

COUNTY OF SANTA CRUZ  
PLANNING DEPARTMENT  
701 Ocean Street, 4<sup>th</sup> Floor  
Santa Cruz, CA 95060  
(831) 454-2580

**NOTICE OF PENDING ACTION**

The Planning Department has received the following application. The identified planner may be contacted for specific information on this application.

**APPLICATION NUMBER: 201109**

**APN: 053-131-17**

**SITUS: 1500 Bonita Dr., Aptos 95003**

Proposal to complete a Time Extension to Permit 161033 to demolish an existing well pump house and associated improvements and to construct a water treatment facility to include a 4,032 square foot treatment building approximately 25 feet in height, standby emergency generator, site access improvements including widening the existing driveway access and construction of a second access bridge, outdoor brine/salt storage and brine waste tanks, storm water detention basin, 590 feet of sewer force main within the County right-of-way extending from the treatment facility to the existing sanitary sewer near the intersection of Bonita Drive and Zanzibar Drive, 1,530 cubic yards of grading, removal of seven trees approximately fifteen inches or less in diameter, and other associated facility improvements. The project requires a Time Extension to Coastal Development Permit and a Preliminary Grading Approval 161033.

**OWNER: Soquel Creek Water District**

**APPLICANT: Michael Wilson**

**SUPERVISORIAL DISTRICT: 2**

**PLANNER: Sheila McDaniel, (831) 454-2255**

**EMAIL: [Sheila.McDaniel@santacruzcounty.us](mailto:Sheila.McDaniel@santacruzcounty.us)**

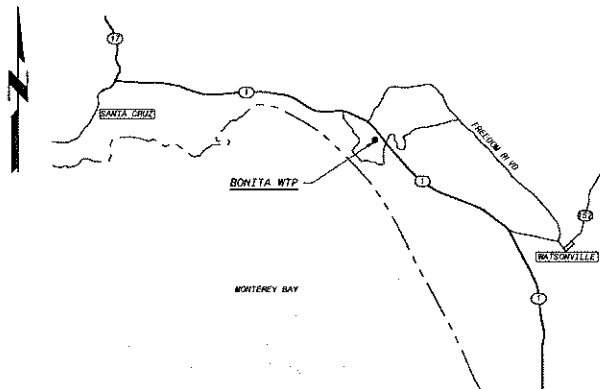
**Public comments must be received by 5:00 p.m. May 29, 2020.**

**A decision will be made on or shortly after June 1, 2020.**

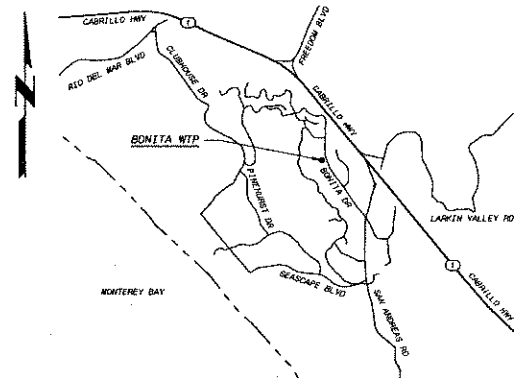
Appeals of the decision will be accepted until 5:00 p.m. two weeks after the decision date. Planner will provide notification of decision to any requesting party. Information regarding the appeal process, including required fees, may be obtained by phoning (831) 454-2130.

# SOQUEL CREEK WATER DISTRICT HEXAVALENT CHROMIUM REMOVAL PROJECT

AUGUST 2016  
COASTAL DEVELOPMENT PERMIT



VICINITY MAP



LOCATION MAP



SOQUEL CREEK WATER DISTRICT

APPROVED BY: ENGINEERING MANAGER

DATE

APN: 053-131-17

CWO 11-140

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NO.	184950
DATE	AUGUST 2016
DESIGNED BY	ALC/WR
DRAWN BY	KAC
CHECKED BY	
APPROVED BY	
DATE	AUGUST 2016
PROJECT NO.	184950
SHEET NO.	G-1
TOTAL SHEETS	1



SOQUEL CREEK WATER DISTRICT  
HEXAVALANT CHROMIUM REMOVAL PROJECT  
BONITA WTP AND SAN ANDREAS WELL  
GENERAL  
COVER SHEET, VICINITY MAP AND LOCATION MAP

DESIGNED: ALC/WR
DRAWN: KAC
CHECKED:
APPROVED:
DATE: AUGUST 2016
PROJECT NO: 184950
SHEET NO: G-1
OF

PROJECT TEAM MEMBERS	
TEAM MEMBER	COMPANY
CIVIL ENGINEER	BLACK & VEATCH
OWNER	SOQUEL CREEK WATER DISTRICT
GEOTECHNICAL ENGINEER	PACIFIC CREST ENGINEERING INC.
ENVIRONMENTAL CONSULTANT	AECOM
BIOLOGIST	AECOM
PROCESS ENGINEER	CORONA ENVIRONMENTAL CONSULTING LLO
SURVEYOR	BOWMAN & WILLIAMS
LANDSCAPE ARCHITECT	JAY L. JARRETT & ASSOCIATES
ARCHITECT	RUTH STILES
CIVIL TREATMENT SYSTEM SUPPLIER	EDWARDS
CONSTRUCTION CONTRACTOR	TO BE DETERMINED

UTILITIES ADJACENT TO SITE	
TYPE	UTILITY OWNER
RAW WATER	SOQUEL CREEK WATER DISTRICT
POTABLE WATER	SOQUEL CREEK WATER DISTRICT
STORM DRAIN	COUNTY OF SANTA CRUZ
SANITARY SEWER	SANTA CRUZ COUNTY SANITATION DISTRICT
GAS	PACIFIC GAS & ELECTRIC (PG&E)
ELECTRIC	PG&E
FIBER OPTIC	COMCAST
TELEVISION/CABLE	COMCAST
TELEPHONE	ATT (PAC BELL)

NEW DRAWING

EXISTING BONITA SITE PLAN

1" = 20'-0"

APN: 053-131-17  
CWO 11-140

PRELIMINARY - NOT FOR CONSTRUCTION

#### NOTE:

- CONSTRUCTION AND DEMO ACTIVITIES SHALL NOT DISTURB / ENCROACH INTO THE ENVIRONMENTAL SENSITIVE AREA UNLESS OTHERWISE SPECIFICALLY INDICATED. REFER TO SPECIFICATIONS FOR CONSTRAINTS AND REQUIREMENTS RELATING TO ESA.

<b>BLACK &amp; VEATCH</b> Building a world of difference Black & Veatch Corporation Sacramento, California	
<b>SOQUEL CREEK WATER DISTRICT</b> HEXAVALENT CHROMIUM REMOVAL PROJECT BONITA WTP AND SAN ANDREAS WELL	
CIVIL EXISTING SITE PLAN	
DESIGNED: DRAWN: CHECKED: APPROVED: DATE: MAY 2016	PROJECT NO. 184950 C-2 SHEET OF



# ISTAND AVOIDANCE MEASURES

THE AVOIDANCE MEASURES INDICATED BELOW AND CONTINUED ON DWG C-7 SHALL BE INCORPORATED IN TO THE PROJECT. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

**AVOIDANCE MEASURE 1 - HABITAT AVOIDANCE:** THE PROJECT DEVELOPMENT AREA AT THE TREATMENT FACILITY SITE SHALL BE RESTRICTED TO LOCATIONS OUTSIDE OF IDENTIFIED HABITAT FOR SANTA CRUZ LONG-TOED SALAMANDER (SOLTS). TO AVOID DISTURBANCE OF THE DRAINAGE AND RIPARIAN CORRIDOR FOR CONSTRUCTION OF THE ACCESS DRIVEWAY, BRIDGES SHALL BE CONSTRUCTED TO SPAN OVER THE DRAINAGE (SEE MEASURE 5; DRIVEWAY BRIDGE DESIGN).

**AVOIDANCE MEASURE 2 - STORMWATER BASIN DESIGN:** THE PROJECT STORM WATER BASIN SHALL BE DESIGNED TO AVOID ADVERSE EFFECTS TO SOLTS BY INSTANTANEOUS EXCLUSION STRUCTURES (E.S.). EXCLUSION FENCING IS IN PLACE AROUND THE PROPOSED BASIN TO PREVENT SALAMANDERS FROM GETTING TRAPPED IN THE BASIN.

**AVOIDANCE MEASURE 3 - DRIVEWAY BRIDGE DESIGN:** THE BRIDGE INSTALLED AS PART OF THE PROJECT, ADHERES TO THE FOLLOWING DESIGN AVOIDANCE MEASURES:

- GROUND DISTURBANCE WITHIN THE DRAINAGE AND RIPARIAN CORRIDOR ALONG THE EASTERN EDGE OF THE SITE SHALL BE AVOIDED THROUGH THE USE OF A CRANE TO INSTALL PRE-FABRICATED BRIDGES ON ABUTMENTS AND FOOTINGS LOCATED OUTSIDE OF THE RIPARIAN CORRIDOR AND SOLTS HABITAT.
- ANY REQUIRED VEGETATION REMOVAL/THINNING TO ACCOMMODATE THE BRIDGE SHALL NOT INCLUDE TRUNK OR ROOT REMOVAL. TREE STAMPS AND ROOTS WILL BE RETAINED TO AVOID ANY GROUND DISTURBANCE.
- MOST OF THE VEGETATION REMOVAL/THINNING WILL BE FOR NON-NATIVE VEGETATION. HOWEVER, ANY BRANCHES, POLARIS, AND OTHER TRIMMINGS COLLECTED FROM NATIVE PLANTS DURING VEGETATION REMOVAL WILL BE SPREAD THROUGHOUT THE RIPARIAN CORRIDOR UP- AND DOWN-STREAM OF THE WORK AREA AS LEAF-LITTER, WALCH, AND WOODY DEBRIS TO ENHANCE HABITAT FOR SANTA CRUZ LONG-TOED SALAMANDERS.

**AVOIDANCE MEASURE 4 - SEWER FORCE MAIN:** THE SEWER FORCE MAIN SHALL BE DESIGNED TO AVOID OPEN TRENCH CONSTRUCTION THROUGH THE SOLTS DRAINAGE.

**AVOIDANCE MEASURE 5 - LIGHTING:** REFER TO ELECTRICAL DWGS FOR AVOIDANCE MEASURE.

**AVOIDANCE MEASURE 6 - SECONDARY CONTAINMENT:** ALL TANKS AND STATIONARY EQUIPMENT THAT INVOLVE THE USE OF HAZARDOUS WASTE, SHELLS, OR FUEL SHALL BE PROVIDED WITH SECONDARY CONTAINMENT AND WILL BE OPERATED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS RELATED TO THE USE, STORAGE, AND TRANSPORT OF SUCH MATERIALS.

**AVOIDANCE MEASURE 7 - FENCE REPAIRS AND REPLACEMENT:** THE EXISTING TREATMENT FACILITY SITE FENCING EXPECTED TO BE MAINTAINED WITH THE PROJECT. IN THE LONG-TERM, HOWEVER, FENCE REPAIRS AND ULTIMATE REPLACEMENT WILL LIKELY BE REQUIRED. ANY REPLACEMENT OF CROSSBARS AND CHAIN-LINK FENCE WILL PROVIDE FOR A SIMILAR PERMEABLE FENCE TO ALLOW FOR INDIVIDUAL SOLTS TO MOVE BACK AND FORTH. IF POLE REPLACEMENT IS REQUIRED AT SOME POINT, POLES SHALL BE REPLACED IN THE EXACT FOOTPRINT OF THE EXISTING POLES TO AVOID EXCAVATION IN UNDISTURBED HABITAT AREA.

**AVOIDANCE MEASURE 8 - PROJECT TIMING:** PROJECT CONSTRUCTION ACTIVITIES THAT OCCUR OUTSIDE THE PART OF THE TREATMENT FACILITY SITE PROTECTED BY EXCLUSION FENCING, IF ANY, SHALL BE TIMED TO OCCUR DURING THE DRY SEASON (NONBREEDING SEASON FOR SANTA CRUZ LONG-TOED SALAMANDER) (APRIL 15 THROUGH OCTOBER 15) TO MINIMIZE POTENTIAL EFFECTS TO SALAMANDER BREEDING AND DISPERSAL.

**AVOIDANCE MEASURE 9 - ENVIRONMENTAL AWARENESS TRAINING:** BEFORE THE START OF GROUND-DISTURBING ACTIVITIES AT THE TREATMENT FACILITY SITE, THE PROJECT BIOLOGIST SHALL PREPARE AND IMPLEMENT AN ENVIRONMENTAL AWARENESS TRAINING SESSION FOR WORKERS WHO WILL BE CONDUCTING THE CONSTRUCTION ACTIVITIES AND ONGOING OPERATIONS AT THE PROJECT SITE. TRAINING MATERIALS WILL INCLUDE DISCUSSION OF THE FOLLOWING:

- FEDERAL ENDANGERED SPECIES ACT, THE CALIFORNIA ENDANGERED SPECIES ACT, FISH AND GAME CODE, THE MIGRATORY BIRD TREATY ACT, AND THE CLEAN WATER ACT.
- CONSEQUENCES AND PENALTIES FOR VIOLATION OF NONCOMPLIANCE WITH THESE LAWS AND REGULATIONS AND PROJECT PERMITS.
- IDENTIFICATION AND VALUE OF SPECIAL-STATUS PLANTS, SPECIAL-STATUS WILDLIFE, AND JURISDICTIONAL WATER, AND EXPLANATIONS REGARDING THEIR VALUE. SPECIFICALLY EMPHASIZE IDENTIFICATION AND IMPORTANCE OF THE SANTA CRUZ LONG-TOED SALAMANDER AND ITS HABITAT.
- HAZARDOUS SUBSTANCE SPILL PREVENTION AND CONTAINMENT MEASURES.
- CONTACT PERSON IN THE EVENT OF THE DISCOVERY OF A SANTA CRUZ LONG-TOED SALAMANDER OR A DEAD OR INJURED WILDLIFE SPECIES.
- REVIEW OF AVOIDANCE MEASURES.

IN THE TRAINING, PROJECT TIMING IN RELATION TO SPECIES' HABITAT AND SPECIES' LIFE STAGE REQUIREMENTS SHALL BE DETAILED AND DISCUSSED ON PROJECT MAPS, WHICH SHALL SHOW AREAS OF PLANNED AVOIDANCE MEASURES.

A FACT SHEET CONVEYING THIS INFORMATION SHALL BE PREPARED BY THE PROJECT BIOLOGIST FOR DISTRIBUTION TO THE PROJECT WORKERS AND OTHERS WHO ENTER THE PROJECT AREA. ON COMPLETION OF THE TRAINING, PROJECT WORKERS SHALL SIGN A FORM STATING THAT THEY ATTENDED THE TRAINING, UNDERSTAND THE INFORMATION PRESENTED, AND WILL COMPLY WITH THE TRAINING REQUIREMENTS. ALL SUBSEQUENT CREW BROUGHT ONTO THE CONSTRUCTION SITE THROUGHOUT THE CONSTRUCTION PERIOD SHALL ALSO RECEIVE THIS TRAINING PRIOR TO WORKING ON THE SITE. THE CONTRACTOR SHALL KEEP THE SIGN-UP SHEETS ON SITE AT ALL TIMES.

**AVOIDANCE MEASURE 10 - EXCLUSION FENCING:** EXCLUSION FENCING WILL BE USED TO ESTABLISH NON-DISTURBANCE EXCLUSION ZONES TO RESTRICT PROJECT EQUIPMENT AND PERSONNEL FROM SENSITIVE AREAS AND RESTRICT FEDERAL AND STATE-LISTED WILDLIFE SPECIES (PARTICULARLY THE SOLTS) FROM ENTERING THE CONSTRUCTION AREAS. SENSITIVE AREAS LIMITS ARE INDICATED ON THE CIVIL PLANS DWGS.

THE WILDLIFE EXCLUSION FENCING WILL BE COMPOSED OF LIGHTWEIGHT PLASTIC MESH FENCE (ERTEC FENCE) DESIGNED WITH ONE-WAY ESCAPE TUNNELS TO ALLOW ANY UNIDENTIFIED SALAMANDERS WITHIN THE CONSTRUCTION AREA ACCESS TO AREAS OUTSIDE THE CONSTRUCTION AREA. THE CONTRACTOR SHALL ENSURE THAT ALL SENSITIVE AREAS AND OFF-LIMITS TO PROJECT PERSONNEL AND EQUIPMENT. THE WILDLIFE EXCLUSION FENCING SHALL BE INSTALLED INTO THE GROUND BURIED AT LEAST A TWO INCHES DEEP USING HAND TOOLS UNDER THE SUPERVISION OF THE PROJECT BIOLOGIST(S). THE QUALIFIED BIOLOGIST(S) WILL SURVEY THE ENTIRE SITE WITHIN THE EXCLUSION FENCING PRIOR TO ANY CONSTRUCTION AT THE SITE. IF ANY SOLTS ARE DISCOVERED WITHIN THE CONSTRUCTION AREA, THEN CONSTRUCTION ACTIVITIES MUST BE POSTPONED UNTIL THE SALAMANDER LEAVES THE CONSTRUCTION MARK AREA AND THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (CDFW) AND THE UNITED STATES FISH AND WILDLIFE SERVICE (USFWS) SHALL BE NOTIFIED BY TELEPHONE AND ELECTRONIC MAIL WITHIN 1 WORKING DAY. IF THE SOLTS DOES NOT LEAVE THE PROJECT SITE, THEN CDFW AND USFWS WILL BE CONTACTED TO DETERMINE HOW TO PROCEED. CONSTRUCTION WILL NOT BEGIN AGAIN UNTIL APPROVAL FROM CDFW AND USFWS IS OBTAINED.

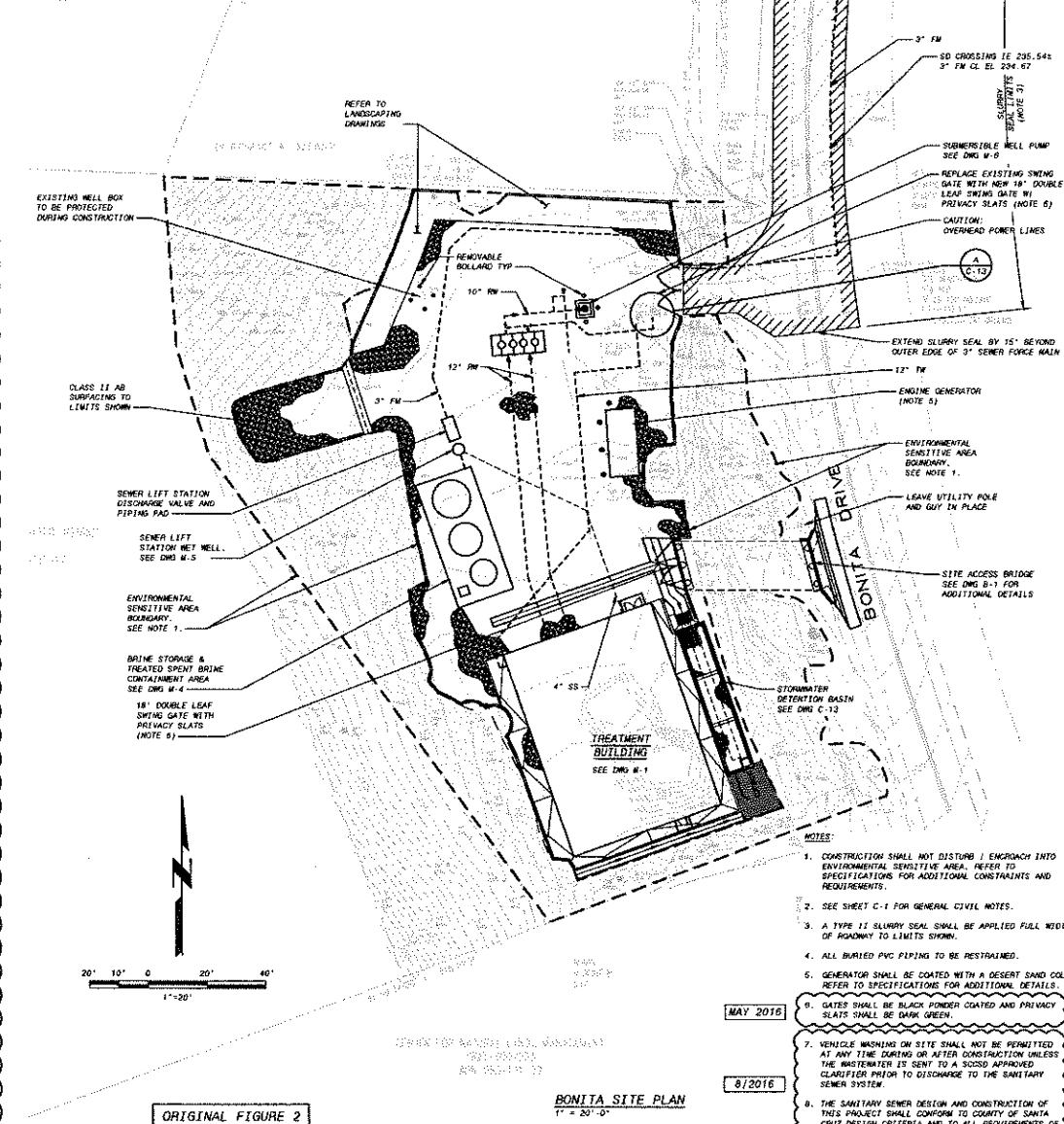
**AVOIDANCE MEASURE 11 - PRECONSTRUCTION SURVEY:** WITHIN 24 HOURS PRIOR TO INITIAL GROUND-DISTURBING ACTIVITIES, THE TREATMENT FACILITY CONSTRUCTION AREA WILL BE SURVEYED BY QUALIFIED BIOLOGIST(S) FOR SALAMANDERS TO ASSESS THE SITE OF SALAMANDERS MOVING ABOVE-GROUND, OR TAVING REFUGE IN BURROW OPENINGS OR UNDER MATERIALS THAT COULD PROVIDE COVER, SUCH AS ROADS, SCRAP WOOD DEBRIS, LEAF LITTER OR OTHER MATERIALS. THE QUALIFIED BIOLOGIST(S) WILL SURVEY THE ENTIRE SITE WITHIN THE EXCLUSION FENCING PRIOR TO ANY CONSTRUCTION AT THE SITE. IF ANY SOLTS ARE DISCOVERED WITHIN THE CONSTRUCTION AREA, THEN CONSTRUCTION ACTIVITIES MUST BE POSTPONED UNTIL THE SALAMANDER LEAVES THE CONSTRUCTION MARK AREA AND THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (CDFW) AND THE UNITED STATES FISH AND WILDLIFE SERVICE (USFWS) SHALL BE NOTIFIED BY TELEPHONE AND ELECTRONIC MAIL WITHIN 1 WORKING DAY. IF THE SOLTS DOES NOT LEAVE THE PROJECT SITE, THEN CDFW AND USFWS WILL BE CONTACTED TO DETERMINE HOW TO PROCEED. CONSTRUCTION WILL NOT BEGIN AGAIN UNTIL APPROVAL FROM CDFW AND USFWS IS OBTAINED.

**AVOIDANCE MEASURE 12 - CONSTRUCTION MONITORING:** A QUALIFIED BIOLOGIST SHALL BE PRESENT AT THE TREATMENT FACILITY SITE DURING THE INSTALLATION OF EXCLUSION FENCING, INSTALLATION OF THE BRIDGES, MAJOR GROUND-DISTURBING ACTIVITIES. AT A MINIMUM, THE BIOLOGIST SHALL VISIT THE SITE WEEKLY DURING CONSTRUCTION TO ENSURE THAT EXCLUSION FENCING IS IN GOOD CONDITION AND AVOIDANCE MEASURES ARE BEING IMPLEMENTED. THE BIOLOGIST(S) SHALL BE GRANTED THE AUTHORITY TO STOP ANY WORK THAT MAY RESULT IN THE TAKE OF LISTED SPECIES. IF THE BIOLOGIST(S) EXERCISED THIS AUTHORITY, THE CDFW AND THE USFWS SHALL BE NOTIFIED BY TELEPHONE AND ELECTRONIC MAIL WITHIN 1 WORKING DAY. THE BIOLOGIST IN CONSULTATION WITH CDFW AND USFWS WILL USE ADAPTIVE MANAGEMENT TO MODIFY AS NECESSARY PROJECT ACTIVITIES TO AVOID ALL IMPACTS TO LISTED SPECIES.

**AVOIDANCE MEASURE 13 - EQUIPMENT AVOIDANCE:** TO PREVENT INSTANTANEOUS ENTRAPMENT OF SOLTS OR OTHER ANIMALS DURING PROJECT CONSTRUCTION, ALL ELEVATED, STEEP-WALLED HOLES OR TRENCHES MORE THAN 1 FOOT DEEP SHALL BE COVERED AT THE CLOSE OF EACH WORK DAY BY PLYWOOD OR SIMILAR MATERIALS, OR SHALL BE PROVIDED WITH ONE OR MORE ESCAPE RAMPS CONSTRUCTED OF EARTH FILL OR WOODEN PLANKS. BEFORE SUCH HOLES OR TRENCHES ARE FILLED, THEY SHALL BE THOROUGHLY INSPECTED FOR TRAPPED ANIMALS.

**AVOIDANCE MEASURE 14 - BRIDGE CONSTRUCTION:** TO CONSTRUCT BRIDGE ABUTMENTS AND FOOTINGS (AND SANDWALCH) ON EITHER SIDE OF THE SENSITIVE DRAINAGE AREA, BRIDGE SHALL BE INSTALLED BETWEEN THE WORK AREA AND THE SENSITIVE AREA. THE BRIDGE SHALL BE INSTALLED BETWEEN THE WORK AREA AND THE SENSITIVE AREA AS DESCRIBED IN MEASURE 10. ALL EQUIPMENT AND PROJECT PERSONNEL SHALL STAY OUT OF THE DRAINAGE AREA DURING CONSTRUCTION. ALL GROUND DISTURBING ACTIVITIES (FOR THE BRIDGE FOOTINGS) IN ADDITION TO ANY TREE OR VEGETATION REMOVAL SHALL REQUIRE THE PRESENCE OF A QUALIFIED BIOLOGIST.

MAY 2016



ORIGINAL FIGURE 2

BONITA SITE PLAN

1" = 20'-0"

CWO 11-140

PRELIMINARY - NOT FOR CONSTRUCTION

NO.	DATE	DESCRIPTION	BY	CHK
1	05/17/2016	ISSUED FOR PERMIT	AW	AW
2	05/17/2016	ISSUED FOR PERMIT	AW	AW
3	05/17/2016	ISSUED FOR PERMIT	AW	AW
4	05/17/2016	ISSUED FOR PERMIT	AW	AW
5	05/17/2016	ISSUED FOR PERMIT	AW	AW
6	05/17/2016	ISSUED FOR PERMIT	AW	AW
7	05/17/2016	ISSUED FOR PERMIT	AW	AW
8	05/17/2016	ISSUED FOR PERMIT	AW	AW
9	05/17/2016	ISSUED FOR PERMIT	AW	AW
10	05/17/2016	ISSUED FOR PERMIT	AW	AW



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Building a world of difference  
Bonita, California

**SOQUEL CREEK WATER DISTRICT**  
HEXAVALENT CHROMIUM REMOVAL PROJECT  
BONITA WTP AND SAN ANDREAS WELL  
CIVIL  
SITE PLAN AND YARD PIPING  
SHEET 1 OF 2

DESIGNED BY	ALAN W.
CHECKED BY	AW
APPROVED BY	AW
DATE	AUGUST 2016
PROJECT NO.	184950
SHEET NO.	C-7
OF	7

# SLURRY SEAL AVOIDANCE MEASURES (CONT.)

## AVOIDANCE MEASURE 15 - GENERAL CONSTRUCTION GUIDELINES AND RESTRICTIONS:

- THE CONTRACTOR SHALL CONTINUE ALL EQUIPMENT TO DESIGNATED WORK ZONES (INCLUDING ACCESS ROADS AND STAGING AREAS) WITHIN THE PROJECT AREA.
- VEHICLE AND EQUIPMENT MAINTENANCE OR FUELING SHALL OCCUR IN DESIGNATED STAGING AREAS AT LEAST 100 FEET FROM IDENTIFIED AQUATIC HABITATS.
- THE CONTRACTOR SHALL PROVIDE CLOSED GARBAGE CONTAINERS FOR THE DISPOSAL OF FOOD-RELATED TRASH ITEMS (E.G., WRAPPERS, CANS, BOTTLES, FOOD SCRAPS). PROJECT PERSONNEL WILL NOT FEED OR OTHERWISE ATTRACT WILDLIFE TO THE PROJECT AREA.
- NO PETS SHALL BE ALLOWED IN THE PROJECT AREA.
- TO MINIMIZE DISTURBANCE OF NOCTURNAL AND/OR CREPUSCULAR WILDLIFE, WORK SHALL BEGIN NO SOONER THAN 15 MINUTES AFTER SUNRISE AND WILL CEASE NO LATER THAN 15 MINUTES BEFORE SUNSET, WHERE FEASIBLE.
- BIODEGRADABLE EROSION CONTROL MEASURES WILL BE USED WHENEVER POSSIBLE. SYNTHETIC EROSION CONTROL MATERIAL, INCLUDING MONOFILAMENT AND PLASTICS, SHALL NOT BE USED.

## AVOIDANCE MEASURE 16 - EROSION AND SEDIMENT CONTROLS: REFER TO DMS C10 FOR AVOIDANCE MEASURE.

## AVOIDANCE MEASURE 17 - INVASIVE WEED CONTROLS: THE FOLLOWING WEED CONTROL MEASURES SHALL BE IMPLEMENTED TO REDUCE THE INTRODUCTION OF INVASIVE WEEDS.

ALL EQUIPMENT SHALL BE CLEANED USING A BRUSH OR SIMILAR DEVICE BEFORE IT ARRIVES ON SITE SO THAT IT IS FREE OF SOIL, SEED, AND PLANT PARTS.

IMPORTED FILL MATERIAL SHALL BE FREE FROM VEGETATION AND PLANT MATERIAL.

EROSION CONTROL MATERIALS SHALL BE WEED FREE.

MAY 2016

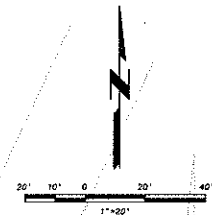
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BY: [Signature]

ZANZIBAR DRIVE

BONITA DRIVE



### NOTES:

1. CONTRACTOR SHALL CORE DRILL THROUGH EXISTING MANHOLE AND CONNECTION 3" FORDEMAIN IN ACCORDANCE WITH THE CURRENT COUNTY OF SANTA CRUZ STANDARD DETAIL FIG 55-4.
2. SEE SHEET C-1 FOR GENERAL CIVIL NOTES.
3. A TYPE II SLURRY SEAL SHALL BE APPLIED FULL WIDTH OF ROADWAY TO LIMITS SHOWN.
4. INSTALL BMPs AT STORM DRAIN INLETS SIMILAR TO CALTRANS BMP HANDBOOK SD-10 TYPE 3. REFER TO DMS C-10 AND SPECIFICATIONS FOR ADDITIONAL BMP & EROSION CONTROL REQUIREMENTS.
5. VEHICLE WASHING ON SITE SHALL NOT BE PERMITTED AT ANY TIME DURING OR AFTER CONSTRUCTION UNLESS THE WASTEWATER IS SENT TO A SECOND APPROVED CLARIFIER PRIOR TO DISCHARGE TO THE SANITARY SEWER SYSTEM.
6. THE SANITARY SEWER DESIGN AND CONSTRUCTION OF THIS PROJECT SHALL CONFORM TO COUNTY OF SANTA CRUZ DESIGN CRITERIA AND TO ALL REQUIREMENTS OF THE SCCSD.

ORIGINAL FIGURE 8

SITE PLAN  
1" = 20'-0"

CWO 11-140

PRELIMINARY - NOT FOR CONSTRUCTION

DATE	BY	REVISION
05/10/2016	[Signature]	1.0
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05/10/2016	[Signature]	1.9
05/10/2016	[Signature]	2.0



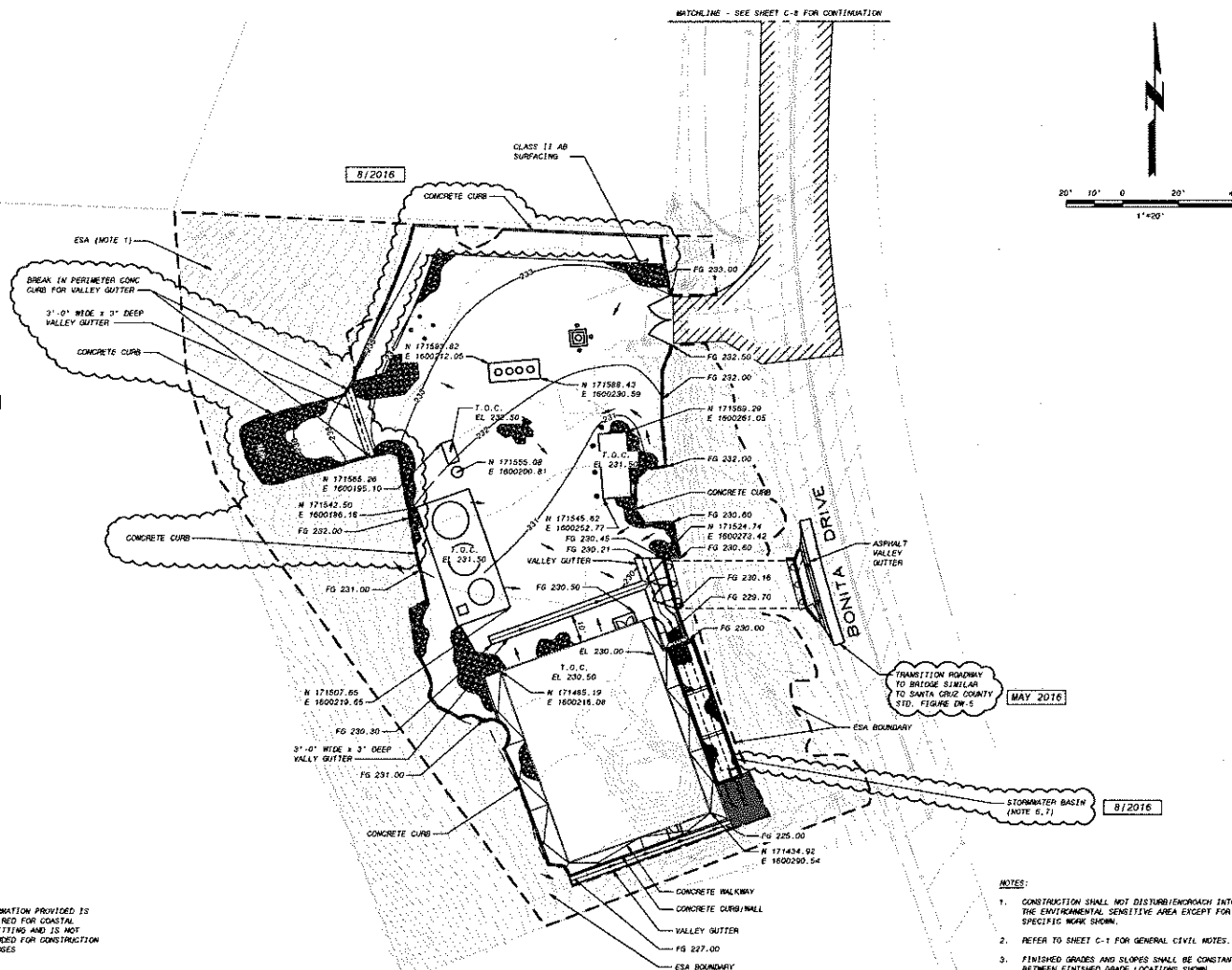
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San Francisco, California

**SQUEL CREEK WATER DISTRICT**  
HEXAVALENT CHROMIUM REMOVAL PROJECT  
BONITA WTP AND SAN ANDREAS WELL  
CIVIL  
SITE PLAN AND YARD PIPING  
SHEET 2 OF 2


DESIGNED: ALN	DATE: AUGUST 2016
DRAWN: MJC	1" = 20'-0"
CHECKED:	IF THIS DRAWING IS NOT TO SCALE
PROJECT NO:	184950
SHEET NO:	C-8

DATA MADE FLOWS:  
Q10 :  
Q25 :  
Q700 :

— INFORMATION PROVIDED IS  
REQUIRED FOR COASTAL  
PERMITTING AND IS NOT  
INTENDED FOR CONSTRUCTION  
PURPOSES



**NOTES:**

1. CONSTRUCTION SHALL NOT DISTURB/ENHANCE INTO THE ENVIRONMENTAL SENSITIVE AREA EXCEPT FOR THE SPECIFIC WORK SHOWN.
2. REFER TO SHEET C-1 FOR GENERAL CIVIL NOTES.
3. FINISHED GRADES AND SLOPES SHALL BE CONSTANT BETWEEN FINISHED GRADE LOCATIONS SHOWN.
4.  REPRESENTS SLOPE TO DRAIN.
5. ALL ELEVATIONS ARE IN REFERENCE TO VERTICAL DATUM INDICATED ON SHEET C-2.
6. CONTRACTOR SHALL AVOID USING THE STORMWATER BASIN AS PART OF THEIR CONSTRUCTION BMP'S TO THE GREATEST EXTENT POSSIBLE. IF BASIN IS USED, CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING AND RESTORING BASIN TO LIKE NEW CONDITION.
7. CONTRACTOR'S CONSTRUCTION ACTIVITIES SHALL NOT OCCUR WITHIN THE LIMITS OF STORMWATER BASIN TO PREVENT ADDITIONAL AND UNWANTED CONSTRUCTION TO THE BASIN.

GRADING AND PAVING PLAN  
1" = 20'-0"

ORIGINAL FIGURE 7

CWO 11-140

PRELIMINARY - NOT FOR CONSTRUCTION

SOQUEL CREEK WATER DISTRICT  
HEXAVALENT CHROMIUM REMOVAL PROJECT

CIVIL  
GOMITA SITE GRADING PLAN

DESIGNED: ALM/AMW  
DETAILED: AMW

DATE: AUGUST 201

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PROJECT

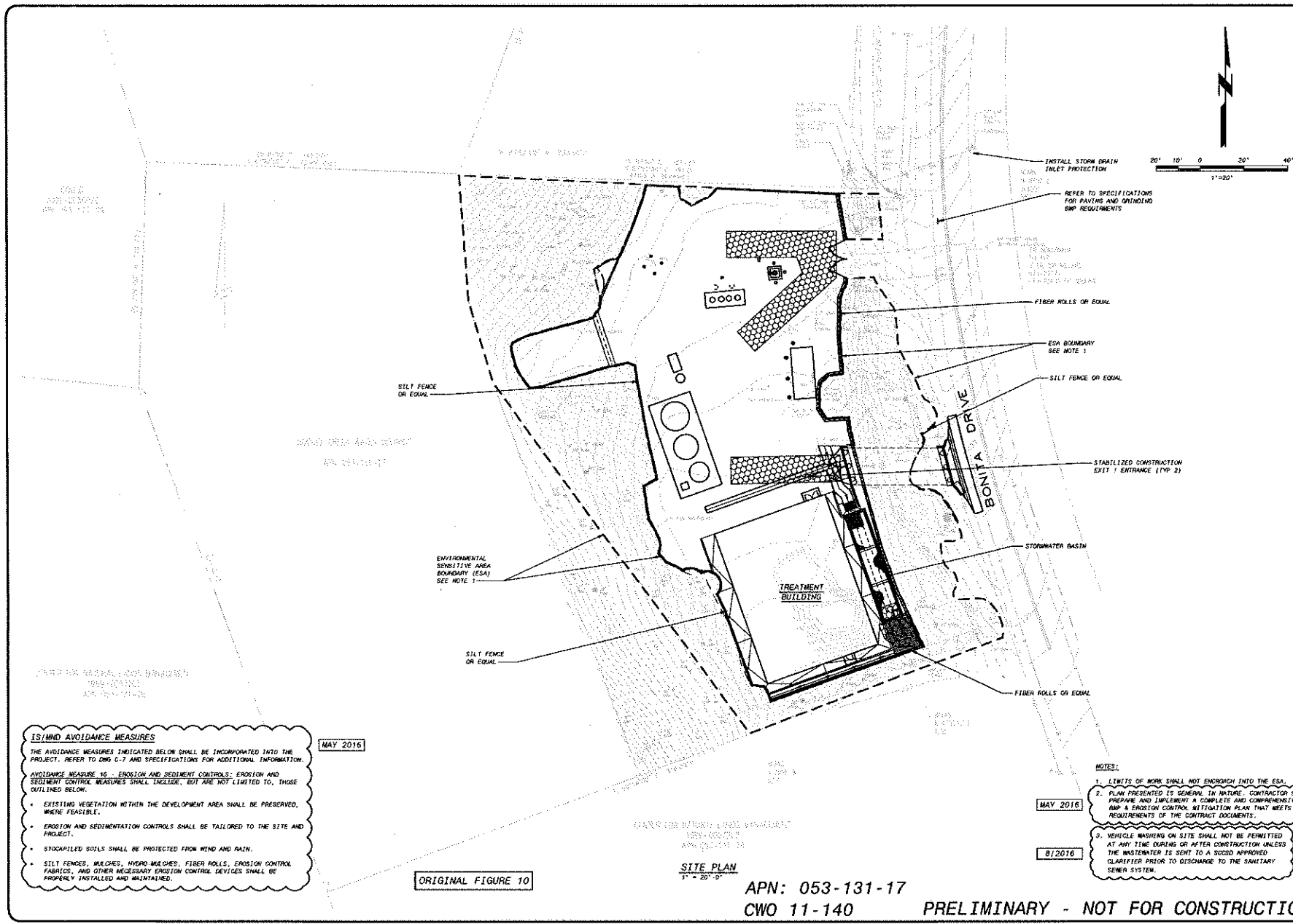
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SHEET

OF

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**ISLAND AVOIDANCE MEASURES**

THE AVOIDANCE MEASURES INDICATED BELOW SHALL BE INCORPORATED INTO THE PROJECT. REFER TO DWG C-7 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

AVOIDANCE MEASURE 15 - EROSION AND SEDIMENT CONTROLS: EROSION AND SEDIMENT CONTROL MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, THOSE OUTLINED BELOW.

- EXISTING VEGETATION WITHIN THE DEVELOPMENT AREA SHALL BE PRESERVED, WHERE FEASIBLE.
- EROSION AND SEDIMENTATION CONTROLS SHALL BE TAILORED TO THE SITE AND PROJECT.
- STOCKPILED SOILS SHALL BE PROTECTED FROM WIND AND RAIN.
- SILT FENCES, MULCHES, HYDRO-MULCHES, FIBER ROLLS, EROSION CONTROL FABRICS, AND OTHER NECESSARY EROSION CONTROL DEVICES SHALL BE PROPERLY INSTALLED AND MAINTAINED.

MAY 2016

MAY 2016

8/2016

- NOTES:**
1. LIMITS OF WORK SHALL NOT ENDORE INTO THE ESA.
  2. PLAN PRESENTED IS GENERAL IN NATURE. CONTRACTOR SHALL PREPARE AND IMPLEMENT A COMPLETE AND COMPREHENSIVE BMP & EROSION CONTROL MITIGATION PLAN THAT MEETS ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS.
  3. VEHICLE WASHING ON SITE SHALL NOT BE PERMITTED AT ANY TIME DURING OR AFTER CONSTRUCTION UNLESS THE WASTEWATER IS SENT TO A SUCSD APPROVED CLARIFIER PRIOR TO DISCHARGE TO THE SANITARY SEWER SYSTEM.

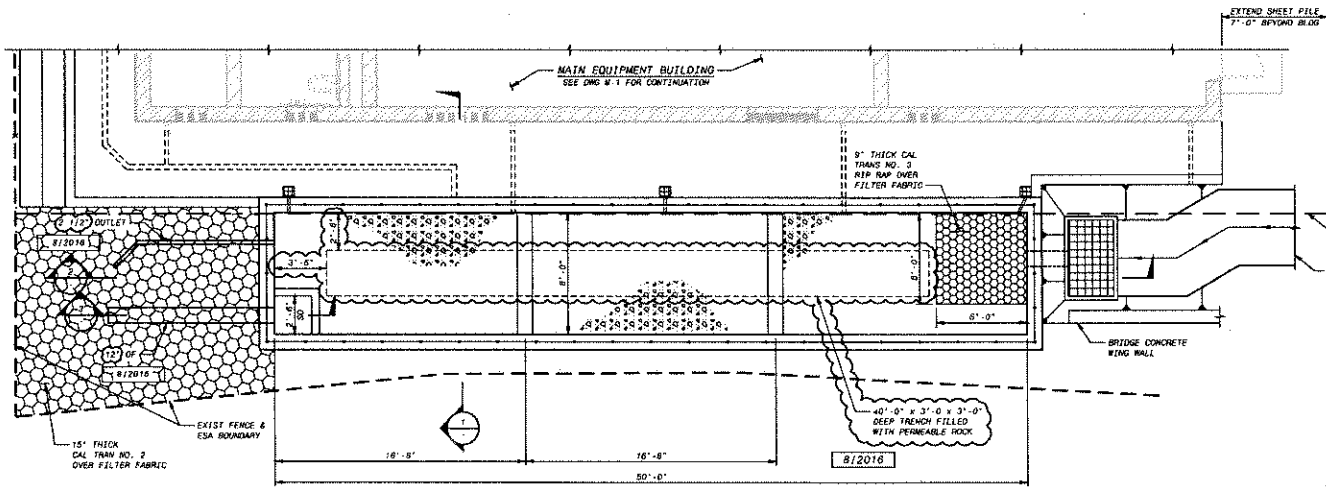
APN: 053-131-17  
CWO 11-140

PRELIMINARY - NOT FOR CONSTRUCTION

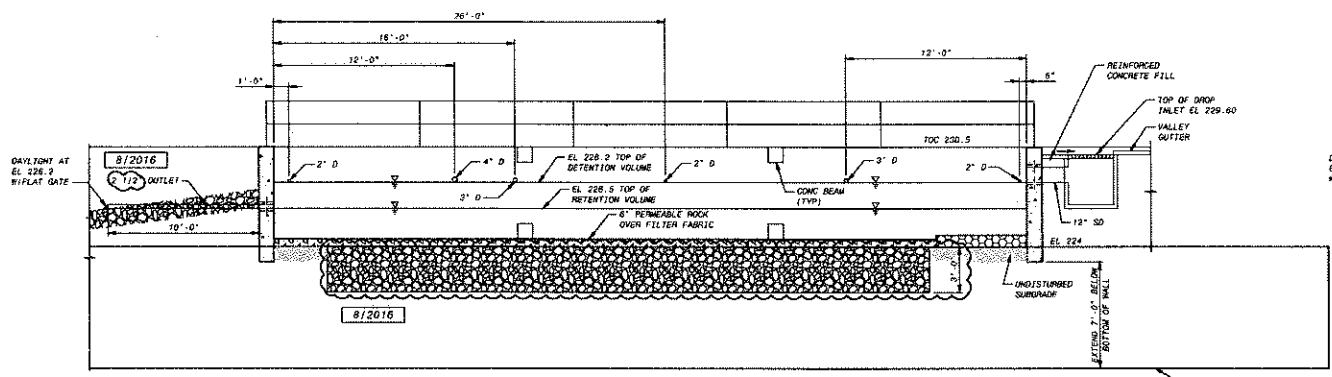
<p><b>BLACK &amp; VEATCH</b> Building a world of difference Black &amp; Veatch Corporation Berkeley, California</p>	
<p><b>SOCQUEL CREEK WATER DISTRICT</b> HEXAVALENT CHROMIUM REMOVAL PROJECT BONITA WTP AND SAN ANDREAS WELL</p>	
<p>CIVIL BONITA SITE CONSTRUCTION BMP EROSION CONTROL PLAN</p>	
<p>DATE: AUGUST 2016</p>	<p>PROJECT NO: 184950</p>
<p>IF THIS PLAN DOES NOT MEASURE 11" THEN DRAWING IS NOT TO BE USED</p>	<p>SHEET OF</p>



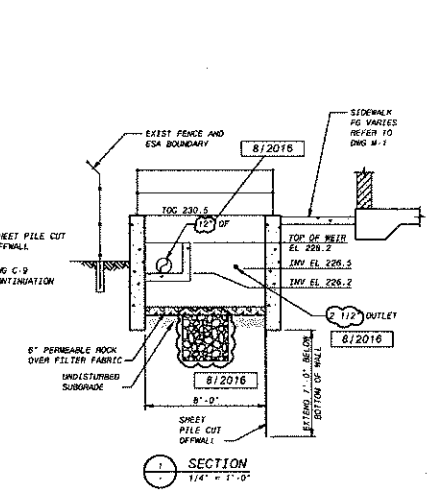




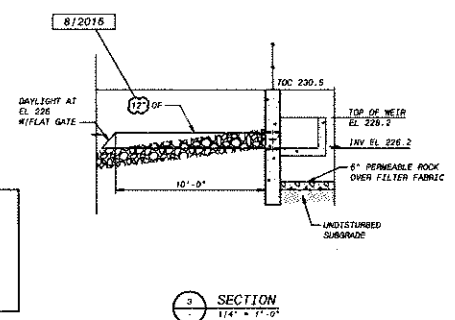
STORMWATER DETENTION - PLAN  
1/4" = 1'-0"



SECTION 1  
1/4" = 1'-0"



SECTION 2  
1/4" = 1'-0"



SECTION 3  
1/4" = 1'-0"

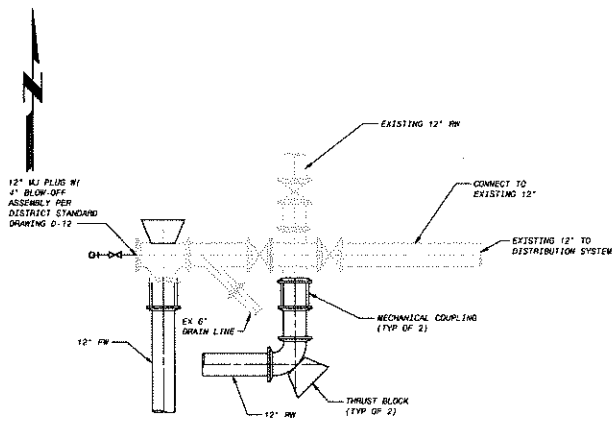
NEW DWG. BASIN ORIGINALLY SHOWN ON FIGURE 9

CWO 11-140

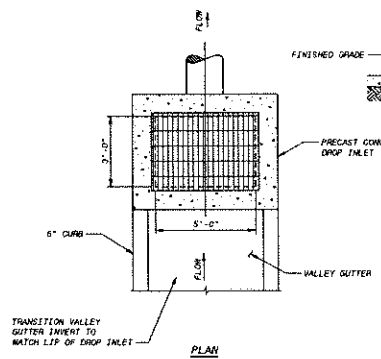
PRELIMINARY - NOT FOR CONSTRUCTION

SOQUEL CREEK WATER DISTRICT HEXAVALENT CHROMIUM REMOVAL PROJECT BONITA WTP AND SAN ANDREAS WELL	
CIVIL STORMWATER BASIN PLAN AND SECTIONS	
DESIGNED: ALH CHECKED: MHC APPROVED: [Signature] DATE: AUGUST 2018	PROJECT NO. 184950 SHEET C-13 OF

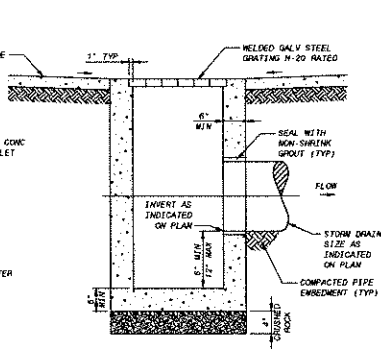
**BLACK & VEATCH**  
*Building a world of difference*  
 Black & Veatch Corporation  
 Sacramento, California



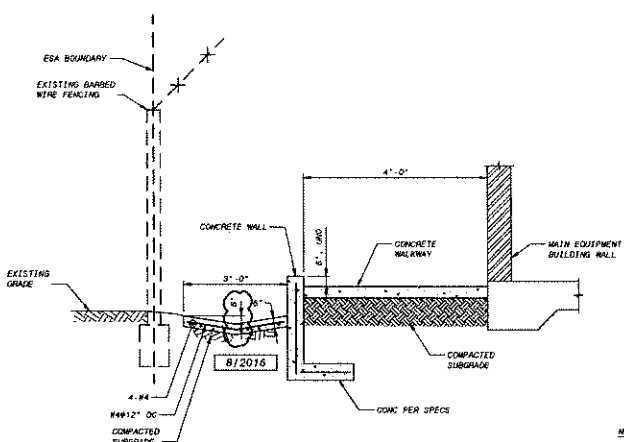
**A** RAW WATER AND FINISH WATER CONNECTION DETAIL  
3/18" = 1'-0"



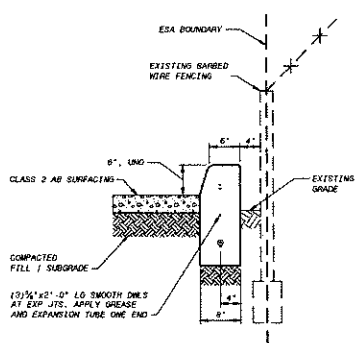
**B** DROP INLET  
NO SCALE



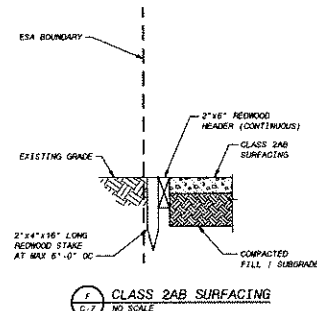
**C** REMOVABLE BOLLARD  
NO SCALE



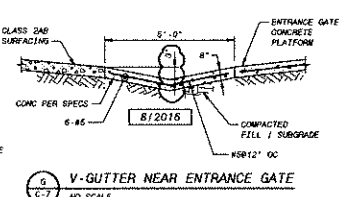
**D** V-GUTTER AND CONCRETE WALL ALONG SOUTHSIDE FENCING  
NO SCALE



**E** CONCRETE CURB ALONG FENCING  
NO SCALE



**F** CLASS 2AB SURFACING  
NO SCALE



**G** V-GUTTER NEAR ENTRANCE GATE  
NO SCALE

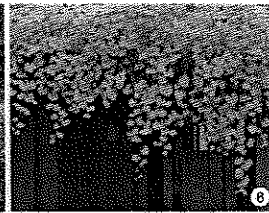
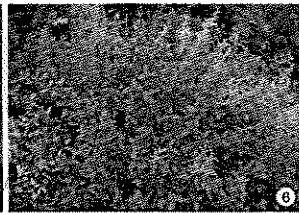
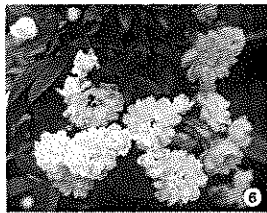
- NOTES:**
1. EXPANSION JOINTS SHALL BE PLACED AT END OF CONCRETE PLACEMENT, AT POINTS OF CURVATURE, AND WALKWAYS CURB RETURNS.
  2. REINFORCING STEEL SHALL NOT PASS THROUGH EXPANSION JOINTS. THE REINFORCEMENT SHALL STOP PRIOR TO EXPANSION JOINT TO ALLOW PLACEMENT OF CONCRETE.

ORIGINAL FIGURE 9

CWO 11-140

PRELIMINARY - NOT FOR CONSTRUCTION

<b>BLACK &amp; VEATCH</b> <i>Building a world of difference</i> Black & Veatch Corporation Sacramento, California	
<b>SQUEL CREEK WATER DISTRICT</b> HEXAVALENT CHROMIUM REMOVAL PROJECT BONITA WTP AND SAN ANDREAS WELL	
CIVIL DETAILS	
DESIGNED: ALI/WH CHECKED: KRC APPROVED: _____ DATE: AUGUST 2016	
IF THIS SHEET DOES NOT MEASURE 11" THEN DRAWING IS NOT TO BE USED	
PROJECT NO. 184950	
C-14 SHEET OF	



## PLANT SUMMARY

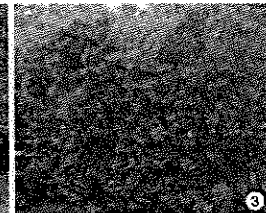
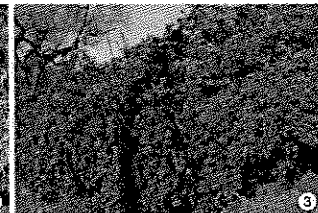
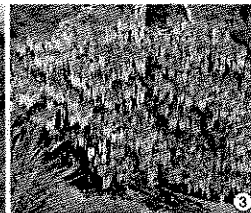
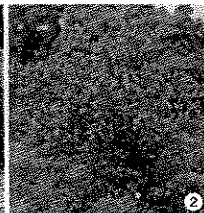
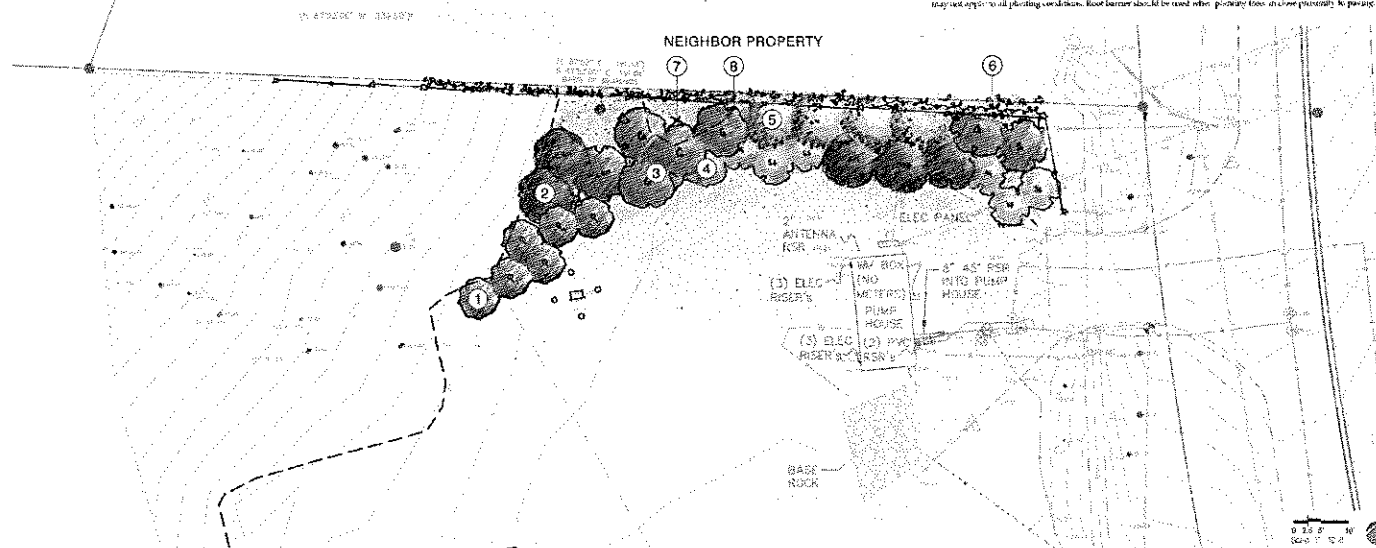
Researcher Name	Research Title	Year	Sample Size	Effect Size	Significance Level	Notes
Chen, H. & Li, J.	Customer Satisfaction	2015	250	0.15	0.05	1
Chen, H. & Li, J.	Customer Satisfaction	2016	300	0.18	0.05	2
Chen, H. & Li, J.	Customer Satisfaction	2017	350	0.20	0.05	3
Chen, H. & Li, J.	Customer Satisfaction	2018	400	0.22	0.05	4
Chen, H. & Li, J.	Customer Satisfaction	2019	450	0.25	0.05	5
Chen, H. & Li, J.	Customer Satisfaction	2020	500	0.28	0.05	6
Chen, H. & Li, J.	Customer Satisfaction	2021	550	0.30	0.05	7
Chen, H. & Li, J.	Customer Satisfaction	2022	600	0.32	0.05	8
Chen, H. & Li, J.	Customer Satisfaction	2023	650	0.35	0.05	9
Chen, H. & Li, J.	Customer Satisfaction	2024	700	0.38	0.05	10
Chen, H. & Li, J.	Customer Satisfaction	2025	750	0.40	0.05	11
Chen, H. & Li, J.	Customer Satisfaction	2026	800	0.42	0.05	12
Chen, H. & Li, J.	Customer Satisfaction	2027	850	0.45	0.05	13
Chen, H. & Li, J.	Customer Satisfaction	2028	900	0.48	0.05	14
Chen, H. & Li, J.	Customer Satisfaction	2029	950	0.50	0.05	15
Chen, H. & Li, J.	Customer Satisfaction	2030	1000	0.52	0.05	16
Chen, H. & Li, J.	Customer Satisfaction	2031	1050	0.55	0.05	17
Chen, H. & Li, J.	Customer Satisfaction	2032	1100	0.58	0.05	18
Chen, H. & Li, J.	Customer Satisfaction	2033	1150	0.60	0.05	19
Chen, H. & Li, J.	Customer Satisfaction	2034	1200	0.62	0.05	20
Chen, H. & Li, J.	Customer Satisfaction	2035	1250	0.65	0.05	21
Chen, H. & Li, J.	Customer Satisfaction	2036	1300	0.68	0.05	22
Chen, H. & Li, J.	Customer Satisfaction	2037	1350	0.70	0.05	23
Chen, H. & Li, J.	Customer Satisfaction	2038	1400	0.72	0.05	24
Chen, H. & Li, J.	Customer Satisfaction	2039	1450	0.75	0.05	25
Chen, H. & Li, J.	Customer Satisfaction	2040	1500	0.78	0.05	26
Chen, H. & Li, J.	Customer Satisfaction	2041	1550	0.80	0.05	27
Chen, H. & Li, J.	Customer Satisfaction	2042	1600	0.82	0.05	28
Chen, H. & Li, J.	Customer Satisfaction	2043	1650	0.85	0.05	29
Chen, H. & Li, J.	Customer Satisfaction	2044	1700	0.88	0.05	30
Chen, H. & Li, J.	Customer Satisfaction	2045	1750	0.90	0.05	31
Chen, H. & Li, J.	Customer Satisfaction	2046	1800	0.92	0.05	32
Chen, H. & Li, J.	Customer Satisfaction	2047	1850	0.95	0.05	33
Chen, H. & Li, J.	Customer Satisfaction	2048	1900	0.98	0.05	34
Chen, H. & Li, J.	Customer Satisfaction	2049	1950	1.00	0.05	35
Chen, H. & Li, J.	Customer Satisfaction	2050	2000	1.02	0.05	36
Chen, H. & Li, J.	Customer Satisfaction	2051	2050	1.05	0.05	37
Chen, H. & Li, J.	Customer Satisfaction	2052	2100	1.08	0.05	38
Chen, H. & Li, J.	Customer Satisfaction	2053	2150	1.10	0.05	39
Chen, H. & Li, J.	Customer Satisfaction	2054	2200	1.12	0.05	40
Chen, H. & Li, J.	Customer Satisfaction	2055	2250	1.15	0.05	41
Chen, H. & Li, J.	Customer Satisfaction	2056	2300	1.18	0.05	42
Chen, H. & Li, J.	Customer Satisfaction	2057	2350	1.20	0.05	43
Chen, H. & Li, J.	Customer Satisfaction	2058	2400	1.22	0.05	44
Chen, H. & Li, J.	Customer Satisfaction	2059	2450	1.25	0.05	45
Chen, H. & Li, J.	Customer Satisfaction	2060	2500	1.28	0.05	46
Chen, H. & Li, J.	Customer Satisfaction	2061	2550	1.30	0.05	47
Chen, H. & Li, J.	Customer Satisfaction	2062	2600	1.32	0.05	48
Chen, H. & Li, J.	Customer Satisfaction	2063	2650	1.35	0.05	49
Chen, H. & Li, J.	Customer Satisfaction	2064	2700	1.38	0.05	50
Chen, H. & Li, J.	Customer Satisfaction	2065	2			

Note: All listed sizes and dimensions are approximated in the context of this testing plan with appropriate (trip) tree techniques may not apply to all planting conditions. Root barrier should be used when planting trees in close proximity to paving.

### PLAN NOTES

- New planning and installation to screen neighbor's view of site. Planning to be micro-climate adapted and non-invasive systems. Planting containers to be 16" (or larger) in-garden system should be in compliance with the County of Santa Cruz code and shall be water conserving (drip, low flow, mulched precipitation rate, micro-sprays or bubblers) and covered by an automatic controller with flow-control and moisture sensing capabilities. Do not plant within environmentally sensitive habitats areas. Plant species may include:

1. *Quercus dumosa* (coastal sage scrub oak) 3-10' tall
  2. *Ceanothus* "Ray Hamann" (California lilac) 12-20' tall
  3. *Garrya elliptica* "James Hogg" (crest or kelly) 3-15' tall and wide, *Fraxinus arbutifolia* (hoylei) 8-15' tall, or *Malva californica* ("Pacific wild mallow")
  4. *Ceanothus* "Snow Flocky" (California lilac)
  5. *Prunus ilicifolia* (holboellii) (holly leaf cherry) 10-25' tall and wide
  6. Vine on "hot dog" property "to be irrigated by SCWD": A thimble cactus (*Cylindropuntia*) or *Artemisia tridentata* "Alopecurus" (or "Lady Banks' rose") with *Vitis californica* "Roger's Red" (California grape)
  7. Do not plant tree at base and plant outside of habitat trail
  8. Environmental sensitive area boundary.
- Project Director shall be present during shrub planting to ensure that requirements are not present during installation.
  - SCWD will determine approval process and schedule of planting with environmental consultant.
  - Existing property line fence to be maintained.

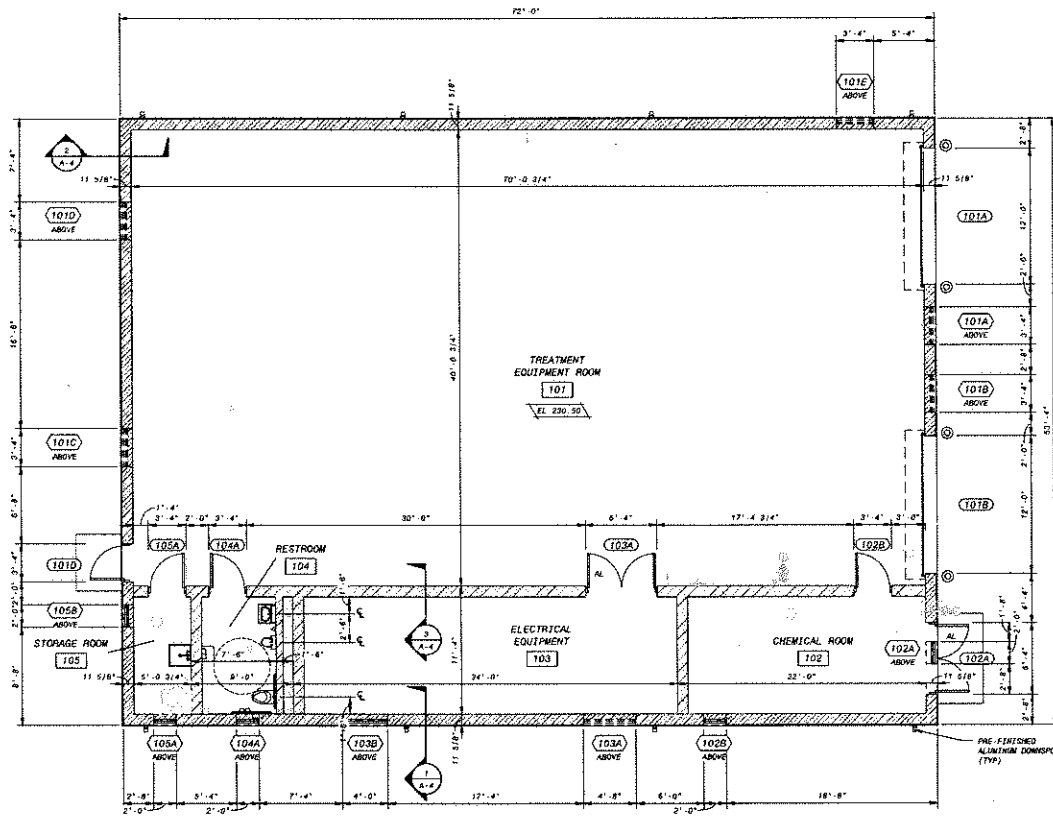


Bonita WTP - Soquel Creek Water District  
CONCEPTUAL LANDSCAPE SCREENING PLAN & IMAGES - L1.0

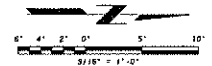
AUGUST 7, 2015  
APN: 053-131-17

ORIGINAL FIGURE 13

**L-1: LANDSCAPING PLAN**



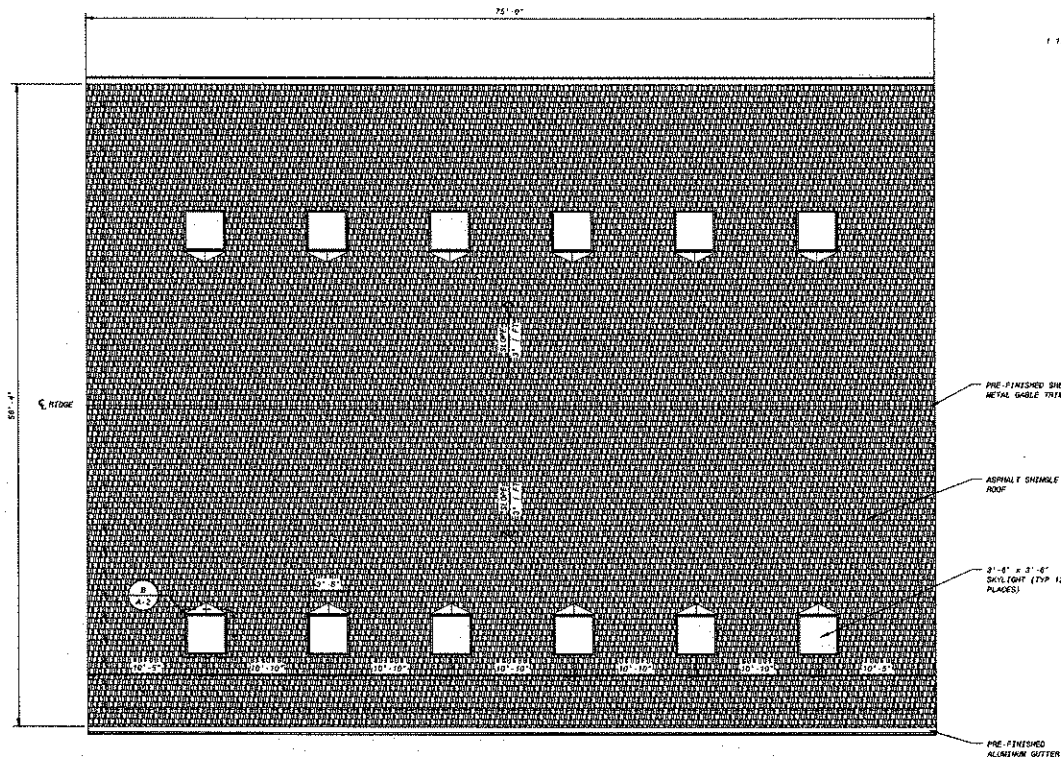
OPERATING FLOOR PLAN  
3/16\"/>



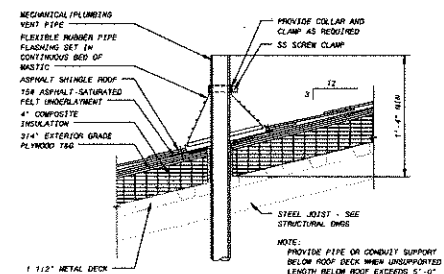
CWO 11-140

PRELIMINARY - NOT FOR CONSTRUCTION

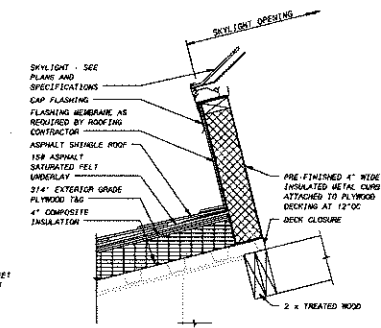
SOQUEL CREEK WATER DISTRICT HEXAVALENT CHROMIUM REMOVAL PROJECT BONITA WTP AND SAN ANDREAS WELL MAIN EQUIPMENT BUILDING ARCHITECTURAL OPERATING FLOOR PLAN	
DESIGNED: JSD CHECKED: JSD APPROVED: JSD DATE: MAY 2016	PROJECT NO. 184950 A-1 SHEET OF
BLACK & VEATCH Building a world of difference Black & Veatch Corporation Kansas City, Missouri	
LICENSED ARCHITECT State of California License No. 10000	
REVISIONS AND RECORD OF ISSUE NO. 184950-100 DATE BY REASON 1. THIS SHEET DOES NOT BEARING 1" THEY SHOWING IS NOT BE FINAL SCALE	



ROOF PLAN  
316' - 0"

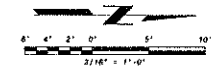


PIPE VENT  
1'-1/2" x 1'-0"



SKYLIGHT DETAIL  
A-2 1'-1/2" x 1'-0"

ORIGINAL FIGURE 4



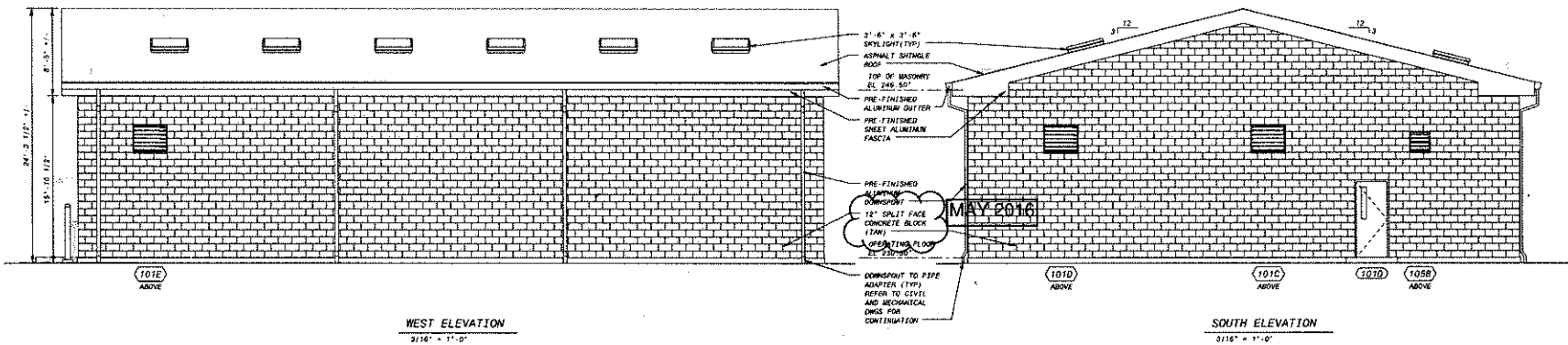
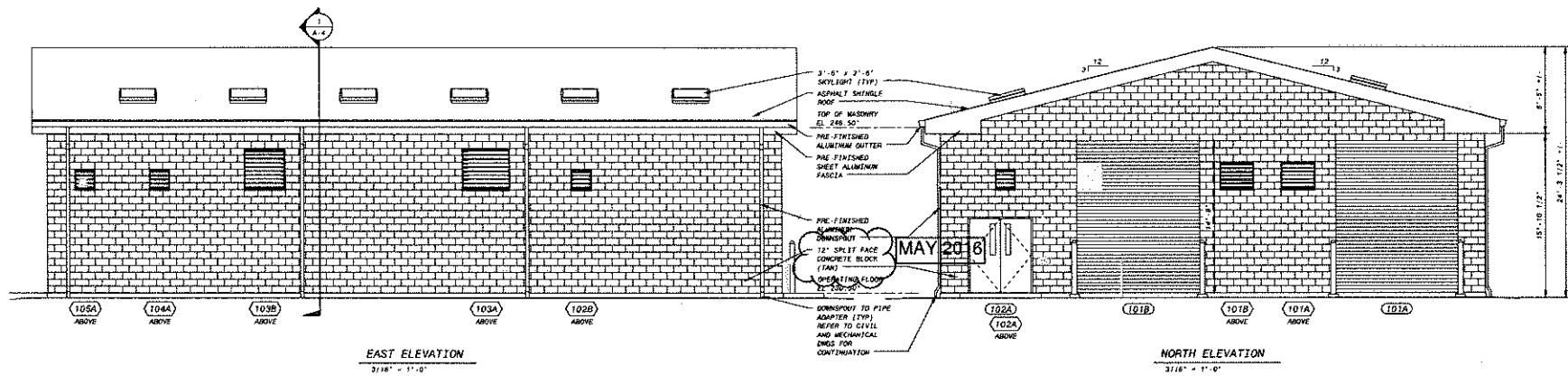
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PRELIMINARY - NOT FOR CONSTRUCTION

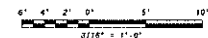
DESIGNED: JGG	DATE: MAY 2018
DRAWN: JGG	DATE: MAY 2018
CHECKED: JGG	DATE: MAY 2018
APPROVED: JGG	DATE: MAY 2018
PROJECT NO. 184950	
A-2 SHEET OF	

**BLACK & VEATCH**  
Building a world of difference  
Black & Veatch Corporation  
Kansas City, Missouri

**SOQUEL CREEK WATER DISTRICT**  
HEXAVALENT CHROMIUM REMOVAL PROJECT  
BONITA WTP AND SAN ANDREAS WELL  
MAIN EQUIPMENT BUILDING  
ARCHITECTURAL  
ROOF PLAN AND DETAILS



ORIGINAL FIGURE 5



CWO 11-140

PRELIMINARY - NOT FOR CONSTRUCTION

DESIGNED: DDO	DATE: MAY 2016
DETAILED: ANH	DATE: MAY 2016
CHECKED: KMB	DATE: MAY 2016
APPROVED: JG	DATE: MAY 2016
PROJECT NO. 184950	
A-3 SHEET OF	

SOQUEL CREEK WATER DISTRICT  
HEXAVALENT CHROMIUM REMOVAL PROJECT  
BONITA WTP AND SAN ANDREAS WELL  
MAIN EQUIPMENT BUILDING  
ARCHITECTURAL ELEVATIONS

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Black & Veatch Corporation  
www.bv.com

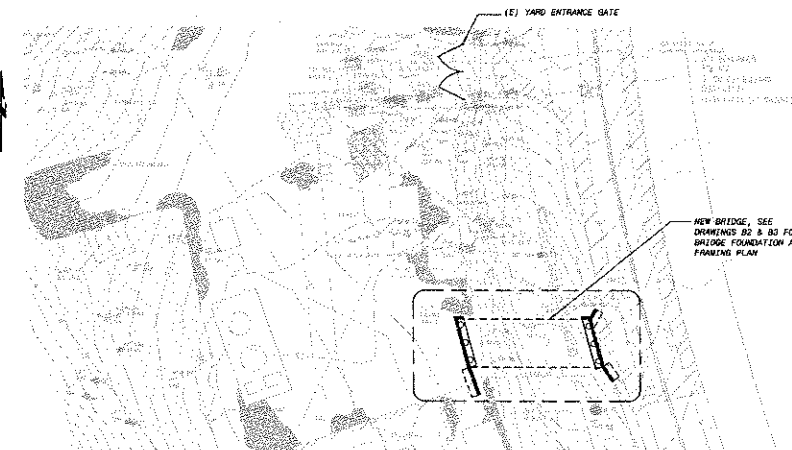
ARCHITECT  
No. C-54888  
WYOMING  
STATE OF WYOMING  
JULY 2016





## DRAWING LIST

DRAWING #	DESCRIPTION
01	BRIDGE COVER SHEET
02	BRIDGE FOUNDATION PLAN
03	BRIDGE FRAMING PLAN, ELEVATION & SECTION
04	DETAILS (780)
05	DETAILS (780)
06	DETAILS (780)

BRIDGE LOCATION PLAN  
NTS

## 1. SCOPE OF WORK &amp; SEQUENCE OF WORK

- CONSTRUCT A NEW CONCRETE BRIDGE WITH STEEL STRINGERS OVER A DRAINAGE DITCH.
- THE BRIDGE DESIGN WAS DEVELOPED BASED ON THE FOLLOWING ASSUMED CONSTRUCTION SEQUENCE:
  - CONSTRUCT NEW CONCRETE PIERS & CAPS.
  - INSTALL STEEL STRINGERS, CORRUGATED STEEL FORM WITH CONCRETE INFILL AND GUARDRAIL.
  - COMPLETE GRADING WORK, CONC. APRONS AND OTHER MISC. WORK.

## 11. STRUCTURAL DESIGN CRITERIA

- CALTRANS 1. ASKTO INFO BRIDGE DESIGN SPECIFICATIONS 2012 EDITION.

## 111. DESIGN LOADS

- LIVE LOAD: HS20 TRUCK LOADING.
- THERMAL FORCES FROM 30 F TO 120 F SECT. 3.16.
- ACTIVE EARTH PRESSURE: 45 PCF EQUIVALENT FLUID WEIGHT.
- ALLOWABLE SOIL BEARING PRESSURE: 2,000 PSF PER GEOTECH SOIL ENGINEER'S RECOMMENDATION.
- PASSIVE SOIL PRESSURE 300 PLF. IGNORE TOP 5 FEET OF EXISTING GRADE.
- DRILLED PIER SKIN FRICTION 300 PSF. SEISMIC PEAK GROUND ACCELERATION, 0.44G.

SS = 1.0446  
S1 = 0.6415

SITE CLASS D-STIFF SOIL

## 1V. REFERENCES

- TOPO SURVEY PER BUY DRAWING # 2657970, DATED 12-12-2014.
- GEOTECH INVESTIGATION REPORT (PROJECT NO. 1459.1-S270-N51) FOR BONITA DRIVE TREATMENT PLANT, SOQUEL WATER DISTRICT BONITA WELL SITE, APTOS, CA PREPARED BY PACIFIC CRIST ENGINEERING, INC. ISSUED SEPTEMBER 2014, WITH ADDENDUM TO GEOTECHNICAL INVESTIGATION REPORT PREPARED BY PACIFIC CRIST ENGINEERING, INC. ISSUED FEBRUARY 6, 2015.

## GENERAL NOTES

## 1. GENERAL

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH CAL OSHA REQUIREMENTS & APPLICABLE CODES, ORDINANCES, RULES AND REGULATION OF THE GOVERNING AGENCIES.
- DO NOT SCALE DRAWINGS. ALL DIMENSIONS RELATED TO EXISTING CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR. DETAILS NOT SPECIFICALLY SHOWN SHALL BE OF SAME NATURE AS OTHER SIMILAR CONDITIONS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO STABILIZE AND/OR TO SHORE UP STRUCTURES AS REQUIRED FOR THE NEW WORK. CONTRACTOR SHALL PROVIDE ADEQUATELY SHORING SYSTEM AND FALL PROTECTION MEASURES PER APPLICABLE CODES AND REGULATIONS HAVING JURISDICTION OVER THE PROJECT DURING THE CONSTRUCTION PERIOD.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST FIVE DAYS PRIOR TO EACH OF BUT NOT LIMITED TO THE FOLLOWING EVENTS SO THAT THE ENGINEER MAY MAKE THE APPROPRIATE JOB SITE REVIEW:
  - REVIEW OF FOUNDATION SOIL UPON COMPLETION OF EXCAVATION AND PIER DRILLING.
  - PRIOR TO PLACING CONCRETE FOR PIERS/CAPS FOR REBAR PLACEMENT REVIEW.
  - PRIOR TO INSTALLATION OF STEEL STRINGERS FOR REVIEW OF ANCHOR BOLTS IN PIER CAPS.
  - REVIEW OF WELDED STUDS IN STRINGERS, METAL DECK & REBARS FOR BRIDGE DECK.
  - FINAL COMPLETION OF THE BRIDGE PROJECT FOR OVERALL COMPLIANCE OF WORK.

## 11. SITE WORK &amp; FOUNDATION

- FOUNDATION INCLUDING PIER CAPS & FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED, COMPETENT NATIVE SOIL OR ENGINEERED FILLS AT OR EXCEEDING DEPTH SHOWN ON DRAWING.
- DRILL PIERS SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATION OF THE GEOTECHNICAL REPORT. CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER FOR REVIEW AND APPROVAL OF THE DRILLED DEPTH FOR ALL PIERS PRIOR TO PLACING REINFORCING STEEL CAGES.
- ALL FOOTING EXCAVATIONS SHALL BE NEAT, OVER EXCAVATIONS IN DEPTH AND WIDTH SHALL BE FILLED WITH CONCRETE. ALL LOOSE SOILS SHALL BE REMOVED FROM EXCAVATIONS PRIOR TO PLACEMENT OF CONCRETE.
- BACKFILL MATERIAL SHALL BE IMPORTED FILL OR NATIVE MATERIAL NOT TO EXCEED 3" IN DIAMETER AND COMPACT TO 90% PER RECOMMENDATION OF THE GEOTECHNICAL REPORT.
- CLASS 2 APPROPRIATE BASE MATERIAL SHALL BE 3/4" MAX. GRADATION CONFORMING TO OWNERS STANDARD SPECIFICATIONS.

## 111. CONCRETE

- CONCRETE WORK SHALL CONFORM TO ACI 318, LATEST EDITION.
- CONCRETE STRENGTH AND MIX REQUIREMENTS:
 

LOCATION	CONC. STRENGTH	MAX SIZE	SACK PER CY
PIERS/FOOTINGS	3,000 PSI	3/4"	6.0 MIN.
BRIDGE DECK	3,000 PSI	3/4"	6.0 MIN.

 CONCRETE AIR ENTRAINMENT SHALL BE 2%.
- REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60 FOR ALL REBARS, DOMES AND RODS. STEEL SHALL BE KEPT CLEAN AND FREE OF RUST SCALES.
- MINIMUM REINFORCING STEEL COVER REQUIREMENTS:
  - CAST AGAINST AND EXPOSED TO EARTH ..... 3"
  - FORMED AND EXPOSED TO EARTH OR WEATHER ..... 2"
  - MULLS, SLABS OR JOIST NOT EXPOSED TO EARTH OR WEATHER ..... 3/4"
  - BEAMS OR COLLARS WHICH ARE NOT EXPOSED TO EARTH OR WEATHER ..... 1-1 1/2"
- REINFORCING BARS SHALL BE PLACED IN AS LONG LENGTHS AS POSSIBLE. ALL REINFORCING STEEL SHALL BE "COLD BENT". MINIMUM BARS LAP SHALL BE 40 BAR DIAMETERS UNLESS OTHERWISE NOTED.
- REINFORCING, ANCHOR BOLTS AND INSERTS SHALL BE PROPERLY WELDED IN PLACE PRIOR TO PLACING CONCRETE.
- EPoxy FOR EMBEDDED RODS SUCH AS REBARS, DOMES, THREADED ROD AND ANCHORS SHALL BE "EPOXY-ADHESIVE BY SIMPSON STRONG TIE OR HILTI HY200 ADHESIVE. DRILLED HOLE SIZE FOR THE EMBEDDED RODS SHALL BE 1/8" LARGER THAN THE SIZE OF THE EMBEDDED RODS FOR "HILTI HY200" PRODUCTS AND 1/16" LARGER THAN THE SIZE OF EMBEDDED RODS FOR HILTI PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. ALL INSTALLATION AND SURFACE PREPARATION FOR THE EPOXY WORK SHALL BE DONE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS.
- NON-SHRINK GROUT SHALL BE NON-FERROUS, NON-SHRINK GROUT WITH COMPRESSIVE STRENGTH OF 8000 PSI OR MORE AT 28 DAYS. NON-SHRINK GROUT SHALL BE FAST SET NON-SHRINK GROUT MANUFACTURED BY QUIKRETE, QUIKRETE 215 BY S&W CO. OR APPROVED EQUIVALENT. APPLY COLD WEATHER CONCRETE PROCEDURE PER ACI 308R-88 FOR CONSTRUCTION IN COLD WEATHER WHEN AMBIENT TEMPERATURE IS BETWEEN 40°F TO 50°F. PLACE GROUT WHEN AMBIENT TEMPERATURE IS AT LEAST 40°F AND RISING. DO NOT POUR GROUT FOR AMBIENT TEMPERATURE BELOW 40°F.
- ALL EXPOSED CONCRETE EDGES SHALL HAVE 3/4" CHAMFER.
- PROVIDE GROOVING AND GRIND SURFACE AT CONCRETE HORIZONTAL SURFACE PER CALTRANS STANDARD SPECIFICATION.

## 1V. STRUCTURAL STEEL &amp; WISC.

- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
  - STEEL SHAPES INCLUDE WIDE FLANGE BEAMS SHALL BE PER ASTM A992.
  - ALL OTHER SHAPES INCLUDING ROLLED SHAPES AND BARS AND PLATES SHALL BE ASTM A36 STEEL.
- ALL NEW ASTM A992 AND A36 STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED.
- ARC-WELD ELECTRODES AND FILLER METALS TO BE LOW HYDROGEN TYPE E70XX, E70XX OR E80XX IN WTH AS APPLICABLE. ALL WELDING WORK SHALL BE DONE IN ACCORDANCE WITH AWS D1.1/D1.1M. WELDER SHALL BE AND CERTIFIED WITH CURRENT CERTIFICATION. PROVIDE WELDING INSPECTION FOR FIELD WELDS.
- EMBEDDED ANCHORS OR THREADED RODS SHALL CONFORM TO ASTM A307 OR A36 AND HOT-DIPPED ZINC GALVANIZED. CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS CONFORMING TO A325, TYPE N.
- HOT-DIP GALVANIZE IN ACCORDANCE WITH ASTM A153 FOR FASTENERS THAT ARE EXPOSED TO WEATHER. COLD FORM STEEL OR MISCELLANEOUS STEEL PLATES TO BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE OWNER FOR REVIEW BY THE ENGINEER PRIOR TO FABRICATION.
- BEARING PADS SHALL BE ELASTOMER WITH FABRIC REINFORCEMENT IN ACCORDANCE WITH CALTRANS STANDARD SPECIFICATION.
- ALL STEEL AND GALVANIZED STEEL SURFACES EXPOSED TO VIEW (NOT INCLUDING STRINGERS) SHALL BE COATED A NON-REFLECTIVE BLACK COLOR PAINT OR PRIMER.

NEW DRAWING

CWO 11-140

PRELIMINARY - NOT FOR CONSTRUCTION

DATE	1/20/2015	BY	WJ	CHK	WJ
PLOTTED	1/20/2015	BY	WJ	CHK	WJ
SCALE	1"=40'	BY	WJ	CHK	WJ



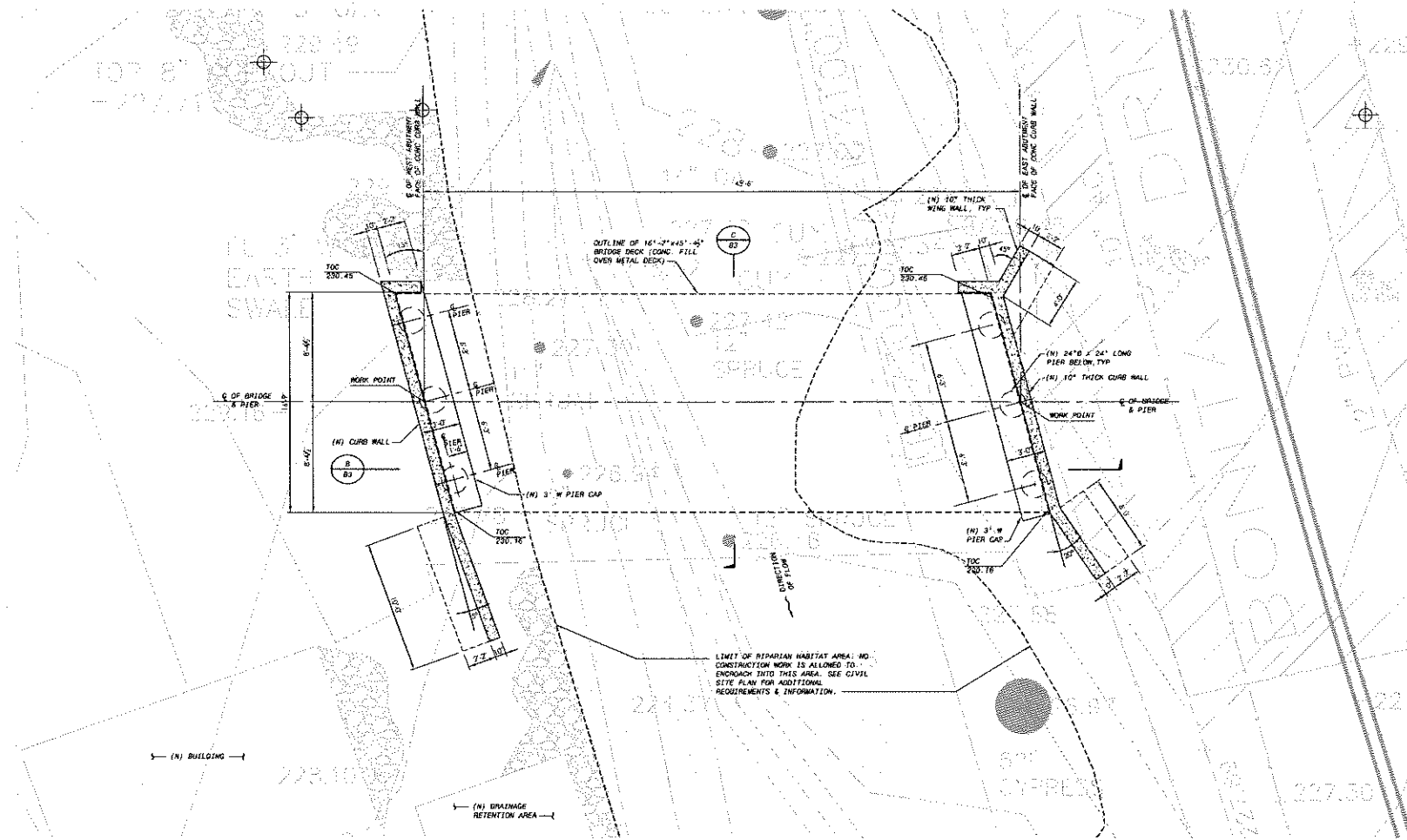
BASELINE DESIGNS, INC.

1700 Oak Street  
Alameda, CA 94501  
Phone: 510-865-4423  
Fax: 510-865-4704  
BOL Project #: 150940

SOQUEL CREEK WATER DISTRICT  
HEXAVALENT CHROMIUM REMOVAL PROJECT  
BONITA WTP AND SAN ANDREWS WELL

BRIDGE COVER SHEET

DESIGNED	WJ
DRAWN	WJ
CHECKED	WJ
APPROVED	WJ
DATE	1/20/2015
PROJECT NO.	150940
SHEET	01



BRIDGE FOUNDATION PLAN  
1/4" = 1'-0"



NOTES:

1. FOR GENERAL NOTES AND REFERENCES, SEE DRAWING B1.
2. FOR VERTICAL AND HORIZONTAL CONTROL OF THE NEW BRIDGE LAYOUT, REFER TO CIVIL SITE PLAN ON DRAWINGS C-1 TO C-10.
3. FOR SITE CONCRETE APPROX, GRADINGS AND PAVEMENT WORK ADJACENT TO THE NEW BRIDGE, SEE CIVIL SITE PLAN ON DRAWINGS C-7 & C-8.
4. REFER TO DRAWINGS C-7, C-8 & C-10 & SPECIFICATIONS FOR AVOIDANCE MEASURES REQUIRED FOR BRIDGE CONSTRUCTION.

NEW DRAWING

CWO 11-140

PRELIMINARY - NOT FOR CONSTRUCTION

DATE	REVISED AND RECORD OF CONSTRUCTION	NO. BY DATE
10/16/2018		
DATE	REVISED AND RECORD OF CONSTRUCTION	NO. BY DATE
10/16/2018		



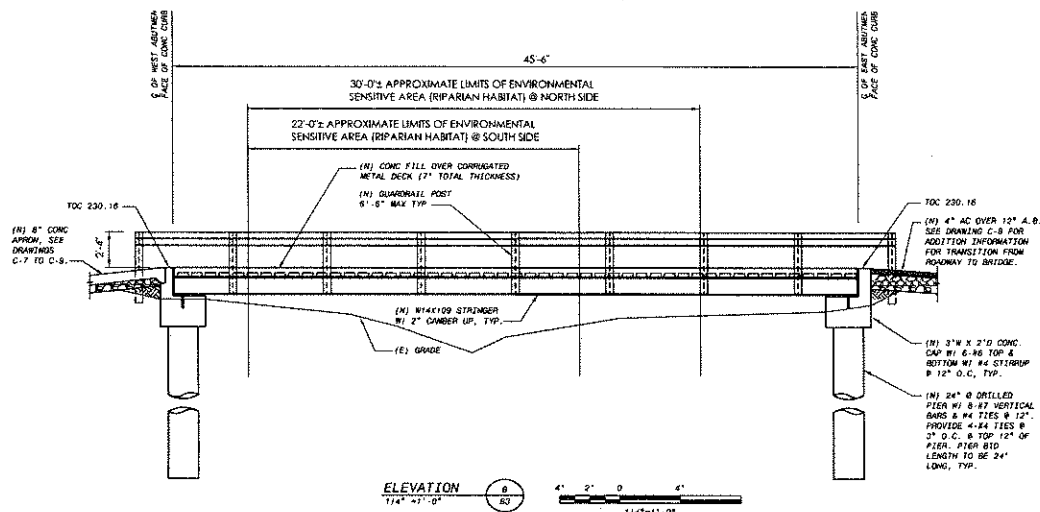
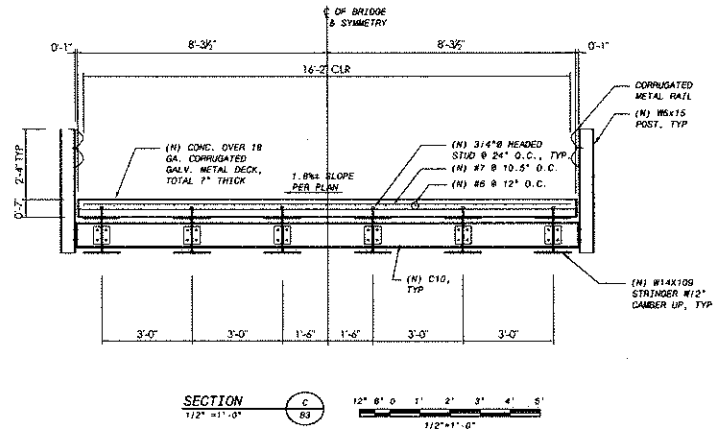
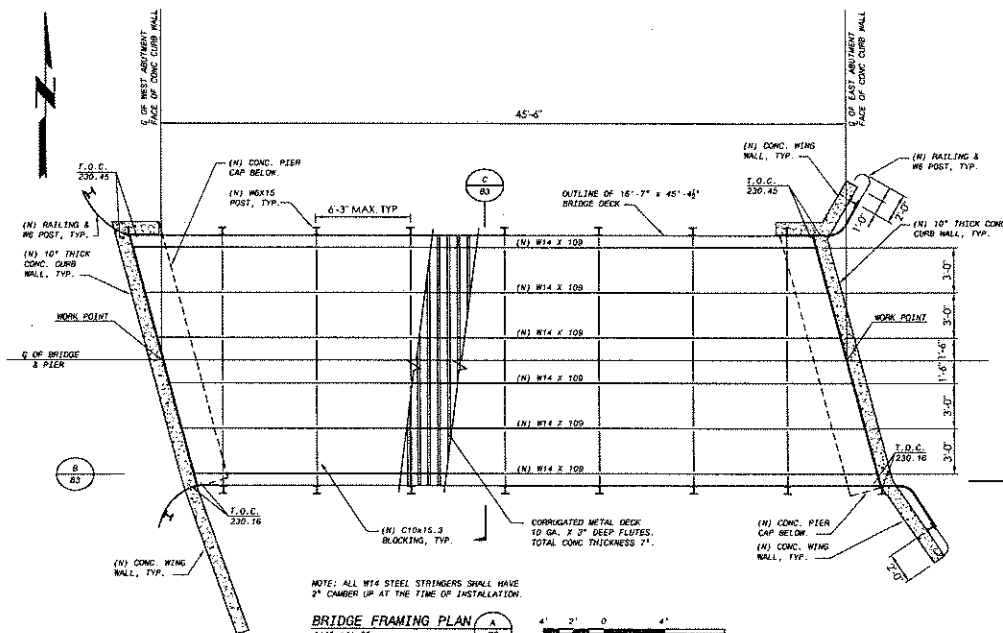
BASLINE DESIGNS, INC.

1700 Oak Street  
Alameda, CA 94501  
Phone: 510-865-4623  
Fax: 510-865-4704  
BID Project #: 150940

SOQUEL CREEK WATER DISTRICT  
HEXAVALENT CHROMIUM REMOVAL PROJECT  
BONITA WTP AND SAN ANDREWS WELL

BRIDGE FOUNDATION PLAN

DESIGNED:	
DRAWN:	
CHECKED:	
APPROVED:	
DATE:	NOV 16, 2018
SCALE:	1/4" = 1'-0"
PROJECT NO.:	150940
SHEET	B2



NOTES:  
1. FOR GENERAL NOTES AND REFERENCES, SEE DRAWING B1.

NEW DRAWING: BRIDGE  
ELEVATION ORIGINAL SHOWN  
ON FIGURE 9

CWO 11-140

PRELIMINARY - NOT FOR CONSTRUCTION

SOQUEL CREEK WATER DISTRICT HEXAVALENT CHROMIUM REMOVAL PROJECT BONITA WTP AND SAN ANDREWS WELL	
BRIDGE FRAMING PLAN, ELEVATION & SECTION	
PROJECT NO. 150940	SHEET B3
BASELINE DESIGNS, INC. 1700 Cook Street Alameda, CA 94501 Phone: 510-865-4623 Fax: 510-865-1704 B01 Project #: 150940	