

INITIAL STUDY FOR THE REXLAND ACRES – SEWER EXPANSION PROJECT

Prepared for:

Kern County Public Works Department
2700 "M" Street, Suite 400
Bakersfield, California 93301-2323

Prepared by:

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ENVIRONMENTAL CHECKLIST FORM

INTRODUCTION

1. Project Title: Rexland Acres – Sewer Expansion Project
2. Lead Agency Name: Kern County Public Works Department
Address: 2700 “M” Street, Suite 400
Bakersfield, CA 93301-2323
3. Contact Person: Alexa Kolosky
Phone Number: (661) 862-5002
4. Project Location: The community of Rexland Acres is located at the southeast intersection of South Union Avenue and East Pacheco Road, south of Bakersfield, Kern Island Canal on the east, South Union Avenue on the west, and Price Road on the south. The project area is located within a portion of Section 20, T30S, R28E, MDB&M, County of Kern, State of California. The sewage generated by this project area will be delivered to an existing sewer force main installed as part of the original Rexland Acres Sewer Project that will transport the sewage to the Kern Sanitation Authority Wastewater Treatment Plant (KSAWWTP) in Section 3, via Sections 20, 21, 22, 15, 10, and 3 all in T30S, R29E, MDB&M. Refer to Figures 1-1 and 1-4.
5. Project Sponsor’s Name and Address: Kern County Engineering and Survey Services Department
2700 “M” Street, Suite 400, Bakersfield, CA 93301-2323
6. Project Description:

Introduction

The purpose for installing the original Rexland Acres Sewer System and for implementing the proposed expanded sewer system is that the density of residential development within the project area has resulted in degradation of water quality due to use of subsurface septic tank and leach lines to manage wastewater generated from individual homes, and collectively, within the project area. Connecting to the area WWTP will remove this area source of groundwater contamination and minimize ongoing future contamination. Refer to Figure 1-1 (Project Location), Figure 1-2 the Alternative 1 Sewer Collection System, and Figure 1-1, 1-2 and 1-3 the Alternative 2 Sewer Collection System.

Project Description

The proposed project is the construction of additional sewer lines within the rural community of Rexland Acres for collection and delivery of wastewater to the KSAWWTP for treatment and discharge. After comparing Alternatives 1 and 2, addressed in the October 2018 Preliminary Engineering Report (PER, refer to Appendix 1 of this document), the PER recommends implementation of Alternative 1 for the Sewer Expansion Project. Alternative 1 consists of the following specific project components.

- 620 linear feet (LF) of 12" PVC sewer main
- 16,140 LF of 8" PVC sewer main
- 182 sewer laterals, assumed to average 75 feet in length (13,650 LF), four (4) inches diameter
- 43 sewer manholes
- three (3) sewer clean-outs
- No land acquisition as all pipelines will be installed in public roads, for which a construction easement may be required
- repair of roads, including resurfacing of paved areas where required
- a connection to the existing Rexland Acres sewer system
- pipeline trenches will vary between 24" and 36", with a maximum depth of twelve (12) feet
- modification to the existing lift station to increase pumping capacity
- closure/destruction of the septic tanks
- assuming 182 Equivalent Dwelling Units (EDU) for this project, average daily flows are estimated to be about 45,500 gallons per day (gpd) based on generation of 250 gallons per day per EDU

Funding is being sought from the State Water Resources Control Board to support implementation of this proposed project. It is anticipated that the area shown on Figure 1-2 will be integrated into Kern Sanitation Authority as part of the overall project.

7. Surrounding land uses and setting: (Briefly describe the project's surroundings)

Surrounding land uses include: to the north are single-family residences and agricultural lands; to the east are Kern Island Canal and agricultural uses; to the south are single family residences; to the west is south Union Avenue, single family residential and commercial uses.

8. Other agencies whose approval is required: (e.g., permits, financing approval, or participation agreement)

- State Water Resources Control Board
- San Joaquin Air Pollution Control District
- Central Valley Regional Water Quality Control Board

Because the County has existing right-of-way on Union Avenue through this area, it is not anticipated that an encroachment permit will be required from Caltrans.

9. Have California Native American tribes traditionally and cultural affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|---|---|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input checked="" type="checkbox"/> Geology / Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards & Hazardous Materials |
| <input checked="" type="checkbox"/> Hydrology & Water Quality | <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources |
| <input checked="" type="checkbox"/> Noise | <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input checked="" type="checkbox"/> Transportation | <input type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Wildfire | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation, the following finding is made:

<input type="checkbox"/>	The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION , including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Tom Dodson & Associates
Prepared by

Lead Agency (signature)

April 10, 2020
Date

7/2/2020
Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
I. AESTHETICS: Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning or other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a. *No Impact* – The proposed project consists of installing pipelines, manholes and other required sewer system facilities at ground level. Short-term construction activities will result in limited above-ground construction activities, but neither these short-term nor long-term changes in the Rexland Acres will adversely impact scenic vistas. This finding is based on the lack of any scenic vistas of significance at Rexland Acres that are not already disturbed by foreground views of adjacent suburban development and the fact that the facilities being installed are at ground level where they cannot interfere with scenic vistas. No mitigation is required, and no adverse impact is forecast to result from implementing the proposed project.
- b. *No Impact* – The proposed sewage collection facilities will all be placed within existing public rights-of-way (ROW). These locations do not contain any scenic resources that could be adversely impacted by installing these facilities. No mitigation is required, and no adverse impact is forecast to result from implementing the proposed project.
- c. *No Impact* – Although not a highly urbanized area, Rexland Acres is more of an urban area than not. The proposed project facilities constitute infrastructure that is zone independent. Implementation of the proposed project will not conflict with either the zoning or scenic quality regulations. No mitigation is required, and no adverse impact is forecast to result from implementing the proposed project.
- d. *No Impact* – The proposed project will be constructed during daylight hours and will not require night lighting. All permanent facilities installed by the Sewer Expansion Project will be below or at ground level or within existing structures with no night lighting requirements. No potential exists to alter the existing light or glare circumstances within the project area. No mitigation is required, and no adverse impact is forecast to result from implementing the proposed project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
II. AGRICULTURE AND FORESTRY RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) 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-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

a-e. *No Impact* – All of the proposed project area is located in existing urbanized areas within the community of Rexland Acres. There are no agricultural or timberland land use designations; no farmland or forest land being used for agriculture or timber production; and no potential for impact to any agricultural or timberland uses or values from implementing the proposed project. According to the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, no prime farmland, unique farmland, or farmland of statewide importance exists within the vicinity of the proposed project. No adverse impact to any agricultural or forest resources can occur from implementing the proposed project. No potential exists for a conflict between the proposed project and agricultural zoning or Williamson Act contracts within the project area.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: Appendix 2 contains an air emission forecast for the proposed project, "Air Quality and GHG Impact Analyses Rexland Acres – Sewer Expansion Project, Kern County, California" prepared by Giroux & Associates dated July 17, 2019.

Background

Tables III-1 and III-2 summarize the current air quality standards and the health risks of air pollutants, respectively. Baseline air quality is provided in Table III-3. The San Joaquin Valley Air Pollution Control District (SJVAPCD) operates a regional monitoring network that measures the ambient concentration of criteria pollutants. Existing levels of criteria air pollutants in the project area can generally be inferred from measurements conducted by the SJVAPCD at its Bakersfield Municipal Airport monitoring station. Although the Municipal Airport station does not monitor the complete spectrum of pollutants, data for particulates is available from the Bakersfield California Avenue station. There is no nearby station that monitors CO.

Table III-3 summarizes the monitoring history from the Bakersfield monitoring stations for the last three years. From these data one can infer that baseline air quality levels near the project site are occasionally unhealthful, but that such violations of clean air standards usually affect only those people most sensitive to air pollution exposure.

- Photochemical smog (ozone) levels occasionally exceed standards. The 8-hour state ozone standard has been exceeded an average of 18 percent of all days in the past three years near the project site and the 8-hour federal was violated 11 percent during the same period. The 1-hour state standard has been violated less than 4 percent of all days in the last three years.
- Respirable dust (PM-10) levels exceed the state standard 31 percent of all days, but the less stringent federal PM-10 standard was not violated for the same time period.
- The federal ultra-fine particulate (PM-2.5) standard of 35 $\mu\text{g}/\text{m}^3$ is occasionally exceeded. From the data observed, eight percent of all days exceeded the 35 $\mu\text{g}/\text{m}^3$ standard.

Although complete attainment of every clean air standard is not yet imminent, extrapolation of the steady improvement trend suggests that such attainment could occur within the reasonably near future.

Table III-1

Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃) ⁸	1 Hour	0.09 ppm (160 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM ₁₀) ⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		—		
Fine Particulate Matter (PM _{2.5}) ⁹	24 Hour	—	—	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³	15 µg/m ³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—	—	
Nitrogen Dioxide (NO ₂) ¹⁰	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (168 µg/m ³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide (SO ₂) ¹¹	1 Hour	0.25 ppm (665 µg/m ³)	Ultraviolet Fluorescence	75 ppb (166 µg/m ³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹¹	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) ¹¹	—	
Lead ^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m ³ (for certain areas) ¹²	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m ³		
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

See footnotes on next page...

See footnotes on next page ...

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (5/4/16)

Table III-1 (continued)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above $150 \mu\text{g}/\text{m}^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from $15 \mu\text{g}/\text{m}^3$ to $12.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at $55 \mu\text{g}/\text{m}^3$, as was the annual secondary standard of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM10 standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard ($1.5 \mu\text{g}/\text{m}^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (5/4/16)

**Table III-2
HEALTH EFFECTS OF MAJOR CRITERIA POLLUTANTS**

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	<ul style="list-style-type: none"> • Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter. 	<ul style="list-style-type: none"> • Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO ₂)	<ul style="list-style-type: none"> • Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions. 	<ul style="list-style-type: none"> • Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O ₃)	<ul style="list-style-type: none"> • Atmospheric reaction of organic gases with nitrogen oxides in sunlight. 	<ul style="list-style-type: none"> • Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	<ul style="list-style-type: none"> • Contaminated soil. 	<ul style="list-style-type: none"> • Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Respirable Particulate Matter (PM-10)	<ul style="list-style-type: none"> • Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions. 	<ul style="list-style-type: none"> • Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Fine Particulate Matter (PM-2.5)	<ul style="list-style-type: none"> • Fuel combustion in motor vehicles, equipment, and industrial sources. • Residential and agricultural burning. • Industrial processes. • Also, formed from photochemical reactions of other pollutants, including NO_x, sulfur oxides, and organics. 	<ul style="list-style-type: none"> • Increases respiratory disease. • Lung damage. • Cancer and premature death. • Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO ₂)	<ul style="list-style-type: none"> • Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes. 	<ul style="list-style-type: none"> • Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board, 2002.

Table III-3
AIR QUALITY MONITORING SUMMARY (2015-2017)
(Predicted Number of Days Standards Were Exceeded, and
Maximum Levels During Such Violations)

Pollutant/Standard	2015	2016	2017
Ozone			
1-Hour > 0.09 ppm (S)	23	8	9
8-Hour > 0.07 ppm (S)	69	63	65
8- Hour > 0.075 ppm (F)	55	41	26
Max. 1-Hour Conc. (ppm)	0.118	0.102	0.118
Max. 8-Hour Conc. (ppm)	0.106	0.093	0.101
Nitrogen Dioxide			
1-Hour > 0.18 ppm (S)	0	0	0
Max. 1-Hour Conc. (ppm)	0.048	0.052	0.042
Respirable Particulates (PM-10)			
24-hour > 50 µg/m ³ (S)	121.4	121.4	98.7
24-hour > 150 µg/m ³ (F)	0	0	0
Max. 24-Hr. Conc. (µg/m ³)	104.7	90.9	138.0
Ultra-Fine Particulates (PM-2.5)			
24-Hour > 35 µg/m ³ (F)	32.3	25.5	30.2
Max. 24-Hr. Conc. (µg/m ³)	101.8	66.4	107.8

Source: Bakersfield Air Monitoring Station, Airport and California Avenue
data: www.arb.ca.gov/adam/

Air Quality Planning

Fugitive dust emissions generated by construction activities are regulated by the SJVAPCD. Construction activities must comply with all applicable SJVAPCD rules and regulations, including SJVAPCD's Regulation VIII. Regulation VIII consists of several individual rules that require implementation of best available mitigation measures to limit construction dust emissions.

The San Joaquin Valley Air Basin has been determined by ARB and EPA to be in attainment of federal PM-10 standards. Regulation VIII has been accepted by ARB and EPA to maintain attainment of PM-10 standards in the Air Basin. In developing the 2007 Maintenance Plan, the SJVAPCD evaluated the potential PM-10 emissions that could occur under all sources within the Air Basin, and developed rules and procedures to reduce future emissions sufficiently to maintain the existing attainment status. The full attainment status is shown in Table III-4.

Table III-4
SAN JOAQUIN VALLEY AIR BASIN ATTAINMENT STATUS¹

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone – 1 Hour	Nonattainment/Extreme	Nonattainment/Severe
Ozone – 8 Hour	Nonattainment/Extreme	Nonattainment
PM-10*	Attainment	Nonattainment
PM 2.5	Nonattainment	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead Particulates	No Designation	Attainment

*On September 25, 2008, EPA redesignated the San Joaquin Valley as attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan.

Air Quality Impact

Standards of Significance

Air quality impacts are considered “significant” if they cause clean air standards to be violated where they are currently met, or if they “substantially” contribute to an existing violation of standards. Any substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, would also be considered a significant impact.

Appendix G of the California CEQA Guidelines offers the following five tests of air quality impact significance. A project would have a potentially significant impact if it:

- Conflicts with or obstructs implementation of the applicable air quality plan.
- Results in a cumulatively considerable net increase of any criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- Exposes sensitive receptors to substantial pollutant concentrations.
- Creates objectionable odors affecting a substantial number of people.

The San Joaquin Valley Air Pollution Control District developed a CEQA Implementation Document that assigned an emissions level that it recommends should be considered as creating a potentially significant air quality impact. Construction projects are considered to have an air quality impact if they cause the following annual emissions to be exceeded (tons/year):

CO	-	100
NOx	-	10
ROG	-	10
SOx	-	27
PM-10	-	15
PM-2.5	-	15

The project is not expected to generate any operational air quality emissions.

¹ <https://www.valleyair.org/aqinfo/attainment.htm>

Significance could also derive from emissions of odors or hazardous air pollutants. Development or a wastewater conveyance system would not typically generate any hazardous air pollutants or odors because system components are all enclosed.

NEPA guidelines do not encourage designation of impacts as (in)significant. However, Section 176(c) of the Clean Air Act Amendments of 1990 prohibits federal participation in projects that would impede implementation of the state implementation plan (SIP) for federal non-attainment pollutants. "Participation" includes project funding as well as granting any federal permits. If the project-related emissions from construction and operations are less than specified "*de minimis*" levels, no further SIP consistency demonstration is required. San Joaquin Valley is designated as a non-attainment area for the federal 8-hour ozone standard. The basin is nonattainment for PM-2.5 and has been determined by ARB to be in attainment of federal PM-10 standards. Based upon these designations, the following emissions levels are presumed evidence of SIP conformity:²

Ozone VOX or NOx	10 tons/year
Carbon Monoxide	100 tons/year
PM-10	100 tons/year
PM-2.5	100 tons/year
NOx	100 tons/year

These *de minimis* thresholds are less stringent than the SJVAPCD CEQA thresholds. If project air quality impacts in the basin are less-than-significant under CEQA, they are automatically in conformance under NEPA.

Construction Emissions

CalEEMod was developed by the South Coast Air Quality Management District (SCAQMD) to provide a model by which to calculate both construction emissions and operational emissions from a variety of land use projects. It calculates both the daily maximum and annual average emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions.

The Rexland Acres Project provides for collection and delivery of wastewater to the Kern Sanitation Authority Wastewater Treatment Plant for treatment. Estimated construction emissions were modeled using CalEEMod2016.3.2 to identify maximum emissions for each pollutant during project construction.

Primarily the project installs a series of pipes to convey the water. The composition of the proposed pipelines are as follows:

- 620 linear feet (LF) of 12" PVC sewer main, 24-36-inch trenches
- 16,140 LF of 8" PVC sewer main, 24-36-inch trenches
- 182 sewer laterals, assumed to average 75 feet in length (13,650 LF), four (4) inches diameter

The project will also require construction of 43 manholes. Modification will be required to an existing lift station to increase pumping capacity. This will be done primarily with hand tools, and therefore was not modeled. Construction is expected to occur over an 8-month period.

² <https://www.epa.gov/general-conformity/de-minimis-tables>

**CalEEMod Construction Activity Equipment Fleet and Workdays
Pipeline Install and Manhole Install**

Demo and Concrete Removal (2 months)	1 Concrete Saw
	1 Dozer
	3 Loader/Backhoes
Trench and Install Pipeline (4 months)	1 Loader/Backhoe
	1 Trencher
	1 Forklift
	1 Crane
	2 Skid Steer Loaders
Backfill and Paving (2 months)	1 Paver
	1 Paving Equipment
	1 Roller
	1 Loader/Backhoe
	1 Mixer
	2 Compactors

Utilizing this indicated equipment fleet and durations the following annual construction emissions are calculated by CalEEMod and are listed below.

**Construction Activity Emissions
Maximum Annual Emissions (tons/year)**

Maximal Construction Emissions	ROG	NOx	CO	SO₂	PM-10	PM-2.5
Pipelines	0.12	1.17	0.94	0.00	0.07	0.06
NEPA Threshold	10	10	100	100	100	100
SJQVAPCD Regional Emissions Threshold	10	10	100	27	15	15

Source: CalEEMod output in appendix

Annual construction activity emissions are estimated be below CEQA and NEPA thresholds without the need for added mitigation. There are no standards for daily emissions.

Emissions will be well below significance thresholds. Locally, the mobile nature of these sources, the minimal surrounding receptor density and the regional spread of emissions from off-site construction vehicles would minimize the exposure to any individual receiver of any project-related construction emissions. These emissions, therefore have a less than significant individual impact, but would be added cumulatively to a large volume of non-project mobile source emissions within the Kern County area.

Operational Impacts

A sewer project will not have any associated operational impacts. The project will not generate any additional trips over existing conditions although electrical consumption for pump use is anticipated to be somewhat more than the current equipment. Electrical consumption has no single uniquely related air pollution emissions source because power is supplied to and drawn from a regional grid. Electrical power is generated regionally by a combination of non-combustion (nuclear, hydroelectric, solar, wind, geothermal, etc.) and fossil fuel combustion sources. There is no direct nexus between consumption and the type of power source or the air basin where the source is located. Operational air pollution emissions from electrical generation are therefore not attributable on a project-specific basis.

Odor

Project operations (pumping and conveyance) are essentially a closed system with negligible odor potential.

- a. *Less Than Significant Impact* - The proposed project will install sewer infrastructure within an existing residential community. No change in land use will occur and the emissions generated by the proposed project are well below the thresholds of significance. Thus, the proposed project will not conflict with or obstruct the applicable air quality plan.
- b. *Less Than Significant Impact* - The emission data indicate that the project related emissions are below significance thresholds and will not result in a cumulatively considerable impact.
- c. *Less Than Significant Impact* - Construction emissions are well below annual thresholds and have no potential to expose sensitive receptors to substantial pollutant concentrations.
- d. *Less Than Significant Impact* - Based on the type of facilities, no significant odor impacts are forecast to occur as a result of implementing the proposed project.

Construction Emission Mitigation

Construction activities are not anticipated to cause emissions to exceed CEQA or NEPA thresholds. Nevertheless, emissions minimization through enhanced dust control measures is required to comply with SJVAPCD Regulation VIII related to dust control.

Regulation VIII Control Measures for Construction Emissions of PM-10

- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.
- When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions.) (Use of blower devices is expressly forbidden.)
- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.
- Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.
- An owner/operator of any site with 150 or more vehicle trips per day, or 20 or more vehicle trips per day by vehicles with three or more axles shall implement measures to prevent carryout and trackout.

Recommended Enhanced Additional Measures for Construction Emissions of PM-10

- Install wheel washers for all exiting trucks or wash off all trucks and equipment leaving the site.
- Install wind breaks at windward side(s) of construction areas.
- Suspend excavation and grading activity when winds exceed 20 mph.
- Limit area subject to excavation, grading, and other construction activity at any one time.

Recommended for Heavy Duty Equipment (scrapers, graders, trenchers, earth movers, etc.)

- Use alternative fueled or catalyst equipped diesel construction equipment.
- Minimize idling time (e.g., 5 minutes maximum).
- Limit the hours of operation of heavy-duty equipment and/or the amount of equipment in use.
- Replace fossil-fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).
- Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak-hour of vehicular traffic on adjacent roadways.
- Implement activity management (e.g. rescheduling activities to reduce short-term impacts).

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, 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 Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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 Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: Although the project area consists of a suburban developed area, it was necessary to compile a biology report to support the State Water Resources Control Board's CEQA-Plus environmental review requirements. A copy of the Biological Resources Assessment prepared by Jericho Systems dated August 29, 2019 is provided as Appendix 3.

- a. *No Impact* – The proposed project area is 100% developed and none of the proposed sewage collection facilities contain natural habitat. Thus, there is no potential to support any species identified as a candidate, sensitive or special status species. With no habitat or species of concern located within the project areas, the implementation of the proposed project has no potential for impact to any native biological resources. No impacts are anticipated. No mitigation is required.
- b. *No Impact* – Based on field inspections, none of the project area contains any riparian habitat or other sensitive natural community resources. As noted, none of these sites contain any streams, wetlands, or riparian habitat. Therefore, no adverse impact to any native biological habitat resources can occur from implementing the proposed project. No impacts are anticipated. No mitigation is required.
- c. *No Impact* – Based on field inspections, none of the project area contains any wetlands as defined by Section 404 of the Clean Water Act, or any other sensitive natural community resource. Therefore, no adverse impact to any wetlands of any type can occur from implementation of the proposed

project. With no habitat or species of concern located within the project area, the implementation of the proposed project has no potential to adversely impact any state or federal wetland habitat. No impacts are anticipated. No mitigation is required.

- d. *Less Than Significant With Mitigation Incorporated* – According to the biology report for the Rexland Acres project area (Appendix 3) several species of migratory birds could potentially occur within the project area's man-made landscaping. Although these trees will probably not be affected, construction during the bird breeding season (February 15 through September 15) could adversely impact birds nesting though construction noise. Those sites solely with maintained turf do not provide suitable habitat to support migratory birds. With no native habitat, and no wildlife corridors that traverse the project area, implementation of the proposed project is not anticipated to interfere with the movement of native animals of any kind, or to impede the use of any native wildlife nursery sites. However, the following mitigation measure is provided as a contingency in the event that any nesting birds are found at the site location:

BIO-1 *The State of California prohibits the “take” of active bird nests. To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal should be conducted outside of the the State identified nesting season (Raptor nesting season is February 1 through September 30; and migratory bird nesting season is March 15 through September 1). Alternatively, the site shall be evaluated by a qualified biologist prior to the initiation of ground disturbance to determine the presence or absence of nesting birds. Active bird nests MUST be avoided during the nesting season. If an active nest is located in the project construction area it will be flagged and a 100-foot avoidance buffer placed around it. No activity shall occur within the 100-foot buffer until the young have fledged the nest.*

With implementation of the above mitigation measure, any impacts under this issue are considered less than significant.

- e. *No Impact* – The project area does not contain any native plants, including trees. Random trees occur throughout the project area, but these non-native plants are not covered by local policies or ordinances. These trees consist of weed/non-native trees. Therefore, the proposed project does not have a potential to conflict with any policies or ordinances that protect native biological resources.
- f. *Less Than Significant With Mitigation Incorporated* – Even though the project area is located within a 100% urbanized areas, the County Staff indicates that it is located within the boundary of the Metropolitan Bakersfield Habitat Conservation Plan (MBHCP, Incidental Take Permit No. 2081-2013-058-04). In order to be covered for incidental take, the MBHCP-ITP requires a pre-construction survey be conducted by a MBHCP-qualified biologist no more than 30 days prior to beginning ground disturbing work. Subsequent minimization measures are required if a covered species or den is discovered in the work area boundaries during this survey. Therefore, the following contingency mitigation measure shall be implemented:

BIO-2 *Within 30 days prior to initiating installation of the Rexland Acres sewer project, a MBHCP qualified biologist shall conduct a preconstruction survey of the project area of potential impact for species of concern. If no individuals of these species of concern are encountered, a report of findings shall be submitted to the manager of the MBHCP. If any of the covered species are encountered within the project area of impact, minimization measures shall be implemented in accordance with MBHCP requirements.*

Implementation of this measure will ensure compliance with the MBHCP.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION: Although the project area consists of a suburban developed area, it was necessary to compile a cultural resources report to support the State Water Resources Control Board's CEQA-Plus environmental review requirements. A copy of the Cultural Report prepared by CRM TECH dated October 26, 2019 is provided as Appendix 4 to this document (*CONFIDENTIAL*).

- a. *No Impact* – Based on the cultural resources study compiled for the project area, no historical resources will be impacted by the proposed project. The project consists of installing pipelines within existing ROWs and minor modifications to the existing lift-pump station that delivers the wastewater to the KSAWWTP. No potential exists to encounter any existing historical resources within these ROWs.
- b. *Less Than Significant With Mitigation Incorporated* – Based on the cultural resources study compiled for the project area, no archaeological resources will be impacted by the proposed project. The project consists of installing pipelines within existing ROWs and minor modifications to the existing lift-pump station that delivers the wastewater to the KSAWWTP. Although the installation of the new facilities will occur within existing disturbed engineering surfaces (primarily paved roadways), the following contingency mitigation measure shall be implemented if subsurface construction activities accidentally expose archaeological resources:

CUL-1 *In the event that a prehistoric or historic artifact over 50 years in age is encountered within the project area during construction activities, all land modification activities in the immediate area of the finds should be halted and an onsite inspection shall be performed immediately by a qualified archaeologist. This professional will be able to assess the find, determine its significance, and make recommendations for appropriate management actions. Reasonable cultural resource management actions shall be implemented to protect the accidentally exposed subsurface resources.*

- c. *No Impact* – Based on the cultural resources study compiled for the project area, the potential to encounter human remains is very low. The project consists of installing pipelines within existing ROWs and minor modifications to the existing lift-pump station that delivers the wastewater to the KSAWWTP. Based on the circumstances of construction within existing ROWs, no potential exists to encounter any human remains within these ROWs.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VI. ENERGY: Would the project:				
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

- a. *Less Than Significant Impact* – The proposed project consists of installing sewer pipelines, including laterals, closing existing subsurface septic tanks, and connection the newly sewer area to the existing conveyance system to deliver the wastewater (estimated to be and average of about 45,000 gpd) to the KSAWWTP for treatment. Energy consumption encompasses many different activities. For example, construction can include the following activities: delivery of equipment and material to a site from some location (note it also requires energy to manufacture the equipment and material, such as the PVC pipelines); employee trips to work, possibly offsite for lunch (or a visit by a catering truck), travel home, and occasionally leaving a site for an appointment or checking another job; use of equipment onsite (electric or petroleum fueled); and sometimes demolition and disposal of construction waste. For the proposed project the number of employees will be limited due to the small size of the project and area. Also, minimal demolition (asphalt roadways) will be required for this site. To minimize energy costs of construction debris management, mitigation has been established to require diversion of all material subject to recycling. Energy consumption by equipment will be reduced by requiring shutdowns when equipment is not in use after five minutes and ensuring equipment is being operated within proper operating parameters (tune-ups) to minimize emissions and fuel consumption. These requirements are consistent with State and regional rules and regulations. Under the construction scenario outlined above, the proposed project will not result in wasteful, inefficient, or unnecessary energy consumption during construction.

The proposed project will ultimately allow wastewater collection facilities to be installed. The wastewater will be delivered to the KSAWWTP through a force main which will require electricity to pump the wastewater against grade (uphill). To minimize energy costs the lift station will be equipped with efficient pumps and the wastewater treatment plant implements energy conservation to minimize overall energy costs of operating the WWTP.

Further, Pacific Gas & Electric (PG&E) is presently in compliance with State renewable energy supply requirements and PG&E will supply electricity to the project. Under the operational/occupancy scenario for the proposed project, the proposed project will not result in wasteful, inefficient, or unnecessary energy consumption that could result in a significant adverse impact to energy issues. No mitigation is required.

- b. *Less Than Significant Impact* – Based on the analysis in the preceding discussion, the proposed project will not conflict with current State energy efficiency or electricity supply requirements or any local plans or programs for renewable energy or energy efficiency requirements. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VII. GEOLOGY AND SOILS: Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
(i) 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? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) 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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

- a.(i) *No Impact* - Based on a review of the Kern County Safety Element, Figure 13, there are no known faults in the Bakersfield and Rexland Project area. Therefore, no potential exists for this project to be exposed to significant fault rupture hazards.
- a.(ii) *Less Than Significant Impact* – The project area is subject to potentially strong seismic ground shaking, but the type of proposed facilities, pipelines and lift-pump station, are not occupied facilities and can survive seismic ground shaking with minimal damage where no rupture occurs. The potential significant damage due to ground shaking is considered a less than significant impact for the project's facilities.

- a.(iii) *No Impact* - Based on a review of the Kern County Safety Element, Figure 13, there is no known liquefaction hazard in the Bakersfield and Rexland Project area due to shallow groundwater. Therefore, no potential exists for this project to be exposed to significant liquefaction hazards.
- a.(iv) *No Impact* - Based on a review of the Kern County Safety Element, Figure 12, there are no known landslide hazards in the Bakersfield and Rexland Project area. Therefore, no potential exists for this project to be exposed to significant landslide hazards.
- b. *Less Than Significant With Mitigation Incorporated* – Given the total area of the Sewer Expansion Project, it is anticipated that more than one acre of ground disturbance will occur in relation to pipeline installation. As a result, the proposed project will be required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP). Site specific best management practices (BMPs) shall be implemented to minimize erosion and sedimentation. Mitigation is provided below to ensure implementation. Because the pipelines and lift station disturbance will occur within existing disturbed ROWs, it should not be necessary to implement long-term BMPs as they should already be installed.

GEO-1 *The construction contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices that will prevent construction pollutants from contacting stormwater with the intent of keeping all products of erosion from moving offsite into receiving waters. The SWPPP may include but not be limited to the following BMPs.*

- *The length of trench which can be left open at any given time should be limited to that needed to reasonably perform construction activities. This will serve to reduce the amount of backfill stored onsite at any given time.*
- *Backfill material should not be stored in areas which are subject to the erosive flows of water.*
- *Stored backfill material should be covered with water resistant material during periods of heavy precipitation to reduce the potential for rainfall erosion of stored backfill material. If covering is not feasible, then measures such as the use of straw bales, sandbags, silt fencing or detention/desilting basins shall be used to capture and hold eroded material on the project site for future cleanup.*
- *The SWPPP shall include a spill prevention and cleanup plan to account for the accidental release of petroleum products or other contaminants during construction activities. This plan shall identify the methods of containing spills, the methods of removing and disposing of spills and the notification procedures to the appropriate regulatory agencies with jurisdiction over such spills.*
 - *Apply erosion and sediment control design that reduce volume and velocity of flows and content of sediment to levels that do not cause significant rill or gully erosion in susceptible areas. In addition, provide for restoration of areas that do become eroded.*
 - *Add protective covering of mulch, straw or synthetic material (erosion control blankets, tacking will be required).*
 - *Limit the amount of area disturbed and the length of time slopes and barren ground are left exposed. After pipeline installation, soil shall be compacted to a level similar to pre-construction conditions.*
 - *Construct diversion dikes and interceptor ditches to divert water away from construction areas.*

- c. *No Impact* – Based on a review of the Kern County Safety Element, Figures 12 and 15, there is no other known geotechnical stability hazard in the Bakersfield and Rexland Project area. Therefore, no potential exists for this project to be exposed to significant geotechnical stability hazards.
- d. *No Impact* – The type of facilities proposed, pipelines and lift station modifications, are not the type of facilities that could create a substantial risk to life or property. Therefore, no potential exists for this project to create a substantial risk to life or property.
- e. *No Impact* – The purpose of the project is to install a wastewater collection system due to subsurface septic tank system failures. This project will remove such existing systems and will not be adversely impacted by the type of soil.
- f. *Less Than Significant With Mitigation Incorporated* – Based on the type of sediments at this site (alluvial) and the highly disturbed nature of the ROWs, no paleontological resources will be impacted by the proposed project. The project consists of installing pipelines within existing ROWs and minor modifications to the existing lift-pump station that delivers the wastewater to the KSAWWTP. Although the installation of the new facilities will occur within existing disturbed engineering surfaces (primarily paved roadways), the following contingency mitigation measure shall be implemented if subsurface construction activities accidentally expose paleontological resources:

GEO-2 *In the event that paleontological resources are encountered within the project area during construction activities, all land modification activities in the immediate area of the finds should be halted and an onsite inspection shall be performed immediately by a qualified paleontologist. This professional will be able to assess the find, determine its significance, and make recommendations for appropriate management actions. Reasonable paleontological resource management actions shall be implemented to protect the accidentally exposed subsurface resources.*

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VIII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: Appendix 2 contains an air emission forecast for the proposed project, "Air Quality and GHG Impact Analyses Rexland Acres - Sewer Expansion Project, Kern County, California" prepared by Giroux & Associates dated July 17, 2019.

Background

"Greenhouse gases" (so called because of their role in trapping heat near the surface of the earth) emitted by human activity are implicated in global climate change, commonly referred to as "global warming." These greenhouse gases contribute to an increase in the temperature of the earth's atmosphere by transparency to short wavelength visible sunlight, but near opacity to outgoing terrestrial long wavelength heat radiation in some parts of the infrared spectrum. The principal greenhouse gases (GHGs) are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. For purposes of planning and regulation, Section 15364.5 of the California Code of Regulations defines GHGs to include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for approximately half of GHG emissions globally. Industrial and commercial sources are the second largest contributors of GHG emissions with about one-fourth of total emissions.

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. GHG statutes and executive orders (EO) include AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07.

AB 32 is one of the most significant pieces of environmental legislation that California has adopted. Among other things, it is designed to maintain California's reputation as a "national and international leader on energy conservation and environmental stewardship." It will have wide-ranging effects on California businesses and lifestyles as well as far reaching effects on other states and countries. A unique aspect of AB 32, beyond its broad and wide-ranging mandatory provisions and dramatic GHG reductions are the short time frames within which it must be implemented. Major components of the AB 32 include:

- Requires the monitoring and reporting of GHG emissions beginning with sources or categories of sources that contribute the most to statewide emissions.
- Requires immediate "early action" control programs on the most readily controlled GHG sources.
- Mandates that by 2020, California's GHG emissions be reduced to 1990 levels.
- Forces an overall reduction of GHG gases in California by 25-40%, from business as usual practices by 2020.
- Dictates that any local initiatives must complement efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.

Statewide, the framework for developing the implementing regulations for AB 32 is under way. Maximum GHG reductions are expected to derive from increased vehicle fuel efficiency, from greater use of renewable energy and from increased structural energy efficiency.

Significance Thresholds

In response to the requirements of SB97, the State Resources Agency developed guidelines for the treatment of GHG emissions under CEQA. These new guidelines became state laws as part of Title 14 of the California Code of Regulations in March, 2010. The CEQA Appendix G guidelines were modified to include GHG as a required analysis element. A project would have a potentially significant impact if it:

- Generates GHG emissions, directly or indirectly, that may have a significant impact on the environment, or,
- Conflicts with an applicable plan, policy or regulation adopted to reduce GHG emissions.

Section 15064.4 of the Code specifies how significance of GHG emissions is to be evaluated. The process is broken down into quantification of project-related GHG emissions, making a determination of significance, and specification of any appropriate mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency with substantial flexibility.

Emissions identification may be quantitative, qualitative or based on performance standards. CEQA guidelines allow the lead agency to “select the model or methodology it considers most appropriate”. The most common practice for transportation/combustion GHG emissions quantification is to use a computer model such as CalEEMod, as was used in the ensuing analysis.

In the Final Staff Report Addressing GHG Emissions Impacts under CEQA, the SJVAPCD notes that ARB staff derived a proposed hybrid threshold consisting of a quantitative threshold of 7,000 metric tons of CO₂ equivalent per year (MTCO₂E/year) for operational emissions (excluding transportation), and performance standards for construction and transportation emissions (CARB).

ARB concludes in its draft proposal that the 7,000 MTCO₂E/year benchmark can be used to effectively mitigate industrial projects with significant GHG emissions. To date, ARB has not finalized its draft proposed threshold, nor has ARB scheduled additional workshops to seek public input on establishing a significance threshold for assessing significance of project specific GHG emission impacts on global climate change. However, in the absence of any other guidance, this 7,000 MT per year recommendation has been used as a guideline for this analysis.

Construction Activity GHG Emissions

The project is assumed to require 8 months for construction. During project construction, the CalEEMod2016.3.2 computer model predicts that the construction activities will generate 136.5 MT CO₂e emissions. This is less than the adopted threshold for use by this project. GHG impacts from construction are considered less-than-significant.

Consistency with Existing Air Quality Plans

In December 2009 the SJVAPCD issued a final staff report addressing greenhouse gas emissions under CEQA. That only language directly related to this Project states that the lead agency should identify GHG emissions based on available information to calculate, model or estimate the amount of CO₂ and other GHG emissions.

With regards to consistency with existing air quality plans, it was determined that because the proposed project would not generate population, residences, or substantial employment, it would neither conflict with nor interfere with the County’s adopted growth forecast. Furthermore, as shown in this report, the

proposed Project's contribution to regional air emissions in the San Joaquin Valley would be very small. When compliance with applicable rules, such as the SJVAPCD's required emissions controls is considered, the proposed project's regional contribution to cumulative air quality impacts would be almost negligible.

- a. *Less Than Significant Impact* – GHG emissions are well below the applicable thresholds for this project.
- b. *Less Than Significant Impact* – GHG emissions are well below the applicable thresholds for this project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IX. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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 or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a. *No Impact* - The proposed project consists of sewer lines below ground surface and modifications to an existing lift station. Although municipal wastewater is a waste that will be transported to a treatment facility, it is not considered a hazardous waste. Other than wastewater, the project will not routinely transport, use, or dispose of hazardous materials. No potential for adverse impact exists under this topic.
- b. *Less Than Significant With Mitigation Incorporated* – The project may 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. During construction there is a potential for accidental release of petroleum products in sufficient quantity to pose a significant hazard to people and the environment. The following mitigation measure will be incorporated into the Storm Water Pollution Prevention Plan (SWPPP) prepared for the project and implementation of this measure can reduce this potential hazard to a less than significant level.

HAZ-1 All spills or leakage of petroleum products during construction activities will be remediated in compliance with applicable state and local regulations

regarding cleanup and disposal of the contaminant released. The contaminated waste will be collected and disposed of at an appropriately licensed disposal or treatment facility. This measure will be incorporated into the SWPPP prepared for the Project development.

- c. *No Impact* – Other than petroleum products, the proposed project will not use hazardous or extremely hazardous materials or wastes. Fairview Elementary school is located approximately one-quarter mile south of the area proposed to be sewered. Regardless, no conflict with any schools can occur under this topic from emission of hazardous materials since none will be emitted.
- d. *No Impact* – The State Geotracker application was queried and no known hazardous waste sites were identified within the project area or its immediate vicinity. Therefore, no potential exists for the project to create a significant hazard to humans from project implementation.
- e. *No Impact* – There are no airports located in the vicinity of the proposed project site; therefore, no potential exists for conflicts between the project and any airport operations.
- f. *Less Than Significant With Mitigation Incorporated* – Although the project is not located on a major evacuation route, the following mitigation measure shall be implemented to ensure emergency access to homes during construction.

HAZ-2 ***During sewer construction, the contractor shall maintain access to all parcels during construction activities. If necessary, this access can be accomplished by having steel sheets available to cover trenches in front of driveways or provide immediate, temporary access. Also, a traffic management plan shall be submitted and approved by the County to manage and minimize hazards to motorists, bicyclists, and pedestrians during construction.***

- g. *No Impact* – The project site is located in a suburban residential subdivision with no wildland areas in the vicinity of the site. With no substantial wildland fuel load in the project area, no potential for exposure to a wildland fire hazard exists for the proposed project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
X. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(i) result in substantial erosion or siltation onsite or offsite?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) 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?; or,	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

- a. *Less Than Significant With Mitigation Incorporated* – There are three potential sources of water quality degradation: municipal wastewater; direct discharges of pollutants; and indirect discharges of pollutants. This project is designed to receive municipal wastewater from existing residences that have been discharging to subsurface septic tank disposal systems. The density of residential development in Rexland Acres now requires collection and treatment of municipal wastewater. The proposed project will provide the infrastructure to transfer wastewater to a WWTP and this is considered a beneficial effect of the proposed project. The community of Rexland Acres has no known direct discharges of pollutants and therefore this activity cannot cause adverse water quality degradation. During construction to install the wastewater collection system, construction activities have a potential to cause indirect discharges of sediment or to concentrate flows and cause erosion. This potential during construction will be controlled by implementing the SWPPP mandated in mitigation measure, GEO-1. Once the subsurface sewer system is installed and the ROWs returned to their pre-existing condition, the existing drainage system will continue to function and will control

long term potential for erosion and sedimentation. Implementation of measure GEO-1 is considered sufficient to prevent the project from causing water quality degradation.

- b. *Less Than Significant Impact* – The project will not pump ground water or intercept the local groundwater supply. It will use a small quantity of ground water to control dust. Over the life of construction, dust control water may rise to a few hundred thousand gallons. The use of this small quantity ground water for dust control is considered *de minimis*, particularly when the treated effluent can be used for recycling or ground water recharge. No significant impact to ground water supplies will result from project implementation.
- c. *Less Than Significant With Mitigation Incorporated* – The existing area drainage will not be altered, but will be modified during pipeline construction. Implementation of mitigation measure GEO-1 will control runoff during construction and no adverse surface runoff hazards will result from project implementation.
 - i. Refer to the discussion under c). Mitigation will control erosion and sedimentation during construction and once the ROWs are restored to existing condition, the proposed project will not alter the erosion and sedimentation environment.
 - ii. Mitigation will control potential for flooding during construction and the environmental conditions of the ROWs will be returned to pre-existing conditions with no adverse impact.
 - iii. Because the proposed project will not increase impervious surfaces within the ROW's no substantial increase in runoff will result from project implementation.
 - iv. During construction surface flows in the ROWs may be modified, but all discharge points will remain the same. After construction surface flows will not be modified.
- d. *No Impact* – According to the County Safety Element of the General Plan (Figures 14 and 16), the project area is not subject to any flood hazards.
- e. *Less Than Significant Impact* – The proposed project will support the water quality control plan by preventing future water quality degradation, and by increasing the volume of recycled water this project can also enhance sustainable use of the regional ground water aquifer.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XI. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

a&b. *Less Than Significant Impact / No Impact* – The proposed project will not alter land use within the Rexland Acres community. ROWs will be used to install the sewer system and this effort will not cause any physical division of an established community. Also, since the land use will not be modified, no conflicts with any land use plan or policy for mitigating adverse environmental effects will result from project implementation.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XII. MINERAL RESOURCES: Would the project:				
a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION:

a&b. *No Impact* – The project area is developed with a residential subdivision and no known mineral resources are known to occur within the project area. No potential for adverse impact to mineral resources or mineral resource values will result from project implementation.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIII. NOISE: Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of a project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a. *Less Than Significant With Mitigation Incorporated* – Construction noise will be generated by the installation of the sewer lines within the road ROWs from trenching, installing pipelines, covering and compacting the cover and repaving the trench area where it is located in the paved ROW. Noise generated by construction equipment, including trucks, back-hoes, cranes and portable generators can reach high levels and is typically one of the sources for the highest potential noise impact of a project. The most effective method of controlling construction noise is by local limitation of construction hours to normal weekday working hours, typically from daylight to dusk, or from 7 a.m. to 6 p.m.

Noise levels at a distance of 50 feet from equipment which might be used for the excavation and construction of the proposed projects can be up to 90 dBA. These noise levels decrease at a rate of approximately 6 dBA for each doubling of distance if there are no structures to attenuate the noise (buildings, hills, walls, etc.). Therefore, at 100 feet from the equipment, noise levels would be about 84 dBA without attenuation. Similarly, at 200 feet from the equipment, noise levels would be reduced by about 12 dBA or about 78 dBA. These noise levels are only reached when the equipment is under full load for short periods of time. Noise generated by construction equipment varies significantly depending on the type of equipment and construction involved. Cranes lifting materials and equipment into place are under full load for short periods of time (typically a few minutes for each lift), while trenching equipment maintains more continuous full operating loads. Intervening structures and topography also act as noise barriers and further reduce noise levels.

Installation of sewer pipelines in suburban areas will place construction activities within 100 feet of residences. Generally, 100 to 200 feet of sewer pipe per day can be installed in developed roads containing existing underground utilities. In either case, the length of time a receptor is exposed to noise from pipeline installation is about 2 days. This includes the pipelines specifically identified for installation in support of the proposed project.

Since construction noise is temporary in nature and limited to daylight hours, most jurisdictions do not require such noise to be mitigated to the specific threshold levels established for the community, which for a residential area is typically about 65 dBA Community Equivalent Noise Level (CNEL). However, jurisdictions commonly require operational considerations (i.e., limitation of construction hours, the muffling of construction equipment, noise complaint response programs, etc.) to minimize noise impacts during the construction process. Construction noise levels affecting sensitive receptors

may exceed the significance thresholds during the day, but eliminating this source of noise at night and reducing any noise levels that might be damaging to hearing can reduce these short-term impacts to a non-significant level. Mitigation measures are identified below to reduce the potential for noise intrusion to sensitive receptors in the evening or expose such receptors to damaging levels of noise at any time. With implementation of these measures, short-term construction activities are not forecast to cause significant adverse noise impacts.

The only long-term source of noise will be the continued operation of the existing lift station which will undergo small modifications to accommodate the increased volume of wastewater that will need to be pumped to the WWTP. Since this is an existing source of noise that will not experience a change in noise level from these changes, no long-term adverse noise impact will result from project implementation.

Construction noise mitigation measures include:

- NOI-1** *Construction activities shall be limited to the hours of 7 a.m. to 6 p.m. on Monday through Friday, and between 9 a.m. to 6 p.m. on Saturday, and shall be prohibited on Sundays and federal holidays except during documented emergencies. No construction may occur during hours of "Darkness" (Night Work), as defined in the California Vehicle Code, Section 280, unless prior authorization is obtained from the County.*
- NOI-2** *All construction vehicles and fixed or mobile equipment shall be equipped with properly operating and maintained sound attenuating devices such as mufflers.*
- NOI-3** *All employees that will be exposed to noise levels greater than 75 dB over an 8-hour period shall be provided with adequate hearing protection devices to ensure no hearing damage will result from construction activities.*
- NOI-4** *If equipment is being used that can cause hearing damage at adjacent noise receptor locations (distance attenuation shall be taken into account), portable noise barriers shall be installed that are demonstrated to be adequate to reduce noise levels at receptor locations below hearing damage thresholds.*
- NOI-5** *Maintain good relations with the local community where construction is scheduled, such as keeping people informed of the schedule, duration, and progress of the construction, to minimize the public objections of unavoidable noise. Communities should be notified in advance of the construction and the expected temporary and intermittent noise increases during the construction period. The construction contractor shall establish a noise complaint program and post a number at the job site where such complaints can be registered. When noise complaints are received, the contractor shall take efforts to control noise (portable sound barriers, short-term relocation, etc.) and document these efforts with the County.*

Based on the above evaluation, it is concluded that implementation of the proposed project will not result in significant adverse noise impacts with implementation of the above mitigation measures.

- b. *Less Than Significant Impact* – Development of the proposed project will utilize standard construction techniques and equipment. No explosives or pile driving activities are proposed. Without large equipment or other vibration generating activities which could generate excessive groundborne noise or vibration, the potential for significant vibration to affect adjacent residences is low to non-existent. No excessive groundborne noise or vibration will result from either constructing or operating facilities proposed by this project and no mitigation beyond that previously identified is required.

- c. *No Impact* – The project site is not located near an airport and will not experience any aircraft or airport noise impacts.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIV. POPULATION AND HOUSING: Would the project:				
a) 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a&b. *No Impact* – The proposed project will provide a wastewater collection system for a fully developed residential subdivision within the Rexland Acres community. The project has no potential to induce growth or displace existing occupied residences.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XV. PUBLIC SERVICES: Would the project 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 public services:				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

a-e. *No Impact* – The installation and utilization of the new sewer lines have no potential to create any demand for public services that would require new or altered facilities. This includes “other public facilities” such as the KSAWWTP which has sufficient capacity to handle the additional wastewater that will be generated by the proposed project without requiring expansion of this public facility.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVI. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

a&b. *No Impact* – The installation and utilization of the new sewer lines have no potential to create any demand for recreational facilities that would require new or altered facilities.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVII. TRANSPORTATION: Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

- a. *No Impact* – Although the proposed project will install the new sewer lines within road ROWs, the roads will be returned to pre-existing condition as part of the project. The, there is no potential for conflicts with any circulation system characteristics.
- b. *No Impact* – The proposed project is a discrete construction project. It is assumed that approximately 20 personnel will be working this project (assumes to work crews) and as many as 10 deliveries will occur by truck per day. Thus, an estimated total of 50 round trips may occur during a workday. Unlike a project that will generate trips over the long-term, this project may require three to six months to complete. Since a project such as proposed will be awarded to the lowest bidder, there is no method of controlling vehicle miles traveled in support of the project, other than awarding some points for a local contractor. Due to the type of project, CEQA Guidelines Section 15064.3 does not appear to apply to the proposed project.
- c&d. *Less Than Significant With Mitigation Incorporated* – The proposed construction activities in road ROWs will be short term, but these activities can create hazards for motorists, bicyclists and pedestrians and the activities have a potential to conflict with continuous access. Mitigation measure HAZ-2 will be implemented to ensure that hazards are minimize and emergency access is maintained to all parcels.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVIII. TRIBAL CULTURAL RESOURCES: Would the project cause a substantial change in the significance of tribal cultural resources, defined in 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 the California Native American tribe, and that is:				
a) 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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) 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 Code Section 5024.1. 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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

To be supplied after AB 52 consultation is completed.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIX. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a. *No Impact* – The specific purpose of the proposed project is to install a wastewater collection system to the remaining portion of the Rexland Acres residential community and deliver the wastewater to the KSAWWTP, which has adequate existing capacity to receive and treat the additional estimated 45,500 gallons of wastewater per day. Thus, other than the proposed project no relocation or construction impacts will result from implementing the proposed project.
- b. *Less Than Significant Impact* – The proposed project will consume a minor amount of water to control dust during construction. Once the collection system is in operation, it will not consume water. Therefore, the analysis of future water consumption is not pertinent to this proposed project. Based on the size of the regional aquifer, consumption of an estimated two hundred thousand gallons for dust control is considered a *de minimis* quantity of water demand.
- c. *Less Than Significant Impact* – The volume of wastewater forecast to be generated by the proposed project (about 45,500 gpd) is well within the capacity of the KSAWWTP. Thus, the proposed project will consume some of the excess capacity at the KSAWWTP, but it will not exceed the WWTP's capacity or require new construction.
- d. *Less Than Significant Impact* – The only solid waste generated by the proposed project will consist of waste packing material for pipe deliveries; perhaps some excavated dirt; possibly some excavated asphalt from trenching activities; and a limited amount of municipal waste generated by employees. All construction waste that can be recycled will be, and the small amount of remaining waste will be delivered to regional landfills with adequate capacity for the small volume of waste associated with this proposed project. Solid waste impacts will be less than significant from project implementation.

- e. *No Impact* – Standard practice is to include a contract stipulation that a contractor obey all laws and regulations of the County, State and United States, and this includes solid waste laws and regulations. No potential conflict with such laws and regulations is anticipated from the proposed project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XX. WILDFIRE: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a-d. *No Impact* – The proposed Project is not located in or near state responsibility areas or lands classified as very high fire hazard severity zone, therefore the proposed Project can have no impacts to any wildfire issues. The proposed Project is not located within the fire safety severity zone. The proposed Project area is located in a suburban area removed from the high fire hazard areas that are located adjacent to Tehachapi Mountains to the east. As such, no impacts under these issues are anticipated.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XXI. MANDATORY FINDINGS OF SIGNIFICANCE:				
a) Does the project have the potential to substantially 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, substantially 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project 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 probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

The analysis in this Initial Study and the findings reached indicate that the proposed Project can be implemented without causing any new Project specific or cumulatively considerable unavoidable significant adverse environmental impacts. Mitigation is required to control potential environmental impacts of the proposed Project to a less than significant impact level. The following findings are based on the detailed analysis of the Initial Study of all environmental topics and the implementation of the mitigation measures identified in the previous text and summarized following this section.

- a. *Less Than Significant With Mitigation Incorporated* – The Project has limited potential to cause a significant impact any biological or cultural resources. The Project has been identified as having no potential to degrade the quality of the natural environment, substantially reduce 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, or reduce the number or restrict the range of a rare or endangered plant or animal. The Project requires mitigation to prevent significant impacts from occurring as a result of implementation of the Project. Based on the historic disturbance of the site, and its current condition, the potential for impacting cultural resources is low. The Cultural Resources Report determined that no cultural resources of importance were found at the Project site, so it is not anticipated that any resources could be affected by the Project because no cultural resources exist. However, because it is not known what could be unearthed upon any excavation activities, contingency mitigation measures are provided to ensure that, in the unlikely event that any resources are found, they are protected from any potential impacts. Please see biological and cultural sections of this Initial Study.
- b. *Less Than Significant Impact* – The proposed project consists of installing a new wastewater collection system in the residential community of Rexland acres. No unavoidable significant impacts

have been identified and no short-term goals will be achieved to the detriment of long-term environmental goals. Limited potential adverse environmental impacts will be experienced during construction to achieve the long-term goal of protecting groundwater quality from further degradation due to concentrated subsurface discharges of wastewater.

- c. *Less Than Significant With Mitigation Incorporated* – The Project has eight (8) potential impact categories that are individually limited, but may be cumulatively considerable. These are: Air Quality, Biological Resources, Cultural Resources, Geology & Soils, Hazards & Hazardous Materials, Hydrology & Water Quality, Noise, and Transportation. The Project is not considered growth-inducing, as defined by *State CEQA Guidelines* (<http://ceres.ca.gov/ceqa/guidelines/>). These issues require the implementation of mitigation measures to reduce impacts to a less than significant level and ensure that cumulative effects are not cumulatively considerable. All other environmental issues were found to have no significant impacts without implementation of mitigation. The potential cumulative environmental effects of implementing the proposed Project have been determined to be less than considerable and thus, less than significant impacts.
- d. *Less Than Significant With Mitigation Incorporated* – The proposed Project includes activities that have a potential to cause direct substantial adverse effects on humans. The issues of Air Quality, Geology and Soils, Hazards & Hazardous Materials, Hydrology, Noise, and Transportation require the implementation of mitigation measures to reduce human impacts to a less than significant level. All other environmental issues were found to have no significant impacts on humans without implementation of mitigation. The potential for direct human effects from implementing the proposed Project have been determined to be less than significant.

Conclusion

This document evaluated all CEQA issues contained in the latest Initial Study Checklist form (2019). The evaluation determined that either no impact or less than significant impacts would be associated with the issues of Aesthetics, Agriculture and Forestry Resources, Energy, Greenhouse Gases, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, Recreation, and Wildfire. The issues of Air Quality, Biological Resources, Cultural Resources, Geology & Soils, Hazards & Hazardous Materials, Hydrology & Water Quality, Noise, Transportation, and Tribal Cultural Resources require the implementation of mitigation measures to reduce Project specific and cumulative impacts to a less than significant level. The required mitigation has been proposed in this Initial Study to reduce impacts for these issues to a less than significant impact level.

Based on the evidence and findings in this Initial Study, Kern County proposes to adopt a Mitigated Negative Declaration for the Rexland Acres Sewer Expansion Project. A Notice of Intent to Adopt a Mitigation Negative Declaration (NOI) will be issued for this Project by the County. The Initial Study and NOI will be circulated for 30 days of public comment. At the end of the 30-day review period, a final MND package will be prepared and it will be reviewed by the County for possible adoption at a future Board meeting, the date for which has yet to be determined. If you or your agency comments on the MND/NOI for this Project, you will be notified about the meeting date in accordance with the requirements in Section 21092.5 of CEQA (statute).

Note: Authority cited: Sections 21083 and 21083.05, Public Resources Code. Reference: Section 65088.4, Gov. Code; Sections 21080(c), 21080.1, 21080.3, 21083, 21083.05, 21083.3, 21093, 21094, 21095, and 21151, Public Resources Code; *Sundstrom v. County of Mendocino*, (1988) 202 Cal.App.3d 296; *Leonoff v. Monterey Board of Supervisors*, (1990) 222 Cal.App.3d 1337; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

Revised 2019

Authority: Public Resources Code sections 21083 and 21083.09

Reference: Public Resources Code sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3/ 21084.2 and 21084.3

SUMMARY OF MITIGATION MEASURES

Biological Resources

- BIO-1 The State of California prohibits the “take” of active bird nests. To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal should be conducted outside of the the State identified nesting season (Raptor nesting season is February 1 through September 30; and migratory bird nesting season is March 15 through September 1). Alternatively, the site shall be evaluated by a qualified biologist prior to the initiation of ground disturbance to determine the presence or absence of nesting birds. Active bird nests MUST be avoided during the nesting season. If an active nest is located in the project construction area it will be flagged and a 100-foot avoidance buffer placed around it. No activity shall occur within the 100-foot buffer until the young have fledged the nest.
- BIO-2 Within 30 days prior to initiating installation of the Rexland Acres sewer project, a MBHCP qualified biologist shall conduct a preconstruction survey of the project area of potential impact for species of concern. If no individuals of these species of concern are encountered, a report of findings shall be submitted to the manager of the MBHCP. If any of the covered species are encountered within the project area of impact, minimization measures shall be implemented in accordance with MBHCP requirements.

Cultural Resources

- CUL-1 In the event that a prehistoric or historic artifact over 50 years in age is encountered within the project area during construction activities, all land modification activities in the immediate area of the finds should be halted and an onsite inspection shall be performed immediately by a qualified archaeologist. This professional will be able to assess the find, determine its significance, and make recommendations for appropriate management actions. Reasonable cultural resource management actions shall be implemented to protect the accidentally exposed subsurface resources.

Geology and Soils

- GEO-1 The construction contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices that will prevent construction pollutants from contacting stormwater with the intent of keeping all products of erosion from moving offsite into receiving waters. The SWPPP may include but not be limited to the following BMPs.
- The length of trench which can be left open at any given time should be limited to that needed to reasonably perform construction activities. This will serve to reduce the amount of backfill stored onsite at any given time.
 - Backfill material should not be stored in areas which are subject to the erosive flows of water.
 - Stored backfill material should be covered with water resistant material during periods of heavy precipitation to reduce the potential for rainfall erosion of stored backfill material. If covering is not feasible, then measures such as the use of straw bales, sandbags, silt fencing or detention/desilting basins shall be used to capture and hold eroded material on the project site for future cleanup.
 - The SWPPP shall include a spill prevention and cleanup plan to account for the accidental release of petroleum products or other contaminants during construction activities. This plan shall identify the methods of containing spills, the methods of removing and disposing of spills

and the notification procedures to the appropriate regulatory agencies with jurisdiction over such spills.

- Apply erosion and sediment control design that reduce volume and velocity of flows and content of sediment to levels that do not cause significant rill or gully erosion in susceptible areas. In addition, provide for restoration of areas that do become eroded.
- Add protective covering of mulch, straw or synthetic material (erosion control blankets, tacking will be required).
- Limit the amount of area disturbed and the length of time slopes and barren ground are left exposed. After pipeline installation, soil shall be compacted to a level similar to pre-construction conditions.
- Construct diversion dikes and interceptor ditches to divert water away from construction areas.

GEO-2 In the event that paleontological resources are encountered within the project area during construction activities, all land modification activities in the immediate area of the finds should be halted and an onsite inspection shall be performed immediately by a qualified paleontologist. This professional will be able to assess the find, determine its significance, and make recommendations for appropriate management actions. Reasonable paleontological resource management actions shall be implemented to protect the accidentally exposed subsurface resources.

Hazards and Hazardous Materials

- HAZ-1 All spills or leakage of petroleum products during construction activities will be remediated in compliance with applicable state and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste will be collected and disposed of at an appropriately licensed disposal or treatment facility. This measure will be incorporated into the SWPPP prepared for the Project development.
- HAZ-2 During sewer construction, the contractor shall maintain access to all parcels during construction activities. If necessary, this access can be accomplished by having steel sheets available to cover trenches in front of driveways or provide immediate, temporary access. Also, a traffic management plan shall be submitted and approved by the County to manage and minimize hazards to motorists, bicyclists, and pedestrians during construction.

Noise

- NOI-1 Construction activities shall be limited to the hours of 7 a.m. to 6 p.m. on Monday through Friday, and between 9 a.m. to 6 p.m. on Saturday, and shall be prohibited on Sundays and federal holidays except during documented emergencies. No construction may occur during hours of "Darkness" (Night Work), as defined in the California Vehicle Code, Section 280, unless prior authorization is obtained from the County.
- NOI-2 All construction vehicles and fixed or mobile equipment shall be equipped with properly operating and maintained sound attenuating devices such as mufflers.
- NOI-3 All employees that will be exposed to noise levels greater than 75 dB over an 8-hour period shall be provided with adequate hearing protection devices to ensure no hearing damage will result from construction activities.
- NOI-4 If equipment is being used that can cause hearing damage at adjacent noise receptor locations (distance attenuation shall be taken into account), portable noise barriers shall be installed that are demonstrated to be adequate to reduce noise levels at receptor locations below hearing damage thresholds.

- NOI-5 Maintain good relations with the local community where construction is scheduled, such as keeping people informed of the schedule, duration, and progress of the construction, to minimize the public objections of unavoidable noise. Communities should be notified in advance of the construction and the expected temporary and intermittent noise increases during the construction period. The construction contractor shall establish a noise complaint program and post a number at the job site where such complaints can be registered. When noise complaints are received, the contractor shall take efforts to control noise (portable sound barriers, short-term relocation, etc.) and document these efforts with the County.

REFERENCES

CRM TECH, "Identification and Evaluation of Historic Properties, Rexland Acres Sewer Expansion Project near the City of Bakersfield, Kern County, California" dated October 26, 2019 (*CONFIDENTIAL*)

Giroux & Associates, "Air Quality and GHG Impact Analysis, Rexland Acres Sewer Expansion Project, Kern County, California" dated July 17, 2019

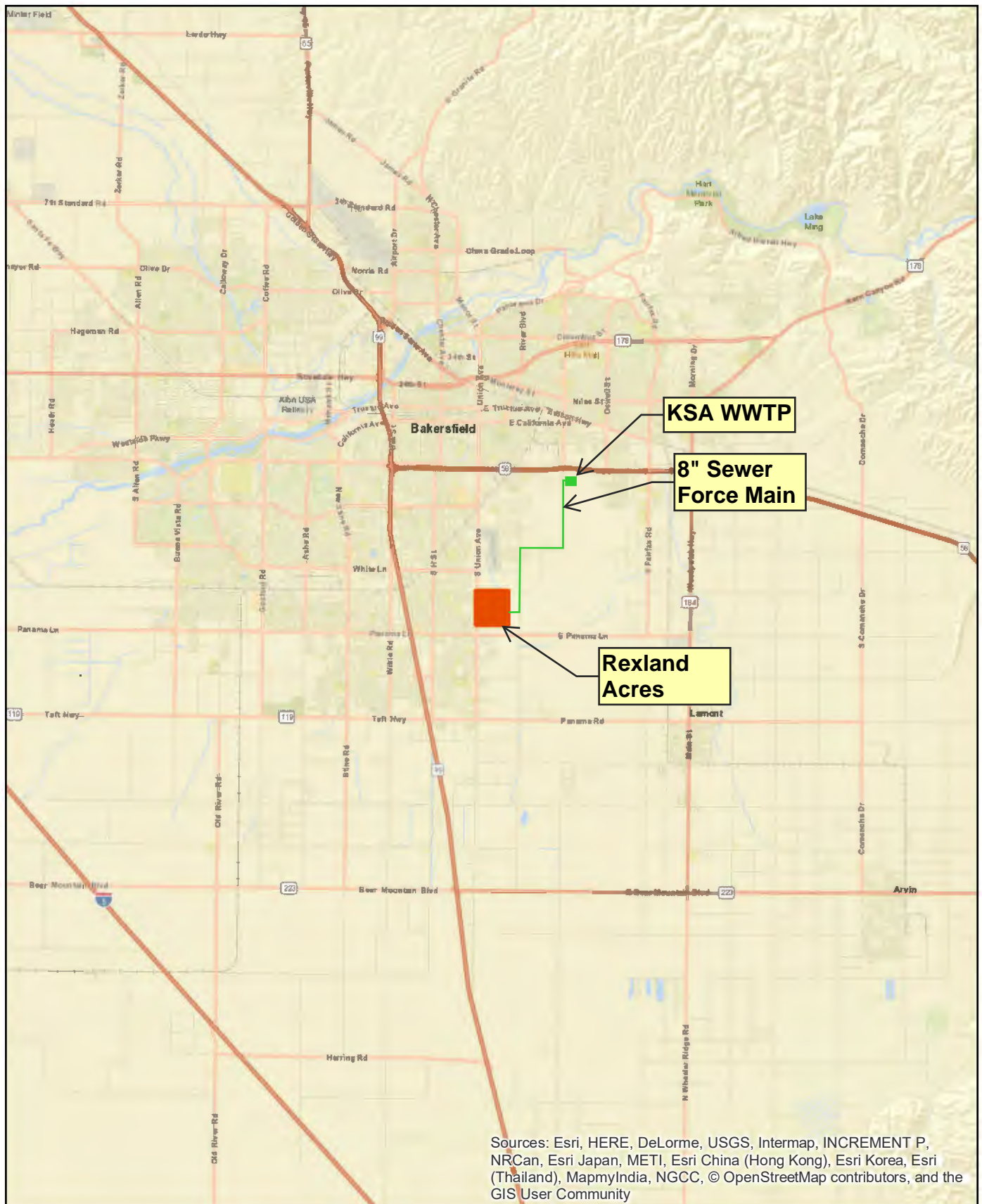
Jericho Systems, "Biological Resources Assessment, Rexland Acres Sewer Expansion Project, Kern County, Bakersfield, California" dated August 29, 2019

Provost & Pritchard Consulting Group, "Rexland Acres Sewer Expansion, Preliminary Engineering Report, Kern County, California" dated October 2018

<https://www.valleyair.org/aqinfo/attainment.htm>

<https://www.epa.gov/general-conformity/de-minimis-tables>

FIGURES















 EST. 1968 PROVOST & PRITCHARD CONSULTING GROUP <i>An Employee Owned Company</i>	 0 200 400 Feet	 Existing SSCO	 Existing SS Line
		 Existing SSMH	 Proposed SS Line
		 Proposed SSCO	 Original Service Area Boundary
		 Proposed SSMH	 Expanded Service Area Boundary

Figure 1-2
Sewer Collection System
Alternative 1
Rexland Acres Sewer Expansion
Self-Help Enterprises




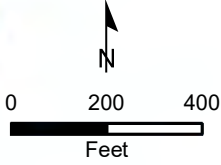









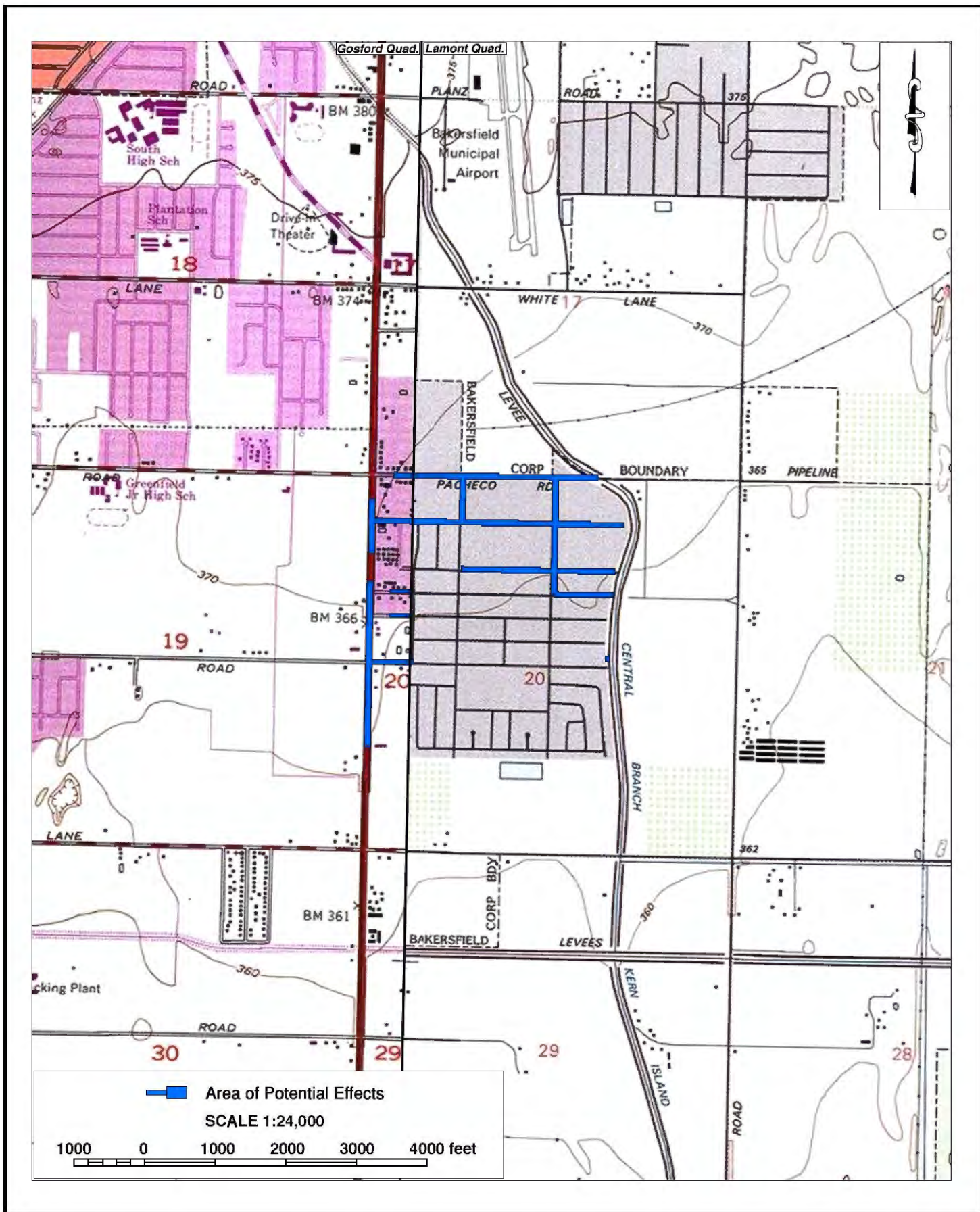
 EST. 1968 PROVOST & PRITCHARD CONSULTING GROUP An Employee Owned Company		 Existing-SSCO	 Existing SS Line
		 Existing-SSMH	 Proposed SS Line
		 Proposed-SSCO	 Original Service Area
		 Proposed-SSMH	 Expanded Service Area
		 Commercial Property wanting Sewer Service	

Figure 1-3
Sewer Collection System
Alternative 2
Rexland Acres Sewer Expansion
Self-Help Enterprises



SOURCE: Prepared by CRM TECH (Based on USGS Gosford and Lamont, CA, 7.5' quadrangles)

FIGURE 1-4

**APPENDIX 1
PRELIMINARY ENGINEERING REPORT**

Rexland Acres Sewer Expansion

Preliminary Engineering Report

Kern County, California
October 2018

Prepared for:
Self Help Enterprises
Visalia, California

Prepared by:
Provost & Pritchard Consulting Group
1800 30th Street, Suite 280, Bakersfield, CA 93301

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Self Help Enterprises

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David Lollis, PE

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(661) 616-5900

This report is prepared in accordance with State Water Resources Control Board, Division of Financial Assistance, Drinking Water State Resolving Fund Financial Assistance Application for construction funding. The content conforms to the outline provided for an Engineering Report in Attachment T1 of the Technical Package.

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Attachments

Attachment A.....Kern County Public Health Services Letter to the RWQCB

Attachment B.....Commercial and Industrial EDUs

Attachment C..... Engineer’s Opinion of Probable Construction Cost

Attachment DSelected Project Map

Appendices

Appendix ASelf-Help Septic Tank Survey, 2017

Appendix B Proposed Sewer System Profiles

Appendix C Kern County Ordinance No. S-136

Abbreviations

ADF	Average Day Flow
CSA	County Service Area
EDU	Equivalent Dwelling Units
EOPCC.....	Engineer's Opinion of Probable Construction Cost
gpd	gallons per day
gpm.....	gallons per minute
KSA	Kern Sanitation Authority
LF	Linear Foot
MDF.....	Maximum Daily Flow
MHI.....	Median Household Income
O&M.....	Operations & Maintenance
psi	pounds per square inch
PVC	Polyvinyl Chloride
WWTP	Wastewater Treatment Plan

1 Sewer System Information

Rexland Acres is a Kern County area bounded by South Union Avenue on the west, the Central Branch Canal on the east, Pacheco Road on the north and Bakersfield City limits on the south (see **Figure 1-1**, Project Location). The topography of the Rexland Acres area is generally flat, sloping to the southeast.

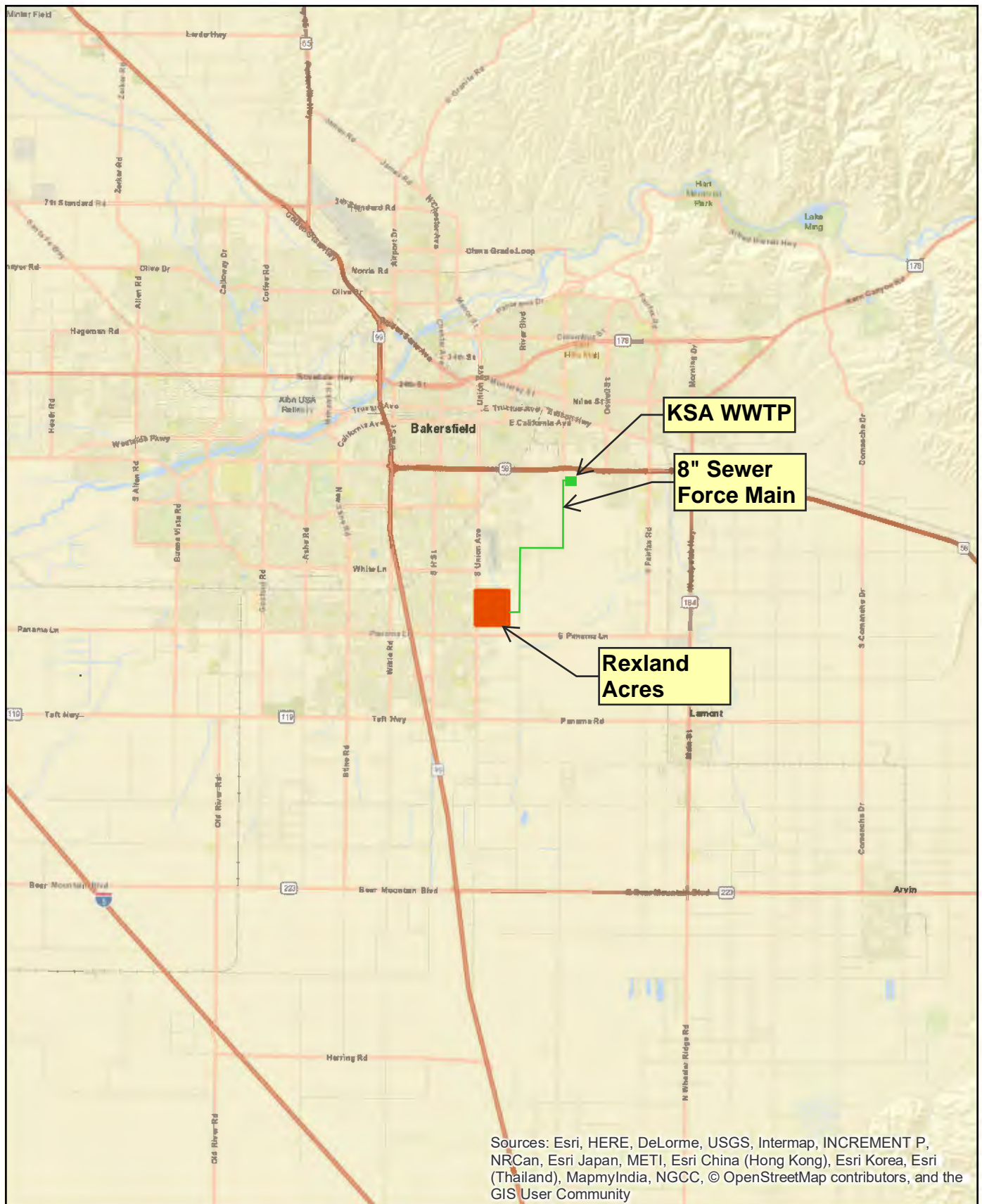
The greater portion of the southern area of Rexland Acres is currently served by a sewer collection system including a sewer lift pump station and a five-mile sewer force main discharging to the Kern Sanitation Authority (KSA) Wastewater Treatment Plant (WWTP) located northeast of Rexland Acres. The collection system was built from 2006 through 2008 and serves approximately 688 properties.

The remainder of parcels in Rexland Acres (generally the northern third and several commercial properties along Union Avenue) are not currently served by the existing sewer collection system and remain on private septic tanks. These property owners are increasingly dealing with problems with their aging septic tanks and there is a majority of support of owners that desire to be connected to the sewer system.


Rexland Acres is a severally disadvantaged community with a median household income (MHI) of \$31,964 per year. Because of this status, property owners have limited financial resources to maintain and/or replace their septic systems, and they also would have difficulty in paying for the full cost of the sewer infrastructure that would be required to serve them.

1.1 Existing System

The existing sewer collection system construction included 8” sewer main (26,600 LF), 12” sewer main (2,800 LF), 4” residential sewer lateral connections (687 EA), of which according to Kern County 94.9 percent are connected, and 6” sewer lateral connections (9 EA). In addition, a sewer lift pump station and 8” sewer force main (27,000 LF) were incorporated in the project for discharge of collected sanitary sewage to the KSA WWTP (see **Figure 1-2** and **Figure 1-3**), Sewer Collection System).





 <p>EST. 1968 PROVOST & PRITCHARD CONSULTING GROUP <i>An Employee Owned Company</i></p> <p>0 200 400 Feet</p>	<table border="0"> <tr> <td>● Existing SSCO</td> <td>— Existing SS Line</td> </tr> <tr> <td>● Existing SSMH</td> <td>— Proposed SS Line</td> </tr> <tr> <td>● Proposed SSCO</td> <td>--- Original Service Area Boundary</td> </tr> <tr> <td>● Proposed SSMH</td> <td>— Expanded Service Area Boundary</td> </tr> </table>	● Existing SSCO	— Existing SS Line	● Existing SSMH	— Proposed SS Line	● Proposed SSCO	--- Original Service Area Boundary	● Proposed SSMH	— Expanded Service Area Boundary	<p>Figure 1-2 Sewer Collection System Alternative 1 Rexland Acres Sewer Expansion Self-Help Enterprises</p>
● Existing SSCO	— Existing SS Line									
● Existing SSMH	— Proposed SS Line									
● Proposed SSCO	--- Original Service Area Boundary									
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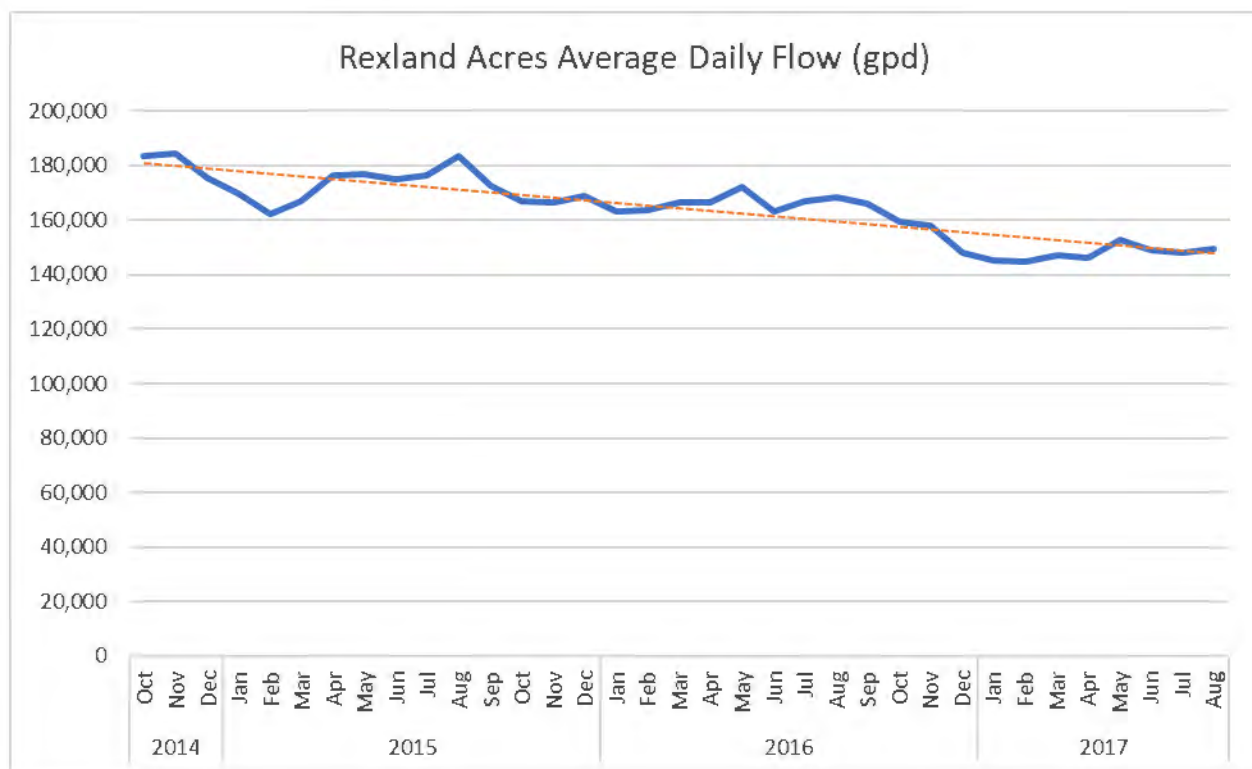
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		Commercial Property wanting Sewer Service	

Figure 1-3
Sewer Collection System
Alternative 2
Rexland Acres Sewer Expansion
Self-Help Enterprises

The KSA WWTP records the Rexland Acres wastewater flow through a flow meter from the pump station. From October 2014 to August 2017, the average daily flow (ADF) from the existing Rexland Acres community was 164,333 gallons per day (approximately 60 million gallons per year). **Figure 1-4** charts the ADF over this period and shows a general trendline of water usage for Rexland Acres. The ADF has decreased by almost 20% over this time period primarily due to the water conservation efforts by residents during the extreme drought period. The ADF is expected to recover as the drought has subsided; however, some of the water conservation plumbing fixtures and general conservation efforts will remain in place.

Figure 1-4 Rexland Acres Average Daily Flow (gpd)



The County of Kern reported that the existing sewer collection system represented a total of 726.4 Equivalent Dwelling Units (EDU). Equivalent Dwelling Units are units of measure that standardize all land use categories (housing, retail, office, etc.) to the level of demand created by one single-family dwelling unit. To estimate the Rexland Acres existing sewer collection system ADF, the Kern County Development standard of 250 gpd per EDU would be used, resulting in a total ADF of 181,600 gpd ($726.4 \times 250 = 181,600$), which would be equivalent to 126 gpm ($181,600 / 1440 = 126$). Division Three of the Kern County Standards for sanitary sewers provides a way to

estimate peak flow by applying a peaking factor of 1.8 to the ADF (Sec. 301-1.02). The calculated peak flow would then be 326,880 gpd ($181,600 \times 1.8 = 326,880$) that would also be equivalent to 227 gpm ($326,880 / 1,440 = 227$).

On September 22, 2017, a field visit to the existing Rexland Acres sewer lift pump station observed the following wastewater pump station discharge(s) as measured by the flow meter at the KSA WWTP:

Pump No. 1 only	340 gpm
Pump No. 2 only	330 gpm
Pump Nos. 1 & 2	360 gpm

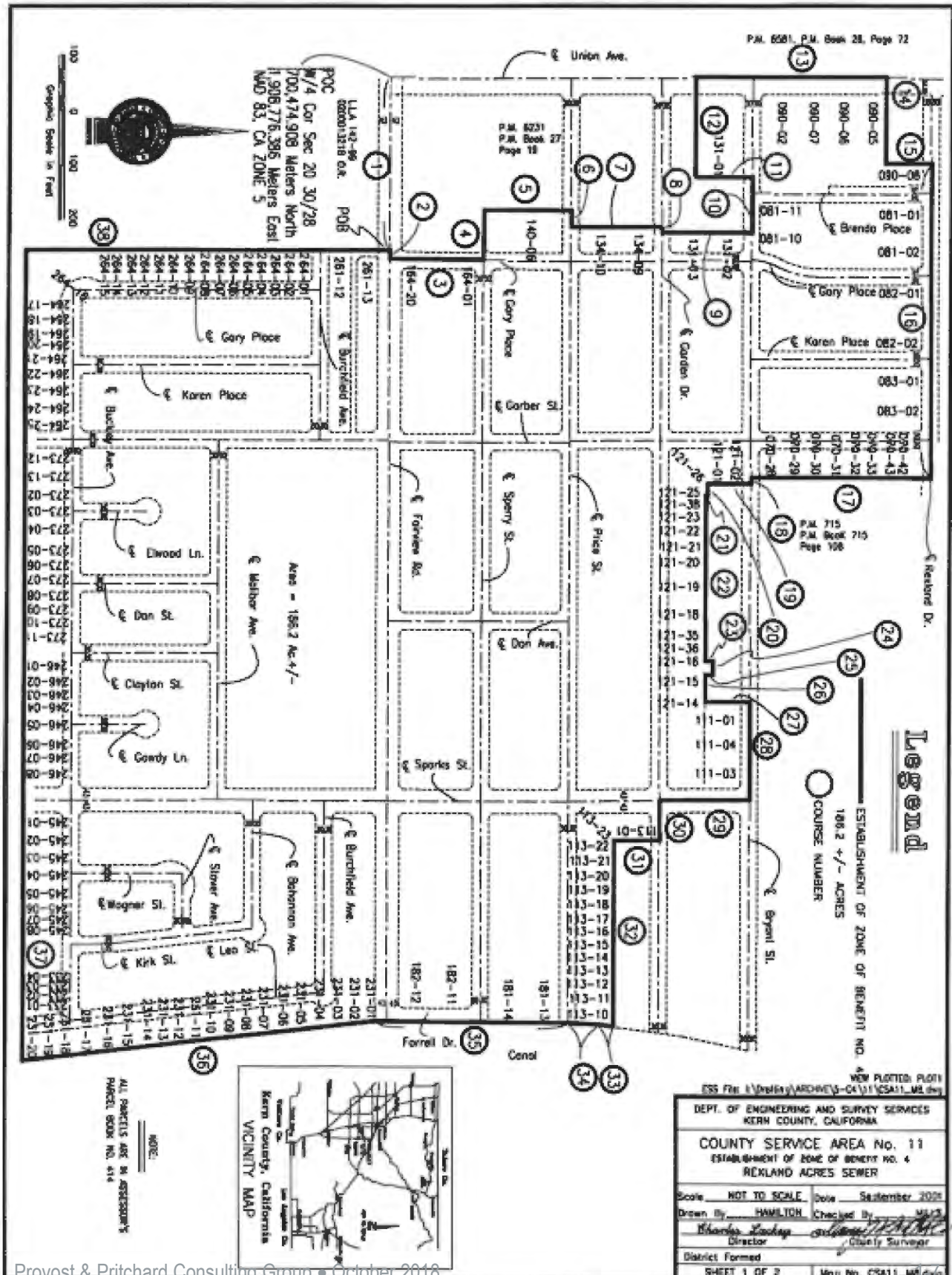
The existing sewer lift pump station is of sufficient discharge capacity to accommodate the estimated peak flow of 227 gpm. Please note that the maximum daily flow (MDF) adjusted for suspect recording time issues is 207,000 gpd (refer to **Table 1-1a**). The MDF of 207,000 gpd is equivalent to 144 gpm ($207,000 / 1,440 = 144$) and is less than the estimated peak flow of 227 gpm as shown above.

1.2 Agency Jurisdiction

Rexland Acres is within the jurisdiction of Kern County with the existing sewer collection system established under County Service Area No. 11 (see **Figure 1-5**, CSA No. 11). The public right of ways within Rexland Acres are owned by Kern County with the exception of South Union Avenue contiguous on the west boundary which is U.S. 99 business highway.

Section One: Sewer System Information
Rexland Acres – Sewer Expansion Project

Figure 1-5 CSA No. 11



2 Problem Description

That properties in the remaining northern portion of Rexland Acres are currently not served by the existing sewer collection system and many of the residents are having significant septic system problems and failures. Many of the properties do not meet the minimum lot size requirement for septic systems. These issues present potential health hazards to the public and also contribute to increased nitrates leaching into the groundwater aquifer.

Self Help Enterprises conducted a Septic Tank Survey in 2017 to identify septic system performance, community data and septic system/sewer system preferences (see **Appendix A**). The survey showed that 42% reported having had issues with their septic tank system. Also, the report further identified that the majority of the area not connected to sewer would prefer a public sewer system. The survey results show that out of 139 surveyed residents or property, 85% would prefer public sewer to a septic tank system.

Additionally, approximately 42% of the survey respondents have disposed of greywater effluent into their yards to either relieve the hydraulic loading of their system or to conserve outdoor potable water use. The above ground disposal of greywater is a violation of public health regulations.

Approximately 30% of the septic tank systems use seepage pits for disposal of the wastewater effluent. A significant issue with seepage pits is that they disperse effluent in oxygen-poor environments where pathogens may not be treated before the effluent reaches the aquifer. Additionally, the wastewater seeps below the root zone and there is no uptake by plants and grass allowing for a use of nitrogen in the effluent (i.e. reducing nitrates into the aquifer). Nearby wells can be impacted by elevated nitrate concentrations and potential pathogens. For these reasons, the nitrates and health hazards from these septic systems are of concern.

Additionally, the Kern County Public Health Services Department submitted a letter to the Central Valley Regional Water Quality Control Board stating the problems of the area's septic systems and concurs that the connection of the remaining community to the sewer system would remedy these potential public health problems (see **Attachment A**).

3 Alternative Solutions

3.1 Alternative 1 – Extend Existing Sewer Collection System

This alternative entails extending the existing sewer collection system to serve the areas not currently served by CSA No. 11. This alternative would resolve the problems of sewer/septic system failures and the resulting potential health hazards.

The proposed sewer collection system extension will entail the construction of approximately 620 LF of 12” PVC sewer main, 16,140 LF of 8” PVC sewer main, 43 sewer manholes, 3 sewer cleanouts and 182 sewer laterals with associated road resurfacing of sewer trench. The new sewer system will connect to the existing sewer collection system for extension.

3.1.1 Conceptual Project Design

Alternative 1 is an extension of the existing Rexland Acres sewer collection system as shown on **Figure 1-2**. A preliminary field survey was conducted to profile the existing ground surface in October 2017. Proposed street sewer line extension profiles were plotted incorporating the existing ground surface to ascertain if adequate cover over the top of the extended sewer lines would be available. Refer to **Appendix B – Proposed Sewer System Profiles**. It was determined that all proposed sewer collection system lines, with the exception of the most southerly reach on South Union Avenue, do have adequate cover over the top of sewer lines of 4.0 feet or more as required by Kern County Design Standards. The cover over the top of the proposed most southerly sewer line extension on South Union Avenue is approximately 3.8 feet of cover. The deficient cover over the top of the pipe can be mitigated by improved trench backfill and compaction.

This alternative also requires modifications to the existing lift station. Specifically, the lift pumps need to have impellers with a larger trim installed, which will slightly increase the pumping capacity of the pump station.

3.1.2 Land Acquisition Requirements

No land acquisition is required for this alternative as all the proposed pipeline will be constructed within public right of way.

3.1.3 Alternative Cost

The preliminary engineer's opinion of probable construction cost (EOPCC) associated with this alternative is provided in Attachment C. The total estimated construction cost is approximately \$5.5 million.

3.2 Alternative 2 – Extend Existing Sewer Collection System to Serve Residential and Select Commercial Customers

This alternative entails extending the existing sewer collection system to serve the residential areas and five commercial areas requesting service that are not currently served by CSA No. 11. This alternative would resolve the problems of sewer/septic system failures and the resulting potential health hazards.

The proposed sewer collection system extension will entail the construction of approximately 620 LF of 12" PVC sewer main, 12,604 LF of 8" PVC sewer main, 33 sewer manholes, 3 sewer cleanouts and 175 sewer laterals with associated road resurfacing of sewer trench. The new sewer system will connect to the existing sewer collection system for extension.

3.2.1 Conceptual Project Design

Alternative 2 is an extension of the existing Rexland Acres sewer collection system as shown on **Figure 1-3**. A preliminary field survey was conducted to profile the existing ground surface in October 2017. Proposed street sewer line extension profiles were plotted incorporating the existing ground surface to ascertain if adequate cover over the top of the extended sewer lines would be available. It was determined that all proposed sewer collection system lines do have adequate cover over the top of sewer lines of 4.0 feet or more as required by Kern County Design Standards.

3.2.2 Land Acquisition Requirements

No land acquisition is required for this alternative as all the proposed pipeline will be constructed within public right of way.

3.2.3 Alternative Cost

The preliminary engineer's opinion of probable construction cost (EOPCC) associated with this alternative is provided in Attachment C. The total estimated construction cost is approximately \$4.6 million.

3.3 Alternative 3 – No Project

The alternative of no project does not provide a solution for the described problem. Under this alternative the homes in the unsewered area of Rexland Acres would continue to rely upon their septic tanks into the future. As these septic tanks continue to age, increased maintenance is expected. Additionally, these septic systems are getting closer to the end of their useful life and will require replacement in the future.

Based on the Self Help Enterprises 2017 Survey, about half of the residents that completed the survey has had to have their septic tank pumped one or more times in the past three years. The average cost of this work is about \$450 per instance. Should replacement of a septic system be required, costs can be in the order of \$20,000.

Septic system failures also present potential health hazards to the public and also contribute to increased nitrates leaching into the groundwater aquifer. These issues will continue to impact the community.

3.4 Alternative Analysis

No project is not considered as a viable alternative as it will not solve the described problem. The recommended alternative is Alternative 1 – Extension of the Existing Rexland Acres Sewer Collection System. With Alternative 2, the number of commercial connections is reduced significantly, and the costs of the infrastructure are spread to fewer customers resulting in a higher individual property owner cost. It is recommended to provide service to the full area in order to reduce the concerns of nitrates leaching into the groundwater aquifer. No other alternatives have been considered viable for this community. For example, a pressure sewer system (typically used in mountainous terrain) is not a viable option for the community and would not be permitted by the County of Kern.

4 Selected Construction Project

4.1.1 Project Description

The proposed sewer collection system extension will entail the construction of approximately 620 LF of 12” PVC sewer main, 16,140 LF of 8” PVC sewer main, 43 sewer manholes, 3 sewer cleanouts and 182 sewer laterals with associated road resurfacing of sewer trench. The new sewer system will connect to the existing sewer collection system for extension. This project requires slight modifications to the existing lift station with the replacement of the existing impellers to slightly increase the pumping capacity of the pump station.

4.1.2 Project Effectiveness

The selected project alternative will resolve all the problems with sewer/septic system failures and associated potential health hazards. The proposed project will serve the areas not currently served by CSA No. 11.

4.1.3 Land Acquisition and Permitting

The extension of the existing Rexland Acres sewer collection system is to be constructed within the public right of way. Therefore, it is not needed to acquire additional land to construct the proposed project improvements. An encroachment permit from the County of Kern will be required for work within the County right of way. It will also be necessary to obtain an encroachment permit from Caltrans to construct the proposed sewer collection system extension improvements contiguous to South Union Avenue on the west boundary, which is a U.S. 99 Business Highway. Caltrans Project Development Procedures Manual Article 4 requires 42 inches of clearance below finish grade for new utility installations in Caltrans right of way.

A Stormwater Pollution Prevention Plan (SWPPP) obtained from the State Water Resources Control Board (SWRCB), and possibly a Dust Control Plan (DCP) obtained from the San Joaquin Valley Air Pollution Control District (SJVAPCD).

4.1.4 Environmental Impacts

Environmental compliance documents will need to be prepared for the proposed project. Environmental documents will be prepared for compliance with the California Environmental Quality Act (CEQA). It is anticipated that an Initial Study/Mitigated Negative Declaration will be the appropriate level of environmental document required for this project.

This work will include preparation of the documents, issuing public notice, circulating the Initial Study/Mitigated Negative Declaration for public comment, and holding a public hearing prior to adopting the Initial Study/Mitigated Negative Declaration.

Environmental impacts that will need to be considered for this project include:

- Noise and traffic disruption will be generated during construction operations. Mitigation measures will have to be employed to minimize impacts to neighbors.
- Mitigations will be incorporated into the project contract documents for potential disturbances of cultural resources.

4.1.5 Design Criteria

The proposed project will be designed in accordance with Kern County Design Standards. Please note that PVC sewer pipe will be required for all sewer pipeline construction thus providing for a minimum slope of 0.25% for 8” sewer pipelines and a minimum slope of 0.15% for 12” sewer pipelines.

4.1.6 Project Sewer System Discharge Estimate

The total sewer system discharge is comprised of the combined flow from the build-out of the existing sewer collection system and the proposed project sewer collection system extension with connection to the existing sewer collection system and sewer lift pump station.

The existing sewer collection system has a calculated average daily flow of 181,600 gpd (see Section 1.1 Existing System). The County of Kern also reported that the existing collection system represented 726.4 EDU with an estimated build-out of 94.9% not including an elementary school in the existing sewer collection system area. Therefore:

$$\text{Build-out EDU} = 726.4 / 0.949 = 765 \text{ EDU}$$

$$\begin{array}{lcl} \text{School EDU} & = & \underline{28 \text{ EDU}} \\ \text{Total Existing System EDU} & = & 793 \text{ EDU} \end{array}$$

And,

$$\begin{array}{lcl} \text{ADF} & = & 793 \text{ EDU} \times 250 \text{ gpd/EDU} = 198,250 \text{ gpd (138 gpm)} \\ \text{Peak Flow} & = & 1.8 \times 198,250 = 356,850 \text{ gpd (248 gpm)} \end{array}$$

The proposed sewer collection system is the estimated flow of both residential and C-2/M-1 properties. The residential area is estimated at 170 additional properties, equivalent to 170 EDU. The commercial and manufacturing properties is estimated at 94.4 EDU (see **Attachment B** – Alternative 1 Rexland Acres Sewer Expansion for C-2 and M-1 Properties).

The calculation of ADF per EDU for C-2 and M-1 properties would be estimated using 250 gpd per EDU to conform to Kern County Standards with an associated peaking factor of 1.8 for C-2 properties and 2.0 for M-1 properties. The estimated EDU for C-2 and M-1 properties conforms to Kern County Ordinance No. S-136 (see **Appendix C**-Kern County Ordinance No. S-136). Therefore, the ADF is calculated as follows:

$$\begin{array}{lcl} \text{Residential} & = & 170 \times 250 = 42,500 \\ \text{C-2 and M-1} & & \underline{= 23,600} \\ \text{Total ADF} & & = 66,100 \text{ gpd (46 gpm)} \end{array}$$

And the Peak Flow is calculated as follows,

$$\begin{array}{lcl} \text{Residential} & = & 1.8 \times 42,500 = 76,500 \\ \text{C-2 and M-1 (see Table 4-1)} & & \underline{= 44,125} \\ \text{Total Peak Flow} & & = 120,625 \text{ gpd (84 gpm)} \end{array}$$

Therefore, the combined discharge estimate for the build-out of the existing sewer collection system and the proposed project sewer collection system is shown below.

$$\begin{array}{lcl} \text{Combined ADF} & 198,250 + 66,100 & = 264,350 \text{ gpd (184 gpm)} \\ \text{Combined Peak Flow} & 356,850 + 120,625 & = 477,475 \text{ gpd (332 gpm)} \end{array}$$

4.1.7 Project Sewer System Analysis

The combined estimated average daily flow of 184 gpm is less than the field recorded capacity of the existing sewer lift pump station running a single pump of 330 – 340

gpm. In addition, the existing 12” sewer pipeline gravity flow capacity is over 800 gpm ($n = 0.011$ @ 0.20% slope) which is over the combined estimated average daily flow and peak flow. The combined estimated peak flow of 332 gpm matches the current capacity of the existing sewer lift pump station running a single pump. Increasing the existing pump capacity could be accomplished by replacing the pump impeller with a larger trim and matching the electric motor size not to exceed 50 hp starter capacity at the moderate cost. However, to be conservative, we have assumed the full replacement of the pump in determining the costs of this project (see Section 4.1.8). Additional analysis and design of the sewer lift pump modifications is required during the preliminary design phase in coordination with the County of Kern and its operational staff.

4.1.8 Cost Analysis

An Engineer’s Opinion of Probable Construction Cost (EOPCC) includes non-construction costs. One non-construction cost included in the EPOCC is the share reimbursement of an existing sewer loan assessed against the parcels provided sewer connection service from the existing sewer collection system. The proposed connection to and use of the existing sewer collection system receives benefit from the existing system and those parcel owners that were assessed for its original construction.

The estimated amount of the original \$3,111,000 loan that benefits the new service area is approximately \$711,000 and is further described as follows:

- The original reduced loan amount is \$3,111,000
- There is an existing total of 793 EDUs
- The proposed sewer system expansion is estimated to be 170 EDUs residential and 94.4 EDUs for commercial and industrial properties adding up to a total of 264.4 EDUs.
- Therefore, the total EDUs for both existing and proposed system is 793 + 264.4 = 1,057.4 EDU.
- The proportioned loan amount to apply to the proposed sewer system expansion is $3,111,000 \times 264.4 / 1,057.4 = \$777,897$ (\$2,942 per EDU)

An overall project cost estimate is as follows:

Item	Cost
Existing Sewer Loan Share Reimb.	\$777,897
Administration	\$40,000
Survey, Design Engineering	\$220,000
Environmental Documentation	\$40,000
Bidding	\$15,000
Construction Management	\$240,000
Kern County Sewer Connection Fee*	\$189,046
Construction Costs **	\$4,772,300
Construction Contingency (15%)	\$715,845
Project Total	\$7,010,088

*Connection fee \$715 per connection = $(715)(264.4) = 189,046$

** Refer to **Attachment C** for detailed cost estimate.

4.1.9 Operations and Maintenance Costs

The operations and maintenance costs for the sewer collection system are factored into the cost of service by the KSA. The property owners within Rexland Acres already pay the current annual assessment of \$277.48 under CSA 11. Any changes to this rate will need to be approved through a Proposition 218 proceeding and would affect the existing and proposed sewer areas equally.

5 Proposed Schedule

The following is the tentative proposed schedule for the selected project.

Prepare Construction Documents	8 months
Agency Review, Permitting	3 months
Construction Bid Process	3 months
Construction	8 months
Project Closeout	2 months
<u>Total Project Time (no land acquisition)</u>	<u>24 months</u>

Attachments



MATTHEW CONSTANTINE
DIRECTOR

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KERNPUBLICHEALTH.COM

February 20, 2018

Scott Hatton
Central Valley Regional Water Quality Control Board
1685 E St
Fresno, Ca 93706

Subject: North Rexland Acres Septic System Performance Survey

Dear Mr. Hatton:

The Kern County Public Health Services Department, Environmental Health Division has received a request on behalf of residents with properties located within the Rexland Acres Sewer Connection project expressing a desire to abandon their existing septic systems for connection to a public sewer system. The properties lie adjacent to the Kern Sanitation Authority service area. This community is comprised of approximately 175 homes and 23 commercial properties located primarily on Pacheco Dr., Rexland Dr., Sparks St., Bryant St. and Union Ave. in Bakersfield, California. This community lies directly adjacent to the Rexland Acres Sewer Project which was built from 2006 to 2008 and serves properties directly to the south and east of the proposed project area.

Documentation submitted to this Division by Self-Help Enterprises on behalf of the community shows that 52 (41%) of 128 respondents have experienced septic system issues. 74 (92.5%) of 80 respondents have had their septic system pumped one or more times in the last 3 years. 37 (46%) of 80 respondents have had their septic system pumped two or more times in the last 3 years. In addition, 53 (42%) of 128 respondents have disposed of greywater effluent into yards. Above ground disposal of greywater is a violation of public health regulations. Many of the properties located within this community do not meet the minimum lot size requirement for septic system installation or leach field replacement.

Failing septic systems, greywater disposal, and outdoor waste disposal pose a serious public health and safety hazard and a potential pollution problem for the local water supply. Connection to a community sewer system, as supported by residents, would remedy these public health problems.

Should you have any questions or need additional information, please contact Amy Rutledge at (661) 862-8776.

Sincerely,

A handwritten signature in blue ink that reads "Donna Fenton".

Donna Fenton
Director

Cc: Eva Lizarra, Rexland Acres Committee
Leticia Perez, Kern County 5th District Supervisor
Helena Gutierrez, Self Help Enterprises (email)
Greg Fenton, Kern County Public Works Department (email)

Attachment B

Revised Alternate 1 - Rexland Acres Sewer Expansion for Residential, C-2 and M-1 Properties

No.	Name	Address	Telephone No.	Zone	KC Ordance S-136	Extension	EDU	ADF	Peaking Factor	Peak
								SS FLOW (EDUx250)		SS FLOW
1	Pulido's Auto Sound and Body Work	5 East Pacheco Rd.	661-201-0765	C-2	3G15	1.0 + 1.7	2.7	675	1.8	1,215
2	Alexis Barber & Beauty Salon	2600 S. Union Ave.	661-836-1470	C-2	3G13	1.0 + (4x1.0)	5.0	1,250	1.8	2,250
3	Community Liquors	2600 S. Union Ave.	661-834-0118	C-2	3G9	1.0 + (1.5+1.0+1.0)	4.5	1,125	1.8	2,025
4	Ceramic Tile Works	2614 S. Union Ave.	661-746-3089	M-1	3G19	1.0 + 1.0	2.0	500	2.0	1,000
5	Superior Sanitation Service	2620 S. Union Ave.	667-831-3551	M-1	3G19	1.0 + 1.0	2.0	500	2.0	1,000
6	F&E Boots & Leather Repair	2640 S. Union Ave.	661-831-3771	M-1	3G19	1.0 + 1.0	2.0	500	2.0	1,000
7	Torres Feed Pet Supply	2656 S Union Ave.	661-835-1556	M-1	3G9	1.0 + (1.5+1.0+1.0)	4.5	1,125	2.0	2,250
8	Union Auto Plaza	2660 S. Union Ave.	661-834-7083	M-1	3G19	1.0 + 1.0	2.0	500	2.0	1,000
9	Vinny's Bar & Grill	2700 S. Union Ave.	661-321-6041	M-1	Closed		0.0	-	2.0	-
10	Frank & Sons Auto Glass	2710 S. Union Ave.	661-833-6096	M-1	3G15	1.0 + 1.7	2.7	675	2.0	1,350
11	Panaderia La Especial	2760 S. Union Ave.	661-834-8420	C-2	3G19	1.0 + 1.0	2.0	500	1.8	900
12	Ashmores Towing	5300 S. Union Ave.	661-832-2900	C-2	3G19	1.0 + 1.0	2.0	500	1.8	900
13	Veterans of Foreign Wars Post 97	5350 S. Union Ave.	661-834-3656	C-2	3G7	1.0 + (300x0.04)	13.0	3,250	1.8	5,850
14	Bear Mountain Auto Repair	133 Price St.	661-833-6127	C-2	3G15	1.0 + 1.7	2.7	675	1.8	1,215
15	Sam's Auto Body	129 Price St.	661-396-1221	C-2	3G15	1.0 + 1.7	2.7	675	1.8	1,215
16	RPM Race Paint Body Shop	125 Price St.	661-835-3500	C-2	3G15	1.0 + 1.7	2.7	675	1.8	1,215
17	Owner - Salvador Cruz	115 Price St.	Unknown	M-1	Vacant		0.0	-	2.0	-
18	Union Market	5500 S. Union Ave.	661-397-7794	C-2	3G9	1.0 + (1.5+1.0)	3.5	875	1.8	1,575
19	Lancaster Frosty King	5508 S. Union Ave.	661-831-9167	C-2	3G2	1.0 + 4.4	5.4	1,350	1.8	2,430
20	West Coast Motors	5512 S. Union Ave.	661-833-3133	C-2	3G19	1.0 + 1.0	2.0	500	1.8	900
21	JC Body Works	5690 S. Union Ave.	661-398-1819	M-1	3G15	1.0 + 1.7	2.7	675	2.0	1,350
22	Ramos Furnature	5690 S. Union Ave.	661-747-1291	M-1	3G19	1.0 + 1.0	2.0	500	2.0	1,000
23	Naranjo Auto Sales	5648 S. Union Ave.	661-847-9677	M-1	3G19	1.0 + 1.0	2.0	500	2.0	1,000
24	RV Recycling	101 Gary Pl.	805-508-3499	C-2	No Connection		0.0	-	1.8	-
25	Action Plumbing	5690 S. Union Ave. Ste. B	661-397-6757	M-1	3G19	1.0 + 1.0	2.0	500	2.0	1,000
26	Empty Lot with Trucking Parked	5690 S. Union Ave. Ste. C	Unknown	M-1	No Connection		0.0	-	2.0	-
27	Suburban Propane	5700 S. Union Ave.	661-831-4611	M-1	3G19	1.0 + 1.0	2.0	500	2.0	1,000
28	Fairview Baptist Church	113 Fairview Rd.	661-831-3085	C-2	3G17	1.0 + (222x0.018)	5.0	1,250	1.8	2,250
29	AAA Quality Services	AAA Quality Services	661-833-5510	M-1	3G19	1.0 + 1.0	2.0	500	2.0	1,000
30	EOC Migrant Seasonal Head Start	5808 S. Union Ave.	661-835-7642	M-1	3G16	1.0+(60x.031)+(3x0.06)	3.0	750	2.0	1,500
31	J Torres Company	5810 S. Union Ave.	805-832-2635	M-1	3G19	1.0 + 1.0	2.0	500	2.0	1,000
32	Empty Parcel	Unknown	Unknown	C-2	No Connection		0.0	-	1.8	-
33	Sierra Vista Motel	5970 S. Union Ave.	661-831-2934	C-2	3E4	1.0+1.0+(12x0.35)+0.12	6.3	1,575	1.8	2,835
34	Sierra Vista Mini-Storage	5970 S. Union Ave.	661-831-2934	C-2	3G19	1.0 + 1.0	2.0	500	1.8	900
					Subtotal		94.4	23,600		44,125
35	Residential	170 Properties		R-1		ADF = EDU x 250	170.0	42,500	1.8	76,500
					Totals		264.4 EDU	66,100 gpd 46 gpm		120,625 gpd 84 gpm

Attachment B

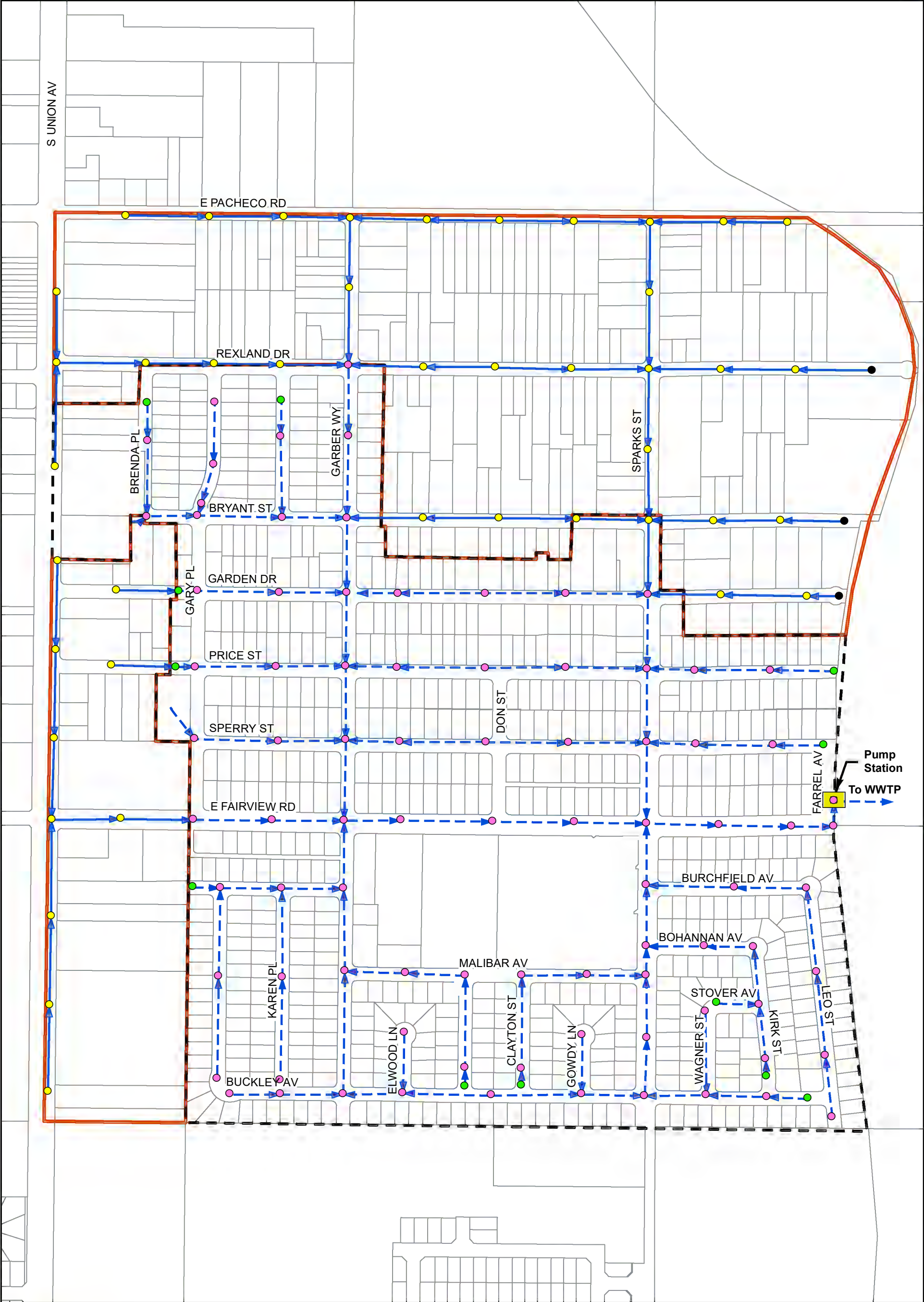
Revised Alternate 2 - Rexland Acres Sewer Expansion for Residential, C-2 and M-1 Properties Requesting Service

No.	Name	Address	Telephone No.	Zone	KC Ordance S-136	Extension	EDU	ADF	Peaking Factor	Peak
								SS FLOW (EDUx250)		SS FLOW
1	Veterans of Foreign Wars Post 97	5350 S. Union Ave.	661-834-3656	C-2	3G7	1.0 + (300x0.04)	13.0	3,250	1.8	5,850
2	Sam's Auto Body	129 Price St.	661-396-1221	C-2	3G15	1.0 + 1.7	2.7	675	1.8	1,215
3	RPM Race Paint Body Shop	125 Price St.	661-835-3500	C-2	3G15	1.0 + 1.7	2.7	675	1.8	1,215
4	Union Market	5500 S. Union Ave.	661-397-7794	C-2	3G9	1.0 + (1.5+1.0)	3.5	875	1.8	1,575
5	J Torres Company	5810 S. Union Ave.	805-832-2635	M-1	3G19	1.0 + 1.0	2.0	500	2.0	1,000
Subtotal							23.9	5,975		10,855
6	Residential	170 Properties		R-1		ADF = EDU x 250	170.0	42,500	1.8	76,500
Totals							193.9 EDU	48,475 gpd		87,355 gpd
								34 gpm		61 gpm

Attachment C

Alternate 1 - Rexland Acres Sewer Expansion - Engineer's Opinion of Probable Construction Costs

ITEM NO.	EST. QTY.	UNIT	BID ITEM DESCRIPTION	UNIT PRICE	SUBTOTAL
1	1	LS	Mobilization, Insurance & Bonds	\$100,000.00	\$100,000.00
2	1	LS	Traffic Control, Detours and Access	\$50,000.00	\$50,000.00
3	1	LS	Dust Control	\$10,000.00	\$10,000.00
4	1	LS	SWPPP	\$10,000.00	\$10,000.00
5	1	LS	Worker Protection and Trench Safety	\$20,000.00	\$20,000.00
6	1	LS	Clearing and Grubbing	\$50,000.00	\$50,000.00
7	1	LS	Finish Roadway	\$20,000.00	\$20,000.00
8	16,140	LF	Furnish and Install 8-inch PVC Sewer Main	\$100.00	\$1,614,000.00
9	620	LF	Furnish and Install 12-inch PVC Sewer Main	\$120.00	\$74,400.00
10	43	EA	Furnish and Install 48-inch Sewer Manhole	\$8,000.00	\$344,000.00
11	3	EA	Furnish and Install 8-inch Sewer Cleanout	\$4,000.00	\$12,000.00
12	170	EA	Furnish and Install 4-inch Sewer Lateral	\$2,000.00	\$340,000.00
13	12	EA	Furnish and Install 6-inch Sewer Lateral	\$2,500.00	\$30,000.00
14	182	EA	Septic Tank Abandonment and Connection	\$5,000.00	\$910,000.00
15	8	EA	Furnish and Install 8-inch Sewer Connection	\$2,000.00	\$16,000.00
16	1	EA	Furnish and Install 12-inch Sewer Connection	\$2,500.00	\$2,500.00
17	8	EA	Furnish and Install Survey Monument Encasement	\$2,500.00	\$20,000.00
18	16,760	LF	Road Resurfacing Sewer Trench inc. Sawcutting	\$65.00	\$1,089,400.00
19	2	EA	Sewer Lift Pump Station Pump Upgrade	\$30,000.00	\$60,000.00
			Sub-Total		\$4,772,300.00
			Contingency (15%)		\$715,845.00
			Total		\$5,488,145.00



EST. 1968

PROVOST & PRITCHARD

CONSULTING GROUP

An Employee Owned Company

N

0200400

Feet

● Existing SSCO

● Existing SSMH

● Proposed SSCO

● Proposed SSMH

--- Existing SS Line

--- Proposed SS Line

--- Original Service Area Boundary

--- Expanded Service Area Boundary

Attachment D

Sewer Collection System

Alternative 1

Rexland Acres Sewer Expansion

Self-Help Enterprises

8/9/2018 : G:\Self Help Enterprises-1875\187517011-Rexland Acres Sewer Expansion\GISMap\Alt 1_parcels and roads.mxd

Appendices

Rexland Acres
Septic Tank Survey Results
2017

Self-Help Enterprises
Helena Gutierrez

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Greywater disposal?.....	Page 11

Introduction:

In 1999, a septic system performance survey documented the southern two thirds of the Rexland Acres community having significant septic system failure problems, potential health hazards and strong community support for a public sewer system. A petition signed by over 60% of the property owners approved the financing and operation of the Rexland Acres Sewer Project owned and operated by the County of Kern. From 2006 thru 2008, a sewer collection system was built serving about 688 properties and over 2,800 people. The northern third of Rexland Acres and several of the commercial properties along Union Avenue were also surveyed in 1999 but were not part of this Project due to lack of property owner support and/or lack of significant septic system failures.

Purpose:

In early February, a community meeting was held at the Rexland Acres Community Center in Fairfax Park, from that meeting a group of volunteers formed a Committee to document septic system performance in Rexland Acres. In March –April of 2017, the Rexland Acres committee and volunteers, under the supervision of Self-Help Enterprises conducted a Septic Tank survey to identify septic system performance, community data and septic system and sewer system preferences.

Methodology:

The Committee received training on the survey by Self-Help Enterprises. Septic survey notices were circulated to each property in the survey area. Self-Help Enterprises provided surveys in Spanish and English as well as survey guidelines. The Committee and Self Help Enterprises conducted a door-to-door septic tank survey that included questions about each resident's septic disposal system. The questions asked about pumping frequency, grey water disposal, number of people living in the household and other issues (see attached survey form). The areas being surveyed were divided into block groups sections 1-6 (including the commercial area along union ave. section 6) See attached map. Each residence was visited up three times. Self- Help Enterprises administered the survey and compiled the data. The main findings of the survey are included below under "Survey Results".

Survey Results:

The Rexland Acres survey area has an average Household size of 4.14 persons per household. This is a higher number of persons per household than nearby City of Bakersfield (3.10 P/HH), Kern County (3.15 P/HH) the State (2.90 P/HH) and the United States (2.58 P/HH). Survey results documented 27 % of all responding systems had pumped their tanks two or more times in the past three years and 27 % once in the past three years. Based on the information obtained residents paid an average of \$450 to pump their septic tank. Thirty three percent of the properties surveyed reported diverting their greywater to their yards. Forty two percent of systems divert all or some of their greywater away from the septic tank. Forty-one percent reported having had issues with their septic tank system. The survey has identified that the majority of the area of Rexland Acres that is currently not connected to sewer would prefer a public sewer system. The results show that out of 139 surveyed residents/property, 85% prefer public sewer to a septic tank system. There are approximately 175 residential properties with approximately 4 vacant lots. There are 23 commercial properties along Union ave. with approximately 2 vacant lots.

Septic Tank Survey Results

Overall – Based on 139 septic tank surveys

Calculations

There are approximately 175 residential connections, including four that are currently vacant. There are 23 commercial connections with approximately 2 vacancies. Out of the 198 residential and commercial properties contacted, we had 139 survey responses, with 52 residences we were unable to contact despite repeat visits. Out of the 23 properties contacted in the commercial area, we received 5 survey responses, 2 refusals and 16 we were unable to contact. Overall, the survey had a 70% response rate. For commercial properties, we had a 22% response rate.

System preference- Which do you prefer?

<i>Total - Based on 88% response rate</i>	<i>Commercial- (Based on 22% response rate)</i>	<i>Residential</i>
1. Public Sewer $118/123 = .95 = 96\%$	$5/5 = 100\%$	$113/118 = 96\%$
2. Septic Tank $4/123 = 0.03 = 3\%$	$0/5 = 0\%$	$5/118 = 4\%$
3. Both $1/123 = .008 = 1\%$		$1/123 = 1\%$

Has the septic disposal system ever given you any problems?

<i>Total - Based on 92% response rate</i>	<i>Commercial</i>	<i>Residential</i>
1. Yes $52/128 = .41 = 41\%$	$1/5 = 20\%$	$51/123 = 41\%$
2. No $76/128 = .59 = 59\%$	$4/5 = 80\%$	$72/123 = 59\%$

Of the properties that have experienced septic system issues, what specific issues were they?

<i>Total - Based on 29% response rate</i>	<i>Commercial</i>	<i>Residential</i>
1. Clog $4/40 = .01 = 10\%$		$4/39 = 10\%$
2. Backed up/overflow $26/40 = .65 = 65\%$	$1/1 = 100\%$	$25/39 = 64\%$
3. Odor $1/40 = .025 = 2\%$		$1/39 = 3\%$

- | | |
|---|------------------|
| 4. Multiple issues 5/40= .01 = 13% | 5/39= 13% |
| 5. Collapse 2/40 = .05= 5% | 2/39 = 5% |
| 6. Broken 2/40= .05= 5% | 2/39= 5% |

In the last 3 years how many times has your septic tank been pumped?

<i>Total - Based on 56% response rate</i>	<i>Commercial</i>	<i>Residential</i>
1. 0 times 6/80 = 0.075 = 8%	2/5= 40%	4/75= 5%
2. 1 time - 37/80= .46 = 46%	1/5= 20%	36/75=48%
3. 2 or more times- 37/80= .46= 46%	2/5= 40%	35/75=47%

Where does your septic water go?

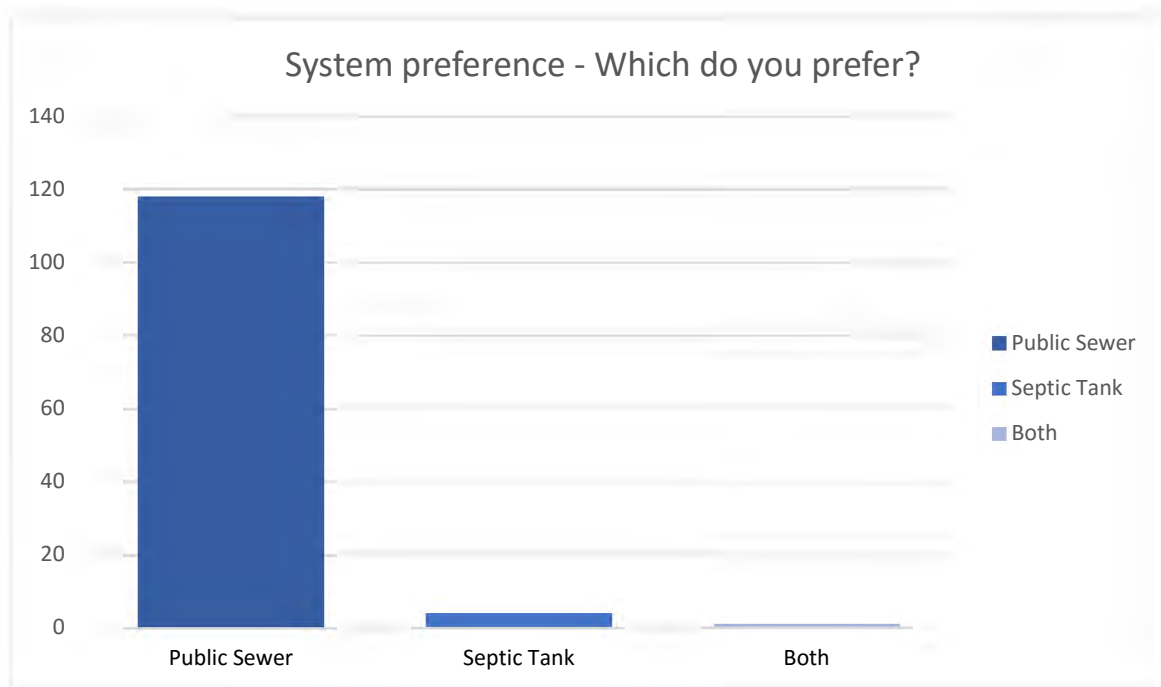
<i>Total - Based on 93% response rate</i>	<i>Commercial</i>	<i>Residential</i>
1. Don't know 22/129= .17= 17%	3/5=60%	19 /124=15%
2. Leachline 64/129= .49= 50%		64/124= 52%
3. Seepage pit/both 43/129 .31= 33%	2/5=40%	41/124= 33 %

Greywater disposal?

<i>Total - Based on a 92% response rate</i>	<i>Commercial</i>	<i>Residential</i>
1. Both (Septic Tank and Yard)11/128= .085= 9%		11/123=9%
2. Septic Tank 74/128= .57= 58%	5/5=100%	69/123= 56%
3. Yard 42/128= 0.32 = 33%		42/123 = 34%
4. Seepage pit 1/128= .078= 0%		1/123=1%

System preference - Which do you, prefer?

Answer	#	%
Public Sewer	118	96 %
Septic Tank	4	3 %
Both	1	1 %
Total response	123	100%



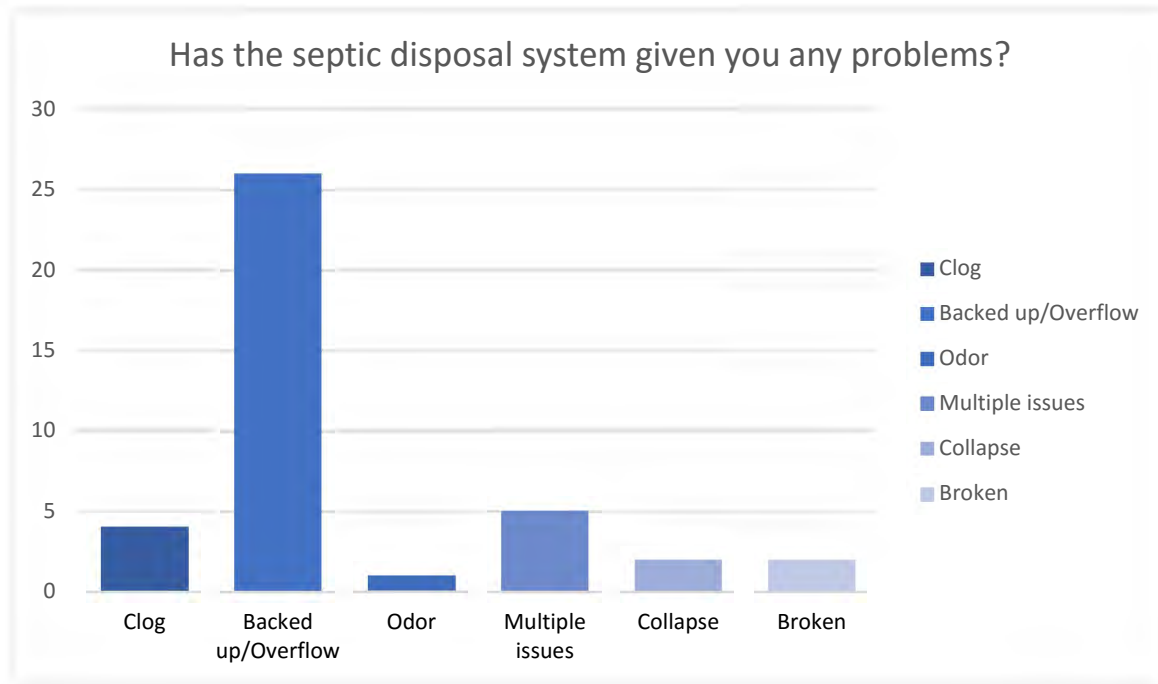
Has the septic disposal system ever given you any problems?

Answer	#	%
Yes	52	41 %
No	76	59 %
Total	128	100 %



Of the properties that have experienced issues, what specific issues were they?

Answer	#	%
Clog	4	10 %
Backed up/Overflow	26	65 %
Odor	1	2 %
Multiple issues	5	13 %
Collapse	2	5 %
Broken	2	5 %
Total	40	100 %



In the last 3 years how many times has your septic tank been pumped?

Answer	#	%
0 times	6	8 %
1 time	37	46 %
2 or more times	37	46 %
Total	80	100%



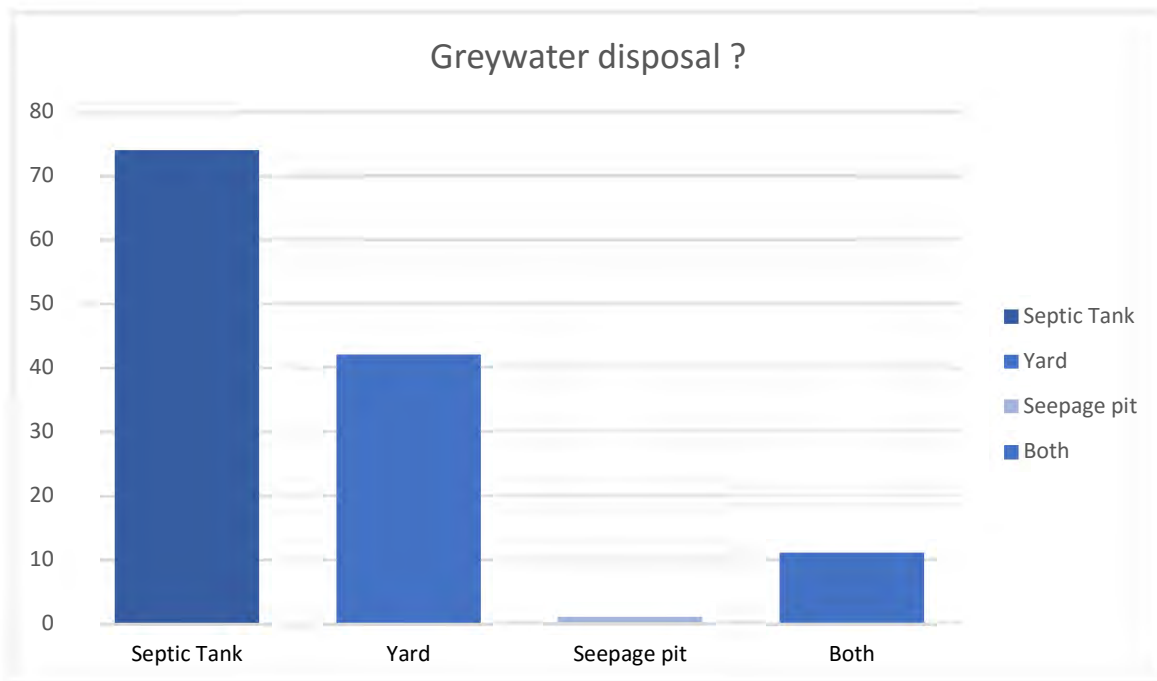
Where does your septic tank water go?

Answer	#	%
Leach line	64	50 %
Seepage pit/both	43	33 %
Don't know	22	17 %
Total	129	100 %



Greywater disposal?

Answer	#	%
Septic tank	74	58%
Yard	42	33%
Seepage pit	1	0 %
Both (Septic tank and yard)	11	9 %
Total	128	100%



Residential	# of units
Surveyed	139
Not home/No response	32
Vacant lots	4
Total	175
Average # of persons per household	4.14
Total permanent population	Approximately 725

Commercial	# of units
Surveyed	5
Couldn't reach/No response	16
Vacant lots	2
Total Parcels/Lots	23

Rexland Acres

SURVEY OF SEPTIC TANK SYSTEM PERFORMANCE

Section: _____

1.) Name (optional): _____ 2.) Street Address: _____

3.) Number of people in house? _____ # of bathrooms? _____

4.) How many people in the house work? _____

5.) Do you: own this house? ☐ rent? ☐ # of years living @ this house? _____

6.) Where does the septic tank water go to?

Leach line ☐ Seepage pit/dry well ☐ Both ☐ Don't know ☐

of homes served by system? _____

7.) Has the septic disposal system ever given you any problems? Yes ☐ No ☐

If yes, please describe: _____

8.) How many times was the septic tank pumped in the last three years? _____ Average Cost? _____

Pumping dates? _____ Receipts? (check mark) Yes ☐ No ☐

Name(s) of Pumping service(s) used: _____

9.) Where does your greywater (wash, sink &/or laundry water) go to?

Septic tank ☐ Yard ☐ Other: _____

10.) Have the leach fields or seepage pits ever been repaired or replaced?

Yes ☐ No ☐

If yes: Why? _____ When? _____

What was done? _____ Cost? \$ _____

Have you had problems with the septic system since this work? Yes ☐ No ☐

11.) Which would you prefer?

public sewers ☐ septic tank system ☐

Surveyor: _____ Date: _____

Rexland Acres

ENCUESTA DEL FUNCIONAMIENTO DE SISTEMAS DE TANQUES SEPTICOS

Sección: _____

1.) Nombre (opcional) _____ 2.) Domicilio: _____

3.) ¿Número de personas en la casa? _____ Numero de Baños? _____

4.) ¿Cuántas personas en la casa trabajan? _____

5.) Usted: Es dueño de casa? ☐ ¿Renta? ☐ # años viviendo en esta casa? _____

6.) ¿A dónde se va el agua del tanque séptico?

Línea de filtración ☐ Poso de filtración/Poso seco ☐ los dos ☐ No se ☐

de hogares servidos por el sistema? _____

7.) ¿Ha tenido problemas con el servicio de sistema de tanque séptico? (marque uno) Sí ☐ No ☐

Si marco, "Si", por favor explique _____

8.) ¿Cuántas veces has vaciado el tanque séptico en los últimos tres años? _____

Costos promedios _____

¿Fechas de limpiezas? _____ Recibos? Sí ☐ No ☐

Nombre(s) de la compañía que limpio: _____

9.) A donde se va su agua gris (Lababo, cocina y/o agua de lavar)? (marque o escriba)

Tanque séptico ☐ yarda ☐ otro: _____

10.) ¿Ha sido reparada o reemplazada la Línea de filtración o el Poso de filtración alguna vez?

Sí ☐ No ☐

Si "Si": Por qué? _____ Cuando? _____

¿Que fue hecho? _____ Cuánto cuesta? \$ _____

¿Ha tenido problemas con el sistema después que se hizo este trabajo? Sí ☐ No ☐

11.) ¿Cuáles servicios prefiere? (Circule uno) drenaje publico sistemas de tanques sépticos

Surveyor: _____

Date: _____

PLT DATE: 4-20-03
 JOB NO.: 02072
 FILE NAME: REXLAND
 SCALE: NO SCALE
 SHEET NO.: 2 OF 2

DRAWING
**REXLAND ACRES
 WASTEWATER SYSTEM**
 KEY MAP


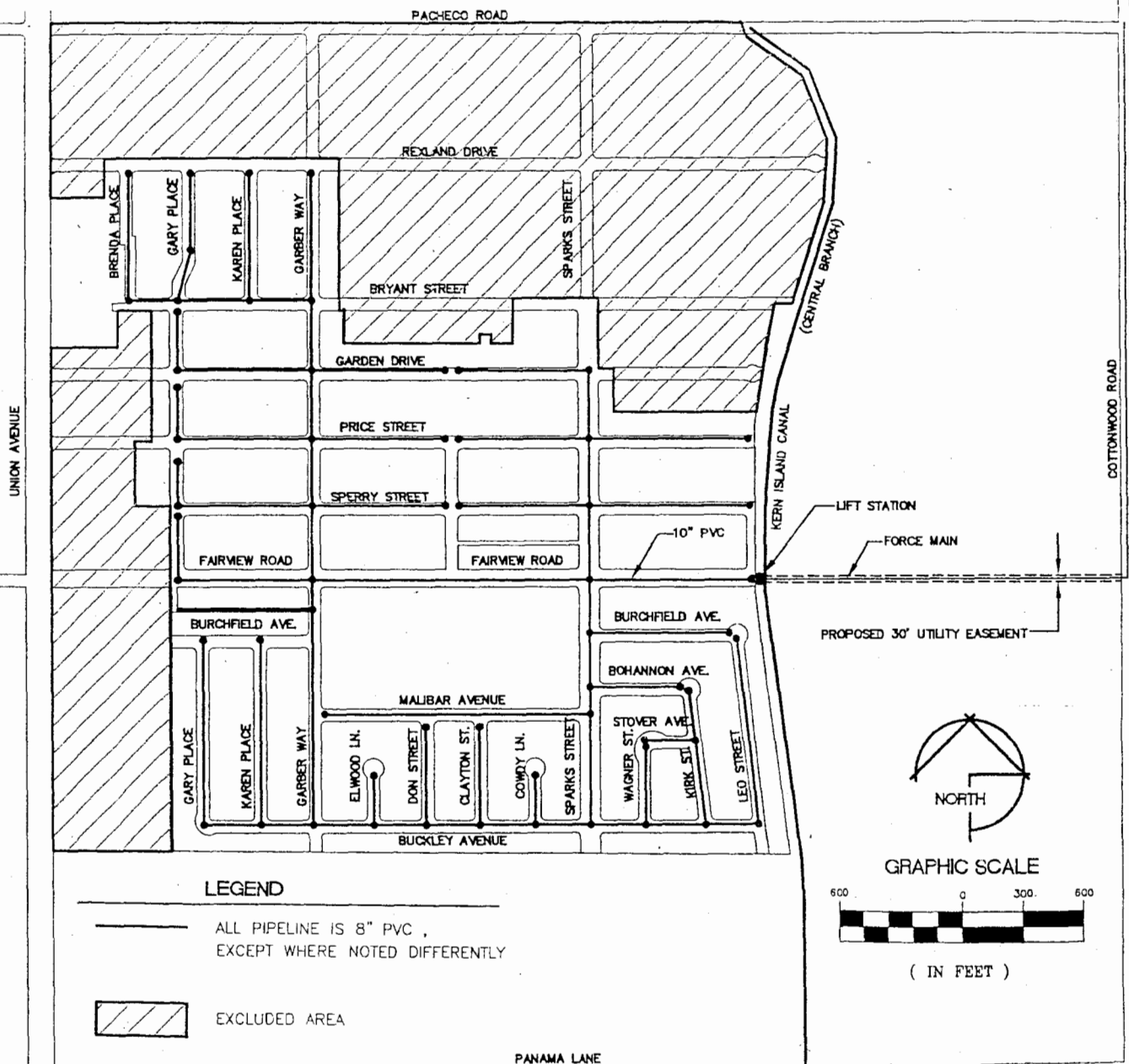
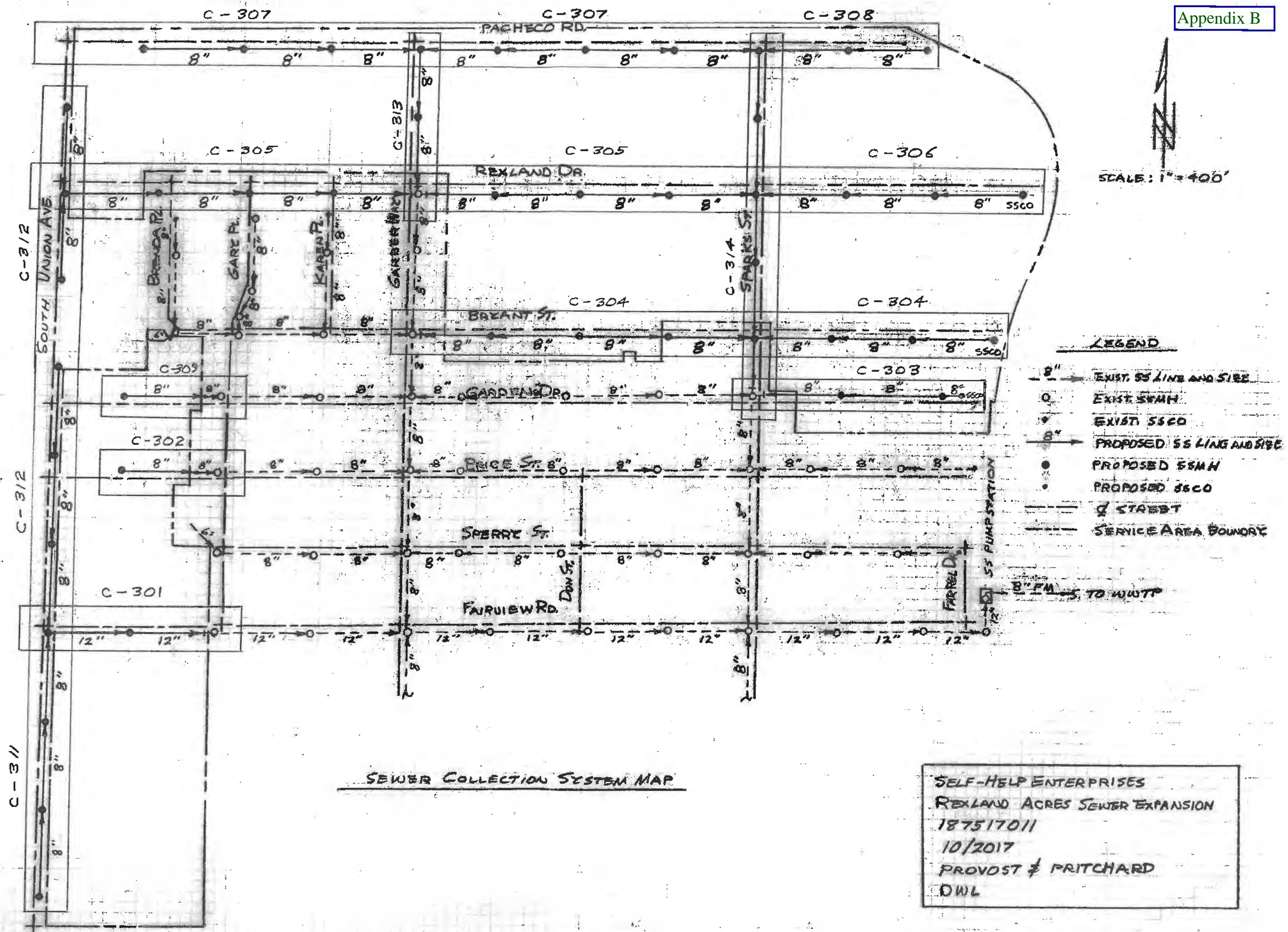
PREPARED BY:

Quad Knopf
 5000 MID AVENUE
 SUITE 410
 BAKERSFIELD, CA 93309
 TEL: (805) 438-8300
 FAX: (805) 438-8311
 WWW.QUADKNOPF.COM
 DRW BY: CHN BY:

FIGURE 2 COLLECTION SYSTEM LAYOUT KSA CONNECTION





374

370

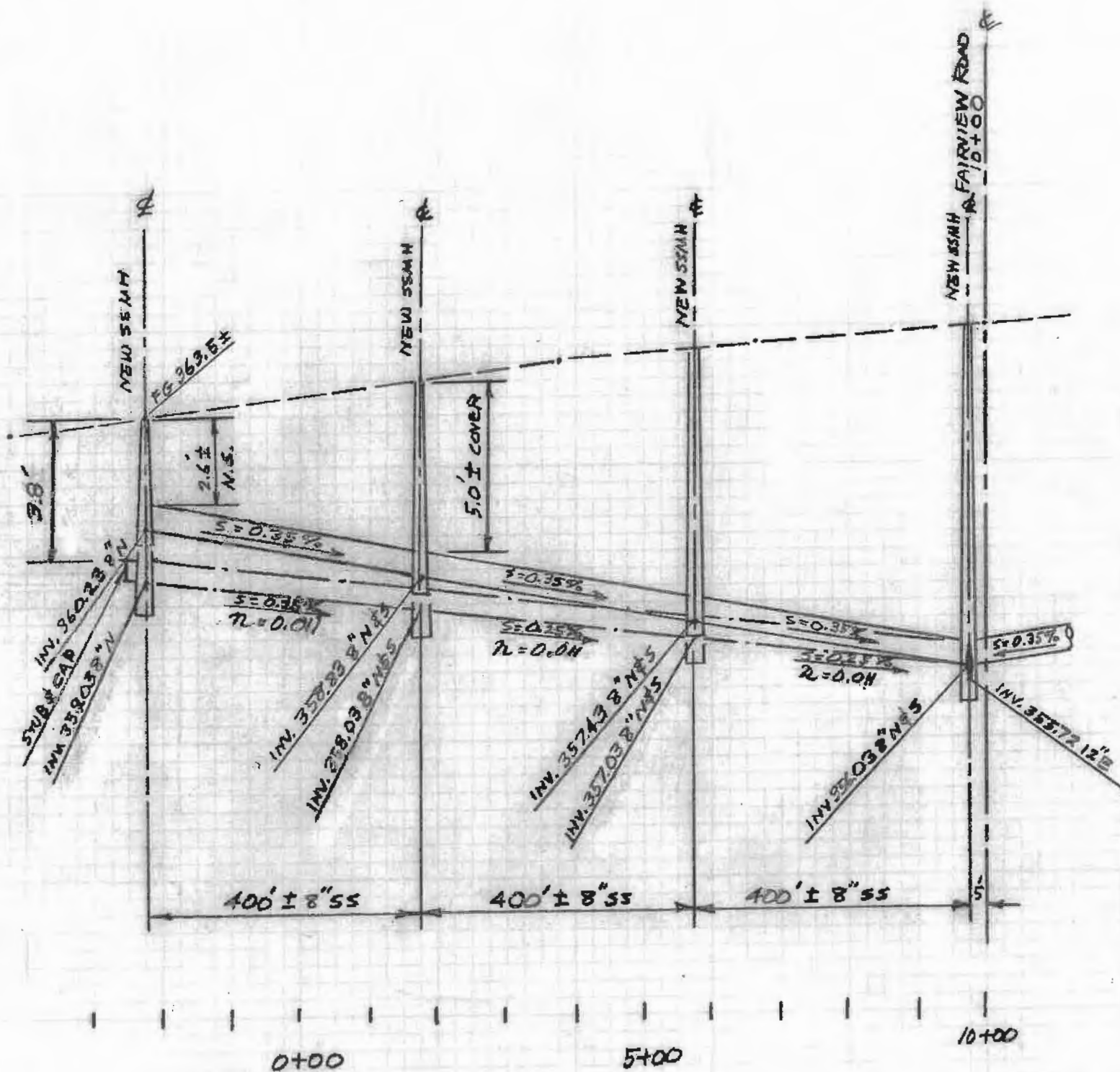
366

362

358

354

350



UNION AVE.
(LOOKING WEST)
C-311

PROFILE
SCALE: HORIZ. 1" = 200'
VERT. 1" = 4'

374

370

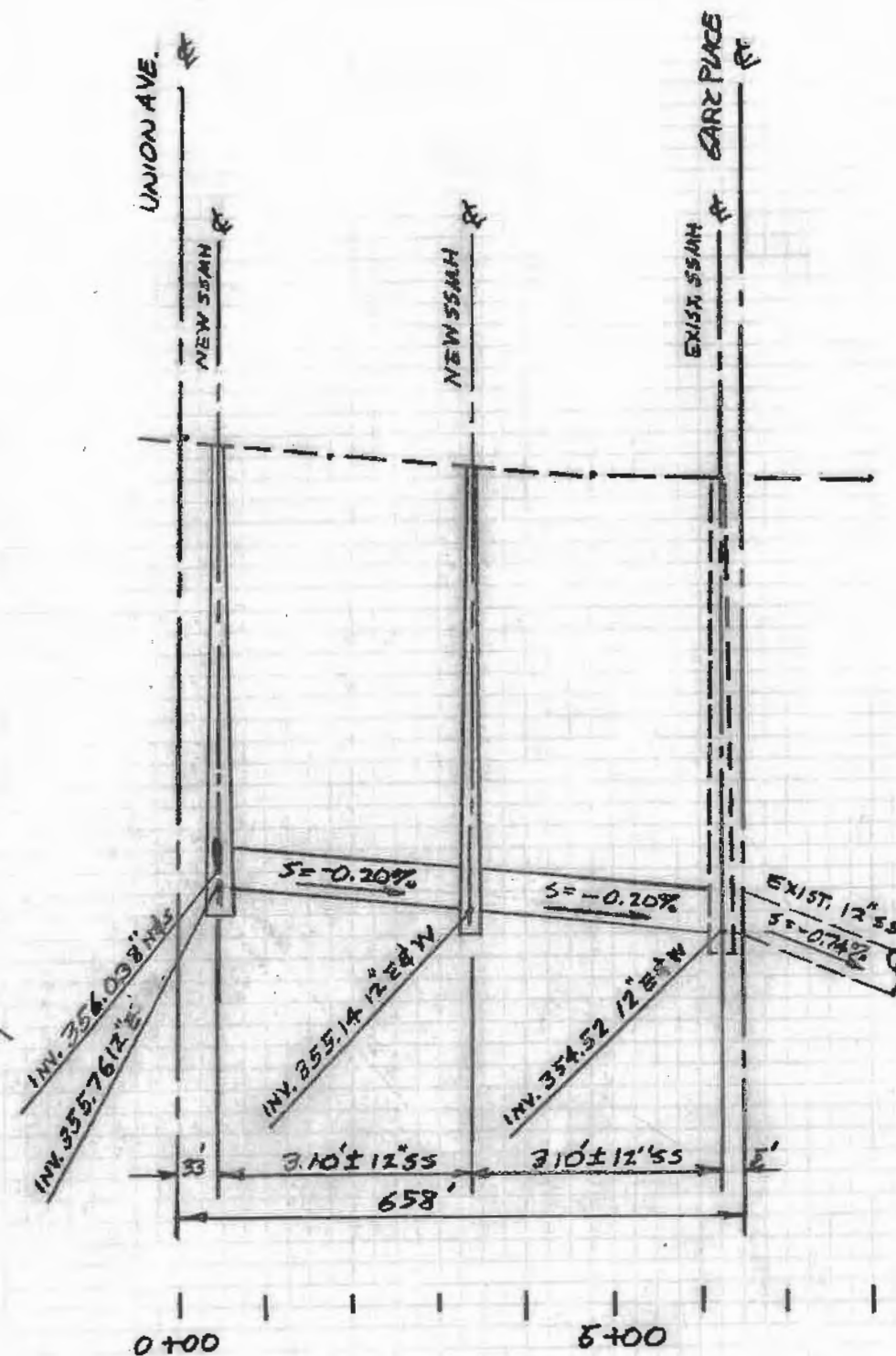
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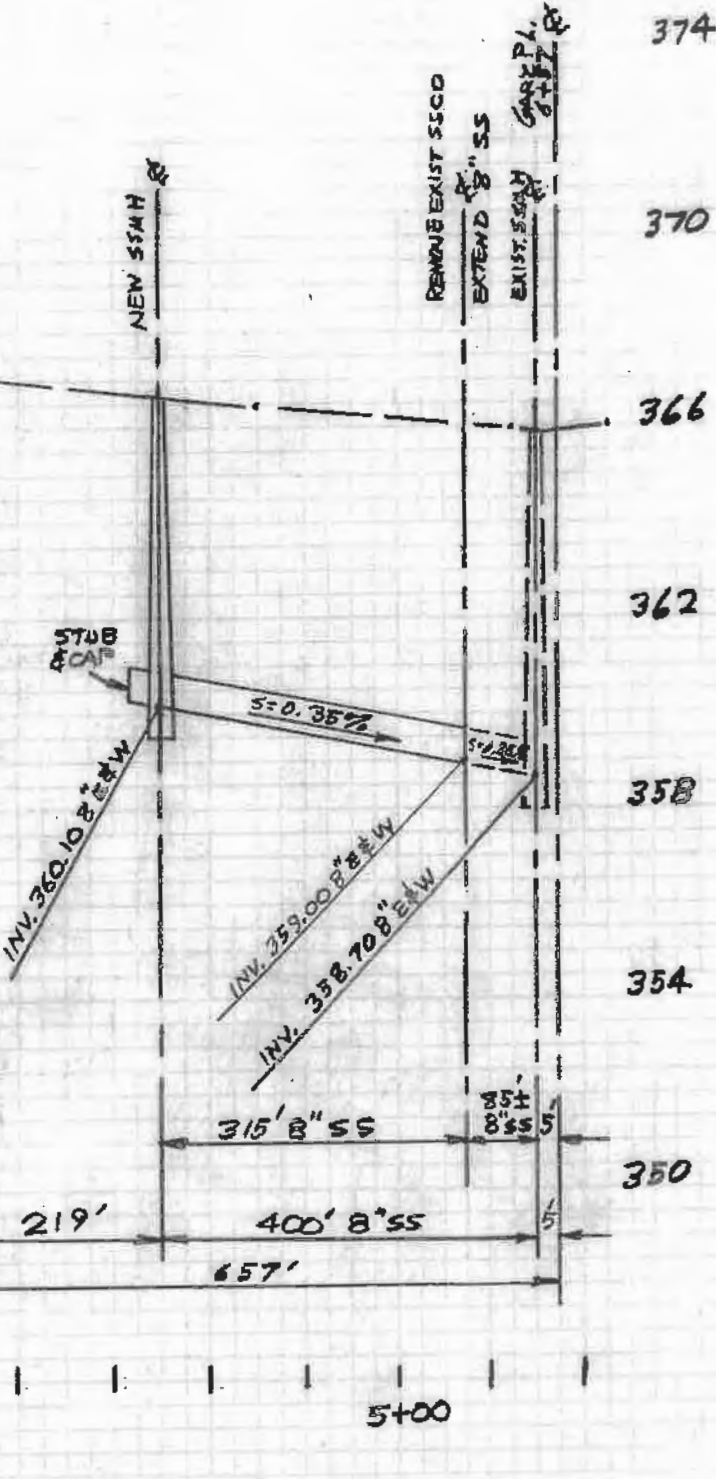
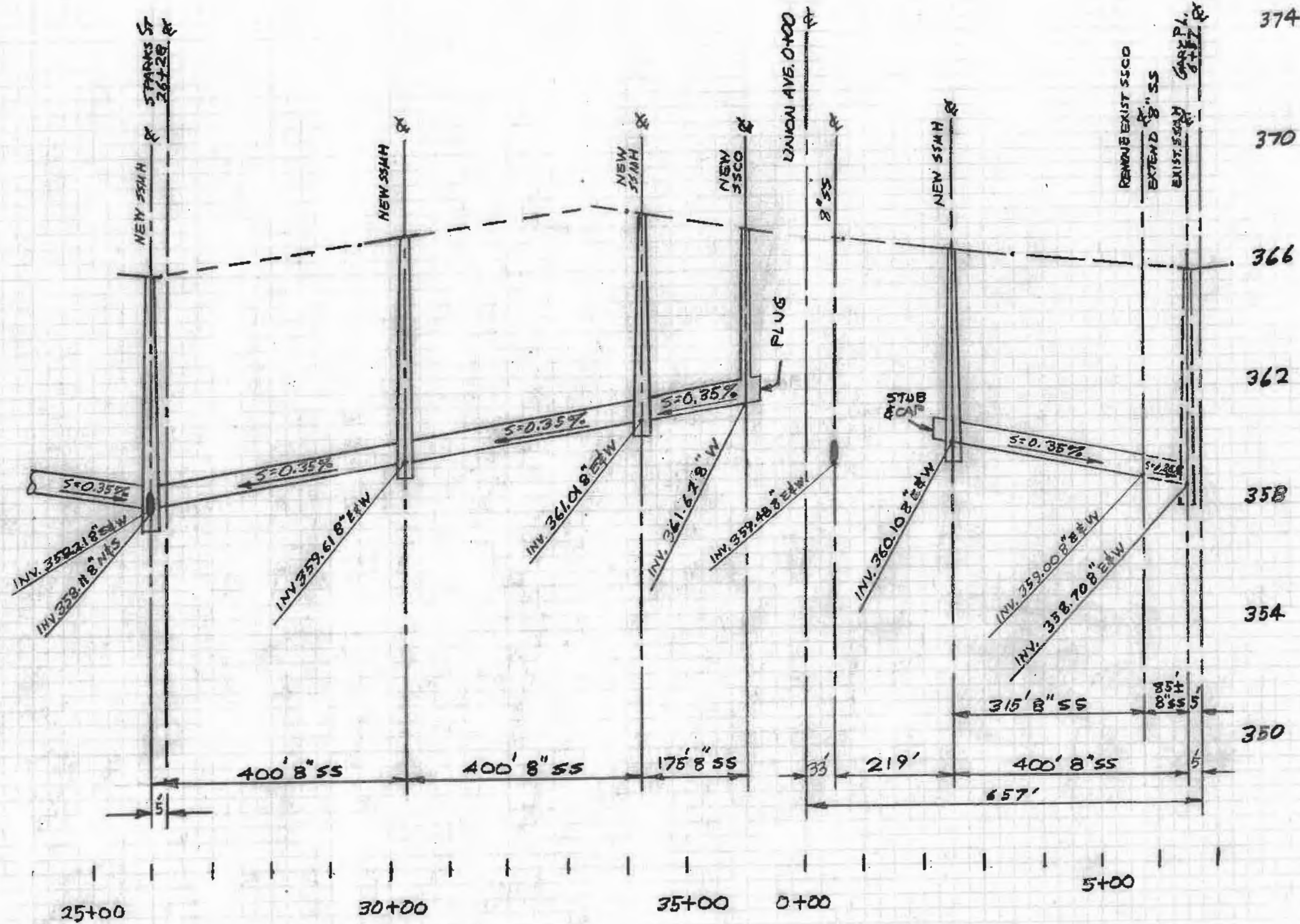
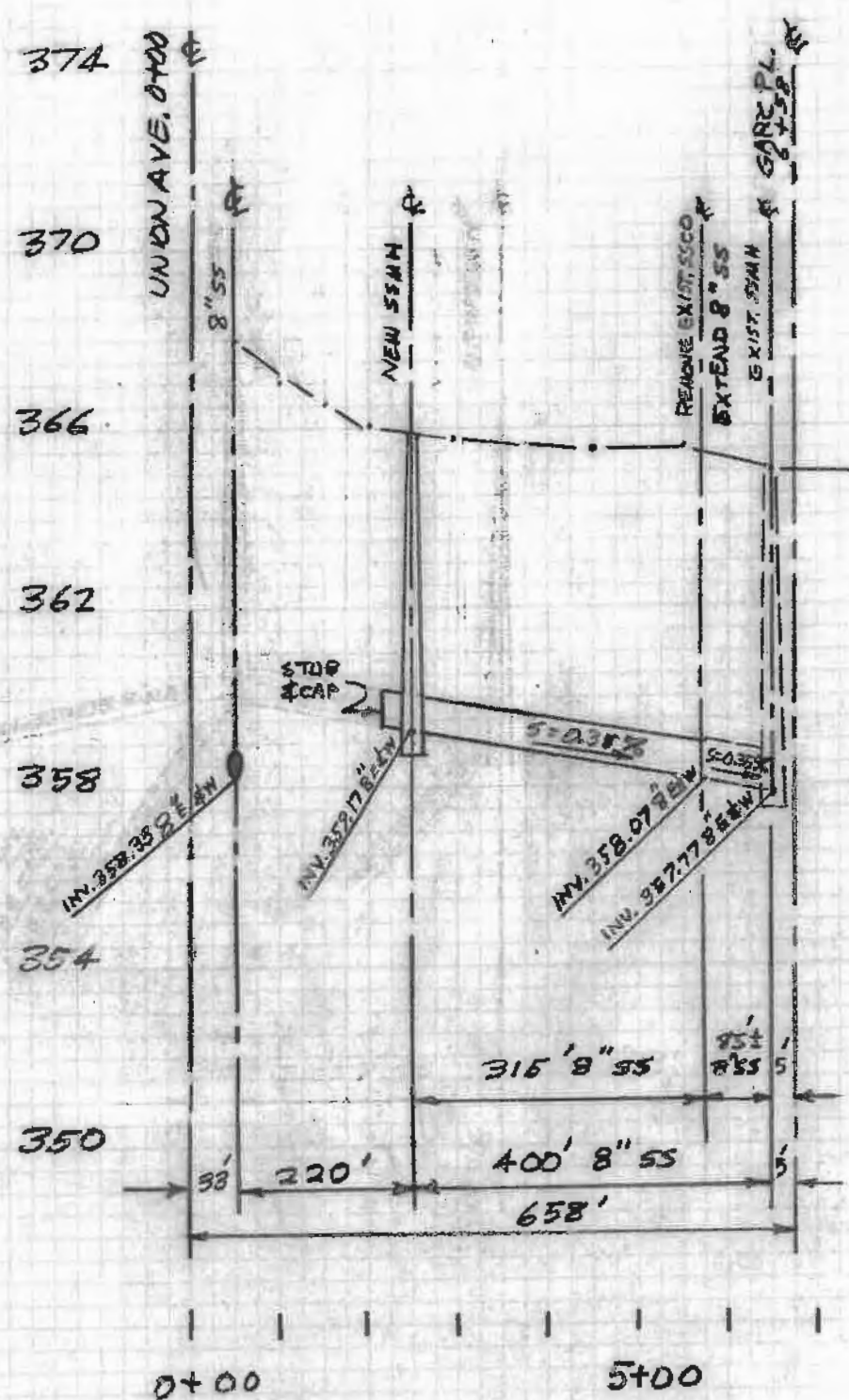
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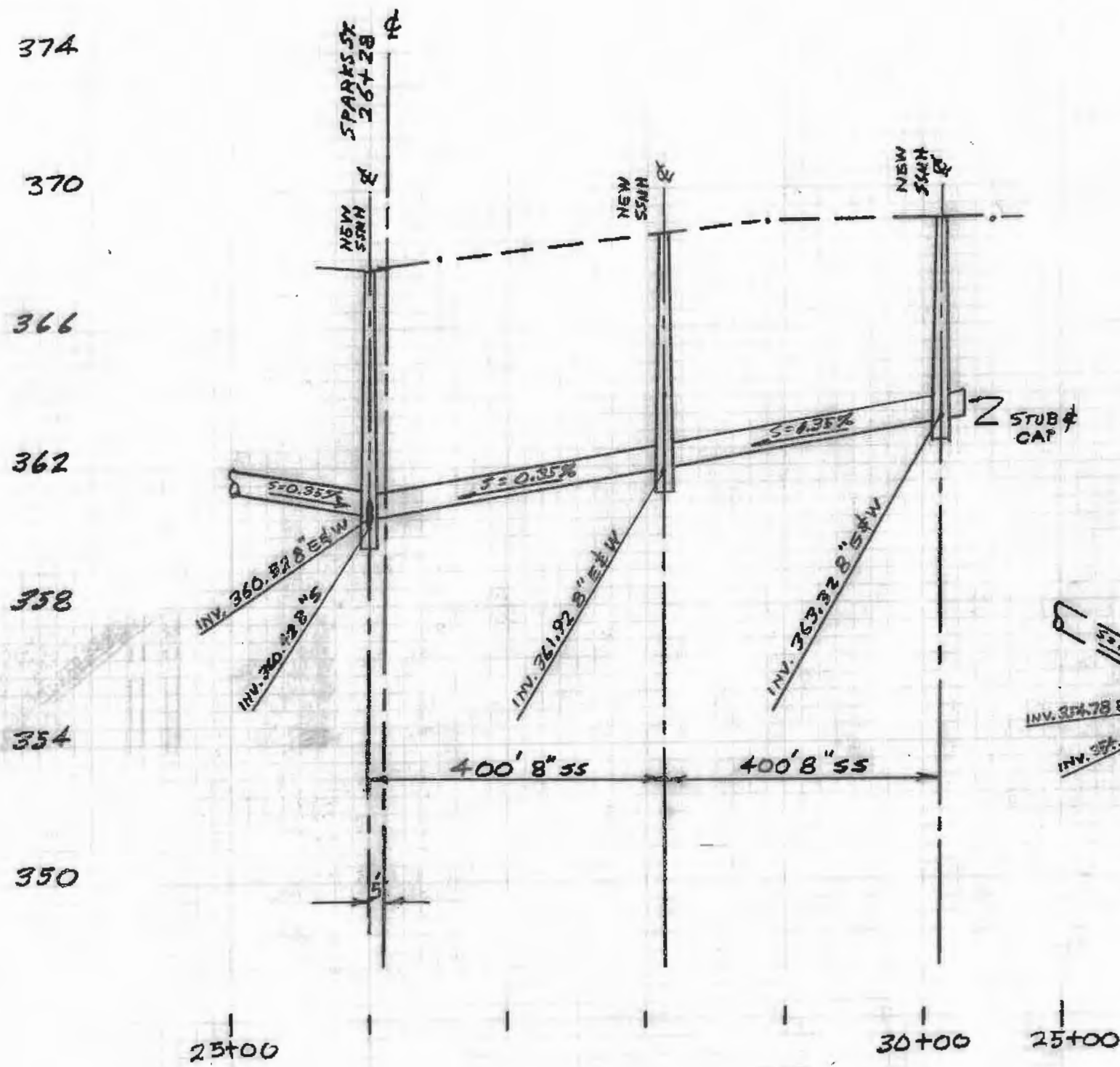
FAIRVIEW ROAD
(LOOKING NORTH)
C-301

C-301 & C-311



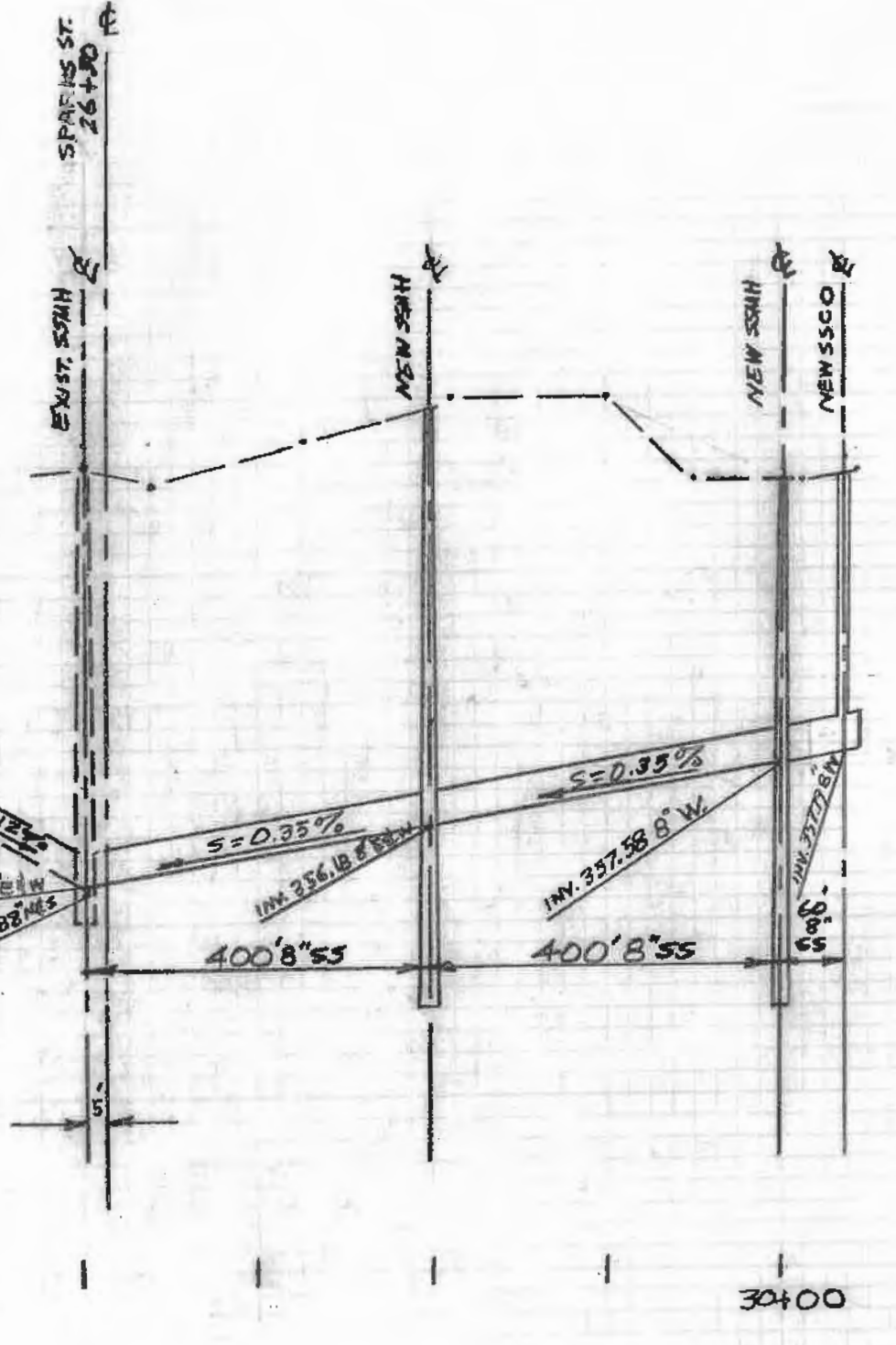
PROFILE
SCALE: HORIZ. 1" = 200'
VERT. 1" = 4'

C-302 & C-306 & C-309



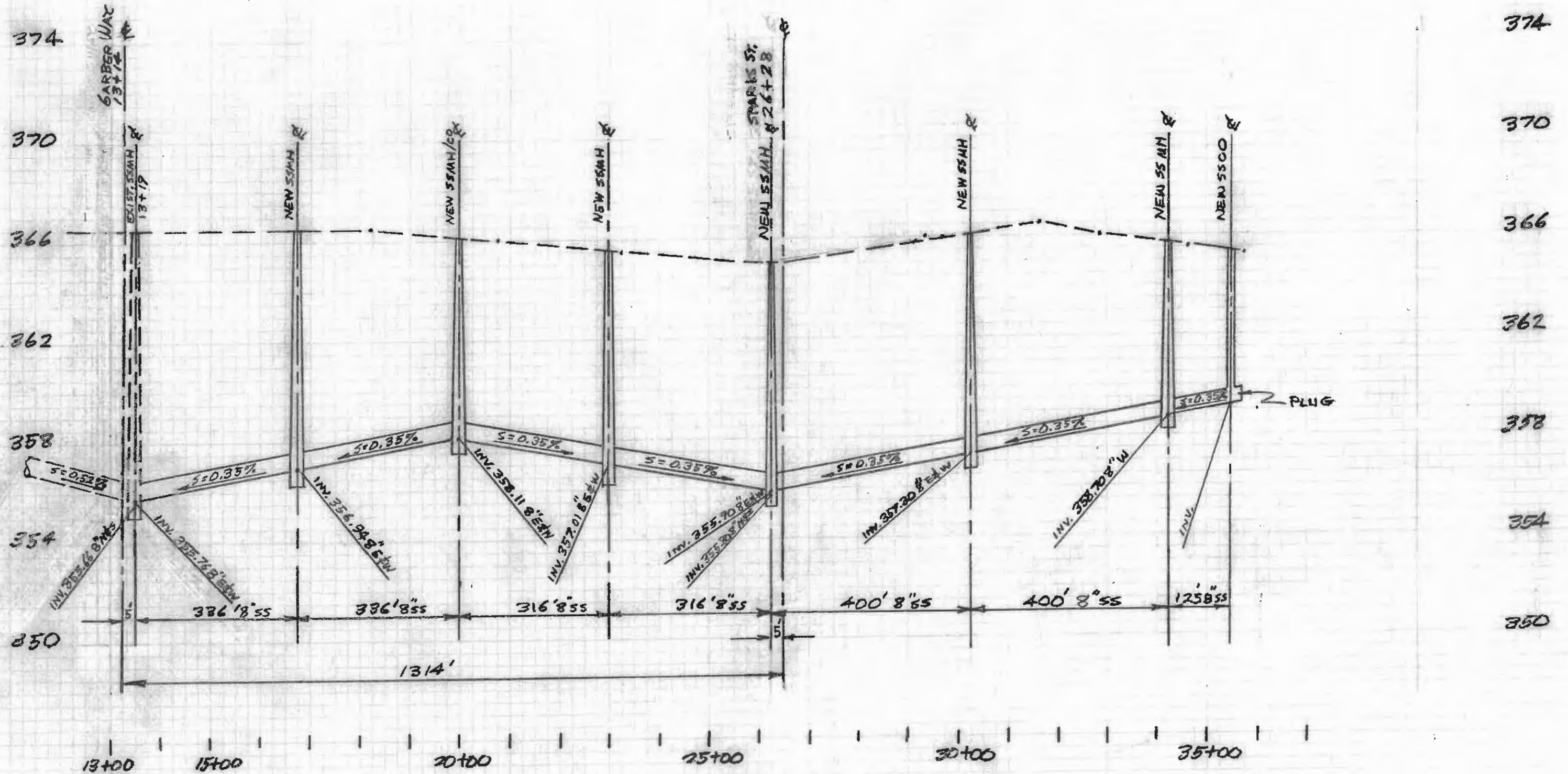
PACHECO RD.
(LOOKING NORTH)
C-308

PROFILE
SCALE: HORIZ. 1" = 200'
VERT. 1" = 4'



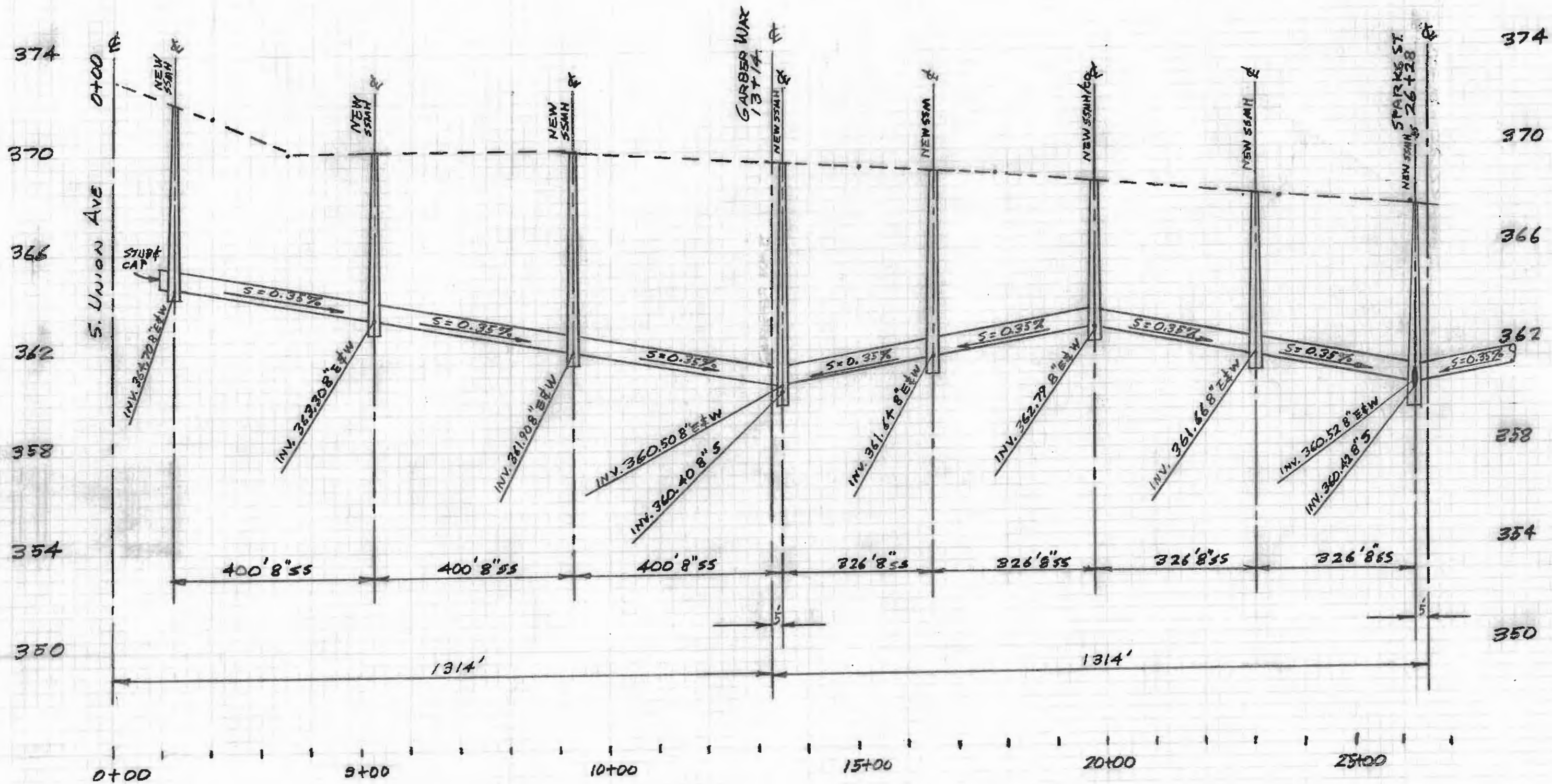
GARDEN DR.
(LOOKING NORTH)
C-303

C-303 & C-308



BRYANT ST.
PROFILE
 (LOOKING NORTH)
 SCALE: HORIZ. 1" = 200'
 VERT. 1" = 4'

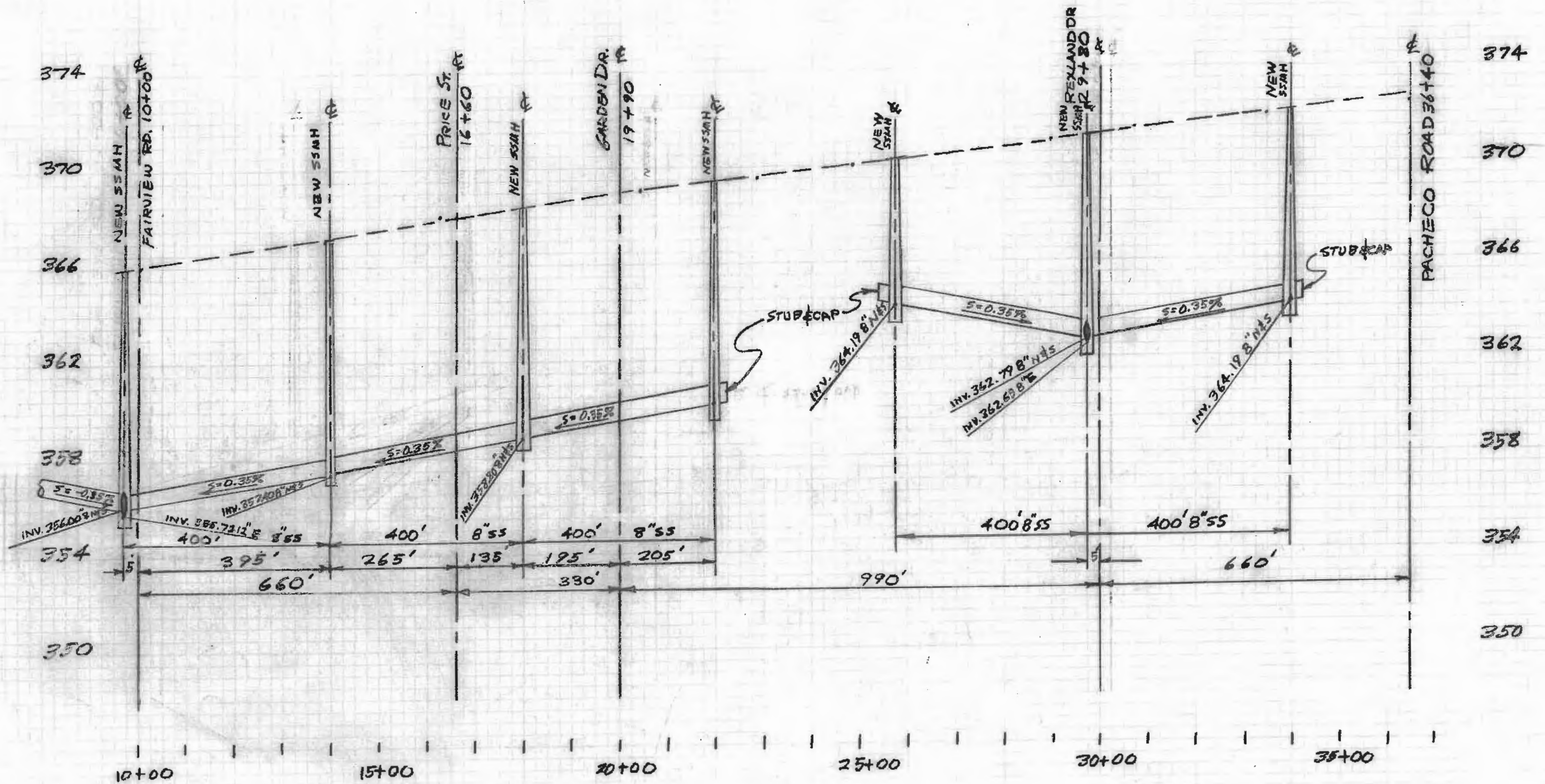
C-304



PACHECO RD.
(LOOKING NORTH)
PROFILE

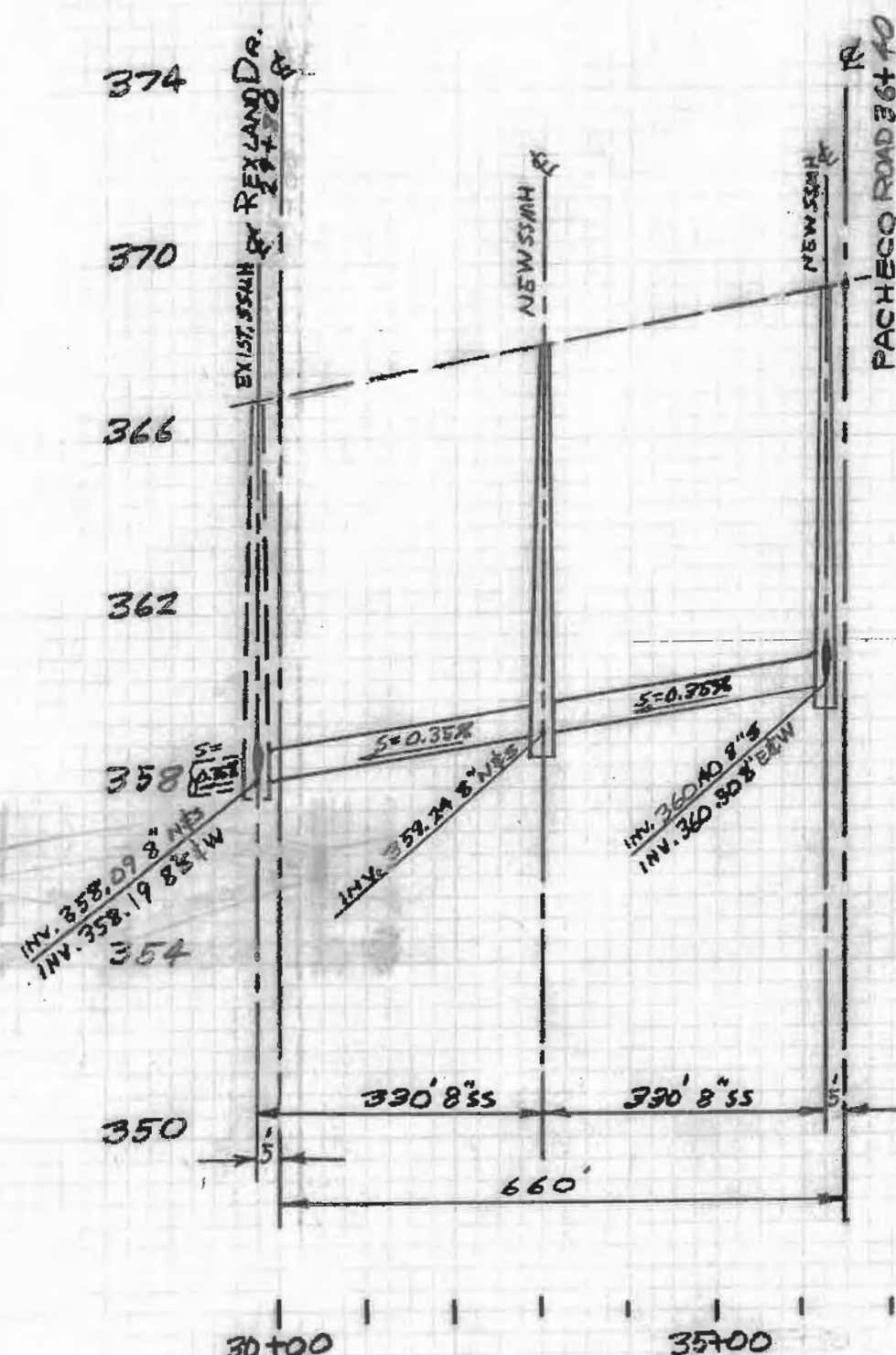
SCALE: HORIZ. 1" = 200'
VERT. 1" = 4'

C-307

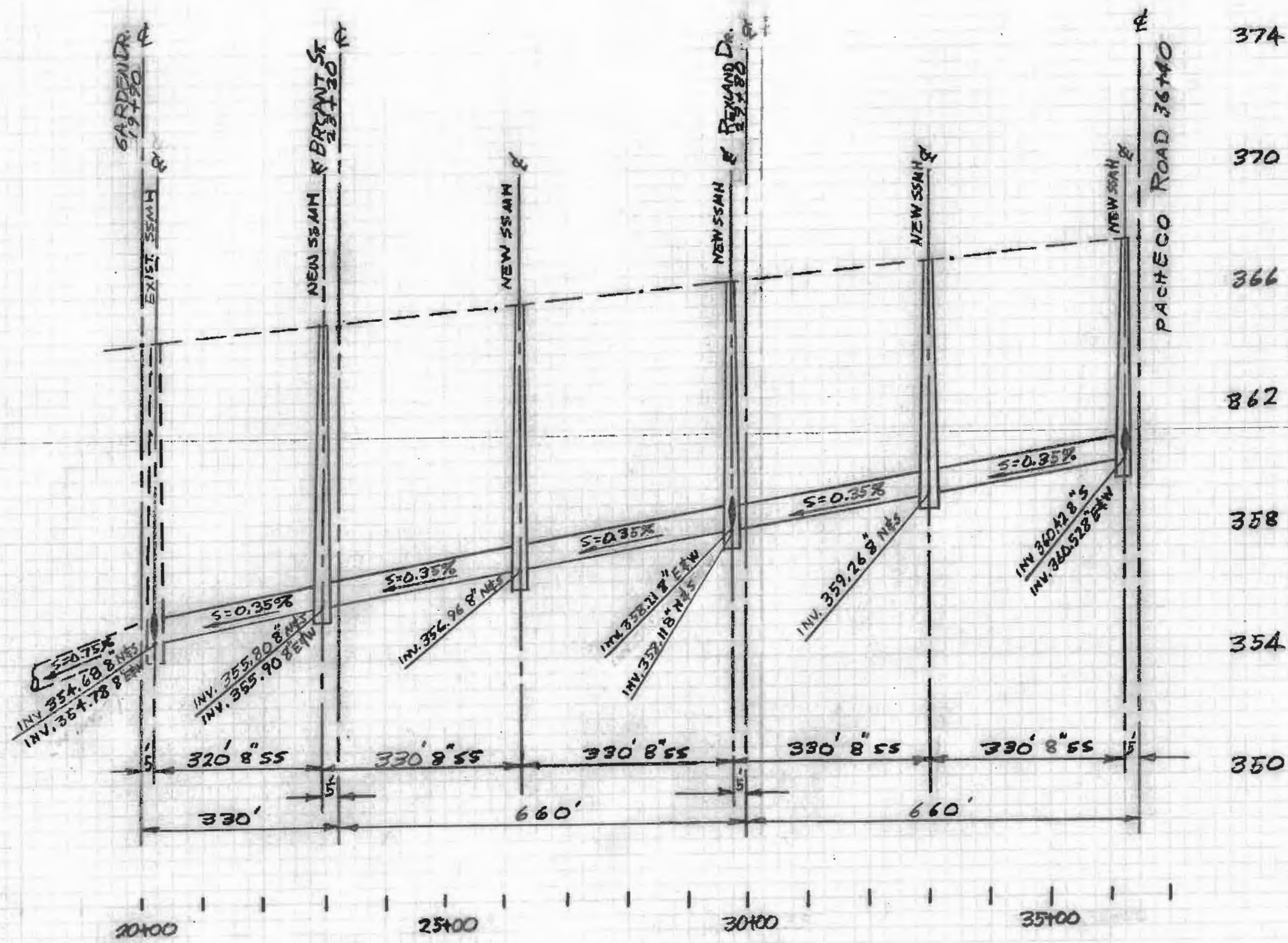


UNION AVE.
(LOOKING WEST)
PROFILE
SCALE: HORIZ. 1" = 200'
VERT. 1" = 4'

C-312



GARBER WAY
(LOOKING WEST)
C-313



SPARKS ST.
(LOOKING WEST)
C-314

PROFILES
SCALE: HORIZ. 1" = 200'
VERT. 1" = 4'

C-313 & C-314

COPIES PROVIDED TO:

Reinforced Binder
6/21/05 Brk
 KSA-LEG

ORDINANCE NO. S-136

**AN ORDINANCE OF THE KERN SANITATION
 AUTHORITY ESTABLISHING CHARGES FOR SEWER
 SERVICE AND PROVIDING PROCEDURES AND
 PENALTIES FOR ITS ENFORCEMENT**

The following Ordinance, consisting of eleven (11) sections, was duly and regularly passed and adopted by the Board of Directors of Kern Sanitation Authority of the County of Kern, State of California, at a regular meeting of the Board of Directors held on the 21st day of June, 2005, by the following vote, to wit:

AYES: McQuiston, Maben, Patrick, Watson, Rubio

NOES: None

ABSENT: None

Rae Watson

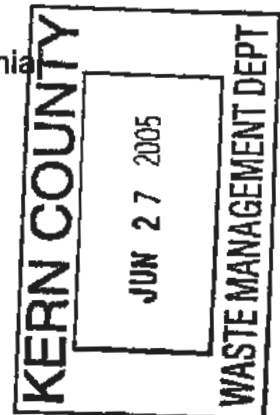
Chairman, Board of Directors
 Kern Sanitation Authority
 County of Kern, State of California

(SEAL)

ATTEST:

DENISE PENNELL
 Clerk of the Board of Directors
 Kern Sanitation Authority

Judy A. Pennell
 Deputy Clerk



**THE BOARD OF DIRECTORS OF KERN SANITATION AUTHORITY, COUNTY OF KERN,
 STATE OF CALIFORNIA, DOES ORDAIN AS FOLLOWS:**

SECTION 1. This Ordinance shall take effect and be in full force on and after the 21st day of July, 2005.

SECTION 2. DEFINITIONS.

(a) **DISTRICT** shall mean the Kern Sanitation Authority.

(b) The term **BOARD** as used herein shall mean the Board of Directors of the Kern Sanitation Authority.

(c) **SEWER SERVICE CHARGES** means fees, tolls, rates, rentals, or other charges for services and facilities furnished by District in connection with its sanitation or sewerage system either within or without the District's territorial limits.

SECTION 3. DISTRICT SERVICE CHARGE SCHEDULE.

(a) Established hereby shall be a sewer service charge schedule that relates charges to benefits received from sewer use. All charges shall be proportionally related to the sewer use made by an average single family dwelling, with that use constituting 1.00 Equivalent Single Family Dwelling (ESFD) and all other uses being related thereto in terms of such ESFD and fractions thereof. Except where specifically indicated herein, no sewer service charge shall be less than 1.00 ESFD.

(b) The sewer use made by an average single family dwelling shall be defined hereby as the discharge of Normal Domestic Sewage in a quantity of 280 gallons per day containing an average of 180 mg/l Suspended Solids and 180 mg/l Biochemical Oxygen Demand (BOD) within a range of 135 mg/l to 225 mg/l for each, 10 ml/l Settleable Solids, Electrical Conductivity of 700 μ mhos and a pH of 7.2. The average single family dwelling shall be considered to constitute 2.8 persons with an average sewage discharge of 100 gallons per capita per day.

(c) Normal Domestic Sewage shall be considered, both in quantity and quality, to be that sewage discharge resulting from normal day-to-day living and activities of a family unit, containing no water or waste from commercial, industrial or other such activities.

(d) The annual sewer service charge shall be \$130.00 per 1.00 Equivalent Single Family Dwelling (ESFD).

(e) SCHEDULE OF CHARGES FOR RESIDENTIAL SEWER USE.

1. 1.00 ESFD per living unit for Single Family Dwellings and Duplexes. The District may charge 0.60 ESFD for the second unit of a two-living units where it is obvious upon inspection by the District that said second unit is either a guest home, rather than a permanent residence, or a rental unit intended for use by one person only.

2. 0.90 ESFD per living unit for Triplexes, and for condominiums with different owners for each living unit.

3. 1.00 ESFD for the first living unit and 0.80 ESFD for each living unit thereafter for multiple unit dwellings of more than three living units, with that same charge to apply to mobile home parks where all units have the same owner.

4. 1.00 ESFD for the first unit and 0.35 ESFD for each unit thereafter for motels, hotels and rooming houses, plus 0.06 ESFD per employee.

5. 0.33 ESFD per single bed for Rest Homes, Sanitariums and Convalescent Hospitals without significant medical facilities. Additionally, 0.06 ESFD shall be charged for each employee.

6. 0.60 ESFD per living unit for Retirement Homes where said living units constitute the equivalent of apartment units, whether or not there are central food

service facilities. Additionally, 1.00 ESFD shall be charged per unit for resident employees and 0.06 ESFD for each non-resident employee.

(f) COMMERCIAL AND INDUSTRIAL SEWER USERS--CHARGE FOR EMPLOYEES.

1. 1.00 ESFD for up to 14 employees, and 0.50 ESFD per each seven (7) employees, or fraction, thereafter.

2. The above charge for employees notwithstanding, only 0.03 ESFD shall be charged for each employee whose normal duty assignment in the facility is less than four (4) hours per day.

(g) COMMERCIAL, INDUSTRIAL AND MISCELLANEOUS USERS--SURCHARGES. Sewer service surcharges shall apply to all commercial and industrial sewer users with sewage discharges resulting from other than the normal living activities of employees. Said surcharges shall be calculated separately and then combined with the charge for employees, except where the surcharge is stated as a percent; in which case, said percent shall be applied to the total of all other charges, including the charge for employees.

1. RESTAURANTS--0.11 ESFD per seat, with Pizza Parlors and Fast Food establishments that are not essentially Drive-In or Take-Out restaurants to be included in this classification.

2. DRIVE-IN or TAKE-OUT RESTAURANTS--4.40 ESFD where the total sewage discharge is estimated by the District to be equivalent to that of a 40-seat restaurant, with 2.60 ESFD to be charged where the total sewage discharge is estimated to be substantially less than a 40-seat restaurant; and 6.20 ESFD to be charged where the total sewage discharge is estimated to be substantially greater than a 40-seat restaurant.

3. FOOD PREPARATION--4.40 ESFD for Bakeries and Catering services where there is substantial food preparation.

4. SANDWICH, DONUT, ICE CREAM AND YOGURT SHOPS--0.04 ESFD per seat where there is significant use of public restrooms and 0.02 ESFD where there is not significant use of public restrooms.

5. COCKTAIL LOUNGES, BARS and TAVERNS--0.06 ESFD per seat.

6. BOWLING ALLEYS--0.30 ESFD per alley.

7. MEETING HALLS, MEETING ROOMS, THEATERS and similar facilities--0.02 ESFD per seat without significant food preparation on the premises, 0.03 ESFD per seat where activities both with and without food preparation are major uses, and 0.04 ESFD per seat where activities with food preparation on the premises is the major use.

8. LAUNDROMATS--0.65 ESFD per washing machine hookup.

9. GROCERY STORES and SUPERMARKETS--1.50 ESFD for the first 25 feet of average building frontage and 1.00 ESFD for each additional 25 feet or fraction thereof, with the average building frontage to be the square root of the length times the width of the building.

10. MEDICAL and DENTAL OFFICES without inpatient services—2.5 times the "Charge for Employees" established herein for the facility, with a minimum surcharge of 2.50 ESFD.

11. VETERINARY OFFICE—2.5 times the rate established herein as the "Charge for Employees", plus 1.0 times that rate if the sewer is used for disposal of cleanings of animal stalls, with a minimum surcharge of 2.50 ESFD.

12. BARBER SHOPS—0.5 times the "Charge for Employees" established herein for the facility, with a minimum surcharge of 0.50 ESFD.

13. BEAUTY SHOPS—1.0 times the "Charge for Employees" established herein for the facility, with a minimum surcharge of 1.00 ESFD.

14. GAS STATIONS—1.70 ESFD without vehicle repair facilities and 3.40 ESFD with vehicle repair facilities.

15. VEHICLE AND EQUIPMENT REPAIR SHOPS—1.70 ESFD.

16. SCHOOLS, PRE-SCHOOLS AND DAY CARE CENTERS—0.031 ESFD per Average Daily Attendance (A.D.A.) or student, plus 0.06 ESFD per staff member.

17. CHURCHES—0.018 ESFD per seat. Where significant use of the facility is made for non-church related activities, the sewer service charge shall be increased by 30 percent, except where the activities take place in a separate structure; in which case, the Meeting Hall surcharge shall apply.

18. CAR WASHES—1.00 ESFD for each 280 gallons per day average discharge as estimated or calculated by the District.

19. PUBLIC USE OF RESTROOMS—Where a Commercial, Industrial or Other Facility not specifically mentioned herein has a sewage discharge consisting of only employee use of restrooms (charged herein as the "Charge for Employees") and use of restrooms by customers and the general public, a surcharge shall apply for the non-employee use of restrooms. The surcharge shall be 1.00 ESFD for each 280 gallons per day average discharge based on either estimates or calculations of the District.

20. DIFFICULT TO TREAT WASTE—Where the District has issued a sewer permit or other written authorization that specifically allows and accepts discharge to the sewer of materials that potentially or actually, by quantity or quality, are of such a nature as to cause, or that may cause, added expense to the District in collecting, treating or disposing of the discharge or causes or may cause injury to the sewers, treatment processes, disposal area or personnel of the District, or others, then the District may establish charges for that specific discharge that may, or may not, be related to other charges established by this Ordinance, with the basis for the rates so charged to be standard engineering texts, technical manuals and judgment of the District. Costs of the District for monitoring the waste discharge shall be included in the charges, as shall a ten percent administration charge where any of the charges that are not collected on the Tax Roll. Additionally, costs incurred by the District for enforcement action against a specific waste discharger shall be added to the charges for that discharge.

21. **UNCLASSIFIED SEWER USES**--For premises having a sewer connection but for which a specific occupancy classification for sewer service charges has not been set forth herein, the District shall charge such fee as, in its sole discretion, it deems applicable for the type of use being made of the premises in relation to the use made of classification premises and the fee fixed for said classified premises.

(h) **COMBINATION OR COMBINED SEWER USES**. Where two or more sewer uses are located on one property, such as a residence and office, the District may charge a lower rate for the combined facilities than is specified herein for those sewer uses if charged separately.

(i) **PUBLIC FACILITIES** not classified otherwise herein:

1. 1.00 ESFD for up to 14 employees, and 0.50 ESFD per each seven (7) employees, or fraction, thereafter.

2. The above charge for employees notwithstanding, only 0.03 ESFD shall be charged for each employee whose normal duty assignment in the facility is less than four (4) hours per day.

3. 0.33 ESFD per fireman shall be charged for Fire Stations.

4. 0.39 ESFD per inmate or patient shall be charged for detention facilities or inpatient care for other than hospitals.

5. 0.40 ESFD per bed shall be charged for hospitals with inpatient care, with this charge consisting of 0.33 ESFD per bed for inpatient care and 20 percent of that amount as allowance for outpatient care. Additional charges shall be made for non-medical or non-hospital functions such as mental health facilities and laboratory operations that are in addition to the medical inpatient and outpatient functions of the hospital, with those additional charges to be based on equivalent sewer uses established elsewhere herein by this Ordinance.

6. 2.00 ESFD shall be charged for chemical, biological or bacteriological laboratories.

7. 1.00 ESFD shall be charged for each 280 gallons per day of estimated sewage discharge where significant use is made of restrooms by the general public.

8. 3.00 ESFD shall be charged for the Coroner's Office for hazardous, potentially hazardous or difficult to treat wastes discharged to the sewer system.

9. A ten percent administration charge shall be added for all sewer service charges that cannot be collected on the Tax Roll.

(j) **SEWER AVAILABILITY CHARGE**. A sewer availability or standby charge shall replace the fee schedule for any structure not connected to the sewer and served by a private disposal system, where connection to the sewer is otherwise required, with the charge to be calculated at one-half the rate established for that structure by this fee schedule. The sewer availability charge shall be continued until such time as the private disposal system becomes "in an unsanitary condition" as defined by the Uniform Plumbing Code, and the full sewer service charge shall thereafter be applied.

(k) DISCHARGE OF DISSOLVED INORGANIC SOLIDS. Other sewer service charges specified herein notwithstanding, the District may assess a charge for discharge to the sewer of dissolved inorganic solids in either quantity or concentration exceeding the normal sewage discharge from an average single family dwelling, with the charge for excess dissolved inorganic solids to be proportional to the quantity and concentration of dissolved inorganic solids discharged by a typical single family dwelling located in the District.

(l) SWIMMING POOL DRAINS. 0.02 ESFD shall be charged for residential swimming pool drains connected to the sewer where said connection is allowed by the District and a sewer permit has been issued, providing that discharge of wastewater is made during off-peak hours of sewage flows as determined by the District.

(m) MONITORING CHARGES FOR GREASE TRAPS, GRIT TRAPS AND SAND TRAPS. 0.30 ESFD shall be added to the sewer service charge of each facility that is required to have a grease trap or grit trap installed on the building sewer, except where the device required is a sand trap on a floor drain; in which case, the monitoring charge shall be 0.15 ESFD. Additionally, upon a finding that a grease trap, grit trap or sand trap has not been properly maintained and upon the issuance of a written order by the District requiring corrective action, the sewer service charge for the sewer user so ordered shall be increased by fifty percent (50%) for the following year as compensation to the District for the added maintenance required to remove excess grease, grit and sand from the sewer system.

(n) CHARGES BASED UPON MEASURED WATER USE RECORDS. Alternative to other provisions of this Ordinance, Equivalent Single Family Dwelling (ESFD) factors established for the purpose of calculating sewer service charges may be based upon metered or measured water use records. Where said water use records are used to estimate the discharge of sewage to the public sewer, excluded shall be the estimated water used that is not discharged to the public sewer.

SECTION 4. BILLING.

(a) BILLING. The regular billing period for sewer service charges will be for each fiscal year, beginning on July 1 and ending on June 30; or bi-monthly, as determined by the Board. Schools and other public institutions may pay semi-annually on bills rendered in January and July of each year for the preceding semi-annual period.

(b) OPENING AND CLOSING BILLS. Opening and closing bills for less than the normal billing period shall be for not less than one month.

(c) BILLING TIME. Bills for sewer service shall be rendered at the beginning of each billing period and are payable upon presentation, except as otherwise provided herein.

(d) PENALTIES AND INTEREST. All bills not provided, prior to delinquency, to be collected on the tax rolls on which general district taxes are collected that are not paid on or before the 20th of the month in which said bill was rendered shall be delinquent and a penalty of ten percent (10%) of the bill or amount due plus one percent (1%) per month from the first day of said month, shall accrue for the period of said non-payment and be collected as a part of the principal amount thereof.

(e) INCLUSION ON GENERAL TAX BILL. The District may elect to have the sewer service charges herein set forth included on the bills levied for its general taxes.

SECTION 5. COLLECTIONS.

(a) USE OF TAX ROLLS. When the District elects to use the County tax roll on which general District taxes are collected for the collection of current or delinquent sewer service charges, proceedings therefore shall be had as now or hereafter provided therefore in Article 4, Chapter 6, Part 3, Division 5 of the Health and Safety Code.

(b) TIME OF COLLECTION. When the District elects to use the County tax roll on which general District taxes are collected as aforesaid, the amount of the sewer service charges shall be collected at the same time and in the same manner by the same person as, together with and not separately from, the general taxes for the District, and shall be delinquent at the same time and thereafter be subjected to the same delinquency penalties.

(c) APPLICATION OF LAWS AND GOVERNING LEVY, COLLECTION AND ENFORCEMENT OF GENERAL TAXES. All laws applicable to the levy, collection and enforcement of general taxes of the District, including, but not limited to, those pertaining to the matters of delinquency correction, cancellation, refund and redemption, are applicable to such charges.

(d) APPLICABLE LAWS. All the provisions of the laws of the State as to the collection of taxes and delinquent taxes and the enforcement of their payment, so far as applicable, apply to the collection of the charges herein set forth.

(e) COLLECTION OF SUIT. As an alternative to any of the other procedures herein provided, the District may collect said unpaid charges by suit, in which event it shall have judgment for the cost of suit and reasonable attorney's fees.

(f) COLLECTION SYSTEM. The Board may, at any time, by order entered in its Minutes, provide a system of collection of delinquent sewer service charges, or make any change in the manner of their collection.

(g) ALTERNATIVE. The powers authorized by this section shall be alternative to all other powers of the District and alternative to procedures adopted by the Board thereof for the collection of such charges.

(h) OTHER REMEDIES. The District may provide otherwise for the collection of such delinquent charges. All remedies herein provided for their enforcement and collection are cumulative and may be pursued alternatively or collectively as the District determines.

SECTION 6. LIEN.

The amount of the delinquent sewer service charges shall constitute a lien against the lot or parcel of land against which the charge has been imposed as of Noon the first Monday in March of each year. The Tax Collector shall include the amount of the charges on bills for taxes levied against the respective lots and parcels of land.

SECTION 7. DISCONNECTION.

(a) DISCONNECTION. As an alternative method of collecting such delinquent sewer service charges, the District may disconnect any premises from the sewer system if the user fails to pay the service charges for his premises after they shall have become delinquent. The person in charge of the sewer system shall estimate the cost of the disconnection of such premises from the sewer system and the cost of reconnecting it thereto, and such user shall deposit the cost as estimated of disconnection and reconnection before such premises are reconnected to the sewer system. The person in charge shall refund any part of the deposit remaining after payment of all costs of disconnection and reconnection.

(b) ABATEMENT. During the period of non-connection or disconnection, habitation of such premises by human beings shall constitute a public nuisance, where upon the Board shall cause proceedings to be brought for the abatement of the occupancy of said premises by the human beings. In such event, and as a condition of connection or reconnection, there shall be paid to the District reasonable attorney's fees and costs of suit arising in said action.

SECTION 8. MISCELLANEOUS.

(a) PARCELS OUTSIDE THE DISTRICT. Where parcels to be assessed sewer service charges are outside the boundaries of the District, they shall be added to the assessment roll of the District for the purpose of collecting such charges.

(b) PARCELS NOT ON ROLL. If the property to be assessed sewer service charges is not described on the roll, the Clerk shall enter the description thereon together with the amounts of the charges, as shown on the assessment roll.

(c) RELIEF FROM UNJUST RATES. The owner or occupant of any premises who by reason of special circumstances finds that the foregoing rates are unjust or inequitable as applied to his premises, may make written application to the Board, stating the circumstances and requesting a different basis of charges for sewer services to his premises. If such application be approved, the Board may by resolution fix and establish fair and equitable rates for such application and continuing during the period of such special circumstances. The Board may on its own motion find that, by reason of special circumstances, foregoing rates are unjust and inequitable as applied to particular premises and may by resolution fix and establish fair and equitable rates for such premises during the period of such special circumstances or any part thereof.

SECTION 9. FUTURE RATE INCREASES.

At a properly noticed public hearing, the Kern Sanitation Authority Board of Directors (Board) may approve future annual increases in the sewer service charge based on the percentage increase in the Consumer Price Index (CPI). The *Los Angeles, Riverside And Orange Counties All Items Consumer Price Index For All Urban Consumers* will be the index used to determine the CPI adjustment. At such public hearings, the Board may approve annual percentage increases in the sewer service charge in an amount no greater than the percentage increase in the prior calendar year's annual average increase in the CPI. However, for sewer service charges billed on the tax roll no annual increase in excess of the CPI increase or five percent (5%), whichever is less, may be approved by the Board without a properly noticed protest hearing held pursuant to Section 6 of Article XIID of the California Constitution.

SECTION 10. CONSTITUTIONALITY.

If any section, sub-section, sentence, clause, or phrase of this Ordinance is for any reason held to be unconstitutional, then such unconstitutional part shall not affect the validity of the remaining section or portions of the Ordinance and the Board hereby declares that it would have passed this Ordinance and each section, sub-section, sentence, clause, or phrases thereof, irrespective of clauses or phrases which might be declared unconstitutional.

SECTION 11. ORDINANCE REPLACEMENT.

This Ordinance repeals Kern Sanitation Authority Ordinance S-122.

COPIES FURNISHED:
Co. Counsel
WMO CAO
Auditor
6-24-05 JH

APPENDIX 2
AIR QUALITY / GHG IMPACT ANALYSES

AIR QUALITY and GHG IMPACT ANALYSES
REXLAND ACRES - SEWER EXPANSION PROJECT
KERN COUNTY, CALIFORNIA

Prepared for:

Tom Dodson & Associates
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Santa Ana CA 92705

Date:

July 17, 2019

Project No.: P19-030 AQ

METEOROLOGY CLIMATE

San Joaquin Valley Air Basin (SJVAB) includes San Joaquin County, Stanislaus County, Madera County, Fresno County, Kings County, Tulare County, and a portion of Kern County. Merced County is in the north-central portion of the SJVAB. The SJVAB is bordered on three sides by mountains: the Sierra Nevada to the east, the Coast Ranges to the west, and the Tehachapi mountains to the south. The SJVAB is open to the north to the Sacramento Valley. The San Joaquin Valley is approximately 250 miles long and averages approximately 35 miles in width. The mountains surrounding the SJVAB restrict air movement through and out of the basin, and as a result, impede the dispersion of pollutants from the basin.

Away from the cooling effects of the Pacific Ocean, the climate of Kern County can be characterized as hot in summer and cold in winter, compared with the coastal basins where the climate is moderated by the adjacent ocean. The SVJAB has an “inland Mediterranean” climate averaging over 260 sunny days per year. The valley floor is characterized by hot summers and mild humid winters. Summer high temperatures often exceed 100°F while the average daily low temperature in the winter is 45°F. Temperatures below freezing are rare. Summer winds in the SJVAB usually originate at the north end of the San Joaquin Valley and flow in a south-southeasterly direction while winter winds originate from the south and flow in a north-northwesterly direction. Winds in the winter months tend to be variable and light; often less than 10 mph. Precipitation in the San Joaquin Valley is strongly influenced by the position of the semi-permanent subtropical high-pressure zone located off the Pacific Coast. Most precipitation occurs in the winter months, with some occurring in late summer and fall. Average annual rainfall for the entire San Joaquin Valley is 9.25 inches on the valley floor.

AIR QUALITY SETTING

AMBIENT AIR QUALITY STANDARDS (AAQS)

In order to gauge the significance of the air quality impacts of the proposed project, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called "sensitive receptors." Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. Recent research has shown, however, that chronic exposure to ozone (the primary ingredient in photochemical smog) may lead to adverse respiratory health even at concentrations close to the ambient standard.

National AAQS were established in 1971 for six pollution species with states retaining the option to add other pollutants, require more stringent compliance, or to include different exposure periods. The initial attainment deadline of 1977 was extended several times in air quality problem areas like Southern California. In 2003, the Environmental Protection Agency (EPA) adopted a rule, which extended and established a new attainment deadline for ozone for the year 2021. Because the State of California had established AAQS several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table 1. Sources and health effects of various pollutants are shown in Table 2.

The Federal Clean Air Act Amendments (CAAA) of 1990 required that the U.S. Environmental Protection Agency (EPA) review all national AAQS in light of currently known health effects. EPA was charged with modifying existing standards or promulgating new ones where appropriate. EPA subsequently developed standards for chronic ozone exposure (8+ hours per day) and for very small diameter particulate matter (called "PM-2.5"). New national AAQS were adopted in 1997 for these pollutants.

Planning and enforcement of the federal standards for PM-2.5 and for ozone (8-hour) were challenged by trucking and manufacturing organizations. In a unanimous decision, the U.S. Supreme Court ruled that EPA did not require specific congressional authorization to adopt national clean air standards. The Court also ruled that health-based standards did not require preparation of a cost-benefit analysis. The Court did find, however, that there was some inconsistency between existing and "new" standards in their required attainment schedules. Such attainment-planning schedule inconsistencies centered mainly on the 8-hour ozone standard. EPA subsequently agreed to downgrade the attainment designation for a large number of communities to "non-attainment" for the 8-hour ozone standard.

Table 1

Ambient Air Quality Standards							
Pollutant	Averaging Time	California Standards ¹		National Standards ²			
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷	
Ozone (O ₃) ⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry	
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)			
Respirable Particulate Matter (PM ₁₀) ⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	20 µg/m ³		—			
Fine Particulate Matter (PM _{2.5}) ⁹	24 Hour	—	—	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³	15 µg/m ³		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	—	Non-Dispersive Infrared Photometry (NDIR)	
	8 Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	—		
	8 Hour (Lake Tahoe)	8 ppm (7 mg/m ³)		—	—		
Nitrogen Dioxide (NO ₂) ¹⁰	1 Hour	0.19 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	—	Gas Phase Chemiluminescence	
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)	Same as Primary Standard		
Sulfur Dioxide (SO ₂) ¹¹	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)	
	3 Hour	—		—	0.5 ppm (1300 µg/m ³)		
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹¹	—		
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) ¹¹	—		
Lead ^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption	
	Calendar Quarter	—		1.5 µg/m ³ (for certain areas) ¹⁴	Same as Primary Standard		
	Rolling 3-Month Average	—		0.15 µg/m ³			
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards			
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography				
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence				
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography				

See footnotes on next page ...

For more information please call ARE-PIO at (916) 322-2990

California Air Resources Board (5/4/16)

Table 1 (continued)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above $150 \mu\text{g}/\text{m}^3$ is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from $15 \mu\text{g}/\text{m}^3$ to $12.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standard of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM10 standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard ($1.5 \mu\text{g}/\text{m}^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (5/4/16)

Table 2
Health Effects of Major Criteria Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	<ul style="list-style-type: none"> • Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter. 	<ul style="list-style-type: none"> • Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO ₂)	<ul style="list-style-type: none"> • Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions. 	<ul style="list-style-type: none"> • Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O ₃)	<ul style="list-style-type: none"> • Atmospheric reaction of organic gases with nitrogen oxides in sunlight. 	<ul style="list-style-type: none"> • Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	<ul style="list-style-type: none"> • Contaminated soil. 	<ul style="list-style-type: none"> • Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Respirable Particulate Matter (PM-10)	<ul style="list-style-type: none"> • Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions. 	<ul style="list-style-type: none"> • Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Fine Particulate Matter (PM-2.5)	<ul style="list-style-type: none"> • Fuel combustion in motor vehicles, equipment, and industrial sources. • Residential and agricultural burning. • Industrial processes. • Also, formed from photochemical reactions of other pollutants, including NO_x, sulfur oxides, and organics. 	<ul style="list-style-type: none"> • Increases respiratory disease. • Lung damage. • Cancer and premature death. • Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO ₂)	<ul style="list-style-type: none"> • Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes. 	<ul style="list-style-type: none"> • Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board, 2002.

Evaluation of the most current data on the health effects of inhalation of fine particulate matter prompted the California Air Resources Board (ARB) to recommend adoption of the statewide PM-2.5 standard that is more stringent than the federal standard. This standard was adopted in 2002. The State PM-2.5 standard is more of a goal in that it does not have specific attainment planning requirements like a federal clean air standard, but only requires continued progress towards attainment.

Similarly, the ARB extensively evaluated health effects of ozone exposure. A new state standard for an 8-hour ozone exposure was adopted in 2005, which aligned with the exposure period for the federal 8-hour standard. The California 8-hour ozone standard of 0.07 ppm is more stringent than the federal 8-hour standard of 0.075 ppm. The state standard, however, does not have a specific attainment deadline. California air quality jurisdictions are required to make steady progress towards attaining state standards, but there are no hard deadlines or any consequences of non-attainment. During the same re-evaluation process, the ARB adopted an annual state standard for nitrogen dioxide (NO₂) that is more stringent than the corresponding federal standard and strengthened the state one-hour NO₂ standard.

As part of EPA's 2002 consent decree on clean air standards, a further review of airborne particulate matter (PM) and human health was initiated. A substantial modification of federal clean air standards for PM was promulgated in 2006. Standards for PM-2.5 were strengthened, a new class of PM in the 2.5 to 10 micron size was created, some PM-10 standards were revoked, and a distinction between rural and urban air quality was adopted. In December, 2012, the federal annual standard for PM-2.5 was reduced from 15 µg/m³ to 12 µg/m³ which matches the California AAQS. The severity of the basin's non-attainment status for PM-2.5 may be increased by this action and thus require accelerated planning for future PM-2.5 attainment.

In response to continuing evidence that ozone exposure at levels just meeting federal clean air standards is demonstrably unhealthful, EPA had proposed a further strengthening of the 8-hour standard. A new 8-hour ozone standard was adopted in 2015 after extensive analysis and public input. The adopted national 8-hour ozone standard is 0.07 ppm which matches the current California standard. It will require three years of ambient data collection, then 2 years of non-attainment findings and planning protocol adoption, then several years of plan development and approval. Final air quality plans for the new standard are likely to be adopted around 2022.

In 2010 a new federal one-hour primary standard for nitrogen dioxide (NO₂) was adopted. This standard is more stringent than the existing state standard. The federal standard for sulfur dioxide (SO₂) was also recently revised. However, with minimal combustion of coal and mandatory use of low sulfur fuels in California, SO₂ is typically not a problem pollutant.

BASELINE AIR MONITORING

The San Joaquin Valley Air Pollution Control District (SJVAPCD) operates a regional monitoring network that measures the ambient concentration of criteria pollutants. Existing levels of criteria air pollutants in the project area can generally be inferred from measurements conducted by the SJVAPCD at its Bakersfield Municipal Airport monitoring station. Although the Municipal Airport station does not monitor the complete spectrum of pollutants, data for particulates is available from the Bakersfield California Avenue station. There is no nearby station that monitors CO.

Table 3 summarizes the monitoring history from the Bakersfield monitoring stations for the last three years. From these data one can infer that baseline air quality levels near the project site are occasionally unhealthful, but that such violations of clean air standards usually affect only those people most sensitive to air pollution exposure.

- a. Photochemical smog (ozone) levels occasionally exceed standards. The 8-hour state ozone standard has been exceeded an average of 18 percent of all days in the past three years near the project site and the 8-hour federal was violated 11 percent during the same period. The 1-hour state standard has been violated less than 4 percent of all days in the last three years.
- b. Respirable dust (PM-10) levels exceed the state standard 31 percent of all days, but the less stringent federal PM-10 standard was not violated for the same time period.
- c. The federal ultra-fine particulate (PM-2.5) standard of 35 $\mu\text{g}/\text{m}^3$ is occasionally exceeded. From the data observed, eight percent of all days exceeded the 35 $\mu\text{g}/\text{m}^3$ standard.

Although complete attainment of every clean air standard is not yet imminent, extrapolation of the steady improvement trend suggests that such attainment could occur within the reasonably near future.

Table 3

Air Quality Monitoring Summary (2015-2017)
(Predicted Number of Days Standards Were Exceeded, and
Maximum Levels During Such Violations)

Pollutant/Standard	2015	2016	2017
Ozone			
1-Hour > 0.09 ppm (S)	23	8	9
8-Hour > 0.07 ppm (S)	69	63	65
8- Hour > 0.075 ppm (F)	55	41	26
Max. 1-Hour Conc. (ppm)	0.118	0.102	0.118
Max. 8-Hour Conc. (ppm)	0.106	0.093	0.101
Nitrogen Dioxide			
1-Hour > 0.18 ppm (S)	0	0	0
Max. 1-Hour Conc. (ppm)	0.048	0.052	0.042
Respirable Particulates (PM-10)			
24-hour > 50 µg/m ³ (S)	121.4	121.4	98.7
24-hour > 150 µg/m ³ (F)	0	0	0
Max. 24-Hr. Conc. (µg/m ³)	104.7	90.9	138.0
Ultra-Fine Particulates (PM-2.5)			
24-Hour > 35 µg/m ³ (F)	32.3	25.5	30.2
Max. 24-Hr. Conc. (µg/m ³)	101.8	66.4	107.8

Source: Bakersfield Air Monitoring Station, Airport and California Avenue
data: www.arb.ca.gov/adam/

AIR QUALITY PLANNING

Fugitive dust emissions generated by construction activities are regulated by the SJVAPCD. Construction activities must comply with all applicable SJVAPCD rules and regulations, including SJVAPCD's Regulation VIII. Regulation VIII consists of several individual rules that require implementation of best available mitigation measures to limit construction dust emissions.

The San Joaquin Valley Air Basin has been determined by ARB and EPA to be in attainment of federal PM-10 standards. Regulation VIII has been accepted by ARB and EPA to maintain attainment of PM-10 standards in the Air Basin. In developing the 2007 Maintenance Plan, the SJVAPCD evaluated the potential PM-10 emissions that could occur under all sources within the Air Basin, and developed rules and procedures to reduce future emissions sufficiently to maintain the existing attainment status. The full attainment status is shown in Table 4.

Table 4
San Joaquin Valley Air Basin Attainment Status¹

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone – 1 Hour	Nonattainment/Extreme	Nonattainment/Severe
Ozone – 8 Hour	Nonattainment/Extreme	Nonattainment
PM-10*	Attainment	Nonattainment
PM 2.5	Nonattainment	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead Particulates	No Designation	Attainment

*On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan.

¹ <https://www.valleyair.org/aqinfo/attainment.htm>

AIR QUALITY IMPACT

STANDARDS OF SIGNIFICANCE

Air quality impacts are considered “significant” if they cause clean air standards to be violated where they are currently met, or if they “substantially” contribute to an existing violation of standards. Any substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, would also be considered a significant impact.

Appendix G of the California CEQA Guidelines offers the following five tests of air quality impact significance. A project would have a potentially significant impact if it:

- a. Conflicts with or obstructs implementation of the applicable air quality plan.
- b. Results in a cumulatively considerable net increase of any criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- d. Exposes sensitive receptors to substantial pollutant concentrations.
- e. Creates objectionable odors affecting a substantial number of people.

The San Joaquin Valley Air Pollution Control District developed a CEQA Implementation Document that assigned an emissions level that it recommends should be considered as creating a potentially significant air quality impact. Construction projects are considered to have an air quality impact if they cause the following annual emissions to be exceeded (tons/year):

CO	-	100
NO _x	-	10
ROG	-	10
SO _x	-	27
PM-10	-	15
PM-2.5	-	15

The project is not expected to generate any operational air quality emissions.

Significance could also derive from emissions of odors or hazardous air pollutants. Development or a wastewater conveyance system would not typically generate any hazardous air pollutants or odors because system components are all enclosed.

FEDERAL THRESHOLDS

NEPA guidelines do not encourage designation of impacts as (in)significant. However, Section 176(c) of the Clean Air Act Amendments of 1990 prohibits federal participation in projects that would impede implementation of the state implementation plan (SIP) for federal non-attainment pollutants. “Participation” includes project funding as well as granting any federal permits. If the project-related emissions from construction and operations are less than specified “*de minimis*” levels, no further SIP consistency demonstration is required. San Joaquin County is designated as a non-attainment area for the federal 8-hour ozone standard. The basin is nonattainment for PM-2.5 and has been determined by ARB to be in attainment of federal PM-10 standards. Based upon these designations, the following emissions levels are presumed evidence of SIP conformity:²

Ozone VOX or NOx	10 tons/year
Carbon Monoxide	100 tons/year
PM-10	100 tons/year
PM-2.5	100 tons/year
NOx	100 tons/year

These *de minimis* thresholds are less stringent than the SJVAPCD CEQA thresholds. If project air quality impacts in the basin are less-than-significant under CEQA, they are automatically in conformance under NEPA.

² <https://www.epa.gov/general-conformity/de-minimis-tables>

AIR QUALITY IMPACT

CONSTRUCTION ACTIVITY IMPACTS

CalEEMod was developed by the SCAQMD to provide a model by which to calculate both construction emissions and operational emissions from a variety of land use projects. It calculates both the daily maximum and annual average emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions.

The Rexland Acres Project provides for collection and delivery of wastewater to the Kern Sanitation Authority Wastewater Treatment Plant for treatment. Estimated construction emissions were modeled using CalEEMod2016.3.2 to identify maximum emissions for each pollutant during project construction.

Primarily the project installs a series of pipes to convey the water. The composition of the proposed pipelines are as follows:

- 620 linear feet (LF) of 12" PVC sewer main, 24-36 inch trenches
- 16,140 LF of 8" PVC sewer main, 24-36 inch trenches
- 182 sewer laterals, assumed to average 75 feet in length (13,650 LF), four (4) inches diameter

The project will also require construction of 43 manholes. Modification will be required to an existing lift station to increase pumping capacity. This will be done primarily with hand tools, and therefore was not modeled. Construction is expected to occur over an 8-month period.

CalEEMod Construction Activity Equipment Fleet and Workdays
Pipeline Install and Manhole Install

Demo and Concrete Removal (2 months)	1 Concrete Saw
	1 Dozer
	3 Loader/Backhoes
Trench and Install Pipeline (4 months)	1 Loader/Backhoe
	1 Trencher
	1 Forklift
	1 Crane
	2 Skid Steer Loaders
Backfill and Paving (2 months)	1 Paver
	1 Paving Equipment
	1 Roller
	1 Loader/Backhoe
	1 Mixer
	2 Compactors

Utilizing this indicated equipment fleet and durations the following annual construction emissions are calculated by CalEEMod and are listed below.

**Construction Activity Emissions
Maximum Annual Emissions (tons/year)**

Maximal Construction Emissions	ROG	NOx	CO	SO₂	PM-10	PM-2.5
Pipelines	0.12	1.17	0.94	0.00	0.07	0.06
NEPA Threshold	10	10	100	100	100	100
JQVAPCD Regional Emissions Threshold	10	10	100	27	15	15

Source: CalEEMod output in appendix

Annual construction activity emissions are estimated be below CEQA and NEPA thresholds without the need for added mitigation. There are no standards for daily emissions.

Emissions will be well below significance thresholds. Locally, the mobile nature of these sources, the minimal surrounding receptor density and the regional spread of emissions from off-site construction vehicles would minimize the exposure to any individual receiver of any project-related construction emissions. These emissions, therefore have a less than significant individual impact, but would be added cumulatively to a large volume of non-project mobile source emissions within the Kern County area.

OPERATIONAL IMPACTS

A sewer project will not have any associated operational impacts. The project will not generate any additional trips over existing conditions although electrical consumption for pump use is anticipated to be somewhat more than the current equipment. Electrical consumption has no single uniquely related air pollution emissions source because power is supplied to and drawn from a regional grid. Electrical power is generated regionally by a combination of non-combustion (nuclear, hydroelectric, solar, wind, geothermal, etc.) and fossil fuel combustion sources. There is no direct nexus between consumption and the type of power source or the air basin where the source is located. Operational air pollution emissions from electrical generation are therefore not attributable on a project-specific basis.

ODOR

Project operations (pumping and conveyance) are essentially a closed system with negligible odor potential.

CONSTRUCTION EMISSIONS MINIMIZATION

Construction activities are not anticipated to cause emissions to exceed CEQA or NEPA thresholds. Nevertheless, emissions minimization through enhanced dust control measures is required to comply with SJVAPCD Regulation VIII related to dust control.

Regulation VIII Control Measures for Construction Emissions of PM-10

- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.
- When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions.) (Use of blower devices is expressly forbidden.)
- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.
- Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.
- An owner/operator of any site with 150 or more vehicle trips per day, or 20 or more vehicle trips per day by vehicles with three or more axles shall implement measures to prevent carryout and trackout.

Recommended Enhanced Additional Measures for Construction Emissions of PM-10

- Install wheel washers for all exiting trucks or wash off all trucks and equipment leaving the site.
- Install wind breaks at windward side(s) of construction areas.
- Suspend excavation and grading activity when winds exceed 20 mph.
- Limit area subject to excavation, grading, and other construction activity at any one time.

Recommended for Heavy Duty Equipment (scrapers, graders, trenchers, earth movers, etc.)

- Use alternative fueled or catalyst equipped diesel construction equipment.
- Minimize idling time (e.g., 5 minutes maximum).
- Limit the hours of operation of heavy-duty equipment and/or the amount of equipment in use.
- Replace fossil-fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).
- Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak-hour of vehicular traffic on adjacent roadways.
- Implement activity management (e.g. rescheduling activities to reduce short-term impacts).

GREENHOUSE GAS EMISSIONS

“Greenhouse gases” (so called because of their role in trapping heat near the surface of the earth) emitted by human activity are implicated in global climate change, commonly referred to as “global warming.” These greenhouse gases contribute to an increase in the temperature of the earth’s atmosphere by transparency to short wavelength visible sunlight, but near opacity to outgoing terrestrial long wavelength heat radiation in some parts of the infrared spectrum. The principal greenhouse gases (GHGs) are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. For purposes of planning and regulation, Section 15364.5 of the California Code of Regulations defines GHGs to include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for approximately half of GHG emissions globally. Industrial and commercial sources are the second largest contributors of GHG emissions with about one-fourth of total emissions.

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. GHG statutes and executive orders (EO) include AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07.

AB 32 is one of the most significant pieces of environmental legislation that California has adopted. Among other things, it is designed to maintain California’s reputation as a “national and international leader on energy conservation and environmental stewardship.” It will have wide-ranging effects on California businesses and lifestyles as well as far reaching effects on other states and countries. A unique aspect of AB 32, beyond its broad and wide-ranging mandatory provisions and dramatic GHG reductions are the short time frames within which it must be implemented. Major components of the AB 32 include:

- Requires the monitoring and reporting of GHG emissions beginning with sources or categories of sources that contribute the most to statewide emissions.
- Requires immediate “early action” control programs on the most readily controlled GHG sources.
- Mandates that by 2020, California’s GHG emissions be reduced to 1990 levels.
- Forces an overall reduction of GHG gases in California by 25-40%, from business as usual practices by 2020.
- Dictates that any local initiatives must complement efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.

Statewide, the framework for developing the implementing regulations for AB 32 is under way. Maximum GHG reductions are expected to derive from increased vehicle fuel efficiency, from greater use of renewable energy and from increased structural energy efficiency.

GREENHOUSE GAS EMISSIONS SIGNIFICANCE THRESHOLDS

In response to the requirements of SB97, the State Resources Agency developed guidelines for the treatment of GHG emissions under CEQA. These new guidelines became state laws as part of Title 14 of the California Code of Regulations in March, 2010. The CEQA Appendix G guidelines were modified to include GHG as a required analysis element. A project would have a potentially significant impact if it:

- Generates GHG emissions, directly or indirectly, that may have a significant impact on the environment, or,
- Conflicts with an applicable plan, policy or regulation adopted to reduce GHG emissions.

Section 15064.4 of the Code specifies how significance of GHG emissions is to be evaluated. The process is broken down into quantification of project-related GHG emissions, making a determination of significance, and specification of any appropriate mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency with substantial flexibility.

Emissions identification may be quantitative, qualitative or based on performance standards. CEQA guidelines allow the lead agency to “select the model or methodology it considers most appropriate”. The most common practice for transportation/combustion GHG emissions quantification is to use a computer model such as CalEEMod, as was used in the ensuing analysis.

In the Final Staff Report Addressing GHG Emissions Impacts under CEQA, the SJVAPCD notes that ARB staff derived a proposed hybrid threshold consisting of a quantitative threshold of 7,000 metric tons of CO₂ equivalent per year (MTCO₂E/year) for operational emissions (excluding transportation), and performance standards for construction and transportation emissions (CARB).

ARB concludes in its draft proposal that the 7,000 MTCO₂E/year benchmark can be used to effectively mitigate industrial projects with significant GHG emissions. To date, ARB has not finalized its draft proposed threshold, nor has ARB scheduled additional workshops to seek public input on establishing a significance threshold for assessing significance of project specific GHG emission impacts on global climate change. However, in the absence of any other guidance, this 7,000 MT per year recommendation has been used as a guideline for this analysis.

PROJECT RELATED GHG EMISSIONS GENERATION

Construction Activity GHG Emissions

The project is assumed to require 8 months for construction. During project construction, the CalEEMod2016.3.2 computer model predicts that the construction activities will generate 136.5 MT CO₂e emissions. This is less than the adopted threshold for use by this project. GHG impacts from construction are considered less-than-significant.

CONSISTENCY WITH EXISTING AIR QUALITY PLANS

In December 2009 the SJVAPCD issued a final staff report addressing greenhouse gas emissions under CEQA. That only language directly related to this Project states that the lead agency should identify GHG emissions based on available information to calculate, model or estimate the amount of CO₂ and other GHG emissions.

With regard to consistency with existing air quality plans, it was determined that because the proposed project would not generate population, residences, or substantial employment, it would neither conflict with nor interfere with the County's adopted growth forecast. Furthermore, as shown in this report, the proposed Project's contribution to regional air emissions in the San Joaquin Valley would be very small. When compliance with applicable rules, such as the SJVAPCD's required emissions controls is considered, the proposed project's regional contribution to cumulative air quality impacts would be almost negligible.

CALEEMOD2016.3.2 COMPUTER MODEL OUTPUT

- **ANNUAL EMISSIONS**

Rexland Acres Pipeline - Kern-San Joaquin County, Annual

Rexland Acres Pipeline

Kern-San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.40	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	32
Climate Zone	3			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 30,420 lf pipe

Construction Phase - 2 months demo, 4 months install, 2 months backfill and pave

Off-road Equipment - Demo: 1 concrete saw, 1 dozer, 3 loader/backhoes

Off-road Equipment - Pipeline Install: 1 crane, 1 forklift, 1 loader/backhoe, 1 trencher, 2 skid steer loaders

Off-road Equipment - Paving: 1 mixer, 1 paver, 1 paving equipment, 2 loader/backhoes, 2 compactors, 1 roller

Construction Off-road Equipment Mitigation -

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Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	87.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	10.00	43.00
tblConstructionPhase	PhaseEndDate	11/11/2020	6/30/2020
tblConstructionPhase	PhaseEndDate	1/28/2020	2/28/2020
tblConstructionPhase	PhaseEndDate	11/25/2020	8/30/2020
tblConstructionPhase	PhaseStartDate	2/6/2020	3/1/2020
tblConstructionPhase	PhaseStartDate	11/12/2020	7/1/2020
tblLandUse	LotAcreage	0.00	1.40
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Building Construction
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

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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					
2020	0.1183	1.1707	0.9437	1.5500e-003	7.0000e-003	0.0653	0.0723	1.8600e-003	0.0604	0.0623	0.0000	135.5078	135.5078	0.0385	0.0000	136.4694
Maximum	0.1183	1.1707	0.9437	1.5500e-003	7.0000e-003	0.0653	0.0723	1.8600e-003	0.0604	0.0623	0.0000	135.5078	135.5078	0.0385	0.0000	136.4694

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					
2020	0.1183	0.9664	0.9437	1.5500e-003	7.0000e-003	0.0653	0.0723	1.8600e-003	0.0604	0.0623	0.0000	135.5077	135.5077	0.0385	0.0000	136.4693
Maximum	0.1183	0.9664	0.9437	1.5500e-003	7.0000e-003	0.0653	0.0723	1.8600e-003	0.0604	0.0623	0.0000	135.5077	135.5077	0.0385	0.0000	136.4693

[illegible]

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2020	3-31-2020	0.6227	0.5735
2	4-1-2020	6-30-2020	0.3928	0.2482
3	7-1-2020	9-30-2020	0.2683	0.2573
		Highest	0.6227	0.5735

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-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	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-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	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-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	N2O	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	Demolition	Demolition	1/1/2020	2/28/2020	5	43	
2	Building Construction	Building Construction	3/1/2020	6/30/2020	5	87	
3	Paving	Paving	7/1/2020	8/30/2020	5	43	

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Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 0****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
Building Construction	Trenchers	1	6.00	78	0.50
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Paving	Plate Compactors	2	8.00	8	0.43
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Skid Steer Loaders	2	6.00	65	0.37
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	1	8.00	132	0.36

Trips and VMT

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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
Building Construction	7	0.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020**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	0.0457	0.4504	0.3151	5.2000e-004		0.0248	0.0248		0.0231	0.0231	0.0000	45.2955	45.2955	0.0116	0.0000	45.5866
Total	0.0457	0.4504	0.3151	5.2000e-004		0.0248	0.0248		0.0231	0.0231	0.0000	45.2955	45.2955	0.0116	0.0000	45.5866

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3.2 Demolition - 2020**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	1.5100e-003	1.0800e-003	0.0105	4.0000e-005	3.5000e-003	2.0000e-005	3.5300e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	3.1808	3.1808	8.0000e-005	0.0000	3.1828
Total	1.5100e-003	1.0800e-003	0.0105	4.0000e-005	3.5000e-003	2.0000e-005	3.5300e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	3.1808	3.1808	8.0000e-005	0.0000	3.1828

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	0.0457	0.4503	0.3151	5.2000e-004		0.0248	0.0248		0.0231	0.0231	0.0000	45.2954	45.2954	0.0116	0.0000	45.5865
Total	0.0457	0.4503	0.3151	5.2000e-004		0.0248	0.0248		0.0231	0.0231	0.0000	45.2954	45.2954	0.0116	0.0000	45.5865

Rexland Acres Pipeline - Kern-San Joaquin County, Annual

3.2 Demolition - 2020**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	1.5100e-003	1.0800e-003	0.0105	4.0000e-005	3.5000e-003	2.0000e-005	3.5300e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	3.1808	3.1808	8.0000e-005	0.0000	3.1828
Total	1.5100e-003	1.0800e-003	0.0105	4.0000e-005	3.5000e-003	2.0000e-005	3.5300e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	3.1808	3.1808	8.0000e-005	0.0000	3.1828

3.3 Building Construction - 2020**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	0.0453	0.4804	0.3587	5.8000e-004		0.0271	0.0271		0.0249	0.0249	0.0000	51.3432	51.3432	0.0166	0.0000	51.7584
Total	0.0453	0.4804	0.3587	5.8000e-004		0.0271	0.0271		0.0249	0.0249	0.0000	51.3432	51.3432	0.0166	0.0000	51.7584

Rexland Acres Pipeline - Kern-San Joaquin County, Annual

3.3 Building Construction - 2020**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	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
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	0.0000	0.0000

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	0.0453	0.2869	0.3587	5.8000e-004		0.0271	0.0271		0.0249	0.0249	0.0000	51.3432	51.3432	0.0166	0.0000	51.7583
Total	0.0453	0.2869	0.3587	5.8000e-004		0.0271	0.0271		0.0249	0.0249	0.0000	51.3432	51.3432	0.0166	0.0000	51.7583

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3.3 Building Construction - 2020**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	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
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	0.0000	0.0000

3.4 Paving - 2020**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	0.0243	0.2378	0.2489	3.8000e-004		0.0134	0.0134		0.0124	0.0124	0.0000	32.5076	32.5076	0.0101	0.0000	32.7590
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0243	0.2378	0.2489	3.8000e-004		0.0134	0.0134		0.0124	0.0124	0.0000	32.5076	32.5076	0.0101	0.0000	32.7590

Rexland Acres Pipeline - Kern-San Joaquin County, Annual

3.4 Paving - 2020**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	1.5100e-003	1.0800e-003	0.0105	4.0000e-005	3.5000e-003	2.0000e-005	3.5300e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	3.1808	3.1808	8.0000e-005	0.0000	3.1828
Total	1.5100e-003	1.0800e-003	0.0105	4.0000e-005	3.5000e-003	2.0000e-005	3.5300e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	3.1808	3.1808	8.0000e-005	0.0000	3.1828

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	0.0243	0.2270	0.2489	3.8000e-004		0.0134	0.0134		0.0124	0.0124	0.0000	32.5076	32.5076	0.0101	0.0000	32.7590
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0243	0.2270	0.2489	3.8000e-004		0.0134	0.0134		0.0124	0.0124	0.0000	32.5076	32.5076	0.0101	0.0000	32.7590

Rexland Acres Pipeline - Kern-San Joaquin County, Annual

3.4 Paving - 2020**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	1.5100e-003	1.0800e-003	0.0105	4.0000e-005	3.5000e-003	2.0000e-005	3.5300e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	3.1808	3.1808	8.0000e-005	0.0000	3.1828
Total	1.5100e-003	1.0800e-003	0.0105	4.0000e-005	3.5000e-003	2.0000e-005	3.5300e-003	9.3000e-004	2.0000e-005	9.5000e-004	0.0000	3.1808	3.1808	8.0000e-005	0.0000	3.1828

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Rexland Acres Pipeline - Kern-San Joaquin County, Annual

	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

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
User Defined Industrial	14.70	6.60	6.60	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
User Defined Industrial	0.472669	0.031291	0.166276	0.125679	0.021211	0.006775	0.020722	0.144029	0.001634	0.001785	0.006011	0.000972	0.000946

5.0 Energy Detail

Historical Energy Use: N

Rexland Acres Pipeline - Kern-San Joaquin County, Annual

5.1 Mitigation Measures Energy

[illegible]

5.2 Energy by Land Use - NaturalGas

Unmitigated

[illegible]

Rexland Acres Pipeline - Kern-San Joaquin County, Annual

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					
User Defined Industrial	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			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Rexland Acres Pipeline - Kern-San Joaquin County, Annual

5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					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	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					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	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

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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			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Rexland Acres Pipeline - Kern-San Joaquin County, Annual

7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	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

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	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			
User Defined Industrial	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
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

**APPENDIX 3
BIOLOGICAL RESOURCES ASSESSMENT**



47 1st Street, Suite 1
Redlands, CA 92373-4601
(909) 915-5900

Aug 29, 2019

Tom Dodson
Tom Dodson & Associates
2150 North Arrowhead Avenue
San Bernardino, CA 92405

RE: Biological Resources Assessment
Kern County Engineering and Survey Services Department
Rexland Acres Sewer Expansion Project
Bakersfield, CA, Kern County

Dear Mr. Dodson:

Jericho Systems, Inc. (Jericho) is pleased to provide the results of the general biological resources assessment (BRA) and Jurisdictional Waters Delineation (JD) report for the Kern County Engineering and Survey Services Department's Rexland Acres Sewer Expansion Project (Project) located in the community Rexland Acres located in south Bakersfield, western-central Kern County, CA.

This report is designed to address potential effects of the proposed Project to designated Critical Habitats and/or any species currently listed or formally proposed for listing as endangered or threatened under the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA), or species designated as sensitive by the California Department of Fish and Wildlife (CDFW), or the California Native Plant Society (CNPS). Attention was focused on sensitive biological resources known to occur locally (within a 3-mile radius of the Project area boundaries). This report also addresses resources protected under the Coastal Barriers Resources Act, Coastal Zone Management Act, Magnuson-Stevens Fishery Conservation and Management Act, the Protection of Wetlands – Executive Order 11990, Migratory Bird Treaty Act and Wild and Scenic Rivers Act.

The Project involves State Revolving Funds administered by the State Water Resources Control Board (SWRCB), the biological resources assessment was conducted in accordance with a process termed as CEQA-Plus (California Environmental Quality Act (CEQA)).

PROJECT LOCATION

The community of Rexland Acres is located southeast intersection of South Union Avenue and East Pacheco Road, Kern Island Canal on the east, South Union Avenue on the west, and Price Road on the south in the southern portion of the City of Bakersfield. The project area is located within a portion of Section 20, T30S, R28E, MDB&M, County of Kern, State of California. The eastern half of the Project can be located along the western border of the *Lamont* 7.5-minute USGS topographical quadrangle map, and the western portion of the Project area can be located along the eastern boundary of the *Gosford* 7.5-minute USGS topographical quadrangle map.

PROJECT DESCRIPTION

The proposed project is the construction of additional sewer lines within the rural community of Rexland Acres for collection and delivery of wastewater to the KSAWWTP for treatment and discharge. After comparing Alternatives 1 and 2, addressed in the October 2018 Preliminary Engineering Report (PER, refer to Appendix 1 of his document), the PER recommends implementation of Alternative 1 for the Sewer Expansion Project. Alternative 1 consists of the following specific project components:

- 620 linear feet (LF) of 12" PVC sewer main
- 16,140 LF of 8" PVC sewer main
- 182 sewer laterals, assumed to average 75 feet in length (13,650 LF), four (4) inches diameter
- 43 sewer manholes
- three (3) sewer clean-outs
- No land acquisition as all pipelines will be installed in public rights-of-way (ROW)
- repair of roads, including resurfacing of paved areas where required
- a connection to the existing Rexland Acres sewer system
- pipeline trenches will vary between 24" and 36", with a maximum depth of six (6) feet
- modification to the existing lift station to increase pumping capacity
- closure/destruction of the septic tanks
- assuming 182 Equivalent Dwelling Units for this project, average daily flows are estimated to be about 45,500 gallons per day (gpd)

Funding is being sought from the State Water Resources Control Board to support implementation of this proposed project. It is anticipated that the area shown on Figure 1-2 will be integrated into County Service Area (CSA) No. 11 as part of the overall project.

No additional land acquisition is necessary for this project, and all construction activities including installation of new and upgrading of existing infrastructure are not anticipated to impact

SPECIAL STATUS SPECIES AND HABITAT

As stated above, the objective of this document is to determine whether the Project area supports special status or otherwise sensitive species and/ or their habitat, and to address the potential effects associated with the Proposed project on those resources. The species and habitats addressed in this document are based on database information and field investigation.

Prior to conducting the field study, species and habitat information was gathered from the reports related to the specific project and relevant databases for the *Lamont* and *Gosford* USGS quadrangles to determine which species and/or habitats would be expected to occur on site. These sources include:

- U.S. Fish and Wildlife (USFWS) threatened and endangered species occurrence GIS overlay;
- USFWS Information for Planning and Consultation System (IPaC);
- California Natural Diversity Database (CNDDB) *Rarefind 5*);
- CNDDB Biogeographic Information and Observation System (BIOS);
- California Native Plant Society Electronic Inventory (CNPSEI) database;
- Calflora Database;
- USDA Natural Resources Conservation Service (NRCS) Web Soil Survey;
- USFWS National Wetland Inventory;
- Environmental Protection Agency (EPA) Water Program "My Waters" data layers

According to the database queries, 19 sensitive species been documented to occur in the *Buttonwillow* USGS 7.5-minute series quadrangle. Of the 19 sensitive species identified, 11 are State and/or federally listed as threatened or endangered. Table 1 below represents a compiled list of results from IPaC, CNDDDB and CNPS databases of listed species which have been documented within this quad and provides a potential to occur assessment based on the field investigation of the Project area and surveyor's knowledge of the species and local ecology (See attached database result

Table 1:
IPac, CNDDDB and CNPSI List of State and Federally Listed Species Occurrence Potential within the Project Area

Scientific Name	Common Name	Federal / State Status	Habitat	Potential to Occur
Mammals				
<i>Dipodomys ingens</i>	Giant Kangaroo Rat	Endangered/ None	This species inhabits annual grassland communities with few or no shrubs, well drained, sandy-loam soils located on gentle slopes (less than 11 percent) in areas with about 6.3 inches or less of annual precipitation. Associated with San Joaquin kit fox, blunt-nosed leopard lizards, San Joaquin antelope squirrel and California jewelflower.	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .
<i>Dipodomys nitratoides nitratoides</i>	Tipton Kangaroo Rat	Endangered/ Endangered	Open areas with flat terrain not subject to flooding is essential for permanent occupancy by Tipton kangaroo rats.	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .
<i>Eumops perotis californicus</i>	western mastiff bat	None/ None	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .
<i>Lasiurus cinereus</i>	hoary bat	None/ None	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .
<i>Taxidea taxus</i>	American badger	None/ None	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .
<i>Sorex ornatus relictus</i>	Buena Vista Lake Ornate Shrew	Endangered/ None	Habitat essential for the shrew contains riparian and wetland vegetation communities with an abundance of leaf litter and dense herbaceous cover. They are most	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .

Scientific Name	Common Name	Federal / State Status	Habitat	Potential to Occur
			commonly found in close proximity to a reliable body of water. Moist soil in areas with an overstory of willows or cottonwoods appears to be favored, but may not be an essential habitat feature.	
<i>Vulpes macrotis mutica</i>	San Joaquin Kit Fox	Endangered/Threatened	Kit fox are an arid-land-adapted species and typically occur in desert-like habitats characterized by sparse or absent shrub cover, sparse ground cover, and short vegetative structure in alkali scrub/shrub and arid grasslands. The kit fox is associated with areas having open, level, sandy ground that is relatively stone-free.	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .
Reptiles				
<i>Anniella grinnelli</i>	Bakersfield legless lizard	None/ None	Southern San Joaquin Valley. Known from two disjunct areas: the east side of the Carrizo Plain and portions of the city limits of Bakersfield. Microhabitat of this species is poorly known. Other legless lizard species occur in sparsely vegetated areas with moist, loose soil. Often found underneath leaf litter, rocks, and logs.	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .
<i>Arizona elegans occidentalis</i>	California glossy snake	None/ None	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .
<i>Gambelia silus</i>	Blunt-nosed Leopard Lizard	Endangered/Endangered	Typically inhabits open, sparsely vegetated areas of low relief on the San Joaquin Valley floor and in the surrounding foothills. They are most commonly found in Nonnative Grassland and Valley Sink Scrub communities, but are also found in Valley Needlegrass Grassland, Alkali Playa, and Atriplex Grassland.	Suitable habitat for this species does not exist within the Project. Species was not observed during survey. The potential for this species to occur is low .
<i>Thamnophis gigas</i>	Giant Garter Snake	Threatened/None	Occurs in marshes, sloughs, ponds, small lakes, low gradient streams and other waterways and agricultural wetlands. Habitat for the giant garter snake consists of (1) adequate water during the snake's active season, (2) emergent herbaceous wetland vegetation for escape and foraging habitat, (3) grassy banks and openings	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .

Scientific Name	Common Name	Federal / State Status	Habitat	Potential to Occur
			in waterside vegetation for basking, and (4) higher elevation upland habitat for cover and refuge from flooding.	
Birds				
<i>Athene cunicularia</i>	burrowing owl	None/ None	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .
<i>Buteo swainsoni</i>	Swainson's hawk	None/ Threatened	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, & agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .
Amphibians				
<i>Lithobates pipiens</i>	northern leopard frog	None/ None	Native range is east of Sierra Nevada-Cascade Crest. Near permanent or semi-permanent water in a variety of habitats. Highly aquatic species. Shoreline cover, submerged and emergent aquatic vegetation are important habitat characteristics.	Suitable habitat for this species does not exist within the Action Area. The potential for this species to occur is none .
<i>Rana draytonii</i>	California Red-legged Frog	Threatened/ None	Breeding sites of the California red-legged frog are in aquatic habitats including pools and backwaters within streams and creeks, ponds, marshes, springs, sag ponds, dune ponds and lagoons. Additionally, California red-legged frogs frequently breed in artificial impoundments such as stock ponds.	Suitable habitat for this species does not exist within the Action Area. The potential for this species to occur is none .
Fish				
<i>Hypomesus transpacificus</i>	Delta Smelt	Threatened/ None	This is an aquatic species.	Suitable habitat for this species does not exist within the Action Area. The potential for this species to occur is none .
Invertebrates				
<i>Bombus crotchii</i>	Crotch bumble bee	None/ None	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .
<i>Branchinecta lynchi</i>	Vernal Pool Fairy Shrimp	Threatened/ None	Endemic to the grasslands of the northern two-thirds of the Central	Suitable habitat for this species does not exist within the Action

Scientific Name	Common Name	Federal / State Status	Habitat	Potential to Occur
			Valley; found in large, turbid pools. Inhabit astatic pools located in swales formed by old, braided alluvium; filled by winter/spring rains, last until June.	Area. The potential for this species to occur is none .
<i>Lytta moesta</i>	moestan blister beetle	None/ None	Central California.	Restricted to vernal pool and grassland habitats on the San Joaquin valley floor. Suitable habitat for this species does not exist within the Action Area. The potential for this species to occur is none .
<i>Lytta morrisoni</i>	Morrison's blister beetle	None/ None	Inhabitant of the southern Central Valley of California.	Restricted to vernal pool and grassland habitats on the San Joaquin valley floor. Suitable habitat for this species does not exist within the Action Area. The potential for this species to occur is none .
Mollusks				
<i>Helminthoglypta callistoderma</i>	Kern shoulderband	None/ None	Known only from Tulare and Kern counties, along the lower Kern River Canyon. Has been collected from dead vegetation along the water's edge.	The Project area is in a developed area with paved roadways and existing commercial and residential structures. Suitable habitat for this species does not exist within the Project area. The potential for this species to occur is none .
Plants				
<i>Astragalus hornii</i> var. <i>hornii</i>	Horn's milk-vetch	None/ None	Meadows and seeps, playas. Lake margins, alkaline sites. 75-350 m.	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .
<i>Atriplex tularensis</i>	Bakersfield smallscale	None/ Endangered	Chenopod scrub, alkali seep. Historically in valley sink scrub or with saltgrass. 90-110 m.	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .
<i>Caulanthus californicus</i>	California jewelflower	Endangered/ Endangered	Occurs Upper Sonoran Subshrub Scrub, and Cismontane Juniper Woodland and Scrub communities at an elevation range of 230 - 3,280 feet.	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .
<i>Chloropyron molle</i> ssp. <i>hispidum</i>	hispid salty bird's-beak	None/ None	Meadows and seeps, playas, valley and foothill grassland. In damp alkaline soils, especially in alkaline meadows and alkali sinks with Distichlis. 5-155 m.	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .

Scientific Name	Common Name	Federal / State Status	Habitat	Potential to Occur
<i>Delphinium recurvatum</i>	recurved larkspur	None/ None	Chenopod scrub, valley and foothill grassland, cismontane woodland. On alkaline soils; often in valley saltbush or valley chenopod scrub. 3-790 m.	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .
<i>Eremalche parryi ssp. kernensis</i>	Kern mallow	Endangered/ None	The species occurs on alkali flats and eroded hillsides of the southern San Joaquin Valley and adjacent areas of California. It is often found growing under and around <i>Atriplex spinifera</i> (spiny saltbush), and <i>A. polycarpa</i> (common saltbush) or <i>Ephedra californica</i> (desert tea); at higher elevations (up to 5000 feet) it grows at the base of <i>Juniperus californicus</i> (California juniper) in the juniper scrub community. It typically grows in areas where shrub cover is less than 25 percent and average herbaceous cover ranges from 48 to 80 percent.	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .
<i>Imperata brevifolia</i>	California satintail	None/ None	Coastal scrub, chaparral, riparian scrub, mojavean desert scrub, meadows and seeps (alkali), riparian scrub. Mesic sites, alkali seeps, riparian areas. 3-1495 m.	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .
<i>Layia leucopappa</i>	Comanche Point layia	None/ None	Chenopod scrub, valley and foothill grassland. Dry hills in white-grey clay soils, often with weedy grasses. Does not reliably appear every year. 100-315 m.	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .
<i>Navarretia setiloba</i>	Piute Mountains navarretia	None/ None	Cismontane woodland, pinyon and juniper woodland, valley and foothill grassland. Red clay soils, or on gravelly loam. 180-1645 m.	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .
<i>Opuntia basilaris var. treleasei</i>	Bakersfield cactus	Endangered/ Endangered	Chenopod scrub, valley and foothill grassland, cismontane woodland. Coarse or cobbly well-drained granitic sand on bluffs, low hills, and flats, within grassland. 85-550 m.	Suitable habitat for this species does not exist within the Action Area. Species was not observed during survey. The potential for this species to occur is low .

Buena Vista Lake Ornate Shrew (*Sorex ornatus relictus*)

The Buena Vista Lake ornate shrew (shrew) is one of nine subspecies of ornate shrews known to occur in California. It is a small dull black to grey-brown shrew with a relatively short bicolored tail darker near the tip. It is about the size of a mouse and has a long-pointed snout, five toes on each foot, tiny beadlike eyes, soft fur, visible external ears, and a scaly, well developed tail covered with very short hairs. They are active during the day and night but are rarely seen due to their small size and cryptic behavior. They have a high rate of metabolism due to their small size and they constantly search for food to maintain their body temperatures, especially in cold conditions. They eat insects.

Habitat essential for the shrew contains riparian and wetland vegetation communities with an abundance of leaf litter and dense herbaceous cover. The shrews are most commonly found in close proximity to a reliable body of water.

Giant Kangaroo Rat (*Dipodomys ingens*)

The giant kangaroo rat is a small burrowing rodent with large hind limbs, long tail and large fur-lined cheek pouches adapted for bipedal locomotion (two-footed hopping). Giant kangaroo rats are primarily seed eaters, but also eat green plants and insects and inhabit annual grassland communities with few or no shrubs, well drained, sandy-loam soils located on gentle slopes (less than 11 percent) in areas with about 6.3 inches or less of annual precipitation. The kangaroo rats form colonies of burrows called precincts in which multiple individuals reside. They are primarily nocturnal and are active all year in all types of weather. When abundant locally, giant kangaroo rats are significant prey items for many species, including the Federal and State listed endangered San Joaquin kit fox (*Vulpes macrotis mutica*).

Giant kangaroo rat habitat is currently fragmented into six major geographic units: (1) the Ciervo-Panoche Region in western Fresno and eastern San Benito Counties; (2) Kettleman Hills in southwestern Kings County; (3) San Juan Creek Valley in eastern San Luis Obispo County; (4) the Lokern area, Elk Hills (NPR1), that includes Buena Vista and McKittrick Valleys, NPR-2, Taft, and Maricopa in western Kern County; (5) the Carrizo Plains in eastern San Luis Obispo County; and (6) the Cuyama Valley along the eastern Santa Barbara-San Luis Obispo County line (USFWS 1998).

Currently, the giant kangaroo rat inhabits areas of both annual grasslands and shrub communities with various soil types and slopes up to 22 percent.

Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*)

The Tipton kangaroo rat is one of three subspecies of the San Joaquin kangaroo rat (*Dipodomys nitratoides* ssp.), morphologically distinguished by being larger than the Fresno kangaroo rat (*Dipodomys nitratoides exilis*) and smaller than the short-nosed kangaroo rat (*Dipodomys nitratoides brevinasus*). Kangaroo rat adaptations for two-footed hopping include elongated hind limbs and a long, tufted tail for balance. Tipton kangaroo rats eat mostly seeds. Burrow systems, normally less than 10 inches deep, are usually in open areas.

Flat terrain not subject to flooding is essential for permanent occupancy by Tipton kangaroo rats. Valley saltbrush scrub and valley sink scrub communities provide the habitat for the Tipton kangaroo rat. They occupy alluvial fan and floodplain soils ranging from fine sands to clay-sized particles with high salinity. Level- to nearly-level terrains are occupied. Although Tipton kangaroo rats occur in terrace grasslands devoid of woody shrubs, sparse-to-moderate shrub cover is associated with populations of high density.

San Joaquin Kit Fox (*Vulpes macrotis mutica*)

The San Joaquin kit fox is the larger of two subspecies of the kit fox, *Vulpes macrotis*, the smallest canid species in North America. The San Joaquin kit fox, on average, weighs 5 pounds, and stands 12 inches tall. It has a small slim body, large close-set ears, and a long bushy tail that tapers at the tip. Depending on location and season, the fur coat of the kit fox varies in color and texture from buff to tan or yellowish-grey. The tail is distinctly black tipped. Kit fox are an arid-land-adapted species and typically occur in desert-like habitats in North America.

They historically ranged in alkali scrub/shrub and arid grasslands throughout the level terrain of the San Joaquin Valley floor from southern Kern County north to Tracy in San Joaquin County, and up into more gradual slopes of the surrounding foothills and adjoining valleys of the interior Coast Range. Within this range, the kit fox has been associated with areas having open, level, sandy ground that is relatively stone-free to depths of about 3 to 4.5 feet. The San Joaquin kit fox utilizes subsurface dens, which may extend to 6 feet or more below ground surface, for shelter and for reproduction. Kit fox subspecies are absent or scarce in areas where soils are shallow due to high water tables, impenetrable hardpans, or proximity to parent material, such as bedrock. The kit fox also does not den in saturated soils or in areas subjected to periodic flooding

The San Joaquin kit fox is primarily nocturnal. The kit fox diet varies geographically, seasonally, and annually. It includes nocturnal rodents such as kangaroo rats, white-footed mice and pocket mice (*Peromyscus* spp.), California ground squirrels (*Spermophilus beecheyi*), rabbits (*Sylvilagus* spp.) and hares (*Lepus* spp.), San Joaquin antelope squirrels (*Ammospermophilus nelsoni*), and ground-nesting birds.

Habitat associated with kit fox consists of alkali sink and alkali flat habitat types, with dominant plant species including *Atriplex polycarpa* (saltbush), *Allenrolfea occidentalis* (iodine bush), *Amaranthus albus* (tumbleweed), *Frankenia grandifolia* (alkali heath), and *Salicornia subterminalis* (pickleweed) widely spaced.. In most other areas of the valley and surrounding lower foothills, kit fox is found in annual grassland habitat typified by *Bromus* spp.(brome grass), *Festuca* spp. (fescue), *Avena fatua* (wild oats), *Hordeum* spp. (barley), and *Erodium* (filaree). Kit fox presence is generally negatively associated with ruggedness.

Critical Habitat

The Project area is not located within or directly adjacent to any designated Critical Habitat.

EXISTING CONDITION – AFFECTED ENVIRONMENT

The city of Bakersfield and its southern neighborhood of Rexland Acres is situated at the southern end of the San Joaquin Valley, and is bound by the Coast Range to the west, the Transverse Range (San Emigdio Mountains) to the south, and the Sierra Nevada (including the Tehachapi Mountains) to the east. Prior development activities have altered the current environment and native plants have for the most part been removed as a result. The climate here is arid.

On August 16, 2019, Ecologist Todd White conducted field surveys of the Project area with focus on potential habitat for federally listed species and migratory birds. Mr. White is a qualified biologist with an advanced degree in Biology and 20 years of experience surveying for the sensitive species known to in California. He surveyed the Project area on a calm weather day, during peak animal activity, between 6:00 a.m. and 4:30 p.m. General wildlife species were detected during field surveys by sight, calls, tracks, scat, or other signs. In addition to species observed, expected wildlife usage of the site was determined according to known habitat preferences of regional wildlife species and knowledge of their relative distributions in the area. Mr. White assessed the Project area for habitat type structure, species composition/association, condition and human disturbances. The main focus of the surveys was to identify sensitive species and habitat including jurisdictional waters and to evaluate the potential for sensitive species to occur within the Project area.

The project will take place within existing paved and unpaved roadway alignments, lots and parcels currently developed supporting residential and commercial structures, and existing utility infrastructure footprints. The surroundings consist of residential, commercial and agricultural development. The majority of the open lands that could potentially support habitats for the above listed species are to the east of the Site and are separated from the Project area by a moderately flowing canal spanning 40 feet across.

An approximately 6.5-acre vacant parcel located at the southwest end of the Project bordering the east side of Union Road just north of Buckley Ave contains relatively undisturbed saltbush habitat. The area is fenced and unavailable for survey. Although this area is outside of the project footprint, it should be noted that there is potential for sensitive resources here.

EFFECTS ANALYSIS

Federal Endangered Species Act (ESA)

The USFWS administers the federal ESA of 1973. The ESA provides a legal mechanism for listing species as either threatened or endangered, and a process of protection for those species listed. Section 9 of the ESA prohibits "take" of threatened or endangered species. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. "Take" can include adverse modification of habitats used by a threatened or endangered species during any portion of its life history. Under the regulations of the ESA, the USFWS may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act. Take authorization can be obtained under Section 7 or Section 10 of the act.

No suitable habitat for San Joaquin kit fox, giant kangaroo rat, Tipton kangaroo rat or Ornate shrew exist within or adjacent to the Project area. No adverse Project-related direct or indirect impacts will not result to federally protected species.

California Endangered Species Act (CESA)

The CDFW administers the State CESA. The State of California considers an endangered species one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is one present in such small numbers throughout its range that it is likely to become an endangered species soon, in the absence of special protection or management. And a rare species is one present in such small numbers throughout its range that it may become endangered if its present environment worsens. Rare species applies to California native plants. Further, all raptors and their nests are protected under Section 3503.5 of the California Fish and Game Code (FGC). Species of Special Concern (SSC) is an informal designation used by CDFW for some declining wildlife species that are not proposed for listing as threatened or endangered. This designation does not provide legal protection but signifies that these species are recognized as sensitive by CDFW.

No suitable habitat for State-listed species exists within or adjacent to the Project area. No adverse Project-related direct or indirect impacts will not result to State protected species.

Coastal Barriers Resources Act Resources

The Coastal Barrier Resources Act (CBRA) was passed by Congress in 1982 to encourage conservation of hurricane-prone, biologically rich coastal barriers. CBRA prohibits most new federal expenditures that

encourage development or modification of coastal barriers. CBRs boundaries are shown on maps that were originally adopted by Congress and are maintained by the USFWS.

Currently, the coastal barrier resource systems are located along the Atlantic and Gulf Coasts of the United States and the shore areas of the Great Lakes. Therefore, the Project is not located in a Coastal Barriers Resources Act area.

Coastal Zone Management Act Resources

Coastal Zone Management Act was passed by Congress in 1972 and is administered by National Oceanic and Atmospheric Administration, (NOAA). It provides for the management of the nation's coastal resources, including the Great Lakes. The goal is to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone."

The Project is not located in a Coastal Zone that where the provisions of this Act would be applicable.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) is the primary law governing marine fisheries management in U.S. federal waters. First passed in 1976, the Magnuson-Stevens Act fosters long-term biological and economic sustainability of our nation's marine fisheries out to 200 nautical miles from shore. The goals of the act include: prevent overfishing; rebuild overfished stocks; increase long-term economic and social benefits; use reliable data and sound science; conserve essential fish habitat; ensure a safe and sustainable supply of seafood.

The Project is not located 200 nautical miles from shore, nor does it impact any essential fish habitat that would impact regulated areas 200 nautical miles from shore.

Protection of Wetlands – Executive Order 11990

Protection of Wetlands – Executive Order 11990: The purpose of Executive Order (EO) 11990 is to "minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands". To meet these objectives, the Order requires federal agencies, in planning their actions, to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. The procedures require the determination of whether or not the proposed project will be in or will affect wetlands. If so, a wetlands assessment must be prepared that describes the alternatives considered. The procedures include a requirement for public review of assessments. The evaluation process follows the same 8 steps as for EO 11988, Floodplain Management.

Wetlands are the at transition between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. Wetlands have one or more of the following three attributes: 1) at least periodically, the land supports predominantly hydrophytes; 2) soils are undrained; and 3) the substrate is saturated with water or covered by shallow water at some time during the growing season of each year. Under current guidelines, a federal jurisdictional wetland must display all three wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. In California however, a jurisdictional wetland needs to meet only one of these parameters.

No drainages or indications of wetlands, hydric soils, naturally occurring indicator plant species were observed during the field survey nor are any expected to occur. There are no jurisdictional wetlands

within or immediately adjacent to any of the Project components identified in the Project description. No impact to wetland areas will result from implementation of the proposed Project.

Migratory Bird Treaty Act (MBTA)

The federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C 703-711) provides protection for nesting birds that are both residents and migrants whether or not they are considered sensitive by resource agencies. The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed under 50 CFR 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The direct injury or death of a migratory bird, due to construction activities or other construction-related disturbance that causes nest abandonment, nestling abandonment, or forced fledging would be considered take under federal law. The USFWS, in coordination with the CDFW administers the MBTA. CDFW's authoritative nexus to MBTA is provided in FGC Sections 3503.5 which protects all birds of prey and their nests and FGC Section 3800 which protects all non-game birds that occur naturally in the State.

The Rexland Acres neighborhood is an older development with many mature trees and vegetation. This vegetation provides suitable nesting opportunities for birds in general. As discussed, most birds are protected by the MBTA. Impacts to all bird species (common and special status) can be avoided by conducting work outside of the nesting season, which is generally January/February to August/September.. However, if all work cannot be conducted outside of nesting season, preconstruction Nesting Bird Surveys are recommended prior to the commencement of any Project activities that may will result in vegetation disturbances within the nesting season (February to September)..

Wild and Scenic Rivers Act.

Wild and Scenic Rivers Act. The National Wild and Scenic Rivers System was created by Congress in 1968 (Public Law 90-542; 16 U.S.C. 1271 et seq.) to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. The Act is notable for safeguarding the special character of these rivers, while also recognizing the potential for their appropriate use and development. It encourages river management that crosses political boundaries and promotes public participation in developing goals for river protection. Rivers may be designated either a federal or state agency. As of 2019, there were 22 water body sections have a wild and scenic river designation in California.

The Project is not located within a water body that is designated by the Wild and Scenic Rivers Act.

CONCLUSION

The proposed Project will not adversely affect Critical Habitat as none exists within the Project area. Further the Project will not impact listed species either directly or indirectly including the San Joaquin kit fox, giant kangaroo rat and Tipton kangaroo rat. There will be no affect to listed species or to species considered sensitive.

Tom Dodson
Rexland BRA
August 2019
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Thank you for asking us to assist you with this project. If you have any questions or need any clarifications, contact me at (909) 915-5900 or at shay@jericho-systems.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Shay Lawrey". The signature is fluid and cursive, with a long horizontal stroke extending from the end.

Shay Lawrey, President
Ecologist/Regulatory Specialist

Attachments:

- Site Photos
- Figures
- Database Search Results



Photo 1
Typical site
existing
conditions of
Sewer
alignment.



Photo 2
View of canal
crossing.



Photo 3
Typical view
within
residential
area.



Photo 4
View along
commercial
area..

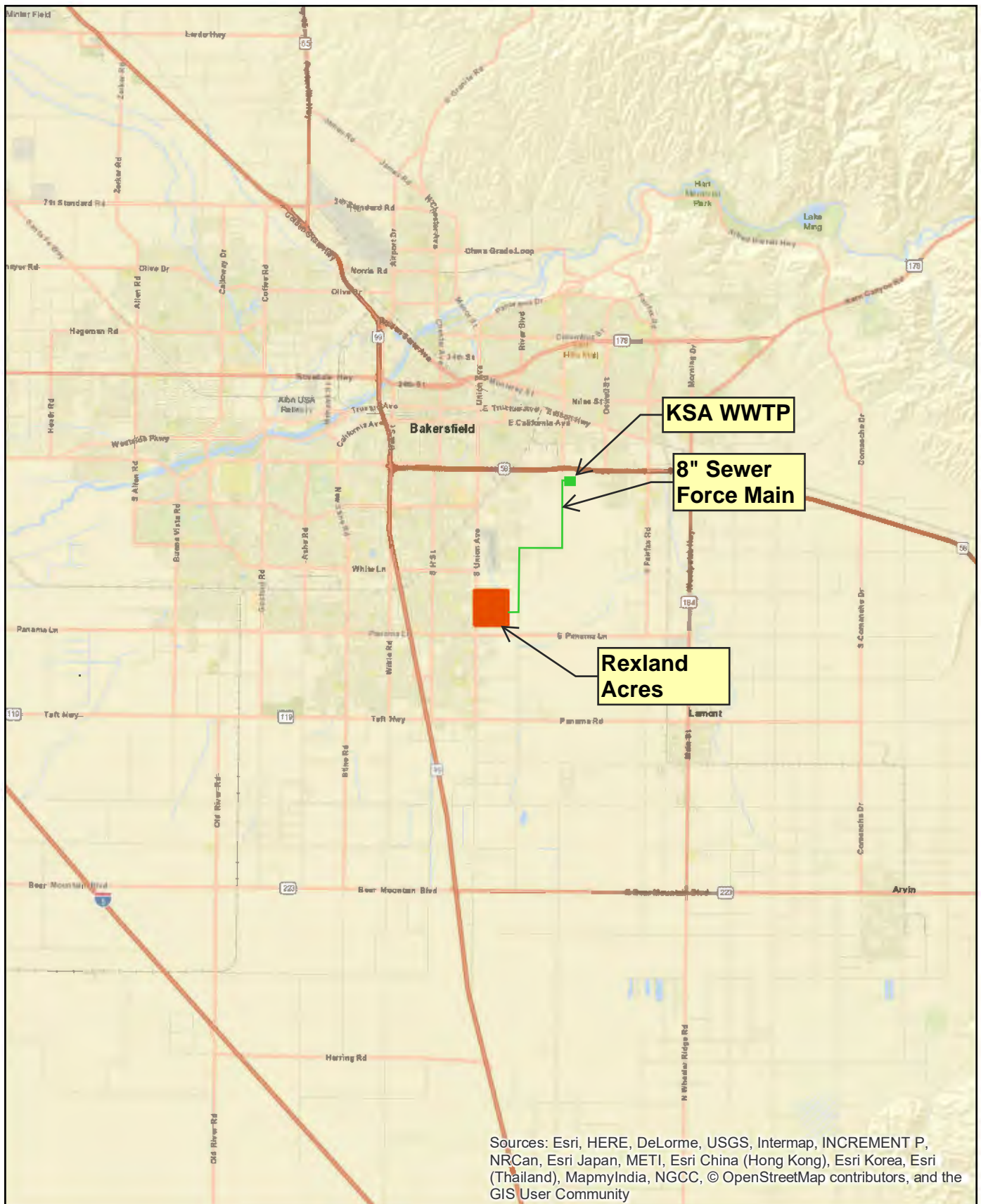
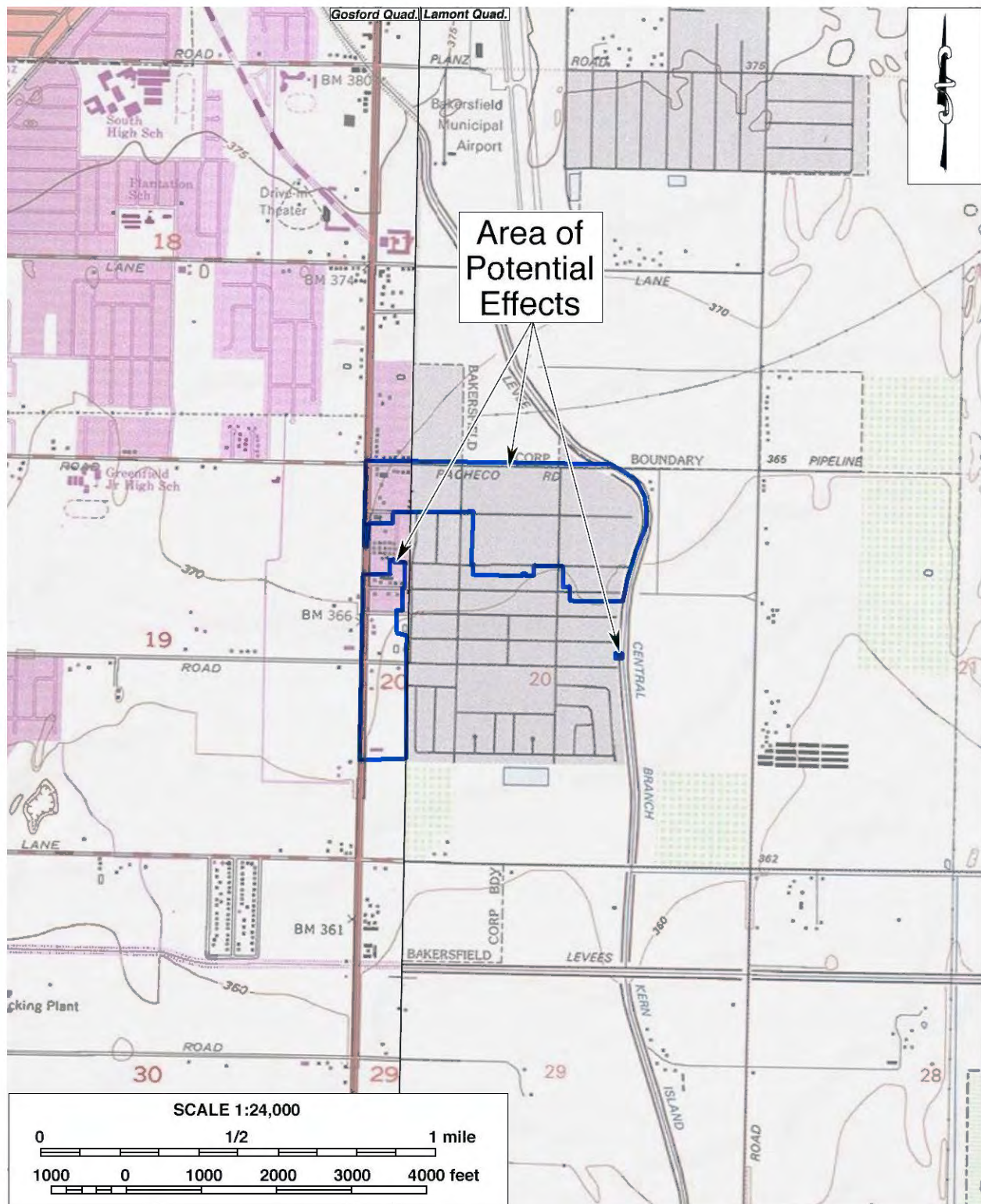


Figure 1-1

Project Location

Rexland Acres Sewer Expansion















 EST. 1968 PROVOST & PRITCHARD CONSULTING GROUP <i>An Employee Owned Company</i>	 0 200 400 Feet	 Existing SSCO	 Existing SS Line
		 Existing SSMH	 Proposed SS Line
		 Proposed SSCO	 Original Service Area Boundary
		 Proposed SSMH	 Expanded Service Area Boundary

Figure 1-2
Sewer Collection System
Alternative 1
Rexland Acres Sewer Expansion
Self-Help Enterprises














 EST. 1968 PROVOST & PRITCHARD CONSULTING GROUP <i>An Employee Owned Company</i>	 0 200 400 Feet	 Existing-SSCO	 Existing SS Line
		 Existing-SSMH	 Proposed SS Line
	 Original Service Area  Expanded Service Area	 Proposed-SSCO	
		 Proposed-SSMH	
		Commercial Property wanting Sewer Service	

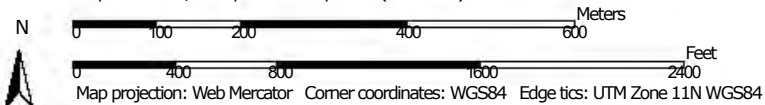
Figure 1-3
Sewer Collection System
Alternative 2
Rexland Acres Sewer
Expansion
Self-Help Enterprises

Soil Map—Kern County, California, Northwestern Part
(Rexland Acres - Bakersfield)



Soil Map may not be valid at this scale.

Map Scale: 1:9,100 if printed on A portrait (8.5" x 11") sheet.



Natural Resources
Conservation Service


Web Soil Survey
National Cooperative Soil Survey

8/28/2019
Page 1 of 3

Soil Map—Kern County, California, Northwestern Part
(Rexland Acres - Bakersfield)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Kern County, California, Northwestern Part

Survey Area Data: Version 11, Sep 14, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 25, 2019—Mar 15, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
174	Kimberlina fine sandy loam, 0 to 2 percent slopes MLRA 17	1.3	0.8%
179	Kimberlina fine sandy loam, saline-sodic, 0 to 2 percent slopes	16.5	9.8%
180	Kimberlina-Urban land-Cajon complex, 0 to 2 percent slopes	150.0	89.4%
Totals for Area of Interest		167.8	100.0%



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713



In Reply Refer To:

August 28, 2019

Consultation Code: 08ESMF00-2019-SLI-2886

Event Code: 08ESMF00-2019-E-09221

Project Name: Rexland Acres Sewer Expansion Project - Bakersfield

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2019-SLI-2886

Event Code: 08ESMF00-2019-E-09221

Project Name: Rexland Acres Sewer Expansion Project - Bakersfield

Project Type: WASTEWATER PIPELINE

Project Description: Install 620 linear feet sewer lines and associated infrastructure in the Rexland Acres area of Bakersfield, CA to remove approximately 190 dwellings from current septic tank systems.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/35.30499532471487N118.99244633590469W>



Counties: Kern, CA

Endangered Species Act Species

There is a total of 12 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Buena Vista Lake Ornate Shrew <i>Sorex ornatus relictus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1610	Endangered
Giant Kangaroo Rat <i>Dipodomys ingens</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6051	Endangered
San Joaquin Kit Fox <i>Vulpes macrotis mutica</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2873	Endangered
Tipton Kangaroo Rat <i>Dipodomys nitratoides nitratoides</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7247 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/40/office/11420.pdf	Endangered

Birds

NAME	STATUS
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is proposed critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Blunt-nosed Leopard Lizard <i>Gambelia silus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/625	Endangered
Giant Garter Snake <i>Thamnophis gigas</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Crustaceans

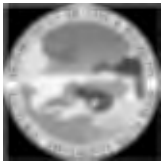
NAME	STATUS
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
Bakersfield Cactus <i>Opuntia treleasei</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7799	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.



Selected Elements by Common Name

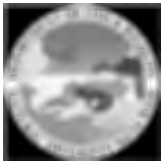
California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad IS (Lamont (3511838) OR Gosford (3511931))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
American badger <i>Taxidea taxus</i>	AMAJF04010	None	None	G5	S3	SSC
Bakersfield cactus <i>Opuntia basilaris</i> var. <i>treleasei</i>	PDCAC0D055	Endangered	Endangered	G5T1	S1	1B.1
Bakersfield legless lizard <i>Anniella grinnelli</i>	ARACC01050	None	None	G2G3	S2S3	SSC
Bakersfield smallscale <i>Atriplex tularensis</i>	PDCHE04240	None	Endangered	GX	SX	1A
blunt-nosed leopard lizard <i>Gambelia sila</i>	ARACF07010	Endangered	Endangered	G1	S1	FP
burrowing owl <i>Athene cunicularia</i>	ABNSB10010	None	None	G4	S3	SSC
California glossy snake <i>Arizona elegans occidentalis</i>	ARADB01017	None	None	G5T2	S2	SSC
California satintail <i>Imperata brevifolia</i>	PMPOA3D020	None	None	G4	S3	2B.1
Comanche Point layia <i>Layia leucopappa</i>	PDAST5N0A0	None	None	G1	S1	1B.1
Crotch bumble bee <i>Bombus crotchii</i>	IIHYM24480	None	None	G3G4	S1S2	
Great Valley Cottonwood Riparian Forest <i>Great Valley Cottonwood Riparian Forest</i>	CTT61410CA	None	None	G2	S2.1	
hispid salty bird's-beak <i>Chloropyron molle</i> ssp. <i>hispidum</i>	PDSCR0J0D1	None	None	G2T1	S1	1B.1
hoary bat <i>Lasiurus cinereus</i>	AMACC05030	None	None	G5	S4	
Horn's milk-vetch <i>Astragalus hornii</i> var. <i>hornii</i>	PDFAB0F421	None	None	G4G5T1T2	S1	1B.1
Kern shoulderband <i>Helminthoglypta callistoderma</i>	IMGASC2080	None	None	G1	S1	
moestan blister beetle <i>Lytta moesta</i>	IICOL4C020	None	None	G2	S2	
Morrison's blister beetle <i>Lytta morrisoni</i>	IICOL4C040	None	None	G1G2	S1S2	
northern leopard frog <i>Lithobates pipiens</i>	AAABH01170	None	None	G5	S2	SSC
Piute Mountains navarretia <i>Navarretia setiloba</i>	PDPLM0C0S0	None	None	G2	S2	1B.1
recurved larkspur <i>Delphinium recurvatum</i>	PDRAN0B1J0	None	None	G2?	S2?	1B.2



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	AMAJA03041	Endangered	Threatened	G4T2	S2	
Swainson's hawk <i>Buteo swainsoni</i>	ABNKC19070	None	Threatened	G5	S3	
Tipton kangaroo rat <i>Dipodomys nitratoide nitratoide</i>	AMAFD03152	Endangered	Endangered	G3T1T2	S1S2	
Valley Saltbush Scrub <i>Valley Saltbush Scrub</i>	CTT36220CA	None	None	G2	S2.1	
western mastiff bat <i>Eumops perotis californicus</i>	AMACD02011	None	None	G5T4	S3S4	SSC

Record Count: 25

**APPENDIX 4
CULTURAL RESOURCES**

(CONFIDENTIAL)