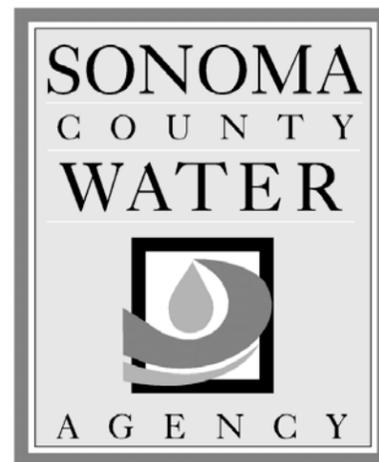


PROJECT MANUAL

Volume 2 of 2

FOR

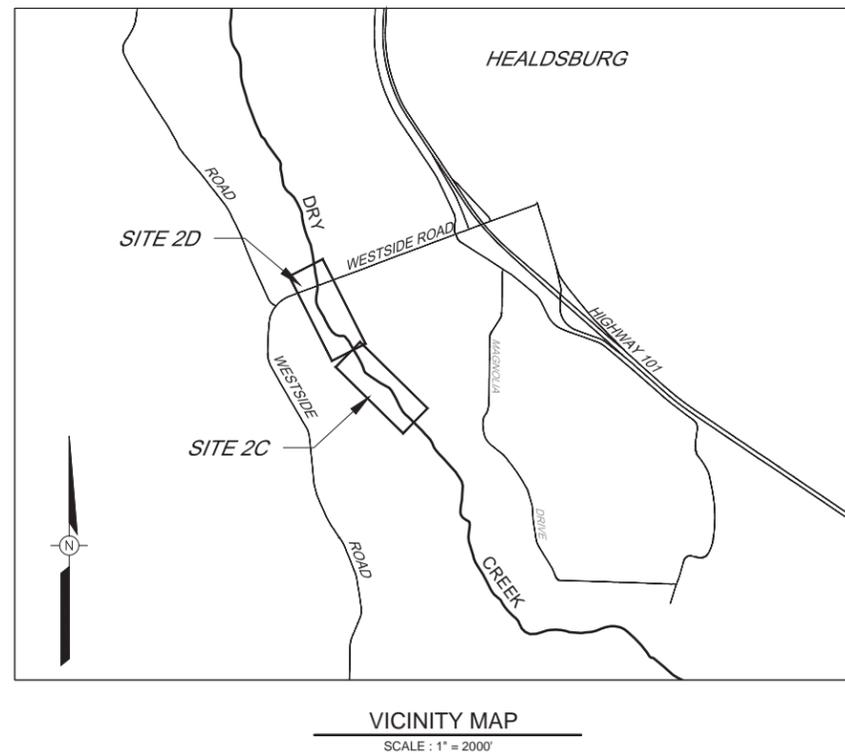
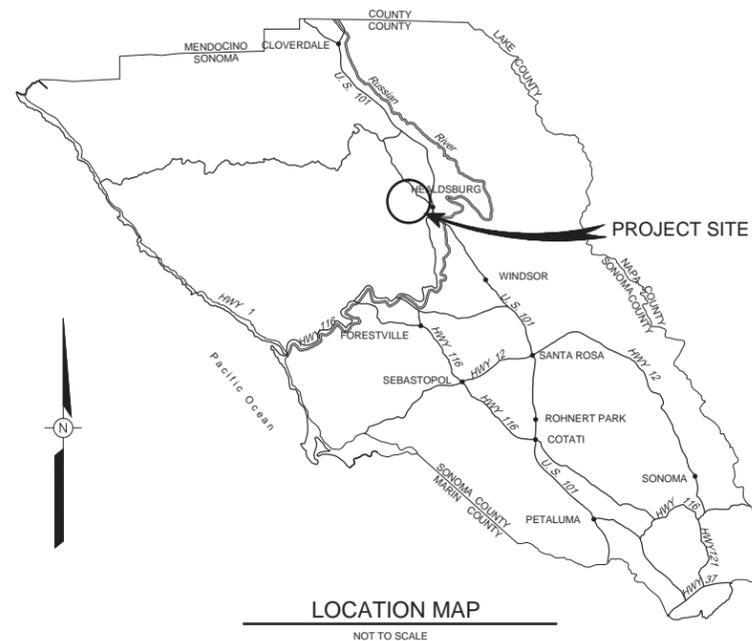
Dry Creek Habitat Enhancement Phase III (Part 1)



MARCH 2016

SONOMA COUNTY WATER AGENCY

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D



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BAR LENGTH ON ORIGINAL
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SCALE: AS NOTED	DATE: 03/17/2016
DRAWN: AF	
REVIEWED:	

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D TITLE SHEET	
FILE NAME: 7351-DRY-CREEK-TITLE-SHEET.dwg	DRAWING NUMBER: G-01
CONTRACT NUMBER: 7351	SHEET 1 OF 42

ABBREVIATIONS

APPROX	APPROXIMATE
C	CURVE
CFS	CUBIC FEET PER SECOND
CP	CONTROL POINT
DG	DESIGN GRADE
DIA	DIAMETER
D/S	DOWNSTREAM
DWG	DRAWING NUMBER
ELEV	ELEVATION
EL	ELEVATION
ESA	ENVIRONMENTAL SCIENCE ASSOCIATES
EX	EXISTING
L	LINE
MAX	MAXIMUM
MIN	MINIMUM
OC	ON CENTER
PIP	PROTECT IN PLACE
SCWA	SONOMA COUNTY WATER AGENCY
STA	STATION
TYP	TYPICAL
U/S	UPSTREAM
VAR	VARIES
VIF	VERIFY IN FIELD
W	WITH
WSE	WATER SURFACE ELEVATION
YR	YEAR
+/-	PLUS/MINUS

LEGEND

	PARCEL LINES
	MAINTENANCE & MONITORING EASEMENT
	ACCESS ROUTE
	LIMIT OF GRADING
	ALIGNMENT STATIONING
	APPROX EDGE OF WATER AT BASE FLOW (110 CFS)
	ELECTRIC LINE
	TRIBUTARY DRAINAGE
	CHAIN LINK FENCE
	SPLIT RAIL FENCE
	RETAINING WALL

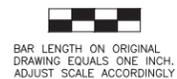
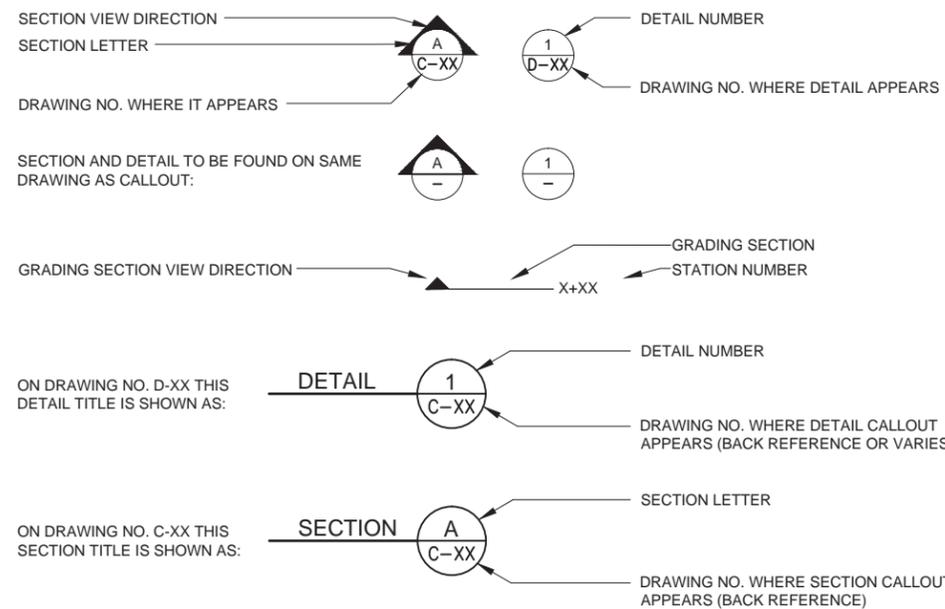
SYMBOLOLOGY

	SHORT-TERM (1-YEAR) STAGING AREA
	LONG-TERM (2-5 YEAR) STAGING AREA
	ACCESS ROAD IMPROVEMENT AREA
	BIOTECHNICAL BANK STABILIZATION
	CONSTRUCTED RIFFLE
	FILL AREAS (PLAN VIEW)
	EXISTING RIFFLE
	EXISTING BANK PROTECTION
	FLOW DIRECTION
	LARGE WOOD STRUCTURE
	POOL WOOD STRUCTURE
	HABITAT WOOD STRUCTURE (TYPE 1)
	HABITAT WOOD STRUCTURE (TYPE 2)
	LIVE WOOD STRUCTURE
	TOPPLE TREE
	BOULDER FIELD
	APEX LOG STRUCTURE
	EXISTING TREE (PROTECT IN PLACE)
	EXISTING TREE (FOR TOPPLE TREE) TREE NUMBER, SEE SHEETS G-09, G-10- G-11
	EXISTING TREE (FOR LIVE WOOD STRUCTURE) TREE NUMBER, SEE SHEETS G-09, G-10- G-11
	EXISTING TREE TO REMOVE TREE NUMBER, SEE SHEETS G-09, G-10- G-11
	EXISTING BUILDING

GENERAL NOTES

- ELEVATIONS ARE ON THE NORTH AMERICAN VERTICAL DATUM OF 1988.
- THE DRAWINGS ARE BASED ON THE CALIFORNIA STATE PLANE ZONE II COORDINATE SYSTEM (FIPS 0402) NORTH AMERICAN DATUM OF 1983 FEET.
- EXISTING TOPOGRAPHY OBTAINED FROM SONOMA VEGETATION MAPPING AND LIDAR PROGRAM LIGHT DETECTION AND RANGING (LIDAR) SURVEY COMPLETED BY THE UNIVERSITY OF MARYLAND BETWEEN SEPTEMBER 28TH 2013 AND NOVEMBER 26TH 2013. THE EXISTING GRADE REFLECTS SITE CONDITIONS AT THE TIME OF THE SURVEYS. CONTRACTOR SHOULD VERIFY GRADES AND EXISTING CONDITIONS PRIOR TO COMMENCING WORK.
- AERIAL IMAGERY OBTAINED FROM SONOMA VEGETATION MAPPING AND LIDAR PROGRAM. IMAGERY REPRESENTS GROUND CONDITIONS BETWEEN SEPTEMBER 28TH 2013 AND NOVEMBER 26TH 2013.
- LOW FLOW CHANNEL GEOMETRY AND BATHYMETRY ARE APPROXIMATE BASED ON CHANNEL PROFILE SURVEYS COMPLETED BY SCWA AND ESA IN FALL 2013 AND WINTER 2014, RESPECTIVELY.
- EXISTING BUILDING FOOTPRINTS AND ROAD SYSTEM ARE APPROXIMATE.
- UTILITY LOCATIONS SHOWN ARE APPROXIMATE BASED ON FIELD OBSERVATIONS, SURVEY AND AERIAL PHOTOGRAPHS.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL CONTACT ALL APPROPRIATE AGENCIES, LANDOWNERS, AND THE UNDERGROUND SERVICE ALERT (1-800 227-2600 OR 811) TO FIELD LOCATE ALL UNDERGROUND UTILITIES AND VINEYARD IRRIGATION SYSTEMS.
- PARCEL LINES SHOWN ARE BASED ON SONOMA COUNTY ASSESSOR MAP DATA PROVIDED BY SCWA. PARCEL LINES ARE APPROXIMATE AND DO NOT REPRESENT BOUNDARY SURVEYS.
- IN SOME CASES THE MAINTENANCE & MONITORING EASEMENT AND PARCEL LINES OVERLAP. WHERE THIS OCCURS THE APPROXIMATE PARCEL LINE IS SHOWN.
- REMOVAL OF SEDIMENT AND VEGETATION SHALL BE LIMITED TO THE MINIMUM REQUIRED TO COMPLETE THE PROJECT TO THE LINES AND GRADES SHOWN ON THE DRAWINGS.
- IT IS ANTICIPATED THAT MISCELLANEOUS DEBRIS (E.G. CONCRETE RUBBLE, CAR BODIES, RUBBER TIRES, PIPING) WILL BE ENCOUNTERED WITHIN THE LIMITS OF WORK. THIS MATERIAL SHALL BE REMOVED WITHIN THE LIMITS OF WORK SHOWN ON THE DRAWINGS AS REQUIRED TO COMPLETE THE WORK. THE MATERIAL REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR TO BE DISPOSED OF OFFSITE IN A LEGAL MANNER.
- CONTRACTOR MUST MAINTAIN DOWNSTREAM FLOW AT ALL TIMES. PERFORM DEWATERING AS NEEDED.
- THE CONTRACTOR SHALL BE AWARE THAT THE WORK WILL INCLUDE EXCAVATION WITHIN THE MAIN CHANNEL OF DRY CREEK AND IN AREAS BELOW THE WATER TABLE. PERFORM DEWATERING AS NEEDED.
- THE CONTRACTOR SHALL ANTICIPATE FLOW IN DRY CREEK (110 CFS OR GREATER) THROUGHOUT CONSTRUCTION. ESTIMATED MINIMUM WATER SURFACE ELEVATION AT 110 CFS SHOWN ON DRAWINGS IS APPROXIMATE ONLY AND SHALL NOT BE RELIED UPON BY CONTRACTOR. FIELD VERIFY ACTUAL CONDITIONS.
- THE CONTRACTOR SHALL PERFORM ALL WORK IN A MANNER THAT COMPLIES WITH ALL PERMITS AND IS PROTECTIVE OF THE ENVIRONMENT, INCLUDING AIR AND WATER QUALITY, WILDLIFE, VEGETATION, AND HUMAN HEALTH.
- THE CONTRACTOR SHALL ONLY OPERATE EQUIPMENT ON APPROVED ACCESS ROUTES AND WITHIN PROJECT LIMITS INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL ALSO CONFIRM THE ACCESS ROUTES WITH THE OWNER PRIOR TO MOBILIZATION.
- FINAL ALIGNMENT OF ACCESS ROUTES THROUGH VEGETATED CORRIDORS TO BE CONFIRMED AT TIME OF CONSTRUCTION. ACCESS ROUTES FROM VINEYARD LEVEL TO CREEK SHALL BE LEFT IN PLACE UNLESS OTHERWISE DIRECTED BY OWNER.
- CONTRACTOR SHALL CONFINE ITS WORK TO GRADING LIMITS ON THE DRAWINGS. AS AN EXCEPTION MINOR WORK OUTSIDE GRADING LIMITS MAY BE NEEDED FOR WOOD STRUCTURE INSTALLATION.
- THE CONTRACTOR'S WORK SHALL BE SCHEDULED AND SEQUENCED TO PREVENT ANY DISRUPTION OF LANDOWNER ACTIVITIES (E.G. AGRICULTURE, WINERY AND VINEYARD PRACTICES).
- REVEGETATION AND IRRIGATION ELEMENTS WILL BE IMPLEMENTED BY THE WATER AGENCY. THE REVEGETATION AND IRRIGATION DESIGN ARE NOT INCLUDED IN THESE DRAWINGS AND ARE A SEPARATE SUBMITTAL PACKAGE.
- PERFORM SEEDING AND IMPLEMENT EROSION CONTROL MEASURES FOR DISTURBED AREAS IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS, AND THE OWNER-APPROVED SWPPP.

TYPICAL SECTION LETTERING AND DETAIL NUMBERING SYSTEM



NO.	DATE	REVISION	BY

SONOMA COUNTY WATER AGENCY

SCALE: NA DATE: 03/17/2016

DRAWN: AF

REVIEWED:

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D

GENERAL NOTES, SYMBOLOLOGY, & ABBREVIATIONS

FILE NAME: 7351-NOTES-SYMBOLOLOGY-&-ABBREVIATION.dwg DRAWING NUMBER: G-02 SHEET 2 OF 42

CONTRACT NUMBER: 7351



PLAN

SCALE: 1"=200'



BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



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NO.	DATE	REVISION	BY

SONOMA COUNTY WATER AGENCY

SCALE: 1"=200'	DATE: 03/17/2016
DRAWN: AF	
REVIEWED:	

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D REACH 2 OVERVIEW

FILE NAME: 7351-DRY-CREEK-REACH-2-OVERVIEW.dwg	DRAWING NUMBER: G-03	SHEET 3 OF 42
CONTRACT NUMBER: 7351		



NOTES

1. THE MAINTENANCE & MONITORING EASEMENTS ARE SHOWN TO EXTEND TO THE CENTERLINE OF DRY CREEK.
2. SUGGESTED ACCESS ROUTES SHOWN INTO THE CREEK ARE APPROXIMATE AND MAY BE MODIFIED BASED ON ACTUAL CONDITIONS IN THE FIELD TO MINIMIZE IMPACTS.

PLAN

SCALE: 1"= 200'



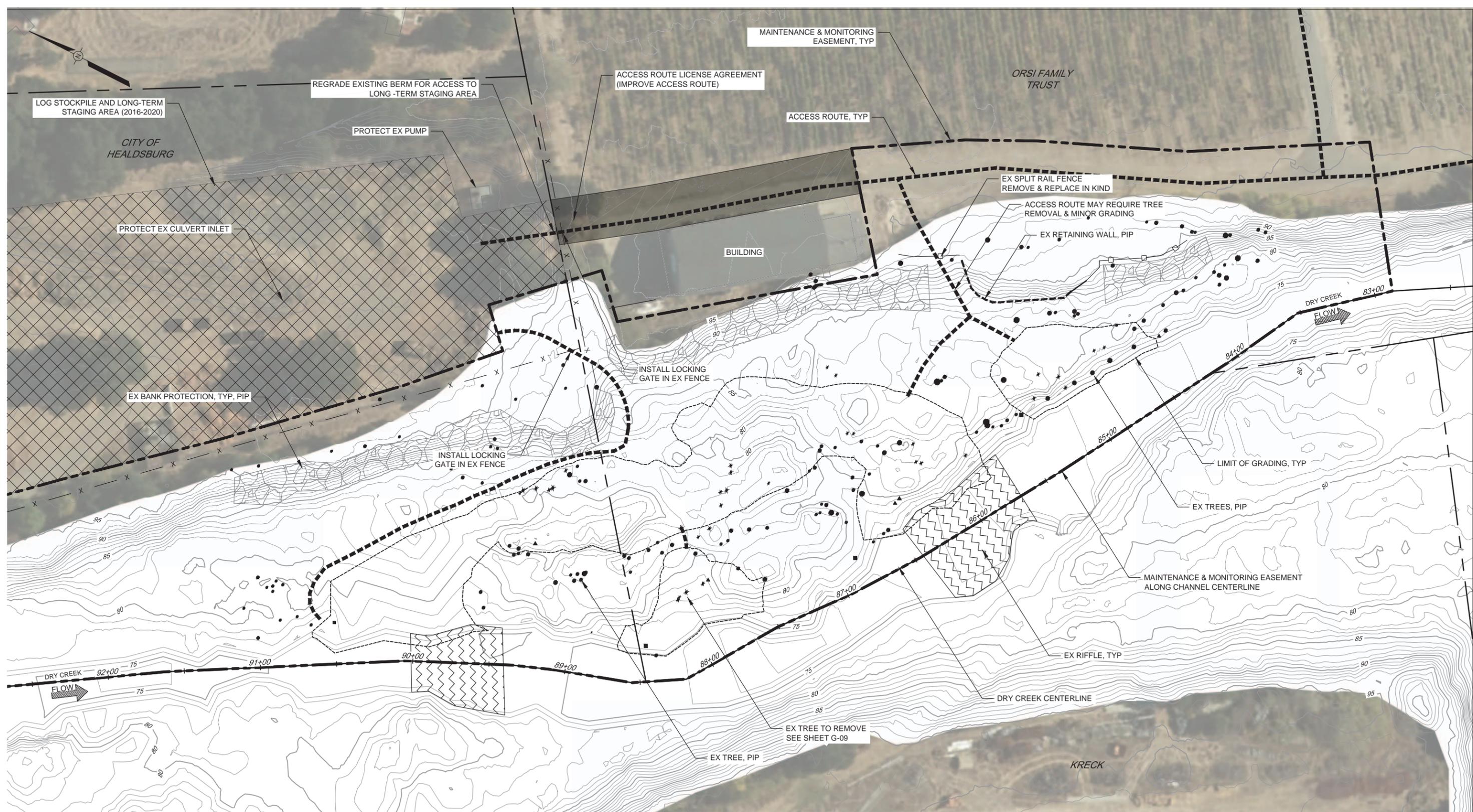
BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



NO.	DATE	REVISION	BY

SCALE: 1" = 200'	DATE: 03/17/2016
DRAWN: AF, JW	
REVIEWED:	

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D SITE 2C & 2D ACCESS & STAGING	
FILE NAME: 7351-DRY-CREEK-ACCESS-&-STAGING.dwg	DRAWING NUMBER: G-04
CONTRACT NUMBER: 7351	SHEET 4 OF 42



PLAN

SCALE: 1" = 30'



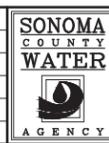
HORIZONTAL SCALE

BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



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NO.	DATE	REVISION	BY



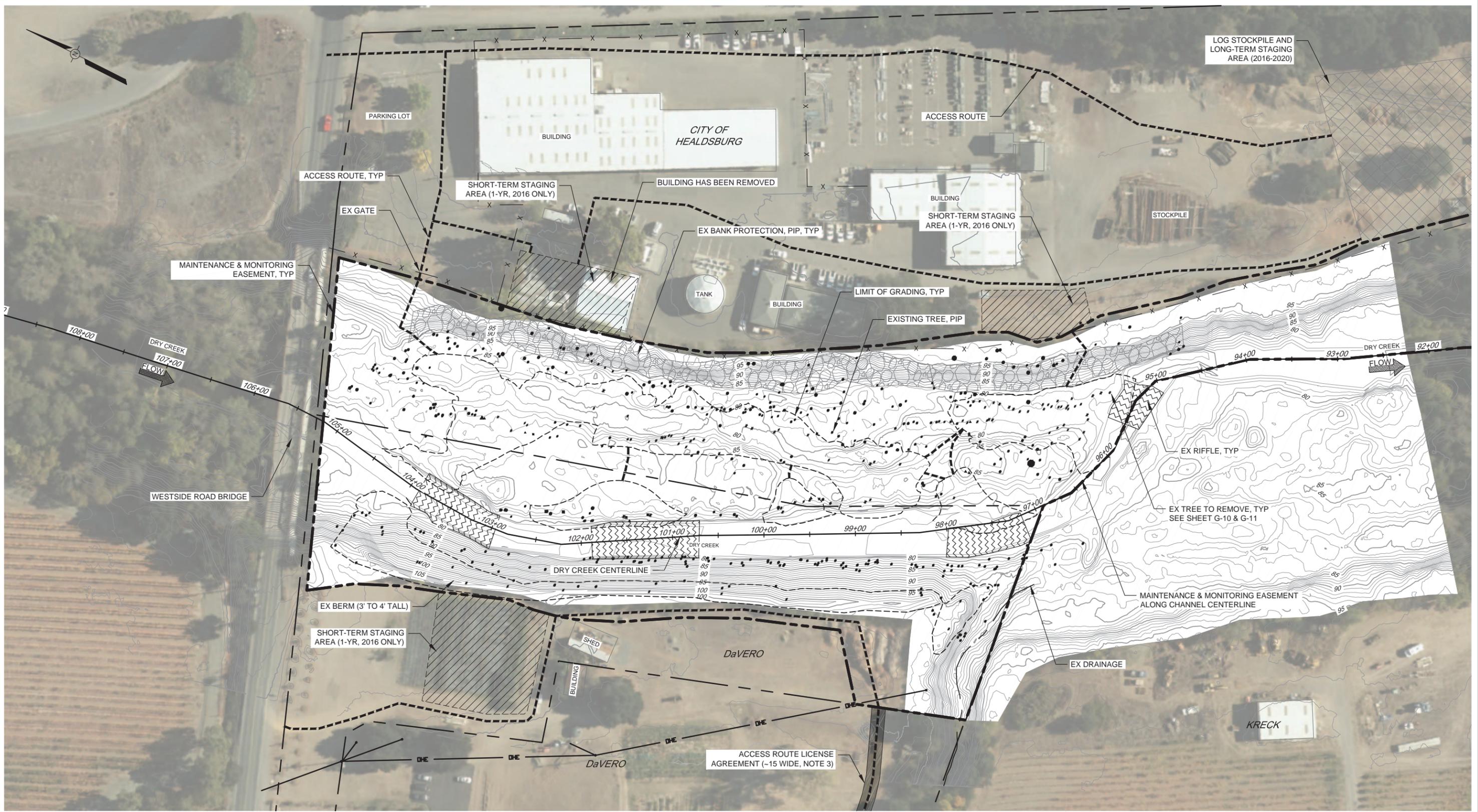
SCALE: 1" = 30'	DATE: 03/17/2016
DRAWN: AF, JW	
REVIEWED:	

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2C EXISTING CONDITIONS

FILE NAME: 7351-DRY-CREEK-SITE-2C-EX-CONDITIONS.dwg	DRAWING NUMBER: G-05	SHEET 5 OF 42
CONTRACT NUMBER: 7351		

NOTES

1. THE MAINTENANCE & MONITORING EASEMENTS ARE SHOWN TO EXTEND TO THE CENTERLINE OF DRY CREEK.
2. SUGGESTED ACCESS ROUTES SHOWN INTO THE CREEK ARE APPROXIMATE AND MAY BE MODIFIED BASED ON ACTUAL CONDITIONS IN THE FIELD TO MINIMIZE IMPACTS.
3. ACCESS ROUTE IMPROVEMENTS MAY INCLUDE MINOR GRADING, LEVELING, PLACEMENT OF GRAVEL, AND VEGETATION PRUNING.



PLAN

SCALE: 1" = 50'

NOTES

1. THE MAINTENANCE & MONITORING EASEMENTS ARE SHOWN TO EXTEND TO THE CENTERLINE OF DRY CREEK.
2. SUGGESTED ACCESS ROUTES SHOWN INTO THE CREEK ARE APPROXIMATE AND MAY BE MODIFIED BASED ON ACTUAL CONDITIONS IN THE FIELD TO MINIMIZE IMPACTS.
3. ACCESS ROUTE IMPROVEMENT MAY INCLUDE MINOR GRADING, LEVELING, PLACEMENT OF GRAVEL, AND VEGETATION PRUNING.



BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



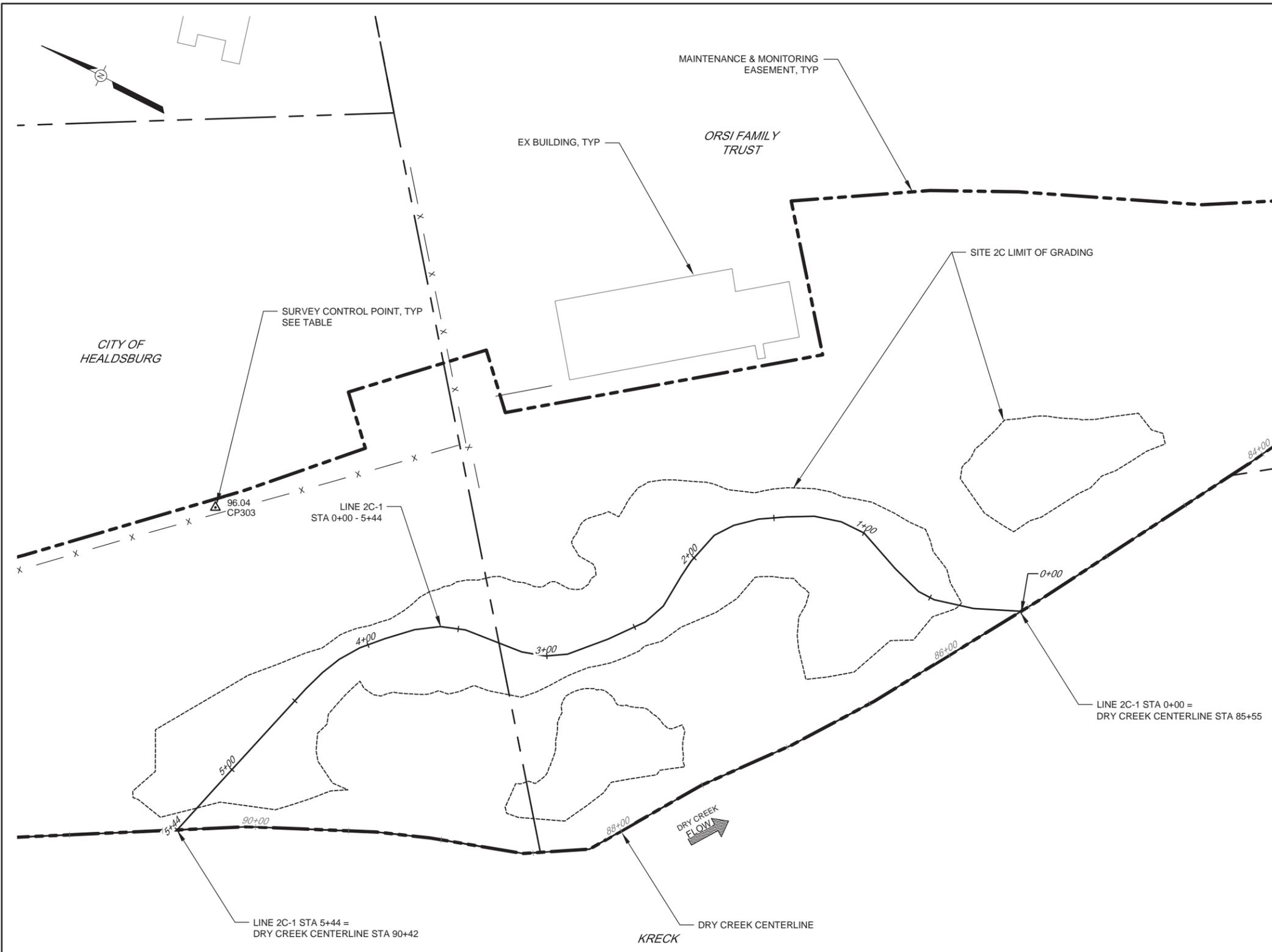
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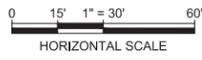
SONOMA COUNTY WATER AGENCY

SCALE: 1" = 50'	DATE: 03/17/2016
DRAWN: AF, JW	
REVIEWED:	

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D	
SITE 2D EXISTING CONDITIONS	
FILE NAME: 7351-DRY-CREEK-SITE-2D-EX-CONDITIONS.dwg	DRAWING NUMBER: G-06
CONTRACT NUMBER: 7351	SHEET 6 OF 42



PLAN
SCALE: 1" = 30'



CONTROL POINTS				
POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
303	96.04	1982015.85	6310343.05	CP303

BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



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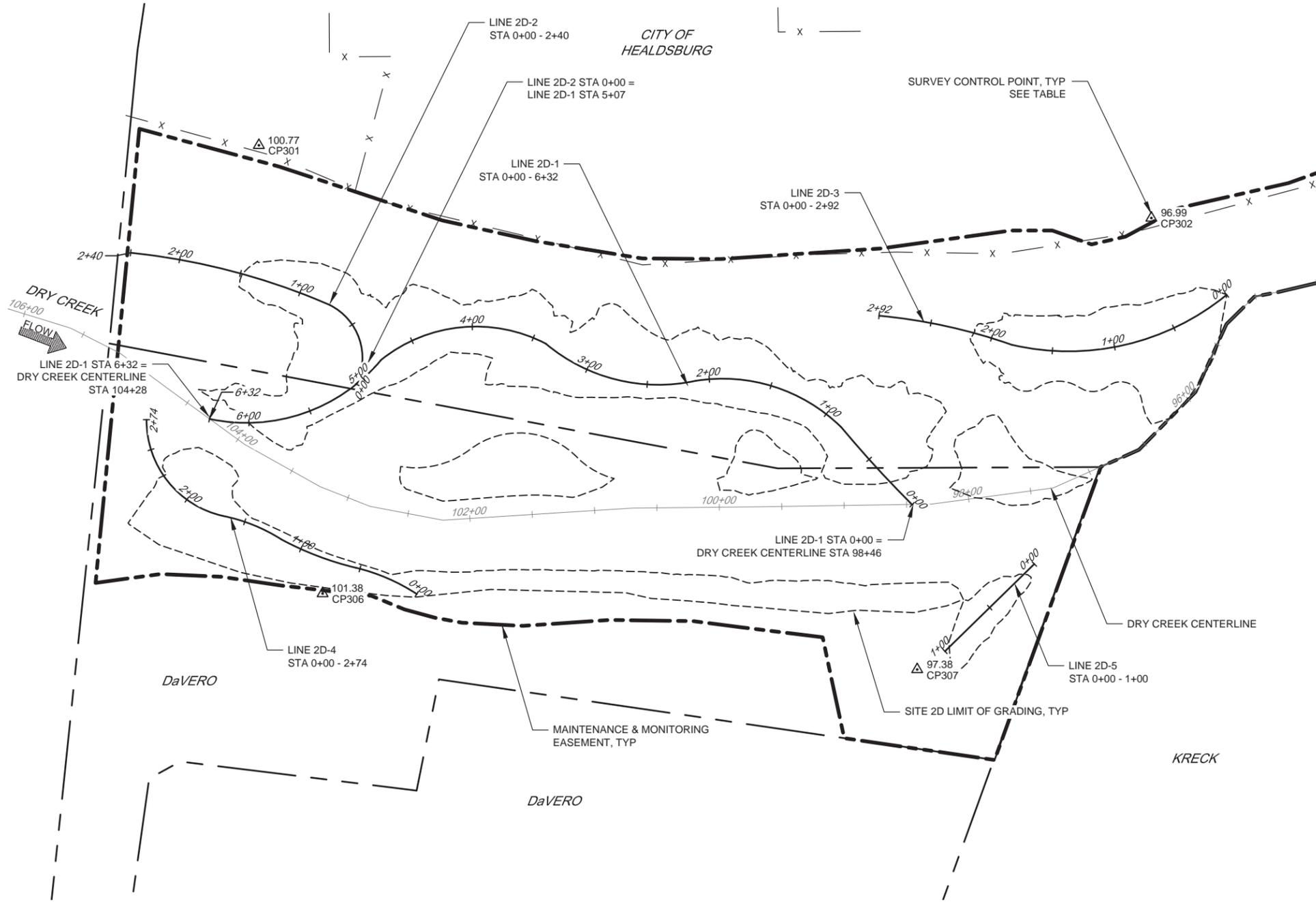
NO.	DATE	REVISION	BY

SONOMA COUNTY WATER AGENCY

SCALE: 1" = 30' DATE: 03/17/2016
DRAWN: AF
REVIEWED:

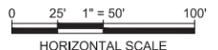
DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2C LAYOUT & CONTROL

FILE NAME: 7351-DRY-CREEK-SITE-2C-LAYOUT-&-CONTROL.dwg DRAWING NUMBER: G-07 SHEET 7 OF 42
CONTRACT NUMBER: 7351



CONTROL POINTS				
POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
301	100.77	1983111.10	6309687.08	CP301
302	96.99	1982446.58	6309956.69	CP302
306	101.38	1982904.40	6309390.17	CP306
307	97.38	1982451.78	6309550.15	CP307

PLAN
SCALE: 1" = 50'



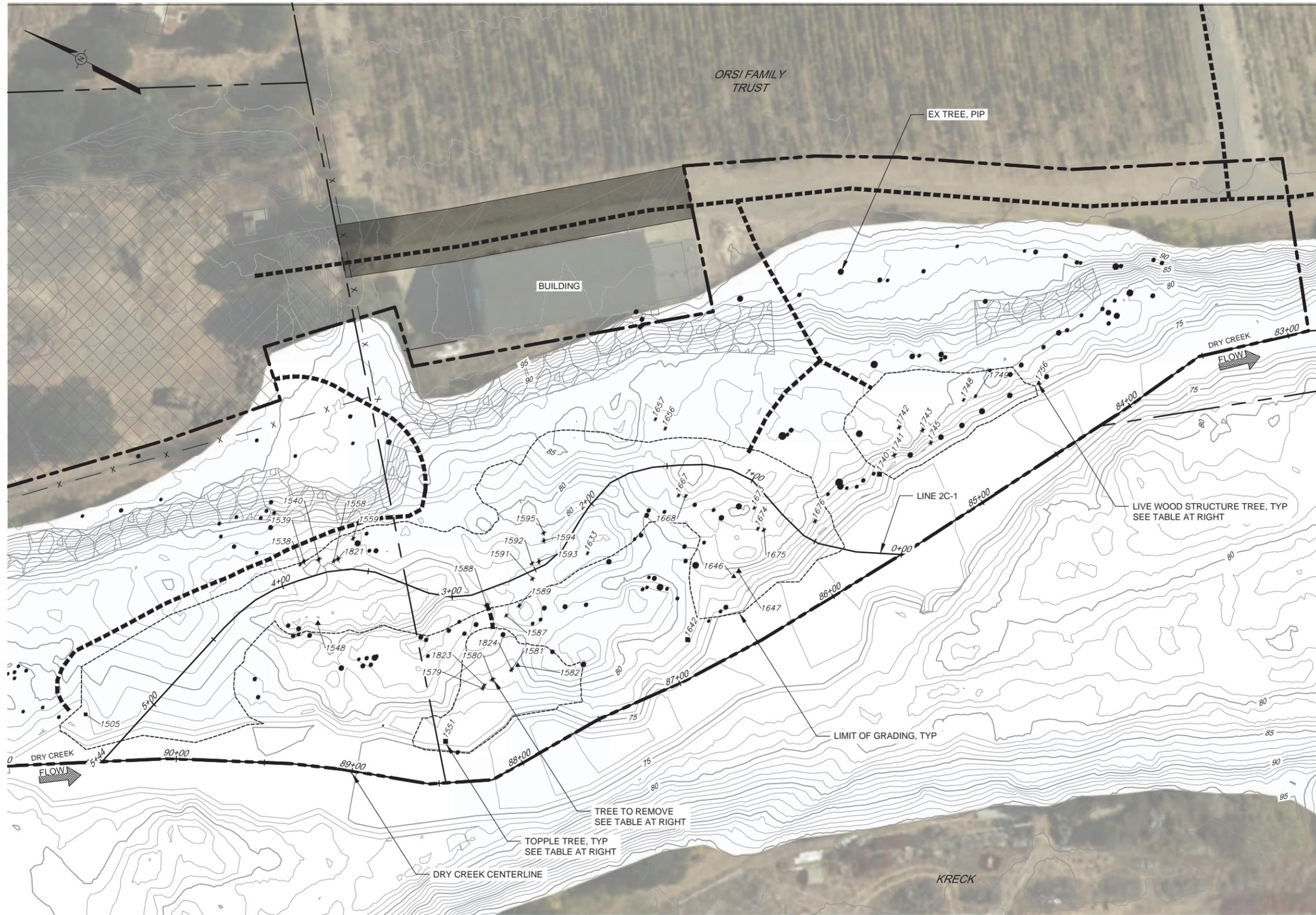
BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



NO.	DATE	REVISION	BY

SCALE: 1" = 50'	DATE: 03/17/2016
DRAWN: AF	
REVIEWED:	

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D SITE 2D LAYOUT & CONTROL			
FILE NAME: 7351-DRY-CREEK-SITE-2D-LAYOUT-&CONTROL.dwg	DRAWING NUMBER: G-08	SHEET 8 OF 42	
CONTRACT NUMBER: 7351			



TREE	SPECIES
1538	9" WILO
1539	18" CTNWD
1540	16" CTNWD
1558	12" CTNWD
1559	12" WILO
1579	12" ALDR
1580	16" ALDR
1581	9" ALDR (5 TRUNKS)
1587	10" WILO
1588	16" WILO
1589	14" WILO
1591	12" ALDR
1592	12" CTNWD
1593	16" CTNWD
1594	14" CTNWD
1595	14" ALDR
1633	9" ALDR
1656	10" WILO
1657	9" WILO
1667	10" WILO

TREE	SPECIES
1668	10" WILO
1673	10" ALDR
1674	10" ALDR
1675	12" ALDR
1676	12" WILO
1741	14" ALDR
1742	12" WILO
1743	14" ALDR
1745	12" ALDR
1748	10" ALDR
1749	10" ALDR
1821	18" CTNWD
1823	10" ALDR
1824	12" ALDR

TREE	SPECIES
1548	14" WILO
1582	12" ALDR
1646	12" WILO
1647	14" WILO
1756	12" WILO (3 TRUNKS)

TREE	SPECIES
1505	10" ALDR (2 TRUNKS)
1551	14" ALDR (2 TRUNKS)
1642	14" WILO
1740	14" ALDR

PLAN
SCALE: 1" = 30'

NOTES

- TREES NOT MARKED FOR REMOVAL SHALL BE PROTECTED IN PLACE.
- ADJUST GRADING LIMITS AND ACCESS ROUTES TO PROTECT TREES NOT MARKED FOR REMOVAL.



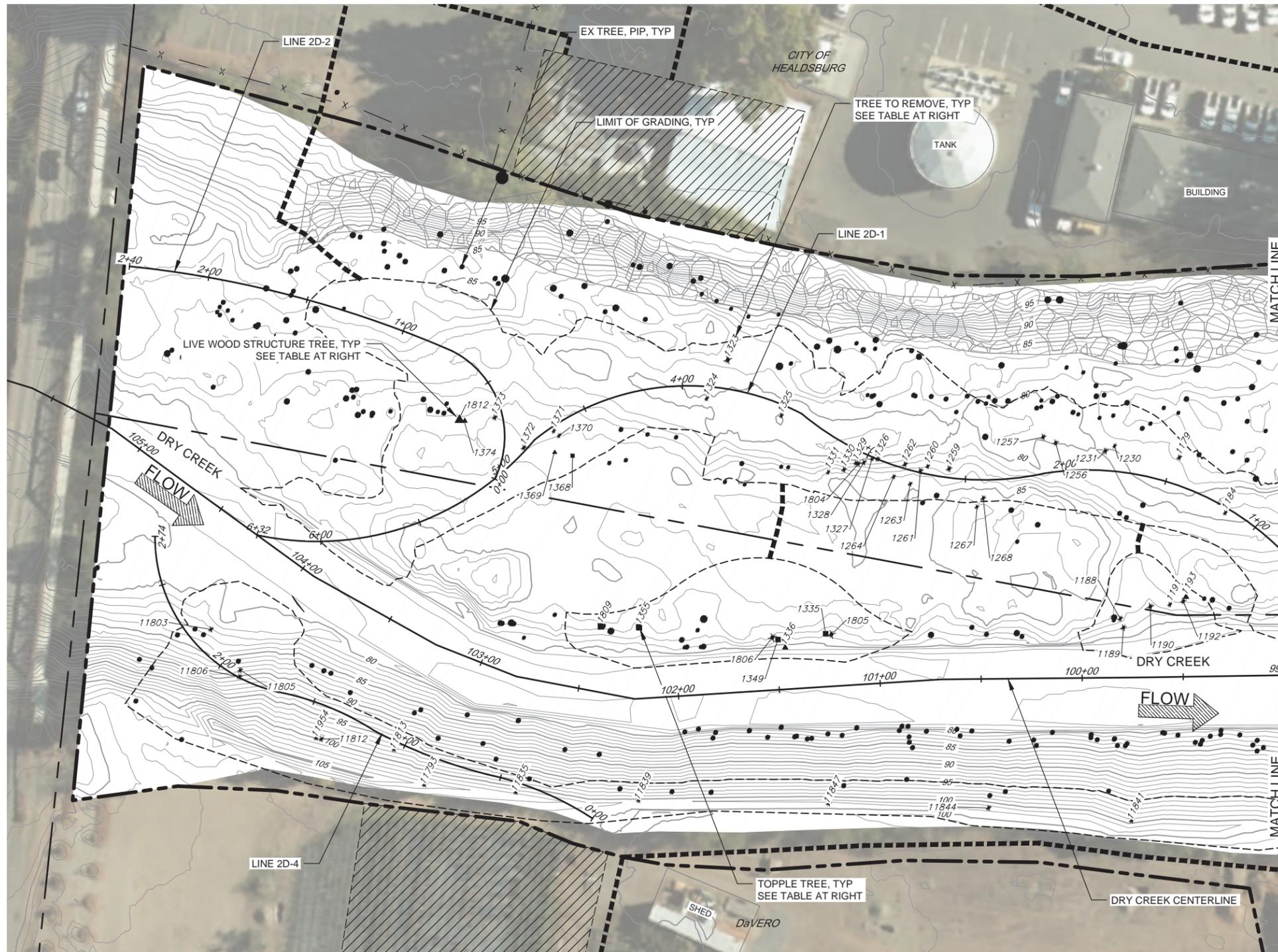
BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



NO.	DATE	REVISION	BY

SCALE: 1" = 30'	DATE: 03/17/2016
DRAWN: DRAWN	
REVIEWED:	

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D SITE 2C TREE REMOVAL	
FILE NAME: 7351-DRY-CREEK-SITE-2C-TREE-REMOVAL.dwg	DRAWING NUMBER: G-09
CONTRACT NUMBER: 7351	SHEET 9 OF 42



TREE	SPECIES
1179	12" ALDR
1184	10" WILO (2 TRUNKS)
1188	12" WILO
1189	14" ALDR
1190	16" ALDR
1191	10" ALDR
1192	14" ALDR
1230	9" ALDR
1231	14" WILO
1256	14" WILO
1257	14" ALDR
1259	14" CTNWD
1260	10" WILO
1261	14" WILO
1262	12" WILO
1263	10" WILO
1264	10" WILO
1267	10" CTNWD
1268	12" CTNWD
1323	18" ALDR
1324	10" ALDR
1325	10" WILO
1327	10" ALDR (2 TRUNKS)
1328	12" WILO

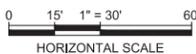
TREE	SPECIES
1329	10" ALDR
1330	12" WILO
1331	9" WILO
1370	9" WILO
1371	9" WILO (2 TRUNKS)
1372	12" CTNWD
1373	12" WILO
1804	12" ALDR
1805	18" ALDR
1806	18" ALDR
11793	9 LVOK
11803	14 ALDR
11805	9 ALDR
11806	24 CTNWD
11812	14 WLNT
11813	10 LVOK
11835	12 LVOK
11839	9 LVOK
11841	9 LVOK
11844	9 LVOK
11847	10 WILO
11954	10 WLNT

TREE	SPECIES
1193	14" WILO
1336	13" WILO
1369	10" WILO
1374	12" CTNWD
1812	22" CTNWD

TREE	SPECIES
1335	14" ALDR
1349	14" ALDR
1355	16" WILO
1368	10" WILO
1809	16" WILO

NOTES

1. TREES NOT MARKED FOR REMOVAL SHALL BE PROTECTED IN PLACE.
2. ADJUST GRADING LIMITS AND ACCESS ROUTES TO PROTECT TREES NOT MARKED FOR REMOVAL.



PLAN

SCALE: 1" = 30'

BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



SCALE: 1" = 30'	DATE: 03/17/2016
DRAWN: DRAWN	
REVIEWED:	

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2D TREE REMOVAL (1 OF 2)

FILE NAME: 7351-DRY-CREEK-SITE-2D-TREE-REMOVAL.dwg
 CONTRACT NUMBER: 7351
 DRAWING NUMBER: G-10
 SHEET 10 OF 42

NO.	DATE	REVISION	BY



PLAN

SCALE: 1" = 30'

TREE REMOVAL TABLE

TREE	SPECIES
1040	14" WILO
1042	12" ALDR
1043	12" ALDR
1044	12" WILO
1045	12" ALDR
1046	10" WILO
1047	10" ALDR
1048	12" WILO
1049	12" ALDR
1050	10" ALDR
1051	10" ALDR
1052	10" WILO
1053	9" ALDR
1054	12" WILO
1055	10" WILO
1056	10" WILO
1057	14" WILO
1058	14" ALDR
1059	12" WILO (3 TRUNKS)
1060	14" ALDR
1061	12" WILO
1062	12" WILO

TREE REMOVAL TABLE

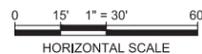
TREE	SPECIES
1063	12" WILO (2 TRUNKS)
1068	9" WILO
1069	12" WILO
1070	12" WILO
1071	10" ALDR
1087	12" ALDR (2 TRUNKS)
1088	10" ALDR
1089	14" ALDR
1090	14" ALDR (2 TRUNKS)
1091	14" WILO
1092	12" WILO (2 TRUNKS)
1093	10" WILO
1104	10" ALDR
1105	10" ALDR (2 TRUNKS)
1123	12" WILO
1129	12" ALDR (3 TRUNKS)
1197	16" WILO
1198	12" WILO
1199	12" WILO
1200	18" ALDR
1201	10" ALDR

LIVE WOOD STRUCTURE TREE TABLE

TREE	SPECIES
1103	12" WILO
1127	12" WILO
1128	12" WILO

NOTES

- TREES NOT MARKED FOR REMOVAL SHALL BE PROTECTED IN PLACE.
- ADJUST GRADING LIMITS AND ACCESS ROUTES TO PROTECT TREES NOT MARKED FOR REMOVAL.



BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



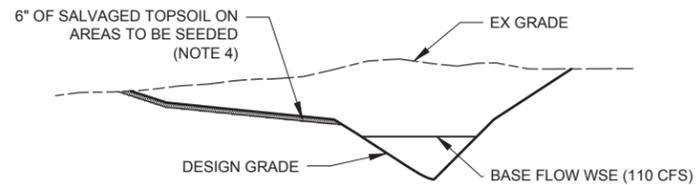
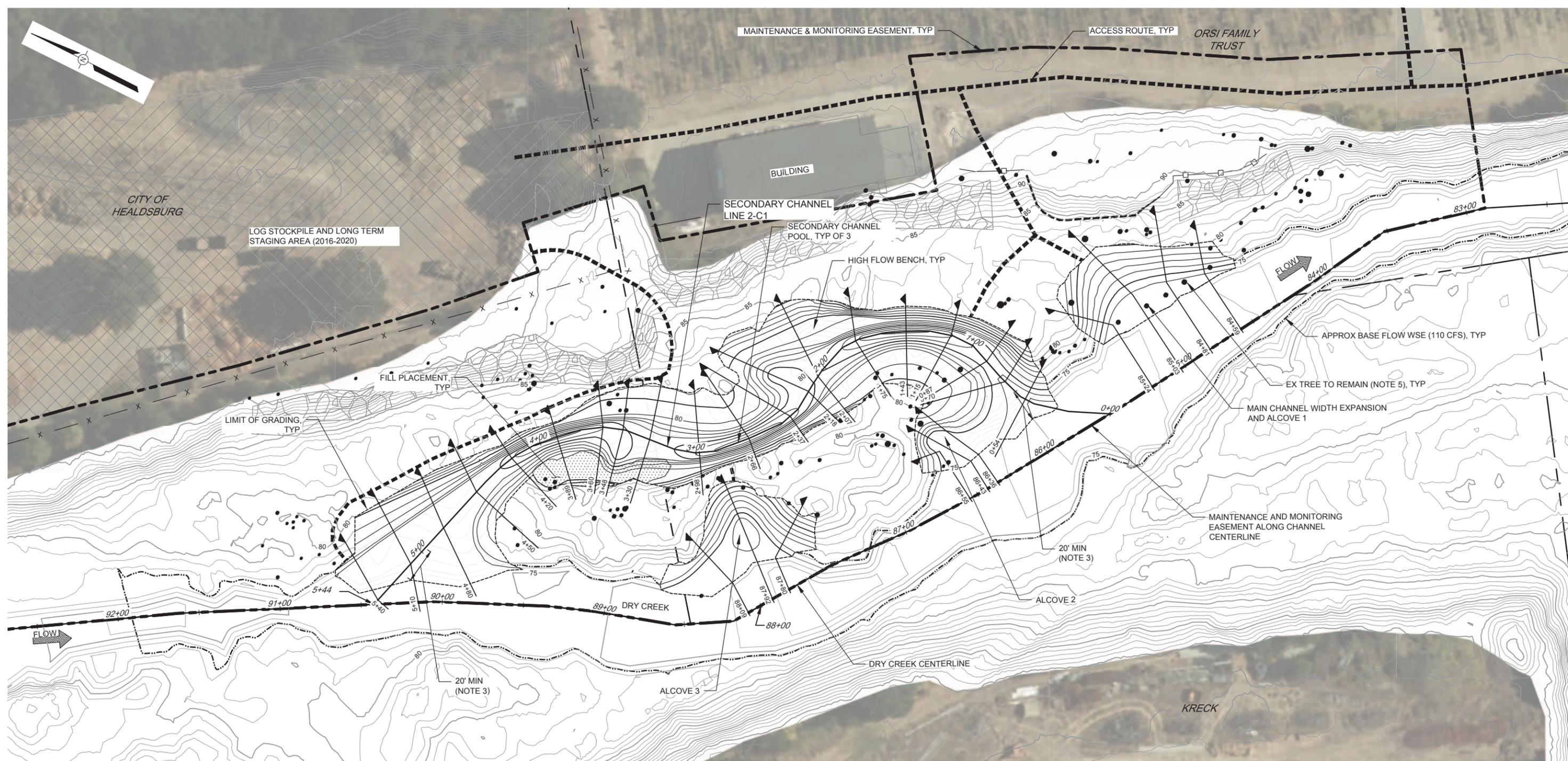
NO.	DATE	REVISION	BY



SCALE: 1" = 30'	DATE: 03/17/2016
DRAWN: DRAWN	
REVIEWED:	

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2D TREE REMOVAL (2 OF 2)

FILE NAME: 7351-DRY-CREEK-SITE-2D-TREE-REMOVAL.dwg DRAWING NUMBER: G-11 SHEET 11 OF 42
 CONTRACT NUMBER: 7351

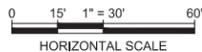


SITE 2C TYPICAL SECTION - TOPSOIL PLACEMENT

SCALE: 1"= 10'

PLAN

SCALE: 1"= 30'



BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



SCALE:	DATE:
SCALE	03/17/2016
DRAWN:	
JW, AF	
REVIEWED:	

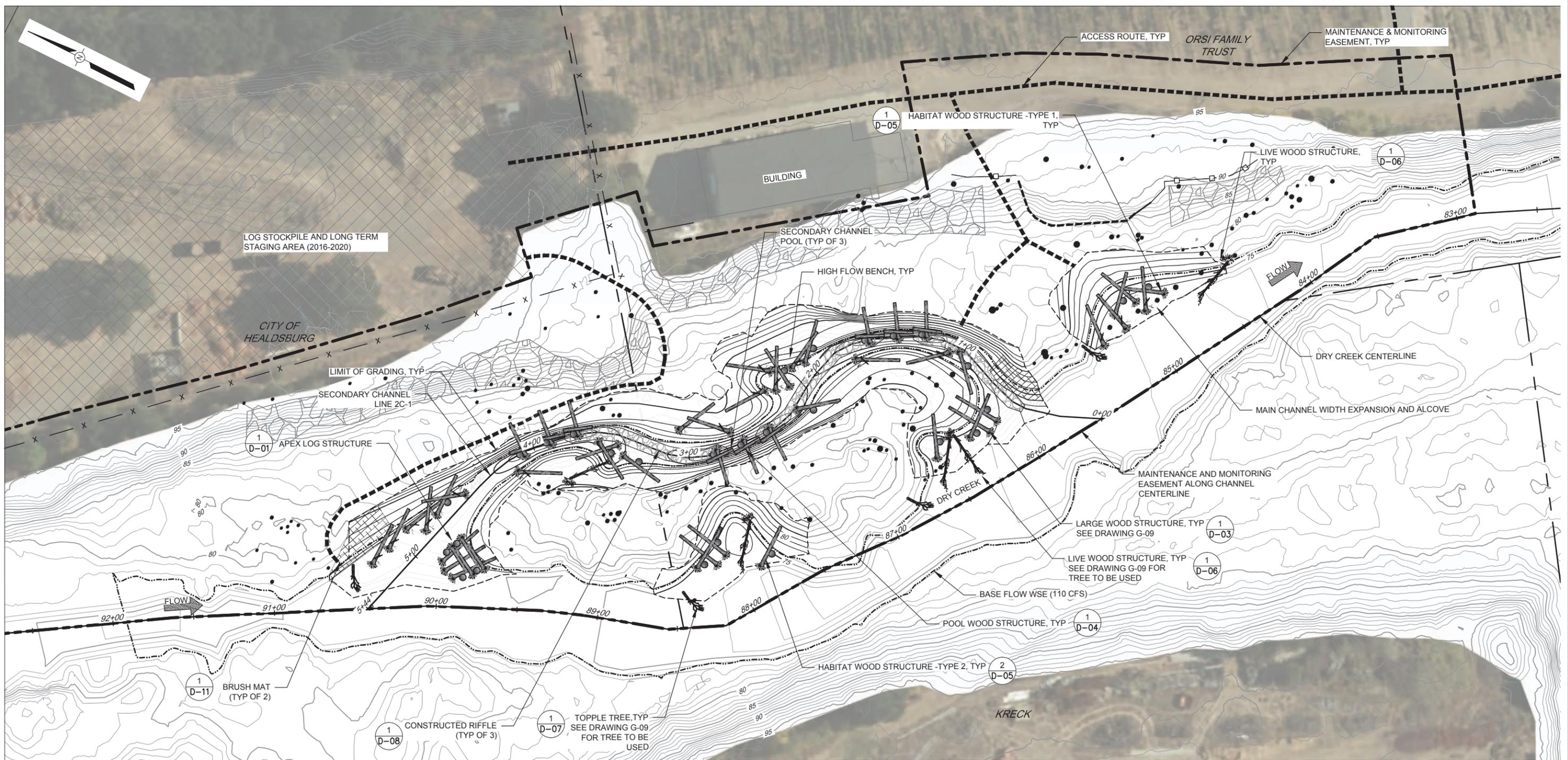
DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2C GRADING PLAN

FILE NAME: 7351-DRY-CREEK-SITE-2C-GRADING-PLAN.dwg	DRAWING NUMBER: C-01	SHEET 12 OF 42
CONTRACT NUMBER: 7351		

NOTES

- SEE DRAWING C-03 FOR GRADING PROFILES.
- SEE DRAWINGS C-04 TO C-06 FOR GRADING SECTIONS.
- SEQUENCE GRADING TO MAINTAIN 20' MINIMUM UNEXCAVATED BETWEEN SECONDARY CHANNEL AND DRY CREEK. DO NOT EXCAVATE FINAL CONNECTION TO DRY CREEK UNTIL ALL GRADING AND LOG STRUCTURES ARE COMPLETE AND ACCEPTED (SEE SPECS).
- SALVAGE TOPSOIL FROM AREAS TO BE GRADED. PLACE ON ALL DISTURBED AREAS TO BE SEEDED PER DRAWING EC-02 WITH SLOPES LESS THAN 3:1.
- ADJUST GRADING LIMITS TO PROTECT TREES NOT MARKED FOR REMOVAL (SEE DRAWING G-09)

NO.	DATE	REVISION	BY



LOG STRUCTURE QUANTITIES	
LARGE WOOD STRUCTURE	2
HABITAT WOOD STRUCTURE - TYPE 1	19
HABITAT WOOD STRUCTURE - TYPE 2	11
LIVE WOOD STRUCTURE	5
APEX LOG STRUCTURE	1
TOPPLE LOGS	4
POOL WOOD STRUCTURE	9

PLAN
SCALE: 1" = 30'

NOTES

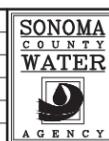
1. THE LOCATION AND ORIENTATION OF SOME ENHANCEMENT FEATURES MAY REQUIRE MINOR FIELD ADJUSTMENTS DURING CONSTRUCTION.



BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY

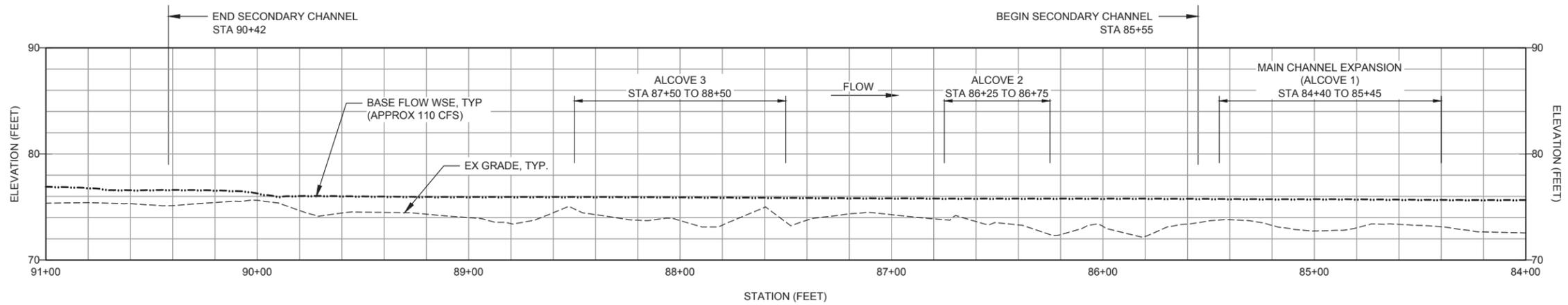


NO.	DATE	REVISION	BY



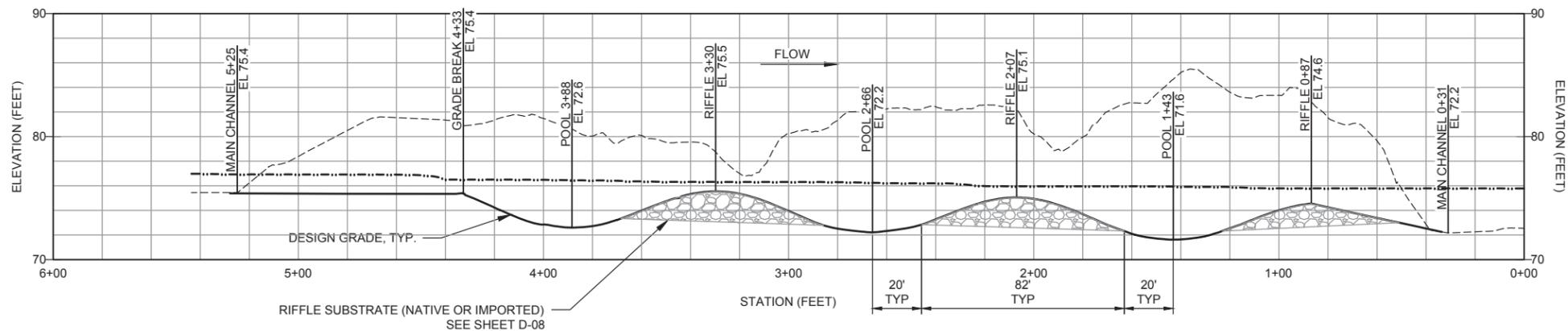
SCALE: 1" = 30'	DATE: 03/17/2016
DRAWN: JW, AF	
REVIEWED:	

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D SITE 2C ENHANCEMENT PLAN	
FILE NAME: 7351-DRY-CREEK-REACH-2C-FEATURES.dwg CONTRACT NUMBER: 7351	DRAWING NUMBER: C-02
SHEET 13 OF 42	



PROFILE - MAIN CHANNEL

HORIZONTAL SCALE: 1"= 30'
 VERTICAL SCALE: 1"=6' (5X EXAGGERATION)



PROFILE - SECONDARY CHANNEL (LINE 2C-1)

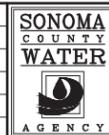
HORIZONTAL SCALE: 1"= 30'
 VERTICAL SCALE: 1"=6' (5X EXAGGERATION)



BAR LENGTH ON ORIGINAL
 DRAWING EQUALS ONE INCH.
 ADJUST SCALE ACCORDINGLY



NO.	DATE	REVISION	BY

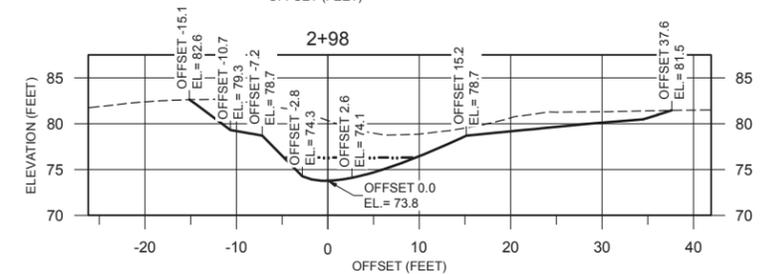
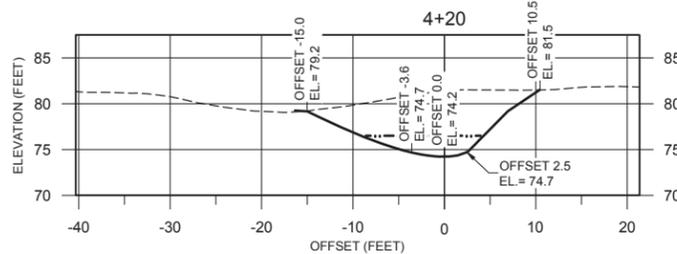
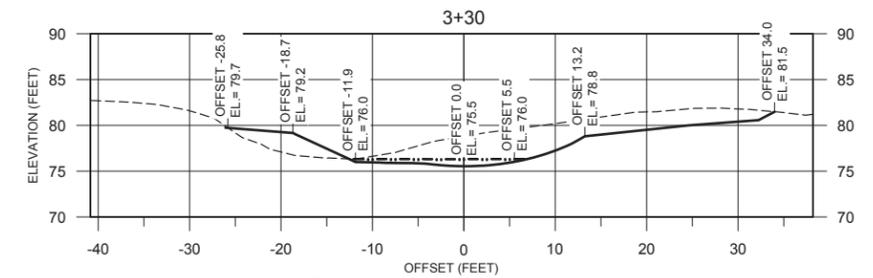
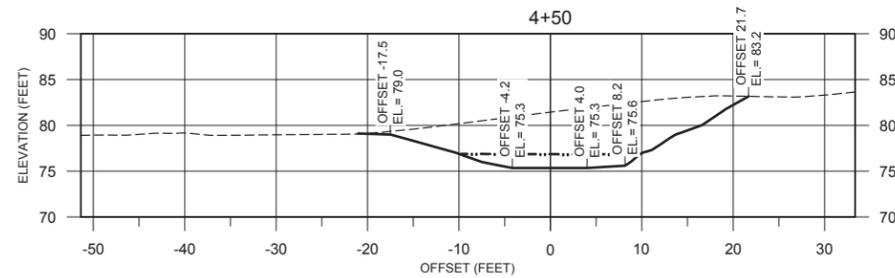
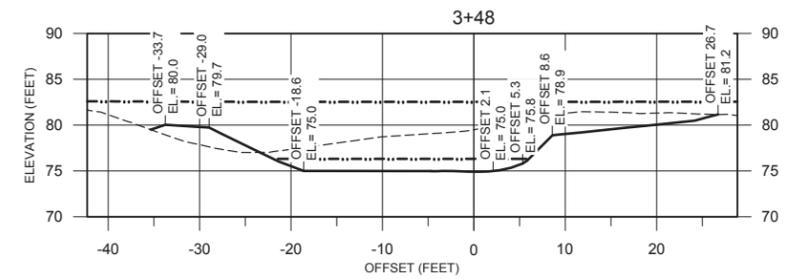
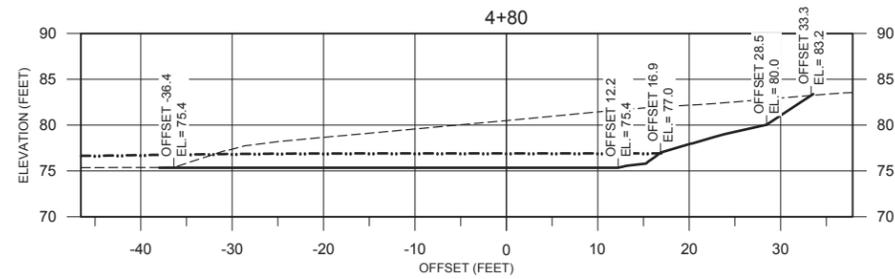
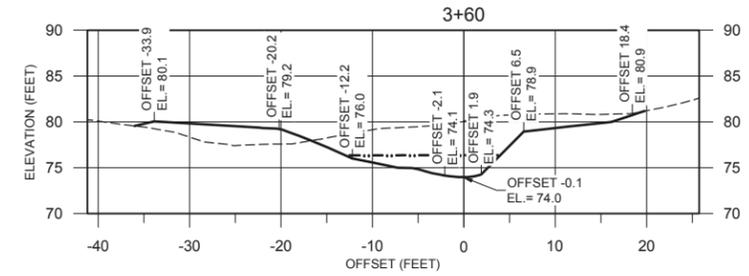
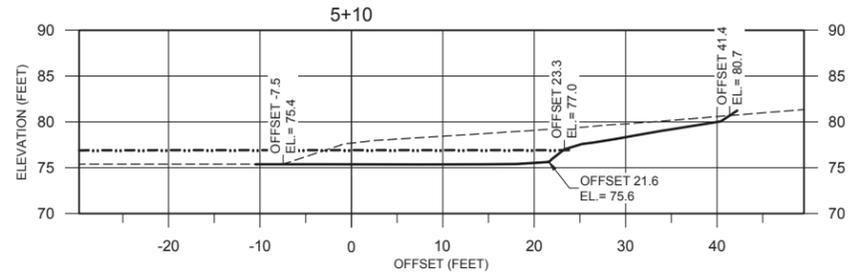
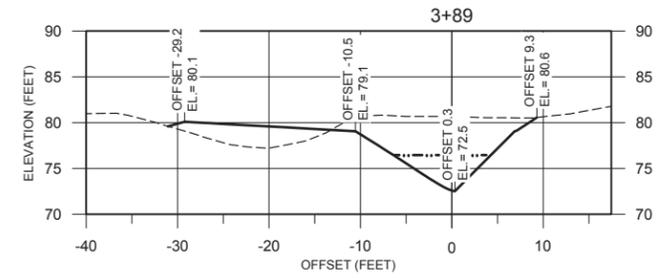
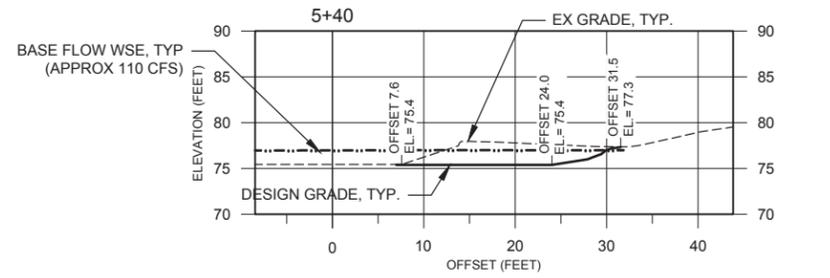


SCALE: AS SHOWN	DATE: 03/17/2016
DRAWN: JW, AF	
REVIEWED:	

NOTES

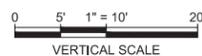
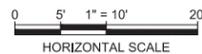
- SEE DRAWING G-07 FOR ALIGNMENT LAYOUT.
- CHANNEL STATIONING IS APPROXIMATE. CONTOUR GRADING GOVERNS.

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2C GRADING PROFILES



SECTIONS - SECONDARY CHANNEL (STA 2+98 TO 5+40) (LINE 2C-1)

HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=10'



BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



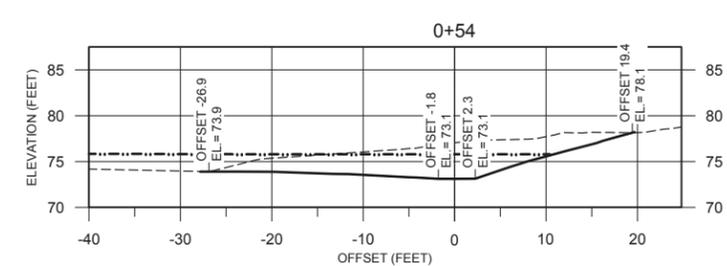
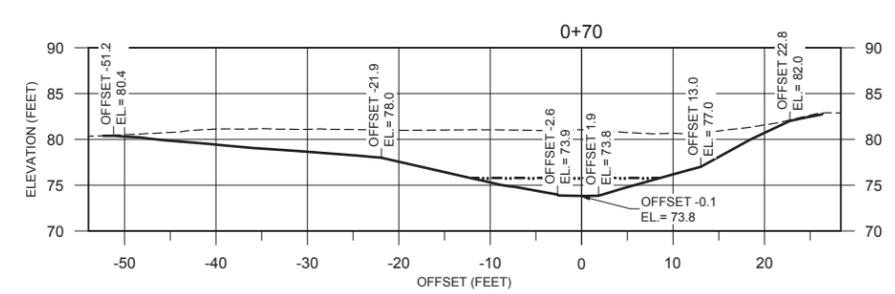
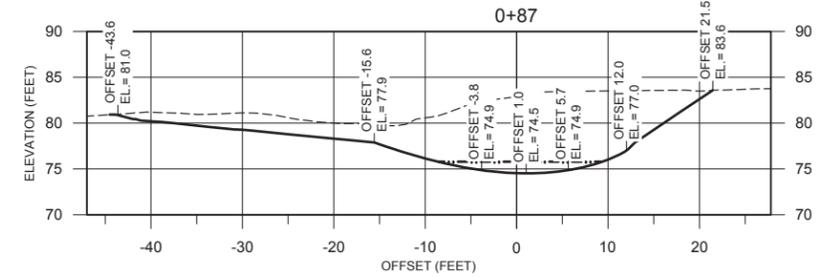
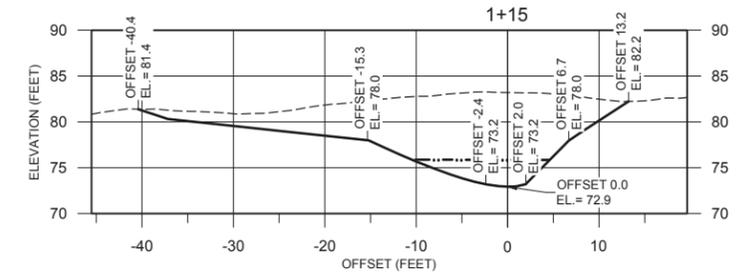
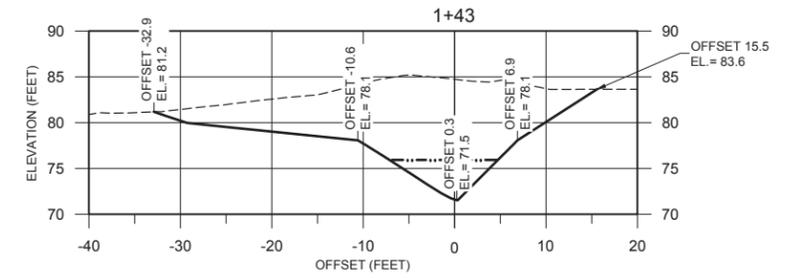
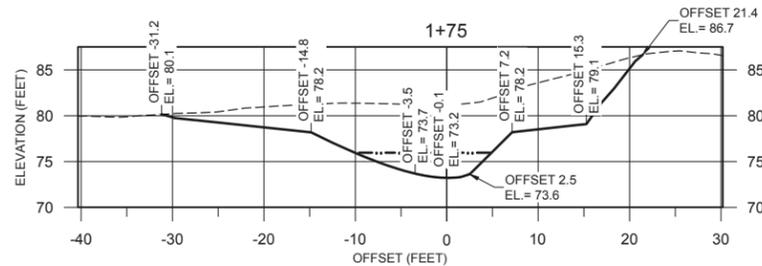
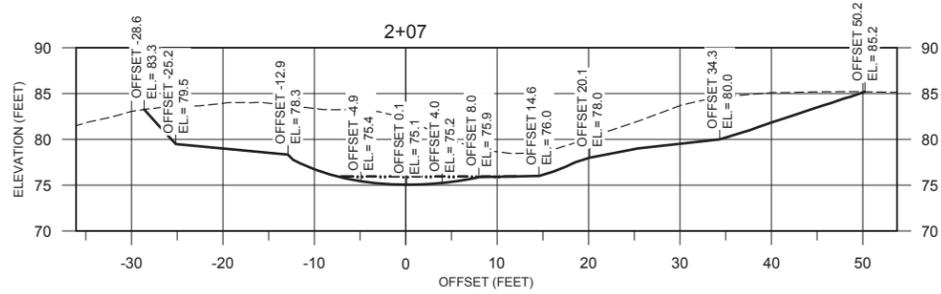
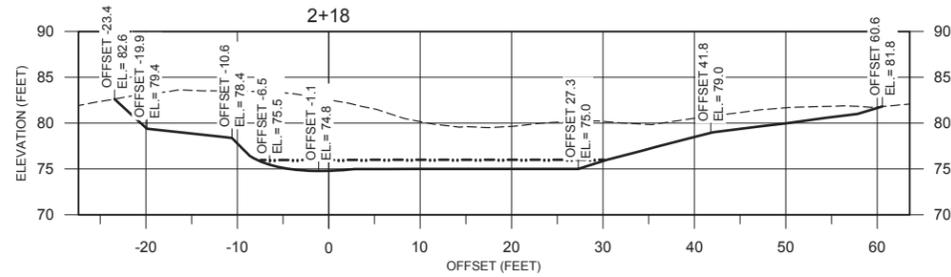
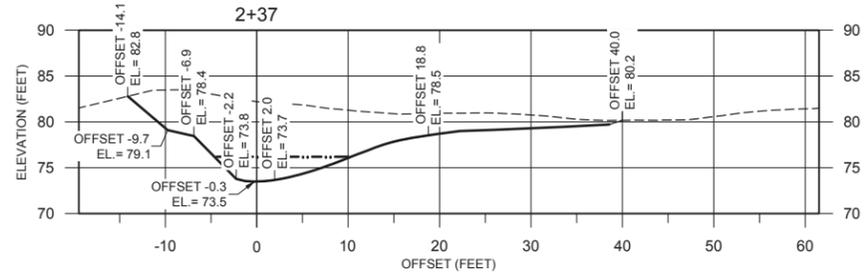
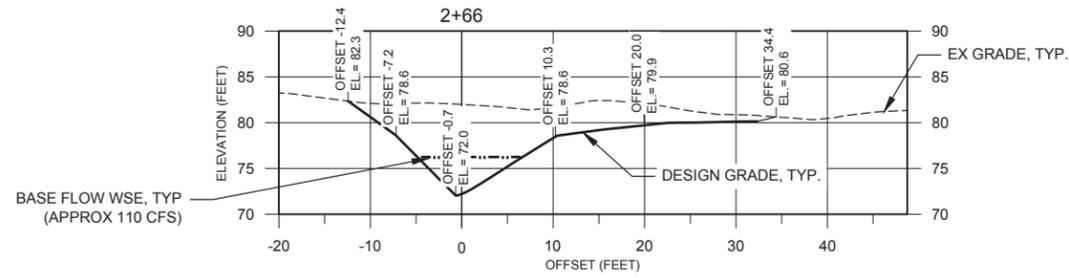
SCALE: 1"=10'
DATE: 03/17/2016
DRAWN: JW, AF
REVIEWED:

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2C GRADING SECTIONS (1 of 3)

NOTES

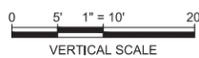
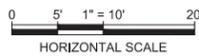
1. GRADING SECTIONS ARE ORIENTED LOOKING UPSTREAM.
2. BLEND TO CONFORM TO EXISTING GRADE AT LIMIT OF GRADING.
3. GRADE TO PRODUCE SMOOTH, NON-PRISMATIC TRANSITIONS BETWEEN GRADE BREAKS.

NO.	DATE	REVISION	BY



SECTIONS - SECONDARY CHANNEL (STA 0+54 TO 2+66) (LINE 2C-1)

HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=10'



BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



NO.	DATE	REVISION	BY

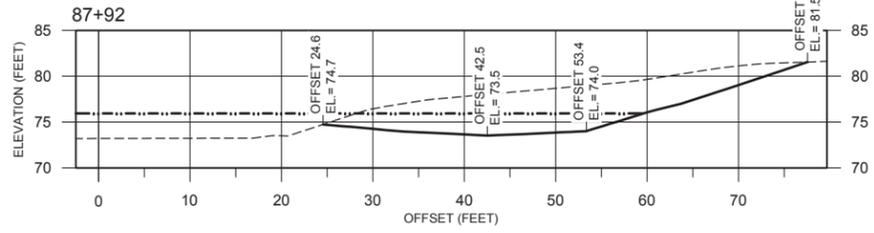
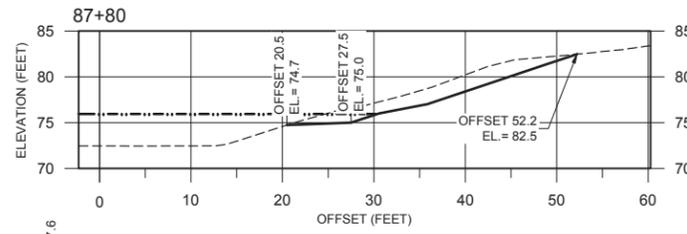
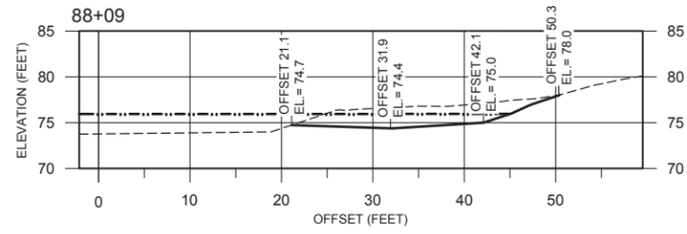


SCALE: 1"=10'	DATE: 03/17/2016
DRAWN: JW, AF	
REVIEWED:	

NOTES

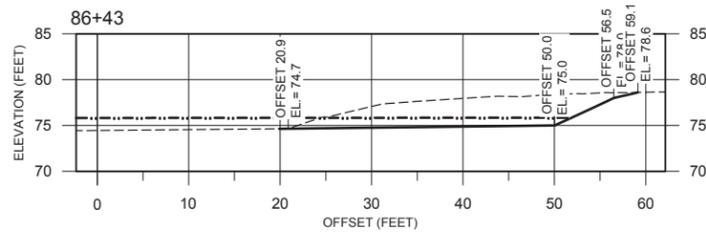
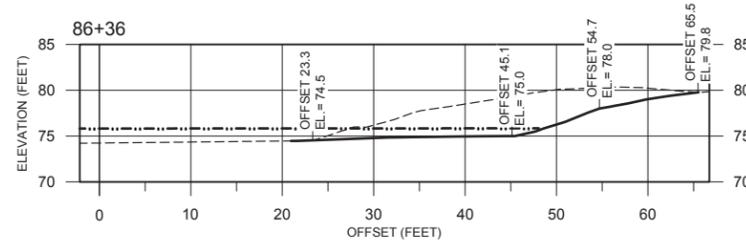
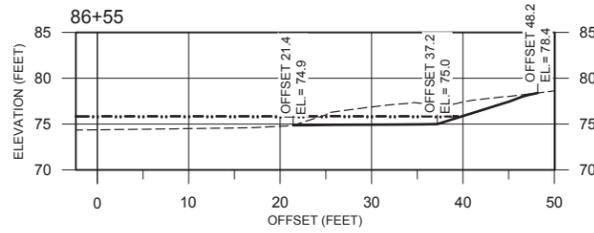
1. GRADING SECTIONS ARE ORIENTED LOOKING UPSTREAM.
2. BLEND TO CONFORM TO EXISTING GRADE AT LIMIT OF GRADING.
3. GRADE TO PRODUCE SMOOTH, NON-PRISMATIC TRANSITIONS BETWEEN GRADEBREAKS.

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2C GRADING SECTIONS (2 of 3)



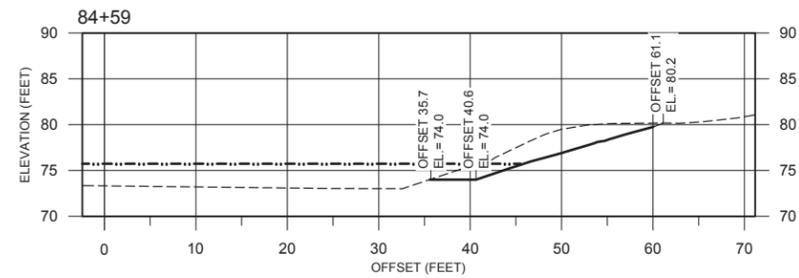
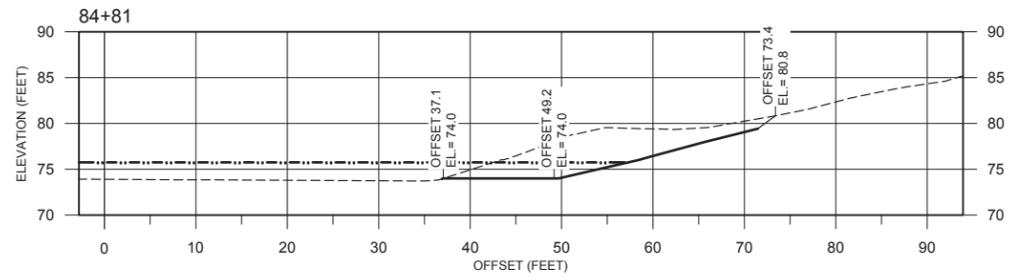
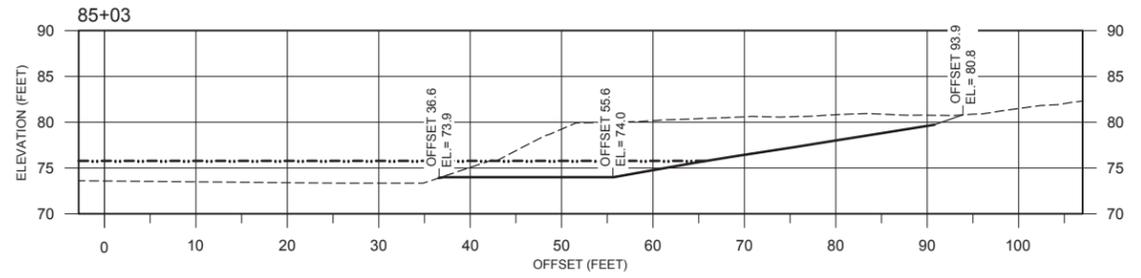
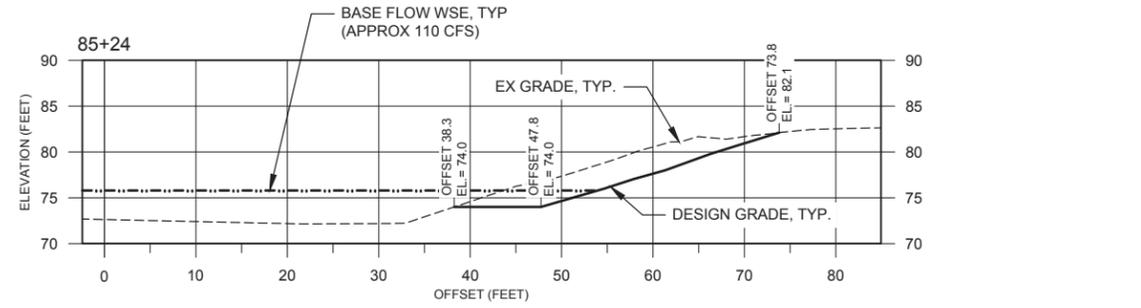
SECTIONS - ALCOVE 3 (MAIN CHANNEL)

HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=10'



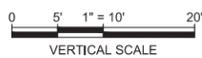
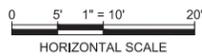
SECTIONS - ALCOVE 2 (MAIN CHANNEL)

HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=10'



SECTIONS - ALCOVE 1 (MAIN CHANNEL)

HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=10'



BAR LENGTH ON ORIGINAL
DRAWING EQUALS ONE INCH.
ADJUST SCALE ACCORDINGLY



NO.	DATE	REVISION	BY

SONOMA COUNTY WATER AGENCY

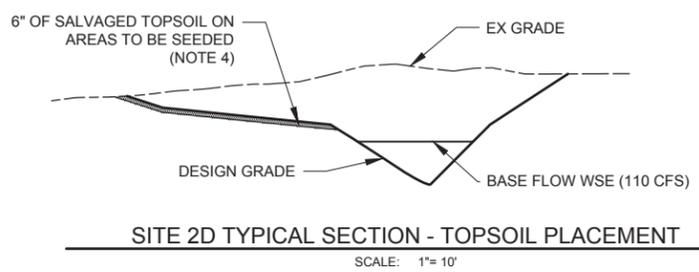
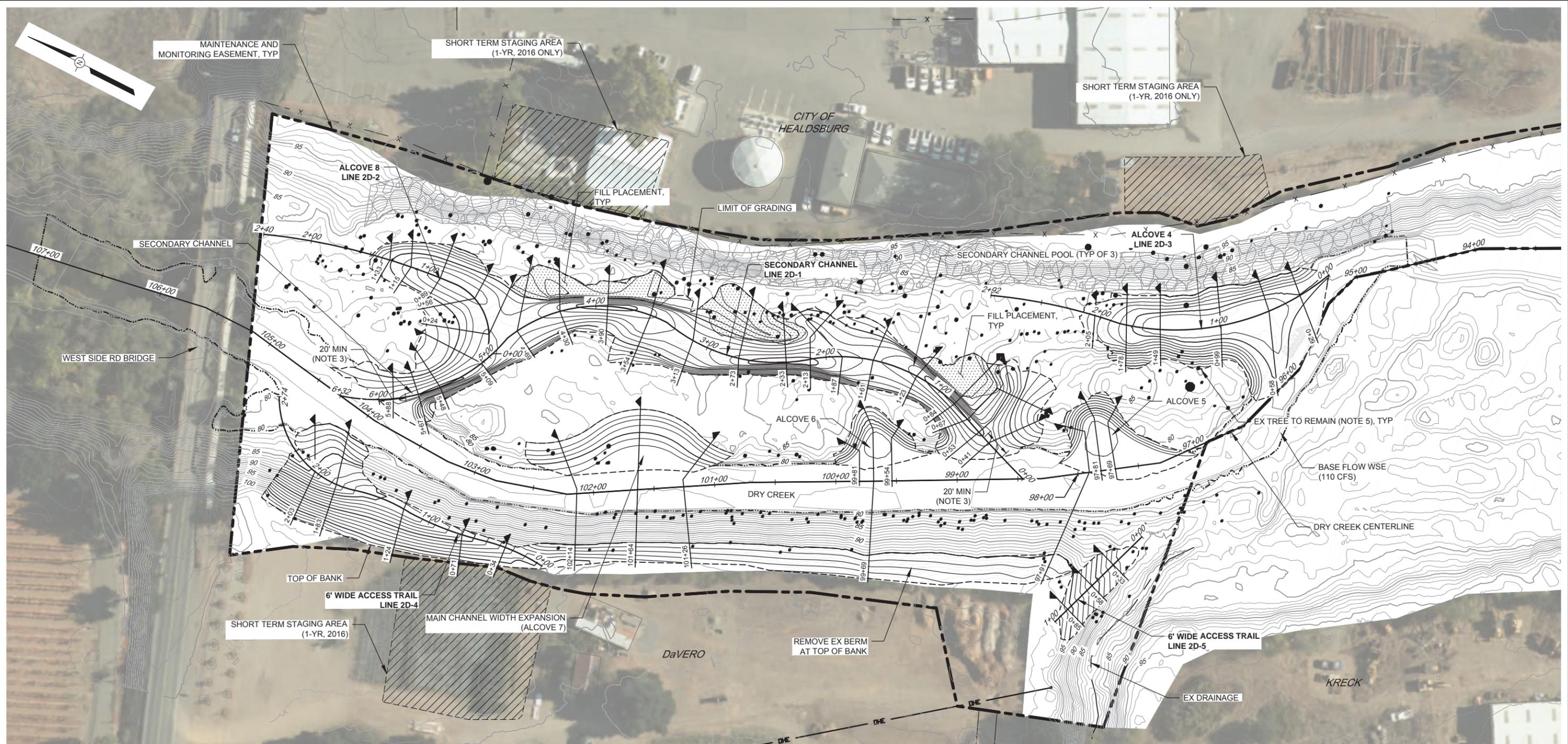
SCALE: 1" = 10' DATE: 03/17/2016
DRAWN: JW, AF
REVIEWED:

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2C GRADING SECTIONS (3 of 3)

FILE NAME: 7351-DRY-CREEK-SITE-2C-GRADING-PLAN.dwg DRAWING NUMBER: C-06 SHEET 17 OF 42
CONTRACT NUMBER: 7351

NOTES

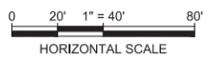
1. GRADING SECTIONS ARE ORIENTED LOOKING UPSTREAM.
2. BLEND TO CONFORM TO EXISTING GRADE AT LIMIT OF GRADING.
3. GRADE TO PRODUCE SMOOTH, NON-PRISMATIC TRANSITIONS BETWEEN GRADEBREAKS.



PLAN
SCALE: 1" = 40'

NOTES

1. SEE DRAWING C-09 TO C-10 FOR GRADING PROFILES.
2. SEE DRAWINGS C-11 TO C-17 FOR GRADING SECTIONS.
3. SEQUENCE GRADING TO MAINTAIN 20' MINIMUM UNEXCAVATED BETWEEN SECONDARY CHANNEL AND DRY CREEK. DO NOT EXCAVATE FINAL CONNECTION TO DRY CREEK UNTIL ALL GRADING AND LOG STRUCTURES ARE COMPLETE AND ACCEPTED (SEE SPECS).
4. SALVAGE TOPSOIL FROM ALL AREAS TO BE GRADED. PLACE ON ALL DISTURBED AREAS TO BE SEEDED PER DRAWING EC-02 WITH SLOPES LESS THAN 3:1.
5. ADJUST GRADING LIMITS TO PROTECT TREES NOT MARKED FOR REMOVAL (SEE DRAWING G-10).



BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



ESA
1425 N. McDOWELL BLVD, SUITE 200
PETALUMA, CA 94108
707.795.0900
www.esassoc.com

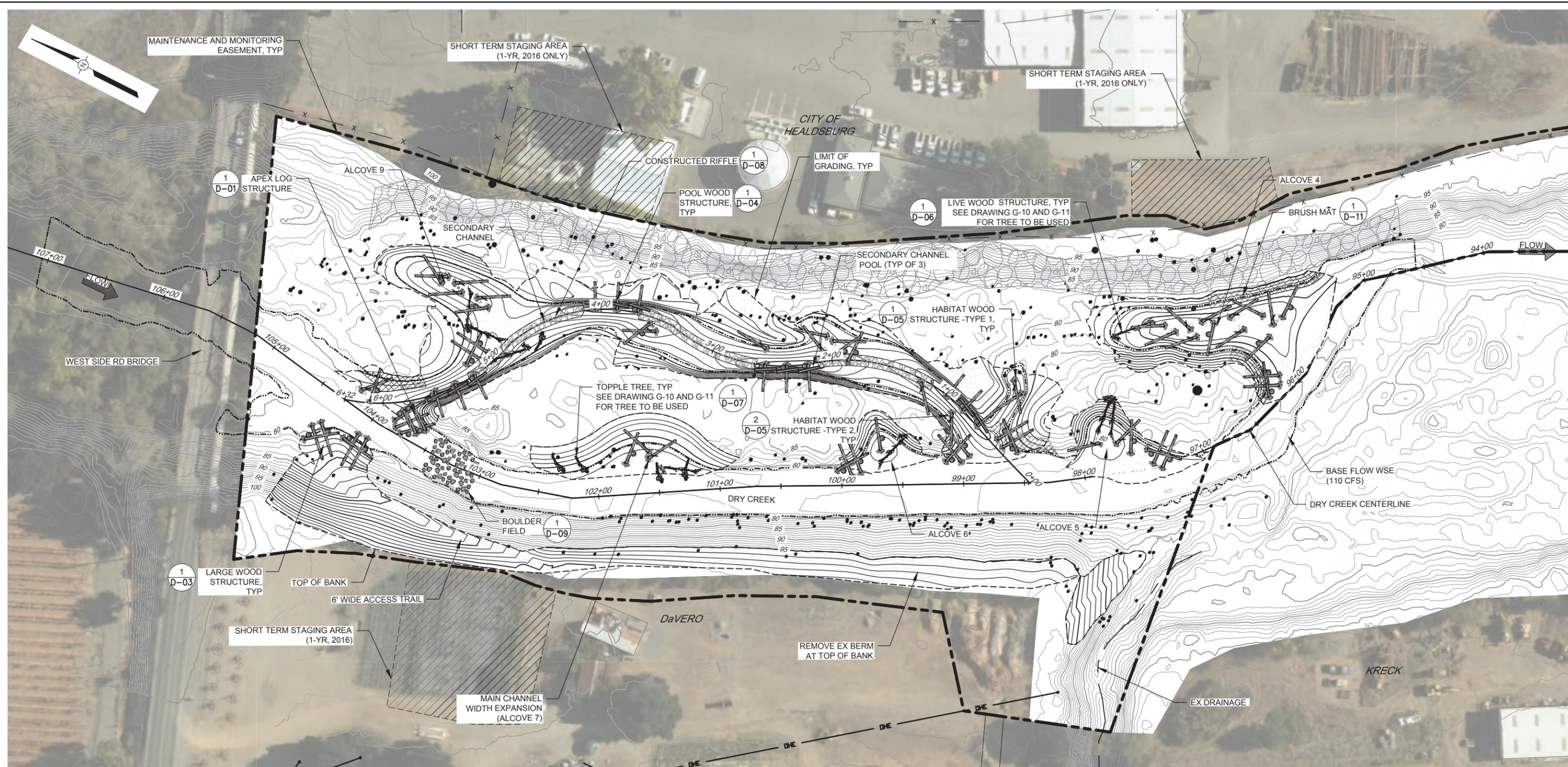
NO.	DATE	REVISION	BY

SONOMA COUNTY WATER AGENCY

SCALE: 1" = 40'	DATE: 03/17/2016
DRAWN: AF, JW	
REVIEWED:	

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2D GRADING PLAN

FILE NAME: 7351-DRY-CREEK-SITE-2D-GRADING.dwg	DRAWING NUMBER: C-07	SHEET 18 OF 42
CONTRACT NUMBER: 7351		



LOG STRUCTURE QUANTITIES	
LARGE WOOD STRUCTURE	8
HABITAT WOOD STRUCTURE - TYPE 1	27
HABITAT WOOD STRUCTURE - TYPE 2	12
LIVE WOOD STRUCTURE	8
APEX LOG STRUCTURE	1
TOPPLE LOGS	5
POOL WOOD STRUCTURE	12

PLAN
SCALE: 1" = 40'

NOTES

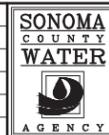
1. THE LOCATION AND ORIENTATION OF SOME ENHANCEMENT FEATURES MAY REQUIRE MINOR FIELD ADJUSTMENTS DURING CONSTRUCTION.



BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY.



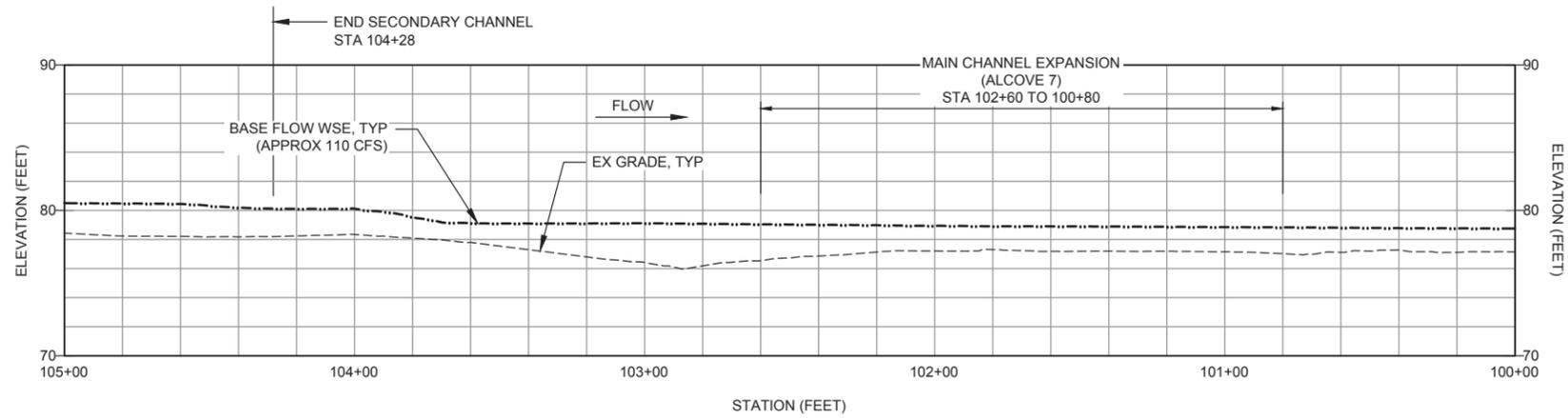
NO.	DATE	REVISION	BY



SCALE: 1" = 40'	DATE: 03/17/2016
DRAWN: AF, JW	
REVIEWED:	

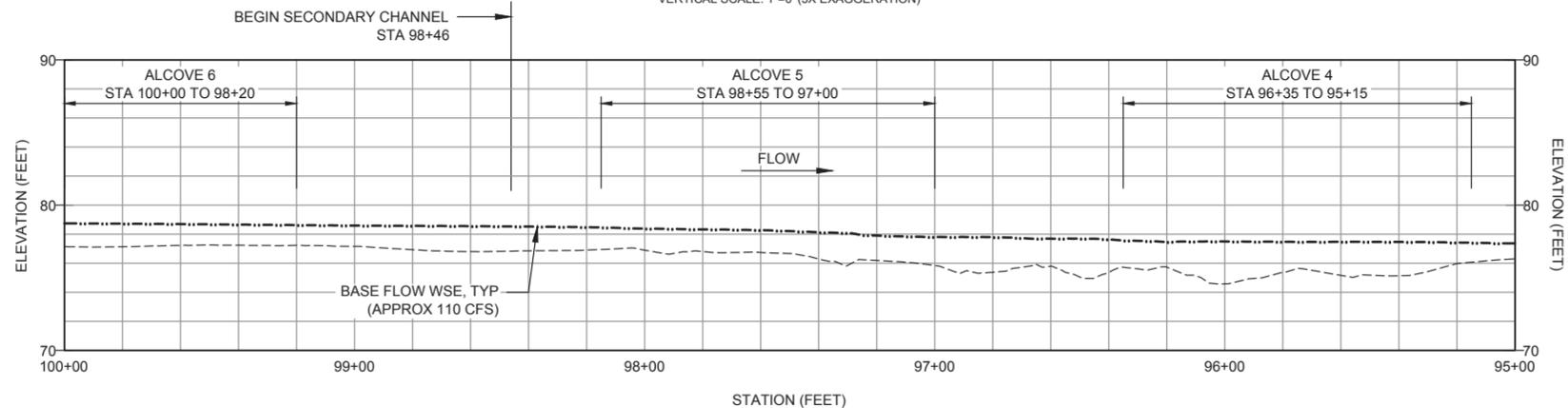
DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2D ENHANCEMENT PLAN

FILE NAME: 7351-DRY-CREEK-SITE-2D-FEATURES.dwg	DRAWING NUMBER: C-08	SHEET 19 OF 42
CONTRACT NUMBER: 7351		



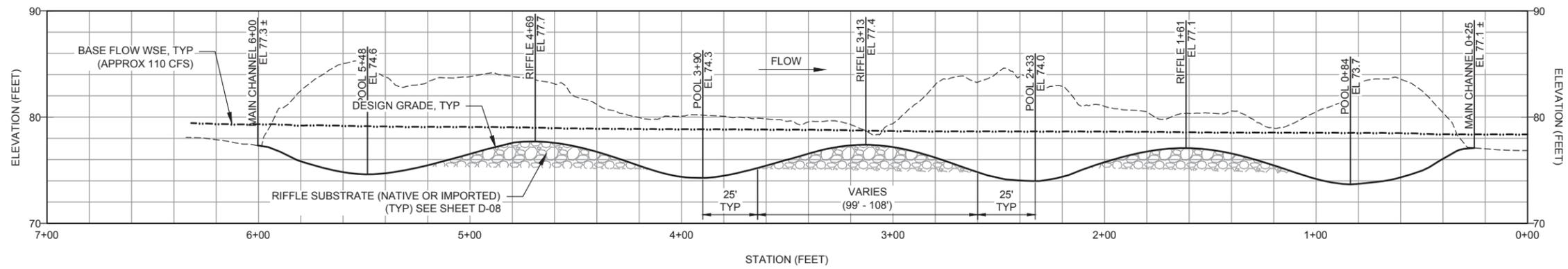
PROFILE - MAIN CHANNEL (STA 100+00 TO 105+00)

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 6' (5X EXAGGERATION)



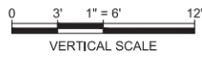
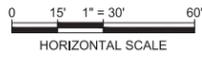
PROFILE - MAIN CHANNEL (STA 95+00 TO 100+00)

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 6' (5X EXAGGERATION)



PROFILE - SECONDARY CHANNEL (LINE 2D-1)

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 6' (5X EXAGGERATION)



BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY.



NO.	DATE	REVISION	BY

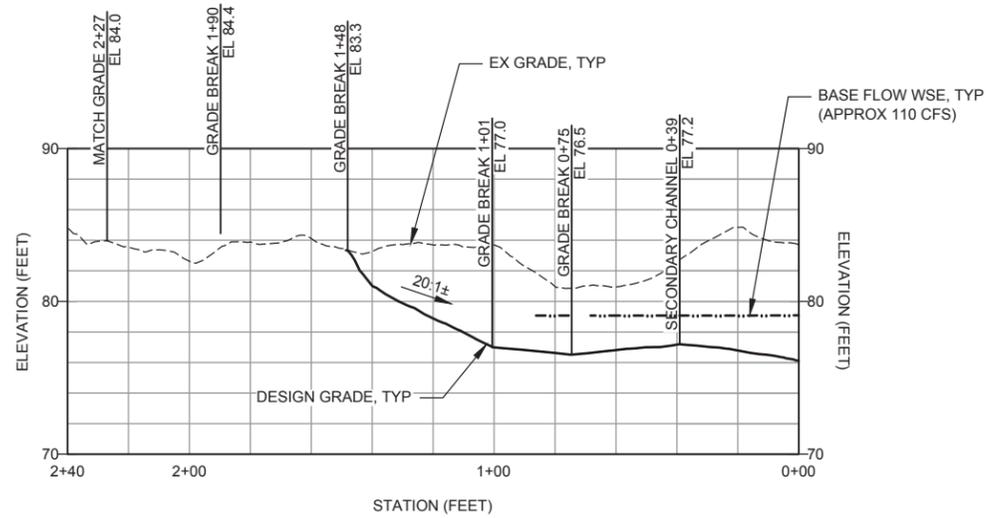


SCALE: AS SHOWN	DATE: 03/17/2016
DRAWN: AF, JW	
REVIEWED:	

NOTES

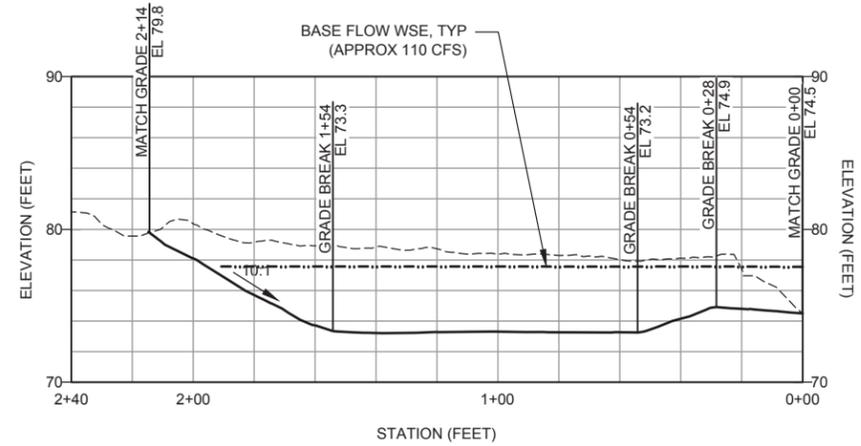
- SEE DRAWING G-08 FOR ALIGNMENT LAYOUTS.
- CHANNEL STATIONING IS APPROXIMATE. CONTOUR GRADING GOVERNS.

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2D GRADING PROFILES (1 OF 2)



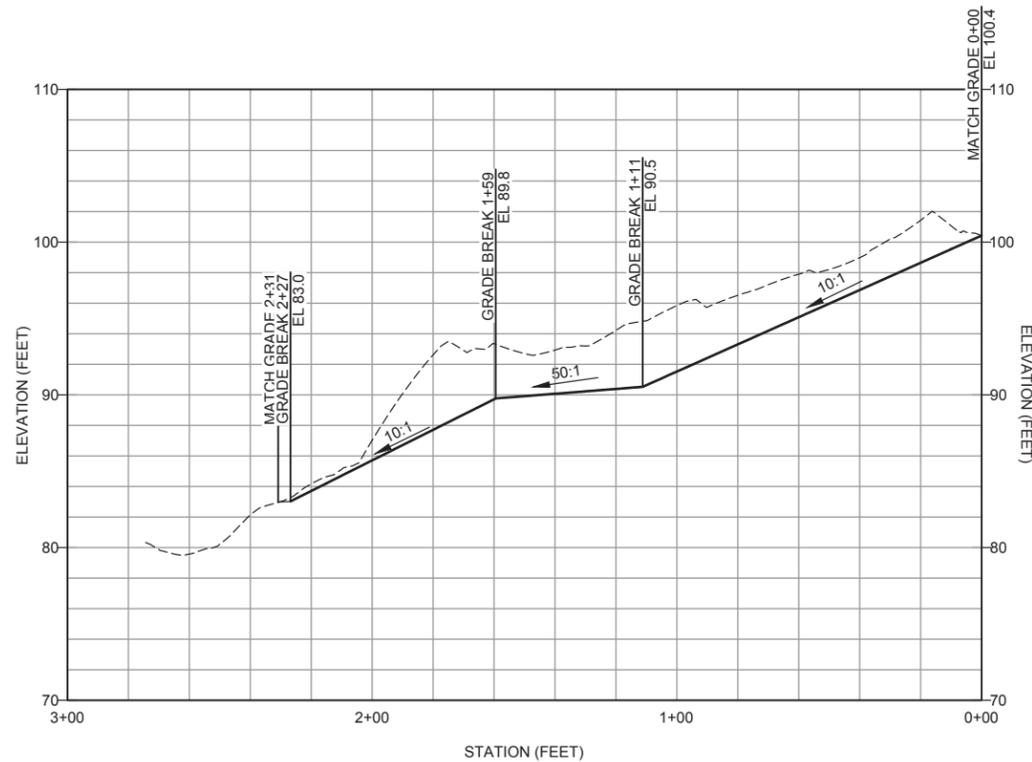
PROFILE - ALCOVE 8 (LINE 2D-2)

HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=6'



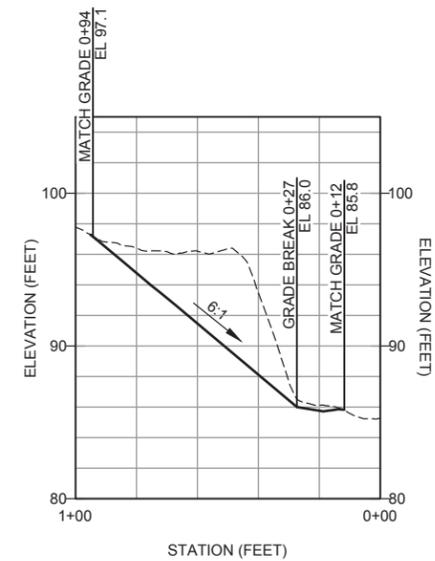
PROFILE - ALCOVE 4 (LINE 2D-3)

HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=6'



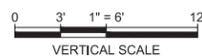
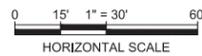
PROFILE - U/S TRAIL (LINE 2D-4)

HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=6'



PROFILE - D/S TRAIL (LINE 2D-5)

HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=6'



BAR LENGTH ON ORIGINAL
DRAWING EQUALS ONE INCH.
ADJUST SCALE ACCORDINGLY



NO.	DATE	REVISION	BY

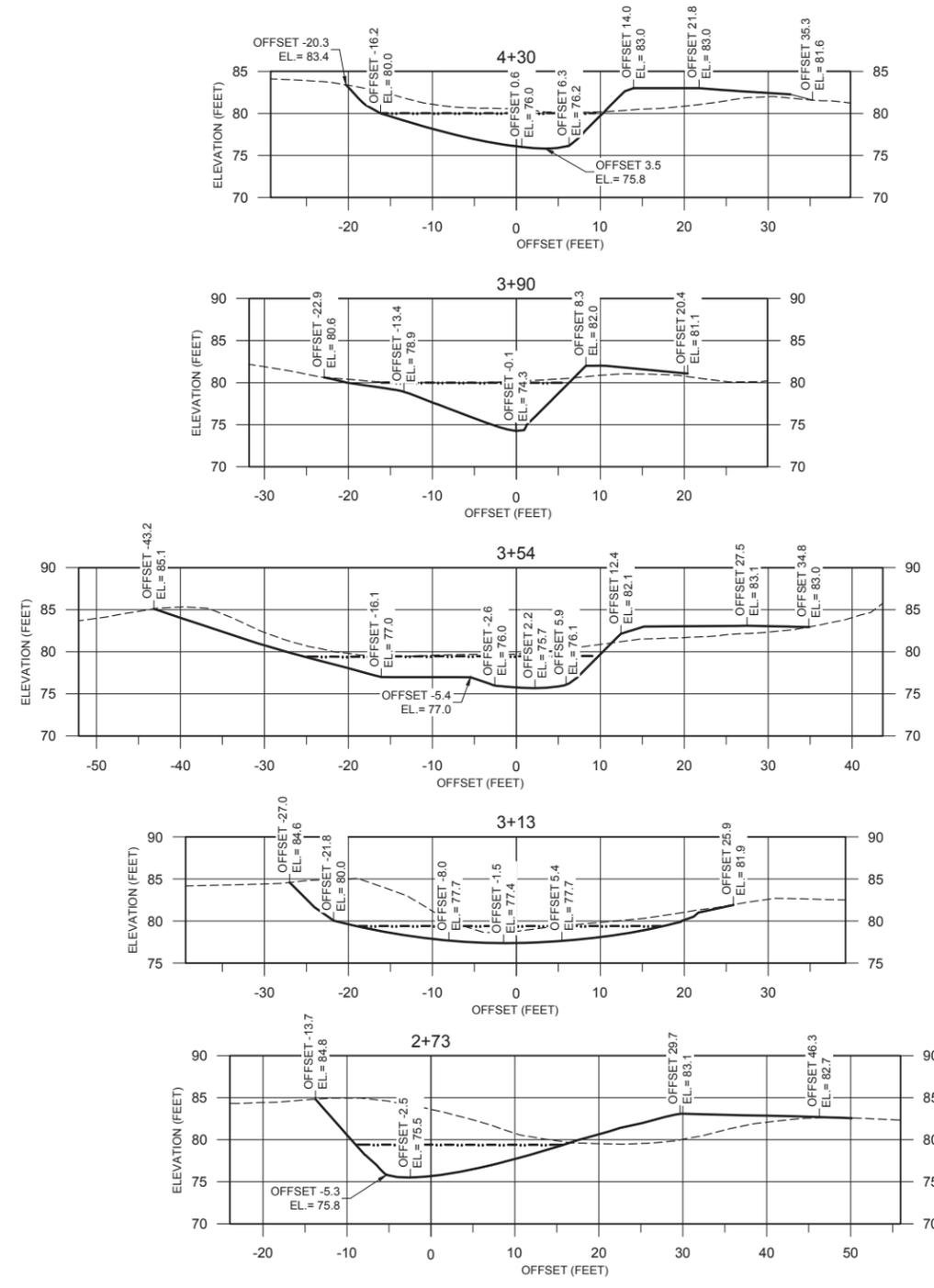
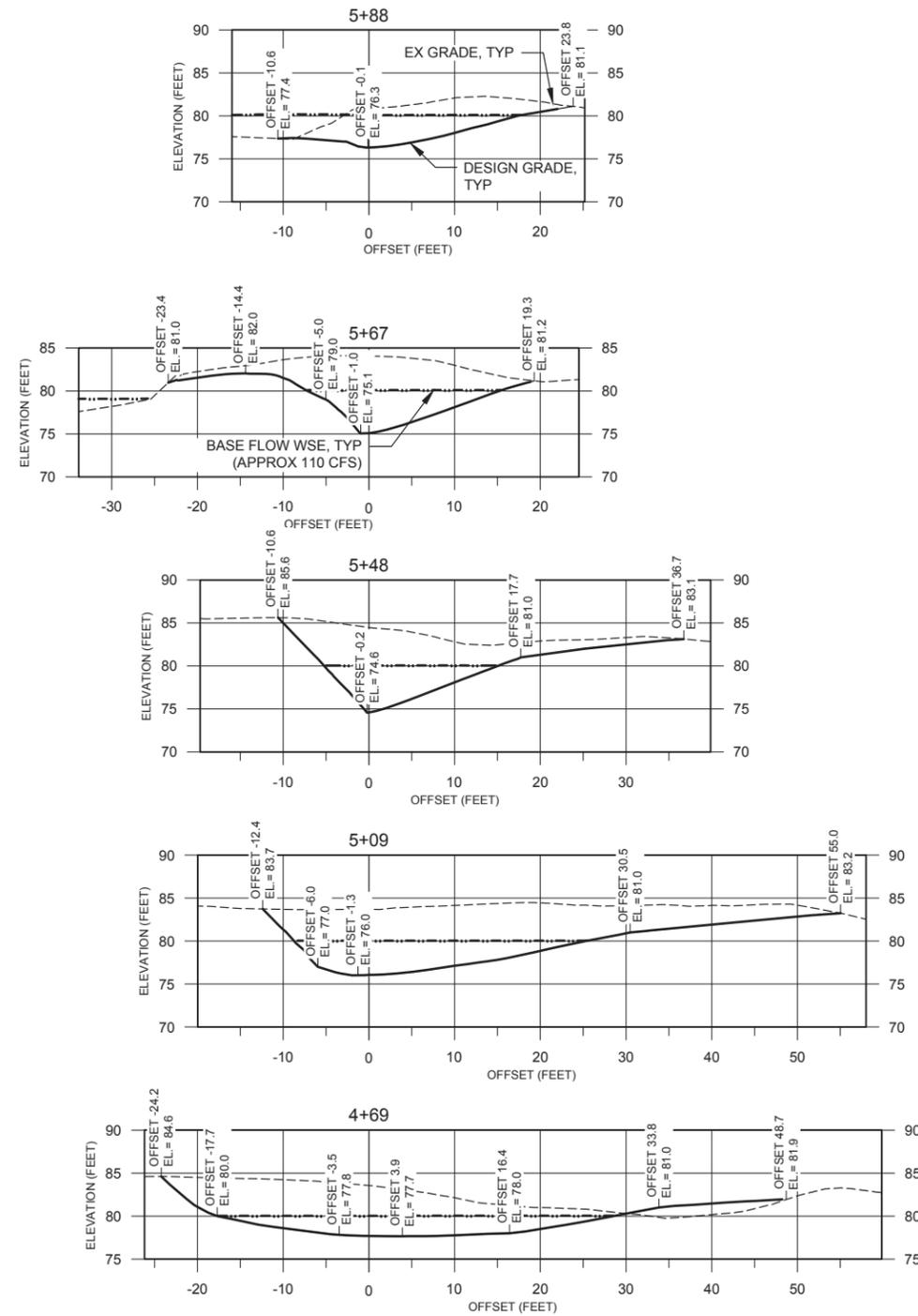
SONOMA COUNTY WATER AGENCY

SCALE: AS SHOWN DATE: 03/17/2016
DRAWN: AF, JW
REVIEWED:

NOTES

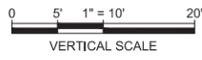
- SEE DRAWING G-08 FOR ALIGNMENT LAYOUTS.

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2D GRADING PROFILES (2 OF 2)



SECTIONS - SECONDARY CHANNEL (STA 2+73 TO 5+88) (LINE 2D-1)

HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=10'



BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



NOTES

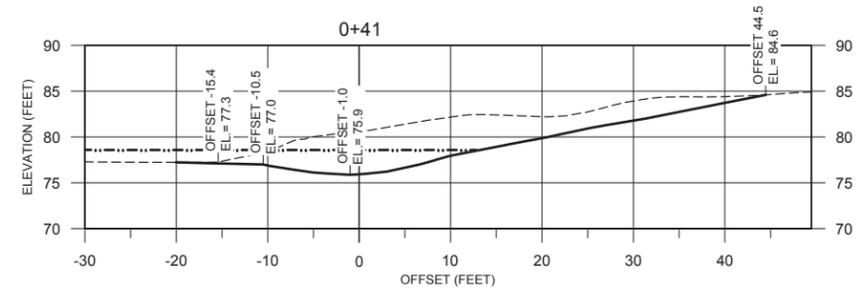
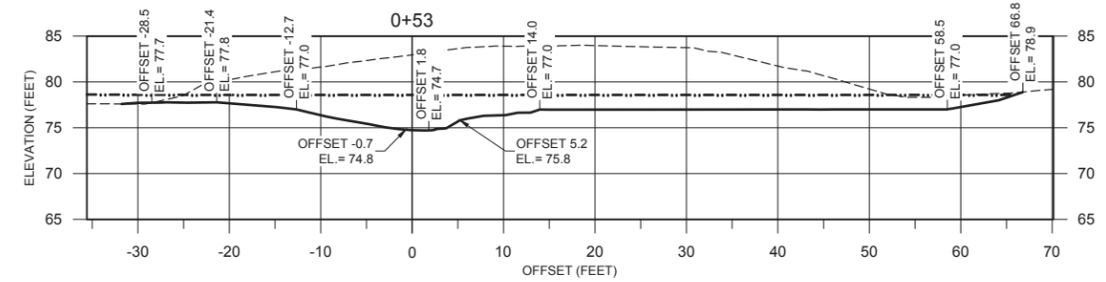
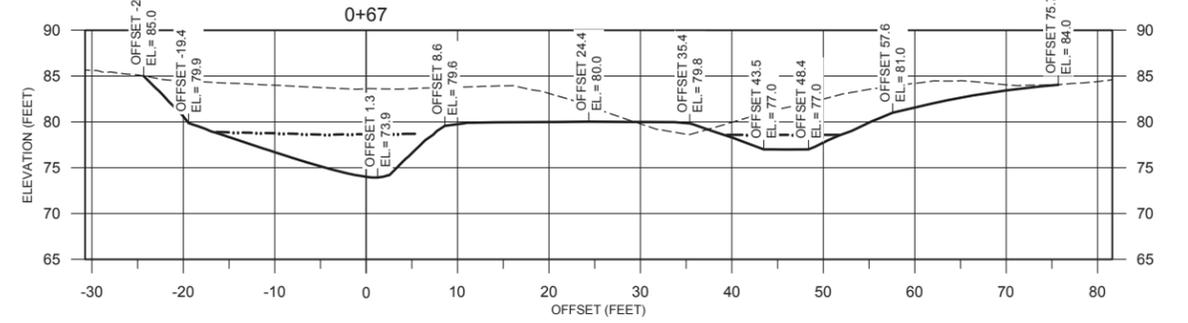
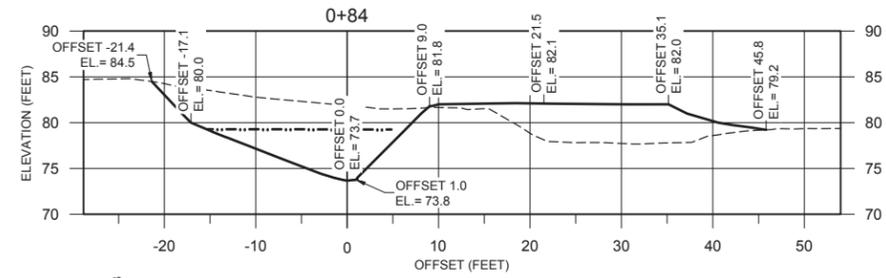
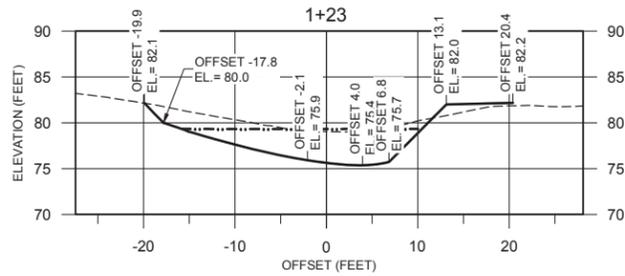
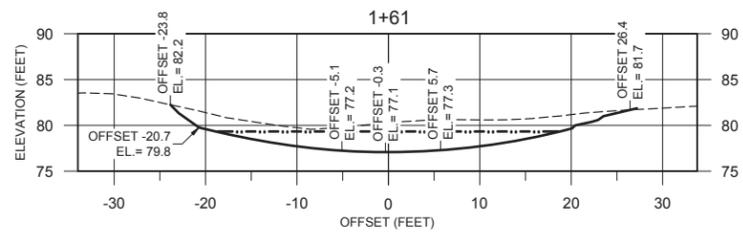
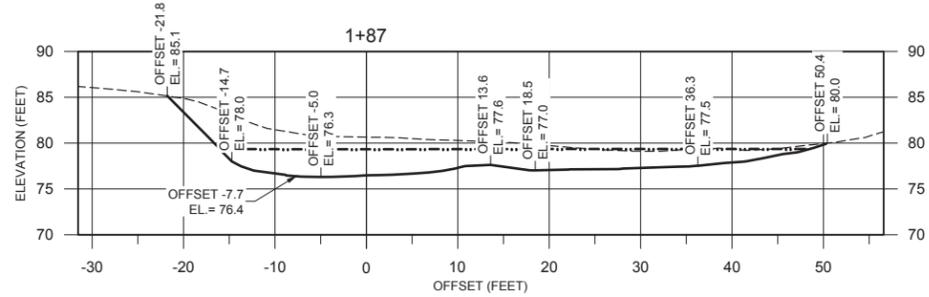
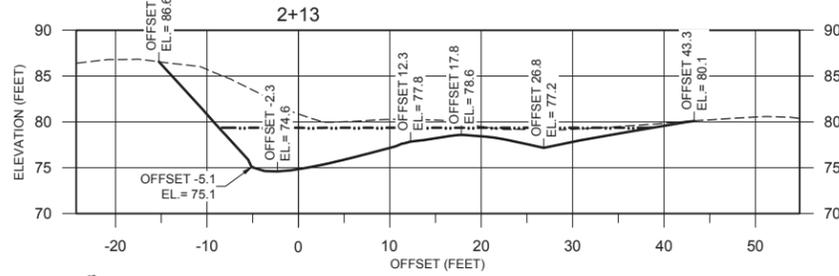
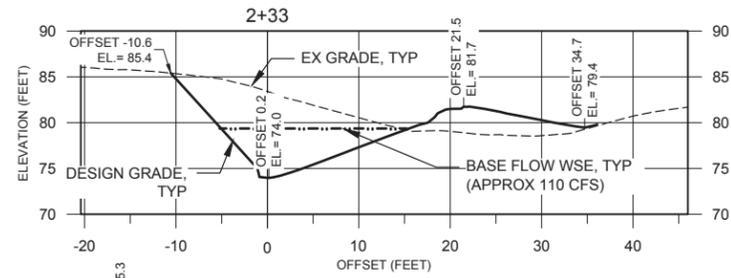
1. GRADING SECTIONS ARE ORIENTED UPSTREAM.
2. BLEND TO CONFORM TO EXISTING GRADE AT LIMIT OF GRADING.
3. GRADE TO PRODUCE SMOOTH, NON-PRISMATIC TRANSITIONS BETWEEN GRADEBREAKS.

NO.	DATE	REVISION	BY

SCALE: 1"=10' DATE: 03/17/2016
DRAWN: AF, JW
REVIEWED:

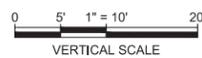
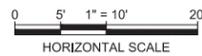


DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2D GRADING SECTIONS (1 OF 7)
FILE NAME: 7351-DRY-CREEK-SITE-2D-GRADING.dwg CONTRACT NUMBER: 7351
DRAWING NUMBER: C-11 SHEET 22 OF 42



SECTIONS - SECONDARY CHANNEL (STA 0+41 TO 2+33) (LINE 2D-1)

HORIZONTAL SCALE: 1"= 10'
VERTICAL SCALE: 1"=10'



BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



SCALE: 1" = 10'
DATE: 03/17/2016
DRAWN: AF, JW
REVIEWED:

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2D GRADING SECTIONS (2 OF 7)

FILE NAME: 7351-DRY-CREEK-SITE-2D-GRADING.dwg
CONTRACT NUMBER: 7351

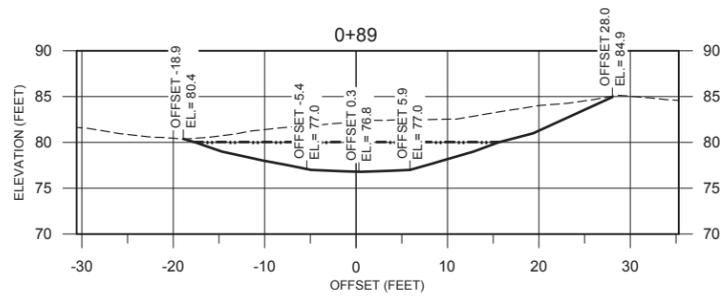
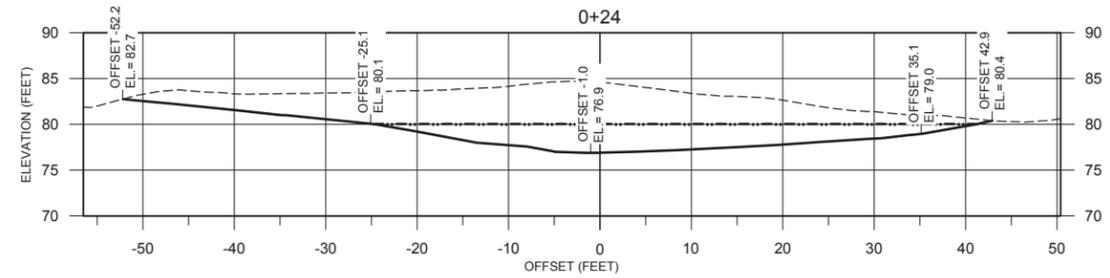
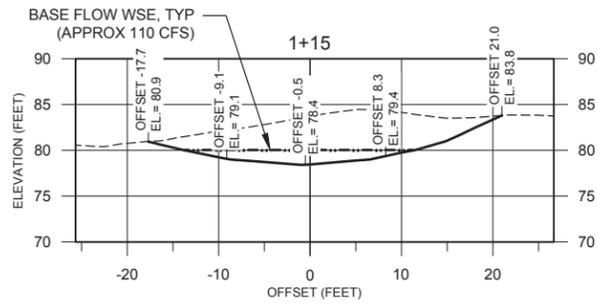
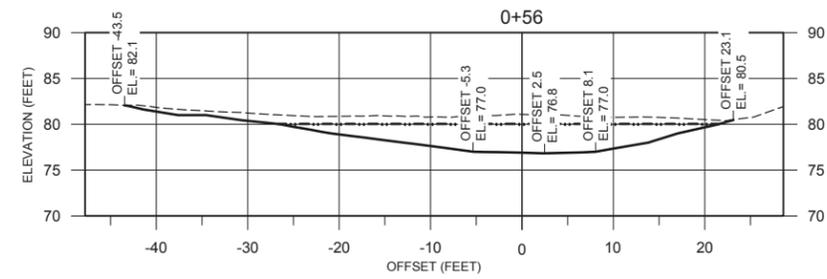
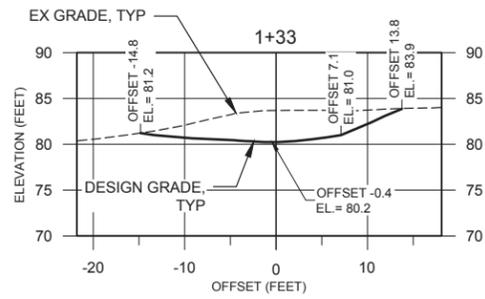
DRAWING NUMBER: C-12

SHEET 23 OF 42

NO.	DATE	REVISION	BY

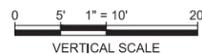
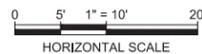
NOTES

1. GRADING SECTIONS ARE ORIENTED UPSTREAM.
2. BLEND TO CONFORM TO EXISTING GRADE AT LIMIT OF GRADING.
3. GRADE TO PRODUCE SMOOTH, NON-PRISMATIC TRANSITIONS BETWEEN GRADEBREAKS.



SECTIONS - ALCOVE 8 (LINE 2D-2)

HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=10'



BAR LENGTH ON ORIGINAL
DRAWING EQUALS ONE INCH.
ADJUST SCALE ACCORDINGLY



SCALE: 1" = 10'	DATE: 03/17/2016
DRAWN: AF, JW	
REVIEWED:	

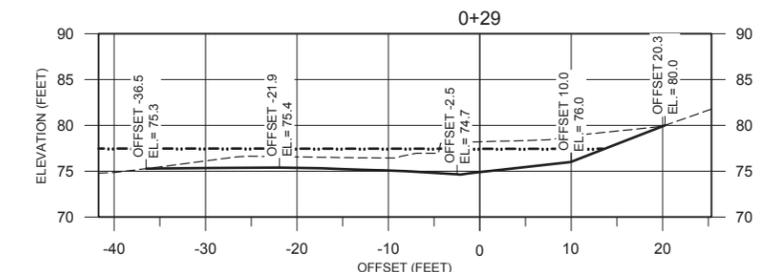
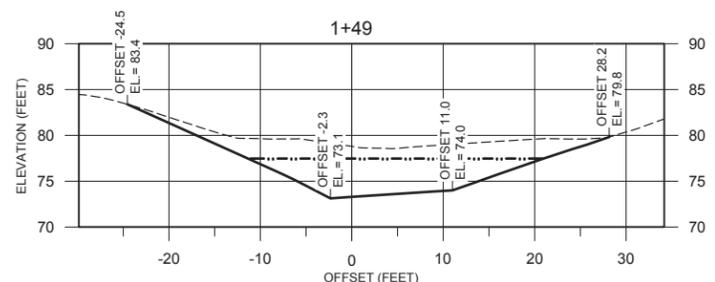
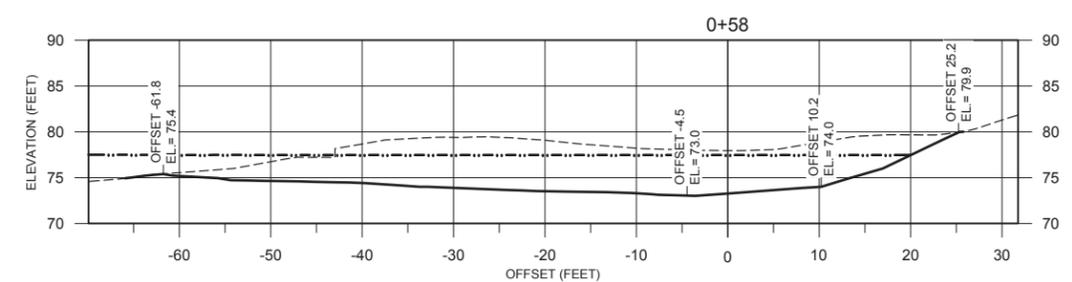
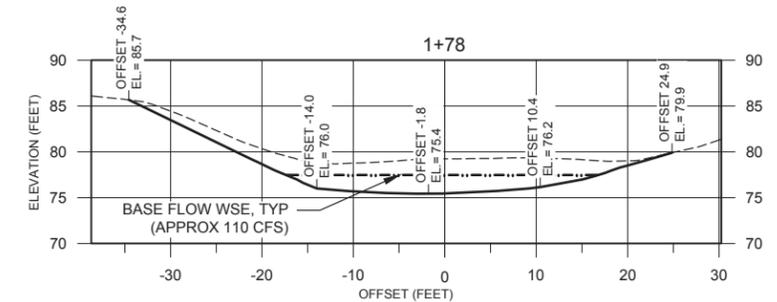
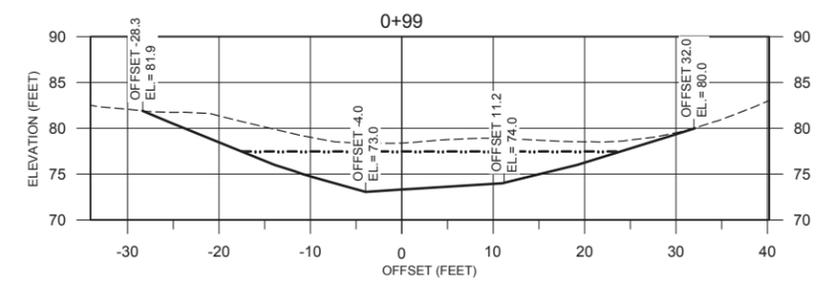
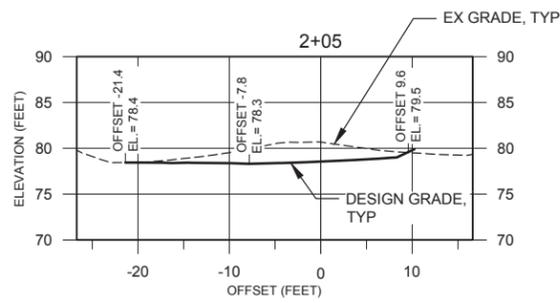
DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2D GRADING SECTIONS (3 OF 7)

FILE NAME: 7351-DRY-CREEK-SITE-2D-GRADING.dwg	DRAWING NUMBER: C-13	SHEET 24 OF 42
CONTRACT NUMBER: 7351		

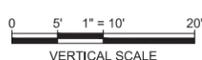
NOTES

1. GRADING SECTIONS ARE ORIENTED UPSTREAM.
2. BLEND TO CONFORM TO EXISTING GRADE AT LIMIT OF GRADING.
3. GRADE TO PRODUCE SMOOTH, NON-PRISMATIC TRANSITIONS BETWEEN GRADEBREAKS.

NO.	DATE	REVISION	BY



SECTIONS - ALCOVE 4 (LINE 2D-3)
 HORIZONTAL SCALE: 1"=10'
 VERTICAL SCALE: 1"=10'



BAR LENGTH ON ORIGINAL
 DRAWING EQUALS ONE INCH.
 ADJUST SCALE ACCORDINGLY



NOTES

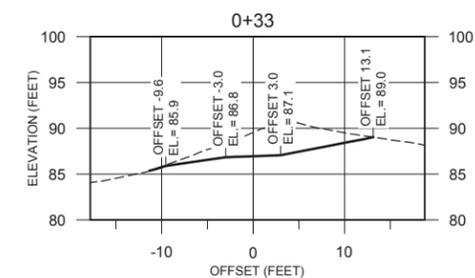
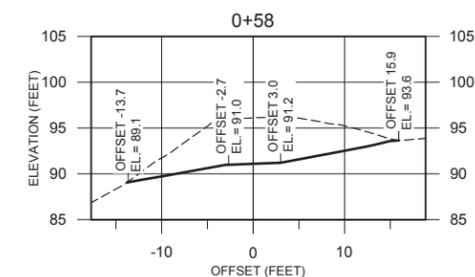
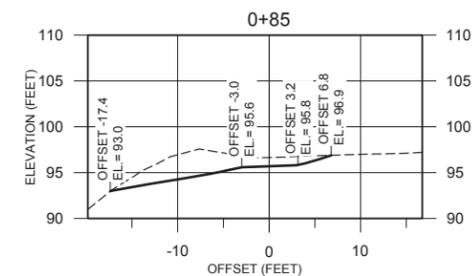
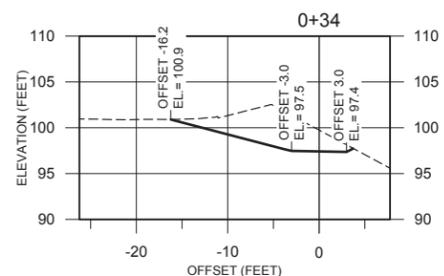
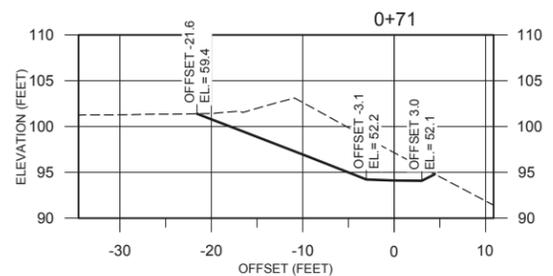
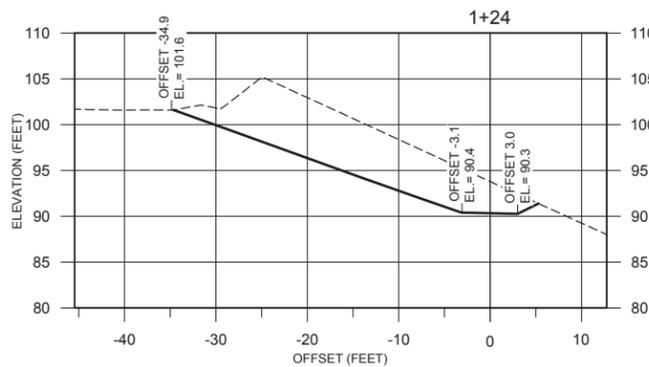
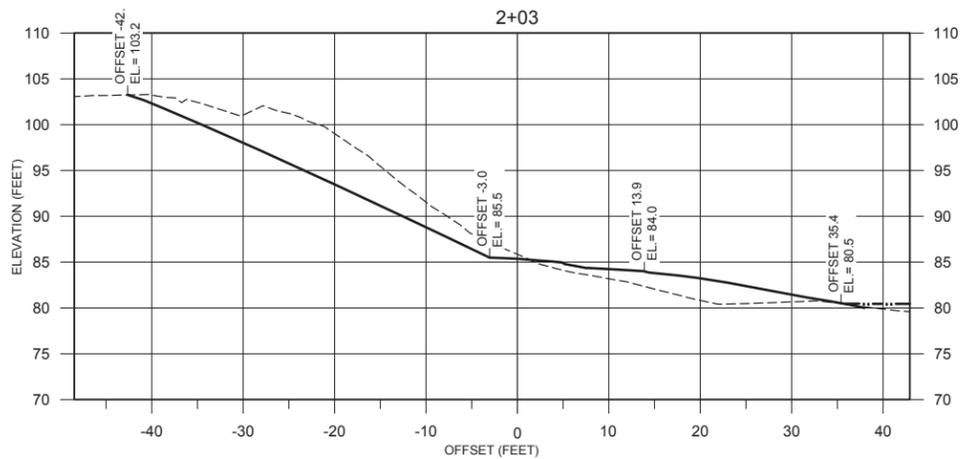
1. GRADING SECTIONS ARE ORIENTED UPSTREAM.
2. BLEND TO CONFORM TO EXISTING GRADE AT LIMIT OF GRADING.
3. GRADE TO PRODUCE SMOOTH, NON-PRISMATIC TRANSITIONS BETWEEN GRADE BREAKS.

NO.	DATE	REVISION	BY



SCALE: 1"=10'	DATE: 03/17/2016
DRAWN: AF, JW	
REVIEWED:	

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D	
SITE 2D GRADING SECTIONS (4 OF 7)	
FILE NAME: 7351-DRY-CREEK-SITE-2D-GRADING.dwg	DRAWING NUMBER: C-14
CONTRACT NUMBER: 7351	SHEET 25 OF 42

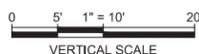
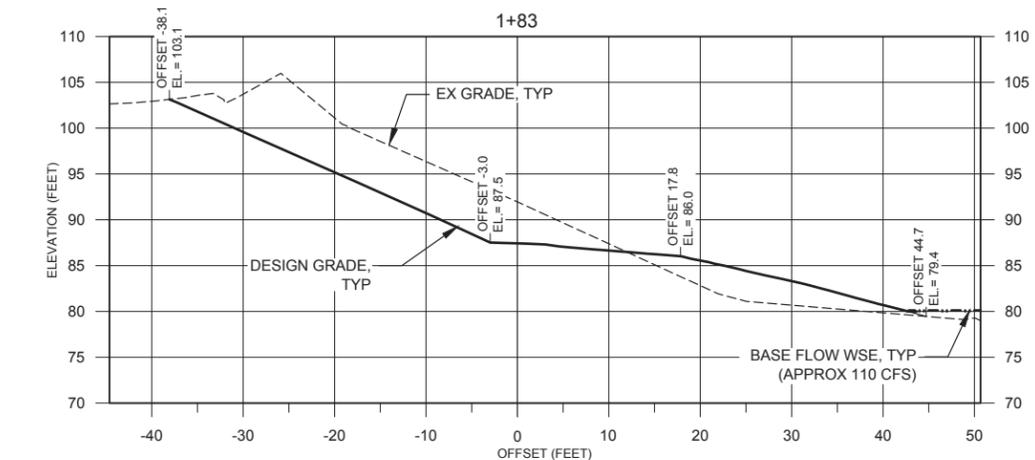


SECTIONS - U/S TRAIL (LINE 2D-4)

HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=10'

SECTIONS - D/S TRAIL (LINE 2D-5)

HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=10'



BAR LENGTH ON ORIGINAL
DRAWING EQUALS ONE INCH.
ADJUST SCALE ACCORDINGLY



NO.	DATE	REVISION	BY

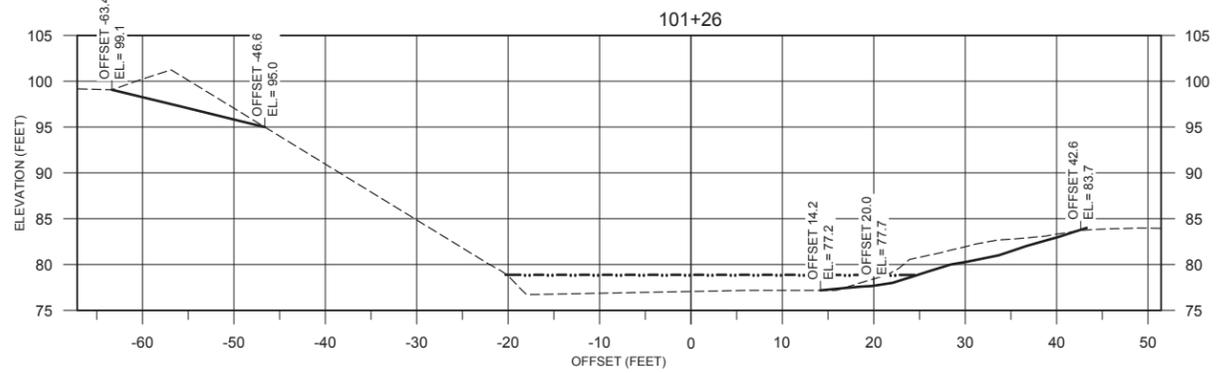
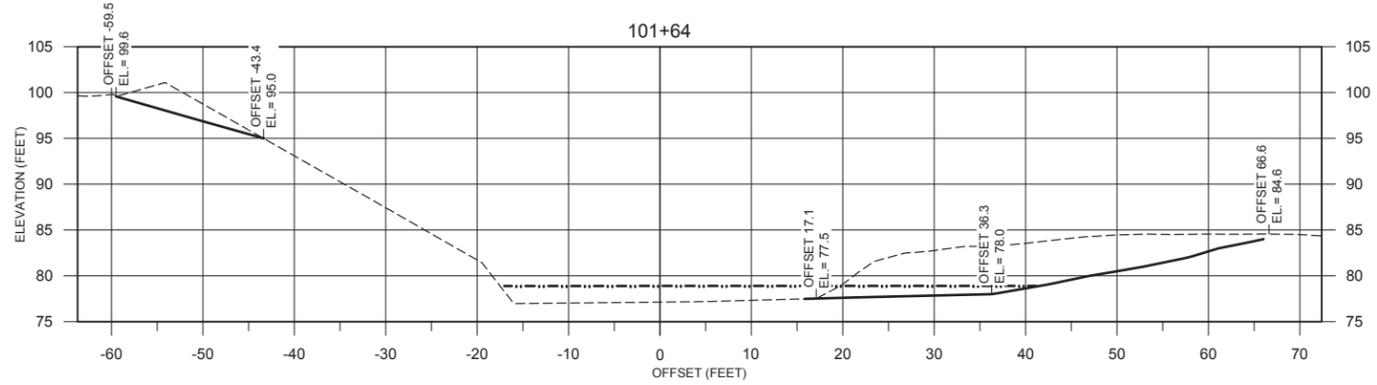
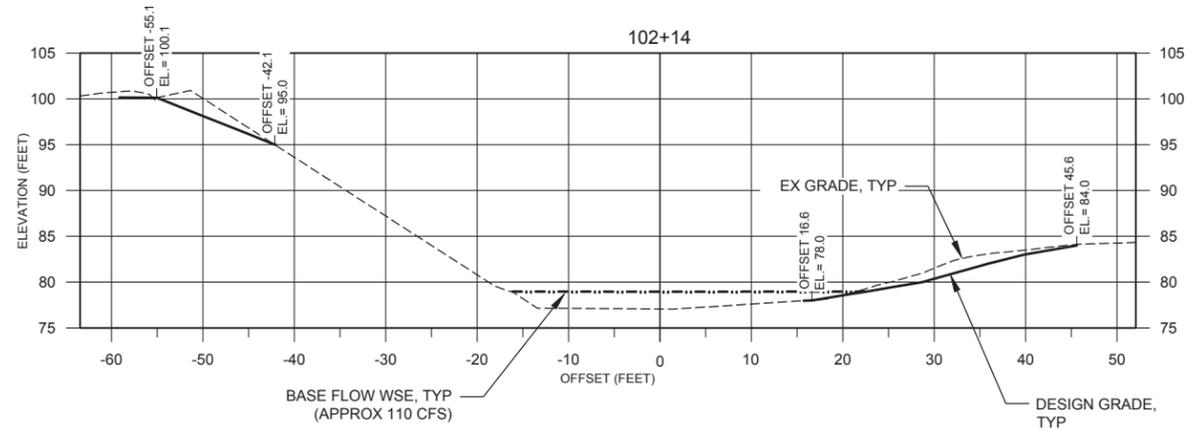


SCALE: 1"=10'	DATE: 03/17/2016
DRAWN: AF, JW	
REVIEWED:	

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2D GRADING SECTIONS (5 OF 7)

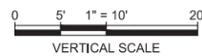
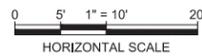
NOTES

1. GRADING SECTIONS ARE ORIENTED UPSTREAM.
2. BLEND TO CONFORM TO EXISTING GRADE AT LIMIT OF GRADING.

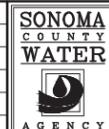


SECTIONS - MAIN CHANNEL EXPANSION (ALCOVE 7) AND RIGHT BANK BERM REMOVAL

HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=10'



BAR LENGTH ON ORIGINAL
DRAWING EQUALS ONE INCH.
ADJUST SCALE ACCORDINGLY



SCALE: 1" = 10'	DATE: 03/17/2016
DRAWN: AF, JW	
REVIEWED:	

NOTES

1. GRADING SECTIONS ARE ORIENTED UPSTREAM.
2. BLEND TO CONFORM TO EXISTING GRADE AT LIMIT OF GRADING.
3. GRADE TO PRODUCE SMOOTH, NON-PRISMATIC TRANSITIONS BETWEEN GRADEBREAKS.

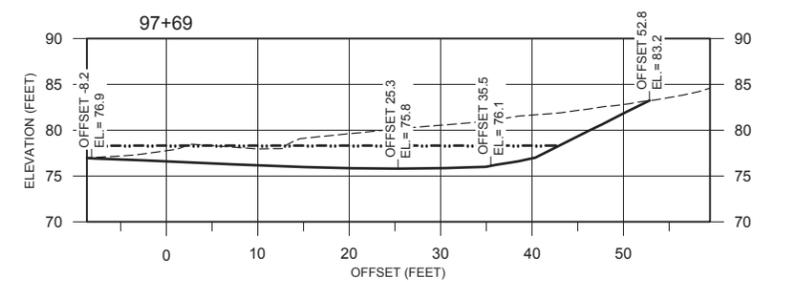
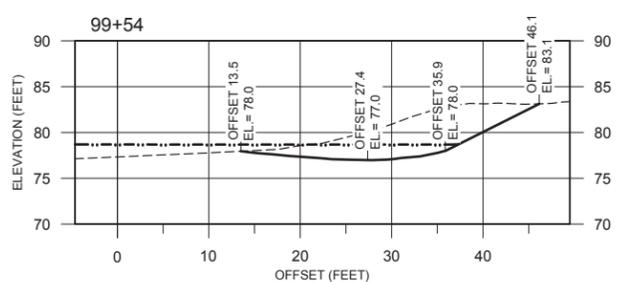
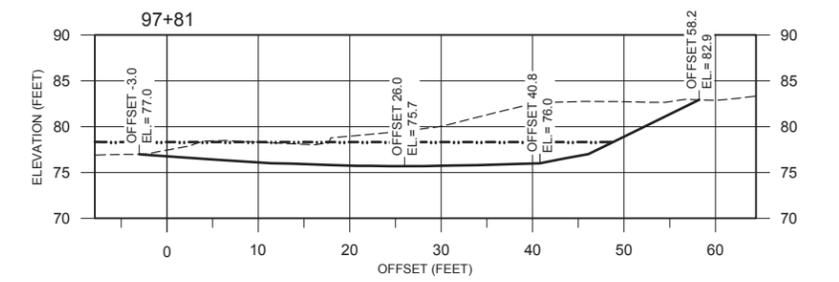
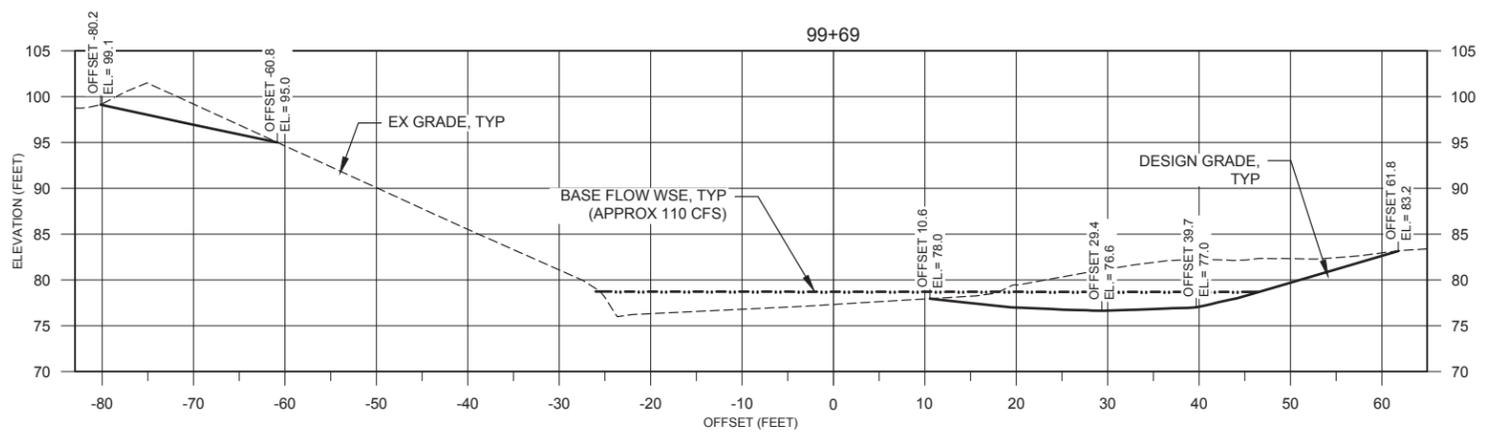
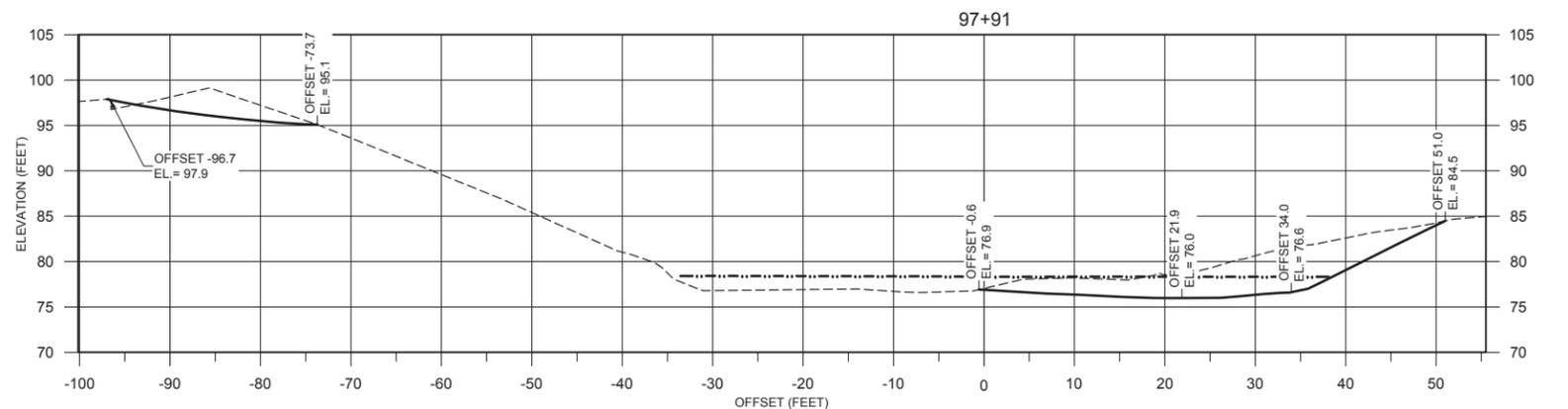
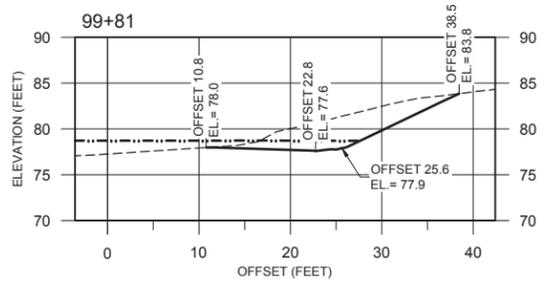
DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2D GRADING SECTIONS (6 OF 7)

FILE NAME: 7351-DRY-CREEK-SITE-2D-GRADING.dwg
CONTRACT NUMBER: 7351

DRAWING NUMBER: C-16

SHEET 27 OF 42

NO.	DATE	REVISION	BY

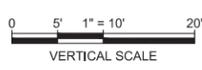


SECTIONS - ALCOVE 6 (MAIN CHANNEL) AND RIGHT BANK BERM REMOVAL

HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=10'

SECTIONS - ALCOVE 5 (MAIN CHANNEL) AND RIGHT BANK BERM REMOVAL

HORIZONTAL SCALE: 1"=10'
VERTICAL SCALE: 1"=10'



BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



NO.	DATE	REVISION	BY



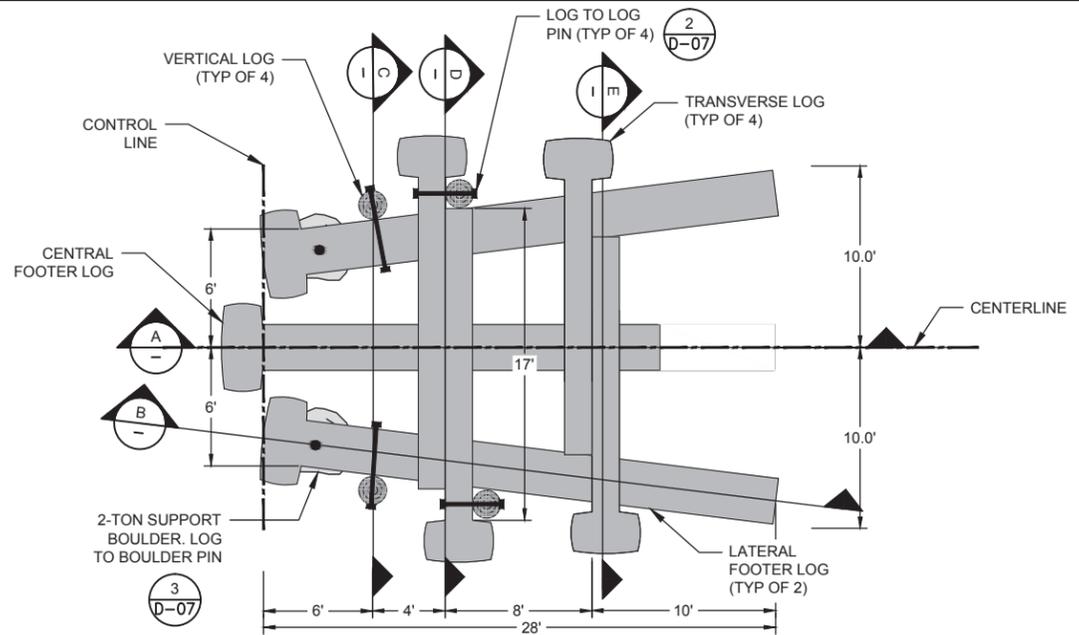
SCALE:	DATE:
SCALE	03/17/2016
DRAWN:	AF, JW
REVIEWED:	

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2D GRADING SECTIONS (7 OF 7)

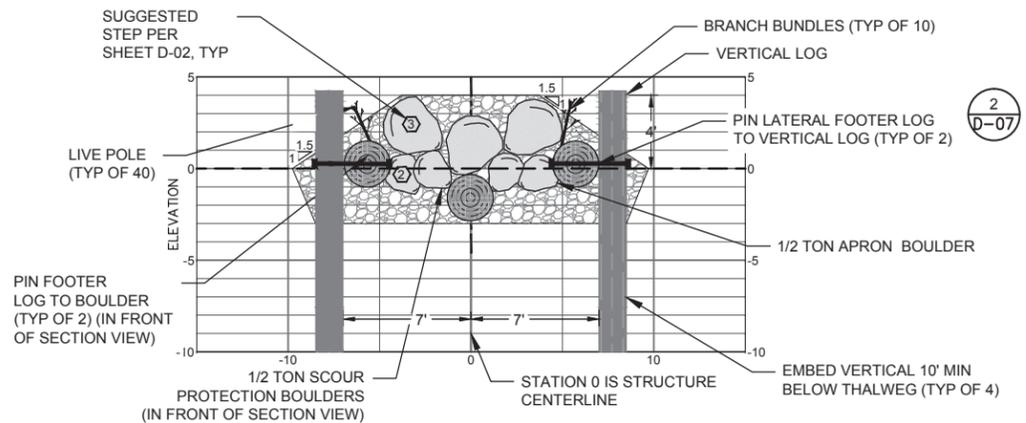
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CONTRACT NUMBER: 7351		

NOTES

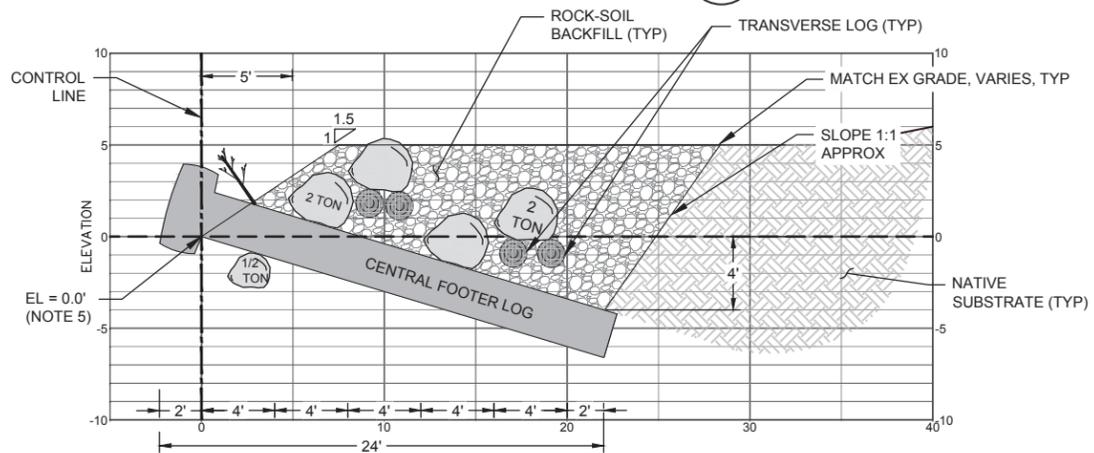
1. GRADING SECTIONS ARE ORIENTED UPSTREAM.
2. BLEND TO CONFORM TO EXISTING GRADE AT LIMIT OF GRADING.
3. GRADE TO PRODUCE SMOOTH, NON-PRISMATIC TRANSITIONS BETWEEN GRADE BREAKS.



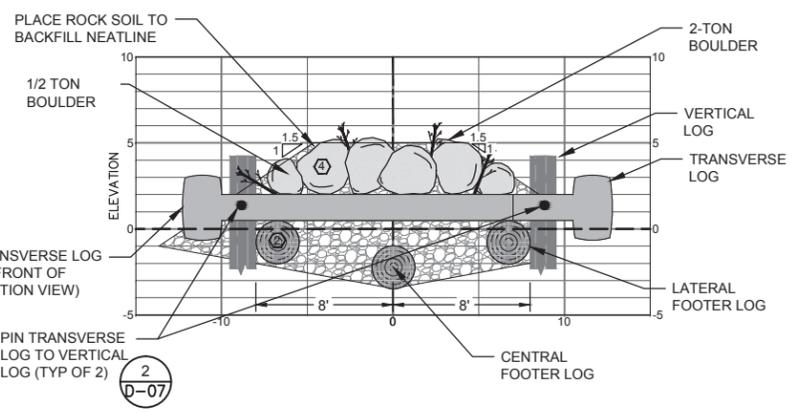
APEX LOG STRUCTURE
PLAN VIEW SCALE: 1"=5' **1** VAR



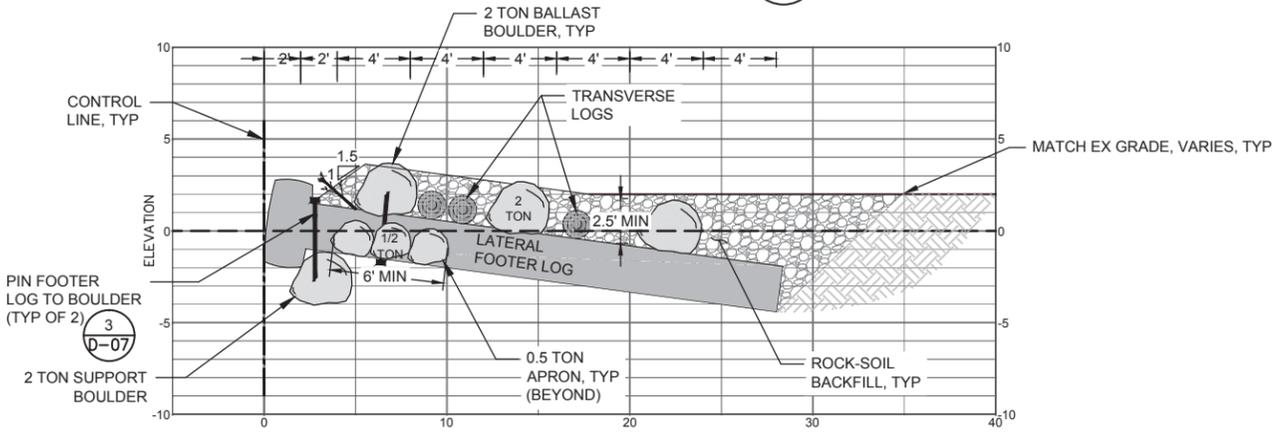
SECTION C SCALE: 1"=5' **C**



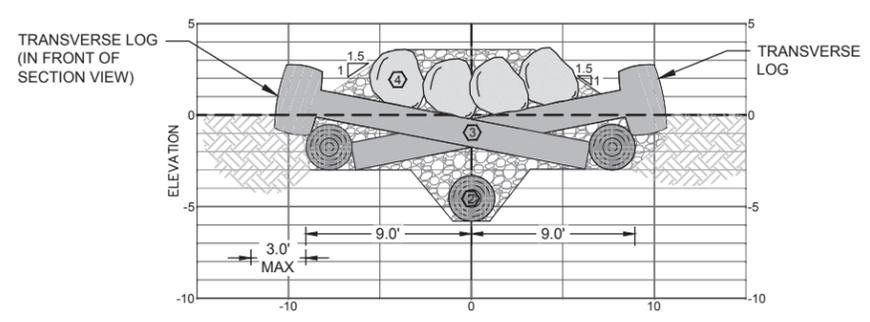
SECTION A
ALONG CENTERLINE SCALE: 1"=5' **A**



SECTION D SCALE: 1"=5' **D**



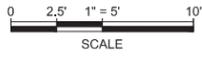
SECTION B
THROUGH LATERAL FOOTER LOG SCALE: 1"=5' **B**



SECTION E SCALE: 1"=5' **E**

SITE	APPROX CHANNEL BOTTOM ELEV (FT)
2C	75.4
2D	77.3

- NOTES:**
- SEE DRAWING D-02 FOR SUGGESTED SEQUENCE DIAGRAMS.
 - PLACE LIVE STAKES AND BRANCH BUNDLES IN ALL CAVITIES. BACKFILL WITH SELECT NATIVE COBBLE, GRAVELS, AND SOIL.
 - ADDITIONAL FILL MAY BE REQUIRED TO PROVIDE A STABLE FOUNDATION FOR PLACEMENT OF BALLAST BOULDERS.
 - LOGS MAY BE SELECTIVELY NOTCHED TO ACHIEVE ORIENTATION AND EMBEDMENT AS SHOWN OR TO PROVIDE A SUITABLE BASE FOR BALLAST BOULDER PLACEMENT. PROVIDE A FLAT BASE FOR BALLAST BOULDER PLACEMENT (3" MAX CUT).
 - ELEVATIONS SHOWN ARE BASED ON AN ARBITRARY DATUM REFERENCED TO THE ELEV. OF THE SECONDARY CHANNEL AT EACH STRUCTURE LOCATION. SEE TABLE (ABOVE) FOR SITE 2C AND SITE 2D DATUM ELEV. FOR APEX STRUCTURES.



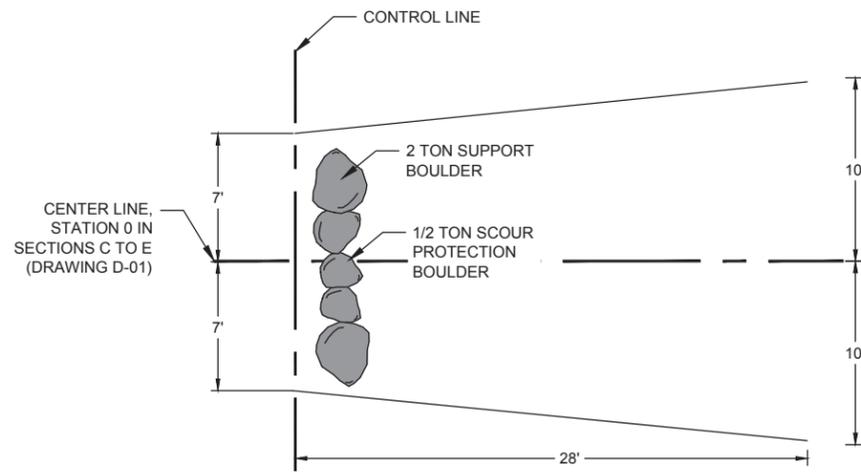
BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



NO.		DATE	REVISION	BY

	SCALE: 1"=5'	DATE: 03/17/2016
	DRAWN: BT	
	REVIEWED:	

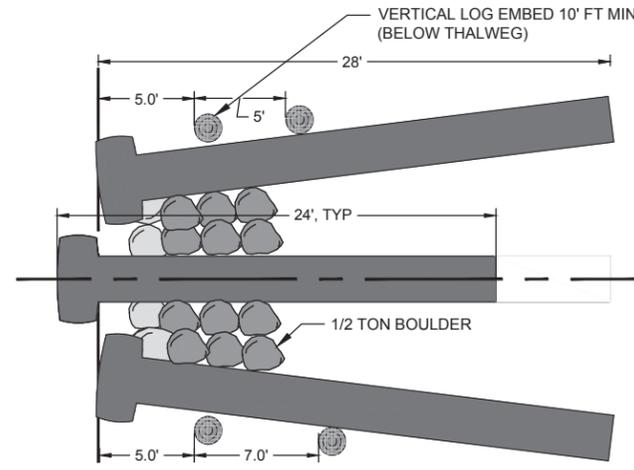
DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
APEX LOG STRUCTURE DETAILS (1 OF 2)



STEP 1

PLAN VIEW SCALE: 1" = 5'

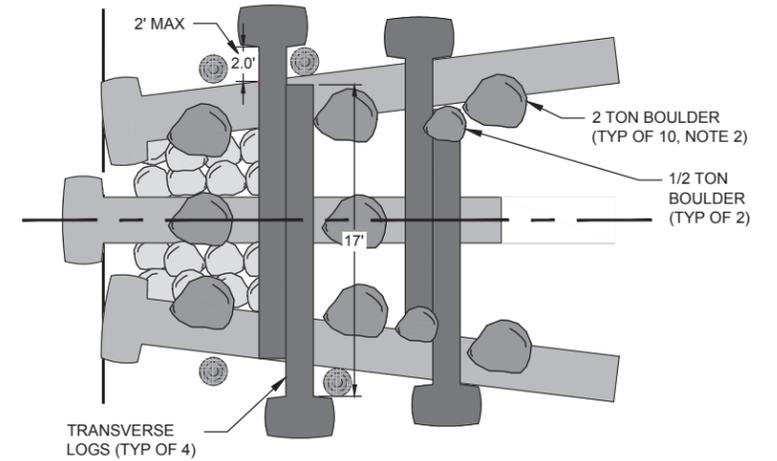
- NOTES:
1. PLACE 2-TON SUPPORT BOULDER AND ½-TON BOULDER FOR SCOUR PROTECTION.



STEP 2

PLAN VIEW SCALE: 1" = 5'

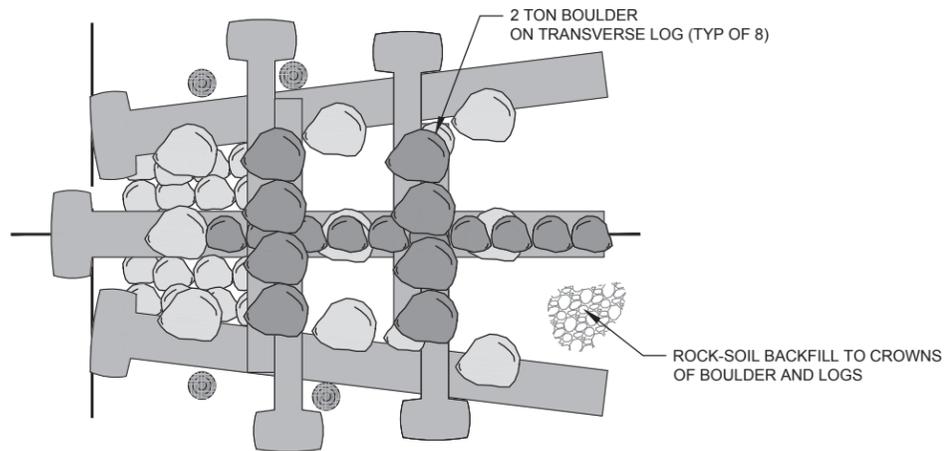
- NOTES:
1. EMBED VERTICAL LOGS. (COORDINATE FULL EMBEDMENT WITH PLACEMENT OF TRANSVERSE LOGS (STEP 3))
 2. PLACE FOOTER LOGS AND PIN TO SUPPORT BOULDERS
 3. PLACE ½-TON BOULDER APRON BETWEEN FOOTER LOGS.
 4. BACKFILL BETWEEN LOGS WITH ROCK-SOIL MIX.



STEP 3

PLAN VIEW SCALE: 1" = 5'

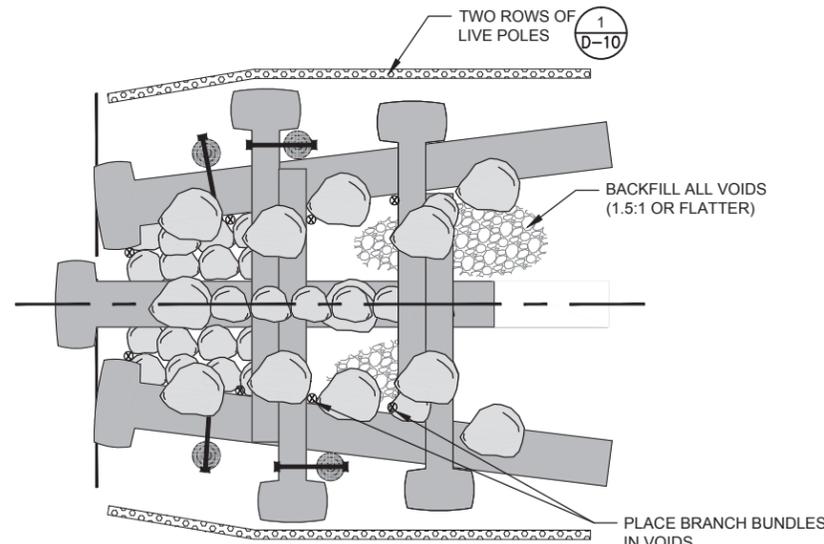
- NOTES:
1. PLACE TRANSVERSE LOGS.
 2. PLACE 2-TON ANCHOR BOULDERS ON FOOTER LOGS (9 TOTAL).
 3. UPSTREAM TRANSVERSE LOGS: DRIVE ADJACENT VERTICAL LOG SO ROOT WAD IS IN CONTACT TRANSVERSE LOG.
 4. DOWNSTREAM TRANSVERSE LOGS: PLACE ½-TON ANCHOR BOULDER ON BURIED END.
 5. BACKFILL VOIDS WITH ROCK-SOIL MIX.



STEP 4

PLAN VIEW SCALE: 1" = 5'

- NOTES:
1. PLACE 2-TON ANCHOR BOULDERS ON TRANSVERSE LOGS (8 TOTAL).
 2. BACKFILL VOIDS WITH ROCK-SOIL MIX.



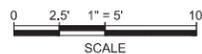
STEP 5

PLAN VIEW SCALE: 1" = 5'

- NOTES:
1. PIN LOG TO VERTICAL LOGS (4 TOTAL).
 2. BACKFILL WITH ROCK-SOIL MIX AND SHAPE TO PRODUCE 1.5:1 OR FLATTER SIDE SLOPES.
 3. EMBED LIVE WILLOW STEMS AND BRANCH BUNDLES. (MAY BE PLACED IN EARLIER STEPS PROVIDED STEMS/BRANCHES ARE NOT DAMAGED).

SCHEDULE OF LOGS				
STEP	LOGS	#	DIA (FT)	LENGTH (FT)
2	FOOTER LOGS (LATERAL)	2	2.5	28
2	FOOTER LOGS (CENTRAL)	1	2.5	24
2	VERTICAL LOGS	4	1.5	14
3	TRANSVERSE LOGS (UPSTREAM)	2	1.5	19
3	TRANSVERSE LOGS (DOWNSTREAM)	2	1.5	17

- GENERAL NOTES:
1. DESIGN INTENT IS ACHIEVE LOG-TO-LOG AND LOG-TO-BOULDER CONTACT.
 2. LOGS ARE SHOWN AT MINIMUM DIMENSIONS (DIAMETER AND LENGTH). GAPS SHOWN BETWEEN LOGS AND BOULDERS TO ALLOW FOR VARIABLE LOG DIMENSIONS (E.G., GREATER DIAMETER THAN MINIMUM).
 3. FOR CLARITY, BOULDERS ARE SHOWN WITH UNIFORM, ROUND DIMENSIONS (EXCEPT AS NOTED OTHERWISE). SELECT BOULDERS TO MEET WEIGHT CLASS AND ALLOWABLE DIMENSIONS.
 4. ORIENT BOULDERS TO MAXIMIZE STABILITY. IN GENERAL SMALLEST DIMENSION OF BOULDER SHOULD BE VERTICAL. PLACE FLATTEST SIDE OF BOULDERS IN CONTACT WITH LOGS.
 5. BACKFILL OVER-EXCAVATED SUBGRADE WITH BEDDING TO ELEVATIONS AND DIMENSIONS SHOWN.
 6. FILL ALL VOIDS IN STRUCTURE WITH ROCK-SOIL MIX PER SPECIFICATIONS.



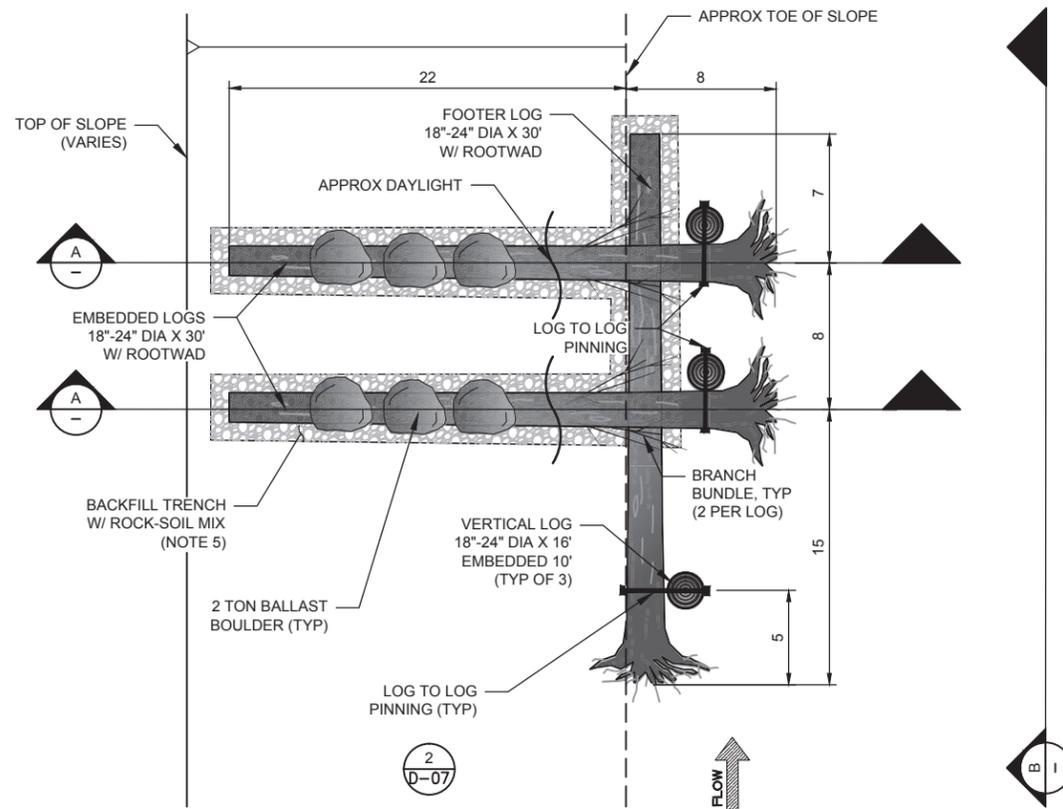
BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



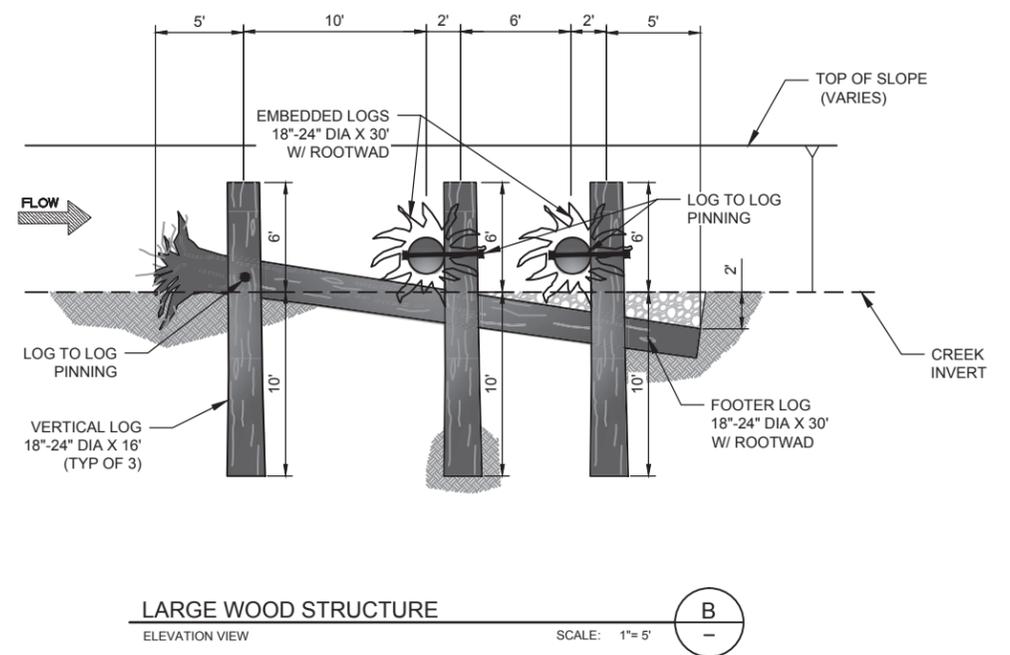
NO.	DATE	REVISION	BY

SONOMA COUNTY WATER AGENCY
 SCALE: 1" = 5'
 DATE: 03/17/2016
 DRAWN: BT
 REVIEWED:

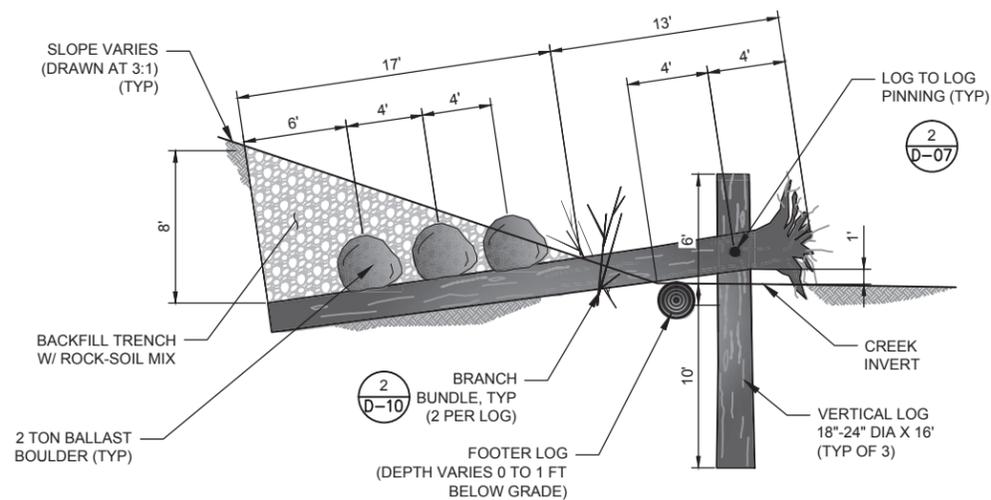
DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
APEX LOG STRUCTURE DETAILS (2 OF 2)
 FILE NAME: 7351-DETAIL-APEX-LOG-STRUCTURE.dwg
 CONTRACT NUMBER: 7351
 DRAWING NUMBER: D-02
 SHEET 30 OF 42



LARGE WOOD STRUCTURE
PLAN VIEW SCALE: 1"= 5' **1** VAR



LARGE WOOD STRUCTURE
ELEVATION VIEW SCALE: 1"= 5' **B**



LARGE WOOD STRUCTURE
SECTION VIEW SCALE: 1"= 5' **A**

SCHEDULE OF LOGS				
TYPE	#	DIA (FT)	LENGTH (FT)	ROOT WAD
EMBEDDED	2	1.5-2	30	Y
FOOTER	1	1.5-2	30	Y
VERTICAL	3	1.5-2	16	N

NOTES

- LOG SHALL BE PLACED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE. FIELD FIT AND ADJUST AS NEEDED TO CONFORM IRREGULAR LOGS TO NEAT DIMENSIONS SHOWN.
- DETAIL SHOWS EMBEDMENT DEPTH ASSUMING THE LOG IS THE MINIMUM LENGTH SPECIFIED. IF LONGER LOG IS USED, INCREASE EMBEDMENT LENGTH AND DEPTH AS NEEDED TO MEET REQUIREMENTS SHOWN. DETAIL SHOWS MAXIMUM EXPOSED LOG LENGTH, LENGTH MAY BE INCREASED IF LONGER LOG IS USED. CONFIRM WITH ENGINEER.
- LOGS MAY BE NOTCHED (3" MAX) TO ACHIEVE ORIENTATION AND EMBEDMENT AS SHOWN.
- BALLAST BOULDER MUST BEAR DIRECTLY ON LOG.
- BACKFILL TRENCH WITH ROCK-SOIL MIX. BACKFILL LIMITS SHOWN ARE SCHEMATIC ONLY. ACTUAL LIMITS WILL VARY.
- ORIENT BRANCH BUNDLES TO MAXIMIZE VOLUME AND EXTENT.



BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



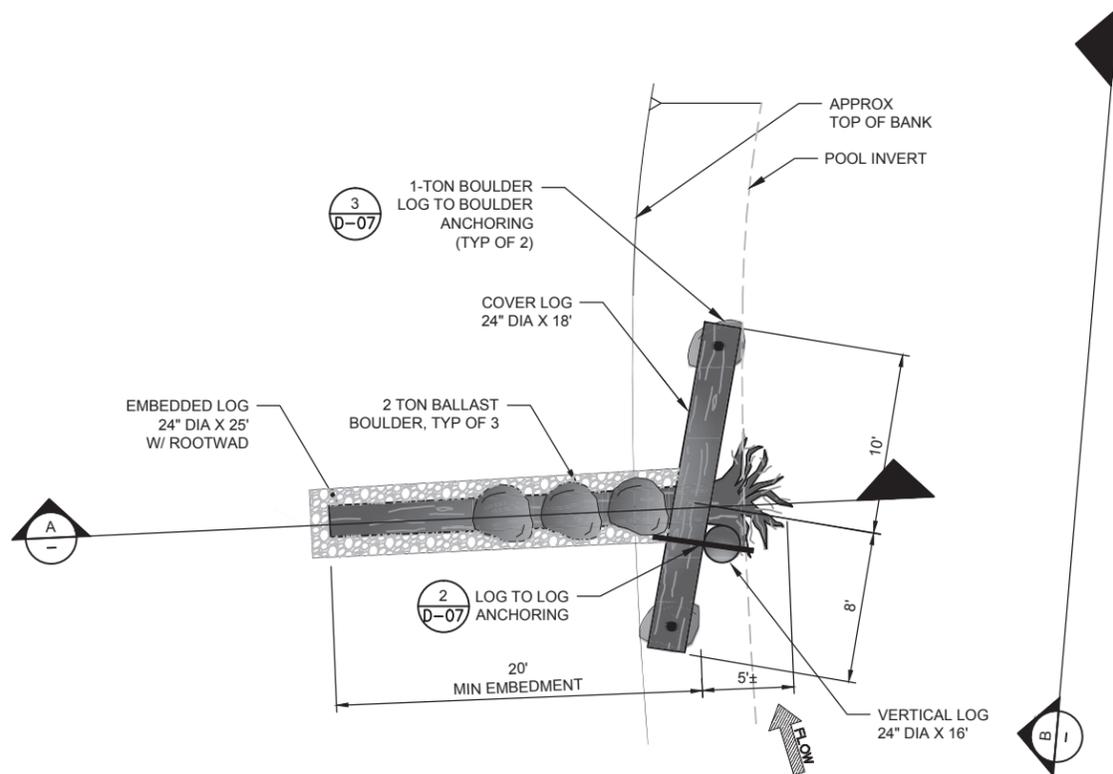
NO.	DATE	REVISION	BY

SONOMA COUNTY WATER AGENCY
 SCALE: 1"= 5' DATE: 03/17/2016
 DRAWN: PL
 REVIEWED:

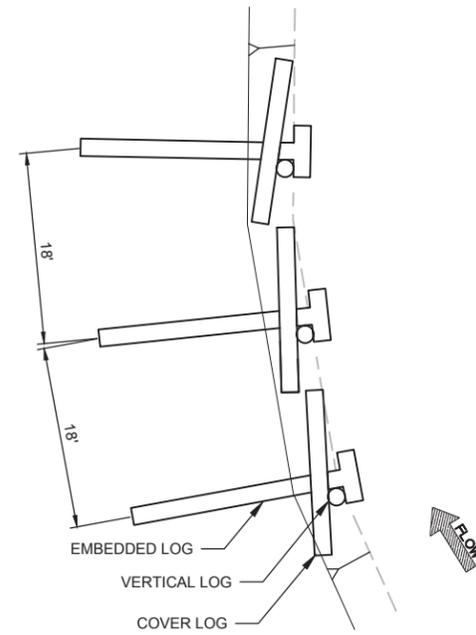
DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
LARGE WOOD STRUCTURE DETAIL
 FILE NAME: 7351-DETAIL-LARGE-WOOD-STRUCTURE.dwg DRAWING NUMBER: D-03 SHEET 31 OF 42
 CONTRACT NUMBER: 7351

NOTES

- LOG SHALL BE PLACED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE. FIELD FIT AND ADJUST AS NEEDED TO CONFORM IRREGULAR LOGS TO NEAT DIMENSIONS SHOWN.
- DETAIL SHOWS EMBEDMENT DEPTH ASSUMING THE LOG IS THE MINIMUM LENGTH SPECIFIED. IF LONGER LOG IS USED, INCREASE EMBEDMENT LENGTH AND DEPTH AS NEEDED TO MEET REQUIREMENTS SHOWN. DETAIL SHOWS MAXIMUM EXPOSED LOG LENGTH. LENGTH MAY BE INCREASED IF LONGER LOG IS USED. CONFIRM WITH ENGINEER.
- BALLAST BOULDER MUST BEAR DIRECTLY ON LOG.
- BACKFILL TRENCH WITH ROCK-SOIL MIX. BACKFILL LIMITS SHOWN ARE SCHEMATIC ONLY. ACTUAL LIMITS WILL VARY.
- EACH SECONDARY CHANNEL POOL WILL INCLUDE A POOL WOOD STRUCTURE COMPLEX CONSISTING OF THREE (3) POOL WOOD STRUCTURES. SEE ENHANCEMENT PLANS.



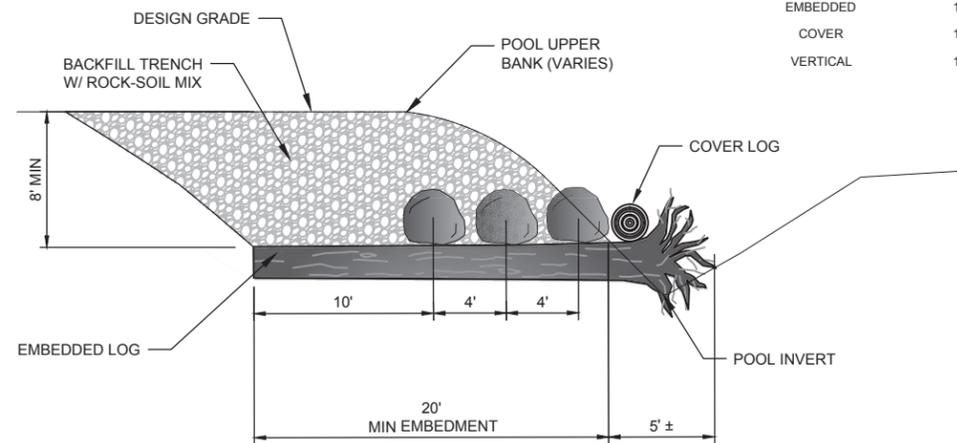
POOL WOOD STRUCTURE
PLAN VIEW SCALE: 1"=5' **1** VAR



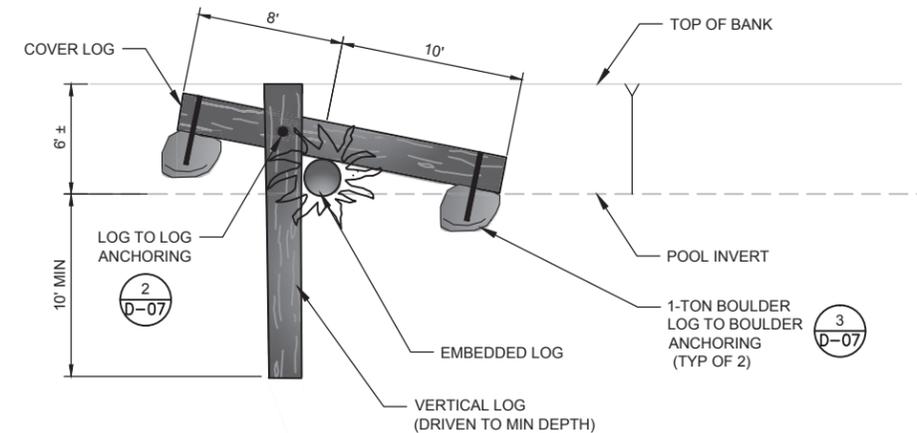
POOL WOOD STRUCTURE- COMPLEX (NOTE 5)
SCHEMATIC PLAN VIEW SCALE: NTS

SCHEDULE OF LOGS

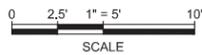
TYPE	#	DIA (FT)	LENGTH (FT)	ROOTWAD
EMBEDDED	1	1.5-2	25	Y
COVER	1	1.5-2	18	N
VERTICAL	1	1.5-2	16	N



POOL WOOD STRUCTURE
SECTION VIEW SCALE: 1"=5' **A**



POOL WOOD STRUCTURE
ELEVATION VIEW SCALE: 1"=5' **B**



BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY

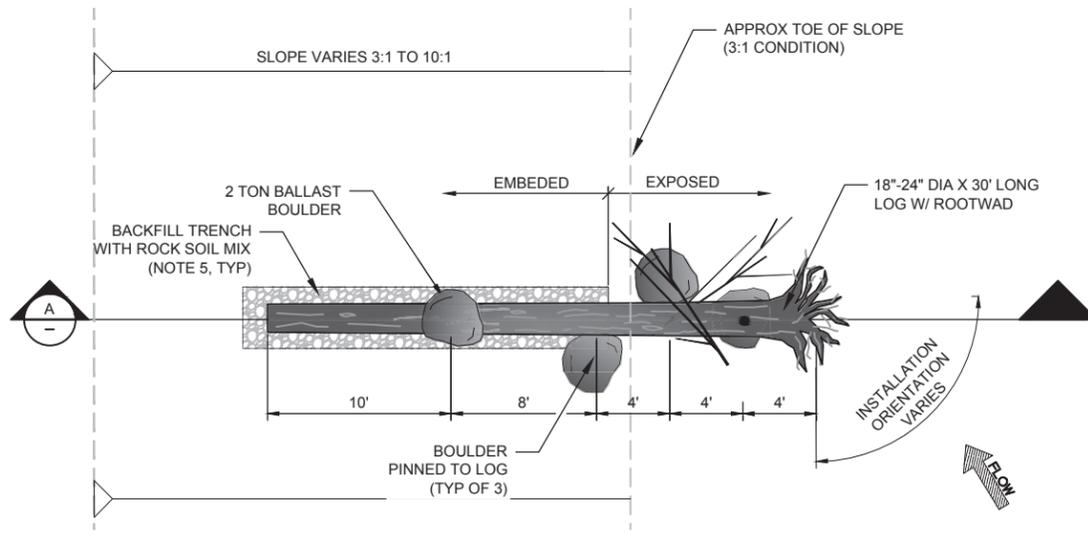


NO.	DATE	REVISION	BY

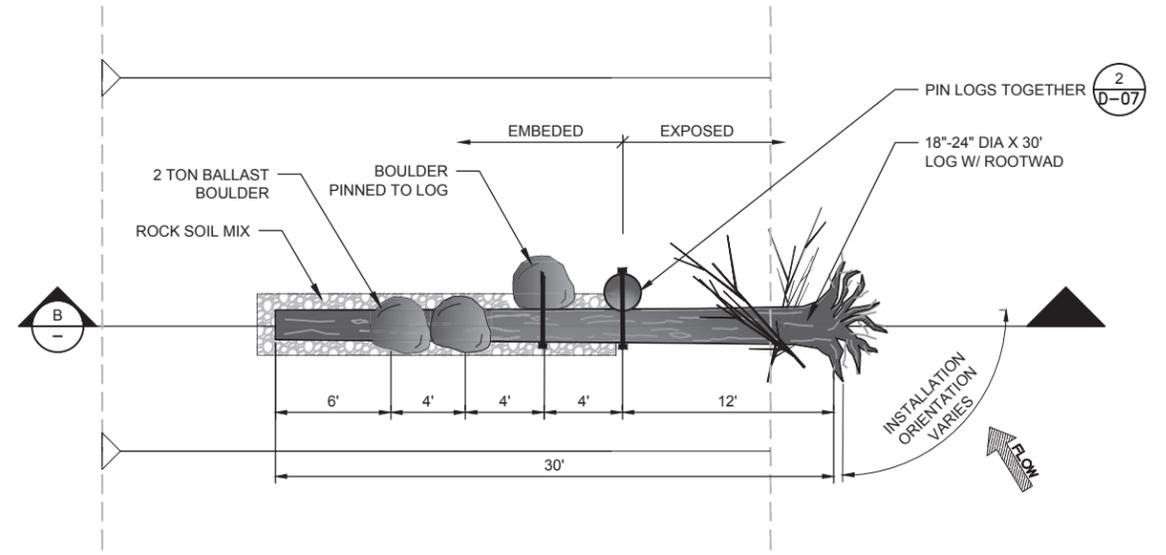


SCALE: 1"=5'	DATE: 03/17/2016
DRAWN: PL	
REVIEWED:	

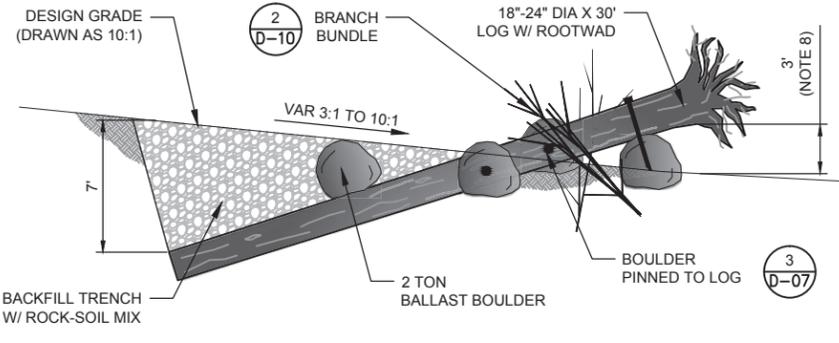
DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
POOL WOOD STRUCTURE DETAILS



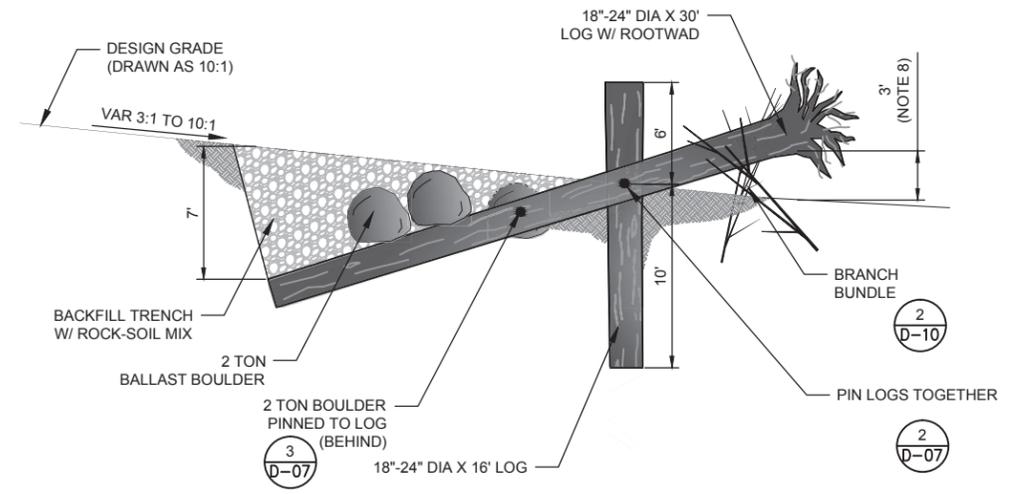
HABITAT WOOD STRUCTURE - TYPE 1
 PLAN VIEW SCALE: 1"=5' 1
 VAR



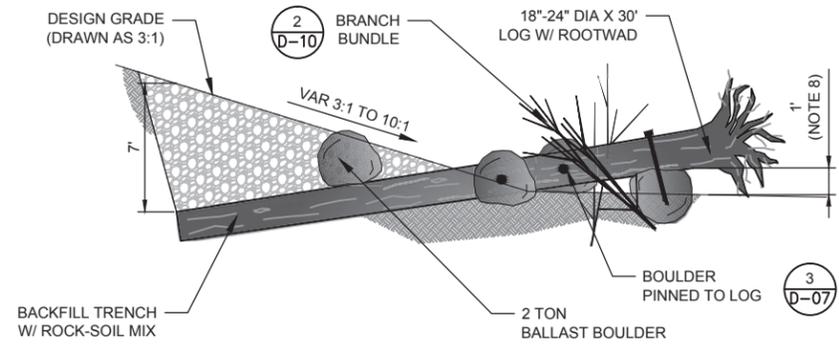
HABITAT WOOD STRUCTURE - TYPE 2
 PLAN VIEW SCALE: 1"=5' 2
 -



HABITAT WOOD STRUCTURE - TYPE 1 IN 10:1 SLOPE
 SECTION VIEW SCALE: 1"=5' A1
 -



HABITAT WOOD STRUCTURE - TYPE 2
 SECTION VIEW SCALE: 1"=5' B
 -



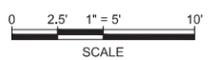
HABITAT WOOD STRUCTURE - TYPE 1 IN 3:1 SLOPE
 SECTION VIEW SCALE: 1"=5' A2
 -

SCHEDULE OF LOGS

TYPE	LOG	DIA (FT)	LENGTH (FT)
TYPE 1	EMBEDDED	1.5-2	30
TYPE 2	EMBEDDED	1.5-2	30
TYPE 2	VERTICAL	1.5-2	16

NOTES

- LOG SHALL BE PLACED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE. FIELD FIT AND ADJUST AS NEEDED TO CONFORM IRREGULAR LOGS TO NEAT DIMENSIONS SHOWN.
- DETAIL SHOWS EMBEDMENT DEPTH ASSUMING THE LOG IS THE MINIMUM LENGTH SPECIFIED. IF LONGER LOG IS USED, INCREASE EMBEDMENT LENGTH AND DEPTH AS NEEDED TO MEET REQUIREMENTS SHOWN. DETAIL SHOWS MAXIMUM EXPOSED LOG LENGTH. LENGTH MAY BE INCREASED IF LONGER LOG IS USED. CONFIRM WITH ENGINEER.
- HABITAT WOOD STRUCTURES WILL BE INSTALLED OVER A RANGE OF ORIENTATION AND A RANGE OF BANK SLOPES. SEE ENHANCEMENT PLANS FOR ORIENTATION.
- BALLAST BOULDER MUST BEAR DIRECTLY ON LOG.
- BACKFILL TRENCH WITH ROCK-SOIL MIX. BACKFILL LIMITS SHOWN ARE SCHEMATIC ONLY. ACTUAL LIMITS WILL VARY.
- ORIENT BRANCH BUNDLES TO MAXIMIZE VOLUME OF EXPOSED BRANCHES.
- HABITAT WOOD STRUCTURES MAY INCLUDE ANCHORING AND INTERLOCKING WITH LIVE TREES. LOCATIONS TO BE DETERMINED IN SUBSEQUENT DESIGN PHASES.
- HEIGHT VARIES 1' TO 3' DEPENDING ON BANK SLOPE.



BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



NO.	DATE	REVISION	BY

SONOMA COUNTY WATER AGENCY

SCALE: 1"=5' DATE: 03/17/2016

DRAWN: PL

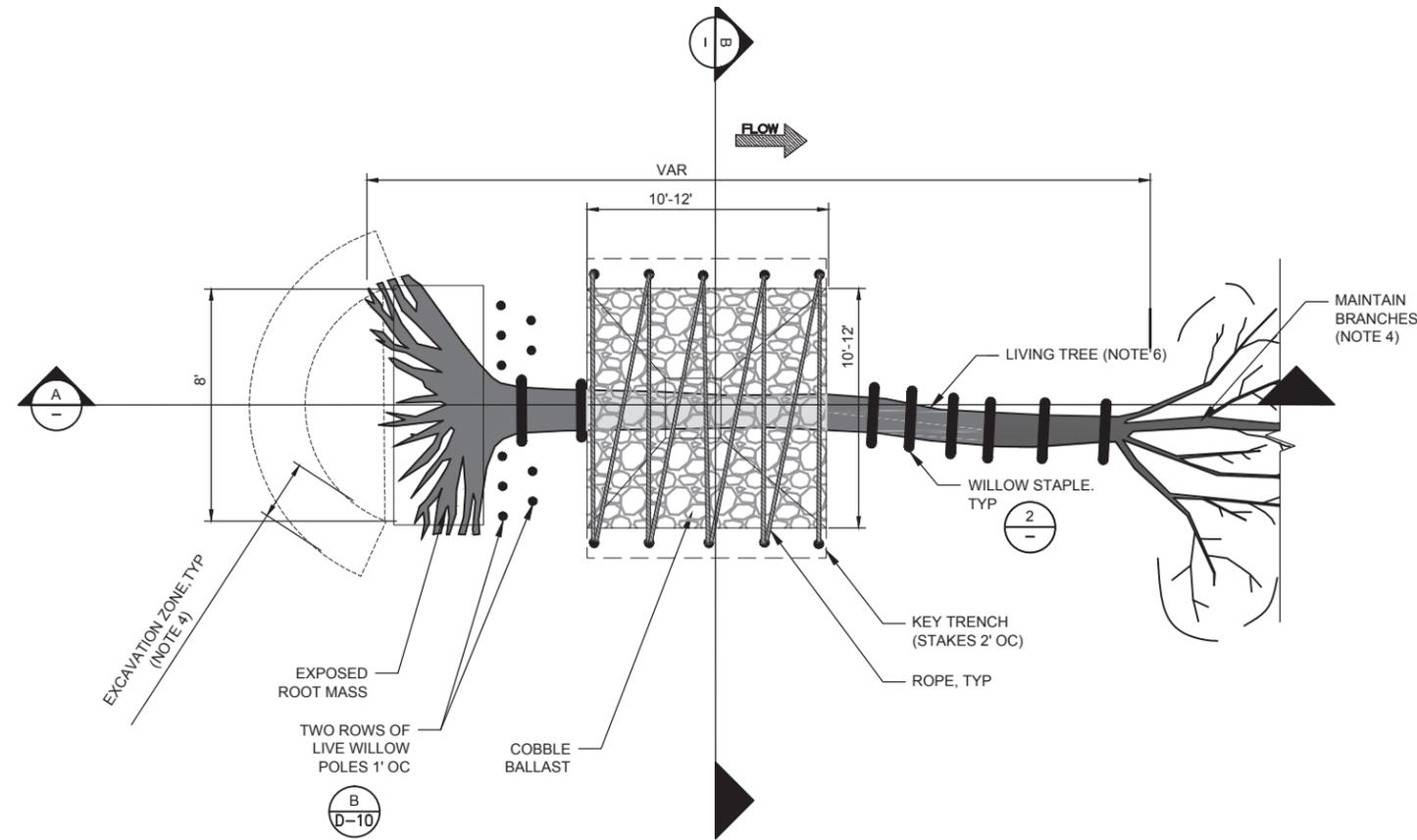
REVIEWED:

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D

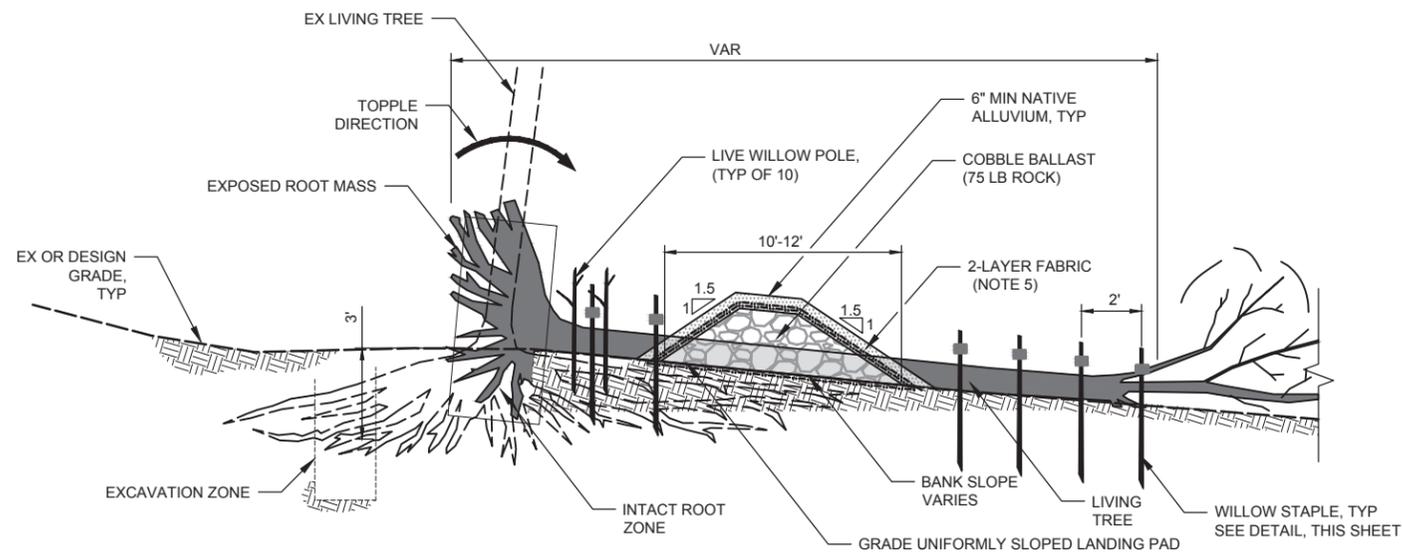
HABITAT WOOD STRUCTURE DETAILS

FILE NAME: 7351-DETAIL-HABITAT-WOOD-STRUCTURE.dwg DRAWING NUMBER: D-05 SHEET 33 OF 42

CONTRACT NUMBER: 7351



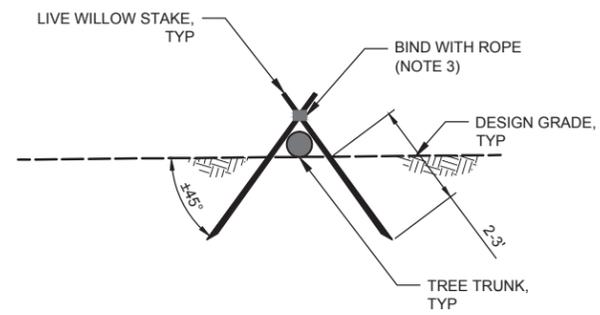
LIVE WOOD STRUCTURE
PLAN VIEW
SCALE: 1" = 3'
1
VAR



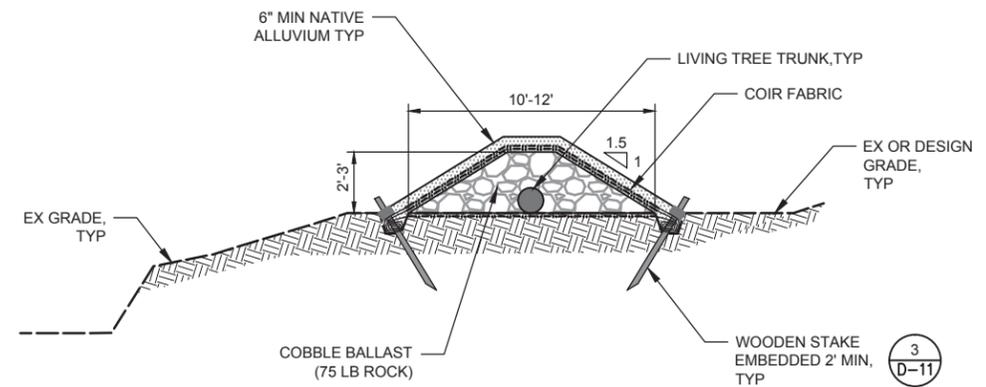
LIVE WOOD STRUCTURE
PROFILE VIEW
SCALE: 1" = 3'
A

NOTES

1. TOPPLE TREE IN SAFE MANNER. MAINTAIN ROOT MASS AS SHOWN AND RETAIN APPROX. 35% OF THE ROOTS INTACT IN PLACE. BACKFILL EXCAVATED TRENCH WITH ROCK/SOIL MIX TO APPROX. DESIGN GRADE ELEVATION AND COMPACT TO 85% RC.
2. WILLOW STAPLES SHALL BEAR DIRECTLY UPON TREE TRUNK.
3. BIND STAKES WITH 1/2" MANILA ROPE, MINIMUM OF 5 WRAPS.
4. MAINTAIN BRANCHES AND CANOPY STRUCTURE, ENGINEER MAY PROVIDE GUIDANCE REGARDING REMOVAL OF SELECT BRANCHES TO FACILITATE INSTALLATION.
5. 2-LAYER FABRIC IS NON-WOVEN BIODEGRADABLE FABRIC ON WOVEN BIODEGRADABLE FABRIC. SEE SPECS.
6. LIVE WOOD STRUCTURE TREES MAY INCLUDE MULTIPLE TRUNKS.



WILLOW STAPLE
SECTION VIEW
SCALE: 1" = 3'
2



COBBLE BALLAST
SECTION VIEW
SCALE: 1" = 3'
B



BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



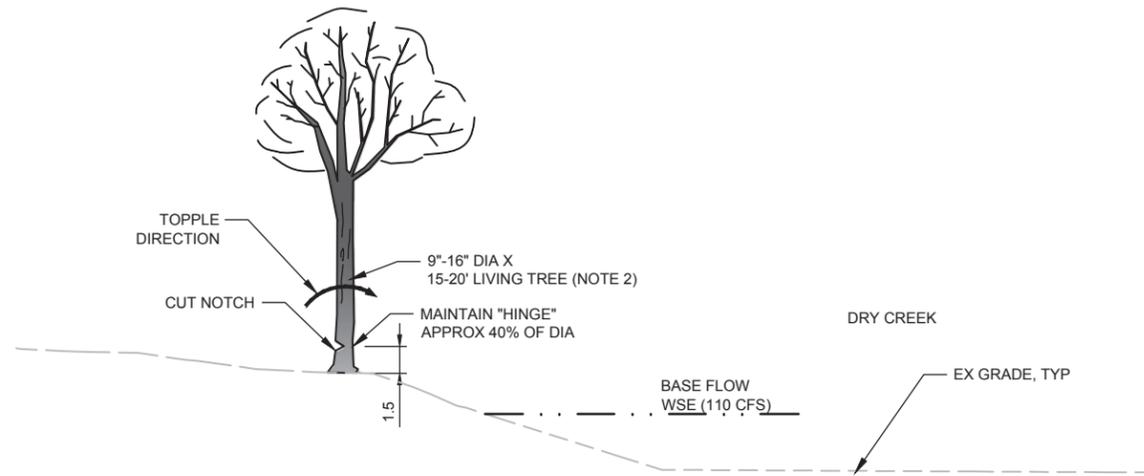
NO.	DATE	REVISION	BY

SONOMA COUNTY WATER AGENCY

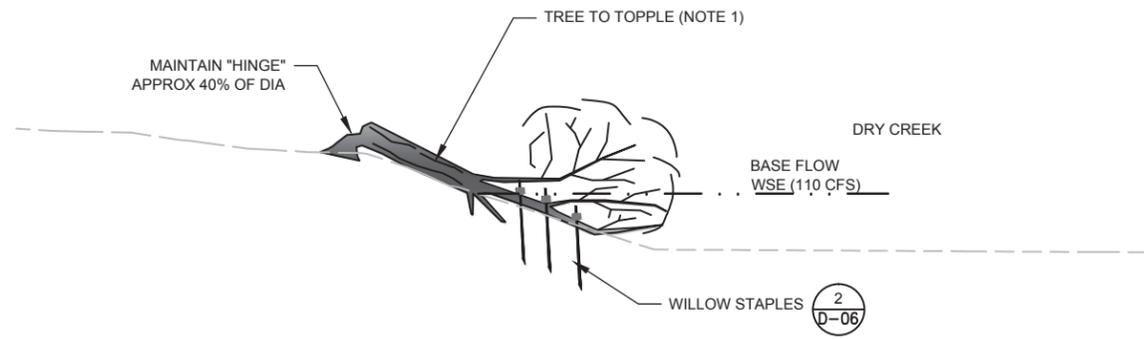
SCALE: 1" = 3' DATE: 03/17/2016
 DRAWN: JW
 REVIEWED:
 AGENCY

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
LIVE WOOD STRUCTURE DETAILS

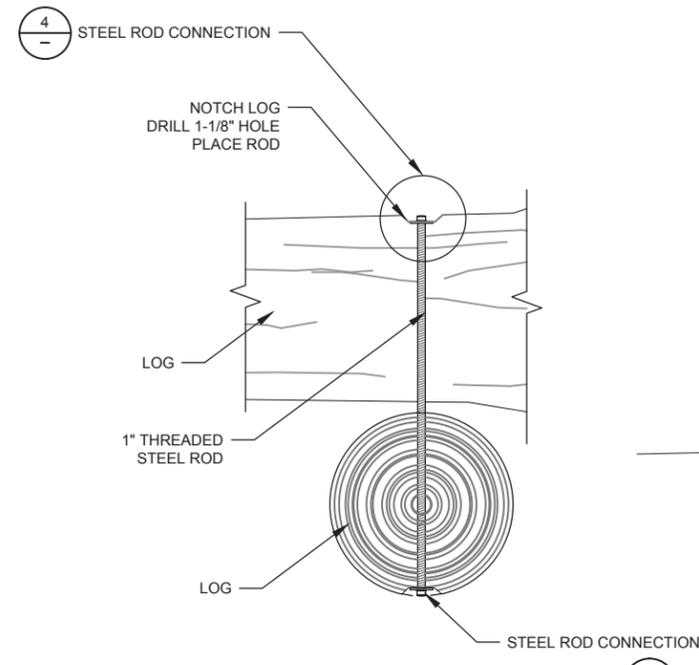
FILE NAME: 7351-DETAIL-LIVE-WOOD-STRUCTURE.dwg CONTRACT NUMBER: 7351
 DRAWING NUMBER: D-06 SHEET 34 OF 42



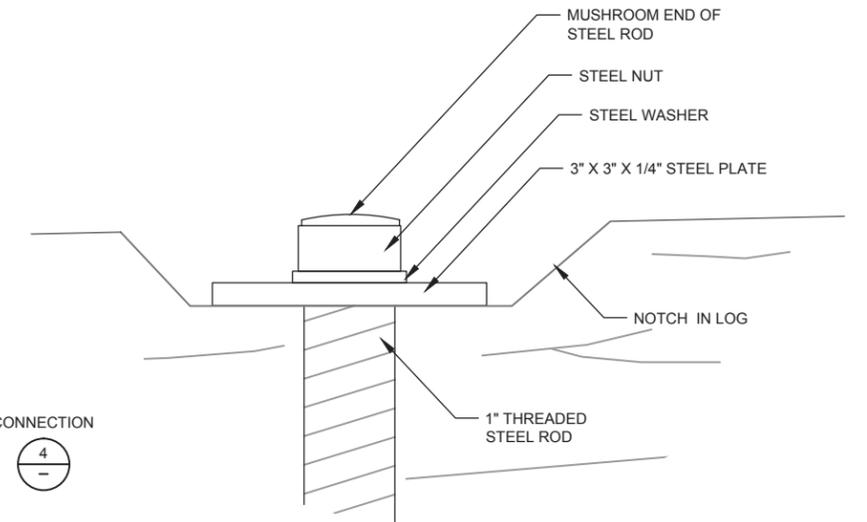
TOPPLE TREE
TYPICAL DETAIL SCALE: 1"=5' **1** VAR



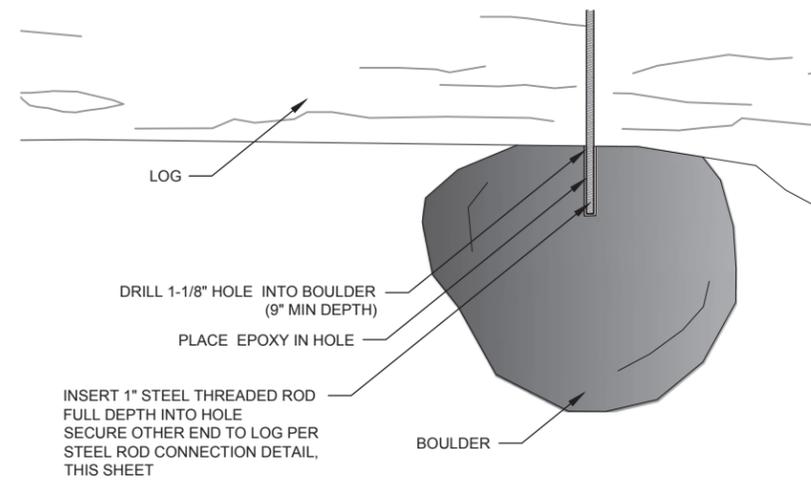
WILLOW STAPLES
TYPICAL DETAIL SCALE: 1"=5' **2** VAR



LOG TO LOG PINNING
TYPICAL DETAIL SCALE: 1"=1' **2** VAR



STEEL ROD CONNECTION
TYPICAL DETAIL SCALE: 1"=1' **4** VAR



LOG TO BOULDER PINNING
TYPICAL DETAIL SCALE: 1"=1' **3** VAR

NOTES

1. TOPPLE TREES MAY INCLUDE MULTIPLE TRUNKS.
2. LIVE WOOD STRUCTURE TREES MAY INCLUDE MULTIPLE TRUNKS.

BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



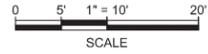
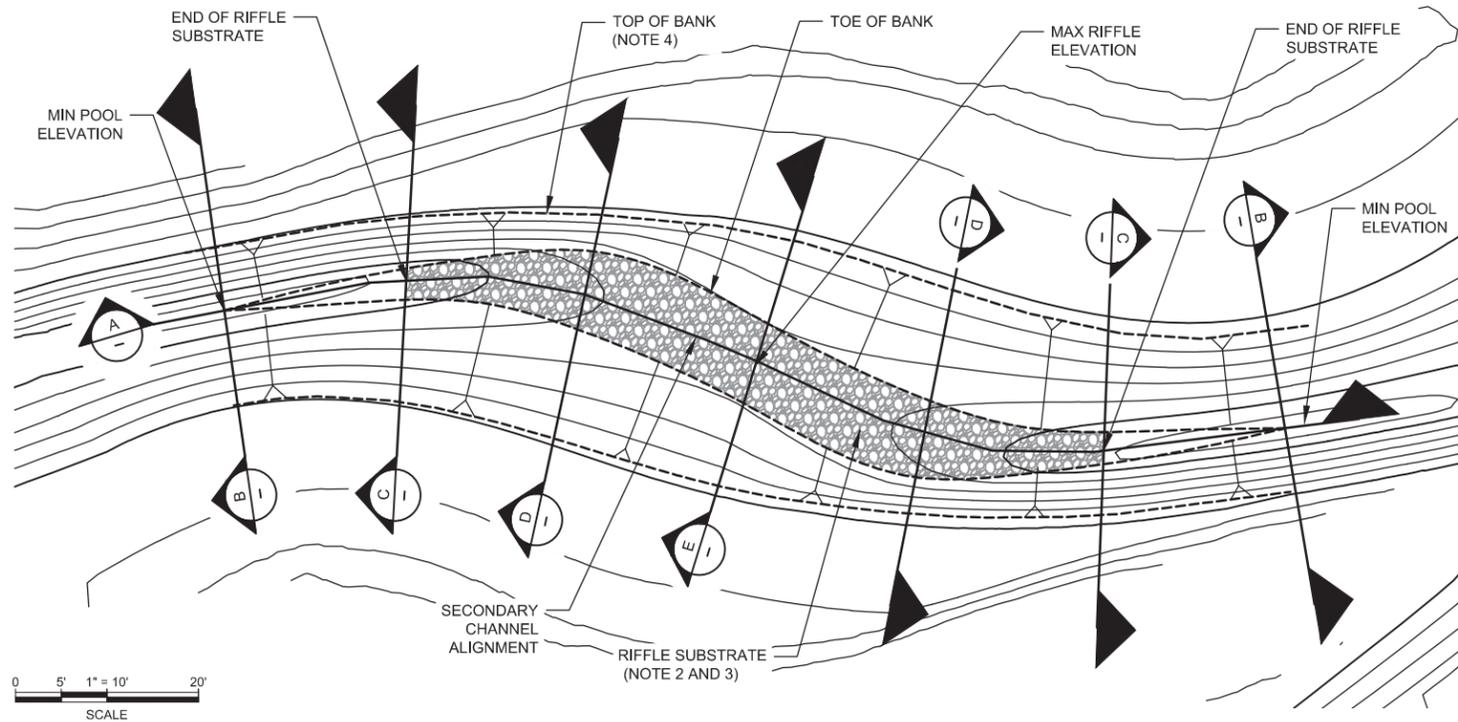
NO.	DATE	REVISION	BY

SONOMA COUNTY WATER AGENCY

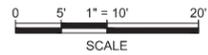
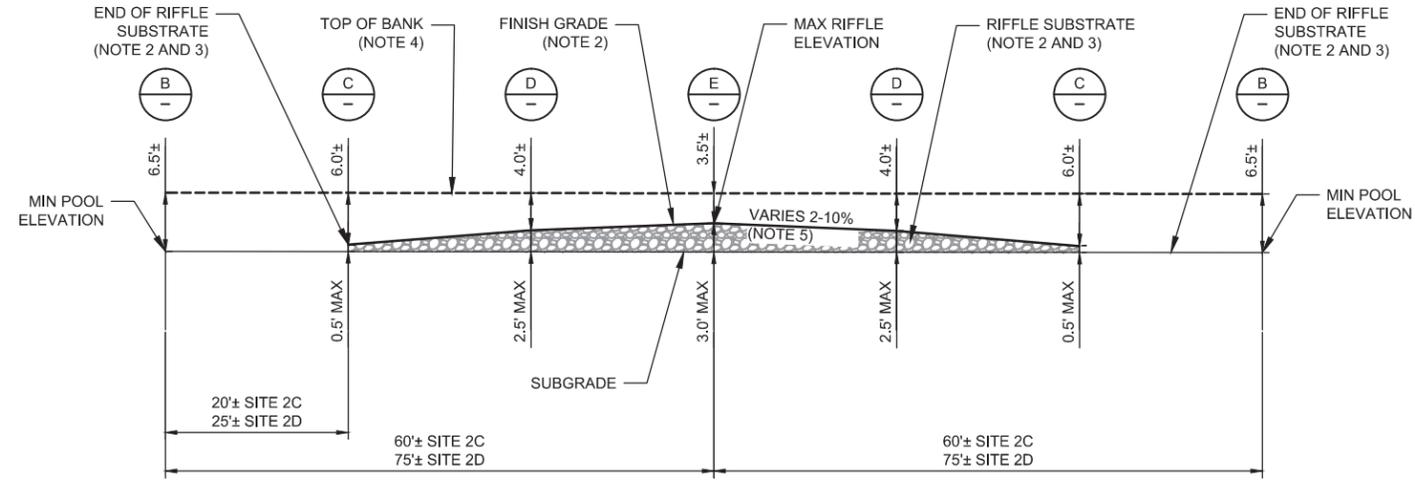
SCALE: AS SHOWN DATE: 03/17/2016
 DRAWN: PL
 REVIEWED:

**DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
TOPPLE TREE & ANCHORING DETAILS**

FILE NAME: 7351-DETAIL-TOPPLE-TREE-&-ANCHORING.dwg DRAWING NUMBER: D-07 SHEET 35 OF 42
 CONTRACT NUMBER: 7351



CONSTRUCTED RIFFLE-POOL DETAIL
PLAN VIEW SCALE: 1"=10' **1**
VAR

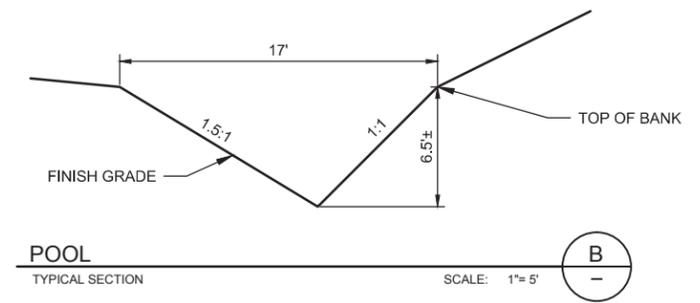


CONSTRUCTED RIFFLE-POOL DETAIL
PROFILE VIEW SCALE: 1"=10' **A**

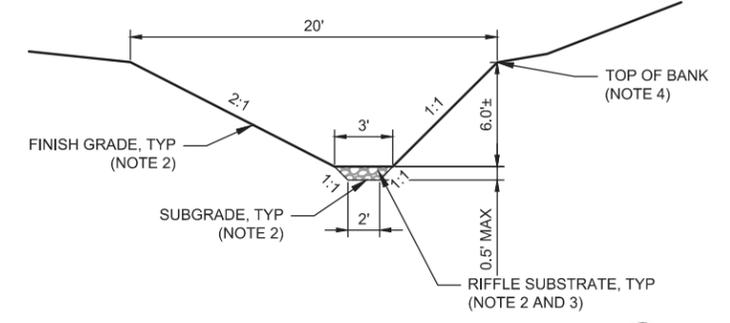
- NOTES**
1. DETAIL IS SHOWN FOR A TYPICAL CONSTRUCTED RIFFLE-POOL. ELEVATIONS VARY BY SITE. GRADING PLANS GOVERN.
 2. BACKFILL WITH RIFFLE SUBSTRATE (THICKNESS VARIES 3.0' MAX) TO FINISH GRADES SHOWN. GRADE TO PRODUCE SMOOTH, NON-PRISMATIC TRANSITIONS.
 3. IF SUITABLE CHANNEL SUBSTRATE EXISTS AS DETERMINED BY OWNER'S REPRESENTATIVE, IMPORTED RIFFLE SUBSTRATE MAY NOT BE NEEDED. SEE SPECS.
 4. APPROXIMATE TOP OF BANK GRADE BREAK SHOWN FOR REFERENCE. BANK GRADING VARIES PER GRADING PLAN.
 5. CREST TO CREST SLOPES VARIES 0.2-0.3% (SEE SCHEDULE THIS SHEET).

SCHEDULE OF POOL TO POOL DIMENSIONS

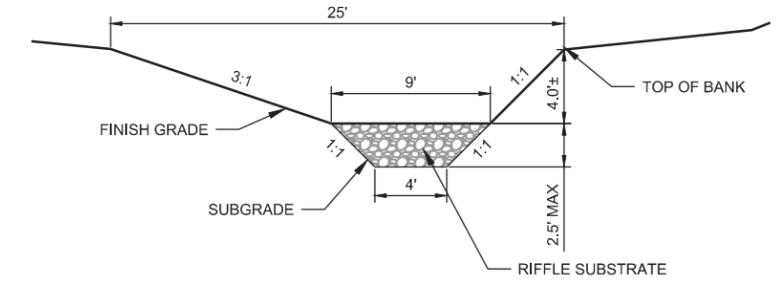
SECONDARY CHANNEL	DISTANCE (FT)	ELEVATION CHANGE (FT)	APPROX SLOPE (FT/FT)
2C-1	122	0.4	0.003
2D-1	149 TO 158	0.3	0.002



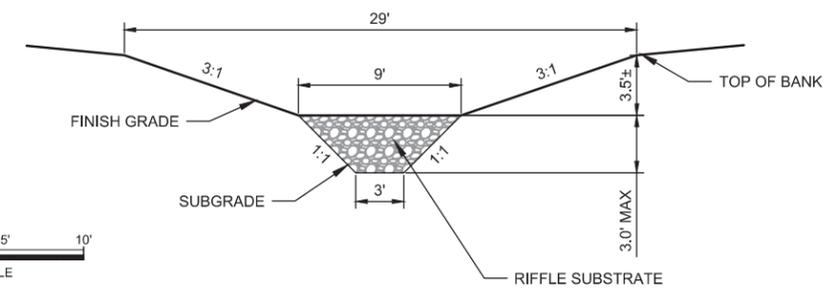
POOL
TYPICAL SECTION SCALE: 1"=5' **B**



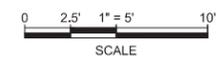
POOL TO RIFFLE TRANSITION
TYPICAL SECTION SCALE: 1"=5' **C**



POOL TO RIFFLE TRANSITION
TYPICAL SECTION SCALE: 1"=5' **D**



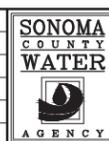
RIFFLE CREST
TYPICAL SECTION SCALE: 1"=5' **E**



BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



NO.	DATE	REVISION	BY

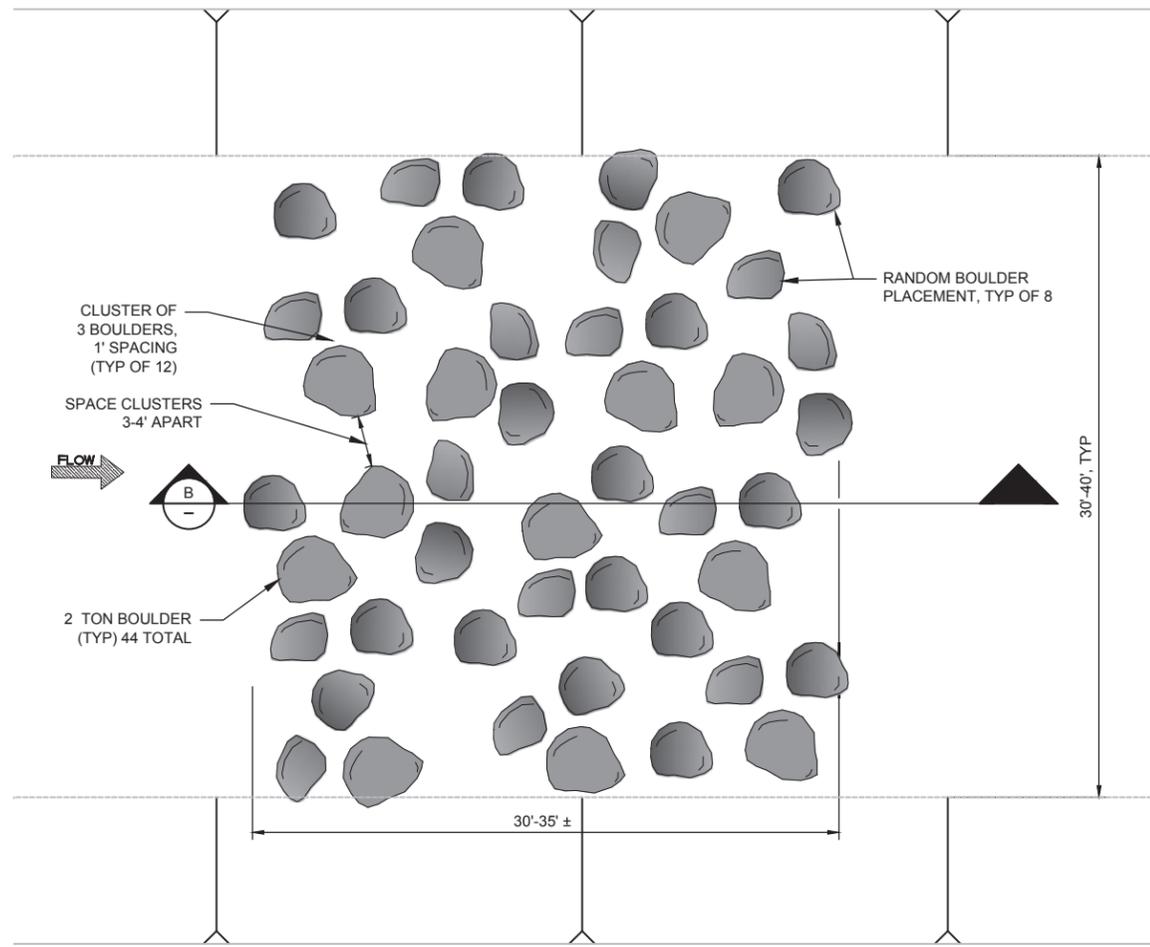


SCALE: AS SHOWN DATE: 03/17/2016
DRAWN: JW
REVIEWED:

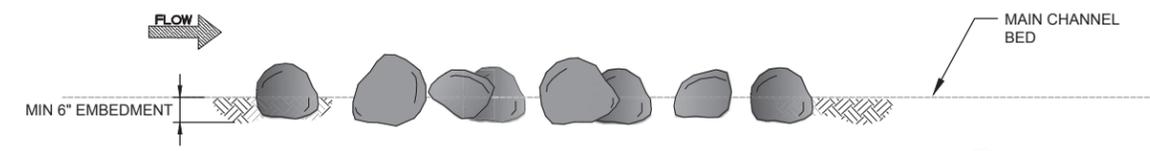
DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
CONSTRUCTED RIFFLE-POOL DETAIL

FILE NAME: 7351-DETAIL-RIFFLE-POOL.dwg CONTRACT NUMBER: 7351

DRAWING NUMBER: D-08 SHEET 36 OF 42

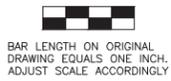


BOULDER FIELD
PLAN VIEW SCALE: 1"=5' 1



BOULDER FIELD
PROFILE VIEW SCALE: 1"=5' B

0 2.5' 1"=5' 10'
SCALE



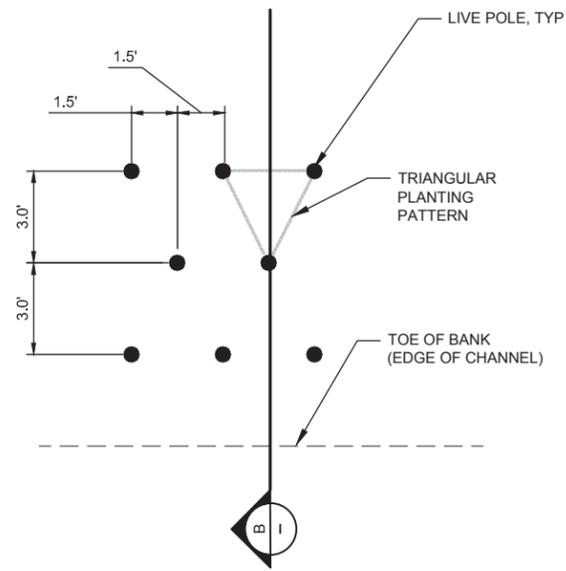
ESA
1425 N. McDOWELL BLVD, SUITE 200
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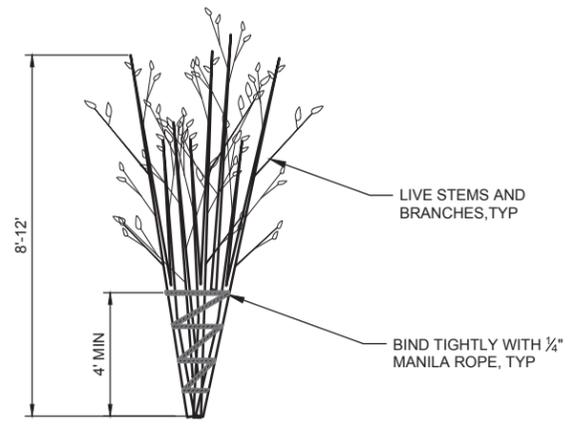


SCALE: AS SHOWN	DATE: 03/17/2016
DRAWN: PL	
REVIEWED:	

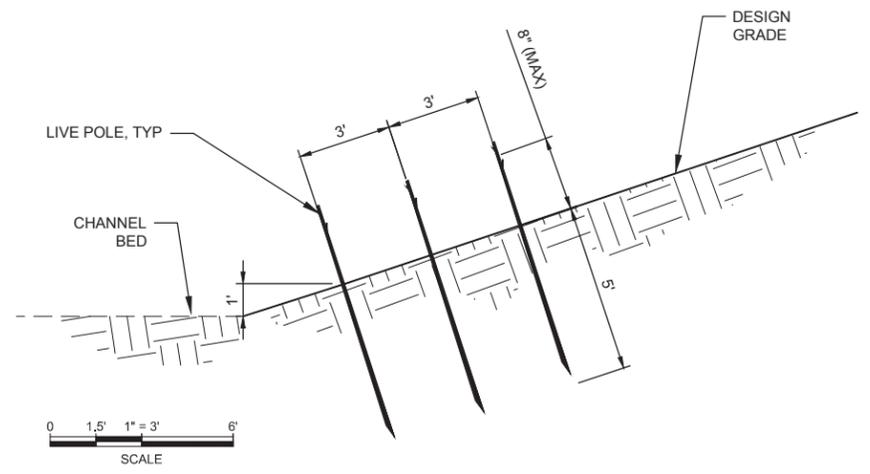
DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D	
BOULDER FIELD DETAILS	
FILE NAME: 7351-DETAIL-BOULDER-CLUSTER.dwg	DRAWING NUMBER: D-09
CONTRACT NUMBER: 7351	SHEET 37 OF 42



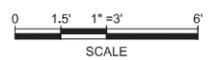
LIVE POLE PLANTING
PLAN VIEW SCALE: 1"=3' 1
VAR



BRANCH BUNDLE
SECTION VIEW SCALE: 1"=3' 2
-



LIVE POLE PLANTING
SECTION VIEW SCALE: 1"=3' B
-



BAR LENGTH ON ORIGINAL
DRAWING EQUALS ONE INCH.
ADJUST SCALE ACCORDINGLY



NO.	DATE	REVISION	BY

SONOMA COUNTY WATER AGENCY

SCALE: 1"=3' DATE: 03/17/2016

DRAWN: BT

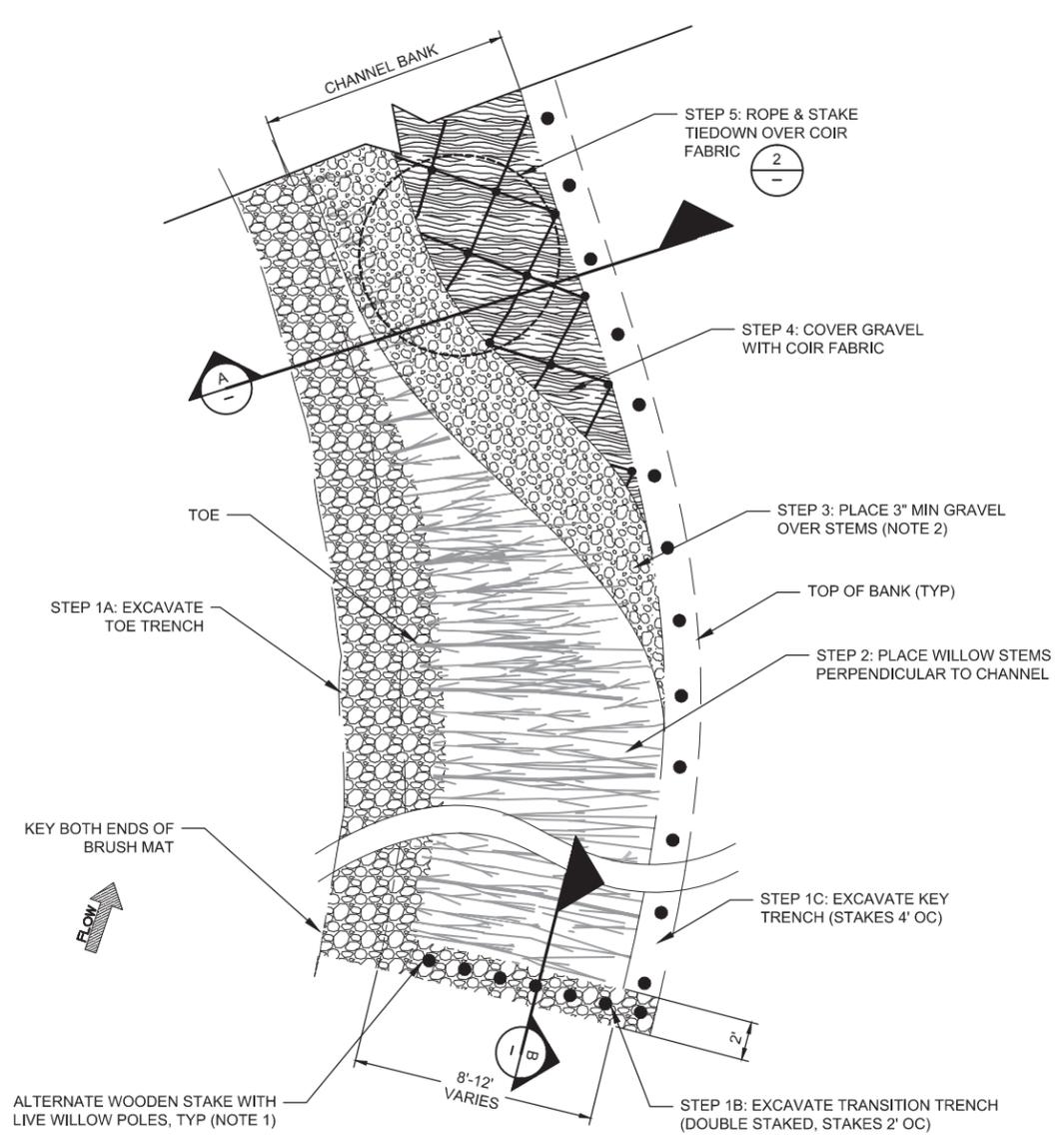
REVIEWED:

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D

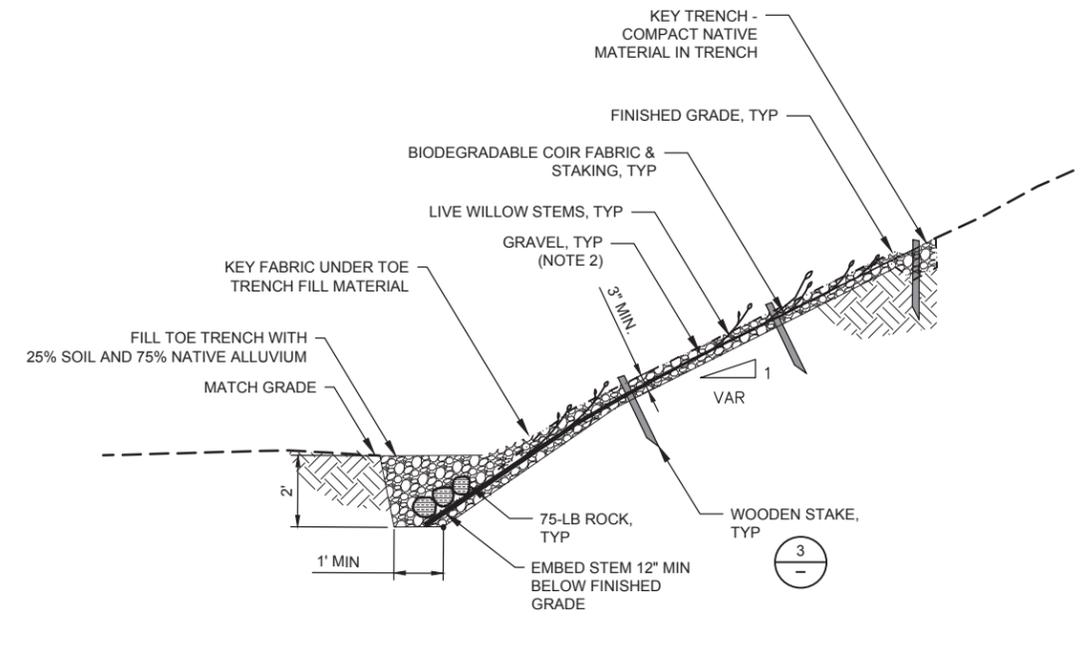
BIOTECHNICAL DETAILS

FILE NAME: 7351-DETAIL-BIOTECHNICAL-2.dwg CONTRACT NUMBER: 7351

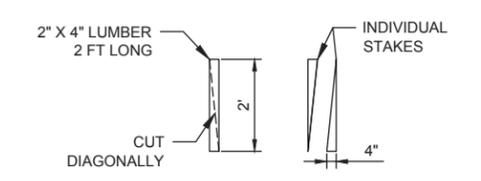
DRAWING NUMBER: D-10 SHEET 38 OF 42



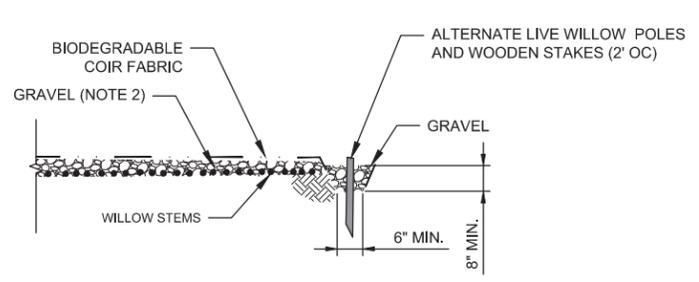
BRUSH MAT
PLAN VIEW
SCALE: 1"=5'
1
VAR



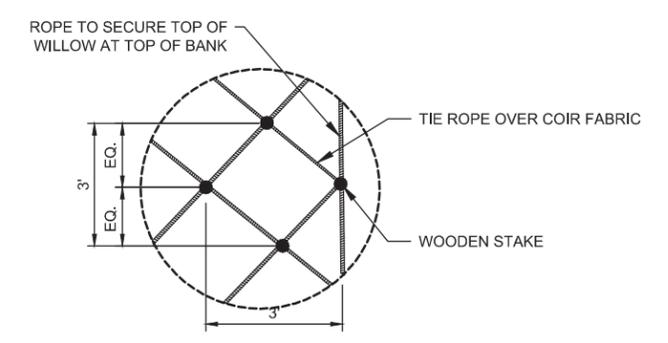
BRUSH MAT
SECTION VIEW
SCALE: 1"=5'
A



WOODEN STAKE
FABRICATION DETAIL
SCALE: 1"=5'
3



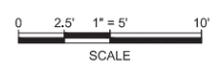
BRUSH MAT TRANSITION (BOTH ENDS)
SECTION VIEW
SCALE: 1"=5'
B



BRUSH MAT ROPE AND STAKE TIEDOWN
PLAN VIEW
NOT TO SCALE
2

NOTES

- CUT LIVE POLE 8" ABOVE GRADE. MAINTAIN TWO (2) GROWTH BUDS MINIMUM.
- NATIVE ALLUVIUM MAY BE UTILIZED IN PLACE OF GRAVEL TO COVER STEMS. CONFIRM WITH ENGINEER.
- THE BRUSH MAT INSTALLATION MAY EXTEND UP TO 20 FEET BEYOND THE GRADING LIMIT TO TIE INTO EXISTING VEGETATION. CONTRACTOR SHALL COORDINATE WITH ENGINEER TO IDENTIFY SPECIFIC LOCATIONS FOLLOWING GRADING ACTIVITIES AND PRIOR TO COMMENCING BRUSH MAT INSTALLATION.



BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



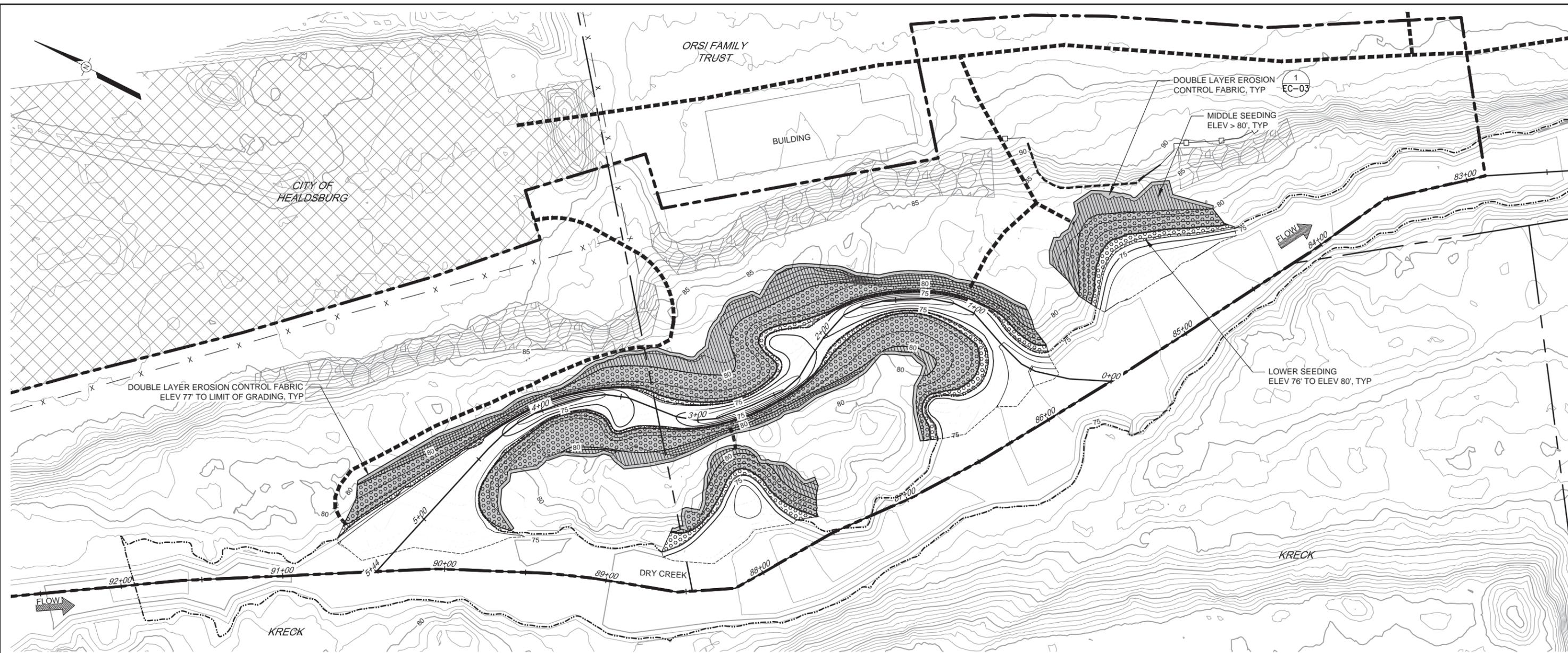
NO.	DATE	REVISION	BY



SCALE: AS SHOWN	DATE: 03/17/2016
DRAWN: PL	
REVIEWED:	

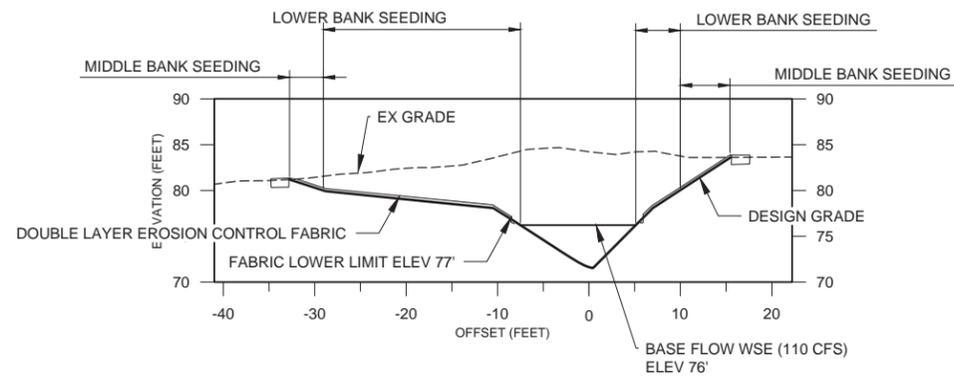
DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
BRUSH MAT DETAILS

FILE NAME: 7351-DETAIL-BRUSH-MATRESS.dwg	DRAWING NUMBER: D-11	SHEET 39 OF 42
CONTRACT NUMBER: 7351		



PLAN

SCALE: 1" = 30'



SITE 2C TYPICAL SECTION - EROSION CONTROL TREATMENT

SCALE: 1" = 10'

EROSION CONTROL TREATMENT			
SYMBOL	DESCRIPTION	APPROX AREA (SQ FT)	ELEV RANGE
	EROSION CONTROL FABRIC	21,300	ELEV 77' TO LIMIT OF GRADING
	MIDDLE BANK SEEDING	5,700	>84'
	LOWER BANK SEEDING	16,100	76' TO 80'

NOTES

- SEE EROSION CONTROL DETAILS DRAWING (EC-03) FOR SEED MIXES.
- SEED ALL ACCESS ROUTES AND DISTURBED AREAS WITH APPROPRIATE SEED MIX.

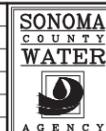


BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



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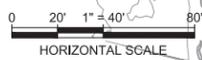
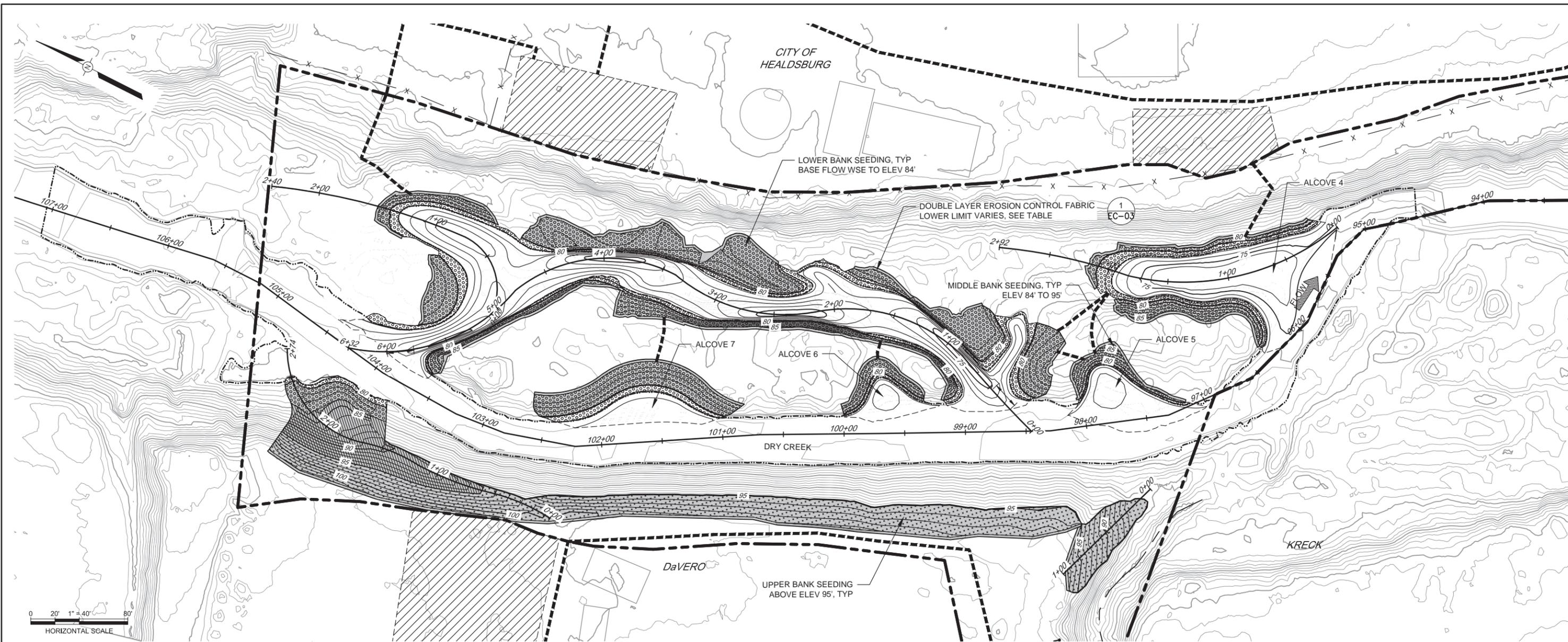
SCALE: 1" = 40'	DATE: 03/17/2016
DRAWN: AF	
REVIEWED:	

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2C EROSION CONTROL PLAN

FILE NAME: 7351-DRY-CREEK-SITE-2C-EROSION.dwg
CONTRACT NUMBER: 7351

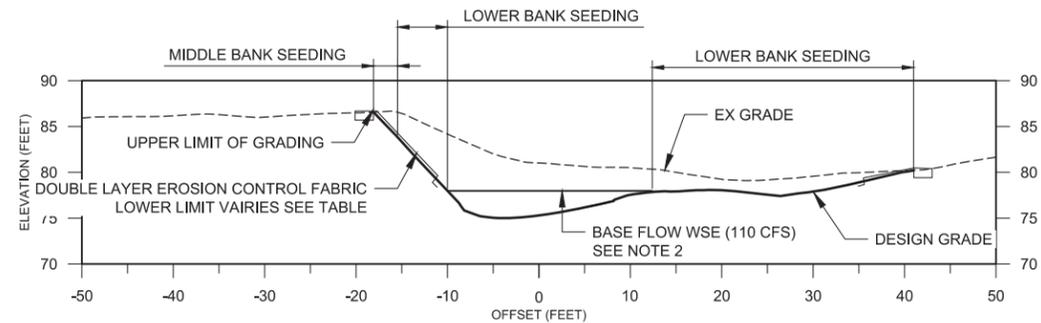
DRAWING NUMBER: EC-01

SHEET 40 OF 42



PLAN

SCALE: 1" = 40'



SITE 2D TYPICAL SECTION - EROSION CONTROL TREATMENT

SCALE: 1" = 10'

SIDE 2D EROSION CONTROL FABRIC INSTALLATION	
LOCATION	LOWER LIMIT (ELEV, FT)
MAIN STEM, ALCOVE 4 & 5	79'
MAIN STEM, ALCOVE 6 & 7	80'
2D-1, STA 0+00 TO 2+00	80'
2D-1, STA 2+00 TO 4+00	80.5'
2D-1, STA 4+00 TO 6+32	81'

EROSION CONTROL TREATMENT			
SYMBOL	DESCRIPTION	APPROX AREA (SQ FT)	ELEV RANGE
[Solid Grey Box]	EROSION CONTROL FABRIC	46,000	VARIES SEE TABLE AT LEFT
[Dotted Pattern Box]	UPPER BANK SEEDING	13,100	> 95'
[Diagonal Line Pattern Box]	MIDDLE BANK SEEDING	4,700	84' TO 95'
[Circular Pattern Box]	LOWER BANK SEEDING	27,500	BASE FLOW WSE TO 84'

NOTES

- SEE EROSION CONTROL DETAILS DRAWING (EC-03) FOR SEED MIXES.
- SEE PROFILE SHEET C-09 FOR BASE FLOW WSE.
- SEED ALL ACCESS ROUTES AND DISTURBED AREAS WITH APPROPRIATE SEED MIX.

BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY

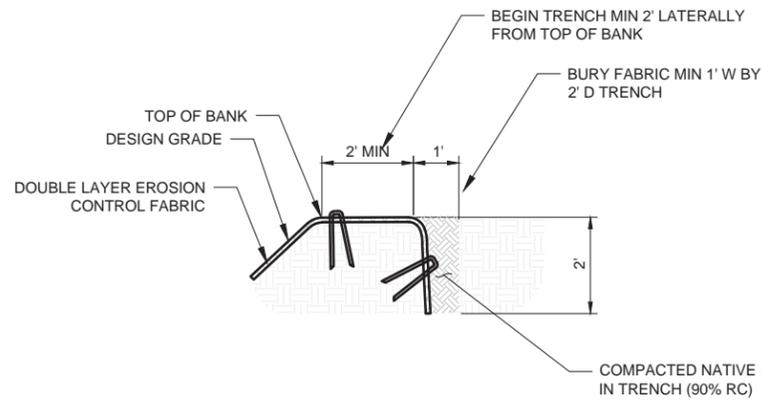


NO.	DATE	REVISION	BY

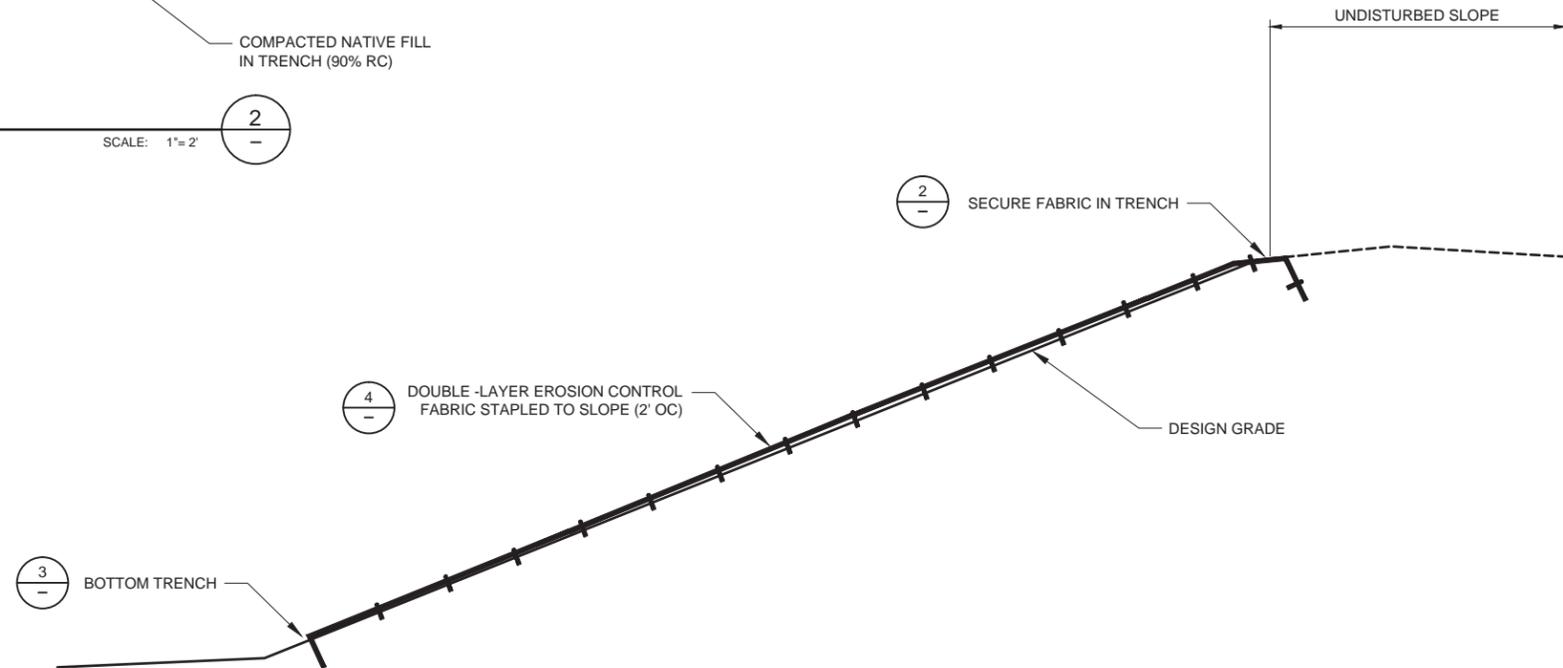


SCALE: 1" = 40'	DATE: 03/17/2016
DRAWN: AF	
REVIEWED:	

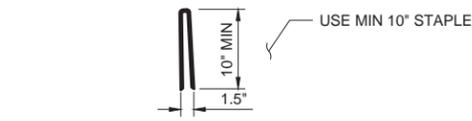
**DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
SITE 2D EROSION CONTROL PLAN**



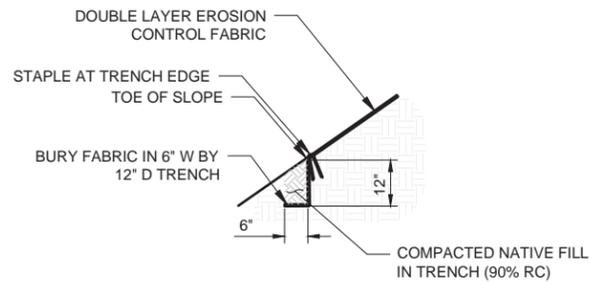
TOP TRENCH DETAIL
SECTION VIEW SCALE: 1"=2' 2



EROSION CONTROL FABRIC
ISOMETRIC VIEW SCALE: 1"=5' 1 VAR



STAPLE DETAIL
SECTION VIEW SCALE: 1"=1' 4



BOTTOM TRENCH DETAIL
SECTION VIEW SCALE: 1"=2' 3

SEED MIX TABLE		
LATIN NAME	COMMON NAME	LBS/ACRE
LOWER BANK SEEDING AREA		
AGROSTIS EXARATA	SPIKE BENTGRASS	2
ELEOCHARIS MACROSTACHYA	CREEPING SPIKERUSH	2
FESTUCA RUBRA	RED FESCUE	5
HORDEUM BRACHYANTHERUM	MEADOW BARLEY	10
LEYMUS TRITICOIDES	CREEPING WILDRYE	10
FESTUCA MICROSTACHYS	SMALL FESCUE	5
TRIFOLIUM WORMSKIOLDII	COW CLOVER	1
TOTAL		35
MIDDLE BANK SEEDING AREA		
BROMUS CARINATUS	CALIFORNIA BROME	5
ELYMUS GLAUCUS	BLUE WILDRYE	5
FESTUCA MICROSTACHYS	SMALL FESCUE	5
FESTUCA RUBRA	RED FESCUE	10
HORDEUM BRACHYANTHERUM	MEADOW BARLEY	10
LEYMUS TRITICOIDES	CREEPING WILDRYE	5
TOTAL		40
UPPER BANK SEEDING AREA		
ACHILLEA MILLEFOLIUM	YARROW	1
BROMUS CARINATUS	CALIFORNIA BROME	10
ELYMUS GLAUCUS	BLUE WILDRYE	10
ESCSCHOLZIA CALIFORNICA	CALIFORNIA POPPY	1
FESTUCA MICROSTACHYS	SMALL FESCUE	5
LOTUS PURSHIANUS	SPANISH CLOVER	2
LUPINUS BICOLOR	MINIATURE LUPINE	1
STIPA PULCHRA	PURPLE NEEDLEGRASS	10
TOTAL		40

NOTES

1. FINISH GRADE SURFACE SHALL BE CLEARED OF LOOSE ROCKS, CLODS, STICKS AND GRASS BEFORE FABRIC INSTALLATION
2. USE TWO LAYERS (DOUBLE LAYER) BIODEGRADABLE COIR EROSION CONTROL FABRIC. PLACE WOVEN FABRIC ON UNWOVEN FABRIC AND SECURE
3. HYDROSEED SLOPE WITH NATIVE SEED MIX BEFORE PLACING FABRIC.
4. LAY FABRIC LOOSELY AND STAKE OR STAPLE 2' OC (VERTICAL) AND 2' OC (HORIZONTAL) TO MAINTAIN DIRECT CONTACT WITH THE FINISH GRADE SURFACE. DO NOT STRETCH.
5. FABRIC SHOULD BE INSTALLED VERTICALLY DOWNSLOPE AND OVERLAPPED A MIN OF 4" IN DOWNSTREAM DIRECTION.
6. FABRIC SHALL BE EXTENDED MIN 2' Laterally FROM THE TOP OF BANK, SECURED PER DETAIL THIS SHEET.

BAR LENGTH ON ORIGINAL DRAWING EQUALS ONE INCH. ADJUST SCALE ACCORDINGLY



NO.	DATE	REVISION	BY

SONOMA COUNTY WATER AGENCY
 SCALE: SCALE DATE: 03/17/2016
 DRAWN: DRAWN
 REVIEWED:
 AGENCY

DRY CREEK HABITAT ENHANCEMENT PHASE III, MILE THREE: SITES 2C & 2D
EROSION CONTROL DETAILS
 FILE NAME: 7351-DETAIL-EROSION-FABRIC.dwg CONTRACT NUMBER: 7351
 DRAWING NUMBER: EC-03 SHEET 42 OF 42