Draft Environmental Assessment

Waterloo High School Seismic Upgrade Project

Monroe County, Illinois

Hazard Mitigation Grant Program

April 2007

U.S. Department of Homeland Security
FEMA Region V
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WATERLOO SCHOOL DISTRICT No. 5
WATERLOO, ILLINOIS

1.0 INTRODUCTION

The Waterloo Community Unit School District 5 in Waterloo, Illinois, has applied for FEMA Hazard Mitigation Grant Program (HMGP) funds to incorporate seismic building standards into the construction of the new Waterloo High School. The objective of the HMGP program is to reduce the impact of natural disasters on health and human safety and the built environment, thereby reducing costs associated with recovery from damage caused by natural disasters.

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 Code of Federal Regulations [CFR] Parts 1500 through 1508), and FEMA regulations for NEPA compliance (44 CFR Part 10), FEMA must fully understand and consider the environmental impacts of actions proposed for federal funding. The purpose of this Environmental Assessment (EA) is to document the review and analysis of any potential impacts the school construction project would have on the natural and human environment, which fulfils FEMA's responsibilities under NEPA.

2.0 PURPOSE AND NEED

The City of Waterloo, Illinois, is located in an area of the country that is prone to seismic events. The community lies within in the northern most part of the New Madrid Seismic Zone, where scientists estimate that there is at least 15% probability that an earthquake with a magnitude of 4.75 or greater will occur over the next 50 years. Consequently, there is a need to provide protection to the students of Waterloo's schools against this seismic risk.

3.0 ALTERNATIVE ANALYSIS

In the course of planning for the Waterloo High School Construction Project, the following two alternatives were considered for the proposed project: Alternative 1 - No Action and Alternative 2 - Seismic Upgrade. Other alternatives that were considered but eliminated from further consideration are also described in this section.

Due to the nature of the integration of seismic reinforcement construction measures into the overall school construction project, the analysis of environmental and historic preservation impacts associated with the No Action Alternative and the Proposed Action Alternative are virtually identical. The Waterloo High School Construction Project is a significant community improvement project which has been in the planning stages for several years. The use of FEMA HMGP funds to incorporate seismic building standards will provide a significant benefit to the community. However, the construction of the planned school is not dependent on FEMA's grant

participation. The school facility will be constructed regardless of FEMA grant funding. However, no seismic upgrades will be included in the building design without the FEMA grant.

3.1 Alternative 1 - No Action Alternative

Under the No Action alternative, the new Waterloo High School will be constructed with no seismic upgrades. The school will be constructed to standard building codes with no seismic reinforcement. The benefits of providing a safe structure for seismic disasters would not be available.

3.2 Alternative 2 - Seismic Upgrade Alternative (Proposed Action)

A newly planned Waterloo High School is being constructed in the New Madrid Fault affected area. Under the Seismic Upgrade alternative, the school district will construct the facility in accordance with FEMA seismic safety standards. This will provide life safety to the estimated 1,500-2,000 weekday occupants of the facility in the event of an earthquake.

The proposed project area is a 62-acre tract located west of Old Red Bud Road and east of South Market Street and Illinois Route 3 in Waterloo, Monroe County, Illinois (Township 2 South, Range 9 and 10 West, Section 31).

The project will consist of a 220,000-square-foot complex that will contain one building segmented into sections that can be used by both the school population and the public. It will primarily be a two-story structure, except for monumental spaces such as the gymnasium, cafeteria, etc. The facility will include all normal and special educational spaces typically found in a high school serving approximately 1,400 students. The spaces shall be arranged to facilitate occupant egress and accessibility in compliance with applicable codes. In addition to the building construction, an access road and utility connections will be installed from the school site to State Route 3. To accommodate the increased traffic associated with the school, turning lanes will be incorporated into the existing State Route 3. All activities will take place within an overall 192 acre parcel which was the subject of all preliminary environmental reconnaissance, and agency coordination and consultation.

The Seismic Upgrade Alternative will upgrade the planned Waterloo High School's structural, architectural, mechanical, electrical, fire protection, hydronic, and plumbing systems to FEMA 424 seismic standards. Specific activities included in this alternative include structural upgrades to increase steel weight, strengthening of framing connections, and implementation of seismic isolation measures. Architectural upgrades include the addition of galvanized steel support channels and hangers sized and suited for seismic requirements. The mechanical upgrades include equipment curbs with seismic isolation and hangers, and supports with vibration capacity and seismic sizing. The electrical upgrades feature the addition of inertia bases, conduit transverse bracing, conduit longitudinal bracing, and seismic fixture clips. The fire protection upgrades are the addition of spring hangers, single pipe transverse bracing, and single pipe longitudinal bracing. Hydronic system upgrades include the addition of inertia bases, spring hangers, single pipe transverse and longitudinal bracing. The plumbing system upgrades are the

addition of inertia bases, seismic snubbers, spring hangers, single pipe transverse and longitudinal bracing.

The building will sit very near the center of the site and will have lawns and future athletic fields on the north, east and south sides of the building. Overall the building measures 571 feet from its northern most point to the south side and 428 feet from the main entrance on the west to the cafeteria on the east. The building ranges in height from 17 feet at the administrative offices to 39 feet at the penthouse located on top of the classroom wings with an average height of 28 feet. A paved roadway crosses the site from west to east along the south side of the building and there are three separate parking areas located around the west and south sides of the building. Much of the architectural pre-cast concrete will have a thinset brick cast into the panels giving the appearance of a masonry building with the strength, durability and ease of construction that comes from pre-cast concrete. Landscaping will consist of both formal and informal plantings of low shrubs and selected ornamental/specimen trees located at key points on the site.

3.3 Alternatives Considered and Eliminated from Further Review

The Waterloo School District could not continue to use its existing facility because the growing population within the district has lead to overcrowding and potentially unsafe conditions for the school children. Additions to the existing facility were not practical because of limitations in the size of the current high school property and lack of adjacent available land. Adding seismic retrofits to the existing masonry structure, which was built in 1937, was also determined to be impractical. Therefore, the use of existing facilities as an alternative was eliminated from consideration.

The school district considered several other properties within its boundaries, but was limited by the constraint of having to acquire a large parcel with favorable traffic access and sufficient public utilities. The most promising alternative considered was a 49.7-acre parcel located on Illinois Route 156. However, this alternative was eliminated from consideration due to potential traffic concerns and a high-pressure gas line that traversed the property.

4.0 AFFECTED ENVIRONMENT AND IMPACTS

4.1 Geology and Soils

A *Geotechnical Due Diligence* report for the overall 192-acre site, which included the 62-acre Waterloo High School project area, was completed on March 8, 2005. An additional *Geotechnical Investigation for Waterloo High School* was performed by Hurst-Roche for the 62-acre project area on November 22, 2006. These reports are on file at the FEMA Region V Office .

The 192-acre site mainly consists of undeveloped agricultural fields. Overall, the site gradually sloped to the east and west of a ridge that ran north-south through the center of the site near the barn. There was evidence of field terracing west of Market Street. Two drainageways traversed the site on the eastern half of the property. Several standpipes were observed in the fields. The site contained several depressions, some of which were sinkholes mostly concentrated on the

eastern half of the site surrounding Old Red Bud Road. Sinkholes are typically formed when groundwater dissolves a portion of the limestone bedrock, usually where it travels along fractures in the rock. They are generally found in areas where the groundwater daylights to a nearby creek or other drainage-way. The site's geologic setting indicated it had a high risk related to sinkhole development.

The Farmland Protection Policy Act (FPPA) of 1981 requires that consideration be given to impacts involving the conversion of farmland to non-agricultural uses. An evaluation of the impacts of Federal activities to prime or unique farmlands or farmlands of unique local or state importance is required by the regulations implementing FPPA at 7 CFR Part 658. Federal agencies may use a Land Evaluation and Site Assessment (LESA) for this evaluation if the Natural Resources Conservation Service has approved one within the state or local government unit where the project will take place. Monroe County has an NRCS approved LESA since 1989 and the county is authorized to complete the FPPA NRCS Form AD 1006 to assess the impact of a Federal activity within the county to the prime or unique farmland. The county officials use the rating from the AD 1006 to limit or deny a project. Projects with a rating of 225 points or higher are denied, projects rated from 224-200 points are approved with limitations, and projects rated below 200 points are approved without limitation.

The applicant coordinated with with the Illinois Department of Agriculture (IDOA) and the National Resource Conservation Service (NRCS). In consultation with the IDOA, dated February 26, 2007 and the Monroe County zoning office, a NRCS Form AD 1006 (Appendix B) was developed and produced a rating of 177 points.

According to the Natural Resources Conservation Services Web Soil Survey for Monroe County, Illinois, soil on the subject site is composed of Menfro silt loam, Ruma silt loam, Homen silt loam, and Ruma silty clay loam.

Ruma silty clay loam, karst, 5 to 12 percent slopes, severely eroded, is located on sinkholes. The parent material consists of loess over silty pedisediment. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is very high. Shrink-swell potential is moderate. This soil is not flooded or ponded. A seasonal zone of water saturation is at 60 inches during February, March, and April. There is a potential for soil erosion during the construction phase of this project. This potential impact will be mitigated through the use of Best Management Practices during construction, including the use of silt fences and active erosion monitoring.

The subject site is located at the northern border of the New Madrid Fault seismic zone and is prone to seismic activity.

Discussion of Alternatives:
The No Action and the Seismic Upgrade Alternatives would not have impacts on local geology or soils. No soil excavated during construction will leave the project area. This is a balanced site and any material excavated will be used on site as fill.

The NRCS Form AD 1006 yielded a value of 177 points which is below the county established threshold of 200 points. Therefore, no significant impacts are expected on prime or unique farmlands in accordance with FPPA.

Risks associated with the sinkhole-prone soil in the area will be mitigated through standard construction techniques. Surface water runoff will be directed away from active sinkhole areas to assist in mitigating future subsidence. Mitigation of the risk associated with sink holes related to the construction of the school will be accomplished through appropriate structural reinforcement of any sinkholes encountered during excavation and backfill with structural fill.

4.2 Waters of the U.S. including Wetlands

The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or filled material into waters of the U.S., including wetlands, pursuant to Section 404 of the Clean Water Act. Additionally, Executive Order 11990 (Protection of the Wetlands) requires federal agencies to avoid, to the extent possible, adverse impacts of wetlands.

On February 11, 2005, a wetland delineation was conducted on the project site. No wetlands or waterbodies were observed within the site boundaries. Additionally, USGS and NWI maps were reviewed for the presence of wetlands; no wetlands were depicted on either map. The topography of the site gently sloped toward the northeast. No significant aquifers were located under the subject site. The Waterloo Water Department supplies the city with treated water purchased through American Water Co. A National Pollutant Discharge Elimination System (NPDES) permit has been obtained for this project. A Stormwater Pollution Prevention Plan (SWPPP) has been prepared for the proposed project. The SWPPP and detailed drawings of the proposed stormwater management during construction are on file at the FEMA Region 5 Office.

Discussion of Alternatives:
The No Action and the Seismic Upgrade Alternatives will not have significant impacts on water resources or water quality.

The SWPPP will contain measures to reduce soil erosion in an effort to minimize impacts to any water resources. Long term storm water management concerns following completion of the structure will be addressed through the creation of an on site retention basin. The retention basin will provide storm water storage to compensate for the loss of pervious surfaces due to the building construction. Stormwater runoff from a majority of the proposed site will be collected and routed to an onsite detention basin located behind the school along Old Redbud Road. The detention basin will release the collected storm water at a discharge rate equal to or less than the pre-development discharge rate for the 100 year rainfall event. The proposed detention basin will be "dry" such that the basin will contain surface water only during rainfall events and will empty completely following the rainfall event. The basin area is approximately 2 acres in size. The detention basin will be constructed first and will be used as a temporary sediment basin during construction of the school.

4.3 Floodplains

Executive Order 11988 (Floodplain Management) requires federal agencies to avoid, to the extent possible, actions within or affecting a floodplain, and prohibits federal agencies from funding construction in the 100-year floodplain, unless there are no practicable alternatives. The Waterloo High School Construction Project is not located within the 100-year floodplain, as indicated in the Flood Insurance Rate Map (FIRM), panel no. 170509 0125C, for Monroe County, Illinois (Figure 4).

Discussion of Alternatives:
There will be no impacts within or affecting a floodplain under the No Action Alternative or the Seismic Upgrade Alternative. The proposed project area is outside of the Special Flood Hazard Area (SFHA).

4.4 Air Quality

The Clean Air Act requires states to adopt ambient air quality standards, which have been established to protect the public from potentially harmful amounts of pollutants. The Environmental Protection Agency has established National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. There are two types of national air quality standards. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly; secondary standards set limits to protect public welfare, including protection against visibility, damage to animals, crops, vegetation and buildings. The current six criteria pollutants are Carbon Monoxide (CO), Nitrogen Dioxide (NO2), Ozone (O3), Lead (Pb), Particulate Matter with a diameter less than or equal to 10 micrometers (PM10), and Sulfur Dioxide (SO2).

The Waterloo High School Construction Project area is located in Monroe County, Illinois, which is considered to be in non-attainment of the NAAQS for ozone and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$).

Discussion of Alternatives:
Under the No Action and the Seismic Upgrade Alternatives, emissions from construction equipment and emission from a diesel fuel powered emergency generator installed at the school will result.

Emissions associated with construction activities will be short-term and temporary in nature, and mitigated by best management practices such as watering down the site.

Low levels of air pollutants including $PM_{2.5}$ and ozone-causing compounds will be emitted by the emergency generator. However, based on the small size of the generator, and the fact that it will only be operated intermittently (i.e. during an emergency), it is considered an insignificant source by the State of Illinois and will not require state or federal permits.

4.5 Threatened and Endangered Species

The site of the Waterloo High School Construction Project site is an agricultural field. The surrounding properties are also agricultural. The property is located approximately 1,000 feet south of the developed portion of the City of Waterloo. The surrounding area to the east, south, and west is primarily undeveloped with some agricultural and various commercial use. No wildlife preserves are located within three miles of the property. Because it is entirely agricultural, limited plant and wildlife habitat exists on the project site.

In accordance with Section 7 of the Endangered Species Act (ESA) of 1973, the project area was evaluated for the potential occurrences of federally listed threatened and endangered species. The ESA requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of any endangered or threatened plant or animal species or result in the destruction or adverse modification of designated critical habitats.
Coordination with the Illinois Department of Natural Resources occurred regarding the subject site. The Illinois Natural Heritage Database indicated the presence of a protected resource, the Illinois cave amphipod, within the vicinity of the project location (Appendix C). Additionally, the U.S. Fish and Wildlife Service (USFWS) was contacted regarding the proposed project and potential impacts to threatened and/or endangered species. USFWS correspondence dated March 18, 2005 (Appendix C) stated that although the Illinois cave amphipod is known to exist within two nearby cave systems, the groundwater within the project area does not drain into these two cave systems or any other recharge area known to contain populations of the amphipod. Therefore, USFWS concluded that the proposed project is not likely to adversely affect the Illinois cave amphipod. USFWS further indicated that they had no objection to the project in their March 27, 2007 correspondence (Appendix C).

Discussion of Alternatives:
The No Action Alternative and the Seismic Upgrade Alternative are not anticipated to effect threatened or endangered species.

4.6 Hazardous Materials

A *Phase One Environmental Site Assessment* and *Limited Phase Two Environmental Site Assessment* were previously conducted in February 1, 2005 and February 24, 2005 respectively for a 192-acre site which included the 62-acre Waterloo High School project area, these reports are on file at the FEMA Region 5 Office. The property is currently unimproved agricultural land. No recognized environmental conditions were associated with the project area.

Discussion of Alternatives:
There will be no impacts associated with hazardous materials under the No Action or the Seismic Upgrade Alternatives.

4.7 Zoning and Land Use

The subject site is currently zoned as agricultural, according to the City of Waterloo Zoning Map, dated June 3, 2004, and most recently revised on January 31, 2007 (Appendix D). The project site is located within Waterloo corporate limits. The zoning of the property will remain agricultural because no zoning classification for a school building exists. The school district has been granted a Special Use permit by the City of Waterloo.

Discussion of Alternatives:
There will be no negative impacts associated with zoning and land use under the No Action or the Seismic Upgrade Alternatives. Both alternatives are consistent with the City's current zoning and land use.

4.8 Noise

Noise is generally defined as undesirable sound and is federally regulated by the Noise Control Act (NCA) of 1972. Although the NCA gives the Environmental Protection Agency (EPA) the authority to prepare guidelines for acceptable ambient noise levels, it only charges those federal agencies that operate noise-producing facilities or equipment to implement noise standards. The EPA's guidelines and those of many federal agencies state that outdoor sound levels in excess of 55 decibels (dB) are "normally unacceptable" for noise-sensitive land uses such as residences, schools, and hospitals. There are no sensitive receptors within the proposed development site.

Discussion of Alternatives:
Under the No Action and the Seismic Upgrade Alternatives, construction activities will cause a temporary and short term increase in noise levels at the project site. Day to day operations of the school facility will increase noise levels in the area. However, the site is presently agricultural land, and there are no sensitive receptors near the proposed development site. Therefore, only minimal effects are anticipated under either alternative.

4.9 Public Services and Utilities

The City of Waterloo has three elementary schools and two junior high schools. The existing high school was constructed in 1938, and the proposed project is intended to replace this out-dated facility. There are no hospitals within Monroe County. The Waterloo City Fire Department provides fire protection within the city. The Waterloo Police Department employs full-time officers and maintains a fleet of squad cars. The Waterloo city coordinator organizes the Emergency Services and Disaster Agency.

The Waterloo Water Department supplies the city with treated water purchased through American Water Co., and the sewer treatment plant is also operated by the City. Waterloo owns a power plant on the west side of town and provides electric service within city limits. Harrisonville Telephone Company provides basic residential and commercial service, as well as custom features such as internet access.

Because the project site is presently used for agriculture, no utilities currently exist on the site. However, utilities available at the school site will include city water, telephone, natural gas (city-owned), sanitary sewer (city-owned), electric service (city-owned), and buried CATV cable (Charter Communications). All utilities being constructed as part of this project will connect with city utilities that will be located within established city utility easements at the property boundary.

Discussion of Alternatives:
Sufficient capacity exists within the City's public services and utilities to accommodate the construction and operation of the new Waterloo High School.

4.10 Traffic and Circulation

The 62-acre project site and surrounding properties are predominantly agricultural. The new development will be located approximately 1,200 feet east of Old Route 3 (South Market Street). Old Red Bud Road will border the proposed development to the east, beyond which is additional agricultural land.

Roadways within the project area are Old Red Bud Road, Illinois Route 3, and Illinois Route 156. The site will have access to State Route 3 via a new entrance road constructed on an easement through the adjacent property; the proposed footprint of the access road lies within the overall 192 acre parcel which was the subject of preliminary environmental reconnaissance, and agency coordination and consultation. Old Red Bud Road is classified as a local road consisting of two lanes. Illinois Route 3 is a state-maintained principal arterial, which consists of four through-lanes and a bi-directional lane. Illinois Route 156 is a minor arterial consisting of two lanes. Traffic counts in 2004 for Old Red Bud Road near the location of the proposed school indicate an average daily traffic (ADT) of 200. The 2004 ADT for Old Red Bud Road south of the location of the proposed school is approximately 75. If the proposed high school is not constructed, ADT would be expected to remain relatively unchanged. A Traffic Study was completed to address the effects of traffic generated by the proposed high school, the study is on file at the FEMA Region 5 Office.

As determined in the Traffic Study, the intersection of Illinois Route 3 and South Market Street is expected to operate a the same level of service (LOS) for the morning and afternoon peak hours with the addition of the traffic generated by the proposed high school. The evaluation of this intersection illustrated that it shall be able to absorb the additional traffic and is projected to operate below capacity (LOS A for morning peak, and LOS B for evening peak).

Discussion of Alternatives:
Under the No Action and the Seismic Upgrade Alternatives, implementation of traffic control measures will mitigate any potential traffic impacts generated by this project. Based on the projected traffic volumes, the Traffic Study recommended several traffic control measures to improve the existing intersection of Illinois Route 3 and South Market Street: addition of a south-bound left turn lane, north-bound right turn land, and multi-way stop sign and pavement

markings on South Market Street; and construction of an access road consisting of three 12-foot lanes with proper storage length.

4.11 Environmental Justice

Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) mandates that federal agencies identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. The executive order requires the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic group should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

Socioeconomic and demographic data for the project area were analyzed to determine if a disproportionate number of minority or low-income persons have the potential to be adversely affected by the proposed project.

Discussion of Alternatives:
Neither the No Action nor the Seismic Upgrade Alternative will have a disproportionately high or adverse impact on any minority or low-income populations in the community. Implementation of either alternative would benefit all populations within the school attendance area by providing an adequate public education facility for high school students.

4.12 Safety and Security

In the planning process for the development of a new high school, it became apparent that the City of Waterloo did not have buildings sufficient to shelter a significant number of its citizens in the aftermath of a disaster. For many rural towns, the schools are the heart of the community. In working with the local Emergency Management Agency, a proactive pre-disaster mitigation plan was approved which identified community safe areas as a way to mitigate against future disasters. Traditionally, schools are often used as shelters after disasters. Community safe areas ensure citizens have a centrally-located shelter where they can go in the case of an emergency. The school could be used during power outages to give persons a place to go for heat and other needs, or as a triage location for medical personnel. The community lies within in the northern most part of the New Madrid Seismic Zone, where scientists estimate that there is at least 15% probability that an earthquake with a magnitude of 4.75 or greater will occur over the next 50 years. Therefore, the school district is also designing the new high school with seismic resistance.

Executive Order 13045 (Protection of Children) requires federal agencies to identify and assess environmental health and safety risks that may disproportionately affect children. Executive

Order 12699 (Seismic Safety of Federal or Federally Assisted or Regulated New Building Construction) requires that federal preparedness and mitigation activities are to include the development and promulgation of specifications, building standards, design criteria, and construction practices to achieve appropriate earthquake resistance for new structures, and an examination of alternative provisions and requirements for reducing earthquake hazards through federal and federally-financed construction, loans, loan guarantees, or licenses.

Discussion of Alternatives:
The new Waterloo High School will be located in the New Madrid fault zone. Under, the No Action alternative, no seismic fitting would be provided to the school buildings. Consequently, , an earthquake during the school's operating hours would pose a potential safety risk to students and staff during the event.

The Seismic Upgrade alternative would provide a safer structure benefiting the school children and the Waterloo population in general by reducing life safety risks during a seismic event.

4.13 Cultural Resources

Section 106 of the National Historic Preservation Act (NHPA), as amended, and implemented by 36 CFR Part 800, requires federal agencies to consider the effects of their actions on historic properties. Historic properties are defined as archaeological sites, standing structures, or other historic resources listed in or eligible for listing in the National Register of Historic Places (NRHP).

Federal agencies must make a determination, in consultation with the appropriate State Historic Preservation Officer (SHPO) and the Tribal Historic Preservation Officer (THPO), as to what effect, if any, their actions will have on historic properties and determine if the project will have an adverse effect on these properties. They must consult with the appropriate resource agencies on ways to avoid, minimize, or mitigate the adverse effect.

4.13.1 Historic Architecture

The Waterloo High School Construction Project has been reviewed by a FEMA historic preservation specialist. The National Park Service's NRHP database and the Illinois Historic Architecture/Archaeological Resources GIS (HAARGIS) database were also consulted, and no historic buildings or structures were located or identified within the area of potential effect (APE) or immediate adjacent areas. In addition, a 2005 Phase One Cultural Resource Survey conducted by SCI Engineering, Inc. identified no historic structures within the project area. In a clearance letter dated March 6, 2007 (Appendix E), the Illinois Historic Preservation Agency (IHPA) indicated a finding of "No Historic Properties Affected."

4.13.2 Archaeological Resources

SCI Engineering, Inc. of St. Charles, Missouri, conducted a Phase One Cultural Resource Survey of the project area in 2005. Prior to that field work, a review of the archaeological site files at

the Illinois State Museum indicated that five prehistoric sites located or partially located within the project had been previously identified. The sites are 11MO683, 11MO716, 11MO717, 11MO836, and 11MO947. None of these sites were determined eligible for listing in the NRHP. The Phase One survey identified six additional prehistoric sites: 11MO1044, 11MO1045, 11MO1046, 11M1047, 11M1048, and 11MO49.

A review by the IHPA determined that Site 11MO1045, a prehistoric field camp, has the potential to be eligible for the NRHP, and a Phase II survey was requested. SCI Engineering, Inc. completed the survey. After consultation with IHPA, it was determined that the site did not possess those qualities necessary for inclusion in the NRHP.

Discussion of Alternatives:
Under the No Action and Seismic Upgrade Alternatives, no impacts to cultural resources are anticipated. If human skeletal remains, or historic or archaeological materials are discovered during construction, all ground-disturbing activities on the project site shall cease and the applicant shall notify the coroner's office (in the case of human remains), FEMA and the IHPA immediately.

5.0 CUMULATIVE IMPACTS

Cumulative impacts are those effects on the environment that result from the incremental effect of an action when added to past, present, and reasonable foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

No cumulative impacts are expected to result from implementation of the Seismic Upgrade alternative. No on-going or planned projects are known to exist in the vicinity of this proposed project.

6.0 PUBLIC PARTICIPATION

Public participation has been an important part of the Waterloo High School Construction Project. Public participation for this project began in January 2005 when the Waterloo School District conducted a community survey to gauge the outlook of the community relative to the District's performance and overcrowding in the schools. A report summarizing this survey is on file at the FEMA Region 5 Office. Based on the results of this survey, the Vision of Interested Citizens for Educational Success (VOICES) Committee was formed. Notes from the meetings and information distributed by the VOICES Committee are also on file at the FEMA Regional Office.

The public participation in this project culminated in the successful March 21, 2006 referendum to approve funding to build the new high school. Throughout the entire process, the community

was kept informed through the local press and other publications. Extensive articles and commentary both for and against the referendum were published. A public notice will be published to specifically notify the community of the proposed FEMA participation and the availability of the draft EA document.

7.0 AGENCY COORDINATION AND PERMITS

As part of the development of this EA, the following state and federal resource agencies were contacted and asked to comment on the proposed project:

- Illinois Department of Agriculture, Bureau of Land and Water Resources
- Illinois Historic Preservation Agency
- United States Department of the Interior, Fish and Wildlife Service

Construction activities will require a NPDES permit and a SWPPP, which have been issued and prepared.

8.0 LIST OF PREPARERS

The following individuals prepared this EA.
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