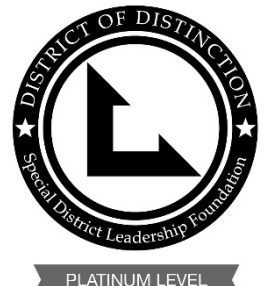




# TOWN OF DISCOVERY BAY

A COMMUNITY SERVICES DISTRICT

**SDLF Platinum-Level of Governance**



PLATINUM LEVEL

President – Kevin Graves • Vice-President – Ashley Porter • Director – Bryon Gutow • Director – Michael Callahan • Director – Carolyn Graham

**NOTICE OF THE MEETING  
OF THE STANDING WATER AND WASTEWATER COMMITTEE  
OF THE TOWN OF DISCOVERY BAY  
Wednesday, April 6, 2022, 5:30 P.M.**

**NOTICE  
Coronavirus COVID-19**

In accordance with the Governor's Executive Order N-08-21, and for the period in which the Order remains in effect, the Town of Discovery Bay Community Services District Committee will hold public meetings via teleconferencing as Board Chambers remain closed to the public.

To accommodate the public during this period of time that the Committee's Chambers are closed to the public, the Town of Discovery Bay Community Services District Committee Members have arranged for members of the public to observe and address the meeting telephonically.

**TO ATTEND IN PERSON:** The meeting will be held at the Community Center located at 1601 Discovery Bay Boulevard.

**TO ATTEND BY WEBINAR:**

**Please register for the Internal Operations Committee Meeting by:** *(copy and pasting into your browser the registration URL. You will then be directed to download the webinar to your device and register with LogMeIn, Inc.)*

**Registration URL:** <https://attendee.gotowebinar.com/register/1608334145332780559>  
**Webinar ID#** 822-151-731

After registering, you will receive a confirmation email containing information about joining the webinar by computer or by phone.

**For listen only mode dial:** (631) 992-3221 ID# 838-671-504

Download Agenda Packet and Materials at [www.todb.ca.gov/](http://www.todb.ca.gov/)

**Water and Wastewater Committee Board Members**

*Chair Kevin Graves  
Vice-Chair Ashley Porter*

**A. ROLL CALL**

1. Call business meeting to order 5:30 p.m.
2. Roll Call.

**B. PUBLIC COMMENTS (Individual Public Comments will be limited to a 3-minute time limit)**

During Public Comments, the public may address the Committee on any issue within the District's jurisdiction which is not on the Agenda. The public may comment on any item on the Agenda at the time the item is before the Committee for consideration. Any person wishing to speak will have 3 minutes to make their comment. There will be no dialog between the Committee and the commenter as the law strictly limits the ability of Committee members to discuss matters not on the agenda. We ask that you refrain from personal attacks during comment, and that you address all comments to the Committee only. Any clarifying questions from the Committee must go through the Chair. Comments from the public do not necessarily reflect the viewpoint of the Committee members.

**C. DRAFT MINUTES TO BE APPROVED**

1. Approve DRAFT minutes of February 2, 2022, Regular Water and Wastewater Committee meeting.

**D. PRESENTATIONS**

1. None.

**E. UPDATES**

**F. DISCUSSION ITEMS**

1. Discussion and Provide Feedback Regarding the Pre-purchase of Materials for Diffuser Project.

**G. FUTURE DISCUSSION/AGENDA ITEMS**

**H. CLOSED SESSION:**

1. CONFERENCE WITH REAL PROPERTY NEGOTIATORS ALLOWED UNDER GOVERNMENT CODE SECTION 54956.8

Property: A Portion of APN 008-330-057 AND 008-330-017, Discovery Bay

Agency Negotiator: Dina Breitstein, General Manager

Negotiating Parties: Discovery Bay Marina

Under Negotiation: Price and Terms of Payment

**I. ADJOURNMENT**

1. Adjourn to the next Standing Water and Wastewater Committee meeting at the Community Center located at 1601 Discovery Bay Boulevard.

"This agenda shall be made available upon request in alternative formats to persons with a disability, as required by the American with Disabilities Act of 1990 (42 U.S.C. § 12132) and the Ralph M. Brown Act (California Government Code § 54954.2). Persons requesting a disability related modification or accommodation in order to participate in the meeting should contact the Town of Discovery Bay, at (925) 634-1131, during regular business hours, at least forty-eight hours prior to the time of the meeting."

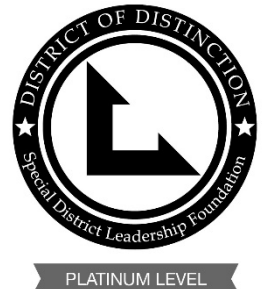
"Materials related to an item on the Agenda submitted to the Town of Discovery Bay after distribution of the agenda packet are available for public inspection in the District Office located at 1800 Willow Lake Road during normal business hours."



# TOWN OF DISCOVERY BAY

A COMMUNITY SERVICES DISTRICT

**SDLF Platinum-Level of Governance**



President – Kevin Graves • Vice-President – Ashley Porter • Director – Bryon Gutow • Director – Michael Callahan • Director – Carolyn Graham

**MINUTES OF THE MEETING  
OF THE WATER AND WASTEWATER COMMITTEE  
OF THE TOWN OF DISCOVERY BAY  
Wednesday February 2, 2022, 5:30 P.M.**

**NOTICE  
Coronavirus COVID-19**

In response to the current proclaimed State of Emergency, indoor masking requirements, and recommended measures to promote social distancing imposed by State and local officials, the Town of Discovery Bay Community Services District Board of Directors will take all actions necessary to carry out the intent and purpose of AB 361, including, ensuring that the Directors and meeting attendees may continue to have the option to access and participate in this public meeting by teleconference to avoid imminent risks to the health or safety of the Directors and meeting attendees.

To accommodate the public during this period of time that the Board's Chambers are closed to the public, the Town of Discovery Bay Community Services District Board of Directors has arranged for members of the public to observe and address the meeting telephonically.

**TO ATTEND BY WEBINAR:**

Please register for the **Water & Wastewater Committee Meeting** by: *(copy and pasting into your browser the registration URL. You will then be directed to download the webinar to your device and register with LogMeIn, Inc.)*

Registration URL: <https://attendee.gotowebinar.com/register/1506763458765812491>

Webinar IDNo. 381-129-851

After registering, you will receive a confirmation email containing information about joining the webinar by computer or by phone.

For listen only mode dial: (562) 247-8321 ID No. 371-403-046

Download Agenda Packet and Materials at <http://www.todb.ca.gov/>

**Water & Wastewater Committee Board Members**

*Chair Kevin Graves  
Vice-Chair Ashley Porter*

**A. ROLL CALL**

1. Call business meeting to order 5:30 p.m.
2. Roll Call – all present

**B. PUBLIC COMMENTS (Individual Public Comments will be limited to a 3-minute time limit)**

1. None

**C. DRAFT MINUTES TO BE APPROVED**

1. None

**D. PRESENTATIONS**

1. Presentation Regarding the Capacity and Connection Fee Study.  
Presenter Catherine Tseng from Lechowicz and Tseng Municipal Consultants commented on a correction to information given at the Finance Committee concerning EDUs pertaining to this presentation; the Town has

historically assigned 1 EDU per home, regardless of square footage. Proceeding to the presentation of the Water and Sewer Capacity Fee Study: defined what capacity fees are (also called connection fees, one-time fees paid by a new development when building permits are issued to cover costs of new capital projects – these fees do not fund routine maintenance or annual operation costs) and provided an overview as to why an update was needed. The last study was done in 2014 and due to California's conservation efforts during the last drought there has been state-wide reduced water demand and sewer flow patterns. The Town has also completed previous developer agreements which no longer apply. Discussed the three different Capacity Fee Methodologies (how values are calculated). Method 1 is the Buy-In Method and it was used to calculate the value of existing facilities that have excess capacity to serve new customers. Method 2 is the Average Cost Method and it was used to calculate planned capital projects that benefit both new and existing users. Method 3 is the Expansion Method and it benefits only new development. Reviewed Slide 4 of the presentation which shows reduced water flow compared from 2014 to 2021 due to conservation measures implemented during the last drought and appliances being more efficient now. Demand in California overall has gone down, not just the Town. Wastewater is based on a percentage of water use. These numbers were then used to estimate the number of new customers through the year 2041; 1 EDU = 1 Unit = amount of water / sewer flow used by typical single family residential customer. Commercial customers are more than 1 EDU (based on use). For example, a restaurant can be calculated to be 10 EDUs.

Vice President Porter questioned: Are those configured in here? Or, is it only single dwelling? Are the numbers combined?

Catherine Tseng answered: Yes, residential and commercial customers are combined for the total projected 1,278 EDUs for new customers.

(Proceeding with presentation) Capacity fees are based on three components: 1<sup>st</sup> component is the Buy-In Capacity Fee which is when new customers buy-in to the Town's existing water and sewer assets (wastewater cost is higher than water due to wastewater treatment) 2<sup>nd</sup> component is the New Facility Capacity Fee which is based on the Town's water and sewer 20-year capital improvement plans, and the 3<sup>rd</sup> component (only for sewer capacity fee calculation) is the Sewer Denitrification Project Cost of \$20M (Town will have to issue a 30-year \$13M bond to cover cost)

Vice President Porter questioned: I'm trying to understand the numbers; On Slide 7 the wastewater cost per EDU is \$2,692 and with the denitrification project the cost is \$3,657 per EDU – are those combined to give you total per wastewater?

Catherine Tseng answered: Yes, it is an accumulation of all three totals (the Buy-In Fee of \$6,455, plus the New Facility Fee of \$2,692, plus the Denitrification Fee of \$3,657 for a Total Wastewater Capacity Fee of \$12,804; Refer to Slide 10 of presentation). Slide 9 of the presentation represents a similar calculation done for the proposed Total Water Capacity Fee of \$5,233. These numbers are considered draft numbers as we work with engineers to finalize the project costs. With the proposed fees there is only a 7% increase to current fees and compared to a regional survey it is a median cost.

President Graves directed a question to District Water Engineer Harris: In Slide 6 (Buy-In Capacity Fee), water is extremely less expensive than wastewater (because of facilities needed to process wastewater) but on the next slide (New Facility Capacity Fee) there's a difference – water costs more per EDU than wastewater; is this because of the new well needed for new facilities?

District Water Engineer Harris: On Slide 7, the key term is 'new customers' we're making a lot of minor improvements to the wastewater treatment plant but a lot of that gets weighted on the back of existing customers (such as retrofits, code compliance, or permit compliance issues that are equal to everybody). So, when you look at the existing customer base, making up 80% of the equation, what is labeled as 'new customers' is really new EDUs and shows only a piece of what's being loaded on to the new.

President Graves questioned: Because the majority of the facilities already exist and have already been paid for?

District Water Engineer Harris added comment: And because the improvements were making in wastewater, much of them, are allocated to existing customers.

President Graves commented that the fact the Town started the Denitrification Project prior to further development of Discovery Bay works out well because we can be much more accurate in our Capacity Fees.

District Water Engineer Harris commented that the other benefit is that we got a preliminary shot at the Denitrification Project in the previous 2014 Capacity Fee Case Study and the importance of that is all the homes that have been connected since then have paid a higher rate and that's the reason the Town is borrowing \$13M instead of \$20M for the project.

President Graves commented that the benefit of the Water and Sewer Capacity Fee Study is that it provides the legal compliance for setting the Town's capacity fees.

## **E. DISCUSSION ITEMS**

1. Discussion Regarding the Preliminary Traffic Control Plan for Waterline Replacement in Discovery Bay Boulevard.

Projects Manager Yeraka summarized the plan for the Waterline Replacement in Discovery Bay Boulevard,

specifically located by the Lakeview Business Plaza when coming into town from Discovery Bay Boulevard. The 6" pipeline (400 feet long) offers commercial service connections and service to fire hydrants and irrigation systems but has been prone to breaking and replacing it is part of the Capitol Improvement Project. Staff report includes a photo of the work area and highlighted in green is where the waterline will be replaced. Traffic control will be required. Due to the concerns the Board has already heard from the public regarding the Discovery Bay Boulevard and Highway 4 intersection, the Town thought it best to present this Preliminary Traffic Control Plan to the Board. However, this Preliminary Traffic Control Plan has already been approved by the County. The intent is to have the contractor close down the lanes where the work is, diverting traffic to the other side, and have flaggers to allow turns and access into the Lakeview Business Plaza parking lot area. We want bidders to know we are expecting this from them and it's been approved by County. The intended hours of the aforementioned traffic control would be Monday – Friday, 8:30 a.m. - 4:30 p.m. (normal traffic patterns will occur outside those hours). This is anticipated to be a 3-4 week project. Bids are expected to take place at the end of February. The intent of this presentation is to notify the public of this upcoming project and avoid surprises of unexpected traffic control. We will, of course, notify all local business and residents two weeks before the start of the project.

General Manager Breitstein affirmed the Town will utilize the message board, Facebook, and Instagram to alert residents as well.

President Graves asked what the estimated costs are.

General Manager Breitstein responded that estimated costs were presented and approved by the Board at the August 19, 2020, Board meeting. (\$590K project budget)

Vice President Porter questioned: Are we alerting schools for the parents being impacted?

Projects Manager Yeraka answered: Yes – good input. The other half of this project is replacing about 1,000 feet of watermain on Edgeview and St. Andrews.

President Graves questioned: Are you alternating driveways for access to the business plaza?

Projects Manager Yeraka answered: The means and methods are up to contractor but they must provide access to driveways at all times / access to shopping center.

President Graves questioned: It dead ends at end of the green?

Projects Manager Yeraka answered: Yes.

President Graves questioned: Why are we having problem with this particular section?

Water and Wastewater Manager Goldsworthy answered: In the last 10 years we've had two main breaks in this particular section and because of where it's at it can cause some major damage. It needs to be replaced for safety reasons.

President Graves concurred it's old infrastructure.

Projects Manager Yeraka concluded his presentation.

## 2. Discussion Regarding the Denitrification Update.

District Water Engineer Harris provided the first update of the initial 6 months and will periodically give updates to the Water and Wastewater committee and, if requested, to the Board. Anderson Pacific Engineering Constructors is the contractor conducting the work. What is being done is improvements to Plant No. 2, essentially ripping the heart of the plant open and adding a new Ox Ditch, three new Anoxic Basins, and improvements to the Headworks, as well as miscellaneous improvements. This project includes other monies that were in the Master Plan Upgrade Project; The Town originally scheduled for Plant No. 1 improvements but it was later decided to kill those and build on Plant No. 2 instead. This is a two year project and we are six months in. Due to unexpected delays due to Covid and Supply Chain Issues there is a new finish date of July 7, 2023. New Permit Conditions start December 31, 2023, which will allow time to break in the new system. The contract amount is under \$16M, low bid by \$3.9M. Significant savings on this contact due to familiarity. \$3.3M spent so far.

President Graves questioned: Does the \$3.3M account for soft costs?

District Water Engineer Harris answered: No.

General Manager Breitstein added comment: We've spent about \$5M total so far.

District Water Engineer Harris proceeded with the presentation. Every project has challenges; The challenge for this project is to keep everything functioning during construction which is achieved by significant staging. We also have deep excavations for ground water. Ground water is 6 feet down and we are going down 26 feet so we are constantly fighting ground water. Covid delays were encountered; Contactor crew got Covid and could not work. The manufacturer also cancelled the supply order two months into the project and we had to find an alternative manufacturer.

President Graves asked if there was a cost impact.

District Water Engineer Harris answered in the affirmative.

President Graves questioned: What is a slide gate and where is it getting installed?

District Water Engineer Harris responded: A slide gate is when a pipe enters a structure you want to shut that pipe off it drops down and stops the flow on a pipe.

President Graves questioned: How many slide gates are in the project?

District Water Engineer Harris: 17. (Proceeded with presentation.) Other challenges: the hurricane in Houston,

TX increased PCP premium costs and some pipe fittings are not available. Plant No. 1 rehab issues include the emergency repair of pump stations and installation of pumping for maintenance.

President Graves questioned: Are the repairs occurring currently?

District Water Engineer Harris answered: Yes, for another month or two. At Plant No. 2 we're adding oxidation ditch No. 4, anoxic basins No. 2, 3, 4, and IMLR pump stations No. 2, 3, 4. Also rehabilitating headworks (replacing all mechanical equipment) and replace bar screens. Unexpected surprises during the project include Plant No. 1 issues, heavy rain in November, December set back project, and emergency repairs. Regarding the influent pump station, pipes were leaking and when inspected it was confirmed all pumps were exhibiting damage. Discussed Rotor 3 failure. The aerobic digester bank had to be rebuilt as an emergency situation. PS-W had structural failure – started having piping failure a few years ago. Part of this project was to fix the piping but further issues were found. For safe access, the roof and structure had to be condemned. PS-W is still running (on a temporary basis) but it's a hole in the ground now and we'll have to decide what we want to do next (there's no way to do maintenance) – new location? The project is more expensive than originally planned and will need a total rebuild so more thought into the project is needed. What is PS-W going to be? What's in the best interest of the Town to build?

President Graves questioned: What part of these repairs are covered in our CIP?

General Manager Breitstein answered: Repairs are covered but the rebuild is not covered.

President Graves commented: We know we have a rag problem. Typically, where do we address that rag problem?

District Water Engineer Harris answered: At Plant No. 2.

President Graves questioned: So, it might be better to put a filter prior to a screen to help have it cleaned out on a regular basis?

District Water Engineer Harris commented: Screens are another \$1M, bringing the total project up to \$2M. The reason being that it would require a new design and equipment.

President Graves commented: Well, rags aren't going away.

District Water Engineer Harris concurred; So many pump stations are all dumping into one location and its excessive, causing the rag buildup issue.

President Graves questioned: Do we have reserves? Can we use money from there to cover the additional cost?

General Manager Breitstein answered: Yes, we have money in reserves, but that's for emergency use – we need to look for funds outside of reserves because that money can't be used for everything.

President Graves requested to add a future agenda item to discuss how the Town can address the public to replenish reserves.

#### **ADDITIONAL MATERIALS: Manhole damage**

District Water Engineer Harris presented the results of a Discovery Bay Manhole Inspection recently done. It found that the coating on the majority of the manholes is failing and some is completely gone. The bottom area is getting covered and it's supposed to be open. The Wayfair Drive manhole is the only one in good shape.

President Graves questioned: We're going to use the same product again?

District Water Engineer Harris answered: It's the best product. Corrosion is so bad there is no product that will stand long term; quote \$82K.

President Graves requested research be done and a proposal to address corrosion be brought to the next Board of Directors meeting; There is a sense of urgency.

#### **3. Discussion Regarding an Update on Digest Pond Repairs and Cattail Removal.**

Veolia Project Manager Harper provided an update on the Digest Pond Repairs and Cattail Removal. On October 26, 2021, the wastewater had their Annual Inspection by the State and on November 30, 2021 the Official Statement from the State was received with one area of concern (not a violation): Excessive cattails and palm trees around the lagoon. Veolia responded before the deadline of December 20, 2021 and two weeks ago completed the removal from both lagoons 1 and 2 and submitted the Statement of Fact to the State with photos and it has been approved.

## **F. FUTURE DISCUSSION/AGENDA ITEMS**

1. None

## **G. ADJOURNMENT**

1. Adjourned at 6:46 PM to the next Standing Water & Wastewater Committee meeting at the Community Center located at 1601 Discovery Bay Boulevard.

"This agenda shall be made available upon request in alternative formats to persons with a disability, as required by the American with Disabilities Act of 1990 (42 U.S.C. § 12132) and the Ralph M. Brown Act (California Government Code § 54954.2). Persons requesting a disability related modification or accommodation in order to participate in the meeting should contact the Town of Discovery Bay, at (925) 634-1131, during regular business hours, at least forty-eight hours prior to the time of the meeting."

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DRAFT



# Town of Discovery Bay

*"A Community Services District"*

## STAFF REPORT

Meeting Date

June 2, 2021

**Prepared By:** Gregory Harris, District Wastewater Engineer  
**Submitted By:** Dina Breitstein, General Manager

### Agenda Title

Discussion and Provide Feedback Regarding the Pre-purchase of Materials for Diffuser Project.

### Recommended Action

- a) Provide feedback regarding the pre-purchase of materials for Diffuser Project.

### Executive Summary

The Town's wastewater effluent leaving Treatment Plant No. 2 is pumped approximately one mile to Old River where it is discharged through diffusers with multiple diffuser ports to mix the effluent into Old River. The diffuser was constructed in December 2004 to comply with previous Notice of Violation by the Regional Water Quality Control Board.

A diver was hired to inspect the diffuser in 2013. The inspection report indicated several of the diffuser ports are missing and a portion of the diffuser has become plugged and no longer operates properly. During startup of the filtration project, testing of the effluent pump station showed the pump station can no longer pump 4 million gallons per day (MGD) of flow to Old River. 4.3 MGD is the design flow of the pump station and was demonstrated when the pump station was tested in 2004 after the diffuser install. The capacity of the effluent filtration and UV system is 4 MGD and the effluent pump station needs to be able to pump at least that much flow for the plant to properly handle peak wastewater flows. The most likely cause of the poor performance of the export pump station is the plugged diffuser.

Based on this information, the Town previously hired Advisian to prepare a report on options and costs to repair the diffuser. This report was completed in June 2018. From this report, Option 4 to repair the diffuser in place with a larger header pipe was selected as the best alternative going forward by Town Staff. The Town set a CIP item 7012 at a budget cost of \$500,000 for the permits, engineering, and construction of the diffuser repairs.

In August 2019, the Town again hired Advisian to prepare environmental reports and CEQA documents for the repair of the diffuser system. In October 2020, the Town hired Advisian to prepare plans and specifications for replacement of the diffuser. Advisian is almost complete with the plans and specs and we will be out to bid in April 2022 with construction set to take place in September-October of 22. However, given issues with material supply chains, Advisian is advising that prepurchase of portions of the diffuser materials is required to ensure delivery in time for the construction window.

Advisian is obtaining material quotes from Vendors and board action in April will be required to approve purchase of the materials once the final quote is obtained.

### Previous Relevant Board Actions for This Item

Authorization for construction of outfall diffuser in 2004,  
Authorization to hire Advisian to prepare a diffuser report October 2017.  
Authorization to hire Advisian to prepare the permits for the diffuser December 5, 2018.  
Authorization to hire Advisian to prepare CEQA Documents for the diffuser August 21, 2019.



Authorization to hire Advisian to prepare plans and specs for the diffuser October 2020.

**Fiscal Impact:** none.

**Amount Requested:** NA

**Sufficient Budgeted Funds Available?:** NA

**Prog/Fund # Category:** NA

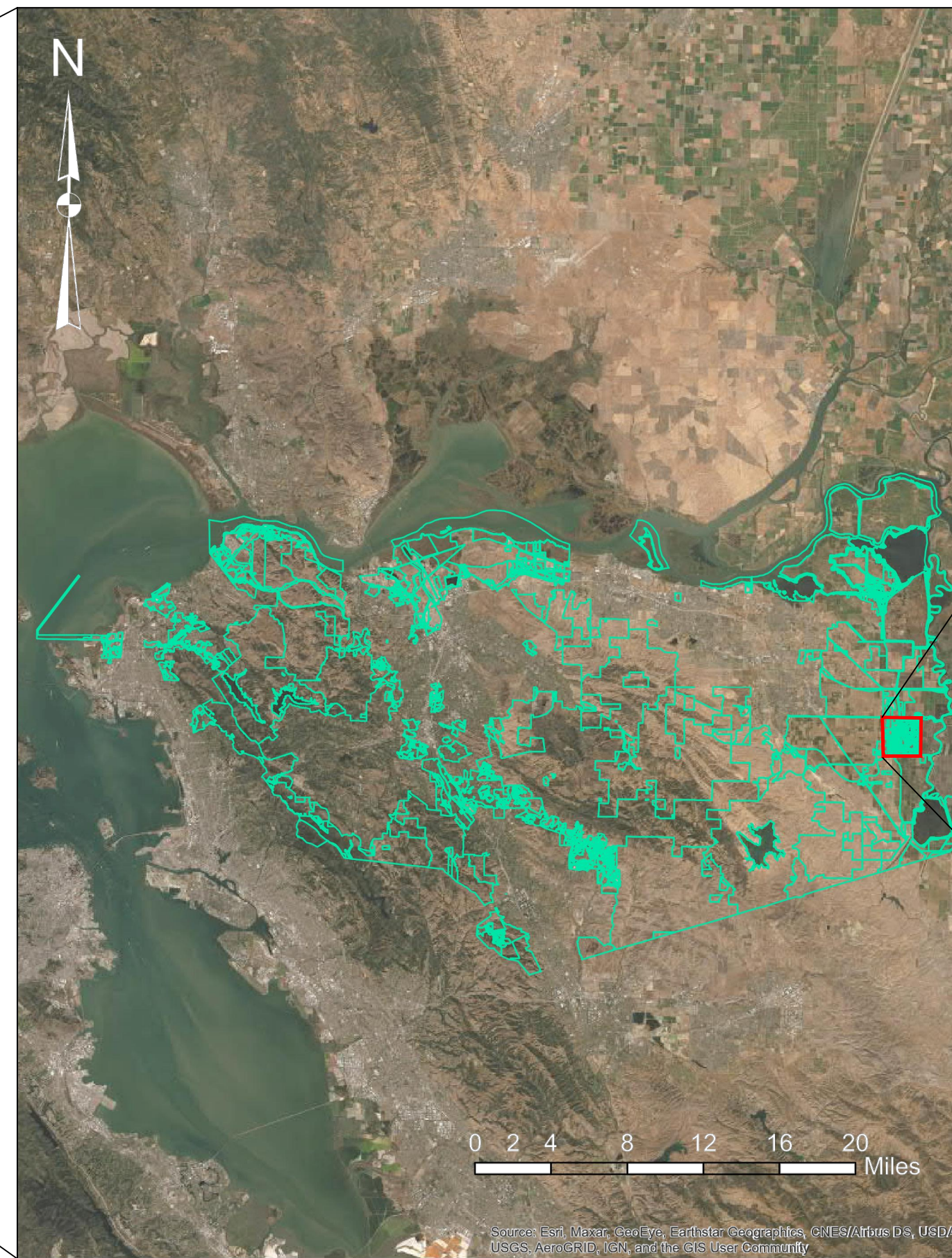
**Attachments**

90% Diffuser Plans

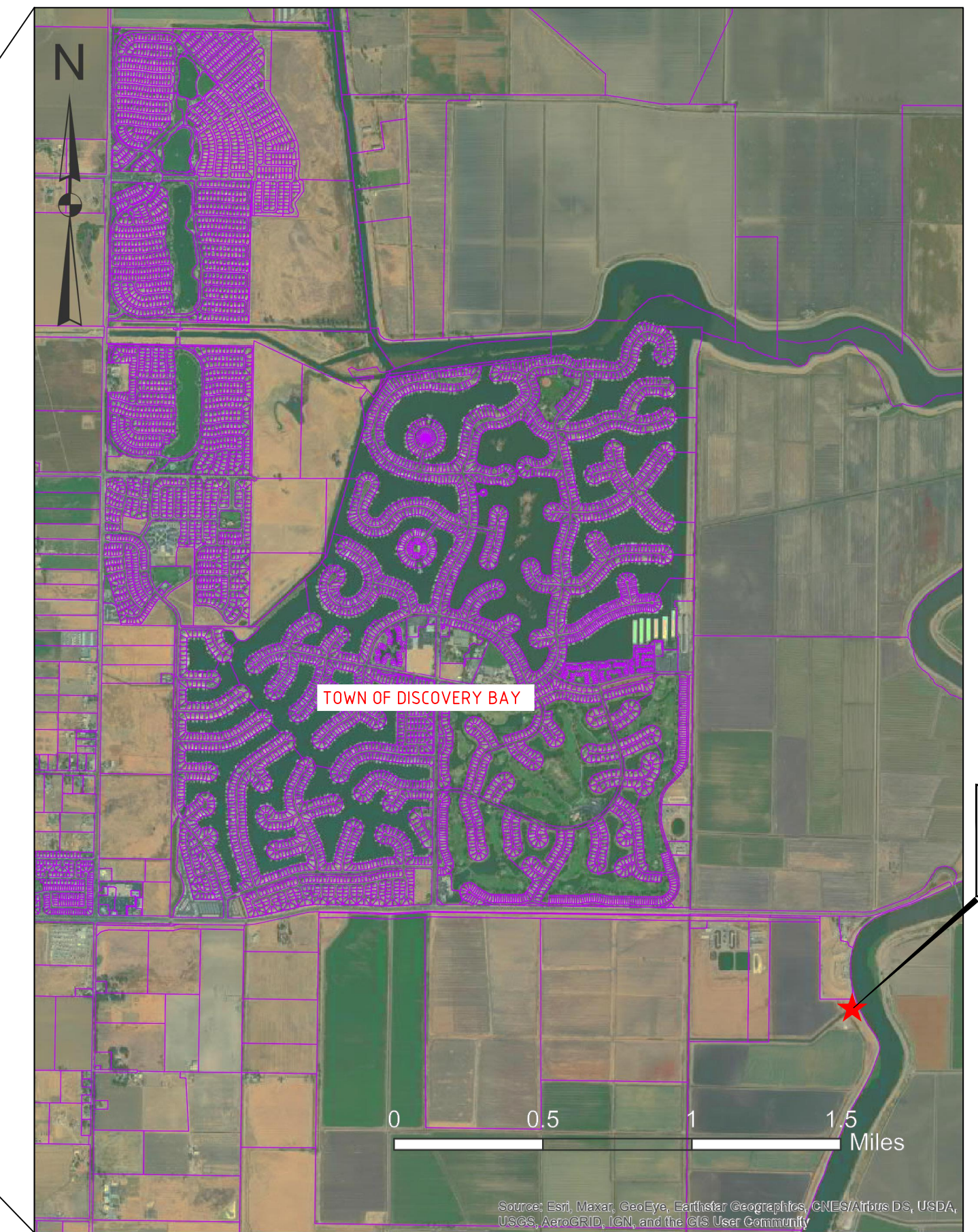
AGENDA ITEM: F1



CALIFORNIA STATE MAP

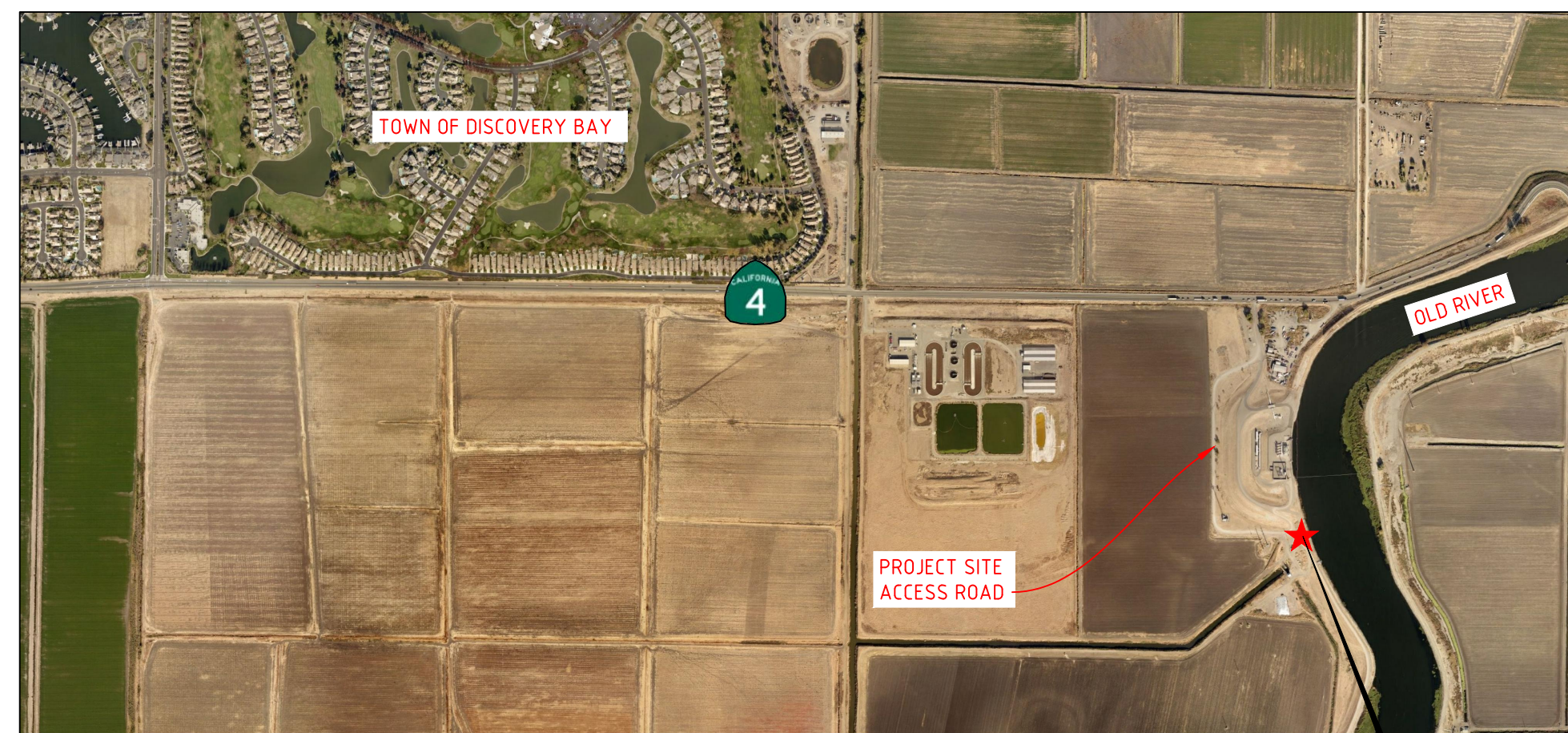


PROJECT AREA MAP



PROJECT LOCATION MAP

**SITE LOCATION**



OUTFLOW LOCATION PLAN

**SITE LOCATION**



SITE PLAN

**TOWN OF DISCOVERY BAY  
WASTEWATER OUTFALL DIFFUSER REPLACEMENT PROJECT**

TOWN OF DISCOVERY BAY COMMUNITY SERVICES DISTRICT

1800 WILLOW LAKE ROAD, DISCOVERY BAY CA 94505-9376  
TEL: (925) 634-1131 FAX: (925) 513-2705

VOLUME 2 OF 2  
CONTRACT DRAWINGS

MARCH 2022


DRAWING LIST

DRAWING NO.	DRAWING NAME
317085-31478-20100-CI-DAL-1001	WASTEWATER OUTFALL DIFFUSER REPLACEMENT PROJECT - SITE LOCATION
317085-31478-20100-CI-DAL-1002	WASTEWATER OUTFALL DIFFUSER REPLACEMENT PROJECT EXCAVATION AND DEMOLITION - PLAN AND PROFILE
317085-31478-20100-CI-DAL-1003	WASTEWATER OUTFALL DIFFUSER REPLACEMENT PROJECT - PLAN AND PROFILE
317085-31478-20100-CI-DRD-1004	WASTEWATER OUTFALL DIFFUSER REPLACEMENT PROJECT - SHEET 1 OF 2 SECTIONS AND DETAILS
317085-31478-20100-CI-DRD-1005	WASTEWATER OUTFALL DIFFUSER REPLACEMENT PROJECT - SHEET 2 OF 2 SECTIONS AND DETAILS

**NOTES:**

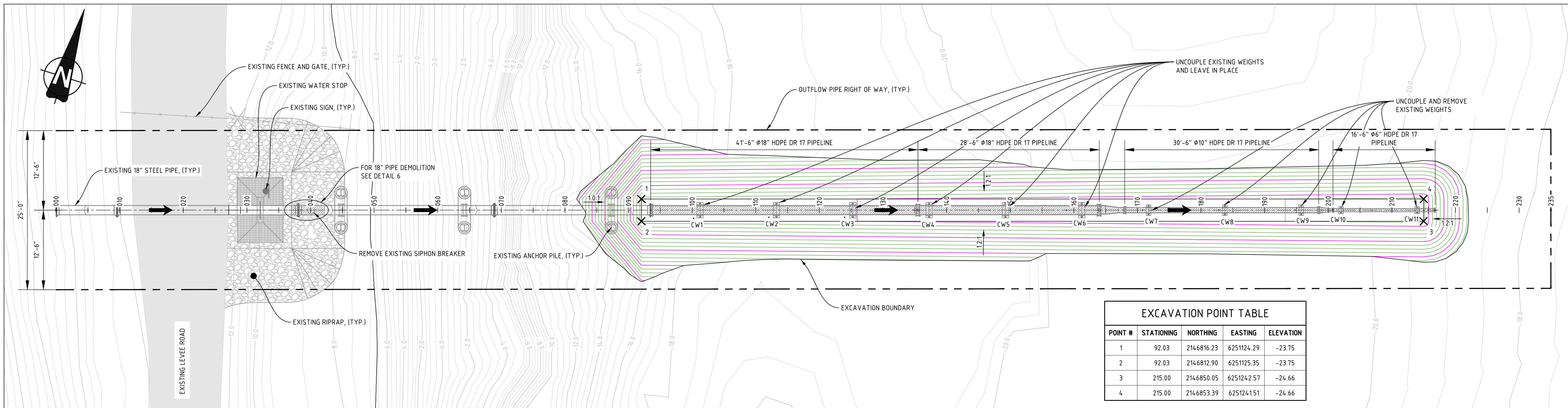
- BACKGROUND IMAGE FROM GIS DATE PROVIDED BY CONTRA COSTA COUNTY, CALIFORNIA
- MAP HORIZONTAL COORDINATE SYSTEM IS REFERENCE TO NAD 83 DATUM (CALIFORNIA STATE PLANE - ZONE 3). VERTICAL COORDINATE SYSTEM IS REFERENCE TO NAVD 29.
- BATHYMETRY INFORMATION PROVIDED BY MERIDIAN SURVEYING ENGINEERING, INC. FIELD NO. 20070, SURVEYED ON OCTOBER 24, 2020, AND REVISED ON MARCH 05, 2021.

REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	QAR	REF DRAWING No	REFERENCE DRAWING TITLE
E	10-MAR-22	RE-ISSUED FOR CLIENT REVIEW - 100%	RL	CV	EG/CV	EG	LM	JC		
D	13-JAN-22	ISSUED FOR CLIENT REVIEW - 100%	KW	EG	EG	EG	LM	JC		
C	14-JUL-21	ISSUED FOR CLIENT REVIEW - 50%	KW	EG	EG/DK	EG	LM	JC		
B	14-MAY-21	ISSUED FOR CLIENT REVIEW - 30%	KW	EG	EG/DK	EG	LM	JC		
A	08-MAR-19	ISSUED FOR CLIENT REVIEW - 30%	KW	EG	EG/DK	EG	LM	JC		

D SHEET	SCALE	SHOWN	ENGINEERING AND PERMIT STAMPS (As Required)	CUSTOMER
			<b>Oneway</b> to zero harm	
			<b>PRELIMINARY</b> DO NOT USE FOR CONSTRUCTION Last Saved: Mar. 10/22 10:55am	TOWN OF DISCOVERY BAY COMMUNITY SERVICES DISTRICT WASTEWATER OUTFALL DIFFUSER REPLACEMENT PROJECT SITE LOCATION
			WORLEY PROJECT No 317085-31478	DRG No 317085-31478-20100-CI-DAL-1001

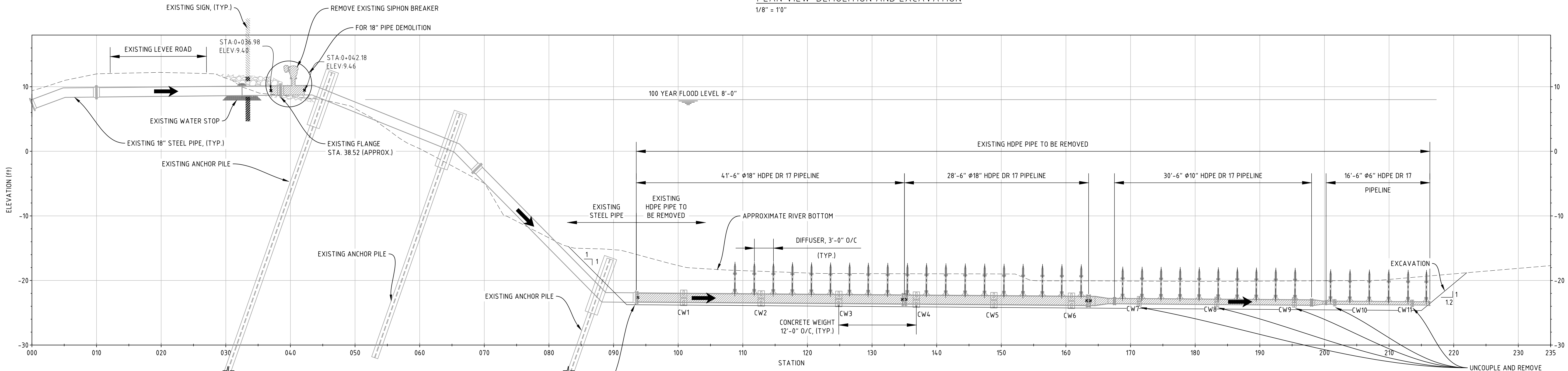
DATE & TIME	SAVE DATE & TIME
15/3/2022 12:19 PM	10/3/2022 10:55:51 AM

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USER NAME: ryan.li



EXCAVATION POINT TABLE				
POINT #	STATIONING	NORTHING	EASTING	ELEVATION
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2	92.03	2146812.90	6251125.35	-23.75
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PLAN VIEW - DEMOLITION AND EXCAVATION  
1/8" = 10"



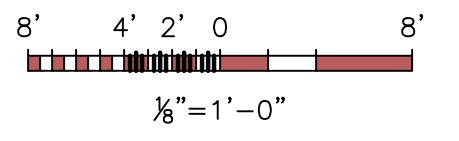
PROFILE - DEMOLITION AND EXCAVATION  
1/8" = 10"

NOTES:

- EXCAVATE AS SHOWN IN PLAN VIEW USING SUCTION DREDGING AND SALVAGE/STOCKPILE THE EXTRACTED EXISTING RIPRAP MATERIAL FOR RE-USE. EXPOSE EXISTING PIPE AND PREPARE TRENCH TO ACCOMMODATE REPLACEMENT 18-IN DIAMETER HDPE PIPE.
- UNCouple CONCRETE WEIGHTS. LEAVE IN PLACE WEIGHTS CW1 THROUGH CW6 FOR RE-USE. DISCARD AND DISPOSED WEIGHTS CW7 THROUGH CW11.
- REMOVE AND PROPERLY DISPOSE EXISTING HDPE PIPE STARTING FROM THE STEEL-HDPE FLANGE AT STA. 094, TO THE END STA. 217.
- REMOVE EXISTING HARRIS SIPHON BREAKER.
- REMOVE AND SALVAGE EXISTING ON-SHORE RIP RAP TO COMPLETELY EXPOSE 18" PIPE APPROXIMATELY FROM STA. 034 TO STA. 044. RIP RAP REMOVAL SHALL BE DONE WITH CARE TO PREVENT DAMAGING OF EXISTING COATING/PAINTING.
- CUT EXISTING 18" PIPE APPROXIMATELY FROM STA. 035.65 TO STA. 041.35. FINAL LENGTH OF PIPE TO BE CUT AND LOCATION TO BE FIELD FIT ONCE THEY CLEAN-OUT ASSEMBLY IS ON SITE.

LEGEND:

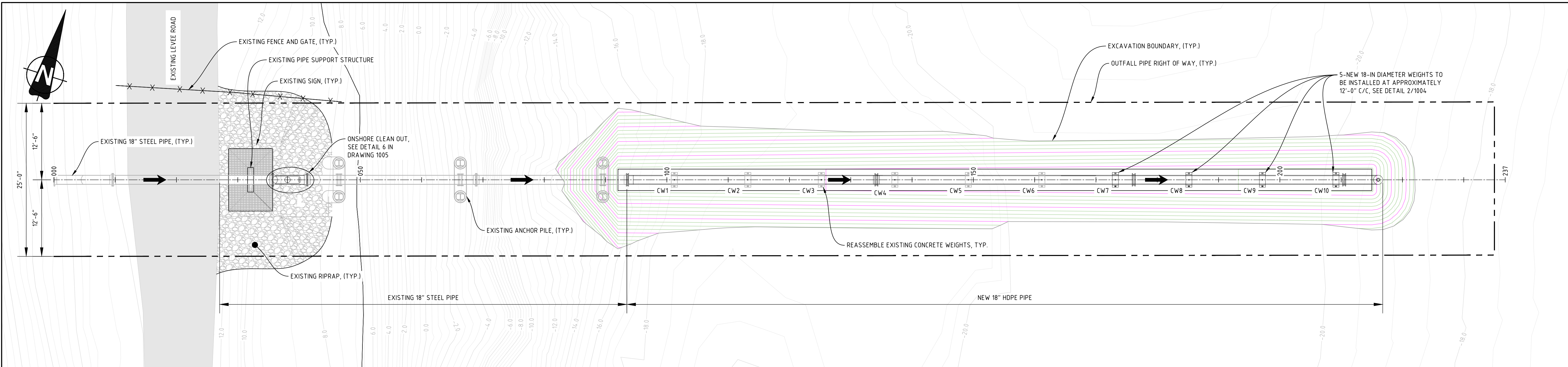
- MAJOR CONTOUR (2 FEET INTERVAL)
- MINOR CONTOUR (0.5 FEET INTERVAL)
- RIGHT OF WAY
- FLOW DIRECTION
- RIPRAP



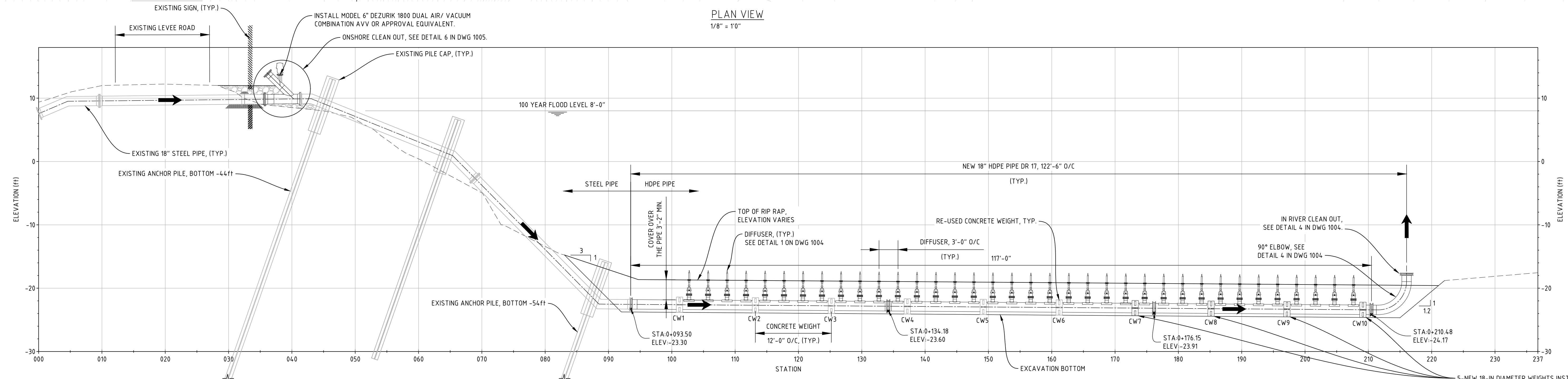
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D	13-JAN-22	ISSUED FOR CLIENT REVIEW - 100%	KW	EG	EG	EG	LM	JC		
C	14-JUL-21	ISSUED FOR CLIENT REVIEW - 50%	KW	EG	EG/DK	EG	LM	JC		
B	14-MAY-21	ISSUED FOR CLIENT REVIEW - 30%	KW	EG	EG/DK	EG	LM	JC		
A	08-MAR-21	ISSUED FOR CLIENT REVIEW - 30%	KW	EG	EG/DK	EG	LM	JC		

D SHEET SCALE SHOWN	ENGINEERING AND PERMIT STAMPS (As Required)	CUSTOMER
<b>Oneway</b> to zero harm		
WORLEY PROJECT No 317085-31478	<b>PRELIMINARY</b> DO NOT USE FOR CONSTRUCTION Last Saved: Mar. 10/22 12:33pm	<b>Advisian</b> Worley Group
		TOWN OF DISCOVERY BAY COMMUNITY SERVICES DISTRICT WASTEWATER OUTFALL DIFFUSER REPLACEMENT PROJECT EXCAVATION AND DEMOLITION - PLAN AND PROFILE
		DRG No 317085-31478-20100-CI-DAL-1002
		REV E

LOCATION: \\WORLEY\COM\DATA\CAL\085338810-002\20100 - DESIGN & CONSTRUCTION\110 - FIGURES & MAPS\1114\_CAD\_FILES\02-DWG\317085-31478-20100-CI-DAL-1002.DWG  
USER NAME: ryan.lai  
PLOT DATE & TIME: 15/3/2022 12:38 PM  
SAVE DATE & TIME: 10/3/2022 12:33:02 PM



PLAN VIEW  
1/8" = 10"



PROFILE - OUTFLOW PIPE  
1/8" = 10"

- LEGEND:
- MAJOR CONTOUR (2 FEET INTERVAL)
  - MINOR CONTOUR (0.5 FEET INTERVAL)
  - RIGHT OF WAY
  - RIPRAP
  - FLOW DIRECTION

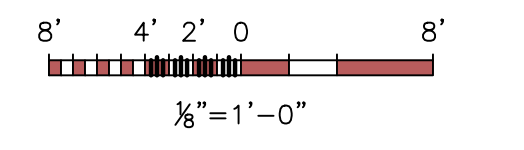
CONCRETE WEIGHT POINT TABLE			
POINT #	STATIONING	NORTHING	EASTING
CW1	101.22	2146817.34	6251133.58
CW2	113.21	2146820.97	6251145.01
CW3	125.20	2146824.59	6251156.44
CW4	137.19	2146828.21	6251167.88
CW5	149.18	2146831.84	6251179.31

CONCRETE WEIGHT POINT TABLE			
POINT #	STATIONING	NORTHING	EASTING
CW6	161.18	2146835.46	6251190.74
CW7	173.17	2146839.08	6251202.17
CW8	185.16	2146842.70	6251213.60
CW9	197.15	2146846.33	6251225.03
CW10	209.14	2146849.95	6251236.46

NOTE: COORDINATES AND STATIONS ARE APPROXIMATE. WEIGHT SHALL BE PLACED MID WAY IN BETWEEN DIFFUSERS.

NOTES:

- INSPECT STEEL PIPE LEFT IN PLACE (FROM APPROX. STA. 0+415 TO 0+935). REPAIR IF REQUIRED AND AS INSTRUCTED BY THE ENGINEER.
- INSTALL ONSHORE Y CLEAN-OUT ASSEMBLY PER DETAIL 5 SHEET 1005.
- PLACE BEDDING SAND UNDER THE PIPE AND RE-INSTATE THE RIP RAP AROUND AND OVER THE PIPE AND CLEAN OUT ASSEMBLY TO THE EXTENT AND SLOPES OF THE ORIGINAL RIP RAP. SPECIAL CARE NEEDS TO BE TAKEN WHEN INSTALLING THE RIP RAP TO PREVENT DAMAGE TO PAINT/WRAPPING OF THE EXISTING PIPE AND THE NEWLY INSTALLED CLEAN OUT ASSEMBLY.
- BEFORE CONNECTING REPLACEMENT HDPE PIPE AT FLANGE STA 094, FLUSH UPPER END OF PIPE FROM NEW Y-CONNECTION ONSHORE CLEAN-OUT TO CLEAR DEBRIS.
- INSTALL REPLACEMENT 18-IN DIAMETER HDPE PIPE COMPLETE WITH DIFFUSERS AND 90° ELBOW CLEAN OUT, AND CONNECT IT AT FLANGE STA 094. RE-ASSEMBLE EXISTING CONCRETE WEIGHTS CW1 THROUGH CW6. INSTALL AND ASSEMBLE REPLACEMENT CONCRETE WEIGHTS CW7 THROUGH CW10 SIZED TO ACCOMMODATE THE REPLACEMENT 18-IN DIAMETER HDPE PIPE. SEE DETAIL 2 SHEET 1004.
- BACKFILL TRENCH WITH PREVIOUSLY EXCAVATED RIPRAP TO THE LINES AS SHOWN IN THE DRAWINGS. SPECIAL CARE SHALL BE TAKEN WHEN PLACING THE MATERIAL TO PREVENT DAMAGE TO THE RISER PIPES AND TIDEFLEX DUCKBILLS.



REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	QAR	REF DRAWING No	REFERENCE DRAWING TITLE
E	10-MAR-22	RE-ISSUED FOR CLIENT REVIEW - 100%	RL	CV	EG/CV	EG	LM	JC		
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C	14-JUL-21	ISSUED FOR CLIENT REVIEW - 50%	KW	EG	EG/DK	EG	LM	JC		
B	14-MAY-21	ISSUED FOR CLIENT REVIEW - 30%	KW	EG	EG/DK	EG	LM	JC		
A	08-MAR-21	ISSUED FOR CLIENT REVIEW - 30%	KW	EG	EG/DK	EG	LM	JC		

D SHEET SCALE SHOWN

ENGINEERING AND PERMIT STAMPS (As Required)

WORLEY PROJECT No  
**317085-31478**

CUSTOMER

TOWN OF DISCOVERY BAY  
COMMUNITY SERVICES DISTRICT

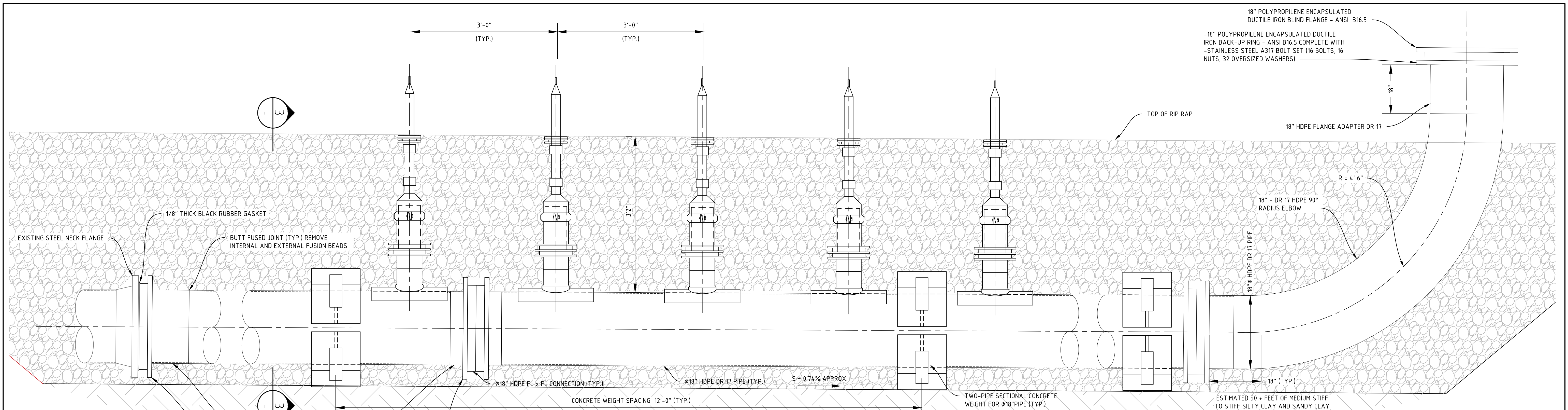
Advisian  
Worley Group

TOWN OF DISCOVERY BAY  
COMMUNITY SERVICES DISTRICT  
WASTEWATER OUTFALL DIFFUSER REPLACEMENT PROJECT  
PLAN AND PROFILE

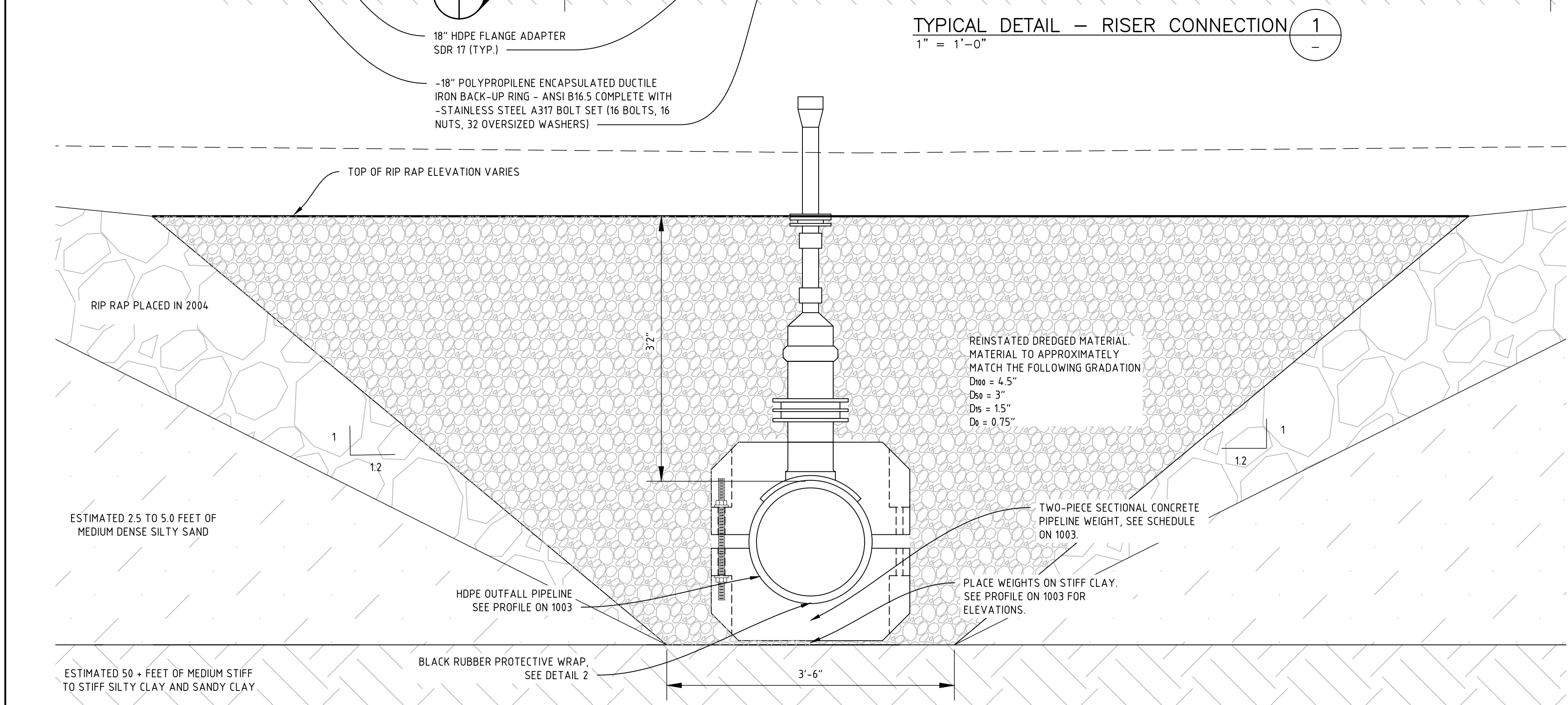
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**317085-31478-20100-CI-DAL-1003**

REV  
**E**

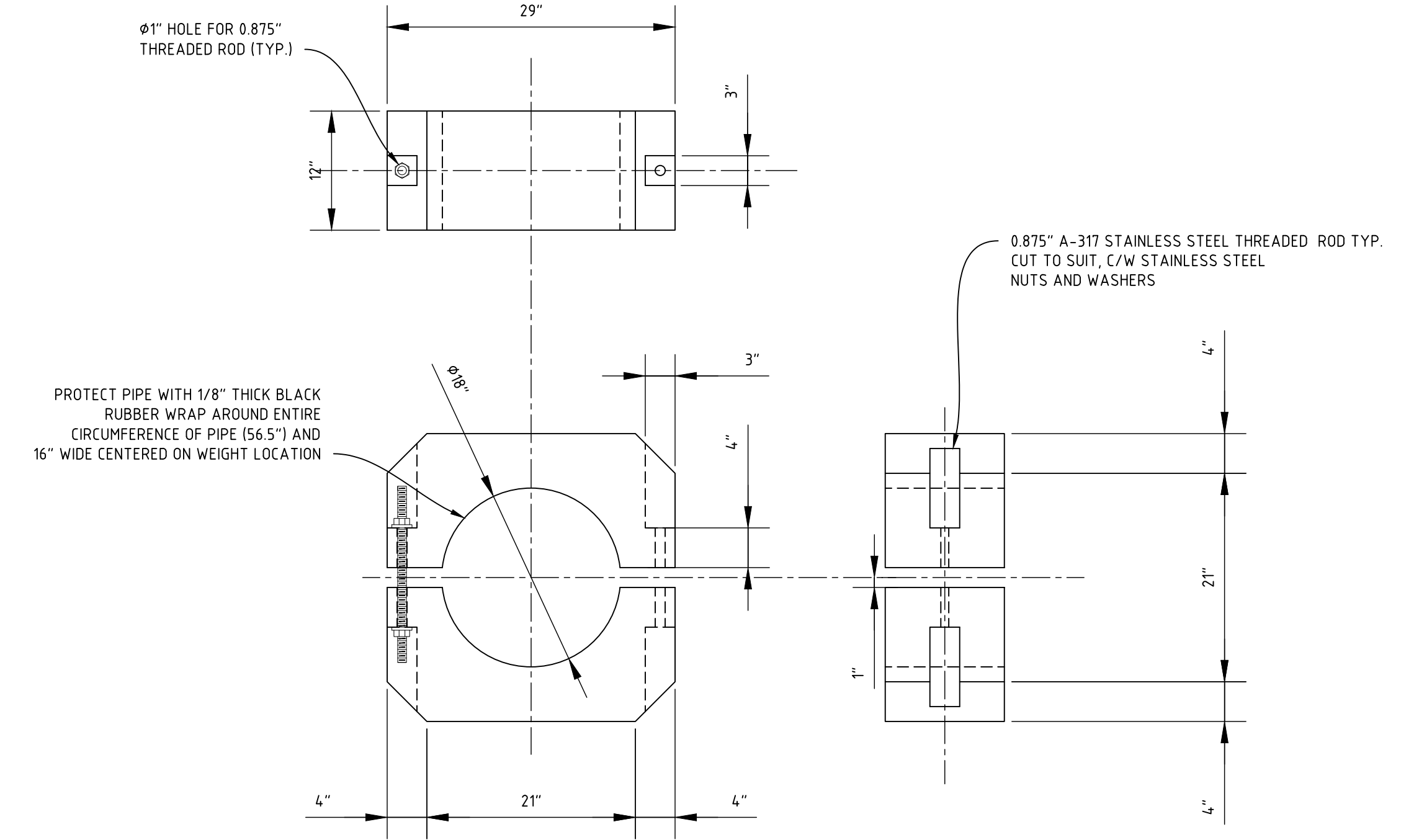
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USER NAME: ryan.lai  
PLOT DATE & TIME: 15/3/2022 12:46 PM  
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TYPICAL DETAIL - RISER CONNECTION 1  
1" = 1'-0"

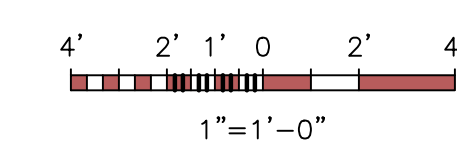


TYPICAL DETAIL - OUTFALL TRENCH 3  
1" = 1'-0"



TYPICAL DETAIL - TWO-PIECE SECTIONAL CONCRETE WEIGHT 2  
1" = 1'-0"

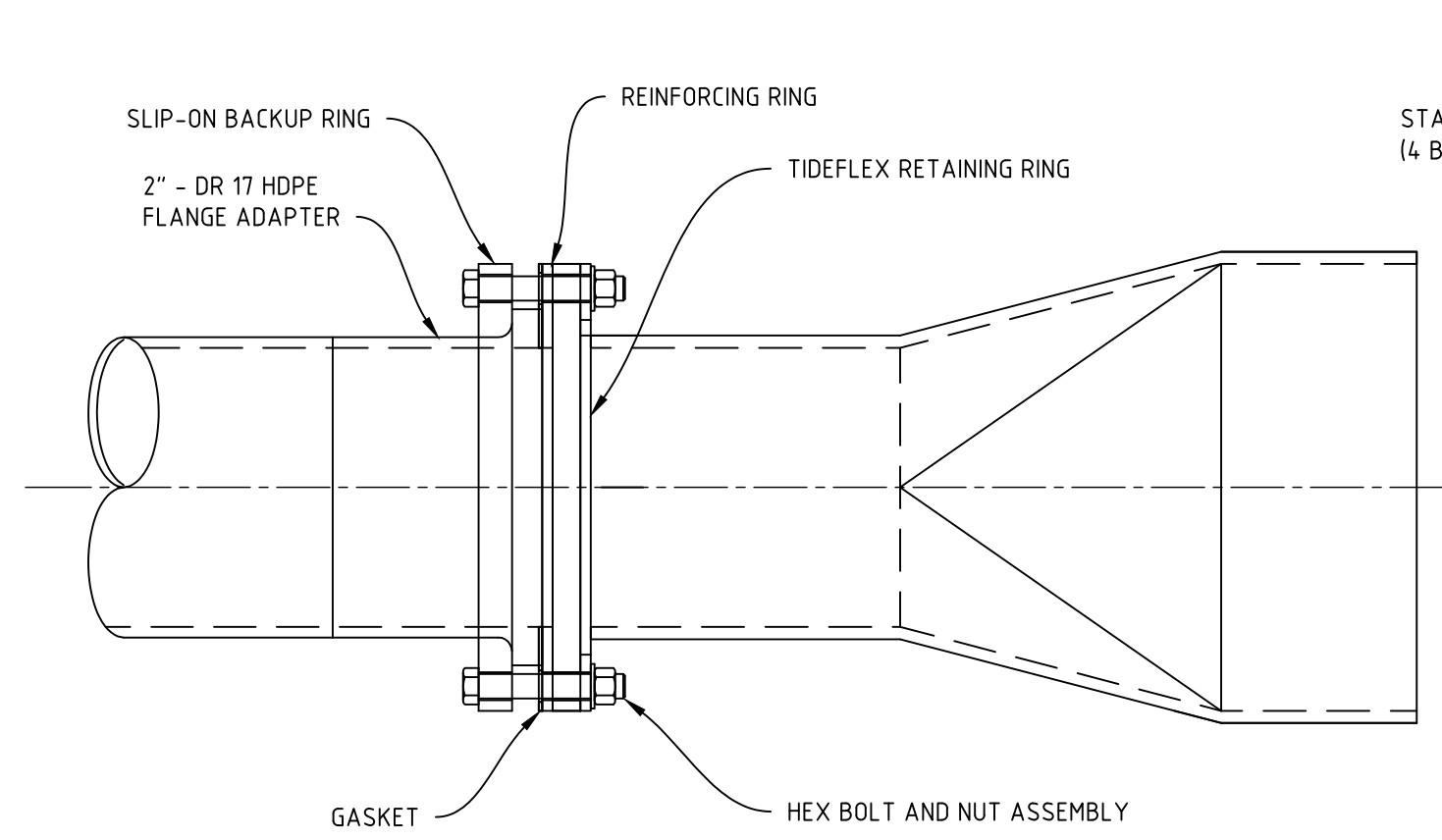
- NOTE:
- KEEP EXISTING CONCRETE WEIGHTS CW1, CW2, CW3, CW4, CW5, CW6 AT STATIONS 099, 111, 123, 135, 147, 159; CUT THREADED ROD. INSTALL NEW 0.875" SS THREADED ROD WITH SS NUTS AND WASHERS WITH NEW PIPE IN PLACE.
  - REMOVE EXISTING CONCRETE WEIGHTS CW7, CW8, CW9, CW10, CW11 AT STATIONS 171, 183, 195, 207, 216; REPLACE WITH NEW WEIGHTS OF 18-IN DIAMETER. INSTALL NEW 0.875" SS THREADED ROD WITH SS NUTS AND WASHERS WITH NEW PIPE IN PLACE.



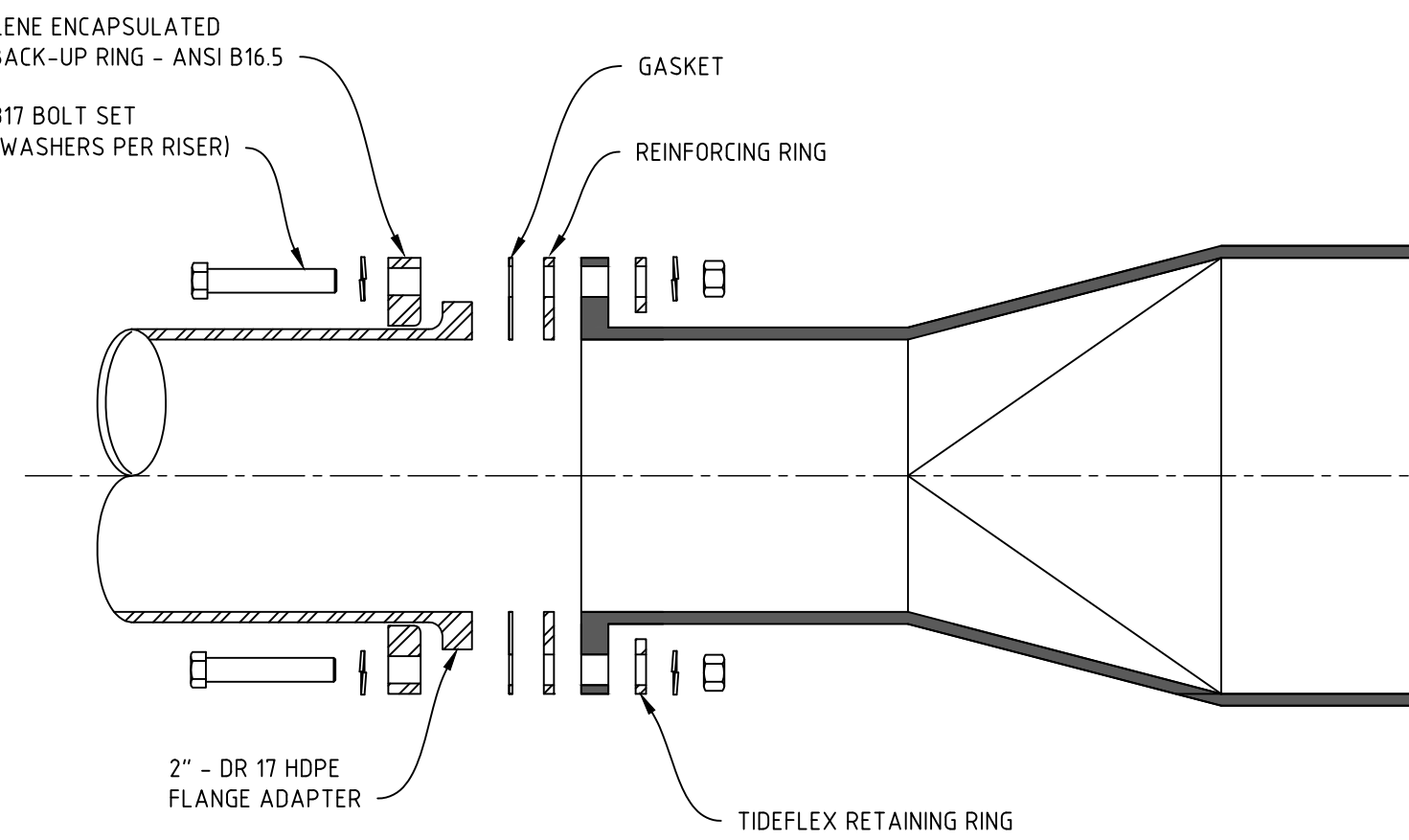
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A	08-MAR-21	ISSUED FOR CLIENT REVIEW - 30%	KW	EG	EG/DK	EG	LM	JC		

D SHEET	SCALE	SHOWN	ENGINEERING AND PERMIT STAMPS (As Required)	CUSTOMER
			<p><b>PRELIMINARY</b> DO NOT USE FOR CONSTRUCTION Last Saved: Mar. 14/22 3:42pm</p>	
			<p>WORLEY PROJECT No <b>317085-31478</b></p>	<p>TOWN OF DISCOVERY BAY COMMUNITY SERVICES DISTRICT WASTEWATER OUTFALL DIFFUSER REPLACEMENT PROJECT SHEET 1 OF 2 SECTIONS AND DETAILS</p>
			<p>"This drawing is prepared for the use of the contractual customer of Worley Canada Services Ltd. and Worley Canada Services Ltd. assumes no liability to any other party for any representations contained in this drawing."</p>	<p>DRG No <b>317085-31478-20100-CI-DRD-1004</b></p>
				<p>REV <b>E</b></p>

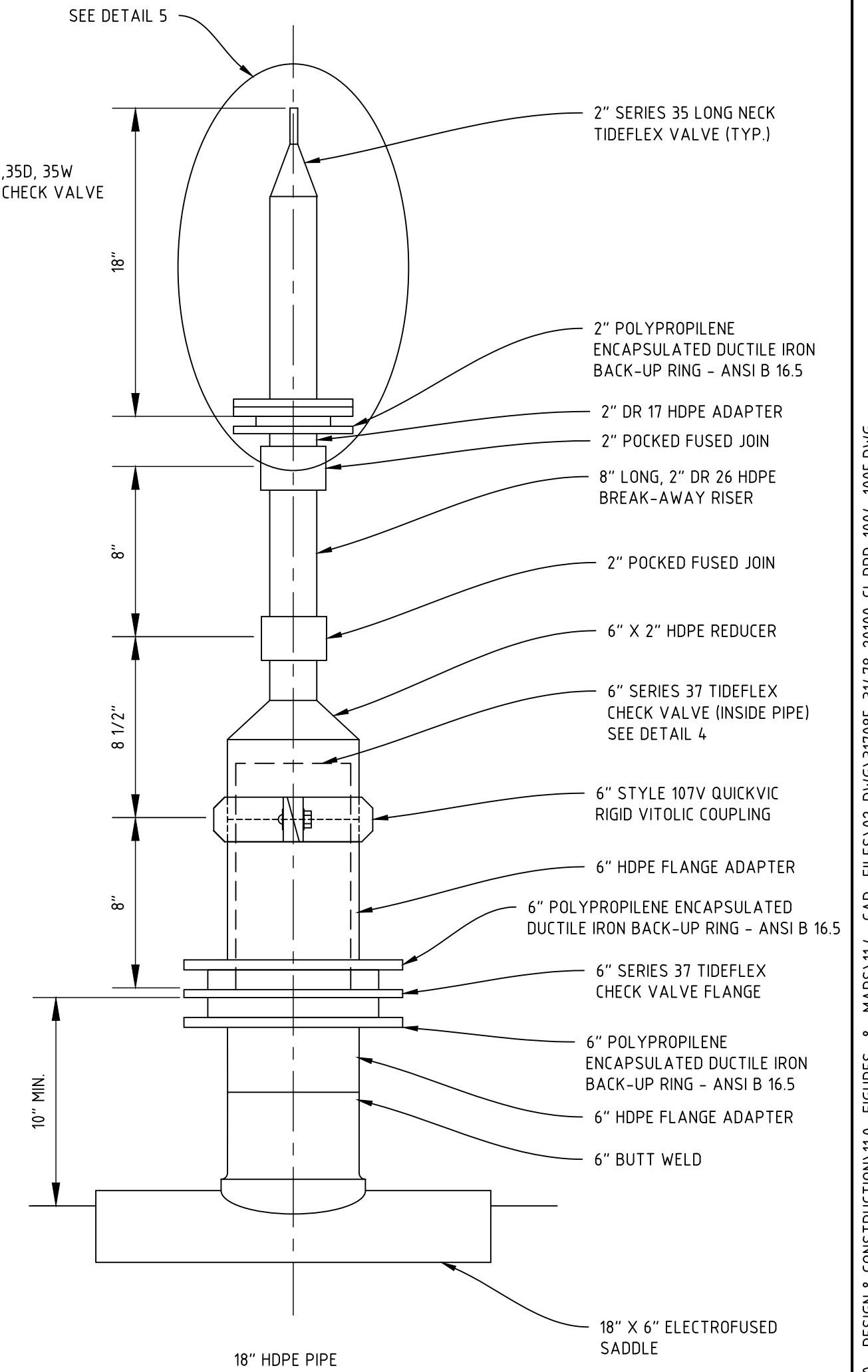
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 SAVE DATE & TIME: 14/3/2022 3:42:26 PM



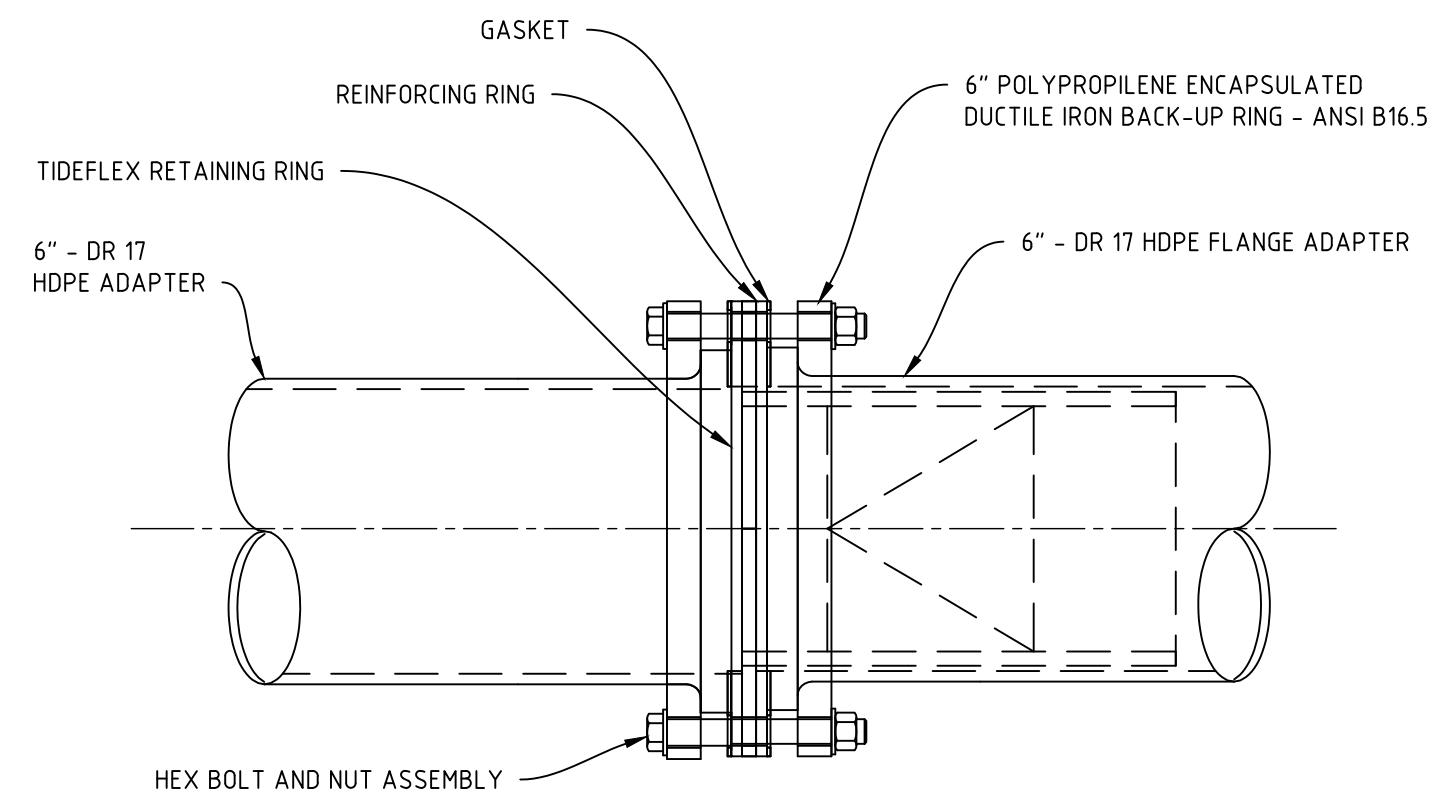
SIDE VIEW - SERIES 35 ASSEMBLY DETAIL  
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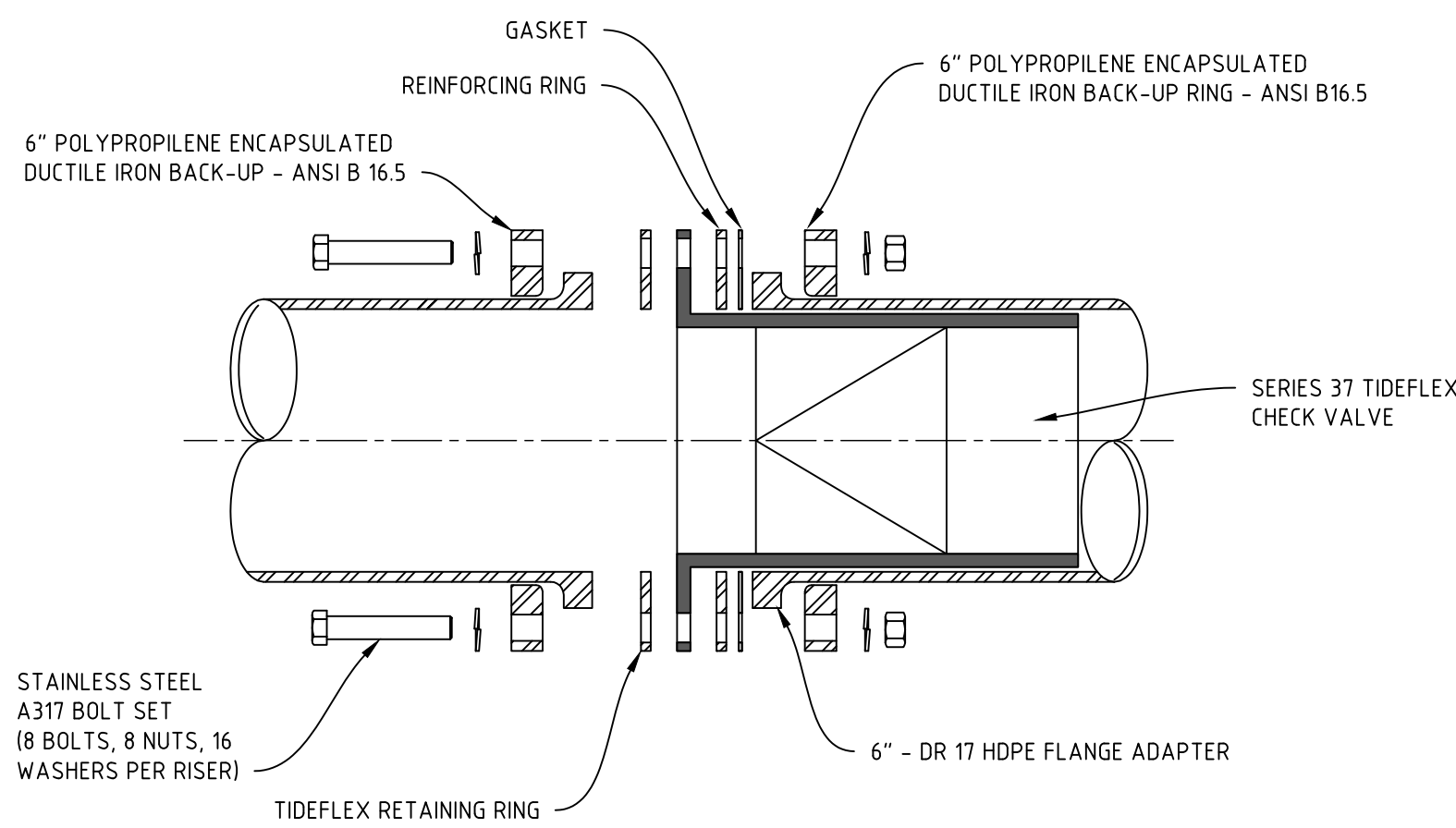
SECTION VIEW - SERIES 35, 35D, 35W ASSEMBLY DETAIL  
NTS



TYPICAL DETAIL - RISER (7)  
2\"/>



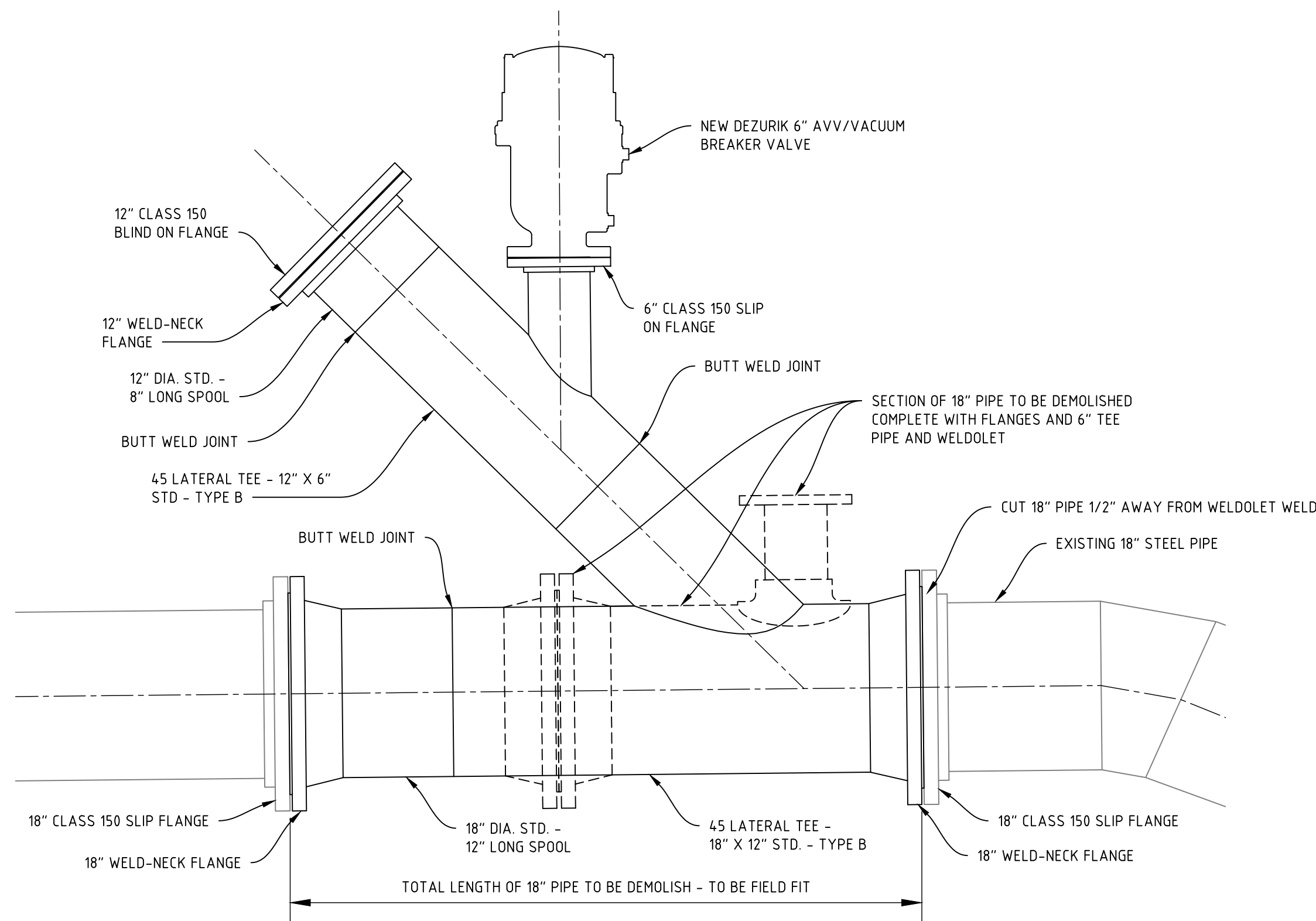
SIDE VIEW - SERIES 37 ASSEMBLY DETAIL  
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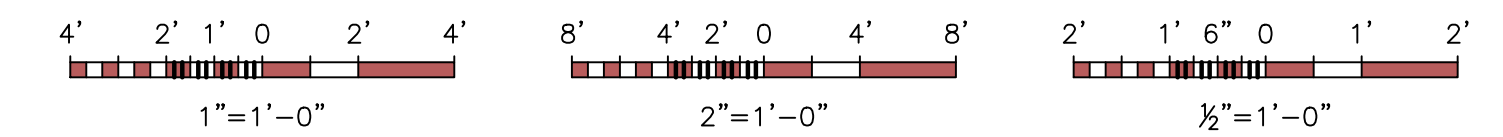
SECTION VIEW - SERIES 37 ASSEMBLY DETAIL  
NTS

DETAIL 4  
NTS

DETAIL 5  
NTS



ON SHORE CLEAN OUT (6)  
1\"/>



REV	DATE	REVISION DESCRIPTION	DRAWN	DRAFT CHK	DESIGNED	ENG CHK	APPROVED	QAR	REF DRAWING No	REFERENCE DRAWING TITLE
A	10-MAR-22	ISSUED FOR CLIENT REVIEW - 100%	RL	CV	EG/CV	EG	LM	JC		

D SHEET SCALE SHOWN


**Oneway**  
to zero team

ENGINEERING AND PERMIT STAMPS (As Required)

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WORLEY PROJECT No  
317085-31478

CUSTOMER



TOWN OF DISCOVERY BAY  
CALIFORNIA  
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Worley Group

TOWN OF DISCOVERY BAY  
COMMUNITY SERVICES DISTRICT  
WASTEWATER OUTFALL DIFFUSER REPLACEMENT PROJECT  
SHEET 2 OF 2 SECTIONS AND DETAILS

DRG No  
317085-31478-20100-CI-DRD-1005

REV  
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LOCATION: \\WORLEY.COM\CA\DATA\CAL\085\30810-002\20100 - DESIGN & CONSTRUCTION\101 - FIGURES & MAPS\114 - CAD\_FILES\02-DWG\317085-31478-20100-CI-DRD-1004-1005.DWG  
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