

State of Wisconsin
Wisconsin Historical Society



W I S C O N S I N
H I S T O R I C A L
S O C I E T Y

Project No. 1711K
Request for Architectural/Engineering Services
Old World Wisconsin Guest Entry Experience
Town of Eagle, County of Waukesha

November 2018

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Request Statement

This request is to select an Architectural and Engineering (A/E) firm to work with the Wisconsin Historical Society (WHS) and the Department of Administration Division of Facilities Development and Management (DFDM) to develop the Entry Experience site, building and infrastructure improvements at Old World Wisconsin (OWW) located near Eagle:

- Provide comprehensive site development plan for all Project Components (refer to pages 3 to 5). Deliverables include comprehensive site, building and utility layout and location for all project components.
- Provide planning and programming services for all Project Components (refer to pages 3 to 5) making up the Entry Experience site, building and utility improvements. Deliverables include a comprehensive program statement and data sheets for building components and a report that establishes final design criteria and scope of work for each of the infrastructure improvements.
- Provide design and construction administration services for the Brewery / Tavern / Beer Garden components.
- Provide design and construction administration services for all planned site utility Infrastructure Improvements.
- As additional funding becomes available, provide A/E services for the remaining project components including Entry Portal, Ticketing and Day Planning, Tram Drop, Pavilion, Toilets, Storage and Service Drive; and
- As additional funding becomes available, provide A/E services for the remodeling of the Clausing and Ramsey Barns consistent with programming needs.

Project Scope

Project Description (General Overview):

The Entry Experience is a planned infill renovation to the arrival area at OWW, centered around the Existing Green between the existing Clausing and Ramsey barns and adjacent to the existing main parking area. Attached to this Request for Architectural/Engineering Services are planning studies and reports that describe previous visioning efforts.

This request for design services includes the following Project Components (refer to page 3 to 5 for more descriptive information):

Existing Green
Lueskow House Teaching Garden and Garden Shop
Windmill and STEM Learning Center
Infrastructure Improvements
Brewery / Tavern / Beer Garden
Entry Portal
Ticketing and Day Planning
Tram Drop
Pavilion / Toilets / Storage
Service Drive
Ramsey Barn Renovation
Clausing Barn Renovation

The Project Components in this service request will be phased dependent on availability of funding for each. Infrastructure utility improvements for the Entry Experience area include: expansion and upgrades to the water distribution system, sanitary system, power distribution and site lighting.

Portions of the Entry Experience are in the process of being completed separately and are not included in this AE service request. These include the Lueskow House Teaching Garden and Garden Shop and the Windmill/STEM Learning Area.

The project may be expanded in the future to include improvements to the Ramsey and Clausing Barns. The Ramsey Barn project would modify the existing gift shop and finish out the lower level for interpretive exhibits presently visualized on immigrants. The Clausing Barn project would include extensive renovation to the lower level food service.

Where there are conflicts between the previous studies and recommendations found in the appendix, the scope and terms in this Request for AE Services will take precedence for AE selection.

Project Location:

Town of Eagle, Waukesha County
Old World Wisconsin
W372 S9727 Wisconsin 67
Eagle, WI 53119



Project Background/Existing Conditions:

OWW is one of the country’s leading outdoor history museums with annual visitation in the range of 70,000. Since it opened to the public in 1976, visitors have continued to utilize the same restrooms, food service facilities, and special events spaces that were available 40 years ago.

Visitor orientation, ticketing, and revenue-generating amenities have largely remained unchanged. In June 2010 a tornado permanently altered the landscape of the existing parking lot, entrance area, and special event spaces at OWW. Since the tornado, master planning has evolved from the initial thought of constructing a new visitor center to pursuing a consultant’s recommendation to design and construct additional smaller facilities in and around the existing

entry-area buildings. The development of these additional facilities will result in a village-like cluster of structures and amenities located around a central green. The central green is the entire area where visitors will be oriented with staff, amenities, and experiences to tend to their needs and interests, setting the stage for a great day at OWW.

The Entry Experience development will help fulfill OWW strategies and mission through new visitor amenities, operations, marketing, revenue growth, and financial sustainability.

These projects will transform the OWW entry experience for general visitors, school groups, and special event attendees. This project will facilitate the addition of individual elements of the overall plan as private funds become available.

Project Expectations/Requirements/Desired Outcomes:

Planning – Comprehensive Site and Implementation Planning

- Obtain Site information –site survey and geotechnical investigation
- Complete the criteria and requirements for infrastructure improvements including power, lighting, communications, water and sanitary systems for the entire Entry Experience area.

- Coordinate with the Milwaukee School of Engineering (MSOE) on Windmill and STEM Learning Area
- Coordinate with WHS on Lueskow Teaching Garden and Garden Shop
- Complete Program Statements and Design Criteria Reports for
 - Entry Portal
 - Ticketing and Day Planning
 - Tram Drop
 - Pavilion / Toilets / Storage
 - Brewery / Tavern / Beer Garden
- Comprehensive site layout of all project components and infrastructure improvements.

Design and Construction – Full service deliverables for Brewery, Beer Garden, Tavern and Infrastructure Improvements, site grading and landscaping.

Future Work – As Funding becomes available incremental additional services may be requested for:

- Entry Portal
- Ticketing and Day Planning
- Tram Drop
- Pavilion / Toilets / Storage
- Service Drive
- Ramsey Barn Renovation
- Clousing Barn Renovation

Project Components

Existing Green:

The existing area bordered by brick pavers is to remain as open space. It is intended that the Entry Experience buildings when completed will enhance the use of the open space for gathering, play and will accommodate special events. If there are existing above grade utility

services within the green they are to be relocated. Existing pavers are to remain, or be replaced and relocated to accommodate proposed improvements.

Lueskow House Teaching Garden and Garden Shop:

This existing building and garden is adjacent to the existing entry portal and is generally complete. Portions of the water system components are located in the basement. Existing exterior and garden to remain.

Windmill and STEM Learning Area:

This separate work is being developed in cooperation between the Wisconsin Historical Society and the Milwaukee School of Engineering as a class project. It is intended to be the focal point on the green. Final location to be determined based on comprehensive site plan.

Infrastructure Improvements:

For the entire Entry Experience area the work includes improvements to electrical service, water distribution, storm water runoff or retention, waste water and/or septic systems, communications systems (telephone, network, etc.), and the potential for the use of renewable energies (wind, solar, geothermal). This project will complete the findings to determine the scope of work for all Infrastructure Improvements, as necessary to correct existing system deficiencies.

Brewery/Tavern/Beer Garden:

The desired building vernacular for these three elements ranges between 1890's and into the 1930's allowing for interpretation of the historical account from days of early brewing in Wisconsin through the Prohibition-Era.

Brewery

New construction to replicate a 19th Century (1890) building similar exterior style of the recently completed Creamery (Discovery Station). Pitched shingle roof with chimney, board and batten siding, single story, approximately 1,000 square feet.

The OWW Guest Entry Experience includes a brewing program developed to re-create traditional farm brewing. In partnership with the Museum of Beer and Brewing, the WHS will create a historic attraction that will interpret the early history and technology of brewing in Wisconsin with the opportunity to generate revenue to support annual operations and foster the educational missions of both organizations. The proposed building is designed to accommodate the brewing process. Brewing demonstrations will be observed from both the tasting room and the demonstration area.

The building is to be located adjacent to the Clausing Barn, which currently houses a restaurant and a large assembly space. It is intended that the brewery will function in concert with the existing restaurant and will provide many of the required support facilities and services. The existing Clausing Barn patio will be extended to link the two buildings.

Tavern

The existing Wittnebels Tavern (circa 1936) building will be relocated from its original location. This existing two-story wood siding building will be remodeled as a tasting/tap room.

Beer Garden

The space between the Brewery and the Tavern is envisioned to serve as a casual beer garden providing outdoor seating.

Entry Portal:

Replace existing picnic park shelter with a distinct and obvious point of entry to the grounds from the parking lot and vehicle drop off.

Ticketing and Day Planning:

Reconstructed or relocated depot building (not yet determined). Includes a new exterior gathering space near the Entry Portal.

The Ticketing and Day Planning station will speed the entry process and assist visitors in creating individualized plans for exploration of the site. Greeted by a costumed staff host, guests will be assisted by trained volunteers in the station, introducing them to the day's opportunities and customizing their visit based upon interests, ages, and physical abilities.

Tram Drop:

Proposed newly developed area adjacent to Ramsey Barn to accommodate gathering of guests for next tram include seating and shelter.

Pavilion / Toilets / Storage:

These three proposed new elements can be one single building of one or two levels, individual buildings or any combination.

Pavilion

This new construction open-air pavilion is to accommodate up to 200 guests. Located at the same level of the Existing Green adjacent to the Ramsey Barn.

Toilets

New toilets should be readily located from the Green near the Pavilion. The toilets can be located adjacent to or underneath the Pavilion. Access from the service drive is desired If located underneath the Pavilion.

Storage

New storage for equipment related to activities on the Green. The storage can be located adjacent to or underneath the Pavilion. Access from the service drive is desired If located underneath the Pavilion.

Service Drive:

Proposed new paved access for service vehicles from Ramsey Barn to Clausing Barn and access to Storage Building. Located at a lower grade level than the Existing Green and to the west of the new buildings.

Ramsey Barn Renovation:

Remodel existing gift shop and develop lower level for immigrant themed interpretive exhibits.

With ticketing functions removed from Ramsey, the upper level retail experience will be enhanced to include new interior spaces, better traffic flow for guests and exterior design elements to offer more natural light to draw guests inside.

The 40-year-old theater in the lower level of the existing Ramsey Barn will transform into a new immersive storytelling experience that places the guests in the shoes of an immigrant leaving home for a new life in Wisconsin.

Clausing Barn Renovation:

Upgrades necessary to the Clausing Barn kitchen and dining room facilities include the removal and replacement of tile floor in the dining room and serving line and repair of floor drains in the kitchen. Kitchen improvements include the purchase and installation of critical operation equipment to replace malfunctioning/inoperative commercial grade coolers and freezers.

Proposed Budget for Planning, Infrastructure Improvements, Brewery / Tavern / Beer Garden

Construction	\$3,911,300
Design	\$673,100
DFD Mgt	\$184,100
Contingency	\$546,500
Other Fees	\$40,000
TOTAL	\$5,355,000

The project will be funded with \$3,892,000 GIFTS plus site utility and infrastructure system improvements funded through General Fund Supported Borrowing (GFSB) and GIFT funding.

Proposed Project Schedule

A/E Selection	Jan 2019
Complete Program Verification & Prelim. Design Report	Apr 2019
SBC Authority to Construct	Jun 2019
Bid Date	Nov 2019
Start Construction – Guest Entry Experience Facilities (Phasing)	Mar 2020
Substantial Completion – Infrastructure Improvements, Brewery / Tavern / Beer Garden	Nov 2020
Substantial Completion – Guest Entry Experience Complete	Jun 2022

A/E Scope of Services

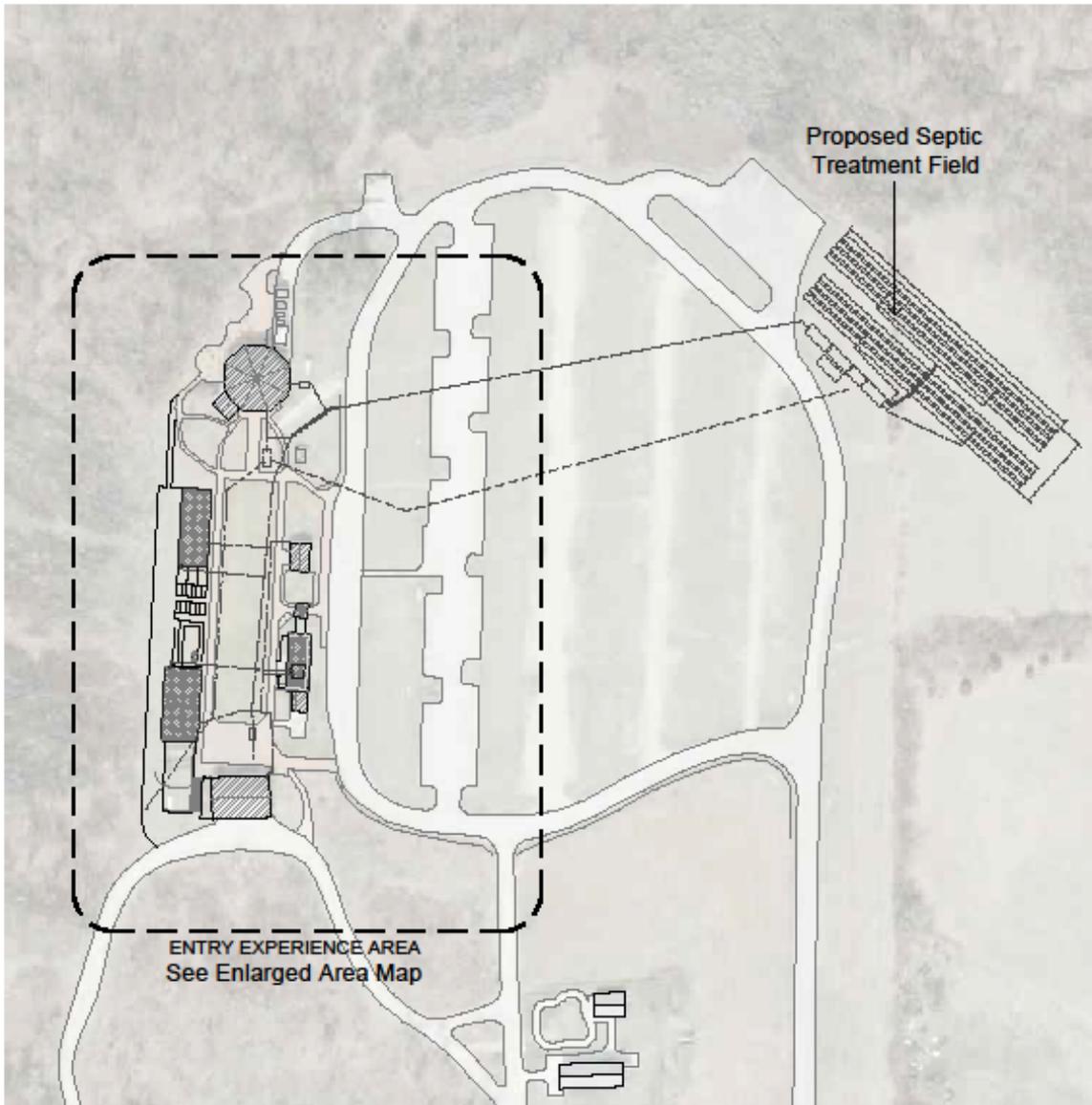
DFD Standard Policies and Procedures:

The A/E will provide design through construction administration services as indicated in the DFD “Policy and Procedure Manual for Architects/Engineers and Consultants”, the “Guide for Developing Program Statements for Projects Requiring Enumeration”, and the DFD “Contract for Professional Services as directed by DFD at the Design Kickoff meeting.

The A/E scope of services for this project includes full design services, site preparation, implementation planning, and the phasing of construction. The A/E contract will include a 35% design stop with Wisconsin Historical Society and Department of Administration administrative approval before proceeding to 100% A/E design and construction services.

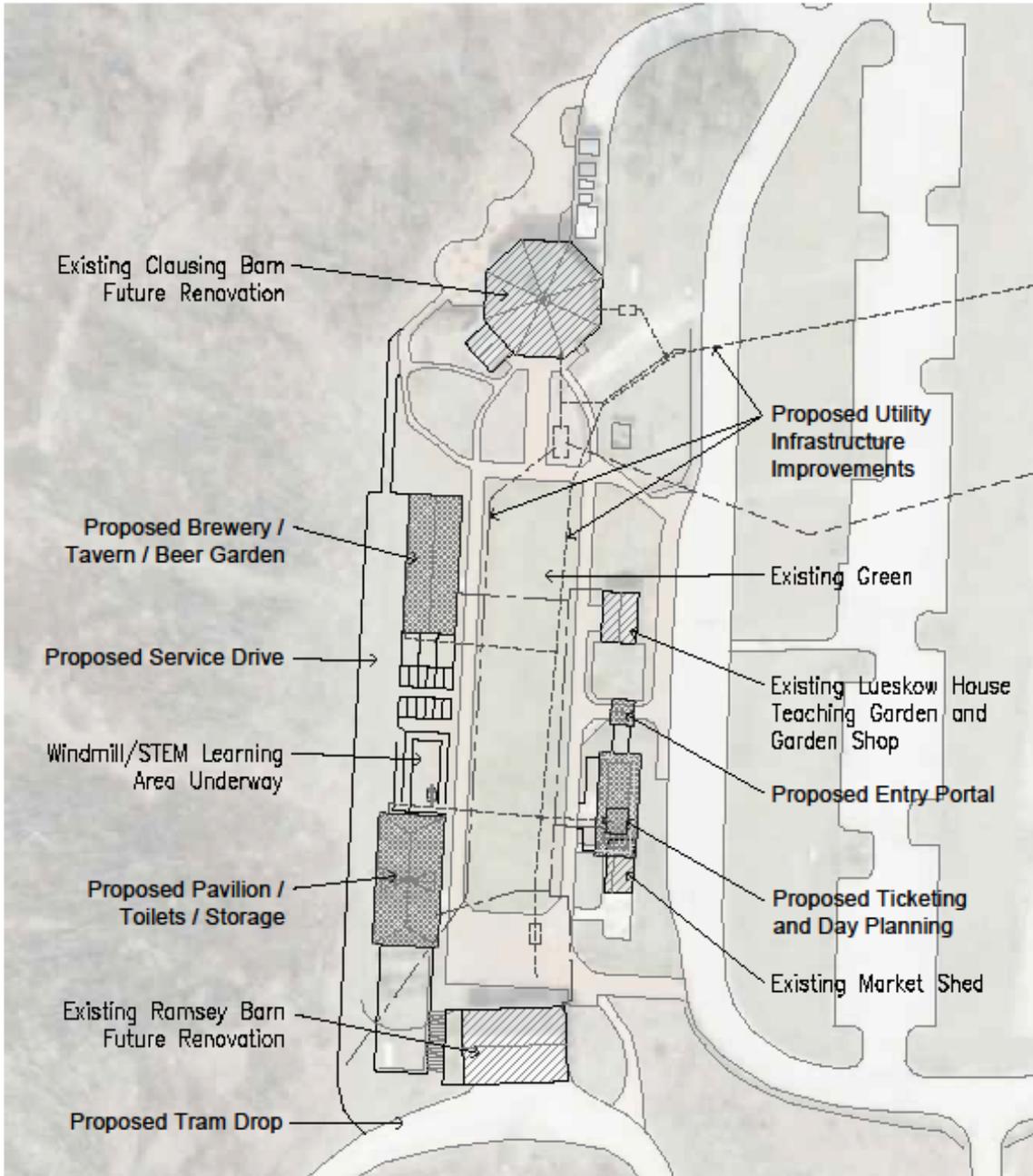
Consultant Qualification Requirements:

The selected firm must have a portfolio of planning, design and construction projects that demonstrate a working understanding of historic facilities, historic site development, museums, educational and recreational facilities.



150' **Site Map**
GUEST ENTRY EXPERIENCE

OLD WORLD
WISCONSIN



80'

Site Map Enlargement
GUEST ENTRY EXPERIENCE

OLD WORLD
WISCONSIN

APPENDIX 1

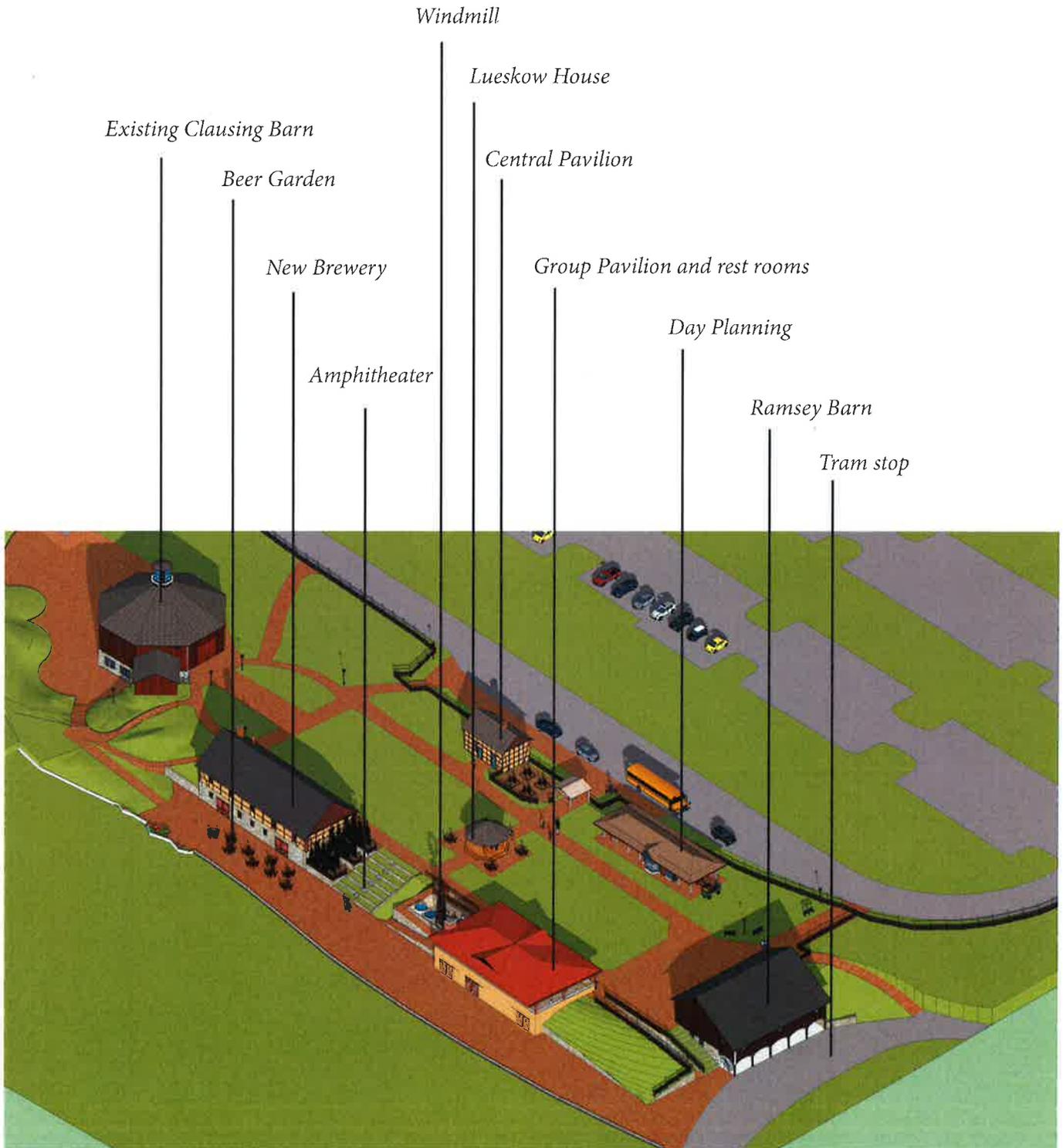
Guest Entry Experience Report
Assemblage Architects
July 2017



Guest Entry Experience Report

A WISCONSIN HISTORICAL SITE

ASSEMBLAGE ARCHITECTS



Project Background and Purpose:

This report is an extension of entry experience concept developed by PGAV in 2014 . The purpose of this report is to update the concepts, develop conceptual architectural designs to serve budgeting and fundraising efforts.

This report identifies the general site concepts and individual buildings contributing to the overall concept.

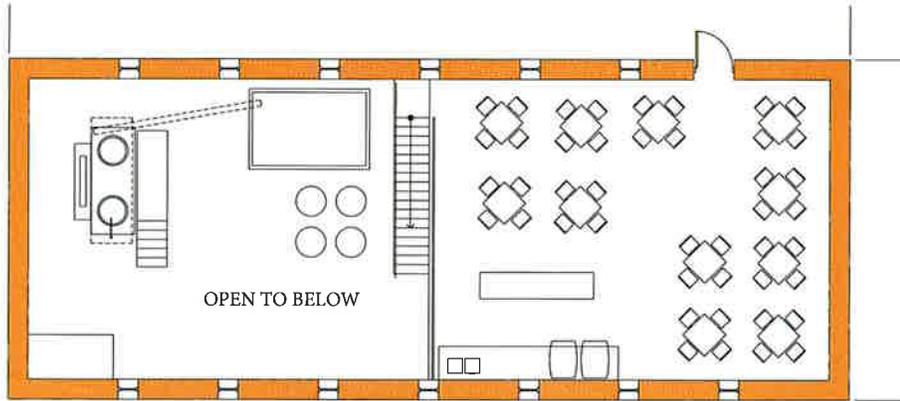
Site:



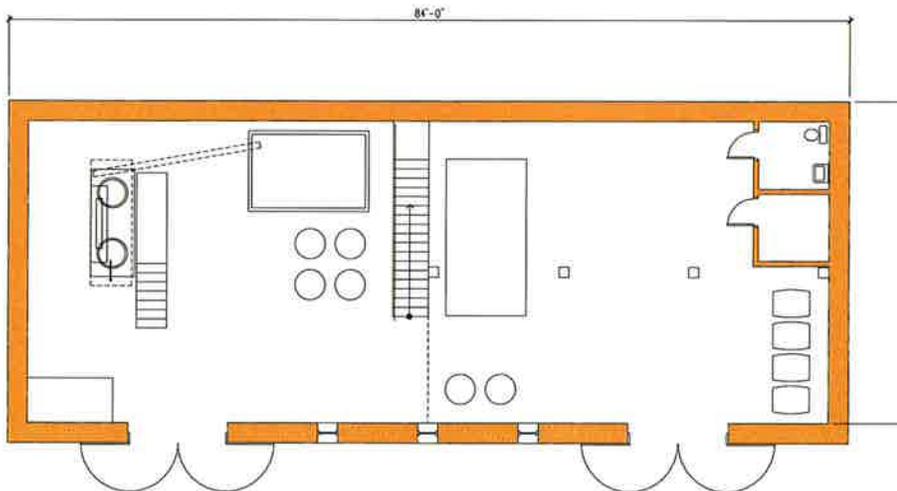


Brewery and Beer Garden(biergarten):

The building is designed as a replica of a traditional German half-timber construction and utilizes timber construction with brick infill. Traditional wood-framed windows and doors will add to the historic character of this building, and will fit within the context of the relocated and reconstructed buildings on the Old World Wisconsin campus. The building foundation is cast-in-place concrete with stone veneer to match the aesthetics of other traditional buildings currently on site.



SECOND FLOOR PLAN

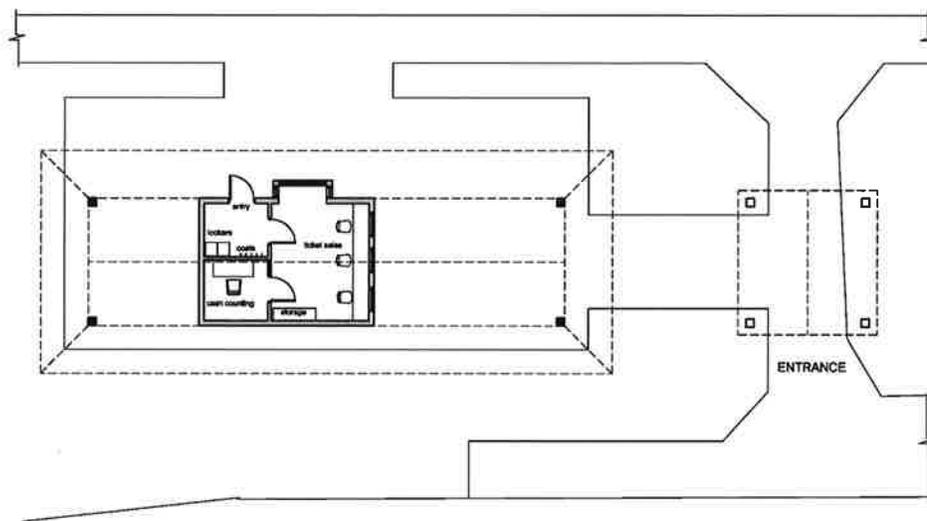


FIRST FLOOR PLAN



Dayplanning and ticketing facility

Designed based on Historic railroad stations, the dayplanning/ticketing station will speed the entry process and assist visitors in creating individualized plans for exploration of the site. Greeted by a costumed staff host, guests will be assisted by trained volunteers in station, introducing them to the day's opportunities and customizing their visit based upon interests, ages, and physical abilities. Guests will be introduced to OWW as one of 12 historic sites and museums administered by the Wisconsin Historical Society. Guests will be introduced to the value of WHS membership before transitioning to the admissions/membership purchase process in an adjoining area.

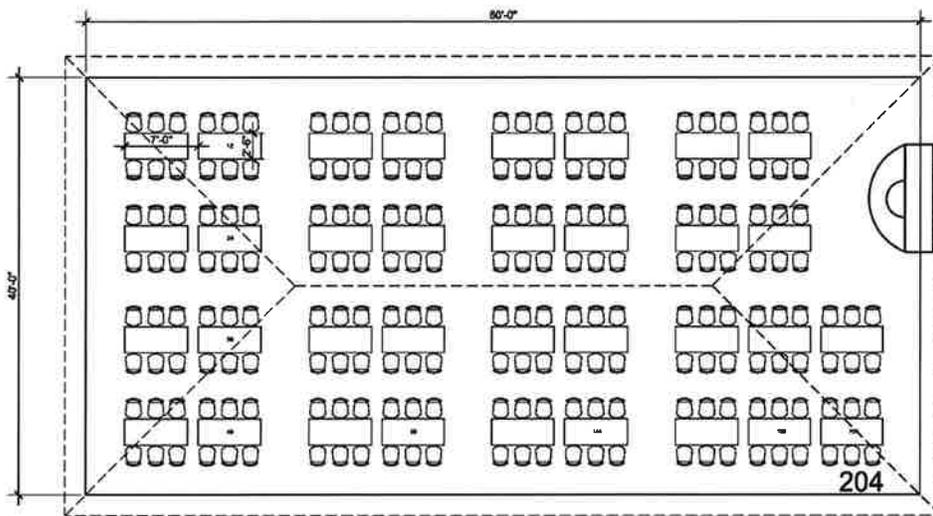


FIRST FLOOR PLAN

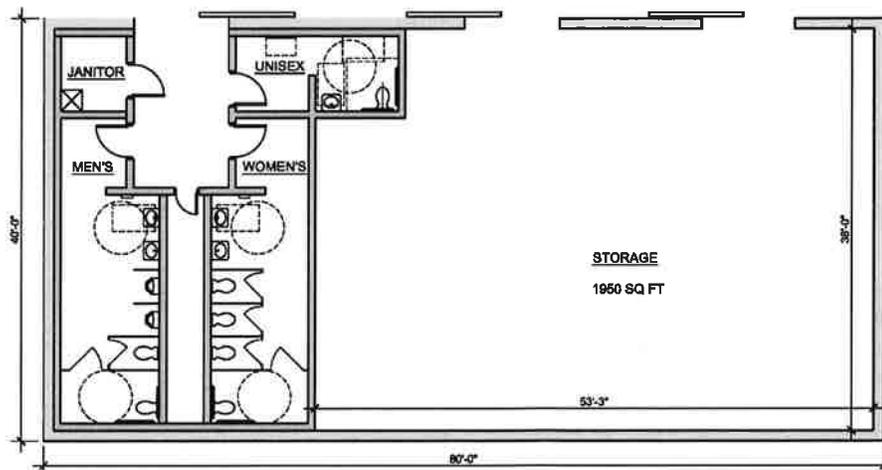


Group Pavilion with Restrooms:

Designed as a traditional timber framed structure, with concrete first floor, the group pavilion with restrooms will provide covered space for visiting students and other groups to gather for meals and activities. Restrooms will be located within the group pavilion to attend to the immediate needs of guests. The group pavilion will be designed to accommodate 200



SECOND FLOOR PLAN



FIRST FLOOR PLAN



Windmill & STEM Learning Center:

The windmill and STEM learning center is a collaboration between between the Milwaukee School of Engineering and the Wisconsin Historical Society. The restored historic windmill will draw people to the Guest Entry Experience and serve as the centerpiece for exploration of wind energy.

A restored historic windmill will tower over the central green where its height, sculptural qualities and constant movement will draw people toward the entrance from the parking area.

The windmill will anchor an interactive outdoor exhibit that fosters exploration of wind power through the lenses of history, science, technology, engineering and math. Interactive exhibits, designed to be unstaffed and open-ended in nature, will introduce guests to the role of windmills in Wisconsin's past, how windmill and pump technology enabled water to be pumped from below the surface, and the basic engineering principles used in harnessing energy from the wind. The experience will include the opportunity for guests to create their own simple wind machines using available parts. This multiple disciplinary approach to exploring the past will be introduced to guests at the windmill and carried throughout the OWW experience.

Central Pavilion/Gazebo:

The gazebo, located in the central green, will provide a location of events, performances, ceremonies, and demonstrations.

Ramsey Barn:

The Ramsey Barn is the entry/exit point for exploration of the site and contains a retail shop on the main level. With ticketing functions removed from Ramsey, the upper level retail experience will be enhanced to include new interior spaces, better traffic flow for guests and exterior design elements to offer more natural light to draw guests inside.

The 40-year-old theater in the lower level of the existing Ramsey Barn will transform into a new immersive storytelling experience that places the guests in the shoes of an immigrant leaving home for a new life in Wisconsin.

Project Budget Summary:

Construction Cost:	\$3,614,800
AE Fees	\$382,800
Other fees:	\$40,000
DFD Management Fees:	\$156,300
Contingencies:	\$285,200
Special equipment-Fire box:	\$200,000
Total:	\$4,679,100

*Notes regarding budget: specializes brewing equipment are excluded.
Site utility is provided under a separate project.*

**This project is prepared by assemblage architects as a
component of OWW Entrance experince DFD Project
Number DFD 16D1D**

Report Date July 11, 2017

APPENDIX 2

Old World Wisconsin Brewery



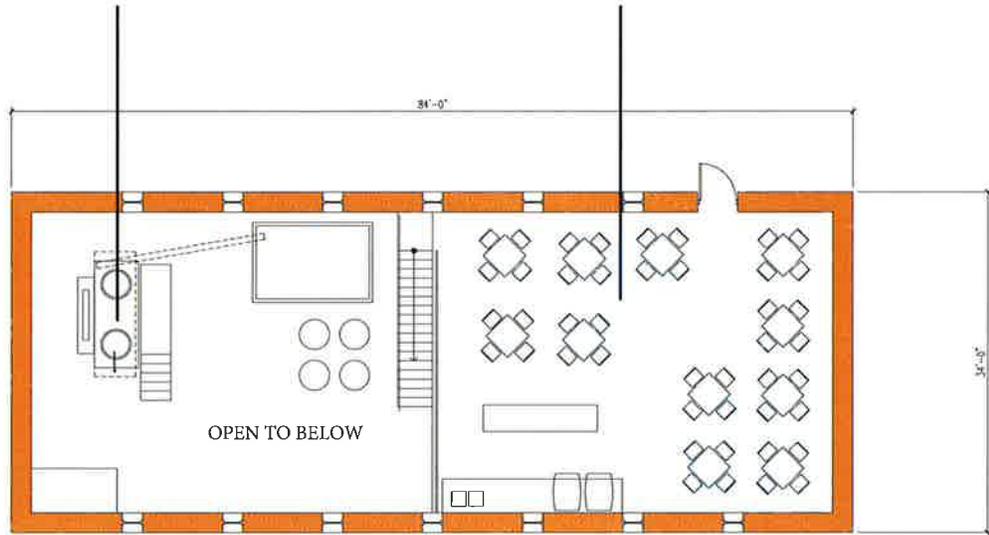
Brewery

A traditional experince at



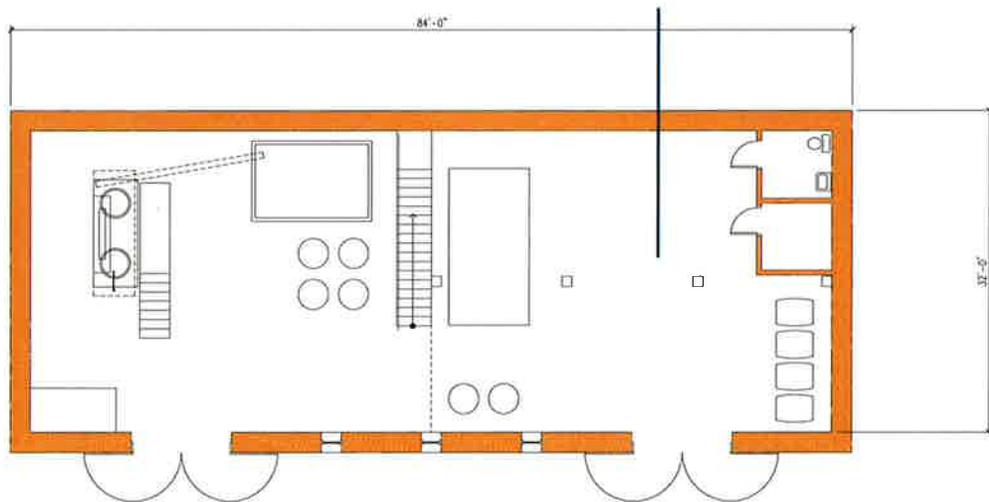
FIRE BOX AND BREW KETTLE

OBSERVATION AND TASTING



SECOND FLOOR PLAN

AGING AND STORAGE



FIRST FLOOR PLAN

Project Background and Purpose:

Old World Wisconsin (OWW) currently offers beer brewing exhibitions on site. Small batches of beer are made using historic brewing methods. The demonstration illustrates the authentic brewing methods brought to Wisconsin by German immigrants. This approximately twice a month event draws a variety of visitors, including home brewers, to OWW. The current exhibit is temporary located next to our 1880 German Immigrant Farm; finding a place within the villages using whatever water is available and bringing the brewing equipment out of storage. Hops are acquired from nearby farms and dried in nearby facilities. Currently there is no permanent storage or display space for the hops, malt or the historic brewing equipment.

By creating a permanent exhibit place, equipment and process can be observed when a demonstration is not in progress. Working brew masters have been instrumental in the layout of the brewing equipment and process. A building would allow for the malt and fermenting process to occur as part of the exhibit. Ingredients and the unique brewing equipment will be permanently located in the building, putting the historic brewing process on display. Fermenting beer will be stored in barrels displayed throughout the brewery. The permanent building will also extend the demonstration season and production capacity.

Historic Brewery:

Old World Wisconsin (OWW) currently offers beer bThe Old World Wisconsin brewing program is developed to re-create traditional farm brewing. The proposed building is designed to accommodate the brewing process. Brewing demonstration can be observed from both the tasting room and within the demonstration area.

The building is located adjacent to the Clausing Barn, which currently houses a restaurant and a large assembly space. It is intended that the brewery will function in concert with the existing restaurant and will provide many of the required support facilities and services.

The existing Clausing Barn Patio will be extended to link the two buildings and serve as a beer garden, hosting visitors and events.

The building is designed as a replica of a traditional German half-timber construction and utilizes timber construction with brick infill. Traditional wood-framed windows and doors will add to the historic character of this building, and will fit within the context of the relocated and reconstructed buildings on the Old World Wisconsin campus. The building foundation is cast-in-place concrete with stone veneer to match the aesthetics of other traditional buildings currently on site.

Brewing process:

The process follows the traditional farm style brewing method, utilizing wood fire and copper brewing kettles, as well as wood fermentation and aging vessels. Some of the grains and hops used in the process will be grown on site including in the adjacent Hop garden.

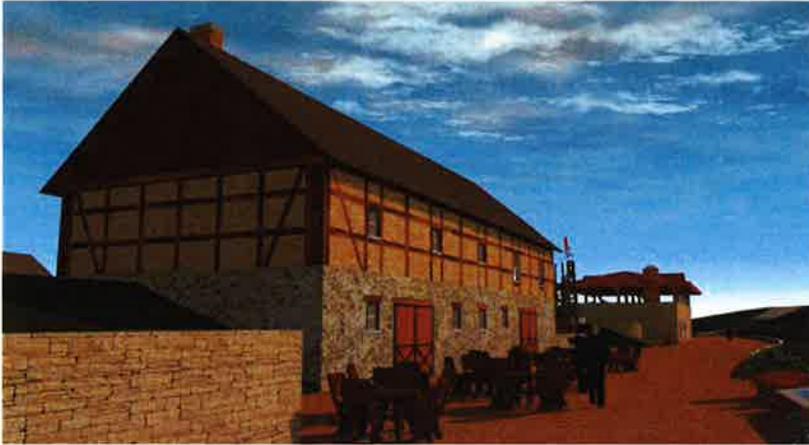
Building services:

Mechanical: The building will be uninsulated and a wood fired stove will provide heat during shoulder months. The stove will exhaust via a traditional fire-rated masonry chimney. A steam collection and exhaust system is envisioned for the brewing equipment.

Fire protection: Because there is no access to a municipal water source, the fire protection system will utilize an underground tank, pump, and generator system.

Electrical: Electrical and lighting will be connected to the site's existing utilities.

Plumbing: A single ADA restroom is provided to serve the brewers. Visitors will utilize a larger bathroom facility that will be developed adjacent to the brewery. The Clausing Barn facilities are also available for visitor use.



Brewery: View from the beer Garden at the lower walkway



Brewery: Approach from main entrance.



Brewery: View from southwest



*Brewery: Interior view towards
brew kettles*



*Brewery: Interior view from
observation loft*



*Brewery: Interior view
observation loft and tasting
Tavern*



*Brewery: Interior view aging and
storage*

Project Budget Summary:

Construction Cost:	\$1,383,000
A/E Design Fees:	\$115,000
Other fees:	\$40,000
DFD Management Fees:	\$58,000
Contingencies:	\$62,000
Special equipment-Fire box:	\$200,000
Total:	\$1,858,000

Notes regarding budget: specializes brewing equipment are excluded.

Site utility is provided under a separate project.

**This project is prepared by assemblage architects as a
component of OWW Entrance experince DFD Project
Number DFD 16D1D**

Report Date June 1, 2017

OLD WORLD WISCONSIN-BREWERY

APPENDIX 3

Guest Entry Experience Report PGAV Destinations 2014-2015

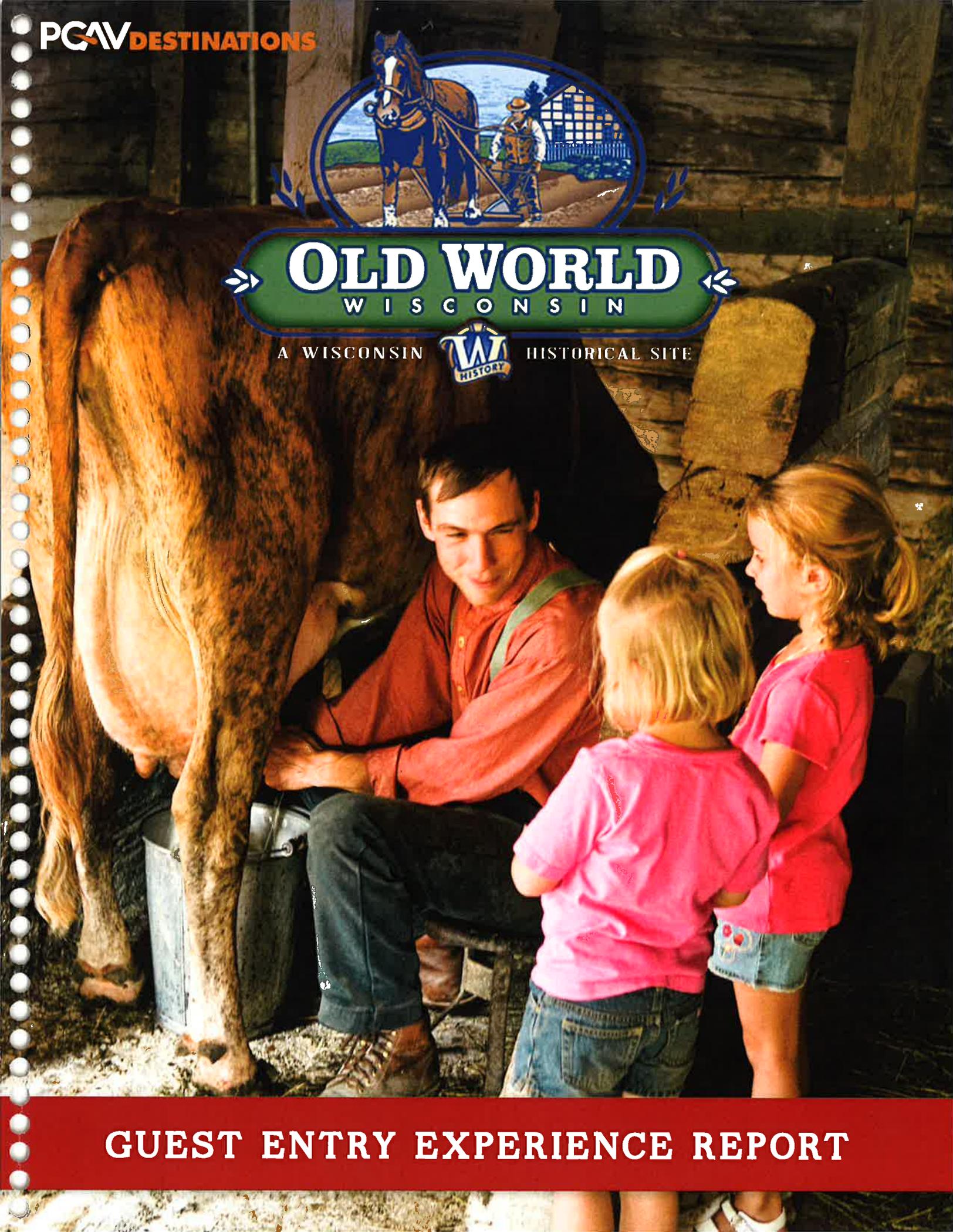


OLD WORLD WISCONSIN

A WISCONSIN



HISTORICAL SITE



GUEST ENTRY EXPERIENCE REPORT

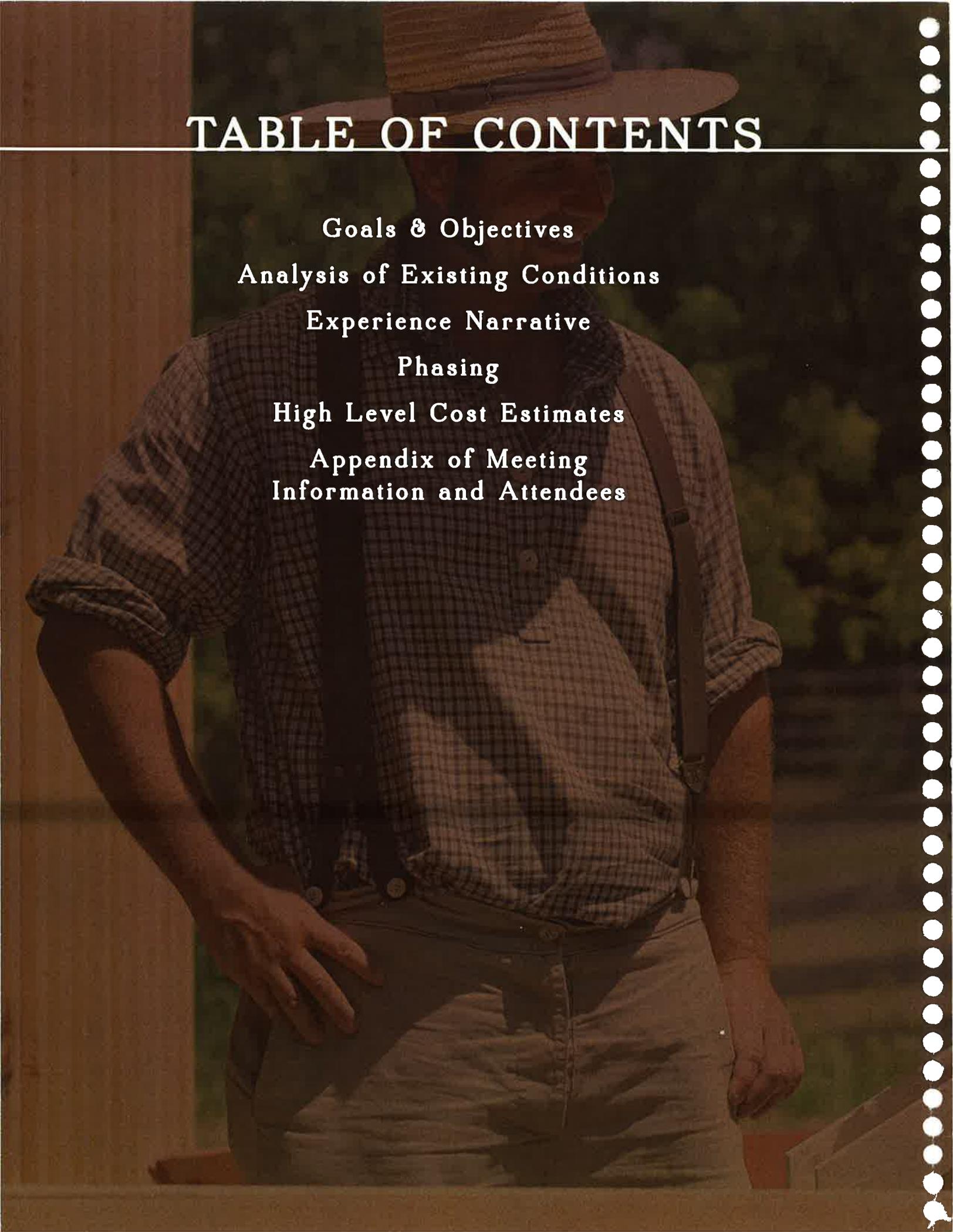
A man wearing a wide-brimmed straw hat, a plaid short-sleeved shirt, and light-colored trousers with suspenders. He is standing outdoors, possibly on a porch or near a building, with a wooden post visible on the left. The background is slightly blurred, showing greenery.

TABLE OF CONTENTS

Goals & Objectives

Analysis of Existing Conditions

Experience Narrative

Phasing

High Level Cost Estimates

Appendix of Meeting
Information and Attendees





GOALS AND OBJECTIVES

PGAV Destinations and leadership at Old World Wisconsin (OWW) met on-site to brainstorm ideas for the improved Entry Experience. The process was a two day workshop that defined characteristics of strong entry experiences and developed a framework for the discussion of what the OWW entry experience is currently, and what the ideal entry experience “Oughta Be.”

The entry development strategy is comprised of 3 major categories of improvements all enhancing the Old World Wisconsin brand.

The Experience should start at the entrance gate and unfold naturally and intuitively...

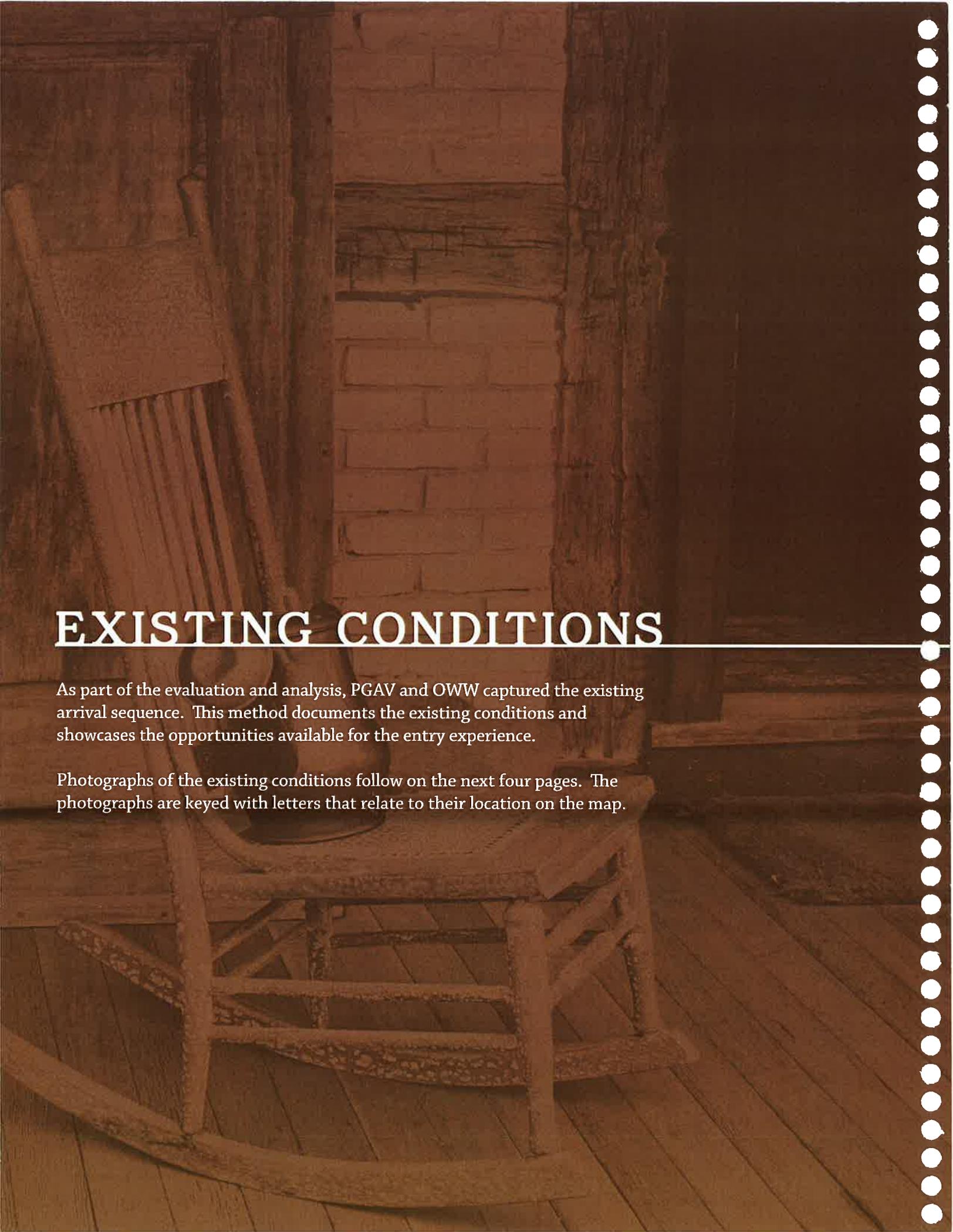
- A Strong Signifier
- Emotional Preparation with glimpses of buildings and animals
- A “Wow” moment
- Stimulation of the five senses
- Parking as an extension of the overall experience
- Clear point of entry for each type of guest (daily visitors and groups)
- Functional needs of the guests need to be met

Storytelling should be consistent throughout all functions of the arrival experience...

- Entry Experience should include interpretation
- Ticketing should include information on dayplanning and navigating the site and can be enhanced through concierge style presentation
- Retail space and merchandising should reflect the themes of Old World Wisconsin
- Old World Wisconsin can prepare and “outfit” the visitor to be prepared for and better engage in the journey in which they are about to embark
- Food and Beverage outlets can be scalable, include sales of products, and act as part of the interpretive experience
- Storytelling can be integrated into revenue generating opportunities such as food & beverage and retail

The “Green” is an opportunity to organize the arrival and immediately engage the guest...

- Provide central arrival, ticketing, and an engagement area
- Concierge service available for day planning
- Play area for children to engage while parents are purchasing tickets or talking to the concierge
- Create visual cues to help guest navigation to next stop
- Provide additional areas for picnicking with shade
- Animals can be a point of entry for many guests
- Provide settings for special performances and events

A rustic wooden rocking chair is the central focus, positioned in a log cabin. The chair is made of light-colored wood with a curved back and a woven seat. It sits on a wooden floor. The background consists of thick, dark wood logs forming the walls and ceiling. The lighting is warm and soft, creating a cozy atmosphere. The text 'EXISTING CONDITIONS' is overlaid in white, bold, sans-serif font across the middle of the image.

EXISTING CONDITIONS

As part of the evaluation and analysis, PGAV and OWW captured the existing arrival sequence. This method documents the existing conditions and showcases the opportunities available for the entry experience.

Photographs of the existing conditions follow on the next four pages. The photographs are keyed with letters that relate to their location on the map.



A

C

D

B

E

F

G

H

I

J

P

M

L

K

O

N

Big Kettle Pond

Black Tern Marsh

A



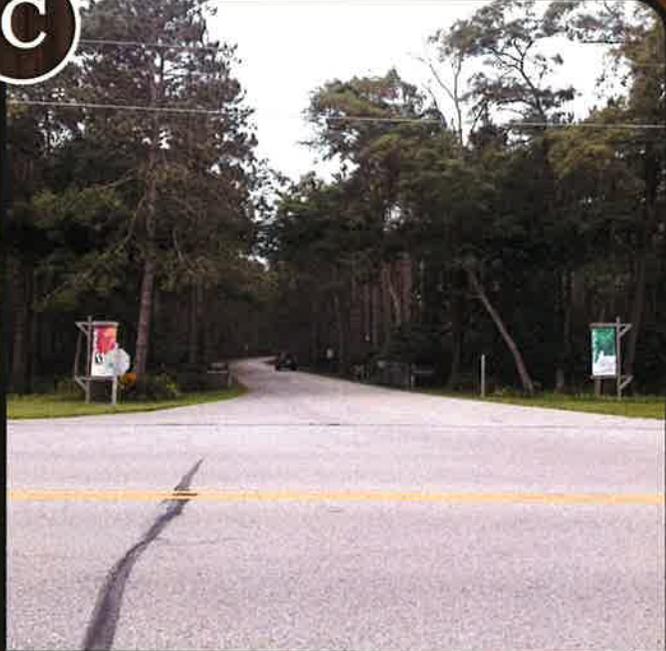
RT 67 ENTRANCE APPROACH FROM SOUTH

B



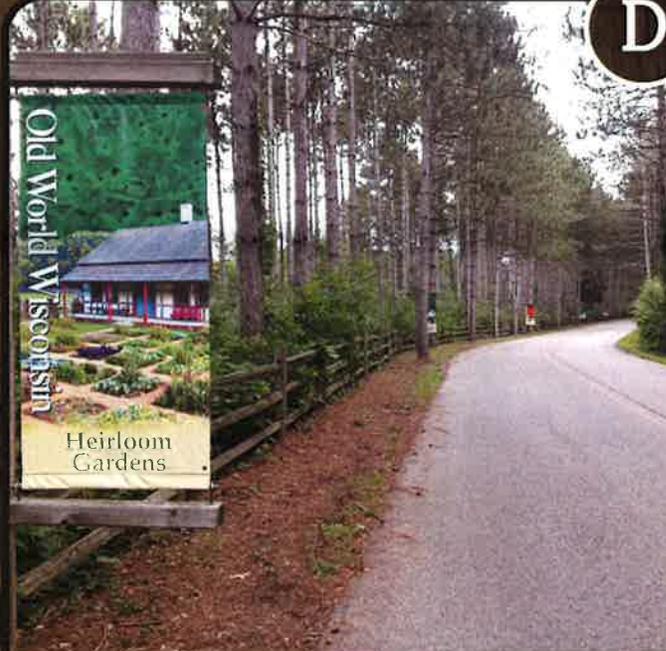
RT 67 ENTRANCE APPROACH FROM NORTH

C



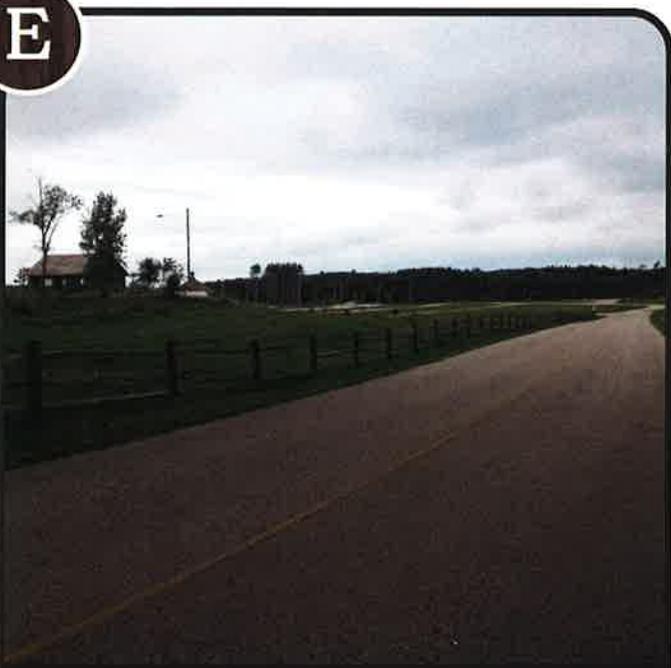
OLD WORLD WISCONSIN ENTRANCE GATE

D



OLD WORLD WISCONSIN ENTRANCE ROAD

E



**OLD WORLD WISCONSIN
ENTRANCE ROAD AT OPENING**

With possible animal pasture on left

F



**OLD WORLD WISCONSIN
ENTRANCE ROAD AT OPENING**

Showing possible animal pastures on right and left (drive through the farm experience)

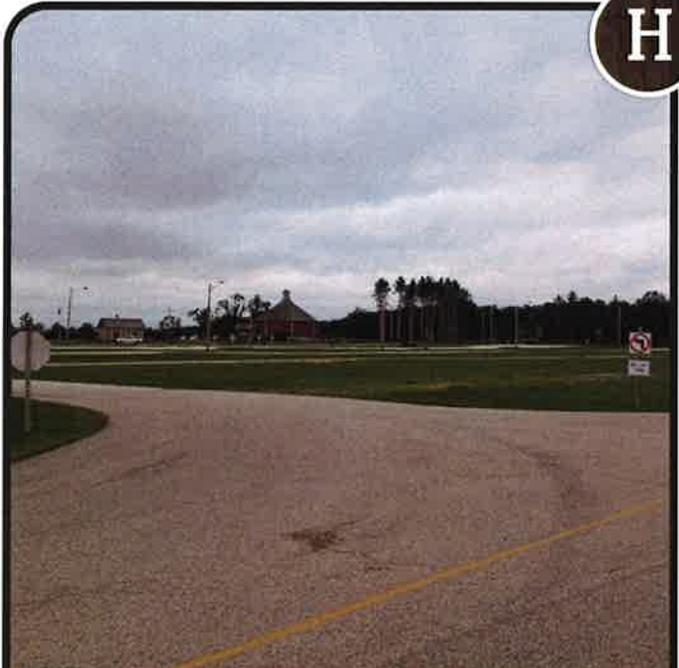
G



**OLD WORLD WISCONSIN
ENTRANCE ROAD**

End of the woods

H



**RT 67 ENTRANCE APPROACH
FROM NORTH**

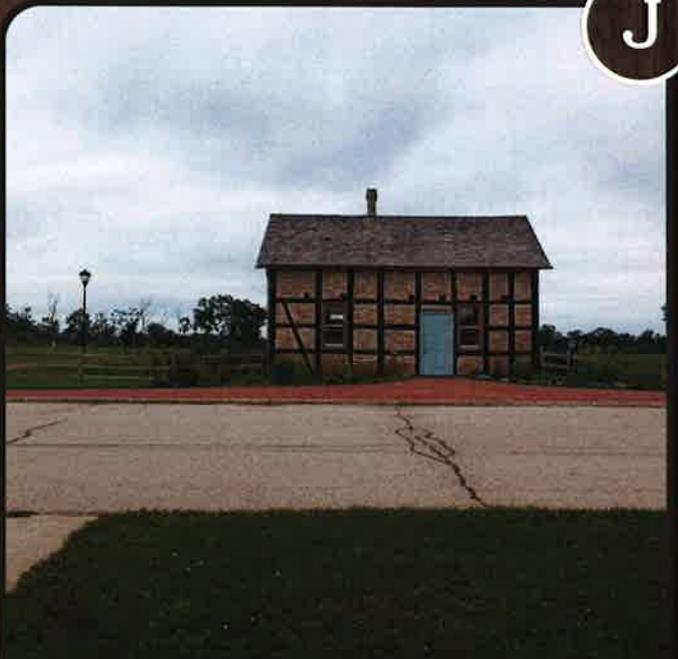
Edge of parking area

I



RAMSEY BARN MUSEUM STORE
FROM PARKING LOT

J



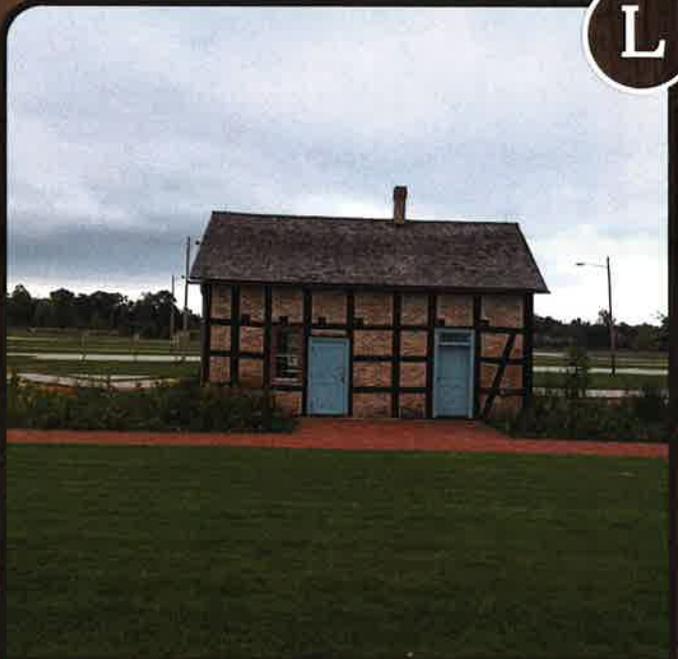
LUESKOW HOUSE
FROM PARKING LOT

K



CLAUSING BARN FRONT

L



LUESKOW HOUSE FROM LAWN

M



MARKET SHED AND SUNBRELLA

N



RAMSEY BARN AND MARKET SHED FROM CLAUSING BARN

O

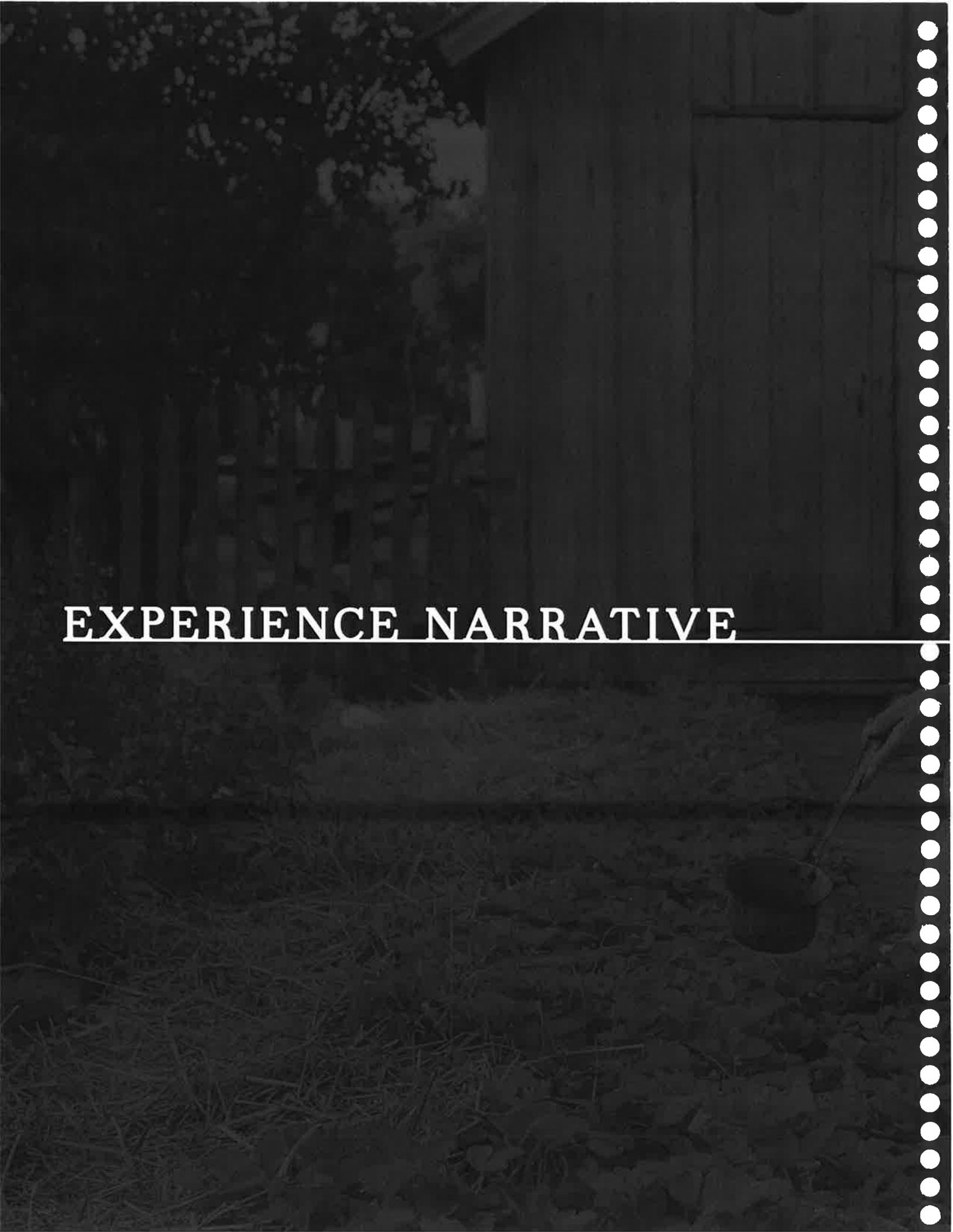


RAMSEY BARN AND PICNIC AREA FROM CLAUSING BARN

P



RAMSEY BARN FRONT

A dark, grainy photograph of a wooden building with a door. A hat is on the ground in the lower right. The text 'EXPERIENCE NARRATIVE' is overlaid in white, underlined, serif font.

EXPERIENCE NARRATIVE



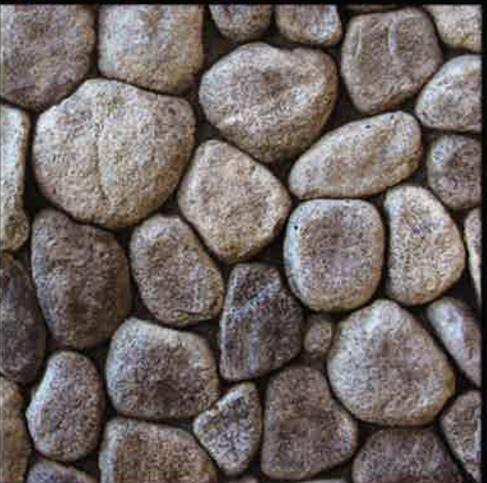
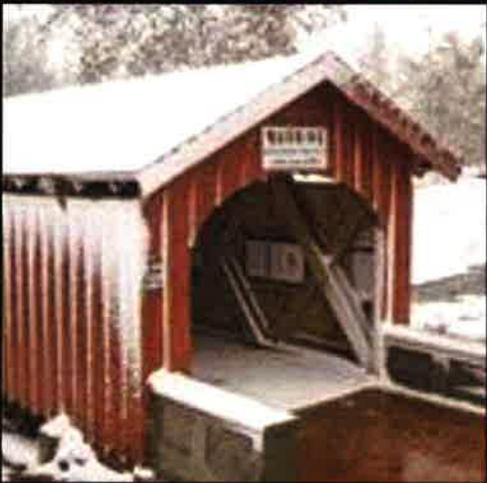
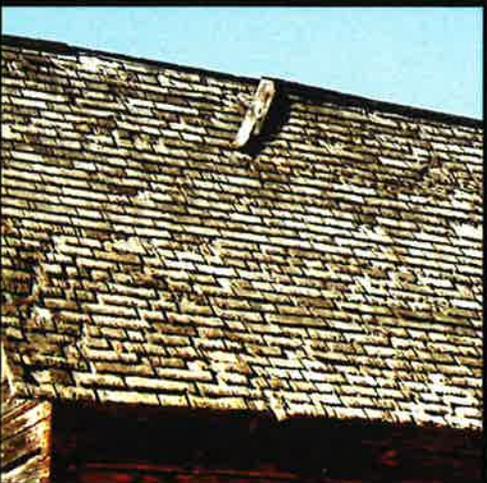
SCENE ONE – HIGHWAY 67 ENTRY

The entry sets the stage for the overall experience and should be attractive and well-marked. The entry point speaks of the promise that the Old World Wisconsin experience will provide to the guest.

Clear, readable, on-brand signage with updated graphics, including a “Welcome” message to greet guests as they turn off Highway 67, builds anticipation and provides for the beginning of the Old World Wisconsin experience. The Old World Wisconsin experience is about its people, its stories and its ability to transport guests into this world.

The Entry acts as a portal to transport guests in their journey into Old World Wisconsin. The imagery reflects the look, character, materiality, and texture that could be used to create a more impactful and easily recognizable entry. The structure would introduce the guest to the strong architectural story of Old World Wisconsin.





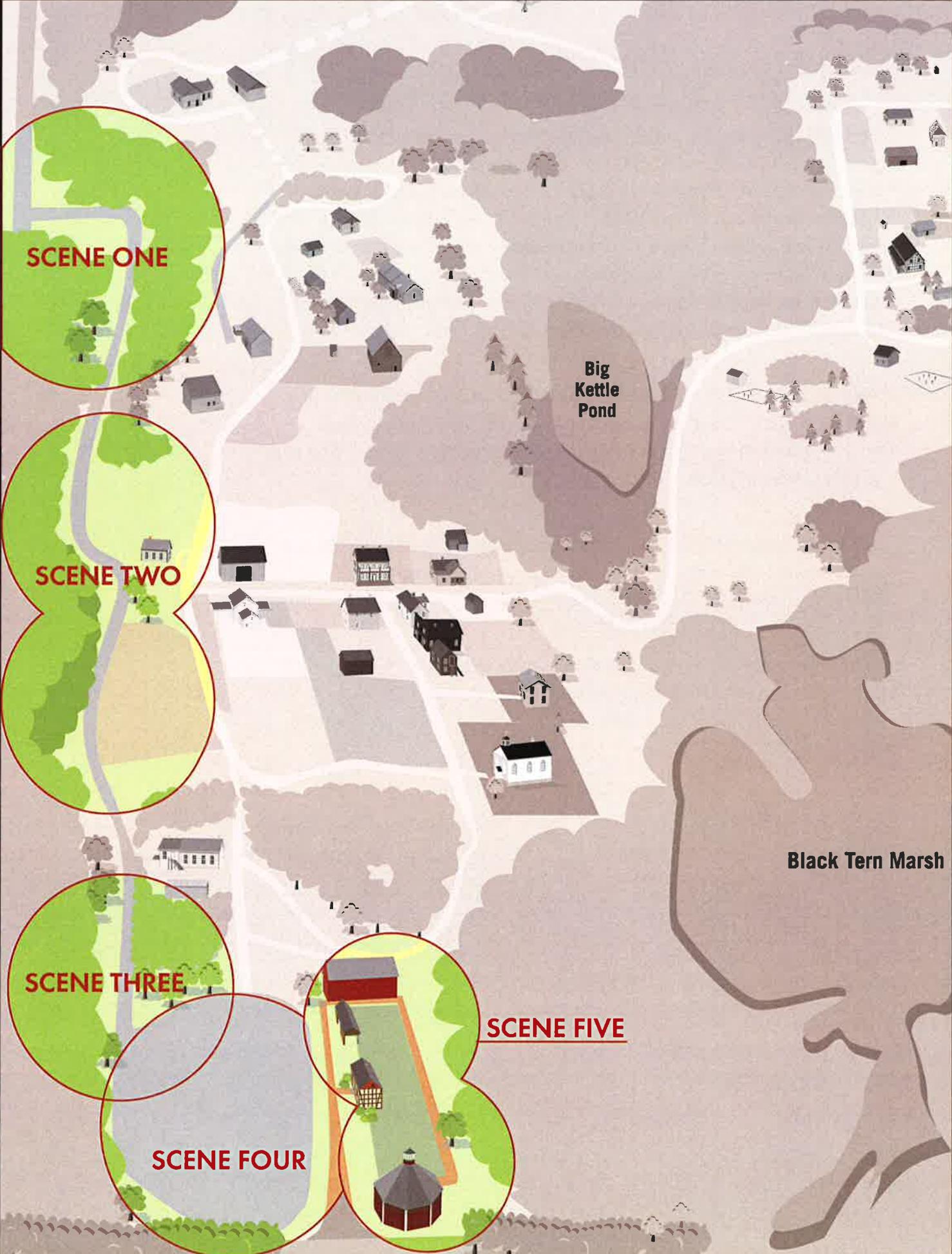
SCENE TWO – ARRIVAL DRIVE

A great existing asset to Old World Wisconsin, the Arrival Drive, builds anticipation for the day’s activities. In order to enhance this portion of the arrival sequence, views to the property should be opened up strategically to allow visitors to catch glimpses of the Old World buildings, the land and animals. New banners showcasing the experiences should not conflict with these views. An enclosed area for animals should be located near the connection of the arrival drive and the parking area.

SCENE THREE – ENTRY TO PARKING AREA

This is the portal to the experience and needs the addition of visual cues and screening of the current treeless open parking lot. Creating animal pastures located on either side of the drive near the opening of the entrance road to the parking lot creates visual interest and builds anticipation. The animal pastures introduce agriculture as a key component of the Old World Wisconsin experience.





SCENE ONE

SCENE TWO

SCENE THREE

SCENE FOUR

SCENE FIVE

Big Kettle Pond

Black Tern Marsh

SCENE FOUR – PARKING AREA

Fencing, crops, flowers, wagons and the relocated stabbur (Norwegian granary), help announce arrival and organize the parking sequence with layers of interest. The farm complex on axis with the Lueskow House balances the arrival to the parking lot and initiates a series of visual cues to help guests navigate from the vehicular arrival to the pedestrian entry. Flags representing the countries of Old World Wisconsin help guests navigate and locate their parking location. A central path collects the guests and brings them to the entry to the Green.

Wagons can act as a kids climbing area to burn off pent up energy from the drive, music engages the auditory and animals add activity and reinforce the introduction to the brand. The farm scene with the Stabbur acts as the centerpiece.

A separate group arrival zone provides easy access to restroom facilities and a covered picnic area for lunches. Signage is used to give clear direction to the guest and group areas.

For larger events the current overflow parking area can be used, and a shuttle service can help bring guests to the drop-off area during busy days. Thoughtful solutions will be considered to integrate site drainage and runoff.



ENLARGED MAP OF SCENE FOUR

SCENE FIVE – ENTRY POINT AND THE GREEN

Lueskow House is established as a clear visual draw to bring guests towards the entry point. The entry will be located on the South side of Lueskow and will be used as the primary point entry and exit. An alternate exit will be used at the point of group entry near Ramsey on days when events occur in Clausing and extend past the main entry. Lueskow will serve as a welcome and interpretation center. A greeter or host in costume will welcome guests and help direct them to day-planning, ticketing and an experience inside Lueskow that orients them to Old World Wisconsin and the Wisconsin Historical Society.

The ticketing complex will be comprised of three structures: day planning, ticketing, and restrooms. This complex will serve as the hub for guest needs and will be a clear visual next step. The gazebo, which would be octagonal in shape and take design elements from the Clausing Barn, would provide a setting for musical or theatrical performances during the day and private special events during the evening.

Clausing Barn will be used for occasional live interpretation, themed meals, and storytelling and remain available for events and weddings. Added signage and café portal help guests who are looking for a full service meal navigate to the Clausing Barn Café on the lower level.

A new structure acts as a secondary food and beverage location on the Green with grab and go options on target with brand. Products with connections to Old World Wisconsin are available to take home, purchase for gifts, or enjoy during a picnic on the lawn or under the added shade structure. Drink carts supply guests with beverages.

With ticketing functions removed from Ramsey, the upper level retail experience will be enhanced to include new interior spaces and exterior design elements that draw guests inside. One function of the redesign retail space will be to “outfit” the guest with products that will enhance the experience. Maps, guidebooks on various topics of interest, hats, sunscreen, clothing, insect repellent, and rain gear are all available for purchase.

At the south end of the Green, a small covered staging area with bench seating is located inside a dedicated entrance for school and other groups. This timber-frame structure reflects Old World Wisconsin architecture and can be easily converted to other functions during special events.

Ramsey’s lower level houses a new immersive experience in the existing theater. The experience tells the story of immigration, the journey across the ocean, history, and how guests’ stories of family immigration and migration are linked to those of Old World Wisconsin.



ENLARGED MAP OF SCENE FIVE

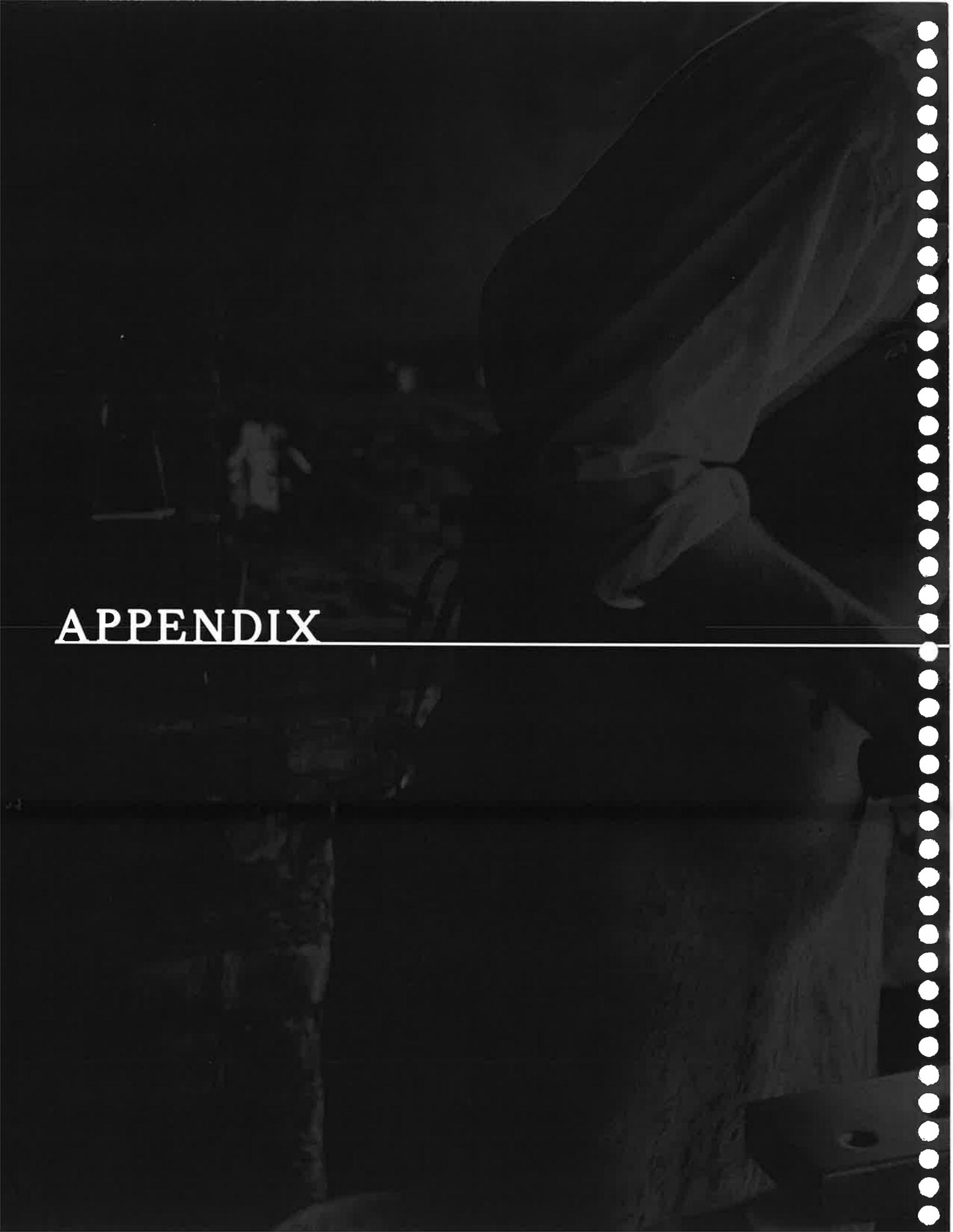
OLD WORLD WISCONSIN PHASING PLAN

Rough Order of Magnitude Improvements Costs

	SCENE 1		
	Entry Signage		\$110K - \$121K
	Updated Banners		\$10K - \$11K
	SCENE 2		
	Opening Views		\$0 (<i>Old World Wisconsin Resources</i>)
	SCENE 3		
	Animal Areas		\$40K (<i>Old World Wisconsin Resources</i>)
	SCENE 4		
	Parking Lot Phase One		\$100K (<i>State Funding</i>)
	Relocate Stabbur		\$100K
	Promenade		\$320K - \$352K
	Landscaping		\$180K - \$200K
	Parking Lot Phase Two		\$540K - \$590K
	SCENE 5A		
	The Green		
	Ticketing (transform Market Shed)		\$45K - \$50K*
	Dayplanning		\$135K - \$150K*
	Gazebo		\$47K - \$50K*
	Cafe Portal		\$20K - \$25K*
	Group Staging		\$115K - \$130K*
	SCENE 5B		
	The Green		
	Food & Beverage (3 Market Carts)		\$135K - \$150K*
	Covered Seating		\$90K - \$100K*
	Tables & Chairs		\$1.8K - \$2K
	SCENE 5C		
	Group Support Area		
	Restrooms		\$350K - \$400K
	Covered Seating		\$140K - \$150K*
	Tables & Chairs		\$2.9K - \$3.2K
	SCENE 5D		
	Activity Area (site prep, activities)		\$20K (<i>Old World Wisconsin Resources</i>)
	Activity / Play Structure		\$140K - \$150K*
	SCENE 5E		
	Retail Renovation		\$140K - \$150K*
	Restrooms		\$350K - \$400K
	Immersive Theater Experience		TBD

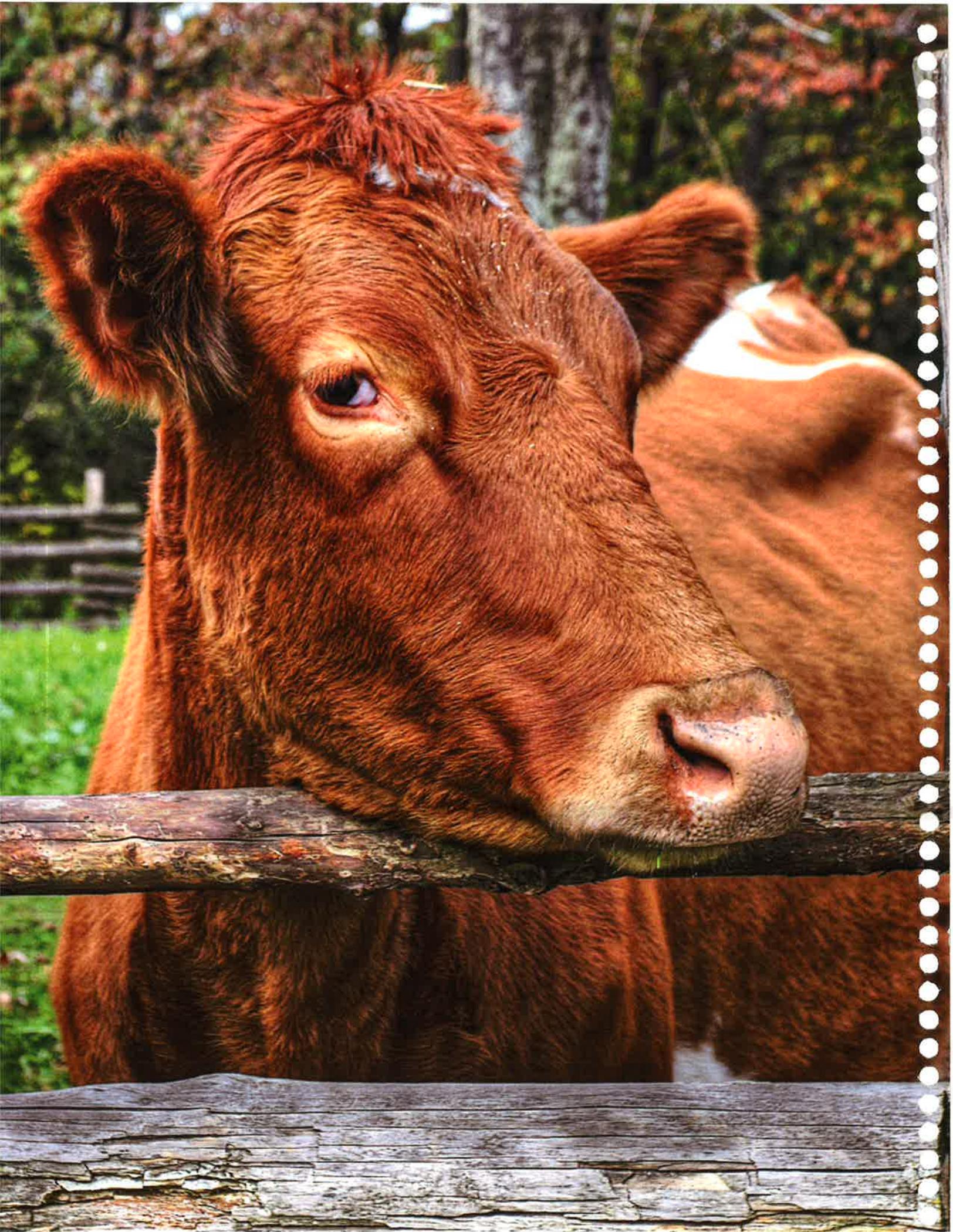
* Old World Wisconsin Resources can be used to construct structures under \$150 K in capital costs

** All estimated costs include General Contractor Markup, Design and Construction contingencies and Design Fees and Growth



APPENDIX





WORKSHOP INFORMATION & PARTICIPANTS

August 28–29, 2014

OLD WORLD WISCONSIN

Dan Freas | *Director*

Bob Parker | *Assistant Director*

Jennifer Van Haften | *Associate Director for Programs and Historic Resources*

Linda Gahart | *Business Manager*

Lisa McGovern | *Marketing and Communications*

Alice Jackson | *Superintendent of Buildings and Grounds*

Ann Selkie | *School Tour Coordinator*

Bricelyn Stermer | *Volunteer Coordinator*

Kathy Krause | *Admissions and Museum Store Manager*

Damian Slaske | *Carpenter*

Marcia Carmichael | *Historic Gardener*

WHS

Cheryl Sullivan

Administrator of the Wisconsin Historical Society's 12 Historic Sites and Museums Division

FOUNDATION REPRESENTATIVES

David Wilder | *Managing Director of the Wisconsin Historical Foundation*

Sara Dostal | *Manager of the Old World Foundation*

PGAV

Mike Konzen

Diane Lochner

“Like It Oughta Be”

1

Something you see right away – back in time

Ticketing – quicker, smoother, something for others to do

Separate area for school groups / large groups

Need more things for guest to be involved with - reproduction, kids involved, something they see demonstrated

Costumed interpreters right away

2

Entry drive / parking lot: tell the story and journey of immigration and optimism

Peeks of the land, farming, animals

Cooking, smell right away, buy a whole pie

Smart phone moments

Portal...stepping forward, crossing over something

Engage all senses: food, music, smell, farm, touch, baby animals

Immediately immerse you into it, photo ops

Forget your present, into your past

3

Tweet a picture about where we park our car

Parking lot is a parking maze

Color highlights entrance

Representative of all aspects of agriculture, animals, gardens, forestry, aqua culture, hops, wine, beer

Parking lot plantings

Clausing Barn – use, big opportunity, tell the story, interpretive plaque

State map – where the buildings came from (Wisconsin, not Europe)

4

Store Product: deck of cards with buildings & map of WI

Map: show buildings big

Tell OWW story: how this came about. Apply cause /effect to our own history

Technology – digital approaches

Senses – entering a different place

Playground for kids on way in / out. Climb a tree? Games on the lawn

Enhancing the picnic area – smaller tables & shade

Families (guests) & School Groups separate

5

Water play – Wisconsin Water Council partnership

Play theme that connects to immigrant experience...ship? Bristol Renaissance Fair, Ulster Museum, interactive play space

Keep sense of history

Keep moment when you emerge form woods to be a wow experience – I have arrived, we are on the farm

Outfitters – you are a time traveler (smart phone, hats)

Food / Theater experience in barn (Food Network, Bobby Flay, offer classes)

Adult education facilities, events, packages, premium experiences

6

Plant Sale in Clausing Barn

Clear Entrance / Exit

Restroom separate from Ramsey Barn

Story starts as you drive through the woods

Immigrant family wagon connected to picnic area

Message through the woods – entry and exit messages, digital, audio messages

Car goes through something - covered bridge

QR codes

Danger in overloading entry experience

People out there, spots where you slow down, preparing people

“Like It Oughta Be” cont’d

7

Flexible for busy days

App – Music

Flag Poles should be moved

Ramsey – use other opening, deck & separate door

Expand the store

Hide portable toilets

Trees, trees, trees (shade)

Stubbor – move to parking lot, oxen pull

Horses, wagon – clip, clop

Prevent Disney creep

The turkeys tell time

8

Soft adventure, rewards

Beer

Leopold trail, nature

Dog days, kennel

Entrance so tight you don’t need a wristband

THE
Belt Pin Book

Assorted Sizes



THE

H. F. N.



AUDIENCE

Audience Arrival / Departure Experience

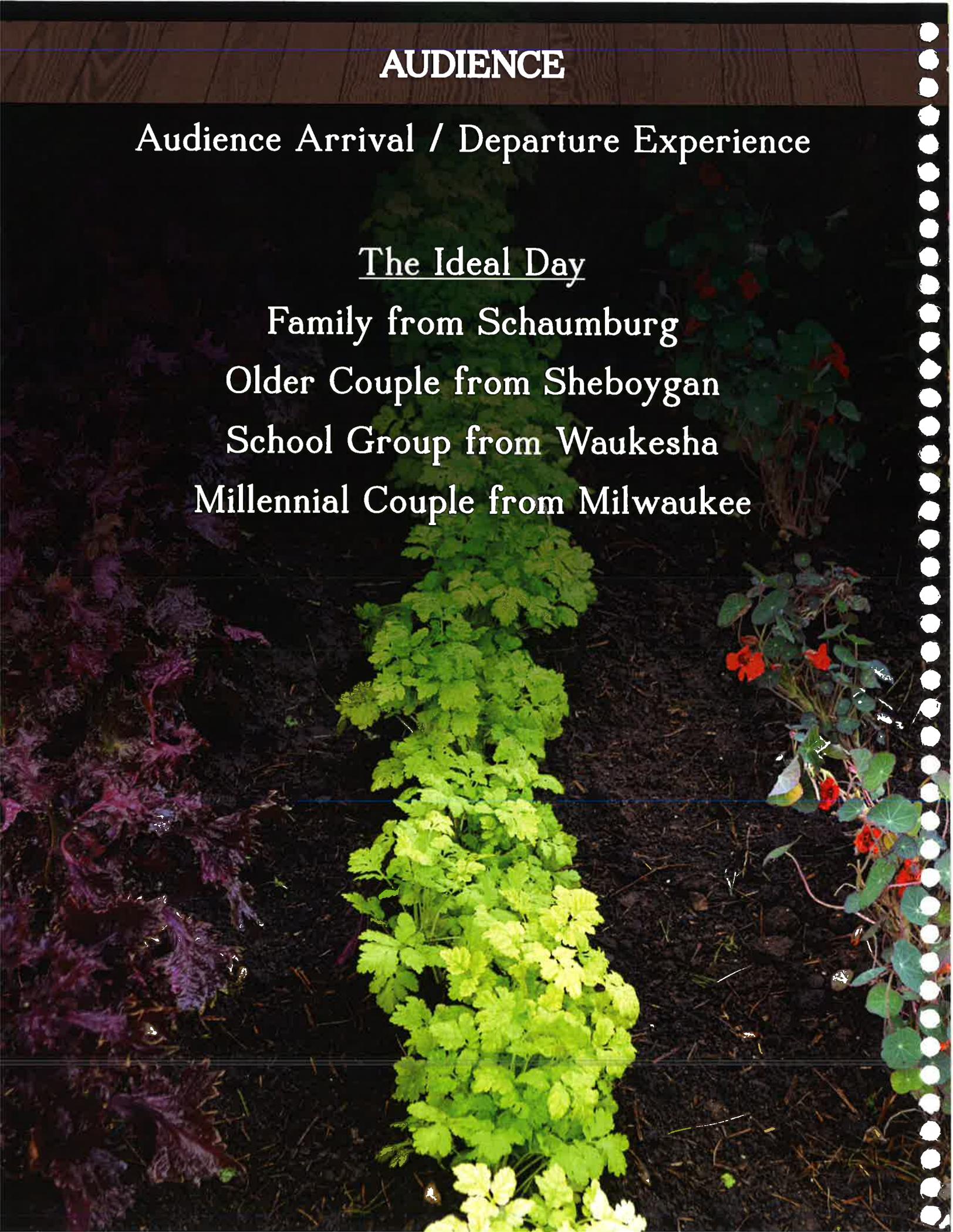
The Ideal Day

Family from Schaumburg

Older Couple from Sheboygan

School Group from Waukesha

Millennial Couple from Milwaukee



FAMILY FROM SCHAUMBURG

Driven 1 ½ hours

Younger Kids / Strollers

Wow Entrance Area - COOL

Need to find the restrooms

Pay First ?

Initial Engagement

Pay First Before the Store/ Rest.

Entrance To Restaurant

Thirsty – Mid Morning

Accessibility for Strollers

Concierge – First Time / Guidance, Separate from ticketing

After ticket - plan the day



AUDIENCE

Audience Arrival / Departure Experience cont'd

OLDER COUPLE FROM SHEBOYGAN

Handicap Parking

Arrived Early

Restrooms, Refreshment, Benches, Garden

Family Connections – Research, Available Info, Map, Interpretation

Map

Eat Right Away – Horse Drawn Carriage to Café

Pathway to Tram, Handrail

Sit Down in Cool Museum Store – Refreshment

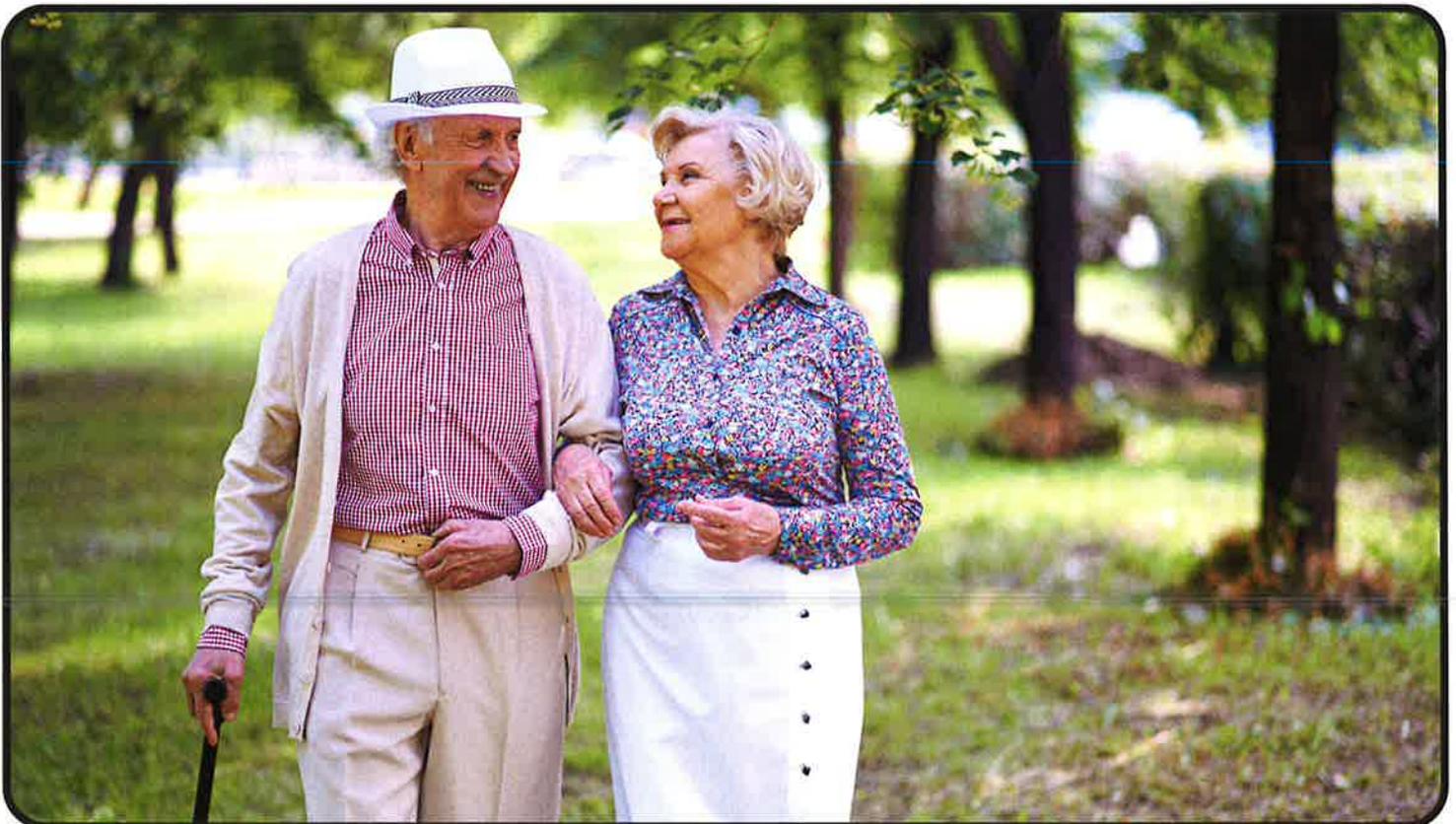
Horse Drawn Carriage to Parking

Not in A Hurry

Not Here to See the Whole Thing

Refreshments every 2 hours

Sit Constantly



SCHOOL GROUP FROM WAUKESHA

Quick Check In

Bathrooms for 60-100

Show them where they are going

Pay in Advance (no refunds)

Throw body on lead bus

Shelter / Restrooms at every bus drop off location

One hour long programs

Take away bags (i.l.o. retail) with Kids names – love the corn cobs



AUDIENCE

Audience Arrival / Departure Experience cont'd

MILLENNIAL COUPLE FROM MILWAUKEE

No interaction with School Groups

Arrive at 11 am ish

Checking cell signal on the way in

Want signs that don't look DNR

Are we engaged right away?

Is parking area loved?

Having conversation with each other

Fresh Food / Farm to Table, Chill and Have Lunch

Farmers Market – insane over this, organic, costumed patron

Logistics – don't want to talk to a volunteer – technology, maps

How the Buildings got here?

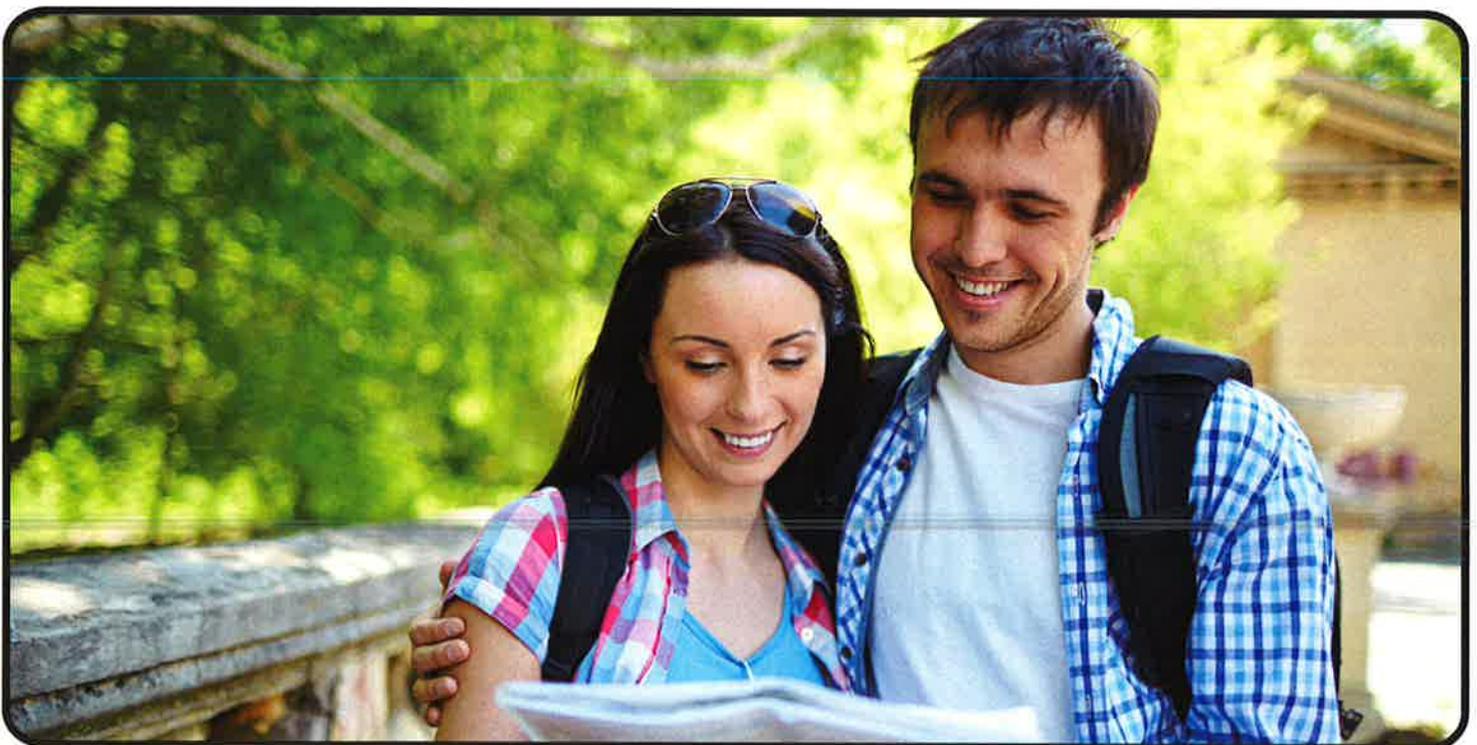
Specialized Opportunities (Heritage, Animals, Herbology)

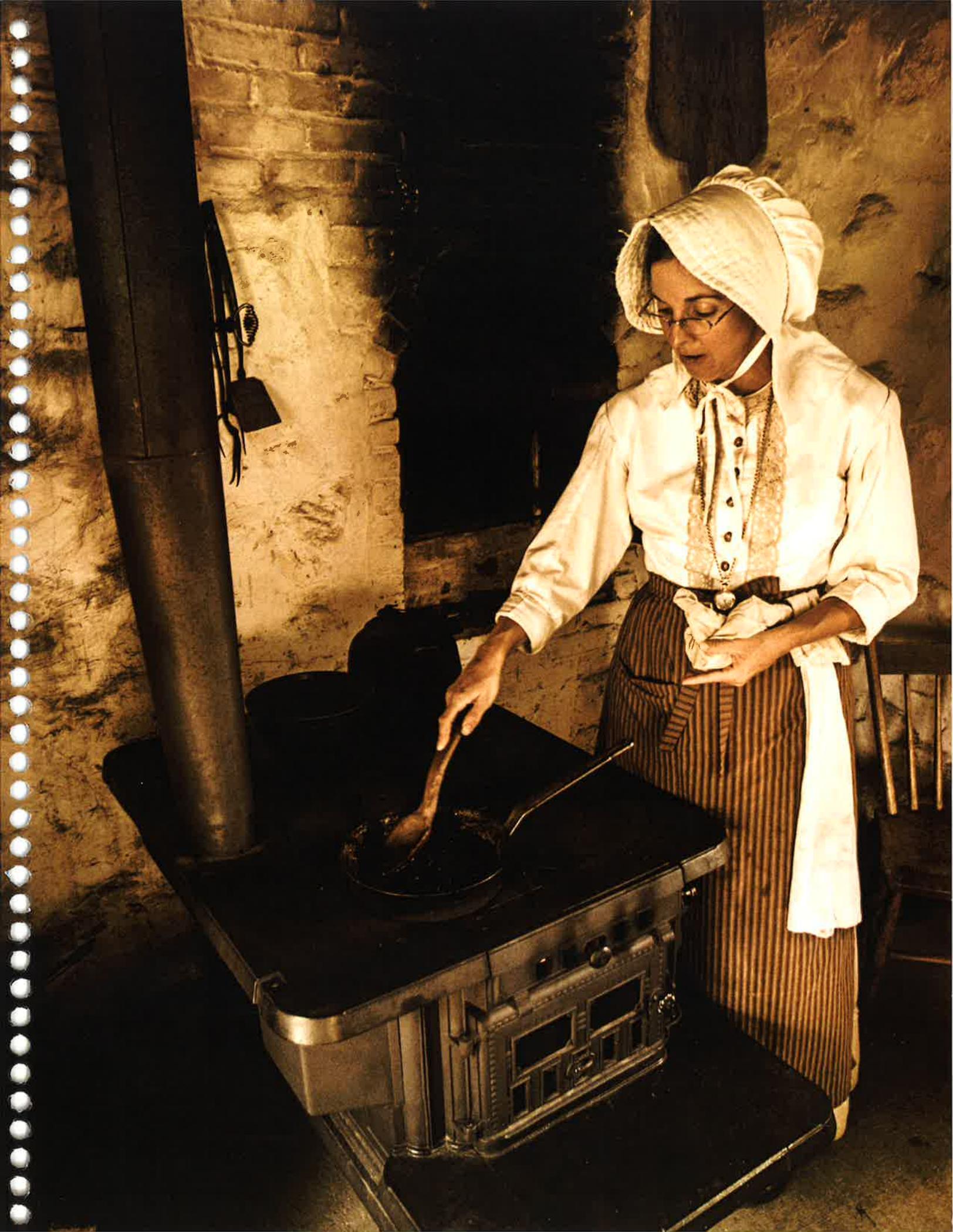
Bought Tickets online

Shop – modern stuff / locally made crafts

Names parking bays, flags (wayfinding)

Membership after the visit





ARRIVAL SEQUENCE

Key Attributes of Program Elements

Highway 67 Entry

Arrival Drive

Entry to Parking

Parking Lot

Entry Point



HIGHWAY 67 ENTRY

Attractive
Well marked
Speak of promise
Updated graphics & gate
Welcome message
People at gate

ARRIVAL DRIVE

Open up views
Banners (not to conflict with views)
Animals close to parking

ENTRY TO PARKING

Low maintenance farm
Fencing
Crops
Flowers
Wagon
Stabbur

PARKING LOT

Reduce Number of Spaces
Wayfinding – flags / countries
Central Path
Paved, need for snow plow
Accessible Parking Spots – handicap and others
Better defined areas for Busses, RVs, cars
Overflow for staff, big events, expand to shuttle service
Music

ENTRY POINT

Visual Goals for next steps
Concierge / Engagement / Interpretive Center
Ticketing / Restrooms
Village Green
Food & Drink Carts
Play – seen from parking lot
Picnic Area / Restrooms for Groups
Ramsey Theater ship experience
Gazebo Music

OLD WORLD WISCONSIN

ENTRANCE EXPERIENCE

WISH LIST

Colorful

Charming

Welcoming

Accessible

Reflect the Old World Experience

Traditional, Rustic, Ethnic Influences

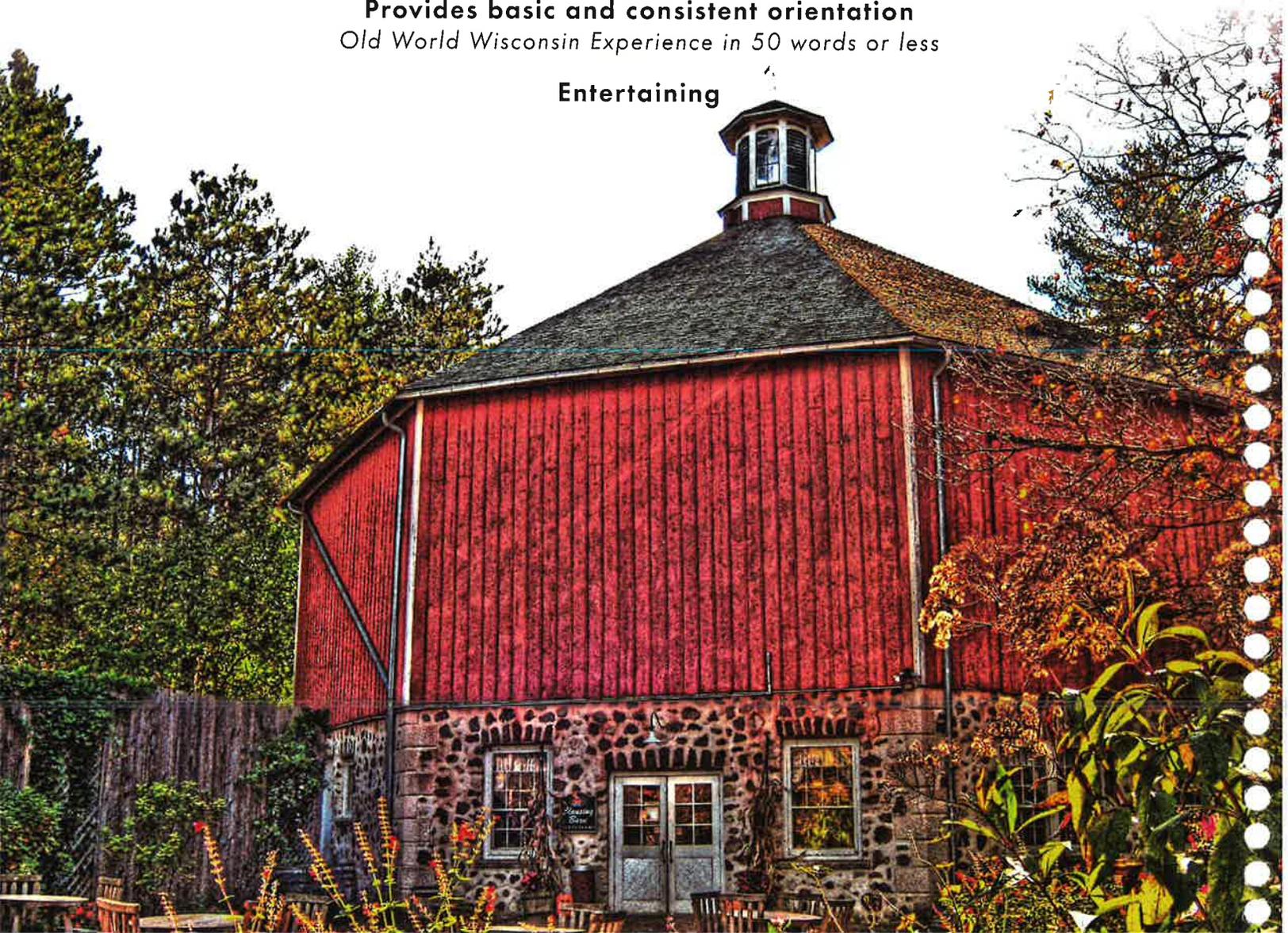
Sustainable

Staffing levels and area maintenance are realistic

Provides basic and consistent orientation

Old World Wisconsin Experience in 50 words or less

Entertaining



ENTRY EXPERIENCE INCLUDES

Performance Space

Music

Shade

Shelter with picnic tables

Clear Entrance and Exit points to and from parking

Simple and prioritized messaging to guests

Better admissions experience

Attractive landscape and gardens

Café - easier to find and improved patio

Restrooms - more and multiple locations

Better wayfinding

Attractive entry experience starting at Rt. 67

Clarified roles for existing buildings on the Green

Lueskow & Market Shed

Ramsey Barn (upper & lower levels)

Greeter (and location)



BRAND ATTRIBUTES

BRAND SHOULD BE

Not Just for History Buffs

Something for all Ages

Interactive and Entertaining

Living / Alive / Fluid

Experiential History & Agriculture

Ever-changing

Something new to see

Multisensory

Gateway to the Wisconsin Historical Society

Rural

Fun and Inspiring

One of a Kind Midwest Experience

Professional, Hospitable Staff, and Volunteers

Stories about immigration that are relevant today

Memorable

Appeal to local, sustainable food movement



APPENDIX 4

Infrastructure Scoping Report
MSA Professional Services

Scoping Document for Utility Improvements

**Old World Wisconsin
“The Green” Development
Eagle, Wisconsin
November 2017**

**Agency: Wisconsin Historical Society
Institution: Old World Wisconsin**

**DFD Project No. 16D1C
MSA Project No. 00374109**

Prepared by:

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Phone: (608) 355-2771
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Project No. 00374109

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Scoping Document for Utility Improvements Old World Wisconsin "The Green" Development

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INTRODUCTION

MSA Professional Services, Inc. reviewed available data and information from various sources for the purposes of providing preliminary design concepts, geotechnical information for siting, and design criteria for the following utility upgrades at "The Green" Development at Old World Wisconsin:

- review of the water supply and distribution system
- replacement on-site wastewater treatment system and collection system
- review of the storm water system
- review & upgrade of the electrical system
- review of the communication system

The facilities anticipated to be served by the upgraded utilities serving "The Green" Development include the following existing and proposed structures which are anticipated to contribute to utility demands:

Existing Structures:

- Clausing Barn – an existing café and special events facility
- Ramsey Barn – an existing retail/ticket sales/theater facility

Proposed Structures:

- Brewery – a proposed beer brewery/beer garden
- Ticket Sales – a proposed ticket sales/day planning facility w/restrooms
- Restroom building – a proposed separate structure

Other proposed structures in the "The Green" Development that are planned but are not anticipated to contribute to the utility demands include:

- Covered Seating – an open air meeting/teaching facility w/no restrooms
- Pavilion – an open air structure for seating
- Windmill – an exhibit demonstrating a historic farm water source
- Demo Garden – a Garden and Welcome Exhibit

These structures may require new utility services in order for them to operate as intended.

The conclusions and recommendations included in this document are based on information provided by Old World staff and others regarding development timing and flows/loadings to a subsurface Privately Owned Wastewater Treatment System (POWTS). Subsurface geotechnical data was collected in the field to determine the suitability of the selected area for the final dispersal of the wastewater after treatment. A copy of the geotechnical information is included in **Appendix A**. Locations of the proposed utility components are presented for the purpose of developing preliminary cost estimates. The actual locations and corresponding estimates will depend on the final locations of proposed structures.

CHAPTER 1 – WATER SYSTEM

1.1 GENERAL

The water system currently serving the facility is considered a transient, non-community public water supply system. Transient non-community (TN) systems serve at least 25 people, but not necessarily the same people, for 60 days a year or more.

Overall, the facility operates with fifteen (15) wells, with various pump capacities. The sum of those capacities exceeds 70 gpm, thus making this site a high-capacity property. "The Green" development is currently served by two of these wells (Wells #1 and #10). Raw water from Well #1 is treated prior to consumption using iron filtration and softening.

1.2 EXISTING SYSTEM

Potable water for the Green Development is supplied via two (2) separate wells.

Well #1 (26806329)-Well #PT487/Hi Cap # 02689

Well #1, which is referred to as Clausing Barn W1, is located north of the Lueskow House. Well #1 was constructed in 1976 with an overall depth of 252-feet, grouted with neat cement to 60 feet and cased to 186-feet. Well #1 discharges through a pitless adaptor to six (6) Amtrol Wel-X-Trol WX-350 bladder-type tanks (gross capacity 119 gallons each) and a Hellenbrand ion-exchange water filtration system for softening and iron treatment. The pressure tanks and filtration equipment are located within the Lueskow House. The reported flow rate for the 5-hp Sta-Rite submersible well pump is 70 gallons per minute.

The Clausing Barn is a special events venue and a restaurant. Recorded average flows for this structure during the 2016 season were 5262 gallons per day.

Well #10 (26822532)-Well #GS026/Hi Cap #88096

Well #10, which is referred to as Ramsey Barn W10, is located directly east of the Ramsey Barn. Well #10 was constructed in 1987 with an overall depth of 262-feet (WDNR sanitary survey indicates 326-foot depth), sealed with clay slurry and drilling mud and cased to 168-feet. Well #10 discharges through a pitless adaptor equipped with a Whitewater in-ground pitless receiver tank (gross volume 100-gallons) and ultimately to a remote Amtrol Wel-X-Trol WX-302 bladder-type tank (gross volume 86 gallons) located in the Ramsey Barn. This well is interconnected to the Clausing Barn system, however, the interconnection is "normally closed" and operates only for emergencies or when Clausing Barn W1 is out of service.

The well provides service to the Ramsey Barn and a drinking fountain. The reported flow rate for the 5-hp submersible well pump is 50 gallons per minute.

The Ramsey Barn recorded average flows during the 2016 season of 466 gallons per day.

1.3 DEFICIENCIES

The following deficiencies were noted in the June 24, 2015 Sanitary Survey Report of the system:

Well #1 – Clausing Barn W1

- ◆ Replace existing threaded sample tap with smooth end sample tap (completed?)
- ◆ Raise casing to a minimum of 12-inches above grade.

Well #10 – Ramsey Barn W10

- ◆ None noted

1.4 EXISTING WATER USE

The following tables indicate the recorded water usage for each well during 2016.

Potable Well W1 Recorded Flows - Clausing Barn (events/restaurant)								
<i>Calculated flows based on well pump run time meter and pump flow rate provided by agency</i>								
Year	Month	RTM Hours	Total Hours /month	Ave. Hours /day	Pump Flow Rate (gpm)	Flow /Month	Days/Month	Flow/Day
2016	March	3,741.4			70.00			
	April	3,762.1	20.7	0.69		86,940	30	2898
	May	3,815.0	52.9	1.71		222,180	31	7167
	June	3,862.0	47.0	1.57		197,400	30	6580
	July	3,907.9	45.9	1.48		192,780	31	6219
	August	3,935.0	27.1	0.87		113,820	31	3672
	Sept	3,985.6	50.6	1.69		212,520	30	7084
	Oct	4,024.6	39.0	1.26		163,800	31	5284
	Nov	4,047.4	22.8	0.76		95,760	30	3192
Average Day =								5262
Peak Average Day =								7167

Potable Well W10 Recorded Flows - Ramsey Barn (retail/gift shop)

Calculated flows based on well pump run time meter and flow rate provided by agency

Year	Month	RTM Hours	Total Hours /month	Ave. Hours /day	Pump Flow Rate (gpm)	Flow /Month	Days/Month	Flow/Day
2016	March	1,799.3			50.00			
	April	1,799.4	0.1	0.00		300	30	10
	May	1,800.0	0.6	0.02		1,800	31	58
	June	1,805.0	5.0	0.17		15,000	30	500
	July	1,811.2	6.2	0.20		18,600	31	600
	August	1,817.7	6.5	0.21		19,500	31	629
	Sept	1,827.6	9.9	0.33		29,700	30	990
	Oct	1,832.4	4.8	0.15		14,400	31	465
	Nov	1,837.2	4.8	0.16		14,400	30	480
Average Day =								466
Peak Average Day =								990

1.5 PROJECTED WATER USE

As outlined in the Wastewater Flows Analysis section, the future average daily flow with the existing and proposed structures within the Green Development is 8,029 gpd current. Assuming a 20% anticipated growth factor, the average daily flow increases to 9,634 gpd. This is an overall increase in demand of 68.2%.

Design Flows:					
Description		Source		Average Daily Flow	Comments
Current Flows				(gal/day)	
1	Clausing Barn	Well Data*	=	5262	*see attached water use records
2	Ramsey	Well Data*	=	466	*see attached water use records
Total Current Flows			=	5728	gal/day
Proposed New Development Expansion					
3	Restroom Building	Projected	=	500	based on Ramsey
4	Ticket Station	Projected	=	500	based on Ramsey
5	Brewery	See Comments	=	1300	from Brewery flow data dated 1/5/17
Total Ex. & Projected Flows			=	8028	
6	Future	20%	=	1606	anticipated growth, add 20%
Average Daily Flow			=	9634	

The maximum run time recorded in one month (May 2016) is 52.9 hours. This equates to 1.71 hours/day average. With an increase of 68.2% in estimated demand, this value increases to 2.86 hours/day average.

The figures above do not address peak demands.

1.6 WATER SYSTEM IMPROVEMENTS

In the short term, the water supply system appears to be adequate to serve the development, however, peak demands are not documented well enough to make a final capacity evaluation with respect to peak day and peak hour demands. It would be beneficial to compile daily pumpage information to allow a more detailed analysis of the water supply capabilities.

Options for increasing water supply capacity include maintaining a normally-open connection with the Ramsey Barn Well W10, increasing the pump capacity of the Clausing Barn Well W1 (including providing additional storage), or development of a new supply.

CHAPTER 2 – WASTEWATER SYSTEM

2.1 EXISTING FACILITIES

The wastewater system currently serving the facility consists of gravity piping leading to septic tanks discharging to a dosing chamber and ultimately to drainfields.

2.2 WASTEWATER COLLECTION SYSTEM

Current sewage collection network for this facility is a building sewer pipe discharging from each building and terminating at a septic tank. At the Clausing Barn a separate building sewer also exists from the building kitchen plumbing and discharges into an exterior concrete grease interceptor (GI). The GI discharge piping is then connected to the building sewer prior to discharge to the septic tank. The Ramsey Barn building sewer is a single pipe which discharges to a concrete septic tank. Final discharge of the wastewater after the septic tanks is somewhat unclear. Original descriptions indicated that a drainfield disposal system was located in the green space between the 2 buildings but subsequent interviews and explorations found another lift station was located west of Ramsey Barn. Interviews with Wayne Pett, a local contractor who has worked extensively at Old World over the years, revealed that this lift station and a newer drainfield was installed which transferred all of the waste to a pasture area approximately 800 feet south of the Ramsey Barn. A record drawing by R.A. Smith dated 12-27-07 shows a forcemain running from the Clausing Barn dose tank to presumably the lift station. It is unknown if the Ramsey Barn is also connected to the lift station.

The terrain at this site is a long ridge top with a steep slope on the west and north side and a relatively level area to the east. Both buildings are at a relatively similar elevation (862" +/-) at the main floor and both have below grade levels which are served by gravity sewers discharging to a septic tank. The distance between the 2 buildings is approximately 400 feet. Due to the elevation difference of the building plumbing and the unknown depths of the building plumbing at the new buildings it is proposed that a low pressure sewer system (LPS) be installed which utilizes small diameter forcemain (1 ½" to 3") and grinder pump equipped fiberglass basins. An illustration of the proposed network and station locations is included in **Appendix D**.

The major components of the system are further described as follows:

1. Sanitary Collection System
 - i. 1000 lin. ft. of 1 1/2" to 3" HDPE low pressure sewer pipe
 - ii. 3000 gallon Grease Interceptor at the Clausing Barn
 - iii. 3 – duplex grinder station w/average depth of 96"
 - iv. 185 lin. ft. of 4" sanitary sewer lateral pipe
 - v. 70 lin. ft. of 6" sanitary sewer lateral pipe

A summary of costs for the sewage collection system is provided in Table 6-1. Detailed costs are located in **Appendix D**.

Table 2-1

Cost Summary for Sewage Collection Network

Capital Cost		

2.3 WASTEWATER FLOWS

The design criteria for a POWTS is dependent on the volume and the strength of the wastewater. The existing sources of wastewater at "The Green" are Clousing Barn and Ramsey Barn. Both structures are served by potable wells. Flows at both wells are monitored by staff and recorded based on the run time meters on each well. Annual flow reports to DNR were provided which calculated the flows by multiplying the well pump recorded hours times the pump flow rate. The facilities are generally open and active from May to December, therefore, flows at this facility fluctuate considerably seasonally. The recorded data is in a monthly format, therefore, peak flows which are likely to occur on weekends cannot be determined. Routine adjustments, required by the plumbing code, to account for flow peaks is to include a peaking factor of 1.5 times the average flows to arrive at a Design Wastewater Flow (DWF).

In addition to the existing buildings, a number of proposed buildings are intended to be constructed which will be contributors to the newly combined wastewater flow. Those buildings are a new ticket sales/restroom, a brewery/beer garden, and a separate restroom building. The final design flow was arrived at by calculating the average flows for the existing buildings and adding the flows from the new structures to arrive at a total combined design flow. In the case of the brewery an estimate of the water usage was provided by the consultants who are advising the Old World staff on that exhibit. Projected flows from the brewery were estimated to be 1300 gal/day of discharged wastewater on a peak day basis.

Design Wastewater Flow (DWF) for the proposed development is shown in **Table 1-1**.

Table 2-2					
Design Wastewater Flows					
Description		Source		Average Daily Flow	Comments
Current Flows				(gal/day)	
1	Clousing Barn	Well Data*	=	5262	*see attached water use records
2	Ramsey	Well Data*	=	466	*see attached water use records
Total Current Flows				=	5728 gal/day
Proposed New Development Expansion					
3	Restroom Building	Projected	=	500	based on Ramsey
4	Ticket Station	Projected	=	500	based on Ramsey
5	Brewery	See Comments	=	1300	from Brewery flow data dated 1/5/17
Total Ex. & Projected Flows				=	8028
6	Future	20%	=	1606	anticipated growth, add 20%
Average Daily Flow				=	9634
Peak Factor				=	1.5 DSPS Required
Total Design Wastewater Flow (DWF)				=	14,451 gal/day

The DWF shown is used in this report for determining size and volume of the various components needed for the proposed POWTS.

2.4 WASTEWATER STRENGTH

Wisconsin State Plumbing Code and Department of Natural Resources (DNR) guidelines specify a limit on the strength of wastewater that can be discharged to a soil based dispersal component. DSPS limits set by code are referred to as "residential strength" or 220 mg/L BOD, 30 mg/L FOG and 150 mg/L TSS. Additionally, DNR requires that all POWTS with a DWF of >12,000 gal/day must address nitrogen reduction in the treatment process. Wastewater from the Ramsey Barn restrooms, the ticket sales building and the separate restroom building are expected to produce "residential strength" wastewater and no additional treatment is required for those sources. The Clousing Barn is a food service facility and therefore is suspected of being a high strength flow. The proposed Brewery is also expected to produce high strength wastewater that will need additional treatment.

2.4.1 CLAUSING BARN

The Clousing Barn average strength of the wastewater is projected to be in the range of 1200 mg/L BOD and 800 mg/L TSS. Additional treatment is required of this effluent to reduce the wastewater strength to acceptable levels prior to discharge to the dispersal unit. High levels of Fats, Oil & Grease (FOG) is also a concern at this facility. The building currently has an exterior grease interceptor of unknown age. Exterior

grease interceptors have been found to provide reasonably good removals of FOG in other food service facilities and therefore should be continued at this facility to avoid grease buildup in the piping and to prevent this material from being discharged to the soil based dispersal unit. Discussions with staff indicate that FOG has not been a problem on the discharge line to the existing septic tank. The cost estimates provided in this report include a cost for removal and replacement of the existing grease interceptor. Evaluation of the existing grease interceptor tank is limited based on the portions visible from the surface. It appears to be in good shape, there are no reported issues with the tank, and therefore replacement could be viewed as an optional item.

Prior to final design of the new treatment system, it is recommended that additional sampling be done of the Clousing Barn wastewater to confirm actual loading parameters from this source. Samples are normally obtained from the outlet end of the septic tank or directly from the dose tank. Sampling should be done during the peak flow months of May thru September.

2.5 SOILS EVALUATION

2.5.1 GENERAL

MSA Professional Services, Inc. performed a soils investigation of the proposed site of a new dispersal drainfield for "The Green" development. The geotechnical information provides siting and design criteria for the replacement septic system serving Old World Wisconsin. The facilities anticipated to be served by the replacement septic system include the following structures:

- Clousing Barn – an existing café and special events facility
- Ramsey Barn – an existing retail/ticket sales/theater facility
- Brewery – a proposed beer brewery/beer garden
- Ticket Sales – a proposed ticket sales/day planning facility w/restrooms
- Restroom building – a proposed separate structure

The conclusions and recommendations included in this report are based on our experience and interpretation of the available information and site data.

2.5.2 SITE INFORMATION

Site Location: Section 21, T5N, R17E
Town of Eagle
Waukesha County, Wisconsin

Site Description: The site is located east of the large parking area at "The Green" in an open field which has been used in the past for overflow parking. The vegetation is grass with a few small trees primarily along the old fence row. The site is gently sloping to the southwest with elevations of approximately 950' to 960' (USGS). A site location map is included with the soil report in **Appendix A**.

2.5.3 SUBSURFACE CONDITIONS

The general soils description is a loam, and sandy loam cap over loamy sands and fine sands with occasional thin bands of finer textured soil material in the lower horizons. The depth to a perched seasonal high water table ranges from >7.0' to 9.0' below ground surface due to the fine sands and banding of loamy sands which causes some restriction of the water movement in the lower horizons of the soil profile. Because of this condition it is recommended that a soil loading rate of 1.0 gal/sf/day or less be used in the design of the dispersal unit when highly treated effluent is applied.

2.6 POWTS DESIGN CONCEPT

All of the wastewater at the "The Green" would be collected and combined for treatment of the entire flow at one point. A low pressure sewer (LPS) piping network with grinder pump stations would pump the flow to the treatment point on the east side of the main parking lot. The POWTS serving "The Green" would be comprised of septic tanks for solids removal followed by aeration units for strength reduction of the wastewater. Effluent flow then passes into a dose tank which discharges treated effluent to the soil based dispersal unit. All of the tanks used as components of the proposed treatment system would be pre-cast concrete structures delivered to the site and set by the contractor and tank manufacturer.

Both the septic tank and the dispersal unit volume/size are based on the anticipated wastewater volumes from the source(s). Aerobic Treatment Units (ATU) provide the additional treatment needed to meet code requirements and published guidelines. Qualified Aerobic Treatment Units (ATUs) are approved products by DSPS and DNR. The preliminary design concept of this system is to reduce the wastewater strength to 30 mg/l BOD & TSS prior to discharge to the dispersal unit. Additional components include dose tanks and pumps to provide a pressurized discharge of effluent to the dispersal unit. See **Appendix B & C** for plan views of the various components of the conceptual system developed for this report.

2.7 TREATMENT SYSTEM SERVICE AREA AND FLOWS

The design flow for "The Green" POWTS is projected to be 14,451 gal/day. This includes wastewater contributions from all of the following sources:

1. Clausing Barn
2. Restroom Building
3. Ramsey Barn
4. Ticket Sales
5. Brewery

2.8 TREATMENT SYSTEM COMPONENTS

The major components of the system are shown in **Appendix B & C** and are further described as follows:

1. Sanitary Collection System
 - a. Low pressure sewer network of 1 ½" to 3" pipe
 - b. 4" & 6" sanitary sewer gravity connector piping
 - c. 3 - Duplex pump grinder stations
 - d. Clausing Barn
 - i. 3,000 gallon exterior precast concrete grease interceptor (optional)
2. Primary Treatment

- a. 18,000 gallon septic tank.
3. Secondary Treatment
 - a. 2 – 12,500 gallon combination surge tank & aeration chambers
 - b. 2 - aerobic treatment units capable of treating 50 lbs./BoD/Day
 - c. 1 – 6,000 gallon clarification/Recirculation tank
4. Dosing Tank
 - a. 1 – 18,000 gallon dose tank
 - b. 4 effluent pumps capable of 125 gpm @ 20' TDH
 - c. 600 lin. ft. of SCH 40 PVC forcemain
5. Dispersal Unit
 - a. 8 - Dispersal cells with dimensions of 6' x 312'
6. Electrical Upgrade
 - a. New electrical service to serve the treatment system

A summary of costs for the POWTS are provided in **Appendix D**.

CHAPTER 3 –STORM WATER SYSTEM

3.1 EXISTING FACILITIES

Stormwater management for the site is primarily accomplished via surface drainage.

3.2 STORMWATER MANAGEMENT

Based on the improvements currently being considered for the Green Development at Old World Wisconsin, it is not anticipated that additional stormwater management features will be required.

CHAPTER 4 – ELECTRICAL SYSTEM

4.1 EXISTING FACILITIES

The "Green" is currently served by at least three electric utility services. The service appear to feed from two pad mounted utility transformers located inside the property. The first utility transformer is located in the Event Staging Facility and it feeds a 208/120VAC 3-Phase service located in the basement of the Café and Special Event Center. The second utility transformer is feeds services located in the basements of the Welcome and Guest Services building and the second is in the Gift Shop.

The Café and Special Event Center has a 208/120VAC 3-phase 800 amp rated main switch board. The switch board feeds several sub-panels and lift station:

1. Sub-Panel 1A (double tub, 80 circuit, 208/120VAC, 3-Phase) lighting and appliance panel;
2. Sub-Panel 1B (8 circuit, 208/120 VAC, 1-phase) lighting panel;
3. Sub-Panel 2B (24 circuit, 100 amp 208/120 VAC, 3-phase) Lighting Panel;
4. Panel L-K (unknown location and make up);
5. (2) Lift Station
6. Lighting Dimmer controller
7. Kitchen appliances

The Welcome and Guest Services building is has a 40 circuit 240/120VAC 1-phase 200 amp rated main Lighting panel. The panel feeds a well and water treatment equipment. This lighting panel appears to only have 2 open spaces.

The Gift Shop has a 240/120VAC 1-Phase 400 amp Maim disconnect. The service appears to be tapped to feed an Emergency Panel and a main distribution switch board. The emergency panel appears to be backed up by a portable generator and exterior receptacle. This switch board feeds two sub-panels and other equipment including well and lift stations.

1. Sub-Panel A (24 circuit, 100 amp 240/120 VAC, 1-phase) Lighting Panel located in the basement near the switchboard;
2. Sub-Panel B (8 circuit, 240/120 VAC, 1-phase) Lighting Panel mount on the exterior of the building.

In general, much of the existing electrical appear to be dated and full (maximum connections or branch circuits). Without historical usage, it is difficult to determine available capacity

4.2 GENERAL ELECTRICAL IMPROVEMENTS

Without the details of the anticipated future electrical demands of the proposed Brewery and other expansions, it is difficult to provide develop alternatives or recommendations for electrical systems. In general, the system and components are dated and antiquated. For example, it is unknown if the existing switchboards located in the Café and the Gift Shop are still supported by the manufacture. Main on the light and appliance panels have the appearance that they have been modified and issues may exist.

It is recommended to conduct an extensive exploration to document the existing electrical systems. It is anticipated that a new single centralized service may be preferable to the existing multiple electrical services serving the site.

4.3 UTILITY SCADA SYSTEM

The existing water system is not connected or controlled by a centralized supervisory control systems. Depending on the interconnection of the water system improvements, a master control system may be required to control the proposed water system.

The existing sanitary facilities are free standing and locally controlled. Alarm identification is by strobe light and/or horn. It may be desirable to network the sanitary facilities on that master control system with the water utilities and failure identification and operational monitoring.

4.4 WATER SYSTEM ELECTRICAL IMPROVEMENTS

Depending on changes or improvements to the water system, existing electrical components may need to be upgraded. Those upgrades would occur in conjunction with any changes to the well supply.

4.5 SANITARY SYSTEM ELECTRICAL IMPROVEMENTS

The proposed sewer system improvements include (3) duplex grinder lift station and a POWT system. It is anticipated the proposed grinder lift stations will be supplied from the existing electrical systems. The proposed lift stations are expected to be feed from distribution panels located in the buildings being served by the proposed lift stations. It is anticipated the added electrical load from the proposed lift station will be minimal. Because the loads from the new lift station will be offset by the abandonment of the existing lift stations.

The proposed site for the new POWT system is on the east side of the parking lot. It is recommended that a new service be installed to serve the POWT. There are two possible options that the utility will need to provide guidance. First, can the near service be served from the utility transformer located in the Event Storage facility? In this scenario, the owner would likely install, own, and operate the secondary conductors from the transformer to the proposed service near the proposed POWT.

The Second service concept, would be for the utility to install new primary to a location near the POWT and install another transformer. In this scenario the utility would install, own, and operate the primary conductors and transformer. The actual installation must be coordinated with the utility.

The following is the expected motor requirements of the proposed POWT:

Wastewater Collection & Treatment System Pump Motor Requirements

1. Collection System Grinder Lift Stations
 - a. Three (3) duplex grinder stations – Model D3696LSGX202
 - b. Hp - 2
 - c. Voltage - 208-230
 - d. Phase - 1
 - e. Service Factor - 1.0
 - f. Full Load/Locked Rotor Amps - 15/53

The connected motor load is >30 amps at 280VAC 1-Phase. Therefore it is recommended to provide branch circuit and feeder to each Lift Station as 60 amps minimum.

1. POWT Treatment System
 - a. Forward Flow & Sludge Return Pumps
 - i. Timed Dosing Pumps
 1. No. of Pumps - 3
 2. Hp – ½
 3. Voltage – 200
 4. Phase – 3
 5. Full Load/Locked Rotor Amps – 5/23
 - ii. Sludge Return Pumps
 1. No. of Pumps - 4
 2. Hp – ½
 3. Voltage – 200
 4. Phase – 3
 5. Full Load/Locked Rotor Amps – 5/23
 - b. Aeration Blower Motors
 - i. No. of Units - 2
 - ii. Hp – 7.5
 - iii. Phase 3
 - iv. Voltage – 208/230/460
 - v. Full Load/Locked Rotor Amps - 10/23
 - c. Polishing Aeration Unit
 - i. No. of Units – 1
 - ii. Hp – 5
 - iii. Phase – 3
 - iv. Voltage – 208/230/460
 - v. Full Load/Locked Rotor Amps -
 - d. Final Dispersal Unit Dosing Pumps
 - i. No. of Pumps - 4
 - ii. Hp – 1½
 - iii. Voltage – 200
 - iv. Phase – 3
 - v. Full Load/Locked Rotor Amps – 10/42

The connected motor loads exceed 100 amps at 208VAC 3-phase. Therefore it is recommended to provide a minimum 200 amp 208/120VAC 3-Phase 4-Wire service to the propose POWT.

CHAPTER 5 – COMMUNICATIONS

5.1 EXISTING FACILITIES

The Green World property is currently served by at telephone and data utility. The utility appears to own and maintain several pedestals and underground services to most of the buildings. The follow 4 pedestals appear to existing on the property:

1. Pedestal just outside the Event Storage Facility;
2. Pedestal inside the Event storage facility adjacent to the first electrical transformer;
3. Pedestal adjacent to the second electrical transformer on the westside of the property;
4. Pedestal adjacent to the Gift Shop.

In general, all the buildings appears to have open air punch downs for splitting simple voice and data lines through the buildings.

5.2 COMMUNICATION IMPROVEMENTS

In general, the current data utility systems are aged. At this time, it appears this system meet the current needs of the facility. However, if the facility want to begin to provide expanded data access (public access Wi-Fi) to guests, upgrades to the existing infrastructure may be required. Considering the focus of this venue, Expanded wide spread Wi-Fi may not meet the future objectives of the facility and owner.

It is recommended to install new data service to the POWT for remote alarm annunciation.

CHAPTER 6 – CONCLUSIONS AND RECOMMENDATIONS

6.1 GENERAL RECOMMENDATIONS

- Install water meters at each building to provide detailed water use data for evaluating peak day and peak hour demands and for monitoring and adjusting the POWTS components in the future.
- Install sewer collection system and POWTS as outlined in this report
- Investigate and repair/replace any leaking plumbing fixtures with new water efficient plumbing fixtures immediately
- As other fixtures are retired or facilities are remodeled/constructed incorporate new water efficient plumbing fixtures.
- Start a sample collection routine of the high strength waste sites as soon as possible.
- Further define future electrical loads and conduct extensive electrical documentation of the existing electrical systems.

APPENDIX A

Soil Report & Map

SOIL EVALUATION REPORT

in accordance with SPS 385, Wis. Adm. Code

Attach complete site plan on paper not less than 8 1/2 x 11 inches in size. Plan must include, but not limited to: vertical and horizontal reference point (BM), direction and percent slope, scale or dimensions, north arrow, and location and distance to nearest road.

Please print all information.

Personal information you provide may be used for secondary purposes (Privacy Law, s. 15.04 (1) (m)).

County	Waukesha
Parcel I.D.	1812995001
Reviewed by	Date
M Finger	5/10/17

Property Owner Old World Wisconsin, Dan Freas		Property Location Govt. Lot SE 1/4 SE 1/4 S 21T 5 N R 17E (or) W <input type="checkbox"/> <input type="checkbox"/>	
Property Owner's Mailing Address P.O. Box 69		Lot #	Block #
City Eagle	State Wi.	Zip Code 53119	Phone Number (262) 594-6301
		<input type="checkbox"/> City	<input type="checkbox"/> Village <input checked="" type="checkbox"/> Town
		Nearest Road Hwy 67	

New Construction Use: Residential / Number of bedrooms _____ Code derived design flow rate 14,451 GPD

Replacement Public or commercial - Describe: historic building exhibits including a restaurant, retail sales, special events

Parent material glacial outwash; Casco Loam Flood Plain elevation if applicable n/a ft.

General comments and recommendations: Wastewater from the restaurant and proposed brewery are expected to be high strength wastes, it is recommended that sampling of the effluent be conducted to establish actual levels of BoD, FoG & TSS. Recommended loading rate is 1.0 gal/sf/day with highly treated effluent. Also see DNR Large POWTS Design guidelines. The recommended elevations of in-ground dispersal cells are 953.5 and 954.5 or as determined by the septic designer.

1 Boring # Boring Pit Ground surface elev. 957.9 ft. Depth to limiting factor 108 in.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate	
									*Eff#1	*Eff#2
1	0-8	7.5yr3/2	--	L	2mgr	dl	cs	3f	0.6	1.0
2	8-36	7.5yr5/6	--	SL	2csbk	ml	aw	2f	0.6	1.0
3	36-48	7.5yr6/4	--	LS&gr	0	ml	gw	2m	0.7	1.6
4	48-108	7.5yr7/4	--	FS	0	ml	cs	2f-c	0.5	1.0
5	108-120	7.5yr7/4	c3f 7.5yr7/8-6/2	FS	0	ml	--	1c	0.5	1.0
	w/	7.5yr4/4	discontinuous 1/2" bands of	LFS	0	mvfr			0.5	1.0

2 Boring # Boring Pit Ground surface elev. 953.0 ft. Depth to limiting factor >96 in.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate	
									*Eff#1	*Eff#2
1	0-7	7.5yr3/2	--	L	2mgr	dl	as	3f	0.6	1.0
2	7-38	7.5yr5/6	--	SL	2csbk	ml	gs	3f-m	0.6	1.0
3	38-62	7.5yr6/4	---	LS	0	ml	cw	2f-m	0.7	1.6
	w/	7.5yr4/4	discontinuous 1/4" bands of	LFS	0	mvfr			0.5	1.0
4	62-96	7.5yr7/4	--	FS	0	ml	--	1c	0.5	1.0

* Effluent #1 = BOD ₅ > 30 ≤ 220 mg/L and TSS > 30 ≤ 150 mg/L

* Effluent #2 = BOD ₅ ≤ 30 mg/L and TSS ≤ 30 mg/L

CST Name (Please Print) Douglas Wilcox	Signature 	CST Number 221811
Address 1230 S. Blvd. Baraboo, Wi. 53913	Date Evaluation Conducted 5/10/2017	Telephone Number (608) 355-8955

Property Owner Old World Wisconsin

Parcel ID # 1812995001

Page 2 of 3

Boring # 3 Pit Ground surface elev. 957.3 ft. Depth to limiting factor >84 in.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate	
									GPD/ft ²	
									*Eff#1	*Eff#2
1	0-8	7.5yr3/2	--	L	1mgr	dl	as	3f	0.4	0.6
2	8-36	7.5yr5/6	--	L	2csbk	ml	aw	2f-m	0.6	1.0
3	36-84	7.5yr7/4	--	LS	0	ml	--	1f-m	0.7	1.6
	W/	7.5yr4/6	discontinuous 1/4" bands	LFS	0	mvfr			0.5	1.0

Boring # 4 Pit Ground surface elev. 956.0 ft. Depth to limiting factor >96 in.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate	
									GPD/ft ²	
									*Eff#1	*Eff#2
1	0-10	7.5yr3/2	--	L	1mgr	dl	aw	3f-m	0.4	0.6
2	10-32	10yr5/4	--	L	2msbk	ml	gs	3f-m	0.5	1.0
3	32-48	7.5yr5/6	--	SL	2csbk	ml	gs	2f	0.6	1.0
4	48-96	7.5yr7/4-7/8	--	LFS/FS	0	ml	--	1f-m	0.5	1.0
	w/	7.5yr4/6	discontinuous 1/4" bands	LFS	0	mvfr			0.5	1.0

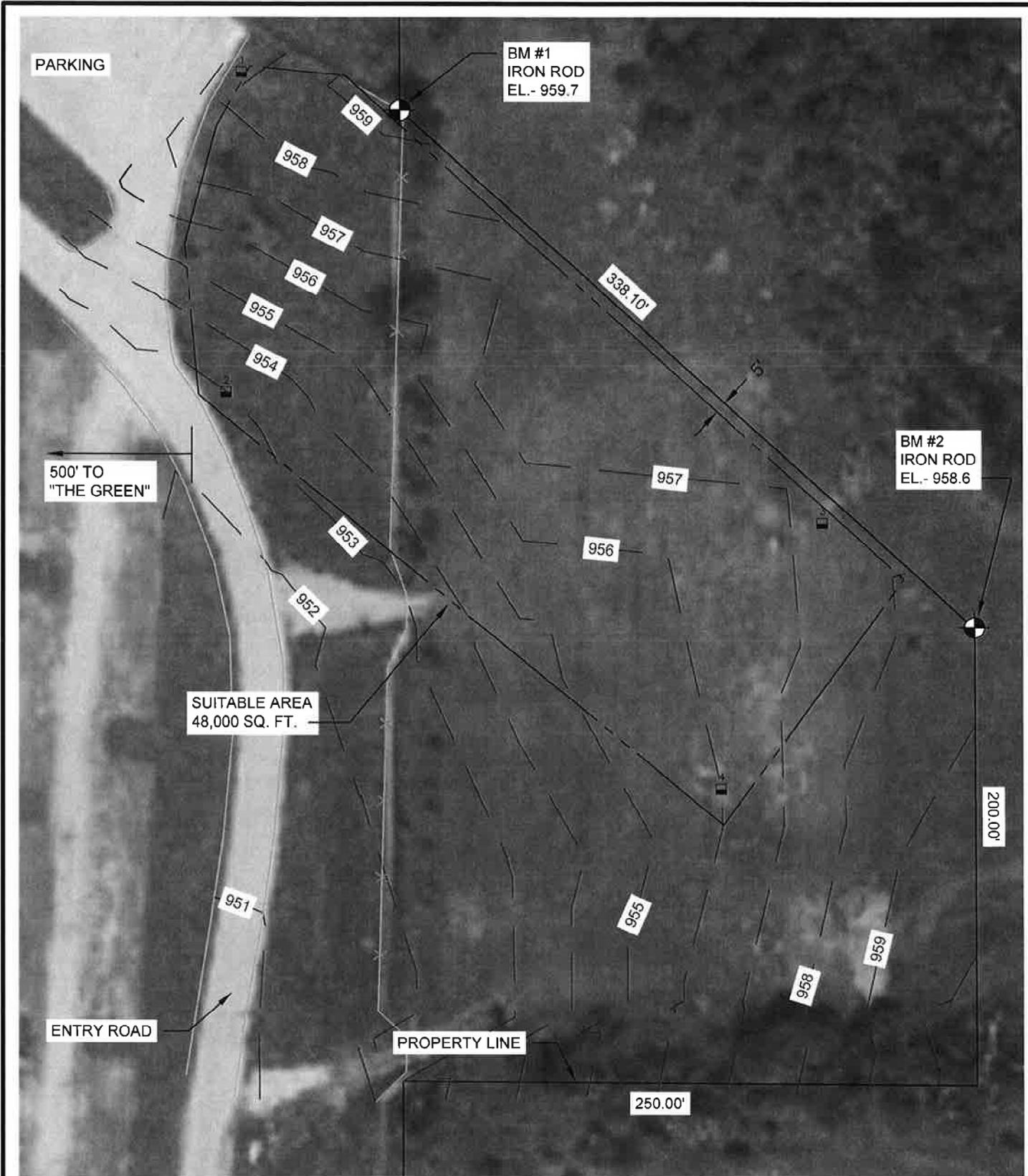
Boring # Pit Ground surface elev. _____ ft. Depth to limiting factor _____ in.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate	
									GPD/ft ²	
									*Eff#1	*Eff#2

* Effluent #1 = BOD₅ > 30 ≤ 220 mg/L and TSS >30 ≤ 150 mg/L

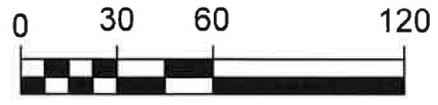
* Effluent #2 = BOD₅ ≤ 30 mg/L and TSS ≤ 30 mg/L

The Dept. of Safety and Professional Services is an equal opportunity service provider and employer. If you need assistance to access services or need material in an alternate format, contact the department at 608-266-3151 or TTY through Relay.



LEGEND

-  = BENCHMARK
-  = SOIL PIT



File Name: P:\3119\31190231\1125\2020\Drawings\Drawings\03119100.dwg Plot Date: 11/11/2020 10:58:10 AM

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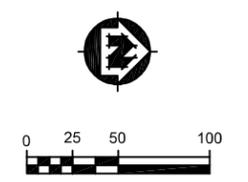
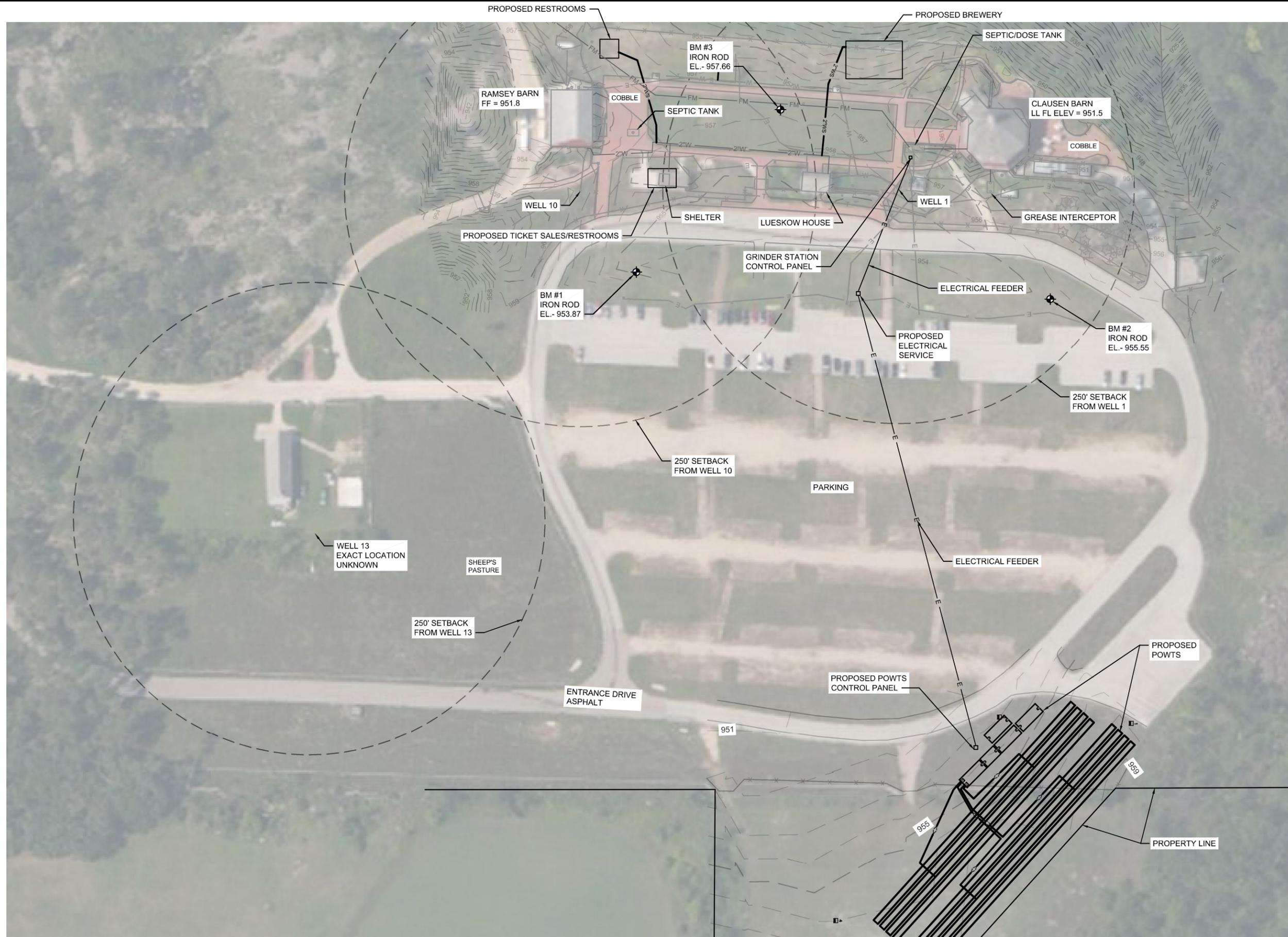
OLD WORLD WISCONSIN
 WISCONSIN HISTORICAL SOCIETY
 WAUKESHA COUNTY

SOIL REPORT SITE PLAN

FILE NO:
374109
SHEET
3

APPENDIX B

POWTS System Plan



PROJECT NO.:	SCALE:	NO.	DATE	REVISION	BY:
00374109	AS SHOWN				
PROJECT DATE:	5/2017	DRAWN BY:	DAW		
F.B.:		CHECKED BY:	INIT		

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OLD WORLD WISCONSIN
STATE OF WISCONSIN
EAGLE, WISCONSIN

"THE GREEN" DEVELOPMENT

FILE NO.	00374109
SHEET	1



- 1 TREATMENT SYSTEM - SEE FIGURE 1
- 2 DISPERSAL UNIT
- 3 FORCEMAINS
- 4 LOW PRESSURE SEWER



ON-SITE WASTEWATER TREATMENT SYSTEM DISPERSAL AREA



PROJECT NO.:	00374109	SCALE:	AS SHOWN	NO.	DATE	REVISION	BY:
PROJECT DATE:	12/15/2016	DRAWN BY:	DAW
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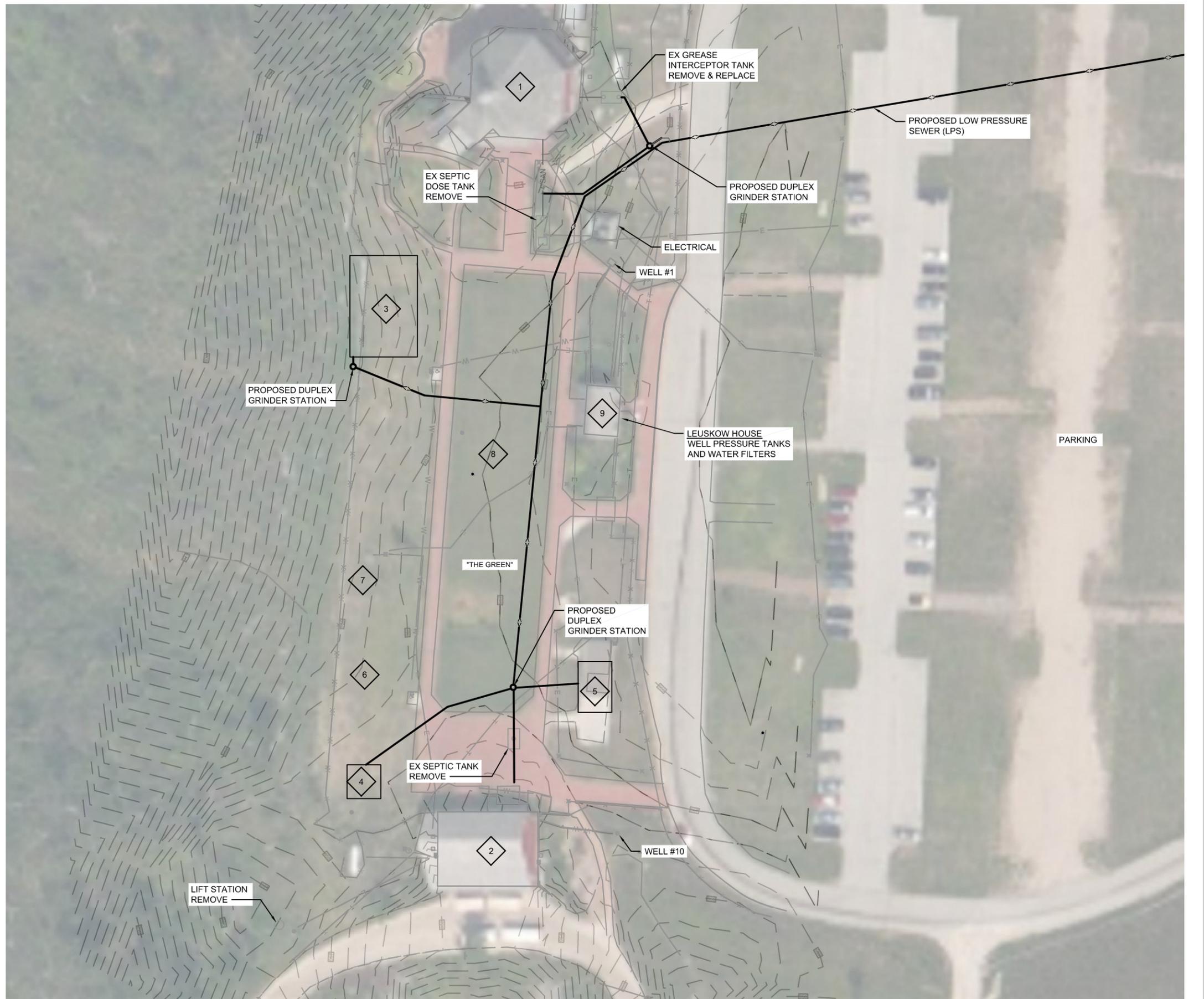
PROPOSED POWTs

FILE NO.	00374109
SHEET	3

APPENDIX C

Sewage Collection System Plan

- 1 CLAUSING BARN (EX. RESTAURANT)
- 2 RAMSEY BARN (EX. RESTROOMS)
- 3 BREWERY (PROPOSED)
- 4 RESTROOMS BUILDING (PROPOSED)
- 5 TICKET SALES & RESTROOMS (PROPOSED)
- 6 COVERED SEATING (NO WASTEWATER FLOW)
- 7 WINDMILL DISPLAY (NO WASTEWATER FLOW)
- 8 PAVILION (NO WASTEWATER FLOW)
- 9 LUESKOW HOUSE (NO WASTEWATER FLOW)



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"THE GREEN" PROPOSED IMPROVEMENTS

FILE NO.	00374109
SHEET	2

APPENDIX D

Cost Estimates

Old World Wisconsin - "The Green"
 Utility Improvements
 DFD Project No. 16D1C

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNITS	UNIT PRICE	TOTAL PRICE
General					
1	Traffic Control	1	LS	\$ 1,000.00	\$ 1,000.00
2	Turf & Site Restoration (does not include drainfield restoration)	1	LS	\$ 5,000.00	\$ 5,000.00
3	Erosion Control	1	LS	\$ 2,500.00	\$ 2,500.00
4	Remove & Replace (pavers, drip irrigation pipe, signs, misc.)	1	LS	\$ 15,000.00	\$ 15,000.00
5	Abandonments (septic tanks & lift station)	1	LS	\$ 20,000.00	\$ 20,000.00
6	Clearing and Grubbing	1	LS	\$ 2,000.00	\$ 2,000.00
General Subtotal					\$ 45,500.00
"The Green" Utility Improvements					
7	Unclassified Excavation	1	LS	\$ 3,000.00	\$ 3,000.00
8	Excavation Below Subgrade	100	CY	\$ 35.00	\$ 3,500.00
9	8-inch Crushed Aggregate Base Course	400	TON	\$ 12.00	\$ 4,800.00
10	3.5-inch Asphalt Pavement	10	TON	\$ 75.00	\$ 750.00
11	3" Low Pressure Sewer (LPS)(Directional Drill)	530	LF	\$ 30.00	\$ 15,900.00
12	2" Low Pressure Sewer (LPS)(Directional Drill)	475	LF	\$ 25.00	\$ 11,875.00
13	6" Sanitary Sewer	70	LF	\$ 40.00	\$ 2,800.00
14	4" Sanitary Sewer	185	LF	\$ 35.00	\$ 6,475.00
15	4" Cleanout	4	EA.	\$ 475.00	\$ 1,900.00
16	Duplex Grinder Station	3	EA.	\$ 18,000.00	\$ 54,000.00
17	2" Rigid Insulation	480	SF	\$ 3.00	\$ 1,440.00
18	6" Bollard	6	EA.	\$ 450.00	\$ 2,700.00
19	2" Water Service	220	LF	\$ 30.00	\$ 6,600.00
20	2" Water Valve	4	EA.	\$ 750.00	\$ 3,000.00
21	1 1/4" Curb Stop	1	EA.	\$ 425.00	\$ 425.00
22	1 1/4" Water Service	30	LF	\$ 25.00	\$ 750.00
23	2-inch water meter (installed by Owner)	1	EA.	\$ 900.00	\$ 900.00
24	1-inch water meter (installed by Owner)	1	EA.	\$ 250.00	\$ 250.00
25	3/4-inch water meter (installed by Owner)	1	EA.	\$ 100.00	\$ 100.00
The Green Improvements Subtotal					\$ 121,165.00
Septic System					
28	Sanitary Permit To Construct	1	LS	\$ 1,000.00	\$ 1,000.00
29	Septic System Treatment (tanks, aeration units, effluent pumps)	1	EA.	\$ 550,000.00	\$ 550,000.00
30	4" SCH 40 PVC Force main	580	LF	\$ 30.00	\$ 17,400.00
31	Unclassified Excavation and Grading	1	LS	\$ 5,000.00	\$ 5,000.00
32	Dispersal Cells (drainfield construction including restoration)	14,976	SF	\$ 6.00	\$ 89,856.00
33	Yard Piping (misc. piping, connections & observation ports)	1	LF	\$ 5,000.00	\$ 5,000.00
Septic System Subtotal:					\$ 668,256.00
Site Electrical					
34	New 400 Amp 208/120VAC Service				
	Utility Allowance	1	LS	\$ 5,000.00	\$ 5,000.00
	CT Cabinet and Meter Socket	1	EA.	\$ 3,500.00	\$ 3,500.00
	Equipment Rack	1	EA.	\$ 1,200.00	\$ 1,200.00
	Nema 3R Main Distribution Panel	1	EA.	\$ 3,500.00	\$ 3,500.00
	Electrical Construction	1	LS	\$ 13,200.00	\$ 13,200.00
35	Feeder to Grinder Station	150	LF	\$ 75.00	\$ 11,250.00
36	Feeder to POWT	450	LF	\$ 80.00	\$ 36,000.00
37	Septic Pump Electrical Conduit & Wire (10-motor circuits for pumps/ AVG of 4	450	LF	\$ 30.00	\$ 13,500.00
38	Septic Pump Local Disconnects	10	LF	\$ 500.00	\$ 5,000.00
39	POWT Control Panel	1	EA.	\$ 30,000.00	\$ 30,000.00
40	Grinder Station Control Panel	1	EA.	\$ 12,000.00	\$ 12,000.00
41	Electrical Construction	1	LS	\$ 30,000.00	\$ 30,000.00
Site Electrical Subtotal					\$ 164,150.00
Subtotal Capital Costs					\$ 999,071.00
Mobilization, Bonds and Insurance					7% \$ 69,934.97
Total Estimated Capital Cost:					\$ 1,069,005.97
Capital Contingencies					15% \$ 160,350.90
Total Estimated Construction Cost:					\$ 1,229,356.87
A & E					15% \$ 184,403.53
Administrative					5% \$ 61,467.84
Total Estimated Construction Cost:					\$ 1,475,228.24

APPENDIX E

Water Use Records

MARCH 1
2016/11/30

RESTORATION	183.7
GERMAN	1837.0
4 MILE	2450.7
RAMSEY	1799.3
CLAUSING	3741.4
CALDWELL	1004.6
FINNISH	105.1
DANISH	84.5
NORWEGIAN	425.7
COLLECTIONS	794.4
PALOFF	407.1
AGRICULTURE	243.7

APRIL

RESTORATION

184.2

GERMAN

1837

4 MILE

2452.3

RAMSEY

1799.4

CLAUSING

3762.1

CALDWELL

1094.4

FINISH

105.1

DANISH

84.5

NORWEGIAN

425.9

COLLECTIONS

796.4

PALOFF

411.3

AG

244.8

2016/11/30

MAY

2016

2016/11/30

RESTORATION	187.7
GERMAN	1859.3
4 MILE	2455
RAMSEY	3815 1800
CLAUSING	3815
CALDWELL	1005.5
FINNISH	105.5
DANISH	86.5
NORW.	428.6
COLLECTIONS	798.1
PALOFF	417.9
AG.	246

2016/11/30

JUNE 2016

RESTORATION	194.0
GERMAN	1867.2
4-MILE	2469.5
RAMSEY	3869 1805
CLAUSING	1805 3868
CALDWELL	1019.3
FINNISH	105.6
DANISH	8619
NORWEGIAN	434.2
PALOFF	424.7
AGRICULTURE	
COLLECTIONS	800

JULY '16

2016/11/30

RESTORATION	200
GERMAN	1998
4 MILE	2499.5
RAMSEY	1811.2
CLAUSING	3907.9
CALDWELL	1021.4
FINISH	106.2
DANISH	86.28
NORWEGIAN	439.2
PALOFF	434.5
AG.	246.6
COLLECTIONS	801

AUGUST

2016

2016/11/30

Restoration	206.1
GERMAN	1930.7
4 Mile	2536.5
RAMSEY	1817.7
CLAUSING	3935
CALDWELL	1047.7
FINN	109
DANISH	92.00
NORWEGIAN	447.7
PALOFF	441.4
AG	247.1
Collections	801.8

SEPT.

2016/11/30

RESTORATION

216.5

GERMAN

1981

4 MILE

2569.8

CALDWELL

1093

CLAUSING

3985.6

RAMSEY

1827.6

NORW.

453.4

DANISH

964.7

FINNISH

112

DALOFF

449.3

AG

248

COLLECTIONS

803.1

NOV. 1

2016/11/30

RESTORATION	233.5
GERMAN	1998
4 MILE	2574.6
CALDWELL	1118.1
RAMSEY	1837.2
CLAUSING	4047.4
FINNISH	111.7
DANISH	964.9
NORWEGIAN	454.8
COLLECTIONS	804
PALOFF	455.7
AG	250.1