



PUBLIC WORKS DEPARTMENT

(650) 877-8550
FAX (650) 877-8665

February 26, 2016

San Francisco Bay Regional Water Quality Control Board
Attn: Bruce Wolfe, Executive Officer
1515 Clay Street, Suite 1400
Oakland, CA 94612

Re: Oyster Point Landfill, City of South San Francisco, Requirement for Submittal of Technical Reports Pursuant to Water Code Section 13267

Dear Mr. Wolfe,

Pursuant to the above-referenced 13267 Order issued on December 10, 2015, the City of South San Francisco ("City") submits the enclosed Short-Term Flood Protection Plan and Implementation Schedule for your review ("Short-Term Plan"). As a reminder, the City obtained an extension to submit the Short-Term Plan by February 29, 2016, based upon an email from Mr. Vic Pal dated January 6, 2016. Mr. Pal stated that the Regional Board is willing to forgo enforcement of the original January 30th deadline provided the Short-Term Plan is submitted by February 29, 2016, and that such plan is acceptable to the Executive Officer.

The City and its consultant have met with Mr. Pal and other Regional Board staff to discuss the contents of the Short-Term Plan. Therefore, the City believes that you will find the enclosed plan to be acceptable.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. I certify under penalty of law that the enclosed document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

If you have any questions regarding the Short-Term Plan, please contact me at Brian.McMinn@ssf.net or (650) 877-8550.

CITY COUNCIL 2016

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MIKE FUTRELL, CITY MANAGER

Sincerely,



Brian McMinn, P.E., P.L.S.
Director of Public Works/City Engineer
City of South San Francisco


Enclosures: Tetra Tech Technical Memorandum for STFPP for Oyster Point Landfill
Oyster Point Ponding & Inundation Figures

cc: Vic Pal, SF Bay Regional Water Quality Control Board (vpal@waterboards.ca.gov)
Mike Futrell, City Manager
Jason Rosenberg, City Attorney
Steve McGrath, SMC Harbor District (smcgrath@smharbor.com)
Greg Acosta, Tetra Tech (greg.acosta@tetrattech.com)

TECHNICAL MEMORANDUM

To: Mr. Brian McMinn, Director of Public Works/City Engineer
City of South San Francisco

Cc:

From: Gregory Saul, P.E. 

Date: February 24, 2016

Subject: Short-Term Flood Protection Plan for the Oyster Point Landfill



The Short-Term Flood Protection Plan as presented herein addresses mitigation measures that can be implemented in the near future to address the current flooding and ponding observed at the Oyster Point Landfill, especially during King Tide events. This report has been prepared by Tetra Tech BAS (TTBAS) in response to the San Francisco Bay Regional Water Quality Control Board (RWQCB) December 10, 2015 letter issued to the City of South San Francisco (City).

It is understood that the RWQCB, the City, the San Mateo County Harbor District, and members of the community have expressed concern over ponding and flooding at the landfill. To address these concerns the RWQCB has required the City to prepare a Short-Term Flood Protection Plan and Implementation Schedule for correcting the ponding and flooding issues. In addition, the RWQCB required that the City prepare a Long-Term Flood Protection Plan and Implementation Schedule that considers mitigation measures for protecting the site from the inundation during the King Tide events and from rising during a 100-year flood event as the sea level rises due to impacts of climate change. The Long-Term Plan will be submitted later. Areas of inundation observed during recent King Tide events are shown in Figure 5. These areas will be addressed in the Long-Term plan as well as areas projected to be inundated or flooded due to sea level rise.

1.0 CURRENT SITE CONDITIONS

TTBAS has inspected the site and performed a field and aerial topographic survey to assess the landfill's current site conditions and to design the appropriate mitigation measures to address the current ponding and flooding issues. During our review of the site, it has become clear that the ponding and flooding of the site are triggered by separate conditions and thus should be mitigated in separate manners.

As previously stated the flooding at the site was observed during King Tide events in which the tidal waters crested at an elevation of over 8 feet above mean sea level (msl), which results areas on the site that are under 8 feet in elevation being subject to flooding. Another cause of the ponding observed onsite is the King Tide water levels rising above the elevation of the storm drain outlets allowing water to flow from the bay back through the storm drain onto the site. This condition occurs in areas where the catch basin is located below 8 feet elevation msl.

The ponding issues are caused by low spots on the surface of the landfill cover and are likely caused by the differential settlement of the site, which is typical for landfills as the refuse is very heterogeneous in nature and often has varying degrees of consolidation throughout the waste prism.

The following section will address the short-term measures to be implemented in order to correct the ponding and the flooding caused by tidal waters flowing back through the storm drains. The flooding caused by the King Tides inundating the lower elevation areas of the site (See Figure 5) will require further analysis, which will be included in the Long-Term Flood Protection Plan since the implementation of these measures will require a long term planning and the

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programming of funding to address these conditions. It should be noted that once the remedial grading and resurfacing is completed the surface drainage pathways will be restored and allow the waters to recede from the lower area of the site as the King Tide ebbs without the current ponding.

2.0 SHORT TERM PROTECTION MEASURES

The short-term measures that TTBAS is recommending be implemented at the site include the regrading of low spots in a manner that promotes drainage toward the nearest drainage structure. The observed areas that have been subject to ponding are identified on Figures 1 -3 (attached). Most of these low spots are located in paved roadways or parking lots and will require an asphalt concrete (AC) patch after regrading the area is completed. TTBAS is proposing two alternatives for repairing the paved surface once the low areas have been regraded to drain: 1) place AC patches with cold patch AC material in areas where the ponding is minor or a quick repair is required or 2) replace the entire AC section (base material and hot mix asphalt) for larger areas of settlement. Note alternative 2 will require a detailed plan and specification and the City may be required to bid the construction.

It is TTBAS' understanding that the areas that require only minor remedial grading and small AC patches would be constructed by the City's operations staff. For these areas, we suggest a meeting in the field between TTBAS and the City's operations staff to review the low areas and discuss repair methodology. If the City prefers to use an alternative to the Cold Patch AC, a more robust AC patching method may be substituted.

In order to prevent the tidal waters from flowing back through the storm drains, TTBAS is recommending retrofitting the storm drain outlets by installing a check valve, specifically designed for tidal areas that closes from rising tides and wave action. TTBAS has included Figure 4, which illustrates the operation of the check valves.

3.0 IMPLEMENTATION SCHEDULE

The implementation schedule for the proposed flood protection measures is shown in the table below. The implementation begins upon RWQCB approval of the Short-Term Plan:

Task	Duration
Prepare Plans and Specifications	3 Weeks
Governing Body Approvals	4 Weeks
Bidding Process	12 Weeks
Construction	6 Weeks
Total	25 Weeks

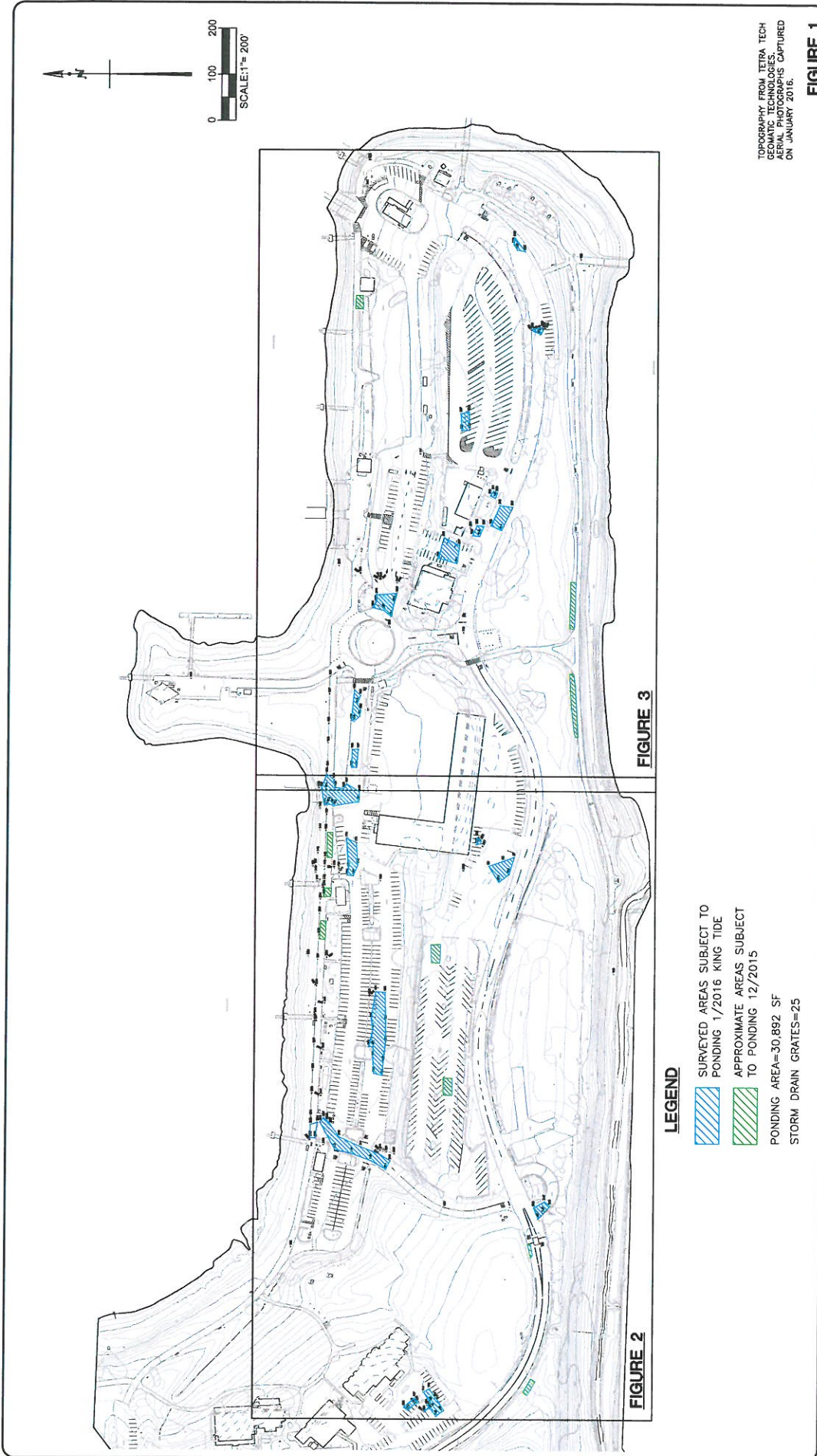
4.0 CLOSURE


As stated above, subsequent to the Short Term Plan, TTBAS will prepare an implementation plan for the long-term flood protection measures that will include the design of infrastructure to protect the site from rising tides in both the current bay levels and with future projected sea level rise.

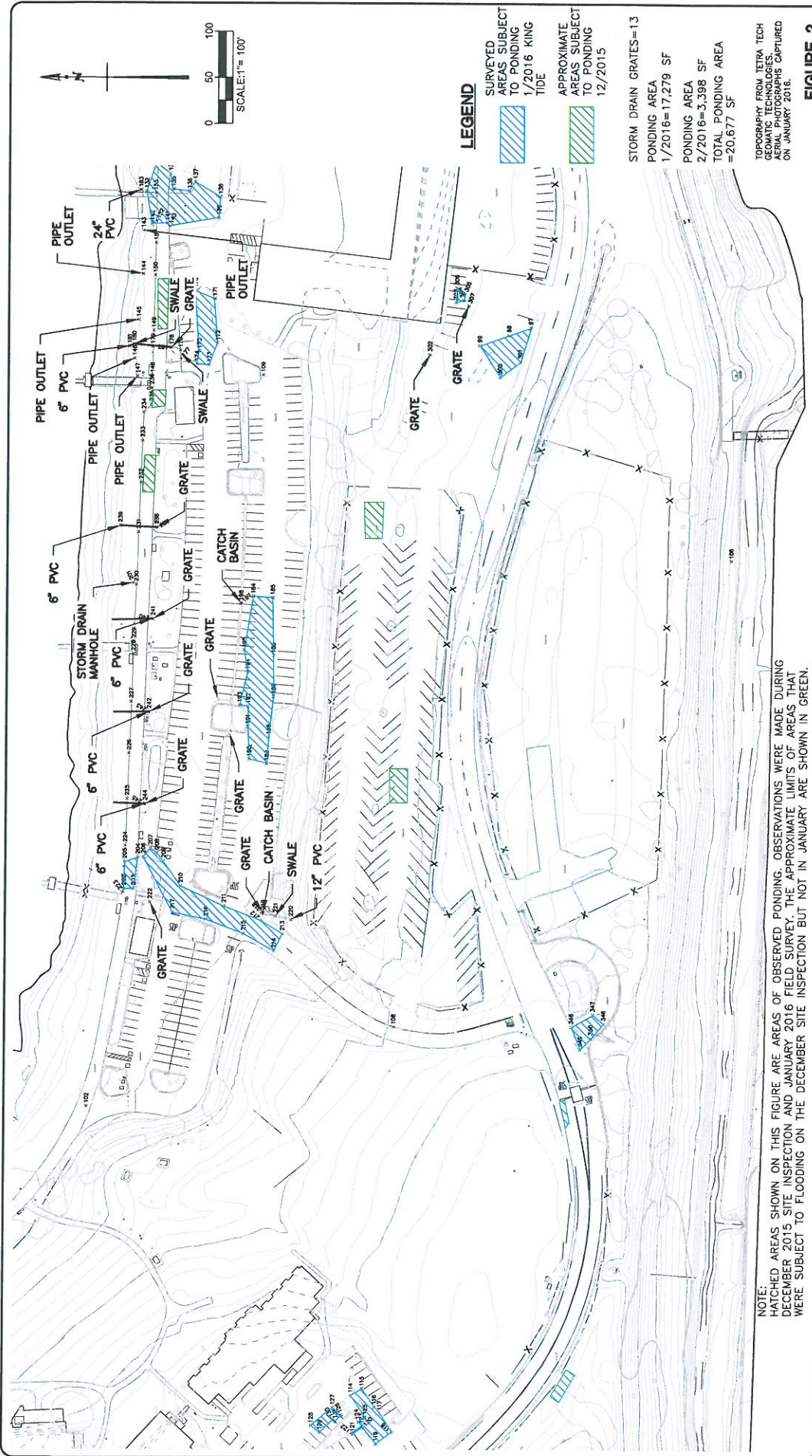
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 TETRA TECH BAS 1360 VALLEY VISTA DRIVE, DIAMOND BAR, CA 91765 TEL 909.860.7777 FAX 909.860.8017	OYSTER POINT
	SITE MAP
JOB NO. 000-0000-0000	DATE FEBRUARY 2016
DRAWN BY J.L.V.	REVISION: 0



NOTE: HATCHED AREAS SHOWN ON THIS FIGURE ARE AREAS OF OBSERVED PONDING. OBSERVATIONS WERE MADE DURING DECEMBER 2015 SITE INSPECTION AND JANUARY 2016 FIELD SURVEY. THE APPROXIMATE LIMITS OF AREAS THAT WERE SUBJECT TO FLOODING ON THE DECEMBER SITE INSPECTION BUT NOT IN JANUARY ARE SHOWN IN GREEN.

LEGEND

SURVEYED AREAS SUBJECT TO PONDING 1/2016 KING TIDE

APPROXIMATE AREAS SUBJECT TO PONDING 12/2015

STORM DRAIN GRATES=13

PONDING AREA 1/2016=17,279 SF

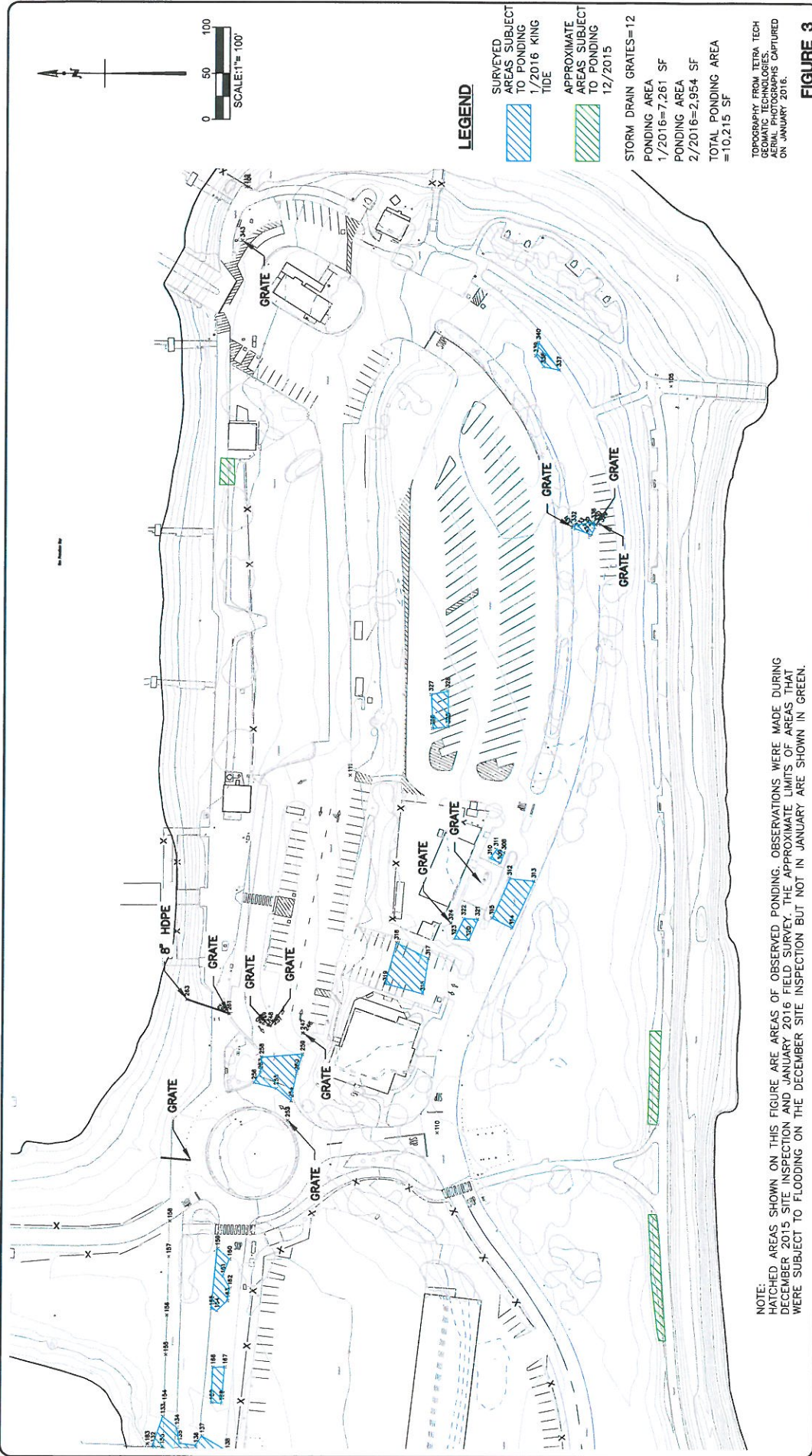
PONDING AREA 2/2016=3,398 SF

TOTAL PONDING AREA =20,677 SF

TOPOGRAPHY FROM TETRA TECH GEOMATIC TECHNOLOGIES. AERIAL PHOTOGRAPHS CAPTURED ON JANUARY 2016.

FIGURE 2

<p>TETRA TECH BAS</p> <p>1360 VALLEY VISTA DRIVE, DIAMOND BAR, CA 91765 TEL. 909.860.7777 FAX 909.860.8017</p>	<p>JOB NO. 000-0000-0000</p> <p>DATE FEBRUARY 2016</p> <p>DRAWN BY J.L.V.</p> <p>REVISION: 0</p>
	<p>OYSTER POINT</p> <p>PONDING AREAS</p>



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FIGURE 3

TOPOGRAPHY FROM TETRA TECH
 GEOMATIC TECHNOLOGIES
 SURVEY POINTS CAPTURED
 ON JANUARY 2016.

OYSTER POINT

PONDING AREAS

TETRA TECH BAS

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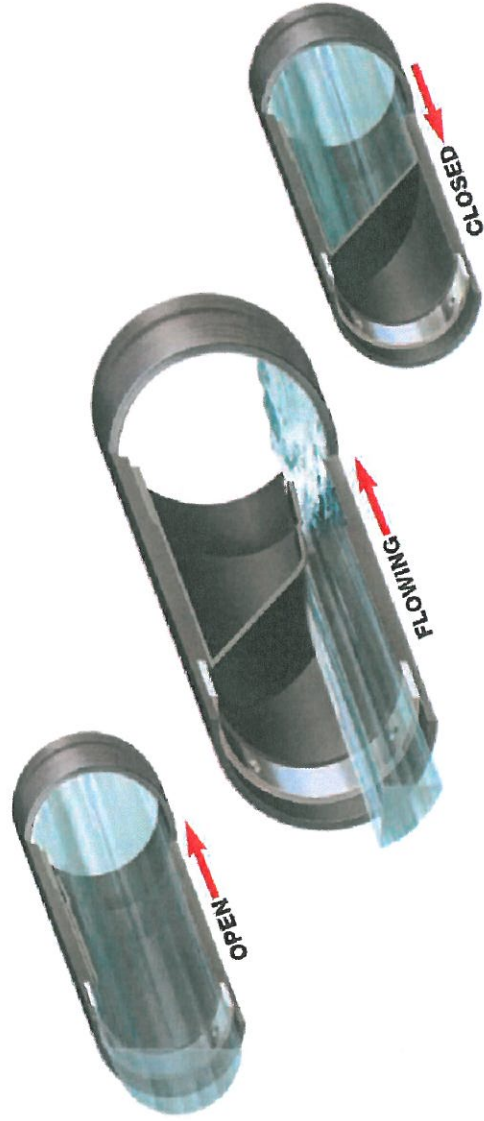


ILLUSTRATION FROM TIDEFLEX TECHNOLOGIES
CHECKMATE IN-LINE CHECK VALVE BROCHURE

FIGURE 4

OYSTER POINT

CHECK VALVE DETAIL

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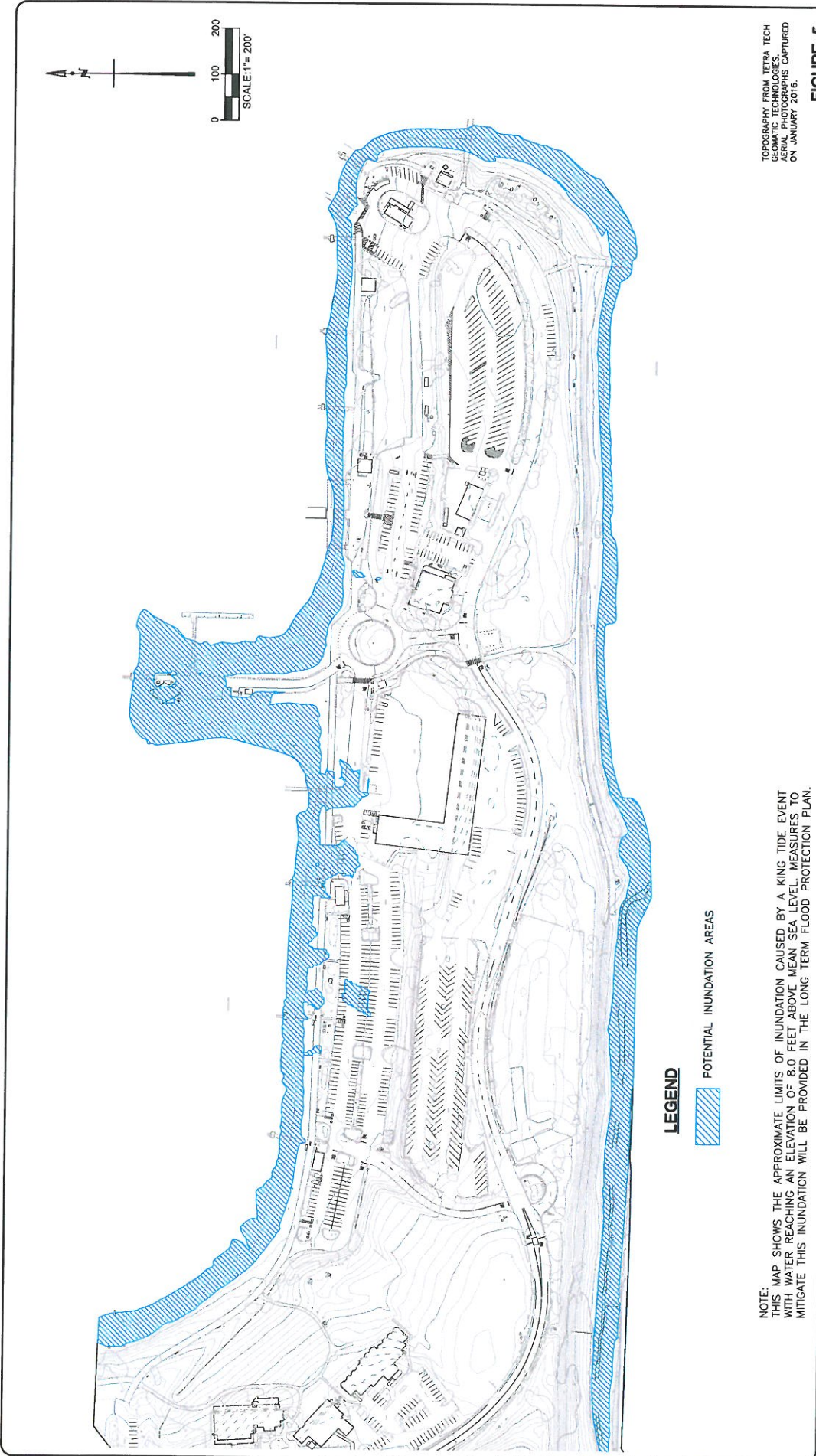


FIGURE 5	
TETRA TECH BAS	OYSTER POINT
POTENTIAL INUNDATION AREAS	
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