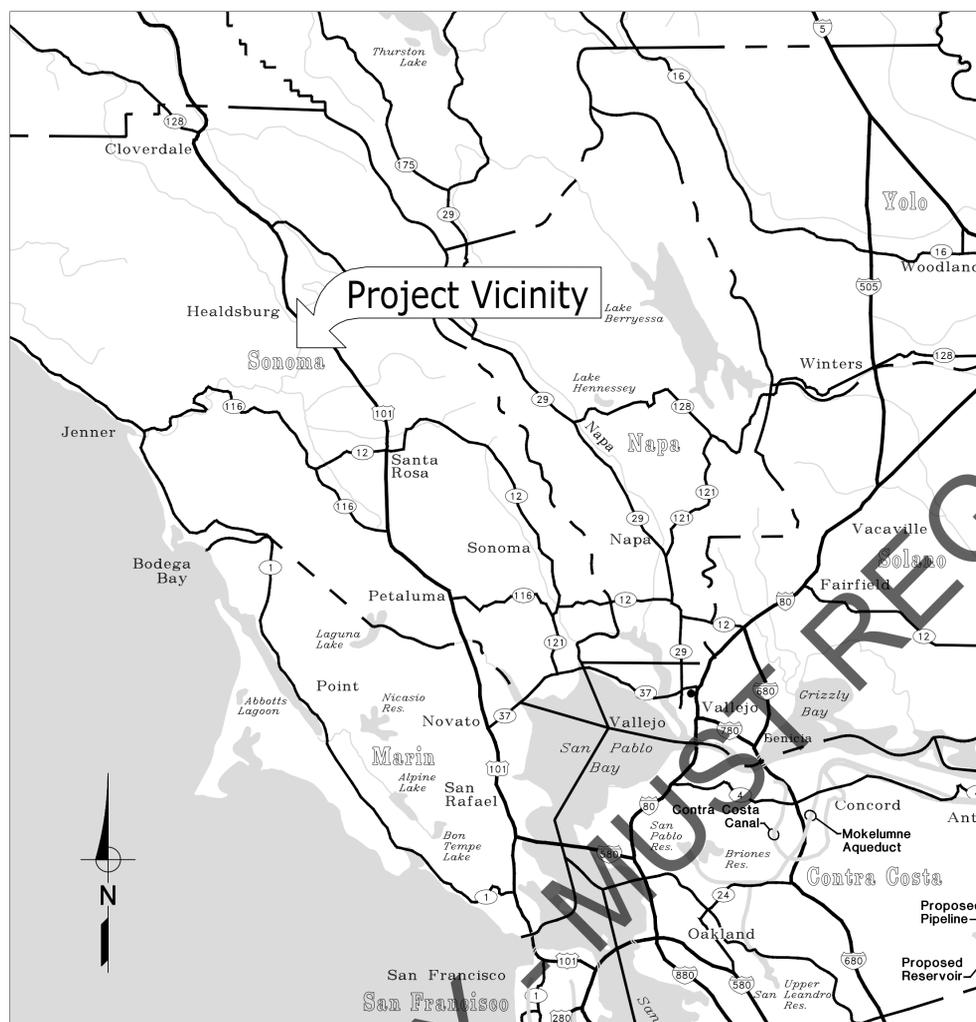


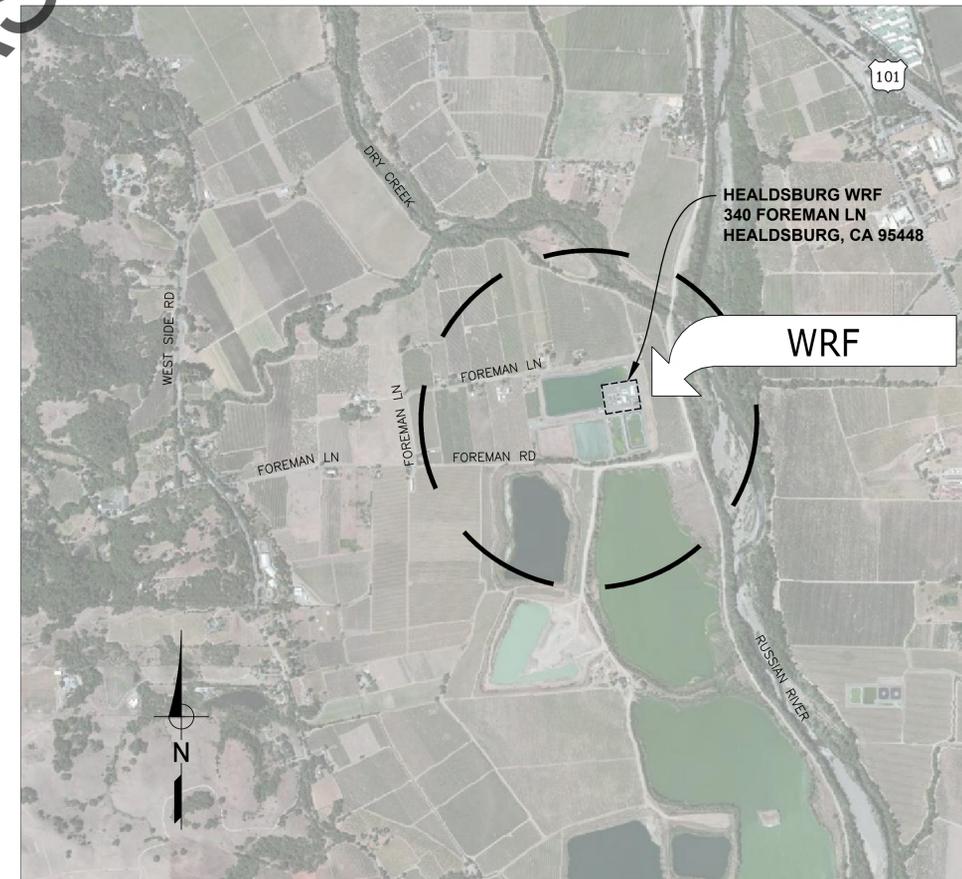


City of Healdsburg Water Reclamation Facility Flood Mitigation Project

FEMA/CAL-OES Project DR4434-PJ0043
City of Healdsburg Project No. PWS944
February, 2022



Project Vicinity Map
Not to Scale



Project Location Map
Scale: 1"=1,000'

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DESIGN BY: MLY
DRAWN BY: SMB CHECKED BY: SRV
PATRICK D. FUSS, P.E. (RCE #57272) DATE
UTILITY ENGINEERING MANAGER
CITY OF HEALDSBURG

CITY OF HEALDSBURG
Date: FEBRUARY 2022 Scale: None

TITLE SHEET
WATER RECLAMATION FACILITY FLOOD MITIGATION PROJECT
(Project PWS944)

LEGEND

	NATURAL GROUND OR GRADE
	GRANULAR MATERIAL SUCH AS ROCK OR GRAVEL
	EXISTING GRADE CONTOURS
	NEW GRADE CONTOURS
	EXISTING FACILITY
	NEW FACILITY
	FUTURE FACILITY
	CENTERLINE
	EXISTING SPOT ELEVATION
	FINISH GRADE SPOT ELEVATION
	SURVEY MONUMENT
	EXISTING PRESSURE PIPELINE
	NEW PRESSURE PIPELINE
	NEW PRESSURE PIPELINE UNDER CONCRETE OR AC
	EXISTING GRAVITY PIPELINE
	NEW GRAVITY PIPELINE
	SLOPE
	DIRECTION OF FLOW
	DEMOLISH
	CONCRETE
	CHECKER PLATED DECK
	GRATING
	AC PAVING
	AB SURFACING
	POND LINER

ABBREVIATIONS

AB	AGGREGATE BASE	HP	HIGH POINT IN PVMT, HIGH PRESSURE
AC	ASPHALT	HORZ	HORIZONTAL
	CONCRETE	IE	INVERT ELEVATION
ADJ	ADJUSTABLE	IN, "	INCH
AGG	AGGREGATE	INV	INVERT
ALT	ALTERNATIVE	IPS	IRON PIPE SIZE
APPROX	APPROXIMATE	IRR	IRRIGATION
ARV	AIR RELIEF VALVE	JT	JOINT TRENCH
ASPH	ASPHALT	LAT	LATERAL
BV, BFV	BUTTERFLY VALVE	LF	LINEAL FEET
BW	BOTH WAYS	LGT	LIGHT
CB	CATCH BASIN	MAX	MAXIMUM
CDF	CONTROLLED DENSITY FILL	MIN	MINIMUM
CIP	CAST IRON PIPE	MH	MANHOLE
CL, CL	CENTER LINE	MJ	MECHANICAL JOINT
CLR	CLEAR	N	NORTH
CLSM	CONTROL LOW STRENGTH MATERIAL	(N)	NEW
	CONCRETE	N.I.C.	NOT IN CONTRACT
CONC	CONCRETE	NO.,	# NUMBER
CONN	CONNECTION	NTS	NOT TO SCALE
CONN	CONNECTION	OC	ON CENTER
CONT	CONTINUOUS	OD	OUTSIDE DIAMETER
CMP	CORROGATED METAL PIPE	OH	OVERHEAD
	CHECK VALVE	PL	PROPERTY LINE
CV	CHECK VALVE	PT	POINT
CY	CUBIC YARDS	PV	PLUG VALVE
DI	DRAIN INLET	PVC	POLYVINYL CHLORIDE PIPE
DIA, Ø	DIAMETER	PVMT	PAVEMENT
DIP	DUCTILE IRON PIPE	R	RADIUS
	DRAWING	RCP	REINFORCED CONCRETE PIPE
DWG	DRAWING	REQD	REQUIRED
E	EAST, ELECTRIC	REIN	REINFORCING
EA	EACH	REV	REVISION
EF	EACH FACE	RW	RECYCLED WATER
EJF	EXPANSION JOINT FILLER	S	SEWER, SOUTH, SLOPE
	ELEVATION	SAN	SANITARY
EL	ELEVATION	SCH	SCHEDULE
ELEC	ELECTRIC	SD	STORM DRAIN
EP	EDGE OF PAVEMENT	SDMH	STORM DRAIN MANHOLE
	EQUIPMENT	SQ	SQUARE
EQUIP	EQUIPMENT	SS	SANITARY SEWER
EW	EACH WAY	SSB	STAINLESS STEEL BOLT
ELB	ELBOW	SSMH	SANITARY SEWER MANHOLE
EX, (E)	EXISTING	SST	STAINLESS STEEL
EXP	EXPANSION	STA	STATION
FF	FINISHED FLOOR	STD	STANDARD
FH	FIRE HYDRANT	T	TELEPHONE
FCA	FLANGED COUPLING	T&B	TOP & BOTTOM
	ADAPTER	TOC	TOP OF CONCRETE
FL	FLOW LINE	TYP	TYPICAL
FLG	FLANGE	UG	UNDERGROUND
FM	FORCE MAIN	VAR	VARIOUS
F/C	FACE OF CURB	W	WATER, WEST
FT, '	FEET, FOOT	W/	WITH
G	GAS	W/O	WITH OUT
GA	GAUGE	WS	WATER SURFACE
GALV	GALVANIZED	WSEL	WATER SURFACE ELEVATION
GB	GRADE BREAK	WWF	WELDED WIRE FABRIC
GS	GROUND SURFACE	WV	WATER VALVE
GV	GATE VALVE		

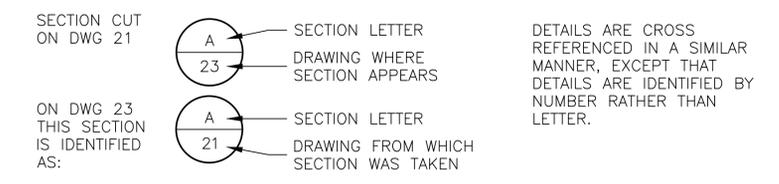
GENERAL CIVIL NOTES

- CONTRACTOR SHALL EXPOSE ALL UNDERGROUND FACILITIES THAT ARE TO BE CONNECTED TO OR THAT ARE IN THE PATH OF PROPOSED IMPROVEMENTS AND SURVEY THE LOCATION AND ELEVATION. CONTRACTOR SHALL DETERMINE LOCATION OF CONFLICTS, IF ANY, PRIOR TO COMMENCING CONSTRUCTION OF THAT PORTION OF WORK THAT WOULD BE AFFECTED BY A CONFLICT WITH EXISTING FACILITIES.
- CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE SURVEYED LOCATIONS OF EACH UNDERGROUND UTILITY THAT IS TO BE CONNECTED TO OR IS IN THE PATH OF THE PROPOSED IMPROVEMENTS AS REQUIRED IN SPECIFICATION SECTION 02210, SUBSURFACE INVESTIGATIONS.
- SMALL DIAMETER (<4") WATER AND OTHER MISCELLANEOUS PIPING EXISTS THROUGHOUT SITE AREA AND MAY NOT BE SHOWN ON THE DRAWINGS. CONTRACTOR IS REQUIRED TO REPAIR PIPING DAMAGED BY CONSTRUCTION AND/OR REALIGN PIPING AS REQUIRED TO CONSTRUCT IMPROVEMENTS UNDER THIS CONTRACT.
- ALL PAVING, LANDSCAPING, PIPING, AND OTHER EXISTING FACILITIES NOT DESIGNATED FOR REMOVAL/DEMOLITION DURING CONSTRUCTION OF NEW FACILITIES TO BE PROTECTED IN PLACE OR REPLACED IN KIND.
- SELECT MECHANICAL EQUIPMENT TO MINIMIZE DAMAGE TO EXISTING PAVEMENT AT PROJECT SITE AND AT ALL ROADS USED TO MOVE MATERIAL AND EQUIPMENT TO AND FROM PROJECT. REPLACE DAMAGED ASPHALT CONCRETE PAVEMENT IN ACCORDANCE WITH CONTRACT DOCUMENTS. ALL PAVEMENT, INCLUDING ASPHALT CONCRETE (AC) AND PORTLAND CEMENT CONCRETE (PCC) PAVING, SHALL BE SAW CUT PRIOR TO INSTALLATION OF PAVEMENT PATCH. ROUGH EDGES THAT DEVELOP DURING CONSTRUCTION SHALL BE SAW CUT PRIOR TO INSTALLATION OF PAVEMENT PATCH.
- ARRANGE FOR ALL REQUIRED INSPECTION. PRESENCE OR ABSENCE OF AN INSPECTOR WILL NOT RELIEVE CONTRACTOR OF FULL RESPONSIBILITY FOR PROPER PERFORMANCE OF WORK. CONTRACTOR WILL BE REQUIRED TO UNCOVER WORK PERFORMED WITHOUT PROPER INSPECTION.

PIPING SYSTEM ABBREVIATIONS

D	DRAIN	OF	OVERFLOW
EBR	EQUALIZATION BASIN RETURN	PD	PUMPED DRAIN
FE	FINAL EFFLUENT	RW	RECLAIMED WATER
FIL	FILTERED EFFLUENT	SD	STORM DRAIN
INF	INFLUENT	S	SANITARY SEWER
NPW	NON POTABLE WATER	W	WATER

SECTION & DETAIL DESIGNATIONS



SURVEY CONTROL

BENCHMARK:
CINQUINI & PASSARINO CONTROL POINT CPI3, BEING A FOUND CUT "X" ON CONCRETE PAD AS SHOWN ON A MAP ENTITLED "WASTEWATER TREATMENT PLANT UPGRADES - OVERALL SITE PLAN," WITH A FILE NAME OF "3147-0C-01.dwg," PROJECT NUMBER 10494-31471, AND DATED JUNE 2006. SAID MAP PURPORTS TO BE ON NAVD88 VERTICAL DATUM ELEVATION = 93.44

BASIS OF BEARINGS:
THE BASIS OF BEARINGS FOR THIS SURVEY IS THE SAME AS THAT SHOWN ON A MAP ENTITLED "WASTEWATER TREATMENT PLANT UPGRADES - OVERALL SITE PLAN," WITH A FILE NAME OF "31471-0C-01.dwg," PROJECT NUMBER 10494-31471, AND DATED JUNE 2006. THIS MAP HOLDS THE COORDINATES FOR CONTROL POINTS CPI2 AND CPI3 (BOTH BEING FOUND CUT "X" ON CONCRETE PAD) AS:

CPI2:	N 1975382.58	LATITUDE 38°34'59"
	E 6315358.38	LONGITUDE -122°51'42"
CPI3:	N 1975259.81	LATITUDE 38°34'58"
	E 6314649.06	LONGITUDE -122°51'51"

(SEE DRAWING G03)

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No.	Date	Revisions	By	APPR.																					

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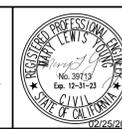


NOTES:
 1. STAGING AREA LIMITS TO EXTEND FROM CHAINLINK FENCE ADJACENT TO CROPS ON THE EAST TO THE EASTERN EDGE OF THE ACCESS ROAD TO THE WEST. CONTRACTOR SHALL PROTECT FENCE AND ENSURE THE ACCESS ROAD IS CLEAR FOR VEHICULAR TRAFFIC AT ALL TIMES.

COPY - MUST REGISTER AS PLANHOLDER

No.	Date	Revisions	By	APPR.

Bar length on original drawing equals one inch. Adjust scale accordingly.



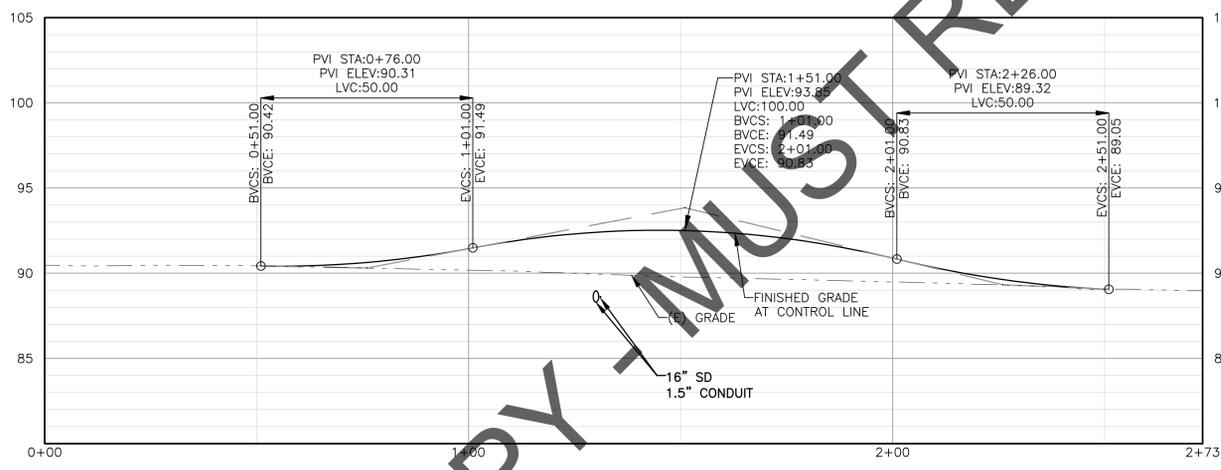
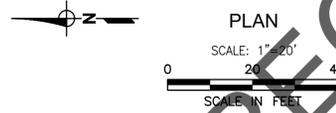
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 QC REVIEW: SRV 02/15/2022

CITY OF HEALDSBURG

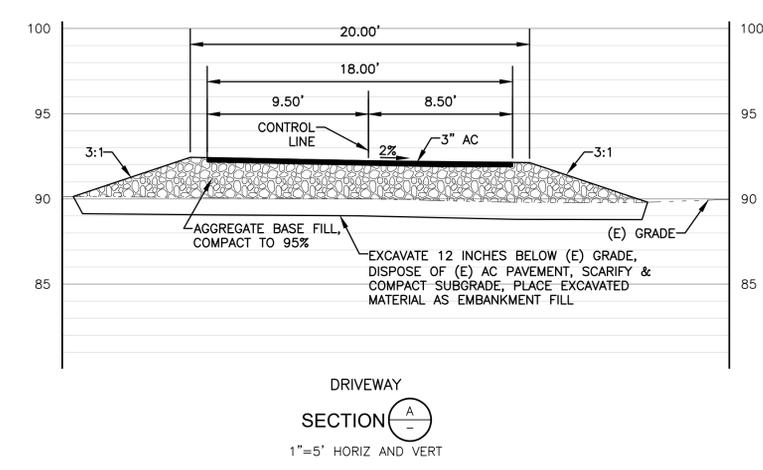
PROJECT NO. PWS944
 SCALE: 1" = 100' DATE: FEBRUARY 2022



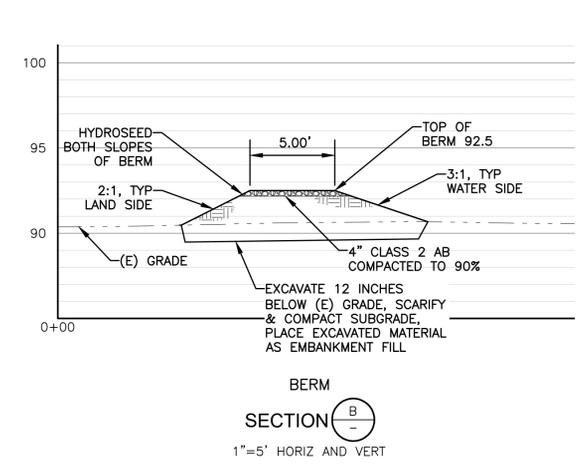
Water Reclamation Facility Flood Mitigation Project
 OVERALL SITE, ACCESS, STAGING AREA, SURVEY CONTROL



ROADWAY
PROFILE
SCALE:
V: 1"=5'
H: 1"=20'



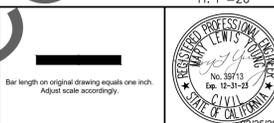
DRIVEWAY
SECTION (A)
1"=5' HORIZ AND VERT



BERM
SECTION (B)
1"=5' HORIZ AND VERT

- NOTES:
1. CITY FURNISHED 16-INCH STORM DRAIN PIPE IS AWWA C905 PVC BELL AND SPIGOT PIPE.
 2. CATCH BASIN CALTRANS TYPE OS PRECAST BASIN WITH SIDE OPENING AND CHECKERED PLATE COVER AND FRAME.

No.	Date	Revisions	By	APPR.

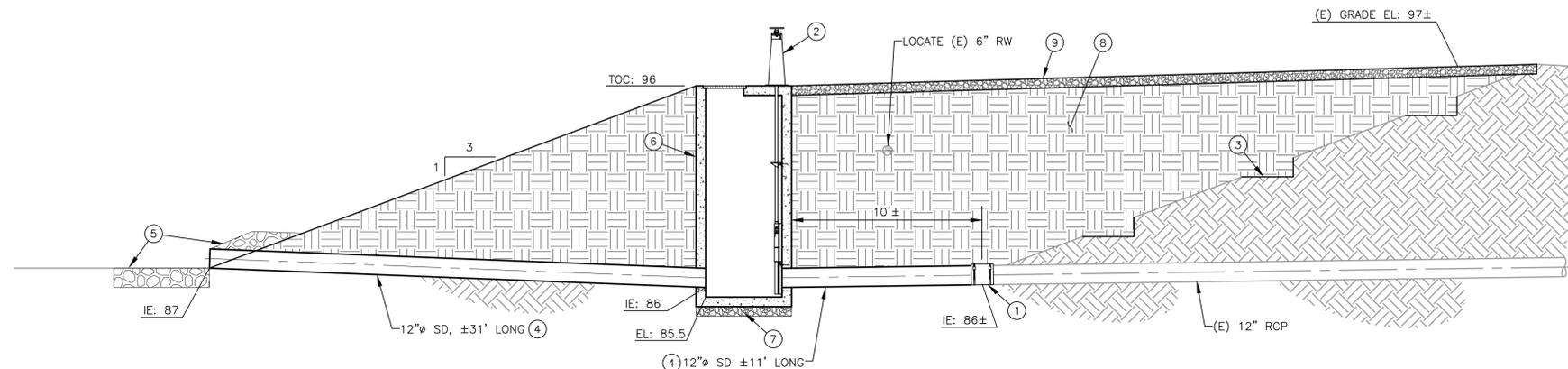


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CITY OF HEALDSBURG
PROJECT NO. PWS944
SCALE: AS SHOWN DATE: FEBRUARY 2022



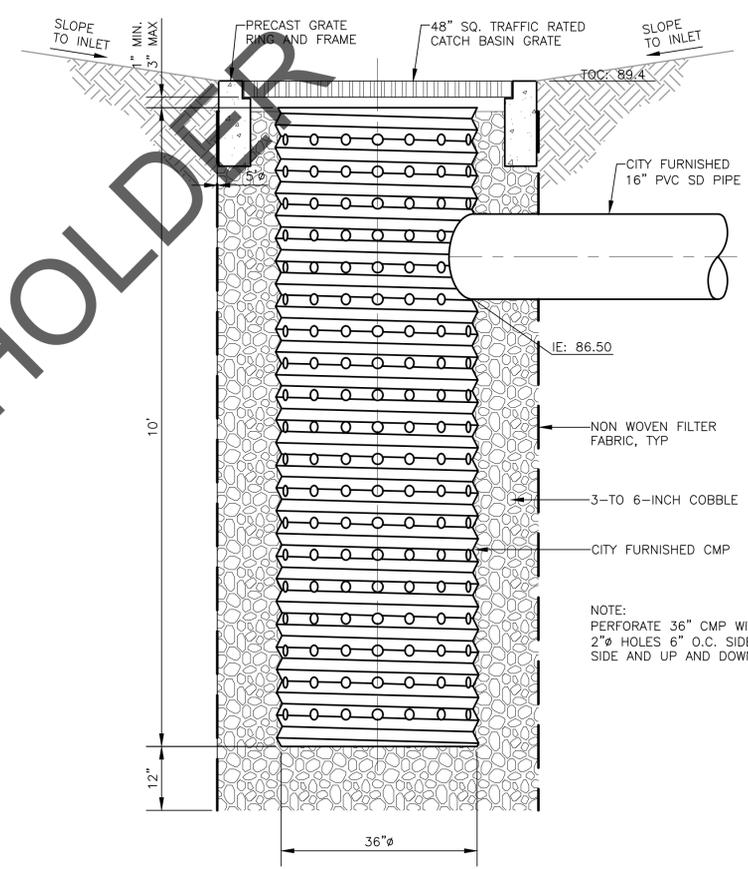
Water Reclamation Facility Flood Mitigation Project
BERM AND DRIVEWAY IMPROVEMENTS



SLIDE GATE ON (E) 12-INCH SD
DETAIL 1 (C01)

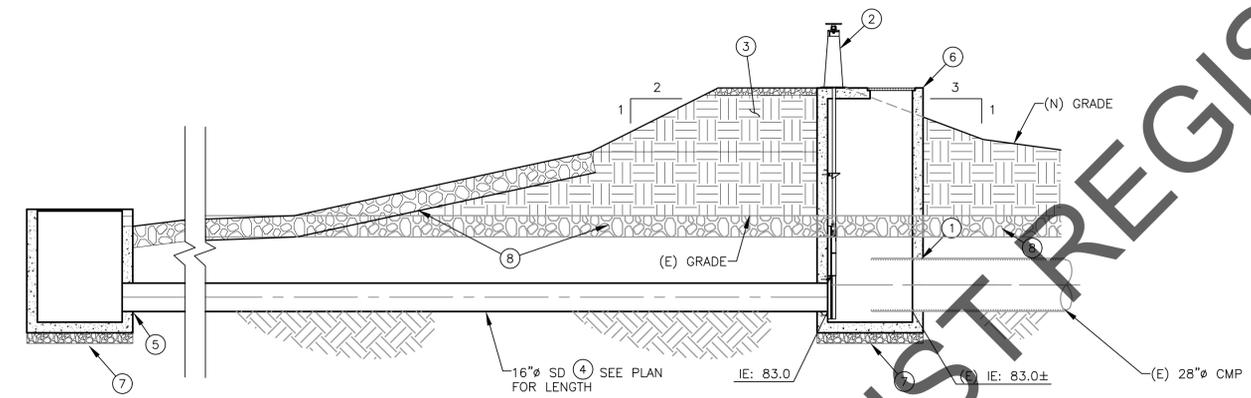
- NOTES:
- CUT OFF BELL END OF EXISTING RCP. CONNECT TO NEW 12" SD WITH RUBBER AND WORM GEAR FLEXIBLE COUPLING.
 - INSTALL CITY-FURNISHED SLIDE GATE, STEM AND OPERATING STAND. ADJUST STEM LENGTH BY CUTTING NON-THREADED END AND DRILLING HOLE FOR CONNECTION TO THE SLIDE GATE. INSTALL CITY FURNISHED ONE STEM GUIDE AT 48-INCHES BELOW TOP OF STRUCTURE. CONTRACTOR SHALL FURNISH AND INSTALL GATE ANCHORS, STEM GUIDE ANCHORS, AND OPERATING STAND ANCHORS. SEE THE GATE DRAWING 2511790-01 INCLUDED IN SPECIFICATIONS FOR ADDITIONAL DETAILS.
 - BENCH EXISTING SLOPES PRIOR TO PLACING EMBANKMENT FILL. BENCHES SHALL BE 1-FOOT HIGH, TYPICAL.
 - INSTALL CITY-FURNISHED 12-INCH PVC PIPE. CITY-FURNISHED PIPE IS AWWA C900 BELL AND SPIGOT PIPE. CONTRACTOR SHALL FURNISH AND INSTALL ELASTOMER WATER STOP ON PIPE AND SEAL PIPE AT WALL CONNECTION WITH NON-SHRINK GROUT.
 - FURNISH AND INSTALL 3-INCH TO 6-INCH COBBLES 12-INCHES DEEP AT NEW 12-INCH STORM DRAIN DAYLIGHT. EXTEND COBBLES 5-FEET BEYOND PIPE OPENING AND ON SLOPE

- TO 1-FOOT ABOVE PIPE.
- FURNISH AND INSTALL 4 FTx4 FT PRECAST CONCRETE BOX STRUCTURE. BOX STRUCTURE TOP SHALL HAVE 2-FOOT WIDE CONCRETE FOR MOUNTING SLIDE GATE OPERATING STAND AND 2-FOOT WIDE GALVANIZED GRATING. THE TOP SHALL BE RATED FOR 300 POUNDS PER SQUARE FOOT MINIMUM.
 - SCARIFY SUBGRADE 6-INCHES AND RECOMPACT. FURNISH AND INSTALL 6-INCH LIFT OF CLASS 2 AGGREGATE BASE UNDER NEW PRECAST CONCRETE BOX STRUCTURE. COMPACT TO 95% MAXIMUM COMPACTION PER ASTM 1557 METHODS.
 - FILL WITH MATERIAL OBTAINED FROM BORROW AREA. COMPACT TO 90% MAXIMUM COMPACTION PER ASTM D1557 METHODS.
 - TOP FILL BETWEEN BOX STRUCTURE AND UPPER EXISTING GRADES WITH 6 INCHES OF CLASS 2 AGGREGATE BASE COMPACTED TO 95% MAXIMUM COMPACTION PER ASTM D1557.



DRY WELL
DETAIL 3 (C02)

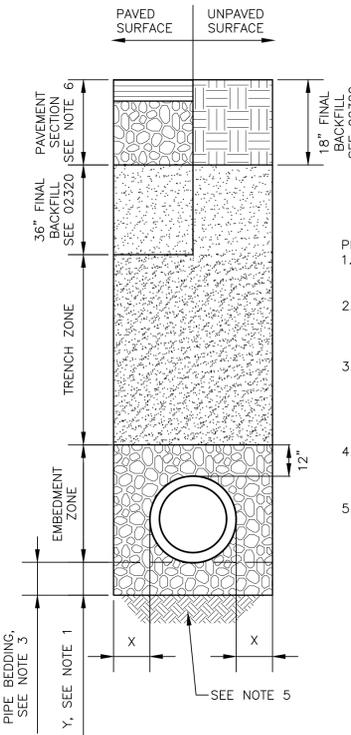
NOT TO SCALE



SLIDE GATE STRUCTURE
DETAIL 2 (C02)

- NOTES:
- CUT OFF EXISTING 28-INCH CMP AT BOX. FURNISH AND INSTALL ELASTOMER WATER STOP ON EXISTING 28-INCH CMP AND SEAL PIPE/WALL CONNECTION WITH NON-SHRINK GROUT.
 - INSTALL CITY-FURNISHED SLIDE GATE, STEM AND OPERATING STAND. ADJUST STEM LENGTH BY CUTTING NON-THREADED END AND DRILLING HOLE FOR CONNECTION TO THE SLIDE GATE. INSTALL CITY FURNISHED ONE STEM GUIDE AT 48-INCHES BELOW TOP OF STRUCTURE. CONTRACTOR SHALL FURNISH AND INSTALL GATE ANCHORS, STEM GUIDE ANCHORS, AND OPERATING STAND ANCHORS. SEE THE GATE DRAWING 2511790-01 INCLUDED IN THE SPECIFICATIONS FOR ADDITIONAL DETAILS.
 - LEVEE FILL WITH MATERIAL OBTAINED FROM BORROW AREA. SEE DRAWING C02.
 - INSTALL CITY-FURNISHED 16-INCH PVC PIPE. CITY-FURNISHED PIPE IS AWWA C905 BELL AND SPIGOT PIPE.
 - FURNISH AND INSTALL PRECAST CATCH BASIN CALTRANS TYPE OS, WITH SIDE OPENING, SEE C02 FOR ELEVATIONS. CONTRACTOR SHALL FURNISH AND INSTALL ELASTOMER WATER STOP ON PIPE AND SEAL PIPE / WALL CONNECTION WITH NON-SHRINK GROUT.

- FURNISH AND INSTALL 4 FTx4 FT PRECAST CONCRETE BOX STRUCTURE. BOX STRUCTURE TOP SHALL HAVE 2-FOOT WIDE CONCRETE FOR MOUNTING SLIDE GATE OPERATING STAND AND 2-FOOT WIDE GALVANIZED GRATING. THE TOP SHALL BE RATED FOR 300 POUNDS PER SQUARE FOOT MINIMUM.
- SCARIFY SUBGRADE 6-INCHES AND RECOMPACT. FURNISH AND INSTALL 6-INCH COMPACTED LIFT OF CLASS 2 AGGREGATE BASE UNDER NEW PRECAST CONCRETE STRUCTURE. COMPACT TO 95% MAXIMUM COMPACTION PER ASTM 1557 METHODS.
- EXISTING ROCK DRAINAGE BED. REMOVE ROCK BELOW BERM FILL AND PLACE IN RE-GRADED DRAINAGE BED.



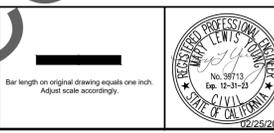
PIPE TRENCH
DETAIL 4 (TYP)

NTS

- PIPE TRENCH NOTES:
- BEDDING DIMENSION "Y" SHALL BE A MINIMUM OF 6".
 - CLEARANCE DIMENSION "X" SHALL BE A MINIMUM OF 8" AND A MAXIMUM OF 12".
 - PLACE BEDDING MATERIAL, COMPACT TO 95% RELATIVE COMPACTION FOR FIRM & UNIFORM BEDDING, & BRING TO GRADE OF THE BOTTOM OF PIPE.
 - BEDDING, EMBEDMENT ZONE AND TRENCH ZONE MATERIAL PER SPECIFICATION SECTION 02320.
 - IF TRENCH BOTTOM IS WET OR UNSTABLE, OVEREXCAVATE AND PLACE 12" MINIMUM LAYER OF 1/2" CRUSHED ROCK WRAPPED IN FILTER FABRIC IN SUB BEDDING ZONE AS NECESSARY TO MAINTAIN A FIRM AND STABLE BASE AS DIRECTED IN THE FIELD BY THE ENGINEER.

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Water Reclamation Facility Flood Mitigation Project
CIVIL DETAILS