


IMPROVEMENT PLANS

FOR
ELIOT FACILITY ARROYO DEL VALLE REALIGNMENT PROJECT (CEMEX)
ALAMEDA COUNTY, CALIFORNIA
AUGUST 2018

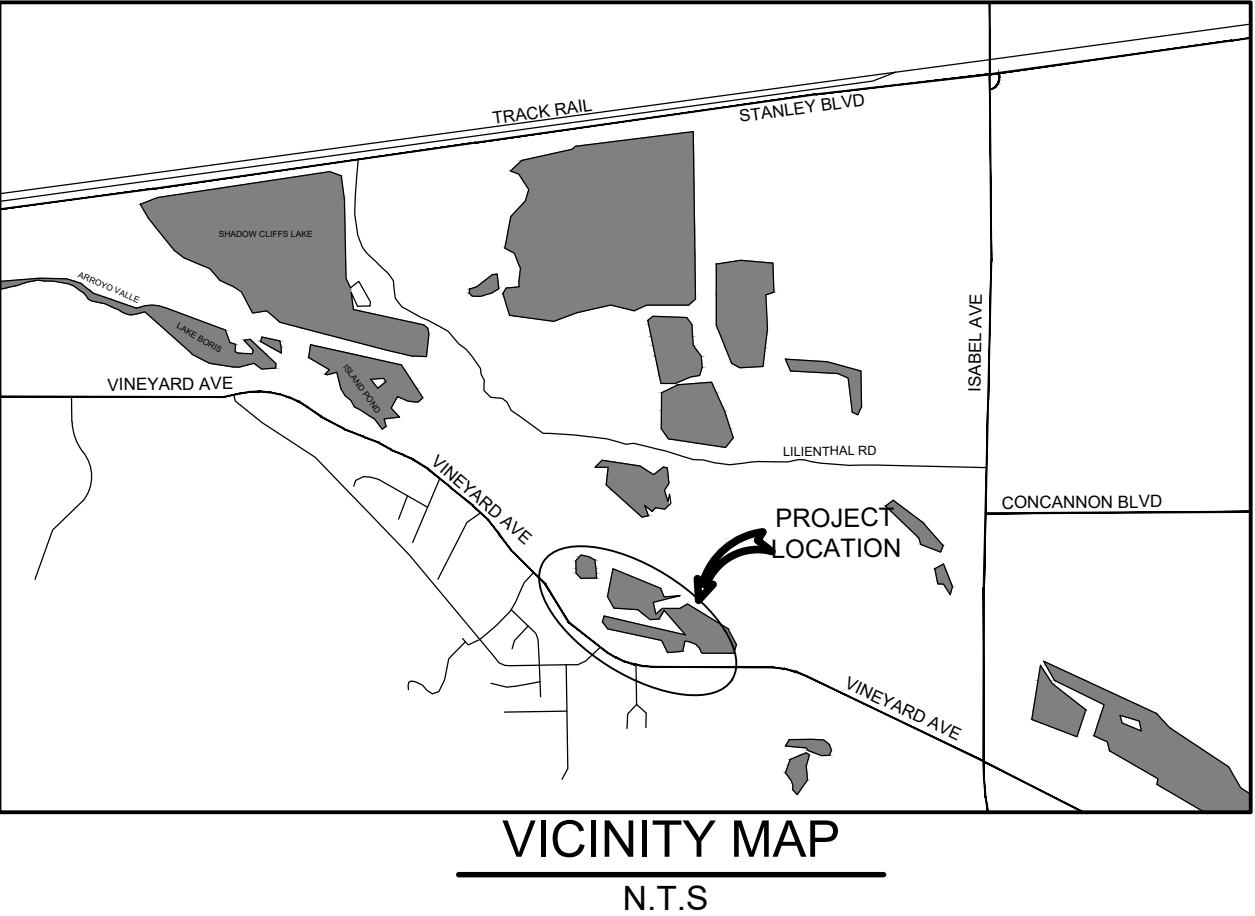
95% DESIGN CONSTRUCTION DRAWINGS



VOLUME 1 OF 1



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
916.941.2800
916.939.7492

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

DRAFT
NOT FOR
CONSTRUCTION

Path: \\BCSEAF\P01\PROJECTS\CEMEX\149951- ARROYO DEL VALLE REALIGNMENT\CAD2-SHEETS\G-GENERAL FILENAME: G-001.DWG PLOT DATE: 8/16/2018 6:24 PM CAD USER: SAMANTHA COHEN

- GENERAL NOTES:
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPORTING ALL CONFLICTS, ERRORS, OMISSIONS, ETC. TO THE ENGINEER IMMEDIATELY UPON DISCOVERY. IF SO DIRECTED BY THE ENGINEER OR THE COUNTY OF ALAMEDA, THE CONTRACTOR SHALL STOP WORK UNTIL MITIGATION CAN BE MADE. ANY COSTS INCURRED RESULTING FROM THE CONTRACTOR'S FAILURE TO STOP WORK AS DIRECTED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 2. CALL "UNDERGROUND SERVICE ALERT" 1-800-227-2600 FORTY- EIGHT (48) HOURS BEFORE DIGGING.
 3. AT THE CONCLUSION OF ITS WORK, THE CONTRACTOR SHALL REPAIR OR REPLACE IN KIND ALL DAMAGED PROPERTY (PUBLIC AND PRIVATE) FOR WHICH HE IS RESPONSIBLE (INCLUDING CURB, GUTTER AND SIDEWALK). THE WORK SITE AND ADJACENT AREAS SHALL BE CLEANED UP. THIS REPAIR AND REPLACEMENT, AND CLEAN UP WORK SHALL BE SUBJECT TO THE APPROVAL AND ACCEPTANCE OF THE OWNER OR PUBLIC ENTITY AS IS APPROPRIATE.
 4. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBLY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
 5. CURRENT FEDERAL (OSHA), STATE AND LOCAL REGULATIONS FOR MINIMUM SAFETY STANDARDS MUST BE OBSERVED.
 6. THE CONTRACTOR SHALL PROVIDE CONSTRUCTION STAKING.
 7. BROWN AND CALDWELL HAS EXERCISED A REASONABLE AND ACCEPTABLE STANDARD OF CARE IN THE PREPARATION OF THESE PLANS, HOWEVER, THE DESIGN PROCESS INCLUDES ACTIVITIES OCCURRING AFTER PLAN SIGNATURE. THESE ACTIVITIES INCLUDE CALCULATIONS, PLAN CHECK, AND VERIFICATIONS DURING CONSTRUCTION. SHOULD PERSONS OTHER THAN BROWN AND CALDWELL PERFORM CONSTRUCTION STAKING OPERATION, THEY SHALL INDEMNIFY BROWN AND CALDWELL FROM ANY DAMAGES RESULTING FROM FAILURE TO PERFORM THESE TASKS.
 8. UNAUTHORIZED CHANGES AND USES: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USE OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ANY EXISTING SURVEY MONUMENTS AND OTHER SURVEY MARKERS DURING CONSTRUCTION.
 10. THE COST OF CORRECTIVE WORK REQUIRED FOR COMPLETION AND/OR ACCEPTANCE OF THE WORK NECESSITATED BECAUSE OF UNSATISFACTORY WORKMANSHIP OR MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 11. TRENCHING SHALL BE PERFORMED IN ACCORDANCE WITH COUNTY OF ALAMEDA REQUIREMENTS. BRACING AND SHORING SHALL BE PERFORMED IN ACCORDANCE WITH ARTICLE 6 OF THE CONSTRUCTION SAFETY ORDERS OF THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY.
 12. THE LOCATION OF EXISTING FACILITIES SHOWN ON THE PLAN SHEETS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL CONFIRM ALL UNDERGROUND FACILITIES BY REQUESTING AN UNDERGROUND LOCATE THROUGH DIGGERS HOTLINE PRIOR TO WORK. THE CONTRACTOR SHALL ALSO COORDINATE PRIVATE UTILITY LOCATES WITH THE OWNER BEFORE CONSTRUCTION STARTS. DAMAGE TO EXISTING UTILITIES RESULTING FROM THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
 13. ALL STATIONING IS ALONG THE HORIZONTAL CENTERLINE OF THE NEW CHANNEL.
 14. THE NOTE IN THE TITLE BLOCK OF THIS DRAWING WHICH READS "TWO INCHES AT FULL SCALE" APPEARS ON DRAWINGS FOR IDENTIFICATION OF SCALE DISTORTIONS ON HALF SIZE DRAWINGS AND DRAWING REPRODUCTIONS. IT SHALL MEAN THAT THE DRAWING IS FULL SIZE AND THE DRAWING SCALES ACCURATE WHEN THE LENGTH OF THIS LINE IS TWO INCHES. IF THE LENGTH IS OTHER THAN TWO INCHES, DRAWING SCALES MUST BE ADJUSTED ACCORDINGLY.
 15. SITE TOPOGRAPHY WAS COMPILED FROM GROUND SURVEYS BY KIER & WRIGHT CIVIL ENGINEERS & SURVEYORS, INC. DATED MARCH 20, 2013. VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) WITH HORIZONTAL COORDINATE SYSTEM REFERENCED TO THE CALIFORNIA COORDINATE SYSTEM OF 1983 (CCS83), ZONE 3.
 16. THE CONTRACTOR SHALL MAKE A REVIEW OF THE SITE TO DETERMINE EXISTING CONDITIONS. ANYTHING NOT SHOWN ON THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER IMMEDIATELY AND SHALL NOT CONSTITUTE GROUNDS FOR AN EXTRA, UNLESS APPROVED BY THE OWNER.
 17. THE CONTRACTOR SHALL CONTACT THE OWNER IMMEDIATELY IF ANY CONFLICTS ARE FOUND IN THE CONTRACT DOCUMENTS.
 18. ANY AND ALL AREAS NOT SPECIFIED FOR CONSTRUCTION WHICH ARE DISTURBED AND OR DAMAGED BY THE CONTRACTOR SHALL BE RESTORED TO THE STANDARDS OF THE CONTRACT DOCUMENTS TO THE EXISTING LOCATION, ELEVATION AND DIMENSION AND TO THE SATISFACTION OF THE OWNER AT THE CONTRACTORS EXPENSE.
 19. THE CONTRACTOR'S CONSTRUCTION MEANS AND METHODS SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL CONSTRUCTION AND SAFETY CODES. WHERE APPLICABLE THE CONTRACTOR SHALL PROVIDE ALL NECESSARY LICENSES AND PERMITS AT ITS OWN EXPENSE UNLESS PREVIOUSLY OBTAINED BY THE OWNER.
 20. ALL MATERIAL SHALL BE NEW, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
 21. CONTRACTOR SHALL MAINTAIN ACCESS TO THE SITE AND ALL ADJACENT PROPERTIES AT ALL TIMES. ACCESS TO THE SITE IS SHOWN ON THE PLANS.
 22. FINISHED GRADE SHOWN ON THE DRAWINGS REFERS TO THE FINAL GRADE AFTER THE INSTALLATION OF FINAL GROUND STABILIZATION MEASURES.

ALAMEDA COUNTY DRAINAGE NOTES:
[RESERVED]

- EARTHWORK NOTES:
1. TRENCH EXCAVATION, PIPE BEDDING, AND PIPE BACKFILL INCLUDING COMPACTION SHALL BE IN COMPLIANCE WITH THE SOIL REPORT RECOMMENDATIONS, MATERIAL MANUFACTURE SPECIFICATIONS, CALIFORNIA STATE REGULATIONS, AND COUNTY OF ALAMEDA SPECIFICATIONS.
 2. EROSION CONTROL MEASURES SHALL BE IMPLEMENTED AS REQUIRED BY THE COUNTY OF ALAMEDA.
 3. THE COST OF PROTECTION AND / OR REPAIR OF THE CONTRACTOR'S WORK AS AFFECTED BY STORM WATERS DURING INCLEMENT WATER SHALL BE THE CONTRACTOR'S RESPONSIBILITY UNTIL THE PUBLIC IMPROVEMENTS HAVE BEEN ACCEPTED BY THE OWNER.

- STORM WATER SYSTEM NOTES:
1. ALL MATERIALS AND CONSTRUCTION METHODS OF THE STORM DRAIN SYSTEM SHALL COMPLY WITH THE STANDARDS AND SPECIFICATIONS OF THE COUNTY OF ALAMEDA, EXCEPT WHERE NOTED.
 2. STORM WATER LINES SHALL BE CONSTRUCTED STRAIGHT AND TO A CONSTANT GRADE BETWEEN STRUCTURES SHOWN UNLESS OTHERWISE NOTED.
 3. THE STORM WATER SYSTEM SHALL BE THOROUGHLY CLEANED BY CONTRACTOR PRIOR TO OWNER'S ACCEPTANCE.

ABBREVIATIONS:

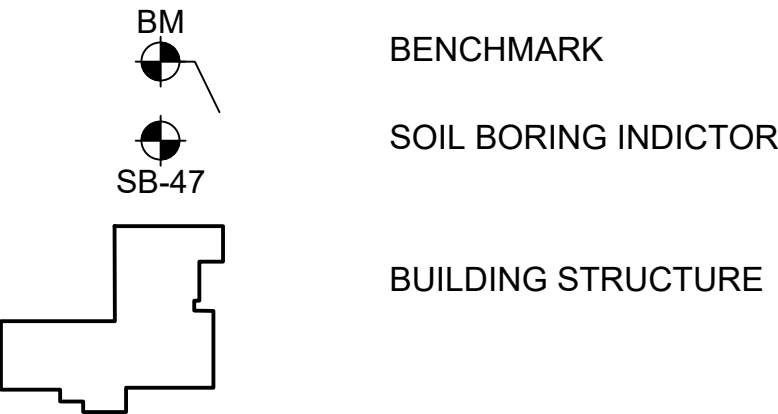
AC	ACRES
AG	AGRICULTURAL
AGG	AGGREGATE
AMSL	ABOVE MEAN SEA LEVEL
APN	ASSESSOR'S PARCEL NUMBER
AVG	AVERAGE
CFR	CODE OF FEDERAL REGULATIONS
CL	CENTER LINE
CMP	CORRUGATED METAL PIPE
CY	CUBIC YARDS
E	EAST
ELEV	ELEVATION
FG	FINISH GRADE
FL	FLOW LINE
FT	FEET
GB	GRADE BREAK
GW	GROUND WATER
H	HORIZONTAL
IRR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

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

SHEET INDEX

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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

LEGEND:



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ARROYO DEL VALLE
REALIGNMENT
PROJECT

1544 STANLEY BOULEVARD
PLEASANTON, CA 94566

CA MINE ID NO: 91-01-0009

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GENERAL

SHEET INDEX,
LEGEND,
ABBREVIATIONS
AND NOTES

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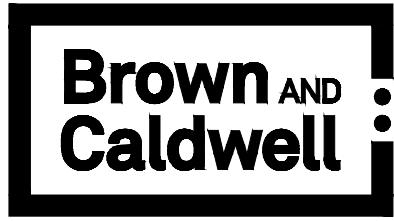
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MITIGATION, MONITORING, AND PERMIT CONDITIONS

ALL INFORMATION CONTAINED HEREIN WILL BE REVISED UPON APPLICATION TO ALAMEDA COUNTY

[RESERVED]



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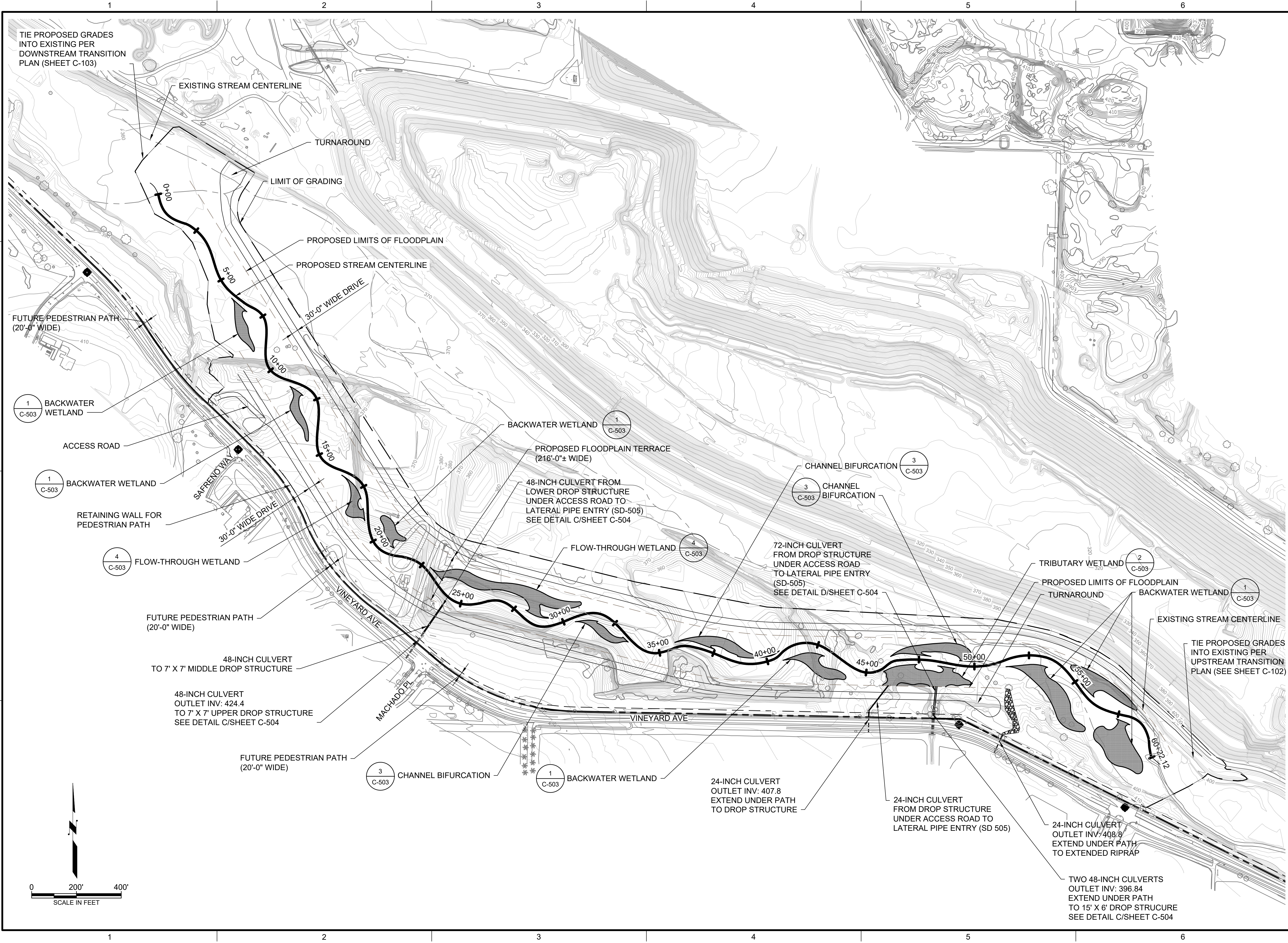
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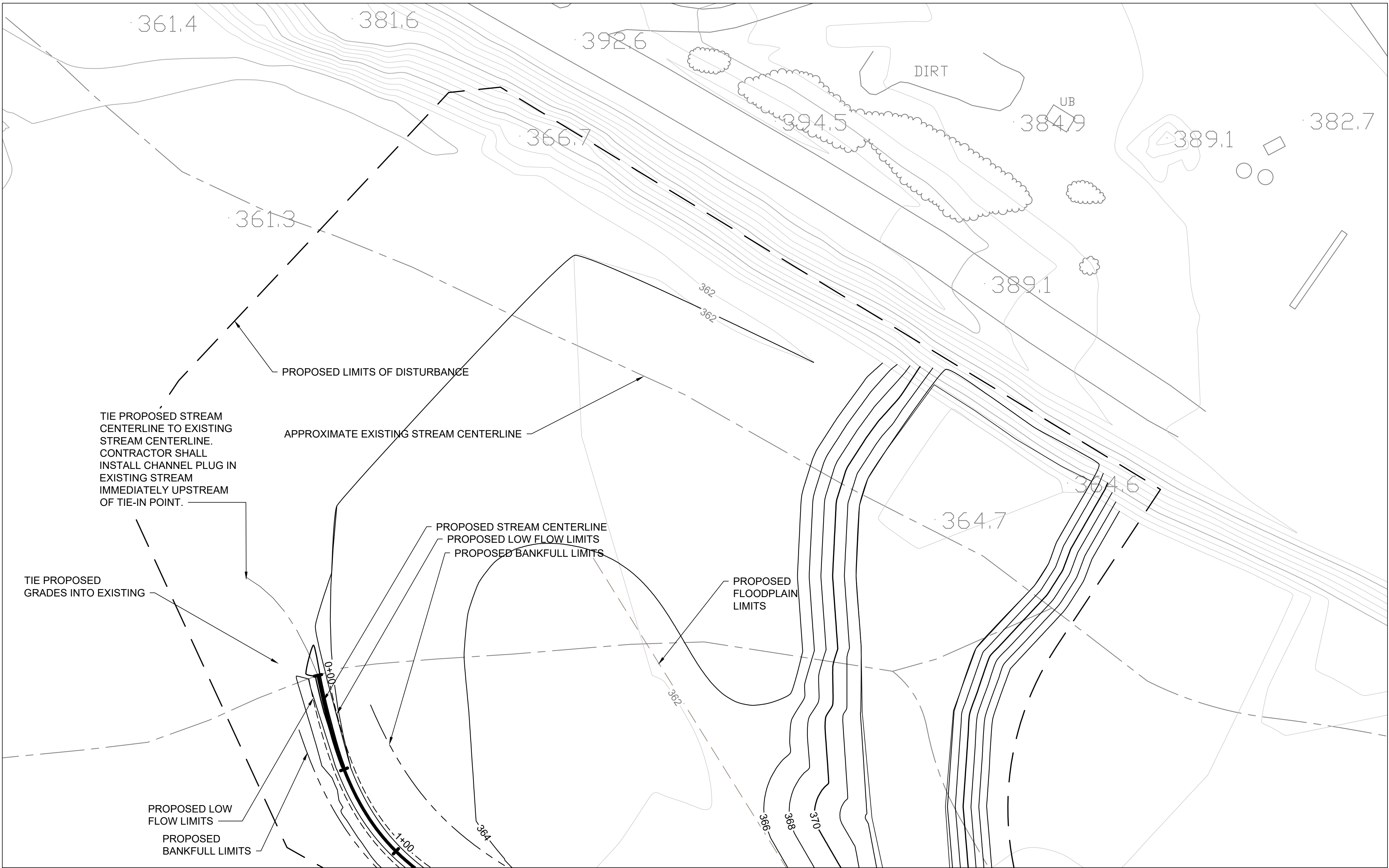
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CIVIL
SITE PLAN

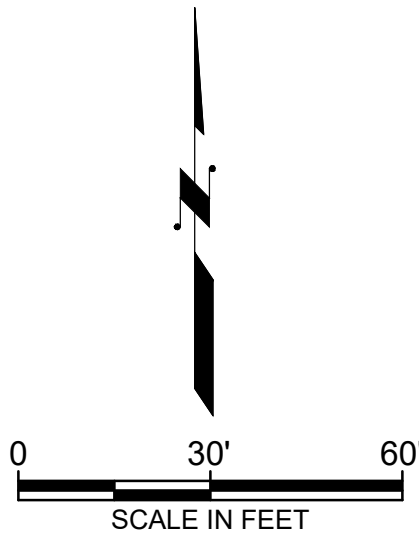
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- GENERAL NOTES:**
- CONTRACTOR IS RESPONSIBLE FOR ENSURING SMOOTH TRANSITIONS AT UPSTREAM AND DOWNSTREAM ENDS OF WORK AREAS.
 - THALWEG IS TO BE INSTALLED PER PLAN AND/OR DIRECTED BY THE ENGINEER.



Brown AND Caldwell

701 PIKE STREET
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**DOWNSTREAM
TRANSITION PLAN**

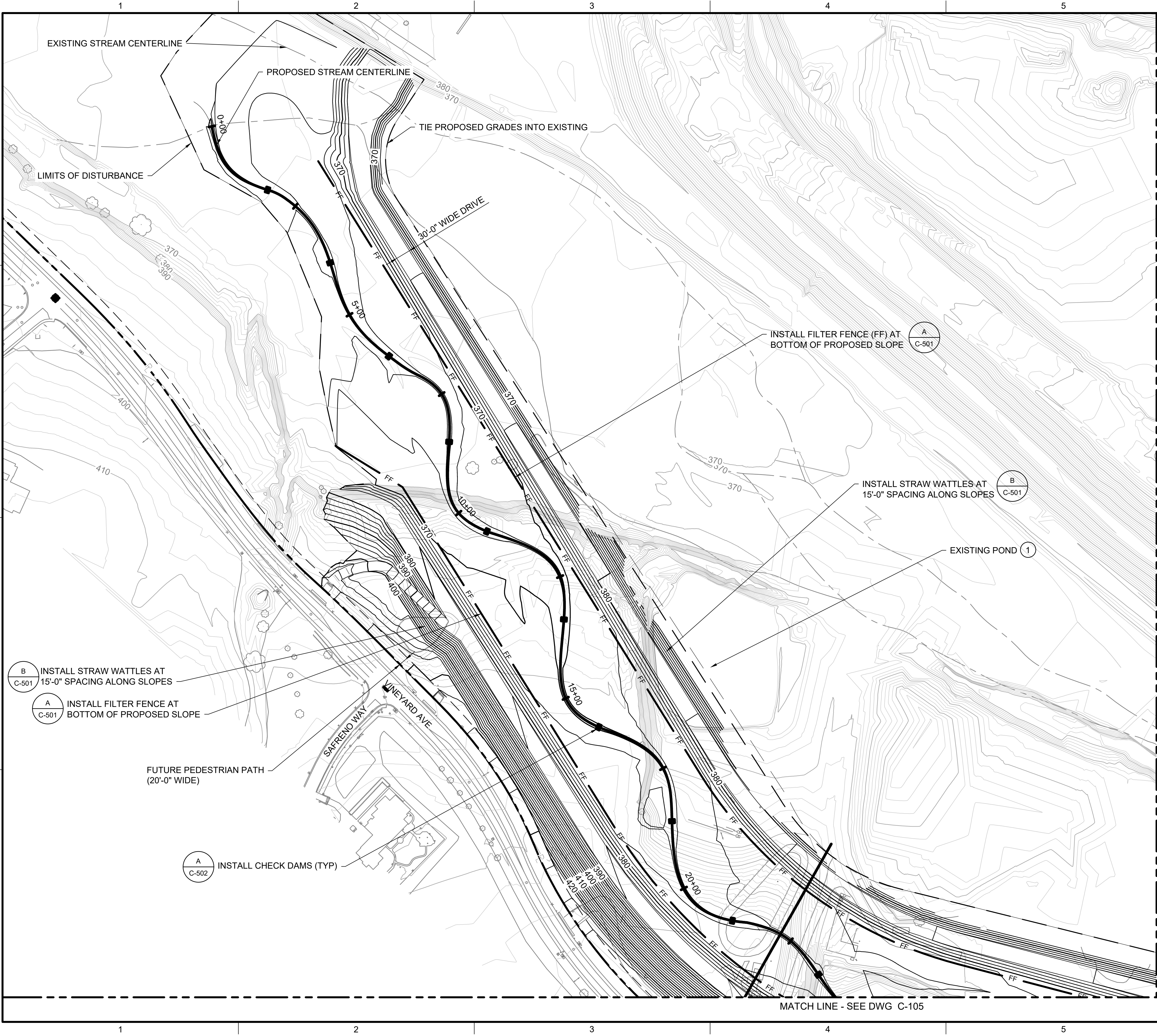
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GENERAL NOTES:

1. ADDITIONAL INFORMATION REGARDING THE ARROYO DEL VALLE REALIGNMENT PROJECT'S EROSION CONTROL MEASURES CAN BE FOUND IN THE SMP-23 REVISED RECLAMATION PLAN.
2. EROSION CONTROL FACILITIES SHALL BE INSTALLED AND MAINTAINED ACCORDING TO THE TECHNICAL STANDARDS AND SPECIFICATIONS OF ALAMEDA COUNTY.
3. THIS SUGGESTED EROSION CONTROL PLAN IS INTENDED TO PROVIDE CONCEPTUAL EROSION CONTROL BMPS FOR THE CONTRACTOR'S CONSIDERATION.
4. CONTRACTOR IS RESPONSIBLE FOR SUBMITTING FINAL EROSION CONTROL, DEWATERING, MATERIALS MANAGEMENT AND SEQUENCING PLANS TO ALAMEDA COUNTY PRIOR TO 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 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.
8. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY 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 FURTHER EROSION AND SEDIMENTATION.
9. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED 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 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 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.

SHEET 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.

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CONSTRUCTION
EROSION CONTROL
PLAN - 1

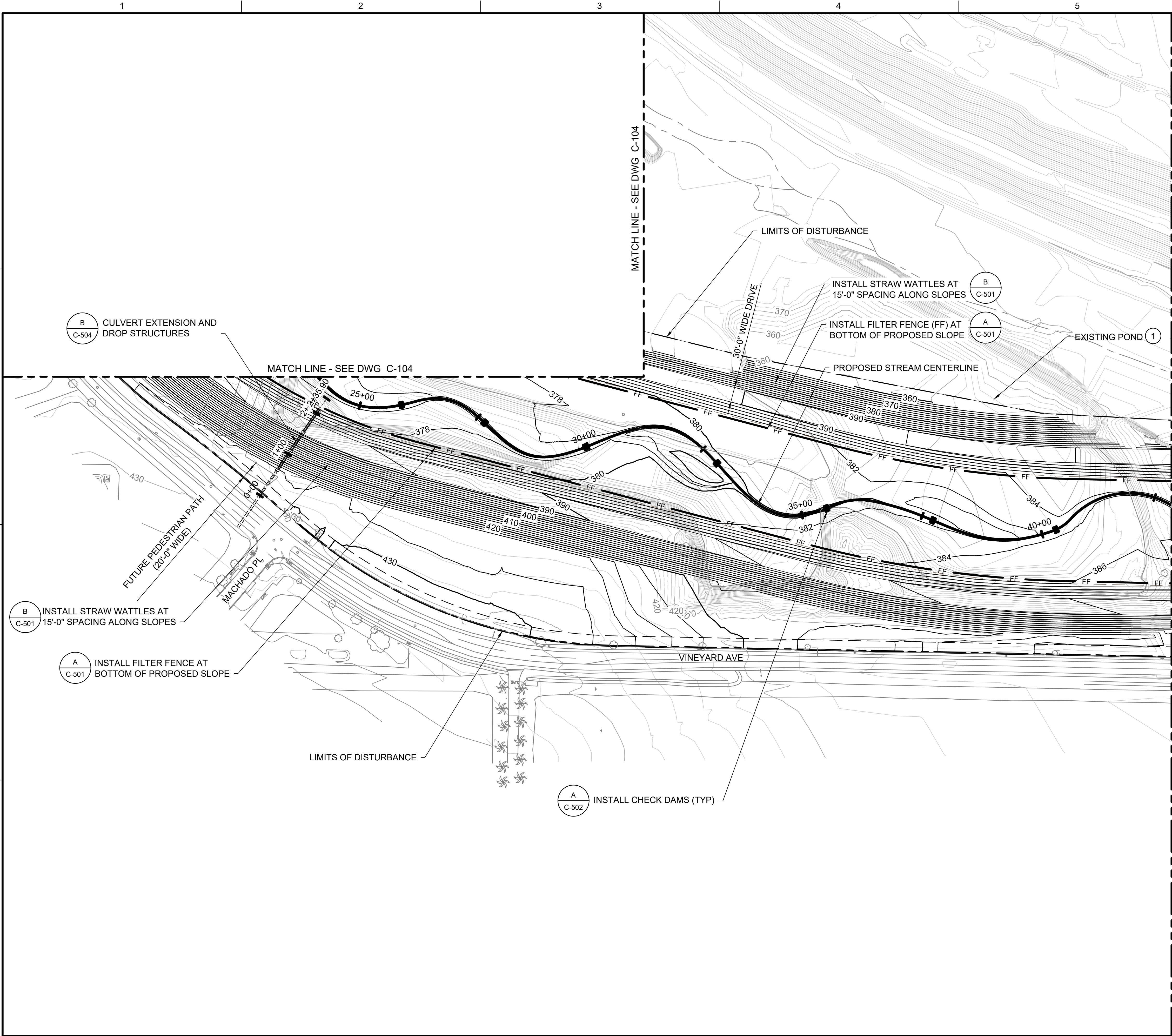
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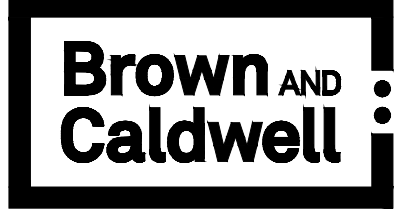


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CONSTRUCTION
EROSION CONTROL
PLAN - 2

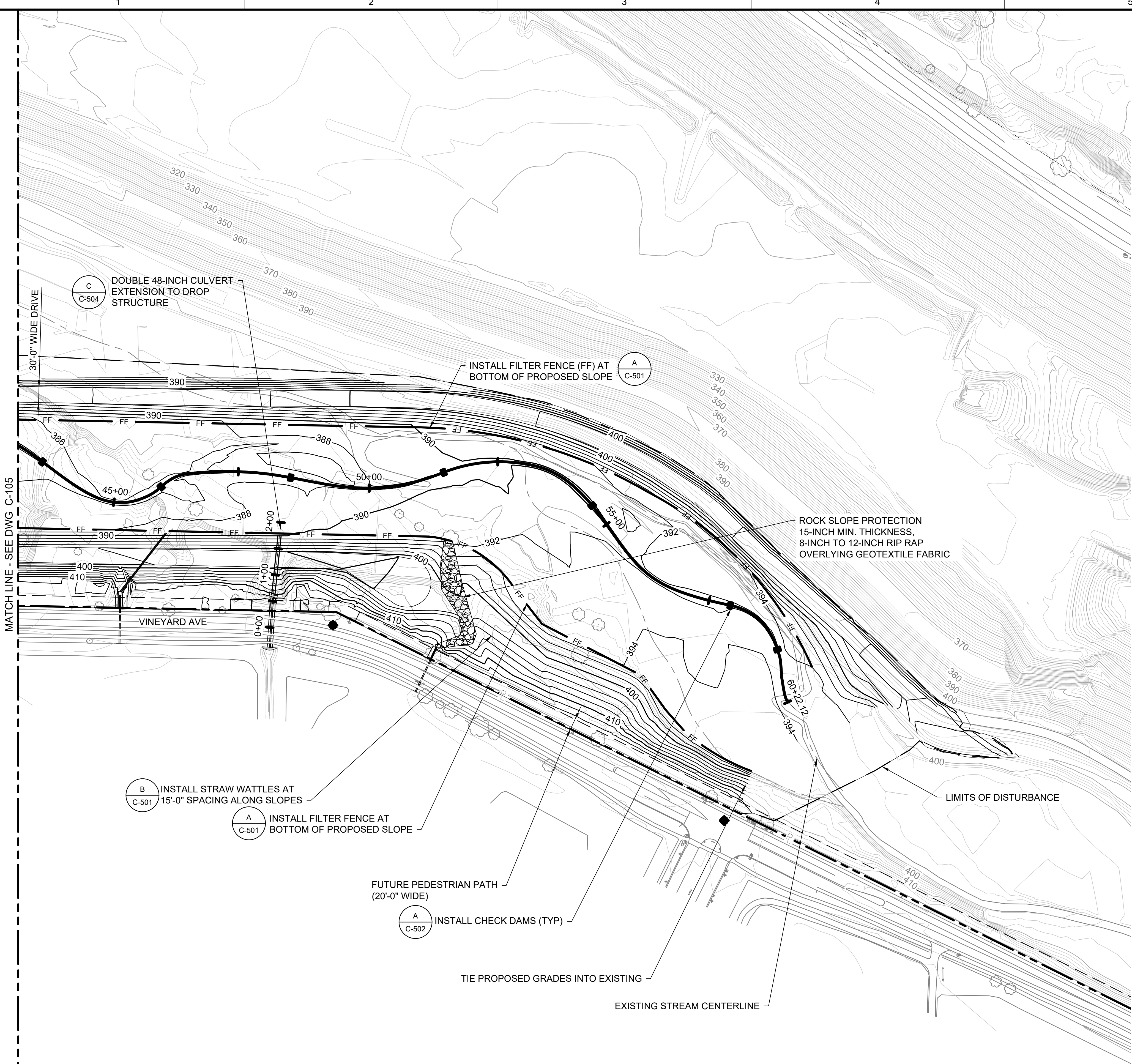
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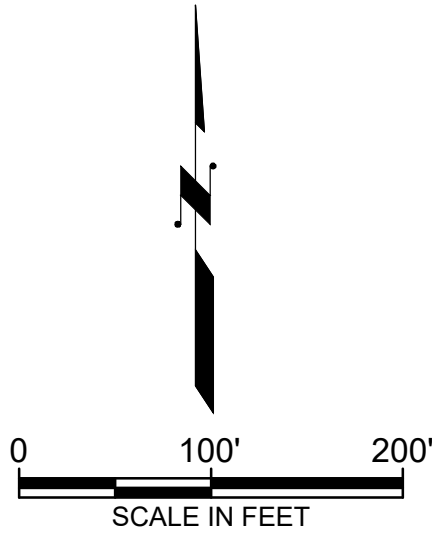
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5. CONTRACTOR SHALL KEEP AND POST A COPY OF ALL PERMITS AND APPROVED PLANS AT THE PROJECT SITE AT ALL TIMES.
6. CONTRACTOR SHALL ALLOW FREE AND UNLIMITED ACCESS TO THE PROJECT SITE AT ANY TIME TO ANY REGULATORY AGENCY EMPLOYEE INSPECTING THE CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ALAMEDA COUNTY OR STATE OF CALIFORNIA FINES RESULTING FROM DEVIATION, WITHOUT 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.
8. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY 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 FURTHER EROSION AND SEDIMENTATION.
9. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED 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 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 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.



Brown AND Caldwell

701 PIKE STREET
SUITE 1200
SEATTLE, WA 98101

2365 IRON POINT ROAD
SUITE 120
FOLSOM, CA 95630

PRELIMINARY
DESIGN
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DRAFT
NOT FOR
CONSTRUCTION

ARROYO DEL VALLE
REALIGNMENT
PROJECT

1544 STANLEY BOULEVARD
PLEASANTON, CA 94566

CA MINE ID NO: 91-01-0009

REVISIONS		
REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE	
DESIGNED:	
DRAWN:	
CHECKED:	
CHECKED:	
APPROVED:	
FILENAME	C-106.DWG
BC PROJECT NUMBER	149951
CLIENT PROJECT NUMBER	

CIVIL

CONSTRUCTION
EROSION CONTROL
PLAN - 3

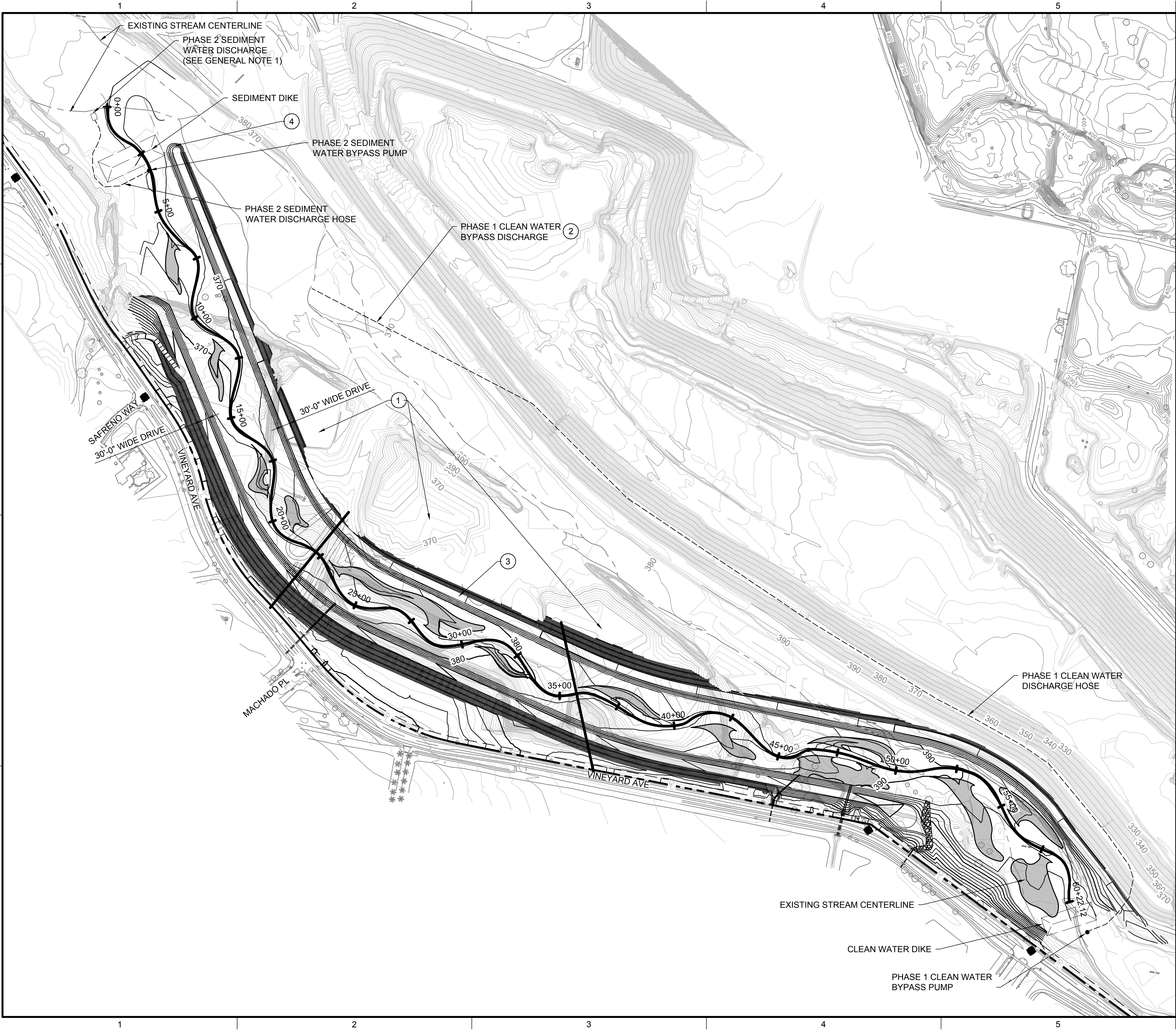
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C-106

SHEET NUMBER

9 OF

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GENERAL NOTES:

1. 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.

SHEET 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.
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 REALIGNMENT AT LAKE B" BY GEOCON CONSULTATNTS, INC. DATED JANUARY 2017.
4. TURN AROUND AREA GRADING TO BE COMPLETED ONLY WHEN BYPASS DISCHARGE ALONG EXISTING STREAMLINE NO LONGER NECESSARY.



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C-107.DWG
BC PROJECT NUMBER
149951
CLIENT PROJECT NUMBER

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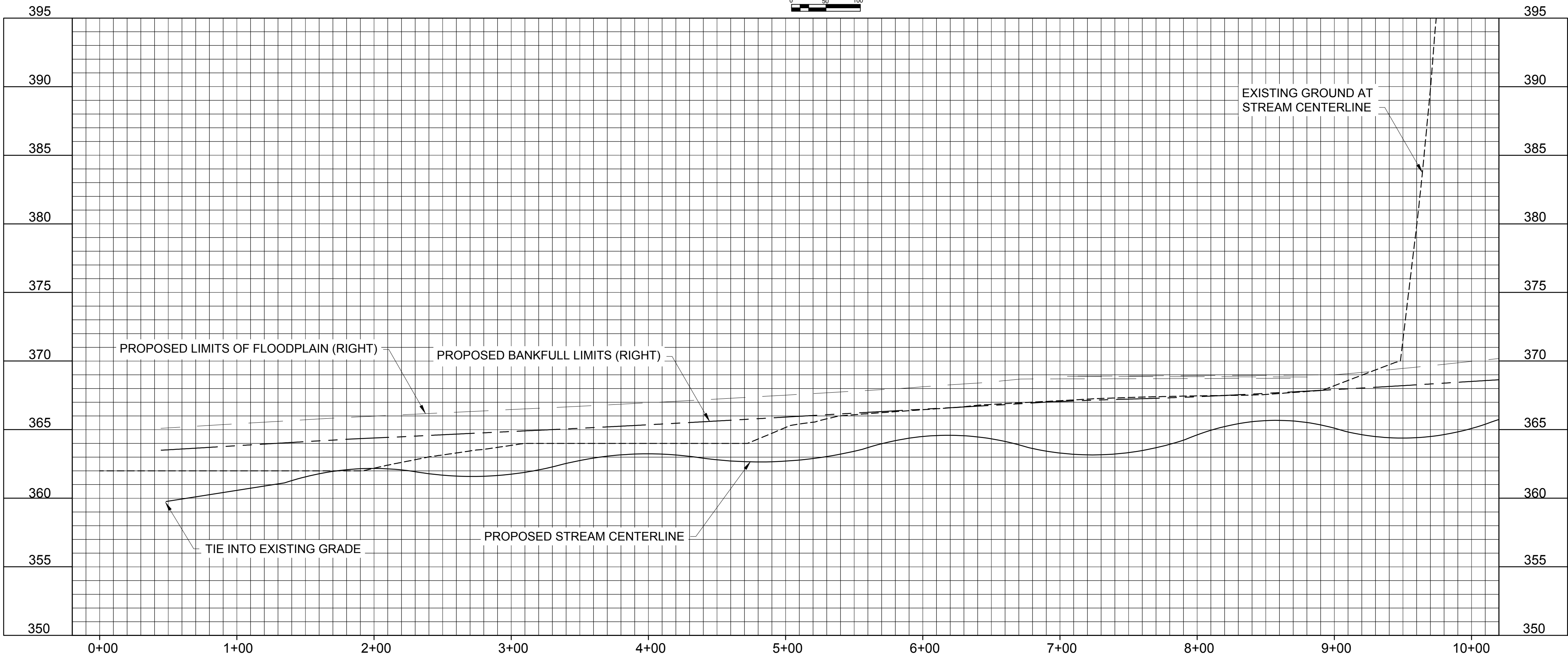
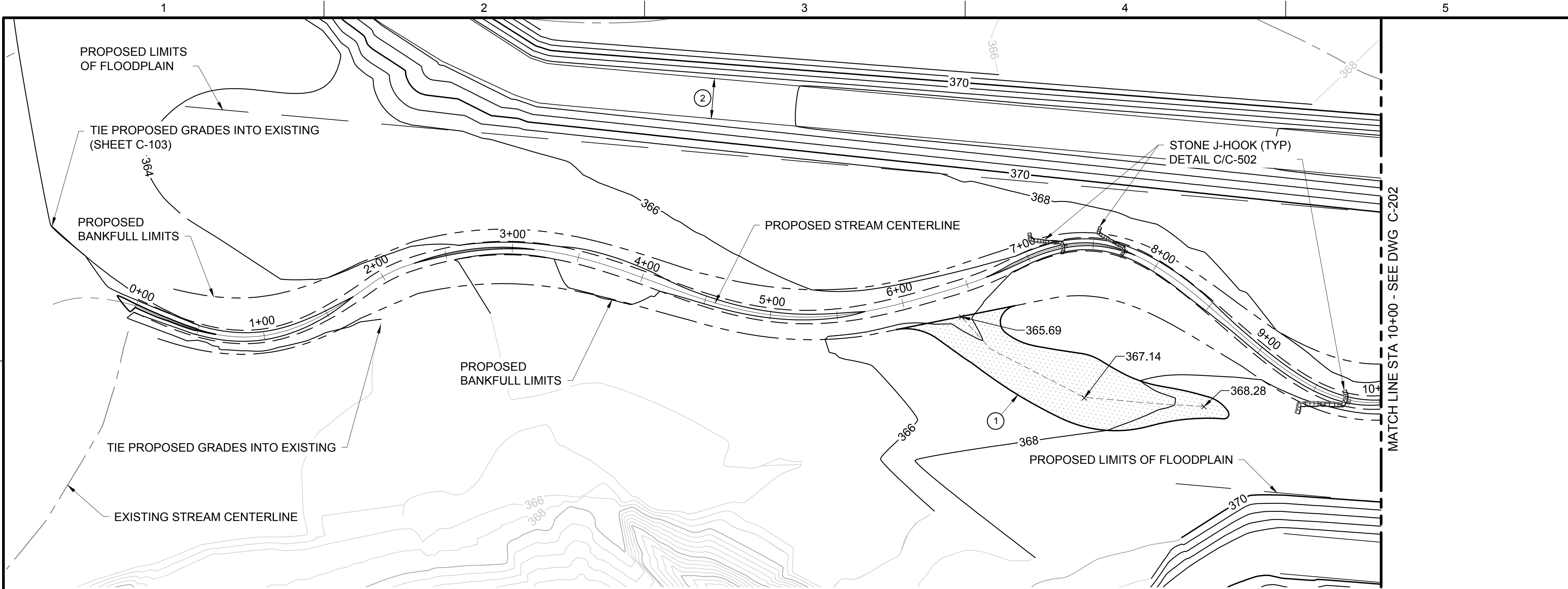
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CONSTRUCTION
SEQUENCING

DRAWING NUMBER

C-107

SHEET NUMBER
10 OF

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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 RE-SEEDING 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 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.
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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.

SHEET KEYNOTES:

1. BACKWATER WETLAND, SEE DETAIL 1/C-503
2. 30'-0" WIDE DRIVE



701 PIKE STREET
SUITE 1200
SEATTLE, WA 98101



2365 IRON POINT ROAD
SUITE 120
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1544 STANLEY BOULEVARD
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CLIENT PROJECT NUMBER

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PROFILE STA 0+00
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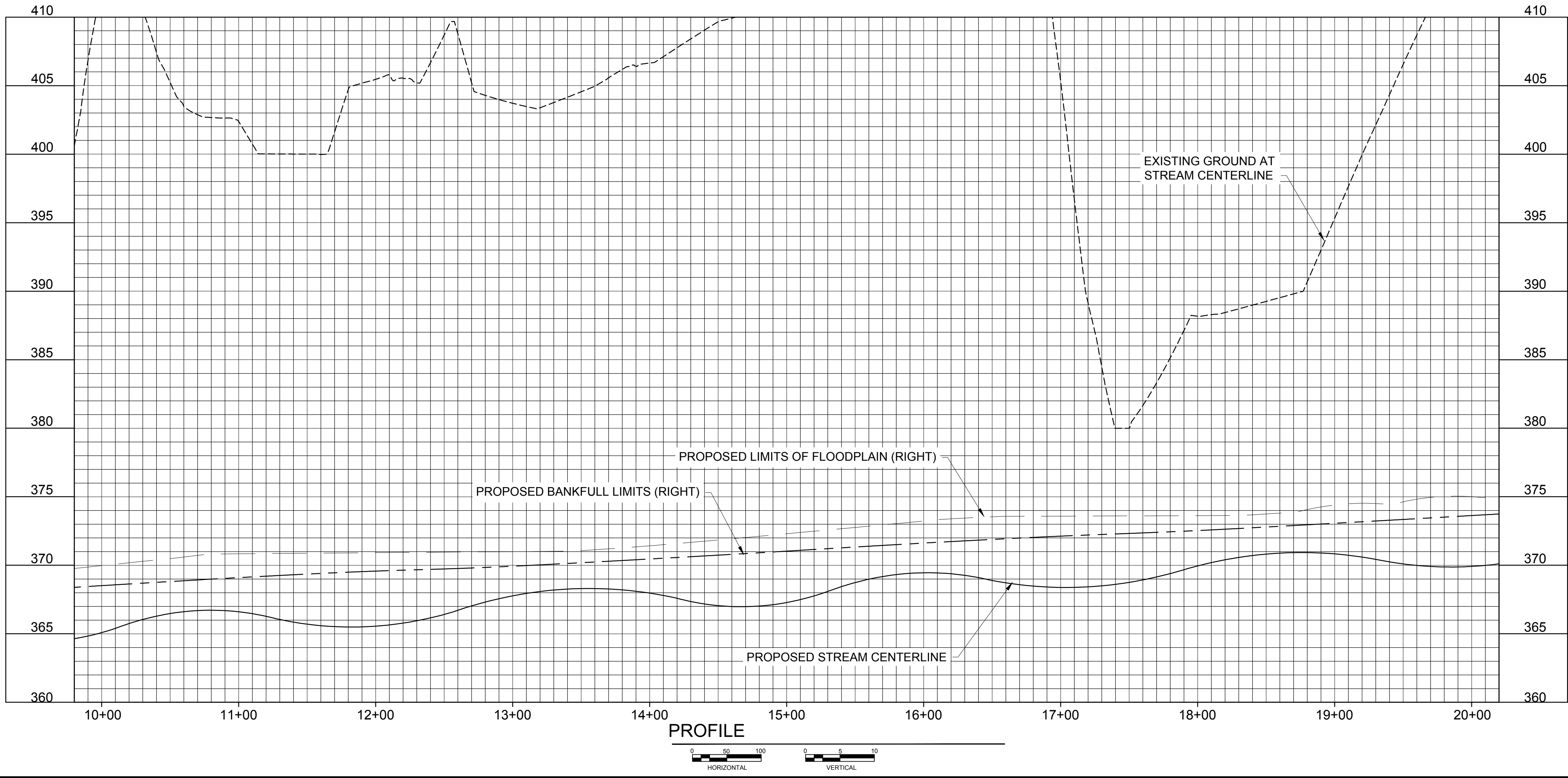
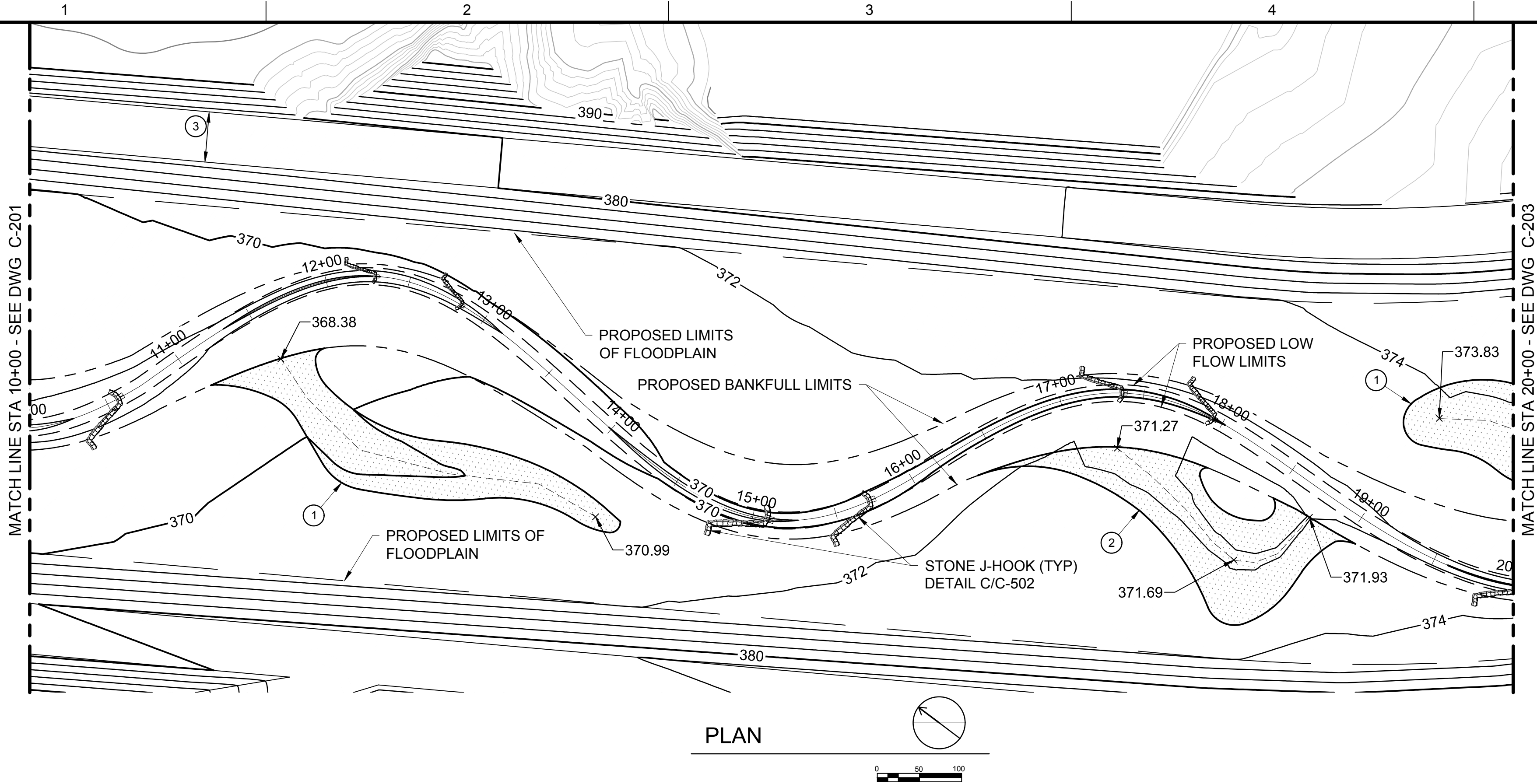
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C-201

SHEET NUMBER

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GENERAL NOTES:

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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.

SHEET KEYNOTES:

1. BACKWATER WETLAND, SEE DETAIL 1/C-503
2. FLOW-THROUGH WETLAND, SEE DETAIL 4/C-503
3. 30'-0" WIDE DRIVE



701 PIKE STREET
SUITE 1200
SEATTLE, WA 98101



2365 IRON POINT ROAD
SUITE 120
FOLSOM, CA 95630

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1544 STANLEY BOULEVARD
PLEASANTON, CA 94566

CA MINE ID NO: 91-01-0009

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CLIENT PROJECT NUMBER

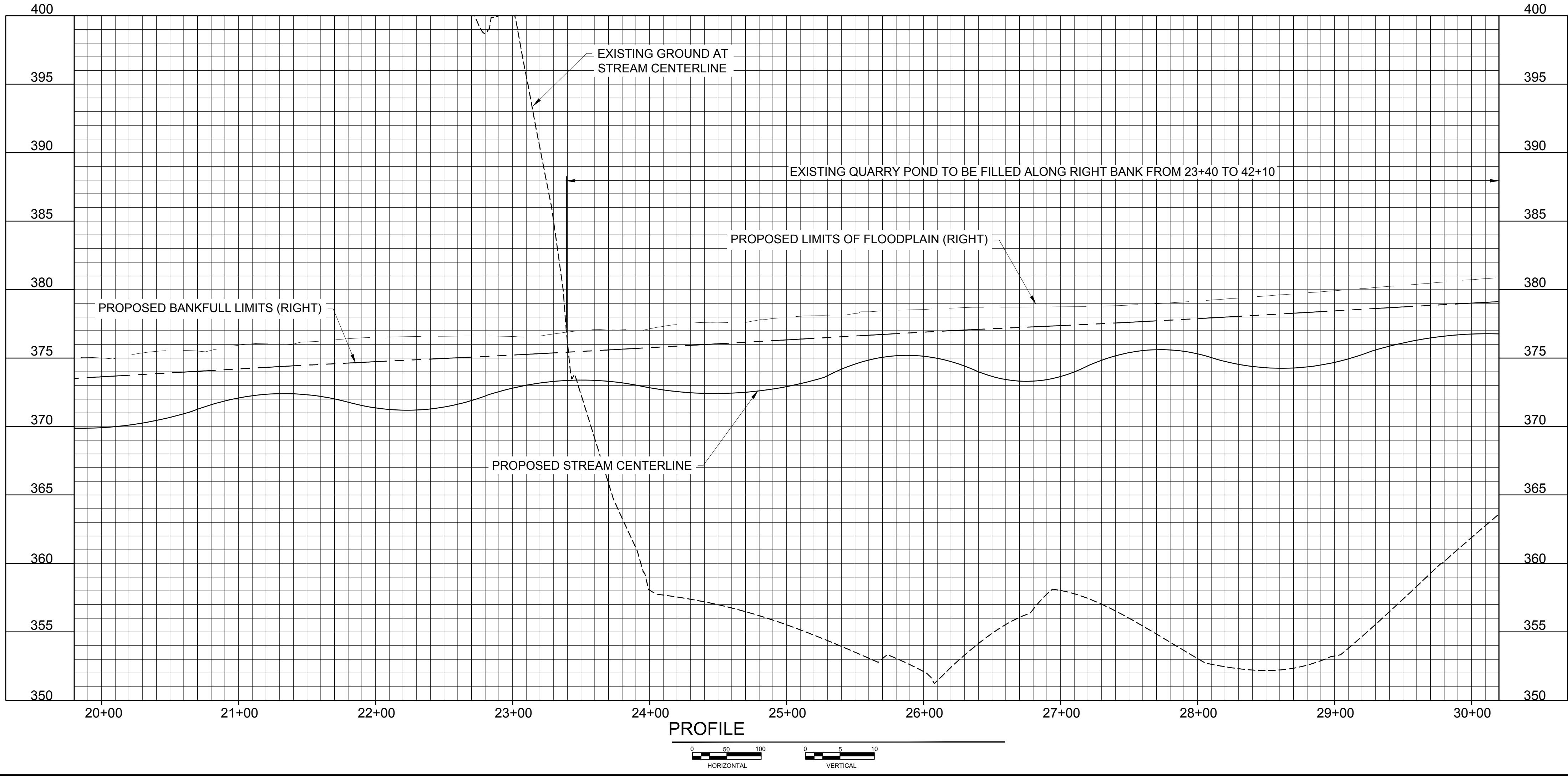
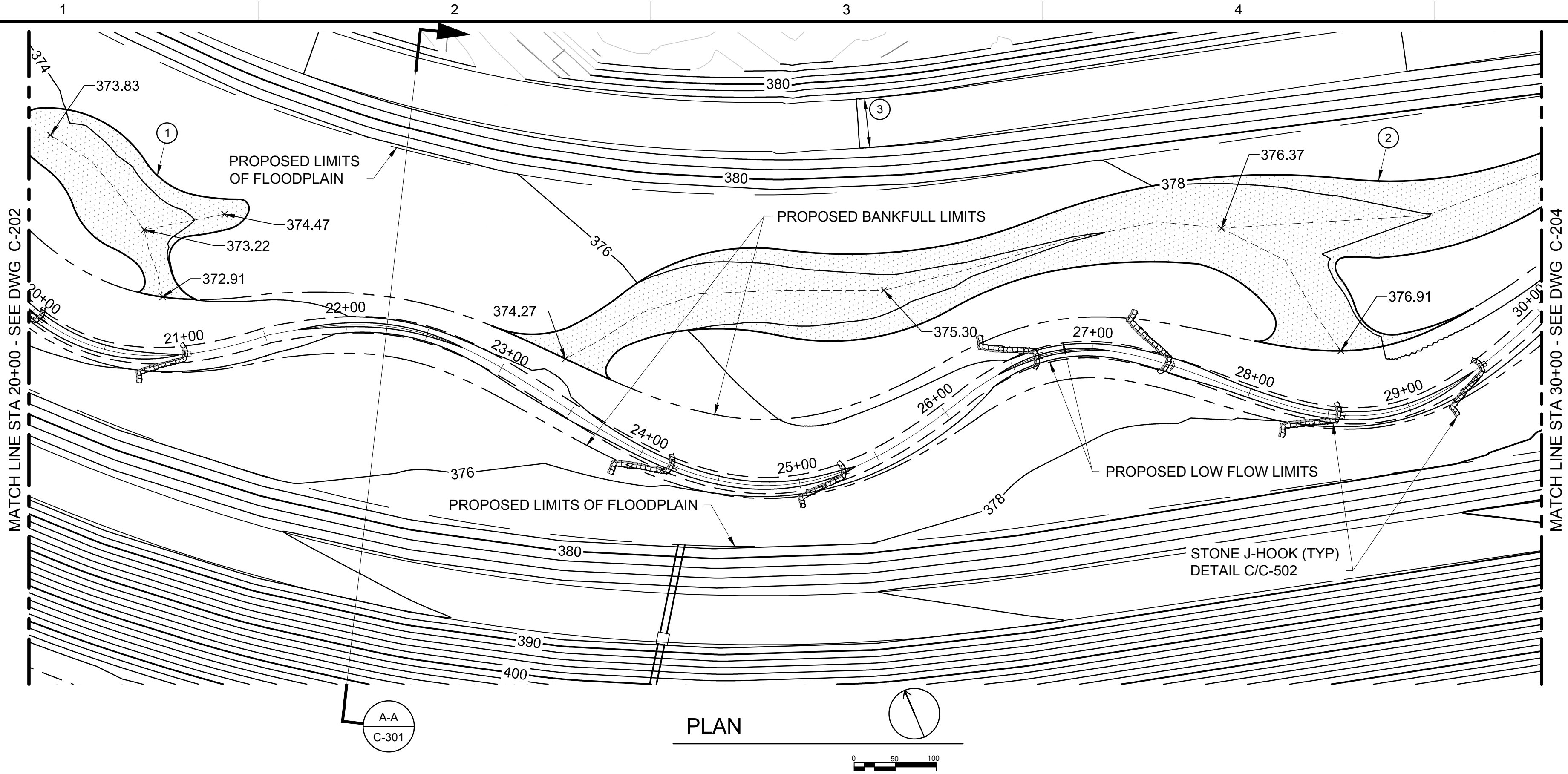
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TO STA 20+00

DRAWING NUMBER

C-202

SHEET NUMBER
12 OF

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GENERAL NOTES:

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9. WHEN LOOKING DOWNSTREAM, THE RIGHT BANK IS ON THE OBSERVER'S RIGHT.

SHEET KEYNOTES:

1. BACKWATER WETLAND, SEE DETAIL 1/C-503
2. FLOW THROUGH WETLAND, SEE DETAIL 4/C-503
3. 30'-0" WIDE DRIVE



701 PIKE STREET
SUITE 1200
SEATTLE, WA 98101



2365 IRON POINT ROAD
SUITE 120
FOLSOM, CA 95630

PRELIMINARY
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CONSTRUCTION

ARROYO DEL VALLE
REALIGNMENT
PROJECT

1544 STANLEY BOULEVARD
PLEASANTON, CA 94566

CA MINE ID NO: 91-01-0009

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED:

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CHECKED:

CHECKED:

APPROVED:

FILENAME

C-201.DWG

BC PROJECT NUMBER

149951

CLIENT PROJECT NUMBER

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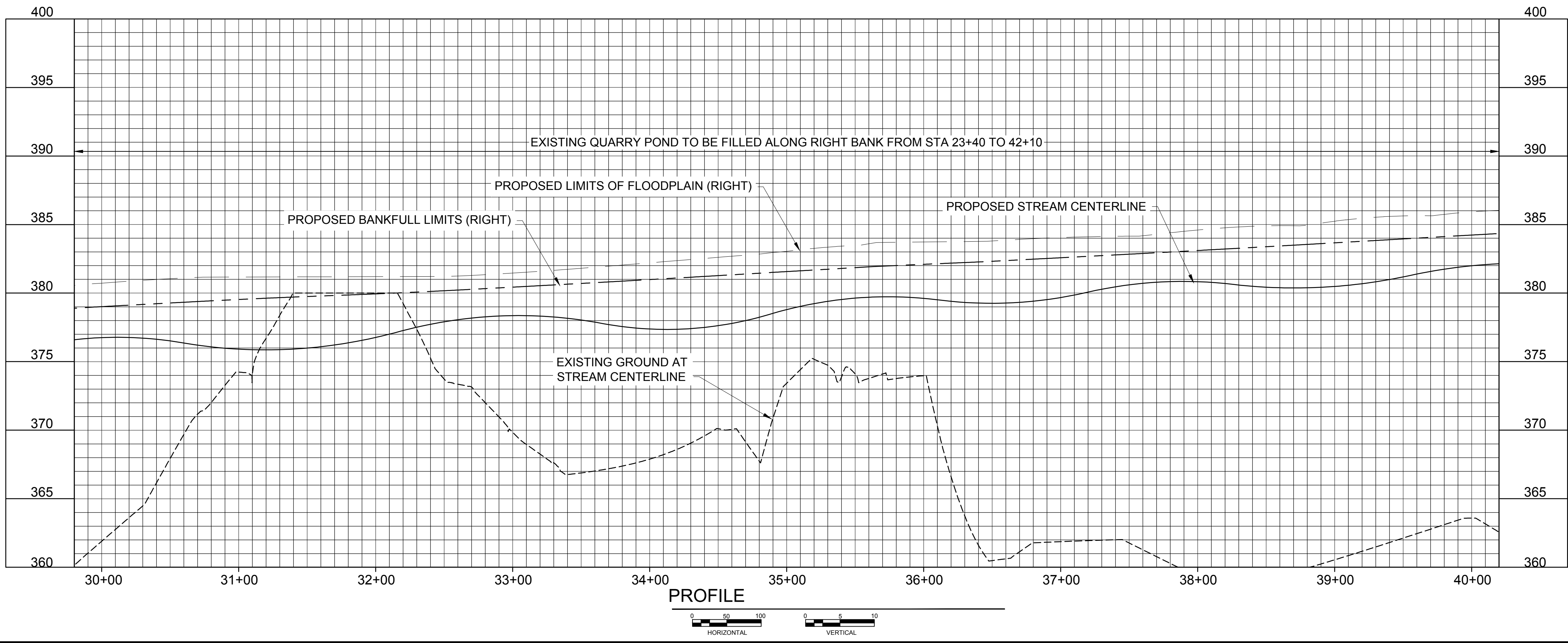
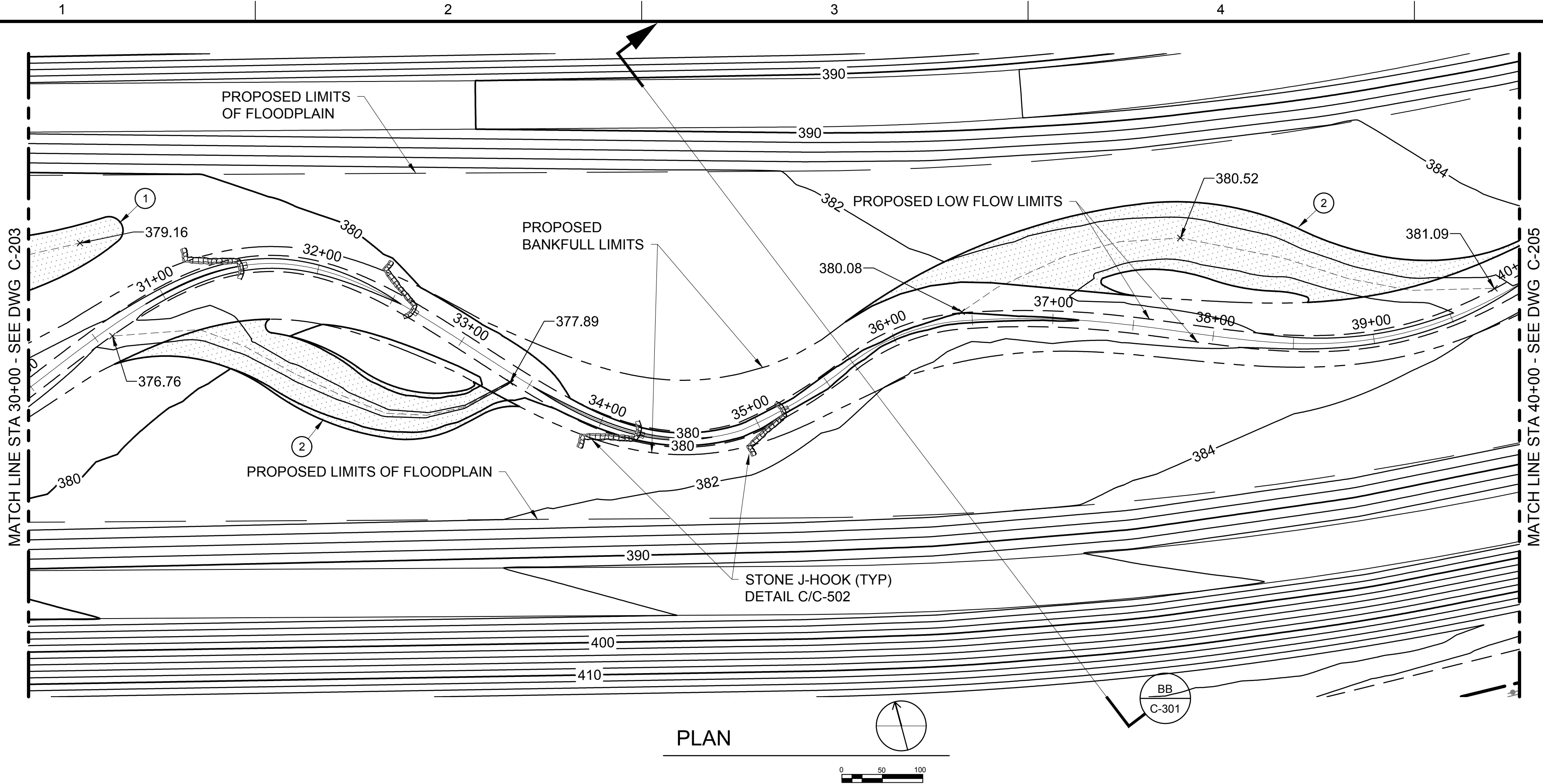
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TO STA 30+00

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C-203

SHEET NUMBER
13 OF

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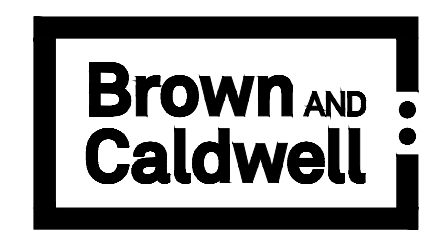


GENERAL NOTES:

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.
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9. WHEN LOOKING DOWNSTREAM, THE RIGHT BANK IS ON THE OBSERVER'S RIGHT.

SHEET KEYNOTES:

1. FLOW THROUGH WETLAND, SEE DETAIL 4/C-503
2. CHANNEL BIFURCATION, SEE DETAIL 3/C-503



701 PIKE STREET
SUITE 1200
SEATTLE, WA 98101



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ARROYO DEL VALLE
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PROJECT

1544 STANLEY BOULEVARD
PLEASANTON, CA 94566

CA MINE ID NO: 91-01-0009

REVISIONS		
REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

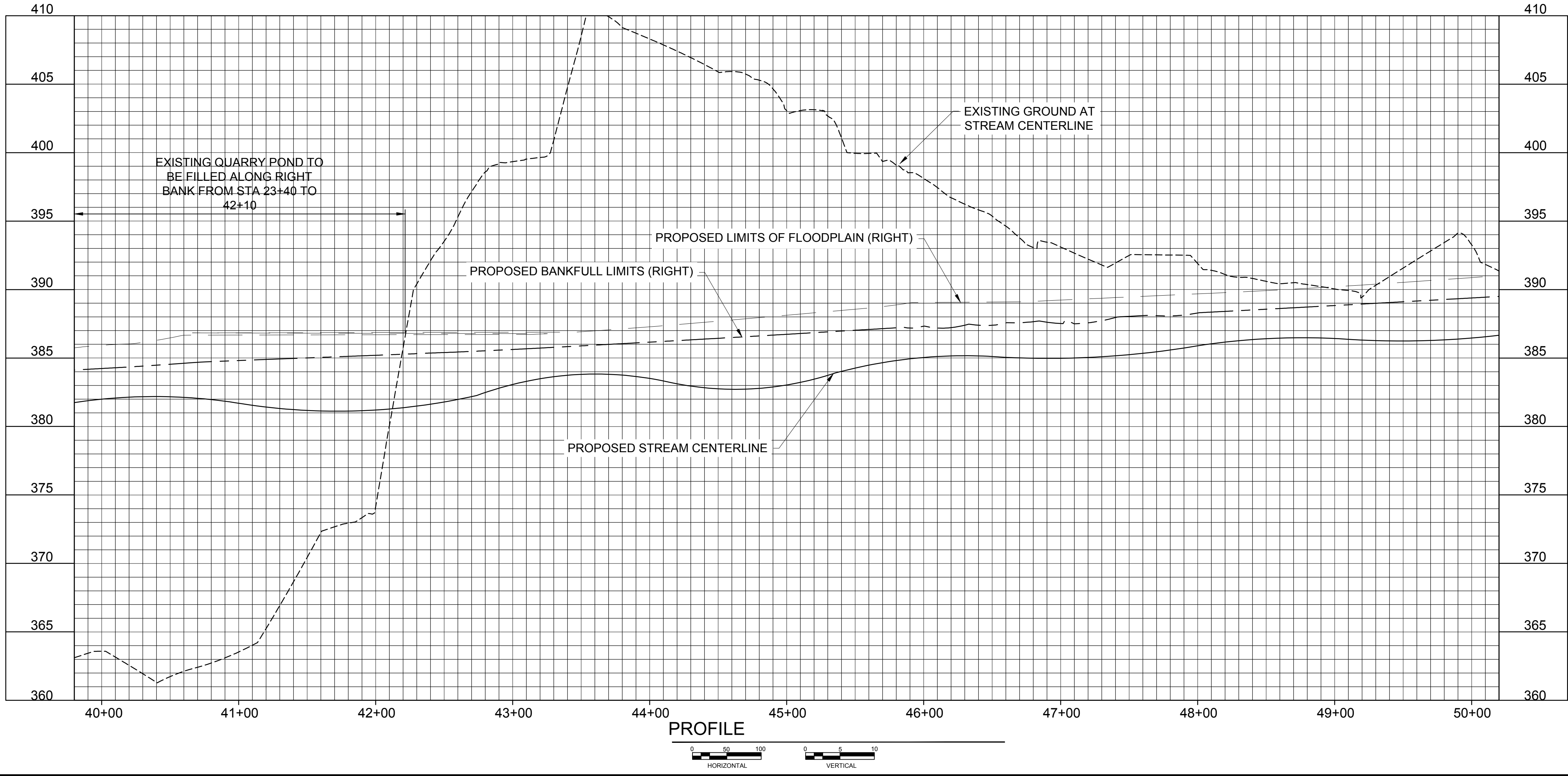
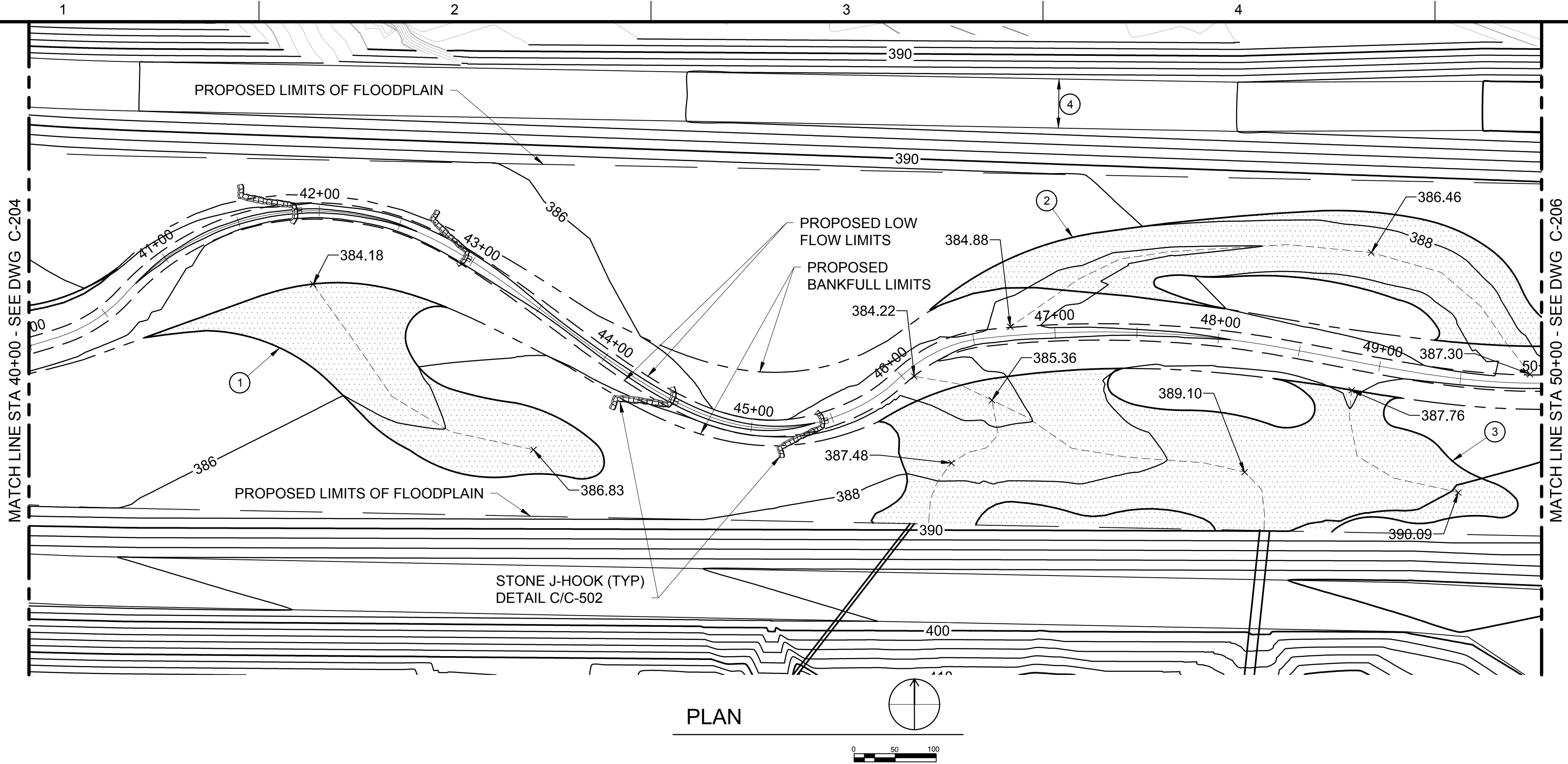
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FILENAME
C-201.DWG
BC PROJECT NUMBER
149951
CLIENT PROJECT NUMBER

CIVIL
GRADING PLAN AND
PROFILE STA 30+00
TO STA 40+00

DRAWING NUMBER
C-204
SHEET NUMBER
14 OF

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GENERAL NOTES:

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9. WHEN LOOKING DOWNSTREAM, THE RIGHT BANK IS ON THE OBSERVER'S RIGHT.

SHEET KEYNOTES:

1. BACKWATER WETLAND, SEE DETAIL 1/C-503
2. CHANNEL BIFURCATION, SEE DETAIL 3/C-503
3. TRIBUTARY WETLAND, SEE DETAIL 2/C-503
4. 30'-0" WIDE DRIVE



701 PIKE STREET
SUITE 1200
SEATTLE, WA 98101



2365 IRON POINT ROAD
SUITE 120
FOLSOM, CA 95630

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PLEASANTON, CA 94566

CA MINE ID NO: 91-01-0009

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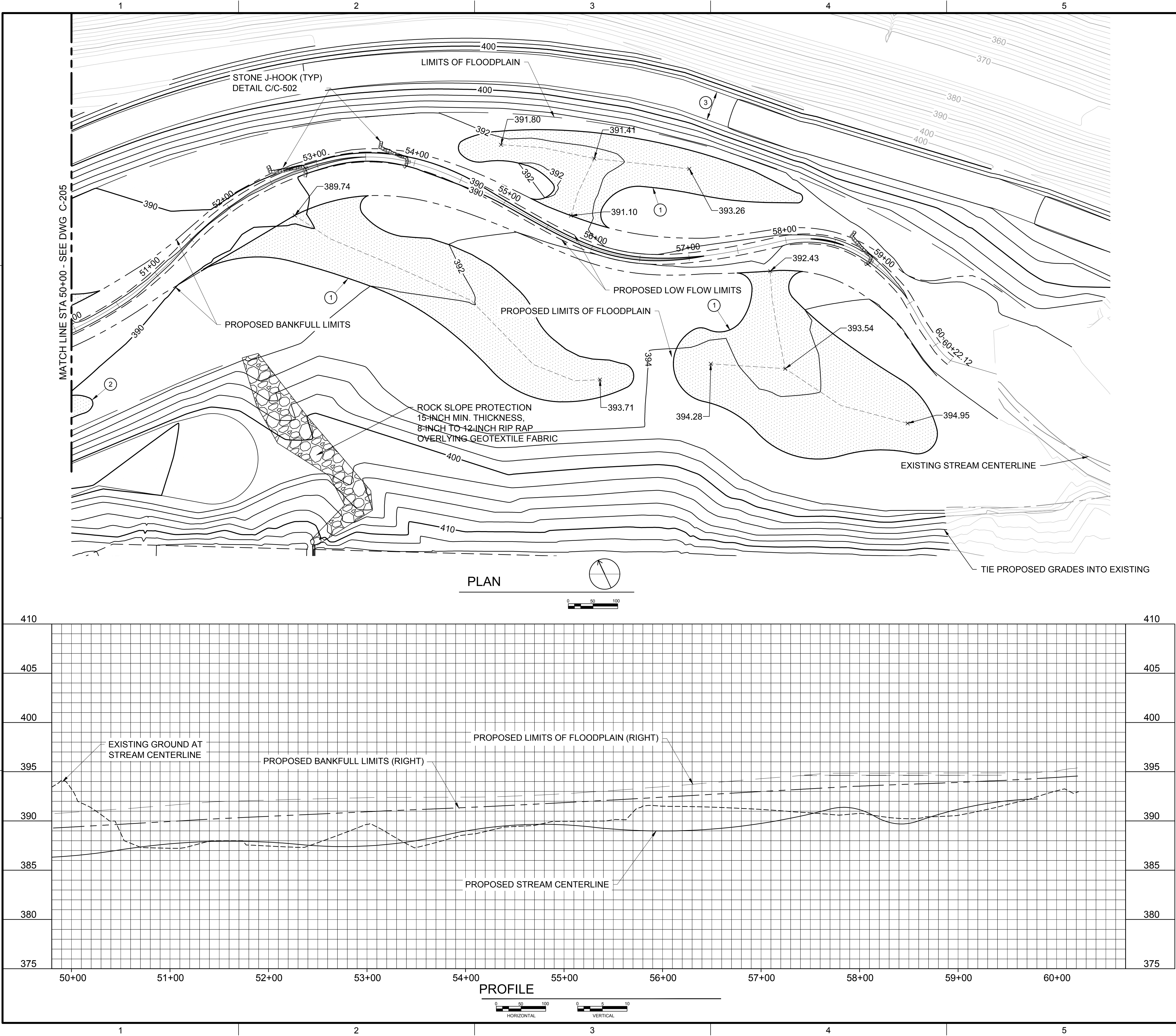
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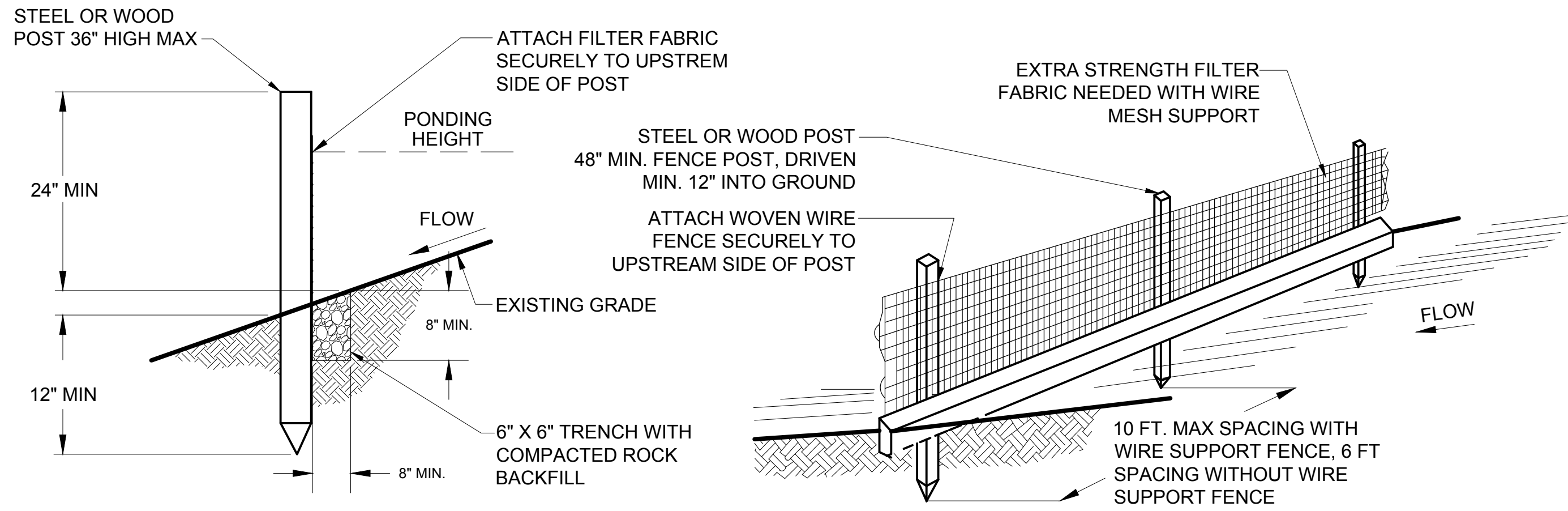
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15 OF

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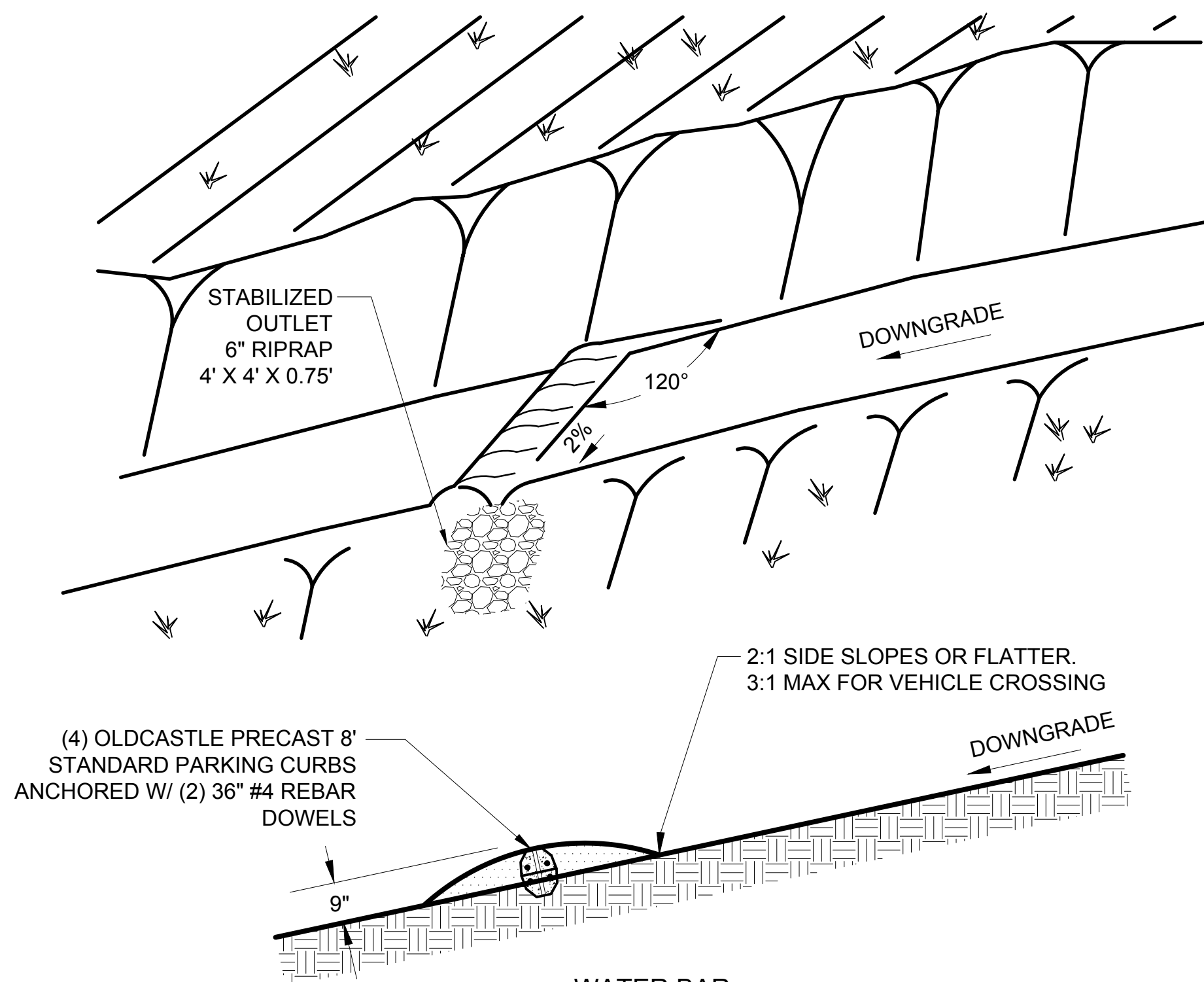


- NOTES:
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
 3. STEEL POSTS SHALL BE EITHER "T" OR "U" TYPE. WOOD POSTS SHALL BE 2" HARDWOOD.
 4. FENCING SHALL BE GEOFAB, ENVIROFENCE OR APPROVED EQUAL.

FILTER FENCE

DETAIL A
VAR

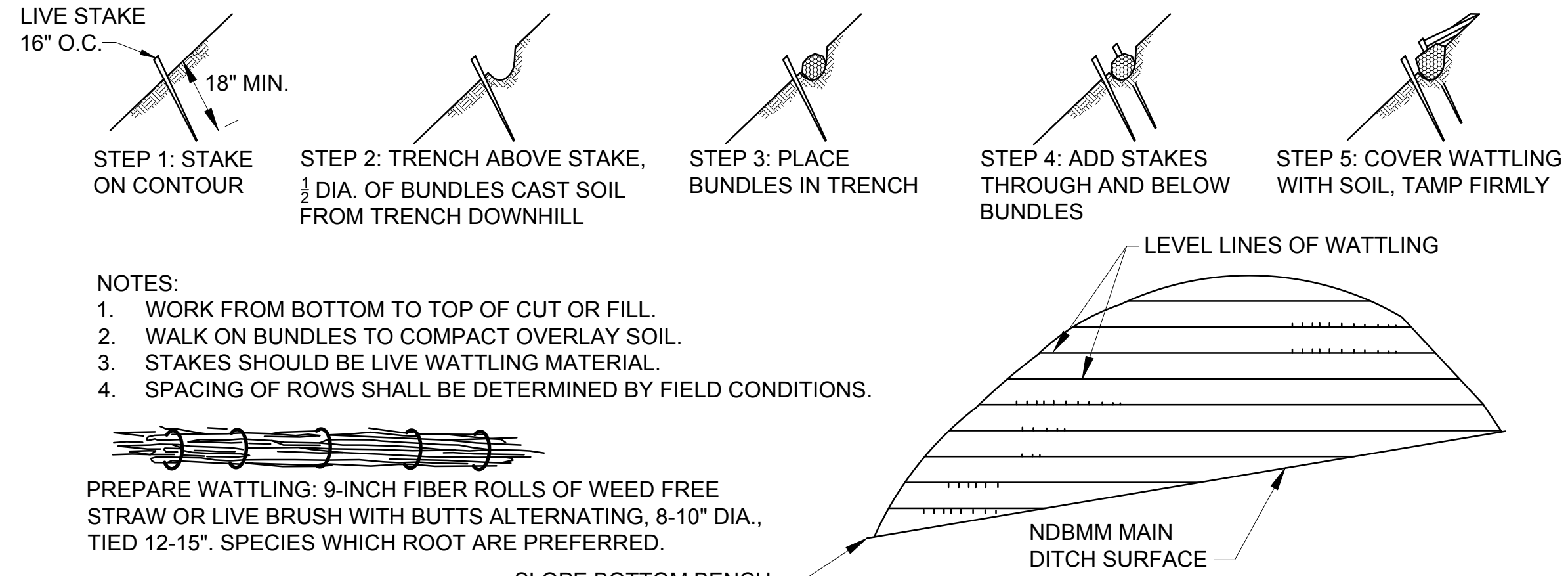
NO SCALE



WATER BAR

DETAIL C
VAR

NO SCALE



- NOTES:
1. WORK FROM BOTTOM TO TOP OF CUT OR FILL.
 2. WALK ON BUNDLES TO COMPACT OVERLAY SOIL.
 3. STAKES SHOULD BE LIVE WATTLING MATERIAL.
 4. SPACING OF ROWS SHALL BE DETERMINED BY FIELD CONDITIONS.

PREPARE WATTLING: 9-INCH FIBER ROLLS OF WEED FREE STRAW OR LIVE BRUSH WITH BUTTS ALTERNATING, 8-10" DIA., TIED 12-15". SPECIES WHICH ROOT ARE PREFERRED.

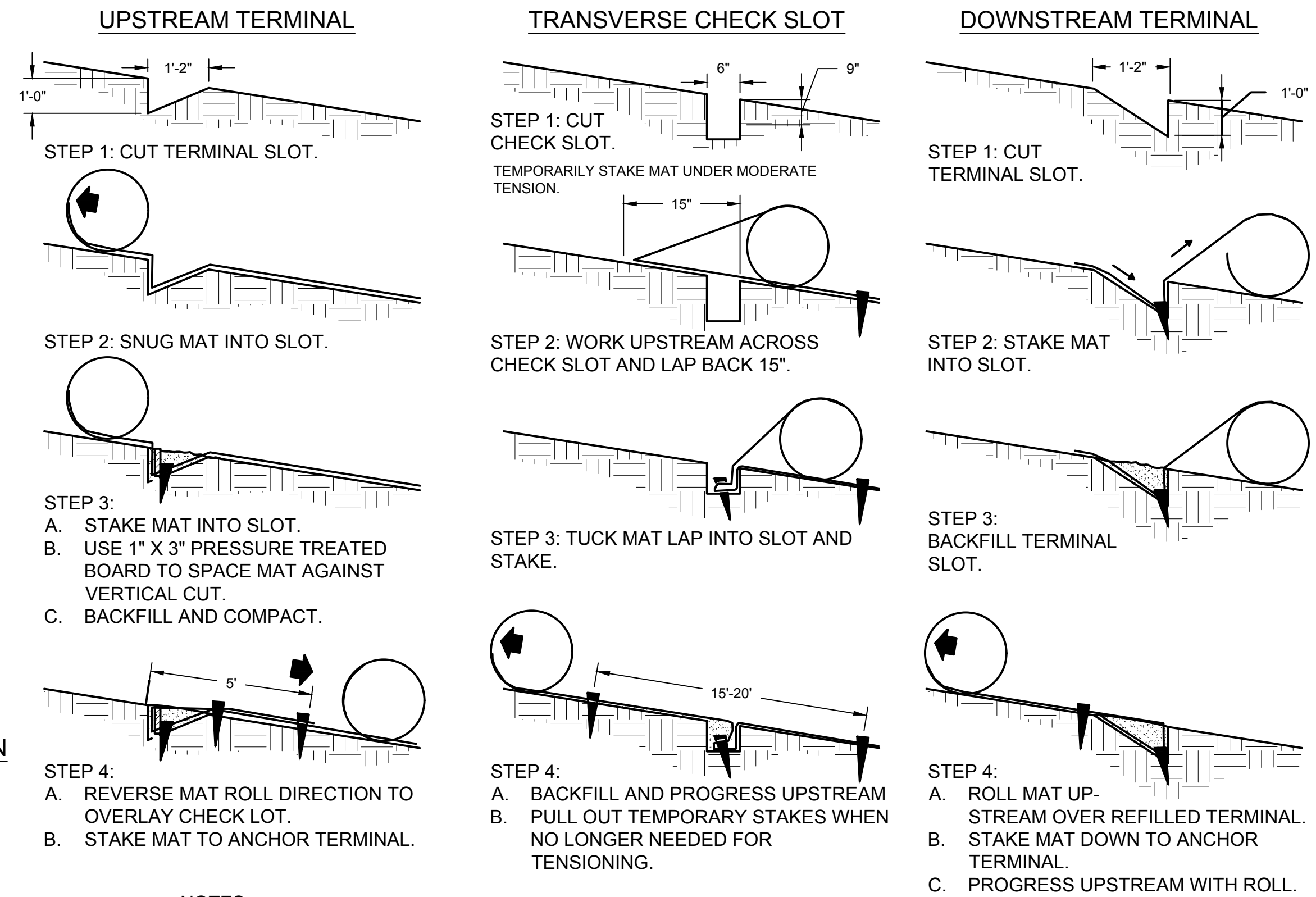
WATTLING - TYPICAL SLOPE APPLICATION

DETAIL B
VAR

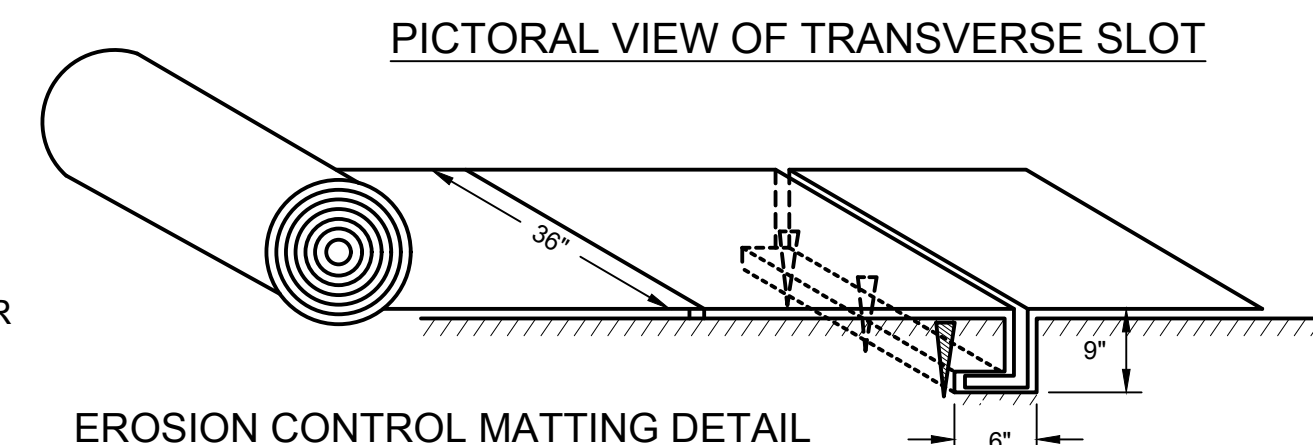
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TYPICAL INSTALLATION GUIDELINES FOR ROLLED EROSION CONTROL PRODUCTS (RECP)

BLANKET AND MATTING CROSS-SECTIONS



- NOTES:
1. START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM.
 2. FIRST ROLL IS CENTERED LONGITUDINALLY IN MID-CHANNEL AND PINNED WITH TEMPORARY STAKES TO MAINTAIN ALIGNMENT.
 3. SUBSEQUENT ROLLS FOLLOW IN STAGGERED SEQUENCE BEHIND THE FIRST ROLL. USE THE CENTER ROLL FOR ALIGNMENT TO THE CHANNEL CENTER.
 4. WORK OUTWARDS FROM THE CHANNEL CENTER TO THE EDGE.
 5. USE 3" OVERLAPS AND STAKE AT 5' INTERVALS ALONG THE SEAMS.
 6. USE 3" OVERLAPS AND SHINGLE DOWNSTREAM TO CONNECT THE LINING AT THE ROLL ENDS.



PICTORIAL VIEW OF TRANSVERSE SLOT

EROSION CONTROL MATTING DETAIL

DETAIL D
VAR

NO SCALE

Brown AND Caldwell

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CEMEX
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CLIENT PROJECT NUMBER

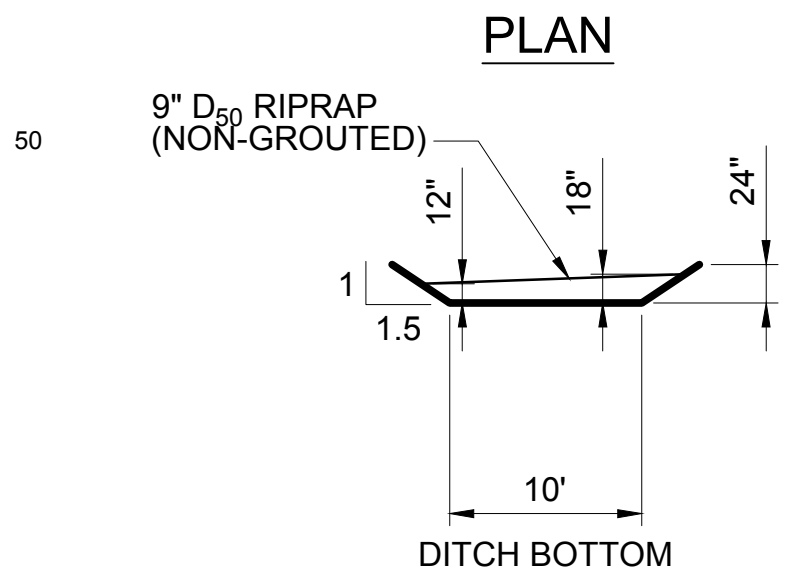
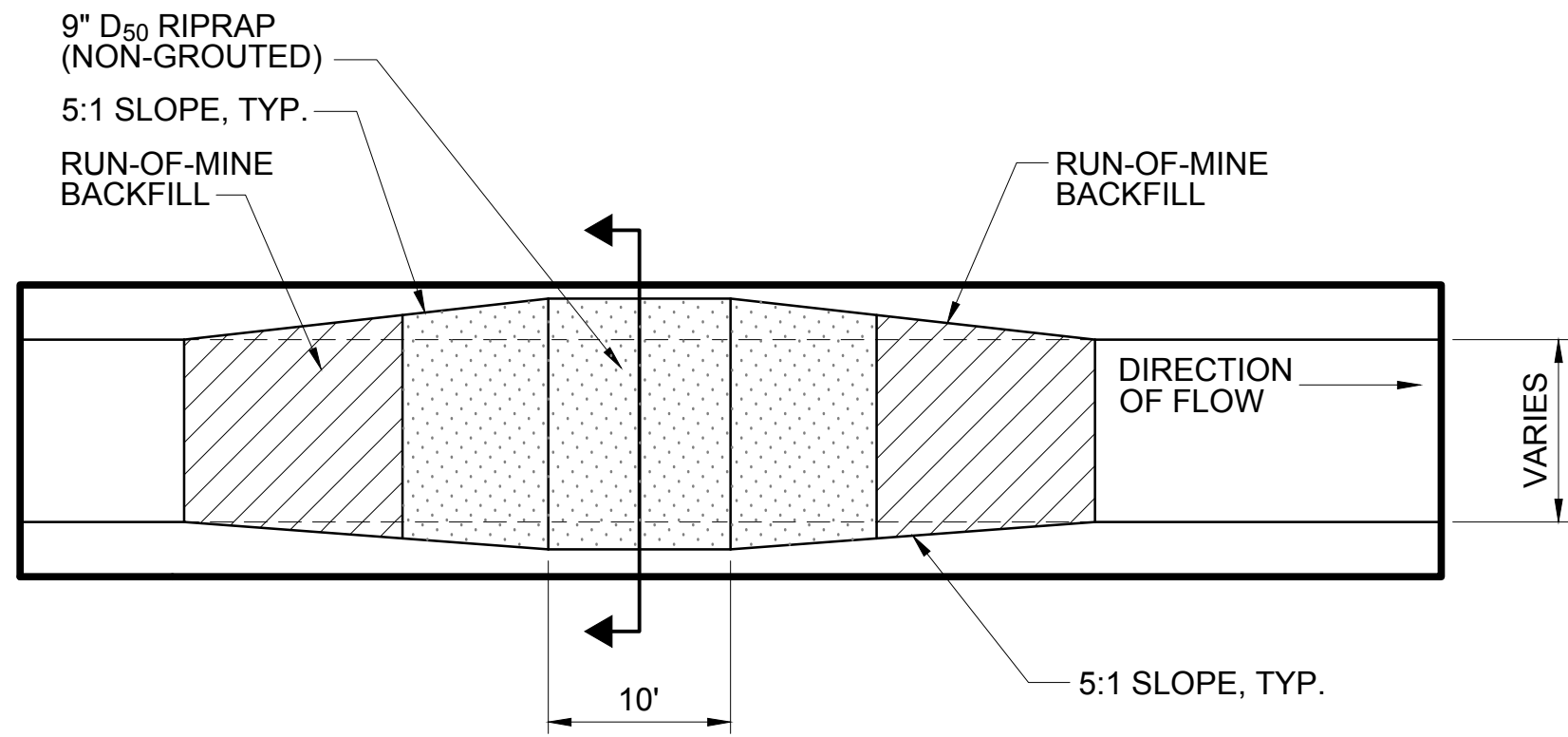
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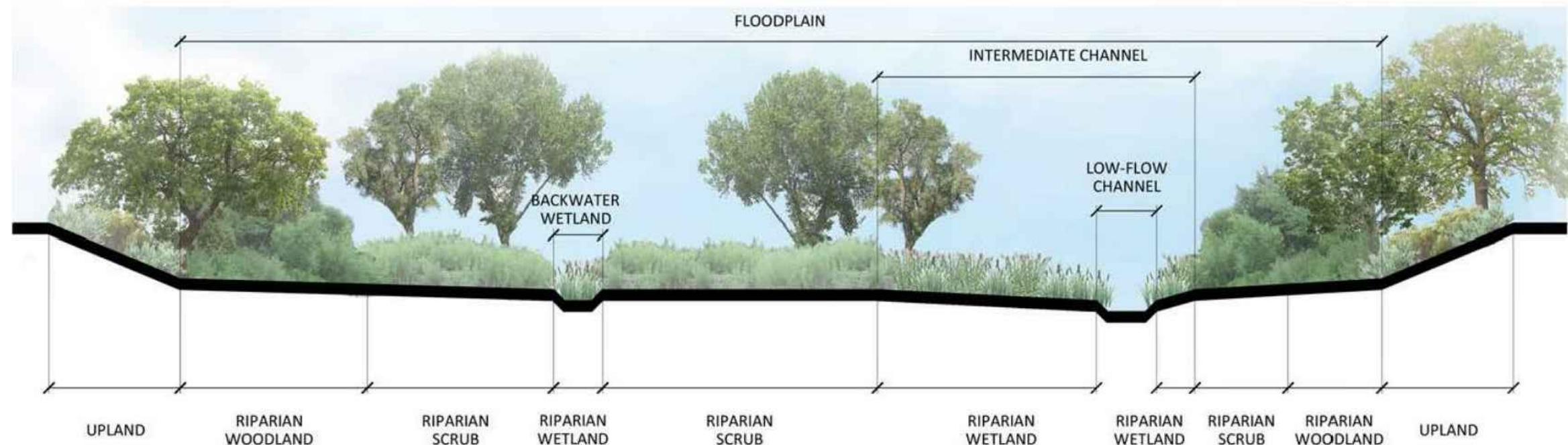
C-501

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18 OF

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CHECK DAM DETAIL A NO SCALE



Riparian Wetland

Trees:
Alnus rhombifolia
Populus fremontii
Salix exigua
Salix laevigata
Salix lasiolepis
Herbaceous:
Cyperus eragrostis
Helenium bigelovii
Nasturtium officinale
Phragmites australis
Schoenoplectus acutus
Typha spp.

Riparian Scrub

Trees:
Alnus rhombifolia
Populus fremontii
Salix laevigata
Salix lasiolepis
Shrubs:
Baccharis salicifolia
Rosa californica
Rubus ursinus
Artemisia douglasiana
Carex barbarae
Cyperus eragrostis
Juncus patens

Riparian Woodland

Trees:
Acer negundo
Platanus racemosa
Populus fremontii
Quercus lobata
Shrubs:
Rosa californica
Vitis californica
Artemisia douglasiana
Carex barbarae
Leymus triticoides

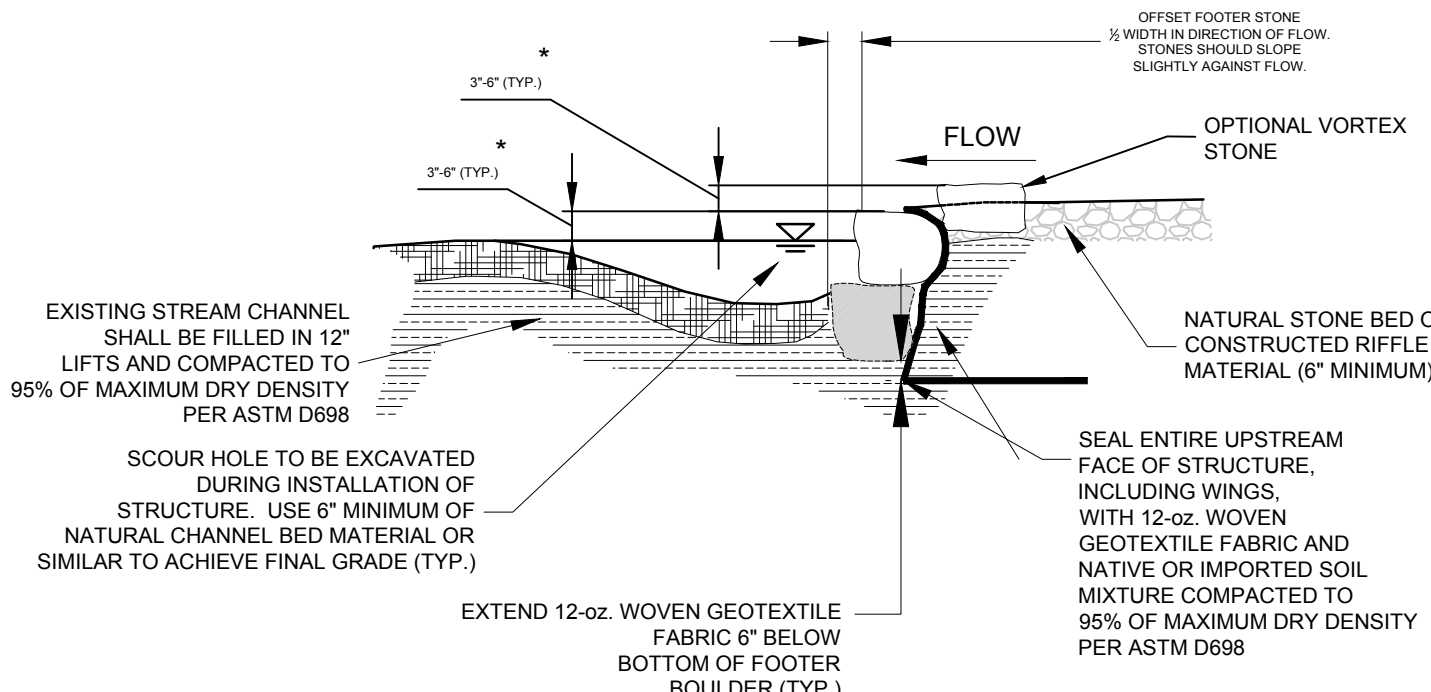
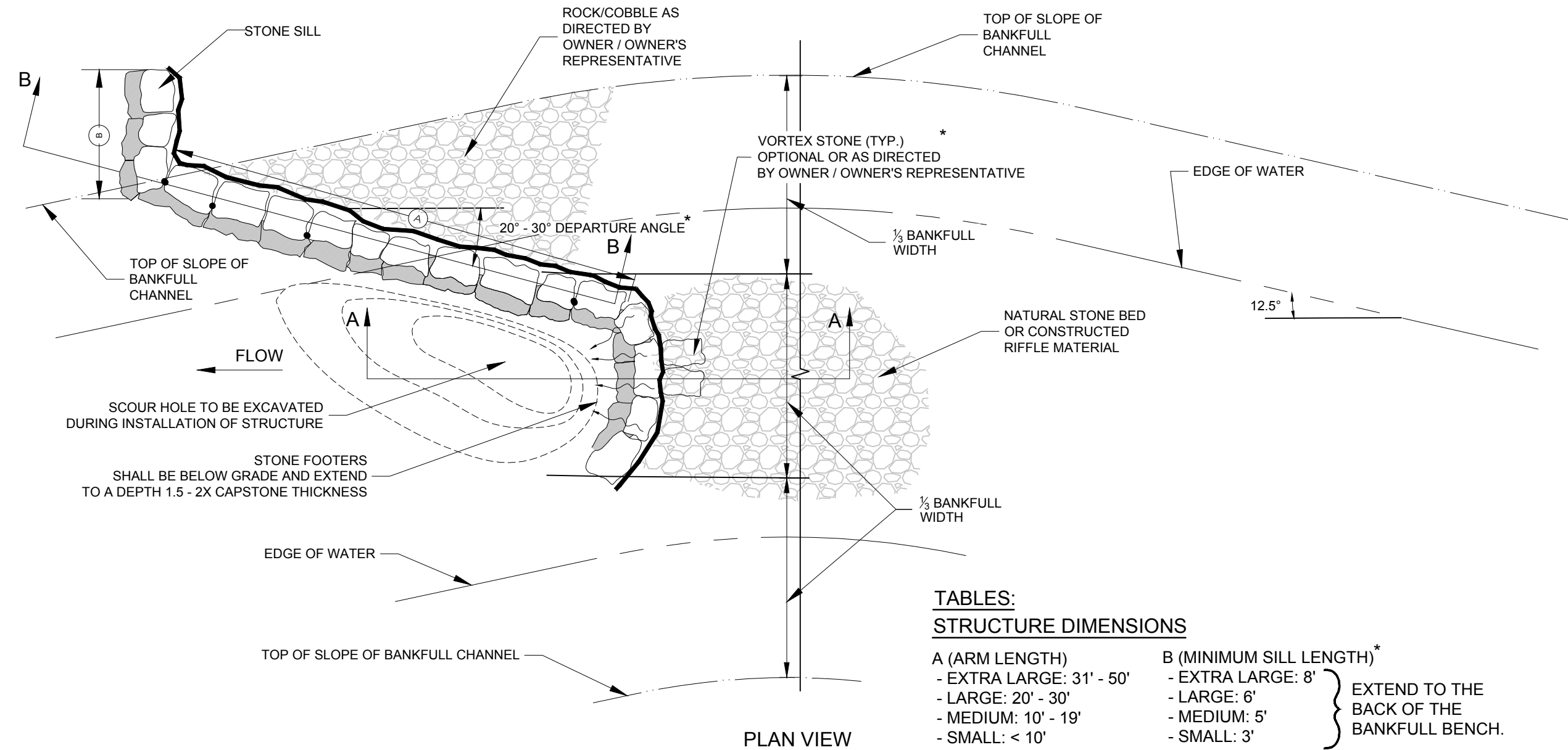
Upland

Trees:
Aesculus californica
Juglans hindsii
Quercus agrifolia
Quercus lobata
Shrubs:
Artemisia californica
Baccharis pilularis
Frangula californica
Heteromeles arbutifolia
Herbaceous:
Acmispon glaber
Hordeum brachyantherum
Stipa pulchra

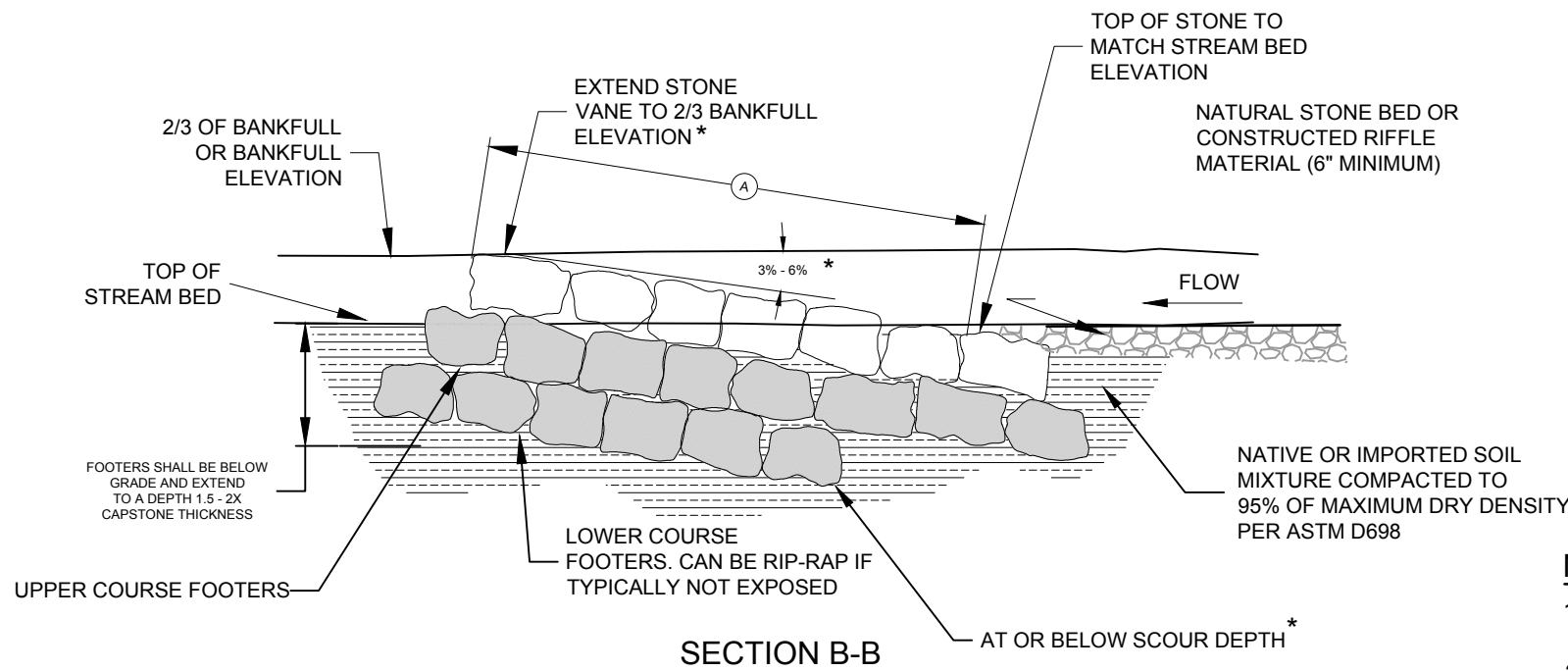
NOTE: FOOTHILL ASSOCIATES, MAY 2018

TYPICAL DEPRESSED FLOODPLAIN SECTION

DETAIL B NO SCALE



SECTION A-A



SECTION B-B

STONE J-HOOK

DETAIL C NO SCALE

TABLES: STRUCTURE DIMENSIONS

A (ARM LENGTH)
- EXTRA LARGE: 31' - 50'
- LARGE: 20' - 30'
- MEDIUM: 10' - 19'
- SMALL: < 10'

B (MINIMUM SILL LENGTH)*
- EXTRA LARGE: 8'
- LARGE: 6'
- MEDIUM: 5'
- SMALL: 3'

* EXTEND TO THE BACK OF THE BANKFULL BENCH.

D (BANKFULL DEPTH)

- EXTRA LARGE: 2.5' - 4'
- LARGE: 1.5' - 2.5'
- MEDIUM: 0.75' - 1.5'
- SMALL: < 0.75'

NOTES: NUMBER OF STONES MAY VARY BASED ON STONE LENGTH.

TYPICAL STONE DIMENSIONS

STONE FOR LARGE AND EXTRA LARGE STRUCTURE

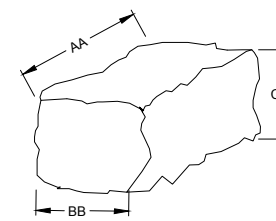
AA: 30" - 48"
BB: 24" - 30"
CC: 18" - 24"

STONE FOR MEDIUM STRUCTURE

AA: 24" - 36"
BB: 18" - 24"
CC: 16" - 18"

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"

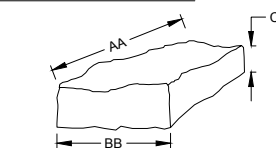
STONE FOR MEDIUM STRUCTURE

AA: 24" - 36"
BB: 18" - 24"
CC: 16" - 18"

STONE FOR SMALL STRUCTURE

AA: 18" - 30"
BB: 12" - 18"
CC: 8" - 12"

NOTES: STONE CAN BE WEDGE SHAPE FOR AA:BB DIMENSIONS



* IF VORTEX STONES ARE USED, USE STONES AND EMBED IN CHANNEL SO THAT THE UPPER PORTION OF THE STONE IS EXPOSED. (SEE SECTION-XA)

NOTES:

1. ADJUST ARM LENGTH TO MATCH ANTICIPATED POINT BAR FORMATION IN FIELD.
2. ALL STONES SHALL HAVE A MORE SQUARE SHAPE WITH AT LEAST TWO FLAT SIDES FOR STACKING.
3. 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.

Brown AND Caldwell

701 PIKE STREET
SUITE 1200
SEATTLE, WA 98101

CEMEX

2365 IRON POINT ROAD
SUITE 120
FOLSOM, CA 95630

PRELIMINARY DESIGN FOR REVIEW ONLY

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ARROYO DEL VALLE REALIGNMENT PROJECT

1544 STANLEY BOULEVARD
PLEASANTON, CA 94566

CA MINE ID NO: 91-01-0009

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED:

DRAWN:

CHECKED:

CHECKED:

APPROVED:

FILENAME
C-501.DWG
BC PROJECT NUMBER
149951
CLIENT PROJECT NUMBER

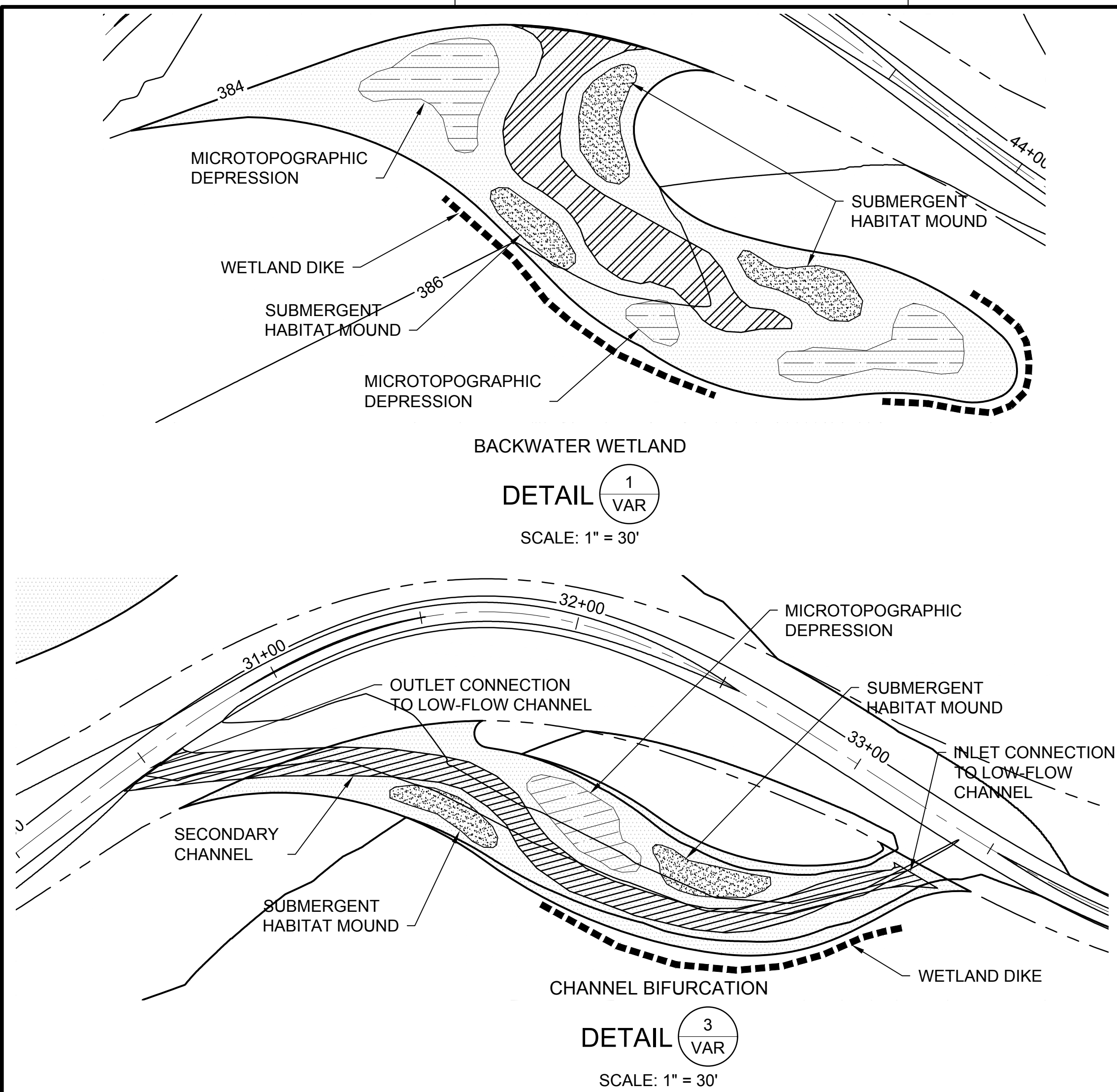
CIVIL DETAILS - 2

DRAWING NUMBER

C-502

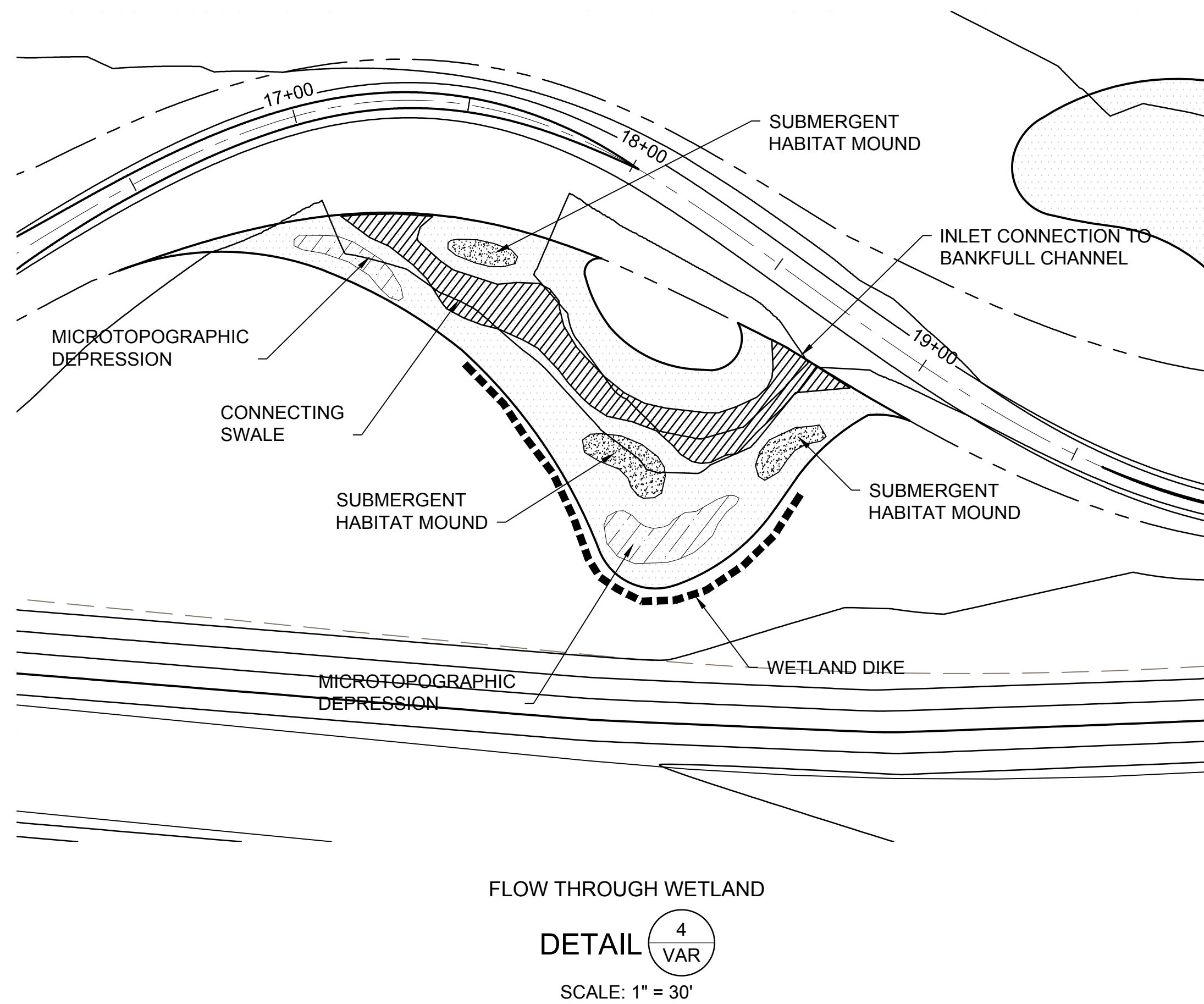
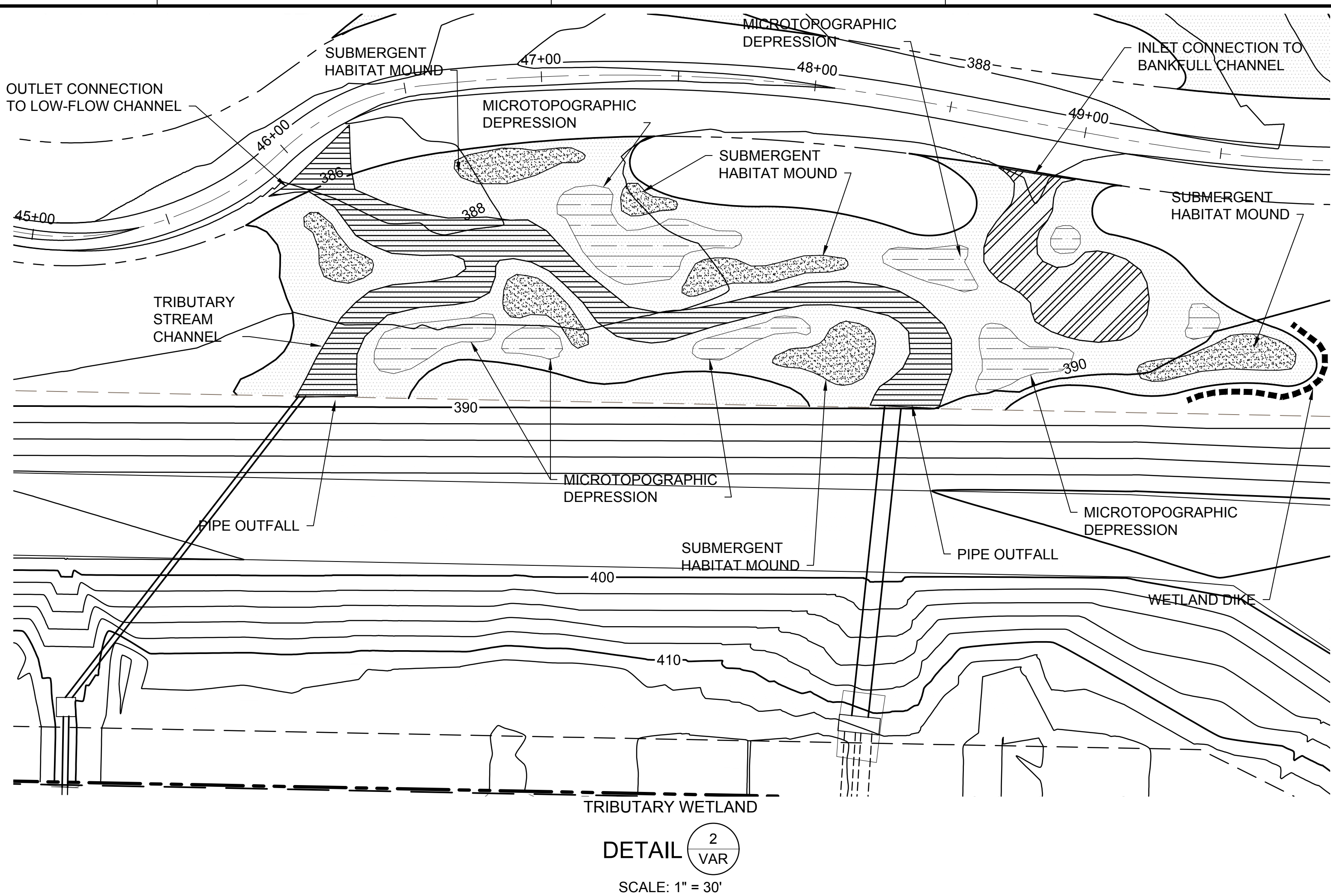
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19 OF

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Reference table for microtopography

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 relaxed to avoid acute bends and sharp changes in flow direction. Width of opening can vary with minimum width of 10'.
Channel Bifurcation	Inlet/outlet connection to bankfull channel	Minus 18" to 24"	Entry and exit angles should be relaxed to avoid acute bends and sharp changes in flow direction. Opening width should be similar to low-flow channel on the main stream.
Flow-through Wetland Backwater Wetland Tributary Wetland Channel Bifurcation	Microtopographic depression	Minus 18" to 24"	Avoid enclosed depressions greater than approximately 12 inches relative to Inlet/outlet connection.
Flow-through Wetland	Connecting swale	Minus 12" to 18"	Create a continuous flow path from inlet to outlet with smooth transitions; avoid sharp bends; bottom width should be no less than 6'.
Channel Bifurcation Tributary Wetland	Secondary channel Tributary Confluence	Minus 18" to 24"	Create a continuous flow path from inlet to outlet with smooth transitions; avoid sharp bends; geometry of section should remain relatively constant and similar to that of the adjacent low-flow channel.
Flow-through Wetland Backwater Wetland Tributary Wetland	Submergent habitat mound	Minus 6" to 12"	Shape can vary; allows some areas of the wetland to be raised above the level of the inlet/outlet, but still below the bankfull elevation.
Flow-through Wetland Backwater Wetland Tributary Wetland	Wetland Dike	Plus 6" to 12"	On the outside perimeter of wetland, spoils can be used to create a small dike; however, dike should not completely enclose the wetland and be limited to roughly 50 percent of the length of the outside perimeter. Width of the dike should be no more than 10' to 12' wide.



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ARROYO DEL VALLE
REALIGNMENT
PROJECT

1544 STANLEY BOULEVARD
PLEASANTON, CA 94566

CA MINE ID NO: 91-01-0009

REVISIONS		
REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED:

DRAWN:

CHECKED:

CHECKED:

APPROVED:

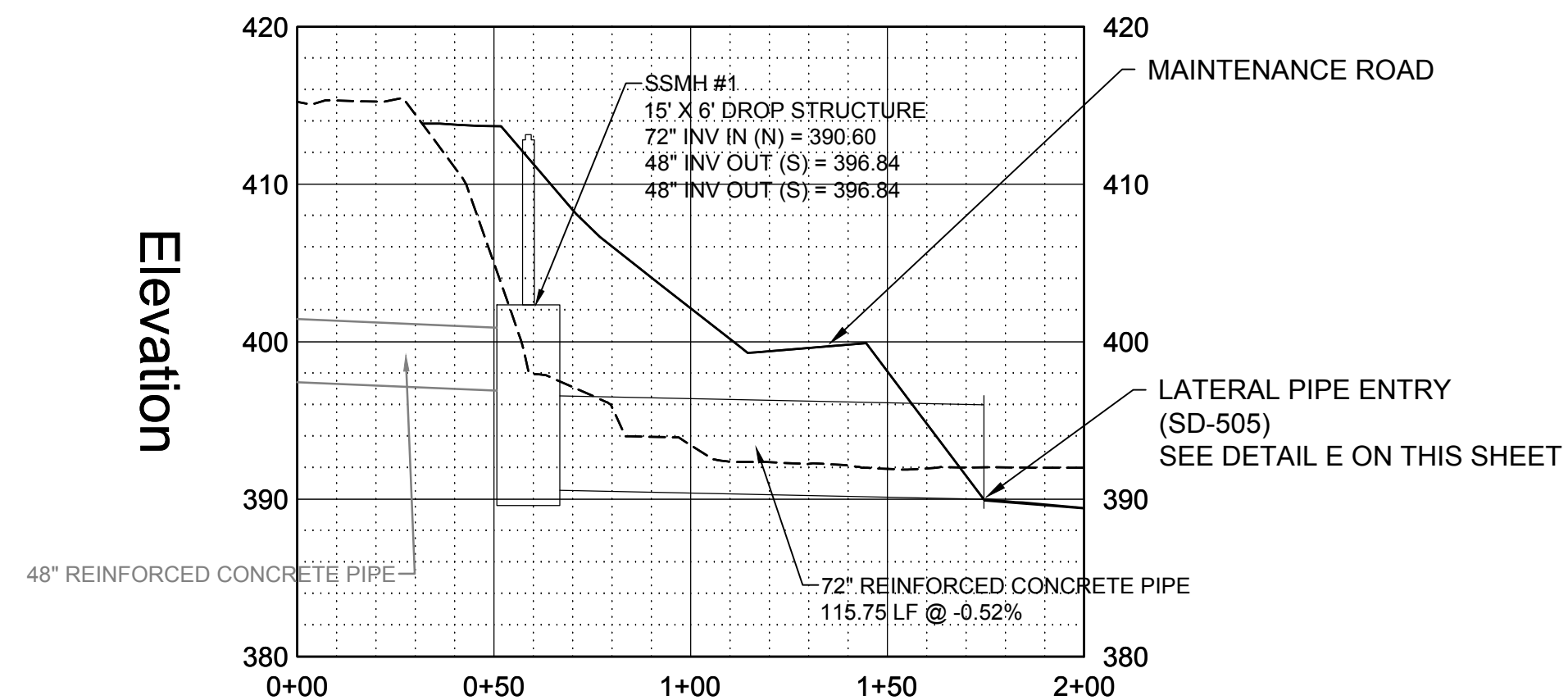
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C-501.DWG
BC PROJECT NUMBER
149951
CLIENT PROJECT NUMBER

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DETAILS - 3

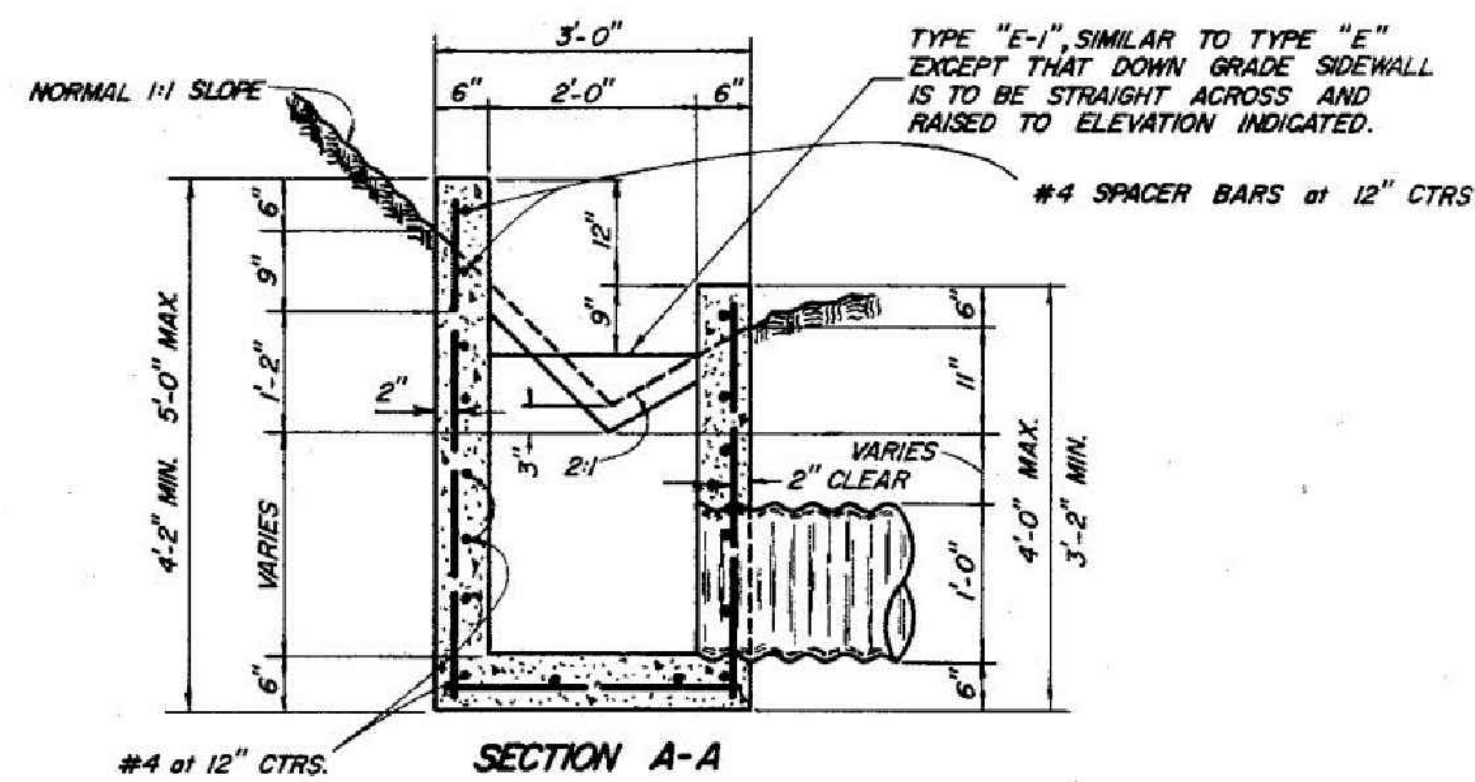
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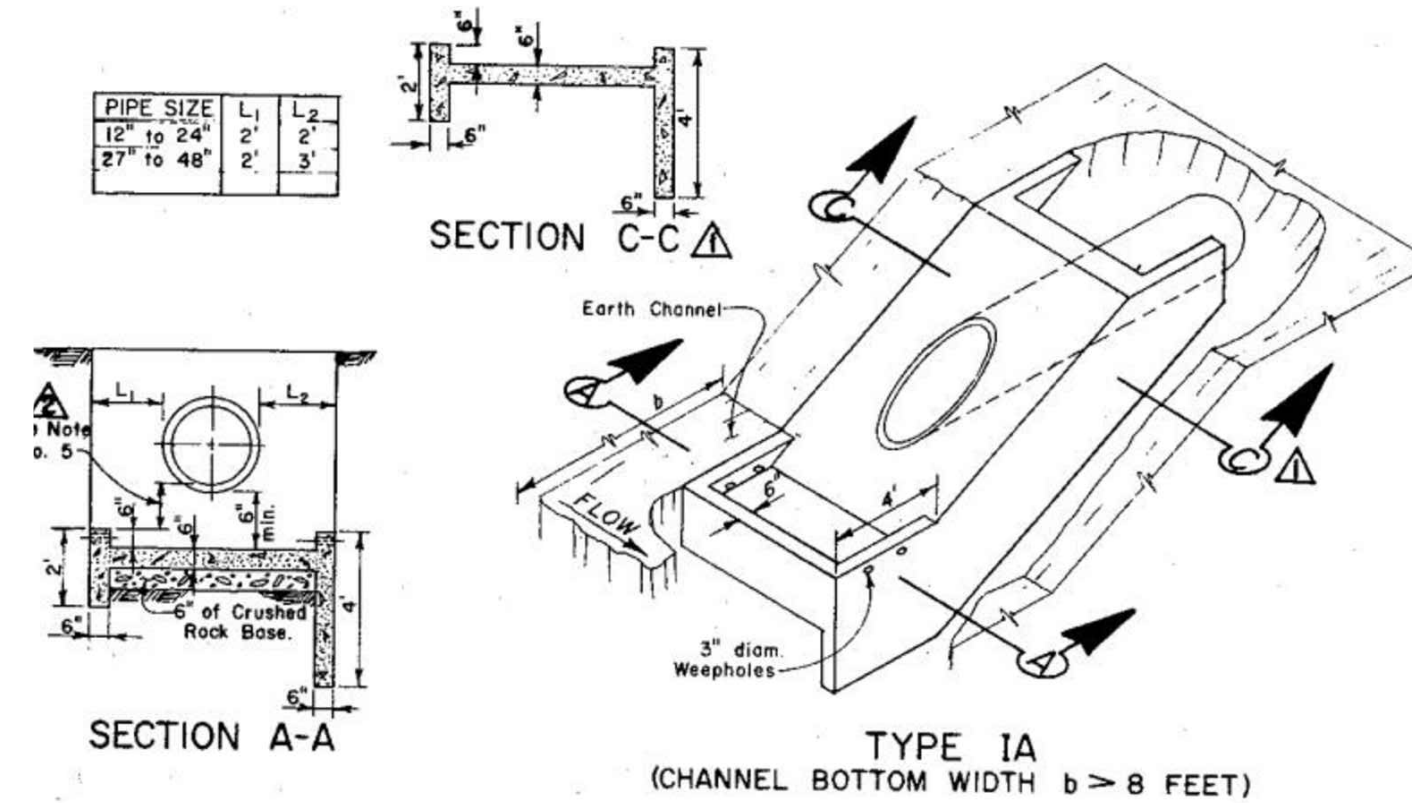
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20 OF



DETAIL 



DETAIL 



1. Provide #4 hoop bar around pipe.
2. Provide #4 reinforcing bars at 12" O.C. each way.
3. Side slope varies to conform with Earth Channel.
4. Trim projecting pipe flush with surface of channel lining, and provide a smooth finish.
5. When > 5 feet then construct side slope with a depressed slab as shown in Section C-C.
Applicable to Type 1A and Type 1B.

DETAIL

E
VAR

DETAIL 

NOT TO BE USED
WITHIN 30' OF BIKE
PATH OR TRAVELED
WAY.

NOTES
CLEAR DISTANCE TO STEEL SHALL
BE 2 INCHES.
ALL REINFORCING TO BE #4 BARS.
STEEL SPACING SHOWN IS MAX.
ALLOWABLE.



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DESIGN
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ARROYO DEL VALLE
REALIGNMENT
PROJECT

CA MINE ID NO: 91-01-0009

[illegible]

LINE IS 2 INCHES
AT FULL SIZE

DESIGNED:

DRAWN:

CHECKED:

CHECKED:

APPROVED:

FILENAME

C-501.DWG

BC PROJECT NUMB

C-501.DWG
BC PROJECT NUMBER
149951

CLIENT PROJECT NUMBER

CIVIL

DETAILS - 4

DRAWING NUMBER

C-504

SHEET NUMBER
19 OF