

## Conceptual Proposal

# Floyd Lamb Park Haybarn

Ward 6



Prepared by  
**Department of Public Works**  
David Bowers, P.E., P.T.O.E., Director

# Summary

Scope: Covert the existing historical Hay Barn at Floyd Lamb Park Tule Springs Ranch from the current storage use into an assembly use, conforming to current Building Safety Fire Codes for community events.

Estimated Project Cost:    **\$ 2.4M**

The project is currently unfunded.

Project Sponsor: Parks & Recreation

Estimated Operating Cost Impact: estimated at warehouse rate \$8.00 X 8,800 SF = per year = \$70,400 per year

## Conceptual Cost Estimate Notes:

- Assumes funding no later than 7/1/18.
- Estimate includes all design, inspection, and construction costs required to complete the work, together with standard contingency amounts and cost escalation to the midpoint of construction.
- Expected accuracy of this cost estimate per industry standards:

Association for Advancement of Cost Engineering International Cost Estimation Classifications (18R-97)			
<i><b>Expected Accuracy</b></i>	<i>Project Definition</i>	<i>Description</i>	<i>Estimate Class</i>
-50% to +100%	0% to 2%	Concept Screening	5
<b>-30% to +50%</b>	<b>1% to 5%</b>	<b>Study or Feasibility</b>	<b>4</b>
-20% to +30%	10% to 40%	Budget, Authorization, or Control	3
-15% to +20%	30% to 70%	Control or Bid	2
-10% to +15%	50% to 100%	Check Estimate or Bid	1

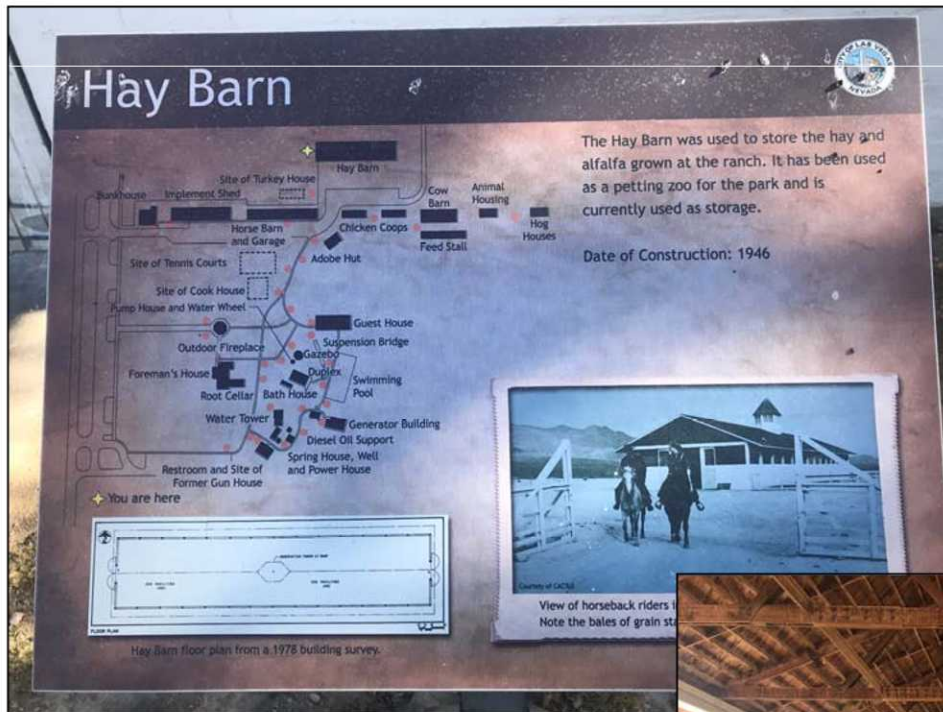
# **Background & Program Proposal**

## Background:

The Hay Barn located within the Historical Section of Floyd Lamb Park Tule Springs was built around 1946 and used to store hay and alfalfa grown at the ranch. Later the building was used as a petting zoo for the Park before its current use as a storage building by the City of Las Vegas Parks Department. In 1981 The Hay Barn is part of Tule Springs Ranch (historical core) that was listed on the National Register of Historic Places. Any modifications would need to be approved by the State Historic Preservation Office (SHPO).

## Proposal for CIPFY19:

Capital Improvement Request is to repair and upgrade the 8,800 S.F. Hay Barn from its current unoccupied storage use to assembly occupancy for community events.



Existing space  
used for storage



## **Improvements –Construction**

In addition to building obsolescence repairs, such as paint, flooring, and roofing, and a secondary location for Parks storage, conversion of the Hay Barn from the current storage use as an unoccupied space into an occupied assembly area will require significant and costly upgrades primarily for conformance with current Building Safety and Fire Codes. A detailed breakdown is as follows:

### **Structural Seismic Repairs:**

A field observational structural survey for the Hay Barn is on file with the City, conducted by Vhay Ferrari Architects on November 7, 1978. At that time, conversion into assembly occupancy was under consideration. The report concluded that the Hay Barn required significant upgrades to the lateral load resisting structural system due to unreinforced masonry walls. Shear walls are required, in addition to a strengthened roof diaphragm (new plywood roof sheathing). The 1978 Vhay Ferrari report placed an estimate for the upgrades at \$120,000 dollars. A thorough structural analysis of current buildings at Floyd Lamb Park was proposed for SNPLMA funding but not approved. A complete forensic structural investigation and analysis would be required in order to provide a more accurate cost estimate of repairs.

### **Fire Code Upgrades:**

If the current 8,800 S.F. Hay Barn is to become assembly occupancy for events, code for an A3 Group (less concentrated) at 15 S.F. per occupant would equate to a total capacity of 587 occupants. IBC 903.2.1.3 requires an automatic sprinkler system for an occupant load of 300 or more. 907.2.1 Only requires a manual pull station for alarm purposes. Domestic and Irrigation water for the Floyd Lamb Park site is supplied by onsite wells and a recently refurbished pumping system for pressure and volume. Although fire hydrants do exist on site, a fire engineering analysis would be required to confirm if the current system has the volume and pressure required. For the purposes of this proposal we assume that the 28'-0" roof height inside causing an 11 psi pressure loss, the Hay Barn will require a separate fire/riser and pump housed in a small heated space, on emergency power/fuel source within the structure. Another less feasible option would be to tie into the public water main at the residential area approximately 1,000 feet south east.

### **Building Exits and ADA Compliance**

With an occupant load capacity of 587 occupants will require a minimum of (3) exits per IBC 2012 section 1019.1. Currently (2) exits exist on the north and south ends of the building. A new exit would be needed preferable at the center of the building. Exit signs and exit pathway illumination on an emergency battery system will need to be added. Existing gates would be replaced with self-closing doors that have exit panic hardware. An illuminated concrete walkway exit discharge path for the nearby parking area that would also as an accessible handicap route would be required. Interior LED building lighting would be required to supplement the minimum fixtures in the building.

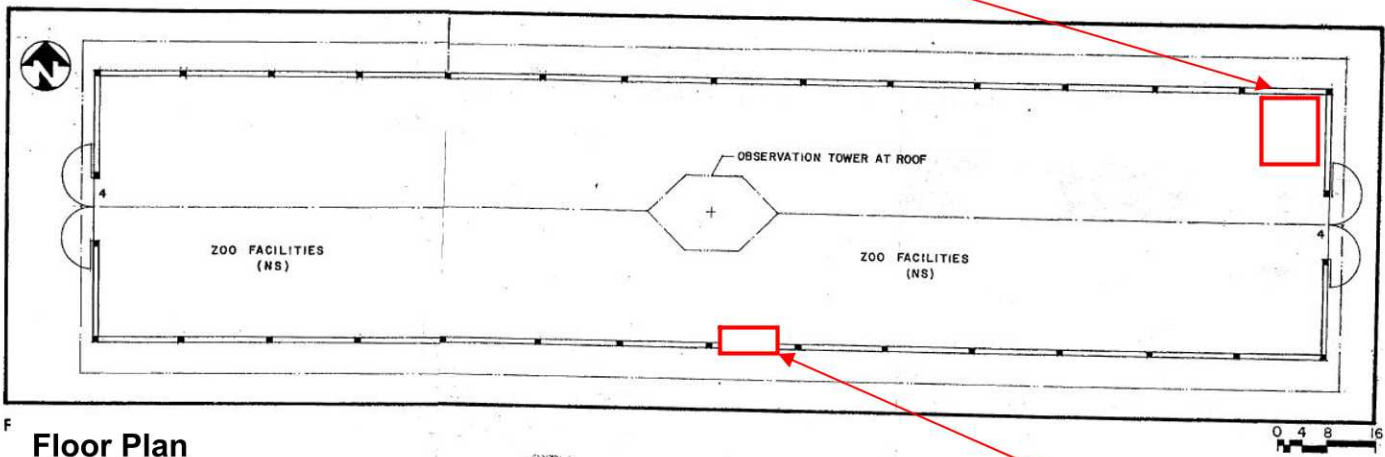


## Improvements –Construction

### Plumbing Bathroom Facilities: (no cost)

Chapter 29 of the 2012 IBC would require (3) water closets for females and (2) water closets for males. The code allows for joint site use of toilet facilities within 500'-0". There is an existing toilet building with (2) male and female water closets approximately 435'-0" from the Hay barn and a single toilet nearby that could serve as bathrooms for the building. For purposes of the estimate new restrooms are not included. Mechanical heat is only required in the fire riser/pump room.

Fire Pump/Riser Room with outside door required. Area to include small service sink with water connection.



Third exit required if occupancy is over 500

Replace gates with new fire exit doors with panic bars.

## Improvements –Continued



Existing roof sheathing to be replaced with plywood shear diaphragm and nailed blocking connection to existing header. New roofing shingles required. Original exposed decking and can be reused.



Seismic retrofit connections are required at existing columns to tie the roof structure and transfer lateral loads to the foundation. Masonry walls are currently unreinforced.



## Improvements –Continued

Existing parking area currently used by City Park Maintenance Vehicles to be repaved and restriped for Hay Barn Patrons. Handicapped stalls and way finding signage will be required with access from Tule Springs Road. Minor grading needed for drainage. Parks Department has requested an alternative area for storage if the Hay Barn is used for community events.



New asphalt paving/stripping and ADA stalls, signage, required for patrons. Building exterior LED lights may be the most cost effective way to illuminate the parking area that can accommodate at least 50 stalls.

## Improvements –Construction

Due to neglect, interior and exterior repairs are needed. Existing wood siding should be pulled, repaired, patched, and receive new exterior stain. Masonry walls after seismic demo and replacement will receive block filler and elastomeric paint. Cloth netting currently on the upper openings should be replaced with a more durable factory coated enamel metal screen mesh.



New metal screen mesh recommended at openings



Existing wood siding to be repaired and replaced. Including existing observation tower.



# Project Budget and Schedule

## PROJECT BUDGET

Estimate Date:	12/14/17
Expected Accuracy of Conceptual Level Estimate:	-30% to +50%
Prepared By:	pbatte

## FUNDING PLAN

<b>TOTAL PROJECT COST:</b>	<b>2,363,100</b>
<b>TOTAL PROJECT FUNDING:</b>	<b>2,400,000</b>
<b>EXCESS FUNDS (OR SHORTFALL):</b>	<b>36,900</b>
<b>CIP EXPENDITURES BY PHASE &amp; FISCAL YEAR:</b>	
Land & ROW Acquisition	FY 2019
Design	362,400 FY 2019
Construction	1,988,866 FY 2020
Equipment & Furnishings	11,834 FY 2020

## AREAS

Building Area:	SF
On-site Area:	AC
Off-site Area:	AC

## LAND & ROW ACQUISITION

Land & ROW Acquisition	
Pre-Design Services	
Land Survey	
Geotech Report	
Cost Estimating	
Internal Labor	
Estimating Contingency:	20%
<b>TOTAL LAND &amp; ROW ACQUISITION</b>	

## DESIGN & MANAGEMENT FEES

Architectural Services	125,000
Engineering Services	145,000
Land Survey	
Geotech Report	5,000
Bidability/Constructability Review	
Cost Estimating	15,000
System Commissioning	
Material Testing \ Special Inspect.	35,000
Construction Management	
Facilitator	
Internal Labor Oversight	
Estimating Contingency:	65,000 20%
<b>TOTAL DESIGN &amp; MANAGEMENT FEES</b>	<b>390,000</b>

PERMITS		
Tortoise Mitigation		
Building Permit	12,000	
Land Development Permit		
Hydrology Study Review		
Traffic Signal Fee		
Water Service Connection		
Sewer Connection		
Power & Phone Service		
Gas & Cable Service		
Health District Fees		
State/County Environmental Permits		
Printing Cost		
Asbestos Report		
Smart City Infrastructure		
Estimating Contingency:	2,400	20%
<b>TOTAL PERMITS</b>	<b>14,400</b>	

CONSTRUCTION & EQUIPMENT COST		
CONSTRUCTION:		
Construction Costs	1,333,700	
LEED Certification Premium		
Designer's Contingency:		
Owner's Scope Contingency:	133,370	10.0%
EQUIPMENT & FURNISHINGS:		
F.F. & E.		
IT Equipment	10,000	
Estimating Contingency:	221,561	15.0%
<b>CONSTRUCTION TOTAL:</b>	<b>1,698,631</b>	
Months till Mid-point of Construction (see Schedule):	29.0	
Escalation Annual Rate: Next 6 Mos	16,986	2.0%
Escalation Annual Rate: Remaining Mos	65,020	2.0%
Market Factor (limited bidders, short-term factors)		
Construction Change Order Contingency:	178,064	10%
Interest Required to be Paid on Retainage (SNPLMA)		
<b>TOTAL CONSTRUCTION COST</b>	<b>1,958,700</b>	

## Cost Estimate

CONCEPTUAL CONSTRUCTION COST DETAIL		Quantity	Unit	Unit Cost	Estimated Cost
<b>STANDARD COSTS PER AREA</b>					
Building Cost			/ SF	300	
Site Area Improvement Cost			/ Acre	480,000	
<b>ADJUSTMENTS NOT INCLUDED IN THE STANDARD COSTS ABOVE</b>					
Demo and replace existing concrete floor slab	8,800	SF	10		83,600
New masonry reinforced columns seismic sheer connection	34	EA	6,500		221,000
Column foundations, excavate, form, rebar concrete	34	EA	4,500		153,000
New plywood roof diaphragm, material and labor	8,800	SF	18		158,400
New shingle roofing/felt paper	8,800	SF	12		105,600
Double exit doors -retrofit and existing gate openings	3	EA	5,000		15,000
Block filler,patch, elastomeric paint for exterior masonry	4,500	SF	4		15,750
New metal screen mesh	6,500	SF	18		117,000
Dry Pipe Fire Suppression System	8,800	SF	4		35,200
Fire Pump/Riser off existing well system	1	LS	75,000		75,000
Exit and interior lighting	20	EA	1,100		22,000
Exterior wall lights	34	EA	1,100		37,400
Replace existing asphalt parking area -minor grading compact existing type II, no lights.Restripe and signage	21,500	SF	5		96,750
ADA path walkway to Tule Springs Parking Area	6,000	SF	4		24,000
Service sink with 1" domestic line	1	LS	8,000		8,000
Minor landscape/irrigaton in parking area	1	LS	15,000		15,000
Security system cameras/Fire Alarm	1	LS	12,000		12,000
Replacement storage area for parks	1,100	sf	120		132,000
Construction and Monument Signs, Dedication Plaque	1	LS	6,500		6,500
Key Cores	1	Allowance	500		500
<b>Subtotal</b>					<b>1,333,700</b>
<b>UNIT COST UPDATE</b>					
Date of Unit Prices Used Above					12/14/2017
Monthly Escalation Rate					0.05%
Unit Price Escalation to Current Estimate Date					
<b>CURRENT CONSTRUCTION COST WITHOUT ESCALATION</b>					<b>(Transfer to Project Budget)</b>
					<b>\$1,333,700</b>