



**City of
Santa Clara**
The Center of What's Possible

Sanitary Sewer Condition Assessment Repairs – Package 1 Monitoring & Reporting Program

March 2023



Sanitary Sewer Condition Assessment Repairs – Package 1
Monitoring & Reporting Program
(including AMMs & CEQA Mitigation Measures)

March 2023



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Santa Clara**
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Introduction

This document constitutes the Monitoring and Reporting Program adopted by the City of Santa Clara (City) pursuant to the California Environmental Quality Act (CEQA) for non-exempt projects in the first construction package of the 2021 – 2023 Sanitary Sewer Condition Assessment Repairs Program (Sanitary Sewer Condition Assessment Repairs – Package 1). It includes the measures incorporated into the projects to avoid or prevent significant environmental impacts—referred to as Avoidance and Minimization Measures or AMMs—as well as additional Mitigation Measures identified and adopted through the CEQA review process.

The non-exempt projects in Sanitary Sewer Condition Assessment Repairs – Package 1 include the following. Locations are shown in Figures 1 and 2.

- At Segment 100, in Mathew Street west of De La Cruz Boulevard: open-cut removal of 166 linear feet (LF) of existing 18-inch-diameter vitrified clay pipe (VCP) sewer line and replacement with 18-inch-diameter polyvinyl chloride (PVC) sewer line; removal and replacement of sanitary sewer manhole (SSMH) 57-35 at west terminus of Segment
- At Segment 231, in a utility easement crossing Lafayette Street just south of Highway 237: installation of 278 LF of cured-in-place-pipe (CIPP) lining in existing 42-inch-diameter reinforced concrete pipe (RCP) sewer line; replacement of manhole cones at SSMH 114-14 and SSMH 114-23 at the termini of the Segment
- At Segment 232, in Lafayette Street immediately south of Segment 231: installation of 437 LF of CIPP lining in existing 42-inch-diameter RCP sewer line; replacement of manhole at SSMH 104-9 at the south terminus of the Segment
- At Segment 233, in Lafayette Street south of Segment 232: installation of 491 LF of CIPP lining in existing 42-inch-diameter RCP sewer line; replacement of manhole cone at SSMH 104-15 at the south terminus of the Segment
- At Segment 242, in Lafayette Street north of Tasman Drive: installation of 430 LF of CIPP lining in existing 42-inch-diameter RCP sewer line; replacement of manhole cones at SSMH 104-17 and SSMH 104-22 at the termini of the Segment

The remaining repairs in Package 1 were screened for project details and environmental constraints, and found to qualify for either statutory or categorical exemption from CEQA (Redtail Consulting 2021a, 2021b).

The City circulated a CEQA Initial Study (IS) analyzing the environmental effects of conducting the non-exempt Package 1 repairs listed above in December 2022, and adopted a Mitigated Negative Declaration (MND) for the projects on April 18, 2023. When a public agency adopts an MND, Section 15097 of the state's *CEQA Guidelines* requires that the agency also adopt a program for monitoring or reporting on the implementation of the measures it will require to mitigate potentially significant effects. This document, also adopted by the City on April 18, 2023, satisfies that requirement.

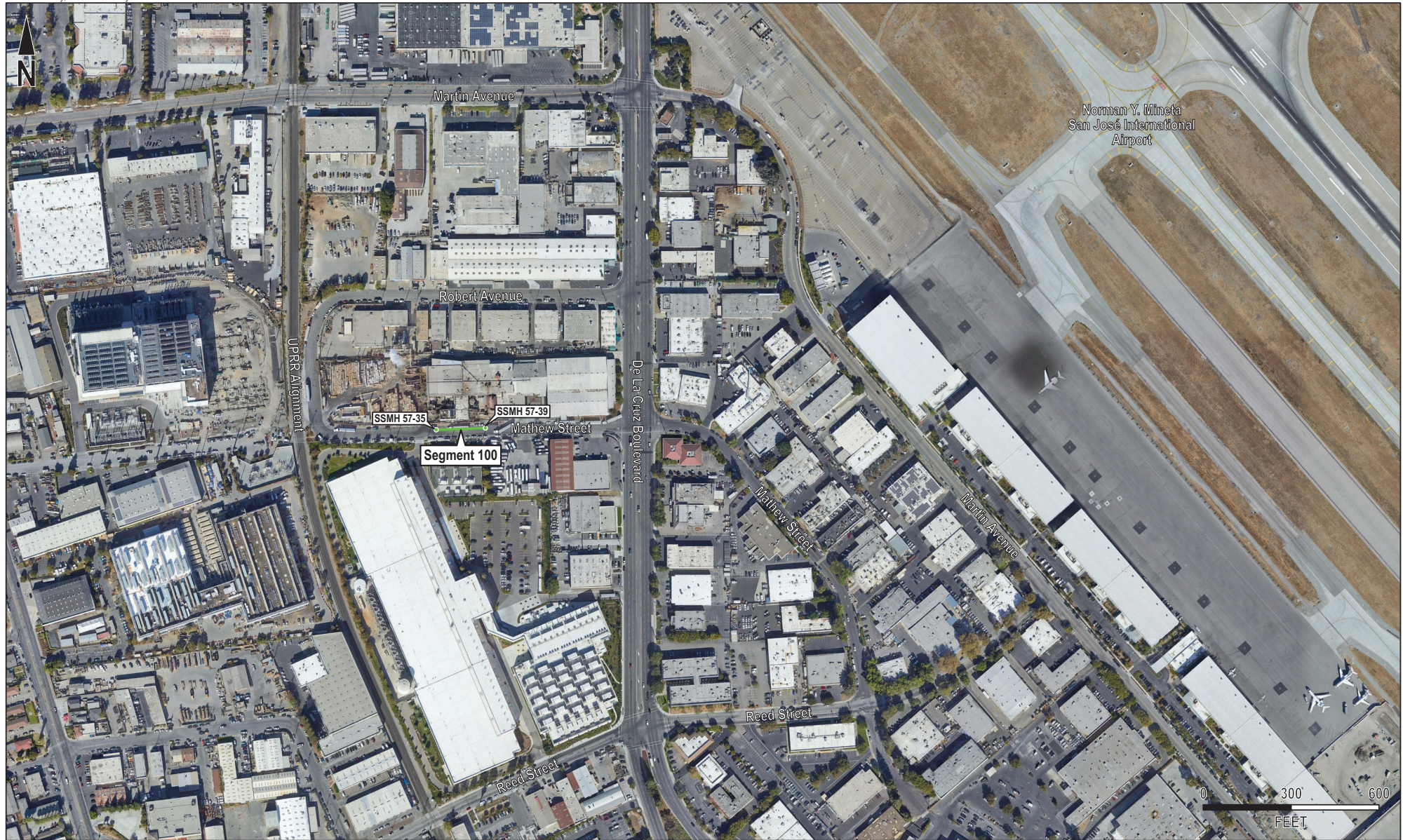
In addition to this Introduction, this document contains the following components.

- A summary matrix listing all adopted environmental measures (AMMs and mitigation)
- *Section 1*—identifying preparatory actions that will need to be completed in advance of commencing construction, in order to support efficient implementation of the AMMs and Mitigation Measures
- *Section 2*—detailing the AMMs “build into” the projects: actions required, timing, responsibility, and performance standard(s)
- *Section 3*—detailing the Mitigation Measures identified through CEQA review: actions required, timing, responsibility, and performance standard(s)

Throughout this document, the following abbreviations are used.

- Contractor – contractor retained to perform repairs
- City PM – City’s construction Project Manager
- Inspector – City’s Inspector
- PW Director – City Public Works Director

Aerial Photograph Source: GoogleEarth (imagery date: 09/04/2020, downloaded: 03/07/2022)
For illustration only; locations not surveyed







Sanitary Sewer Condition Assessment Repairs – Package 1
Summary of Adopted Environmental Measures

Measure	See Page ¹	Implementation Timing ²	Advance Prep? ³
Avoidance and Minimization Measures			
Dust Control	3	<ul style="list-style-type: none"> Design phase (requirements included in construction documents) During construction (implementation) 	Yes
Emissions Control	4	<ul style="list-style-type: none"> Design phase (requirements included in construction documents) During construction (implementation) 	Yes
Mitigation Measures			
AIR-1. Toxic Air Contaminant and Odor Control	5	<ul style="list-style-type: none"> During project planning (styrene avoidance if feasible) Prior to construction (noticing) During construction (additional measures) 	Yes
BIO-1. Protection of Nesting Birds (General), All Segments	7	<ul style="list-style-type: none"> During project planning (scheduling) Prior to construction (surveys) During construction (if needed, avoidance) 	Yes
BIO-2. Protection of Nesting Burrowing Owl, Segments 231 and 232	9	<ul style="list-style-type: none"> Prior to construction (surveys) During construction (if needed, avoidance) 	Yes
CUL-1. Notice of Potential for Buried Cultural Resources in Construction Documents	11	<ul style="list-style-type: none"> Design phase 	No
CUL-2. Retention of On-Call Archaeologist	12	<ul style="list-style-type: none"> Prior to construction 	Yes

¹ For details (actions required, implementation/oversight responsibility, performance standards), see referenced pages.

² Measures that include **pre-construction requirements** are highlighted in orange.

³ For advance preparation needed to efficiently implement AMMs and Mitigation Measures, see Section 1.

Measure	See Page¹	Implementation Timing²	Advance Prep?³
CUL-3. Worker Awareness Training for Archaeological Resources	13	<ul style="list-style-type: none"> At construction start-up, prior to groundbreaking 	Yes
CUL-4. Evaluation and Treatment of Unanticipated Archaeological Discoveries	14	<ul style="list-style-type: none"> During construction 	Yes
CUL-5. Procedures for Discovery of Human Remains	15	<ul style="list-style-type: none"> During construction 	Yes
GEO-1. Worker Awareness Training for Paleontological Resources	16	<ul style="list-style-type: none"> At construction start-up, prior to groundbreaking 	Yes
GEO-2. Stop-Work, Evaluation, and Treatment in the Event of a Paleontological Find	17	<ul style="list-style-type: none"> During construction 	Yes
HAZ-1. Contaminated Groundwater, Soil, and Soil Vapor Protection	18	<ul style="list-style-type: none"> Design phase (contractor responsibilities identified in construction documents) Prior to construction (HASP development) During construction (HASP implementation) 	Yes

Advance Preparation

The following advance steps will be needed to implement the adopted AMMs and Mitigation Measures.

- During the design phase: incorporation of AMM requirements into construction documents
 - Dust Control AMM (page 3)
 - Emissions Control AMM (page 4)
- During the design phase: incorporation of mitigation requirements into construction documents
 - Adherence to NASSCO guidelines for use of styrene resins and other requirements of Mitigation Measure AIR-1 (page 5)
 - Observance of no-activity/no-disturbance buffers around active nesting sites, per Mitigation Measures BIO-1 and BIO-2 (pages 7 and 9)
 - Notice of potential to encounter buried cultural resources (Mitigation Measure CUL-1, page 11)
 - Compliance with worker awareness training requirements, per Mitigation Measures CUL-3 and GEO-1 (pages 13 and 16)
 - Procedures in the event archaeological resources or human remains are encountered, per Mitigation Measures CUL-4 and CUL-5 (pages 14 and 15)
 - Procedures in the event of a paleontological find, per Mitigation Measure GEO-2 (page 17)
 - HASP preparation and other Contractor responsibilities under Mitigation Measure HAZ-1 (page 18)
- During project planning: construction scheduling to avoid nesting season, if feasible (Mitigation Measure BIO-1, page 7)
- During project planning/bidding: avoidance of styrene resins if feasible (Mitigation Measure AIR-1, page 5)
- Prior to construction: retention of qualified staff to assist with implementation of mitigation measures, including
 - City's Biologist (Mitigation Measures BIO-1 and BIO-2, pages 7 and 9)
 - City's Archaeologist (Mitigation Measures CUL-2 through CUL-5, beginning on page 12)

- City’s Paleontologist (Mitigation Measures GEO-1 and GEO-2, pages 16 – 17)
- Prior to construction: assessment of need for interpreter/translator services for Worker Awareness Training; retention of interpreter/translator if needed
- Prior to construction: review of contractor submittals
 - Project signage, including City contact for dust complaints (Dust Control AMM, page 3)
 - Health and Safety Plan (HASP) submittal (Mitigation Measure HAZ-1, page 18)

In addition, note that some AMMs and Mitigation Measures include activities that must occur prior to construction, highlighted in the foregoing *Summary of Adopted Environmental Measures*. These are not technically considered “advance preparation” since they are part of the measures themselves, but still represent early steps in the implementation process.

Avoidance & Minimization Measures

Dust Control

To reduce dust generation, the following measures will be required during excavation and ground disturbance. These measures reflect the requirements of the Bay Area Air Quality Management District's (BAAQMD's) Best Management Practices (BMPs) for fugitive dust control (Bay Area Air Quality Management District 2017).

- All exposed surfaces (potentially including contractor parking areas, staging areas, areas subject to excavation or other ground disturbance, and unpaved access roads/routes) and soil stockpiles will be watered 2 times per day
- All haul trucks transporting soil, sand, or other loose material offsite will be covered
- All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. Use of dry power sweeping will be prohibited
- All vehicle speeds in unpaved areas will be limited to 15 miles per hour
- If pavement is removed, it will be replaced as soon as possible.
- Vegetated areas disturbed during construction will be replanted/reseeded as soon as possible
- Project signage will include the name and telephone number of City staff to contact regarding dust complaints. City staff will respond and take corrective action within 48 hours. Project signage will also include the BAAQMD's phone number to ensure compliance with applicable regulations

Timing:	Throughout construction period
Responsibility:	Implementation: Contractor (dust control measures), City PM or designated City staff (response to dust complaints) Oversight: Inspector, City PM
Performance Standard:	Requirements implemented as specified, as verified by City Inspector

Confirmation:

Emissions Control

- Idling times will be minimized, either by shutting equipment off when not in use or by reducing the maximum idling time to 5 minutes. Clear notification will be provided to all equipment operators regarding limitation on idling times
- All construction equipment will be maintained and properly tuned in accordance with manufacturer specifications. All equipment will be checked by a certified mechanic and determined to be running in proper condition prior to operation

Timing:	Throughout construction period
Responsibility:	Implementation: Contractor Oversight: Inspector, City PM
Performance Standard:	Requirements implemented as specified, as verified by City Inspector

Confirmation:

Mitigation Measures

AIR-1. Toxic Air Contaminant and Odor Control

If feasible, the City will avoid the use of styrene resins for CIPP lining.

If the use of styrene resins cannot feasibly be avoided, the City will require the following measures to reduce the potential for exposure to toxic air contaminants during CIPP lining.

- All use of styrene resins will be required to adhere to the standard best practices in NASSCO's Guideline for the Safe Use and Handling of Styrene-Based Resins in Cured-in-Place Pipe (National Association of Sewer Service Companies 2020 or most current)
- Sewer main reaches to be rehabilitated via CIPP will be plugged at both ends prior to lining, and a vent will be provided at each end of the reach to provide better dispersal of vapors
- If steam curing is used, the steam exhaust will be located at least 250 feet from commercial/business park entry areas and all heating, ventilation, and air conditioning system air intakes. If this is not feasible, an alternative curing method will be used
- Adjacent facilities will be notified in writing at least 1 week prior to the start of work. Notification will include the following information.
 - Anticipated work dates
 - An overview of the repair process, including the substances proposed for use
 - Instructions to leave the premises, move farther away from the work area if possible, and contact the Santa Clara Fire Department if vapors or odors have entered the building, along with the appropriate Fire Department contact information
 - An advisory to seek medical attention promptly if exposure is suspected
 - A request to report any odor or health concerns to the City
 - The name, phone number, and email address of the City staff member who will be responsible for answering questions and receiving and responding to reports of odors or health concerns

Additionally, to enable further assessment of potential concerns, the City will document any calls received regarding odors or health symptoms, and if health symptoms are reported will conduct indoor air monitoring following a standard protocol appropriate to the type of resin and curing method(s) being used. Results of

monitoring will be documented in City files for consideration in planning future projects. If monitoring indicates levels of any CIPP-related emissions of any toxic air contaminant above applicable health thresholds, the City will take appropriate action to reduce the potential for exposure.

Timing:	<ul style="list-style-type: none"> • During project planning (styrene avoidance if feasible) • Prior to construction (noticing) • During construction (additional measures)
Responsibility:	<p>Implementation:</p> <ul style="list-style-type: none"> – City PM determines whether avoidance of styrene resins is feasible – City PM identifies point of contact for complaints and designates staff responsible for noticing; City staff conduct noticing – Contractor implements measures for reduction of vapor exposure during construction – City receives and documents complaints – If warranted, City conducts indoor air monitoring, documents results, and implements any appropriate follow-up <p>Oversight: PW Director (overall execution)</p>
Performance Standard:	<ul style="list-style-type: none"> • Use of styrene resins avoided if feasible • If use of styrene resins cannot be avoided, noticing is carried out as required • If use of styrene resins cannot be avoided, measures for reduction of vapor exposure are implemented as required • Complaints regarding odors or health symptoms (if any) are documented • If health symptoms are reported, air monitoring is carried out as required, and result are documented, and follow-up action is conducted if warranted

Confirmation:

BIO-1. Protection of Nesting Birds (General), All Segments

If feasible, all project-related activity within 300 feet of the proposed repair Segments will be scheduled between September 1 and January 31, outside the February 1 – August 31 nesting period.

If project-related activity at any Segment occurs during the nesting period, the City will retain a qualified biologist to conduct a preconstruction nesting bird survey covering the Segment footprint and a 300-foot-wide surrounding buffer. The survey will be conducted within 2 weeks of the start of construction-related activity at the Segment. If active nest(s) of any protected species are identified within the 300-foot-wide survey area, a no-activity buffer will be established around the nest for the duration of the nesting season, or until a biologist determines the young have fledged and left the nest, or that the nest has been abandoned. No entry into the no-activity buffer will be permitted. The no-activity buffer will be delineated in the field by or under the supervision of the biologist, using temporary construction fencing or another suitable low-impact medium. The width of the buffer will be determined by the biologist, based on the species involved, the amount of vegetative and other screening between the nest and areas where construction activity will take place, and, if appropriate, other site-specific factors. If special-status species are involved, the biologist will consult with the appropriate resource agency(ies) (California Department of Fish and Wildlife and/or U.S. Fish and Wildlife Service) in determining the width of the buffer.

Timing:	<ul style="list-style-type: none"> • During project planning (scheduling) • Prior to construction (surveys) • During construction (if needed, avoidance)
Responsibility:	<p>Implementation:</p> <ul style="list-style-type: none"> – City PM retains Biologist – Biologist conducts surveys, establishes no-activity buffers if needed, conducts site checks to verify nesting status, communicates status to City, removes buffers (if any) – Contractor avoids areas within no-activity buffers <p>Oversight:</p> <ul style="list-style-type: none"> – City PM (Biologist) – Inspector (Contractor performance) – PW Director (overall execution)
Performance Standard:	<ul style="list-style-type: none"> • If construction occurs during nesting period, surveys are conducted prior to construction (within 2 weeks of Contractor mobilization) • Buffers are installed if warranted • Buffer areas are avoided • Biologist site checks are conducted until nesting success or nest abandonment is verified, or until construction is complete, whichever comes first • Buffers are removed by biologist following nesting completion or Contractor demobilization, whichever comes first

Confirmation:

BIO-2. Protection of Nesting Burrowing Owl, Segments 231 and 232

If repair work at Segment 231 or Segment 232 occurs during the Western Burrowing Owl nesting season (February 1 – August 31), the City will retain a qualified biologist to conduct preconstruction surveys covering all areas of suitable habitat within 250 feet of the Segment. The survey will last a minimum of 3 hours, and will either begin 1 hour before sunrise and continue until 2 hours after sunrise or begin 2 hours before sunset and continue until 1 hour after sunset. If no owls are detected during a first survey, a second survey will be conducted. If owls are detected during the first survey, a second survey is not needed. All owls observed will be counted and their locations will be mapped.

If evidence of nesting Western Burrowing Owls is found, a 250-foot-wide no-disturbance buffer zone will be established around each occupied nest and will be delineated in the field by the biologist, using a suitable low-impact medium. Construction may proceed outside the no-disturbance buffer zones.

Timing:	<ul style="list-style-type: none"> • Prior to construction (surveys) • During construction (if needed, avoidance)
Responsibility:	<p>Implementation:</p> <ul style="list-style-type: none"> – City PM retains Biologist – Biologist conducts surveys, establishes no-disturbance buffer(s) if needed, conducts site check(s) to verify nesting status, communicates status to City, removes buffer(s) – Contractor avoids areas within no-disturbance buffers <p>Oversight:</p> <ul style="list-style-type: none"> – City PM (Biologist) – Inspector (Contractor performance) – PW Director (overall execution)
Performance Standard:	<ul style="list-style-type: none"> • Survey(s) conducted prior to groundbreaking, per specifics in measure • Locations are documented if owls are present • Buffers are installed if warranted • Buffer areas are avoided • Biologist site checks are conducted to verify avoidance and monitor nesting progress • Biologist site checks are conducted until nesting success or nest abandonment is verified, or until construction is complete, whichever comes first • Buffer(s) are removed by biologist following nesting completion or Contractor demobilization, whichever comes first

Confirmation:

CUL-1. Notice of Potential for Buried Cultural Resources in Construction Documents

The potential to encounter buried cultural resources, including Native American burials, will be noted in the project construction documents.

Timing:	Design phase
Responsibility:	Implementation: – Design consultant Oversight: – City PM
Performance Standard:	<ul style="list-style-type: none">• Information included in construction documents as required

Confirmation:

CUL-2. Retention of On-Call Archaeologist

Prior to construction, the City will retain a qualified professional archaeologist (City's Archaeologist) with experience in northern and central California archaeology on an on-call basis for the duration of all ground-disturbing activities. The City's Archaeologist will be responsible for reviewing, identifying, and evaluating cultural resources (if any) exposed during construction, for determining whether they qualify as *unique archaeological resource(s)* under CEQA, and, if needed, recommending and implementing appropriate follow-up treatment.

Timing:	Prior to construction
Responsibility:	Implementation: City PM Oversight: PW Director
Performance Standard:	<ul style="list-style-type: none">• Archaeologist is retained before construction begins• Archaeologist can demonstrate experience in northern and central California archaeology

Confirmation:

CUL-3. Worker Awareness Training for Cultural Resources

Prior to groundbreaking at each of the Segments, the City’s Archaeologist (defined in Mitigation Measure CUL-2) will develop and present in-person, hands-on worker awareness training for archaeological resources. Training will include information on the possibility of encountering resources during construction; the types of resources that may be seen and how to recognize them; and proper procedures in the event resources are encountered. All field management and supervisory personnel and construction workers involved with ground-disturbing activities will be required to take this training prior to beginning work on the project. Upon completion of the training, workers will be required to sign a form stating that they attended the training, understand, and will comply with the information presented.

Timing:	At construction start-up, prior to groundbreaking <i>Note that if the same crew will carry out repairs at all Segments, only one training will be needed; if crews change, additional training prior to groundbreaking at subsequent Segments will be necessary</i>
Responsibility:	Implementation: <ul style="list-style-type: none"> - City PM retains City’s Archaeologist - City’s Archaeologist conducts training, including collection of worker signatures - Contractor identifies personnel and sends them to training Oversight: PW Director
Performance Standard:	<ul style="list-style-type: none"> • Training is properly conducted and documented • Staff delivering training meet qualifications in Mitigation Measure CUL-2

Confirmation:

CUL-4. Evaluation and Treatment of Unanticipated Archaeological Discoveries

If known or suspected archaeological resources are discovered during construction, work in the immediate area of the find will cease and the contractor will be required to notify the City before the end of the work day. The find will be protected in place until the City’s Archaeologist has evaluated it and identified appropriate follow-up measures, if any. If the City’s Archaeologist determines that the resource qualifies as a *unique archaeological resource* under CEQA, they will notify the City and other appropriate parties and recommend follow-up measures to reduce impacts, in accordance with Section 15064.5 of the *CEQA Guidelines*. Depending on the nature of the find, follow-up measures may include avoidance, preservation in place, recordation, monitoring during ongoing work, additional archaeological testing, and data recovery, among other options. The City’s Archaeologist may recommend completion of a formal Archaeological Monitoring Plan (AMP) and/or Archaeological Treatment Plan (ATP), potentially including data recovery, if significant archaeological deposits are exposed during ground-disturbing activities. The City will be responsible for proper implementation of the AMP and ATP. If archaeological evaluation, monitoring, or treatment is required, the City’s Archaeologist will prepare and file a Monitoring Closure Report with the City, documenting the nature of the find(s), evaluation methods, and outcomes.

Timing:	Throughout construction period
Responsibility:	Implementation: <ul style="list-style-type: none"> – In the event of a known or potential find, Contractor implements stop work, protection, and avoidance in the event of a find; reports find to City – City notifies City’s Archaeologist – City’s Archaeologist responds to and evaluates find; if needed, recommends treatment; if needed, implements treatment and prepares and files Monitoring Closure Report – Contractor coordinates with and enables evaluation and treatment of find Oversight: City PM
Performance Standard:	<ul style="list-style-type: none"> • In the event of a find, resources are protected, evaluated, and treated if appropriate • Treatment conforms to CEQA requirements • Treatment is documented in Monitoring Closure Report per specifics in measure

Confirmation:

CUL-5. Procedures for Discovery of Human Remains

The treatment of human remains and funerary objects discovered during any project related ground-disturbing activity will comply with all applicable state laws. If known or potential human remains are encountered during project-related activities, work within 50 feet of the discovery and in any nearby areas reasonably suspected to overlie adjacent remains will cease, the find will be protected in place, and the contractor will be required to notify the City before the end of the work day. The City will promptly notify the Santa Clara County Coroner, who will be responsible for determining whether the remains are Native American. If the Coroner determines that the remains are Native American and are not subject to their authority, they will notify the Native American Heritage Commission, which is responsible for identifying and notifying descendant(s) of the deceased so they can make recommendations regarding the treatment of the remains. The City will be responsible for facilitating the disposition of remains recommended by the Most Likely Descendant(s). If no satisfactory agreement can be reached as to the disposition of the remains pursuant to state law, the City will respectfully reinter the human remains and items associated with the burial on City property in a location not subject to further subsurface disturbance. A final report detailing the find, follow-up activities, and disposition of remains will be prepared by the City's Archaeologist or other qualified staff, and will be submitted to the City's Director of Community Development promptly following disposition of the remains. The report will be subject to review and approval by the City's Director of Community Development.

Timing:	Throughout construction period
Responsibility:	<p>Implementation:</p> <ul style="list-style-type: none"> - In the event of a known or potential find, Contractor implements stop work, protection, and avoidance; reports find to City - City PM notifies County Coroner and proceeds according to Coroner direction - If remains are Native American, City coordinates with Most Likely Descendent and facilitates reburial per Most Likely Descendent recommendations - If reinterment of remains on City property is necessary, City coordinates location and facilitates reburial - Contractor coordinates with and enables evaluation and treatment of find <p>Oversight: PW Director</p>
Performance Standard:	<ul style="list-style-type: none"> • California state legal requirements for treatment of human remains are satisfied • If Native American remains are encountered, either: <ul style="list-style-type: none"> - recommendations of Most Likely Descendant for disposition of remains are implemented, <u>or</u> - in the absence of recommendations from Most Likely Descendant, remains are respectfully reinterred at a City-owned location where they will not be subject to further disturbance

Confirmation:

GEO-1. Worker Awareness Training for Paleontological Resources

Prior to groundbreaking, the City will retain qualified staff to develop and present in-person, hands-on worker awareness training for paleontological resources. As used here, *qualified staff* refers to an individual who satisfies one or both of the following criteria.

- A Principal Paleontologist as defined by the Society of Vertebrate Paleontology (Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee 2010), who is experienced in delivering training to nonspecialists
- A California-licensed professional geologist (PG) who has expertise in South San Francisco Bay Area stratigraphy and paleontology and is experienced in delivering training to nonspecialists

Training will be concise and substantive. It will include information on the possibility of encountering fossils during construction; the types of fossils that may be seen and how to recognize them; and proper procedures in the event fossils are encountered. All field management and supervisory personnel and construction workers involved with ground-disturbing activities will be required to take this training prior to beginning work on the project. Upon completion of the training, workers will be required to sign a form stating that they attended the training, understand, and will comply with the information presented.

Timing:	At construction start-up, prior to groundbreaking <i>Note that if the same crew will carry out repairs at all Segments, only one training will be needed; if crews change, additional training prior to groundbreaking at subsequent Segments will be necessary</i>
Responsibility:	Implementation: <ul style="list-style-type: none"> – City PM retains City’s Paleontologist – City’s Paleontologist conducts training, including collection of worker signatures – Contractor identifies personnel and sends them to training Oversight: PW Director
Performance Standard:	<ul style="list-style-type: none"> • Training is properly conducted and documented • Staff developing/delivering training meet qualifications specified in measure

Confirmation:

GEO-2. Stop-Work, Evaluation, and Treatment in the Event of a Paleontological Find

If vertebrate remains or other potentially significant fossil resources are discovered during project-related activities, all work in the immediate vicinity of the discovery will cease, the find will be protected in place, and the contractor will be required to notify the City before the end of the work day. The City will detail qualified staff—i.e., staff meeting the criteria for a Qualified Professional Paleontologist as defined by the Society of Vertebrate Paleontology (Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee 2010)—to evaluate the find and recommend appropriate follow-up treatment. Work may continue on other parts of the alignment while evaluation (and, if needed, treatment) takes place, as long as the find can be adequately protected in the judgment of the qualified staff. The City will be responsible for ensuring that the recommendations of the qualified staff regarding treatment and reporting are implemented.

Timing:	Throughout construction period
Responsibility:	Implementation: <ul style="list-style-type: none"> – In the event of a known or potential find, Contractor implements stop work, protection, and avoidance; reports find to City – City notifies Paleontologist – City’s Paleontologist responds to find, evaluates find; if needed, recommends treatment; if needed, implements treatment – Contractor complies with Paleontologist direction for avoidance/treatment of find Oversight: City PM
Performance Standard:	<ul style="list-style-type: none"> • In the event of a find, resources are protected, evaluated, and, if warranted, treated (recovered, curated, reported) • Staff evaluating find and recommending/implementing treatment meet qualifications stipulated in measure

Confirmation:

HAZ-1. Contaminated Groundwater, Soil, and Soil Vapor Protection

The contractor will be required to prepare and submit a Health and Safety Plan (HASP) for worker and public safety during all phases of sewer and manhole repair work. The HASP will be tailored to the contaminants potentially present, the media potentially affected/involved (soil, groundwater, soil vapor), and the activities planned. The HASP will be subject to review and approval by a Certified Industrial Hygienist and the City, and at a minimum will include the following requirements.

- Contractor staff will be required to wear appropriate Personal Protective Equipment (PPEs) and the contractor will be required to employ Best Management Practices (BMPs) to minimize and monitor human exposure to potential contaminants, consistent with applicable federal and state requirements, including Title 29 of the Code of Federal Regulations and California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) guidelines (California Code of Regulations, Title 8). Construction BMPs described in the HASP will include, but will not necessarily be limited to, the following
- Public access to the active work site will be prohibited using appropriate safety barriers and signage
- If contaminated soil, groundwater, or other materials encountered during construction activities qualify as hazardous waste (per California Code of Regulations, Title 22), all contractor employees (and subcontractors, if any) handling the hazardous waste will be certified in OSHA's 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training
- If dewatering is required, groundwater removed from excavations will be stored in a settling tank and tested onsite for contamination prior to discharge in accordance with applicable permit requirements. If contaminant levels are detected in excess of the applicable discharge limits per the contractor's discharge permit, the groundwater will either be treated onsite using appropriate technology (e.g., sediment filter, activated carbon filter, or other appropriate alternative methods) prior to discharge to the sanitary sewer, or will be removed from the site for appropriate offsite disposal. Groundwater treatment and offsite disposal options will be described in the HASP
- Contractor will stockpile excavated materials prior to onsite reuse as backfill or offsite disposal at an appropriately permitted landfill. Contractor will water/mist soil as it is being excavated. Stockpiled soil will be placed in areas shielded to the extent feasible from prevailing winds and will be covered with plastic sheeting to prevent fugitive dust and vapor emissions and to shield the stockpile from potential rain. Stockpiles will be placed away from drainage courses, gutters, and stormdrain inlets to prevent contact with stormwater runoff. Public access to the stockpile area(s) will be prohibited using appropriate barriers and signage. Soil exhibiting signs of potential contamination (such as staining, odors, or the presence of debris) will be placed in a separate stockpile
- Soil that does not exhibit signs of potential contamination may be reused as backfill in the excavation from which it was removed
- Excavated materials that exhibit signs of potential contamination, and excavated materials that are planned for offsite disposal at a landfill (if any), will be tested for contaminants in accordance with the receiving landfill's requirements and the U.S. Environmental Protection Agency's (EPA's) SW-846 guidelines (available: <https://www.epa.gov/hw-sw846>)
- If testing of excavated materials indicates any contaminant levels in excess of hazardous waste thresholds (per California Code of Regulations, Title 22), excavated materials will be handled and

disposed of by a licensed hazardous waste disposal contractor and transported by a licensed hazardous waste hauler to an appropriately licensed and permitted disposal facility, in accordance with local, state, and federal requirements. Contractor will water/mist soil as it is being loaded onto haul trucks to prevent fugitive dust generation, and haul trucks will be covered and the truck wheels and body brushed clean to control trackout, fugitive dust, and vapor emissions during transport

- If import fill materials (e.g., soil, sand, aggregate base) are used, they will be sourced and tested in accordance with guidance from the California Department of Toxic Substances Control’s Information Advisory *Clean Imported Fill Material* (available: <https://dtsc.ca.gov/information-advisory-clean-imported-fill-material-fact-sheet/>). Fill material testing results will be provided to the City for review and approval prior to importing the fill materials to the project site. No fill material will be imported for use at any of the repair Segments if it contains any contaminant at a level exceeding hazardous waste thresholds (per California Code of Regulations, Title 22) or the applicable Regional Water Quality Control Board (RWQCB) Environmental Screening Level (ESL) for commercial/industrial land use, with the exception of arsenic for which the naturally occurring background level of 11 milligrams per kilogram (mg/kg) (per Duvergé 2011) will apply as a limiting threshold
- The contractor will monitor ambient air in the trench and around the perimeter of the active work area for fugitive vapor emissions, including volatile organic compounds (VOCs), methane, and other sewer/landfill gases, using appropriate field screening instrumentation. If any contaminant level in excess of applicable Cal/OSHA Permissible Exposure Levels is detected, worker PPEs will be required to include inhalation protection meeting Cal/OSHA standards, and/or work will be suspended until airborne concentrations decrease below the action threshold, as verified by ambient air monitoring. If air monitoring indicates the presence of flammable vapors in excess of their lower explosive limits (LELs) or other hazardous atmosphere conditions (e.g., oxygen-deficient atmosphere) work will be suspended until the hazardous atmosphere conditions have been mitigated as verified by air monitoring. Vapor control measures (e.g., spraying water or vapor suppressants, covering exposed soil with plastic sheeting, and ventilation of excavations and manholes) will be performed as necessary based on air monitoring results, to maintain vapor concentrations below PELs and LELs and ensure that safe oxygen levels (20.8% – 21%) are present in the trench and surrounding work area

The project Contract Documents will stipulate contractor responsibilities in implementing these requirements.

Timing:	<ul style="list-style-type: none"> • Design phase (contractor responsibilities identified in construction documents) • Prior to construction (HASP development and review/approval) • During construction (HASP implementation)
Responsibility:	<p>Implementation:</p> <ul style="list-style-type: none"> – Design team incorporates Contractor responsibilities in construction documents – Contractor prepares HASP; Certified Industrial Hygienist and City review/approve – Contractor implements HASP requirements, including use of appropriately trained staff <p>Oversight: City PM</p>
Performance Standard:	<ul style="list-style-type: none"> • HASP is approved by Certified Industrial Hygienist and City

	<ul style="list-style-type: none">• HASP includes all minimum requirements stipulated in measure; may include other requirements• All HASP requirements are met throughout construction period, including staff qualifications and use of PPEs• Testing of potentially contaminated spoils complies with EPA's SW-846 guidelines• If import fill is used, it is sourced and tested in accordance with DTSC's <i>Clean Imported Fill Material</i> Information Advisory and meets requirements identified in measure• Air monitoring and follow-up are conducted according to measure requirements
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Confirmation:

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References & Standards Cited in this Document

- Bay Area Air Quality Management District. 2017. California Environmental Quality Act Air Quality Guidelines. (May.) Available: http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en. Downloaded: December 2017.
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- National Association of Sewer Service Companies. 2020. Guideline for the Safe Use and Handling of Styrene-Based Resins in Cured-in-Place Pipe. (October.) Available: https://www.nassco.org/wp-content/uploads/2021/02/Safe-Handling-and-Use-of-Styrene_Specification-Guideline_-_2020-2.pdf. Downloaded: October 2022.
- Redtail Consulting. 2021a. Memorandum: Annual Sanitary Sewer Repairs 2021, 2022, & 2023 Projects – 2021 Construction Package Statutory Exemption Screening. (September.) Prepared for City of Santa Clara Public Works Department, Santa Clara, CA. Fremont, CA.
- Redtail Consulting. 2021b. Memorandum: Annual Sanitary Sewer Repairs 2021, 2022, & 2023 Projects – 2021 Construction Package Categorical Exemption Screening. (October.) Prepared for City of Santa Clara Public Works Department, Santa Clara, CA. Fremont, CA.
- Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee. 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Available: http://vertpaleo.org/Membership/Member-Resources/SVP_Impact_Mitigation_Guidelines.aspx. Downloaded: July 2018.

