

9.0 SECTION 106 EVALUATION: CULTURAL RESOURCES

The Affected Environment of cultural resources in the I-494 corridor reconstruction was described in Section 4.2.5 of the DEIS. Impacts and Mitigation Measures for cultural resources were addressed in Section 5.5 of the DEIS.

Federal government protection of cultural resources is defined and set forth by the Antiquities Act of 1906, The Historic Sites Act of 1935, the National Historic Preservation Act of 1966 (as amended), the Archaeological and Historic Preservation Act of 1974, and the National Environmental Policy Act of 1970. The cultural resources study and reports conducted for the I-494 reconstruction project follow guidelines set forth in Sections 1(3) and 2(b) of the Executive Order 11593, the National Environmental Policy Act of 1969, the guidelines of the Advisory Council on Historic Preservation (36 CFR 66), and all policies regarding cultural resources established under the Minnesota Field Archaeology Act of 1992.

In compliance with Section 106 of the National Historic Preservation Act (36 CFR 800) and Section 4(f) of the Department of Transportation Act of 1966 (49 USC 303, 23 USC 138) a cultural resources investigation of the I-494 reconstruction project from I-394 to the Minnesota River was conducted between 1990 and 1994. The study was conducted to assess and minimize the potential impact of the proposed reconstruction of I-494 on historically, architecturally, and archaeologically significant properties as required by Section 106 for all federally funded construction projects and by Section 4(f) for federally assisted highway construction projects. Sites were evaluated in terms of National Register Criteria described in the National Register Bulletin #15 published by the U.S. Department of the Interior in 1990 (revised in 1991). This study resulted in a determination of adverse effect. The process was concluded with a Memorandum of Agreement signed in 1995. Reconstruction of I-494 was then placed on hold due to funding considerations.

As discussed in Section 1.2 of this FEIS, the current design has been revised from the design under consideration at the time of the 1995 Memorandum of Agreement. However, as discussed below, the revised project design does not result in the inclusion of additional cultural resources within the project Area of Potential Effect (APE) nor does it result in any further impacts to cultural resources within the APE. Therefore, the project will proceed under the 1995 Memorandum of Agreement. Correspondingly, the Section 106 evaluation for this project was conducted under the version of 36 CFR 800 in effect prior to May 18, 1999.

9.1 INVESTIGATIONS CONDUCTED PRIOR TO THE DEIS

Standing structures and archaeological properties along the I-494 corridor were identified and evaluated during two survey phases. The DEIS describes the methods used to initially identify potential National Register-eligible structures and archaeological sites within the project area,

culminating with a Phase I survey. The following technical reports described in the *I-494 Reconstruction DEIS* are available for review at the Minnesota Department of Transportation and at the State Historic Preservation Office in St. Paul, Minnesota.

Scoping Decision Document September 1990
Cultural Resources Investigation Phase I Technical Report January 1992
Draft Environmental Impact Statement April 1992

A preliminary survey of the corridor documented in the *Scoping Decision Document*, Historical and Archaeological Impacts section (page 41), identified several areas of high potential for archaeological resources, and several structures potentially eligible for the National Register of Historic Places (NHRP).

The Phase I investigation, documented in the *Cultural Resources Investigation Phase I Technical Report*, identified and located potential archaeological (prehistoric and historic) and architectural resources within and immediately adjacent to the proposed construction areas. The investigation of archaeological resources was limited to the direct impact areas delineated in the *I-494 Reconstruction Scoping Decision Document*. With respect to structures, consideration was given to properties adjacent to the project corridor that may be affected indirectly (visually, for example) as well. Several methods were used to identify archaeological sites and potential National Register-eligible standing structures in the survey area including a literature search, archival research, survey fieldwork and the solicitation of input from historic preservation agencies and neighborhood groups.

Five (5) structures were recommended for Phase II study to be evaluated for eligibility for the National Register of Historic Places. These five (5) were 1810 Oakland Road (HE-MKC-015), the Assumption Church Rectory (HE-RFC-018), the Elizabeth and Frederick H. Carpenter summer residence (HE-MKC-018), the Swan J. Swanson residence (HE-MKC-022), and the Anna and Joseph Lorence residence (HE-BLC-044).

The Phase I archaeological survey identified one site previously determined eligible for the National Register as a standing structure (Bush Lake School, demolished prior to 1991) and five (5) additional sites for further evaluation for eligibility: one (1) historic structure foundation, a historic Native American trail and three (3) historic period sites.

The State Historic Preservation Office (SHPO) agreed with the archaeological sites recommended for Phase II investigation (March 31, 1992, letter to Mn/DOT) but determined that two (2) of the five (5) standing structures, 1810 Oakland Road (HE-MKC-015) and the Assumption Church Rectory (HE-RFC-108) did not warrant further research. SHPO also requested that the Phase II investigation also research the significance of I-494 in shaping the suburban landscape in recent history.

9.2 INVESTIGATIONS COMPLETED FOR THE 1993 PREFERRED ALTERNATIVE

As discussed in Section 1.2, DEIS Alternate 2A (referred to in this FEIS as the 1993 Preferred Alternative) was selected in 1993 as the Preferred Alternative for study in a Final EIS. The Phase II studies and SHPO coordination between 1993 and 1995 were based on the 1993 Preferred Alternative. The I-494 reconstruction project was put on hold in 1995 due to lack of construction funds for the project. The Phase II investigation, determination of effect, and resulting Memorandum of Agreement (discussed below) were completed just prior to the closure of the project at that time.

The Phase II investigation completed in February 1994 examined each site, developed property-specific historic contexts, and evaluated the archaeological and historic sites recommended by the State Historic Preservation Office for National Register eligibility.

The investigators concluded that none of the archeological sites were eligible for the National Register or merited further investigation.

Of the three residential structures evaluated, two were recommended for inclusion on the National Register of Historic Places (Figure 9.1).

- The Anna and Joseph Lorence residence, 7335 Marth Road, Bloomington, was recommended based on National Register Criterion A (properties significant for their association with one or more events important in the defined historic context).
- The Elizabeth and Frederick H. Carpenter summer residence, 13405 McGinty Road East, Minnetonka, based on Criterion C (properties significant for their architectural style, engineering technique, and/or method of construction).

The investigation of the Highway 5/Interstate 494 corridor completed at the request of the SHPO determined that the corridor was not eligible for listing on the NRHP. While the original construction of I-494 was found to clearly affect suburban development, the investigators determined that it was difficult to determine a direct causal connection between construction of the roadway and specific elements of the suburban environment. Further, while I-494 itself is approaching the minimum age criterion of 50 years, it suffers from substantial integrity issues due to numerous changes in roadway design and adjacent developments.

At the request of the State Historic Preservation Office (February 16, 1994 letter to Mn/DOT), supplemental information about the Carpenter outbuildings, as well as information regarding the historic boundary of the property was supplied in a *Phase II Cultural Resources Investigation of the Proposed I-494 Reconstruction Addendum #1*.

The affected historic properties' significance, and the 1993 Preferred Alternative's effects on the preservation of these properties was summarized in *Finding of Adverse Effect: Section 106 Review of Two Properties Along I-494* prepared in April of 1994. A Memorandum of Agreement (see Appendix C) regarding the 1993 Preferred Alternative and its adverse effects to the Lorence and Carpenter properties was signed in 1995.

The following Phase II technical reports for this project are available for review at the Minnesota Department of Transportation and at the State Historic Preservation Office in St. Paul, Minnesota.

Cultural Resources Investigation Phase II Technical Report	February 1994
Phase II Cultural Resources Investigation Addendum #1	April 1994
Finding of Adverse Effect: Section 106 Review of Two Properties Along I-494 ...	April 1994
Memorandum of Agreement	1995

9.3 CONSTRUCTION WITHIN THE I-494 CORRIDOR BETWEEN 1995 AND 1999

Bridge replacement and other minor, maintenance-related reconstruction activities occurred in the I-494 study corridor between 1995 and 1999 where needed to address deficient infrastructure and severe functional inadequacies. Environmental effects resulting from these projects, including impacts to cultural resources, were addressed in separate environmental documents listed in Section 1.2.2. Each of these projects were examined for their effects to cultural resources; the projects were either found to be exempt from review or resulted in a “no historic properties” finding.

One of these projects, however, merits some discussion as it relates to the Carpenter House, identified during the Phase II evaluation as eligible for the National Register of Historic Places and determined to face adverse effects under the 1993 Preferred Alternative. The I-494 bridges over CSAH 5 (Minnetonka Boulevard) and Stone Road were replaced in 1998 (S.P. 2785-307) due to their poor condition. The Elizabeth and Frederick H. Carpenter summer residence lay immediately northeast of the project area. The CSAH 5 interchange concepts studied in the 1992 DEIS Alternative 2A included a much larger reconstruction of this interchange and would have taken a portion of the Carpenter property for right of way. The 1998 bridge replacement did not include reconfiguration of the interchange as had been proposed in the DEIS. Rather, the interchange configuration was left intact although the bridges were built to accommodate additional lanes if approved under the future I-494 reconstruction project. Also, the 1998 bridge replacement project included retaining walls so that acquisition of the Carpenter property was no longer required as part of the improvements. As the project would be constructed within existing right of way, did not introduce new structural or visual elements, and did not require substantial ground disturbance, the project memorandum prepared for the bridge replacement/interchange reconstruction concluded that the project was exempt from review under 36 CFR 800 under the Programmatic Agreement between the Federal Highway Administration, the Minnesota Department of Transportation, the Advisory Council on Historic Preservation, and the Minnesota State Historic Preservation Office.

The current Preferred Alternative for the I-494 FEIS reconstruction as described in Section 3.4 of this FEIS does not include any further work to bridges or the Minnetonka Boulevard interchange in this area.

Figure 9.1 11 x 17

9.4 ASSESSMENT OF THE CURRENT PREFERRED ALTERNATIVE

Changes in the project design between the 1993 Preferred Alternative and the current Preferred Alternative were examined to determine if further cultural resources investigation was warranted. In general, the current area of impact of the design is less extensive than the impact area studied for the 1993 Preferred Alternative and the DEIS. However, the current project construction limits have expanded to a small degree beyond the 1993 Preferred Alternative construction limits in a few locations due to design changes.

Current project construction limits were compared against the geographic limits of the Phase I and Phase II evaluations. The previous evaluations of standing structures had included properties adjacent to, as well as properties within, the project limits. Recent design changes have resulted in minor expansions of the project limits, however the limits still remain outside, or only slightly within, the parcel boundaries of the first tier of adjacent properties. Therefore, it was determined that the area of potential effect for standing structures evaluated during the Phase I and Phase II investigations remained valid for the current design.

The archaeological area of potential effect, however, relied upon the 1993 Preferred Alternative construction limits as the bounds for investigation. Areas where the current Preferred Alternative construction limits extend beyond those of the 1993 Preferred Alternative had not been examined for archeological potential as part of the Phase I or Phase II studies. These areas were reviewed by staff archaeologists at Mn/DOT's Cultural Resources Unit as part of the FEIS studies and were found to have low potential for unknown archeological sites.

Additional assessment for archaeological potential occurred in the area east of 34th Avenue, where the horizontal and vertical alignment of a high flow storm water conveyance line is yet undetermined. Possible horizontal alignments could occur anywhere in the area outlined in Figure 6.16 as discussed in Section 6.3.4.4. The portion of the area to the south of I-494 was assessed by Mn/DOT archaeologists and determined to possess low archaeological potential due to steep slopes, wetlands, and limited flat areas at the bluff top. The portion of the area north of I-494 was previously examined for archaeological potential during the Section 106 evaluation for the Metropolitan Airports Commission Trunk Storm Sewer Project that will be constructed in spring 2001 (SHPO Number 2000-4560). This evaluation is documented in *Phase I and Phase II Cultural Resource Investigations Metropolitan Airports Commission Drainage Improvement Project in Hennepin County, Minnesota*, by Bradley E. Perkl, et. al., BRW Report No. 01-02. Two archaeological sites were identified during this evaluation (21HE-316 and 21HE-317) although only one was determined eligible for the National Register of Historic Places (21HE-316). Both sites are located at the top of a ravine, north of I-494 and west of the TH 5 crossing. Neither site would be affected by the storm sewer line which, if in proximity to these sites, would be drilled 3 to 15 meters (10 to 50 feet) below the soil surface. If any surface construction activities were to occur in proximity to either of these sites, fencing would be provided to protect the sites from construction activities.

9.5. IMPACTS ASSOCIATED WITH THE CURRENT PREFERRED ALTERNATIVE

Two National Register-eligible properties lie within the Area of Potential Effect for the current Preferred Alternative: the Anna and Joseph Lorence residence and the Elizabeth and Frederick H. Carpenter summer residence (see Figure 9.1).

9.5.1 THE ANNA AND JOSEPH LORENCE RESIDENCE

The Lorence house, 7335 Marth Road, Bloomington, was built ca. 1901 by Anna and Joseph Lorence. Joseph Lorence was a carpenter and bricklayer born in Czechoslovakia. The Chaska brick vernacular farmhouse is constructed in the “Gabled Ell” form and exhibits stylistic elements and characteristics possibly rooted in vernacular European forms familiar to its original owner. The house was the base of the Lorence’s raspberry farm operation and housed workers as well as the Lorence family.

The Lorence house was determined eligible for the National Register of Historic Places under Criterion A, representing historic agricultural trends among the settlers and immigrants of the western portion of Hennepin County from the late 1800s to the 1930s. The Lorences represent the activities of many Czech families in producing goods for the Minneapolis urban market, and their house is one of the few farmhouses from that era left standing, particularly notable due to its brick construction.

The current Preferred Alternative will not directly affect the Lorence house. However, the current Preferred Alternative shifts I-494 somewhat to the south in the vicinity of the property. The proposed roadway edge has not changed substantively from the 1993 Preferred Alternative design discussed in the *Finding of Adverse Effect: Section 106 Review of Two Properties Along I-494* prepared in April of 1994. The SHPO concurred with the “adverse effect” finding for this property presented in this report (see letter dated August 16, 1994) due to noise and visual impacts. However, the current Preferred Alternative proposes a retaining wall along the southern roadway edge in this area that results in slightly different noise modeling outcomes and reduces visibility of the roadway from the property.

Noise modeling for the 2000 Preferred Alternative indicates limited increases in noise levels would result to the property under this alternative. As summarized in Table 6.7 Noise Monitoring and Modeling Results, existing daytime L₁₀ noise levels were modeled at 67 dB in this location (Receptor 58) and would rise 1 dB under both the No-Build and 2000 Preferred Alternative. Nighttime L₁₀ noise levels exhibit a similar pattern, rising 1 db between existing (66 dB) and 2020 (67 dB) noise levels for the No-Build and current Preferred Alternative. This increase is less than the 3 dB increase required to be discernable to the human ear.

Visual impacts would also be very limited. While the roadway edge would move closer to the property under the current Preferred Alternative, the property would remain 76.25 meters (250 feet) from the roadway edge which will be depressed below a retaining wall. A substantial amount of vegetation in the form of trees and bushes is present both in the front yard of the Lorence property and in the open area between Marth Road and I-494 opposite the Marth residence. Additional landscaping is being considered for the area above the retaining wall.

9.5.2 THE ELIZABETH AND FREDERICK H. CARPENTER SUMMER RESIDENCE

The Carpenter summer residence was built in 1915 by Elizabeth D. and Frederick H. Carpenter. The Carpenter summer residence currently occupies 1.3 hectares (3.1 acres) and is located at 13405 McGinty Road East, Minnetonka, Minnesota, in the northeast quadrant of the I-494/Minnetonka Boulevard interchange. The structure is a single-story Craftsman style bungalow and is in good condition. Outbuildings on the site include a well house, garage, guest cottage and screened shelter. All of these outbuildings relate to the design of the original structure. The site also contains a stone retaining wall and stairs.

This property was determined to be eligible for the National Register of Historic Places under Criterion C for its innovative construction methods and under Criterion B for its association with the Carpenters who influenced the continued development of the City of Minneapolis.

As discussed above, the current Preferred Alternative no longer includes the full reconstruction of the interchange and acquisition of property envisioned in the 1993 Preferred Alternative discussed in the *Finding of Adverse Effect: Section 106 Review of Two Properties Along I-494* prepared in April of 1994.

Noise modeling for the current Preferred Alternative indicates limited increases in noise levels would result to the property under this alternative. As summarized in Table 6.7 Noise Monitoring and Modeling Results, existing daytime L₁₀ noise levels were modeled at 63 dB in this location (Receptor 12A) and would rise 1 dB under both the No-Build and current Preferred Alternative. Nighttime L₁₀ noise levels exhibit a similar pattern, rising 1 dB between existing (62 dB) and 2020 (63 dB) noise levels for the No-Build and current Preferred Alternative. This increase is less than the 3 dB increase required to be discernable to the human ear.

9.6 MITIGATION MEASURES

A Memorandum of Agreement regarding adverse effects to the Lorence and Carpenter properties (resulting from the 1993 Preferred Alternative) was signed in 1995. As the current Preferred Alternative results in no additional National Register-eligible properties affected by the project and lesser impacts to the identified properties, Mn/DOT and MnSHPO have agreed that this Memorandum of Agreement will be executed as agreed to in 1995. (See Appendix C for a copy of the Memorandum of Agreement).

While noise and visual impacts are less than what was anticipated in 1995, plans for the current Preferred Alternative in the vicinity of the Carpenter and Lorence properties were submitted to SHPO for review and concurrence as stipulated in the Memorandum of Agreement. Appendix C includes a letter from SHPO to Mn/DOT concurring with Mn/DOT's determination that no additional effects to historic properties are apparent in the newly added project elements, and concurring with the proposed plans for the segments of the project in the vicinity of the Carpenter House and the Lorence House.