

Mitigation Plan for Wright-Patterson Air Force Base  
Housing Program Environmental Impact Statement

**DRAFT - JULY 2019**

1 This mitigation plan supports the Wright-Patterson Air Force Base (WPAFB) Housing Program  
2 Environmental Impact Statement (EIS) which addresses the potential impacts from the proposed  
3 alternatives. This document provides mitigation strategies to resolve adverse effects under the National  
4 Historic Preservation Act (NHPA).

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6 The project proponent, in this case, Air Force Civil Engineer Center Housing (AFCEC/CIM) is  
7 responsible for implementation of any mitigation and for monitoring its effectiveness. For the EIS  
8 Record of Decision (ROD), this plan identifies for each mitigation, how the proponent will execute the  
9 mitigations, identifying who will fund and implement the mitigations, and stating when the proponent  
10 will complete the mitigation. The mitigation plan will be forwarded to the Air Force decision maker for  
11 review prior to signature of the EIS ROD.

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13 Table 1 provides an overview of the eleven alternatives and the mitigation items with estimated costs  
14 identified as appropriate for the level of adverse effects expected for the alternative.

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**TABLE 1**

<b>Alternative 1: Whole-house renovations 29 BQHD K&amp;E units, minor repairs to correct code deficiencies in 60 BQHD units, demolish 10 Yount Dr units</b>	Mitigation 6: Total cost: \$410,000
<b>Alternative 2: Renovate 29 BQHD K&amp;E units, demolish 60 BQHD units and 10 Yount Dr units</b>	Mitigations 1 through 6. Total Cost: \$8.21M
<b>Alternative 3: Whole-house renovations 89 BQHD units, demolish 10 Yount Dr units</b>	Mitigation 6: Total cost: \$410,000
<b>Alternative 4: Whole-house renovations 89 BQHD units, demolish 10 Yount Dr units, maintain 29 BQHD units &amp; Foulois House as AF-owned, privatize 60 BQHD units</b>	Mitigation 6: Total cost: \$410,000
<b>Alternative 5: Whole-house renovations 29 BQHD K&amp;E units, demolish 10 Yount Dr units, &amp; lease 60 BQHD units under Section 111</b>	Mitigation 6: Total cost: \$410,000
<b>Alternative 6: Privatize Foulois House, 89 BQHD units &amp; 10 Yount Dr units. Whole house renovations 29 BQHD K&amp;E units</b>	Mitigation 6: Total cost: \$410,000
<b>Alternative 7: Same as Alternative 6, except demolish 60 BQHD units when no longer financially viable</b>	Mitigation 6: Total cost: \$410,000 Demolitions require Mitigation Items: 1 through 5. Total cost: \$7.8M
<b>Alternative 8: Privatize Foulois House, 29 BQHD units &amp; 10 Yount Dr units; whole house renovations of 29 BQHD K&amp;E units; Section 111 lease 60 BQHD units</b>	Mitigation 6: Total cost: \$410,000
<b>Alternative 9: Privatize all units, renovate 9 BQHD units, demolish 80 BQHD units, build 20 new units</b>	Demolitions require Mitigation Items: 1 through 5. Total cost: \$7.8M
<b>Alternative 10: Privatize all units, renovate 1 BQHD unit, demolish 88 BQHD units, build 28 new units</b>	Demolitions require Mitigation Items: 1 through 5. Total cost: \$7.8M
<b>Alternative 11: No action alternative, the AF would continue to own and operate Foulois House, BQHD units &amp; Yount Dr units</b>	No mitigation required

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2     **Additional Analysis for Mitigation:**

3     Since it is possible that some combination of the alternatives presented above could be advanced as the  
4     selection in the ROD a further analysis of possible demolition effects should be considered. The number  
5     of Key & Essential (K&E) leaders fluctuates periodically based on mission requirements and commander  
6     perceived needs. Additionally, requirements for officer housing changes periodically. This may lead to a  
7     variable number of units identified for retention or demolition if selected. Currently K&E has been  
8     identified as 50 individuals, a substantial increase from the original number. Additionally the commander  
9     has identified a need for ten distinguished visitor quarters.

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11     **Retention of 60 units and Demolition of 29 units:**

12     This would require a combination of mitigation items. Assuming the MILCON renovation would remain  
13     for 29 units this would mean the mitigation identified in the PA would suffice for those. The remaining 31  
14     units would most likely receive some form of renovation after the MILCON. This would require further  
15     Section 106 consultation at the time that is identified. The demolition of 29 units however would have a  
16     severe adverse effect on the BQHD. The appropriate mitigation for this action would be either Mitigation  
17     1 alone, or Mitigation 2, 3, 4, and 5.

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18   **MITIGATION ITEMS**

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20   The proponent AFCEC/CIM is responsible for funding and execution of the mitigation items.  
21   AFCEC/CIM will implement these by executing the proposed mitigation through the 88 Air Base Wing's  
22   88 Civil Engineer Group (88 CEG). The 88 CEG Environmental Branch would be responsible for  
23   coordination and monitoring of the mitigation, and mitigation should be completed within five years of  
24   initiation of the project causing the effects.

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26   **Mitigation 1:** Interpretive Center Addition - Development of an expanded Huffman Prairie Flying Field  
27   Interpretive Center with a WPAFB heritage addition. Coordination with Dayton Aviation Heritage  
28   National Historical Park would be needed requiring redesign of NPS interpretive media within the  
29   facility. This mitigation would need to be executed in partnership with the National Park Service. New  
30   interpretation media portraying the history of WPAFB would be designed and installed. This would  
31   include the reconstruction and interpretive display of the historic Five-Foot Wind Tunnel and installation  
32   of the German POW Mural and its interpretation. The proposed addition, approximately 13,000 square  
33   feet, and expansion of parking facilities would allow publicly accessible outreach and education regarding  
34   the history of WPAFB and the Brick Quarters Historic District. Projected cost for this mitigation is  
35   approximately 5.5 million dollars.

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37   **Mitigation 2:** Historical Mapping and 3D Virtual Rendering - Implementation of the historical mapping  
38   project noted by Wallander and Zeidler (WPAFB, 2016). A base wide historical mapping project is  
39   needed to graphically capture all previous buildings, sites, and structures at WPAFB using a variety of  
40   available historic maps as baseline data. The ability to graphically render past building campaigns (both  
41   permanent and temporary) would aid future master planning efforts. These data may be entered into a  
42   Geodatabase, which would allow the development of an interactive database with integration of historic  
43   photos and text. The development of a user-friendly interface would allow this database to be installed at  
44   the newly expanded interpretive center set forth in Item 1. Additionally this data would provide the means  
45   for creation of a 3D rendered virtual reality program allowing user to view, walk through, fly over, and  
46   interact with the base during its high water mark in 1945. This requires development of a virtual reality  
47   and interpretive experience using "state of the art" virtual reality equipment that would allow the user to  
48   experience what life was like in the BQHD during the development of the modern US Air Force. This  
49   effort may require a partnership with Microsoft, Apple, or another virtual reality pioneer company who  
50   could use the project as a demonstration of their technology. The estimated cost for Mitigation 2 is  
51   approximately \$750,000.

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53   **Mitigation 3:** WPAFB Documentary Film - Development of a documentary film that could be added to  
54   the WPAFB website or presented in a kiosk at a museum or library, and You Tube or Netflix type  
55   venues would provide public benefit. This would be a full feature professional documentary requiring the  
56   following: extensive research of the history of the airbase and its relationship to Dayton, the U.S. Air  
57   Force and the history of aviation. This would include obtaining archival images, video, and data,  
58   interviews, filming on site, professional narration, artwork, animation, sound, etc. This is the follow-on  
59   project to the mitigation item identified for the Brick Quarters MILCON renovation (Stipulation II. H.)  
60   which would lay the groundwork for this final development of the documentary. The estimated cost for  
61   Mitigation 3 is approximately \$850,000.

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63   **Mitigation 4:** National Historic Landmark (NHL) Improvements - Improvements to Huffman Prairie  
64   Flying Field NHL. These improvements would provide public benefit by improving the viewshed for  
65   visitors to the NHL and improving the site to more closely resemble the field when the Wright Brothers  
66   flew there. This mitigation includes; burying the power lines within the viewshed, new vegetation

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67 screening of the storage building at the south edge of the field, removal of Pylon Road and its  
68 replacement with grid like paving substitute such as Stabilagrid that would allow grass to grow through,  
69 but vehicles can still travel over the grid. Additionally this mitigation includes replacing the existing  
70 catapult replica with a more accurate replica, adding air conditioning to the storage building for year  
71 round storage of a flyer replica, addition of a powered door opener system for the storage building, and  
72 restoration of portions of the old Interurban railway embankment near Simms station including  
73 installation of rail ties and rails. The estimated cost for Mitigation 4 is approximately \$450,000.

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75 **Mitigation 5:** 3D Laser Scanning – Utilize U.S. Army Corps of Engineers, Construction Engineering  
76 Research Laboratory (CERL) to conduct Laser scans of the entire Brick Quarters Historic District exterior  
77 and interior of the eight different unit types. Utilize CERL’s expertise in producing 3D imaging of the  
78 entire Brick Quarters. This technology allows production of 3D printing of a to-scale model of the entire  
79 historic district which is to be produced and placed on display along with interpretive media regarding the  
80 history of the Brick Quarters. The estimated cost for Mitigation 5 is approximately \$250,000.

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82 **Mitigation 6:** These are the MILCON mitigation items called for in the PA under Stipulation II. H.

- 83 1. Support the NPS expansion of the boundary for the Dayton Aviation Heritage National Historical  
84 Park to include both Wright Memorial Facility 40001 and the Arnold House Facility 30008. This  
85 requires administrative efforts by the NPS in partnership with WPAFB, which may include  
86 congressional action initiated by the NPS.
- 87 2. Rehabilitation and continued use of the Arnold House Facility 30008 as the WPAFB Heritage  
88 Center, with work to be substantially complete within five years of the ROD being signed. This  
89 mitigation is approximately \$160,000.00.
- 90 3. Submit an NRHP nomination for the Arnold House Facility 30008 to the Keeper of the NRHP  
91 within five years of the ROD being signed.
- 92 4. Green space behind BQ structures on Johnson and Metzger Drives will be retained to  
93 accommodate a driveway for access to new garages. This represents a means to minimize the  
94 number of garage demolitions required for construction of new garages. 88 ABW will seek new  
95 uses for the existing garages to the maximum extent possible. 88 ABW will retain existing  
96 garages to the maximum extent possible.
- 97 5. The 88 ABW shall fund as part of the MILCON project initial research, information gathering,  
98 organization, and review of materials required in preparation for production of a WPAFB history  
99 documentary. Within five years of the ROD being signed, 88 ABW will then seek out and  
100 contract with a nationally recognized documentary producer to create a new 20 minute video in  
101 anticipation of a future full length documentary history of WPAFB. The estimated cost for  
102 Mitigation 5 is approximately \$350,000. This would include research and development to  
103 address the following:
  - 104 • Read history of the airbase and its relationship to Dayton, the U.S. Air Force and the  
105 history of aviation
  - 106 • Make an assessment of the archives available to us, both on and off base
  - 107 • Make an outline for the structure and length of the documentary
  - 108 • Make a list of potential interviewees weighed against extant interviews
  - 109 • Research and make a list of crucial interviews where time is a factor
  - 110 • Identify and approach potential community/youth partners
  - 111 • Production and post production to deliver a short 20 minute trailer for the full  
112 documentary.