community development corporations often approach portfolio planning in an ad hoc manner, while larger organizations with more sophisticated business infrastructure have entire departments devoted to this work. Even if you are not able to implement the steps in this guide right away, we hope you will understand what is needed to build towards this deep portfolio work. This will guide you through the process from start to finish, advising on when to engage professional vendors and what kinds of questions you need to ask them.

This is designed to work with the new **CPC Think BIG Toolkit** that can be **downloaded** on the CPC website. The Toolkit follows the steps outlined here and will generate sections for you to fill in information as needed. More instructions around how to use the Toolkit are available on the site as well.

This guide includes a case study that shows you how a hypothetical borrower might complete this work for a portfolio of three properties. A completed Think BIG Toolkit following along with the case study is also available to **download** on the CPC website.

INTRODUCTION TO THE FRAMEWORK

Please use this guide in a way that makes sense for you. We recommend reading the guide in sequence and reviewing the case studies before beginning to dig into your own portfolio using the Toolkit.

COLLECT DATA

Aggregate portfolio information about building condition, energy usage, debt and finances for all properties. Collect information on legal and financial restrictions for all projects.

BENCHMARK

You cannot manage what you do not measure. Track your expenses and energy consumption against market assumptions. Assess the physical condition of your buildings. Compare your buildings' performances against each other and against targets you have set. Sort buildings into a performance matrix.

IDENTIFY ISSUES AND SUCCESSES

Look for trends across high performing and low performing projects. Discover what is driving performance across your portfolio.

IDENTIFY ACTION ITEMS

Address immediate health and safety concerns. Prioritize immediate fixes across your portfolio. Simplify the process to reduce brain drain and transaction costs. Set goals and look for ways to achieve economies of scale and expand impact.

RECOMMEND SOLUTIONS

Create an actionable strategic plan for portfolio optimization and success. Anticipate trigger events and look for concurrences across your portfolio. Use cash flow and payback analysis to plan for long term time horizons.

This guide assumes the reader has a basic understanding of real estate development and has experience managing more than one multifamily rental property. For a glossary of terms used in this guide, please refer to CPC's prior publication: **Start Small: A Guide to Financing Small Multifamily Building Projects**.

BUILDING THE CASE FOR WHY

All too often, developers tend to focus on increasing property income or relying on financial transactions as the main strategies to boost the income and value of their portfolio. However, the value of a portfolio fluctuates based on cash flow, the quality of the properties' physical condition, geographical and economic context. Improvement across any of these factors can contribute to value increases, while deterioration of an asset or inefficient expense management can have a negative impact.

Buildings, much like any company, are subject to market conditions, new regulations, and shocks. A new law can influence and change the performance of your building. Ensuring your project is compliant with regulatory bodies and planning for challenges related to economic shocks or natural disasters is part of any sound long-term portfolio plan.

The criteria on the following page summarize the variables associated with property management.

CASH FLOW

Cash flow is a simple mathematical formula: Revenue - Expenses = Cash Flow. Ensuring your property has optimal collections and is not paying unnecessary costs are both ways to ensure cash flow is healthy and growing. This allows the owner to build out reserves, ensuring their property is resilient and able to weather unexpected events or disasters. Additionally, consideration should be given to transitioning to clean energy with renewables on site to manage expenses.

CONDITION

Buildings age. Each system has an estimated useful life that attempts to predict when it will need repairs or need to be replaced. Planning for replacement in advance will help you prepare for the cost, avoid unnecessary chronic repairs, and give you time to purchase the best system compliant with new codes and laws at the best price on the market.

CONTEXT

Context does not just mean real estate values in your neighborhood are increasing or declining. While your project may be performing well right now, incoming regulation around decarbonization, looming local law requirements, and fading tax abatements are all potential future challenges that require strategic planning to overcome. The political, economic, and social context of your project will affect its long-term value.

COMPLIANCE

Compliance can be a headache. Your building must be compliant with physical building codes. Rents and incomes need to comply with regulatory restrictions. You must ensure you are meeting all necessary reporting requirements with Lenders or syndicators. Additionally, as new building laws regarding carbon emissions, fuel sources, and other environmental factors take effect, you need to create a plan to be compliant. Mapping out your different obligations allows you to plan for the time needed to ensure you can get compliant and avoid fines. Ultimately, being in good standing will enable you to cultivate a positive relationship with Lender partners while maximizing value and returns.

RESILIENCE

Resilience is the capacity to withstand or recover quickly from challenges such as market spikes, climate disasters and economic recessions. Planning for your building to withstand the stress of these events is a key component to any long-term portfolio planning strategy. Additionally, several cities have set clean energy targets and specific codes designed to make buildings more resilient against climate events. Setting your portfolio up to meet these requirements will help you avoid fines and improve the quality and resilience of your buildings.

Most projects will cycle through the financing phases outlined below. The majority of this lifecycle is the permanent loan phase. Sound asset management throughout the permanent loan term is integral to optimum performance.

Sale, Predevelopment, or Acquisition

3-6 months

Closing or Refinance

1 month

Construction

1-3 years

Permanent Term

5-30 years

- Tax Exemption and Reg Agreement Monitoring
- Useful Life of Systems and Maintenance Monitoring
- Asset Management and Compliance Reporting
- Annual Budgeting
- Annual Inspections

TRIGGER EVENTS

In addition to optimizing an asset's performance, long-term portfolio planning prepares projects for trigger events and changes in the market environment. A trigger event is something that forces your project to change or move from phase to phase through its lifecycle.

Any of the items below can be a trigger event for your property:

- A loan reaches maturity
- Year 15 of a Low-Income Housing Tax Credit (LIHTC) project requires an investor exit
- A tax abatement or regulatory agreement expires
- A sale or acquisition occurs
- A building system (e.g., HVAC, roof, electrical) fails
- New laws or regulations come into effect
- Change in building codes

Typically, a trigger event will have a major impact on your project's financial and physical condition. It may result in selling, refinancing, or investing additional capital into your project. Planning for these kinds of events often requires pre-development capital and a proactive approach to ensure a property's clean bill of health (i.e., correcting existing violations, title, etc.).

Long term portfolio planning ensures trigger events do not catch you by surprise, offering the time and capacity to move forward with a transaction as needed. Additionally, it helps you strengthen the position of your assets across these many factors. As you begin this process, keep in mind the end goal of increased optimization and value.


STEP 1

COLLECTING DATA

You can't track what you don't measure

Every portfolio planning process begins with collecting baseline information about each individual building or project in that portfolio. This information will comprise your Deal Book. The Deal Book is an easy to reference guide that includes the details of each property. It enables you to quickly access and communicate information about your properties for investor and management reporting, as well as Lender communication prior to transactions.

Even with a keen sense of your project's financial performance, it is still critical to understand legal and regulatory restrictions. Before you begin portfolio planning, you need to get through this endeavor's largest lift: data collection. This step requires reviewing legal documents, reaching out to your Lenders and partners and digging through files you may not have looked at in some time.

Below is an important list of static and dynamic data points needed to assemble your Deal Book.

STATIC DATA refers to the characteristics or attributes of your project that will remain consistent over its lifecycle. For example, consider the physical structure of your building: the number of stories, layout of units, square footage and heating type. These are unlikely to change unless you make a major capital investment in apartment distribution upgrades or overhaul your heating and cooling systems. Static data can also include financing conditions such as the maturity date of your loan and the position of liens on the project.

DYNAMIC DATA refers to characteristics or attributes of your project that are subject to change annually, monthly, or even daily: rent rolls, number of violations, collections rates, utility costs, insurance premiums and other expenses.

In this guide we define:

- *building: one real property*
- *project: one financially cohesive building or set of buildings with a single financing owned by a single entity*
- *portfolio: one collection of projects managed or owned by a single sponsor but may have disparate financing and other attributes*

Depending on your financing terms, some of the data you collect may have static stipulations that impose a dynamic effect on your project. For instance, a prepayment penalty for a loan may be 5% in the first three years and then drop down to 1% in the last ten. The legal specifics of the prepayment penalty do not change, but the terms change, impacting your expenses. Another example of this is a diminishing tax exemption. With a 20-year tax exemption that has a step-down payment structure, the effect on your project as time passes may be to pay more or less tax, depending on the static terms of the agreement. While these terms may be complex, it is vital to understand the fine print and nuances of your agreements so you can effectively communicate with your future Lender or investor.

COLLECTING STATIC DATA

Static data collection should only happen one time. Keep this information in one easy to reference place to ensure you and your employees can always access it if needed.

The Think BIG Toolkit generated for each project includes an input list to collect static data about your project. The following pages include the specific inputs and guidance on where to find them within the tool.

TABLE 1: STATIC DATA COLLECTION

Detailed Address(es)			
# of Buildings in Project		**Square Footage of Building**	
Building Type		**Utilities Provided by Owner**	
Number of Units			
Number of Rooms		**Heat Type**	
Number of Stories		**Operating Reserves (Y or N)**	
Number of Elevators		**Operating Reserve Holder**	
Year Built		**Replacement Reserve (Y or N)**	
Year of Last Renovation		**Replacement Reserve Holder**	
Senior Lender		**Regulatory Agreement (Y or N)**	
1st UPB		**Regulatory Agreement Expiration**	
Rate (%)		**Terms of Regulatory Agreement**	
Maturity Date			
Annual DS		**LIHTC (Y or N)**	
Prepayment Terms and Restrictions		**Investor**	
		Investor Proposed Exit Year	
Sub Debt (1) UPB		**Homeless Requirements**	
Sub Debt (1) Lender			
Sub Debt (1) Rate (%)		**Terms of Homeless Requirement**	
Sub Debt (1) Maturity			
Hard Pay or Soft Pay			
Sub Debt (2) UPB		**Social Service/HAP**	
Sub Debt (2) Lender		**Contract (Y or N)**	
Sub Debt (2) Rate (%)		**Social Service/HAP Contract**	
Sub Debt (2) Maturity		**Expiration**	
Hard Pay or Soft Pay		**Terms of Service/HAP Contract**	
Sub Debt (3) UPB		**Current Tax Exemption (Y or N)**	
Sub Debt (3) Lender		**Type of Exemptions**	
Sub Debt (3) Rate (%)		**Maturity of Exemptions**	
Sub Debt (3) Maturity		**Terms of Exemption**	
Hard Pay or Soft Pay			
Payment Terms on Subordinate Debt		**# of A/B Violations**	
		# of C Violations	
		# Violations per Unit	
Staff is Union or Prevailing Wage		**Consents and Requests Required**	

FINANCING INFORMATION

Initial documents used to finance a project are collectively referred to as a "closing binder." This captures the terms and conditions of your financing and outlines details that inform day-to-day operations of your building. Most closing binders have an index, which outlines every document in the binder in numeric order. The index can help you pinpoint documents that provide you with your project's major financing conditions. While it is not necessary to read every word of every single document, important details to know include:

- **Lenders:** (and lien position) Know who your Lender of record is by looking at your mortgage documents. The Lender of record is sometimes a private bank, but it can also be a government agency, a community development financial institution (CDFI), or even a grant program. You may have more than one Lender. Be sure to understand your Lenders' lien position. Also called lien priority, lien position is the order of seniority in which the law recognizes Lenders' claims against a property. Typically, a private mortgage will be in first position and is granted more power in the event of a foreclosure. Grant structured loans and government agency loans may be in subordinate lien positions. Each Lender will have reporting and asset management requirements.

- **Rate:** The rate of your loan is usually outlined in your financing Note, not the recorded mortgage. It can be fixed over the term at a certain amount, or it can be variable, meaning it moves with the market. It could also be a hybrid of the two where the interest rate is fixed for an initial set term and is then adjusted periodically until the end of the loan term. The rate has consequences on the amount of monthly debt service you pay, so making sure you understand any changes to the rate over the term of your financing is critical to your project's wellbeing.

- **Maturity Date:** This can also be found in your Note. This is the date when your loan expires and your Lender can force you to pay it back in full. It is important to know this date so you can determine an "exit plan" upon maturity of your loan. Often, borrowers plan on a capital investment and major refinance ahead of a loan expiration. That's because they will need to leverage that new debt to secure capital that enables them to complete work and pay back their existing Lender. Usually, subordinate debt will mature coterminous with any private financing, but that's not always how it works. Note the maturity dates of all your loans to be sure.

- **Prepayment Penalty:** A prepayment penalty is a cost associated with paying down or satisfying your loan early. It can be found in your loan agreement. Since most borrowers pay down their first mortgage ahead of an expiration date, it is important to understand your prepayment penalty terms.

- **Terms of Payment:** If you have subordinate debt, you need to be clear on any payment terms. Does your subordinate debt charge an interest rate? If you pay your subordinate Lender monthly, you have hard debt. If you do not pay anything to your subordinate Lender, even if they accrue interest, you have soft debt. Potential Lenders will utilize this information to dictate potential future loans. Typically, soft pay interest is not calculated into a leverage calculation or loan-to-value calculation while hard pay debt usually is included.

- **Project Type:** Determine if your project previously received Low Income Housing Tax Credits (LIHTC). This informs your reporting requirements and potential tax benefits. If you have an active LIHTC investor, make note of your investor's estimated exit date as that can be a major trigger event.

PREPAYMENT PENALTY

A LIHTC project is a fitting example of a prepaid loan. These loans typically have affordability restrictions for thirty years. There is an investor in the project for the first fifteen years, the initial compliance period. The last fifteen years, called the extended use period, typically does not have an investor in the project. Around Year 15 of a 30-year permanent loan, the LIHTC investor exits, and the borrower takes this time to complete as-needed major capital work and refinance the existing permanent loan. Since this loan typically carries a 30-year term, it is usually prepaid 15 years earlier than the maturity date. When the existing loan is refinanced with new debt, a prepayment penalty (for example, 1% of the original loan amount) will be charged as part of the payoff. This is not the only time a loan is prepaid. Make sure you know your existing Lender's prepayment requirements and talk to them about your refinancing options throughout the life of your loan.

REGULATORY RESTRICTIONS

Is your project regulated? Regulatory agreements with a government agency or municipality are usually recorded in the public archive and outline any rent or income requirements to maintain with tenants. Sometimes you may have more than one regulatory agreement and the stricter provision within the documents may prevail. It is important to understand the following about your regulatory agreements:

- **Expiration of the Regulatory Agreement:** The term of your regulatory agreement may not be easily identifiable in the document. Sometimes it outlines a certain term (such as 30 years) which is how long the regulatory agreement lasts. However, the date the term starts depends on the status of other documents (such as a permanent certificate of occupancy, substantial completion certificate, or conversion of a loan.) Your goal should be to back into a concrete calendar date to understand the expiration of your regulatory requirements.

- **Certification Timing:** Your regulatory agreement will also provide information around your certification requirements with a regulating agency. With some projects, you only need to income certify tenants upon their initial occupancy. With others, you may need to repeat this every year. Additionally, certain reporting requirements for rent rolls may need to be provided to your regulating agency. Your regulating agency may be different from your Lender, so keep in mind there may be multiple firms that have different reporting requirements.

- **Rent Registrations:** In the state of New York, and in many other states, the housing agency regulates rental increases year over year. You may be required to complete an annual rent registration outlining what each household is paying as of a certain date. These registrations are essential to maintain as they inform lending practices and can help your project against market rental comparables.

- **Referral Requirements:** Some regulatory agreements require you to take referrals from certain sources. For instance, in New York City, you may be required to take a certain number of referrals from agencies supporting formerly unhoused individuals or families. You should be aware of and understand any referral requirements your project may have.

TAX EXEMPTIONS

If you own a regulated building it is likely that you have one or more tax exemptions. This could be a payment in lieu of taxes (PILOT) or a full exemption provided by your city or municipality. While the terms of the exemption may be stepped or dynamic, the expiration date of your tax exemption should be set.

You can find information about your tax exemption in a PILOT agreement, Article XI agreement, or on your city's finance website. Make sure you understand the terms of your exemption and the requirements needed to remain eligible. A change in the terms of an exemption could mean a major change in expenses and a reduction in cash flow. You can often get ahead of an exemption expiration by renegotiating with your existing provider.

PHYSICAL CONDITIONS

The legal definition of "physical condition of property" pertains to the quality, nature, and adequacy of a property, including the design quality, labor and construction materials, the condition of structural systems, utility capacity, surroundings and location (in or near any special taxing district, flood hazard zone, environmental site, etc.), the property's age and safety and the presence of any hazardous materials (e.g. asbestos) in, on, under or about the property.

Many owners are required to procure Property Condition Reports ("PCR") or Integrated Physical Needs Assessments ("IPNA") to outline physical conditions. These reports, completed by engineering firms on behalf of owners or Lenders, outline the property's existing physical conditions and the estimated needs and costs over a certain time horizon. While procuring these reports is a diligent first step of any financial transaction with a Lender, you can aggregate preliminary physical condition information to help you plan for the future of your property. Collecting this information also helps you determine which regulations and incentives may be available for your site.

Outlined on the next page is a list of physical criteria you should collect for each of your projects.

PHYSICAL CONDITION DATA

Number of Buildings: Sometimes you may transact one building at a time, but often you may have a suite of properties financed cumulatively. Track their characteristics together, as well. For each project, outline the number of buildings in the set. If you are filling this information in for a scattered site project, you can add room, unit counts, and square footage. Make sure you are also tracking these items individually because compliance requirements are tracked on a building-by-building basis.

Building Type: This refers to the use of the building. You may have a multifamily residential building, or your building may be mixed use, meaning it is a combination of residential, commercial, and/or community facility spaces. This guide is designed for analysis of properties with some form of residential use.

Number of Units: This may seem like a simple exercise, but it is critical to make sure the number of physical units matches in all documentation related to your properties. You want to ensure your number of units matches the certificate of occupancy. This number should reconcile with the number of units outlined in your legal and regulatory documents. This is especially important as it informs estimates for costs when benchmarking as well as eligibility for product placement.

Number of Rooms: The number of rooms is calculated as follows: studio is equal to 2 rooms, 1-bedroom is equal to 3 rooms, 2-bedroom is equal to 4 rooms and so on. The total number of rooms in aggregate is valuable information to have because it estimates square footage. Additionally, many expense assumptions are based on room count when benchmarking your project.

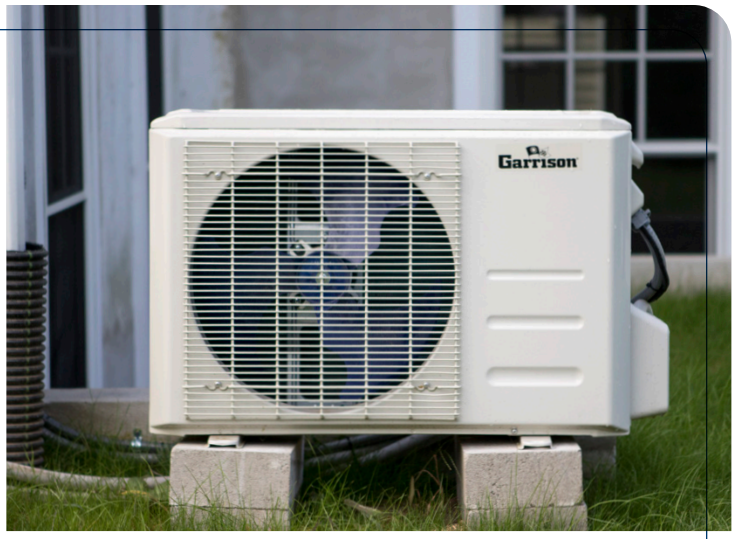
Number of Stories: This refers to the number of floor levels within your building above grade level, meaning, without basement levels. If you have a floor that is half above grade level, it should be included in the number of stories. This is essential information because it will determine your eligibility for incentives and may trigger requirements for certain local laws.

Number of Elevators: This is an added cost to expenses per cab for maintenance purposes. Ensure you have this information filled in on the Toolkit.

Age of Building: The year that your building was originally constructed is essential information because it determines if your building is subject to certain types of testing requirements, such as lead paint, which was only used prior to 1978.

Age of Last Renovation: This is sometimes the same as the established date for recently constructed buildings. For older buildings, you should outline the date of the last renovation and list other major capital investments that you have made off cycle. Please note that renovation here refers to a replacement of major systems (roof, boiler, HVAC) and not necessarily cosmetic updates. If you replaced any systems, try to make an estimate of the average age across all systems.

Square Footage of Building: This is the measurement of gross livable area within your property or properties. It is important to know this number as it can trigger certain local law requirements to have a building of a certain size. This number also allows you to assess your per square foot performance when benchmarking.



Utilities: Buildings provide utility services to their tenants and may fully cover the cost of these services or directly meter utility access. These can include heat, air conditioning, water, sewer, electricity, laundry amenities, and other resources. You should know which utilities you provide to your tenants. Additionally, you should know which utilities are individually sub metered, meaning the tenant pays for that service directly. For instance, many multifamily building owners cover heat, water, and sewer for tenants, but tenants are responsible for apartment electricity (including window air conditioning units) and cooking gas. Make sure you know which utilities your tenants pay for and which you pay as this informs your building's performance.

Heat Type: Do you know what fuels your building? Multifamily buildings provide heat and domestic hot water utilizing natural gas, fuel oil, propane, and/or electricity. It is critical to understand which heating type you use because there may be different monitoring needs based on system and fuel type. Many localities are beginning to implement policies to aid and incentivize the transition to clean energy, encouraging electrification as a pathway to move away from fossil fuel powered systems.

COLLECTING DYNAMIC DATA

The dynamic data you collect on your property pertains to the everyday operations and maintenance of the building. These are the cash flow elements that affect how solvent your property is annually.

As a building owner you are already aware of this equation:

However, revenue and expense values are comprised of multiple variables, all of which are subject to inflation, market fluctuation, and natural cycles. The information you should be collecting about your project's dynamic data is below:

Residential Income: This is income that comes from rents associated with tenants' leases. As you know, sometimes tenants pay late or do not pay in full. You must be able to track collections for each individual tenant and keep track of arrears.

Commercial Income: This is income associated with any commercial or community space you have leased within your building. This should always be separated from residential revenue because it is treated differently by Lenders.

Ancillary Income: This is income associated with unexpected or nonrecurring charges. This might include laundry income in your building or late fees you charge tenants. It is important to track how much of your revenue is coming in as ancillary income so you can get a sense of additional revenues you might expect moving forward.

Collections: Based on leases, you should be able to estimate the gross potential revenue your building can achieve. However, sometimes issues arise, and tenants may not pay what they owe or a few of your units may not generate income while they remain vacant. Monitor potential revenue against actual revenue coming in. This is your collections rate.

In the template, you will have the ability to put in your aggregate revenues going back three years. This allows a deeper understanding of how your revenues are growing, even in a year that is unusually high or low. Lenders' typical rule of thumb: we expect your aggregate revenues to increase 2% annually on average.

RENEWAL RESTRICTIONS

Each city or municipality may have laws in place that restrict the amount of annual increases that an owner can take on a unit upon lease renewal. For example, the New York City Rent Guidelines Board (NYCRGB) determines rent increases for lease renewals of rent stabilized apartments, lofts, hotels, and single room occupancies (SROs). Some years, this increased allowance was at zero percent and others such as 2024 saw a 5% increase with a two-year lease. The Lenders' 2% revenue increase assumption is a long-term average for variation in increases on units over time. However, please note that the NYCRGB does not set the rent increase for unregulated apartments. Market rate apartment rental rates and lease terms are negotiated between the owner and tenant and are dependent on market demand.

Consistent small rent increases provide tenants with stability in understanding their future rents.

EXPENSES

Expenses for a building can vary drastically. They depend on the building type, building systems, and age of the property. Expenses can be categorized via the following:

- **Management Fee:** If you self-manage, this might not pertain to you as an actual expense. Typically, you may have a contract with a property management company that takes a percentage of your revenues as payment for overseeing the operation of your building. Typically, we see this as 5-8% of the effective gross income (all revenues minus any vacancies) depending on the project type and rent levels. Your Lender may also have a cap on management fee percentage, so keep that in mind. Even if you self-manage and do not charge the project a fee, the Lender will usually include this as a potential fee for underwriting purposes to ensure the option of a third-party manager in the future.
- **Payroll:** This includes any expenses associated with staff you hire to maintain the finances or upkeep of your building.
- **Cleaning and Exterminating:** This includes cleaning supplies, pest control, and regular building upkeep.
- **Heat:** This includes any heating of the building for which you as the owner are responsible. Depending on your building, your tenants may be responsible for their own heat or hot water expenses. In addition to identifying whether heating is tenant or owner-paid, you should also know your building's heating and water heating sources: natural gas, fuel oil, propane, and/or electricity.
- **Common Electric:** This includes any electrification of the building for which you as the owner are responsible for within commons areas, basement, etc. Most tenants will be individually sub metered to pay their own electric charges, but you should know if you pay your tenants' electric as well. You will also be responsible for any electricity in a vacant unit.
- **Water/Sewer:** This includes any payment for the supply of water to the building. There are two ways this can be billed, either by meter or a flat fee using frontage. In New York City, the owner typically pays all water charges in a rental building, but elsewhere this varies.
- **Insurance:** This includes any payment to cover premiums associated with property and liability insurance for the building. Your Lender will likely escrow for these costs, so it is important to parse any insurance costs out of your typical mortgage payment.

You may be tracking your expenses in property management software. These tools are great for ensuring accounting and correct categorization of costs as they accrue. This may be worth investing in if you are not currently using it.

Take a look at the Appendix for a list of common software that can provide summary reports.

- **Repair, Replacement and Painting:** This includes the costs, in aggregate, of any repairs or unit turnover associated with tenants moving in and out. This can include large systems replacement all the way down to painting the hallways or replacing a light fixture. All Lenders and owners expect a certain amount of recurring costs associated with the general upkeep and maintenance of a property.

- **Legal:** Any legal costs pertaining to the project should be accounted for here. This can include tenant/landlord disputes and insurance litigation. Be sure to include any nonrecurring expenses to understand the general trend.

- **Accounting:** This is a professional cost to create audited financial statements. You may or may not be required to do this by your Lenders.

- **Energy Benchmarking:** Many municipalities and Lenders will require your project to be energy benchmarked annually. This information is key to understanding your building's performance and is usually contracted out to a specific service provider for a flat fee.

- **Reserve Contributions:** Most Lenders have requirements for ongoing contributions to a reserve or multiple reserves. You should budget for this annually. Many Lenders include this as an escrow in your mortgage payment so be sure to parse out the specific contribution from the overall charges.

- **Security:** If you have a contract for in-person security, surveillance or camera maintenance, it may fall into this category.

- **Elevator Maintenance:** Elevators require annual upkeep and inspections. This includes any costs associated with upkeep and repair as well as any standard contract maintained. Any costs or contracts associated with elevator maintenance and repair should be separated from the repair and replacement line and collected in this category. If you do not have elevators in your project, this expense should be zero.

- **Real Estate Taxes:** Account for and plan out the estimated cost of your annual real estate tax liability. It is important to know the amount you have been charged against the project amount from any tax exemption or PILOT you receive. Errors do sometimes occur, so ensure your agreement is being administered accurately.

The cumulative sum of these expenses affects your cash flow. CPC has a portfolio of properties within our loan book. When we average the reported expenses across our portfolio of loans, we can estimate the cost we expect a building to incur annually on a per unit or per room basis. CPC relies on these estimates for underwriting standards when assessing new loans and checking the operational health of existing projects in our loan portfolio.

While it is important to track your aggregate expenditures, you should also investigate each cost by category. This will enable you to identify expense abnormalities that usually are a symptom of a larger issue. Collecting the performance information enables you to complete the benchmarking step outlined in Step 2.

The CPC Think BIG Toolkit allows you to put in your aggregate expenses dating back three years. This is because most Lenders want historical information about your expenses. It is also useful because it allows you to see how your expenses are tracking, or if you have a year that is unusually high or low. Lenders' typical rule of thumb: we expect your aggregate long-term expenses to increase 3% annually on average.

TABLE 2: THREE-YEAR CASH FLOW LOOKBACK

	3Y Back	2Y Back	1Y Back
Gross Potential Income			
Actual Revenue			
Collections (average)	0%	0%	0%
EGI	**$0.00**	**$0.00**	**$0.00**
Taxes			
Tax as % of Gross Revenues	0%	0%	0%
Total Expenses	**$0.00**	**$0.00**	**$0.00**
Expenses per Unit	$0.00	$0.00	$0.00
Net Cash Flow	$0.00	$0.00	$0.00
Debt Service			
NOI	$0.00	$0.00	$0.00
Income Expense Ratio			
Debt Service Coverage Ratio			

The information below is not collected in the Think BIG Toolkit but it may be useful to have handy as you begin the process of portfolio planning and prepare to approach a Lender:

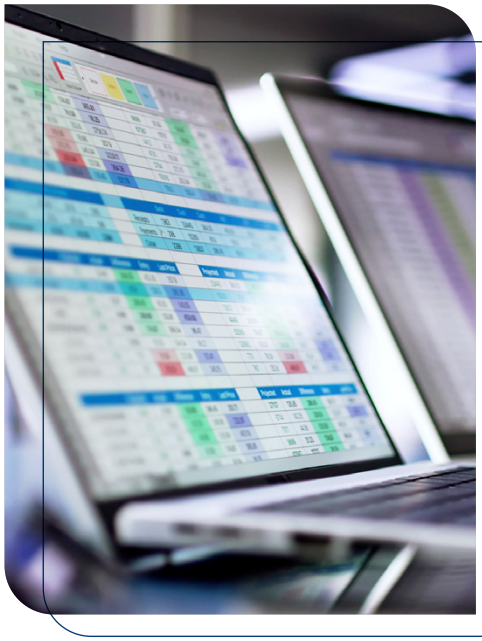
- **Consents and Requests:** Your Lenders and investors on your project may have consent provisions stipulated in any legal documents you have. They are typically found in a loan agreement or mortgage. You should understand who requires consents versus notifications only (just notifying means letting them know you are refinancing or doing work instead of asking for permission.) It is important to make sure you understand who must approve compliance of your project when you decide to implement parts of your portfolio plan, from capital investments to refinancing.

- **Operating and Replacement Reserve Drawdowns:** You should know if you have operating and replacement reserves for the project and understand the process for drawing them down. If you have a specific asset manager or loan servicer, you can reach out to confirm the reserve drawdown request requirements, but this is usually stipulated in your loan documents. The places you are most likely to find these requirements are the mortgage, the regulatory agreement, or the operating agreement.

- **Waterfall for Cash:** A waterfall for cash outlines how any excess cash flow will be distributed after project expenses and debt service are paid. Typically, this waterfall of cash is in the operating agreements between sponsors and partners or even a limited partnership agreement of a project. It may also be outlined in a regulatory agreement. This information is important to understand because it may outline reserve and escrow requirements before an owner can get their project profits. Additionally, it will outline how any sponsor loans, deferred developer fee, or equity investments will be paid back.

- **Social Service Contracts:** Some projects have social service contracts that provide services to tenants. This type of project, typically called supportive housing, may have additional sources of revenues, additional expenses, and added compliance requirements. While we are not exploring supportive housing expenses within the parameters of this benchmarking exercise, it is imperative to understand the stipulations of any social service contract your project is awarded.

- **Energy Consumption and Carbon Footprint:** While benchmarking is covered in this guide, energy consumption and greenhouse gas emissions benchmarking and reporting mechanisms are not fully explored. Energy benchmarking can be used to identify areas of need within your building. Depending on the granularity of data available, this can help you identify the opportunities for demand management and provide greater understanding of tenant usage and performance in relation to peer buildings. This also contributes to your ability to measure the operational carbon emissions of your building. Additionally, it creates a footprint to guide future emissions reduction planning and ensure you meet local regulations where applicable. For information and resources on energy consumption benchmarking, please see the Appendix A.



EXPENSE TRACKING AND MUNICIPAL REPORTING

For expense tracking, owners will only need to consider their own utility bills and consumption. For municipal reporting requirements, consumption and billing will often require aggregated tenant data or individual tenant bills to be included in the whole building calculations for cost and usage. See the Energy Consumption Benchmarking section of Appendix A for more information.

STEP 2

BENCHMARK YOUR OPERATIONS

Where do your projects stand?

Now that you have collected the necessary data, you can begin to look at the performance of each of your projects. A benchmark is a reference that serves as a standard by which others may be measured or judged.

OPERATIONAL BENCHMARKING

Each year, CPC surveils the performance of each project in our loan book. If you choose to utilize these benchmarks, be weary of differences between your portfolio of projects and the sample surveyed here. In New York City, the standards provided by the New York City Housing Development Corporation (HDC) are also widely used and can function as a reference point. Be sure to reach out to your Lender to request expense assumptions typically utilized for properties in your area.

CPC generates annual standards for projects in New York City and larger New York State geographies (both upstate and in the Hudson Valley.) For the New York City standards, nearly 100% of units in the portfolio are rent stabilized. More than half of projects have an city administered regulatory agreement as well, further restricting rents. If your portfolio feels in line with this sample set, these might be the benchmarks for you.

For the NY state standards, these building types vary more than that of the typical multifamily building in New York City. However, if you are operating in a less dense city, these standards provide a reference point to consider performance.

Rely on your lender to estimate market expenses for your project based on your geographic region. A good time to ask for this information is when you submit your next project report.

CPC MAINTENANCE & OPERATIONS STANDARDS 2024

At the time of this guide's publication, the data from CPC's annual standards is based on expense information captured in early 2024, including CPC's property data from calendar year 2023.

Category	Standard NYC	Standard Hudson Valley	Standard Upstate
Real Estate Tax	20% of EGI	No standard	No standard
Water & Sewer	$300 per room	$125-$180 per room	$125 per room
Insurance	$1,900 per unit for buildings with <20 units; $1,500 per unit for Buildings with >20 units	$800-$1,000 per unit for buildings with <20 units; $600-$750 per unit for buildings with >20 units	$600-$1,000 per unit for buildings with >20 units; no standard for buildings <20 units
Payroll	$1,500 per unit, $1,900 per unit for Union or prevailing wage	$1,500 per unit, $1,900 per unit for Union or prevailing wage	$1,500 per unit, $1,900 per unit for Union or prevailing wage
Elevator	$7,500 per elevator	$7,500 per elevator	$7,500 per elevator
Cleaning & Exterminating	$140 per room	$140 per room	$140 per room
Heat	Heat- gas: $325 per room; Electric heat pump: $360 per room; Oil or dual fuel: $400 per room	Heat- gas: $325 per room; Electric heat pump: $360 per room; Oil or dual fuel: $400 per room	Heat- gas: $325 per room; Electric heat pump: $360 per room; Oil or dual fuel: $400 per room
Electric	$175 per room – walk-up; $200 per room –elevator	$175 per room – walk-up; $200 per room –elevator	$175 per room – walk-up; $200 per room –elevator
Management Fee	6.5% of EGI; 8% of EGI for supportive housing, LIHTC and co-ops	6.5% of EGI; 8% of EGI for supportive housing, LIHTC and co-ops	6.5% of EGI; 8% of EGI for supportive housing, LIHTC and co-ops
Repair & Replacement	$1,000 per room (includes painting)	$1,000 per room (includes painting)	$1,000 per room (includes painting)
Legal	$250 per room	$250 per room	$250 per room
Accounting	$2,000 per building with <20 units or unaudited; $4,000 per building >20 units, audited; $10,000 audited (LIHTC & co-ops)	$2,000 per building with <20 units or unaudited; $4,000 per building >20 units, audited; $10,000 audited (LIHTC & co-ops)	$2,000 per building with <20 units or unaudited; $40,00 per building >20 units, audited; $10,000 audited (LIHTC & co-ops)
Building Reserve	$300 per unit	$300 per unit	$300 per unit
Energy Benchmarking	$600 per building	$600 per building	$600 per building

You also know your buildings well. You have an intuitive sense of where these costs might land based on your tenant profile, the size of your building, and your experience as an owner or operator. These benchmarks typically inform your projected development budget. One resource for your projected development budget is your operating pro forma. If your project closed recently, this information may be more readily available. This expense pro forma was used to underwrite your financing so it is an excellent benchmark to inform your performance and expectation of cash flow. An appraisal from a recently closed project offers an excellent indication of broader market conditions and expense assumptions. The CPC Toolkit standards tab has a self-set benchmark column for you to fill in. This could include standards for your geography provided by your Lender or self-set performance targets. Fill in this information to supplement or replace the CPC provided standards already summarized in the tool.

The three-year lookback enables you to assess the percent change in your aggregate expenses, year over year. The benchmarking tab in the toolkit will enable you to dig deeper into these numbers.

Why do we calculate some standards by room and others by unit? We use room count as a proxy for the number of tenants living in a household. For instance, we assume two people live in a one-bedroom, three people live in a two bedroom and so on. This helps forecast the number of individuals consuming water. In a building with larger units that have multiple bedrooms, the consumption of water will be higher than that of a building with only studios, which is why the latter is calculated by room.

COMPARING YOUR PERFORMANCE YEAR OVER YEAR

Since the physical conditions of your project are static, revenue and expenses should trend in a predictable manner. Typically, when looking into performance, we expect to see revenues increase 2% annually and expenses increase 3% annually. These, however, are just rules of thumb. Expenses change all the time. There are periods of rapid expense growth and stagnation. If you see spikes in costs, try to understand why.

When looking at year over year performance, calculate the percentage change.

Year 2 – Year 1 / **Year 1** * **100** = **Percent Change**

If your overall expenses are increasing by significantly more than 3% each year, consider the percent change for each individual line item. Take the example below. The overall expenses are trending at 5% YOY, but each line item is static or trending under 3%, apart from water. This indicates that water consumption has spiked and is driving an increase in the overall expenses, impacting the project's performance. The 5% increase is almost entirely dependent on the increase in water costs. This indicates that consumption by tenants has increased, or it can be a sign of a degraded plumbing condition. Leaky pipes can be very costly.

TABLE 3: A SPIKE IN WATER EXPENSES

	3Y Back (2021)	YOY% Change	2Y Back (2022)	YOY% Change	1Y Back (2023)
Real Estate Tax	$29,000.00	-0.1%	$28,975.00	-0.1%	$28,950.00
Water & Sewer	$32,000.00	28.1%	$41,000.00	9.8%	$45,000.00
Insurance	$45,000.00	3.0%	$46,350.00	3.0%	$47,740.50
Payroll	$35,500.00	3.0%	$36,565.00	3.0%	$37,661.95
Elevator Main & Repair	$0.00	0.0%	$0.00	0.0%	$0.00
Cleaning & Exterminating	$12,000.00	3.0%	$12,360.00	3.0%	$12,730.80
Heat	$40,700.00	3.0%	$41,921.00	-2.9%	$40,700.00
Common Electric	$18,700.00	4.0%	$19,448.00	3.0%	$20,031.44
Management Fee	$40,600.00	-0.1%	$40,565.00	-0.1%	$40,530.00
Repair & Replacement	$21,000.00	2.0%	$21,420.00	3.0%	$22,062.60
Legal & Accounting	$22,000.00	4.0%	$22,880.00	5.0%	$24,024.00
Building Reserve	$5,600.00	0.0%	$5,600.00	0.0%	$5,600.00
Energy Benchmarking	$0.00	0.0%	$0.00	0.0%	$0.00
Total Expenses	**$302,100.00**	5.0%	**$317,084.00**	2.5%	**$325,031.29**
Expenses per unit	**$10,789.29**		**$11,324.43**		**$11,608.26**

Take another example. The repair and replacement line in the expenses is trending downward. This seems great, but it is a significant drop in the repair line. Knowing what you know about this building, the violations may have also gone up as repairs decreased. This could be a sign of deferred maintenance to a potential Lender. Ensure that if a line item is going down, there is an understanding and explanation as to why. Is your staff creating efficiencies or neglecting needed repairs?

TABLE 4: A DROP IN REPAIR & REPLACEMENT COSTS

	3Y Back (2021)	YOY% Change	2Y Back (2022)	YOY% Change	1Y Back (2023)
Real Estate Tax	$0.00	0.0%	$0.00	0.0%	$0.00
Water & Sewer	$25,000.00	2.0%	$25,500.00	3.0%	$26,265.00
Insurance	$55,000.00	0.0%	$55,000.00	9.1%	$60,000.00
Payroll	$85,000.00	0.0%	$85,000.00	0.0%	$85,000.00
Elevator Main & Repair	$7,500.00	0.0%	$7,725.00	0.0%	$10,000.00
Cleaning & Exterminating	$20,100.00	-5.5%	$19,000.00	-7.9%	$17,500.00
Heat	$62,900.00	3.0%	$64,787.00	3.0%	$66,730.61
Common Electric	$15,000.00	4.0%	$15,600.00	3.0%	$16,068.00
Management Fee	$10,752.00	0.2%	$10,777.54	0.3%	$10,810.80
Repair & Replacement	$75,000.00	-13.3%	$65,000.00	-10.8%	$58,000.00
Legal & Accounting	$2,500.00	0.0%	$2,500.00	4.0%	$2,600.00
Building Reserve	$21,250.00	0.0%	$21,250.00	0.0%	$21,250.00
Energy Benchmarking	$600.00	0.0%	$650.00	0.0%	$700.00
Total Expenses	**$380,602.00**	-2.1%	**$372,789.54**	0.6%	**$374,924.41**
Expenses per unit	**$4,477.67**		**$4,385.76**		**$4,410.88**

COMPARING PERFORMANCE AGAINST A KNOWN STANDARD

You can also look at the performance of your building against historical standards to get a sense of where to place targets. For instance, if you own a 50-unit elevatored building with 25 studios and 25 one-bedroom units in NYC that previously received LIHTC, we can calculate the standard to compare your buildings actual expenses against. The building performance outlined in the chart below totals 125 rooms and has a standard of $357,100 annually or $7,142 (before taxes or management fee) per dwelling unit/ per year. Your building is $7,099 per unit/year. This is 1% different from the CPC standard, which is in line.

TABLE 5: COMPARING PERFORMANCE AGAINST A STANDARD BY LINE ITEM

	1Y Back (2023)	CPC Standard NYC	1Y Back (2023) vs CPC Standard NYC	
			$	%
Real Estate Tax	$0.00	$0.00	$0.00	
Water & Sewer	$36,500.00	$37,500.00	-$1,000.00	-3%
Insurance	$76,000.00	$75,000.00	$1,000.00	1%
Payroll	$72,000.00	$75,000.00	-$3,000.00	-4%
Elevator Main & Repair	$7,500.00	$7,500.00	$0.00	0%
Cleaning & Exterminating	$17,500.00	$17,500.00	$0.00	0%
Heat	$40,000.00	$40,625.00	-$625.00	-2%
Common Electric	$21,875.00	$21,875.00	$0.00	0%
Management Fee	$0.00	$0.00	$0.00	
Repair & Replacement	$53,000.00	$50,000.00	$3,000.00	6%
Legal & Accounting	$15,000.00	$16,500.00	-$1,500.00	-9%
Building Reserve	$15,000.00	$15,000.00	$0.00	0%
Energy Benchmarking	$620.00	$600.00	$20.00	3%
Total Expenses	**$354,995.00**	**$357,100.00**	**-$2,105.00**	-1%
Expenses per unit	**$7,099.90**	**$7,142.0**		

COMPARING PERFORMANCE AGAINST A SELF-SET BENCHMARK

In the CPC Toolkit, you have a self-set benchmark tab that guides you to set your own performance targets. This enables you to compare the annual performance of a project against a budget you set at the beginning of a year to see if the project is performing at or below expectations.

Additionally, when setting a self-set benchmark, it is a good idea to benchmark similar sized buildings within your portfolio. Expect per unit expenses to be in line with each other since the buildings have similar business models.

Take the example below. The owner has three 20–25-unit buildings in Brooklyn with a similar building typology. They are comparing the buildings against each other to pinpoint any differences. While all three buildings have expensive insurance and electricity costs, they are in line with each other and may be indicative of a price escalation for these line items. You can then use the average expense across these buildings to create a self-set benchmark.

TABLE 6: USING KNOWN DATA TO CREATE A SELF-SET BENCHMARK

	Building 1 (20 units, 60 rooms)	Building 2 (25 units, 80 rooms)	Building 3 (22 units, 100 rooms)	Self-Set Benchmark* (Average of 3 buildings)	Per unit	Per Room
Real Estate Tax	$0.00	$0.00	$0.00	$0.00		
Water & Sewer	$18,000.00	$27,200.00	$31,200.00	$25,466.67		$311.84
Insurance	$40,000.00	$52,500.00	$44,000.00	$45,500.00	$2,037	
Payroll	$40,000.00	$37,500.00	$38,500.00	$38,666.67	$1,731	
Elevator Main & Repair	$7,500.00	$10,000.00	$7,000.00	$8,166.67	$366	
Cleaning & Exterminating	$7,200.00	$11,900.00	$14,500.00	$11,200.00		$137.14
Heat	$21,600.00	$29,750.00	$36,000.00	$29,116.67		$356.53
Common Electric	$12,720.00	$25,500.00	$26,000.00	$21,406.67		$262.12
Management Fee	$0.00	$0.00	$0.00	$0.00		
Repair & Replacement	$20,040.00	$23,925.00	$26,400.00	$23,455.00	$1,050	
Legal & Accounting	$10,000.00	$5,000.00	$5,896.00	$6,965.33	$312	
Building Reserve	$5,000.00	$7,500.00	$5,500.00	$6,000.00	$269	
Energy Benchmarking	$650.00	$620.00	$600.00	$623.33	$28	
Total Expenses	**$182,710.00**	**$231,395.00**	**$235,596.00**	**$216,567.00**		
Expenses per unit	**$9,135.50**	**$9,255.80**	**$10,708.91**	**$9,697.03**		

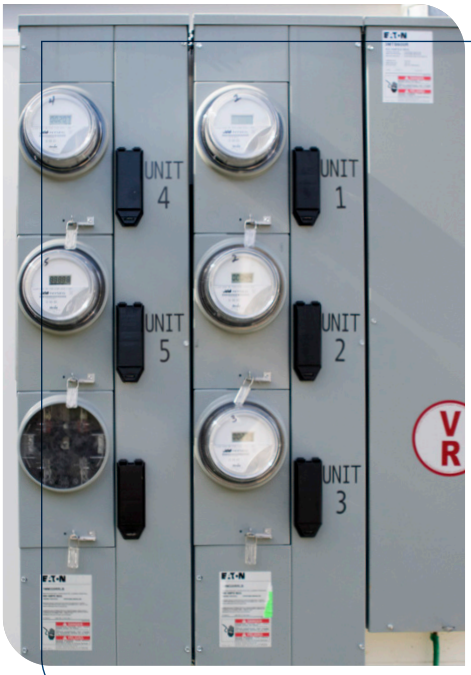
*Note that RE taxes and management fees are omitted from this calculation since they are based on specific negotiations. Note that energy benchmarking is on a per building basis.

PHYSICAL PERFORMANCE BENCHMARKING

In addition to financially benchmarking your property, it is important to assess the physical condition of said property. When you procure a PCR or IPNA from a vendor, they will typically walk through your building, look at your roof, your boiler room, and a sample of units to assess the visible condition and needs. When assessing the physical condition of your building, it is important to walk through the site beforehand. A checklist of what to look for is outlined on the following page.

Prepare for your walkthrough by looking at the expense ledger to review the last three years of repair and replacements. Note which items are recurring. If you have several boiler repair expenses or specific repair costs associated with leaks in one unit, make sure to pay special attention to this system or area.

In addition to noting your expenses, look for building violations logged by your municipality. In New York City, violation reports can be found on the NYC HPD website and the NYC Department of Buildings (DOB) website. Additionally, a title company can run municipal searches against your property on your behalf. Any potential violations or issues that come up in these searches should be investigated during your walk through.



ENERGY CONSUMPTION

Before an IPNA or energy audit can be completed it is necessary to benchmark energy consumption at your building. Utility benchmarking gives Lenders and building owners a clear understanding of which systems are running inefficiently and need upgrades or replacement. Start by collecting 12 - 24 months of a property's utility bills (including electricity, fuel, and water). Then enter cost and usage data into an online tool like the EPA's "Portfolio Manager," which will provide an ENERGY STAR score based on data from similar buildings. There are also companies that offer energy benchmarking services. Look for a provider that offers an online portfolio management tool so performance can be monitored on an ongoing basis. This baseline benchmarking can inform scopes of work needed to upgrade existing building systems and overall building performance down the line.

Preliminary Property Walkthrough Checklist

- ☐ When approaching the property, check the sidewalk and curb for potential tripping hazards.
- ☐ Walk around the building and check the envelope for cracks, water penetration, and other disrepair.
- ☐ Stand on the roof and look for signs of water penetration, water pooling, or spots that sink when stepped on.
- ☐ Inspect the boiler room and check control settings for proper set points.
- ☐ Inspect units for peeling paint, cracks in walls, sloping floors, and leaky or running water fixtures and toilets.
- ☐ Test water fixture flow rates and domestic hot water temperatures.
- ☐ Check indoor temperatures in common area and sample units to ensure building is not overheated.
- ☐ Inspect windows for appropriate window A/C supports, as applicable.
- ☐ Visually inspect building exteriors for obvious signs of inefficiency: open windows on cold days, exterior lights on during the day, sprinklers watering hardscape.
- ☐ Inspect elevator cabin, as applicable, for signs of distress.
- ☐ Pay special attention to any areas or systems with violations or high repair costs.
- ☐ Identify the level of energy efficiency on site, noting opportunities for insulation, air sealing, lighting retrofit and water reduction measures.





VIOLATIONS

Violations are a proxy by which to gauge the physical condition of your building. Buildings in great shape generally have fewer violations. Familiarize yourself with your municipality's code enforcement website to assess how it logs violations.

In the CPC Think Big Toolkit, you can enter the estimated number of active A,B and C violations listed for your property. This classification system is borrowed from the New York City violations classification system wherein C violations represent immediately hazardous issues such as lead, mold, or inadequate heat in winter months. B violations may include potentially hazardous issues such as leaks, inadequate lighting, or egress issues. A violations are typically non-hazardous issues such as a missing peephole or missing signage. If your municipality does not follow this system of classification, use your judgment to categorize violations on your projects as you log them. If there are multiple properties in your project, add the total violations for the entire project together.

VIOLATION CLASSIFICATIONS

The Tool will assess your violations per unit for each project based upon the following criteria:

When assessing the physical condition of your property, keep in mind the substance of your violations. While small repairs or quick fixes can be easily handled, violations are often symptomatic of larger issues and a decline in the quality of the physical building. Violations can prevent you from securing financing, so getting ahead of them is integral to strategic portfolio planning.

LOCAL LAW REQUIREMENTS

Based on your building's physical location, size, age and use, regulations and ordinances may affect your projects and capital improvement plans. Failure to comply with applicable local law requirements may result in violations or monetary penalties. Local law enforcement violations in New York City are typically logged on the DOB website and can be tracked to ensure they are cleared so they do not impede your ability to apply for permits or complete other necessary building work.

These local laws not only cover physical condition and building code/tenant protection law compliance, but they may also govern your building's energy performance and effect on climate. Along with a suite of climate legislation referred to as the Climate Mobilization Act (CMA) passed in 2019, Local Law 97 is New York City's most ambitious plan for reducing building emissions. Starting in 2024, all covered buildings must comply with Greenhouse Gas (GHG) emissions caps or face a penalty of $268 per ton of CO2 over their designated limits. These limits will become stricter over time, and by 2030, nearly all NYC buildings will need to take action to ensure full compliance and avoid financial penalties.

A list of relevant Local Laws for property owners in the NYC area is included in Appendix C. New Local Law requirements are released or amended annually with a horizon for enforcement. Part of assessing your physical condition includes assessing readiness for building code retrofit requirements.

CLASSIFY YOUR PROJECTS

Assessing performance is a subjective exercise. The quantitative information provided in this benchmarking exercise is a tool to help you decide if your building is performing financially. Even if your building is cash flowing well, we also need to assess physical performance. If you have a substantial number of violations or deferred work, the project is not physically performing.

To assess your financial performance, you can arrange your properties across a range. ”Financially performing” indicates that a building is meeting or exceeding cash flow expectations and each individual line expense is within the targets or standards you selected. The middle point represents a financial break even.

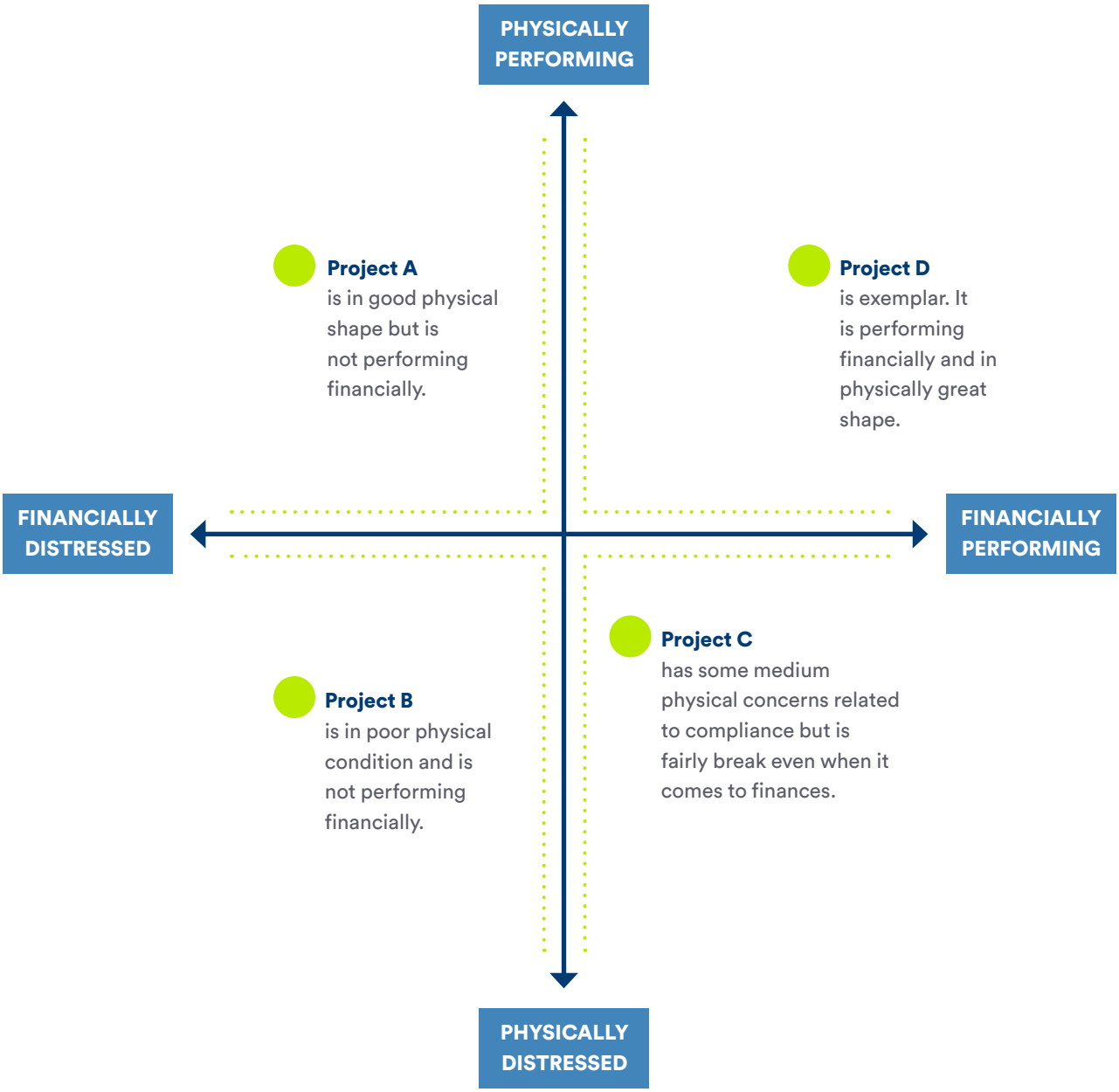
The physical performance of each your properties can also be assessed across a range. “Physically performing” well may imply that the building has few violations, a manageable number of repairs and up-to-date systems. It implies the building is resilient to potential physical challenges and shows there is a plan to ensure the building is compliant with incoming regulations. The middle point represents a physical break even. You get to set the standards by which you assess physical performance.

When simultaneously accounting for the physical and financial performance of your property, you can plot them on an xy chart. The x-axis accounts for the financial performance, while the y-axis accounts for physical performance.

Projects A-D show examples of where projects might land based on their qualities. A blank template to begin to plot your properties is included in the Appendix E of this guide.

THE FINANCIAL AND PHYSICAL PERFORMANCE MATRIX

Projects A-D show examples of where projects might land based on their qualities.




STEP 3

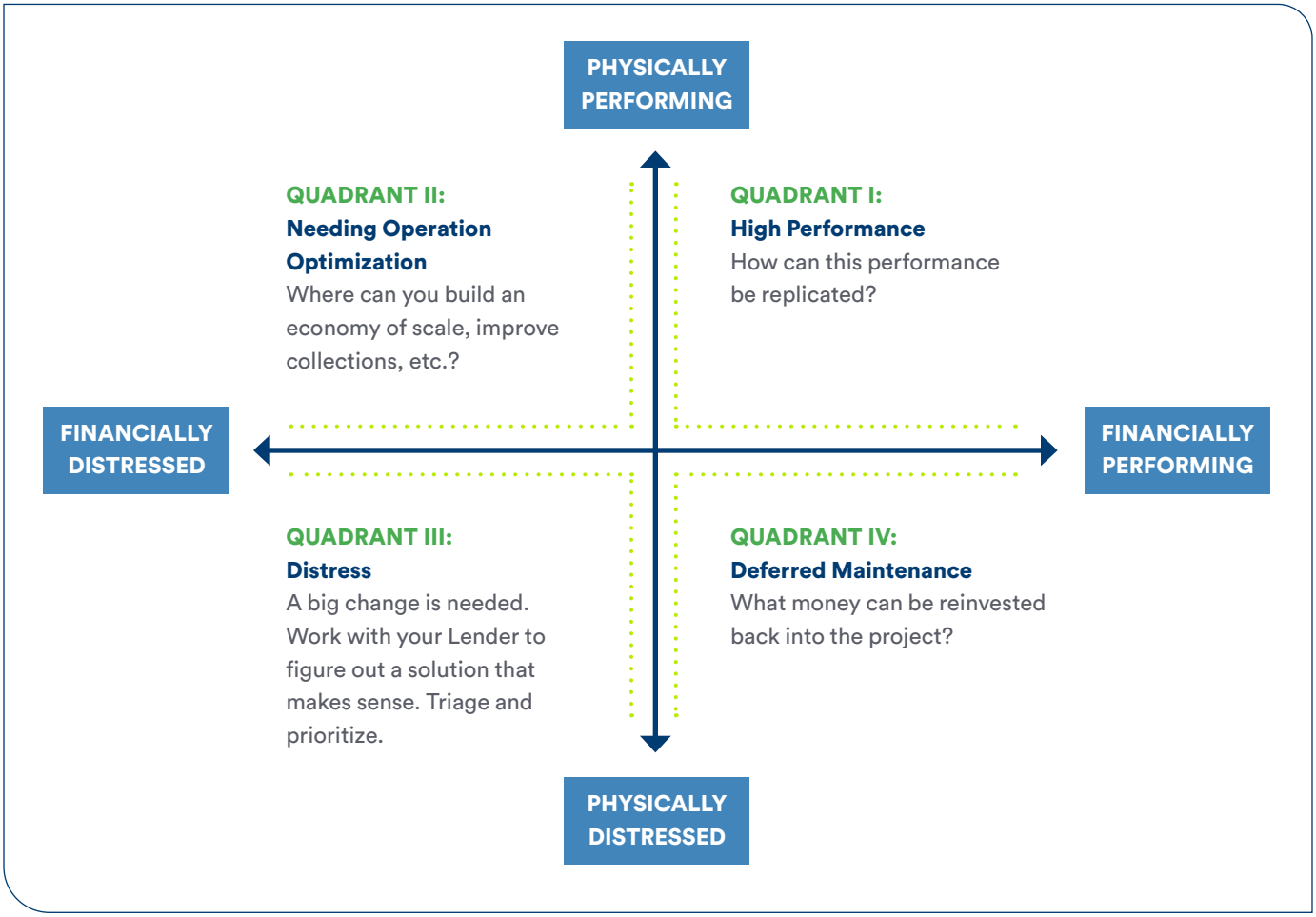
IDENTIFY ISSUES AND SUCCESSES

What works and what needs work?

You have now collected data for each building or project you want to include in your portfolio plan. Now that the arduous work of data collection is done, it is time to analyze the portfolio. Utilizing your completed matrix and benchmarking, you can now look for trends in your portfolio's performance.

After plotting each of your projects into the physical and financial condition matrix, the building performance axis can be divided into the quadrants outlined below.

Let's analyze your portfolio by quadrant to look for trends and patterns. Use the guided exercise on the following pages to help you through this work.



QUADRANT I:

QUADRANT OF HIGH PERFORMANCE

These are your exemplar buildings. They are in great physical condition and carrying excess cash flow. They are meeting or outperforming your revenue and expense targets and have healthy collections. Maybe they were recently refinanced or the recipient of a capital reinvestment. Consider the following when assessing trends with the properties in this quadrant:

- Did these projects recently receive a major capital investment or refinance?
- In mapping capital improvements, have you considered energy conservation and energy efficiency as part of that scope of work?
- Are any of the buildings in your portfolio subject to local laws or other restrictions that require decarbonization, electrification, or other upgrades?
- What about these projects could be replicated?

QUADRANT II:

QUADRANT NEEDING OPERATING OPTIMIZATION

These buildings are in great physical shape but are not cash flowing as expected, nor are they meeting achievement standards. This is indicative of an operations issue. Perhaps there are collections challenges at these properties or expenses that are much higher than expected. Consider the following when assessing trends with the properties in this quadrant:

- Is it a revenue or an expense problem? Use your benchmarking analysis for each building to pinpoint similarities.
- If it is an expense problem, are energy costs here higher than those of other projects you own?
- Where are the problems similar across these properties?
- What is outside your locus of control? For instance, is the project meeting benchmarks with high collections but still is not cash flowing?

QUADRANT III:

QUADRANT OF DISTRESS

These are your most distressed assets. They are not able to carry their debt service and they are in poor physical condition. When looking for trends in the properties in this quadrant, consider the following:

- How old are the existing heating and water heating systems? When was the last time the envelope condition, windows, and roof were addressed?
- Is this a revenue or expense problem? Use your benchmarking analysis for each building to pinpoint similarities.
- How is this building performing from an energy perspective? Has efficiency been addressed?
- Are there any life and safety issues that need to be addressed at these sites?

QUADRANT IV:

QUADRANT OF DEFERRED MAINTENANCE

The projects in this quadrant are cash flowing and meeting benchmarks for performance but are not in great physical condition. This could be because maintenance is being deferred. Additionally, this project could just be at the end of some of its systems' useful lives and will require a major capital investment to make necessary updates. When analyzing trends in this quadrant, consider the following:

- Does deferred maintenance on these projects include implementing energy efficiency measures?
- Are there any life and safety issues that need to be addressed at these sites?
- What cash flow can be reinvested back into these projects to improve their physical condition?

STEP 4

CREATE ACTIONABLE ITEMS

Now let us roll up our sleeves and get to work!

Now that you have plotted each of your projects into a performance matrix and analyzed the scores, it is time to begin planning for the successful future of your portfolio. Now is the time to think broadly. Previously, you looked for trends, strengths and weaknesses across your portfolio. Instead of analyzing buildings on a one-off basis, you bucketed them into the quadrants of performance. Now that you have analyzed your portfolio in this way, identifying trends that are symptoms of widespread inefficiencies, you can begin to set goals that optimize performance. Some of these goals are short term and can be addressed immediately, while others may be implemented in the long term. It is important to set both short and long-term goals for your portfolio.

The long-term view includes thinking about trigger events down the line, between 2 to 15 years from now. This is covered at length in the next section.

The short-term view includes action items you can implement immediately or sometime in the next two years. These usually include interventions that respond to a need within your portfolio.

While not as costly as a major rehabilitation, implementing these strategies still requires capital and labor. For projects that are cash flowing or have healthy reserves, reinvesting some of their cash back into them may increase your returns in the long run. Speak with your Lender about how to utilize reserves to implement improvement strategies outlined in this guide.

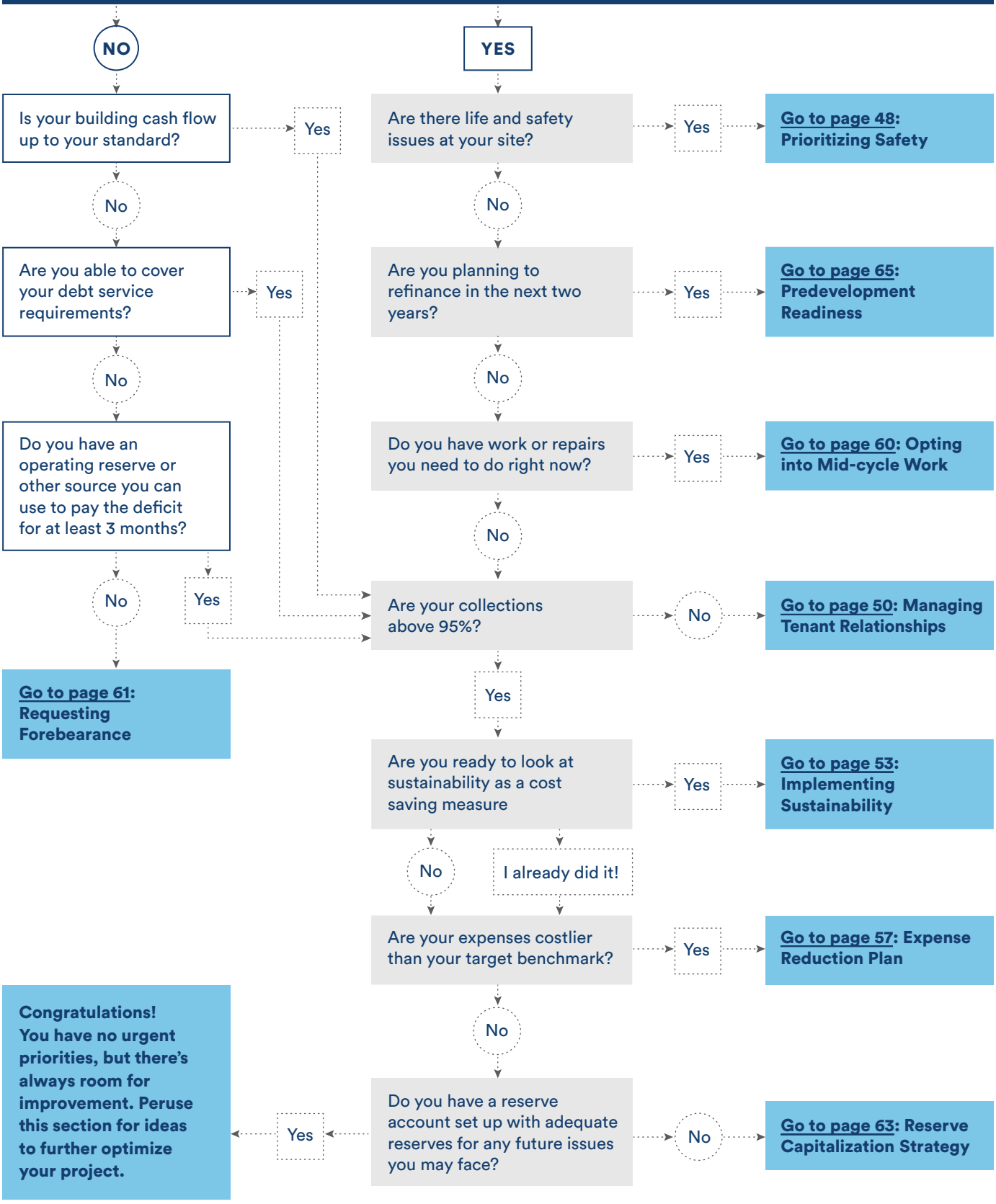
WHERE DO I BEGIN?

There are a number of different ways to prioritize work. Using your analysis, think through which items are of utmost importance. This section offers strategies to effectuate goals for the following:

- **Prioritizing Safety:** This section offers strategies to mitigate life, health, and safety issues, ensuring compliance with Local Laws.
- **Managing Tenant Relationships and Leasing:** This section offers strategies for fostering healthy communication with tenants, implementing a collections plan and creating a lease up plan.
- **Creating an Expense Reduction Plan:** This section offers strategies to help reduce potential inefficiencies in your operating budget.
- **Implementing Sustainability:** This section offers concrete strategies to help reduce overconsumption of utilities, implement low or no cost energy upgrades and assess your project's viability for accessing clean energy.
- **Opting into Mid-cycle Work :**This section offers strategies for how to evaluate mid-cycle work or work completed during the permanent loan term without conventional financing. This section will also provide potential resources to fund mid-cycle work.
- **Requesting Forbearance:** This section offers strategies for working with your Lender to request relief on debt service payments, also known as forbearance. It will help you create a plan to improve the financial condition of distressed portfolios.
- **Predevelopment Readiness:** This section offers a checklist of items to ensure you are "deal ready" for projects you will look to finance in the next year or two.
- **Reserve Capitalization Strategy**: This section offers tips to ensure you are properly capitalized for future costs and repairs.

It is difficult to identify priorities when thinking about the near term. If you are unsure where to start, use the flowchart on the next page. You can do this on a project-by-project basis, but in the spirit of Think BIG, try to consider your entire portfolio as you move through it.

IS YOUR PORTFOLIO PHYSICALLY DISTRESSED?



PRIORITIZING SAFETY

This section offers strategies to identify and mitigate life and safety issues, ensure compliance with Local Laws and ensure healthy housing for all tenants.

If there are safety issues at your property, your priority should be to ensure the well-being of your tenants. Safety issues can come from episodic events such as a superstorm, active construction failure, or documented safety violations.

VIOLATIONS AND LOCAL LAWS

Often, municipalities will document any life and safety issues reported in a multifamily property. In New York City, the city housing agency typically issues A, B, or C violations based on the severity of the violation condition.. The C violations are typically life and safety issues and include suspected lead-based paint, mold, missing window guards and other unsafe conditions. Additionally, there are several Local Laws in NYC designed to ensure preventive maintenance of buildings. Failing to complete required inspections and filing the results with the local building department is considered dangerous for tenants. For a comprehensive list of Local Laws pertaining to multifamily buildings, see Appendix D.

These violation systems are designed to highlight to potential problems at the site and ensure owners are addressing deficient conditions. Outstanding violations or failure to file required reports may result in punitive fines.

A general process for clearing violations is outlined below. Take time to review the processes and procedures for clearing violations in your municipality.

In New York City, violations can be recorded by a number of different agencies. Keep in mind that violations may be posted by the Fire Department (FDNY), Department of Buildings (DOB) and NYC Housing Preservation and Development (HPD). You may also have violations that come up in a title report. If you have an available title report from your legal staff, be sure to check it against violations records provided by city agencies.

1. **Review the Notice:** Read the notice carefully to understand the nature of the violation, the specific building code or Local Law it may pertain to and the deadline set for corrective action.
2. **Determine Access Requirements:** Identify whether the violation requires access to a unit and, if so, communicate that with the tenant. Access to the unit will be necessary to both correct the violation condition and have it inspected by a city inspector if required.
3. **Hire Professional Vendors:** Engage licensed, certified professionals to assess the condition and complete any inspections or necessary updates, particularly if the work involves electrical, plumbing, or structural issues.
4. **Make Necessary Repairs:** Ensure all work complies with building codes and regulations. Obtain any necessary permits to complete the corrective work.
5. **Self-certify or Schedule an Inspection:** Once the work is completed, submit a self-certification with the local code enforcement department confirming the work is completed. If required, schedule an inspection.
6. **Pay Fines:** If the violation includes a fine, make sure this is paid to clear the violation off your property's record.

WORKING WITH AN EXPEDITER

For time-sensitive issues, it may be in your best interest to hire an expediter. In New York City, expediters are often recommended due to the protracted process of working with agencies. These professionals have experience navigating the bureaucratic systems associated with violation clearance. They act as a filing representative for building owners and vendors, ensuring all documents are updated, filed correctly, and adhere to regulatory building codes.

IS YOUR SAFETY CONCERN RELATED TO A NATURAL DISASTER?

Episodic events at the building offer opportunities to address broader safety concerns and secure your building's resilience. While unfortunate, they allow you to pressure test infrastructure.

There are many ways to make your property more resilient to natural disasters and climate change. The sustainable upgrades section of this section provides additional guidance.

MANAGING TENANT RELATIONSHIPS AND LEASING

This section offers strategies to foster healthy communication with tenants, implement a collections plan, and address tenant-related issues.

Fostering healthy relationships with your tenants can help you get ahead of operational pitfalls. When tenants do not have an open line of communication with their landlords, they are more likely to report maintenance issues to 311, attempt to erroneously fix things themselves, and may refuse to provide access to their unit. Often when tenants face rent challenges or struggle to make payments on time, they resort to avoidance tactics. This is counterproductive to both the owner and tenant. With a healthy relationship, the two parties are more likely to figure out solutions by working together.

Providing resources to your tenants can improve your project performance.

TENANT SUPPORT

Many tenants in affordable housing may be eligible for assistance programs to help cover rental arrears. They may not even be aware of these resources and assisting them by providing this information can help you recoup rent arrears. Familiarize yourself with resources in your area. Two such options in New York State and New York City include the following:

Emergency Rental Assistance Program (ERAP): New York State has implemented an Emergency Rental Assistance Program to help eligible tenants who are behind on their rent or experiencing financial hardship due to the COVID-19 pandemic. The program provides rental arrears payments directly to landlords on behalf of tenants. Tenants can apply through the ERAP website or by contacting their local ERAP administrator.

One-time Emergency Grants ("One Shot Deals"): Tenants may be able to apply for a One Shot Deal through the Human Resources Administration (HRA), the agency responsible for administering public assistance programs in New York City. The process requires that the tenant provide documentation of rental arrears, income, and proof of residency.

Below are some tips to foster healthy relationships with tenants:

- **Establish Clear Channels of Communication:** Make sure both parties know the best ways to communicate with each other, whether by email, phone calls, text messages or a dedicated communication platform.

- **Know Your Tenancy:** When working with seniors or vulnerable populations, be sensitive to any accommodations they may need regarding communication. Many older tenants may not be Internet savvy and may require physical notices to be posted in the building or on their apartment door. Additionally, be sensitive to any translation that may be required and provide ample time to let tenants address questions regarding communication.

- **Be Prompt and Responsive:** Respond to messages and inquiries from tenants in a timely manner. This helps to address issues, especially maintenance issues, before they escalate. It is important to demonstrate respect for the tenant's concerns. Even if you are unable to quickly address the issue, letting tenants know your process and expected timeline for the repair goes a long way.

- **Review the Lease Together:** Clearly outline expectations regarding rent payments, property maintenance, repairs, and any other relevant issues in the lease agreement. When tenants are signing the lease, talk through these elements and set expectations early. This helps to prevent misunderstandings later.

- **Document and Retain Everything:** Keep records of all communications, including emails, letters, and maintenance requests. This can be helpful for resolving disputes or clarifying agreements later.

- **Schedule Regular Check-Ins of your Building:** Schedule regular walk-throughs of your buildings either on your own or with your superintendent to address the physical concerns of the building and provide a friendly face to tenants. Schedule meetings or check-ins to discuss any concerns, updates, or issues related to the rental property.

- **Follow Applicable Laws and Regulations:** Both tenants and landlords should be familiar with their rights and responsibilities under local tenancy laws and regulations. This ensures all parties are treated fairly and legally.

- **Be Proactive About Providing Resources to Tenants:** Some may not be aware of tenant resources that can assist them in family household management and handling rental arrears. Be sure to research your municipality's relief programs and resources so you can provide tenants with necessary resources to help them seek out housing vouchers or rental assistance programs.

HANDLING VACANCIES IN YOUR PORTFOLIO

When underwriting, most Lenders assume that in any given year, your property will forgo roughly 5% of potential revenues to physical vacancy and/or collection loss. If you have physical vacancy and/or collection losses beyond this percentage, it may impact the financial performance of your property. Vacancies have a more drastic impact on smaller properties. For instance, in a 10-unit building, just one unit may account for around 10% of the rents received in the building, significantly exceeding the assumed 5% vacancy rate.

Keeping your units rented is paramount to ensuring the financial health of your property. A few tips for leasing vacant units include:

- **Partner with Affordable Housing Organizations:** Collaborate with local affordable housing organizations, nonprofits, and government agencies that specialize in affordable housing to promote your vacancies. These organizations often have established networks and resources to reach eligible tenants.

- **Take Referrals:** Partner with housing agencies such as the New York City Housing Authority (NYCHA) or the New York Housing Resources Administration (HRA) to advertise vacancies and connect with eligible tenants seeking affordable housing options. These referred tenants may come with subsidies to assist in rental payments.

- **Provide Language Accessibility:** Ensure that your marketing materials and rental applications are available in multiple languages to accommodate diverse communities and immigrant populations in New York City.

- **Streamline the Application Process:** Simplify and streamline the application process for potential tenants by providing clear instructions, guidance on documentation, and access to online application portals or assistance centers.

- **Maintain Compliance with Housing Quality Standards:** Ensure your property complies with all applicable housing quality regulations. Tenants with rental assistance vouchers are often required to take units that pass a Housing Quality Standards (HQS) inspection to confirm they are in acceptable physical condition. You can work closely with regulatory agencies to ensure compliance by keeping units in good physical condition for eligible referrals. Additionally, ensuring units are in good quality can help you avoid ongoing violations and penalties.

- **Think Creatively:** You may be able to distribute flyers with local tenant networks. For instance, if you are near a community organization, faith-based organization, or a university, you can find potential tenants through community-based housing resources.

IMPLEMENTING SUSTAINABILITY

This section offers useful strategies to help implement low or no cost energy upgrades and assess your project's viability for utilizing clean energy sources. Whether you are making updates to comply with local laws or planning for more substantial scopes of work, these measures can set your building up for long term success while improving current operations.

LOW-LIFT, SHORT-TERM ACTION ITEMS TO IMPROVE PERFORMANCE

Making investments in your properties through energy conservation and resilience upgrades can reduce consumption, greenhouse gas emissions and expenses across your portfolio. These upgrades can be implemented all at once or over time. To implement energy efficiency measures to support existing systems in your building, see the Creating an Expense Reduction Plan section on Page 53.

In the **Underwriting Energy Efficiency Handbook**, CPC assessed the efficacy of energy efficiency and water conservation upgrades to multifamily buildings to determine the percentage of energy and costs saved due to implementing low lift upgrades. The list below, ranging from low flow water fixtures to LED lighting and weather stripping, shows that small upgrades can have a big impact on heating and water costs through load reduction and increased operational control.

CPC's **Financing High Performance Guide** gives examples of the impact of building owners who have made substantial improvements to envelopes, domestic hot water heating, space heating and cooling and water management. Certain municipalities may require building owners to consider greenhouse gas (GHG) emissions reduction when planning capital improvements and electrification of major building systems. Appliances may be a necessary scope item in that process.

Measure	Property Type
Install Programmable Thermostats	Any
Install Low-Flow Sink Aerators	Any
Install Low-Flow Showerheads	Any
Air-Seal Common Areas	Any
Upgrade Common Area Lighting	Any
Upgrade Apartment Lighting	Any
Install Exhaust Fan Timers	Any
Repair Heating System Leaks	Central Boiler Heat
Insulate Heating Pipes	Central Boiler Heat
Tune Up Heating System	Central Boiler Heat
Insulate DHW Pipes and Tank	Central DHW
Install DHW Controls	Central DHW
Insulate Condensate Tank	Steam Heat
Install or Upgrade Master Venting	Steam Heat
Replace or Repair Steam Traps	Steam Heat

ELECTRIFICATION

Electrifying your building means replacing fossil fuel burning systems with electrically powered systems, limiting carbon emissions and increasing the potential for carbon-free operations with the addition of on-site energy generation and/or a clean electricity source. This can impact your building's heating and cooling, domestic hot water system and appliances.

Completing electrification-ready scopes of work can yield many benefits, from eliminating on-site combustion and use of fossil fuels, reducing GHG emissions from heating, cooling, and hot water heating, improving indoor air-quality, and increasing tenant comfort. In some localities, electrification may be required or incentivized to meet legislated climate goals.

States and cities across the US have passed legislation and mandates that require buildings to decarbonize operations and consider lower carbon emitting fuel sources when planning substantial renovations or new construction projects. For example, New York City has implemented legislation that bans the use of oil and/or natural gas in most new buildings. Additionally, building emissions are now being measured and capped under Local Law 97, incentivizing thousands of buildings to decarbonize operations or electrify major building systems to stay below the emission limits.

Ithaca, New York has also implemented electrification and decarbonization requirements to address GHG emissions during construction, requiring net-zero construction by 2026. Washington D.C. has established Building Energy Performance Standards to improve energy performance in existing buildings, requiring either a reduction in Energy Use Intensity (EUI) or implementing energy conservation measures that provide a comparable EUI decrease. Seeing regulatory trends within the region, the Building Emissions Reduction and Disclosure Ordinance (BERDO) in Boston is a local law requiring emissions reductions and annual reporting for all covered buildings to reduce air pollution and GHG emissions. These regulations serve as a signal of what is to come, which underscores another benefit of electrification: mitigating physical risk and compliance risk by investing in long term decarbonization solutions now.

When planning decarbonization improvements, remember that not all buildings are currently electrification ready. Consider the age of your building, the current electrical capacity and electrical service limitations, envelope condition, current internal heating loads, and availability of equipment.

To assist with the upfront costs of electrification, there are many state- and nationwide incentives (see Appendix A).

CLEAN ENERGY GENERATION ON-SITE: INSTALLING SOLAR ARRAYS

Installing solar arrays on the roof of your buildings, if viable, can help reduce the electric costs associated with your project. It will also help meet your energy needs, decreasing carbon emissions and reliance on fossil fuels. Electricity produced by solar panels can be utilized by your property. Any unused electricity can be sold to the local utility company and be exchanged for credits on your bill. Reach out to a solar vendor to assess if your roof can accommodate a solar array installation. Solar panels work best on southern facing roofs with no shade. Canopy solar panels and other designs offer workarounds for other roof types.

There are many available subsidies and incentive programs to fund the upfront cost associated with solar panel installation. The federal investment tax credit (ITC) allows you to deduct 30% of the cost of your solar energy system from your taxes. Some states provide additional tax credits, and certain cities and utilities offer cash refunds or other benefits.

For a list of solar related incentives, see Appendix A: Sustainability Resources.

- **Accessing Clean Energy:** Accessing clean energy for your building is another pathway to decarbonization. This can be tackled in the short-term, by substituting low- and no-carbon power sources to reduce combustion associated emissions. There are different ways to access clean energy that can work within the needs of your building.

- **Renewable Energy Credits:** Renewable Energy Credits (RECs) are registered units of energy produced at one site that may be attributed to consumption at a separate site. Some states allow private owners of solar PV arrays to register and sell credits in regulated marketplaces.

  Subsequently, anyone living in the United States can buy RECs generated by renewable energy sources such as solar or wind power facilities. This ensures a portion of your energy usage is coming from a renewable energy source. You can likely discuss REC options with your electrical utility, as 850 utilities in the U.S. offer a green power program. You can also purchase RECs directly from outside suppliers.

- **Community Solar:** Community solar allows buildings to access the benefits of solar energy regardless of whether their particular roof is amenable to solar. Customers sign up to participate in a community solar project and receive the benefits of clean energy produced by solar panels located elsewhere in the utility area grid. This enables buildings to access lower electricity costs and produce fewer carbon emissions.

  The sign-up process for community solar varies by state, but you can contact your local electric utility to find available community solar subscriptions in your area. See Appendix A for NREL's list of community solar programs and other NY-based community solar programs.

BUILDING FOR THE FUTURE: REGULATORY RISK AND NEW OPPORTUNITIES TO FINANCE HIGH-PERFORMANCE IMPROVEMENTS

Urgency is growing across the country as climate change is increasingly impacting the physical environment, health, and economy of local communities. As cities and states adopt increasingly rigorous energy codes and expand requirements for construction quality, the incremental cost to meet high-performance building standards is coming down. At the same time, new policy and regulatory changes aimed at reducing GHG emissions are advancing. Carbon emission regulation has the potential to drive up the cost of fossil fuel-based energy, increasing operating costs and reducing profit margins. This will increase the demand for low-carbon alternatives and drive sustainable economic activity and investment towards low-carbon innovation.

To stay ahead of the curve, it is important to start adopting sustainable practices today, with the help of available resources. In addition to the state-level programs and incentives referenced throughout this section (also found in Appendix A) the Inflation Reduction Act (IRA) passed in 2022 encompasses the most significant climate legislation to date. In addition to the hundreds of billions in tax credits, the IRA includes the Greenhouse Gas Reduction Fund (GGRF), a $27 billion investment to mobilize financing and private capital to confront the climate crisis and promote energy independence and economic revitalization within historically disadvantaged communities

CPC is a member of the Climate United coalition, which was awarded nearly $7 billion through the GGRF. Tackling the multifamily prong of the coalition's strategy, CPC has created CPC Climate Capital, a subsidiary to manage this portion of the GGRF award. See Appendix A for the most updated resources on how to access this capital and find the right product for your building.

Buildings that utilize these economic incentives now will not only be better suited to comply with future regulations, they will be primed to take advantage of low-carbon equipment and appliances that will be deployed in the coming years. Building to high-performance standards today means preparing for tomorrow, making sustainability investments more valuable in the long run.

CREATING AN EXPENSE REDUCTION PLAN

This section offers strategies to help reduce potential operating expense inefficiencies. Often, finding savings on your operations expenses can yield higher returns as much or more than that of rental increases.

When you analyzed your portfolio, certain expenses may have deviated from your operational benchmark. Utilize your analysis to identify specific cost reduction opportunities that do not negatively impact the quality of the housing or amenities provided to tenants. Tips on specific areas for cost reduction may include:

UTILITIES: Implement energy-efficient measures to reduce utility costs. Consider installing programmable thermostats, LED lighting with timers, low flow fixtures, and energy-efficient appliances.

If your portfolio's water consumption is higher than your benchmark or that of comparable buildings from Step 2, try to find out the cause. Tenants and building managers are a good first source to look for information about water performance. When possible, spot check toilets, faucets and showerheads for faulty equipment or leaks. Ask your tenants if toilets or faucets are leaking or running. Ask your building manager or superintendent to check water distribution lines and pipes for weak spots. Many municipalities offer fixed rate water programs. If your water costs fluctuate month to month, this may be something to consider. The NYC Multifamily Conservation Program ("MCP") is available to multifamily buildings with five or more residential units. It caps water bills, regardless of consumption, at a predetermined cost per unit. A fixed rate water program offers predictability of monthly expenses and may help manage cash flow across projects.

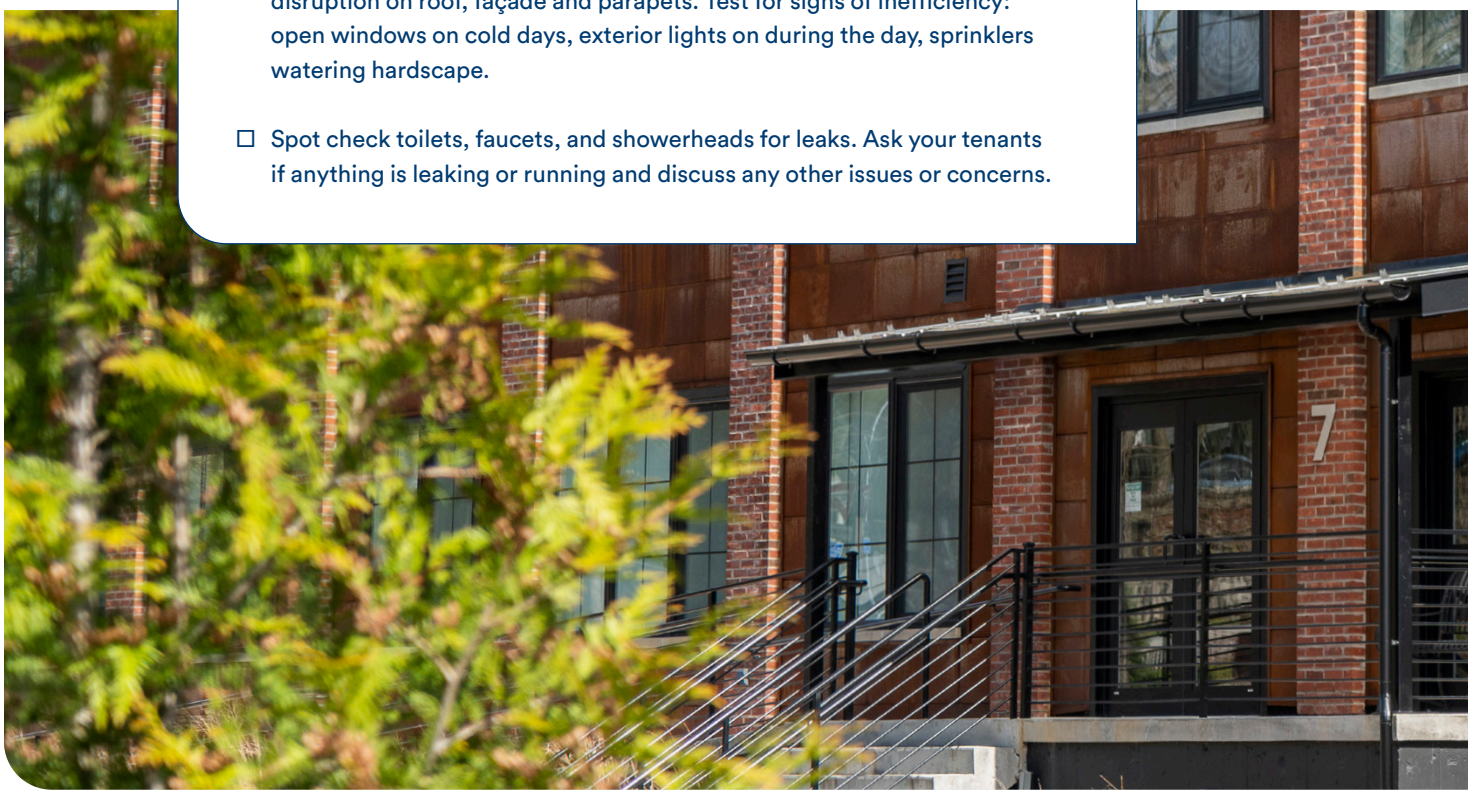
EFFICIENCY OPPORTUNITIES

Always look to integrate energy and water efficiency opportunities into routine portfolio management. Low/no cost repairs range from low flow water fixtures to LED lighting and weather stripping. Incentive programs can help fund this type of work. The CPC underwriting energy efficiency guide offers a list of simple and moderate upgrades that can help lower consumption and operating costs. Additionally, see Appendix A for a list of sustainability and decarbonization resources that can help you complete this work.

MAINTENANCE AND REPAIRS: Prioritize preventive maintenance to avoid costly repairs and extend the lifespan of building systems and equipment. Negotiate lower rates with contractors and suppliers by bundling repairs across multiple buildings when you cannot complete a repair on your own.

Preventive maintenance includes regular inspections of building systems to ensure optimization. Additional preventive maintenance tips include:

- ☐ Inspect the boiler room and check control settings for proper set points.
- ☐ Test water fixture flow rates and domestic hot water temperatures to ensure water and energy are not being wasted.
- ☐ Complete a retrocommissioning every five to 10 years to confirm all building equipment functions properly.
- ☐ Check indoor temperatures in common areas and sample units to ensure the building is not overheated.
- ☐ Inspect windows for appropriate window A/C supports, as applicable.
- ☐ Visually inspect buildings exteriors for obvious signs of envelope disruption on roof, façade and parapets. Test for signs of inefficiency: open windows on cold days, exterior lights on during the day, sprinklers watering hardscape.
- ☐ Spot check toilets, faucets, and showerheads for leaks. Ask your tenants if anything is leaking or running and discuss any other issues or concerns.



INSURANCE: Insurance costs since COVID-19 have increased dramatically. CPC provided you with a standard between $1500 and $1900 per unit for the 2024 year but you may be quoted rates higher than this. There are several ways to ensure you are getting a competitive price. Shop around for reasonable insurance quotes and consider increasing deductibles or adjusting coverage levels to reduce premiums. Lower costs by bundling many projects into one policy. Additionally, be sure to communicate resources you have on hand to the broker. For instance, a CCTV security system can reduce slip and fall claims. Having such a resource on site may reduce insurance costs. Confirm that changes in coverage limits or policy structure are acceptable to your Lender.

Did you know that improving resilience of buildings may help reduce insurance premiums? For instance, installing solar panels provides your property with a backup source of energy and can make your building more resilient during power outages. Check the sustainable upgrades section of this chapter for more ways to make your property more resilient.

PROPERTY MANAGEMENT: Evaluate property management fees and consider renegotiating contracts or switching to a more cost-effective management solution.

If you have third-party property management, it is important to communicate your expense reduction proposals to them and hold them accountable for implementing procedures you have requested. Be vigilant in ensuring the effective management of your portfolio.

ADMINISTRATIVE COSTS: Streamline administrative processes and consider outsourcing non-essential tasks to reduce staffing costs.

OPTING INTO MID-CYCLE WORK

This section offers criteria for how to decide to undertake mid-cycle work, and potential resources to fund this work.

At times, you may need to undertake capital improvements of your property outside of a financing cycle. For instance, in a high-interest rate environment, you may prefer to pay for a system replacement using equity or available reserves.

Tips regarding Mid-cycle Work

- ☐ Always speak with your Lender regarding any planned capital improvements at your property. A Lender can provide any consent that might be required under your loan documents. Additionally, they can confirm any available reserves or other financial resources to help fund the work.
- ☐ Assess the useful life of your systems against your potential plan for future financing. An estimated useful life schedule for major systems is included in Appendix B. If you need to do the work now, review your available resources to see if you can afford the work.
- ☐ You may have a long-term replacement schedule from any former property condition reports or IPNAs completed on your buildings in years past. Be sure to refer to this document's schedule, if available, to assess the potential need and cost of planned mid-cycle work and utilize any available replacement reserves needed to complete that work. Assess what your team can do versus what needs to be outsourced to vendors.
- ☐ Seek out mid-cycle funding sources to support capital improvements and energy efficiency work. CPC's sustainability department can provide guidance and technical assistance to grant programs and available incentives. For more information, see Appendix A.
- ☐ Vendors used in active construction deals can also be used for mid-cycle work. Try to negotiate reduced pricing with vendors you are already working with on other properties.

REQUESTING FORBEARANCE

This section offers strategies for working with your Lender to request relief from debt service payments, a.k.a. forbearance, and create a plan to improve the financial condition of distressed properties.

We look at cash flow on an annual basis because it helps mitigate month to month volatility across projects. For instance, there may be months where expenses exceed revenues. Perhaps you prepaid a water bill for several months, or you had a large but necessary repair. Consider also natural disasters or economic events (like COVID-19) that also impact project performance.

These situations are inevitable, which is why borrowers maintain reserves to offset performance deficit periods. However, if you continually face cash flow shortfalls or constantly pull from dwindling reserves to make your debt service payments, reach out to your Lender to discuss alternate options to addressing these issues.

If the net operating income from your project is not sufficient to cover your mortgage payments, and you do not have additional cash resources, such as an operating reserve or cash on hand, you should immediately speak to your mortgagor to make a forbearance request.

FOREBEARANCE STRUCTURES

The structure of forbearance agreements runs the gamut. A few more prevalent structures include:

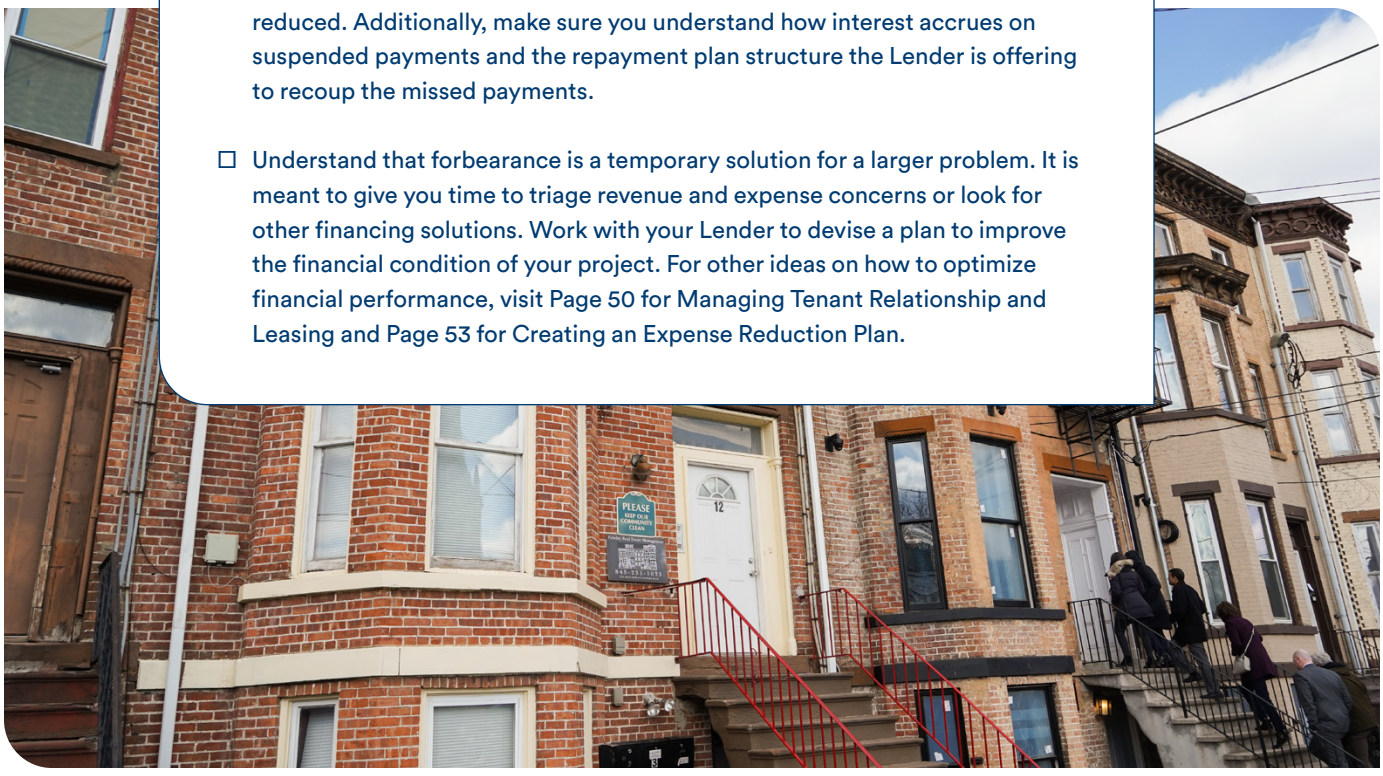
- Paused payments to be repaid upon the end of the forbearance term. Bear in mind you may be hit with a big bill upon the end of the term.
- Paused payments paid back at the end of the mortgage. Tacking additional payments to the end of your mortgage term may result in a longer mortgage term and interest will continue to accrue until you repay.
- Paid reduction, repaid during the mortgage term. The amount of the reduction is spread out over some amount of months and tacked onto your existing mortgage payment for those months, so your monthly payment will increase during that period.

Always make sure you understand the terms of your forbearance agreement before signing on!

Forbearance processes vary across Lenders, but the general idea is that your Lender may temporarily pause mortgage payments or allow you to make smaller payments for a designated amount of time. You will still owe the full amount and must pay back the difference later, typically at loan maturity. The rationale for this request is to give you time to troubleshoot the operational situation and remedy any issues to rectify your cash flow problem.

Keep the guidance below in mind when applying for forbearance with any Lender.

- ☐ Call your Lender or servicer and disclose your situation immediately. Ask them what options are available for forbearance or reduced payments.
- ☐ Have your income and expense statements for the past year and any cash account statements available to provide to your Lender upon request.
- ☐ Go into the request understanding the rationale for the financial distress of your portfolio. Use the collecting data and benchmarking data sections as a resource if you are not sure what is causing it. If you are still unsure of the causes, speak with your Lender, as they may be able to provide guidance.
- ☐ Make sure you know the terms of any forbearance plan, including the amount you must pay, if any, and how long your payments will be suspended or reduced. Additionally, make sure you understand how interest accrues on suspended payments and the repayment plan structure the Lender is offering to recoup the missed payments.
- ☐ Understand that forbearance is a temporary solution for a larger problem. It is meant to give you time to triage revenue and expense concerns or look for other financing solutions. Work with your Lender to devise a plan to improve the financial condition of your project. For other ideas on how to optimize financial performance, visit Page 50 for Managing Tenant Relationship and Leasing and Page 53 for Creating an Expense Reduction Plan.



RESERVE CAPITALIZATION STRATEGY

Even if your properties are performing up to standard, ensure you have a solid reserve capitalization strategy, so your building is ready for future improvements. Creating a reserve capitalization strategy is something you can do now to invest in the long-term health of your portfolio.

Typically, reserves are held on a project-by-project basis. It is a form of savings for future project costs. The most typical reserves are replacement reserves (which can be drawn down to implement large repairs in a building) or operating reserves (which can be utilized to pay cost overruns associated with the everyday operating costs of the property.) You may also have reserves that were specifically set up at your time of financing. An example of a less common reserve is a Tenant voucher reserve, which can be used to offset delays in tenant voucher payments. Make sure you know which reserve accounts you have, the balance of the accounts, and where they are held.

Reserves are typically set up at the time of financing and may be capitalized with an initial amount and/or require ongoing contributions. For instance, CPC standards stipulate an expected reserve contribution of $300 per unit per year. However, your Lender or investor may have specific reserve requirements. Be sure to review your legal documents and speak with your current partners to ensure you understand any requirements for use as well as ongoing requirements for recurring contributions. Even if your Lender or investor does not require a reserve, it is important to create one for the future capital planning of your project.

A few best practices for setting up and monitoring reserves are outlined below. By following these steps, you can effectively set up and manage a reserve account for your property, ensuring you are prepared for future costs without compromising your operational budget.

1. DETERMINE YOUR TARGETED AMOUNT AND THE TYPE OF RESERVES YOU WANT. CALCULATE THE APPROPRIATE AMOUNT TO SET ASIDE BASED ON:

- **Property Age and Condition:** Older properties might need higher reserves. Look at your current repair and replacement costs and ensure you are saving a percentage of this amount each year.
- **Reserve Study:** Conduct or review a reserve study if available, which estimates the lifespan and replacement costs of major components.
- **Local Requirements:** Some states or municipalities may have specific requirements for reserve funding. Make sure you are familiar with your Local Laws.
- **For Operating Reserves:** A typical Lenders' rule of thumb is to ensure the account has at least six months of operating expenses and debt service for the project. You can get to this amount by looking at historical financial performance.

2. ESTABLISH THE ACCOUNT(S).

- **Separate Accounts:** Open a separate bank account specifically for each reserve. This ensures funds are not co-mingled with operational or other accounts.
- **Legal Considerations:** Ensure compliance with any legal requirements regarding the management and use of reserve funds.

3. DECIDE ON CONTRIBUTIONS.

- **Initial Funding:** If possible, create the account with a lump sum based on your calculation.
- **Monthly Contributions:** Determine a monthly contribution to the reserve account. This is typically a percentage of rental income or a cost on a per unit basis.
- **Backup Plan:** Decide how you will manage this contribution if the project's cash flow is weak. Will you forgo contributions? Will you make them up as arrears?
- **Reserve Achievement Level:** Is there an amount you want to target? After this amount is reached, will you continue to contribute?

4. GET DOCUMENTATION.

- **Policy and Procedures:** Develop clear policies and procedures for managing the reserve account. This should include how funds are deposited, withdrawn and reported.
- **Reserve Study Updates:** Regularly update the reserve study to adjust funding levels as needed based on changes in property condition or costs.
- **Tracking:** Maintain accurate records of contributions, interest earned and expenditures from the reserve account.
- **Reporting:** Provide regular reports to stakeholders (Lenders, investors, etc.) detailing the status of the reserve account, as applicable.

5. ADJUST AS NEEDED.

- **Authorized Use:** Ensure withdrawals from the reserve account are authorized for legitimate capital expenses as per the reserve study and your policy.
- **Replenishment:** After using funds from the reserve account, plan for replenishment to maintain adequate reserves for future needs.
- **Annual Review:** Conduct an annual review to assess whether funding levels are sufficient based on actual usage. Update information in the reserve study and adjust contributions, as necessary.

PREDEVELOPMENT READINESS

This section offers a checklist of items to ensure you are "deal-ready" for any properties you will look to finance in the next year or two.

If you are still deciding whether to transact, refer to Step 5 "Recommend Solutions" for tools to help you decide.

If you know you will reposition your project in the next two years, this immediate legwork still applies. Most Lenders will require that any issues at the site are resolved before taking a lien on the property. Below are several tips to ensure your project is financeable. This predevelopment section refers to refinancing with moderate to minimal rehabilitation. This does not apply to major gut renovations or unit reconfigurations of existing properties.

Cover your bases when preparing to transact by following the guidance below.

- ☐ Refer to your deal book to see what is allowable. Consider mortgage consent requirements, potential prepayment penalties and other property restrictions. Ensure you communicate these terms with any potential Lender.
- ☐ Get a third-party physical needs assessment completed at your site.
- ☐ Speak with your Lender about energy audit requirements for financing and ensure the necessary 12-24 months of information is collected in advance, if needed.
- ☐ Order a title report with your counsel to ensure the title is clear. Preemptively work with your counsel to clear any concerns that come up on title.
- ☐ Order a zoning report to ensure your project conforms with local zoning and building codes.
- ☐ Ensure your property's financial records are up to date and organized, including financial statements, reserve statements, tax returns and collections reports.
- ☐ Begin to interview an experienced development team. Having experienced architects, contractors, financial consultants and counsel will help your transaction run smoothly.
- ☐ Know your market. Research local market conditions to understand current trends, rental rates and property values. Keep abreast of any changes to building codes or laws and determine how they may affect your property.
- ☐ Speak to your existing Lender partners about predevelopment financing. This may be available to help you cover upfront expenses associated with a new financial execution.


STEP 5

RECOMMENDED SOLUTIONS

Maintaining the Long-Term Health of your Portfolio

THE LONG-TERM PLANNING TOOLKIT

Part of the Think BIG approach to strategic portfolio management includes viewing your portfolio in the aggregate. While the health and operation of each project is important, looking at the overall health of your portfolio helps you identify concurrences, trends, and informs long-term decisions that optimize the overall financial condition of your portfolio.

On the other hand, each individual project you own and manage requires an individualized assessment of how it is expected to perform over the next 5, 10, or 15 years.

The goal of this section is to provide you with tools for long term portfolio planning. A cash flow model and a trigger calendar are two such tools.

A cash flow model in real estate refers to the financial framework used to project and track the inflows and outflows of money related to a project over a specific period of time. The goal of this model is to project the net cash flow—the amount of money coming in versus going out—for a property or portfolio of properties. It's a key tool to understand the financial performance and determine future returns. By forecasting cash flow, you can make informed decisions about property purchases, financing strategies, and long-term investment plans. The Cash Flow Model is completed on a project-by project basis.

The CPC Toolkit provided an automatic cash flow projection for each project for which you complete property information and benchmarking. The Cash flow tab of the Tool will toggle between each of your projects. In order to modify the cash flow projection using your own assumptions, you can export the model to a new sheet.

A trigger event calendar is a tool used to forecast major events in the lifecycle of your portfolio. A trigger event is something that will force your project to change. Using a 10-20 year horizon, you can map out the expected trigger events for each of your projects and see how they relate across your portfolio.

THE TRIGGER EVENT CALENDAR

Certain changes within your portfolio are caused by trigger events and others are economic decisions. Looking at each of the properties in your portfolio over a 10 to 20 year timeline allows you to plan for trigger events, see when trigger events overlap, and decide when to build economies of scale. Creating long term portfolio strategy solutions helps inform when to make major changes to your portfolio and gets ahead of potential problems.

What major trigger events do we not control?

- Loan maturity
- End of Useful Life of Systems - resets the clock on your building's major systems.
- Expiration of tax exemptions
- Expiration of regulatory agreements
- Major regulatory changes
- Exit of an investor
- Change in prepayment penalty
- Change in building codes - decarbonization: Ex: ban of gas appliances
- Local law requirements: Ex: LL97

Trigger Events We Can Schedule

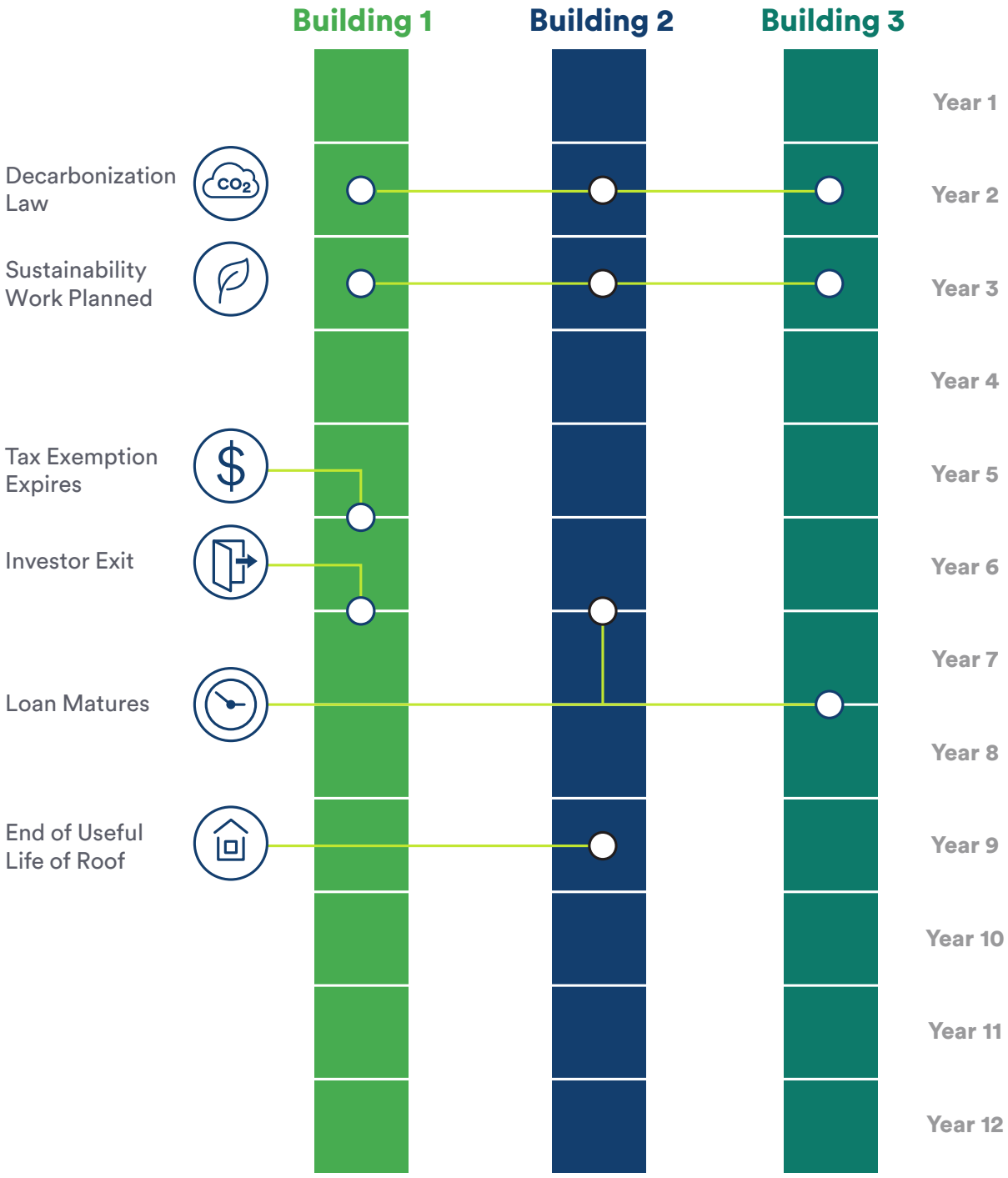
- Acquisition or Sale
- Capital Improvements, Replacement Schedules and/or Sustainable Investments

Concurrences of events in your portfolio, such as three loans maturing near each other, is an opportune time to assess whether you should consolidate these three projects into one or negotiate with vendors for reduced costs per transaction when you refinance all three.

Once you have a sense of the major trigger events across your portfolio, decisions can be better informed utilizing a cash flow model.

MAPPING OUT TRIGGER EVENTS

Note when Trigger events occur close in time for one building or occur across multiple properties around the same time. Either type of concurrence can be an opportunity to build an economy of scale.



CASH FLOW ANALYSIS

A cash flow analysis model is an excellent tool to assess the long-term health of your individual projects. You can also use this to assess the long-term benefits of making investments or changes in your project.

Creating a cash flow model requires collecting all income and expense assumptions from prior chapters while factoring in inflation rates and potential changes to rental income and expenses year over year. This information can be used to project out cash flow over a desired time horizon (typically 5-10 years). It can be utilized to help owners make decisions in the long term, get ahead of issues and make financial decisions about capital investments.

Let us look at the setup of a cash flow model. You may recall this simple formula for understanding cash flow:

The cash flow model looks at this formula in a more granular way, much in the same way we size a loan in the CPC Start Small guide. However, the difference here is the cash flow model projects cash flow over many years.

If we break down the formula into its respective parts, we begin with total income, the sum of various income sources as described in Step 1. This number depends on how much money your project throws off on any given year before you pay for any expenses associated with the operations and maintenance of the property.

For various reasons, our gross potential is not always achieved. Sometimes tenants have trouble paying rent or a unit sits vacant. For these reasons, underwriters typically assume a vacancy of 5% of residential income and 10% for commercial and ancillary income. These vacancy rates are indirectly proportional to collections rates, which we analyzed in Step One of this guide.

TABLE 7: REVENUE CALCULATION

Income	Calculations	Annual Income
Residential Rent	Projected monthly rent per unit x number of units x 12 months	
Other Income		
Commercial or Other Rent	*Projected monthly commercial rent x 12 months*	
Laundry	*Projected monthly laundry income x 12 months*	
Parking	*Projected monthly parking income x 12 months*	
Storage	*Projected monthly storage income x 12 months*	
Cell Tower	*Projected monthly cell tower income x 12 months*	
Total Other Income	Sum of all other income	
Gross Income Vacancy & Credit Loss – Rent (5%)	**Total annual residential rent + total annual other income** Total annual residential rent x 5%	
Vacancy & Credit Loss – Other (10%)	Total annual other income x 10%	
Effective Income (EI)	Gross income minus (rent vacancy & credit loss + other income vacancy & credit loss)	

In addition to the total operational expenses, we also need to account for any debt obligations on the project. After accounting for expenses, consider the Debt Service payment or other payments you may be making.

The product of net operating income (NOI) less the required debt service payment represents the project's net cash flow. Sometimes this net cash flow shows profit. Sometimes it goes straight into reserves or to investors. For compliance purposes, you should know where the cash is supposed to go and who gets paid first.

A cash flow model takes this year of income and expense assessment and extrapolates it over time. Lenders typically assume a 2% increase annually on income and a 3% annual increase on expenses. These are standards that account for inflation, rental increases, and general expense volatility over time. However, these rates of increase are just assumptions. When you devise a cash flow model, look at your historical performance or any other market specific intelligence to modify the Lender's standard as needed.

INTRODUCING THE CASH FLOW MODEL

For the purpose of understanding the model, let us follow the Lender standard and show a simple five-year cash flow model. This is a cash flow model for a 10-unit affordable housing building with one commercial space. This model shows us that, with every assumption held fixed, this property will be in the green for the next five years. It will be able to pay its debt service and generate excess cash. In the bottom left, we can predict the total cash flow from all five years to be $19,080.57.

These cells control the assumptions year over year (YOY). Each one affects its applicable row.

	% Increase	Year 1	
EFFECTIVE INCOMES			
Gross Potential Revenue - Residential	2.00%	$110,000	← x 102%
Gross Potential Revenue - Commercial	2.00%	$10,000	← x 102%
Residential Vacancy	5.00%	$5,500	
Commercial Vacancy	10.00%	$1,000	
Effective Gross Income		**$113,500**	
EXPENSES		(–)	
Utilities (Water, Heat, Electric)	3.00%	$15,000	← x 103%
Management Fee	6.50%	$7,378	
Real Estate Tax	3.00%	$25,000	← x 103%
Other Expenses	3.00%	$35,000	← x 103%
Reserve Contributions	0.00%	$2,000	(–)
Total Expenses		**$84,378**	
		(=)	
Net Operating Income (NOI)		**$29,123**	
Debt Service		$25,000	
Total Expenses + Debt Service		$109,378	
Net Cash Flow (NCF)		**$4,123**	(+)
Debt Service Coverage Ratio		1.16	
Income to Expense Ratio		1.04	
Net Cash Flow in 5 years		19,080	

These are vacancies set at 5% of the Gross Potential Revenue. You subtract these from the above values to get the EGI for each year.

Management Fee is typically sized as a % of Effective Gross Income. The 6.5% can be changed to show to how management fee is calculated.

This 0% inflation holds the reserve contributions fixed YOY.

The NOI estimated in your cash flow is typically used to assess how much bank financing your project can leverage.

The sum of your net cash flow over the term of the cash flow model can be used to make decisions about your project.

NOI - Debt Service = Net Cash Flow for each Year

It is worth highlighting that the cash flow is gently declining year over year. We see this in the dollar amount and in the debt service coverage ratio for each individual year. This could indicate that, while this project is solvent for the next five years, it may eventually break even (at 1.00 DSCR) at which point proceeds will go into a cash flow deficit.

Year 2		Year 3		Year 4		Year 5
$112,200	← x 102%	$114,444	← x 102%	$116,733	← x 102%	$119,068
$10,200	← x 102%	$10,404	← x 102%	$10,612	← x 102%	$10,824
$5,610		$5,722		$5,837		$5,953
$1,020		$1,040		$1,061		$1,082
$115,770		**$118,085**		**$120,447**		**$122,856**
(–)		(–)		(–)		(–)
$15,450	← x 103%	$15,914	← x 103%	$16,391	← x 103%	$16,883
$7,525		$7,676		$7,829		$7,986
$25,750	← x 103%	$26,523	← x 103%	$27,318	← x 103%	$28,138
$36,050	← x 103%	$37,132	← x 103%	$38,245	← x 103%	$39,393
$2,000	(–)	$2,000	(–)	$2,000	(–)	$2,000
$86,775		**$89,243**		**$91,784**		**$77,516**
(=)		(=)		(=)		(=)
$28,995		**$28,842**		**$28,664**		**$45,340**
$25,000		$25,000		$25,000		$25,000
$111,775		$114,243		$116,784		$102,516
$3,995	(+)	**$3,842**	(+)	**$3,664**	(+)	**$20,340**
1.16		1.15		1.15		1.14
1.04		1.03		1.03		1.03

Each Effective Gross Income and Total Expense Calculation is based on the cells calculated above it for each individual year.

In this example, that NOI is gently decreasing as the years progress.

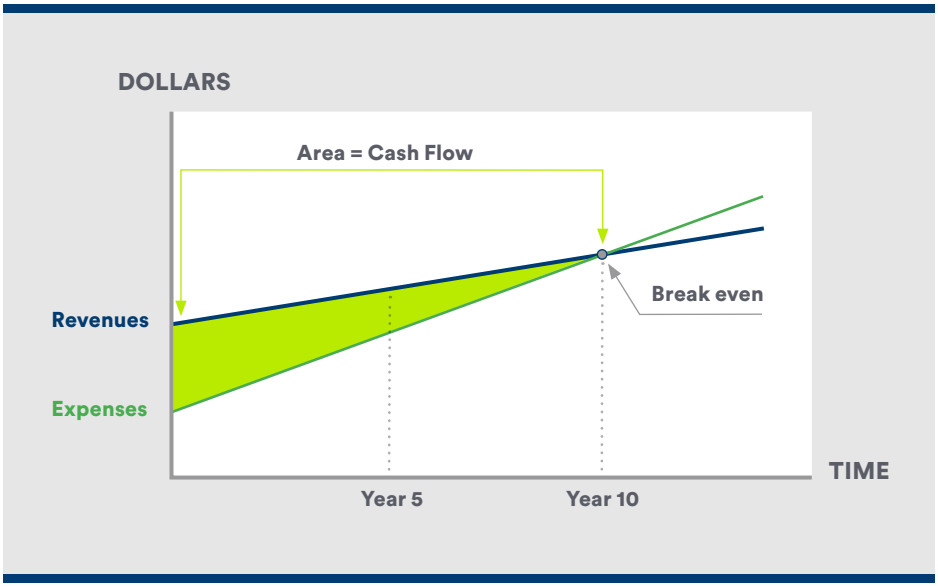
These ratios asses the health of your project for each estimated year. Lenders typically want to see a DCR of 1.15 and an Income to Expense Ratio of 1.05 minimum.

These Income and Expense ratios and Debt service coverage ratios are going down as NOI goes down.

GRAPHING CASH FLOW

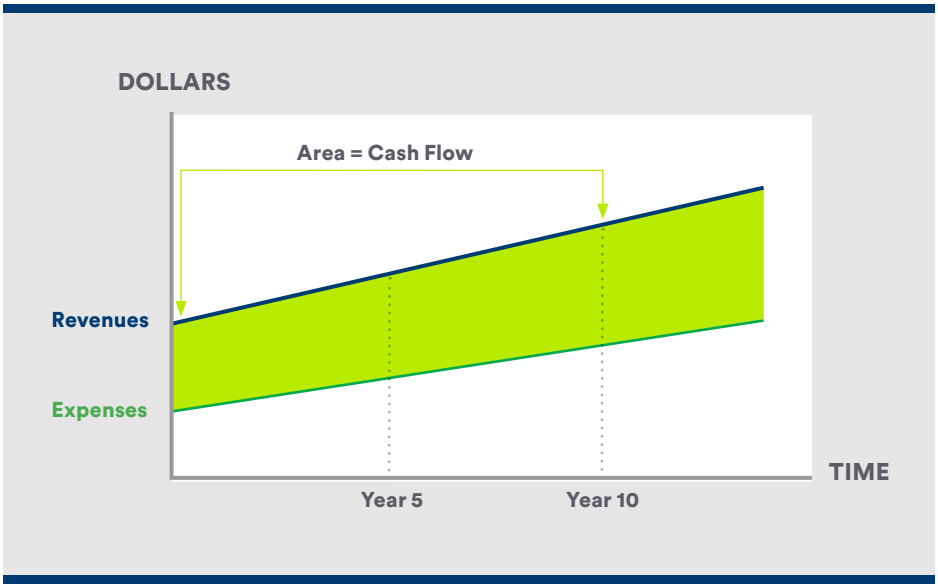
Another way to think about a cash flow model is shown below. On the x axis is Time in years and on the y axis are Dollar values. These two lines both increase at different rates. One represents revenues and the other represents expenses. The area in between, shown as a triangle below represents total cash over time. For any given year, the value of the revenue line minus the value of the expense line is equal to the cash flow (or the difference between the two lines).

In the graph below, since the lines are increasing at different rates, both lines will intersect in Year 10. This is a break-even year and is not a good event in real estate because it eliminates any excess cash flow. In subsequent years, without any intervention, it is likely that expenses will begin to exceed revenues and your project will reflect a cash flow deficit.



Some projects, when graphed as below have revenue that far exceed expenses and they increase at similar rates. For these projects, there isn't a break even point. The project instead forms a rectangle where a break event point will not occur.

You can use the cash flow model or the graphed visualization to think about how to optimize your cash flow. The goal is always to make the cash flow area bigger. Knowing this information can help you understand the current timeline of your financing.



Lenders typically use two ratios to assess the financial health of a project. The cash flow model template in the Think BIG Toolkit will immediately calculate both ratios for your review.

Debt Service Coverage Ratio
This is the ratio of your net operating income (NOI) to your annual debt service. Lenders typically want to see a DSCR of 1.25, meaning that your NOI is 125% higher than your debt payments.

Income To Expense Ratio
This is the ratio of your total income to the sum of all your expenses and debt service. Lenders typically want to see an I/E ratio of at least 1.05, meaning income is 105% higher than the sum of all expenses

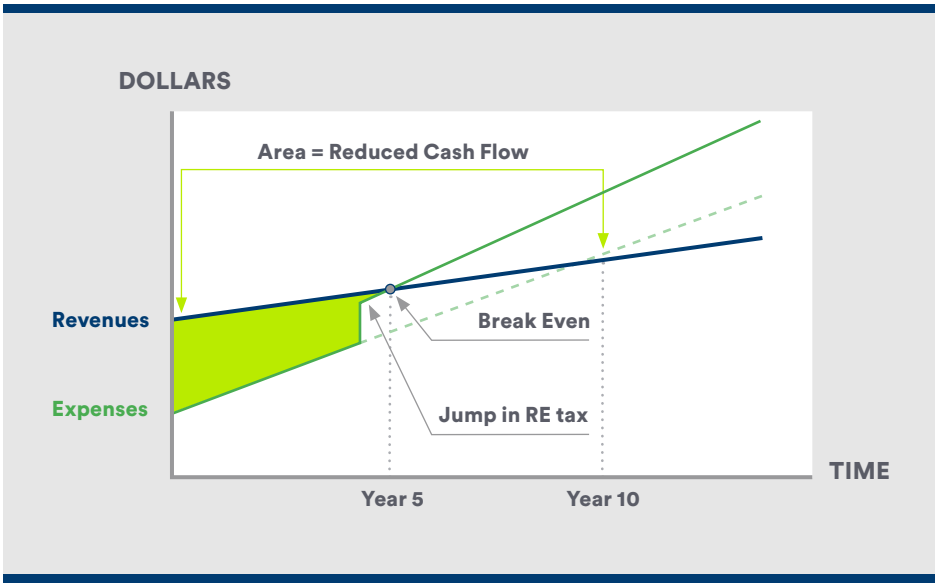
USING CASH FLOW MODELS TO PERFORM SENSITIVITY ANALYSIS

ASSESSING THE IMPACT OF AN EXPIRING TAX EXEMPTION (CASH FLOW ANALYSIS)

Let us revisit the five year cash flow model, On the next page, this model shows all of the revenues and expenses trended out from Year 1 to Year 5. You may note that the real estate tax in Year 1 is zero dollars. This indicates the project has a real estate tax exemption. If the tax exemption expires in three years, the real estate tax liability will not actually be zero in years 4 and 5.

By making changes within the model to the RE tax from year 4 and beyond, we can assess how the larger tax liability will affect the cash flow of the project. With the information from a tax bill, we can estimate that the full tax liability beginning in year 4 will be $5,250. Now it is clear how operating expenses will increase starting in year 4, reducing the net cash flow moving forward.

	% Increase	Year 1	Year 2	Year 3	Year 4	Year 5
EFFECTIVE INCOMES						
Gross Potential Revenue - Residential	2.00%	$110,000	$112,200	$114,444	$116,733	$119,068
Gross Potential Revenue - Commercial	2.00%	$10,000	$10,200	$10,404	$10,612	$10,824
Residential Vacancy	5.00%	$5,500	$5,610	$5,722	$5,837	$5,953
Commercial Vacancy	10.00%	$1,000	$1,020	$1,040	$1,061	$1,082
Effective Gross Income		**$113,500**	**$115,770**	**$118,085**	**$120,447**	**$122,856**
EXPENSES						
Utilities (Water, Heat, Electric)	3.00%	$25,000	$25,750	$26,523	$27,318	$28,138
Management Fee	7.00%	$7,945	$8,104	$8,266	$8,431	$8,600
Real Estate Tax	3.00%	$0	$0	$0	$5,250	$5,408
Other Expenses	3.00%	$47,000	$48,410	$49,862	$51,358	$52,899
Reserve Contributions	0.00%	$3,000	$3,000	$3,000	$3,000	$3,000
Total Expenses		**$82,945**	**$85,264**	**$87,651**	**$95,358**	**$98,044**
Net Operating Income (NOI)		**$30,555**	**$30,506**	**$30,435**	**$25,089**	**$24,812**
Debt Service		$25,000	$25,000	$25,000	$25,000	$25,000
Total Expenses + Debt Service		$107,945	$110,264	$112,651	$120,358	$123,044
Net Cash Flow (NCF)		**$5,555**	**$5,506**	**$5,435**	**$89**	**-$18 8**
Debt Service Coverage Ratio		1.22	1.22	1.22	1.00	0.99
Income to Expense Ratio		1.05	1.05	1.05	1.00	1.00
Net Cash Flow in 5 years		16,397.18				



CASH FLOW TAX ADJUSTMENT

The original graph of the revenue and expenses shows a break even point in Year 10. However, the actual tax exemption will spike expenses in Year 4, accelerating the break even point to Year 5.

ASSESSING AN IMPROVEMENT IN COLLECTIONS

On the following two pages, let's look at another cash flow model to assess how changing revenue or expense assumptions affects net cash flow. The 20-year cash model on the top of the opposing page is abridged but shows Years 1 and 2 and jumps to Years 18, 19, and 20. It shows revenues with a residential vacancy rate of 9%. Using information about the project, this vacancy rate was set based on the historical performance of the associated building.

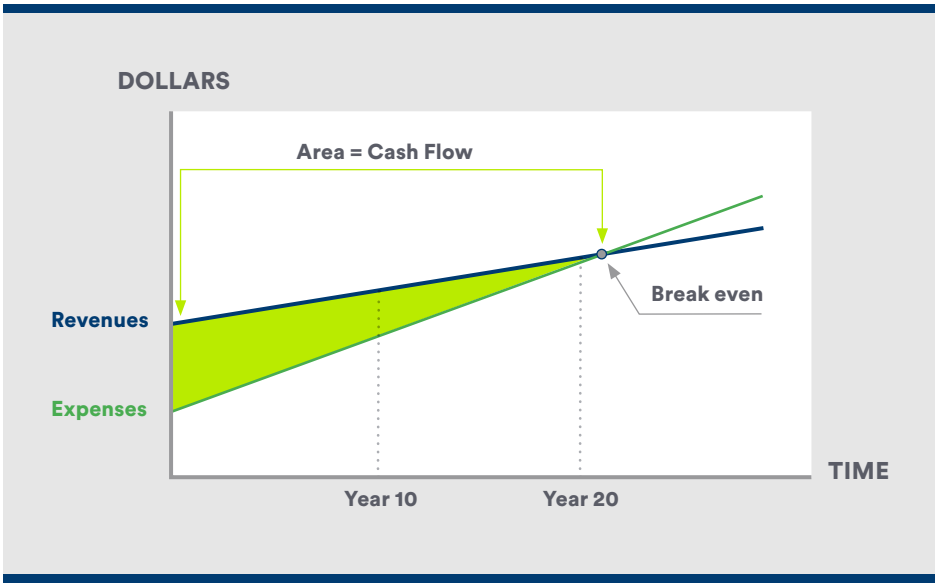
To determine how an improvement to the collections (alternately, a reduction in vacancy) would improve the project's performance over time, we can modify this element. The improved vacancy model on the opposing page shows the same revenues but with a 5% vacancy allowance applied.

Making just this one change to the model increases net cash flow for any individual year. The cumulative net cash flow across 20 years increases from $28,211.23 to $57,405.89. An improvement in vacancy from 9% to 5% will result in $29,194, or a 103% increase in dollars from the current performance.

The graphic visualization also shows the increased net cash flow. Because we improved collections overall, the entire revenue line has shifted up, creating increased area for total cash flow. Additionally, the break-even point here has moved further from Year 18 to a year beyond the model's 20 year horizon.

ORIGINAL

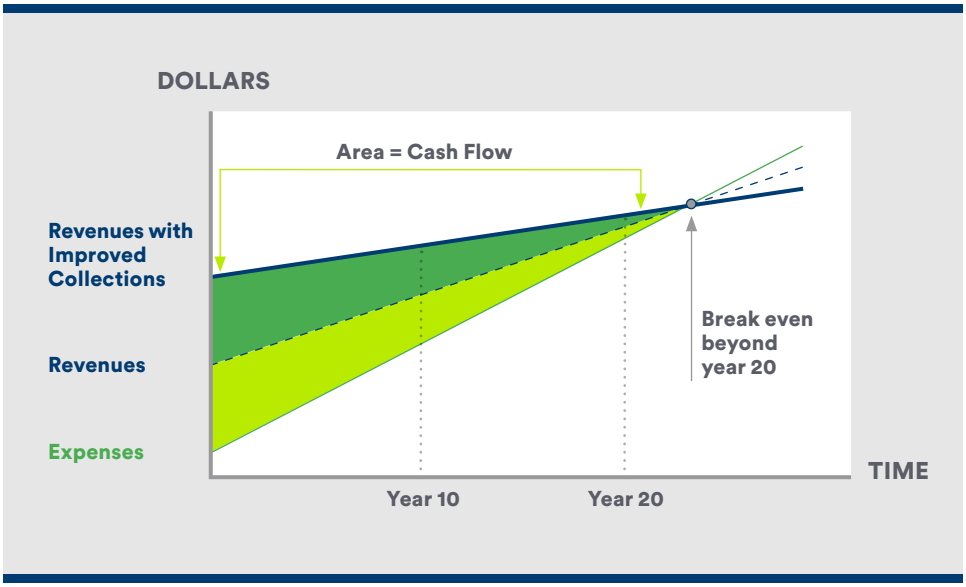
The area of the green triangle bounded by the revenue and expense line represents the total cash flow for the project over time. The break even point, or year where there is no excess cash, is past Year 20.



	% Increase	Year 1	Year 2 ...	Year 18	Year 19	Year 20
EFFECTIVE INCOMES						
Gross Potential Revenue - Residential	2.00%	$150,000	$153,000	$210,036	$214,237	$218,522
Gross Potential Revenue - Commercial	2.00%	$0	$0	$0	$0	$0
Residential Vacancy	9.00%	$13,500	$13,770	$18,903	$19,281	$19,667
Commercial Vacancy	10.00%	$0	$0	$0	$0	$0
Effective Gross Income		**$136,500**	**$139,230**	**$191,133**	**$194,956**	$198,855
EXPENSES						
Utilities (Water, Heat, Electric)	3.00%	$25,000	$25,750	$41,321	$42,561	$43,838
Management Fee	6.50%	$8,873	$9,050	$12,424	$12,672	$12,926
Real Estate Tax	3.00%	$12,000	$12,360	$19,834	$20,429	$21,042
Other Expenses	3.00%	$47,000	$48,410	$77,684	$80,014	$82,415
Reserve Contributions	0.00%	$3,000	$3,000	$3,000	$3,000	$3,000
Total Expenses		**$95,873**	**$98,570**	**$154,263**	**$158,676**	$163,220
Net Operating Income (NOI)		**$40,628**	**$40,660**	**$36,870**	**$36,279**	$35,635
Debt Service		$35,000	$35,000	$35,000	$35,000	$35,000
Total Expenses + Debt Service		$130,873	$133,570	$189,263	$193,676	$198,220
Net Cash Flow (NCF)		**$5,628**	**$5,660**	**$1,870**	**$1,279**	$635
Debt Service Coverage Ratio		1.16	1.16	1.05	1.04	1.02
Income to Expense Ratio		1.04	1.04	1.01	1.01	1.00
Net Cash Flow in 5 years		83,901.11				

IMPROVED VACANCY

When the revenue is increased through improved collections, the area of the original light green triangle is expanded to include the area of the dark green triangle. The revenue line has shifted up so the break even point is pushed out even further.



	% Increase	Year 1	Year 2 ...	Year 18	Year 19	Year 20
EFFECTIVE INCOMES						
Gross Potential Revenue - Residential	2.00%	$150,000	$153,000	$210,036	$214,237	$218,522
Gross Potential Revenue - Commercial	2.00%	$0	$0	$0	$0	$0
Residential Vacancy	5.00%	$7,500	$7,650	$10,502	$10,712	$10,926
Commercial Vacancy	10.00%	$0	$0	$0	$0	$0
Effective Gross Income		**$142,500**	**$145,350**	**$199,534**	**$203,525**	**$207,596**
EXPENSES						
Utilities (Water, Heat, Electric)	3.00%	$25,000	$25,750	$41,321	$42,561	$43,838
Management Fee	6.50%	$9,263	$9,448	$12,970	$13,229	$13,494
Real Estate Tax	3.00%	$12,000	$12,360	$19,834	$20,429	$21,042
Other Expenses	3.00%	$47,000	$48,410	$77,684	$80,014	$82,415
Reserve Contributions	0.00%	$3,000	$3,000	$3,000	$3,000	$3,000
Total Expenses		**$96,263**	**$98,968**	**$154,809**	**$159,234**	**$163,788**
Net Operating Income (NOI)		$46,238	$46,382	$44,725	$44,292	$43,807
Debt Service		$35,000	$35,000	$35,000	$35,000	$35,000
Total Expenses + Debt Service		$131,263	$133,968	$189,809	$194,234	$198,788
Net Cash Flow (NCF)		**$11,238**	**$11,382**	**$9,725**	**$9,292**	**$8,807**
Debt Service Coverage Ratio		1.32	1.33	1.28	1.27	1.25
Income to Expense Ratio		1.09	1.08	1.05	1.05	1.04
Net Cash Flow in 5 years		220,209.35				

MAKING DECISIONS ABOUT YOUR PROJECTS

We can use a similar analysis to decide if it makes sense to invest capital into properties as well.

As an owner with a business plan, you can set the number of years you want to take to recoup an investment. The typical owner horizon for a return on investment is 5-7 years. Lenders typically look at return on investment horizons of 10-12 years.

For whatever time horizon you set, you want to ensure you can recoup the upfront investment required through improvement to cash flow (or inflows) over that time horizon. You can use this analysis to make decisions about your property. For example, use this method when deciding whether to make sustainability upgrades at properties.

In your current scenario, you make no sustainability investments in your property and you receive no savings. Your net benefit is neutral - $0.

SCENARIO 1: NO CHANGE

Outflows Year Over 10 years	Inflows Over 10 Years
• No investment	• No savings

Let's assume you can make $200,000 worth of sustainability upgrades to your project. If the outflow exceed inflows from savings on expenses, the sustainability costs at their current pricing may not be a viable investment right now.

SCENARIO 2: MAKING AN INVESTMENT IN SUSTAINABILITY

Outflows Over 10 Years	Inflows Over 10 Years
• Cost to Make Improvements - $100,000	• Additional cash flow attributed to savings from sustainability upgrades (You can use the cash flow model for this) = +$50,000

In Scenario 2, the net benefit of making an investment in sustainability is not worthwhile. You end up with -$50,000.

When performing a cost benefit analysis, it is important to understand how inflows of cash impact your outflows and vice versa. If you are missing information about the effects of capital infusion, your analysis may not be sound. For instance, due to carbon regulation, Scenario 1 might not be realistic if you begin to receive annual fines associated with your carbon output. Scenario 1 would then become Scenario 3, wherein you are -$100,000 in the red over the 10 year time horizon. Scenario 2 becomes more attractive, comparatively.

SCENARIO 3: PENALTIES FOR NO CHANGE

Outflows Over 10 Years	Inflows Over 10 Years
• No Investments	• Penalties -$100,000

Discounted cash flow analysis is a valuation method that helps assess the benefit of infusing capital into your project. It shows how quickly you can recoup that money over time, considering the time value of money (e.g., a dollar today is worth more than a dollar tomorrow). For the purposes of decision making, we are not assessing returns on an investment. We are only looking at how quickly you can be paid back by looking at inflows and outflows of cash.

BEFORE SUSTAINABILITY WORK

Let us map out a different project making the same choice about sustainability over a 10-year time horizon. The model to the right shows the as-is scenario.

	Year 1	Year 2	Year 3
EFFECTIVE INCOMES			
Gross Potential Revenue - Residential	$850,000	$867,000	$884,340
Residential Vacancy	$42,500	$43,350	$44,217
Effective Gross Income	**$807,500**	**$823,650**	**$840,213**
EXPENSES			
Utilities (Water, Heat, Electric)	$200,000	$206,000	$212,180
All other expenses, tax, and contributions	$400,000	$412,000	$424,360
Total Expenses	**$600,000**	**$618,000**	**$636,540**
Net Operating Income (NOI)	**$207,500**	**$205,650**	**$203,583**
Debt Service	$150,000	$150,000	$150,000
Total Expenses + Debt Service	$750,000	$768,000	$786,540
Net Cash Flow (NCF)	**$57,500**	**$55,650**	**$53,583**
Debt Service Coverage Ratio	1.38	1.37	1.36
Income to Expense Ratio	1.08	1.07	1.07
Net Cash Flow in 10 years	**$463,572**		

AFTER SUSTAINABILITY WORK

If your energy consultant told you to expect a 10% reduction in utility expenses YOY, this can modify your expense assumptions from the as-is scenario. You may take the difference in NOI as-is versus including the sustainability upgrades for each year.

	Year 1	Year 2	Year 3
EFFECTIVE INCOMES			
Gross Potential Revenue - Residential	$850,000	$867,000	$884,340
Residential Vacancy	$42,500	$43,350	$44,217
Effective Gross Income	**$807,500**	**$823,650**	**$840,123**
EXPENSES			
Utilities (Water, Heat, Electric)	$180,000	$185,400	$190,962
All other expenses, tax, and contributions	$400,000	$412,000	$424,360
Total Expenses	**$580,000**	**$597,400**	**$615,322**
Net Operating Income (NOI)	**$227,500**	**$226,250**	**$224,801**
Debt Service	$150,000	$150,000	$150,000
Total Expenses + Debt Service	$730,000	$747,400	$765,322
Net Cash Flow (NCF)	**$77,500**	**$76,250**	**$74,801**
Debt Service Coverage Ratio	1.52	1.51	1.50
Income to Expense Ratio	1.11	1.10	1.10
Net Cash Flow in 10 years	**$692,850**		
Additional Cash Added from Status Quo	**$229,278**		
Cost to Complete Work	**-$200,000**		
Net Benefit	**$29,278**		

The net cash flow in the as-is scenario versus the sustainable scenario increases by $229, 278. Let's assume you did $200,000 of work. Your net benefit is $29,278.

Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
$902,027	$920,067	$938,469	$957,238	$976,383	$995,910	$1,015,829
$45,101	$46,003	$46,923	$47,862	$48,819	$49,796	$50,791
$856,925	**$874,064**	**$891,545**	**$909,376**	**$927,564**	**$946,115**	**$965,037**
$218,545	$225,102	$231,855	$238,810	$245,975	$253,354	$260,955
$437,091	$450,204	$463,710	$477,621	$491,950	$506,708	$521,909
$655,636	**$675,305**	**$695,564**	**$716,431**	**$737,924**	**$760,062**	**$782,864**
$201,289	**$198,759**	**$195,981**	**$192,945**	**$189,639**	**$186,053**	**$182,173**
$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000
$805,636	$825,305	$845,564	$866,431	$887,924	$910,062	$932,864
$51,289	**$48,759**	**$45,981**	**$42,945**	**$39,639**	**$36,053**	**$32,173**
1.34	1.33	1.31	1.29	1.26	1.24	1.21
1.06	1.06	1.05	1.05	1.04	1.04	1.03

Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
$902,027	$920,067	$938,469	$957,238	$976,383	$995,910	$1,015,829
$45,101	$46,923	$46,923	$47,862	$48,819	$49,796	$50,791
$856,925	**$874,064**	**$891,545**	**$909,376**	**$927,564**	**$946,115**	**$965,037**
$196,691	$202,592	$208,669	$214,929	$221,377	$228,019	$234,859
$437,091	$450,204	$463,710	$477,621	$491,950	$506,708	$521,909
$633,782	**$652,795**	**$672,379**	**$692,550**	**$713,327**	**$734,727**	**$756,768**
$223,144	**$221,269**	**$219,166**	**$216,826**	**$214,237**	**$211,388**	**$208,269**
$150,000	$150,000	$150,000	$150,000	$150,000	$150,000	$150,000
$783,782	$802,795	$822,379	$842,550	$863,327	$884,727	$906,768
$73,144	**$71,269**	**$69,166**	**$66,826**	**$64,237**	**$61,388**	**$58,269**
1.49	1.48	1.46	1.45	1.43	1.41	1.39
1.09	1.09	1.08	1.08	1.07	1.07	1.06

DECIDING WHEN TO REFINANCE

The cash flow model is of particular importance when deciding to refinance a property. You need to weigh the cost of time and capital against potential savings to long-term cash flow opportunities. Many factors impact this decision such as transaction costs, loan pricing, terms and potential prepayment penalties. Work with your Lender to get a quote on your potential refinance options and assess each of these variables to inform your decision.

Outflows Upon Refinance in Year 0	Inflows Over Term of Loan
• Transaction Costs *(Legal, bank fees, third party reports)*	• Tapped equity borrower may recoup with a refinance in Year 0
• Prepayment penalty associated with existing financing	• Potential savings on debt service payments *(if any associated with new financing)*

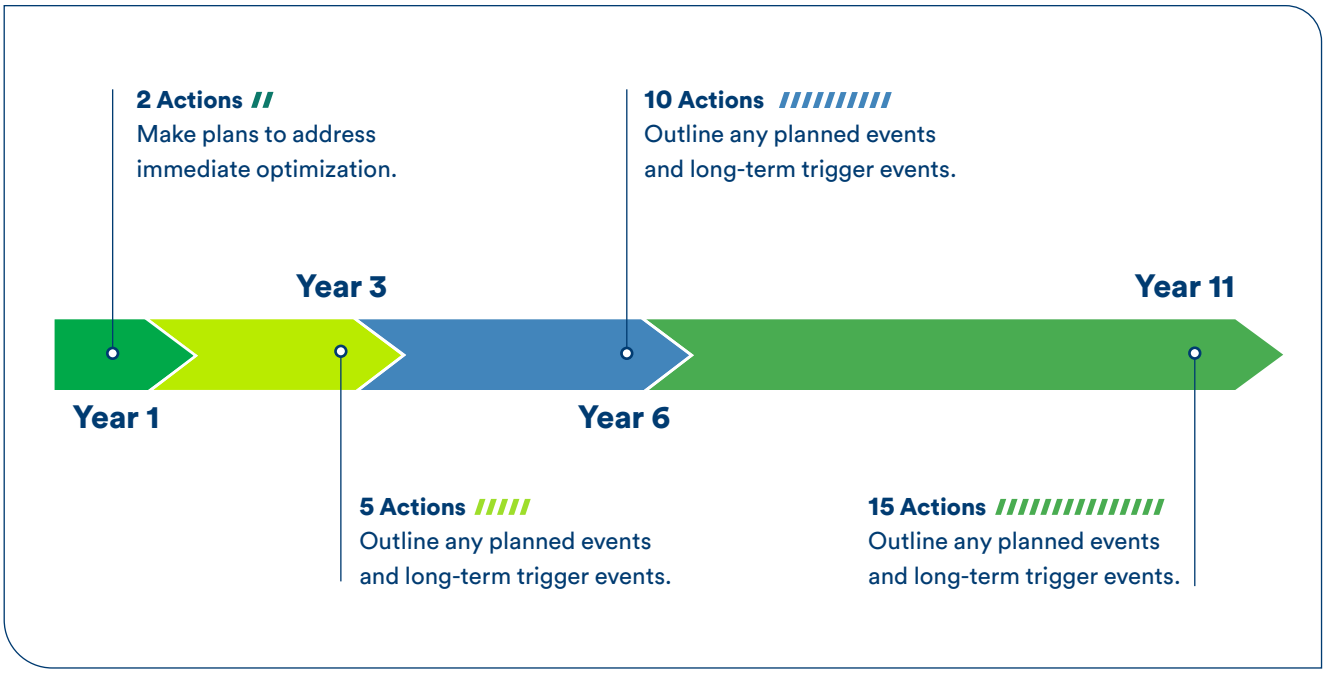
In the case study, look at the owner's analysis that helped them decide when to refinance. This section shows you the decision based on the time and expenses associated with a refinance.

SHOULD I CONSOLIDATE MY PROJECTS?

Deciding when to consolidate your projects depends on the overall benefit to those projects and to you as the owner. Look at the sum of the cash flow in a consolidated scenario versus the sum of the cash flow as three separate projects. However, consolidation is not just a financial choice. When considering consolidation, look at geographical proximity to each other, shared management, tenancy type and age of last renovation. You may have one strong project and two average projects all in the same neighborhood with the same management company. It might make sense for you to subsidize the two lower performing buildings with the higher performing buildings to realize an economy of scale and boost overall performance. However, if one of these buildings is supportive housing and has different regulatory, compliance, and security requirements, it might not be a candidate for a consolidation. Speak with your mortgage officer and use the cash flow model tool to help determine if your various projects are good candidates for a portfolio consolidation.

PUTTING IT ALL TOGETHER

Once you have made specific choices about your property and you have your trigger calendar, you can begin to put it all together.



Once you outline all sections, you have a long-term portfolio plan. Creating a long term portfolio strategy means thinking about the right time to implement major changes to your portfolio, forecasting potential issues down the line, and getting ahead of potential problems. It also offers you the macro-opportunity to look for bundling, concurrences, and economies of scale that will help further optimize expenses.

For instance, if there is work that needs to get done in years 4-5, negotiate with a contractor for reduced pricing for the year 4 work by committing to contract with them for the following year's work.

You can also look at portfolio consolidations, wherein you have three loans all maturing within the same time frame. You may be able to consolidate those into one project. If not consolidating, you still may be able to negotiate better pricing with your Lender or your vendors by committing to working with them on all three projects.

CASE STUDY

INTRODUCTION

Scion Partners is a growing real estate investment firm managing a diverse portfolio of seven properties, primarily focused on affordable residential and mixed-use developments in the Hudson Valley of New York State. Committed to maximizing returns and enhancing tenant experiences, Scion Partners seeks to assess and optimize the performance of their portfolio through the structured evaluation process outlined in the Think BIG guide.

Given the time and capital investment needed, they will not complete a full analysis of their entire portfolio but will look into a sample of their properties.

The following three properties were selected for the assessment based on their diversity in type and location, as well as historical performance metrics:

1. **Refi Manor** (Residential, 28 units)
2. **Savings Hill** (Mixed-Use, 85 units)
3. **Seniors on Fifth** (Residential, 50 units)

STEP 1: GET FAMILIAR WITH THE ONLINE TOOL

You can find Scion Partners' completed Think BIG Toolkit here online at the CPC website.

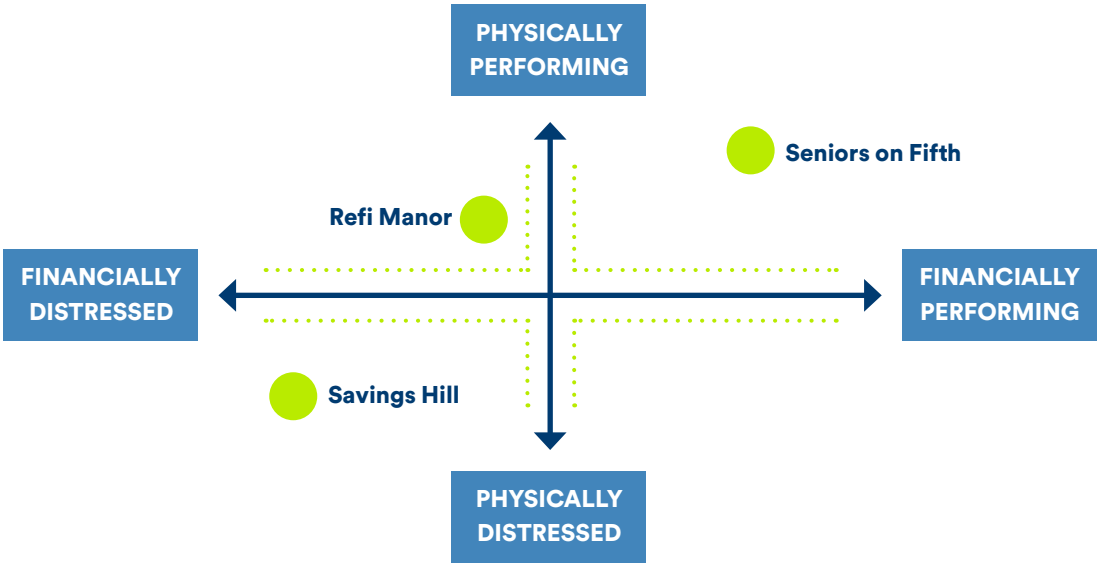
Within the text of the Tool, there are comments added showing where Scion Partners found information about their three projects and how they analyzed the information provided to finalize their immediate action items and long-term plan. The case study sheds light on real-world issues and regulations that may come up when assessing project performance and will help flesh out the main text in the guide. It will also outline the flexibility and choice that exists for borrowers undertaking this work.

STEP 2: ANALYZING SCION PARTNERS PORTFOLIO

After completing the Toolkit for each project, Scion placed each project on the spectrum for financial performance. They used the following indicators based on their business model: **Collections %, income to expense ratio, and utility consumption (under or overperforming). They decided that properties had to be performing above 95% collections, have an income expense ratio above 1.06, and have utility consumption below the Hudson Valley CPC standard to be considered highly financially performing**. If they only met two of the thresholds, Scion ranked them in the middle. If they did not perform on any of the three factors, they were considered financially distressed.

For Scion's physical assessment, they set similar thresholds. **They wanted the property to have no more than 0.5 violations per unit, no more than 1 issue flagged in the checklist from their walk through and must have been renovated no more than 15 years ago to be considered physically performing.** If the project only met two of these items, they put one at a more neutral location. If it had only one or none, it was considered physically distressed.

When they put these assessments together on the matrix, they had the following placements:



STEP 3: IDENTIFY ISSUES AND SUCCESSES

Analyzing the data revealed trends:

- **High Performers:** Seniors on Fifth showed low turnover and high tenant satisfaction, driven by effective management and updated amenities. This is a newer electrified building.
- **Low Performers:** Savings Hill struggled with poor collections, attributed to maintenance issues in units and communication issues with tenants.
- **Energy Inefficiencies:** Refi Manor had a higher than usual water expense. Both Refi Manor and Savings Hill also exhibited higher-than-average energy costs, highlighting opportunities for efficiency improvements.

STEP 4: IDENTIFY ACTION ITEMS

- **Immediate Fixes:** Scion determined that Refi Manor had a water expense spike and had their plumber immediately go out and investigate the issue. They discovered multiple leaking showerheads and multiple running toilets as part of their analysis, all of which were fixed.
- **Reserve Capitalization:** While Seniors on Fifth was in great condition and cash flowing healthily, Scion determined during the benchmarking analysis that the reserve contributions were not where they needed to be. They implemented a reserve capitalization plan for this project using excess cash flow.
- **Deferred Maintenance:** At Savings Hill, the owner worked with property management to hold a tenant meeting and establish a work maintenance request system. The hope being to streamline communication channels between management and tenants to enhance engagement and reduce turnover.
- **Sustainable Upgrades:** Scion Partners determined that expenses for utilities were much higher than typical for Savings Hill and Refi Manor. They engaged with an energy audit vendor to complete an analysis of upgrades. Since they were fixing showerheads and toilets at Refi Manor already, sustainable upgrades. They completed other low cost/no cost upgrades such as lighting and weather stripping in both properties.

STEP 5: RECOMMEND SOLUTIONS

Scion Partners developed an actionable strategic plan for the next five years based on their analysis:

- **Look for Refinances:** Using the cash flow analysis model and the deal book information, Scion recognized that Refi Manor paid a high rate of debt service and required a modest amount of work. The UPB of their current loan was low enough that they could unlock equity. They have a prepayment penalty that will fall off in two years. Given this, they are planning to refinance this project in exactly two years. They have reached out to their Lender to begin predevelopment now.

- **Optimize Portfolio:** Using the cash flow model, they determined that the financial distress at Savings Hill was coming from collections issues and inefficiencies. They set a three-year plan to improve collections at the property with a focus on handling tenant issues and streamlining communications. For tenants with income issues, they have set up a housing assistance line to connect tenants with resources for vouchers.

- **Anticipate Trigger Events:** They determined that both Savings Hill and Seniors on Fifth would be subject to Local Law Inspections on their façade and parapet in five years. Since this is a large expense, they set up a reserve payment plan to set aside money from the cash flow monthly, ensuring they can afford these inspections when they are due.

- **Get Ahead of Issues:** Scion reached out to their Lender after creating their long-term plan to get additional insight and explore product options. The Lender offered suggestions to ensure that they were ready for decarbonization standards that New York State was rolling out over the next five years. They will be able to apply to incentive programs for their properties and can even utilize incentive funds simultaneous to their refinance at Refi Manor.

CONCLUSION

Through a structured assessment process, Scion Partners identified key opportunities to enhance the performance of their selected properties. By collecting and analyzing data, benchmarking performance, and addressing identified issues, the firm can optimize tenant experiences, stabilize cash flow, and increase property values. This strategic plan will guide Scion Partners in achieving their long-term investment goals while enhancing the overall efficiency of their portfolio.

APPENDIX

IN THIS SECTION

USING THE TOOL

This is designed to work with the new **CPC Think BIG Toolkit** that can be **downloaded** on the CPC website. The Toolkit follows the steps outlined here and will generate sections for you to fill in information as needed. More instructions around how to use the Toolkit are available on the site as well.

APPENDIX A:

SUSTAINABILITY RESOURCES

This non-comprehensive list provided resources to help you begin thinking about sustainability. These products and incentives are subject to change.

ENERGY CONSUMPTION BENCHMARKING AND CARBON FOOTPRINTING

- EPA Introduction to Benchmarking and Portfolio Manager: Benchmark Your Building With Portfolio Manager | ENERGY STA
- EPA Portfolio Manager: ENERGY STAR Portfolio Manager: Login
- DOE Building Energy Use Benchmarking: Building Energy Use Benchmarking | Department of Energy
- NYC DOE Benchmarking/LL84: Benchmarking and Energy Efficiency Rating - Buildings
- PCAF Methodology – disclosing greenhouse gas emissions associated with financial activities: Enabling financial institutions to assess and disclose greenhouse gas emissions associated with financial activities

CPC RESOURCES

- Underwriting Energy Efficiency Handbook: Underwriting Efficiency Handbook - Community Preservation Corporation
- Financing High Performance Guide: Financing High-Performance - Community Preservation Corporation
- CPC Climate Capital: Climate Capital - Community Preservation Corporation
- Climate United: Climate United
- Climate Friendly Homes Fund: Climate Friendly Homes Fund - Community Preservation Corporation

INFLATION REDUCTION ACT (IRA) INCENTIVES AND REBATES

- Rewiring America Guide to the IRA: Your guide to the Inflation Reduction Act — Rewiring America
- Rewiring America Savings Calculator: Household electrification incentives calculator from Rewiring America
- IRA Fact Sheets: IRA Fact Sheets — Rewiring America
- Credits and deductions under the IRS

CLEAN ENERGY INCENTIVES AND REBATES

- NY-Sun: NY-Sun Solar Program - NYSERDA
- Solar for All: Solar for All | US EPA
- IRA Incentives for Homeowners: Inflation Reduction Act: Homeowners - NYSERDA
- Guide to Community Solar: A Guide to Community Solar: Utility, Private, and Non-Profit Project Development (Book), Energy Efficiency & Renewable Energy (EERE) (nrel.gov)
- NREL List of Community Solar Programs: Sharing the Sun Community Solar Project Data (December 2021) | NREL Data Catalog
- Find a contractor that can install solar in your home: Find a Residential Solar Contractor - NYSERDA
- Enterprise Green Communities Green Funding and Resources Guide

APPENDIX B:

USEFUL LIFE OF SYSTEMS

These Estimated Useful Life Tables for multifamily property systems and components are intended to represent standardized average estimated useful life ("EUL") values and should not be relied on for purposes of scoping or repairs without guidance from a professional vendor.

SYSTEMS & COMPONENTS (SITE & BUILDING)	Estimated Useful Life (EUL*) (Years)
SITE SYSTEMS	
PAVING, CURBS, HARDSCAPING & COVER	
Asphalt pavement	25
Asphalt seal coat	5
Concrete pavement	50
Curbing, asphalt	25
Curbing, concrete	50
Parking stall, striping	5
Parking, gravel surfaced	15
Sidewalk, asphalt	25
Sidewalk, brick paver	30
Sidewalk, concrete	50
Gravel	15

SITE DRAINAGE & STORMWATER	
Catch basins, inlets, culverts	50
Marine or stormwater bulkhead	35
Earthwork swales, drainways, erosion controls	50
Storm drain lines	50
Stormwater management ponds	50
Fountains, pond aerators	15

SITE ACCESSORIES	
Signage, roadway/parking/monument	15
Mail kiosk	10 to 15
Mail facility (interior)	20

SITE APPURTENANCES & MISC. STRUCTURES	
Carports, wood frame	30 to 40
Carports, metal frame	40
Canopy, concrete	50
Canopy, wood/metal	40
Garages	50

SYSTEMS & COMPONENTS (SITE & BUILDING)	Estimated Useful Life (EUL*) (Years)
SITE SYSTEMS	
Storage sheds	30
Penthouse mechanical room	50

SITE LIGHTING	
Building mounted exterior lighting	10
Building mounted high intensity discharge lighting (HIDs)	10
Lighting (pole mounted)	25
Ground lighting	10

FENCING & RETAINING WALLS	
Bulkhead (barrier)/partition wall/embankment	10
Fencing, chain link	40
Fencing, concrete masonry unit (CMU)	30
Fencing, dumpster enclosure (wood)	12
Fencing, PVC	15 to 25
Fencing, steel or aluminum	20
Fencing, tennis court, chain link	40
Fencing, wood privacy	15
Fencing, wrought iron, decorative	50 to 60
Security gate (site ingress/egress) - rolling gate/lift arm	10 to 15
Retaining walls (80 LB block type)	50 to 60
Retaining walls, CMU w. brick face	40
Retaining walls, timber (railroad tie)	25 to 30

RECREATIONAL FACILITIES / SITE AMENITIES	
Sport court - asphalt	25
Sport court - synthetic	15
Sport court - hardwood	50
Tot Lot (playground equipment)	10
Tot Lot (loose ground cover)	2 to 3

SYSTEMS & COMPONENTS (SITE & BUILDING)	Estimated Useful Life (EUL*) (Years)
SITE SYSTEMS	
RECREATIONAL FACILITIES / SITE AMENITIES	
Pool deck	15
Pool/spa plastic liner	8
Pool/spa pumps and equipment	10
Decks-treated lumber	20
Decks - composite	50
Basketball court	25
Tennis court (acrylic emulsion)	10
Tennis court/basketball court surface (paint markings)	5
SITE UTILITIES	
Water mains/valves	50
Water tower	50
Irrigation system	25
Electric distribution center	40
Electric distribution lines	40
Transformer	30
Emergency generator	25
Solar photovoltaic panels	15
Photovoltaic inverters	10
Gas main	40
Gas supply lines	40
Site propane, storage and distribution	35
Gas lights/fire pits	20
Sanitary sewer lines	50
Sanitary waste treatment system	40
Lift station	50
SANITATION EQUIPMENT	
Dumpsters	10 to 15
Compactors (exterior, commercial grade)	15 to 20
Recycling containers/equipment	15
Composting, organic recycling equipment	10

SYSTEMS & COMPONENTS (SITE & BUILDING)	Estimated Useful Life (EUL*) (Years)
BUILDING FRAME & ENVELOPE	
FOUNDATION	
Slab, reinforced concrete	100
Slab, post tensioned	100
Continuous reinforced concrete footer and CMU stem wall	100
Piers, reinforced concrete footer and CMU pier	100
Piers, treated timber post/pole	40
Foundation waterproofing	40 to 50
Foundation suction, drainage, groundwater, radon gas controls, pumps, sumps, equipment, failure alarms	10
Foundations	50
FRAMING	
Brick or block	40
Precast concrete panel (tilt up)	40
Wood floor frame	50
Wood, timbers, dimensioned lumber, laminated beams/trusses	100
Tie downs, clips, straps, hangers, shear walls/panels	75
Steel, beams, trusses	100
Reinforced concrete	100
Reinforced masonry, concrete masonry units (CMU)	100
Solid masonry	100
CRAWL SPACES, ENVELOPE, PENETRATIONS	
Sealed crawl space system	40
Vents, screens, covers	30
Vapor barrier (VDR) ground or underfloor	30
Penetrations, caulking/sealing	15
Crawl space, (de)pressuraization, fans, pumps, sumps, equipment failure, alarms	10
ROOF FRAME & SHEATHING	
Wood frame and board or plywood sheathing	75
Tie downs, clips, braces, straps, hangers	75

SYSTEMS & COMPONENTS (SITE & BUILDING)	Estimated Useful Life (EUL*) (Years)
BUILDING FRAME & ENVELOPE	
ROOF FRAME & SHEATHING	
Steel frame and sheet metal or insulated panel sheathing	100
Reinforced concrete deck	100
FLASHING & MOISTURE PROTECTION	
Caulking and sealing	15
Concrete/masonry sealants	10
Wood waterproofing and sealants	10
Building wraps and moisture resistant barriers	50
Paints and stains, exterior	8
ATTICS & EAVES	
Screened gable end or soffit vents	30
Roof vents, passive	40
Roof vents, powered	20
INSULATION	
Loose fill, fiberglass, cellulose, mineral wool	50+
Batts, blankets, rolls, fiber glass, or mineral wool	50+
Rigid foam	50+
Sprayed foam	50+
EXTERIOR STAIRS, RAILS, BALCONIES/PORCHES, CANOPIES	
Exterior stairs, wood frame/stringer	30
Exterior stairs tread-wood	15
Exterior stairs - steel frame/stringer	40
Exterior stair tread - metal, concrete filled	20 to 30
Exterior stairs, concrete	50
Fire escapes, metal	40 to 50
Balcony/porch, wood frame	25
Balcony/porch, steel frame or concrete	40 to 50
Balcony/porch, wood decking	20
Balcony/porch, composite decking	50
Railings, wood	20
Railings, metal	50
Railings, composite	50

SYSTEMS & COMPONENTS (SITE & BUILDING)	Estimated Useful Life (EUL*) (Years)
FACADES OR CURTAINWALL	
SIDEWALL SYSTEMS	
Aluminum siding	40
Brownstone	40
Vinyl siding	25
Cement board siding (hardi-plank)/ cementitious siding	45
Plywood/laminated panels	20
Exterior Insulation Finishing System (EIFS)	20 to 30
Stucco, over wire mesh/lath	50
Precast concrete panel (tiltup)	45
Brick/block veneer	50 to 60
Stone veneer	50
Glass block	40 to 50
Granite block	40
Cedar/redwood shakes, clapboard	20
Pine board, clapboard	20
Metal/glass curtain wall	30
Painting, exterior	5 to 10
WINDOWS	
Wood (dbl, sgl hung, casement, awning, sliders)	35
Wood, fixed pane, picture	40
Aluminum	30 to 35
Vinyl	30
Vinyl/aluminum clad wood	50
Storm/screen windows	7 to 10
EXTERIOR DOORS & ENTRY SYSTEMS	
Unit entry door, exterior, solid wood/metal clad	25
Common exterior door, aluminum and glass	30
Common exterior door, solid wood /metal clad	25
Storm/screen doors	5 to 7
Sliding glass doors & french doors	25
French or atrium doors, wood/metal clad	25
Automatic entry doors	30
Commercial entry systems	50
Overhead door	30
Automatic opener, overhead door	20

SYSTEMS & COMPONENTS (SITE & BUILDING)	Estimated Useful Life (EUL*) (Years)
FACADES OR CURTAINWALL	
EXTERIOR DOORS & ENTRY SYSTEMS	
Service door (roof)	25
Ceilings, open or exterior	30

ROOF SYSTEMS	
SLOPED ROOFS	
Asphalt shingle	20
Metal	40 to 50
Slate shingle	75
Clay/cementitious barrel tile	60
Wood shingle, cedar shakes/shingles	25

LOW SLOPE/FLAT ROOFS	
Low slope-built-up roof, with gravel finish	20
Low slope-built-up roof, no mineral or gravel finish	10
Low slope-adhered rubber membrane, (epdm)	15 to 20
Low slope-thermoplastic membrane, (tpo, vinyl)	15 to 20
Low slope-rubberized/elastomeric white/cool roof	15
Parapet wall	50+
Caps, copings (aluminum/terra-cotta) - parapet	25

ROOF DRAINAGE, ACCESSORIES, TRIM & OTHER	
Roof drainage exterior (gutter/downspout)	10
Roof drainage exterior (gutter/downspout) - aluminum	20
Roof drainage exterior (gutter/downspout) - copper	50
Low-slope roof drains, scuppers	30
Roof drainage interior (drain covers)	30
Roof railing	25
Roof structure	50+
Roof hatch	30
Roof skylight	30
Roof service door	30
Slab	50+
Slate, clay, concrete tile	40
Soffits (wood/stucco)	20

SYSTEMS & COMPONENTS (SITE & BUILDING)	Estimated Useful Life (EUL*) (Years)
ROOF SYSTEMS	
FOUNDATION	
Soffits (aluminum or vinyl)	20 to 25
Wood shingles	25

MECHANICAL & PLUMBING	
WATER SUPPLY & WASTE PIPING	
PVC/CPVC pipe, supply and waste	75
Copper/brass hard pipe, supply	75
Copper tube, supply	50
Galvanized pipe, supply	40
Cast iron sanitary waste	75
Domestic cold water pumps	20
Sewage ejectors	50
Commercial sump pump	15 to 20
Residential sump pump	7 to 15
Water softener/filtration	15

DOMESTIC WATER HEATING	
DHW circulating pumps	15
DHW storage tanks	10 to 15
Exchanger, in tank or boiler	15
External tankless heater, gas or electric	15 to 20
Instantaneous (tankless type)	10
Solar hot water	20
Residential hot water heater, gas or electric	12
Flue, gas water heaters	35
Boilers, oil fired, sectional	25
Boilers, gas fired, sectional	25
Boilers oil/gas dual fuel, low mbh	30
Boilers oil/gas dual fuel, high mbh	40
Boilers, gas fired atmospheric	25
Boilers, electric	20
Boiler blowdown and water treatment	25
Boiler room pipe insulation	25
Boiler room piping	50
Boiler room valves	15 to 25
Boiler temperature controls	15
Heat exchangers	35

SYSTEMS & COMPONENTS (SITE & BUILDING)	Estimated Useful Life (EUL*) (Years)
MECHANICAL & PLUMBING	
FIXTURES	
Faucets & valves	15-20
Bathtubs & sinks, cast iron	75
Bathtubs & sinks, enameled or stainless steel, fiberglass	40
Bathtubs & sinks, porcelain	50
Toilets/bidets/urinals	40 to 50
Flush valves	5 to 10
Tub/shower units or integrated assemblies	20 to 30
CENTRALIZED HEATING/COOLING EQUIPMENT	
Boilers, oil fired, sectional - centralized	25
Boilers, gas fired, sectional - centralized	25
Boilers, oil/gas/dual fuel, low mbh - centralized	30
Boilers, oil/gas/dual fuel, high mbh - centralized	40
Boilers, gas fired atmospheric - centralized	25
Boilers, electric - centralized	20
Boiler blowdown and water treatment - centralized	25
Boiler room pipe insulation - centralized	25
Boiler room piping - centralized	50
Boiler room valves - centralized	25
Boiler temperature controls - centralized	15
Heat exchanger - centralized	35
Combustion air, duct with fixed louvers	30
Combustion air, motor louvers and duct	25
Combustion waste flue	40
Cooling tower	25
Chilling plant	15 to 20
Chilled water distribution	50+
Steam supply station	50
Free standing chimney	50+
CENTRALIZED HEAT/AIR/FUEL DISTRIBUTION	
Fuel oil/propane storage tanks	25 to 40
Remediate/remove abandoned tanks/fuel lines	100

SYSTEMS & COMPONENTS (SITE & BUILDING)	Estimated Useful Life (EUL*) (Years)
MECHANICAL & PLUMBING	
Fuel transfer system	25
Gas/oil distribution lines	50+
Gas meter	40
2 Pipe/4 pipe hydronic distribution - above grade	50
2 Pipe/4 pipe hydronic distribution - in ground	25
Hydronic/water circulating pumps	20
Hydronic/water controller	15 to 20
Radiation-steam/hydronic (baseboard or freestanding radiator)	30 to 50
Fan coil unit, hydronic	30
Central exhaust fans/blowers	15 to 20
DECENTRALIZED AND SPLIT HVAC SYSTEMS	
Electric heat pump, condenser, pad or rooftop	15 to 20
Electric AC condenser, pad or rooftop	15
Electric furnace/air handler	20
Gas furnace/air handler	20
Hydronic heat/electric AC air handler	20 to 25
Hydronic feed electric heat pump/air handler	25
Fan Coil Unit, electric	20
Wall mounted electric/gas heater	20 to 25
Electric baseboard heater	25 to 30
PTAC Thruwall (packaged terminal air conditioning)	15
Window or thruwall air conditioners	10
Package HVAC roof top	15 to 20
Air filtration/humidity control devices (humidifiers, HRV's)	20
Duct, rigid sheet metal, insulated if not in conditioned space	35
Duct, flexible, insulated	20
Duct, sealing-mastic or UL 181A or 181B tape.	20
Diffusers, registers	20
Fireplace, masonry & firebrick, masonry chimney	75
Fireplace, factory assembled	35
Fireplace insert, stove	50
Chimneys, metal, and chimney covers	35

SYSTEMS & COMPONENTS (SITE & BUILDING)	Estimated Useful Life (EUL*) (Years)
MECHANICAL & PLUMBING	
HVAC CONTROLS	
Dwelling/common area thermostat	15
Heat sensors	15
Outdoor temperature sensor	10
ELECTRICAL	
ELECTRICAL SERVICE & METERING	
Building service main panel	40 to 50
Building meter	40
Tenant meters, meter panel	40
ELECTRICAL DISTRIBUTION	
Tenant electrical panel	50
Unit/building wiring	30 to 50
ELECTRICAL LIGHTING & FIXTURES	
Switches & outlets	35
Lighting - exterior entry	15
Lighting - interior common space	15 to 25
Lighting - tenant spaces	20
Doorbells, chimes	20
TELECOMMUNICATIONS EQUIPMENT	
Satellite dishes/antennae	20
Telecom panels & controls	20
Telecom cabling & outlets	20
VERTICAL TRANSPORTATION	
ELEVATORS/ESCALATORS	
Electrical switchgear	50+
Electrical wiring	30
Elevator controller, call, dispatch, emergency	10 to 15
Elevator cab, interior finish	10 to 15
Elevator cab, frame	35
Elevator, machinery	20 to 30
Elevator, shaftway doors	10 to 20
Elevator, shaftway hoist rails, cables, traveling	20 to 25
Elevator, shaftway, hydraulic piston & leveling	20 to 25
Escalators	50

SYSTEMS & COMPONENTS (SITE & BUILDING)	Estimated Useful Life (EUL*) (Years)
LIFE SAFETY/FIRE PROTECTION	
SPRINKLERS & STANDPIPES	
Building fire suppression sprinklers, standpipes	50+
Fire pumps	20
Fire hose stations	50
Fire extinguishers	10 to 15
ALARM, SECURITY AND EMERGENCY SYSTEMS	
Tenant space alarm systems	10
Residential smoke detectors	5
Carbon monoxide detectors	5
Call station	10
Emergency/auxiliary generator	25
Emergency/auxiliary fuel storage tank	25
Emergency lights, illuminated signs	5 to 8
Smoke and fire detection system, central panel	15
Buzzer/intercom, central panel	20
Tenant buzzer/intercom/secured entry system	20
OTHER SYSTEMS	
Pneumatic lines & controls	30
Auto-securing doors/entries/lock down	30
INTERIOR ELEMENTS	
FINISHES (WALLS, CEILINGS, FLOORS) - COMMON AREAS	
Drywall - common	15 to 35
Plaster- common	50
Paints, stains, clear finishes, interior - common	15
Wallpaper - common	15
Wall tile, ceramic, glass, natural stone - common	35
Floor tile, ceramic, natural stone - common	40 to 50
Concrete/masonry/terrazzo - common	50 to 75
Hardwood floor - common	30 to 50
Wood floor, laminated/veneered - common	20
Resilient tile or sheet floor (vinyl, linoleum) - common	15
Carpet - common	5
Acoustic tile/drop ceiling - common	10 to 15

SYSTEMS & COMPONENTS (SITE & BUILDING)	Estimated Useful Life (EUL*) (Years)
INTERIOR ELEMENTS	
MILLWORK (DOORS, TRIM, CABINETS, TOPS) - COMMON AREAS	
Interior, hollow core doors - common	20
Interior doors, solid core, wood, metal clad, fire rated	7 to 20
Door trim - common	20
Wall trim (base, chair rail, crown moldings) - common	20
Passage & lock sets - common	50
Bifold & sliding doors - common	15
Cabinets & vanities - common	15
Tops, granite, natural stone, engineered stone - common	15 to 20
Tops, solid surface, stainless steel - common	15 to 20
Tops, plastic laminates, wood - common	10
Vanity tops, cultured marble, molded acrylic, fiber glass - common	15
APPLIANCES - COMMON AREAS	
Refrigerator/freezer - common	10 to 15
Range, cooktop, wall oven - common	20
Range hood - common	20
Microwave - common	10
Disposal (food waste) - common	5 to 7
Compactors (interior, residential grade) - common	5 to 7
Dishwasher - common	10 to 15
Clothes washer/dryer - common	10
SPECIALTIES - COMMON AREAS	
Interior mail facility	20
Common area bath accessories (towel bars, grab bars, toilets, stalls)	7
Mirrors & medicine cabinets - common	20
Closet/storage specialties, shelving - common	20
Common area interior stairs	50
Common area railings	15 to 20
Bath/kitchen vent/exhaust fans - common	10 to 15

SYSTEMS & COMPONENTS (SITE & BUILDING)	Estimated Useful Life (EUL*) (Years)
INTERIOR ELEMENTS	
Ceiling fans - common	15
Window treatments, drapery rods, shades, blinds, etc. - common	15
Indoor recreation and fitness equipment	10
Entertainment centers, theatre projection and seating	15
FINISHES (WALLS, CEILINGS, FLOORS) - DWELLING UNITS	
Drywall	35
Plaster	50
Paints, stains, clear finishes, interior	10
Wallpaper	10
Wall tile, ceramic, glass, natural stone	30
Floor tile, ceramic, natural stone	20 to 40
Concrete/masonry/terrazzo	50 to 75
Hardwood floor (strip, parquet)	15 to 50
Wood floor, laminated/veneered	15
Resilient tile or sheet floor (vinyl, linoleum)	10 to 15
Carpet	6 to 7
Acoustic tile/drop ceiling	10 to 15
MILLWORK (DOORS, TRIM, CABINETS, TOPS) - DWELLING UNITS	
Interior, hollow core doors	15 to 20
Interior doors, solid core, wood, metal clad	30
Door trim	20
Wall trim (base, chair rail, crown moldings)	25
Passage & lock sets	12
Bifold & sliding doors	12
Cabinets & vanities (wood construction)	20
Cabinets & vanities (particle board)	15
Tops, granite, natural stone, engineered stone	50
Tops, solid surface, stainless steel	40
Tops, plastic laminates, wood	15
Vanity tops, cultured marble, molded acrylic, fiber glass	10 to 25

SYSTEMS & COMPONENTS (SITE & BUILDING)	Estimated Useful Life (EUL*) (Years)
INTERIOR ELEMENTS	
APPLIANCES - DWELLING UNITS	
Refrigerator/freezer	10 to 12
Range, cooktop, wall oven	15
Range hood	10 to 15
Microwave	10
Disposal (food waste)	7
Compactors (interior, residential grade)	7
Dishwasher	5 to 10
Clothes washer/dryer	10

SPECIALTIES - DWELLING UNITS	
Bath accessories (towel bars, grab bars, toilets, stalls)	7
Mirrors & medicine cabinets	15
Closet/storage specialties, shelving	15
Interior stairs	50
Stair and loft railings	20
Bath/kitchen vent/exhaust fans	15
Ceiling fans	10
Window treatments, drapery rods, shades, blinds, etc.	3 to 10

ADDITIONAL CONSIDERATIONS	
ENVIRONMENTAL	
Environmental remediation alarms	5
Environmental remediation pumps & equipment	5
Mold-treat-remediate	100
Pest control/integrated pest management plan	1

*EULs vary from Multifamily/COOP vs. Seniors vs. Students (this table depicts EULs of components for properties occupied by Multifamily/COOPs) 2EULs vary from Family use vs. Elderly use (this depicts EULs occupied by Family/non-elderly exclusive)

APPENDIX C:

PROPERTY MANAGEMENT RESOURCES

CPC spoke with a survey of borrowers asking about which property management software they use and why. Below are the top five recommendations along with information regarding their utility. CPC is providing this information to help you make an informed decision. This list should not be relied on without guidance from a professional vendor.

PROPERTY MANAGEMENT SOFTWARE:

1. **YARDI BREEZE**
   a. **Features:** Accounting, tenant and lease management, online rent collection, and maintenance coordination.
   b. **Pros:** User-friendly, scalable for various property types, and offers excellent customer support.
   c. **Ideal for:** Versatile for small to medium property owners, intuitive software to make managing properties easier to navigate.
   d. **Link:** https://www.yardibreeze.com/

2. **MRI REAL ESTATE SOFTWARE**
   a. **Features:** Detailed reporting for Leasing, Construction/CapEx accounting, Delinquency Management,. and Repair + Maintenance.
   b. **Pros:** Can interface with 3rd party Accounts Payable software, i.e. AVID
   c. **Ideal for:** Can be used across multiple property types; Resi, Multi-Family (rentals, condos/coops), Commercial, Industrial.
   d. **Link:** https://www.mrisoftware.com/

3. **BUILDIUM**
   a. **Features:** Comprehensive accounting, automated bill payments, tenant and lease management, maintenance oversight, and detailed financial reporting.
   b. **Pros:** Intuitive interface, adaptable for various property sizes, and great customer support.
   c. **Ideal for:** Property owners of medium to large portfolios looking for efficient software to manage operations.
   d. **Link:** https://www.buildium.com/

4. **APPFOLIO PROPERTY MANAGER**
   a. **Features:** Complete accounting suite, automated late fee management, online rent collection, maintenance request tracking, and extensive reporting tools.
   b. **Pros:** User-friendly design, comprehensive functionality, and exceptional customer support.
   c. **Ideal For**: Property managers and owners with large portfolios seeking advanced features and ready to invest in a top-tier solution
   d. **Link:** https://www.appfolio.com/

5. **TENANTCLOUD**
   a. **Features:** Expense tracking, income and expense reports, online payments, tenant management, and maintenance request handling.
   b. **Pros:** Free basic plan, easy to use, integrates with QuickBooks.
   c. **Ideal For:** Small property owners or beginners seeking a budget-friendly solution with essential features.
   d. **Link:** https://www.tenantcloud.com/

APPENDIX D:

LOCAL LAWS

A number of Local Laws govern buildings in NYC and New York State. The most commonly applicable ones are highlighted below.

NON-COMPREHENSIVE RELEVANT LOCAL LAW INFORMATION:

1. **Local Law 11 of 1998 (Facade Inspection Safety Program - FISP):**
   - Eligibility: Buildings that are six stories and over.
   - Inspections/Filings: Every five years facade inspections are required along with filed reports about the inspection.
   - Requirements: Inspections can fall into three categories; safe, safe with a repair and maintenance program, or unsafe.

2. **Local Law 87 of 2009:**
   - Eligibility: Buildings that are over 50,000 square feet in size, or if combined properties, from the same owner are over 100,000 square feet.
   - Inspections/Filings: Every ten years owners must perform energy audits and retro-commissioning of the buildings base systems, and owners are required to file an Energy Efficiency Report (EER) with the NYC Department of Buildings.
   - Requirements: Systems that need to be included in the energy audit: HVAC systems, building envelope, hot water systems, and all electrical systems.

3. **Local Law 84 of 2009:**
   - Eligibility: Buildings that are over 25,000 square feet.
   - Inspections/Filings: Enforces annual benchmarking of all energy and water usage in their property.
   - Requirements: Owners must use the United States Environmental Protection Agency's (EPA) online tool, Energy Star Portfolio Manager, to submit the findings of benchmarking every year by May 1st.

4. **Local Law 33 of 2018:**
   - Eligibility: Buildings that are over 25,000 square feet.
   - Inspections/Filings: Requires buildings to disclose energy efficiency grades based on the Energy Star score and submit the scores each year to the NYC Department of Buildings.
   - Requirements: The data must be filed by May 1st each year and then it must be displayed by the entrance of the building by October 1st each year.

5. **Local Law 152 of 2016:**
   - Eligibility: All buildings except buildings that are in occupancy group R3.
   - Inspections/Filings: Mandates inspections of gas piping systems by a Licensed Master Plumber or someone of a similar qualification.
   - Requirements: These inspections must take place every four years and the filings must be submitted to NYC Department of Buildings.

6. **Local Law 97 of 2019 (Climate Mobilization Act):**
   - Eligibility: Buildings that are over 25,000 square feet, and two buildings/condominiums on the same tax lot that together are over 50,000 square feet.
   - Inspections/Filings: Mandates limits on greenhouse gas emission and enforces owners to file annual reports on their emissions with the NYC Department of Buildings, proving that they are complying.
   - Requirements: The first compliance period was January 2024, but there are multiple current options to demonstrate a path to compliance.

7. **Local Law 55 of 2018 (Indoor Allergen Hazards Law):**
    - Eligibility: Applicable to any multi-family buildings with three or more apartments.,
    - Inspections/Filings: Landlords must perform inspections to check for any possible allergen hazards that could be indoor in an apartment.
    - Requirements: Landlords are responsible for eradication of any rodents, insects, pests, or mold.

8. **Local law 154 of 2021:**
    - Eligibility: All new buildings must comply.
    - Inspections/Filings: Outlaws onsite combustion of fuels that emit more than 25kg of carbon dioxide.
    - Requirements: Combustion of fuels that emit more than 25kg of carbon dioxide are only permitted with devices that are not connected to a building's gas supply line or fuel oil piping system and are not consistently used.

9. **Local Laws 92/94 of 2019:**
    - Eligibility: All potential new buildings or retrofits on existing buildings.
    - Inspections/Filings: All new filings will not be accepted unless built with a sustainable roof.
    - Requirements: All new buildings built after 2019 or any building alterations must be built with sustainable roofing including either a solar photovoltaic system, or a green roof system.

10. **Business Corporation Law (BCL) 727:**
    - Eligibility: All new condominiums who are in the process of assembling their board.
    - Inspections/Filings: Any potential board member must disclose any contracts they currently have that could be a conflict.
    - Requirements: All co-op board members must prove they do not have a conflict of interest before joining the board.

11. **Local Law 31:**
    - Eligibility: This law applies to all multifamily building owners in buildings that were built in the range of 1960 to 1978. within five years of when it was passed.
    - Inspections/Filings: Inspectors must conduct an XRF lead test.
    - Requirements: Building owners must use an official agency in order to test for lead-based paint in units. Additionally, owners must inquire if there any children under the age of six in their building and they must share the information from the inspection with tenants.

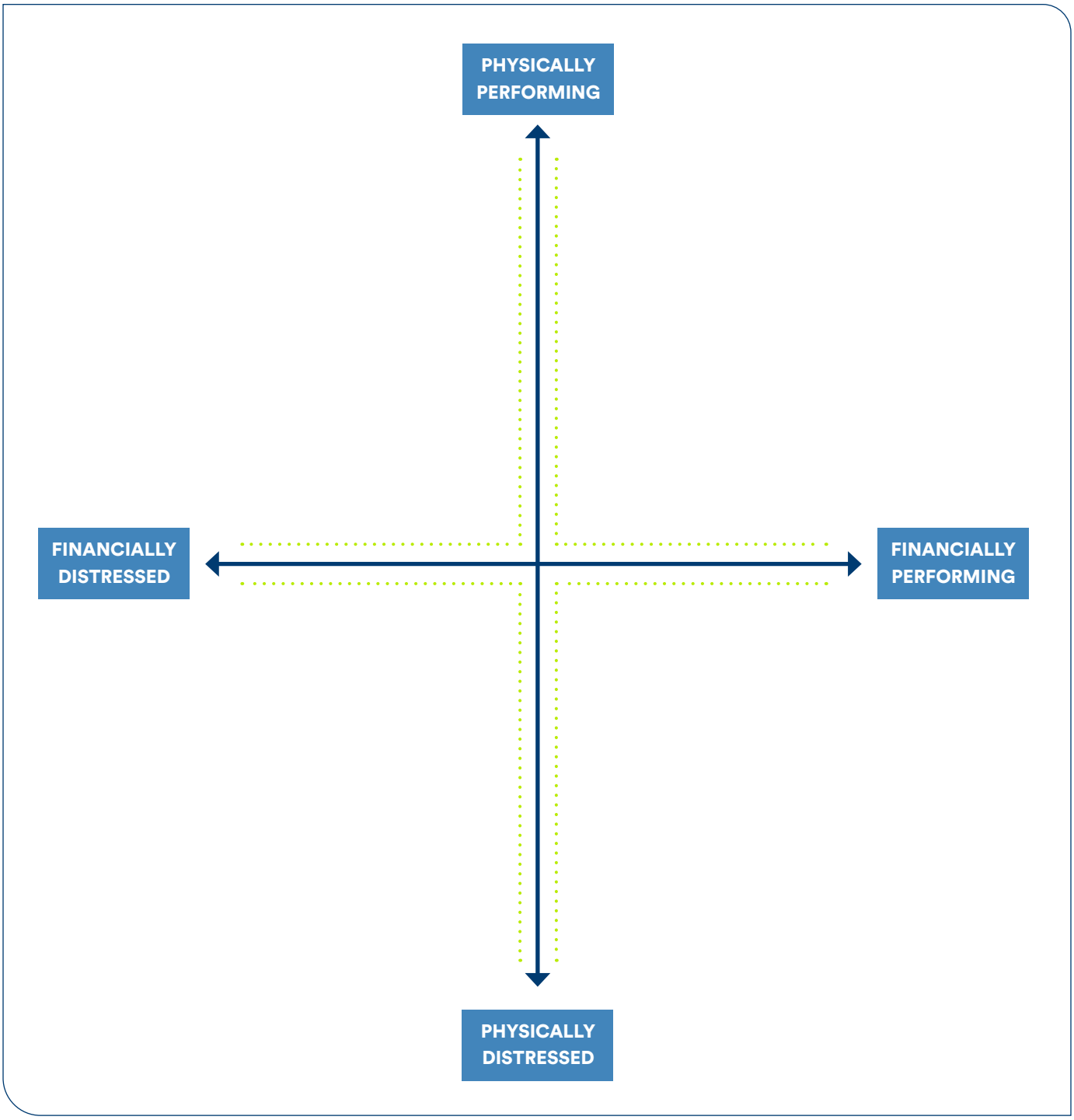
TO ENSURE YOU ARE MEETING COMPLIANCE STANDARDS PLEASE CHECK THESE RESOURCES:

- Finding your LL97 Compliance Pathway
- All Locals Laws from 1973-2023
- Business Corporation Law
- List of relevant residential building Local Laws
- NYC Admin code Local Law
- NY State Local Laws Database
- Local Law 33 Steps to Compliance
- Local Law 31 Steps to Compliance

APPENDIX E:

THE FINANCIAL AND PHYSICAL PERFORMANCE MATRIX TEMPLATE

Use this blank template to begin to plot your properties.



NOTES:

NOTES:

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NYC Housing Partnership
Paulus Development
Riseboro Community Partnership
Rocky Mountain Institute
Samaritan Daytop Village
Strada Ventures
The Creators Lounge
The Lemle & Wolff Companies

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