THE ICE HOUSE  HARRISONBURG, VIRGINIA

AN ADAPTIVE MIXED USE REGENERATIVE PLAN  7.22.11

Michael Singer Studio
The Ice House Complex in downtown Harrisonburg, Virginia is a unique project with the potential to have a transformational effect on both Downtown Harrisonburg and its interconnections with the surrounding community. This Vision Study is an exploration of the numerous programmatic and regenerative possibilities for the Ice House Complex and its site. The goal of this study is to present a range of concepts and ideas rather than a prescriptive architectural solution. The ideas put forth in this packet are largely concepts generated from within the community, or ideas the community found worth exploring further.

The Ice House Complex has approximately 80,000 square feet (sq ft) of interior space (not including the basement) on just slightly over 2 acres. The entire block has a related ownership group, which is helpful for concepts effecting adjacencies. Built for ice and cold storage the Ice House Complex is a structural heavyweight, capable of handling just about any program type one can image. This size, structure, and proximity to both downtown and James Madison University (JMU) are the driving factors behind the significant adaptive reuse potential for the Ice House Complex.

Michael Singer Studio was invited to study the Ice House Complex to explore the adaptive reuse potential through programming, conceptual planning and introducing regenerative environmental strategies effecting water, ecology, and energy. This document is the product of this initial investigation, and may be followed by a more developed Conceptual Design working in tandem with local architects and engineers.

It is important to note that this study is a planning report and has not studied all potential issues associated with the existing site and facilities. In-depth, structural, civil, geotechnical, environmental and historic resource studies may need to be completed to support the concepts put forth in this document.
The Ice House Project Site is located at 125 West Bruce Street and 217 South Liberty Street and is slightly over 2 acres in area. The site has excellent downtown connectivity— it is approximately two blocks southwest of the Harrisonburg central business district and City Hall, and less than 6 blocks north of James Madison University’s (JMU) expanding campus. The site is adjacent to multiple bus and bicycle routes (existing and planned), numerous cultural venues and historic structures, the regional Farmers Market and significant off-site parking resources.

The adaptive reuse of the Ice House Complex and the regeneration of this core downtown site has the potential to foster adjacent historic restoration and downtown economic activity. The site also has the ability to visibly and experientially connect to Blacks Run, providing a precedent for the downtown on how to sustainably manage stormwater and connect people to this urban greenway.

A small portion of the site lies within FEMA Flood Zone A due to the adjacency with Blacks Run, but most of the site is within Flood Zone X. According to the City’s maps, a 100 year flood event may reach the Liberty Street Frontage of the Ice House but most flood events will typically only inundate the southern edge of the site along Blacks Run.
THE ICE HOUSE
BUILDING ZONES AND HISTORY

The Ice House Complex evolved piecemeal as a facility over the course of many decades, likely due to increased demand for cold storage space and improved technology. The base historical information shown on this page is compiled from historical aerial photos and the 1998 Draft Phase 1 Environmental Site Assessment by Environmental Resources Management (ERM). In some cases, the historical dating of the facilities is contradictory and should be further researched with the local historical society to obtain more finite dates as the project moves forward. It can be concluded, however, that the Ice House Complex may be considered as a series of buildings within a site, and may be divisible for the purposes of both adaptive reuse and, as deemed advantageous for historical renovation purposes.

The square footages (sq ft) shown are approximate and based on previous studies by Frazier Associates. There is approximately 80,000 sq ft of interior space in the Ice House Complex. The unimproved and flood prone basement space was not a part of the site visit and is not considered for the purposes of this report.

For the purpose of clarity in identifying locations throughout this document, the Ice House Complex has also been divided into building ‘zones’ and given names.
Constrains

Lacking Natural Light
Built for functionality as a cold storage warehouse, the Ice House has very few windows and virtually no natural light. This single most significant constraint is a design challenge more than a permanent limitation; concepts on the following pages will demonstrate how natural light may be introduced into most interior spaces.

Parking Convenience
While there are numerous on and off-site parking possibilities, some of the parking may not seem as convenient as drivers are accustomed to in the region. As an urban living/working development this constraint is viewed to have a limited impact, and may in fact promote greener living such as bike and bus use, car share programs and downtown centered living.

Balancing History and Function
The historic brick facades of the main Ice House and the Liberty Street Frontage present a unique challenge to maximize natural light and ventilation, and interior function, while preserving the historic character of the facades.

Building Irregularity and Level Changes
The Ice House has numerous interior and exterior level changes and a number of irregular built conditions, likely due to the phased expansion of the facility over many decades. Most of these issues are considered to be minor and may be handled with careful planning and design to ensure accessibility.

Opportunities

Structure Built for Ice - Flexibility
The Ice House is structured for heavy storage with massive concrete columns and floor plates. The various interior walls and insulation panels are believed to be mostly non-structural and therefore offer a great deal of interior flexibility for building programming.

Historic Renovation - Adaptive Reuse
Creative adaptive reuse of the Ice House may be able to obtain tax credits on 25% of eligible expenses through the Virginia Rehabilitation Tax Credit Program and an additional 20% credit through the Federal Rehabilitation Tax Credit Program. This type of adaptive reuse is also a core green building practice as it utilizes existing materials and embodied energy (energy already expended to create the building).

Associated Properties
The Ice House property is held by a related property ownership group that owns the rest of the block and associated structures - allowing for shared use and design opportunities that may not otherwise be possible. This includes the parking lot across Bruce Street (see p. 3).

Connectivity and Program Interconnections
Situated centrally between downtown and the expanding JMU campus, the Ice House Complex is perfectly situated as a catalyst for urban living and program connections between JMU and downtown.

Green Building
Due to the adaptive reuse and urban connectivity of the Ice House Complex, it likely already qualifies for approximately 50% of the points needed to obtain LEED certification, making this project an ideal candidate for showcasing urban sustainable development.

Site Regeneration
The adjacencies of Blacks Run, the Farmers Market and downtown make this site a highly visible anchor for urban environmental and economic regeneration.

Off-Site Parking
The parking lot across Bruce Street from the Ice House site, as well as nearby on and off-street public parking allows for the site to incorporate landscape amenities rather than maximizing on-site surface parking.

Overall the Ice House presents many wonderful opportunities for creative adaptive reuse, and the known constraints are limited and manageable through thoughtful planning and design. This page provides an overview of the main opportunities and constraints unique to the Ice House Complex. It is important to note however that this study is a planning report and has not studied all potential issues associated with the existing site and facilities. In-depth, structural, civil, geo-technical, environmental and historic resource studies may need to be completed to support the concepts put forth in this document.

The Ice House presents both opportunities and constraints for consideration. The massive structure of the buildings offers tremendous interior flexibility and unique spatial conditions. However, the facility layout was never designed for natural light or habitation, and therefore requires some significant design interventions to maximize interior use on all floors.

It is understood that numerous conversations have been conducted between the property owners and the Virginia Department of Historic Resources regarding the Ice House Complex and the Historic Rehabilitation Tax Credit Program. Based on these previous discussions it has been noted that the primary historic facades are the brick (and limited stucco) facades associated with the earlier structures notably the Liberty Street Frontage (left) and the Ice House East and West (above right). To become habitable for any regular use such as housing or offices, the historic brick facades of the Ice House will need to be punctured with windows to allow for natural light and ventilation. This critical issue is explored further in following sections of this document.
The Big Move will have a multi-fold effect - it will allow for more natural light into the larger spaces and thus more usable interior space, it will create more green space and it will expose more of the historic brick facades.

During site visits Michael Singer Studio suggested the possibility of modifying the Ice House Complex to maximize the functionality of the larger interior spaces by removing some of the less usable, smaller, support spaces. This concept, referred to as ‘The Big Move’ proposes to cut away the Rear Offices And Equipment Area (A, as shown in red, left and below) - approximately 6,800 sq ft, on 1 to 3 levels, built circa 1963-1977. This area proposed for demolition appears to be one of the more recently constructed areas, and potentially structurally unrelated (or only minimally related) to the adjacent main Ice House and The Block. The Big Move will have a multi-fold effect - it will allow for more natural light into the larger spaces and thus more usable interior space, it will create more green space and it will expose more of the historic brick facades. It may also be possible to keep some of the structural elements in this area intact as a part of a unique post-industrial aesthetic for the landscape and Bruce Street entry.

In addition to the demolition of the Rear Offices And Equipment Area the Rear Circulation area (B, shown left and below) is proposed to be significantly modified to allow for vehicular access from Bruce Street to enter the covered drive and access the back of Ice House West as well as park on the top of The Deck to the south. Significant modification of the loading dock ramp is required to accomplish this new access to on-site parking but the west facade and roof structure could remain intact as part of a covered driveway. The 2nd floor of the Annex (C, shown left) may require modification for vehicle clearance.

The dates and historical significance of the areas proposed for demolition or significant modification must be further researched and analyzed prior to any design effort on this concept. This research may also reveal defined historic areas that will help guide the phasing of the project relative to the Historic Tax Credits. For example, it may be advantageous to restore the Liberty Street Frontage and Ice House East and West in phase 1 and leave The Block and The Annex for later phases.

MAJOR BUILDING MODIFICATIONS

REAR OFFICES AND EQUIPMENT AREA
6,800 sq ft, 1-3 levels, built circa 1963-1977, proposed for demolition

REAR CIRCULATION
4,000 sq ft driveway and loading areas, 1 level, built circa 1966-1977
proposed for significant modification

2ND FLOOR ANNEX
A small section of the second floor Annex may require modification or demolition for vehicle clearance below.

“THE DECK”
With access from Bruce Street, The Deck may be utilized to park up to 34 vehicles on the upper level depending on structural analysis. Demolition of the existing loading dock areas (red squares shown left and above) will help to maximize parking.

ADJACENT PROPERTIES
Access and parking along Bruce Street, and the space between the two properties are easily addressed due to the related ownership of both sites.

HISTORIC BRICK FACADES AND WALLS
The Big Move will help to expose more of the historic brick walls (shown left in orange) of the original Ice House structure.

Above, the proposed area for demolition (A) will open up the possibility for a beautiful entry landscape between the two main building masses. The Rear Circulation drive (B) could remain intact as a covered driveway leading to The Deck at the south end of the site.
The ground floor of the Ice House Complex is open to numerous configurations and programmatic possibilities after The Big Move demolition and modifications are enacted. Three potential options are presented as viable conceptual layouts on this page to give a sense of the possibilities.

**OPTION 1**: The Liberty Street Frontage is split between artisan space and a small cafe. The cafe utilizes the community kitchen and the aquaponics facility. The gallery and office spaces are entered from Bruce Street as is The Block space and circulation to upper floors.

**OPTION 2**: The Liberty Street Frontage is designated as all artisan space and is associated with the gallery in Ice House East. In this option the community kitchen located near vehicular circulation and is more suited for catering, co-packing with the Farmer's Market and connections to the aquaponics facility.

**OPTION 3**: This option proposes a large restaurant-cafe along Liberty Street, again with use of the shared kitchen facility as in Option 1. The artisan programs are located in a new Annex facility near the gallery space in Ice House West.
The upper floors of the Ice House Complex are better suited to adaptive reuse as loft housing, which is the primary economic driver for development of the site. Both Ice House East and West and The Block are suitable for loft apartments with the critical addition of new vertical circulation and windows. Due to the unique conditions of the Ice House Complex the 2nd floor is slightly more challenging than the 3rd and 4th floors which are virtually free from obstructions. The 2nd floor would benefit from a detached 2nd floor Annex to maximize unit count which may be possible given the more recent construction of the Annex and its likely ‘non contributing’ status as a part of the historic complex. (For this study, the full footprint of the Annex is shown.)

On all floors there are multiple ways to carve up the floor plates to achieve a mix of unit sizes and layouts within the existing structure. The current market favors 600 to 900 sq ft 1 bedroom apartments and the diagrams on this page show 54 units within and around that range with some units leaning towards a studio layout and some potentially created as 2 bedroom units. The layouts shown are only a possible layout of the floors, and have not been developed at the unit level in this conceptual planning document.
The Ice House Complex may be designed with a range of regenerative strategies to help restore the landscape, hold and filter stormwater, conserve or produce energy and enhance the overall desirability of the living and working spaces. Due to the adaptive reuse of the existing structures and urban connectivity of the site, the Ice House Complex likely already qualifies for approximately 50% of the points needed to obtain LEED certification, making this project an ideal candidate for showcasing urban sustainable development. The concepts shown on this page are just a selection of the possible environmental strategies, but are representative of the types of systems for water, energy and ecology that could be utilized.

Many of the programs proposed for the Ice House Complex also have a role in this unique sustainable model including the live-work opportunities and the project’s connection to local food through the shared kitchen, Farmers Market and aquaponic program interconnections.
Above, Ice House Lofts in Tucson Arizona by Architect Ron Paulus. The building complex has 51 residential units, including some split-level units (above left) that look similar to the potential layout of The Block loft units. The gym (above right) has some of the original ice equipment; similar showcasing of historic industrial equipment could be done in the Ice House Complex, especially in circulation areas on the ground floor. Photos by Bradley Wheeler.

The open office program offers residents of the Ice House and The Block the ability to have an expanded interactive ‘home’ office. This opportunity is typically desirable for small and web-based businesses.

Whether utilizing the in-building restaurant / cafe, purchasing aquaponic goods, visiting the Farmers Market, taking a class in the shared kitchen, or growing on the rooftop—residents can partake in numerous local fresh foods.

Event and gallery spaces may be ‘rented out’ by residents of the Ice House Complex. An artist for instance could rent the gallery for a show, a chef could rent the kitchen.

Administration offices, bathrooms, lobby amenities and building security may all be shared between the loft apartments and other Ice House Complex programs. Green systems such as solar hot water, or geothermal heating/cooling, may be a shared cost for maintenance as well.

Some parking may be designated, while other flex parking may be shared, allowing daytime use for businesses and evening use of residents.

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Above, images of the variety of windows and openings along the Ice House Complex historic facades. While the majority of the historic Ice House Complex facades have minimal apertures, these windows and loading docks provide plenty of formal and aesthetic references for application to the blank brick facades. Window size and placements will be a balancing act between historic references and allowing natural light for people living and working within the Ice House Complex.

Above, the Denver Ice House and Tavern. Note the significant modification of some of the facades to accommodate housing (windows, balconies) while retaining some historical character and material references. The large super graphic “Ice House” is utilized on one of the more visible facades.

Above, light blue areas indicate proposed locations for loft apartments within the Ice House East and West and the 2nd floor of The Block.

Above, the Denver Ice House and Tavern. Note the significant modification of some of the facades to accommodate housing (windows, balconies) while retaining some historical character and material references. The large super graphic “Ice House” is utilized on one of the more visible facades.

Above, examples of car share and bike share parking stations. Given the downtown location of the Ice House Complex, and the anchor residential tenants, such programs may be implemented at the Ice House as another small business opportunity. Residents could share vehicles and thus not require individual parking spaces. These programs may be expanded in downtown Harrisonburg or even onto the JMU campus.

The upper floor diagrammatic layouts for the Ice House Complex shown on page 8 suggest 54 units ranging in size from 600 to 900 sq ft may be possible. Some units may lend themselves towards a studio layout and some may be potentially created as 2 bedroom units. The layouts shown are only a possible layout of the floors, and have not been developed at the unit level in this conceptual planning document. Cold storage facility conversions are in-fact not that uncommon, and housing is often the program of choice for such facilities. Some of the more notable cold storage facility conversions include Decatur, Georgia; Denver, Colorado (shown below middle) and Tucson, Arizona (shown far left).

During discussions with the community, the concept of a boutique hotel program was raised as a potential alternative to loft apartments. This concept may be viable, and is largely dependant on other hotel development sites being considered in the area. Most of the concepts in this study may still be applicable to a boutique hotel program instead of apartments, though some aspects of the ground floor program and site layout would need to be reconsidered.

Loft apartments are the primary economic driver for development of the Ice House and program for the upper levels of the Ice House Complex. Both the main Ice House East and West and The Block are suitable for loft apartments on the upper levels. Housing (whether apartments, or sold in a condo model) is only possible with the critical addition of new vertical circulation and windows for natural light and ventilation. These windows will likely need to reference some of the original Ice House Complex windows (shown left) and other openings (such as the loading docks, also shown left) for the historic facades. It is understood that numerous conversations have been conducted between the property owners and the Virginia Department of Historic Resources regarding these facades which will need to be carefully developed in the early phases of design.

The open office program offers residents of the Ice House and The Block the ability to have an expanded interactive ‘home’ office. This opportunity is typically desirable for small and web-based businesses. Whether utilizing the in-building restaurant / cafe, purchasing aquaponic goods, visiting the Farmers Market, taking a class in the shared kitchen, or growing on the rooftop—residents can partake in numerous local fresh foods.
The Ice House Complex is suitable for unique programming such as artisan work spaces and open galleries. These businesses can benefit from the durable and open construction of the Ice House Complex and may utilize spaces that are otherwise marginal for other programming. With the exception of the desirable Liberty Street Frontage area, the Ice House Complex lacks street frontage typically required by traditional retailers. Even the Liberty Street Frontage likely lacks the visibility and foot traffic most retailers require. “Destination commercial” businesses therefore refers to places that people go to not by chance, but specifically to seek the business out. Artists may desire such off-the-grid retail spaces and certain retail types, suggested on this page, may benefit from such a location as well.

A gallery space within the Ice House Complex could similarly be utilized as a destination venue- leveraging the unique environment and atmosphere of the building. The exterior courtyard spaces could be utilized as temporary outdoor sculpture venues associated with the gallery. The gallery may have a potential interconnection with JMU galleries and art programs, as well as with in-house and in-town artisans. These links are also fostered by numerous nearby cultural venues that attract a regional audience seeking culture and unique shopping destinations.

**DESTINATION ARTS AND COMMERCIAL BUSINESSES**

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**PROGRAM INTERCONNECTIONS**

**CREATIVE COMMUNITY**
Working artisans and a gallery are mutually supportive programs that create a cultural hub which encourages more visitors collectively than singularly.

**JMU ARTS AND GALLERIES**
Connecting with JMU for a new downtown gallery or creating a new venue in which to sell student, faculty and alumni work offers an innovative way to interact with campus life.

**REGIONAL ARTS AND CRAFTS**
The Ice House gallery and or artisan spaces may be a venue for regional artisans, such as Mennonite furniture makers, to obtain exposure to a wider audience. Initially, this interaction may be fostered through the Farmers Market.

**CULINARY ARTS (see p. 12)**
Visitor’s to the Ice House coming to experience a culinary arts demonstration in the community kitchen will be able to visit the gallery and the artisan work spaces.
CULINARY ARTS COMMUNITY KITCHEN

The Ice House Complex ground floor may be an ideal location for a culinary arts community kitchen that could support a number of small businesses. A shared kitchen facility can benefit from the durable and open construction of the Ice House and may utilize spaces that are otherwise marginal due to a lack of natural light (which is not critical for a commercial kitchen facility).

First and foremost, a kitchen facility would be utilized by any cafe or restaurant program, which would likely be located in the Liberty Street Frontage. In this scenario the kitchen would likely be located just west (behind) the restaurant or cafe. If the Ice House Complex has no restaurant or cafe, then the kitchen may be more suitable near the loading areas at the rear of Ice House West where it may be more readily available for packing, catering and deliveries.

In either location the kitchen may be more than a back-of-house facility, and may be designed for classes, cooking demonstrations, or even a co-packing facility associated with the Farmers Market. In addition to supporting small businesses enterprises for specialty prepared foods, the kitchen could be utilized by local groups such as Our Community Place, for preparing meals or even training.

Above, the pink areas indicate potential locations for culinary arts kitchen (2,300-3,000 sq ft). This program may be associated with a restaurant / cafe (2,000-4,000 sq ft shown in yellow) in the Liberty Street Frontage, or near the loading area at the rear of Ice House West, if more catering / production oriented.

The potential interactions with the Farmers Market are many, including cooking demonstrations, canning, food prep and support for the Winter Market. Image from Downtown Harrisonburg Renaissance’s website.

The culinary arts kitchen may be designed as a learning kitchen for teaching cuisine, canning or nutrition. Such a venue may be desirable for JMU Health Sciences Department (nutrition, click to here to see article), Hospitality Management (cuisine, culture, click here to see courses), and JMU’s Life Long Learning Center (general interest, click here to see program). All of these JMU programs have classes and demonstrations that could utilize such a kitchen facility.

Above, the DC Central Kitchen is a model for community kitchens around the nation (www.dccentralkitchen.org). The kitchen collects 3,000 pounds of surplus food every day from area food service businesses and converts them into 4,500 meals for those in need. The kitchen staff is based around a job training program in the culinary arts in addition to volunteers. Local groups such as Our Community Place (www.ourcommunityplace.org) in Harrisonburg have similar programs that may be interested in utilizing a larger or more updated kitchen facility.

Left, The Hanover County Cannery and Commercial Kitchen is one of the closest co-packing and cooking facilities available to the public. The Cannery is stocked with large stainless steel sinks and work tables; steam jacketed kettles in 30, 40, and 80-gallon sizes; a steam blancher, corn cutter, and juicer-pulper. According to the Shenandoah Valley chapter of Buy Fresh Buy Local (www.buylocalshenvalley.org), there is demand for such a facility in the Harrisonburg area. The co-packing operation could be small business similar to the Farm-to-Table Co-Packers in New York (www.farm2tablecopackers.com).
PROGRAM INTERCONNECTIONS

LIVE - WORK OPPORTUNITY
The open office program offers residents of the Ice House and The Block the ability to have an expanded interactive home office. This opportunity is typically desirable for small and web-based businesses.

START-UP AND BUSINESS INCUBATOR
The open office may connect with City small business development groups, the JMU Center for Entrepreneurship in the College of Business, and the Shenandoah Valley Small Business Development Center. JMU students with a business concept may find the open office as a suitable place away from campus to found a new venture.

VISITOR’S WORKSPACE
Visitors to JMU, Rosetta Stone or other regional businesses may utilize the open office when in Harrisonburg on a regular basis.

ARTS BUSINESSES (see p. 11)
Artisans working at the Ice House Complex may require office space which can be accommodated within the open office model.

EVENTS PROGRAMMING
Any number of downtown or regional businesses may require the use of a large flexible event space for conferences, gatherings or celebrations. The ground floor of The Block could be rented out for such occasions - attracting large groups to the Ice House Complex.

FOOD BASED BUSINESSES (see p. 12)
Food based businesses or non-profits operating out of the culinary arts community kitchen, or the restaurant cafe may require office space which can be accommodated within the open office model. A catering business in the Ice House could also be a provider for events occurring within the flexible space on the ground floor of The Block.

FOOD BASED BUSINESSES

THE ICE HOUSE

FLEXIBLE SPACE
OPEN OFFICE AND EVENT SPACE
The Ice House Complex has several spaces that may be suitable as office environments (once modified to introduce natural light) but that may be utilized in the interim as flexible multipurpose spaces. The Annex 2nd floor (or even potentially its ground floor), The Block ground floor and some portion of the ground floor in Ice House West are all candidates for this type of program. These locations have limited street presence and/or limited natural light potential- but enough light potential to be functional as office space.

One type of flexible program is an ‘open office model’ also known as co-working spaces, which operates with very little infrastructure and may be relocated and re-sized within the Ice House Complex as tenant needs change over time. This type space supports small businesses and start-ups and thus links well with many of the other program ideas put forth in this study. A good regional open office model is Open Space in Charlottesville, Virginia (www.getopenspace.com) which charges $9 an hour or $250 a month per user and includes access to conference rooms, internet access, workstations, kitchen, bathrooms and parking.

Due to the nature of ice house and cold storage facilities (heavy structure and insulation, typically limited natural light), they are often converted into night clubs and music venues. With relatively little investment The Block ground floor could be converted into such a space as a venue for a range of concerts, parties, exhibits, ballroom dancing, theater, or photography and filming (see examples bottom left). A second means of egress would be provided, likely along the south wall. In the long-term, the ground floor of The Block may be outfitted for an office tenant by cutting openings for natural light along its south, west and east (as a light well) facades to create a similar feel to the project below in Spain.

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Above, Citizen Space in San Francisco (www.citizenspace.us) is another example of a co-working business, located in an interior space similar to the type of spaces available in the Ice House Complex. Citizen Space is a unique model in that it includes classes and workshops, fosters a community environment for the participating businesses and users, and even has a library. Citizen Space is about 4,000 sq ft compared to Open Space in Charlottesville which has 7,000 sq ft. The Ice House open office would likely start with a smaller space of around 2,000 sq ft that could be moved or expanded over time.

Above, photography and filming studios often need controlled environments for their work. The flexible space in the ground floor of The Block could accommodate this type of program. A photographer may then decide to utilize the open office as a workspace near this photography/filming space.

Above, a wedding reception in a converted warehouse space with controlled lighting and movable furniture and fixtures. A similar program could be imagined for the ground floor of The Block with catering and bathrooms located in the adjacent Ice House (east and west wings).

Above, a converted warehouse space being utilized for a special gallery exhibition involving video art. The ground floor of The Block or the gallery in Ice House East or West could be a venue for video, projection and interactive artwork.

Above, a block box theater space with movable and collapsible bleacher style seating. All of the programs at the bottom of this page could occur in the same space at the ground floor of The Block by utilizing movable furniture and fixtures.

Above, an abandoned cement factory converted into an office and home by and for architect Ricardo Bofill in Barcelona, Spain. The project was completed over 35 years ago but remains one of the most spectacular examples of adaptive reuse of an industrial site.
LOCAL FOOD
An aquaponics facility and/or green roof, whether commercial or research based, could provide fresh greens and fish to Ice House residents, the Farmers Market, the Co-op, JMU or local schools.

JMU ENVIRONMENTAL SCIENCES
JMU’s Environmental Sciences program could be the primary end-user for the an aquaponics facility. The space could be utilized as a JMU research facility and/or leased and shared for regional users including the Virginia Cooperative Extension (statewide agricultural support services and research).

CULINARY ARTS SUPPLIER (see p. 12)
Rooftop gardens or the aquaponics facility could provide a source of greens and fish to the in-house restaurants’ cafes, caterer or food packing businesses located in the Ice House Complex.

GROWING LOCAL
Growing food is not typically what one might first think of when exploring the potential of a large urban adaptive reuse project, but the Ice House Complex is not a typical project and Harrisonburg is not a typical city. The adjacencies of the Farmer’s Market and the new Co-op as well as potential in-house kitchen facility, catering and food businesses all have possible interconnections with growing food on-site. The Annex building with its existing steel structure may be the best location for an indoor year-round growing facility. The Annex exterior walls are not historical and are in very poor condition and are therefore a good candidate for a more transparent building envelope. The Annex could then support an interior growing program such as the aquaponic facility described below.

The massive structure of Ice House East and West and The Block can support a range of rooftop programs once suitable vertical circulation access is provided. A cable railing detail may be necessary for building code and safety requirements- but beyond that the roof is essentially free program space for the imagination. A green roof on these buildings will add additional insulation, improve stormwater management and quality, provide habitat, and would likely be one of the largest green roofs in the entire region. Growing food on the roofs would create a unique local resource.

THE ICE HOUSE
Above and left, Brooklyn Grange- a 40,000 sq ft roof top farm actually in Long Island City, Queens, New York. The farm is built on a 1919 building with a concrete roof, likely similar in construction to the Ice House and The Block. Brooklyn Grange is a commercial organic farm and sells to the public and restaurants. They also offer community and school tours and plan to expand into other communities to make local healthy food more readily available to the public. Photo credit above left: Donnelly Marks.

Above, the dark green Annex building (up to 8,000 sq ft on two floors) is perhaps best suited for an aquaponics facility as it has an existing steel structure and likely requires a completely new building envelope which may be designed for more natural light. The green roof area shown on the Ice House is a combined 12,600 sq ft of area, and The Block roof is another 5,800 sq ft, both heavily structured and able to support a green roof. The combined growing area could be up to half an acre.

Right and below right, Sweet Water Organics (www.sweetwater-organic.com) in Milwaukee, Wisconsin converted a former crane factory into an indoor aquaponics facility, raising about 55,000 fish (Tilapia and Perch) in tanks topped by beds of lettuce and other crops. As they describe on their website: “aquaponics is a system of agriculture involving the simultaneous cultivation of plants and aquatic animals such as fish in a symbiotic environment. In a traditional aquaculture, animal effluents accumulate in the water, increasing toxicity for the fish. This water is then led to a hydroponic system where the by-products from the aquaculture are filtered out by the plants as vital nutrients, after which the clean water is re-circulated back to the animals. The term aquaponics is a portmanteau of the terms aquaculture and hydroponic.” These types of aquaponic enterprises are not common, but interest in them is growing as sustainable fish and local year-round produce becomes more in demand by restaurants and consumers. It is possible to imagine a similar facility in the Ice House Annex making use of the good southern exposure and access to the rear vehicle loading area as well as selling to local restaurants and at the Farmers Market. Given the unique nature of such a facility it may start as a JMU research or collaboration project to later evolve into a commercial operation, or possibly remain as a demonstration project and food supplier to JMU. The facility has great potential for research, innovation and educational outreach. Eastern Mennonite University also offers majors in Biology and Environmental Sustainability, and may be interested in such a facility as well given their emphasis on hands-on education.

The massive structure of Ice House East and West and The Block can support a range of rooftop programs once suitable vertical circulation access is provided. A cable railing detail may be necessary for building code and safety requirements- but beyond that the roof is essentially free program space for the imagination. A green roof on these buildings will add additional insulation, improve stormwater management and quality, provide habitat, and would likely be one of the largest green roofs in the entire region. Growing food on the roofs would create a unique local resource.

THE ICE HOUSE
GROWING LOCAL
Growing food is not typically what one might first think of when exploring the potential of a large urban adaptive reuse project, but the Ice House Complex is not a typical project and Harrisonburg is not a typical city. The adjacencies of the Farmer’s Market and the new Co-op as well as potential in-house kitchen facility, catering and food businesses all have possible interconnections with growing food on-site. The Annex building with its existing steel structure may be the best location for an indoor year-round growing facility. The Annex exterior walls are not historical and are in very poor condition and are therefore a good candidate for a more transparent building envelope. The Annex could then support an interior growing program such as the aquaponic facility described below.

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The Liberty Street View is perhaps the most visible face of the Ice House Complex for the public. The historic brick facade of the Liberty Street Frontage will be maintained and restored. Accessibility to the site can be enhanced with a gently sloping walkway that will rise to the level of the Ice House West loading docks for a central entry area (see p. 7). The non-historic 3rd and 4th level Ice House East facades and the Annex Building facade (in the distance) may be completely re-skinned to maximize natural light for the interior spaces. Large areas of new landscape spaces may be added due to the potential for the use of structured parking above and below The Deck in the southwest corner of the site. Access to Blacks Run (behind existing trees and thus not visible in the rendering) occurs deeper within the site along the southwestern edge where one can actually reach the edge of the water.

Please note that this conceptual rendering is not a design, but rather a vision of what might be possible at this location. In-depth design, engineering feasibility, cost analysis and 3rd party reviews will have a role in shaping the final project form and function.
The current 'back side' of the site facing Bruce Street can be radically transformed as a 2nd entry to the Ice House Complex and an equally important civic space as the Liberty Street entry. The Big Move described on page 6 opens up historic facades of Ice House West and The Block to create loft housing filled with natural light and maximizes the adaptive re-use of the Complex as a whole. The Big Move also creates a landscaped courtyard space and a pathway between the building masses, allowing direct access to Ice House East and West from Bruce Street. Structural remnants of the removed portions of the Complex may be left in place as suggested in the rendering. The existing Rear Circulation area could be significantly modified as a semi-open structure and ramped to allow vehicular access to The Deck parking area at the southwest corner of the site.

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This rendering is from within the Ice House Complex looking east and depicts the interior program potential of this critical juncture between Ice House East, Ice House West and The Annex building. Newly added north facing windows in Ice House West allow for an open collaborative office space in the converted cold storage and equipment areas. The Annex Building is shown with the potential aquaponics facility described on page 14 that could act as a research facility, a commercial food producing operation and even an attraction for visitors to the Ice House Complex for tours. The main corridor connecting these programs could be an extension of the gallery, utilizing the more active public space for sculptural furniture, for instance, that could be a shared amenity for the Complex.

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