Well 3 Tank Demolition Project

Draft Environmental Impact Report

SCH#2018021015

prepared by
City of Merced
Public Works-Engineering Division
678 West 18th Street
Merced, CA 95340

prepared with the assistance of
Rincon Consultants
4825 J Street, Suite 200
Sacramento, California 95816

April 2018

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Environmental Scientists Planners Engineers
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Executive Summary

This section summarizes the characteristics of the proposed project as well as the environmental impacts, mitigation measures, and residual impacts associated with implementation of the proposed project.

Project Synopsis

Project Proponent

City of Merced

Lead Agency Contact Person

Joseph Angulo
City of Merced
Public Works-Engineering Division
678 West 18th Street
Merced, CA 95340
anguloj@cityofmerced.org

Project Description

A detailed description of the proposed project is included in Section 2.0, *Project Description*. The key characteristics of the proposed project are summarized below.

The applicant is proposing to demolish an inactive 300,000-gallon water tank located on the northwest corner of W. 12th Street and Canal Street in the City of Merced. The water tank is 148 feet in height, 40 feet in diameter, and is mounted on six steel supports set in concrete; a 30-inch wide balcony with handrail circles the tank. The water tank originally helped to maintain pressure in the City's water system, but was disconnected from the operating well on-site (Well 3C) in 2016; thus, it no longer plays a role in the City's water supply and storage. In addition to the water tank and well, the project site contains equipment associated with operation of the well, including a well pump, four 20,000 pound carbon vessels, a backup generator building, a chemical building, a transformer, a diesel convault, and a chlorine and fluorine inject vault. The project would involve demolition of the water tank, excavation to remove the tank's supporting concrete piers, backfilling, and grading, as well as additional surface paving and construction of a new gate on the north side of the site so trucks can drive through the facility. All equipment and structures on-site other than the water tank would remain in place and would not be demolished.

Project Objectives

1. Allow for safe and efficient operation of the Well Site #3 tetrachloroethylene (PCE) treatment system
2. Improve vehicle access on the site

3. Reduce the risk of subsidence hazards on the site

4. Reduce the risk of seismic hazards on the site

Alternatives

Three alternatives to the proposed project were chosen for analysis:

- Alternative 1: No project
- Alternative 2: Renovation of the water tank to meet current seismic standards
- Alternative 3: Relocation of the water tank to an alternative site

Alternative 1, no project, assumes that the water tank would remain on the project site and would not be demolished. The site would continue to operate as it does under existing conditions. Improvements to on-site vehicle access, and reductions in seismic and subsidence risks to the site would not occur.

Under Alternative 2, the water tank would undergo engineering evaluations to determine alterations necessary to bring the water tank into conformance with current seismic standards and recommended alterations would be implemented. Alterations to the water tank would be completed in a manner in compliance with the Secretary of the Interior's Standards for Rehabilitation and a historic architect shall review the project during planning, design, and implementation. The site would continue to operate. Improvements to on-site vehicle access and a reduction in risk from subsidence hazards would not occur. However, risk from seismic hazards would be reduced and the water tank would not be demolished.

Alternative 3 considers relocation of the water tank to an alternative site. This would require that the City secure an alternative site in which to place the water tank and transport the water tank in a manner in compliance with the Secretary of the Interior's Standards for Rehabilitation; a historic architect shall review the project during planning, design, and implementation. The site would benefit from Improvements to on-site vehicle access and a reduction in risk from subsidence and seismic hazards, and the water tank would not be demolished. However, this alternative could result in seismic and subsidence hazard risks and other environmental impacts at an off-site location.

All three alternatives would reduce the project's significant impact to a historical resource to a less than significant level. However, Alternative 2, renovation of the water tank to meet current seismic standards, would be the environmentally superior alternative.

Refer to Section 6.0, *Alternatives*, for the complete alternatives analysis.

Summary of Impacts and Mitigation Measures

Table 1 includes a brief description of the environmental issues relative to the proposed project, the identified environmental impacts, proposed mitigation measures, and residual impacts. Impacts are categorized by significance. *Significant and unavoidable* adverse impacts require a statement of overriding considerations to be issued per Section 15093 of the State CEQA Guidelines if the project is approved. *Significant but mitigable* impacts are adverse impacts that can be feasibly mitigated to less than significant levels and which require findings to be made under Section 15091 of the *State CEQA Guidelines*. *Less than significant* impacts would not exceed significance thresholds and

therefore would not require mitigation. The summary table includes impacts and mitigation measures initially addressed in the Initial Study (Appendix A), as well as cultural resources impacts assessed in the EIR. Impacts related to all other resource areas were determined to be less than significant in the Initial Study (contained in full in Appendix A).

Table 1 Summary of Significant Environmental Impacts, Mitigation Measures, and Residual Impacts

Impact	Mitigation Measure	Residual Impact
Cultural Resources and Tribal Cultural Resources		
Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? The proposed project would involve demolition a water tank individually listed on the California Register of Historical Resources. Therefore, the project would have a significant and unavoidable impact to a historical resource.	**CR-1 Historic Documentation Package.** Prior to issuance of demolition permits, the City shall undertake Historic American Building Survey (HABS)-like documentation of the subject property. The documentation should generally follow the HABS Level III requirements and include digital photographic recordation of the interior and exterior of the subject property, including all character-defining features, a detailed historic narrative report, and compilation of historic research. The documentation shall be undertaken by a qualified professional who meets the standards set forth by the Secretary of the Interior's Professional Qualification Standards (36 CFR, Part 61) for history, architectural history, or architecture (as appropriate). The original archival-quality documentation shall be offered as donated material to the University of California, Merced Library where it would be available for current and future generations. Archival copies of the documentation shall also be submitted to the Merced County Library where it would be available to local researchers. Completion of this mitigation measure shall be monitored and enforced by the lead agency.	Significant and unavoidable impact.
Noise (Initial Study)		
Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? Demolition of the existing water tank would generate high levels of noise at sensitive receptors during construction activities. Incorporation of mitigation would reduce potential this impact to a less than significant level.	**N-1 Prohibited Hours for Construction Activity.** Project construction activities shall be prohibited outside the hours of 7 AM to 6 PM Monday through Friday, and 9 AM to 6 PM on Saturdays. Construction activities shall be prohibited on Sundays and federal holidays. **N-2 Construction Noise Reduction Measures.** The construction contractor shall implement the following measures to reduce construction noise impacts on nearby sensitive receptors: • Construction equipment shall be properly maintained per manufacturers' specifications and fitted with the best available noise suppression devices (i.e., mufflers, silencers, wraps, etc.). • All impact tools shall be shrouded or shielded, and all intake and exhaust ports on power equipment shall be muffled or shielded. • Electrical power shall be used to run air compressors and similar power tools. • All fixed and/or stationary equipment (e.g.,	Less than significant

Impact	Mitigation Measure	Residual Impact
	generators, compressors, rock crushers, cement mixers) shall be located as far as possible from noise-sensitive receptors.	

1 Introduction

This document is the Draft Environmental Impact Report (EIR) for the proposed Well Tank 3 Demolition Project, located in the City of Merced in Merced County. For the purposes of this EIR, the proposed project refers to the scenario where the existing water tank located on the Well 3C site is demolished, as detailed in Section 2.0, Project Description.

This section describes: (1) the general project background; (2) the environmental impact report background; (3) the purpose and legal authority of the EIR; (4) the scope and content of the EIR; (5) lead, responsible, and trustee agencies; (6) the environmental review process required under the California Environmental Quality Act (CEQA); and (7) areas of known controversy.

1.1 Project Background

The City of Merced has identified the need to demolish an inactive, 300,000 gallon water tank on the project site due to concerns regarding the safety risks posed by the water tank. The water tank was installed in 1934 and the City has no records that the structure has been modified since its installation to comply with current building and seismic codes. In addition, the operating well on the project site, Well 3C, has a history of sand ingress in the well and tank, which results in the development of voids in the soil surrounding the well casing, leading to soil instability. Under these conditions, the weight of the tank contributes to the risk of subsidence on the site and poses a hazard to life and property if the tank should collapse due to soil instability, as well as due to earthquakes, or structural corrosion from inclement weather.

From 1934 to 2016, the water tank was connected to the City's water system and played a role in maintaining water system pressure. The system was designed so that groundwater would be pumped out of the well and into the elevated storage tank. The water then flowed under the influence of gravity from the elevated tank to the City's piping distribution system. This arrangement served to maintain pressure in the piping system to provide a dependable water supply for the City's residents and businesses.

The groundwater beneath the Well 3C site has been impacted by the chemical PCE, a volatile organic compound (VOC) that may contribute to cancer in humans and animals (American Cancer Society 2014). A PCE groundwater treatment system consisting of four, 20,000-pound carbon vessels was installed at the site in September 2017. The groundwater is pumped from Well 3C through the carbon filtration vessels, and then directly discharged into the water piping distribution system as a clean water source. The system requires continuous water flow to prevent bacteria formation in the carbon; consequently, the State Water Resources Control Board (SWRCB) placed conditions in the City's permit to require bacteria monitoring activities if a six-hour idling time is exceeded. Because pumping water into the Well 3 Tank would reduce water flow through the carbon vessels, the water tank was disconnected from the water pump and cannot be re-activated for efficient operation of the PCE treatment system to continue.

1.2 Environmental Impact Report Background

The City of Merced prepared a Notice of Preparation (NOP) of an EIR and distributed it for agency and public review for the required 30-day review period on February 12, 2018. The City received three comment letters from three state agencies (Native American Heritage Commission [NAHC], San Joaquin Valley Air Pollution Control District [SJVAPCD], and Caltrans) in response to the NOP during the public review period. The NOP and responses received are provided in Appendix B. The intent of the NOP was to provide interested individuals, groups, public agencies and others a forum to provide input to regarding the scope and focus of the EIR. Table 2 lists the issues relevant to the EIR that were raised in the NOP written comments as well as the EIR or Initial Study sections where the issues are addressed.

Table 2 NOP Comments and EIR Response

Commenter	Comment/Request	How and Where it was Addressed
Native American Heritage Committee (NAHC)	Indicates that Assembly Bill 52 applies to the project.	Section Q, Tribal Cultural Resources, of the Initial Study addresses AB 52 requirements for the project. Because the City has not received a request for notification from any Native American tribes traditionally and culturally affiliated with the geographic area of the proposed project, the City is not required to pursue further consultation pursuant to AB 52. In addition, the project involves only demolition of a water tank on a developed site that already has underground utilities and a well, so it is highly unlikely that the project's limited ground disturbing activities would unearth tribal cultural resources.
San Joaquin Valley Air Pollution Control District	The SJVAPCD concurs with the findings that the project's emissions of criteria pollutants are not expected to exceed District significance thresholds, and that the project is not subject to District Rule 9510 (Indirect Source Review). The SJVAPCD notes that the project may be subject to Regulation VIII (Fugitive PM10 Prohibitions), Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations), as well as Rule 4002 (National Emission Standards for Hazardous Air Pollutants).	Section C, Air Quality, of the Initial Study addresses the project's air quality impacts and also provides the regulatory setting for the project. The regulatory setting has been revised to include additional applicable District rules, including Rule 4102, 4601, 4641, and 4002; additions are underlined in the document. These edits do not affect the findings or impact analysis. The project would be required to comply with all applicable District rules and regulations.
Caltrans	Caltrans indicates that the project, as described, would not have a significant impact on state highway facilities in the area.	Section P, Transportation/Traffic, addresses potential project impacts to transportation and circulation.

1.3 Purpose and Legal Authority

The proposed project requires the discretionary approval of the City of Merced. Therefore, it is subject to the environmental review requirements of CEQA. In accordance with Section 15121 of the *CEQA Guidelines,* the purpose of this EIR is to serve as an informational document that:

> ...will inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

This EIR has been prepared as a Project EIR pursuant to Section 15161 of the *CEQA Guidelines.* A Project EIR is appropriate for a specific development project. As stated in the *CEQA Guidelines:*

This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project, including planning, construction, and operation.

This EIR is to serve as an informational document for the public and City decision makers. The process will culminate with a City Council hearing to consider certification of the Final EIR and approval of the project.

1.4 Scope and Content

Of the 18 areas discussed in the Initial Study prepared for the project and provided in Appendix A, the following was identified as requiring further study in an EIR:

- Cultural Resources

This EIR addresses the issue referenced above and identifies potentially significant environmental impacts of the project and cumulative development in the city in accordance with provisions set forth in the CEQA Guidelines. The EIR also recommends feasible mitigation measures, where needed and possible, that would reduce or eliminate adverse environmental effects. In preparing the EIR, pertinent policies and guidelines, existing EIRs, and other background documents were used. A full reference list is contained in Section 7.0, References and Preparers.

The Alternatives section of the EIR was prepared in accordance with Section 15126.6 of the CEQA Guidelines and focuses on alternatives that are capable of eliminating or reducing significant adverse effects associated with the project while feasibly attaining most of the basic project objectives. In addition, the Alternatives section identifies the "environmentally superior" alternative among the alternatives assessed. The alternatives evaluated include the CEQA-required "No Project" Alternative and two alternative development scenarios.

1.5 Lead, Responsible, and Trustee Agencies

The *CEQA Guidelines* define lead, responsible and trustee agencies. The City of Merced is the lead agency for the project because it holds principal responsibility for certifying the EIR and approving the project.

A responsible agency refers to a public agency other than the lead agency that has discretionary approval over the project. There are no applicable responsible agencies for the project.

A trustee agency refers to a state agency having jurisdiction by law over natural resources affected by a project. There are no applicable trustee agencies for the proposed project.

1.6 Environmental Review Process

The environmental impact review process, as required under CEQA, is summarized below and illustrated in Figure 1. The steps are presented in sequential order.

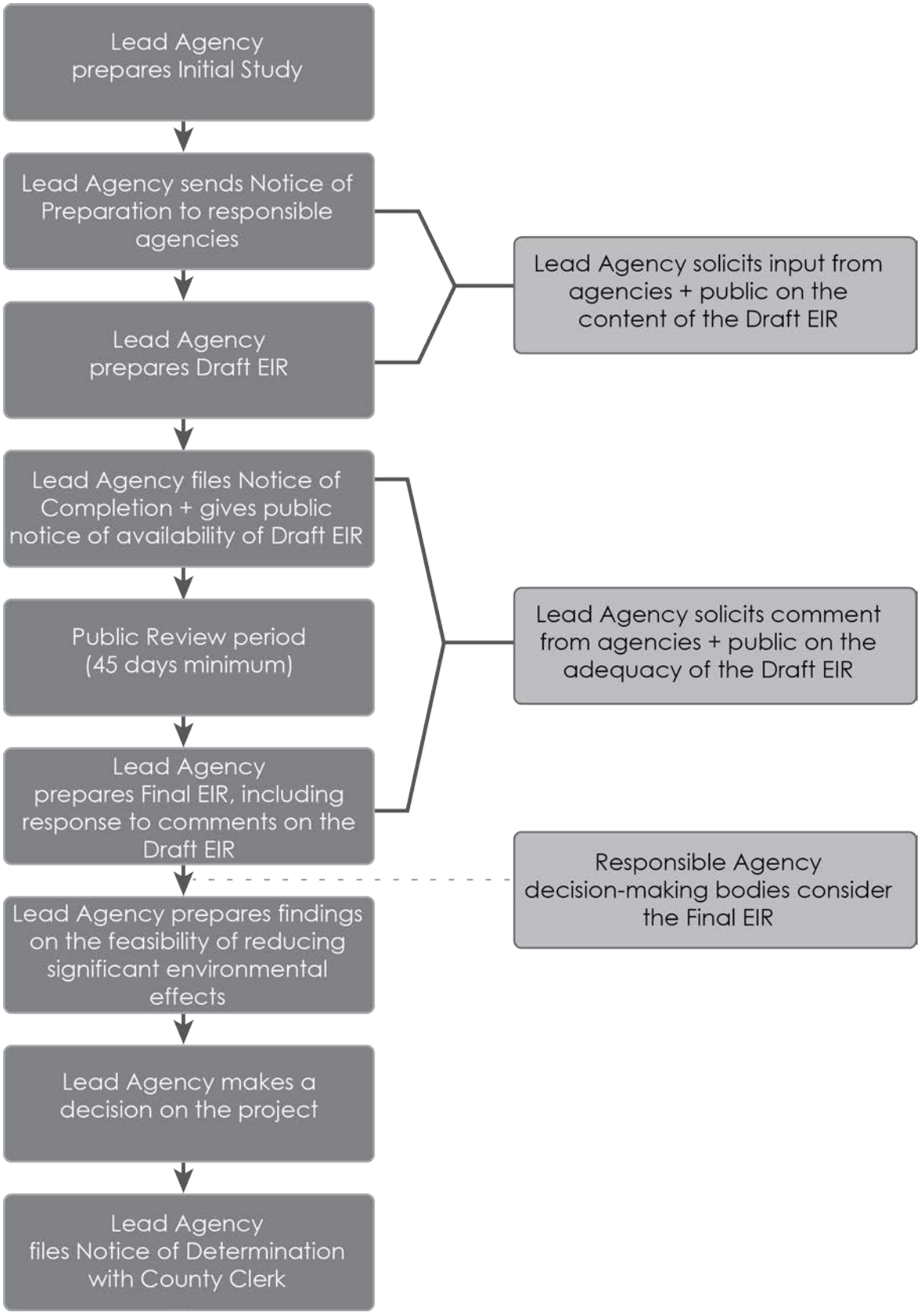
1. **Notice of Preparation (NOP) Distributed.** Immediately after deciding that an EIR is required, the lead agency must file a NOP soliciting input on the EIR scope to "responsible," "trustee," and involved federal agencies; to the State Clearinghouse, if one or more state agencies is a responsible or trustee agency; and to parties previously requesting notice in writing. The NOP must be posted in the County Clerk's office for 30 days. A scoping meeting to solicit public input on the issues to be assessed in the EIR is not required, but may be conducted by the lead agency.
2. **Draft EIR Prepared.** The Draft EIR must contain: a) table of contents or index; b) summary; c) project description; d) environmental setting; e) significant impacts (direct, indirect, cumulative, growth-inducing and unavoidable impacts); f) alternatives; g) mitigation measures; and h) irreversible changes.
3. **Public Notice and Review.** A lead agency must prepare a Public Notice of Availability of an EIR. The Notice must be placed in the County Clerk's office for 30 days (Public Resources Code Section 21092) and sent to anyone requesting it. Additionally, public notice of Draft EIR availability must be given through at least one of the following procedures: a) publication in a newspaper of general circulation; b) posting on and off the project site; and c) direct mailing to owners and occupants of contiguous properties. The lead agency must consult with and request comments on the Draft EIR from responsible and trustee agencies, and adjacent cities and counties. The minimum public review period for a Draft EIR is 30 days. When a Draft EIR is sent to the State Clearinghouse for review, the public review period must be 45 days, unless a shorter period is approved by the Clearinghouse (Public Resources Code 21091). Distribution of the Draft EIR may be required through the State Clearinghouse.
4. **Notice of Completion.** A lead agency must file a Notice of Completion with the State Clearinghouse as soon as it completes a Draft EIR.
5. **Final EIR**. A Final EIR must include: a) the Draft EIR; b) copies of comments received during public review; c) list of persons and entities commenting; and d) responses to comments.
6. **Certification of Final EIR**. The lead agency shall certify: a) the Final EIR has been completed in compliance with CEQA; b) the Final EIR was presented to the decision-making body of the lead agency; and c) the decision-making body reviewed and considered the information in the Final EIR prior to approving a project.
7. **Lead Agency Project Decision.** A lead agency may: a) disapprove a project because of its significant environmental effects; b) require changes to a project to reduce or avoid significant environmental effects; or c) approve a project despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted.
8. **Findings/Statement of Overriding Considerations.** For each significant impact of the project identified in the EIR, the lead or responsible agency must find, based on substantial evidence, that either: a) the project has been changed to avoid or substantially reduce the magnitude of

the impact; b) changes to the project are within another agency's jurisdiction and such changes have or should be adopted; or c) specific economic, social, or other considerations make the mitigation measures or project alternatives infeasible. If an agency approves a project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that set forth the specific social, economic or other reasons supporting the agency's decision.

9. **Mitigation Monitoring/Reporting Program.** When an agency makes findings on significant effects identified in the EIR, it must adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.

10. **Notice of Determination.** An agency must file a Notice of Determination after deciding to approve a project for which an EIR is prepared. A local agency must file the Notice with the County Clerk. The Notice must be posted for 30 days and sent to anyone previously requesting notice. Posting of the Notice starts a 30-day statute of limitations on CEQA challenges.

Figure 1 Environmental Review Process



2 Project Description

This section describes the proposed project, including the project proponent, project location, existing site characteristics, the proposed project's characteristics, project objectives, and approvals needed to implement the project.

2.1 Project Proponent

City of Merced
Public Works-Engineering Division
678 West 18th Street
Merced, CA 95340
anguloj@cityofmerced.org

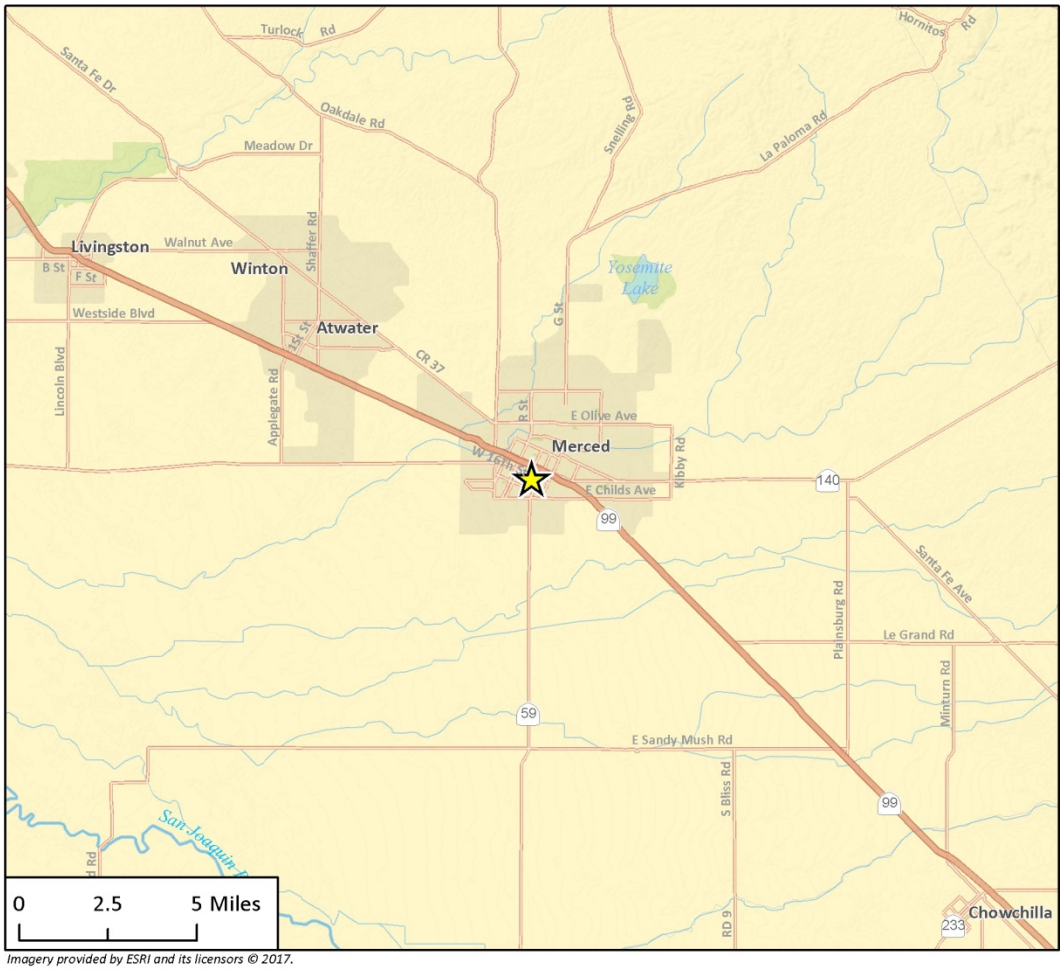
2.2 Project Location

The project site consists of an approximately 0.34-acre parcel located on the northwest corner of W. 12th Street and Canal Street in the City of Merced; the assessor parcel number (APN) of the site is 031-321-015. Figure 2 provides a map of the project site's regional location. Figure 3 shows the location of the project site in its local context.

2.3 Existing Site Characteristics

The project site is designated for High to Medium Density Residential uses in the City's General Plan (City of Merced 2015a) and zoned as High Medium Density Residential (R-3-1.5). The site contains a 300,000 gallon, riveted steel water tank, as well as underground utilities, above-ground equipment, and buildings associated with a well (Well 3C) operating on-site, including a well pump, four 20,000 pound carbon vessels, a backup generator building, a chemical building, a transformer, a diesel convault, and a chlorine and fluorine inject vault. The site is covered in a mix of asphalt and gravel and is surrounded by a chain-link fence. There is a single vehicle access point along W 12th Street. Truck assess within the site is currently constrained due to the site's small size and proximity of facility structures. Figure 4 provides an aerial-view image of the project site with labeled equipment and Figure 5 shows images of the project site and surrounding area.

Figure 2 Regional Location



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Project Location

N

Figure 3 Project Location

Figure 4 On-site Equipment

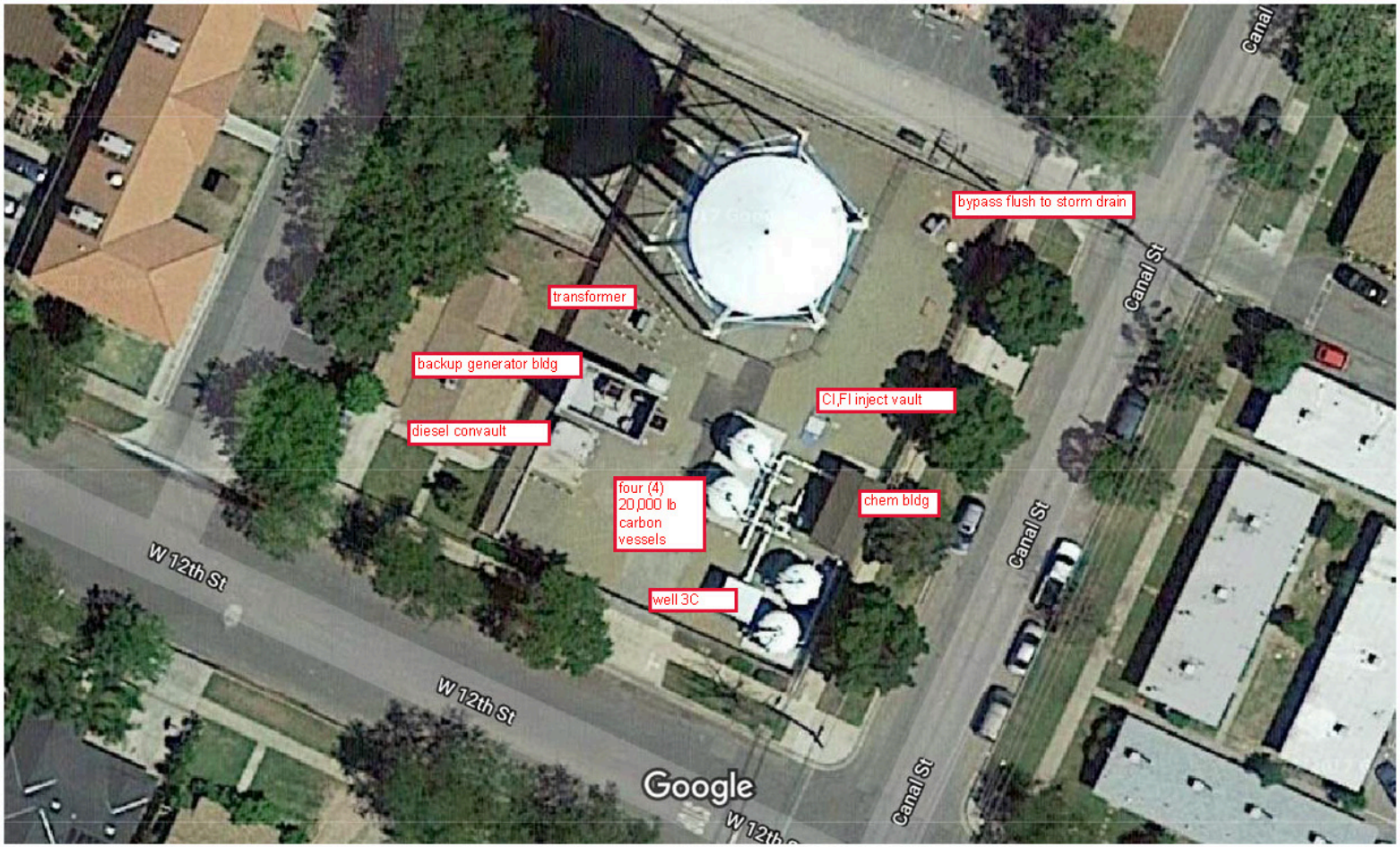

Figure 5 Photos of the Project Site and Surrounding Area

20,000-lb carbon vessels for on-site PCE treatment system. Facing southeast.

Project site, facing northeast on W 12th Street.

One-story houses and two-story apartments along W 12th Street, facing northwest.

One-story houses located along the south side of W 12th Street, facing southeast.

2.4 Surrounding Land Uses

The project site is directly bordered by Sacred Heart Church and auxiliary buildings to the north, a one-story single-family house to the west, Canal Street to the east, and W. 12th Street to the south. One-story multi-family residences are located to the east of the project site across Canal Street, and one-story, single-family residences are located to the south of the project site across W. 12th Street. The project vicinity is developed primarily with one-story single-family and multi-family residences, as well as some two-story apartments. Institutional and public facilities are also located within a few blocks of the project site, including the Merced County Office of Education, Valley High School, and a Police department office. The Golden State Highway (State Route [SR]-99) overpass is located two blocks to the north. Figure 5 shows images of the project site and surrounding area.

2.5 Project Characteristics

The City is proposing to demolish an inactive 300,000-gallon, riveted steel water tank on the project site. The water tank is 148 feet in height, 40 feet in diameter, and is mounted on six steel supports set in concrete; a 30-inch wide balcony with handrail circles the tank. The project would involve demolition of the water tank, excavation to remove the tank's supporting concrete piers, backfilling, and grading, as well as additional surface paving and construction of a new gate on the north side of the site so trucks can drive through the facility. The well tank and other demolition materials would be disposed of at an appropriate receiving facility and steel materials recycled in a fashion that reduces the steel to its raw material form. The demolition schedule and equipment list for demolition activities have not yet been determined.

2.6 Project Objectives

The objectives of the proposed project are as follows:

1. Allow for safe and efficient operation of the Well #3C PCE (tetrachloroethylene) treatment system
2. Improve vehicle access on the site
3. Reduce risk of subsidence hazards associated with the site
4. Reduce risk of seismic hazards associated with the site

2.7 Required Approvals

The project would require approval by the Merced City Council. No other permits or approvals would be required at this time.

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3 Environmental Setting

3.1 Regional Setting

The project site is located in the City of Merced within Merced County in the northern portion of the San Joaquin Valley. The City covers approximately 23.1 square miles and serves as the political seat for the County, as well as the retail commercial center for the surrounding region (City of Merced 2012). The northern portion of the City is characterized by gently rolling terrain, while the southern portion is relatively flat. Lake Yosemite and UC Merced are located approximately two miles north and east of the City, and the City of Atwater is located approximately four miles northwest of the City (City of Merced 2012).

Merced is approximately 150 miles southeast of San Francisco and is one of a chain of cities located along State Highway 99. Highway 99 is one of the two main north-south arteries connecting Southern California to the Pacific Northwest region. The City lies 40 miles from Modesto, 65 miles from Stockton, and 100 miles from Sacramento along Highway 99. The City of Fresno is 55 miles and Bakersfield is 165 miles to the south along Highway 99. The climate in Merced is semi-arid with mild winters and hot and dry summers. The region is subject to various natural hazards, including earthquakes and flooding.

3.2 Project Site Setting

The project site consists of an approximately 0.34-acre parcel located on the northwest corner of W. 12th Street and Canal Street in a developed area of the city. The project vicinity is developed primarily with one-story single-family and multi-family residences, as well as some two-story apartments. Institutional and public facilities are also located within a few blocks of the project site, including the Merced County Office of Education, Valley High School, and a Police department office. The Golden State Highway (State Route [SR]-99) overpass is located two blocks to the north. Figure 5 shows images of the project site and surrounding area.

The site contains a 300,000 gallon, riveted steel water tank, and underground utilities, above-ground equipment, and buildings associated with a well (Well 3C) operating on-site, including a well pump, four 20,000 pound carbon vessels, a backup generator building, a chemical building, a transformer, a diesel convault, and a chlorine and fluorine inject vault. The site is covered in a mix of asphalt and gravel and is surrounded by a chain-link fence. There is a single vehicle access point along W 12th Street. An alley runs along the site's northern border. Figure 4 provides an aerial-view image of the project site with labeled equipment. Photos of the project site and surrounding uses are shown in Figure 5. The project site's historical setting is described in greater detail in in Section 4, *Environmental Impact Analysis*.

3.3 Cumulative Development

CEQA defines "cumulative impacts" as two or more individual events that, when considered together, are considerable or will compound other environmental impacts. Cumulative impacts are the changes in the environment that result from the incremental impact of development of the

proposed project and other nearby projects. For example, traffic impacts of two nearby projects may be insignificant when analyzed separately, but could have a significant impact when analyzed together. Cumulative impact analysis allows the EIR to provide a reasonable forecast of future environmental conditions and can more accurately gauge the effects of a series of projects.

The project's cumulative impact to historical resources is discussed in Section 4, *Environmental Impact Analysis*. Section 15130 of the *CEQA Guidelines* states that an adequate discussion of cumulative impacts should include either a list of past, present, and probable future projects producing related or cumulative impacts, or a summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. For the purpose of this EIR, which focuses on consideration of the project's potential impact to historical resources, a query was conducted of CEQAnet (http://www.ceqanet.ca.gov/QueryForm.asp) to identify planned or pending projects in Merced that would potentially impact historical resources. CEQAnet was queried for projects with activity between January 2016 and March 2018. No projects were identified with potentially significant impacts to the City's historical resources; therefore, cumulative impacts are discussed more generally.

4 Environmental Impact Analysis

This section discusses the potential environmental effects of the proposed project for the specific environmental issue areas that were identified through the Initial Study process (or otherwise determined to be appropriate to include in this analysis) as having the potential to experience significant impacts.

"Significant effect" is defined by the State CEQA Guidelines §15382 as:

> "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment, but may be considered in determining whether the physical change is significant."

The assessment of each issue area begins with the setting and is followed by the impact analysis. Within the impact analysis, the first subsection identifies the methodologies used and the "significance thresholds," which are those criteria adopted by Eureka City Schools (as the CEQA Lead Agency) or other public agencies, as determined appropriate. Other thresholds are generally recognized or have been developed specifically for this analysis. The next subsection describes each impact of the proposed project, feasible mitigation measures for significant impacts, and the level of significance after mitigation. Each effect under consideration for an issue area is separately listed in bold text, with the discussion of the effect and its significance following. Each bolded impact listing also contains a statement of the significance determination for the environmental impact as follows:

Significant and Unavoidable. An impact that cannot be reduced to below the significance threshold level with implementation of reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved per §15093 of the State CEQA Guidelines.

Significant but Mitigable. An impact that can be reduced to below the significance threshold level with implementation of reasonably available and feasible mitigation measures. Such an impact requires findings to be made under §15091 of the State CEQA Guidelines.

Less than Significant. An impact that may be adverse, but does not exceed the significance threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.

No Impact. No impact would occur.

Beneficial Impact. The project would result in a beneficial impact on the environment.

Following each environmental effect discussion is a listing of feasible mitigation measures (if required) and the residual effects or level of significance remaining after the implementation of the measures. In those cases where the mitigation measure for an impact could have a significant environmental impact in another issue area, this impact is discussed as a residual effect. The impact analysis concludes with a discussion of cumulative effects, which evaluates the impacts associated

with the proposed project in conjunction with other past, present and probable future development in the area.

4.1 Cultural Resources

The information and analysis presented in this section is based on searches of the California Historical Resources Information System (CHRIS) completed by Rincon Consultants in 2017. The results of the CHRIS record search for historic resources are provided in Appendix C.

4.1.1 Setting

Historic Background

City of Merced

The following historic background is summarized from the Merced Vision 2030 General Plan (City of Merced 2012).

The Central Pacific Railroad created a transportation corridor through the San Joaquin Valley, driving development in the region and leading to the founding of the City of Merced. Charles H. Huffman laid the grid for the new city in 1871 and the first buildings were constructed the following year in 1872. In the early 1870s, after the city was established, the county seat moved to Merced, sparking further growth. The County Courthouse was completed in 1875 and served as the anchor for a planned commercial district. Three separate residential neighborhoods were established in Merced by 1875. The City was incorporated in 1889; the original City borders encompassed the current project site. By 1890, the City's population had reached over 2,000.

After the turn of the century, growth in the City slowed until the development of the Yosemite Valley Railroad and its headquarters in 1907. The construction of the new railroad headquarters brought increased job growth and demand for goods leading to a surge in commercial and residential development. Other growth influences came from the establishment of the Merced Airport and Merced Air Field during World War II. Steady growth and development of the City led to a population of 20,000 by the year 1960. The City experienced a major surge in residential construction in 1980. Growth slowed due to recession in 1990, but has sped back up in recent years due to the construction of the University of California, Merced, a new medical center, and other large developments.

Well Tank 3

Well Tank 3 consists of a riveted steel water tank with a capacity of 300,000 gallons mounted on six steel supports set in concrete. The water tank is approximately 148 feet in height, 40 feet in diameter, and has a 30-inch wide balcony with a handrail. The tank was originally constructed in 1934 by the Crocker-Huffman Land and Water Company over an existing well that had been in operation since 1923. The tank was installed for maintaining water system pressure to provide a dependable water supply for residents and businesses. According to the site record, the structure is part of one of the only systems in the San Joaquin Valley able to maintain almost constant water pressure (Arquelles 1985). Since the tank was constructed in 1934 and acquired by the City in 1973, alterations have only consisted of routine maintenance and the updating of pumps and other associated equipment.

Well Tank 3 was recorded as a cultural resource by City of Merced staff in 1985 and given a National Register of Historic Places (NRHP) status code of 3: Appears eligible for National Register or California Register through Survey Evaluation. In 2001, Well Tank 3 was formally evaluated and recommended eligible for listing in the NRHP to the State Historic Preservation Office (SHPO) (Billat 2001). The tower was recommended eligible under Criterion A for its association with the conservation and distribution of water in the San Joaquin Valley and under Criterion C as a landmark for residents and visitors of the City and as representing a type and method of construction. The SHPO concurred that the well tank was NRHP-eligible, resulting in its automatic listing in the California Register of Historical Resources (CRHR).

Regulatory Setting

Federal

Projects that involve federal funding or permitting (i.e., have a federal nexus) must comply with the provisions of the National Historic Preservation Act of 1966 (NHPA), as amended (16 United States Code [U.S.C.] 470f). The proposed project does not have a federal nexus and, therefore, compliance with reference to the NHPA and other federal laws is provided here for informational purposes only. Cultural resources are considered during federal undertakings chiefly under Section 106 of the NHPA through one of its implementing regulations, 36 Code of Federal Regulations (CFR) 800 (Protection of Historic Properties), as well as the National Environmental Policy Act (NEPA). Properties of traditional religious and cultural importance to Native Americans are considered under Section 101(d)(6)(A) of the NHPA. Other relevant federal laws include the Archaeological Data Preservation Act of 1974, American Indian Religious Freedom Act of 1978, Archaeological Resources Protection Act of 1979, and Native American Graves Protection and Repatriation Act of 1989.

National Register of Historic Places

The National Register of Historic Places was established by the NHPA of 1966 as "an authoritative guide to be used by Federal, State, and local governments, private groups and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment" (CFR 36 CFR 60.2). The NRHP recognizes properties that are significant at the national, state, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. Criteria are provided under Section 4.1.2, *Impact Analysis.*

State

California Register of Historic Resources

The California Register of Historical Resources (CRHR) is an inventory of significant architectural, archaeological, and historical resources in the State of California. Resources can be listed in the California Register through a number of methods. State Historical Landmarks and National Register-listed properties are automatically listed in the California Register. Properties can also be nominated to the California Register by local governments, private organizations, or citizens. The evaluative criteria used by the California Register for determining eligibility are closely based on those developed by the National Park Service for the National Register of Historic Places. Criteria are provided under Section 4.1.2, *Impact Analysis.*

CEQA

CEQA requires a lead agency to determine whether a project may have a significant effect on historical resources (Public Resources Code [PRC], Section 21084.1). A *historical resource* is a resource listed, or determined to be eligible for listing, in the CRHR; a resource included in a local register of historical resources; or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (State CEQA Guidelines, Section 15064.5[a][1-3]).

City of Merced

The Merced Vision 2030 General Plan includes goals, policies, and implementing actions relating to cultural resources in its Sustainable Development chapter. The General Plan calls for the identification and preservation of archaeological sites and historic and cultural resources.

4.1.2 Impact Analysis

Significance Thresholds

CEQA Guidelines

According to Appendix G of the *State CEQA Guidelines*, impacts related to cultural resources from the proposed project would be significant if the project would:

1. Cause a substantial adverse change in the significance of an historical resource as defined in Section 15064.5
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5
3. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature of paleontological or cultural value
4. Disturb any human remains, including those interred outside of formal cemeteries

A thorough analysis of these issues relating to thresholds 2 through 4 was conducted in the Initial Study for the project. No archaeological or paleontological resources or human remains are likely to occur on site and the project would involve minimal ground disturbance on a developed site. Therefore, impacts were found to be less than significant and this EIR focuses on Cultural Resource threshold 1. See Appendix A for the Initial Study and the discussion of Cultural Resources thresholds 2 through 4.

Methodology

Historical resources are “significantly” affected if there is demolition, destruction, relocation, or alteration of the resource or its surroundings. Generally, impacts to historical resources can be mitigated to below a level of significance by following the Secretary of the Interior’s Guidelines for the Treatment of Historic Properties with Guidelines *for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior’s Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* [13 PRC 15064.6 (b)]. In some circumstances, however, documentation of a historical resource by way of historic narrative photographs or architectural drawings will not mitigate the impact of demolition below the level of significance [13

PRC 15126.4 (b)(3)]. Preservation in place is the preferred form of mitigation for a "historical resource of an archaeological nature" as it retains the relationship between artifact and context, and may avoid conflicts with groups associated with the site [PRC 15126.4 (b)(3)(A)]. Historic resources of an archaeological nature and "unique archaeological resources" can be mitigated to below a level of significance by:

- Relocating construction areas such that the site is avoided;
- Incorporation of sites within parks, greenspace, or other open space;
- "Capping" or covering the site with a layer of chemically stable soil before building; or
- Deeding the site into a permanent conservation easement. [PRC 15126.4 (b)(3)(B)].

If an archaeological resource does not meet either the historical resource or the more specific "unique archaeological resource" definition, impacts do not need to be mitigated [13 PRC 15064.5 (e)]. Where the significance of a site is unknown, it is presumed to be significant for the purpose of the EIR investigation.

Historic Resources Designation Criteria

As stated above, the *State CEQA Guidelines* define a historical resource as a resource listed, or determined to be eligible for listing, in the CRHR; a resource included in a local register of historical resources; or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (State CEQA Guidelines, Section 15064.5[a][1-3]). Consequently, a property would be considered a historical resource if it is eligible for listing in the NRHP, CRHR, or local listing.

National Register of Historic Places

A property is eligible for the NRHP if the resource:

A. Is associated with events that have made a significant contribution to the broad patterns of our history; or

B. Is associated with the lives of persons significant in our past; or

C. Embodies the distinctive characteristics of a type, period, or method of installation, or represents the work of a master, possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; or

D. Has yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting these criteria, a property must retain historic integrity, which is defined in National Register Bulletin 15 as the "ability of a property to convey its significance" (National Park Service 1990). In order to assess integrity, the National Park Service recognizes seven aspects or qualities that, considered together, define historic integrity. To retain integrity, a property must possess several, if not all, of these seven qualities, which are defined in the following manner in National Register Bulletin 15:

1. **Location.** The place where the historic property was constructed or the place where the historic event occurred;

2. **Design.** The combination of elements that create the form, plan, space, structure, and style of a property;

3. **Setting.** The physical environment of a historic property;

4. **Materials** are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
5. **Workmanship.** The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory;
6. **Feeling.** A property's expression of the aesthetic or historic sense of a particular period of time;
7. **Association. T**he direct link between an important historic event or person and a historic property.

Integrity is a "yes" or "no" determination. A historic property either has adequate integrity, or it does not. To retain historic integrity, a property will often possess several, if not all of the aforementioned aspects. Specific aspects of integrity may also be more important, depending on the criteria for which it is significant. It is important to note that historic integrity is not synonymous with condition. A building or structure can possess all or many of the seven aspects of integrity, even if the condition of the materials has degraded. Condition comes into consideration when there is a substantial loss of historic material or other character-defining features.

California Register of Historic Resources

California Register criteria are modeled on NRHP criteria. For listing in the CRHR, a property must be eligible under one or more of the following criteria and retain sufficient integrity to convey its significance:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

Project Impacts

Threshold:	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.

IMPACT CR -1 THE PROPOSED PROJECT WOULD DEMOLISH A CRHR-LISTED HISTORICAL RESOURCE. THUS, IMPACTS TO HISTORICAL RESOURCES WOULD BE SIGNIFICANT AND UNAVOIDABLE. .

The Well 3 Tank was evaluated for listing in the NRHP in 2001. The tank was identified as eligible for listing in the NRHP and the State Historic Preservation Officer (SHPO) concurred with the finding, resulting in the automatic listing of Well 3 Tank on the CRHR; it is therefore considered a historical resource as defined by CEQA. In addition, as stated in the Draft EIR for the 2030 Merced County General Plan, the Well 3 Tank is the only historically-designated water tank in the County (County of Merced 2012).

The project proposes the demolition of Well Tank 3 and therefore would result in significant and unavoidable impacts to a historical resource. Mitigation Measure CR-1 would reduce the severity of

impacts to the extent feasible by allowing for the documentation of the resource in the form of a historic documentation package.

MM HWQ-1 MM CR-1 HISTORIC DOCUMENTATION PACKAGE

Prior to issuance of demolition permits, the City shall undertake documentation of the subject property that generally follows the Historic American Building Survey (HABS) Level III requirements. The documentation shall include digital photographic recordation of the interior and exterior of the subject property, including all character-defining features, a detailed historic narrative report, and compilation of historic research. The documentation shall be undertaken by a qualified professional who meets the standards set forth by the Secretary of the Interior's Professional Qualification Standards (36 CFR, Part 61) for history or architectural history. The original archival-quality documentation shall be offered as donated material to the University of California, Merced Library where it would be available for current and future generations. Archival copies of the documentation shall also be submitted to the Merced County Library where it would be available to local researchers.

4.1.3 Cumulative Impacts

In terms of historical resources, the analysis of cumulative impacts relates to whether impacts of the project and future related projects, considered together, might substantially impact and/or diminish the number of similar historical resources, in terms of context or property type. As discussed in Section 3.3, *Cumulative Development*, there are no planned or pending projects in the City of Merced that would adversely impact any historical resources, including water tanks. In addition, as discussed above, there are no other historically-designated water tanks in Merced County. Therefore, there would be no cumulative impact to similar historical resources in the region and the project would have a less than significant cumulative impact.

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5 Other CEQA Required Discussions

This section discusses growth-inducing impacts, irreversible environmental impacts, and energy impacts that would be caused by the project.

5.1 Growth Inducing Effects

Section 15126(d) of the *CEQA Guidelines* requires a discussion of a proposed project's potential to foster economic or population growth, including ways in which a project could remove an obstacle to growth. Growth does not necessarily create significant physical changes to the environment. However, depending upon the type, magnitude, and location of growth, it can result in significant adverse environmental effects. The proposed project's growth inducing potential is therefore considered significant if it could result in significant physical effects in one or more environmental issue areas.

5.1.1 Population and Economic Growth

Population

The proposed project would involve demolition of an inactive water tank. It would not provide new residences or work space and therefore would not contribute to an increase in population.

Economic

The project would generate temporary employment opportunities during construction, which would be expected to draw workers from the existing regional work force. Therefore, construction of the project would not be considered growth-inducing.

The proposed project does not involve development of new uses that would generate permanent employment opportunities. Operation and maintenance of the site is expected to continue as under existing conditions. Therefore, the proposed project would not be growth-inducing with respect to jobs and the economy.

5.2 Removal of Obstacles to Growth

The project involves demolition of an inactive water tank in a developed portion of Merced. It does not require the expansion of infrastructure to undeveloped areas; therefore, project implementation would not remove an obstacle to growth.

5.3 Energy Effects

The *CEQA Guidelines* Appendix F requires that EIRs include a discussion of the potential energy consumption and/or conservation impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful or unnecessary consumption of energy.

The proposed project would involve the use of energy solely during demolition and site restoration activities. Energy use would be in the form of fuel consumption (e.g., gasoline and diesel fuel) to operate heavy equipment, light-duty vehicles, machinery, and generators for lighting. In addition, temporary grid power may also be provided to any temporary construction trailers or electric construction equipment. Because demolition and site restoration activities would be temporary and of short duration (approximately two months), the project's energy usage would be minimal and would not result in wasteful or unnecessary consumption of energy.

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6 Alternatives

As required by Section 15126.6 of the CEQA Guidelines, this EIR examines a range of reasonable alternatives to the proposed project that would attain most of its basic objectives (stated in Section 2.5 of this EIR), but avoid or substantially lessen any of its significant effects.

The key objectives of the project are to:

1. **Allow for safe and efficient operation of the Well 3C PCE treatment system.** Efficient operation of the PCE requires continual and substantial water flow to prevent the growth of bacteria in the carbon vessels. This requires the water tank to be disconnected as it would divert water flow from the treatment system and cause idle periods when bacteria can form.

2. **Improve vehicle access on the site.** The treatment system requires operational monitoring, maintenance, and periodic replenishment of the granular activated carbon in the vessels. Truck access within the site is currently constrained due to the site's small size and proximity of facility structures, and the tank's steel support legs and footings render a large portion of the site inaccessible to vehicles.

3. **Reduce the risk of subsidence hazards on the site.** Well 3C has a history of sand ingress into the well and tank. This can result in the formation of voids underground in the soil surrounding the well case, which contributes to soil instability. The weight of the tank and associated steel supports and concrete footings increase the risk of subsidence on the site.

4. **Reduce the risk of seismic hazards on the site.** The tank was erected in 1934. The City has no records indicating that the structure has since been modified to comply with current building and seismic codes. The water tank poses a structural hazard to life and surrounding property in the case of an earthquake, which may cause it to collapse.

The following discussion analyzes three alternatives to the proposed project, including the CEQA-required "no project" alternative. This section also identifies the environmentally superior alternative.

The following alternatives are evaluated in this EIR:

- Alternative 1: No project
- Alternative 2: Renovation of the water tank to meet current seismic standards
- Alternative 3: Relocation of the water tank to an alternative site

6.1 No Project Alternative

Description

This alternative assumes that the water tank would remain on the project site and would not be demolished. The site would continue to operate as it does under existing conditions. Improvements to on-site vehicle access and reductions in risk from seismic and subsidence hazards would not occur.

Impact Analysis

Historical Resources

This alternative would not require demolition of the existing water tank. Therefore, this alternative would not result in an impact to a historic resource. However, without improvements, the water tank would continue to deteriorate over time.

Other Impact Areas

This alternative would not require mitigation of any noise impacts that would occur under the proposed project, as there would be no demolition or site restoration activities. However, without improvements, the water tank would continue the risk of subsidence and seismic hazards on the site and would restrict vehicle access on the site. Therefore, this alternative would not fulfill three of the project's objectives. This alternative would have no other impacts.

6.2 Renovation of the Water Tank

Description

This alternative assumes that the water tank would undergo engineering evaluations to determine alterations necessary to bring the water tank into conformance with current seismic standards and that recommended alterations would be implemented to bring the water tank up to seismic code. Alterations to the water tank would be completed in a manner in compliance with the Secretary of the Interior's Standards for Rehabilitation and a historic architect would review the project during planning, design, and implementation. Except during renovation activities, which would be of short duration, the site would continue to operate under existing conditions. Improvements to on-site vehicle access and a reduction in risk from subsidence hazards would not occur. However, risk from seismic hazards would be reduced and the water tank would not be demolished.

Impact Analysis

Historical Resources

This alternative would retain the existing water tank and also complete necessary seismic improvements in a manner that would preserve the tank's historic elements. Therefore, this alternative would result in a less than significant impact to historic resources.

Other Impact Areas

Under this alternative, noise impacts would potentially be less than under the proposed project because demolition of the water tank would not occur. However, there would be some noise impacts associated with renovation activities. Impacts to other resource areas would be similar to the proposed project.

6.3 Relocation of the Water Tank

Description

This alternative considers relocation of the water tank to an alternative site. This would require that the City secure an alternative site in which to place the water tank and transport the water tank in a

manner in compliance with the Secretary of the Interior's Standards for Rehabilitation; a historic architect shall review the project during planning, design, and implementation. The site would benefit from Improvements to on-site vehicle access and a reduction in risk from subsidence and seismic hazards, and the water tank would not be demolished. However, this alternative could result in risk of seismic and subsidence hazards and other environmental impacts at an off-site location.

Impact Analysis

Historical Resources

This alternative would retain the water tank structure and execute its relocation in a manner that would preserve the tank's historic elements. Therefore, this alternative would result in a less than significant impact to the historic resource. However, without improvements, the tank would continue to deteriorate.

Other Impact Areas

Under this alternative, noise impacts would potentially be less than under the proposed project because demolition of the water tank would not occur. However, there would be some noise impacts associated with relocation and installation activities. This alternative would reduce the risk of subsidence and seismic hazards on the project site and would allow for improved vehicle access on-site. However, depending on the features of the alternative site and surrounding area, the water tank may result in similar risks of seismic and subsidence hazards at its new location. It may also contribute to additional environmental impacts relative to the proposed project, such as impacts related to aesthetics, archaeological resources, biological resources, and land use.

6.4 Environmentally Superior Alternative

The EIR determined that the project would result in a significant and unavoidable impact to a historical resource. The Initial Study determined that the project would result in a less than significant noise impact, with mitigation incorporated, and that the project would result in a less than significant impact to the other issue areas on the CEQA checklist. Each of the alternatives considered above would have a less than significant impact to a historical resource and would potentially reduce noise impacts relative to the project.

The Renovation Alternative would be the environmentally superior alternative of those considered because it would preserve the water tank as a historical resource in its current setting, reduce the project's noise impacts, and improve the structural integrity of the existing water tank, thereby reducing the risk of seismic hazard on-site. The No Project Alternative would eliminate the historical resources impacts of the proposed project, but would increase seismic and subsidence hazards compared to the proposed project. Therefore, the No Project Alternative would not be environmentally superior to the proposed project. The Relocation Alternative would reduce historical resource impacts and noise impacts, but would remove the water tank from its historical setting and would potentially introduce new environmental impacts to an alternative site. Therefore, the Renovation Alternative would be environmentally superior. Adoption of this alternative would reduce the project's significant impact to a historical resource to a less than significant level. However, this alternative would not meet project objectives 2 and 3.

7 References

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7.2 List of Preparers

RINCON CONSULTANTS, INC.

Richard Daulton, MURP, Principal
Matt Maddox, MESM, Project Manager
Smadar Levy, MESM, Associate Planner
Hannah Haas, M.A., Archaeologist
Steven Treffers, Senior Architectural Historian
Jon Montgomery, Graphics Specialist

Appendix A

Initial Study

CITY OF MERCED
PLANNING & PERMITTING DIVISION

TYPE OF PROPOSAL: CEQA Initial Study

INITIAL STUDY: #18-10 WELL 3 TANK DEMOLITION PROJECT

LOCATION: On the corner of W. 12th Street and Canal Street (511 W. 12th Street)

ASSESSOR'S PARCEL NUMBER: 031-321-015-000

Please forward any written comments by Tuesday, March 13, 2018 to:

Joseph D. Angulo, Environmental Project Manager
City of Merced
Public Works-Engineering Division
678 West 18th Street
Merced, CA 95340
anguloj@cityofmerced.org

A. Setting

The project site consists of an approximately 0.34-acre parcel located on the northwest corner of W. 12th Street and Canal Street in the City of Merced; the assessor parcel number (APN) of the site is 031-321-015. The site is covered in a mix of asphalt and gravel and contains underground utilities and above-ground equipment and buildings associated with an operating well (Well 3C), as well as a 300,000 gallon, riveted steel water tank. In addition to the water tank, the site contains a well pump, four 20,000 pound carbon vessels, a backup generator building, a chemical building, a transformer, a diesel convault, and a chlorine and fluorine inject vault. A map of the project site's regional location, an aerial-view image of the project site, and an aerial-view image of the project site with labeled equipment are provided in Attachment A.

The water tank is located on a parcel of land designated for High to Medium Density Residential uses in the City's General Plan (City of Merced 2015a) and zoned as High Medium Density Residential (R-3-1.5). The project site is directly bordered by Sacred Heart Church and auxiliary buildings to the north, a one-story single-family house to the west, Canal Street to the east, and W. 12th Street to the south. One-story multi-family residences are located to the east of the project site across Canal Street, and one-story, single-family residences are located to the south of the project site across W. 12th Street. The project vicinity is developed primarily with one-story single-family and multi-family residences, as well as some two-story apartments. Institutional and public facilities are also located within a few blocks of the project site, including the Merced County Office of Education, Valley High School, and a Police department office. The Golden State Highway (State Route [SR]-99) overpass is located two blocks to the north.

B. Project Description

The applicant is proposing to demolish an inactive water tank on the project site. The water tank was constructed in 1934 and does not meet current seismic standards. The tank used to be an active component of the City's water system, serving to maintain system pressure; however, the water tank has not been connected to the well pump since 2016. The water tank is 148 feet in height, 40 feet in diameter, and is mounted on six steel supports set in concrete; a 30-inch wide balcony with handrail circles the tank. The project would include demolition of the water tank, excavation to remove the tank's supporting concrete piers, backfilling, and grading. The exposed water tank footprint would be covered in gravel and/ or paved in asphalt, consistent with existing coverage on the site. The well and other demolition materials would be disposed of at an appropriate receiving facility and steel materials recycled in a fashion that reduces the steel to its raw material form. The demolition schedule and equipment list for demolition activities have not yet been determined.

I. INITIAL FINDINGS

A. The proposal is a project as defined by CEQA Guidelines Section 15378.

B. The project is not a ministerial or emergency project as defined under CEQA Guidelines (Sections 15369 and 15369).

C. The project is therefore discretionary and subject to CEQA (Section 15357).

D. The project is not Categorically Exempt.

E. The project is not Statutorily Exempt.

F. Therefore, an Environmental Checklist is required and has been filed.

II. ENVIRONMENTAL IMPACTS

Will the proposed project result in significant impacts in any of the listed categories?

Significant impacts consist of substantial physical impacts to the environment resulting from the project. An economic or social change by itself shall not be considered a significant impact on the environment unless it has a substantial physical effect on existing environmental conditions (Section 15372, State CEQA Guidelines). Appendix G of the CEQA Guidelines contains examples of possible significant effects.

A narrative description of all "potentially significant," "potentially significant unless mitigation incorporated," and "less than significant" project impacts are provided within this Initial Study.

A. Aesthetics

SETTING AND DESCRIPTION

The project site is located on the northwest corner of W. 12th Street and Canal Street in the City of Merced. The project site is immediately surrounded by residential uses and a church and is situated in an urban area developed primarily with one-story multi-family and single-family residences. The project site currently contains a 148-foot tall, 300,000 gallon water tank, associated equipment, and two structures. Due to the height of the water tank, it is visible from both nearby and distant viewpoints. See Attachment A for an aerial image of the project site and surrounding uses. The project site is not located within a designated scenic corridor and is not within the viewshed of a designated scenic vista. The project involves the demolition of a water tank and would not introduce new sources of light or glare to the site.

IMPACT ANALYSIS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
A. Aesthetics. Will the project:				
1) Have a substantial adverse effect on a scenic vista?				✓
2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historical buildings within a state scenic highway?				✓
3) Substantially degrade the existing visual character or quality of the site and its surrounding?				✓
4) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				✓

1) **No Impact**

The project would involve demolition of the predominant structure on the project site, a 148-foot tall, 300,000 gallon water tank. It would not involve construction of any new structures that could alter the existing viewshed in the project vicinity. The existing water tank does not significantly contribute to the scenic quality of the site or vicinity. In addition, the project site is not located in a scenic corridor designated in the City's General Plan or within the viewshed of a designated scenic corridor. Therefore, the project would have no impact on a scenic vista.

2) **No Impact**

The project site currently contains a 300,000 gallon water tank, associated equipment, and two structures. There are no scenic resources on the site, such as trees, rocks, and outcroppings. The project is not visible from any designated scenic highways, and therefore would have no impact to scenic resources within a scenic highway.

3) **No Impact**

The project would demolish an existing water tank located in a residential neighborhood. This would arguably improve the visual character of the site by removing a prominent industrial structure from an area that is otherwise primarily residential. The project would have no negative impact to the visual character of the site or surroundings relative to existing conditions.

4) **No Impact**

The project would not introduce any new operational uses to the site that could be sources of light or glare. The project would have no impact.

B. Agriculture Resources

SETTING AND DESCRIPTION

The project site is located in a developed, urban area of the City of Merced that is designated and zoned for residential uses. The site does not contain agriculture resources.

IMPACT ANALYSIS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
B. Agriculture Resources. Will the project:				
1) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and monitoring Program of the California Resources Agency, to non - agriculture?				✓
2) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
3) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				✓
4) Cause development of non-agricultural uses within 1,000 feet of agriculturally zoned property (Right-to-Farm)?				✓

1) **No Impact**

The project site is located in a developed, urban area in the City of Merced. The project site is not identified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) in California Department of Conservation's Mapping and Monitoring Program (FMMP) maps (California Department of Conservation 2015). The project would have no impact to designated farmland.

2) **No Impact**

There are no Williamson Act contract lands in this area (California Department of Conservation 2013).

3) **No Impact**

The project would involve demolition of an existing water tank in an urban area and would not result in changes to the existing environment that could result in conversion of farmland to non-agriculture use. There would be no impact.

4) **No Impact**

The project site is in an urban area with no adjacent agricultural uses. Therefore, the project would not result in the development of non-agricultural uses within 1,000 feet of agriculturally-zoned property. There would be no impact.

C. Air Quality

SETTING AND DESCRIPTION

The project is located in the San Joaquin Valley Air Basin (SJVAB), which occupies the southern half of the Central Valley and is approximately 250 miles in length and, on average, 35 miles in width. The Coast Range, which has an average elevation of 3,000 feet, serves as the western border of the SJVAB. The San Emigdio Mountains, part of the Coast Range, and the Tehachapi Mountains, part of the Sierra Nevada, are both located to the south of the SJVAB. The Sierra Nevada extends in a northwesterly direction and forms the eastern boundary of the SJVAB. The SJVAB is basically flat with a slight downward gradient to the northwest.

The climate of the SJVAB is strongly influenced by the presence of these mountain ranges. The mountain ranges to the west and south induce winter storms from the Pacific to release precipitation on the western slopes, producing a partial rain shadow over the valley. A rain shadow is defined as the region on the leeward side of the mountain where precipitation is noticeably less because moisture in the air is removed in the form of clouds and precipitation on the windward side. In addition, the mountain ranges block the free circulation of air to the east, resulting in the entrapment of stable air in the valley for extended periods during the cooler months.

Winter in the SJVAB is characterized as mild and fairly humid, and the summer is hot, dry, and cloudless. During the summer, a Pacific high-pressure cell is centered over the northeastern Pacific Ocean, resulting in stable meteorological conditions and a steady northwesterly wind.

Existing Ambient Air Quality

The California Air Resources Board (ARB) and the United States Environmental Protection Agency (EPA) monitor the following air pollutants as indicators of ambient air quality: Ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM), and lead. Because these are the most prevalent air pollutants known to be deleterious to human health and extensive health-effects criteria documents are available, they are commonly referred to as "criteria air pollutants." Table 1 describes health effects associated with criteria pollutants.

The EPA has established National Ambient Air Quality Standards (NAAQS) intended to protect public health and welfare for the following criteria air pollutants: O_3, CO, NO_2, SO_2, PM_{10} (PM with a diameter of 10 microns or less), $PM_{2.5}$ (PM with a diameter of 2.5 microns or less), and lead. In addition to the criteria pollutants covered by the NAAQS, the ARB has established California Ambient Air Quality Standards (CAAQS) for the following criteria air pollutants: sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particulate matter. In most cases, CAAQS are more stringent that NAAQS.

Table 1 Health Effects Associated with Criteria Pollutants

Pollutant	Adverse Effects
Ozone	(1) Short-term exposures: pulmonary function decrements and localized lung edema in humans and animals, risk to public health implied by alterations in pulmonary morphology and host defense in animals; (2) long-term exposures: risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (3) vegetation damage; and (4) property damage.
Carbon monoxide (CO)	Reduces oxygen delivery leading to: (1) Aggravation of chest pain (angina pectoris) and other aspects of coronary heart disease; (2) decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (3) impairment of central nervous system functions; and (4) possible increased risk to fetuses.
Nitrogen dioxide (NO_2)	(1) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (2) risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; and (3) contribution to atmospheric discoloration.
Sulfur dioxide (SO_2)	(1) Bronchoconstriction accompanied by symptoms that may include wheezing, shortness of breath, and chest tightness during exercise or physical activity in persons with asthma.
Suspended particulate matter (PM_{10})	(1) Excess deaths from short-term and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease (including asthma).
Suspended particulate matter ($PM_{2.5}$)	(1) Excess deaths from short- and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes, including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children, such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease, including asthma.[1]

1. More detailed discussions on the health effects associated with exposure to suspended particulate matter can be found in the following documents: Office of Environmental Health Hazard Assessment, Particulate Matter Health Effects and Standard Recommendations, www.oehha.ca.gov/air/toxic_contaminants/PM10notice.html#may, May 9, 2002; and EPA, Air Quality Criteria for Particulate Matter, October 2004.

Source: US EPA 2016

Both the ARB and EPA use monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of the designations is to identify those areas with air quality problems and initiate planning efforts (i.e., air quality management planning) for improvement. The three basic designation categories are nonattainment, attainment, and unclassified; unclassified is used in an area that cannot be classified on the basis of available information as meeting or not meeting the standards. In addition, the California designations include a subcategory of the nonattainment designation, called nonattainment-transitional. The nonattainment-transitional designation is given to nonattainment areas that are progressing and nearing attainment. As shown below in Table 2, the SJVAB is in nonattainment for federal ozone and $PM_{2.5}$ standards and State ozone, PM_{10}, and $PM_{2.5}$ standards.

Table 2 San Joaquin Valley Attainment Status (Federal and State)

	Designation/Classification	
Pollutant	**Federal Standards**	**State Standards**
Ozone - One Hour	No Federal Standard (See note below)	Nonattainment/ Severe
Ozone - Eight Hour	Nonattainment/ Extreme	Nonattainment
PM_{10} (Particulate Matter 10 micrometers in diameter)	Attainment	Nonattainment
$PM_{2.5}$ (Particulate Matter 2.5 micrometers in diameter)	Nonattainment	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead (Particulate)	No Designation/ Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment

Note: The Federal One Hour Ozone national Ambient Air Quality Standard was revoked on June 15, 2005.
Source: SJVAPCD 2017

San Joaquin Valley Air Pollution Control District

The San Joaquin Valley Air Pollution Control District (SJVAPCD) is responsible for managing air quality in the SJVAB, including Merced County. As required by the CAA, the SJVAPCD prepares air quality management plans that outline strategies to attain ambient air quality standards. It implements these strategies primarily through establishing rules, regulations, and guidance to reduce pollution, and issuing permits for stationary sources of air pollution. The SJVAPCD also inspects stationary sources of air pollution and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by the Federal Clean Air Act (FCAA) and the California Clean Air Act (CCAA).

Air Quality Plans

The SJVAPCD has adopted numerous attainment plans to reduce ozone and particulate precursor emissions since 1992. Most recently, SJVAPCD adopted the 2016 Ozone Plan to bring the San Joaquin Valley into attainment of the Federal 2008 8-hour ozone standard by December 31, 2031. The Ozone Plan describes a comprehensive stationary and mobile source control strategy to reduce NO_X emissions by over 60 percent between 2012 and 2031. SJVAPCD is currently preparing the 2017 $PM_{2.5}$ Plan as a single comprehensive attainment plan that addresses multiple $PM_{2.5}$ standards under the federal CAA. Most recently, SJVAPCD adopted the 2016 Moderate Area Plan for the 2012 $PM_{2.5}$ Standard, which addresses the EPA federal annual $PM_{2.5}$ standard of12 $\mu g/m^3$ established in 2012. The Moderate Area Plan addresses the fact that attainment of the 2012 $PM_{2.5}$ standard by 2021 is impracticable and is physically impossible given that critical mobile source regulations, such as the ARB truck and bus regulation and off-road engine regulation, will not be fully implemented until 2023. The Moderate Area Plan also requests reclassification of the region to Serious Non-attainment with a new attainment deadline of 2025.

In 2007, the SJVAPCD also adopted a PM_{10} Maintenance Plan to ensure that the continued attainment of EPA's PM_{10} standard.

Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI)

The SJVAPCD has developed an advisory document that provides lead agencies, consultants, and project applicants with uniform procedures for addressing air quality in CEQA documents. The GAMAQI includes a summary of applicable District rules and regulations, significance thresholds for project-level air quality impacts, and mitigation measures. The latest version of the GAMAQI was adopted on March 19, 2015.

Applicable District Rules and Regulations

The SJVAPCD has established a number of regulations and rules to reduce air pollutant emissions related to construction and operation of development projects. The following regulation would apply to emissions associated with project demolition activities:

- Regulation VIII (Fugitive PM_{10} Prohibition). Regulation VIII sets forth rules to reduce fugitive dust emissions from a variety of sources including construction, demolition, excavation, extraction, and other earthmoving activities (Rule 8021), and handling, storage, and transport of bulk materials (Rule 8031). As stated in Rule 8021, any earthmoving activities are required to limit visibility of dust emissions (VDE) to 20% opacity in accordance with SJVAPCD methodology, and comply with conditions for a stabilized surface area. Requirements to ensure 20% or less opacity include applying sufficient water to building exterior surfaces, compliance with Rule 8031, applying water within one hour of demolition to unpaved surfaces, and ceasing earthmoving activities when VDE exceeds 20% opacity due to wind.
- Rule 4102 (Nuisance). Prohibits any type of emission discharge (including odors) that would cause injury or nuisance to a considerable number of persons, the public, or to business or property.
- Rule 4601 (Architectural Coatings). Establishes VOC content limits for different types of architectural coatings to reduce VOC emissions.
- Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). Restricts the use and manufacturing of certain types of asphalt for paving and maintenance operations in order to reduce VOC emissions.
- Rule 4002 (National Emission Standards for Hazardous Air Pollutants [NESHAP]). Incorporates the federal NESHAPs, including NESHAPs for asbestos.

Thresholds of Significance

The GAMAQI establishes the following thresholds of significance for criteria pollutants emitted by project construction activities, which encompasses demolition and grading activities:

- CO – 100 tons per year (tpy)
- NO_X – 10 tpy
- ROG – 10 tpy
- SO_X – 27 tpy

- PM_{10} – 15 tpy
- $PM_{2.5}$ – 15 tpy

Methodology

Project emissions were modeled using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 assuming demolition of 915,505 tons of material on a 0.34-acre site; see Attachment B for calculations of demolition debris volume. Because the demolition schedule has not yet been determined, it was assumed that demolition activities would begin in June 2018. Assumptions for construction phases, phase duration, types of equipment, and equipment usage were based on similar projects, but were customized to the particular characteristics of this project. CalEEMod inputs and results are provided in Attachment C. It was assumed that the project would water exposed surfaces twice a day to comply with Regulation VIII requirements to reduce fugitive dust emissions. Project emissions were compared to SJVAPCD thresholds of significance for construction emissions to determine if the project would have significant air quality impacts.

IMPACT ANALYSIS

The project would involve demolition of an existing water tank and associated activities, such as excavation to remove the water tank supports, grading, hauling of waste materials, and potentially re-paving of the demolition area. Demolition activities would generate emissions primarily from the combustion of diesel used to power large equipment, as well as combustion of fuel from vehicle trips associated with demolition activities, such as employee trips and truck hauling trips. Because the project would not develop a new use on the project site, there would be no operational emissions. Therefore, the scope of this analysis is limited to air quality impacts resulting from project demolition activities.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
C. <u>Air Quality.</u> Would the project:				
1) Conflict with or obstruct implementation of the applicable air quality plan?				✓
2) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			✓	
3) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			✓	
4) Expose sensitive receptors to substantial pollutant concentrations?			✓	

5) Create objectionable odors affecting a substantial number of people?			✓	

1) **No Impact**

As stated in section 7.12 of the GAMAQI, a project with emissions below the thresholds of significance for criteria pollutants would be determined to "not conflict or obstruct implementation of the District's air quality plan." The project would generate short-term emissions associated with demolition of the water tank and associated earthwork and paving activities; it would not generate any long-term emissions.

Table 3 below summarizes the project's short-term emissions of criteria pollutants, which were modeled using CalEEMod as described above. As indicated in the table, the project would not exceed significance thresholds for criteria pollutants emitted by demolition activities. Therefore, the project would not conflict with regional air quality plans. Impacts would be less than significant.

Table 3 Project Air Pollutant Emissions (tons/year)

Pollutant	Total Emissions (tons/year)	SJVAPCD Significance Threshold	Significant Impact?
CO	0.2	100	No
NO_x	0.4	10	No
ROG	<0.1	10	No
SO_X	<0. 1	27	No
PM_{10}	9.8	15	No
$PM_{2.5}$	1.5	15	No

See Attachment C for CalEEMod outputs.

Note: Results were pulled from the "Mitigated Construction" scenario, which incorporates mitigation consistent with SJVAPCD Regulation VIII requirements to reduce fugitive dust.

2) **Less Than Significant Impact**

See response to item 3 below.

3) **Less Than Significant Impact**

In accordance with the GAMAQI, a project that emits criteria pollutants at levels below significance thresholds would not violate an air quality standard or contribute substantially to an existing or projected air quality violation. As demonstrated in Table 3, project emissions would fall below SJVAPCD significance thresholds; therefore, the project would not violate an air quality standard or contribute substantially to air quality violation.

The GAMAQI states that a project with criteria pollutants at levels below significance thresholds may still result in a cumulatively considerable net increase of a criteria pollutant. As shown in Table 3, the project would generate short-term emissions that would contribute to ozone, PM_{10},

and $PM_{2.5}$ levels in the SJVAB, which currently exceed State and/or federal AAQS. However, because short-term emissions would be minor and the project would have no operational emissions, the project would not result in a cumulatively considerable net increase of a criteria pollutant. Project impacts to regional air quality would be less than significant.

4) **Less Than Significant Impact**

The GAMAQI defines a sensitive receptor as a location where human populations, especially children, seniors, and sick persons are present and where there is a reasonable expectation of continuous human exposure to pollutants. Examples of sensitive receptors include, but are not limited to, residential land uses, schools, hospitals, convalescent homes, and day care centers.

Lead and Asbestos from Demolition Activities

The project is situated in a residential neighborhood and would potentially expose nearby residents and construction workers to asbestos and lead during demolition. The water tank was constructed in 1934 and is supported by six concrete piers that may contain asbestos, as asbestos began to be used in cement in the early 1900s (Farny and Franz 2012). In addition, the tank and auxiliary equipment may have been coated with lead-based paints, which continue to be used in non-residential buildings and structures (Haas 2014).

Asbestos is categorized as a hazardous air pollutant by the EPA (EPA 2016), and is regulated at the federal level under the Clean Air Act and at the state level under the California Occupational Safety and Health Administration (Cal OSHA); federal requirements are implemented on the regional level by the SJVAPCD. Federal asbestos requirements are listed under the Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP) (Code of Federal Regulations [CFR] Title 40, Part 61, Subpart M) and require the control of asbestos during the renovation and demolition of buildings. The asbestos NESHAPs require a thorough inspection for asbestos where demolition will occur and specifies work practices to control emissions, such as removing all asbestos-containing materials, adequately wetting all regulated asbestos-containing materials, sealing the material in leak tight containers and disposing of the asbestos-containing waste material as expediently as practicable (EPA 2016). The SJVAPCD enforces the Federal NESHAPs on a regional level and requires eligible projects to conduct an asbestos survey prior to demolition, submit an asbestos notification, demolition permit release, and pay fees (SJVAPCD 2012). At the state level, California Code of Regulations (CCR) §1529 sets requirements for asbestos exposure assessments and monitoring, methods of complying with exposure requirements, safety wear, communication of hazards, and medical examination of workers.

Lead-based materials are also regulated by Cal OSHA. The CCR §1532.1 requires testing, monitoring, containment, and disposal of lead-based materials such that exposure levels do not exceed Cal OSHA standards. Under this rule, construction workers may not be exposed to lead at concentrations greater than fifty micrograms per cubic meter of air averaged over an eight-hour period and exposure must be reduced to lower concentrations if the work day exceeds eight hours. Similarly, CCR §1529 sets requirements for asbestos exposure assessments and monitoring, methods of complying with exposure requirements, safety wear, communication of hazards, and medical examination of workers.

Diesel Exhaust from Demolition Activities

Demolition activities are anticipated to involve the operation of diesel-powered equipment, which emit diesel particulate matter (DPM) in their exhaust. In 1998, the ARB identified DPM as a toxic air contaminant (TAC). The SJVAPCD does not consider construction- and demolition-equipment diesel-related cancer risk to be an issue because of the short-term nature of construction and demolition activities. Cancer health risks associated with exposure to diesel exhaust are typically associated with chronic exposure, in which a 70-year exposure period is often assumed. Although elevated cancer rates can result from exposure periods of less than 70 years, acute exposure to diesel exhaust typically are not anticipated to result in an increased health risk because acute exposure typically does not result in the exposure concentration as necessary to result in a health risk. Because project demolition activities are expected to last less than 90 days, it is not anticipated to cause any health impacts.

5) **Less Than Significant Impact**

Demolition activities would potentially generate odors associated with fossil fuel-powered equipment, such as diesel exhaust, and petroleum odors. However, odors would be minimal and temporary in nature. The project would not introduce an operational use to the site that could generate odors. Therefore, the project would not create objectionable odors affecting a substantial number of people and impacts would be less than significant.

D. Biological Resources

SETTING AND DESCRIPTION

The project site is located in a developed area of Merced and currently contains a water tank and auxiliary equipment and structures enclosed within fencing. The site is covered entirely in pavement, concrete, or gravel-like material. There is no vegetation within the fencing; a few small shrubs are located along the perimeter of the site, outside the fencing along W. 12th Street.

IMPACT ANALYSIS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
D. Biological Resources. Would the project:				
1) Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				✓
2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				✓
3) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				✓

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
4) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				✓
5) Conflict with any local policies or ordinance protecting biological resources, such as a tree preservation policy or ordinance?				✓
6) Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan				✓

1) **No Impact**

As described above, the project site contains no biological habitat that could support wildlife species and is located in a developed area of Merced. Therefore, the project would not have a substantial adverse effect on a candidate, sensitive, or special status species.

2) **No Impact**

The project site is located in a developed, urban area. It does not contain, nor is located adjacent to, any riparian habitat or other sensitive natural community. Therefore, the project would have no impact to sensitive natural communities.

3) **No Impact**

The project site would not have any direct effect on wetlands as no wetlands have been identified in this area. All of the area surrounding the subject site has been modified from its original state and is developed with urban uses.

4) **No Impact**

The project site is located in developed area of a city and contains no biological habitat that could support the movement of migratory fish or wildlife species or serve as nursery sites. The project would have no impact to wildlife movement.

5) **No Impact**

The project site does not contain any biological resources. Therefore, activities associated with demolition of the existing water tank on-site would not damage any biological resources and the project would not conflict with any local policies or ordinances protecting biological resources. There would be no impact.

6) **No Impact**

The proposed project would not have any effects on a habitat conservation plan. There are no adopted habitat conservation plans, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan for the City of Merced.

E. Cultural Resources

SETTING AND DESCRIPTION

The City of Merced area lies within the ethnographic territory of the Yokuts people. The Yokuts were members of the Penutian language family which held all of the Central Valley, San Francisco Bay Area, and the Pacific Coast from Marin County to near Point Sur.

Merced County was first explored by Gabriel Moraga in 1806, when he named the Merced River, "El Rio de Nuestra Senora de la Merced." Moraga's explorations were designed to locate appropriate sites for an inland chain of missions. Moraga explored the region again in 1808 and 1810.

Archaeology

Archaeological sites are defined as locations containing substantial levels of resources that identify human activity. Very little archaeological survey work has been conducted within the City or its surrounding areas. Creeks, drainage, and sloughs exist in the northern expansion area of the City, and Bear Creek and Cottonwood Creek pass through the developed area. Archaeological sites in the Central Valley are commonly located adjacent to waterways and represent potential for significant archaeological resources.

Paleontology

Paleontological resources (fossils) are the remains or traces of once-living organisms. These include actual bones, shells or other organic remnants, impressions, casts, molds, mineral replacement of organisms, and indirect evidence such as tracks, trails and burrows. Fossils can range in size from microscopic (e.g., radiolarians and foraminiferans) to very large specimens (e.g., large mammal or reptile bones). Fossil remains are the only physical record of the presence of extinct organisms. As such, fossils are important evidence of the evolutionary history of both modern and extinct lineages. Fossils are also important for determining the relative ages of geologic strata and can provide unique, independent data for the correlation of sedimentary units on local and regional scales. Geologic formations are important indicators of the likelihood of encountering paleontological resources.

Historical Resources

In response to community concerns over the loss of some of the City's historical resources, and the perceived threats to many remaining resources, a survey of historical buildings was undertaken in the City in 1985. The survey focused on pre-1941 districts, buildings, structures, and objects of historical, architectural, and cultural significance. The survey area included a roughly four square-mile area of the central portion of the City.

The National Register of Historical Places, the California Historical Landmarks List, and the California Inventory of Historical Resources identify several sites within the City of Merced. These sites are listed on the Merced Historical Site Survey and maintained by the Merced Historical Society and are listed in the Historical Resources Inventory maintained by the State Office of Historical Preservation. One historical-period structure, Station No. 3 Water Tower is located in the project site and is proposed for demolition. The structure was previously determined to be eligible for listing in the National Register of Historical Places; as a result of that determination, it was automatically listed in the California Register of Historical Resources and is consider a historical resource in accordance with CEQA.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
E. <u>Cultural Resources.</u> Would the project:				
1) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	✓			
2) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?				✓
3) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				✓
4) Disturb any human remains, including those interred outside of formal cemeteries?				✓

1) **Potentially Significant Impact**

According to CEQA (Section 21084.1) a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. Historical resources are "significantly" affected if there is demolition, destruction, relocation, or alteration of the resource or its surroundings. Generally, when rehabilitation is an option, impacts to historical resources can be mitigated to below a level of significance by following the Secretary of the Interior's *Guidelines for the Treatment of Historical Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historical Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historical Buildings* [13 PRC 15064.5 (b)(3)].

The project proposes the demolition of the Station No. 3 Water Tower, identified as a significant resource by the Redevelopment Agency of the City of Merced in 1985 and determined eligible for listing in the National Register of Historical Places (NRHP) by the State Historical Preservation Office (SHPO) in 2001; it was automatically listed in the California Register of Historical Resources as a result of this SHPO determination and is therefore considered a historical resource for the purposes of CEQA. A cultural resources records search was conducted by the Central California Information Center (CCIC) at California State University, Stanislaus for the current project. No additional historical resources were identified at or near the project site. Because the project proposes the demolition of a historical resource, the impact of the project is potentially significant and will be analyzed further in an environmental impact report (EIR).

2) **No Impact**

The project is not expected to alter or destroy any archaeological resources. A cultural resources records search was conducted by the Central California Information Center (CCIC) at California State University, Stanislaus as part of the City's General Plan update. No archeological resources were identified as occurring on the project site. Ground disturbance for the proposed project

would be limited to the removal of subsurface components of the water tank (footings, etc.), and would thus be occurring in previously disturbed sediments. No impacts would result.

3) **No Impact**

The project is not expected to alter or destroy any paleontological resource, site, or unique geologic feature. The project site is located within the Riverbank geologic formation, which is considered sensitive for paleontological resources. However, ground disturbance for the proposed project would be limited to the removal of subsurface components of the water tank (footings, etc.) and would thus be occurring in previously disturbed sediments. Therefore, no impacts would result.

4) **No Impact**

The proposed project would not disturb any human remains, including those interred outside of formal cemeteries, alter or affect unique ethnic cultural values or restrict religious or sacred uses. There are no known internment facilities in the project area. Ground disturbance for the proposed project would be limited to the removal of subsurface components of the water tank (footings, etc.), and would thus be occurring in previously disturbed sediments. Therefore, no impacts would result.

F. Geology and Soils

SETTING AND DESCRIPTION

The City of Merced is located approximately 150 miles southeast of San Francisco along the west side of the southern portion of the San Joaquin Valley. The valley is a broad lowlands bounded by the Sierra Nevada to the east and Coastal Ranges to the west. As described in the City's General Plan, no liquefaction hazard zones have been identified in the City, and the City is not vulnerable to landslides as the topography is generally flat with slopes of 0 to 3 percent. As in most parts of California, however, Merced experiences seismic activity. No fault has been identified in Merced, but the City is located within 58 miles of the San Andreas Fault; the City is within 54 miles of an additional eight faults, with the closest fault, the Bowie Flat Fault, located approximately 19 miles away (City of Merced 2016a, Geocon 2013).

IMPACT ANALYSIS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
F. Geology and Soils. Would the project:				
1) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: a) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?				✓
b) Strong seismic ground shaking?				✓
c) Seismic-related ground failure, including liquefaction?				✓
d) Landslides?				✓
2) Result in substantial soil erosion or loss of topsoil?				✓
3) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?				✓
4) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				✓

5) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				✓

1) **No Impact**

The water tank ("Tank 3") proposed for demolition was constructed in 1934 does not meet current seismic standards. Therefore, the project would remove an existing seismic hazard, would be a beneficial impact. The project would not introduce a new structure or a new use that would bring people to the site. No adverse impacts would result from the project.

2) **No Impact**

The project would involve minimal earthwork associated with excavation and removal of the water tank concrete foundation and replacement of holes with fill. Soil exposure would occur for approximately two months on a small portion of a 0.34-acre site that is mostly covered in gravel or asphalt and is topographically flat. Therefore, the project would not result in soil erosion or loss of topsoil. No impacts would result from the project.

3) **No Impact**

Project activities would occur on a developed site located in an urban area with level terrain and no identified ground failure hazard, including liquefaction, subsidence, or landslide (Geocon 2013). The project would not introduce any new structures to the site that could contribute to soil instability and any areas trenched or excavated as part of project activities would be backfilled, graded, and either paved or covered in gravel. No impacts would result from the project.

4) **No Impact**

The project would not introduce a new use or structure to the site that would result in substantial risk to life or property due to the presence of expansive soils on site. No impacts would result

5) No Impact

The project would not involve use of septic tanks or alternative waste water disposal systems. The project would have no impact.

G. Greenhouse Gas Emissions

SETTING AND DESCRIPTION

Background

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period of time. Climate change is the result of numerous, cumulative sources of greenhouse gases (GHG). GHGs contribute to the "greenhouse effect," which is a natural occurrence that helps regulate the temperature of the planet. The majority of radiation from the Sun hits the Earth's surface and warms it. The surface in turn radiates heat back towards the atmosphere, known as infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping back into space and re-radiate it in all directions. This process is essential to supporting life on Earth because it warms the planet by approximately 60° Fahrenheit. Emissions from human activities since the beginning of the industrial revolution (approximately 250 years ago) are adding to the natural greenhouse effect by increasing the gases in the atmosphere that trap heat, thereby contributing to an average increase in the Earth's temperature.

GHGs occur naturally and from human activities. Human activities that produce GHGs are the burning of fossil fuels (coal, oil and natural gas for heating and electricity, gasoline and diesel for transportation); methane from landfill wastes and raising livestock, deforestation activities; and some agricultural practices. GHGs produced by human activities include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Since 1750, it is estimated that the concentrations of carbon dioxide, methane, and nitrous oxide in the atmosphere have increased over by 36 percent, 148 percent, and 18 percent respectively, primarily due to human activity. Emissions of GHGs affect the atmosphere directly by changing its chemical composition while changes to the land surface indirectly affect the atmosphere by changing the way in which the Earth absorbs gases from the atmosphere. Potential impacts of global climate change in California may include loss of snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CEC 2009).

In response to an increase in man-made GHG concentrations over the past 150 years, California has implemented AB 32, the "California Global Warming Solutions Act of 2006." AB 32 requires achievement by 2020 of a statewide GHG emissions limit equivalent to 1990 emissions and the adoption of rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions. On September 8, 2016, the governor signed Senate Bill 32, which requires the ARB to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. On December 14, 2017, the ARB adopted the 2017 Scoping Plan to provide a framework for achieving the 2030 target set forth by SB 32. Measures contained in the Scoping Plan provide for statewide emission reductions that would contribute to a decrease in long-term emissions associated with development projects.

In August 2012, the City approved a Climate Action Plan (CAP) that provides strategies and implementation measures to reduce the City's GHG emissions (City of Merced 2012a). The CAP sets a 2020 emission target for the City of 349,981 metric tons of carbon dioxide equivalent (MT of CO_2e); this is equivalent to the City's estimated 1990 emission level, which is consistent with

the statewide goal set forth in AB 32 of reducing emissions to 1990 levels by 2020. However, the City's CAP does not qualify as a greenhouse gas reduction plan under CEQA guideline 15183.5 and does not account for the emissions target established in SB 32.

The SJVAPCD provides guidance for assessing the significance of GHG emissions, which it applies to projects for which it is the lead agency. It recommends the following tiered approach:

- Tier 1: A project is considered less than significant if it complies with an adopted statewide, regional, or local plan for reduction of GHG emissions
- Tier 2: A project is considered less than significant if it complies with best performance standards (BPS),
- Tier 3: A project is considered less than significant if it would achieve a 29 percent reduction in emissions relative to business as usual (BAU).

The Tier 1 approach is not applicable to the project as Merced does not have a GHG reduction plan that meets CEQA Guidelines criteria. The Tier 2 and Tier 3 approaches are intended to address operational emissions, and, therefore also do not apply to this project; the SJVAPCD considers construction emissions, which derive primarily from fuel combustion, to be already accounted for under California's Cap and Trade bill, which requires fuel suppliers to reduce their product-related emissions (Yang 2017). Therefore, the guidance provided by the SJVAPCD for determining the significance a project's GHG impact does not apply to the project. In lieu of applicable SJVAPCD guidance, the significance of the project's emissions is assessed by comparing the magnitude of project emissions to the bright line threshold set by the Bay Area Air Quality Management District (BAAQMD) for projects of 1,100 metric tons of CO_2 equivalent (MT CO_2e) per year (BAAQMD 2017).

IMPACT ANALYSIS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
G. <u>Greenhouse Gas Emissions.</u> Would the project:				
1) Generate greenhouse gas emission, either directly or indirectly, that may have a significant impact on the environment?			✓	
2) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				✓

1) **Less Than Significant Impact**

Project demolition would generate short-term GHG emissions associated with the use of diesel-powered demolition equipment, hauling truck trips, and employee vehicle trips. Based on modeling of project emissions in CalEEMod (previously described in Section C, *Air Quality*), project demolition activities would generate a one-time annual emission of approximately 38 MT CO_2e; see Attachment C for CalEEMod outputs. The project would have no operational emissions as it would remove an existing use and would not develop a new use or alter an existing use on the project site. Project emissions would be well below the 1,100 MT CO_2e established by the BAAQMD for projects. Due to the minimal amount of emissions generated by the project and absence of operational emissions, the project would have a less than significant impact.

2) **No Impact**

As described above, the project would have no long-term operational emissions and would emit a minimal amount of GHGs during demolition activities. Consequently, it would not conflict with AB 32 or SB 32, which establish annual emission targets for 2020 and 2030, respectively. Because the project would not involve the development of a land use or alteration of a land use, it also would not conflict with the 2014-2040 Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS) prepared by the Merced County Association of Governments, which sets forth future land use and transportation strategies to meet passenger vehicle GHG emission reduction targets in accordance with SB 375. The City's General Plan and CAP contain local policies to reduce GHG emissions, but all policies apply to new development or operation of uses and do not apply to the project. Therefore, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emission of GHGs. There would be no impact.

H. Hazards and Hazardous Materials

SETTING AND DESCRIPTION

Hazardous Materials

A substance may be considered hazardous due to a number of criteria, including toxicity, ignitability, corrosivity, or reactivity. The term "hazardous material" is defined in law as any material that, because of quantity, concentration, or physical, or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment. Hazardous waste storage, transport, and disposal is regulated by a number of federal and state regulations, including the Resource Conservation and Recovery Act (RCRA), which is administered by the EPA, Hazardous Materials Transportation Uniform Safety Act of 1990, which is administered primarily by the US Department of Transportation, and California Code of Regulations Title 22, Division 4.5, Environmental Health Standards for the Management of Hazardous Waste, which is administered by the Department of Toxic Substances Control (DTSC).

Airports

The nearest airport or airstrip to the City of Merced is the Merced Regional Airport, located approximately 1.36 miles southwest of the project site. The project site lies in the airport's influence area, along the northern boundary of Compatibility Zone D, which indicates overflight areas (Merced County Airport Land Use Commission 2012). The next closest airport is the Merced County Castle Airport, located approximately six miles northwest of the project site; the project site lies outside of the Castle Airport are of influence. Potential hazards to flight include physical obstructions and other land use characteristics that can affect flight safety, which include: visual hazards such as distracting lights, glare, and sources of smoke; electronic interference with aircraft instruments or radio communications; and uses which may attract flocks of birds. In order to safeguard an airport's long-term usability, preventing encroachment of objects into the surrounding airspace is imperative.

Wildland and Urban Fire Hazards

Both urban and wildland fire hazard potential exists in the City of Merced and surrounding areas, creating the potential for injury, loss of life, and property damage. Urban fires primarily involve the uncontrolled burning of residential, commercial, or industrial structures due to human activities. Wildland fires affect grassland, brush or woodlands, and any structures on or near these fires. Such fires can result from either human made or natural causes.

IMPACT ANALYSIS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
H. <u>Hazards and Hazardous Materials.</u> Would the project:				
1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			✓	
2) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			✓	
3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			✓	
4) Be located on a site which is included on a list of hazardous materials site complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				✓
5) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?			✓	
6) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				✓
7) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			✓	

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
8) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			✓	

1) **Less Than Significant Impact**

Demolition activities of the proposed project may involve the temporary use, storage, transport, and disposal of oil, gasoline, diesel fuel, paints, solvents, and other hazardous materials. All activities would be required to adhere to all applicable federal and state health and safety standards, including Cal OSHA requirements to protect construction workers from exposure to hazardous materials and California Fire Code requirements for safe storage and use of hazardous materials during demolition. In addition, the project would not introduce an operational use to the site and thus, would not result in long-term, routine use, storage, and transport of hazardous materials. Project impacts would be less than significant.

2) **Less Than Significant Impact**

See response to item 3 below.

3) **Less Than Significant Impact**

The project would involve demolition of an existing 300,000 gallon steel water tank. As previously discussed in Section C, Air Quality, the water tank and supporting piers may contain lead and asbestos. Demolition activities would be required to comply with federal, State, and regional requirements to prevent hazardous levels of exposure to lead and asbestos during demolition activities, including compliance with Cal OSHA lead-related requirements contained in CCR §1532.1 by Cal OSHA, and asbestos requirements contained in CFR Title 40, Part 61, Subpart M and CCR §1529. In addition, as discussed under checklist item 1 above, construction activities would be required to comply with regulations regarding use, storage, transport, and disposal of hazardous materials. Therefore, the project would not create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials, or emit hazardous emissions, substances, or waste within one-quarter mile of an existing or proposed school. Project impacts would be less than significant.

4) **No Impact**

The California Department of Toxic Substances Control's (DTSC) EnviroStor database was used to search for superfund sites, leaking underground storage tanks (LUST), hazardous waste, and other cleanup sites in and near the project site. No hazardous sites were identified within a 1,000-foot radius of the project site. Therefore, the project would not result in a significant hazard to the public or the environment. There would be no impact.

5) **Less Than Significant Impact**

The project site is located in the airport influence area of the Merced Regional Airport, within compatibility zone D, which indicates that the project site would be exposed to over-flights. Over-flights would not present a safety hazard to workers involved in demolition of a water tank; rather than indicating an area where flight activities would pose a safety hazard, the compatibility zone D designation is intended to restrict land uses that could result in high levels of collateral damage should a collision occur, such as oil refineries and landfills, or that would interfere with flight activities (Merced County Land Use Commission). Therefore, no at-risk population working at the site would be exposed to hazards from flight activity. In addition, the project would benefit flight safety by removing a 148-foot tall water tank from airspace. The project would have a less than significant impact.

6) **No Impact**

The project site is not located near any private airstrips. The project would have no impact.

7) **Less Than Significant Impact**

The project would not introduce a new use or structure to the project site that would alter or otherwise interfere with a public right-of-way, or otherwise interfere with emergency response or evacuation. Demolition activities would be limited in time and scale and would be required to comply with applicable California Fire Code requirements to maintain adequate egress, fire fighter access, and otherwise ensure fire safety. Therefore, the project would not impair implementation or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant.

8) **Less Than Significant Impact**

According to the EIR prepared for the *Merced Vision 2030 General Plan*, the risk for wildland fire in the City of Merced is minimal. According to CAL FIRE, Merced County has no Very High Severity Zones in any of its Local Areas of Responsibility (LAR), including the City of Merced (CAL FIRE 2008). Because the project is located in an urban area without high risk of wildfires and would not involve a permanent new use, the project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. The project's impact would be less than significant.

I. Hydrology and Water Quality

SETTING AND DESCRIPTION

The project site is located in an urban environment with a City-managed storm drain system. The site has a flat topography and is currently covered in a mix of asphalt and gravel. Stormwater would either percolate on-site in areas of gravel cover, or would travel off-site onto W. 12th Street or Canal Street, and enter City storm drains.

IMPACT ANALYSIS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Hydrology and Water Quality. Would the project:				
1) Violate any water quality standards or waste discharge requirements?			✓	
2) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			✓	
3) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			✓	
4) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			✓	
5) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			✓	

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
6) Otherwise substantially degrade water quality?			✓	
7) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				✓
8) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				✓
9) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				✓
10) Inundation by seiche, tsunami, or mudflow?				✓

1) **Less Than Significant Impact**

The project would involve demolition of an existing water tank on a site that also contains an operating well-pump and auxiliary equipment. The project would be limited to demolition of the water tank and activities to restore the water tank footprint to a paved or graveled surface consistent with existing grade and coverage on-site. Existing equipment and structures on the site would remain intact and would not be impaired or substantially altered by project activities. Thus, the project would not alter drainage patterns on the site or vicinity. In addition, the project would not introduce a new use or structure to the site and thus would not result in any operational waste discharges to a water source, or generate any runoff or pollutants once project activities are complete.

Project demolition activities would involve some excavation and grading, as well as demolition of the water tank. These activities would expose soil and involve use of diesel-powered construction equipment that could contribute sediment and pollutants to runoff during a storm event. Project demolition activities would be required to comply with Section 15.50.120 of the Merced Municipal Code (MMC), which requires all construction projects having soil disturbance or activities exposed to storm water to, at a minimum, implement best management practices (BMP) for erosion and sediment controls, soil stabilization, dewatering, dewatering source controls, pollution prevention measures, and prohibited discharges, as applicable. Potential BMPs for the project include covering waste piles, soil piles, and exposed areas, removing demolition waste in a timely manner, ensuring construction equipment is properly maintained and in good repair, and properly storing and transporting fuel and other potential pollutant sources on site.

2) **Less Than Significant Impact**

The project would not develop an operational use that would draw upon City groundwater supplies. In addition, the project would not substantially alter groundwater recharge as the project would not substantially alter drainage on the site. Therefore, the project would not substantially deplete groundwater supplies or interfere with groundwater recharge. The project's impact to groundwater would be less than significant.

3) **Less Than Significant Impact**

See response to item 1 above.

4) **Less Than Significant Impact**

See response to item 1 above.

5) **Less Than Significant Impact**

See response to item 1 above.

6) **Less Than Significant Impact**

See response to item 1 above.

7) **No Impact**

The project would not involve development of dwelling units. Therefore, the project would not place housing in a flood hazard area.

8) **No Impact**

The project would not involve development of any new structures. Therefore, it would not place a structure in a flood hazard area that could impede or redirect flood flows.

9) **No Impact**

The project would not involve the development of any dwelling units or other structures. Therefore, it would not expose people or structures to risks from flooding.

10) **No Impact**

The project would not involve the development of any dwelling units or other structures. Therefore, it would not expose people or structures to inundation by seiche, tsunami, or mudflow.

J. Land Use and Planning

SETTING AND DESCRIPTION

The project site is located within the City Limits of Merced and within its Specific Urban Development Plan and Sphere of Influence (SUDP/SOI). The project site is currently developed with a water tank, well pump, and auxiliary equipment and structures. The site is designated for High to Medium Density Residential uses in the City's General Plan (City of Merced 2015a) and zoned High Medium Density Residential (R-3-1.5). Table 4 shows the surrounding land uses.

Table 4 Surrounding Land Uses

	Land Use	Zoning Designation	City General Plan Land Use Designation
North	Church	R-3-1.5	High to Medium Density
South	Single-Family Residential (across W. 12th Street)	R-2	Low to Medium Density
East	Multi-Family Residential (across Canal Street)	R-4	High Density
West	Multi-Family Residential (across Canal Street)	R-3-1.5	High to Medium Density

Source: Merced 2012c, Merced 2017

IMPACT ANALYSIS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
J. Land Use and Planning. Would the project:				
1) Physically divide an established community?				✓
2) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			✓	
3) Conflict with any applicable habitat conservation plan or natural community conservation plan?				✓

1) **No Impact**

The project would remove an existing water tank from the project site. It would not introduce a new structure or alter the existing use of the project site in such a way as to physically divide the surrounding residential community. The project would have no impact.

2) **Less Than Significant Impact**

The project would remove an existing use (a water tank) from the project site, rather than introduce a new land use. Therefore, the project would not conflict with land use designations and zoning for the site, which identify the project site for residential uses. In addition, the project would not conflict with the following applicable General Plan policy:

- S-2.2 Provide adequate storage facilities to insure an adequate supply of water in the event of seismic activity. An evaluation of the seismic safety of the water system, including the elevated water towers, should be completed as part of the update of the Water Master Plan.

The water tank on the project site ("Tank 3") is one of the City's four elevated storage tanks that have a combined capacity of 1.5 million gallons (MG) (Merced 2014). The other three elevated water tanks (Tanks 1, 2, and 7), remain connected to well pumps and continue to store water when water demand falls below baseline water production flow rate; however, Tank 3 no longer provides storage as it has been disconnected from Well 3C since 2016.

As stated in the City's *Water System Master Plan*, to comply with design and operational criteria, the water system must provide emergency storage of at least 100 percent of average day demand (Merced 2014). In 2012, the average day demand was 23.4 MG, while the water system, including elevated storage tanks and groundwater wells, had a total storage capacity of approximately 46 MG. Therefore, removal of the water tank, which has a storage capacity of 0.3 MG, would not substantially impact the City's emergency storage capacity. The project would have a less than significant impact in regards to applicable land use plans, goals, and policies.

3) **No Impact**

No Habitat Conservation Plans or Natural Community Conservation Plans have been adopted by the City of Merced. Therefore, there would be no impact.

K. Mineral Resources

SETTING AND DESCRIPTION

As stated in the City's General Plan, the City of Merced does not contain any mineral resources that require managed production, according to the State Mining and Geology Board (City of Merced 2016b). The City also does not contain any Mineral Resource Zones, which are areas identified as possessing minerals of state-wide or regional significance (Merced 2016).

IMPACT ANALYSIS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
K. Mineral Resources. Would the project:				
1) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓
2) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				✓

1) **No Impact**

The City of Merced does not contain mineral resources of statewide or regional importance. The project would have no impact.

2) **No Impact**

The City of Merced does not have any mineral resource recovery sites. Therefore, the project would have no impact on the availability of mineral resource recovery sites.

L. Noise

SETTING AND DESCRIPTION

Noise and Vibration Background

Noise

Noise is unwanted sound that disturbs human activity. Environmental noise levels typically fluctuate over time, and different types of noise descriptors are used to account for this variability. Noise level measurements include intensity, frequency, and duration, as well as time of occurrence. Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). Because of the way the human ear works, a sound must be about 10 dBA greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is noticeable, while 1-2 dBA changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40-50 dBA, while arterial streets are in the 50-60+ dBA range. Normal conversational levels are in the 60-65 dBA range, and ambient noise levels greater than 65 dBA can interrupt conversations.

Excessive noise poses a health concern to humans and wildlife as it interferes with key biological functions, such as sleeping, and can cause high levels of distress and irritation. Excessive noise can also interfere with noise-sensitive activities, such as music recording and learning. Some land uses are considered more sensitive to noise levels than other uses and are referred to as sensitive receptors. Sensitive receptors can include residences, schools, nursing homes, hospitals, and some public facilities, such as libraries.

The noise level experienced at a receptor depends on the distance between the source and the receptor, the presence or absence of noise barriers and other shielding devices, and the amount of noise attenuation (lessening) provided by the intervening terrain. For stationary sources, such as construction equipment, noise decreases by about six weighted decibels (dBA) for every doubling of distance. For line sources, such as motor or vehicular traffic, noise decreases by about three dBA for every doubling of the distance from the roadway. Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dBA per doubling of distance, while noise from heavily traveled roads typically attenuates at about three dBA per doubling of distance. Noise levels may be reduced by the introduction of intervening structures. For example, a single row of buildings between the receptor and the noise source reduces the noise level by about five dBA, while a solid wall or berm that breaks the line-of-sight reduces noise levels by five to 10 dBA. The construction style for dwelling units in California generally provides a reduction of exterior-to-interior noise levels of about 30 dBA with closed windows (Federal Highway Administration [FHWA] 2006).

Vibration

Vibration is a unique form of noise because its energy is carried through buildings, structures, and the ground, whereas noise is simply carried through the air. Thus, vibration is generally felt rather than heard. The ground motion caused by vibration is measured as particle velocity in inches per second and is referenced as vibration decibels (VdB) in the U.S. The vibration velocity level threshold of perception for humans is approximately 65 VdB. At high levels, vibration can pose a health concern to humans and wildlife and can also cause physical impacts to structures, particularly fragile structures. Certain types of construction equipment, such as pile

drivers and jackhammers, generate high levels of groundborne vibration. As with noise, distance and intervening structures attenuate vibration levels experienced by receptors.

Regulatory Setting

Noise

The Noise Element of the City's General Plan establishes goals and policies to protect residents from the harmful effects of excessive noise. Most of these policies apply to projects involving development of sensitive land uses and do not apply to the proposed project, which would involve only temporary demolition activities. The following policy and implementing action are applicable to the project:

- Policy N-1.3 Reduce equipment noise levels
    - Implementing Action 1.3a Limit operating hours for noisy construction equipment used in the City of Merced.

Figure 10.1 of the Noise Element provides land use compatibility guidelines for new development that establish acceptable ambient noise levels for different land uses. For residential uses and institutional uses, such as churches, an ambient noise level up to 60 dBA CNEL is considered acceptable and a noise level of 60 to 70 dBA CNEL is considered conditionally acceptable. The Noise Element also references standards contained in the State's "Model Community Noise Control Ordinance" for exterior noise from stationary sources associated with operational uses and interior noise in sleeping areas, which are provided below in Table 5. Typically, these types of standards do not apply to construction (including demolition) noise. The City has not yet adopted a Noise Control Ordinance that codifies these State recommended interior and exterior standards, and the MMC does not contain any regulations addressing construction noise or equipment noise.

Table 5 "Model Community Noise Control Ordinance" - Exterior and Interior Noise Standards

	Noise Level (dBA Hourly L50/ Leq)
Exterior Noise Thresholds for Stationary Sources	
Daytime (7 AM – 10 PM)	55
Nighttime (10 PM – 7 AM)	45
Interior Noise Thresholds for Sleeping Areas	
Nighttime (10 PM – 7 AM)	45

Source: City of Merced 2012c

Vibration

The EIR for the City of Merced 2030 General Plan EIR states that vibration levels should not exceed a peak particle velocity of 0.1 inch/ second at a distance of 25 feet (City of Merced 2015b).

Project Setting

The project site is situated in a residential neighborhood and surrounded by sensitive receptors in all directions. The nearest residential structure is located six feet to the west of the project site boundary, and the next closest sensitive receptor is a church located 41 feet to the north of the

project site boundary. These receptors are located approximately 50 feet or more from where construction would occur on site.

On September 13, 2017, Rincon Consultants, Inc. took two noise measurements to determine ambient noise levels at the project site and at nearby sensitive receptors. Noise measurements were captured on a weekday over a 15-minute period using an ANSI Type II integrating sound meter. Table 6 provides the noise measurement results. Attachment D provides noise measurement data sheets and a map of measurement locations. These noise measurements serve as a baseline for existing noise conditions in the vicinity of the project site.

Table 6 Noise Measurement Results

Measurement Number	Measurement Location	Primary Noise Source	Sample Time	Leq [15] (dBA)
1[1]	On project site, to the south of the water tank.	Roadway noise from SR-99	11:50 AM - 12:05 PM	59.1
2	In front of a residential receptor on the southern side of W. 12th Street, across from the project site.	Roadway noise from SR-99	12:11 – 12:26 PM	58.1

1. The on-site well pump was off while noise measurements were being taken.

Source: Field visit using ANSI Type II Integrating sound level meter, September 13, 2017. Attachment D provides noise measurement data sheets and measurement locations.

IMPACT ANALYSIS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
K. <u>Noise.</u> Would the project result in:				
1) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				✓
2) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			✓	
3) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				✓
4) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		✓		

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
5) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				✓
6) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				✓

1) **No Impact**

The project would not introduce a new use or alter an existing use on the project site. Therefore, the City's land use compatibility guidelines do not apply to the project and the project would not generate long-term noise from operational sources that would be subject to State-recommended exterior or interior noise levels referenced in the City's General Plan. Therefore, the project would not be subject to any local noise standards. There would be no impact.

2) **Less Than Significant Impact**

Project demolition activities would involve operation of typical construction equipment and would not require the use of equipment that generate high levels of ground-borne vibration, such as pile drivers or vibratory rollers. Table 8 shows the vibration levels associated with the highest-impact construction equipment that would be used by the project. None of the equipment would generate vibration levels exceeding the threshold level presented in the EIR for the General Plan of 0.1 inches/second peak particle velocity at 25 feet. Therefore, the project would have a less than significant environmental impact due to groundborne vibration.

Table 7 Vibration Levels by Phase

Construction Equipment	Peak Particle Velocity at 25 feet
Bulldozer (large)	0.089
Bulldozer (small)	0.003
Loaded Trucks	0.076
Jackhammer	0.035

Source: Harris Miller Miller & Hanson, Inc. 1995

3) **No Impact**

The project would not introduce a new use or alter an existing use on the project site. Therefore, it would not have a long-term impact on ambient noise levels. There would be no impact.

4) **Less Than Significant Impact with Mitigation**

Project demolition activities would generate noise from the operation of heavy construction equipment and demolition itself. Thus, the project would cause a temporary increase ambient noise levels on the project site and vicinity during demolition activities, which would extend for approximately 30 days.

To determine the project's impact on ambient noise, construction noise levels were modeled by phase for the two sensitive receptors nearest to the project site using the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM). RCNM predicts noise levels at receptors for a variety of construction operations using reference noise levels for standard construction equipment and acoustical propagation formulas. Because both the residential building to the west and the church building to the north of the project site are located approximately 50 feet from the water tank footprint, a single receptor was modeled at a distance of 50 feet. RCNM was run for two construction phases (Site Clearing and Demolition and Site Restoration) using the same equipment list used for emissions modeling in CalEEMod, plus a jackhammer, which may potentially be used to remove concrete supports; the complete equipment list is provided in Attachment C. Assumptions for construction phases, phase duration, types of equipment, and equipment usage were based on similar projects, but were customized to the particular characteristics of this project. Noise Measurement 2 (58.1 Leq dBA) was input as the baseline noise level.

Table 8 Construction Noise Levels by Phase

Construction Phase	Equipment	Construction Noise Level (dBA Leq) at 50 feet
Site Clearing and Demolition	Concrete/Industrial Saw, Excavator, Aerial Lift, Dozer, Generator, Tractor/ Backhoe/Loader	89
Site Restoration	Tractor/ Backhoe/Loader, Paving Equipment	85

See Attachment E for RCNM worksheets. See Attachment C for the construction equipment list generated by CalEEMod.

Table 8 shows estimated noise levels during each construction phase at the two nearest sensitive receptors, which are located approximately 50 feet from the construction area. Construction activities would expose these sensitive receptors to noise levels as high as 88 dBA Leq, which substantially exceeds the existing ambient noise level in the project vicinity of approximately 58 dBA Leq.

Mitigation Measures:

The Noise Element's Implementing Action 1.3a directs the City to reduce equipment noise levels by limiting operating hours for noisy construction equipment. In accordance with Action 1.3a, Mitigation Measure N-1 would restrict the hours when project demolition activities can take place. This would limit construction noise impacts to daytime hours, when most residents would be awake and many residents would be away from home. Mitigation Measure N-2 would further

reduce construction noise impacts by requiring that control measures be applied to construction equipment and demolition activities. Demolition activities would be temporary, lasting approximately 30 days, and would not result in a permanent, substantial increase in ambient noise levels. Therefore, the project would be consistent with applicable noise standards and, the project's temporary impact to ambient levels would be reduced to a less than significant level with incorporation of Mitigation Measures N-1 and N-2.

N-1) **Prohibited Hours for Construction Activity.** Project construction activities shall be prohibited outside the hours of 7 AM to 6 PM Monday through Friday, and 9 AM to 6 PM on Saturdays. Construction activities shall be prohibited on Sundays and federal holidays.

N-2) **Construction Noise Reduction Measures.** The construction contractor shall implement the following measures to reduce construction noise impacts on nearby sensitive receptors:

- Construction equipment shall be properly maintained per manufacturers' specifications and fitted with the best available noise suppression devices (i.e., mufflers, silencers, wraps, etc.).
- All impact tools shall be shrouded or shielded, and all intake and exhaust ports on power equipment shall be muffled or shielded.
- Electrical power shall be used to run air compressors and similar power tools.
- All fixed and/or stationary equipment (e.g., generators, compressors, rock crushers, cement mixers) shall be located as far as possible from noise-sensitive receptors.

5) **No Impact**

The project does not involve construction of any habitable structures, or any structures where people would work; therefore, it would not expose people residing or working in the project area to excessive airport noise levels. In addition, the project site lies outside of the airport's 55 CNEL noise contour and would not be exposed to excessive noise associated with airport activity (City of Merced 2012c). Therefore, the project would not expose people residing or working in the project area to excessive airport noise levels. There would be no impact.

6) **No Impact**

The project site is not located within the vicinity of a private airstrip. Therefore, there would be no impact.

M. Population and Housing

IMPACT ANALYSIS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
L. Population and Housing. Would the project:				
1) Induce substantial population growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				✓
2) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				✓
3) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				✓

1) **No Impact**

The project would involve demolition of a water tank. It would not involve development of new dwelling units, commercial space, or other type of structure or infrastructure that would support population growth, displace existing housing, or displace residents. There would be no impact to population and housing.

2) **No Impact**

See response to item 1 above.

3) **No Impact**

See response to item 1 above.

N. Public Services

IMPACT ANALYSIS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
M. Public Services. Would the project:				
1) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:				
Fire Protection?				✓
Police Protection?				✓
Schools?				✓
Parks?				✓
Other Public Facilities?				✓

1) **No Impact**

As discussed in Section L, *Population and Housing*, the project would not contribute to population growth; the project would not involve development of new dwelling units or work spaces. Therefore, it would not increase demand for public services and no new or expanded public services facilities would be required as a result of the project. The project would have no impact on the environment associated with provision of public services.

O. Recreation

IMPACT ANALYSIS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
N. Recreation. Would the project:				
1) Increase the use of neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				✓
2) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				✓

1) **No Impact**

As discussed in Section L, *Population and Housing*, the project would not contribute to population growth. Therefore, it would not increase use of recreational facilities or contribute to deterioration of existing facilities. The project would have no impact on recreational facilities.

2) **No Impact**

The project does not include recreational facilities. Because the project would not contribute to population growth, it would not contribute to the need for construction or expansion of recreational facilities. The project would have no impact on the environment associated with provision of recreational facilities.

P. Transportation/Traffic

SETTING AND DESCRIPTION

The project is located at the northwest corner of W. 12th Street and Canal Street, which are both local roads. Vehicle access to the site is provided along W. 12th Street.

IMPACT ANALYSIS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
O. Transportation/Traffic. Would the project:				
1) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e. result in a substantial increase in either vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?				✓
2) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roadways?				✓
3) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				✓
4) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?				✓
5) Result in inadequate emergency access?				✓
6) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?				✓

1) **No Impact**

The project would not develop any new operational uses on the project site. Therefore, the project would not generate new vehicle trips that would contribute to area traffic. The project would have no impact.

2) **No Impact**

See response to item 1.

3) **No Impact**

The project would not result in any changes to air traffic patterns. The project would remove an existing structure from a site within the over-flight zone (Compatibility Zone D) of the Merced Regional Airport.

4) **No Impact**

The project would not introduce new physical structures to the project site or alter existing features that could result in a design hazard. The project would involve removal of an existing water tank and grading and covering of the tank footprint with gravel and/or asphalt in a manner consistent with the rest of the site. All other existing equipment and structures on-site would remain intact and would not be altered by the project. The project would have no impact associated with design hazards.

5) **No Impact**

The project site is 0.34 acre with a chain link fence around its perimeter. The project site contains a well pump and associated above-ground equipment. Most of the site is exposed, except for two small structures—a chemical building and a structure to house the backup generator (see Attachment A, Figure A-3). The project site is bounded by local roads to the south and east, and by an alley to the north. Vehicle access is provided along W. 12th. Emergency response would be able to access the site from the vehicle access gate, as well as the adjacent roadways and alley, if necessary. Therefore, the project would not obstruct emergency access to the site.

6) **No Impact**

The project would not conflict with any policies, plans, or programs supporting alternative transportation as it would not develop any new structures, generate vehicle trips, or contribute to population growth.

Q. Tribal Cultural Resources

SETTING AND DESCRIPTION

The project is located at the northwest corner of W. 12th Street and Canal Street, which are both local roads. Vehicle access to the site is provided along W. 12th Street.

IMPACT ANALYSIS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
O. Tribal Cultural Resources. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
1) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Cod Section 2024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.				✓

1) **No Impact**

The project site does not contain a tribal cultural resource listed, or eligible for listing in a register of historical resources or a resource identified by the lead agency. The City has not received a request for notification from any Native American tribes traditionally and culturally affiliated with the geographic area of the proposed project; thus, tribes were not required to be contacted for consultation, in accordance with AB 52.

R. Utilities and Service Systems

IMPACT ANALYSIS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
P. Utilities and Service Systems. Would the project:				
1) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				✓
2) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				✓
3) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				✓
4) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				✓
5) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				✓
6) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			✓	
7) Comply with federal, state, and local statues and regulations related to solid waste?			✓	

1) **No Impact**

The project would not develop a new operational use or alter an existing operational use on the project site. Therefore, the project would not generate wastewater and would have no impacts related to wastewater treatment quality.

2) **No Impact**

See response above.

3) **No Impact**

The project would not develop a new operational use or substantially alter drainage on the project site. Therefore, the project would not generate additional runoff and would not require the construction of new storm water drainage facilities or expansion of existing facilities. The project would have no impact related to the provision of storm water drainage facilities.

4) **No Impact**

The project would not develop a new operational use or alter an existing operational use on the project site. Therefore, the project would have no operational water demand. The project would have no impact related to water supply.

5) **No Impact**

Refer to item 1 above.

6) **Less Than Significant Impact**

The City of Merced is served by the Highway 59 Landfill and the Highway 59 Compost Facility, located at 6040 North Highway 59. The County of Merced is the contracting agency for landfill operations and maintenance, while the facilities are owned by the Merced County Association of Governments. The City of Merced provides services for all refuse pick-up within the City limits.

The project would not involve the development or alteration of an operational use that would generate waste continually. However, demolition of the water tank would generate short-term demolition waste that would require disposal in a landfill or, potentially, a hazardous waste disposal site (e.g., if materials are found to contain lead, asbestos, or other hazardous material). The City of Merced is served by the Highway 59 Landfill, which had a remaining capacity of 28,025,334 cubic yards (cy) as of September 2005; the landfill is expected to cease operations in 2030 (CalRecycle 2005). Based on the dimensions of the water tank, the project would generate approximately 500 cubic yards of demolition waste, which comprises less than 0.002 percent (i.e., 500 cy / 28,025,335 cy x 100) of remaining landfill capacity; see Attachment B for calculations of project demolition waste. Therefore, the project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. The project would have a less than significant impact.

7) **Less Than Significant Impact**

All demolition activities on the site would be required to comply with all local, state, and federal regulations regarding solid waste, including recycling, as a condition of approval. The project would have a less than significant impact.

S. Mandatory Findings of Significance

IMPACT ANALYSIS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Q. Mandatory Findings of Significance. Would the project:				
1) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	✓			
2) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects?)			✓	
3) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			✓	

1) **Potentially Significant Impact**

The project would have no impact to biological habitat, wildlife or plant species, or natural communities. However, the project would involve demolition of a water tank currently listed in the California Register of Historical Resources. Therefore, the project would have a potentially significant impact to an important historical example. This issue will be analyzed in greater detail in an EIR.

2) **Less Than Significant Impact**

As described in the discussion of environmental checklist Sections A through R, the project would have no impact, a less than significant impact, or a less than significant impact with mitigation incorporated with respect to all environmental issues, except for historical resources. For some resource areas (i.e., agricultural, biological, mineral), the project would have no impact

relative to existing conditions and thus would not contribute to cumulative impacts to these areas. Other issues (e.g., geology, hazards and hazardous materials, cultural resources) are inherently site-specific in nature and an impact at one site does not create additive effects at another site.

There are no other planned or pending projects in the immediate vicinity of the project site that would have long-term impacts to area-specific resources, such as aesthetic resources. A number of commercial/ retail projects, however, are planned within a quarter mile of the project, north of SR-99 near Martin Luther King Boulevard and 16th Street. While construction of these projects could contribute cumulatively to short-term noise in the project area, the project's contribution would be less than significant with mitigation incorporated and therefore, the project would not have a significant cumulative impact. Construction traffic from other area projects would not be a concern, as construction vehicles would likely access pending development project sites via SR-99, which lies to the north of the project site, and would not need to pass through the project area's residential neighborhood. In addition, the project would not introduce or alter an operational use and therefore would not contribute to cumulative long-term impacts related to public facilities and VMT, such as utilities, public services, air quality, and greenhouse gases. Therefore, the project's cumulative impacts would be less than significant.

3) **Less Than Significant Impact**

As described in the discussion of environmental review checklist Sections A through R, the project would have no impact, a less than significant impact, or a less than significant impact with mitigation incorporated with respect to all environmental issues, with the exception of a potentially significant impact to a historical resource. Therefore, the project would not have environmental effects which would cause direct or indirect substantial adverse effects on human beings, such as effects related to air quality, greenhouse gas emissions, hazardous materials, geological hazards, water quality, and traffic hazards. The project would have a less than significant impact.

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U. Environmental Determination

On the basis of this initial environmental evaluation:

X I find that the project could have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

_____ February 5, 2018

Kim Espinosa, Planning Manager
Environmental Coordinator
City of Merced

Distributed for Public Review: February 12, 2018

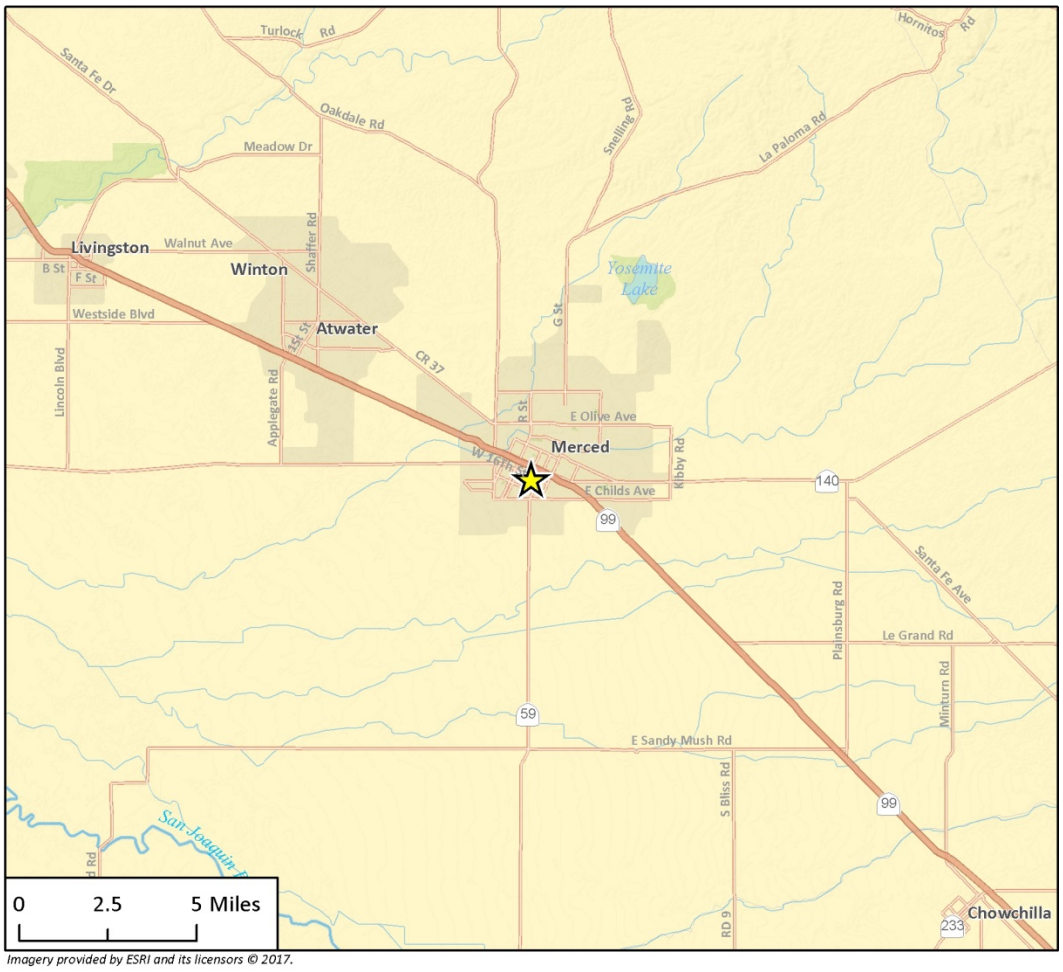
Attachments:

A) Regional Location, Project Location, and Project Site Equipment Maps
B) Demolition Debris Calculations (includes water tower engineering plans)
C) Air Quality and Greenhouse Gas Emissions Modeling (CalEEMod)
D) Noise Measurement Data
E) Construction Noise Modeling (RCNM)

ATTACHMENT A

Regional Location, Project Location, and Project Site Equipment Maps

Figure A-1. Regional Location



Imagery provided by ESRI and its licensors © 2017.

★ Project Location

N

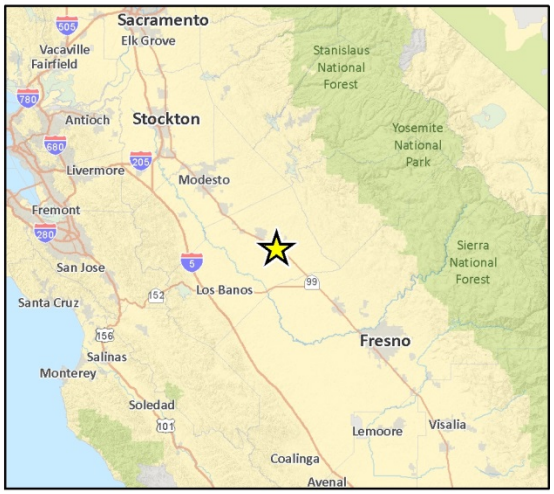
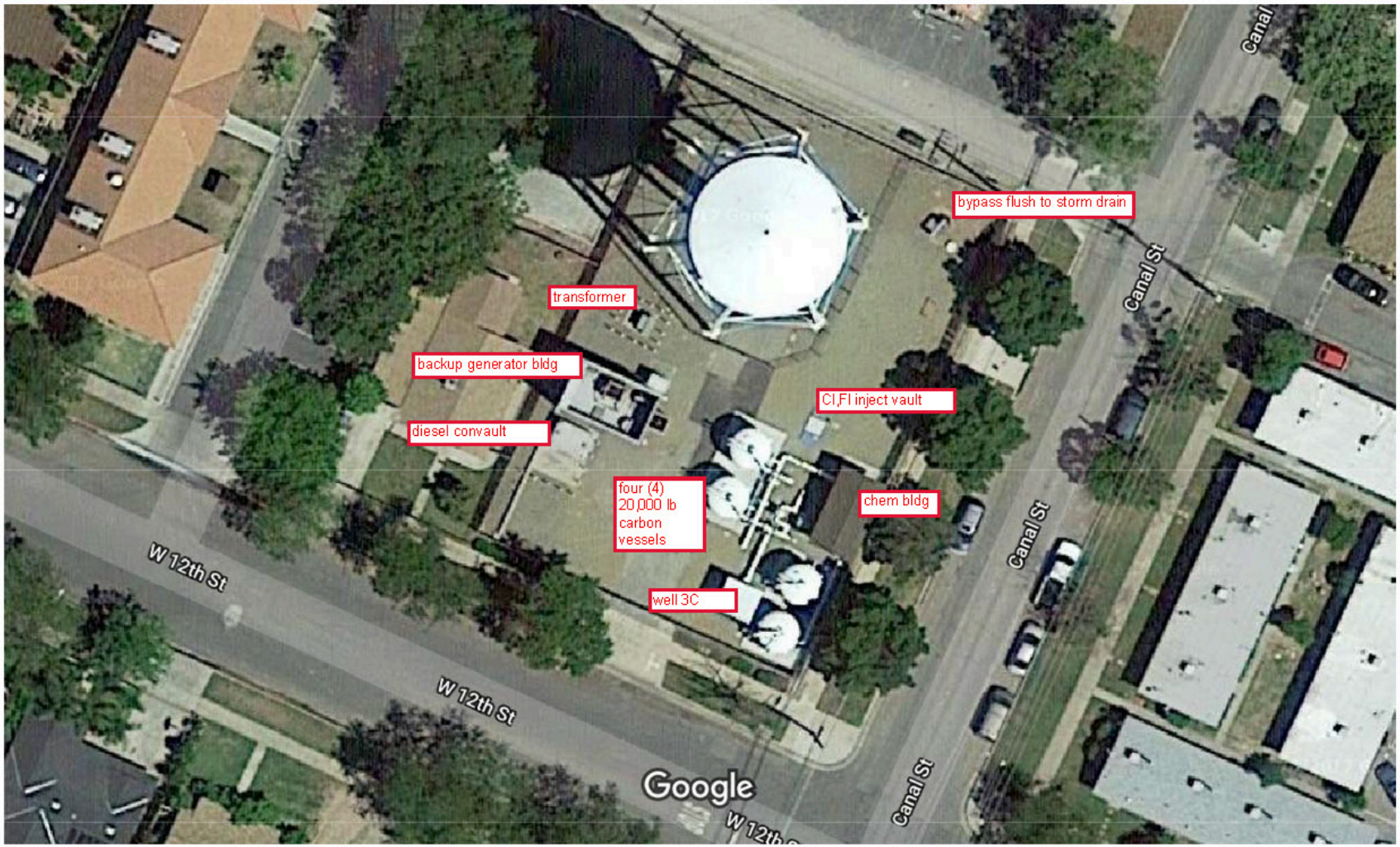


Fig 1 Regional Location

Figure A-2. Project Location

Figure A-3. Project Site Equipment



Source: City of Merced

ATTACHMENT B

Demolition Debris Calculations

Demolition Debris Calculations

Summary		
Volume of steel (i.e., tower components only)	248.4731361	cy
Weight of cast steel* (lbs)	3312500	lbs
Weight of steel (tons)	1656.25	tons
Volume of concrete	244.999755	cy
Weight of concrete (from supports)*	913849.0862	tons
Total volume of debris	**493.4728911**	cy
Total weight of debris	**915,505.34**	tons

* Source of conversion factors: Swaploader U.S.A. LTD. Cubic Yardage Calculation Sheet - taken from EPA and NTEA. https://www.swaploader.com/wp-content/uploads/2015/02/Cubic_Yardage_Chart.pdf. (aceessed December 2017)

Tank			
Given			
radius		20	feet
height of tank		24	feet
height of finial		12	feet
thickness of steel		1	inch
Calculations			**Area (feet)**
bottom of tank (circle)	∏r^2		1256.637
body of tank (rolled rectangle)	2∏r*h		3015.929
finial (cone)	∏r(r+sq. rt (h^2 + r^2))		2722.115
tank bottom (half of a sphere)	1/2(4*∏r^2)		2513.274
Tower cylinder			
radius		2	feet
height		112	feet
			Area (feet)
tower cylinder (rolled rectangle)	2∏r*h		1407.434
handrail			
height		30	in
radius		25	feet
			Area (feet)
rolled rectangle	2∏r*h		392.6991
Posts - 6			
height		148	feet
radius		17	inches

volume of a cylinder 6 posts	∏r^2*h		
Cylinder rods -12			
height		25	feet
radius		0.75	in
volume of a cylinder 12 rods	∏r^2*h		
Tower rods -36			
height		41	feet
radius		1.5	inch
volume of a cylinder 36 rods	∏r^2*h		
Concrete supports-6			
base 1		6	feet
base 2		15	feet
height		7	feet
length		15	feet
Volume of trapezoidal prism 6 supports	(b1+b2)/2 x h x l		

0.0833 foot

Volume (cu. Ft.)	Volume (cu. Yd.)
104.6778672	3.876954168
251.2268813	9.304690004
226.7521889	8.398220819
209.3557344	7.753908336

Volume (cu. Ft.)	Volume (cu. Yd.)
117.2392113	4.342188668

2.5 feet

Volume (cu. Ft.)	Volume (cu. Yd.)
98.17477042	3.636098972

(guestimate)

1.42 feet

Volume (cu. Ft.)	Volume (cu. Yd.)
937.5366992	34.72354673
	208.3412804

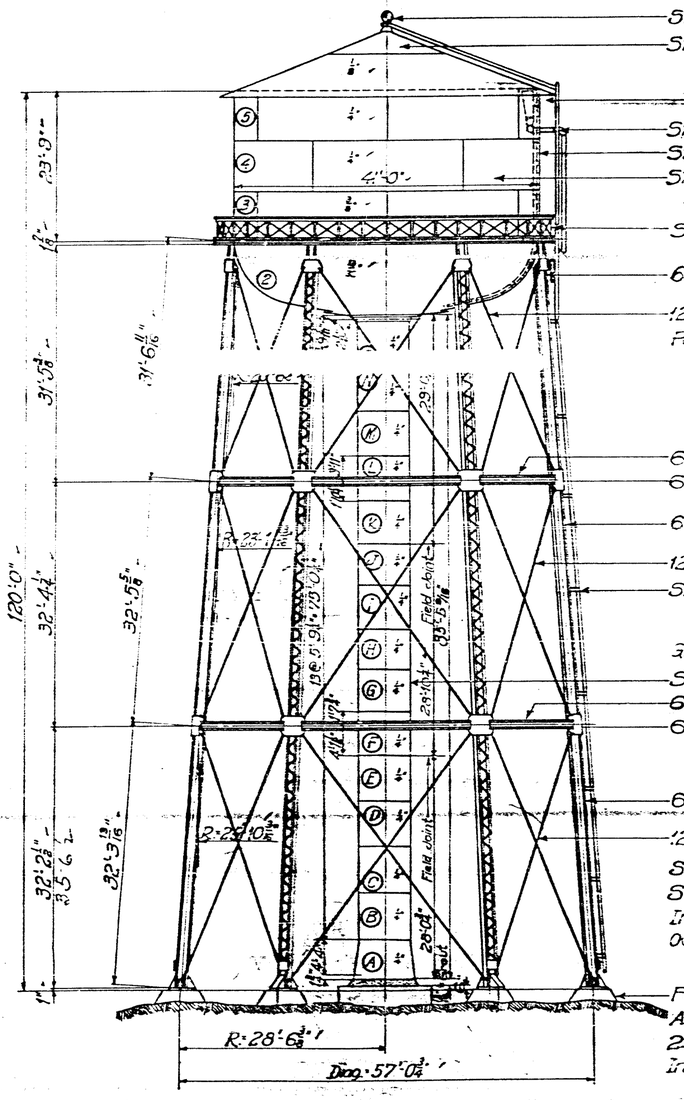
0.0625 feet

Volume (cu. Ft.)	Volume (cu. Yd.)
0.306796158	0.011362809
	0.136353711

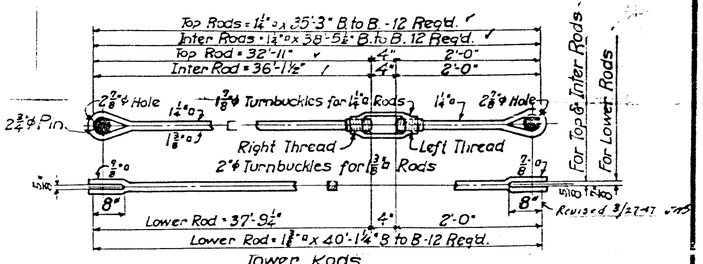
0.125 feet

Volume (cu. Ft.)	Volume (cu. Yd.)
2.012582794	0.074540029
	2.683441041

Volume (cu. Ft.)	Volume (cu. Yd.)
1102.5	40.8332925
	244.999755



For Connections in Head Pl. see Sheet No. 4



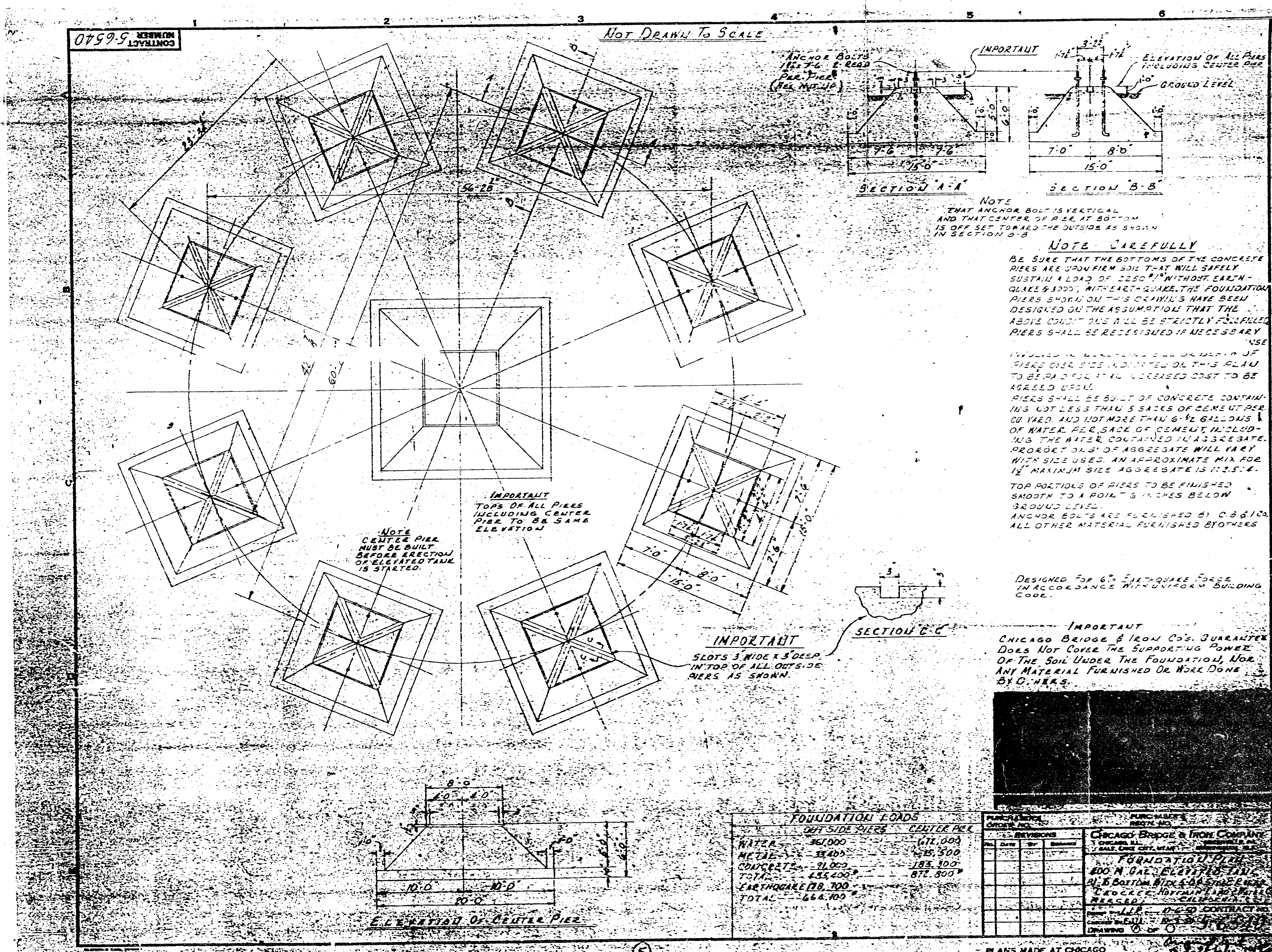
DRAWINGS	
INDEX	DESCRIPTION
Sheet #1	General Plan
Sheet #3	Roof
1:1-690	Roof Framing
22-480	Tank Revised
Sheet #4	Cylinder
3-480	Balcony and Hand Rail
44-400	No. 2 Plates - Revised
55-240	Top Posts Revised
66-250	Inter Posts Revised
77-240	Lower Posts Revised
88-240	Struts
9-181	6" Blow Off Valve
0-209	Inside Ladder
0-200	Revolving Ladder
Sheet #2	Foundation
9-161	Manhole Cover
9-111	Pins (Revised)
Sheet #5	Overflow
0-101	Post Ladder

General Plan
For 300,000 Gallon Ry. Tank & Tower
With 41'-0" Cylinder
Height to Balcony = 96'-3"
For the Crocker-Huffman Land & Water Co.
At Merced, California.
Chicago Bridge & Iron Works

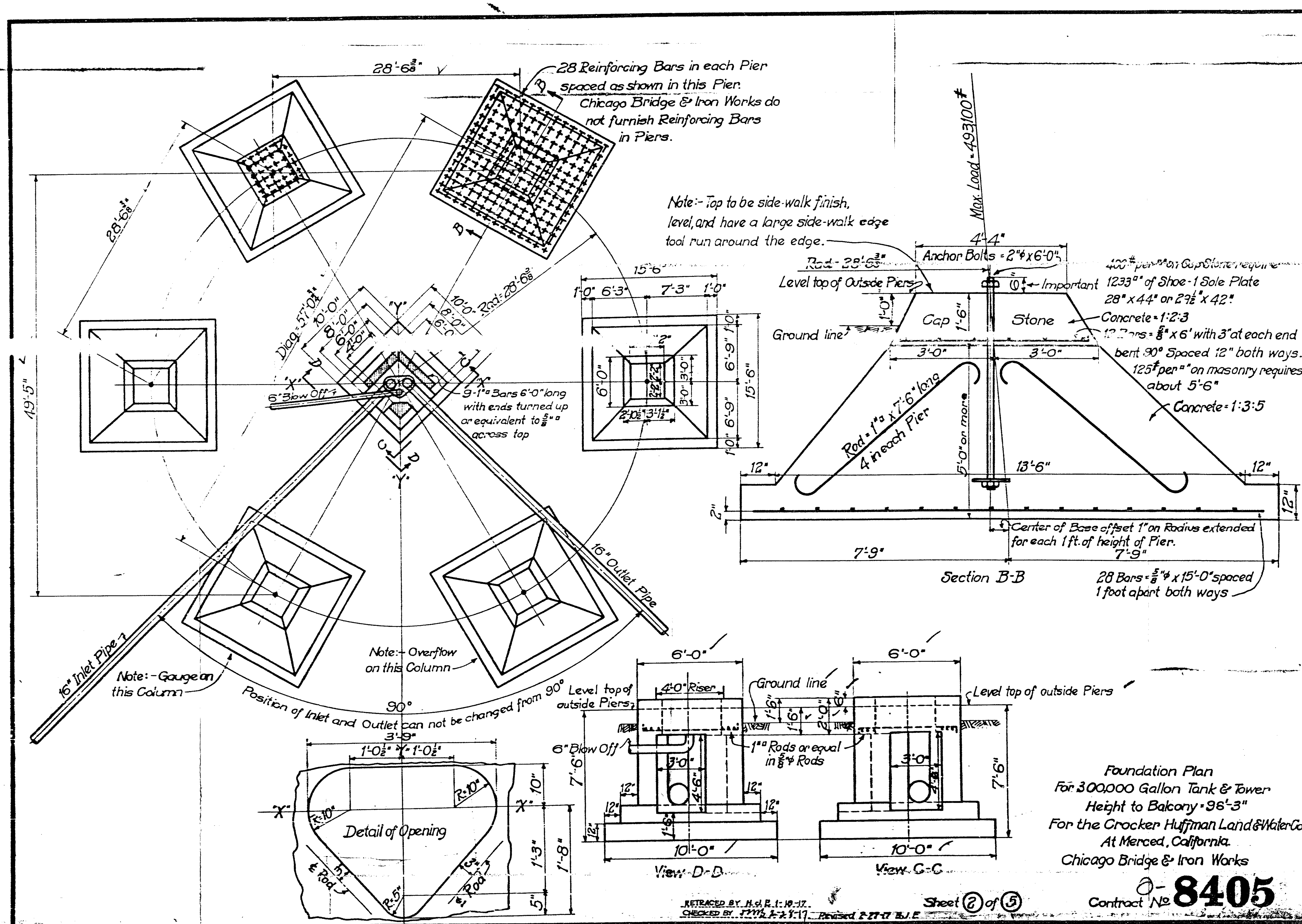
Revised 2-28-17 H.J.E. MADE BY H.J.E. 12-20-16 CHECKED BY [illegible] Rod Detail added 3-2-17 H.J.E.

Sheet (1) of (6) Contract No. 0-8405

(1)



CONTRACT NUMBER 5-6540
NOT DRAWN TO SCALE
ANCHOR BOLTS 1 1/2" x 7'-6" 2 REQ'D PER PIER (BEL NUT UP)
IMPORTANT
ELEVATION OF ALL PIERS INCLUDING CENTER PIER
GROUND LEVEL
7'-6" 7'-6" 15'-0"
SECTION "A-A"
7'-0" 8'-0" 15'-0"
SECTION "B-B"
NOTE
THAT ANCHOR BOLT IS VERTICAL AND THAT CENTER OF PIER AT BOTTOM IS OFF SET TOWARD THE OUTSIDE AS SHOWN IN SECTION B-B
NOTE CAREFULLY
BE SURE THAT THE BOTTOMS OF THE CONCRETE PIERS ARE UPON FIRM SOIL THAT WILL SAFELY SUSTAIN A LOAD OF 2250 #/□' WITHOUT EARTHQUAKE & 3000 # WITH EARTHQUAKE. THE FOUNDATION PIERS SHOWN ON THIS DRAWING HAVE BEEN DESIGNED ON THE ASSUMPTION THAT THE ABOVE CONDITIONS WILL BE STRICTLY FULFILLED. PIERS SHALL BE REDESIGNED IF NECESSARY ... NSE
INVOLVED IN ... PIERS OVER SIZE ... ON THIS PLAN TO BE PAID FOR AT ... INCREASED COST TO BE AGREED UPON.
PIERS SHALL BE BUILT OF CONCRETE CONTAINING NOT LESS THAN 5 SACKS OF CEMENT PER CU. YARD. AND NOT MORE THAN 6-1/2 GALLONS OF WATER PER SACK OF CEMENT, INCLUDING THE WATER CONTAINED IN AGGREGATE. PROPORTIONS OF AGGREGATE WILL VARY WITH SIZE USED. AN APPROXIMATE MIX FOR 1 1/2" MAXIMUM SIZE AGGREGATE IS 1:2.5:4.
TOP PORTIONS OF PIERS TO BE FINISHED SMOOTH TO A POINT 6 INCHES BELOW GROUND LEVEL.
ANCHOR BOLTS ARE FURNISHED BY C.B.&I.CO. ALL OTHER MATERIAL FURNISHED BY OTHERS
56'-2 3/8"
60'-4"
IMPORTANT
TOPS OF ALL PIERS INCLUDING CENTER PIER TO BE SAME ELEVATION
NOTE
CENTER PIER MUST BE BUILT BEFORE ERECTION OF ELEVATED TANK IS STARTED.
7'-0" 8'-0" 15'-0" 7'-6" 7'-6"
IMPORTANT
SLOTS 3" WIDE x 3" DEEP IN TOP OF ALL OUTSIDE PIERS AS SHOWN.
SECTION C-C
DESIGNED FOR 6% EARTHQUAKE FORCE IN ACCORDANCE WITH UNIFORM BUILDING CODE.
IMPORTANT
CHICAGO BRIDGE & IRON CO'S. GUARANTEE DOES NOT COVER THE SUPPORTING POWER OF THE SOIL UNDER THE FOUNDATION, NOR ANY MATERIAL FURNISHED OR WORK DONE BY OTHERS.
[redacted]
8'-0" 4'-0" 4'-0"
10'-0" 10'-0" 20'-0"
ELEVATION OF CENTER PIER
FOUNDATION LOADS
	OUTSIDE PIERS	CENTER PIER
WATER	361,000	672,000
METAL	33,400	15,500
CONCRETE	91,000	185,300
TOTAL	485,400 #	872,800 #
EARTHQUAKE	178,700	
TOTAL	664,100 #	
PURCHASER'S ORDER NO.
PURCHASER'S REQ'N NO.
REVISIONS
NO. DATE BY REMARKS
CHICAGO BRIDGE & IRON COMPANY
CHICAGO, ILL.
SALT LAKE CITY, UTAH
FOUNDATION PLAN
400 M GAL. ELEVATED TANK
ELLIPSOIDAL BOTTOM WITH C.B. STEEL RISER
CROCKER HOFFMAN LAND & WATER CO.
MERCED, CALIFORNIA
DRAWN BY L.J.R. 10-6-50
CHECKED BY E.J.H. 10-9-50
DRAWING 1 OF 1
CONTRACT NO. 5-6540
PLANS MADE AT CHICAGO



28 Reinforcing Bars in each Pier spaced as shown in this Pier. Chicago Bridge & Iron Works do not furnish Reinforcing Bars in Piers.
Note:- Top to be side-walk finish, level, and have a large side-walk edge tool run around the edge.
Max Load = 493100#
Anchor Bolts = 2"φ x 6'-0"
Level top of Outside Piers
Important
Ground line
Cap
Stone
Concrete = 1:2:3
Concrete = 1:3:5
Rod = 1"□ x 7'-6" long 4 in each Pier
5'-0" on more
Center of Base offset 1" on Radius extended for each 1 ft. of height of Pier.
Section B-B
28 Bars = 5/8"φ x 15'-0" spaced 1 foot apart both ways
9-1"□ Bars 6'-0" long with ends turned up or equivalent to 5/8"□ across top
6" Blow Off
16" Outlet Pipe
16" Inlet Pipe
Note:- Overflow on this Column
Note:- Gauge on this Column
Position of Inlet and Outlet can not be changed from 90°
Detail of Opening
Level top of outside Piers
Ground line
4'-0" Riser
1"□ Rods or equal in 5/8"φ Rods
View D-D
View C-C
Foundation Plan
For 300,000 Gallon Tank & Tower
Height to Balcony = 96'-3"
For the Crocker Huffman Land & Water Co.
At Merced, California.
Chicago Bridge & Iron Works
Sheet 2 of 5
Contract No. 8405

ATTACHMENT C

Air Quality and Greenhouse Gas Emissions Modeling (CalEEMod)

Merced Well 3 Tank

Merced County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	0.34	Acre	0.34	14,810.40	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	49
Climate Zone	3			**Operational Year**	2019
Utility Company	Turlock Irrigation District				
CO2 Intensity (lb/MWhr)	790	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Merced is powered by the Merced Irrigation District, which is not in Caleemod. Turlock Irrigation District is right next door and also generates hydroelectric power, so used that instead.

Land Use -

Construction Phase - Schedule based on Castlewood Tanks Replacement Project.

Off-road Equipment -

Off-road Equipment - Unit amount and hours based on Castlewood tanks replacement project.

Off-road Equipment - Unit amount and hours based on Castlewood tanks replacement project.

Demolition -

Energy Use -

Construction Off-road Equipment Mitigation - Project would comply with Regulation VIII.

Merced Well 3 Tank - Merced County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	25.00
tblConstructionPhase	PhaseEndDate	6/15/2018	7/6/2018
tblConstructionPhase	PhaseEndDate	6/22/2018	7/13/2018
tblConstructionPhase	PhaseStartDate	6/16/2018	7/9/2018
tblOffRoadEquipment	HorsePower	132.00	97.00
tblOffRoadEquipment	LoadFactor	0.36	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	1.00	7.00
tblOffRoadEquipment	UsageHours	6.00	7.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblTripsAndVMT	HaulingTripNumber	90,525.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0380	0.3709	0.2395	4.2000e-004	9.7973	0.0197	9.8170	1.4836	0.0186	1.5022	0.0000	37.7550	37.7550	8.6300e-003	0.0000	37.9707
Maximum	**0.0380**	**0.3709**	**0.2395**	**4.2000e-004**	**9.7973**	**0.0197**	**9.8170**	**1.4836**	**0.0186**	**1.5022**	**0.0000**	**37.7550**	**37.7550**	**8.6300e-003**	**0.0000**	**37.9707**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0380	0.3708	0.2395	4.2000e-004	4.4098	0.0197	4.4296	0.6679	0.0186	0.6865	0.0000	37.7549	37.7549	8.6300e-003	0.0000	37.9707
Maximum	**0.0380**	**0.3708**	**0.2395**	**4.2000e-004**	**4.4098**	**0.0197**	**4.4296**	**0.6679**	**0.0186**	**0.6865**	**0.0000**	**37.7549**	**37.7549**	**8.6300e-003**	**0.0000**	**37.9707**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**54.99**	**0.00**	**54.88**	**54.98**	**0.00**	**54.30**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-4-2018	9-3-2018	0.3837	0.3837
		Highest	0.3837	0.3837

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2700e-003	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.2700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.2700e-003	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.2700e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Clearing and Demolition	Demolition	6/4/2018	7/6/2018	5	25	
2	Site Restoration	Paving	7/9/2018	7/13/2018	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.34

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Clearing and Demolition	Aerial Lifts	1	6.00	63	0.31
Site Clearing and Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Site Clearing and Demolition	Excavators	1	7.00	158	0.38
Site Clearing and Demolition	Generator Sets	1	5.00	84	0.74
Site Clearing and Demolition	Rubber Tired Dozers	1	7.00	247	0.40
Site Clearing and Demolition	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Site Restoration	Cement and Mortar Mixers	0	6.00	9	0.56
Site Restoration	Pavers	0	7.00	130	0.42
Site Restoration	Paving Equipment	1	5.00	97	0.37
Site Restoration	Rollers	0	7.00	80	0.38
Site Restoration	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Site Clearing and Demolition	Cranes	1	7.00	231	0.29

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Clearing and Demolition	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Restoration	2	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

3.2 Site Clearing and Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.7955	0.0000	9.7955	1.4831	0.0000	1.4831	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0359	0.3623	0.2229	3.9000e-004		0.0192	0.0192		0.0181	0.0181	0.0000	35.1280	35.1280	8.3100e-003	0.0000	35.3357
Total	**0.0359**	**0.3623**	**0.2229**	**3.9000e-004**	**9.7955**	**0.0192**	**9.8146**	**1.4831**	**0.0181**	**1.5012**	**0.0000**	**35.1280**	**35.1280**	**8.3100e-003**	**0.0000**	**35.3357**

3.2 Site Clearing and Demolition - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2600e-003	9.4000e-004	9.5900e-003	2.0000e-005	1.7900e-003	2.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.7344	1.7344	7.0000e-005	0.0000	1.7361
Total	**1.2600e-003**	**9.4000e-004**	**9.5900e-003**	**2.0000e-005**	**1.7900e-003**	**2.0000e-005**	**1.8100e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.7344**	**1.7344**	**7.0000e-005**	**0.0000**	**1.7361**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.4080	0.0000	4.4080	0.6674	0.0000	0.6674	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0359	0.3623	0.2229	3.9000e-004		0.0192	0.0192		0.0181	0.0181	0.0000	35.1280	35.1280	8.3100e-003	0.0000	35.3357
Total	**0.0359**	**0.3623**	**0.2229**	**3.9000e-004**	**4.4080**	**0.0192**	**4.4271**	**0.6674**	**0.0181**	**0.6855**	**0.0000**	**35.1280**	**35.1280**	**8.3100e-003**	**0.0000**	**35.3357**

3.2 Site Clearing and Demolition - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2600e-003	9.4000e-004	9.5900e-003	2.0000e-005	1.7900e-003	2.0000e-005	1.8100e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.7344	1.7344	7.0000e-005	0.0000	1.7361
Total	**1.2600e-003**	**9.4000e-004**	**9.5900e-003**	**2.0000e-005**	**1.7900e-003**	**2.0000e-005**	**1.8100e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.7344**	**1.7344**	**7.0000e-005**	**0.0000**	**1.7361**

3.3 Site Restoration - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.8000e-004	7.5100e-003	6.4900e-003	1.0000e-005		5.3000e-004	5.3000e-004		4.9000e-004	4.9000e-004	0.0000	0.7962	0.7962	2.5000e-004	0.0000	0.8024
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.8000e-004**	**7.5100e-003**	**6.4900e-003**	**1.0000e-005**		**5.3000e-004**	**5.3000e-004**		**4.9000e-004**	**4.9000e-004**	**0.0000**	**0.7962**	**0.7962**	**2.5000e-004**	**0.0000**	**0.8024**

3.3 Site Restoration - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	5.0000e-005	5.3000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0964	0.0964	0.0000	0.0000	0.0965
Total	**7.0000e-005**	**5.0000e-005**	**5.3000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0964**	**0.0964**	**0.0000**	**0.0000**	**0.0965**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.8000e-004	7.5100e-003	6.4900e-003	1.0000e-005		5.3000e-004	5.3000e-004		4.9000e-004	4.9000e-004	0.0000	0.7962	0.7962	2.5000e-004	0.0000	0.8024
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.8000e-004**	**7.5100e-003**	**6.4900e-003**	**1.0000e-005**		**5.3000e-004**	**5.3000e-004**		**4.9000e-004**	**4.9000e-004**	**0.0000**	**0.7962**	**0.7962**	**2.5000e-004**	**0.0000**	**0.8024**

3.3 Site Restoration - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	5.0000e-005	5.3000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0964	0.0964	0.0000	0.0000	0.0965
Total	**7.0000e-005**	**5.0000e-005**	**5.3000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0964**	**0.0964**	**0.0000**	**0.0000**	**0.0965**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.477385	0.032954	0.155020	0.127450	0.023126	0.005418	0.015590	0.149182	0.002365	0.002469	0.006628	0.001652	0.000762

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.2700e-003	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Unmitigated	1.2700e-003	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Total	**1.2700e-003**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	0.0000	1.0000e-005
Total	**1.2700e-003**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0000**	**1.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

ATTACHMENT D

Noise Measurement Data

- Freq Weight : A
- Time Weight : FAST
- Level Range : 40-100
- Max dB : 71.3 - 2017/09/13 11:53:17
- Level Range : 40-100
- SEL : 88.6
- Leq : 59.1
-

No.s	Date Time	(dB)				
1	2017/09/13 11:48:29	58.2	58.6	57.7	57.4	56.9
6	2017/09/13 11:48:34	56.4	56.8	57.0	58.1	58.8
11	2017/09/13 11:48:39	58.0	58.4	57.9	58.1	59.0
16	2017/09/13 11:48:44	58.6	59.0	58.9	59.1	58.6
21	2017/09/13 11:48:49	59.1	60.2	58.3	58.0	58.7
26	2017/09/13 11:48:54	57.7	57.3	56.9	57.0	56.5
31	2017/09/13 11:48:59	57.4	57.6	57.5	56.5	56.2
36	2017/09/13 11:49:04	56.9	56.6	57.1	57.6	57.9
41	2017/09/13 11:49:09	58.6	58.4	59.7	59.5	58.8
46	2017/09/13 11:49:14	59.5	58.3	57.0	56.9	56.7
51	2017/09/13 11:49:19	56.8	57.3	55.8	56.0	55.0
56	2017/09/13 11:49:24	55.0	56.2	56.1	56.5	58.5
61	2017/09/13 11:49:29	56.6	56.8	58.0	57.7	59.2
66	2017/09/13 11:49:34	59.4	60.5	60.4	60.4	58.7
71	2017/09/13 11:49:39	58.9	59.1	58.2	59.1	59.1
76	2017/09/13 11:49:44	58.0	59.4	60.2	59.6	59.8
81	2017/09/13 11:49:49	59.3	58.8	58.7	59.3	61.9
86	2017/09/13 11:49:54	62.7	63.0	66.1	67.3	67.7
91	2017/09/13 11:49:59	66.1	65.0	63.9	62.8	59.9
96	2017/09/13 11:50:04	58.9	57.7	57.0	57.5	56.3
101	2017/09/13 11:50:09	57.3	58.8	57.2	59.8	57.2
106	2017/09/13 11:50:14	58.5	58.6	58.7	58.9	58.0
111	2017/09/13 11:50:19	58.3	58.2	57.9	59.2	60.5
116	2017/09/13 11:50:24	59.3	60.2	59.6	63.7	60.0
121	2017/09/13 11:50:29	61.6	60.2	61.0	60.0	60.0
126	2017/09/13 11:50:34	58.9	58.5	58.0	57.2	57.5
131	2017/09/13 11:50:39	57.3	57.1	58.1	58.3	60.2
136	2017/09/13 11:50:44	62.5	59.4	58.4	58.0	58.1
141	2017/09/13 11:50:49	61.6	59.0	59.5	58.6	57.3
146	2017/09/13 11:50:54	57.0	56.1	54.8	56.0	58.7
151	2017/09/13 11:50:59	56.3	55.7	55.2	54.1	53.8
156	2017/09/13 11:51:04	53.5	52.9	53.5	54.5	55.4
161	2017/09/13 11:51:09	53.9	56.7	56.2	54.4	55.1
166	2017/09/13 11:51:14	54.6	54.0	54.2	54.5	54.2
171	2017/09/13 11:51:19	55.4	54.1	53.7	53.2	53.8
176	2017/09/13 11:51:24	53.7	57.1	56.9	57.6	59.4
181	2017/09/13 11:51:29	60.4	63.4	61.1	59.6	61.5
186	2017/09/13 11:51:34	60.2	59.4	59.3	59.3	58.8
191	2017/09/13 11:51:39	59.3	59.2	59.5	59.2	58.8
196	2017/09/13 11:51:44	58.8	60.3	60.2	60.2	58.9
201	2017/09/13 11:51:49	59.2	59.4	59.5	59.7	59.1
206	2017/09/13 11:51:54	58.3	58.8	58.3	58.7	61.3
211	2017/09/13 11:51:59	62.3	60.9	60.5	61.8	61.0
216	2017/09/13 11:52:04	60.7	60.7	59.8	59.0	58.6
221	2017/09/13 11:52:09	57.5	56.6	56.3	55.9	55.8
226	2017/09/13 11:52:14	56.1	55.4	55.5	56.2	56.1
231	2017/09/13 11:52:19	56.4	56.6	56.2	56.0	57.4
236	2017/09/13 11:52:24	58.0	57.6	57.3	58.5	58.7
241	2017/09/13 11:52:29	58.8	58.5	59.9	60.3	59.1
246	2017/09/13 11:52:34	59.7	60.7	59.5	60.4	60.3
251	2017/09/13 11:52:39	59.3	58.3	58.3	59.3	58.6
256	2017/09/13 11:52:44	57.8	59.1	60.8	59.7	58.7
261	2017/09/13 11:52:49	60.4	58.3	59.0	61.3	59.2
266	2017/09/13 11:52:54	59.2	61.3	63.3	58.0	58.7
271	2017/09/13 11:52:59	60.3	62.6	60.8	64.0	62.3
276	2017/09/13 11:53:04	62.4	60.2	59.1	59.7	58.7
281	2017/09/13 11:53:09	58.9	58.7	58.9	58.4	58.1
286	2017/09/13 11:53:14	67.2	66.7	69.7	63.6	64.7
291	2017/09/13 11:53:19	60.8	58.2	59.2	58.7	58.4
296	2017/09/13 11:53:24	57.7	61.3	58.9	60.8	59.8
301	2017/09/13 11:53:29	59.7	59.8	59.4	59.2	59.3
306	2017/09/13 11:53:34	62.0	62.3	62.4	61.8	61.6
311	2017/09/13 11:53:39	61.0	59.9	60.1	60.0	59.7
316	2017/09/13 11:53:44	58.4	58.3	56.7	56.5	55.3
321	2017/09/13 11:53:49	54.9	55.1	55.0	55.8	56.5
326	2017/09/13 11:53:54	57.1	57.5	58.5	59.2	59.8
331	2017/09/13 11:53:59	59.8	59.6	59.9	59.4	59.4
336	2017/09/13 11:54:04	60.8	60.4	60.1	60.2	60.3
341	2017/09/13 11:54:09	60.5	59.7	59.3	58.6	58.0
346	2017/09/13 11:54:14	57.7	57.6	56.5	56.4	56.0
351	2017/09/13 11:54:19	55.6	55.3	55.1	55.7	54.9
356	2017/09/13 11:54:24	54.9	57.0	55.3	56.2	56.4
361	2017/09/13 11:54:29	55.3	56.7	57.5	56.7	58.1
366	2017/09/13 11:54:34	57.8	57.5	58.2	59.2	58.5
371	2017/09/13 11:54:39	59.1	61.1	60.4	60.5	60.8
376	2017/09/13 11:54:44	60.8	59.7	58.5	59.1	58.2
381	2017/09/13 11:54:49	56.6	56.7	56.3	56.4	57.0
386	2017/09/13 11:54:54	56.6	56.6	57.5	57.2	58.0
391	2017/09/13 11:54:59	59.7	58.9	58.8	59.1	59.3
396	2017/09/13 11:55:04	59.9	59.7	59.6	59.0	60.6
401	2017/09/13 11:55:09	59.9	60.1	59.5	60.4	59.5
406	2017/09/13 11:55:14	59.6	60.5	60.6	60.8	60.3
411	2017/09/13 11:55:19	59.5	59.7	59.7	61.3	61.0
416	2017/09/13 11:55:24	61.8	62.2	60.8	60.9	62.1
421	2017/09/13 11:55:29	62.5	61.8	61.9	59.8	62.9

426	2017/09/13	11:55:34	61.2	60.9	59.0	59.4	59.2
431	2017/09/13	11:55:39	58.8	59.5	59.1	58.4	58.6
436	2017/09/13	11:55:44	58.2	58.1	58.4	61.0	59.6
441	2017/09/13	11:55:49	60.4	59.4	58.1	57.9	57.6
446	2017/09/13	11:55:54	58.7	58.1	59.2	59.3	58.8
451	2017/09/13	11:55:59	58.8	57.6	59.2	58.0	58.0
456	2017/09/13	11:56:04	57.3	57.0	56.6	55.9	56.0
461	2017/09/13	11:56:09	55.8	56.0	56.0	57.2	56.2
466	2017/09/13	11:56:14	56.6	57.9	58.2	57.1	56.1
471	2017/09/13	11:56:19	57.7	56.2	57.6	57.8	56.0
476	2017/09/13	11:56:24	56.0	56.5	55.9	55.8	56.4
481	2017/09/13	11:56:29	58.8	62.2	59.6	59.3	59.0
486	2017/09/13	11:56:34	59.4	58.9	58.8	59.3	59.4
491	2017/09/13	11:56:39	59.3	59.5	58.7	58.7	59.3
496	2017/09/13	11:56:44	59.7	61.4	60.5	60.7	59.8
501	2017/09/13	11:56:49	57.6	59.2	57.9	57.1	58.1
506	2017/09/13	11:56:54	57.8	57.2	56.1	56.0	56.5
511	2017/09/13	11:56:59	56.9	57.0	56.8	57.2	59.3
516	2017/09/13	11:57:04	60.4	58.8	58.5	57.1	57.2
521	2017/09/13	11:57:09	57.3	56.8	57.6	58.0	58.5
526	2017/09/13	11:57:14	59.3	58.9	59.9	59.6	60.3
531	2017/09/13	11:57:19	59.2	60.0	59.0	59.0	59.3
536	2017/09/13	11:57:24	58.5	59.3	60.2	61.3	61.2
541	2017/09/13	11:57:29	58.7	59.1	59.4	59.0	58.5
546	2017/09/13	11:57:34	59.9	59.9	59.5	59.7	59.7
551	2017/09/13	11:57:39	57.8	57.5	57.1	56.9	56.5
556	2017/09/13	11:57:44	57.1	57.8	60.3	59.3	60.1
561	2017/09/13	11:57:49	61.6	60.5	61.2	59.0	59.9
566	2017/09/13	11:57:54	59.3	60.9	59.0	59.7	58.5
571	2017/09/13	11:57:59	59.1	59.3	58.8	60.1	58.0
576	2017/09/13	11:58:04	59.3	58.3	59.8	58.8	57.9
581	2017/09/13	11:58:09	57.8	55.7	54.9	56.0	55.7
586	2017/09/13	11:58:14	54.2	54.3	54.3	57.8	55.4
591	2017/09/13	11:58:19	56.7	58.3	57.1	61.0	59.1
596	2017/09/13	11:58:24	57.5	58.2	59.4	60.2	60.5
601	2017/09/13	11:58:29	59.5	61.6	60.5	60.0	58.9
606	2017/09/13	11:58:34	58.4	58.4	59.1	58.1	58.4
611	2017/09/13	11:58:39	57.2	58.0	57.9	59.8	58.0
616	2017/09/13	11:58:44	58.8	59.5	60.8	58.4	60.1
621	2017/09/13	11:58:49	59.4	59.5	58.4	60.2	61.6
626	2017/09/13	11:58:54	61.1	60.3	62.1	60.3	59.9
631	2017/09/13	11:58:59	60.2	60.3	59.5	59.6	59.6
636	2017/09/13	11:59:04	60.3	59.6	59.4	60.5	59.2
641	2017/09/13	11:59:09	58.5	58.4	56.3	56.1	55.7
646	2017/09/13	11:59:14	55.1	55.1	55.2	57.9	60.8
651	2017/09/13	11:59:19	64.3	59.7	61.4	58.1	57.8
656	2017/09/13	11:59:24	57.3	56.8	58.0	58.3	58.5
661	2017/09/13	11:59:29	57.2	57.4	58.3	59.4	58.7
666	2017/09/13	11:59:34	58.4	58.7	59.1	59.4	57.5
671	2017/09/13	11:59:39	60.5	59.1	59.1	58.4	61.5
676	2017/09/13	11:59:44	58.7	58.4	58.1	58.0	59.2
681	2017/09/13	11:59:49	59.2	58.6	57.7	58.1	57.7
686	2017/09/13	11:59:54	57.0	57.5	57.9	58.0	57.7
691	2017/09/13	11:59:59	58.3	57.6	57.3	58.6	59.0
696	2017/09/13	12:00:04	58.5	57.9	57.7	59.2	58.3
701	2017/09/13	12:00:09	58.8	59.6	60.1	60.7	60.6
706	2017/09/13	12:00:14	60.6	60.3	59.5	60.0	60.0
711	2017/09/13	12:00:19	58.7	58.9	59.2	58.8	57.4
716	2017/09/13	12:00:24	57.9	59.1	58.2	57.2	57.5
721	2017/09/13	12:00:29	58.5	57.8	57.0	57.0	57.4
726	2017/09/13	12:00:34	57.8	59.0	59.0	58.2	58.3
731	2017/09/13	12:00:39	57.2	57.2	59.0	58.0	57.3
736	2017/09/13	12:00:44	57.6	57.8	57.9	57.8	57.7
741	2017/09/13	12:00:49	57.7	58.8	57.9	58.5	58.6
746	2017/09/13	12:00:54	58.1	59.5	58.5	58.4	61.3
751	2017/09/13	12:00:59	59.1	58.9	58.3	58.1	59.3
756	2017/09/13	12:01:04	58.5	58.0	58.3	59.3	59.0
761	2017/09/13	12:01:09	57.7	58.4	57.5	58.1	59.1
766	2017/09/13	12:01:14	59.1	58.4	57.8	57.1	57.4
771	2017/09/13	12:01:19	58.0	56.8	57.2	56.7	57.8
776	2017/09/13	12:01:24	58.5	57.7	59.0	57.5	57.7
781	2017/09/13	12:01:29	58.7	58.7	59.0	58.3	60.0
786	2017/09/13	12:01:34	58.1	57.9	56.9	57.0	56.7
791	2017/09/13	12:01:39	56.9	58.0	59.9	59.5	60.7
796	2017/09/13	12:01:44	60.9	62.4	60.6	61.9	61.2
801	2017/09/13	12:01:49	60.0	60.1	60.2	60.8	60.9
806	2017/09/13	12:01:54	61.0	61.9	62.0	60.9	62.0
811	2017/09/13	12:01:59	60.7	60.6	62.5	61.4	60.8
816	2017/09/13	12:02:04	61.6	59.9	60.6	60.8	61.0
821	2017/09/13	12:02:09	60.2	62.0	60.2	59.8	60.1
826	2017/09/13	12:02:14	59.9	59.2	59.0	57.9	58.1
831	2017/09/13	12:02:19	57.6	57.8	58.6	59.3	58.3
836	2017/09/13	12:02:24	58.2	56.7	58.3	56.8	56.6
841	2017/09/13	12:02:29	55.8	55.6	56.0	55.9	55.7
846	2017/09/13	12:02:34	55.3	55.3	56.1	56.2	57.0
851	2017/09/13	12:02:39	57.5	56.6	58.6	57.9	58.9
856	2017/09/13	12:02:44	58.8	58.9	58.7	58.5	58.1
861	2017/09/13	12:02:49	58.8	58.4	59.7	59.6	59.4
866	2017/09/13	12:02:54	59.3	58.0	57.9	58.8	57.9
871	2017/09/13	12:02:59	59.0	57.2	57.3	57.1	57.4
876	2017/09/13	12:03:04	57.2	58.4	57.6	58.5	57.8
881	2017/09/13	12:03:09	58.0	58.3	59.1	59.7	59.1
886	2017/09/13	12:03:14	59.9	60.0	59.5	59.9	60.6
891	2017/09/13	12:03:19	59.7	59.3	59.6	59.1	61.0
896	2017/09/13	12:03:24	61.2	59.8	60.0	59.4	59.9

- Freq Weight : A
- Time Weight : FAST
- Level Range : 40-100
- Max dB : 71.4 - 2017/09/13 12:10:19
- Level Range : 40-100
- SEL : 87.6
- Leq : 58.1
-

No.s	Date Time	(dB)				
1	2017/09/13 12:08:41	58.6	59.0	59.1	59.3	59.6
6	2017/09/13 12:08:46	59.9	60.1	58.7	58.1	57.7
11	2017/09/13 12:08:51	57.6	58.5	58.6	58.7	58.7
16	2017/09/13 12:08:56	57.5	57.5	56.9	56.4	56.6
21	2017/09/13 12:09:01	56.1	55.7	55.1	55.7	55.9
26	2017/09/13 12:09:06	56.0	56.2	57.5	57.9	59.3
31	2017/09/13 12:09:11	60.3	61.8	59.9	59.9	60.9
36	2017/09/13 12:09:16	60.2	59.4	60.0	59.6	59.2
41	2017/09/13 12:09:21	60.0	59.4	59.2	59.0	58.6
46	2017/09/13 12:09:26	59.2	58.8	57.8	57.3	57.4
51	2017/09/13 12:09:31	57.3	57.6	57.7	56.5	56.5
56	2017/09/13 12:09:36	56.2	56.3	56.0	56.4	58.4
61	2017/09/13 12:09:41	59.9	64.1	55.8	55.5	55.0
66	2017/09/13 12:09:46	56.3	57.8	55.9	56.4	56.8
71	2017/09/13 12:09:51	55.9	55.6	56.0	56.1	55.0
76	2017/09/13 12:09:56	56.1	55.3	55.5	56.9	56.1
81	2017/09/13 12:10:01	55.7	56.1	57.1	56.1	55.9
86	2017/09/13 12:10:06	56.6	56.3	56.0	56.3	54.4
91	2017/09/13 12:10:11	54.6	55.0	59.4	57.6	60.6
96	2017/09/13 12:10:16	64.0	69.7	70.4	64.3	65.5
101	2017/09/13 12:10:21	60.5	60.1	57.4	55.7	56.3
106	2017/09/13 12:10:26	58.2	56.8	58.3	58.7	58.4
111	2017/09/13 12:10:31	58.8	60.4	58.4	58.4	60.2
116	2017/09/13 12:10:36	58.7	58.6	58.1	57.9	57.3
121	2017/09/13 12:10:41	58.3	57.8	60.3	57.3	57.1
126	2017/09/13 12:10:46	57.4	57.2	56.4	57.1	55.3
131	2017/09/13 12:10:51	54.7	55.8	55.4	57.0	55.6
136	2017/09/13 12:10:56	59.0	60.1	57.2	56.5	56.3
141	2017/09/13 12:11:01	59.4	55.9	56.8	58.4	61.7
146	2017/09/13 12:11:06	60.2	59.8	56.6	56.2	59.1
151	2017/09/13 12:11:11	60.1	61.6	62.3	63.0	60.2
156	2017/09/13 12:11:16	59.8	58.2	60.2	58.6	57.7
161	2017/09/13 12:11:21	58.5	59.7	58.0	60.2	63.4
166	2017/09/13 12:11:26	59.7	59.8	61.8	62.1	61.6
171	2017/09/13 12:11:31	59.3	59.5	59.2	57.1	57.3
176	2017/09/13 12:11:36	59.4	58.1	58.3	58.3	56.4
181	2017/09/13 12:11:41	59.5	57.6	59.3	60.9	59.0
186	2017/09/13 12:11:46	58.2	58.6	58.0	59.5	57.9
191	2017/09/13 12:11:51	56.1	56.9	55.8	55.4	55.2
196	2017/09/13 12:11:56	55.4	55.6	55.3	54.4	56.1
201	2017/09/13 12:12:01	53.7	54.0	53.2	52.8	56.2
206	2017/09/13 12:12:06	54.1	54.7	57.8	58.1	58.1
211	2017/09/13 12:12:11	54.8	54.5	55.2	54.8	55.5
216	2017/09/13 12:12:16	54.6	55.4	55.1	54.2	55.3
221	2017/09/13 12:12:21	55.0	53.9	54.7	54.1	56.2
226	2017/09/13 12:12:26	54.4	54.1	54.7	56.1	55.9
231	2017/09/13 12:12:31	57.1	56.6	57.4	58.8	56.7
236	2017/09/13 12:12:36	58.5	55.6	55.3	55.6	58.5
241	2017/09/13 12:12:41	56.7	56.0	55.2	55.0	56.1
246	2017/09/13 12:12:46	54.8	53.1	57.3	55.8	54.9
251	2017/09/13 12:12:51	54.7	56.4	56.5	54.9	54.2
256	2017/09/13 12:12:56	54.9	56.0	54.2	53.6	54.1
261	2017/09/13 12:13:01	53.8	56.1	55.0	53.1	55.1
266	2017/09/13 12:13:06	53.7	57.5	57.0	55.8	53.9
271	2017/09/13 12:13:11	54.2	57.4	52.8	52.4	52.9
276	2017/09/13 12:13:16	53.5	54.3	53.3	54.2	53.9
281	2017/09/13 12:13:21	54.9	54.0	56.3	55.6	54.7
286	2017/09/13 12:13:26	55.1	54.0	56.4	56.0	54.2
291	2017/09/13 12:13:31	54.6	54.5	57.3	55.4	57.1
296	2017/09/13 12:13:36	56.0	57.8	55.4	54.6	55.7
301	2017/09/13 12:13:41	55.8	59.7	55.6	55.0	55.7
306	2017/09/13 12:13:46	58.2	56.6	59.0	56.6	57.9
311	2017/09/13 12:13:51	56.8	59.9	57.7	56.2	56.1
316	2017/09/13 12:13:56	55.0	55.1	56.1	57.0	58.4
321	2017/09/13 12:14:01	56.9	57.5	58.2	58.2	58.0
326	2017/09/13 12:14:06	56.7	56.4	58.1	58.9	57.2
331	2017/09/13 12:14:11	57.8	63.9	62.6	60.0	63.6
336	2017/09/13 12:14:16	59.2	60.5	61.3	59.6	59.6
341	2017/09/13 12:14:21	59.6	62.3	60.2	61.5	59.7
346	2017/09/13 12:14:26	57.4	57.2	58.4	55.9	56.6
351	2017/09/13 12:14:31	59.1	61.5	63.7	58.8	57.7
356	2017/09/13 12:14:36	58.5	59.2	58.5	58.9	58.8
361	2017/09/13 12:14:41	59.6	59.7	59.1	60.1	60.5
366	2017/09/13 12:14:46	61.3	60.7	59.0	59.4	63.3
371	2017/09/13 12:14:51	59.5	59.6	60.8	66.2	62.3
376	2017/09/13 12:14:56	60.3	60.7	63.9	59.8	60.1
381	2017/09/13 12:15:01	58.8	60.1	59.9	59.9	59.0
386	2017/09/13 12:15:06	58.6	59.4	59.3	59.4	58.7
391	2017/09/13 12:15:11	60.3	59.0	59.4	59.1	59.2
396	2017/09/13 12:15:16	62.8	65.0	61.0	60.4	62.9
401	2017/09/13 12:15:21	61.1	59.9	59.8	58.7	58.8
406	2017/09/13 12:15:26	59.6	58.2	60.5	57.4	56.5
411	2017/09/13 12:15:31	56.7	58.0	57.1	57.0	57.0
416	2017/09/13 12:15:36	56.5	55.8	56.2	57.8	56.6
421	2017/09/13 12:15:41	56.5	57.4	59.7	58.6	60.2

426	2017/09/13	12:15:46	61.0	59.7	58.9	57.6	57.8
431	2017/09/13	12:15:51	57.1	55.8	57.1	57.8	56.7
436	2017/09/13	12:15:56	57.2	55.4	55.8	55.7	56.3
441	2017/09/13	12:16:01	57.1	56.9	58.0	58.6	59.0
446	2017/09/13	12:16:06	61.2	57.0	57.2	59.1	58.7
451	2017/09/13	12:16:11	57.4	58.7	58.1	58.1	57.9
456	2017/09/13	12:16:16	56.4	56.8	55.9	55.6	59.1
461	2017/09/13	12:16:21	59.6	55.5	56.5	54.6	55.0
466	2017/09/13	12:16:26	57.8	55.5	55.3	54.1	54.1
471	2017/09/13	12:16:31	54.4	55.3	57.8	57.1	58.1
476	2017/09/13	12:16:36	59.7	58.8	57.8	57.4	57.6
481	2017/09/13	12:16:41	57.4	57.8	56.6	58.0	57.6
486	2017/09/13	12:16:46	57.4	58.1	58.3	58.2	56.6
491	2017/09/13	12:16:51	57.5	57.3	57.1	57.8	58.1
496	2017/09/13	12:16:56	60.4	59.1	61.7	62.5	59.5
501	2017/09/13	12:17:01	58.8	58.1	57.1	56.9	57.3
506	2017/09/13	12:17:06	59.9	58.4	57.7	58.6	58.7
511	2017/09/13	12:17:11	60.0	58.8	60.5	60.7	60.2
516	2017/09/13	12:17:16	60.2	60.4	61.0	58.2	58.5
521	2017/09/13	12:17:21	58.8	58.8	58.9	59.9	57.8
526	2017/09/13	12:17:26	59.0	59.1	60.5	59.4	60.0
531	2017/09/13	12:17:31	58.4	58.6	57.6	58.5	59.9
536	2017/09/13	12:17:36	63.1	61.7	60.2	58.4	58.9
541	2017/09/13	12:17:41	57.6	57.2	56.9	59.5	62.4
546	2017/09/13	12:17:46	59.9	59.1	58.4	58.6	58.2
551	2017/09/13	12:17:51	59.2	57.1	59.3	58.1	55.8
556	2017/09/13	12:17:56	56.0	55.5	61.6	60.3	56.7
561	2017/09/13	12:18:01	56.6	59.6	56.7	55.1	58.2
566	2017/09/13	12:18:06	57.6	55.0	55.7	56.8	57.6
571	2017/09/13	12:18:11	56.7	57.7	56.7	57.2	57.1
576	2017/09/13	12:18:16	56.3	56.7	57.0	57.5	58.9
581	2017/09/13	12:18:21	57.2	64.4	57.7	57.3	57.0
586	2017/09/13	12:18:26	58.7	59.5	56.5	57.2	58.5
591	2017/09/13	12:18:31	58.3	58.1	58.2	65.2	58.8
596	2017/09/13	12:18:36	57.8	59.0	59.4	59.6	59.6
601	2017/09/13	12:18:41	59.5	57.8	57.5	57.5	57.7
606	2017/09/13	12:18:46	56.5	57.5	56.7	58.0	57.3
611	2017/09/13	12:18:51	57.2	56.5	57.1	57.7	57.8
616	2017/09/13	12:18:56	57.8	59.6	57.3	58.5	60.0
621	2017/09/13	12:19:01	57.6	59.3	57.5	59.0	58.1
626	2017/09/13	12:19:06	59.0	57.7	58.5	57.9	58.4
631	2017/09/13	12:19:11	58.6	58.3	58.1	58.1	58.0
636	2017/09/13	12:19:16	57.8	57.9	56.4	56.9	57.7
641	2017/09/13	12:19:21	58.4	58.0	57.9	57.2	58.8
646	2017/09/13	12:19:26	57.8	57.9	58.6	58.3	59.4
651	2017/09/13	12:19:31	59.3	57.5	57.8	58.8	58.8
656	2017/09/13	12:19:36	58.2	58.7	59.2	60.7	62.4
661	2017/09/13	12:19:41	63.4	68.9	66.7	63.4	59.4
666	2017/09/13	12:19:46	57.8	56.2	57.2	55.7	56.5
671	2017/09/13	12:19:51	57.2	58.4	59.7	56.9	57.1
676	2017/09/13	12:19:56	56.6	55.9	56.6	57.4	56.7
681	2017/09/13	12:20:01	56.4	57.7	57.0	56.5	55.3
686	2017/09/13	12:20:06	56.2	55.0	54.5	54.6	54.6
691	2017/09/13	12:20:11	53.9	55.0	54.6	54.2	55.0
696	2017/09/13	12:20:16	54.2	55.0	55.7	56.0	55.4
701	2017/09/13	12:20:21	56.1	57.3	56.0	56.2	56.9
706	2017/09/13	12:20:26	56.8	56.4	55.9	56.6	57.1
711	2017/09/13	12:20:31	55.1	56.4	55.4	55.7	55.7
716	2017/09/13	12:20:36	55.2	54.9	55.4	55.6	54.8
721	2017/09/13	12:20:41	54.9	54.8	55.6	55.1	54.7
726	2017/09/13	12:20:46	55.5	56.0	55.3	54.6	54.6
731	2017/09/13	12:20:51	56.0	54.7	54.9	55.5	54.8
736	2017/09/13	12:20:56	55.3	55.2	55.7	55.5	56.1
741	2017/09/13	12:21:01	56.6	55.4	56.5	57.8	56.8
746	2017/09/13	12:21:06	57.7	58.1	59.0	58.6	58.0
751	2017/09/13	12:21:11	57.9	56.9	57.6	56.7	56.6
756	2017/09/13	12:21:16	56.1	55.5	56.1	56.4	54.7
761	2017/09/13	12:21:21	54.4	54.7	56.0	53.8	54.2
766	2017/09/13	12:21:26	54.4	54.8	54.9	55.6	56.9
771	2017/09/13	12:21:31	57.7	58.8	58.0	59.2	59.1
776	2017/09/13	12:21:36	58.0	59.7	57.5	58.3	58.3
781	2017/09/13	12:21:41	58.3	57.8	57.2	58.0	59.6
786	2017/09/13	12:21:46	58.8	58.2	58.0	58.1	58.1
791	2017/09/13	12:21:51	56.4	56.9	57.6	56.4	56.6
796	2017/09/13	12:21:56	57.8	56.4	54.3	54.6	55.6
801	2017/09/13	12:22:01	55.9	55.6	58.2	57.2	54.4
806	2017/09/13	12:22:06	55.0	55.9	54.6	53.2	55.7
811	2017/09/13	12:22:11	55.7	54.3	56.0	55.9	57.2
816	2017/09/13	12:22:16	55.7	56.2	58.1	57.4	56.6
821	2017/09/13	12:22:21	56.4	58.3	57.9	57.7	57.5
826	2017/09/13	12:22:26	56.1	56.9	56.3	57.6	57.6
831	2017/09/13	12:22:31	57.8	57.3	57.0	56.4	55.0
836	2017/09/13	12:22:36	56.0	57.1	56.1	57.5	57.1
841	2017/09/13	12:22:41	57.5	56.6	56.4	58.1	56.8
846	2017/09/13	12:22:46	56.7	58.0	57.1	55.4	56.0
851	2017/09/13	12:22:51	55.2	55.0	54.7	54.9	54.9
856	2017/09/13	12:22:56	54.8	54.7	53.6	55.2	56.1
861	2017/09/13	12:23:01	57.5	56.1	55.6	55.4	55.7
866	2017/09/13	12:23:06	54.3	54.1	53.9	54.7	54.0
871	2017/09/13	12:23:11	56.2	52.8	53.2	53.6	52.9
876	2017/09/13	12:23:16	53.9	54.2	54.3	54.3	53.8
881	2017/09/13	12:23:21	54.3	52.6	52.9	52.3	54.6
886	2017/09/13	12:23:26	54.9	55.5	60.7	65.0	63.2
891	2017/09/13	12:23:31	58.4	59.6	57.0	56.4	55.2
896	2017/09/13	12:23:36	54.5	54.2	54.9	56.3	54.7

ATTACHMENT E

Construction Noise Modeling (RCNM)

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 12/20/2017
Case Description: Site Clearing and Demolition

**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Residence and Church	Residential	58.1	58.1	58.1

Equipment

Description	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)
Concrete Saw	No	20	89.6	50.0		0.0
Excavator	No	40	80.7	50.0		0.0
All Other Equipment > 5 HP	No	50	85.0	50.0		0.0
Dozer	No	40	81.7	50.0		0.0
Generator	No	50	80.6	50.0		0.0
Tractor	No	40	84.0	50.0		0.0
Jackhammer	Yes	20	88.9	50.0		0.0

Results

	Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
	Calculated (dBA)		Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	89.6	82.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipment > 5 HP	85.0	82.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	80.6	77.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Jackhammer	88.9	81.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	89.6	88.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 12/13/2017
Case Description: Site Restoration

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residence and Church	Residential	58.1	58.1	58.1

Equipment

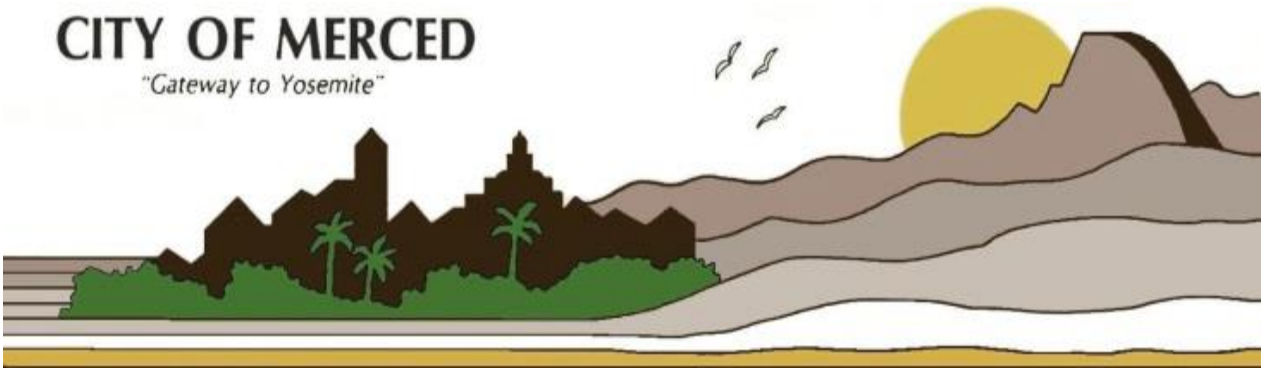
Description	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)
Pavement Scarafier	No	20	89.5	50.0		0.0
Tractor	No	40	84.0	50.0		0.0

Results

Equipment	Calculated (dBA) Lmax	Leq	Noise Limits (dBA) Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Noise Limit Exceedance (dBA) Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq
Pavement Scarafier	89.5	82.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	89.5	84.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Appendix B

Notice of Preparation and Comments



City of Merced, Public Works-Engineering
678 W. 18th Street
Merced, CA 95340
Phone: (209) 388-7507
Email: anguloj@cityofmerced.org

Notice of Preparation of Draft Environmental Impact Report

Date:	February 12, 2018
To:	State Clearinghouse, Responsible Agencies, Federal Agencies, Interested Parties and Organizations
Project:	Well 3 Tank Demolition Project
Lead Agency:	City of Merced
Contact:	Joseph Angulo, Environmental Project Manager, Public Works - Engineering
Public Review Period:	Monday, February 12, 2018 – Tuesday, March 13, 2018

Purpose of the Notice

The intent of this Notice of Preparation (NOP) is to inform agencies and interested parties that the City of Merced is preparing a Draft Environmental Impact Report (EIR) for the proposed Well 3 Tank Demolition Project in accordance with California Environmental Quality Act (CEQA) Guidelines, Section 15082. This NOP provides information about the project and its potential environmental effects and requests that comments be provided on the proposed scope and content of the Draft EIR. An Initial Study for the project has been completed and is available for review online at:

https://www.cityofmerced.org/depts/cd/planning/documents_and_handouts/default.asp

Project Location

Northwest corner of W. 12th Street and Canal Street. Assessor parcel number: 031-321-015.

Background

The City of Merced is proposing to demolish an existing water tank on the project site to address safety concerns regarding: vehicle access, land subsidence, and stability of the water tank, which does not meet current seismic standards. The 300,000-gallon steel water tank was constructed in 1934 and once served as an active component of the City's water system, maintaining system pressure; however, the water tank has not been connected to the on-site well (Well 3) since 2016.

Project Description

The applicant is proposing to demolish an inactive water tank on the project site. The water tank is 148 feet in height, 40 feet in diameter, and is mounted on six steel supports set in concrete; a 30-inch wide balcony with a handrail circles the tank. The project would include demolition of the water tank, excavation to remove the tank's supporting concrete piers, backfilling, and grading. The exposed water tank footprint would be covered in gravel and/ or paved in asphalt following demolition, consistent with existing coverage on the site.

Potential Environmental Effects

An Initial Study was prepared for the proposed project and found that the proposed project would have a less than significant impact with mitigation incorporated for all resource areas evaluated under CEQA except for historical resources. The Well 3 Tank was identified as a significant historic resource by the City of Merced in 1985 and determined eligible for listing in the National Register of Historical Places (NRHP) by the State Historical Preservation Office (SHPO) in 2001. It was automatically listed in the California Register of Historical Resources as a result of this SHPO determination and is therefore considered a historical resource for the purposes of CEQA.

The EIR will further evaluate the eligibility of the Well 3 Tank as a historical resource, propose mitigation to avoid and/or reduce impacts if deemed potentially significant, identify reasonable alternatives, and compare the environmental impacts of the alternatives to the impacts of the proposed project. The Draft EIR will also discuss the cumulative impacts of the proposed project in combination with other closely related past, present, and reasonably foreseeable probable future projects in the area. (14 CCR 15130). Comments provided in response to the NOP may identify additional environmental resources to be evaluated.

Providing Comments

At this time, the City of Merced is soliciting comments on the NOP regarding your views on how the project may affect the environment, including historical resources. This information will be considered when preparing the Draft EIR's discussion of environmental topics, significant effects, mitigation measures, and alternatives. Because of time limits mandated by state law, comments should be provided no later than **Tuesday, March 13, 2018 by 5:00 p.m.,** which ends the 30-day comment period. You may submit comments in writing in two ways: (1) by U.S. mail, or (2) by electronic mail (email).

If sending by mail, please send comments to:
Joseph Angulo
Public Works - Engineering
City of Merced
678 West 18th Street
Merced, CA 95340

If sending by email, please send comments to:
anguloj@cityofmerced.org

Please include "NOP Comments-Well 3 Tank" in the subject line, and the name and physical address of the commenter in the body of the email.

All comments on environmental issues received during the public comment period will be considered and addressed in the Draft EIR, which is anticipated to be available for public review in the spring of 2018.

The NOP, Initial Study, and all public review documents for this project are available for viewing online at:

https://www.cityofmerced.org/depts/cd/planning/documents_and_handouts/default.asp

Please contact Joseph Angulo if you have any questions about the environmental review process:

- Phone: (209) 388-7507
- Email: anguloj@cityofmerced.org

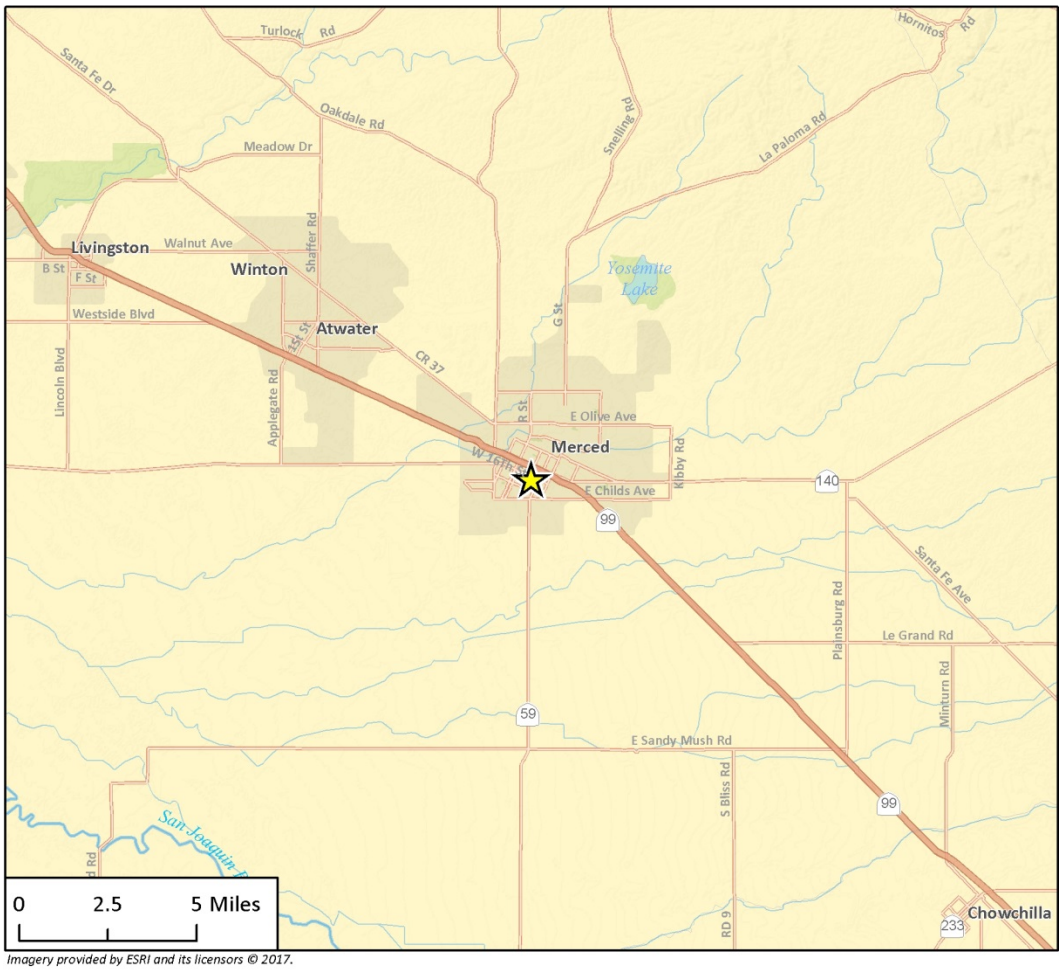
Joseph Angulo, P.G.
Environmental Project Manager
Public Works – Engineering
City of Merced

Attachments

Figure 1 - Regional Location

Figure 2 - Project Location

Figure 1 Regional Location



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Project Location

N

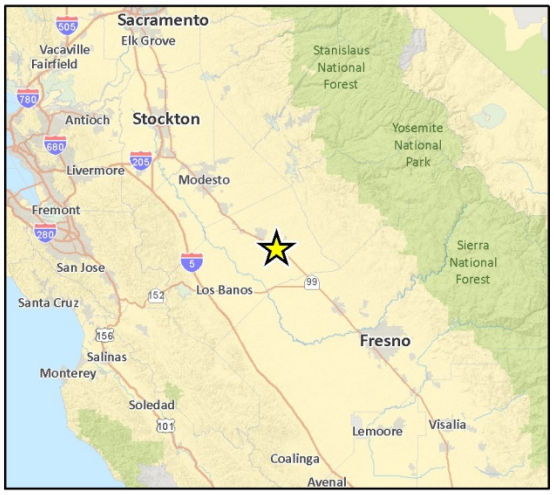

Fig 1 Regional Location

Figure 2 Project Location

Imagery provided by Google and its licensors © 2017.

Fig 2 Project Location

STATE OF CALIFORNIA
NATIVE AMERICAN HERITAGE COMMISSION
Environmental and Cultural Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov
Twitter: @CA_NAHC

Edmund G. Brown Jr., Governor

February 28, 2018

Joseph Angulo
City of Merced
678 W. 18th Street
Merced, CA 95340

RE: SCH#2018021015, Well 3 Tank Demolition Project, Merced County

Dear Mr. Angulo:

The Native American Heritage Commission has received the Notice of Preparation (NOP) for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b) (CEQA Guidelines Section 15064.5 (b)). If **there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared**. (Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd.(a)(1) (CEQA Guidelines § 15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code § 21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code § 21084.3 (a)). **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements**. If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. § 800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
   a. A brief description of the project.

STATE OF CALIFORNIA
NATIVE AMERICAN HERITAGE COMMISSION
Environmental and Cultural Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov
Twitter: @CA_NAHC

Edmund G. Brown Jr., Governor

February 28, 2018

Joseph Angulo
City of Merced
678 W. 18th Street
Merced, CA 95340

RE: SCH#2018021015, Well 3 Tank Demolition Project, Merced County

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   a. A brief description of the project.

b. The lead agency contact information.
c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code § 21080.3.1 (d)).
d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code § 21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code § 21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. (Pub. Resources Code § 21080.3.1(b)).
   a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18). (Pub. Resources Code § 21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
   a. Alternatives to the project.
   b. Recommended mitigation measures.
   c. Significant effects. (Pub. Resources Code § 21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
   a. Type of environmental review necessary.
   b. Significance of the tribal cultural resources.
   c. Significance of the project's impacts on tribal cultural resources.
   d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code § 21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code § 21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
   a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
   b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code § 21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
   a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
   b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code § 21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources

Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code § 21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code section 21084.3 (b). (Pub. Resources Code § 21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
    a. Avoidance and preservation of the resources in place, including, but not limited to:
        i. Planning and construction to avoid the resources and protect the cultural and natural context.
        ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
    b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
        i. Protecting the cultural character and integrity of the resource.
        ii. Protecting the traditional use of the resource.
        iii. Protecting the confidentiality of the resource.
    c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
    d. Protecting the resource. (Pub. Resource Code § 21084.3 (b)).
    e. Please note that a federally recognized California Native American tribe or a nonfederally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code § 815.3 (c)).
    f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code § 5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An environmental impact report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
    a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
    b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
    c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code § 21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code § 65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code § 65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code section 65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction. (Gov. Code § 65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have been already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
    a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
    b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
    a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
    b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
    c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions, please contact me at my email address: sharaya.souza@nahc.ca.gov.

Sincerely,

Sharaya Souza
Staff Services Analyst
(916) 573-0168

cc: State Clearinghouse

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

FEB 2 8 2018

RECEIVED
MAR 0 5 2018
ENGINEERING DEPT.

Joseph Angulo
City of Merced
Public Works-Engineering
678 W. 18th Street
Merced, CA 95340

Project: Notice of Preparation of Draft Environmental Impact Report (EIR) for the Well 3 Tank Demolition Project

District CEQA Reference No: 20180109

Dear Mr. Angulo:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the Notice of Preparation (NOP) for the Well 3 Tank Demolition Project. The proposed project consists of demolition of an inactive water tank, excavation to remove the tank's supporting concrete piers, backfilling, and grading (Project), located at the northwest corner of W. 12th Street and Canal Street, in Merced, CA. The District offers the following comments:

1. Based on information provided to the District, Project specific annual emissions of criteria pollutants are not expected to exceed any of the following District significance thresholds: 100 tons per year of carbon monoxide (CO), 10 tons per year of oxides of nitrogen (NOx), 10 tons per year of reactive organic gases (ROG), 27 tons per year of oxides of sulfur (SOx), 15 tons per year of particulate matter of 10 microns or less in size (PM10), or 15 tons per year of particulate matter of 2.5 microns or less in size (PM2.5). Therefore, the District concludes that the Project would have a less than significant impact on air quality when compared to the above-listed annual criteria pollutant emissions significance thresholds.

2. Based on information provided to the District, there is no construction of a new building, facility, or structure, or reconstruction of a building, facility, or structure for the purpose of increasing capacity or activity. Therefore, the Project does not meet the definition of a "Development Project", as defined in District Rule 9510 (Indirect Source Review). Therefore, the District concludes that the proposed Project is not subject to District Rule 9510 (Indirect Source Review).

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

www.valleyair.org www.healthyairliving.com

3. The proposed Project may be subject to District Rules and Regulations, including: Regulation VIII (Fugitive PM10 Prohibitions), Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). In the event an existing building will be renovated, partially demolished or removed, the Project may be subject to District Rule 4002 (National Emission Standards for Hazardous Air Pollutants). The above list of rules is neither exhaustive nor exclusive. To identify other District rules or regulations that apply to this Project or to obtain information about District permit requirements, the applicant is strongly encouraged to contact the District's Small Business Assistance Office at (559) 230-5888. Current District rules can be found online at: www.valleyair.org/rules/1ruleslist.htm.

4. The District recommends that a copy of the District's comments be provided to the Project proponent.

If you have any questions or require further information, please call Sharla Yang at (559) 230-5934.

Sincerely,

Arnaud Marjollet
Director of Permit Services

Brian Clements
Program Manager

AM: sy

Smadar Levy

From: Martinez, Steven R@DOT <Steven.R.Martinez@dot.ca.gov>
Sent: Thursday, February 15, 2018 4:32 PM
To: Angulo, Joseph
Subject: Caltrans Local Development-Intergovernmental Review (LD-IGR) - NOP Comments-Well 3 Tank

Mr. Angulo,

Thank you for the opportunity to review the NOP for Well 3 Tank Demolition.

The Department does not believe the project, as described, will have significant impact on state highway facilities in the area. Please keep us updated if there are changes to the provided documents and as the project develop, we would like to review and provide further comment.

Thank you,

Steven R. Martinez
Metropolitan Planning
Caltrans District 10
(209) 942-6092

Appendix C

Historic Resources Records

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

HISTORIC RESOURCES INVENTORY

P-24-000888
Ser. No. 5340-5L
HABS ___ HAER ___ NR 3 SHL ___ Loc ___
UTM: A 10/722900/4130540 B ___
C ___ D ___
Prop# 057415
DOE-29-01-0013-0000 257
HRI MERCED 7-SQ

IDENTIFICATION

1. Common name: Station No. 3 Water Tower
2. Historic name: Station No. 3 Water Tower
3. Street or rural address: 12th and Canal Streets

   City Merced Zip 95340 County Merced
4. Parcel number:
5. Present Owner: City of Merced Address: 1730 M Street

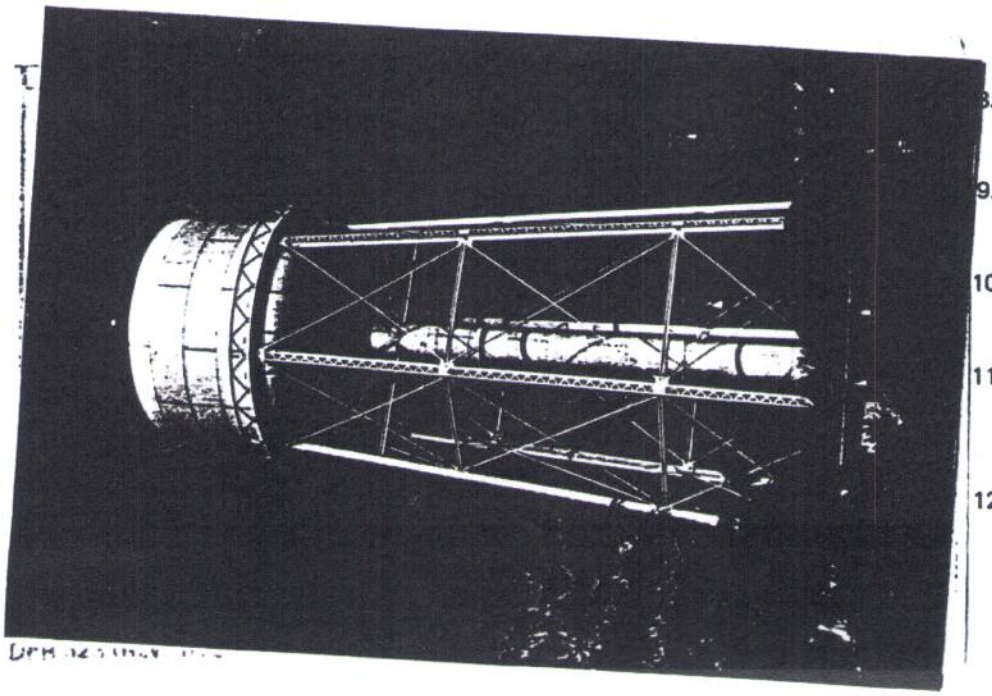
   City Merced Zip 95340 Ownership is: Public X Private ___
6. Present Use: Water Storage/Pressure Original use: Water Storage/Pressure

DESCRIPTION

7a. Architectural style: Utilitarian

7b. Briefly describe the present *physical description* of the site or structure and describe any major alterations from its origin' condition:

The riveted steel water tank, measuring 40 feet in diameter, has a 300,000 gallon capacity and is mounted on six steel supports set in concrete, giving it an overall height of 148 feet. A 30 inch wide balcony with handrail circles the tank.



8. Construction date: Estimated ___ Factual 1934
9. Architect Unknown
10. Builder Pittsburg-Des Moines Steel Co.
11. Approx. property size (in feet) Frontage 150 Depth 150 or approx. acreage ___
12. Date(s) of enclosed photograph(s) 3/29/85

ATTACHMENT 1

13. Condition: Excellent ___ Good _X_ Fair ___ Deteriorated ___ No longer in existence ___

14. Alterations: Routine maintenance and updating of pumps and equipment

15. Surroundings: (Check more than one if necessary) Open land ___ Scattered buildings ___ Densely built-up _X_
Residential _X_ Industrial ___ Commercial ___ Other: ___

16. Threats to site: None known _X_ Private development ___ Zoning ___ Vandalism ___
Public Works project ___ Other: ___

17. Is the structure: On its original site? _X_ Moved? ___ Unknown? ___

18. Related features: None

SIGNIFICANCE

19. Briefly state historical and/or architectural importance (include dates, events, and persons associated with the site.)

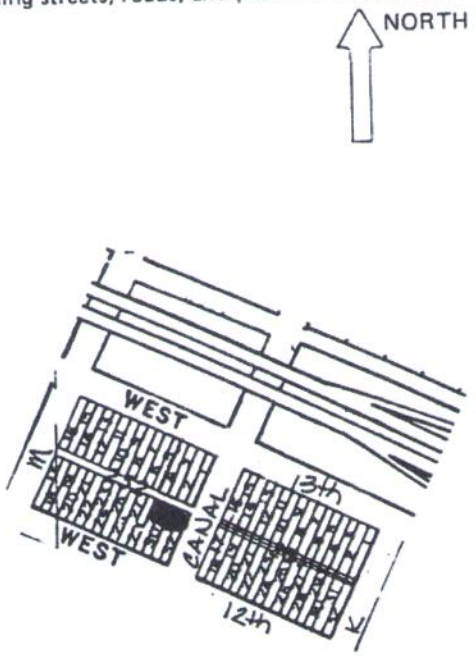
The construction of Merced's second water tower in 1934 reflected an increasing demand for water necessitated by the growth of the City during the 1920's. The Crocker-Huffman Land and Water Company erected this structure on the site of an 18" auxilliary well, serviced by a 75 H.P. turbine pump, which had been put into operation in 1923. The estimated value of this structure was $18,600. During the 11 years this well augmented the flow from the tower at Station No. 1 (Bear Creek) there was a problem of sand build-up in the system which was alleviated with the construction of this tower at Station No. 3. This structure is part of a system that appears to be the only one in the San Joaquin Valley that is capable of maintaining almost constant water pressure by pumping water directly into the tank and controlling the overflow by an adjustable regulating valve on a separate discharge pipe feeding into the distribution mains. This operating practice began with the tank at Station No. 1 in 1917 and continues to this day. The City of Merced acquired the system on May 1, 1973.

20. Main theme of the historic resource: (If more than one is checked, number in order of importance.)
Architecture ___ Arts & Leisure ___
Economic/Industrial ___ Exploration/Settlement ___
Government _X_ Military ___
Religion ___ Social/Education ___

21. Sources (List books, documents, surveys, personal interviews and their dates). Blueprints on file at Merced County Historical Society.
Guy B. Cornell. Development and Operation of the Merced Water System from 1889 Through 1969. Building permit 12/1/34.
Interview: Robert Garretson, Util. Supt., City of Merced, Feb. 1985

22. Date form prepared 3/20/85
By (name) Susan Arguelles
Organization City of Merced
Address: 1730 M Street
City Merced Zip 95340
Phone: 209/385-6826

Locational sketch map (draw and label site and surrounding streets, roads, and prominent landmarks):



CA-779G

earth touch
www.earthtouch-llc.com

RECEIVED
JUN 11 2001
OHP

B

FCC

May 29, 2001

California Office of Historic Preservation
Attn: Dr. Knox Mellon
1416 Ninth Street, Room 1442-7
Sacramento, CA 95814

Dear Dr. Mellon:

EarthTouch, LLC is under contract to Nextel Communications to evaluate and make recommendations to the California Office of Historic Preservation (OHP) regarding constructed telecommunication facilities. According to Federal Communication Commission (FCC) rules, outlined in 47 CFR 1.1301-1.1319 et. seq., Nextel is consulting with the California-OHP regarding the construction of a cellular facility (Nextel Site Number: CA-0799G: Merced) in Merced, California. The basis for this consultation is 36 CFR Part 800.

NL

In accordance with FCC rules in complying with Section 106 of the National Historic Preservation Act (NHPA), Nextel has taken the following steps to identify historic properties that might be affected by completing the following:

- Conducted a records search through the California Historical Resource Information System (CHRIS) of historic properties within a 1-block radius of the proposed cellular facility; and
- Conducted an on-site evaluation of the building for historic significance and a reconnaissance of the site vicinity to assess potential impact to historic structures nearby.

The cellular facility is situated on the water tower located at 511 West 12th Street, in the City of Merced, California (Figure 1).

The results of the CHRIS file search indicated that the water tower has been previously recorded and documented by Susan Arquelles of the City of Merced in 1985. It is also listed in the Historic Property Data File for Merced County, and was given a eligibility rating of 3S (eligible for the NRHP under a separate listing). The historic name and the current name of the tower is Station No. 3 Water Tower. The structure is composed of a riveted steel water tank measuring 40 feet in diameter with a water holding capacity of 300,000 gallons. The tank is supported by six steel support legs set in concrete with an overall height of 148 feet. A balcony with a handrail also encircles the tank. The tank was originally constructed in 1934 as city growth required an increase in water storage facilities. The structure was built over an existing well that had been in operation since 1923. The water tower is part of a system that is unique in that it is the only one that maintains almost constant water pressure to residents within the San Joaquin Valley. The subject property meets criteria A as it is associated with the conservation of water in the San Joaquin Valley, an important factor in the growth and development of the area. It does not meet criteria B, but does meet criteria C as it is a landmark for residents and visitors of the city and represents a type and method of construction. The tower is does not meet criteria D. As the water tower still meets criteria A and C of the NRHP, it appears to retain its eligible status.

The review of the Historic Property Data File also indicates that there are a number of historic buildings within a 1-block radius of the subject property. These structures are located along 12th Street as well.

2269 East Canyon View Drive, Layton, Utah 84040 • Telephone: 801-771-2800 • Fax: 801-771-2838

ATTACHMENT 3

Nextel Communications has installed three sectors of three-panel antennas mounted on the catwalk railing of the tower, and a 10 by 20 foot electronic equipment shelter near the base. Electrical and telecommunications cables connect the antennas to the equipment shed.

On behalf of the FCC, Nextel is requesting that OHP address the multiple steps outlined in sections 800.3 - 800.6 in an expedited review, as permitted under section 800.3(g) of 36 CFR Part 800. Nextel is requesting that OHP review and comment on the enclosed supporting documentation and on the recommended finding that the subject property is eligible, and that construction of the facility has had no additional visual impacts to the water tower and painting the antennae and brackets to mimic the structural background will mitigate any effects on this historic property.

If you have any questions or concerns, please don't hesitate to contact us here at your earliest convenience.

Sincerely,

Chris Jensen
Archaeologist
EarthTouch LLC.

Lorna Billat
Historic Archaeologist
EarthTouch LLC.
tel: 801.771.2800
fax: 801.771.2838

enc

STATE OF CALIFORNIA – THE RESOURCES AGENCY GRAY DAVIS, *Governor*

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov

August 9, 2001

RECEIVED
AUG 27 2001
OHP

Reply To: FCC010611B

SCC
NL 641

Lorna Billat
Historic Archaeologist
EarthTouch LLC
2269 East Canyon View Drive
Layton, UT 84040

Re: Nextel Wireless Communications Facility, CA-0779G, 511 West 12th Street, Merced, CA

Dear Ms. Billat:

You have provided me with the results of your efforts to determine for the benefit of the FCC, whether the above cellular installation, may affect historic properties. You have done this, and are consulting with me, in order to enable the FCC to comply with Section 106 of the National Historic Preservation Act and implementing regulations codified at 36 CFR Part 800.

I have reviewed the documentation furnished and considered your recommendation to the FCC that the Station No. 3 Water Tower in Merced appears eligible for the National Register of Historic Places (NRHP) under criterion A for its association with the conservation of water in the San Joaquin Valley, an important factor in the growth and development of the area. It is Earthtouch's opinion that the water tower is also eligible under criterion C for its role as a landmark for residents and visitors of the city and because it represents a type and method of construction. Earthtouch is also recommending that no historic properties will be adversely affected as a result of this undertaking.

Given the nature of the project and the attempt to mitigate impacts, I have the following comments:

1) The steps taken to identify historic properties that may be affected by this undertaking are satisfactory.

2) I concur that the Station No. 3 Water Tower in Merced is eligible for the NRHP under criterion A for its association with the conservation of water in the San Joaquin Valley. At this time, I do not believe that there is enough information to concur that the water tower is also eligible under criterion C.

3) I concur in your recommendation that there are no historic properties that will be adversely affected by this undertaking.

4) I would not object to an official finding by the FCC that there are no historic properties that will be adversely affected by this undertaking.

5) I will assume that the FCC has made this finding unless I hear to the contrary from them within 15 calendar days after you have furnished them with a copy of this letter.

ATTACHMENT 4

6) Be advised that under certain circumstances, such as unanticipated discovery or a change in project description, the FCC may have additional responsibilities for this undertaking under 36 CFR Part 800.

If you agree with the determinations that I have proposed, please evidence your agreement by signing the signature block below. Please return the original letter to me as soon as possible. Alternatively, you may provide me with a separate letter concurring in the proposed determinations of eligibility and effect. If you have any questions, please contact Natalie Lindquist of my staff at your earliest convenience at (916) 654-0631 or e-mail at nlind@ohp.parks.ca.gov.

Sincerely,

Dr. Knox Mellon
State Historic Preservation Officer

AGREED: Lorna Billat DATE: 8/21/01

Lorna Billat
Historic Archeologist
EarthTouch LLC.