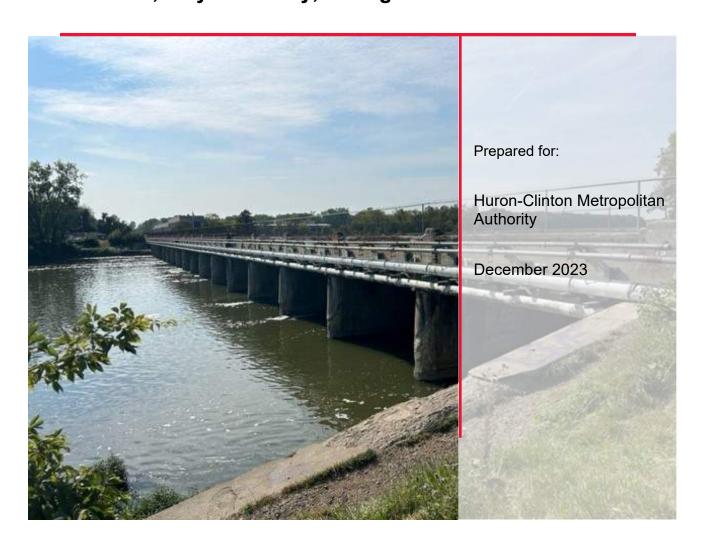
DRAFT Flat Rock-Huroc Dam Removal Feasibility Study Cultural Resources Phase I Records Review Report Flat Rock, Wayne County, Michigan



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Abbreviations and Acronyms

AD Anno Domini

APE Area of Potenital Effects

BP Before Present F Fahrenheit

FCR Fire-Cracked Rock
GEI GEI Consultants, Inc.

GIS Geographic Information Systems
GLRI Great Lakes Restoration Initiative

HCMA Huron-Clinton Metropolitan Authority
NETR Nationwide Environmental Title Research

NHL National Historic Landmarks

NHPA National Historic Preservation Act

NOAA National Oceanic and Atmospheric Administration

NPS National Parks Service

NRCS Natural Resources Conservation Service
NRHP National Register of Historic Places
Project Flat Rock-Huroc Dam Removal Project
RPA Registered Professional Archaeologist

Section 106 Section 106 of the National Historic Preservation Act

SHPO State Historic Preservation Office

STP Shovel Test Pit

USGS U.S. Geological Survey

Executive Summary

The Huron-Clinton Metropolitan Authority (HCMA) has contracted GEI Consultants, Inc. (GEI) to complete a Phase I preliminary cultural resources records review and initial site visit for the HCMA Flat Rock-Huroc Dam Removal Feasibility Study. The project is located along the Huron River in southern Wayne County, Michigan, near the City of Flat Rock. At this time, the exact impacts of the project are not known as there are several restoration alternatives under consideration. The best alternative will allow for the passage of native fish species and the reconnection of important tributary habitat of Great Lakes species while also minimizing the risk of sea lamprey infestation and reducing future risk of dam failures.

To assist the project team in choosing the best alternative for the project, GEI has completed this study to determine where the project may affect known cultural resources. Furthermore, and in consideration of the preliminary findings of this study, GEI has provided information about the next steps for future cultural resource compliance efforts based on applicable laws and regulations. The project will include funding originating from a National Oceanic and Atmospheric Administration (NOAA) Fisheries Regional Partnership Grant via the Great Lakes Restoration Initiative (GLRI). The use of federal funds will necessitate National Historic Preservation Act (NHPA) Section 106 (Section 106) compliance review in the future and this Phase I report is intended to assist the project team in outlining the next steps for the compliance process relative to Section 106.

Background research for this study focused on documenting known and previously recorded archaeological and architectural resources within the feasibility study area and a one-mile radius. GEI also completed a site visit of the study area to identify historic-era (i.e., more than 45 years old) architectural resources and to assess existing conditions to determine which portions of the study area would require archaeological survey, as well as recommended survey methods.

According to the background research, seven previously recorded archaeological sites are found within the feasibility study area. Including these resources, a total of 45 known archaeological sites are located within the one-mile research radius. In addition, three historic-era architectural resources have been identified within or in close vicinity to the study area, which include the Flat Rock Dam, Huroc Dam, and the Ford Motor Company Head and Tail Light Assembly Plant.

Based on the results of the cultural resources records review, preliminary site visit, and per relevant federal regulations (Section 106), GEI recommends that a Section 106 application be submitted to the Michigan State Historic Preservation Office (SHPO). This application will include an assessment of cultural resources that may be affected by the project and will likely require the completion of the technical studies listed below. Additional details on these recommendations can be found in Chapter 7.

- A Phase I archaeological survey;
- A submerged resources assessment; and
- An Architectural Resources Inventory and Evaluation Report.

Chapter 1. Introduction

GEI conducted a cultural resources records review as part of the Flat Rock-Huroc Dam Removal Feasibility Study Project located near the City of Flat Rock in Wayne County, Michigan. The study area for the project considers the maximum extent of the project and all of its alternatives, as well as the proposed staging areas, and it measures approximately 338.6-acres. It is within and along the Lower Huron River Watershed in Sections 25, 26, 35, and 36 of Township 4 South, Range 9 East and Section 31 of Township 4 South, Range 10 East as shown on the U.S. Geological Survey (USGS) *Flat Rock, MI* 7.5-minute topographic quadrangle map. The study area is shown in detail in Attachment A: Project Maps, Figure 1. Project Area Map – Topographic Base and Figure 2. Feasibility Study Area Map – Aerial Base.

At this time, the exact impacts of the project are not known as several alternatives are under consideration. The best alternative will allow for the passage of native fish species and the reconnection of important tributary habitat of Great Lakes species while also minimizing the risk of sea lamprey infestation and reducing future risk of dam failures. Several goals of the project are known. These include:

- Minimize the risk of sea lamprey- a parasitic invasive fish species- infestation to the extent possible and necessary.
- Allow for the passage and travel of native species such as lake sturgeon (*Acipenser fulvescens*), walleye (*Sander vitreus*), and white bass (*Morone chrysops*).
- Improve and connect natural habitats along the Huron River.
- Reduce future risk of dam failures and possible downstream damage that could occur in the event of a failure.

GEI conducted background research between June and September of 2023. This research focused on the feasibility study area and a one-mile buffer and was completed to determine the presence or absence of archaeological and historic-era structures and sites in the study area, including previously recorded archaeological resources, burial sites, and historic-era architectural resources (buildings and structures). In addition, GEI gathered information on previous cultural resource investigations in and near the study area. SHPO staff completed the records search, and the results were compiled by GEI archaeologist Taryn J. Nance (T. Nance), M.A., RPA. GEI architectural historian, Lena Philliber (L. Philliber) conducted and compiled archival research relating to architectural resources.

A site visit to assess the current conditions of the study area was conducted on September 21, 2023, by T. Nance who, along with L. Philliber, prepared this report. GEI Geographic Information Systems (GIS) specialist, Erin White, created the report graphics using field information compiled by T. Nance. GEI archaeologist Jennifer M. Sanka, M.A., RPA and GEI senior architectural historian Madeline Bowen, M.A. provided senior review.

Chapter 2. Methodology

2.1 Background Research

2.1.1 Cultural Resources Records Review

The purpose of the records review was to determine the presence or absence of previously recorded cultural resources in and near the feasibility study area, including archaeological sites and historic-era architectural resources. To identify these documented resources, GEI reviewed information available from various resources and databases. This review was completed for the feasibility study area and all lands within a one-mile radius. It included a review of the following:

- National Historic Landmarks (NHL) List (NPS 2023a);
- National Register of Historic Places (NRHP) Spatial Data (GIS) Public Database maintained by the National Parks Service (NPS) (NPS 2023b);
- Michigan SHPO Archaeological Site Files (SHPO 2023a); and
- Michigan SHPO Files for Architectural Resources (SHPO 2023b).

2.1.2 Additional Research

GEI completed additional research to document the soils in the study area, as well as past and present land use. This research consisted of an examination of historic and topographic maps, aerial photographs, and soils data available from the following resources:

- Nationwide Environmental Title Research, LLC (NETR) Historic Aerials Viewer (NETR 2023);
 and
- Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2023).

2.2 Site Visit

GEI completed a site visit of the feasibility study area to identify historic-era architectural resources within and in close proximity to the study area, as well as to determine the level of archaeological investigation possible for the area. The Michigan Above-Ground Survey Manual (SHPO 2018) informed the methods for the site visit. As part of the site visit, GEI cultural staff documented the architectural resources through photography and written notes. In addition, GEI assessed the existing conditions in the study area to determine whether any portions might require intensive pedestrian survey for archaeological resources in the future and recommended survey methods. Such recommendations have been provided based on the presence or absence of standing water or wetlands, vegetation coverage, and general surface visibility and feasibility for surface inspection, subsurface examination via shovel test pits, and/or other methods. Michigan SHPO requires subsurface testing in areas with less than 25% surface visibility (SHPO 2023c).

Chapter 3. Environmental Context

The project area is located near the City of Flat Rock in Wayne County, which is in the southeastern portion of the Lower Peninsula of Michigan. The study area is located within and along the Lower Huron River Watershed. The ecoregion of the study area is described as the Maumee Lake Plain subregion of the Huron/Erie Lake Plains. The Huron/Erie Lake Plains ecoregion is characterized by relict sand dunes, beach ridges, and low-end moraines. The Maumee Lake Plain contains clayey lake deposits, poorly drained fertile soils, and water-worked glacial till. The topography of the region is characterized by a flat lacustrine sand and clay plain that was formed by the water levels of the Pleistocene Lake Maumee about 14,000 years ago (EPA 2023).

The primary vegetation community of the study area is the Mesic Southern Forest dominated by an overstory species of Beech (Fagus grandifolia) and Sugar Maple (Acer saccharum) found in loamy soils on flat to rolling topography (MSU 2023b). The understory here is dominated by Sugar Maple, Beech, American elm (Ulmus americana), and ironwood (Ostrya virginiana) saplings. Other common understory species include pawpaw (Asimina triloba), musclewood (Carpinus caroliniana), flowering dogwood (Cornus florida), prickly gooseberry (Ribes cynosbati), red elderberry (Sambucus racemose), Virginia creeper (Parthenocissus quinquefolia), green briar (Smilax spp.), and poison ivy (Toxicodendron radicans). Pre-settlement vegetation in the feasibility study area has also been classified as a beech-sugar maple forest (Comer et. al. 1995).

Wayne County is characterized by a climate that is one of the warmest in the Lower Peninsula of Michigan, with little lake effect snow. The average annual snowfall in Detroit is 33 inches, while the typical annual rainfall is 31 inches. The mean air temperatures range between July highs of 82 degrees Fahrenheit (F) and February lows of 18 degrees F (World Climate 2023).

Chapter 4. Cultural Context

This chapter includes a brief cultural context for the southeastern portion of Michigan's Lower Peninsula and the project area in particular. It provides a cultural background to contextualize the resources identified in the feasibility study area and vicinity.

4.1 Precontact Period

The earliest evidence of human presence in the Great Lakes regions dates back 10,000 to 12,000 years, shortly following the retreat of the Laurentide ice sheet (MDOT 2022). The archaeological evidence of the earliest inhabitants (e.g., at the Belson Clovis Site in St. Joseph County; Talbot et al. 2021) suggests they lived in small, mobile groups and hunted local megafauna, including mastodon (Sherburne 2021; Talbot et al. 2021). Evidence of semi-permanent settlement began to appear around 7,000 years ago. Copper mining in the Great Lakes regions also begins to emerge around this time. Michigan copper artifacts have been identified at archaeological sites as far south as the Gulf of Mexico (Michigan Legislature nd).

Larger-scale settlements appeared in the Middle Woodland period (approximately 2,200 to 1,500 years ago). Primarily settling along waterways, the semi-agricultural society emerged in Michigan roughly 2,000 years ago (Rosentreter 2013). Around the same time, a massive trading network developed that stretched across what is now the central U.S., distributing trade goods widely across the continent.

North of the study area, a series of five Late Woodland period (approximately 1,500 to 1,000 years ago) burial mounds and earthworks, known as the Springwell Mound Group, have been described just north of the confluence of the Detroit and Rouge Rivers (Halsey 1999; Killion et al. 2019). Only one of the reported mounds, known today as the Fort Wayne Mound, has survived into the twenty-first century. Though mound-building was a common feature of the Middle Woodland period, non-mound burial sites and cemeteries were more common in the region during Late Woodland times (Killion et al. 2019). A well-documented example of non-mound burial sites from this period can be found on the south shore of the Detroit River in Windsor, Ontario (Dewar et al 2010).

4.2 Contact Period

As was well-known to the indigenous habitants, the Flat Rock/Detroit region also proved attractive to Europeans because of its proximity to various waterways and bodies (e.g., the Detroit and Huron Rivers and the Great Lakes), fertile soil, a diverse ecosystem that supported several different species of furbearing animals, such as beavers, abundant lumber, and precious natural resources, like copper, that could be mined and made into tools and jewelry (Michigan Legislature nd; Teasdale 2012).

The first contact between Indigenous peoples and Europeans in the region occurred in the early seventeenth century, when French explorer Samuel de Champlain dispatched Etienne Brule and an agent

named Grenoble to search for a "northwest passage" to Asia from Quebec (Michigan Legislature nd). The goal of such a passage was to establish a short, readily controlled route for economic trade. De Champlain himself may have never visited Michigan, though his efforts opened the area up to French incursion, first by explorers looking to trap fur and acquire highly valuable copper, then by missionaries looking to convert Indigenous inhabitants (MSU 2023a). During the waning years of the seventeenth century and the beginning of the eighteenth century, French interests in Michigan and what is now Detroit, were being guarded against the British, who were also interested in becoming more established there. In 1701, Antoine de la Mothe Cadillac, a commandant in the French military, established Fort Pontchartrain. This quickly became a major regional trading post and settlement attractor (Michigan Legislature nd).

By the mid-1700s, Europeans were entering the region with enough frequency that the French began expanding economic and settlement efforts, focusing on fur trading and farming development along the Detroit River. French families began establishing "ribbon farms" around Fort Pontchartrain (Michigan Legislature nd). However, this overt French settlement agitated the British, which led to periodic, open conflict. Though no major battles of the so-called French and Indian War occurred in Michigan, the ultimate victory by the British in that war over the French in Quebec in 1759 resulted in full British control of the Detroit region by 1760 (Michigan Legislature nd).

4.3 Historic Setting

As late as the mid-nineteenth century, the Wyandot Tribe was present in the Flat Rock region. Initially relegated to the Huron River Reservation located roughly within one-mile of the study area, in 1842, federal officials relocated the Tribe to Kansas (Winifred May Oestrike Hamilton Collection nd). The community of Flat Rock was established around 1821 under the name Vreelandt, after settlers who initially moved into the area. By 1838, Vreelandt became known as Smooth Rock, due to the smooth rock found at the bottom of the Huron River. During this period, logging and milling largely sustained the community (Flat Rock 2023). The early twentieth century ushered in a period of rapid growth for the area as the nation enjoyed a strong post-World War I economy. In 1923, Smooth Rock incorporated and became officially known as Flat Rock (Huron Valley Sentinel 1938).

It was during this time that entrepreneur Henry Ford, owner of the Ford Motor Company, implemented his plan of small-town revitalization by constructing manufacturing plants throughout the region that provided hundreds of jobs for the local communities. In 1920, Ford chose Flat Rock as the site for one of his plants and purchased the existing dam and mill to generate power for his operation (Winifred May Oestrike Hamilton Collection nd). Three years later, Ford secured the firm of Stone and Webster to construct the associated factory which he designated as an automobile lamp production facility for Ford Motor cars. To generate more power for his operation, Ford rebuilt and enlarged the existing Flat Rock Dam (The Monroe Evening News 2007). In addition, Ford constructed a nearby filter plant to provide clean water for the lamp factory and the town of Flat Rock (Huron Valley Sentinel 1938; Winifred May Oestrike Hamilton Collection nd).

The Ford Motor Company Head and Tail Light Assembly Plant created employment for the local population and soon became the main economic driving force for the community and the surrounding area. Between the 1930s and 1940s, the Ford Motor Company expanded the Flat Rock plant. To support

the war effort during World War II, the factory converted its operations into a military vehicle and Jeep production facility (Second Front 2007). The operation continued to manufacture headlights and tail lights until it closed in 1950. Currently, Flat Rock Metal Inc. occupies the facility and has operated on site as a metal processing company for the last 40 years (Second Front 2007).

Prior to the 1920s, an earlier dam existed at the current Flat Rock Dam site, but in 1923, Ford rebuilt the dam to its present form. A road crossing and tracks for the local railroad were constructed and run adjacent to the dam structure; trains and automobiles still traverse the bridge today. Historically, the Flat Rock Dam served as a power generator and it also withheld water for the nearby filter plant, however the dam is no longer used to generate power for the factory. The Huroc Dam is situated south of Flat Rock Dam and was constructed circa 1950 (Winifred May Oestrike Hamilton Collection nd).

Chapter 5. Background Research Results

GEI completed background research for the project area and a one-mile buffer, and this work commenced in June 2023. The results of the background research are presented below.

5.1 Cultural Resources Records Review

Records reviewed indicated that seven previously recorded archaeological sites are found within the feasibility study area. A review of architectural resources records revealed information on the Ford Motor Company Head and Tail Light Assembly Plant which is partially located within the study area. In addition, coordination with SHPO staff during the completion of the records review indicated that the study area is highly archaeologically sensitive. It is for this reason that SHPO Senior Archaeologist, Sarah Surface-Evens, requested that both an archaeological assessment of the terrestrial portion and a separate submerged resources assessment of the study area be submitted to SHPO (Surface-Evans 2023).

5.1.1 National Historic Landmarks (NHL) List

Sixteen (16) NHLs are located in Wayne County, Michigan; however, none of these landmarks are in the feasibility study area or within the one-mile search radius (NPS 2023a).

5.1.2 National Register of Historic Places (NRHP)

No NRHP-listed properties are located in the feasibility study area or within the one-mile research radius (NPS 2023b).

5.1.3 Archaeological Site Files

GEI requested a review of the Michigan SHPO files for archaeological resources on June 1, 2023, and the records search results were received on June 7, 2023 (SHPO 2023a).

The results indicated that numerous studies have been completed in the research radius of the feasibility study area. Of these studies, four address portions of the feasibility study area (Krakker 1974, ER-1254, ER-5864, and ER-6392). A portion of Oakwoods Metropolitan Park that is located in the feasibility study area (i.e., the staging area near the parking lot) was subject to a large Phase I survey where surface collections were made of 37 sites (Krakker 1974; survey not given an ER number by SHPO). Most of the collected artifact assemblages date to the late Woodland time period, with some nineteenth century and Early Archaic sites. Sites 20WN18, 20WN21, 20WN36, 20WN37, 20WN38, 20WN39, 20WN40, 20WN134, 20WN183, and 20WN184 were recorded as a result of this effort (see Table 1 below for site details).

In addition to this survey, it appears that a Phase I survey for the North Huron Valley Rouge Valley Interceptor Project (ER-1254) traverses the southern portion of the study area on Huroc Park Island. No

sites relevant to this survey are found in the study area. In addition, cultural surveys ER-5864 and ER-6392 also cover lands within the feasibility study area or the one-mile search radius.

The records search results further revealed that seven archaeological sites are located within the feasibility study area (20WN39, 20WN155, 20WN184, 20WN657, 20WN687, 20WN688, and 20WN852). These resources include four historic sites (including a large Wyandot reservation), two precontact sites, and one multicomponent site, none of which have been evaluated for inclusion on the NRHP. More detail on these sites can be found in Table 1 below.

Including these seven resources, a total of 45 sites are known within the one-mile search radius. The previously recorded sites primarily consist of precontact artifact scatters and reports of nineteenth century dwellings; however, known sites also include the locations of a grist mill (20WN658), a sawmill (20WN654), a Native American cemetery (20WN674), and the twentieth century Cadillac Hotel (20WN91). There is also a rumored "burial ground" on Huroc Park island, but this site has not been given a Smithsonian trinomial number. All 45 previously recorded archaeological sites are summarized below in Table 1.

Table 1: Identification of Archaeological Resources (One-Mile Buffer)

Site Number (20-)	Site Type and Details	NRHP Eligibility	Located in the Study Area?
WN18	Multicomponent: This site consists of a surface scatter of artifacts that appear to range in age from Late Archaic Native American to the nineteenth century.	More Information Needed/Unevaluated	No
WN21	Precontact: An Archaic/Late Woodland Period site that has been excavated. Stratified cultural deposits where preserved pits and informal outdoor hearths were recognized. Artifacts uncovered include flaked stone, ceramics, fire-cracked rock (FCR), groundstone, and faunal remains. No formal tools were found, but the pottery exhibited a wide range of decoration, including cordmaking, incising, cord-wrapped stick impressions, dentate, punctate, and castellated rims.	More Information Needed/Unevaluated	No
WN36	Precontact: Native American lithic scatter.	More Information Needed/Unevaluated	No
WN37	Precontact: Native American lithic scatter.	More Information Needed/Unevaluated	No
WN38	Multicomponent: The site consists of a precontact Native American artifact scatter and a twentieth century house.	More Information Needed/Unevaluated	No
WN39	Precontact: The site file indicates that this Woodland Period site of undetermined function has been vandalized.	More Information Needed/Unevaluated	Yes. Located along the border of the Huron River and the northern portion of the study area.
WN40	Multicomponent: The site consists of a precontact lithic scatter and a twentieth century house.	More Information Needed/Unevaluated	No
WN48	Precontact: This site consists of a surface scatter of Native American artifacts that may date to the Archaic or Woodland Periods.	More Information Needed/Unevaluated	No
WN62	Precontact: This is an artifact scatter attributed to the Woodland and Archaic periods.	More Information Needed/Unevaluated	No
WN64	Precontact: Native American lithic scatter.	More Information Needed/Unevaluated	No

WN65	Precontact: Native American lithic scatter.	More Information Needed/Unevaluated	No
WN66	Multicomponent: This site consists of a surface scatter of artifacts that date to the Late Archaic, Late Woodland (Younge Tradition), and historic time periods.	More Information Needed/Unevaluated	No
WN67	Multicomponent: This site consists of a surface scatter of artifacts that are both historic and precontact Native American.	More Information Needed/Unevaluated	No
WN91	Historic: This site consists of a surface scatter of artifacts that was associated with the twentieth century Cadillac Hotel. The site file lists the resource as being destroyed.	More Information Needed/Unevaluated	No
WN134	Multicomponent: Artifact scatter ranging from the Archaic Period through the nineteenth century.	More Information Needed/Unevaluated	No
WN155	Historic: This site was the Wyandot Reservation from 1818-1842 according to historical references (Hinsdale 1931; Royce 1899). A large site mapped in portions of Sections 23, 25, and 26, though exact location is not known.	More Information Needed/Unevaluated	Yes. A portion of the northern part of the study area along the Huron River is mapped in the reservation.
WN183	Precontact: Late Woodland Period (post-AD 1000) Native American surface scatter.	More Information Needed/Unevaluated	No
WN184	Multicomponent: The site consists of a Woodland Period Native American lithic scatter and a nineteenth-/twentieth century house.	More Information Needed/Unevaluated	Yes. Located partially within the northern portion of the feasibility study area, near staging area
WN248	Precontact: Native American lithic scatter.	More Information Needed/Unevaluated	No
WN367	Precontact: Scatter of Native American artifacts likely dating to the Late Woodland Period.	More Information Needed/Unevaluated	No
WN397	Historic: This is an abandoned family cemetery that dates to post-1841.	More Information Needed/Unevaluated	No
WN462	Multicomponent: The site consists of a Native American component of an undetermined function and the remains of a nineteenth century barn. The site file states that the resource is disturbed and that all collections associated with it are lost.	More Information Needed/Unevaluated	No
WN473	Precontact: The site consists of a Woodland Period Native American lithic scatter.	More Information Needed/Unevaluated	No
WN474	Precontact: Native American lithic scatter.	More Information Needed/Unevaluated	No
WN476	Precontact: The site consists of a Woodland Period Native American lithic scatter.	More Information Needed/Unevaluated	No
WN506	Historic: This is an historical reference to a nineteenth century brick kiln.	More Information Needed/Unevaluated	No
WN655	Historic: This is an historical reference to a nineteenth century dwelling.	More Information Needed/Unevaluated	No
WN656	Historic: This is an historical reference to a nineteenth century dwelling.	More Information Needed/Unevaluated	No
WN657	Historic: This is an historical reference to a nineteenth century dwelling.	More Information Needed/Unevaluated	Yes. Located along the border of the southern portion of the study area across the River from Huroc Park.

WN658	Historic: This is an historical reference to a nineteenth century (pre-1852) grist mill.	More Information Needed/Unevaluated	No
WN659	Historic: This is an historical reference to a nineteenth century (pre-1852) sawmill.	More Information Needed/Unevaluated	No
WN660	Historic: This is an historical reference to a nineteenth century dwelling.	More Information Needed/Unevaluated	No
WN661	Historic: This is an historical reference to a nineteenth century dwelling.	More Information Needed/Unevaluated	No
WN686	Historic: Nineteenth century dwelling (Hitchcock's House) found on a historic map.	More Information Needed/Unevaluated	No
WN687	Historic: Nineteenth century dwelling (John Short's House) found on a historic map.	More Information Needed/Unevaluated	Yes. Located along the border of the Huron River and the northern portion of the study area along, West Huron River Drive.
WN688	Historic: Nineteenth century dwelling found on a historic map.	More Information Needed/Unevaluated	Yes. Located in the northern portion of the study area.
WN689	Historic: Nineteenth century dwelling found on a historic map.	More Information Needed/Unevaluated	No
WN690	Historic: Nineteenth century dwelling found on a historic map.	More Information Needed/Unevaluated	No
WN691	Historic: Nineteenth century dwelling (Burgess House) found on a historic map.	More Information Needed/Unevaluated	No
WN802	Historic: This is an historical reference to a nineteenth century cemetery on Church Street.	More Information Needed/Unevaluated	No
WN852	Precontact: This site consists of a lithic scatter that possibly dates to the Paleoindian Period along with ceramics attributed to the Wayne Tradition of the Late Woodland.	More Information Needed/Unevaluated	Yes. Located on the mainland across from Huroc Park in the southern portion of the study area, along Arsenal Road.
WN1122	Precontact: This is an isolated find of a single piece of flake shatter.	Not Eligible	No
WN1157	Precontact: Native American site of an undetermined function.	More Information Needed/Unevaluated	No
MR588	Precontact: This site consists of a scatter of Native American artifacts.	More Information Needed/Unevaluated	No
MR674	Precontact: Native American cemetery on James Kerr's property which has yielded human bones and unidentified artifacts.	More Information Needed/Unevaluated	No

5.1.4 Architectural Resource Files

GEI requested a review of the Michigan SHPO files for architectural resources on June 1, 2023, and the results were received on June 7, 2023 (SHPO 2023b).

The results indicated that there are two previously reported historic-era architectural resources located in the study area and there are two additional resources located within the one-mile research radius. The identified architectural resources located within the study area are associated with Henry Ford and the Ford Motor Company: Flat Rock Dam and the Ford Motor Company Head and Tail Light Assembly Plant. Records indicate the Flat Rock Dam was constructed to provide hydroelectric power to the adjacent manufacturing facility and at one time supported the City of Flat Rock water reservoir (see detailed discussion below). Neither property has been evaluated for NRHP eligibility. Two additional historic-era architectural resources, the First Congregational Church of Flat Rock and the Cornelius G. Munger General Store, are located within the one-mile search radius.

A summary of the four architectural resources that have been recorded within one-mile of the study area is found below in Table 2.

Approximate Distance from Study NRHP Eligibility Property Name/Address Feature Type Area Flat Rock Bridge-Dam Structure over Railroad More information Huron River Located within the study area bridge/Dam needed/Unevaluated (SHPO Site ID P61807) Ford Motor Company Head and Tail Light Manufacturing More information Assembly Plant Partially located within the study area needed/Unevaluated Factory (SHPO Site ID P49344) First Congregational Church of Flat Rock Church Not Eligible 0.16-mile Cornelius G. Munger General Store Commercial More information 0.80-mile needed/Unevaluated (SHPO Site ID P242) Building

Table 2: Identification of Architectural Resources (One-Mile Buffer)

5.2 Additional Research Results

A records review of historical documentation was also completed for the project area which included the examination of historical topographic maps and aerial photographs.

5.2.1 Historical Map and Aerial Photograph Review

GEI reviewed historical maps and aerial photographs to provide information about historic-era land use and the potential for the feasibility study area to contain historic-era buildings, structures, and features. This review included the examination of a series of topographic maps dating 1906, 1926, 1936, 1942, 1953, 1969, 1974, 1981, 2014, and 2017 and aerial photographs from 1951, 1955, 1957, 1964, 1966, 1973, 1983, 1987, 1993, 1999, 2005, 2009, 2010, 2012, 2014, 2016, 2018, and 2020 (NETR 2023).

The Flat Rock and Huroc Dams are both evident on the earliest available aerial photograph (1951). The 1936 topographic map shows the reservoir behind the Flat Rock Dam for the first time. The community of Flat Rock is seen on the earliest topographic map (1906) and aerial photograph (1951), and its continual development is evident throughout the map series. Huron Lake Boulevard is also evident on these earliest depictions in its present-day alignment. The railroad that traverses the bridge adjacent to the Flat Rock Dam is seen as early as 1906 and is still shown on the most recent maps (2017). Despite knowledge that

the Ford Motor Company Lamp Factory was constructed in 1923, it is first depicted on the 1936 topographic map.

Between 1966 and 1973, the parking lot in the Oakwoods Metropark (slated for use as a staging area for the Flat Rock project) appears on the historic aerials. This parking area is also seen on the topographic maps starting in 1974.

5.2.2 Natural Resources Conservation Services (NRCS) Web Soil Survey Review

Soils in the northern portion of the feasibility study area, found in and around a meandering portion of the Huron River, are classified by the NRCS as either Blount Loam (NRCS Classification BfA), Metea Loamy Sands (NRCS classification MhB), or Shoals Silt Loam (NRCS Classification ShB). These classifications range from somewhat poorly drained to well drained loams found of slopes of zero to six percent. Similarly, southern portions of the study area are also described as Blount Loam (NRCS Classification BfA) or Shoals Silt Loam (NRCS Classification ShB), with the entirety of Huroc Island classified as the latter. The remaining portions of the feasibility study area are found within the channel of the Huron River and are inundated.

Chapter 6. Site Visit Results

GEI conducted a site visit of the feasibility study area on September 21, 2023. The weather was hot and sunny and there was no precipitation. GEI photographed and documented all accessible terrestrial portions of the study area, including three historic-era architectural resources (described in 6.2 below).

Photographs were taken during the site visit in the attempt to detail field conditions, surface visibility, and ground disturbances encountered throughout the study area, along with the three identified architectural resources. They are included in Attachment B: Photographs. A graphic representing the additional cultural resources studies recommended for the study area was created using data gathered during the site visit. It can be found in Attachment A: Project Maps, Figure 3. Areas Identified for Additional Study – Aerial Base.

6.1 Potential for Archaeological Resources

SHPO has indicated that the feasibility study area is sensitive for archaeological resources and that the terrestrial and submerged portions of the study area will require separate assessments in the future (Surface-Evans 2023). As such, GEI considered all areas of the study area during the site visit to ascertain potential assessment methods to be completed in the future on both portions of the study area.

The terrestrial portions of the study area adjacent to the Huron River are mainly steep, difficult to access, and heavily vegetated with species such as prickly gooseberry, red elderberry, poison ivy, and other understory species, causing surface visibility to be generally low (i.e., less than 25%). Visually inspecting these areas for cultural resources via a pedestrian survey would not be feasible due to the low surface visibility and subsurface investigations are required by SHPO. However, the majority of the study area is located within the Huron River channel and is currently inundated and/or associated with wetlands, and therefore limited areas are amenable to excavation. Inundated areas and areas exhibiting saturated soils would be best addressed via a submerged resources assessment and these areas constitute about 303.58-acres within the study area as depicted in Attachment A: Project Maps, Figure 3. Areas Identified for Additional Study – Aerial Base.

The locations where the excavation of shovel test pits (STPs) appears possible include Huroc Park Island; the grassy areas between the Huron River and Arsenal Road, across the Huroc Dam bridge from Huroc Park; a small, grassed area around the parking lot of the Ford Motor Company Head and Tail Light Assembly Plant; and the lawn surrounding the parking lot in the Oakwoods Metropark. These areas total approximately 33.03-acres within the study area as shown in Attachment A: Project Maps, Figure 3. Areas Identified for Additional Study – Aerial Base. Portions of these areas are paved or graveled for use as recreation areas, sidewalks, parking lots, or roads.

6.2 Identified Architectural Resources

Three historic-era architectural resources were identified as part of the site visit, including two previously recorded resources and one newly identified resource: Flat Rock Dam, Huroc Dam, and the Ford Motor Company Head and Tail Light Assembly Plant. The locations of these resources are depicted on Attachment A: Project Maps, Figure 3. Areas Identified for Additional Study – Aerial Base and occupy approximately 18.85-acres within and near the feasibility study area. They are pictured in Attachment B: Photographs and are briefly described below.

Flat Rock Dam

The Flat Rock Dam is a 492-foot-long concrete dam. It was constructed in 1923 as a gravity dam (USACE 2023).

Huroc Dam

The Huroc Dam is located south of Flat Rock Dam and dates to circa 1950. The dam is concrete with a covered wooden footbridge extending along its crest.

Ford Motor Company Head and Tail Light Assembly Plant

The Ford Motor Company Head and Tail Light Assembly Plant consists of a main building with several additions. It was constructed in 1923.

Chapter 7. Summary and Recommendations

7.1 Summary

Based on the review of information available from various databases, the Michigan SHPO files for archaeological and architectural resources (SHPO 2023a; SHPO 2023b), and GEI's background research, seven previously recorded archaeological sites are found within the feasibility study area. In addition, coordination with SHPO indicated that the feasibility study area is sensitive for archaeological resources and that the terrestrial and submerged portions of the study area will require separate assessments in the future. Furthermore, the Ford Motor Company Head and Tail Light Assembly Plant is partially located within the study area and two historic-era architectural resources are located entirely in the study area: Flat Rock Dam and Huroc Dam.

7.2 Recommendations

Based on results of the cultural resources records review, a preliminary site visit, the identification of three historic-era resources, and the knowledge that the project will be subject to a Section 106 review due to a federal nexus, GEI has made the following findings and recommendations:

- Upon selection of the preferred alternative for the project, an Area of Potential Effects (APE) should be delineated for the undertaking. The APE should include the horizontal and vertical extent of ground disturbance and any temporary use areas, such as equipment staging locations. Further, consideration should be given to the potential for the project to result in indirect effects to nearby lands and/or built-environment features and as such, the APE may encompass lands beyond the direct impact area(s) associated with the project.
- The project will require a review by the Michigan SHPO to be initiated by the submittal of a Section 106 Application.
- The Section 106 review will likely require the completion of several technical studies to determine the presence or absence of Historic Properties in the APE and the potential for the project to results in effects to Historic Properties pursuant to Section 106. While the scope and scale of these studies should be developed in coordination with the federal agency and SHPO, GEI anticipates the following studies at a minimum:
 - O Phase I Archaeological Survey. A Phase I archaeological survey will need to be conducted within the terrestrial portions of the study area that are selected for project implementation and that are accessible (i.e., not underwater or on a steep slope). As the terrestrial portions of the study area generally lack surface visibility of more than 25%,

subsurface investigations in the form of STPs will be required per SHPO guidelines. The survey will be needed to address the current conditions and NRHP eligibility of any previously recorded archaeological resources and would serve to document any previously unidentified resources. Additional recording efforts might be needed for the seven previously recorded resources (20WN39, 20WN155, 20WN184, 20WN657, 20WN687, 20WN688, and 20WN852) once they are relocated (if possible) and their current conditions are ascertained.

- Submerged Resources Assessment. Through early coordination with SHPO, it has been strongly recommended that a separate submerged resources assessment be completed for the portions of the study area located within the Huron River and associated wetlands. Background research for this evaluation should include reviewing maps of the impoundment area prior to the construction of the Huroc and Flat Rock Dams, along with maps depicting the original contours and channels of the Huron River (Surface-Evans 2023).
- o Architectural Resources Inventory and Evaluation Report. Historic-era architectural resources have been identified within or in close vicinity to the study area. If any of the project alternatives chosen would potentially impact these resources, an architectural resources inventory and evaluation study will need to be prepared prior to project-implementation. This study would include the identification and evaluation of historic-era architectural resources in the proposed project area to determine if they are eligible for the NRHP. In addition, a corresponding Michigan SHPO Architectural Properties Identification Form will need to be completed to document each evaluated resource. If any of the architectural resources are recommended as NRHP-eligible, a finding of effect analysis would also need to be prepared to assess the effects the proposed project may have on the significant resource(s). The inventory and evaluation report would meet Section 106 requirements and will require SHPO review and concurrence.

Chapter 8. References Cited

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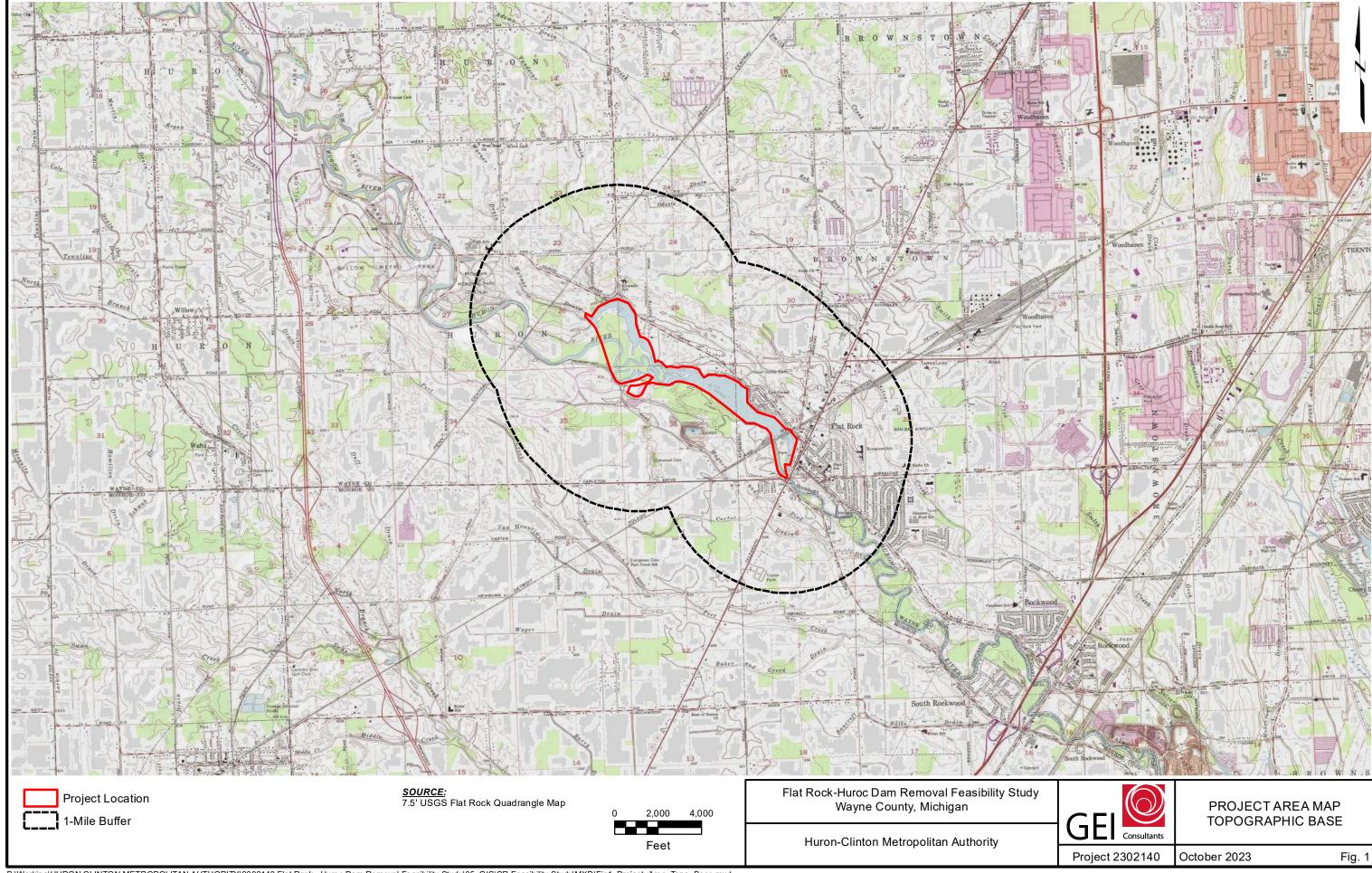
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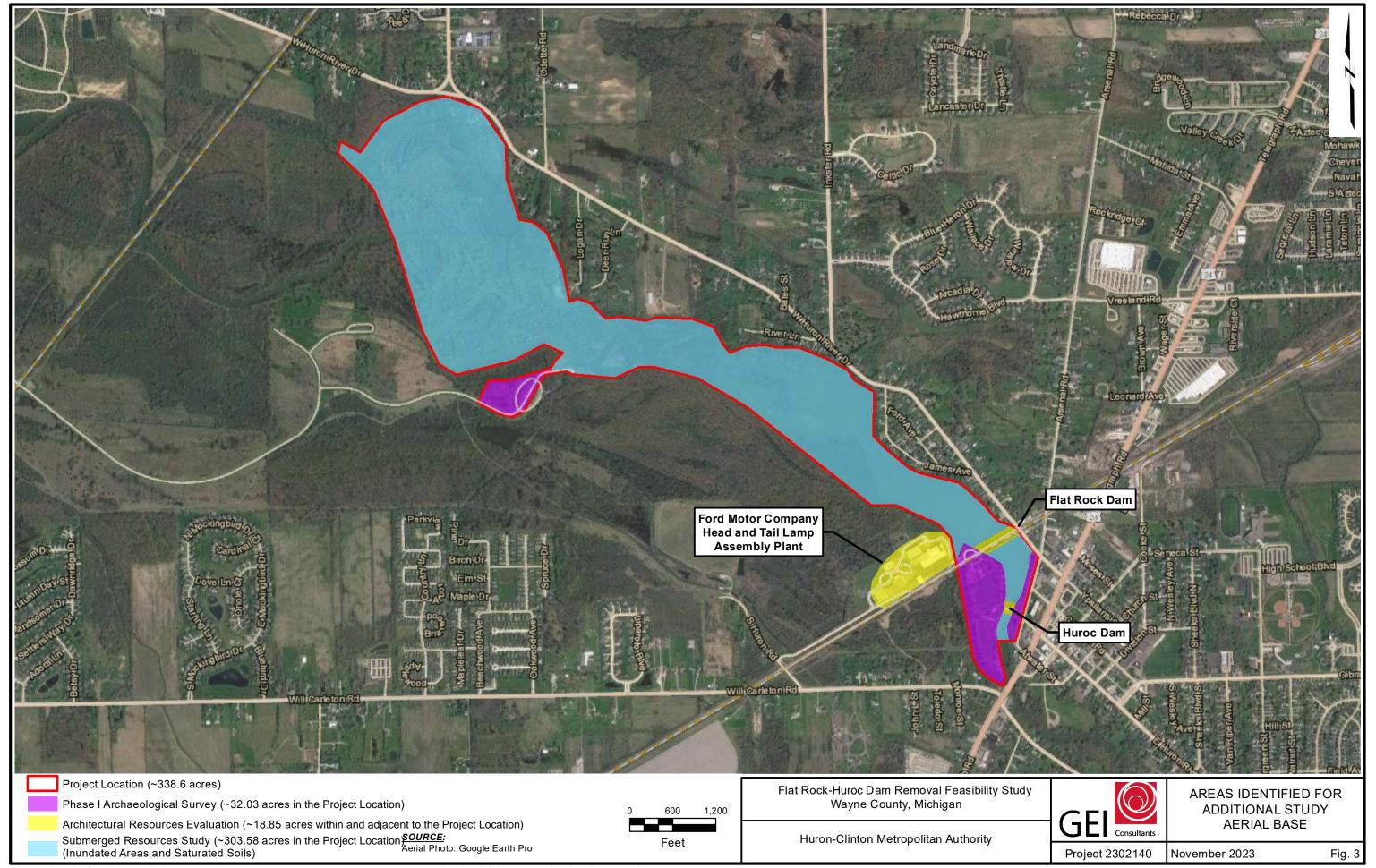
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Attachment A: Project Maps

Figure 1. Project Area Map – Topographic Base Figure 2. Feasibility Study Area Map – Aerial Base Figure 3. Areas Identified for Additional Study – Aerial Base







Attachment B: Photographs



			Consultants
Рнотодгарн No: 1	DATE: September 21, 2023	GEI PROJECT NO: 2302140	CLIENT: Huron-Clinton Metropolitan Authority
DIRECTION: W/SW	SITE LOCATION: CITY OF FLAT ROCK, WAYNE COUNTY, MI		
DESCRIPTION: Overview of feasibility study area from West Huron Road.			

PHOTOGRAPH NO: 2	DATE:	GEI PROJECT NO:	CLIENT:		
	September 21, 2023	2302140	Huron-Clinton Metropolitan Authority		
DIRECTION: W	SITE LOCATION: CITY OF FLAT ROCK, WAYNE COUNTY, MI				
DESCRIPTION: Feasibility study area in background behind private residences, taken from James Avenue.					



PHOTOGRAPH NO: 3	DATE: September 21, 2023	GEI PROJECT NO: 2302140	CLIENT: Huron-Clinton Metropolitan Authority
DIRECTION: S	SITE LOCATION: CITY OF FLAT ROCK, WAYNE COUNTY, MI		
DESCRIPTION: Overview of feasibility study area in Huroc Park.			

Рнотодгарн No: 4	DATE: September 21, 2023	GEI PROJECT NO: 2302140	CLIENT: Huron-Clinton Metropolitan Authority		
DIRECTION: NE	SITE LOCATION: CITY OF FLAT ROCK, WAYNE COUNTY, MI				
DESCRIPTION: Overview of feasibility study area in Huroc Park.					



PHOTOGRAPH NO: 5	DATE: September 21, 2023	GEI PROJECT NO: 2302140	CLIENT: Huron-Clinton Metropolitan Authority	
DIRECTION: NE	SITE LOCATION: CITY OF FLAT ROCK, WAYNE COUNTY, MI			
DESCRIPTION:				

Staging area/parking lot in Oakwoods Metropark in the northern portion of the feasibility study area.



Рнотодгарн No: 6	DATE: September 21, 2023	GEI PROJECT NO: 2302140	CLIENT: Huron-Clinton Metropolitan Authority	
DIRECTION: SE	SITE LOCATION: CITY OF FLAT ROCK, WAYNE COUNTY, MI			
DESCRIPTION: Staging area/area adjacent to parking lot in Oakwoods Metropark in the northern portion of the feasibility study area.				



Рнотодгарн No: 7	DATE: September 21, 2023	GEI PROJECT NO: 2302140	CLIENT: Huron-Clinton Metropolitan Authority		
DIRECTION: W/SW	SITE LOCATION: CITY OF FLAT ROCK, WAYNE COUNTY, MI				
DESCRIPTION: Former Ford Motor Company Lamp Factory adjacent to the Flat Rock Dam in the feasibility study area.					

PHOTOGRAPH NO: 8	DATE: September 21, 2023	GEI PROJECT NO: 2302140	CLIENT: Huron-Clinton Metropolitan Authority		
DIRECTION: NW	SITE LOCATION: CITY OF FLAT ROCK, WAYNE COUNTY, MI				
DESCRIPTION:			n de la companya de		
Overview of Flat Rock Dam from downstream.					



PHOTOGRAPH NO: 9	DATE: September 21, 2023	GEI PROJECT NO: 2302140	CLIENT: Huron-Clinton Metropolitan Authority		
DIRECTION: S	SITE LOCATION: CITY OF FLAT ROCK, WAYNE COUNTY, MI				

DESCRIPTION:

Overview of Flat Rock Dam from upstream.



PHOTOGRAPH NO: 10 DATE: September 21, 2023 GEI PROJECT NO: 2302140 CLIENT: Huron-Clinton Metropolitan Authority

DIRECTION: N SITE LOCATION: CITY OF FLAT ROCK, WAYNE COUNTY, MI

DESCRIPTION:

Overview Huroc Dam from downstream.

