MICHIGAN STATE UNIVERSITY

A GREEN APPROACH TO ENDING STRUCTURAL ABANDONMENT IN COMMUNITIES

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Many Midwestern cities in the United States have suffered population and economic decline, resulting in widespread residential, commercial, and industrial property abandonment. This flood of abandonment and subsequent blight has left communities with large numbers of vacant properties and limited public resources to remove these abandoned structures. The current system of private property ownership encourages throwing away parcels and this presents a clear public health and safety hazard. This paper examines the current situation of abandoned commercial, industrial and residential properties in the U.S and summarizes the negative social, economic and environmental consequences of structural abandonment and proposes several innovative policies and practices to change our built environment paradigm to achieve a more socially equitable, environmentally sustainable and economically feasible built environment.

1. Structural Abandonment in the United States:

Quantifying the number of abandoned residential, commercial and industrial properties in America's communities is a difficult undertaking, due to differing definitions of abandonment and data gaps, particularly for commercial and industrial parcels (Brachman 2005). The U.S. Department of Housing and Urban Development has used an operational definition for residential abandonment in their Neighborhood Stabilization Program (NSP). As part of the NSP1 program, abandoned properties were defined as those that had been foreclosed upon and vacant for at least 90 days (HUD 2009). Beginning with the NSP2 program, that definition was expanded to include homes where the property owner has made no mortgage or tax payments for at least 90 days or a code enforcement inspection has determined that the property is not habitable and the owner has taken no corrective actions within 90 days of notification of the deficiencies.

Detroit, Baltimore, Philadelphia, and St. Louis are currently undertaking studies of the number, location, and financial impact of such properties on their communities (Smith 2014). Despite this, some estimates and data analogs exist to provide an estimate of the amount of abandoned property in the United States.

The Joint Center for Housing Studies of Harvard University (2013) reported that a subset of the "vacant" category used by the U.S. Census Bureau, classified as homes that are currently vacant and not being marketed for sale or rent, reached a record high of 7.4 million in 2012. Estimates of the amount of abandoned residential properties range from four to six percent in "declining" cities up to ten percent in "seriously distressed" cities (Mallach 2002). Although vacant homes can be found throughout the country, they tend to be concentrated; nearly 40 percent of the nation's vacant homes are located in just 10 percent of all census tracts (Duke 2012). More than half of the census tracts with vacancy rates of 20 percent or higher were in just 50 counties, most of them in metropolitan areas. Wayne County in Michigan and Cook County in Illinois, for example, each have more than 200 high-vacancy neighborhoods (Joint Center for Housing Studies 2013). Detroit, Michigan alone has approximately 80,000 abandoned buildings.

The number of abandoned commercial properties is also difficult to estimate accurately. The economic transition of the past four decades has caused economic hardship for many private enterprises resulting in the abandonment of entire commercial sectors and their existing properties. The abandonment of downtown commercial properties in the 1950-60's has been accompanied more recently with the abandonment of suburban malls. US cities have experienced substantial declines in the number of shopping malls in the last decades. According to New York Times report, more than two dozen malls were closed in the past four years and another 60 malls are on the way to death. It is also predicted that about 15% of US malls would have the possibility to be converted into nonretail space in 10 years later[1]. The ongoing cycle of private

[1] Peterson, H. (2015, January 6). The Shopping-Mall Crisis Is Getting More Ominous. Retrieved from http://www.businessinsider.com/shopping-malls-in-crisis-2015-1

property abandonment from decades of decline and economic transformation has littered communities throughout the United States with empty storefronts.
It is estimated in Detroit, Michigan that 36% of commercial properties are vacant (Detroit Works Project 2012). The reuse or removal of these vast numbers of commercial structures is a serious challenge for the public sector where finances are already strained by reduced tax revenues and increasing social costs. These abandoned properties threaten public health and safety and negatively affect the aesthetics of the surrounding region deterring other businesses or developers from investing.

The decline in manufacturing in the U.S. has brought about widespread industrial abandonment as well. This decline has resulted in communities with large blighted industrial structures many of which are also contaminated brownfields. According a report prepared by the Center for Automotive Research, 267 automotive plants have closed across the country, which accounts for nearly 60 percent of the original 447 such plants constructed in the United States since 1979 (Brugeman, et al. 2011). Of the 267 automotive plants some have been repurposed, some began manufacturing once again, and 135 remain closed (Brugeman, et al., 2011).

Much of the research conducted on industrial parcels focuses on automotive plants and does not include other industrial uses; however, this does not mean that the only manufacturing plants being closed are automotive manufacturers. According to the Detroit Long Range Plan, 22% of industrial zoned land in Detroit is vacant (Detroit Works Project 2012). The United States and the State of Michigan have seen a decline in overall industrial and commercial activity over the last 40 years. The scale of industrial and commercial abandonment continues to grow as municipalities continue to lack the funding to address the issue of blight and dismantling, removal, and restoration.

2. The Economic, Social and Environmental Cost of Abandonment

Economic

The cost of maintaining abandoned buildings, together with their associated revenue loss (e.g., direct economic activity) leads to significant financial impacts for local governments. Apgar et al. (2005) found that such costs to the City of Chicago ranged from approximately $5,400 to over $34,000 per property. Increased public safety and building code enforcement costs are also incurred by cities for boarding buildings; The City of Chicago pays nearly $1,400 per home in 2010 (GAO 2011).

The cost of removing abandoned structures by the public sector is enormous. According to estimates by the Pollution Prevention Resources Exchange the U.S. demolishes 245,000 residential and 44,000 commercial structures each year. According to the Genesee County Land Bank (Flint, Michigan), the full cost of demolishing an average residential property is approximately $10,600 from beginning to end[2]. The removal of all of the currently estimated abandoned residential properties (7.4 million) in the U.S. could cost the U.S. taxpayer

[2] Genesee County Land Bank (2015). "The Costs of Demolition," Blight Elimination Grant progress report, URL:http://www.thelandbank.org/downloads/demo_costs_revised_with_graphic_final.pdf

approximately **78 billion dollars**. Private structural abandonment places substantial economic, costs on communities.

Abandoned properties inherently decrease the tax revenues available to public entities to support public safety, debt retirement, public works maintenance and other critical social needs. The recent bankruptcy of the City of Detroit is a stark example of consequences of abandonment on a communities tax base and fiscal solvency.

However, the direct decline in tax revenues is not the only economic impact of abandonment. Property abandonment has been shown to cause decreased property values, and decreased tax revenue, to non-abandoned adjacent buildings. A 2001 study found that houses in Philadelphia located within 150 feet of a vacant or abandoned property experienced a net loss of $7,627 in value; properties within 150 to 300 feet experienced a loss of $6,819, and those within 300 to 450 feet experienced a loss of $3,542 (Temple University 2001). A 2010 study in Philadelphia found that such effects resulted in a loss of $3.6 billion in property value of single family homes, which translated to a loss of $112.5 million in property tax revenues (approximately 10% of total property tax collections) (Econsult Corporation et al. 2010). Property abandonment sets in motion a general economic decline in an area reducing property values and driving away future investment.

Social

Abandoned properties also exert a number of negative social effects on the people in a community. These include impacts to local quality of life, barriers to neighborhood revitalization, and disincentivizing urban renewal (Mallach 2012). Communities with high rates of property abandonment often see attendant high rates of foreclosure, crime, and unemployment.

Table 1. Social Impacts of Foreclosure on Crime and Unemployment (2008 Data)

City	Foreclosure Rate	Crime Index per 100,000	Unemployment Rate 16+
Detroit	16.0%	5,295	20.4%
Flint	12.8%	5,530	18.5%
Lansing	9.3%	2,938	9.6%
Grand Rapids	8.0%	3,050	9.4%
Ann Arbor	4.1%	1,241	6.0%

Data Sources: USA.com 2008; US Department of Housing and Urban Development 2008; US Census Bureau 2008

Abandonment sets into motion a series of reinforcing social and economic woes (Orfield, 1997). Orfield notes in Metro Politics: a Regional Agenda for Community and Stability, "Concentrated

poverty multiplies the severity of problems faced by communities and poor individuals. As neighborhoods become dominated by joblessness, racial segregation, and single parentage, they become isolated from middle-class society and the private economy." Communities with substantial abandonment have in most cases higher foreclosure rates, higher occurrence of crime, and higher unemployment rates (see Table 1). The current practice of private property abandonment results in neighborhoods where limited economic opportunity and a cycle of poverty become dominant.

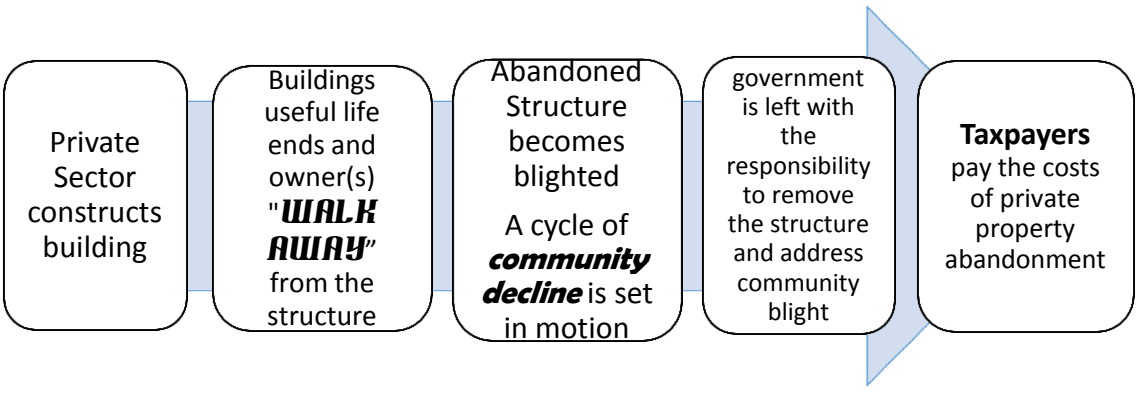
Environmental

In addition to the economic and social costs associated with abandonment summarized above, structural abandonment extracts an environmental cost as well. For example, the most common method currently employed to address blight and abandonment is through the public funding of structural demolition. Demolishing abandoned structures generates large amounts of building material waste. The US Environmental Protect Agency estimates that 136 million tons of construction and demolition waste are generated each year. This volume of waste constitutes approximately ¼ of all landfill waste[3]. In some cases rare and unique materials are landfilled rather than reused.

In addition to the sheer volume of waste the demolition of these properties also involves the handling of hazardous materials such as asbestos and lead paint in residential structures to serious toxic wastes in abandoned commercial and industrial enterprises. The proper handling and disposal of these dangerous materials increase the potential for public health concerns and substantially increasing the public costs of demolition and clean up. Since 1995 EPA's brownfields program has awarded grants totaling $447.6 million, 279 revolving loan funds totaling $273.1 million and 752 cleanup grants totaling $140.8 million (EPA HealthNews, 2011).

We see in **Figure 1** the current system of abandonment which shifts all the negative economic, social and environmental cost of abandonment to the public/general taxpayers. In summary, the current policies and practices that govern property structural abandonment and the removal of these structures are economically, socially and environmentally unsustainable.

Figure 1: Current System of Abandonment



[3] EPA, 2003. Building-Related Construction and Demolition Materials Amounts, United States Environmental Protection Agency, URL: http://www.epa.gov/epawaste/conserve/imr/cdm/pubs/cd-meas.pdf

3. The Current Practice in Removing Abandoned Structures[4]

Critical to the development of a public policy that can end the cycle of private sector structural abandonment is the examination of current practices that seek to eliminate abandonment particularly when this presents a public health and safety hazard. This section summarizes current policies and practices that are used to provide for the dismantling, removal, and restoration of private infrastructure.

Federal Programs for Blight Elimination

The Department of Housing and Urban Development (HUD) is a federal government agency that was created in 1965, which aims to increase homeownership, support community development and increase access to affordable housing free from discrimination[5]. HUD has a wide range of programs that are available to address housing issues and community development needs. The Community Development Block Grant is one of the oldest and continuously running HUD programs which provides annual grants to more than 1000 state and local governments and communities. The Neighborhood Stabilization Program (NSP) is a component of CDBG that was established for the purpose of stabilizing communities that suffered from foreclosure and abandonment[6]. NSP funds could be used to purchase abandoned homes and resell or redevelop these homes to stabilize neighborhood. The Hardest Hit Fund (HHF) is also a federal financial program to deal with housing crisis including private property abandonment. In 2010, the Hardest Hit Fund provides $7.6 billion to the hardest hit states (including Michigan) to develop programs to support their local struggling homeowners[7].

It is estimated that the City of Detroit will need as much as $850 million to address neighborhood blight in the next few years. In 2013, the State of Michigan awarded to Detroit the $52.5 million Hardest Hit Funds for blight removal task. In additional to that, the city has currently allocated $8 million of CDBG and $7.3 million of NSP toward blight removal[8]. With all kinds of available funding together, Detroit still faces a gap of around $400 million to deal with neighborhood blight (Detroit Blight Removal Task Force Plan).

Land Bank

[4] This material is abstracted from a paper presented at the **AESOP-ACSP Joint Congress, 15-19 July 2013, Dublin Ireland, by** Dr. Rex LaMore[1] and Michelle LeBlanc **"Planning Policies and Regulations that can Reduce the Practice of Private Property Abandonment in the United States: The Case for Michigan".**

[5] Promoting Fair Housing - HUD. (n.d.). Retrieved from http://portal.hud.gov/hudportal/HUD?src=/program_offices/fair_housing_equal_opp/promotingfh

[6] NSP: Neighborhood Stabilization Program - HUD Exchange. (n.d.). Retrieved from https://www.hudexchange.info/nsp/

[7] Hardest Hit Fund. (n.d.). Retrieved from http://www.treasury.gov/initiatives/financial-stability/TARP-Programs/housing/hhf/Pages/default.aspx

[8] How do we fund this mission? (n.d.). Retrieved from http://report.timetoendblight.org/funding/

Land Banks are public or community-owned entities that developed for the purposed of acquiring, managing, maintaining and repurposing vacant, abandoned and foreclosed properties. Land banks are intended to acquire abandoned properties and transfer the properties to new, responsible owners who have the ability to manage the property. Land banks can help to convert low value properties into assets for community revitalization[9].

According to research conducted by the Center for Community Progress in 2014, there are approximately 120 land banks and land banking programs throughout the country[10]. The top three states with largest number of land banks are Michigan, Ohio and Georgia. Genesee County is Michigan first land bank, dates back to 2004.

In order to solve the abandonment and blight problem, land banks are offered special legal power to acquire properties at low or no cost through foreclosure process. After the properties go into land banks, they hold land with tax free. Land banks can lease properties for temporary uses or sell properties to private owners with the consideration of not only sale prices but the community's needs[11].

Community Benefit Agreements

Community Benefits Agreements are legally enforceable contracts between a developer (i.e. a private business), the local government, and community organizations and residents (Marcello 2007). Community benefits agreements can incorporate specific conditions that can provide for the financing of reuse or removal of a structure. The "dark store ordinance" is an example to illustrate how a community benefits agreement works in requiring a private property owner to remove the abandoned structure at the end of its use. The ordinance requires the retail stores' owners or developers to contribute certain amount of money to fund which the demolition or renovation of the building after it has been vacated.

Vacant Property Registration Ordinance

Because of the growing number of abandoned properties, there is a major increase in the number of local governments in the U.S. adopting vacant property registration ordinance (VPROs).

Creating a vacant property registration ordinance seeks to protect public health and safety and prevent neighborhood blight, secure properties, protect property values and neighborhood integrity (City Of Trenton). As of As of May 2012, there were more than 550 local VPROs in the United States.(Cheung, 2014).

The VPROs require property owners to register vacant and foreclosed properties with the local government. In the City of Trenton, Ohio, the VPROs requires owners of real property to register all property within 30 days of the vacancy and they are required to renew registration annually A registration fee is often collected to maintain and secure properties for a specific period of time. Properties owner are typically required to carry a minimum amount of insurance or to provide a

[9] Land Banking: Transforming abandoned and problem properties into opportunities for productive re-use. (n.d.). Retrieved from http://www.communityprogress.net/land-banking---one-pager-pages-183.php

[10] Land Bank Information Headquarters | Center for Community Progress | Center for Community Progress. (n.d.). Retrieved from http://www.communityprogress.net/land-bank-headquarters-pages-446.php

[11] Land Banking FAQ | Center for Community Progress | Center for Community Progress. (n.d.). Retrieved from http://www.communityprogress.net/land-bank-faq-pages-449.php

minimum bonds or deposits. If owners fail to meet the requirement to register, fail to report changes to registration information or fail to renew a registration annually they may be assessed a fine. Besides registering the vacant building, the owner also has the responsibility to perform regular weekly inspections of the property (City Of Trenton).

Mining Reclamation

Surface Mines can cause severe environmental damage and present a danger to public health in their surrounding areas if they are left unattended at the end of their productive life. The Surface Mining and Reclamation Act (SCMRA) was passed on August 3rd of 1977 with the goal "To provide for the cooperation between the Secretary of the Interior and the States with respect to the regulation of surface coal mining operations, and the acquisition and reclamation of abandoned mines, and for other purpose,"[12]. The SCMRA requires a fee from the mining company that will be used for the protection of the land and nearby water systems after the decommissioning of the mine.

Electricity generating wind turbines

The demand for an increased use in renewable energy sources has caused wind turbines to appear in some communities. An issue that has arisen with the new construction of wind turbines is their deconstruction when the turbines are no longer in use. The typical height of an industrial wind turbine is 363 feet, including the fan blades, with an average lifespan of 20-30 years[13]. An idle wind turbine can be a matter of public safety due to the possibility of a tower that may collapse and endanger property and lives. Some communities, such as Gratiot County, Michigan are requiring that the wind turbine operators post a performance bond to ensure funds for the decommissioning on the wind turbines after their useful life (Gratiot County, 2009).

Landfills

Through the Natural Resources and Environmental Protection Act of Michigan landfills are required to provide financial assurance through a perpetual care fund for their closure and monitoring for the 30 years after they cease operation. Landfills occupy large plots of land and must be monitored after their closure to prevent potential ground water contamination and other potential hazards to the surrounding environment. To ensure that there are adequate funds to monitor the landfill after its closure the State of Michigan has enacted legislation that requires landfills to pay a cash bond for the purposes of the post closure life of the site. The bonds are assessed by a per acre basis as well as by the category of landfill (State of Michigan, 1994).

Oil Rigs

The Federal Government regulates the decommissioning of Off Shore Oil Rigs. If left unmonitored and in place after operations have ceased oil rigs can cause significant

[12] Office of Surface Mining Reclamation and Enforcement, 2006. *Surface Mining Control and Reclamation Act of 1977*. [Online] Available at: http://www.osmre.gov/topic/SMCRA/SMCRA.pdf

[13] National Wind, 2012. *Wind Turbine Facts.* [Online] Available at: http://www.nationalwind.com/files/NationalWindTurbineFacts.pdf

environmental damage to the surrounding ecosystem through leakages and crumbling foundations. To ensure the completion of the decommissioning process the United States Bureau of Safety and Environmental Enforcement requires the plan for decommissioning at the time of the initial Right-Of-Way or Right-Of-Use-and-Easement (U.S. Bureau of Safety and Environmental Enforcement, 2013).

Cell Towers

Cellular Towers are another example of an infrastructure investment where the business must incorporate the cost of deconstruction into the business plan. Abandoned Cellular towers represent a clear public safety hazard. In order to ensure that unused cellular towers are not being abandoned and endanger public safety the Michigan Zoning Enabling Act of 2006 permits a performance bond to reclaim an abandoned tower.

Current Insurance Practices

The practice of requiring individuals and private enterprises to purchase insurance can be seen for healthcare, properties within a floodplain, and automobiles. These practices of requiring individuals to carry specific insurance policies exist at both the State and Federal levels. In June of 2012 the Supreme Court ruled on the constitutionality of the Affordable Care Act. The Affordable Care Act requires that all persons have health care coverage (HealthCare.Gov, 2013). This practice is a measure to ensure that all citizens of the United States are able to receive adequate healthcare assistance. Also at the Federal level and a preventative measure for damages is the Federal requirement to purchase Flood Insurance if you build a structure in a flood plain. The National Flood Insurance Program was created in 1968 as a means to "help provide a means for property owners to financially protect themselves," (FloodSmart.Gov, 2013). The practice of requiring floor insurance for property owners located in a flood plain prevents the practice of abandonment in the event of a flood by providing the funds for restoration of the damaged structure. A third form of insurance that has been made mandatory, but at the State level in Michigan, is the purchase of automobile insurance. Prior to the registration process for a vehicle it is required to purchase no-fault automobile insurance in Michigan (Department of State, 2013). Auto no-fault insurance does not cover damages to the vehicle, nor is collision coverage required under State law. The required coverage includes: "bodily injury/property damage (BI/PD), personal injury protection (PIP), and property protection insurance (PPI)" (Department of State, 2013). The practice of requiring insurance at the State and Federal level are intended to protect public health and welfare through ensuring adequate funding in the event of flood or accidents.

4. Recommendations for Changing our Built Environment Paradigm

Recognizing the negative economic, social and environmental impacts that private structural abandonment inflicts upon communities the development and implementation of a more equitable and sustainable set of policies and practices must be instituted in our built environment. This section summarizes several innovative tools, models policies and practices that are may end structural abandonment, improve our use of building materials and create a more just system of eliminating blight.

Policies for Construction and Demolition Waste Management

Policies that have the potential to promote construction and demolition waste management fall into three general categories: 1).Direct regulation, 2). Market incentives and 3). Education (Barron, 1996).

1. Direct regulation

Direct regulation includes disposal bans, recycling targets, recycling material requirements, green building requirements and salvage requirement, etc.

2. Market incentives

Market incentives include disposal taxes, advanced disposal fees or deposits, subsidized recycling and business development, etc. Market incentives contribute to the C&D waste recycling and reuse in an appropriate way that benefit developers as well.

3. Education

Many local governments in US states have educational programs to train the public and businesses how to recycle and reuse C&D materials after they demolished or deconstructed their buildings. Several recycling guides that introduce how to recycle at the construction site for business have been developed by state legislations and non-profit organizations. For example, US Environmental Protection Agency released a guideline "Recover Your Resource - Reduce, Reuse, and Recycle Construction and Demolition Materials at Land Revitalization Projects" to teach community basic information about C&D waste, give success stories across the nation and show how new technology such as deconstruction can be employed[14].

Instituting policies that require material reuse or recycling, facilitate the growth of a building materials reuse sector and educate the general public on the advantages of reducing structural waste can assists in re-imaging our current built environment relationship.

Requiring all new construction to be built for Deconstruction

Deconstruction is the process of the selective dismantling or removal from building components in order to make the maximum use of recycled materials (U.S. Department of Housing & Urban Development, 2000). It is the disassembly of a building and the recovery of its materials, often considered as construction in reverse.

First, deconstruction results in the reduction of waste generation as building wastes are recycled and reused rather than dumping to the landfill directly. This also leads to the conservation of local landfill space and helps to extend the life span of existing landfills. Secondly, deconstruction can reduce the natural resource and energy consumption as it minimize the need to produce new materials, thus reducing production impacts such as greenhouse emission (Deconstruction Guide). In addition, deconstruction is a labor-intensive procedure that requires skilled and trained workers to disassemble structures, recover and sort materials, salvage useful materials. These job provide workers not only employment opportunities but training skills. Deconstruction also provides salvageable materials which can be used for building construction and repairing existing houses (U.S. Department of Housing & Urban Development, 2000).

[14] United States Office of Solid Waste EPA-560-F-09-523 Environmental Protection and Emergency October 2009

Requiring newly constructed structures to plan for deconstruction at the end of their useful life can reduce waste, maximize reuse, create jobs and reduce if not eliminate abandonment.

Paying the Cost of Removal/Reuse- Insurance and/or Bonding

A critical aspect of providing for the timely removal/reuse of abandoned private structures is to create financial instruments to pay for the removal of these properties at the end of their useful life. One method of ending the private sector practice of abandoning structures in communities is to require landowners to secure an insurance policy that provides for the removal of an abandoned structure. The insurance policy and subsequent premium would cover the cost of dismantling, removal, and restoration of a site.

The premium of a building lifecycle insurance policy of a specific structure is likely to be dependent on a number of factors including an assessment of the cost of dismantling, removal, and restoration. One factor that may reduce the cost of deconstruction is the use of recyclable materials and the nature of construction. The use of different materials and building practices may ease the process of deconstruction and thus lower the cost. Also, the use of recyclable materials allows the property owner to either reuse elsewhere, or sell the materials. Another factor that is likely to affect the cost of dismantling, removal, and restoration is the size of the building. The size of the building may impact the duration period of the deconstruction process as well as the workload involved for the deconstruction. The building use may also be a factor in the cost of deconstruction. If the building use poses high risk for environmental contamination or is located near other structures that may cause environmental harm and leak onto the property this may increase the cost of dismantling, removal, and restoration. These factors that could impact the assessment of the cost of dismantling, removal, and restoration vary for industrial and commercial structures but should be addressed to assess a fair and just cost.

The practice of securing a bond could involve the developer securing a bond through a bonding company with the local government. This method provides that in the event of abandonment the local government funds from the bond to finance the dismantling, removal, and restoration. The cost of the bond would be assessed at the time of inspection by a bond assessor/consultant. The purchase of the bond could be required before for the issuance of the occupancy permit by the local government.

This system does not imply that all structures must be deconstructed after the first occupant has left the premises or for some specific period of vacancy. In adopting a bonding policy a community may wish to allow a structure to remain vacant for a specified duration that would allow the property owner reasonable time to find new occupants. In the case of property sale the bond would transfer with the title of the property through the bonding agent and may wish to reassess the cost. This reassessment would provide for any changes, structural enhancements or modifications that may have been made. The bonding mechanism is intended to be available throughout the life of structures.

The two systems of financial assurance, insurance and bonding, could reduce the practice of private property abandonment in Michigan. The level of government at which this requirement would be mandated may mold the future practice of requiring financial assurance. The two strategies, while different in practice, could achieve the same purpose and goal of holding private

property owners responsible for the dismantling, removal, and restoration of their industrial and commercial structures.

5. Conclusion

Private property abandonment is widespread in many legacy cities. The practice can lead to social and economic decline that threaten the public health and welfare of communities. It is imperative that this cycle of abandonment be ended! The implementation of policies that lead to the dismantling, removal, and restoration of private property are necessary for a sustainable future.

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