

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

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

10

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.

25
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.

36
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.

52
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 Nextflix 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.

62
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.
74

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.
81

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.