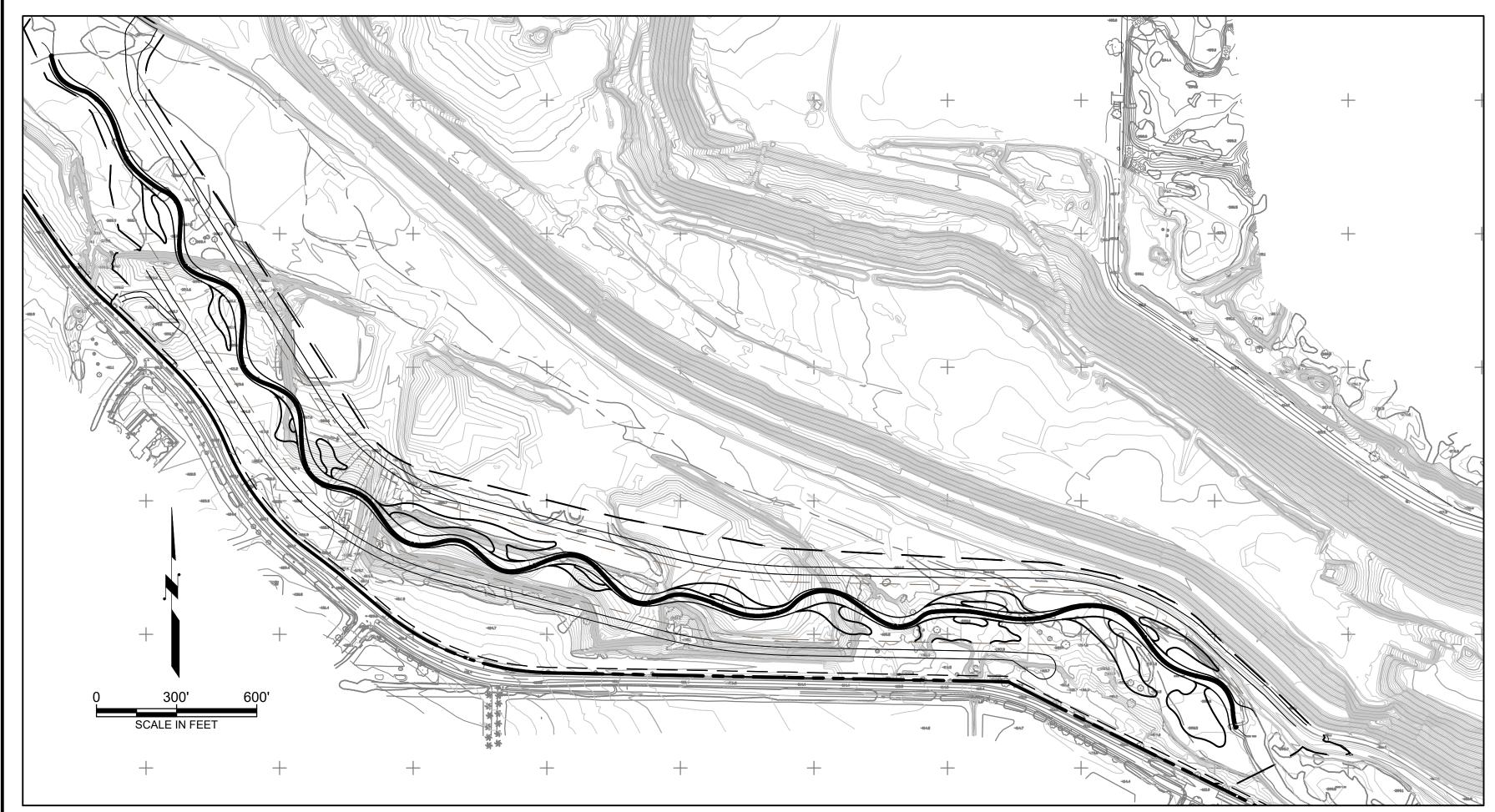


APPENDIX B-4 IMPROVEMENT PLANS FOR ARROYO DEL VALLE REALIGNMENT



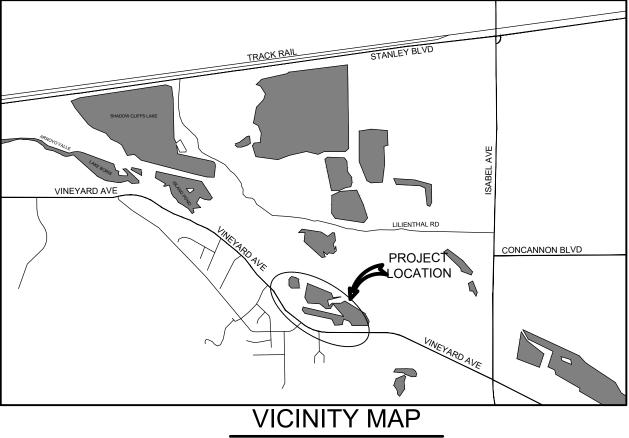
CEMEX (WEB).jpg Backwater Wetland.jpg Channel Bifurcation.jpg Flowthrough Wetland.jpg Tributary Wetland PowerE



VOLUME 1 OF 1

Brown AND Caldwell

701 PIKE STREET **SUITE 1200** SEATTLE, WA 98101



PROPERTY OWNER AND CONSTRUCTION CONTRACTOR CEMEX CONSTRUCTION MATERIALS PACIFIC LLC 2365 IRON POINT ROAD, SUITE 120 FOLSOM, CALIFORNIA 95630

APPLICANT DEBORAH HALDEMAN REGIONAL NATURAL RESOURCES MANAGER NORTHERN CALIFORNIA/NEVADA CEMEX CONSTRUCTION MATERIALS PACIFIC LLC 2365 IRON POINT ROAD, SUITE 120 FOLSOM, CA 95630

CIVIL ENGINEER

916.941.2800 916.939.7492

NATHAN H. FOGED MANAGING ENGINEER 701 PIKE STREET, SUITE 1200 SEATTLE, WA, 98101 206.749.2202 206.749.2200 (FAX)

DRAFT NOT FOR CONSTRUCTION

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ABBREVIATIONS:

AC AG	ACRES AGRICULTURAL
AGG	AGGREGATE
AMSL	ABOVE MEAN SEA LEVEL
APN	ASSESSOR'S PARCEL NUMBER
AVG	AVERAGE
CFR	CODE OF FEDERAL REGULATIONS
CL	CENTER LINE
CMP	CORRUGATED METAL PIPE
CY	CUBIC YARDS
E	EAST
ELEV	ELEVATION
FG	FINISH GRADE
FL	FLOW LINE
FT	FEET
GB	GRADE BREAK
GW	GROUND WATER
Н	HORIZONTAL
IRR	IRRIGATION
MSHA	MINE SAFETY AND HEALTH
	ADMINISTRATION
MW	MONITOR WELL
N	NORTH
N.I.C	NOT IN CONTRACT
NO.	
OG	ORIGINAL GROUND ELEVATION
PC PRC	PC POINT OF CURVATURE POINT OF REVERSE CURVATURE
PRC	POINT OF REVERSE CORVATORE PROPERTY LINE
PL R	RADIUS
n	

HORIZONTAL DATUM:

VERTICAL DATUM:

California Coordinate System, Zone 3 North American Datum of 1983 (NAD83, 2000.35) North American Vertical Datum of 1988 (NAVD88) GROUND CONTROL SURVEY BY: Towill, Inc. (Based on Control by Guida Surveying, Inc.)

SHEET INDEX

G-001	GENERAL NOTES
G-002	GENERAL NOTES
C-101	SITE PLAN
C-102	TRANSITION PLAN
C-103	EROSION CONTROL PLAN
C-104	EROSION CONTROL PLAN
C-105	EROSION CONTROL PLAN
C-106	TYPICAL CONSTRUCTION SEQUENCING
C-201	PROFILE VIEW AND PLAN
C-202	PROFILE VIEW AND PLAN
C-203	PROFILE VIEW AND PLAN
C-204	PROFILE VIEW AND PLAN
C-205	PROFILE VIEW AND PLAN
C-206	PROFILE VIEW AND PLAN
C-301	CROSS SECTION AND TRANSITION DETAIL
C-501	DETAIL
C-502	DETAIL
C-503	DETAIL
C-504	DETAIL
L-101	LANDSCAPE PLAN
L-102	LANDSCAPE PLAN
L-103	LANDSCAPE PLAN

ВM

SB-47

BENCHMARK
SOIL BORING INDICTOR
BUILDING STRUCTURE

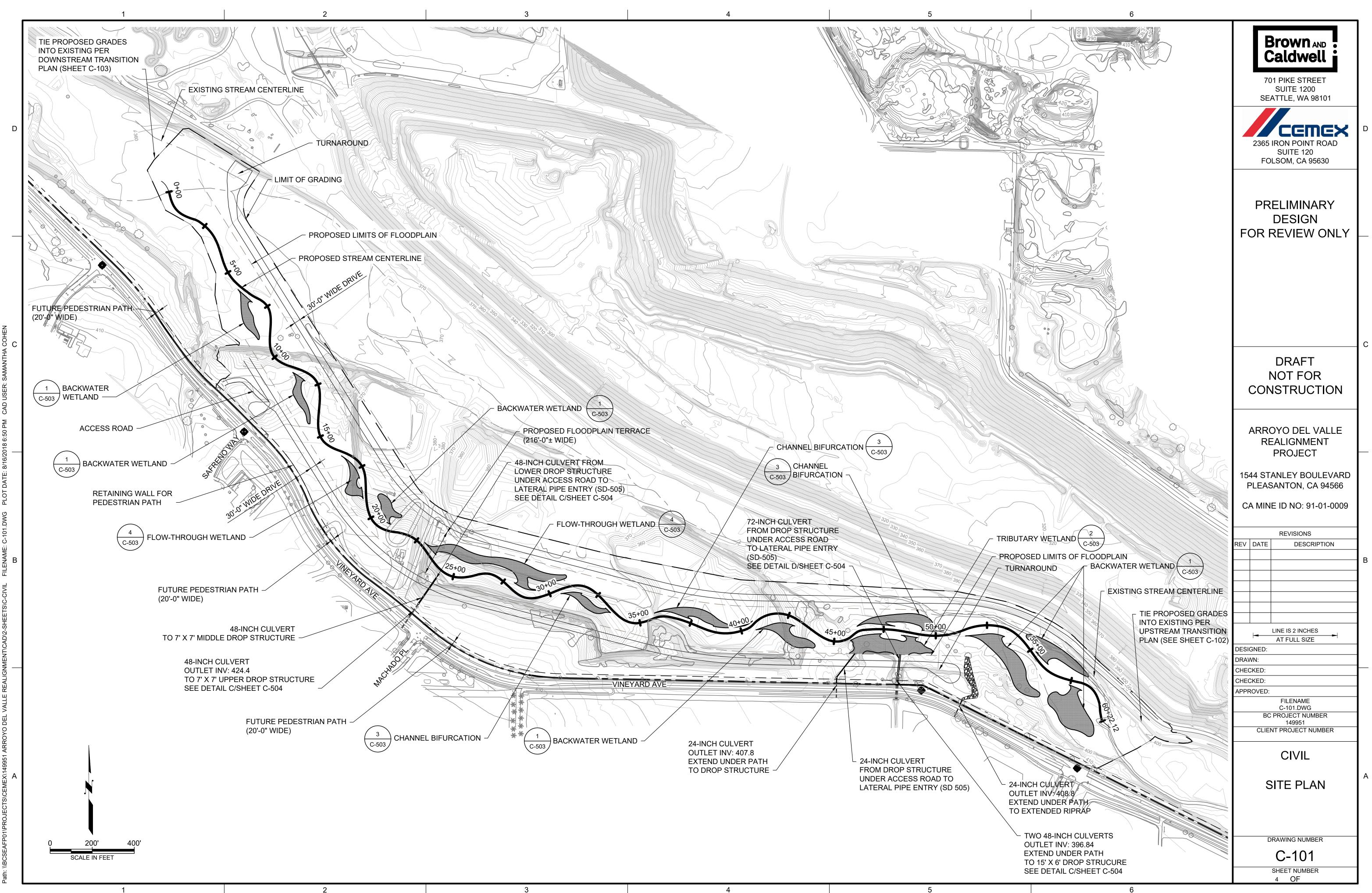
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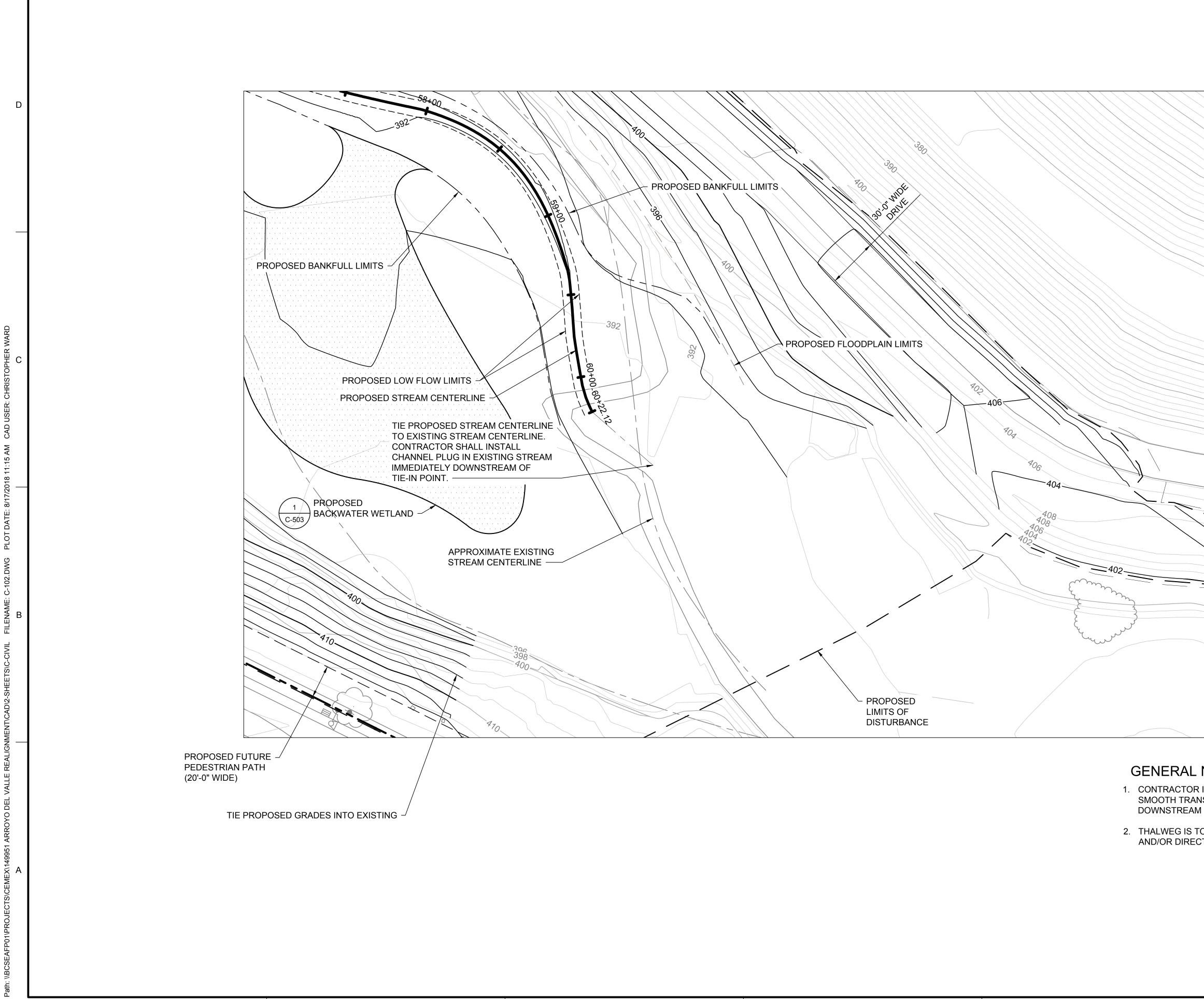
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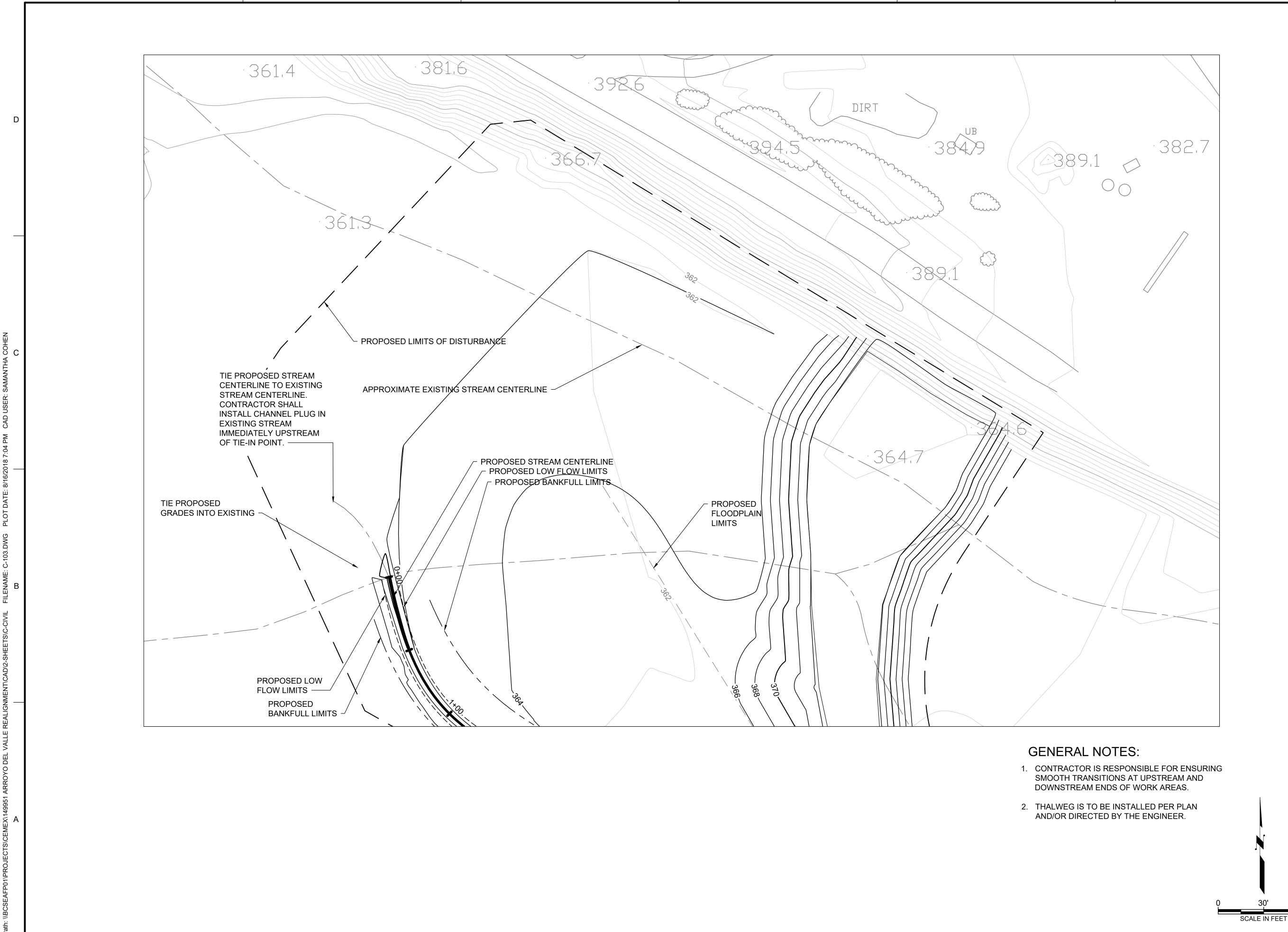
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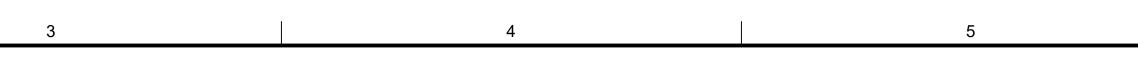
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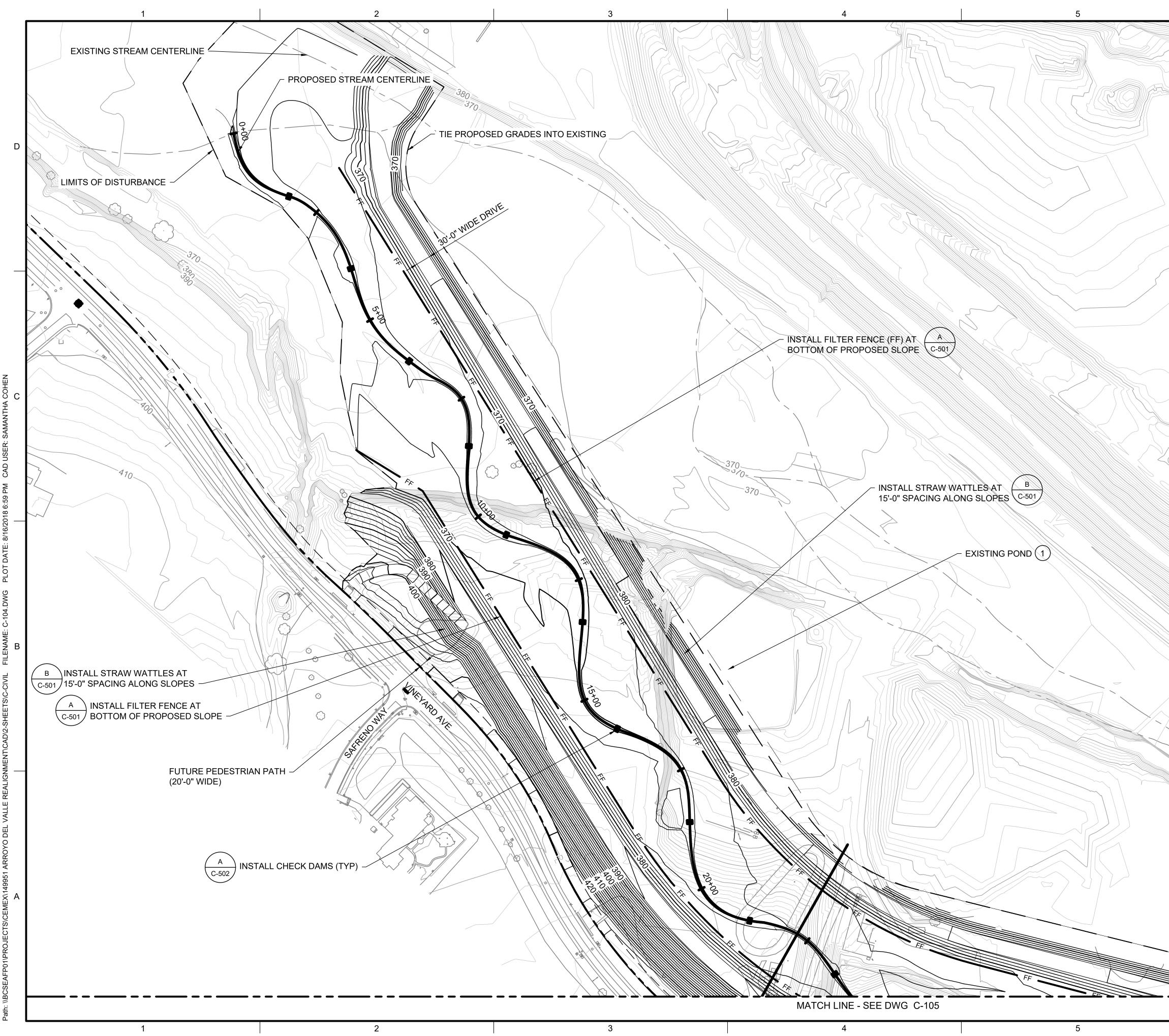
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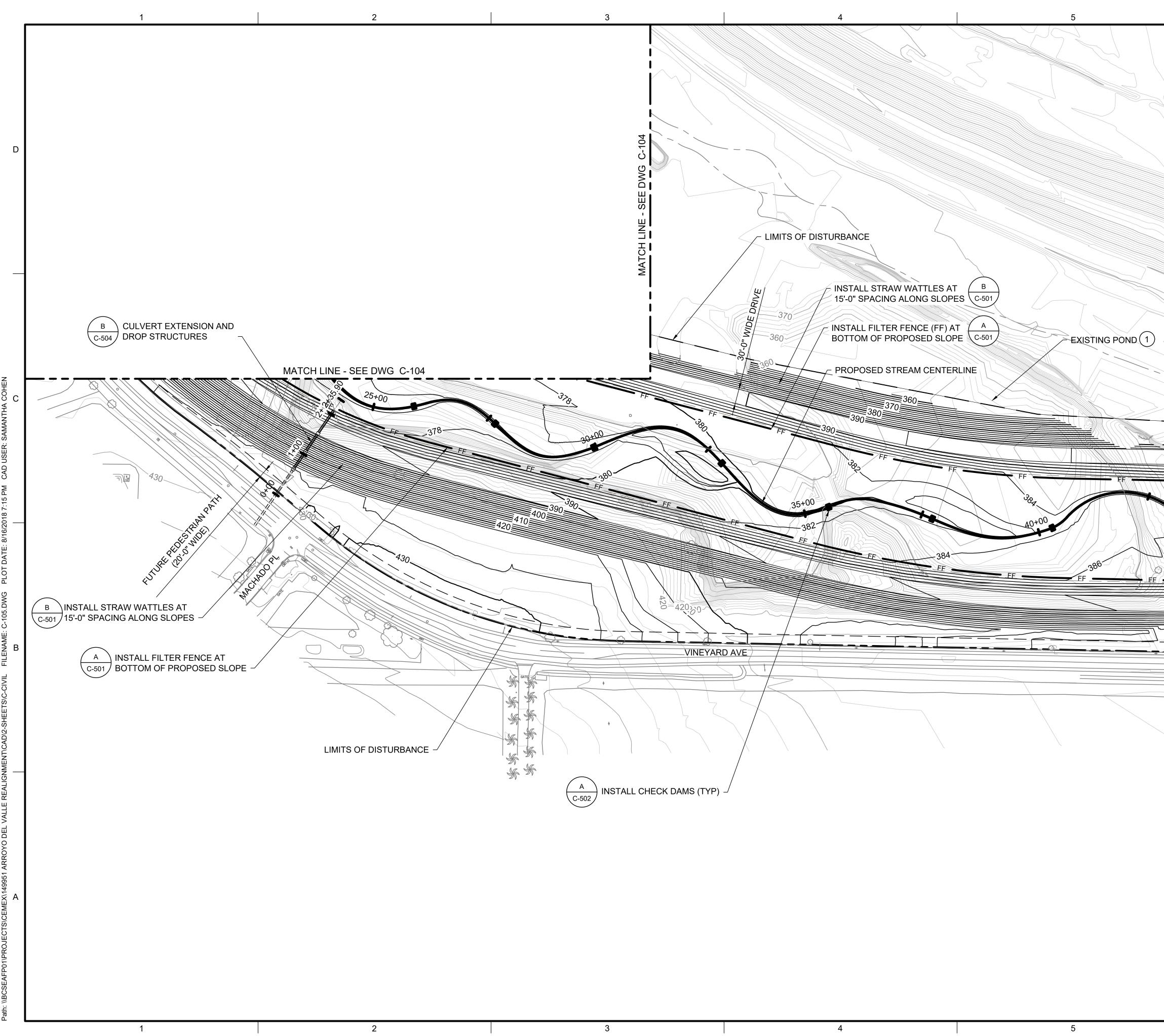
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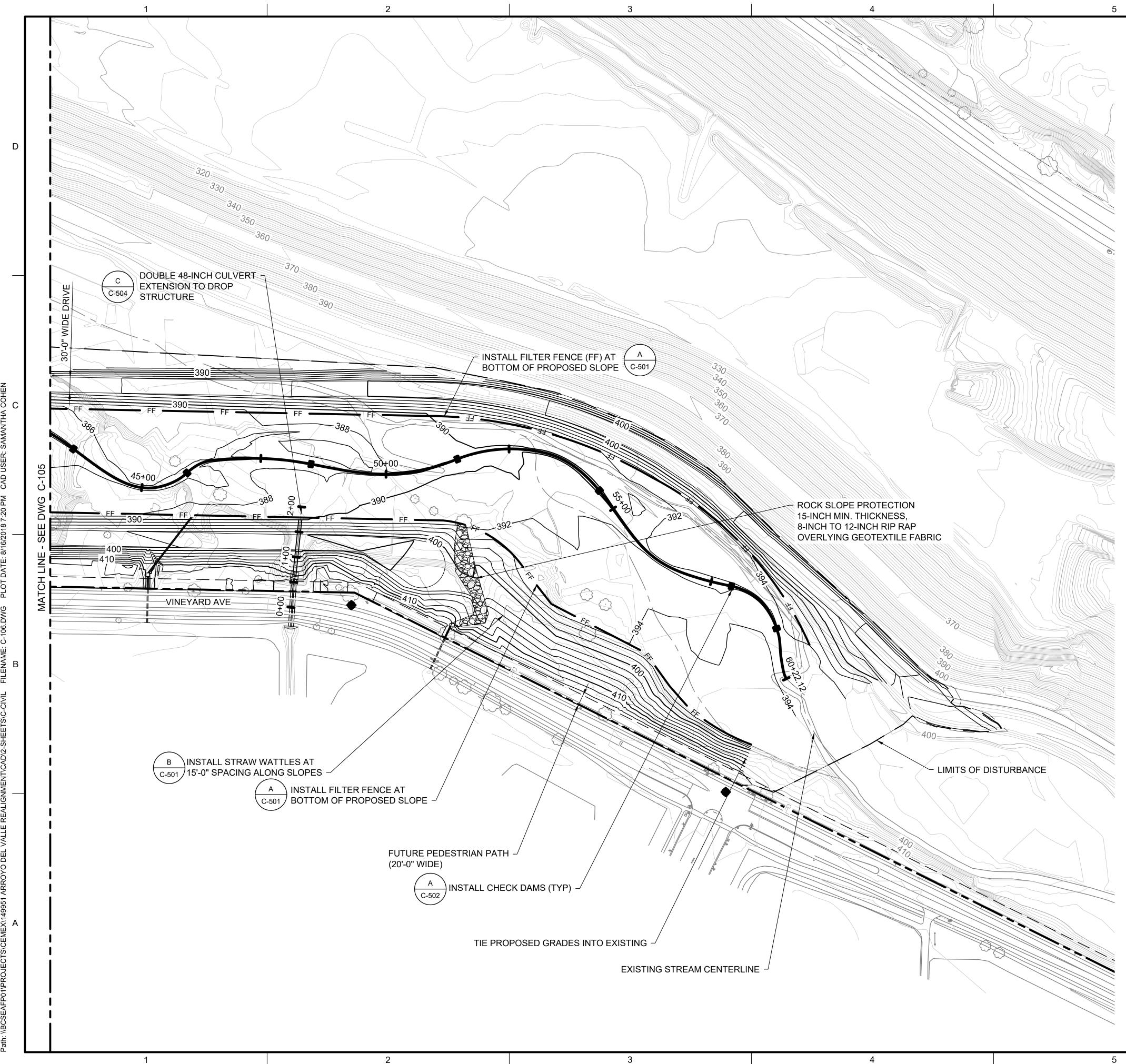


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GENERAL NOTES:	Brown	
1. ADDITIONAL INFORMATION REGARDING THE ARROYO DEL VALLE REALIGNMENT PROJECT'S EROSION CONTROL MEASURES CAN BE FOUND IN	Brown AND Caldwell	
 THE SMP-23 REVISED RECLAMATION PLAN. 2. EROSION CONTROL FACILITIES SHALL BE INSTALLED AND MAINTAINED ACCORDING TO THE TECHNICAL STANDARDS AND SPECIFICATIONS OF 	701 PIKE STREET SUITE 1200 SEATTLE, WA 98101	
 ALAMEDA COUNTY. THIS SUGGESTED EROSION CONTROL PLAN IS INTENDED TO PROVIDE CONCEPTUAL EROSION CONTROL BMPS FOR THE CONTRACTOR'S 	2365 IRON POINT ROAD	D
 CONSIDERATION. 4. CONTRACTOR IS RESPONSIBLE FOR SUBMITTING FINAL EROSION CONTROL, DEWATERING, MATERIALS MANAGEMENT AND SEQUENCING PLANS TO ALAMEDA COUNTY PRIOR TO 	SUITE 120 FOLSOM, CA 95630	
 CONSTRUCTION START. 5. CONTRACTOR SHALL KEEP AND POST A COPY OF ALL PERMITS AND APPROVED PLANS AT THE PROJECT SITE AT ALL TIMES. 	PRELIMINARY	
6. CONTRACTOR SHALL ALLOW FREE AND UNLIMITED ACCESS TO THE PROJECT SITE AT ANY TIME TO ANY REGULATORY AGENCY	DESIGN FOR REVIEW ONLY	┝
EMPLOYEE INSPECTING THE CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ALAMEDA COUNTY OR STATE OF CALIFORNIA FINES RESULTING FROM DEVIATION, WITHOUT OWNER APPROVAL, FROM THE CONTRACT DOCUMENTS.		
 ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET. 		
8. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY	DRAFT	С
MEASURES ARE NO LONGER NEEDED. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT	NOT FOR CONSTRUCTION	
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SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR	1544 STANLEY BOULEVARD PLEASANTON, CA 94566	
LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE	CA MINE ID NO: 91-01-0009	_
THAN ONE YEAR. 10. EROSION AND SEDIMENT CONTROLS SHALL BE	REVISIONS REV DATE DESCRIPTION	
MAINTAINED UNTIL THE DISTURBED AREA IS STABILIZED.		В
OSHEET KEYNOTES:		
1 EXISTING POND TO BE DEWATERED PRIOR TO FILL PER "GEOTECHNICAL		
INVESTIGATION/SLOPE STABILITY ANALYSIS - CEMEX ELIOT-ARROYO DEL VALLE REALIGNMENT AT LAKE B" BY GEOCON CONSULTANTS, INC. DATED JANUARY 2017.	LINE IS 2 INCHES	
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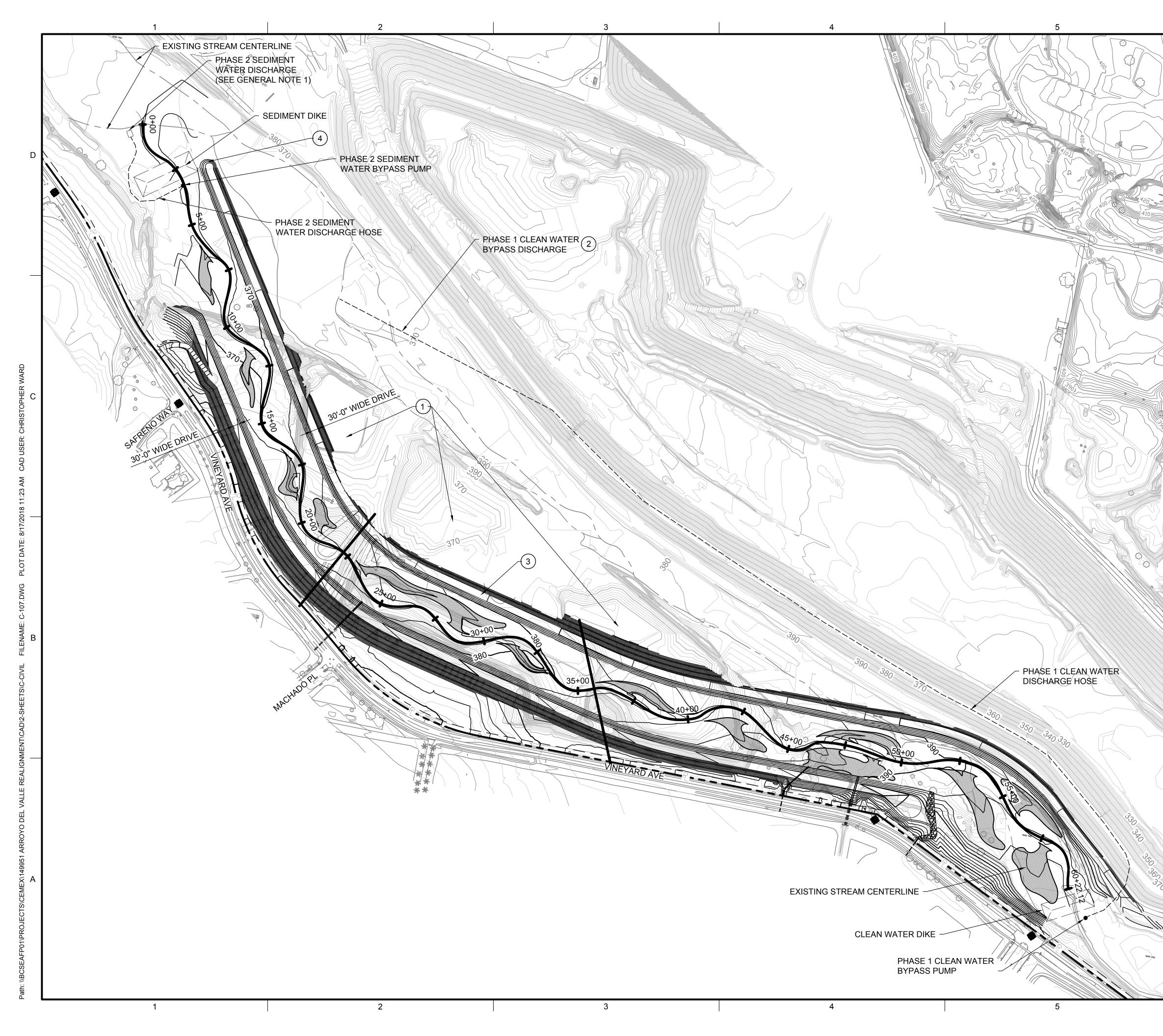
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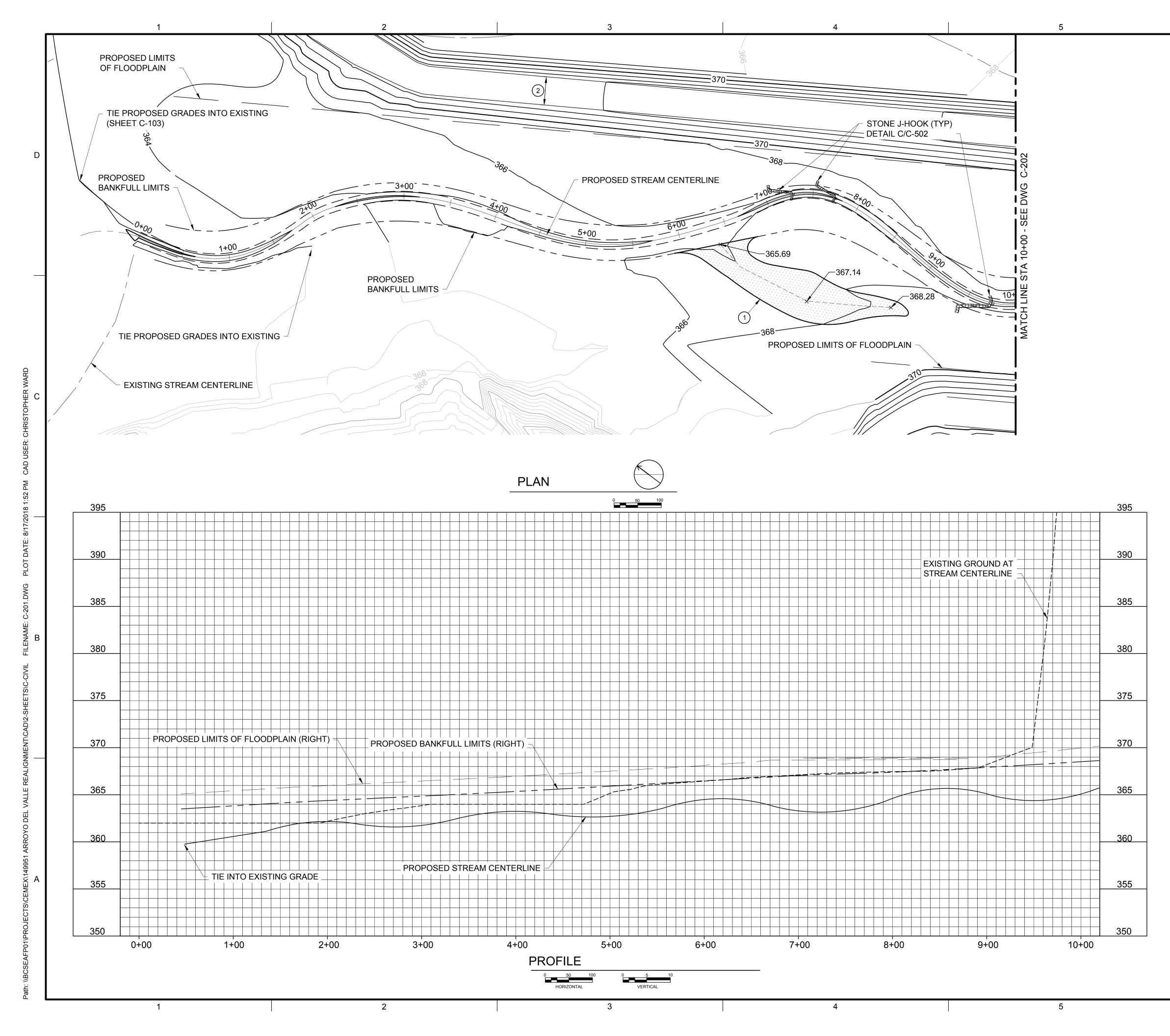
6 GENERAL NOTES:	
1. ADDITIONAL INFORMATION REGARDING THE ARROYO DEL VALLE REALIGNMENT PROJECT'S	Brown AND Caldwell
EROSION CONTROL MEASURES CAN BE FOUND IN THE SMP-23 REVISED RECLAMATION PLAN.2. EROSION CONTROL FACILITIES SHALL BE	701 PIKE STREET SUITE 1200
INSTALLED AND MAINTAINED ACCORDING TO THE TECHNICAL STANDARDS AND SPECIFICATIONS OF ALAMEDA COUNTY. 3. THIS SUGGESTED EROSION CONTROL PLAN IS	OLATILL, WA SOTOT
INTENDED TO PROVIDE CONCEPTUAL EROSION CONTROL BMPS FOR THE CONTRACTOR'S CONSIDERATION.	2365 IRON POINT ROAD SUITE 120
4. CONTRACTOR IS RESPONSIBLE FOR SUBMITTING FINAL EROSION CONTROL, DEWATERING, MATERIALS MANAGEMENT AND SEQUENCING PLANS TO ALAMEDA COUNTY PRIOR TO	FOLSOM, CA 95630
CONSTRUCTION START. 5. CONTRACTOR SHALL KEEP AND POST A COPY OF ALL PERMITS AND APPROVED PLANS AT THE	
 PROJECT SITE AT ALL TIMES. 6. CONTRACTOR SHALL ALLOW FREE AND UNLIMITED ACCESS TO THE PROJECT SITE AT ANY TIME TO ANY REGULATORY AGENCY EMPLOYEE INSPECTING THE CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ALAMEDA COUNTY OR STATE OF CALIFORNIA FINES RESULTING FROM DEVIATION, WITHOUT 	DESIGN FOR REVIEW ONLY
 OWNER APPROVAL, FROM THE CONTRACT DOCUMENTS. 7. ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET. 	
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TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION. 9. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDER AREAS WITHIN SEVEN DAYS AFTER FINAL	ARROYO DEL VALLE REALIGNMENT PROJECT
GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS	1544 STANLEY BOULEVARD PLEASANTON, CA 94566 CA MINE ID NO: 91-01-0009
THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR. 10. EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED UNTIL THE DISTURBED AREA IS STABILIZED.	REVISIONS REV DATE DESCRIPTION
OSHEET KEYNOTES:	
1 EXISTING POND TO BE DEWATERED PRIOR TO FILL PER "GEOTECHNICAL INVESTIGATION/SLOPE STABILITY ANALYSIS - CEMEX ELIOT-ARROYO DEL VALLE	LINE IS 2 INCHES
REALIGNMENT AT LAKE B" BY GEOCON CONSULTANTS, INC. DATED JANUARY 2017.	DRAWN: CHECKED: CHECKED:
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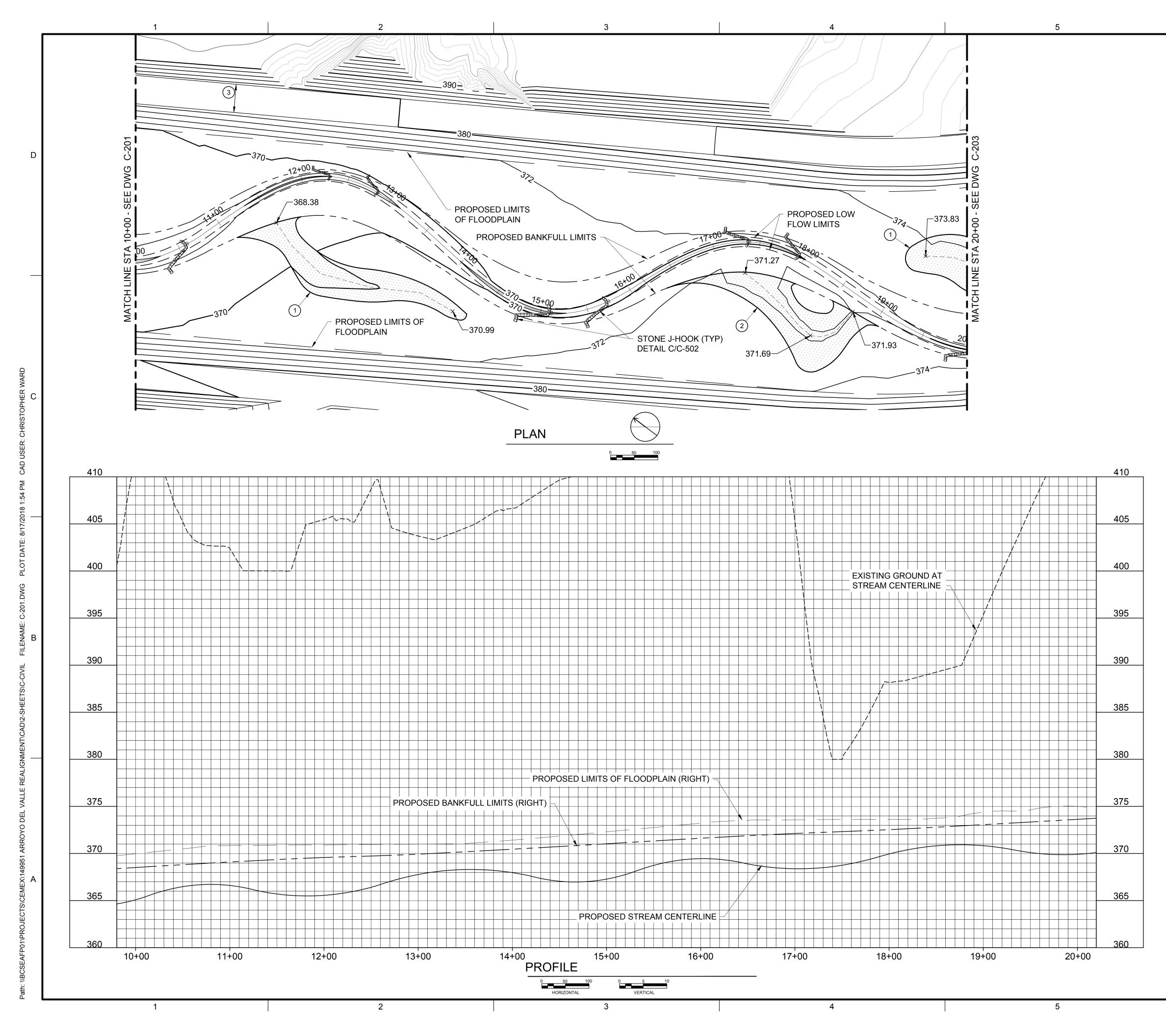
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GENERAL NOTES:	Brown AND .	
1. ADDITIONAL INFORMATION REGARDING THE ARROYO DEL VALLE REALIGNMENT PROJECT'S	Caldwell	
EROSION CONTROL MEASURES CAN BE FOUND IN THE SMP-23 REVISED RECLAMATION PLAN.	701 PIKE STREET SUITE 1200	
2. EROSION CONTROL FACILITIES SHALL BE INSTALLED AND MAINTAINED ACCORDING TO THE TECHNICAL STANDARDS AND SPECIFICATIONS OF	SEATTLE, WA 98101	-
 ALAMEDA COUNTY. THIS SUGGESTED EROSION CONTROL PLAN IS INTENDED TO PROVIDE CONCEPTUAL EROSION CONTROL BMPS FOR THE CONTRACTOR'S CONSIDERATION. 	2365 IRON POINT ROAD SUITE 120	D
 4. CONTRACTOR IS RESPONSIBLE FOR SUBMITTING FINAL EROSION CONTROL, DEWATERING, 	FOLSOM, CA 95630	
 MATERIALS MANAGEMENT AND SEQUENCING PLANS TO ALAMEDA COUNTY PRIOR TO CONSTRUCTION START. 5. CONTRACTOR SHALL KEEP AND POST A COPY OF 	PRELIMINARY DESIGN	
ALL PERMITS AND APPROVED PLANS AT THE PROJECT SITE AT ALL TIMES. 6. CONTRACTOR SHALL ALLOW FREE AND	FOR REVIEW ONLY	
UNLIMITED ACCESS TO THE PROJECT SITE AT ANY TIME TO ANY REGULATORY AGENCY EMPLOYEE INSPECTING THE CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ALAMEDA COUNTY OR STATE OF CALIFORNIA FINES RESULTING FROM DEVIATION, WITHOUT OWNER APPROVAL, FROM THE CONTRACT		
 DOCUMENTS. 7. ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE 		с
MET. 8. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED	DRAFT	
WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY	NOT FOR CONSTRUCTION	
MEASURES ARE NO LONGER NEEDED. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF		-
TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT	ARROYO DEL VALLE	
 FURTHER EROSION AND SEDIMENTATION. 9. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED 	REALIGNMENT PROJECT	
AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SVEN DAYS TO DENUDED	1544 STANLEY BOULEVARD PLEASANTON, CA 94566	
AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 14 DAYS. PERMANENT	CA MINE ID NO: 91-01-0009	
STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE	REVISIONS	
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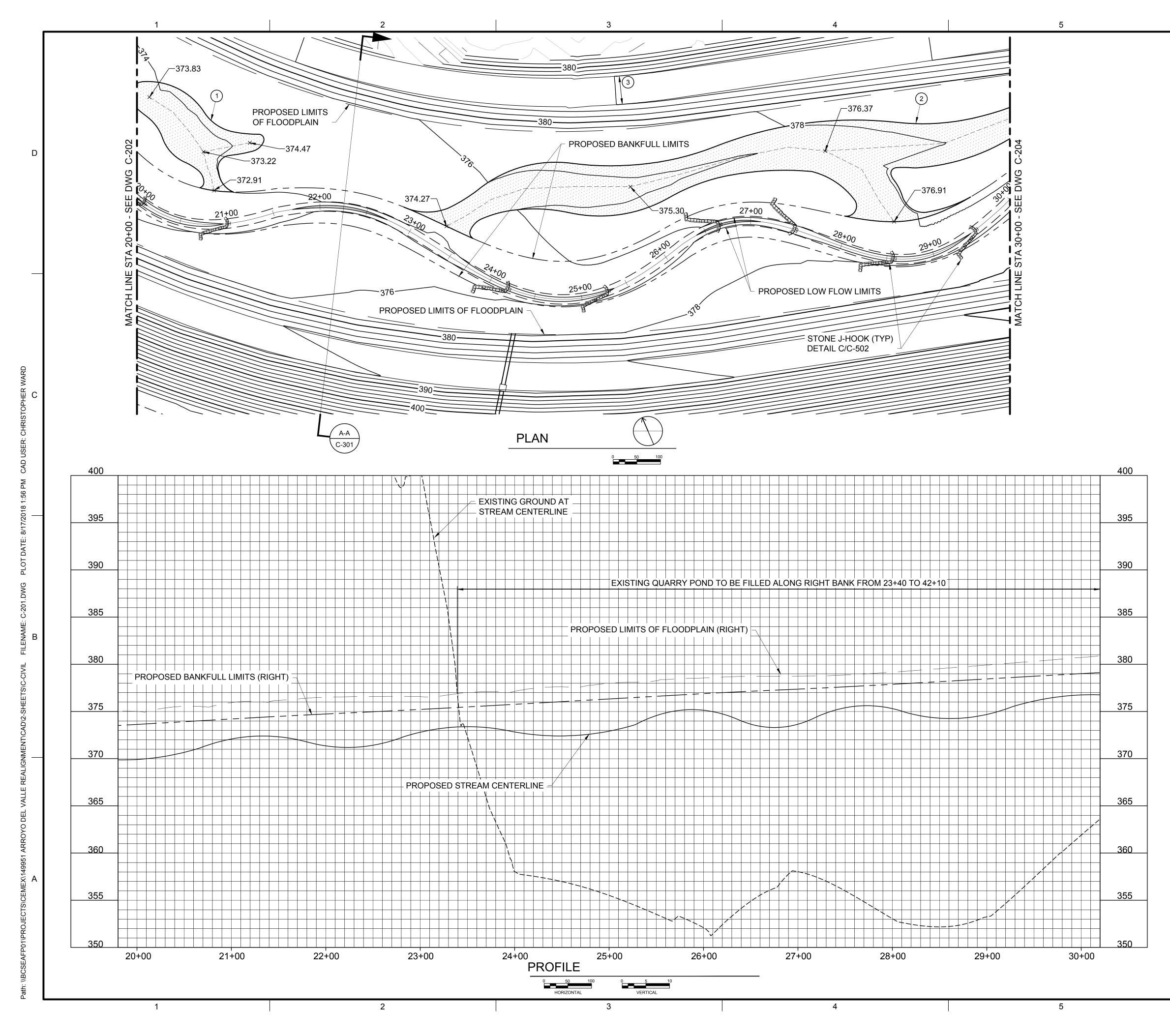
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	GENERAL NOTES:	Brown	
	 ALL PHASE 2 SEDIMENT WATER DISCHARGE SHALL PASS THROUGH SILT BAGS AND/OR RIP RAP APRON STRUCTURE BASED ON FLOW RATES PRIOR TO ENTERING EXISTING STREAM. 	Brown AND Caldwell 701 PIKE STREET SUITE 1200 SEATTLE, WA 98101	
		2365 IRON POINT ROAD SUITE 120 FOLSOM, CA 95630	D
		PRELIMINARY DESIGN FOR REVIEW ONLY	
	OSHEET KEYNOTES:		
	1. EXISTING PONDS TO BE DEWATERED PRIOR TO FILL PER "GEOTECHNICAL INVESTIGATION/SLOPE STABILITY ANALYSIS - CEMEX ELIOT-ARROYO DEL VALLE REALIGNMENT AT LAKE B" BY GEOCON CONSULTATNTS, INC. DATED JANUARY 2017.		
	2. CLEAN WATER BYPASS DISCHARGE TO BE EXTENDED PAST EXISTING PONDS TO MINIMIZE FLOW BACK INTO DEWATERED PONDS.	DRAFT NOT FOR	С
	3. THIRTY-FOOT WIDE DRIVE BERM TO BE INSTALLED AFTER BYPASS STORM SYSTEM IS INSTALLED BUT BEFORE ANY CHANNEL MODIFICATIONS OCCUR. BERM TO BE CONSTRUCTED PER "GEOTECHNICAL INVESTIGATION/SLOPE STABILITY ANALYSIS - CEMEX ELIOT-ARROYO DEL VALLE	CONSTRUCTION ARROYO DEL VALLE REALIGNMENT	
	REALIGNMENT AT LAKE B" BY GEOCON CONSULTATNTS, INC. DATED JANUARY 2017.	PROJECT	
) } {	4. TURN AROUND AREA GRADING TO BE COMPLETED ONLY WHEN BYPASS	1544 STANLEY BOULEVARD PLEASANTON, CA 94566	
N NSAIR	DISCHARGE ALONG EXISTING STREAMLINE NO LONGER NECESSARY.	CA MINE ID NO: 91-01-0009	
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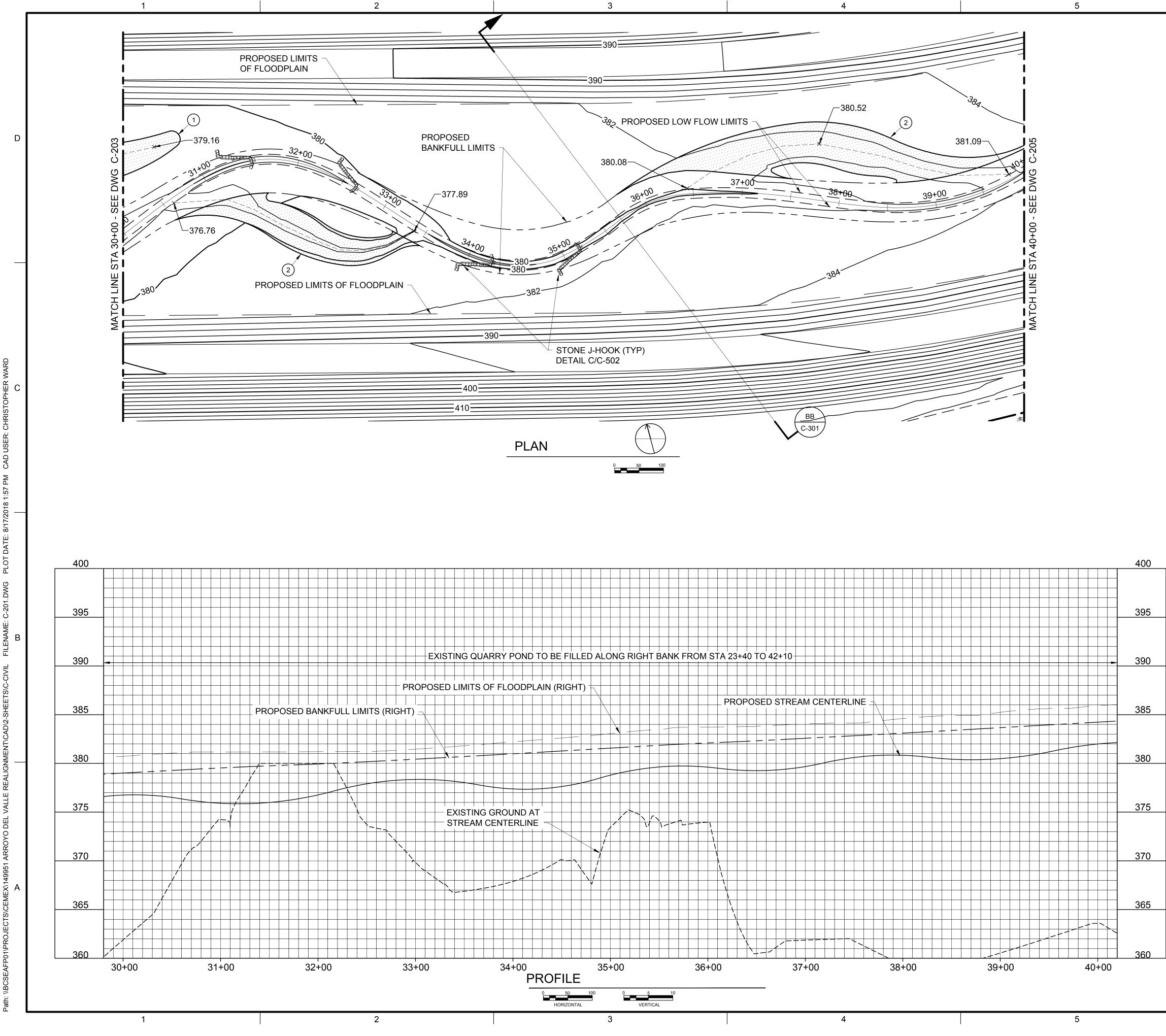
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 GENERAL NOTES: 1. TYPICAL POOL AND RIFFLE, SEE DETAILS A/C-505 AND B/C-505. 2. STAGING & STOCKPILE TO BE LOCATED AS SHOWN ON SHEET C-106. 3. ALL DISTURBED AREAS WITHIN THE LIMIT OF DISTURBANCE (EXCEPT CHANNEL) SHALL BE 	Brown AND Caldwell 701 PIKE STREET SUITE 1200 SEATTLE, WA 98101
 RE-SEEDED AND / OR RE-PLANTED PER PLANTING PLAN. 4. ALL CUT AND FILL QUANTITIES, AS LISTED, SHALL BE CONSIDERED APPROXIMATE ONLY AND ARE SUBJECT TO CHANGE PENDING ACTUAL SITE CONDITIONS AND CONSTRUCTION OPERATIONS. 5. EXCAVATED STREAM BANK / BED MATERIAL 	2365 IRON POINT ROAD SUITE 120 FOLSOM, CA 95630
 MAY BE USED WHERE PLANS INDICATE "FILL", PROVIDED THAT THE MATERIAL IS UNIFORM IN CONSISTENCY, FREE OF EXCESS ORGANIC MATTER AND CONTAINS NO MORE THAN 20 PERCENT (BY UNIT VOLUME) OF SAND, SILT AND/OR FINES. 6. CONTRACTOR SHALL DISTURB ONLY WHAT IS NECESSARY TO PERFORM IMPROVEMENTS. CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE DISTURBED AREA, INCLUDING THAT WITHIN THE PERMITTED LOD. 7. AREAS DISTURBED DURING CONSTRUCTION 	PRELIMINARY DESIGN FOR REVIEW ONLY
 WITHOUT A SPECIFIED RESTORATION LAND COVER SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS. THE DEPTH OF THE BANKFULL CHANNEL VARIES WITHIN EACH MEANDER TO CREATE NATURAL POOLS AND RIFFLES. WHEN LOOKING DOWNSTREAM, THE RIGHT BANK IS ON THE OBSERVER'S RIGHT. 	C
	DRAFT NOT FOR CONSTRUCTION
 SHEET KEYNOTES: 1. BACKWATER WETLAND, SEE DETAIL 1/C-503 2. 30'-0" WIDE DRIVE 	ARROYO DEL VALLE REALIGNMENT PROJECT
	1544 STANLEY BOULEVARD PLEASANTON, CA 94566 CA MINE ID NO: 91-01-0009
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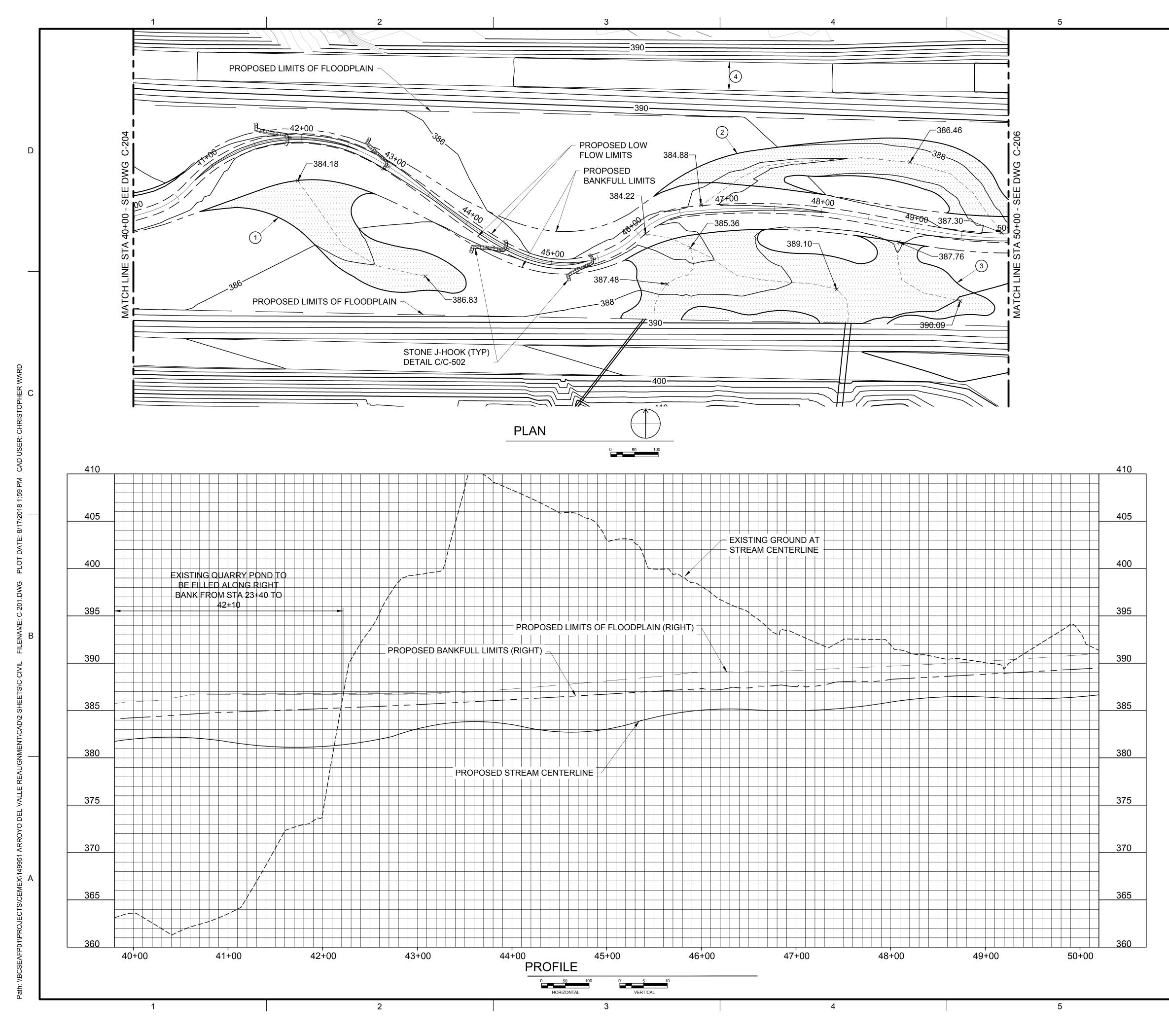
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GENERAL NOTES:	Decement	
1. TYPICAL POOL AND RIFFLE, SEE DETAILS	Brown AND	
A/C-505 AND B/C-505. 2. STAGING & STOCKPILE TO BE LOCATED AS	Caldwell	
SHOWN ON SHEET C-106. 3. ALL DISTURBED AREAS WITHIN THE LIMIT OF	701 PIKE STREET	
DISTURBANCE (EXCEPT CHANNEL) SHALL BE	SUITE 1200 SEATTLE, WA 98101	
RE-SEEDED AND / OR RE-PLANTED PER PLANTING PLAN.		
4. ALL CUT AND FILL QUANTITIES, AS LISTED, SHALL BE CONSIDERED APPROXIMATE ONLY	CCDCV	D
AND ARE SUBJECT TO CHANGE PENDING	2365 IRON POINT ROAD	
ACTUAL SITE CONDITIONS AND CONSTRUCTION OPERATIONS.	SUITE 120	
5. EXCAVATED STREAM BANK / BED MATERIAL MAY BE USED WHERE PLANS INDICATE "FILL",	FOLSOM, CA 95630	
PROVIDED THAT THE MATERIAL IS UNIFORM IN CONSISTENCY, FREE OF EXCESS ORGANIC		
MATTER AND CONTAINS NO MORE THAN 20	PRELIMINARY	
PERCENT (BY UNIT VOLUME) OF SAND, SILT AND/OR FINES.	DESIGN	
 CONTRACTOR SHALL DISTURB ONLY WHAT IS NECESSARY TO PERFORM IMPROVEMENTS. 	FOR REVIEW ONLY	
CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE DISTURBED AREA, INCLUDING THAT		
WITHIN THE PERMITTED LOD.		
7. AREAS DISTURBED DURING CONSTRUCTION WITHOUT A SPECIFIED RESTORATION LAND		
COVER SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS.		
8. THE DEPTH OF THE BANKFULL CHANNEL VARIES WITHIN EACH MEANDER TO CREATE		
NATURAL POOLS AND RIFFLES.		
9. WHEN LOOKING DOWNSTREAM, THE RIGHT BANK IS ON THE OBSERVER'S RIGHT.		с
	DRAFT	Ŭ
◯ SHEET KEYNOTES:	NOT FOR	
1.) BACKWATER WETLAND, SEE DETAIL 1/C-503	CONSTRUCTION	
(2.) FLOW-THROUGH WETLAND, SEE DETAIL		
4/C-503		
3. 30'-0" WIDE DRIVE	ARROYO DEL VALLE	
	REALIGNMENT PROJECT	
	1544 STANLEY BOULEVARD PLEASANTON, CA 94566	
	CA MINE ID NO: 91-01-0009	
	CA MINE ID NO. 91-01-0009	
	REVISIONS	
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	CLIENT PROJECT NUMBER	
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	TO STA 20+00	
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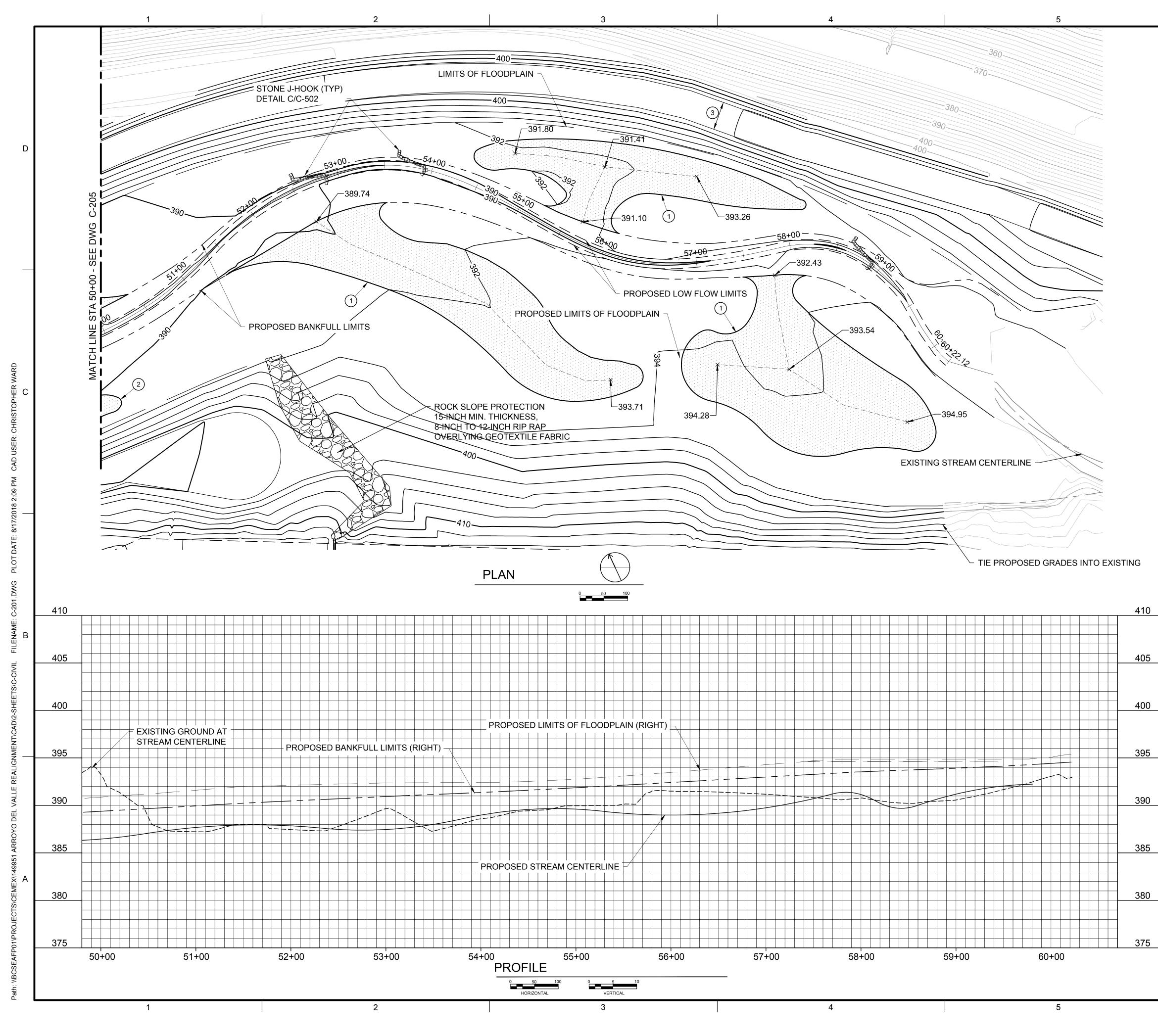
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GENERAL NOTES:	Dresser	
1. TYPICAL POOL AND RIFFLE, SEE DETAILS A/C-505 AND B/C-505.	Brown AND Caldwell	
2. STAGING & STOCKPILE TO BE LOCATED AS	Caluwell	
SHOWN ON SHEET C-106. 3. ALL DISTURBED AREAS WITHIN THE LIMIT OF	701 PIKE STREET SUITE 1200	
DISTURBANCE (EXCEPT CHANNEL) SHALL BE RE-SEEDED AND / OR RE-PLANTED PER	SEATTLE, WA 98101	
PLANTING PLAN.4. ALL CUT AND FILL QUANTITIES, AS LISTED,		
SHALL BE CONSIDERED APPROXIMATE ONLY AND ARE SUBJECT TO CHANGE PENDING		D
ACTUAL SITE CONDITIONS AND CONSTRUCTION OPERATIONS.	2365 IRON POINT ROAD SUITE 120	
5. EXCAVATED STREAM BANK / BED MATERIAL MAY BE USED WHERE PLANS INDICATE "FILL",	FOLSOM, CA 95630	
PROVIDED THAT THE MATERIAL IS UNIFORM IN CONSISTENCY, FREE OF EXCESS ORGANIC		
MATTER AND CONTAINS NO MORE THAN 20	PRELIMINARY	
PERCENT (BY UNIT VOLUME) OF SAND, SILT AND/OR FINES.	DESIGN	
6. CONTRACTOR SHALL DISTURB ONLY WHAT IS NECESSARY TO PERFORM IMPROVEMENTS.	FOR REVIEW ONLY	
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WITHOUT A SPECIFIED RESTORATION LAND COVER SHALL BE RESTORED TO		
PRE-CONSTRUCTION CONDITIONS. 8. THE DEPTH OF THE BANKFULL CHANNEL		
VARIES WITHIN EACH MEANDER TO CREATE		
NATURAL POOLS AND RIFFLES.9. WHEN LOOKING DOWNSTREAM, THE RIGHT		
BANK IS ON THE OBSERVER'S RIGHT.		С
	DRAFT	
◯ SHEET KEYNOTES:		
1. BACKWATER WETLAND, SEE DETAIL 1/C-503	CONSTRUCTION	
2. FLOW THROUGH WETLAND, SEE DETAIL 4/C-503		
(3.) 30'-0" WIDE DRIVE	ARROYO DEL VALLE	
	REALIGNMENT PROJECT	
	1544 STANLEY BOULEVARD PLEASANTON, CA 94566	
	CA MINE ID NO: 91-01-0009	
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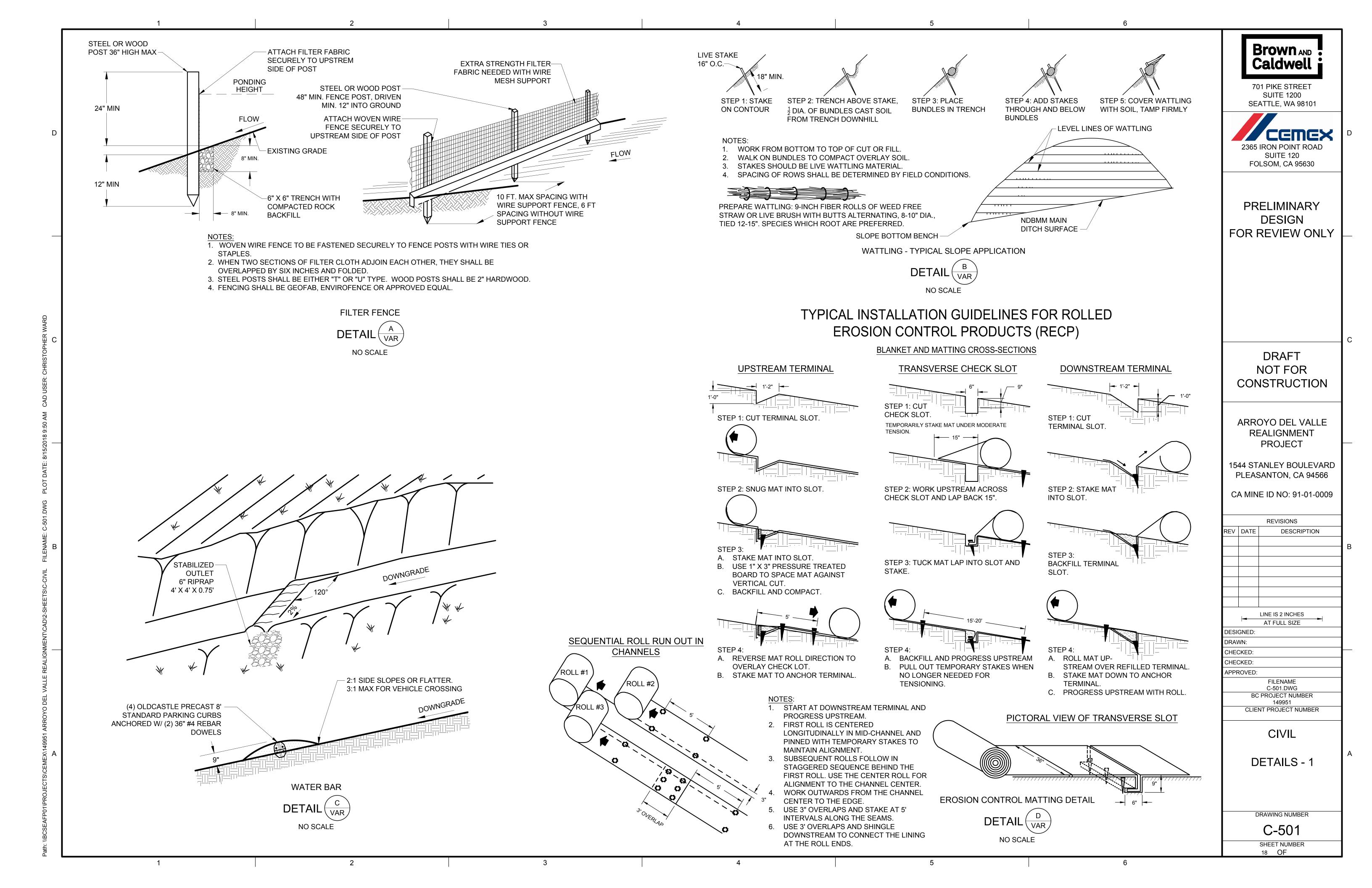
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GENERAL NOTES: 1. TYPICAL POOL AND RIFFLE, SEE DETAILS	Brown AND .	
 A/C-505 AND B/C-505. STAGING & STOCKPILE TO BE LOCATED AS SHOWN ON SHEET C-106. 	Caldwell	
3. ALL DISTURBED AREAS WITHIN THE LIMIT OF DISTURBANCE (EXCEPT CHANNEL) SHALL BE RE-SEEDED AND / OR RE-PLANTED PER	701 PIKE STREET SUITE 1200 SEATTLE, WA 98101	
 PLANTING PLAN. 4. ALL CUT AND FILL QUANTITIES, AS LISTED, SHALL BE CONSIDERED APPROXIMATE ONLY AND ARE SUBJECT TO CHANGE PENDING ACTUAL SITE CONDITIONS AND CONSTRUCTION OPERATIONS. 	2365 IRON POINT ROAD SUITE 120 FOLSOM, CA 95630	D
5. EXCAVATED STREAM BANK / BED MATERIAL MAY BE USED WHERE PLANS INDICATE "FILL", PROVIDED THAT THE MATERIAL IS UNIFORM IN CONSISTENCY, FREE OF EXCESS ORGANIC MATTER AND CONTAINS NO MORE THAN 20		
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(1.) FLOW THROUGH WETLAND, SEE DETAIL	DRAFT NOT FOR	
 4/C-503 CHANNEL BIFURCATION, SEE DETAIL 3/C-503 	CONSTRUCTION	
	ARROYO DEL VALLE REALIGNMENT PROJECT	
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	CA MINE ID NO: 91-01-0009	
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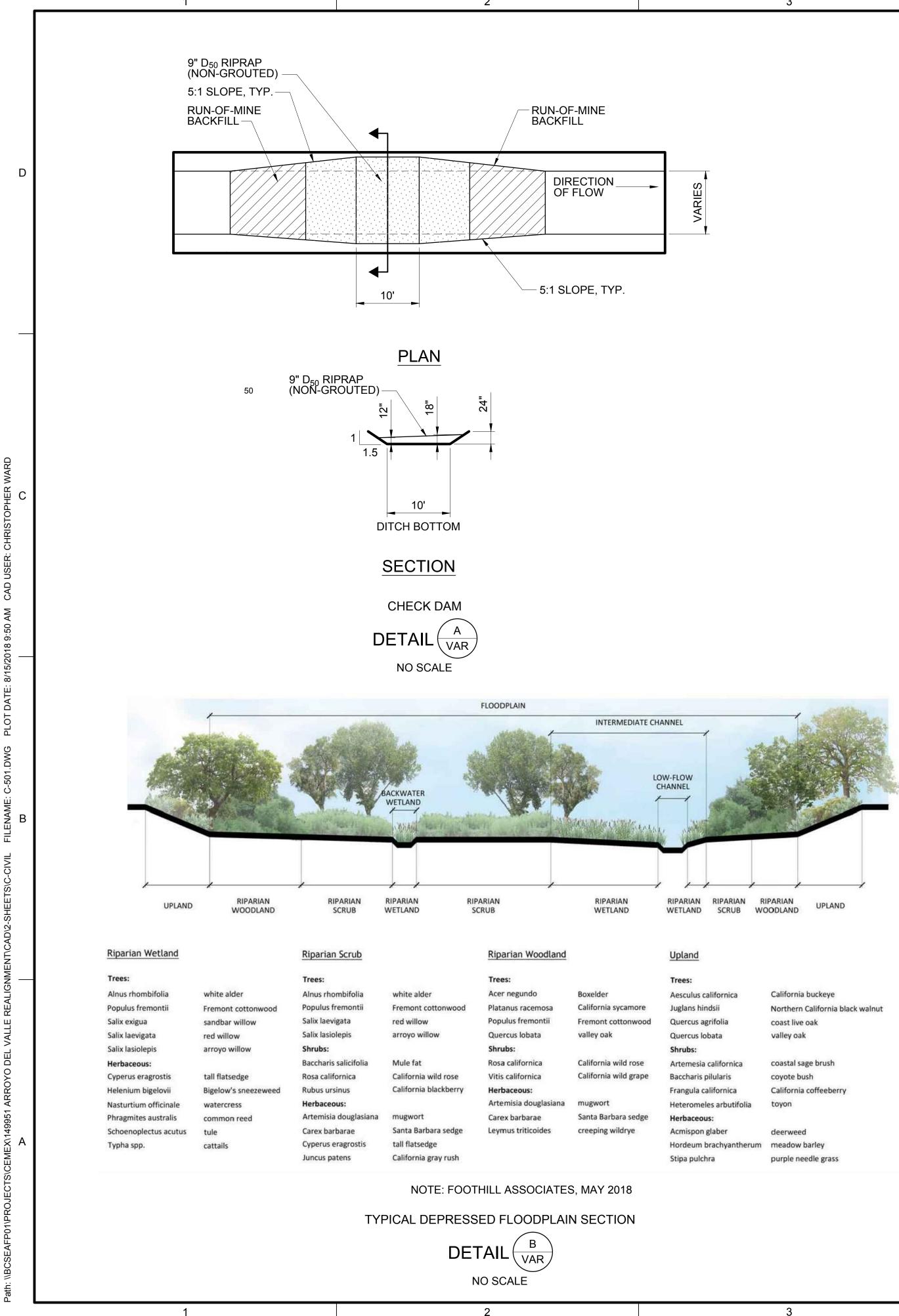


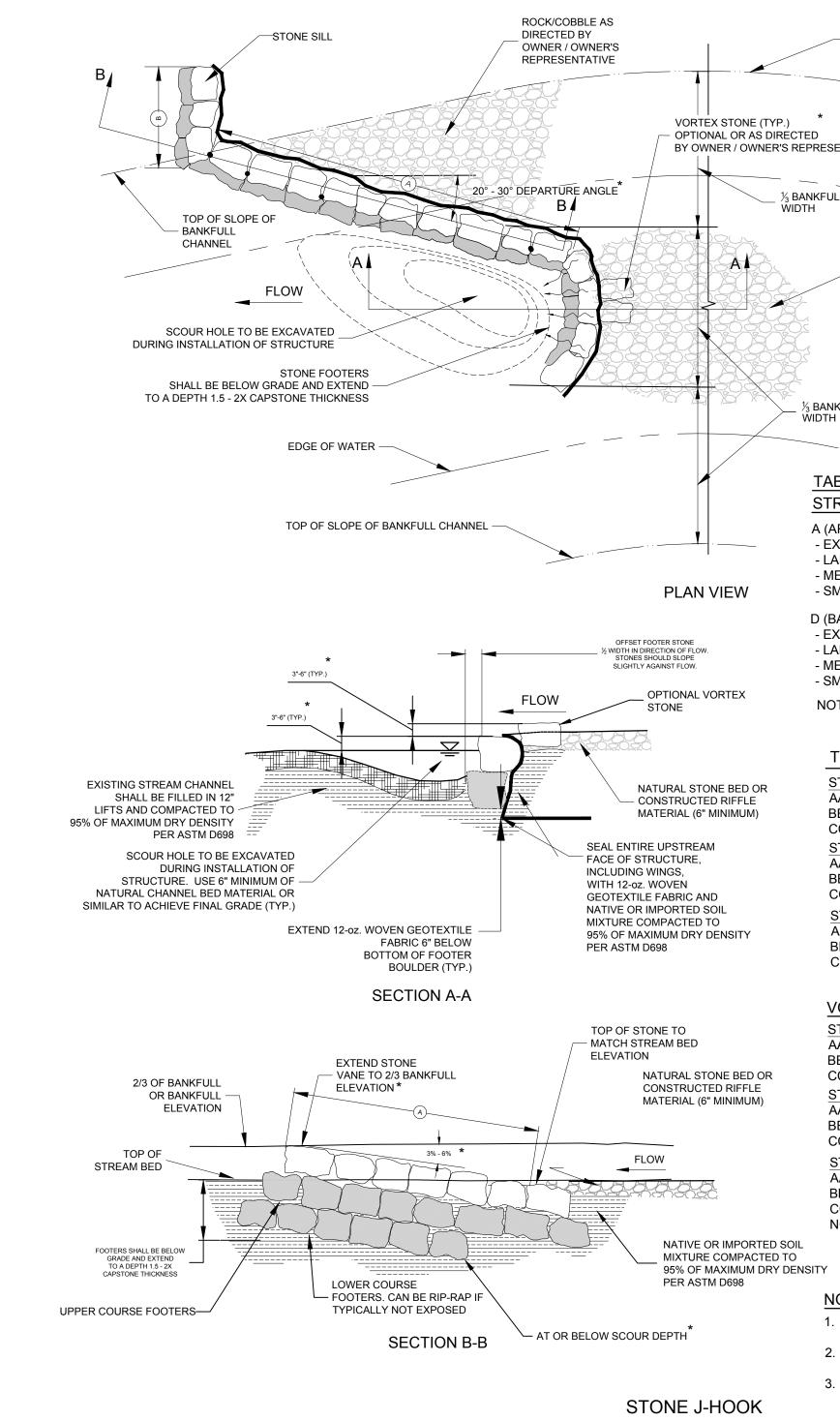
6		•
GENERAL NOTES:		
1. TYPICAL POOL AND RIFFLE, SEE DETAILS	Brown AND .	
A/C-505 AND B/C-505.	Caldwell	
 STAGING & STOCKPILE TO BE LOCATED AS SHOWN ON SHEET C-106. 		
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RE-SEEDED AND / OR RE-PLANTED PER	SEATTLE, WA 98101	
PLANTING PLAN. 4. ALL CUT AND FILL QUANTITIES, AS LISTED,		
SHALL BE CONSIDERED APPROXIMATE ONLY	CEMEX	D
AND ARE SUBJECT TO CHANGE PENDING ACTUAL SITE CONDITIONS AND CONSTRUCTION	2365 IRON POINT ROAD	
OPERATIONS. 5. EXCAVATED STREAM BANK / BED MATERIAL	SUITE 120 FOLSOM, CA 95630	
MAY BE USED WHERE PLANS INDICATE "FILL",	· · · · · · · · · · · · · · · · · · ·	
PROVIDED THAT THE MATERIAL IS UNIFORM IN CONSISTENCY, FREE OF EXCESS ORGANIC		
MATTER AND CONTAINS NO MORE THAN 20 PERCENT (BY UNIT VOLUME) OF SAND, SILT	PRELIMINARY	
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	DRAFT	
	NOT FOR	
1.) BACKWATER WETLAND, SEE DETAIL 1/C-503	CONSTRUCTION	
2.) CHANNEL BIFURCATION, SEE DETAIL 3/C-503		
3.) TRIBUTARY WETLAND, SEE DETAIL 2/C-503		
(4.) 30'-0" WIDE DRIVE	ARROYO DEL VALLE REALIGNMENT	
	PROJECT	 _
	1544 STANLEY BOULEVARD PLEASANTON, CA 94566	
	CA MINE ID NO: 91-01-0009	
	REVISIONS	
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	GENERAL NOTES:	Dressure
	 TYPICAL POOL AND RIFFLE, SEE DETAILS A/C-505 AND B/C-505. STAGING & STOCKPILE TO BE LOCATED AS 	Brown AND Caldwell
	 SHOWN ON SHEET C-106. 3. ALL DISTURBED AREAS WITHIN THE LIMIT OF DISTURBANCE (EXCEPT CHANNEL) SHALL BE RE-SEEDED AND / OR RE-PLANTED PER 	701 PIKE STREET SUITE 1200 SEATTLE, WA 98101
	 PLANTING PLAN. 4. ALL CUT AND FILL QUANTITIES, AS LISTED, SHALL BE CONSIDERED APPROXIMATE ONLY AND ARE SUBJECT TO CHANGE PENDING ACTUAL SITE CONDITIONS AND CONSTRUCTION OPERATIONS. 5. EXCAVATED STREAM BANK / BED MATERIAL 	2365 IRON POINT ROAD SUITE 120 FOLSOM, CA 95630
	 MAY BE USED WHERE PLANS INDICATE "FILL", PROVIDED THAT THE MATERIAL IS UNIFORM IN CONSISTENCY, FREE OF EXCESS ORGANIC MATTER AND CONTAINS NO MORE THAN 20 PERCENT (BY UNIT VOLUME) OF SAND, SILT AND/OR FINES. 6. CONTRACTOR SHALL DISTURB ONLY WHAT IS NECESSARY TO PERFORM IMPROVEMENTS. 	PRELIMINARY DESIGN FOR REVIEW ONLY
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	O SHEET KEYNOTES:	DRAFT
	 BACKWATER WETLAND, SEE DETAIL 1/C-503 TRIBUTARY WETLAND, SEE DETAIL 2/C-503 	NOT FOR CONSTRUCTION
	3.) 30'-0" WIDE DRIVE	ARROYO DEL VALLE REALIGNMENT PROJECT
		1544 STANLEY BOULEVARD PLEASANTON, CA 94566
		CA MINE ID NO: 91-01-0009
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		SHEET NUMBER 16 OF





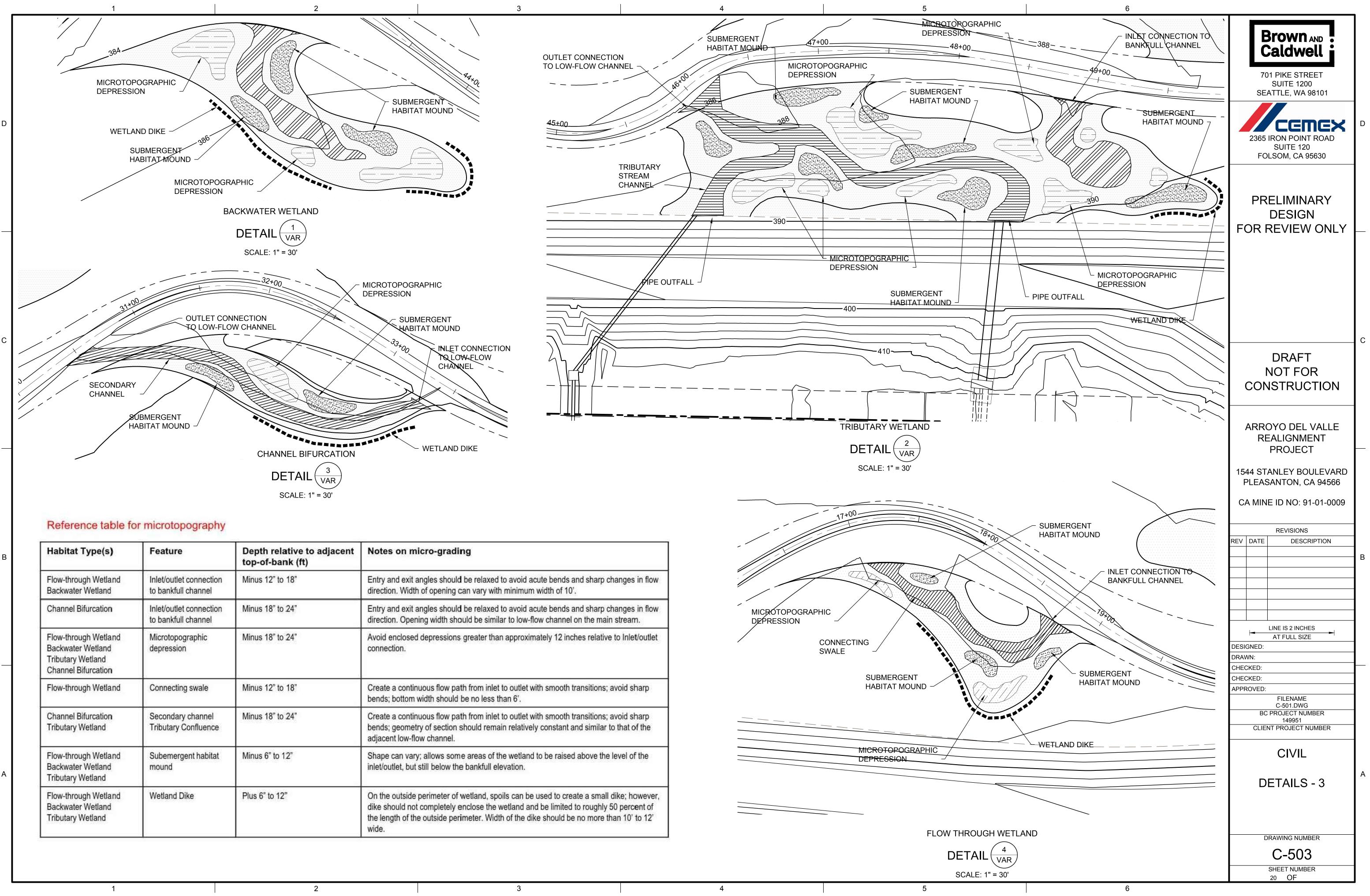




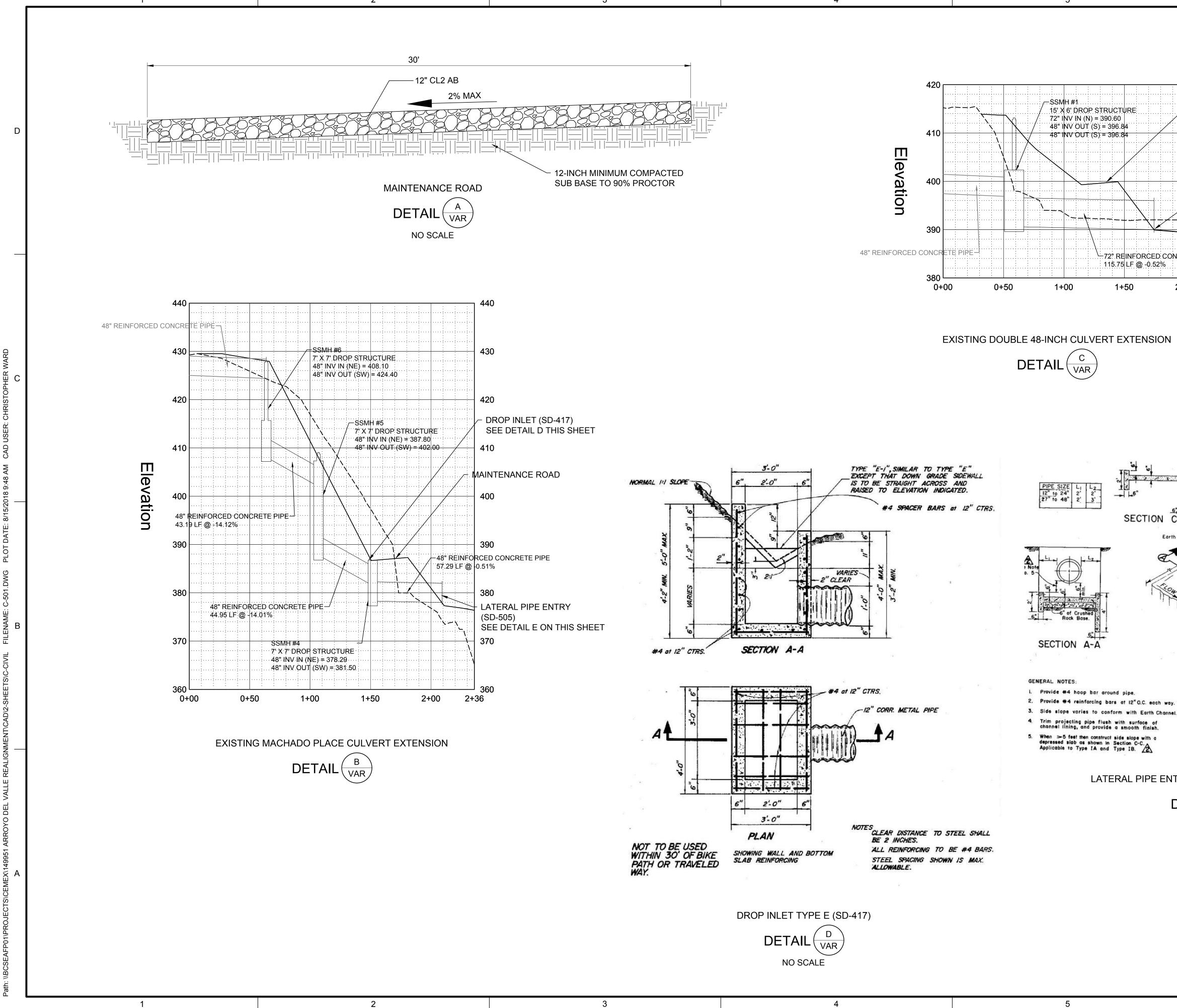
rnica	California buckeye	
	Northern California black walnu	
ia	coast live oak	
	valley oak	
ornica	coastal sage brush	
ris	coyote bush	
nica	California coffeeberry	
butifolia	toyon	
er	deerweed	
nyantherum	meadow barley	
	purple needle grass	

TOP OF SLOPE OF BANKFULL CHANNEL	Brown AND Caldwell 701 PIKE STREET SUITE 1200 SEATTLE, WA 98101	
ESENTATIVE FULL NATURAL STONE BED OD CONSTRUCTED	2365 IRON POINT ROAD SUITE 120 FOLSOM, CA 95630	D
ANKFULL	PRELIMINARY DESIGN FOR REVIEW ONLY	
$\overrightarrow{ABLES:}$ STRUCTURE DIMENSIONS (ARM LENGTH)B (MINIMUM SILL LENGTH)*EXTRA LARGE: 31' - 50' $= EXTRA LARGE: 8'$ LARGE: 20' - 30' $= LARGE: 6'$ MEDIUM: 10' - 19' $= MEDIUM: 5'$ SMALL: < 10'	DRAFT NOT FOR CONSTRUCTION ARROYO DEL VALLE REALIGNMENT PROJECT	С
STONE FOR SMALL STRUCTURE AA: 18" - 30" BB: 12" - 18" CC: 8" - 12" VORTEX STONE DIMENSIONS* STONE FOR LARGE AND EXTRA LARGE STRUCTURE AA: 30" - 48" BB: 24" - 30" CC: 18" - 24" STONE FOR MEDIUM STRUCTURE AA: 24" - 36" BB: 18" - 24" STONE FOR SMALL STRUCTURE AA: 18" - 30" BB: 12" - 18" CC: 8" - 12" NOTES: STONE CAN BE WEDGE SHAPE FOR AA: BB DIMENSIONS Y	1544 STANLEY BOULEVARD PLEASANTON, CA 94566 CA MINE ID NO: 91-01-0009 REVISIONS REV DATE DESCRIPTION DESCRIPTION	B
 PONNATION IN PIELD. ALL STONES SHALL HAVE A MORE SQUARE SHAPE WITH AT LEAST TWO FLAT SIDES FOR STACKING. STONES CAN BE GRANITE, FIELDSTONE, OR OTHER STONE AS APPROVED BY OWNER OR OWNER'S REPRESENTATIVE. PER OWNER/OWNER'S REPRESENTATIVE OR * PROJECT-SPECIFIC PLANS. 	DRAWN: CHECKED: CHECKED: APPROVED: FILENAME C-501.DWG BC PROJECT NUMBER 149951 CLIENT PROJECT NUMBER CIVIL DETAILS - 2 DRAWING NUMBER C-502	A

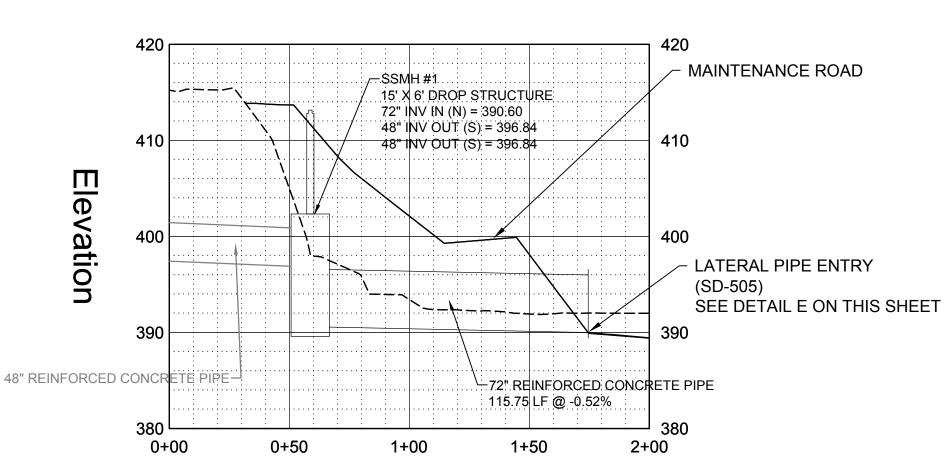
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Habitat Type(s)	Feature	Depth relative to adjacent top-of-bank (ft)	Notes on micro-grading
Flow-through Wetland Backwater Wetland	Inlet/outlet connection to bankfull channel	Minus 12" to 18"	Entry and exit angles should be re direction. Width of opening can var
Channel Bifurcation	Inlet/outlet connection to bankfull channel	Minus 18" to 24"	Entry and exit angles should be re direction. Opening width should be
Flow-through Wetland Backwater Wetland Tributary Wetland Channel Bifurcation	Microtopographic depression	Minus 18" to 24"	Avoid enclosed depressions greate connection.
Flow-through Wetland	Connecting swale	Minus 12" to 18"	Create a continuous flow path from bends; bottom width should be no
Channel Bifurcation Tributary Wetland	Secondary channel Tributary Confluence	Minus 18" to 24"	Create a continuous flow path from bends; geometry of section should adjacent low-flow channel.
Flow-through Wetland Backwater Wetland Tributary Wetland	Subemergent habitat mound	Minus 6" to 12"	Shape can vary; allows some area inlet/outlet, but still below the bank
Flow-through Wetland Backwater Wetland Tributary Wetland	Wetland Dike	Plus 6" to 12"	On the outside perimeter of wetlan dike should not completely enclose the length of the outside perimeter wide.





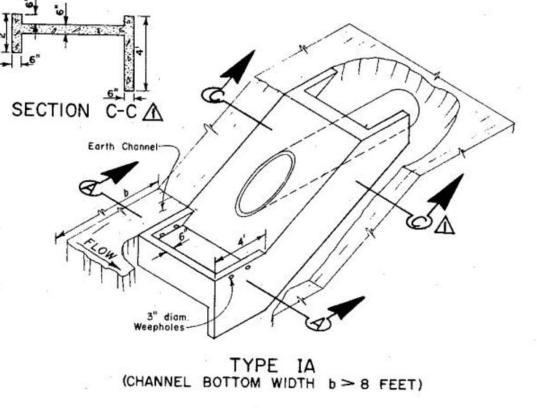


EXISTING DOUBLE 48-INCH CULVERT EXTENSION









LATERAL PIPE ENTRY TO EARTH CHANNEL (SD-505)



