### Appendix K Conceptual Habitat Plan

# ELVERTA SPECIFIC PLAN

# Drainage Corridors B, C, & D CONCEPTUAL HABITAT DEVELOPMENT PLAN

Elverta, California

**CLIENT:** 

## The RCH Group

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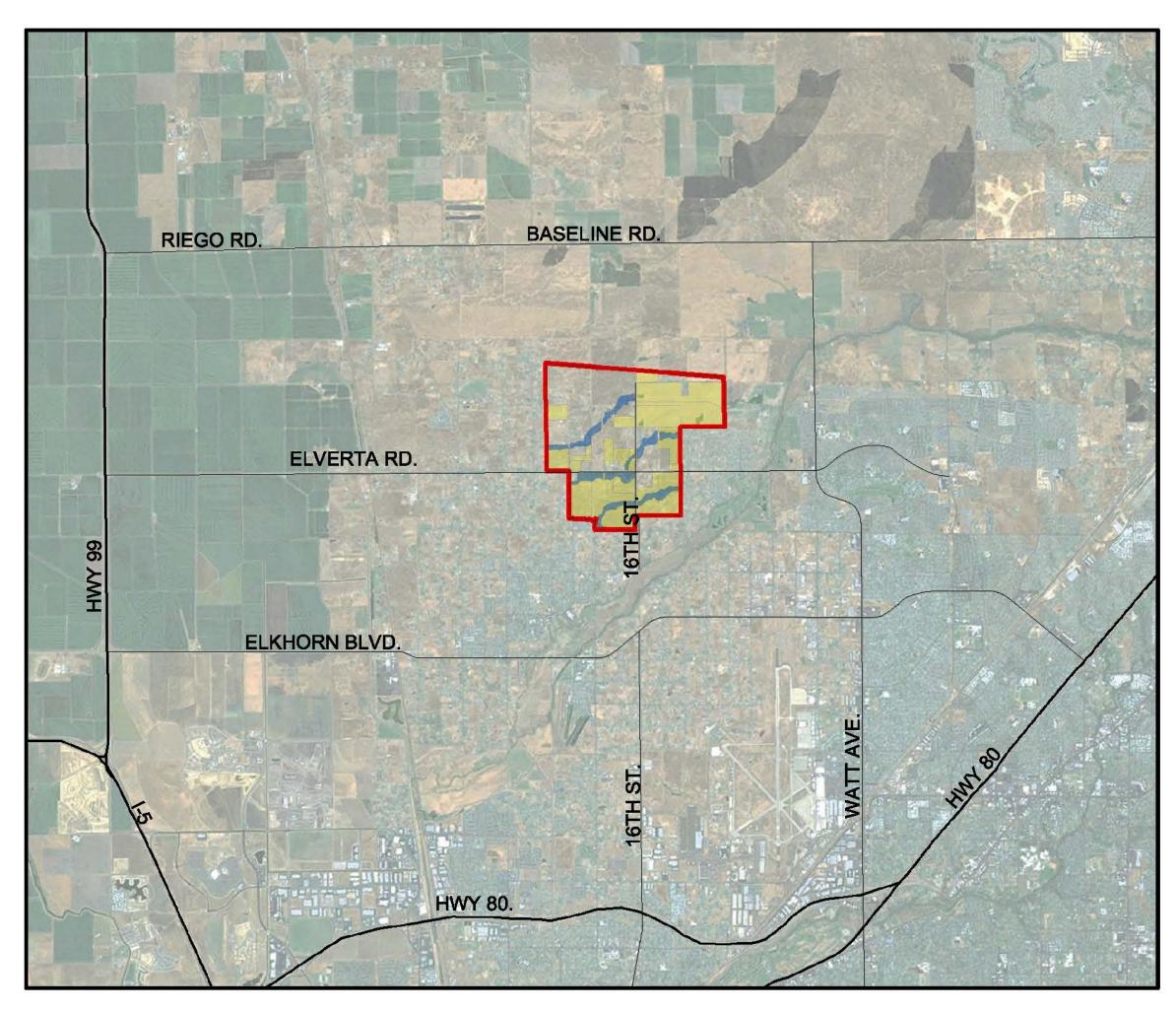
SHEET L4.3 CONCEPTUAL SECTIONS AND DETAILS

SHEET L4.4 CONCEPTUAL SECTIONS AND DETAILS CONT.

REVISED: JANUARY 14, 2011 SECOND REVISION: OCTOBER 7, 2011

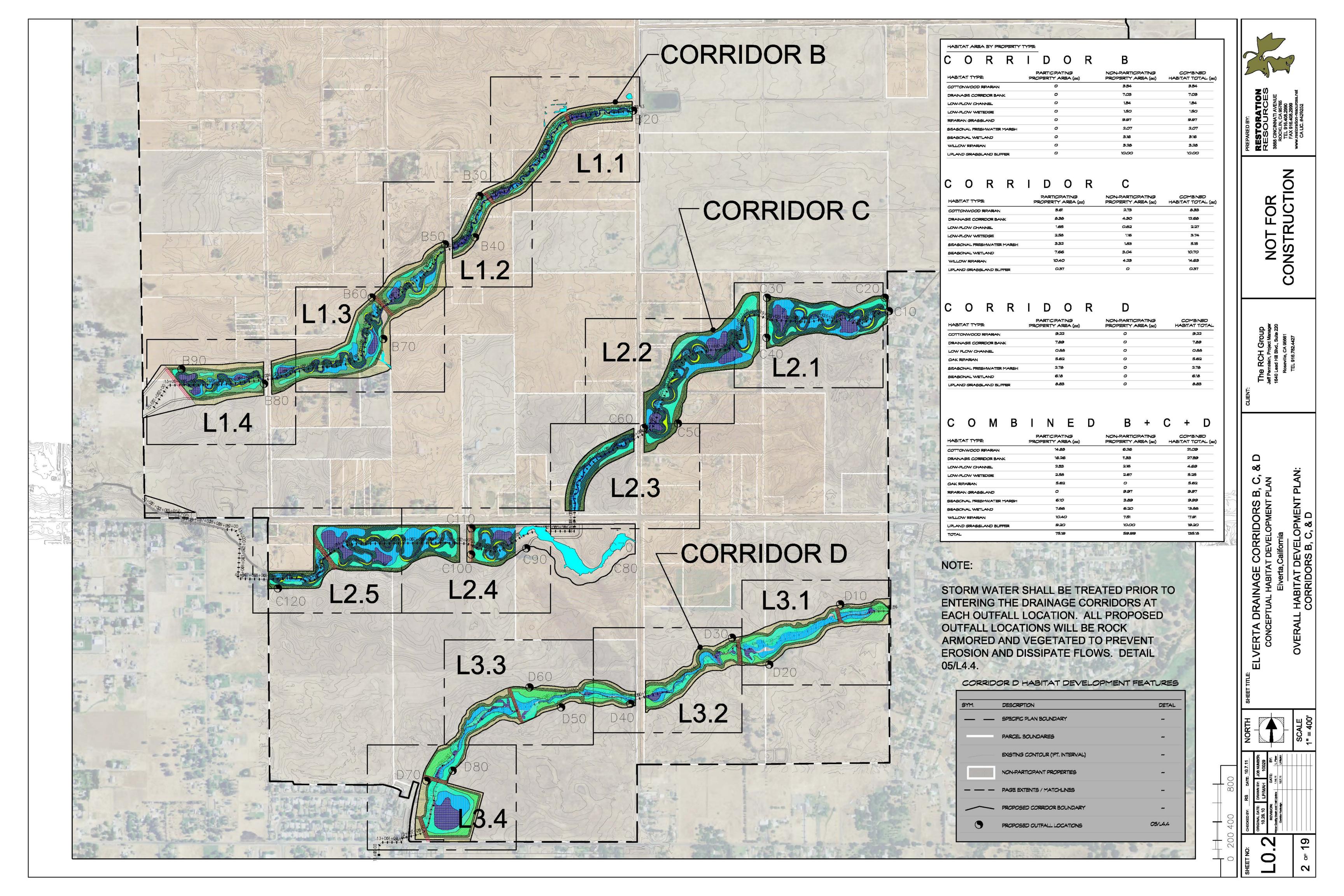
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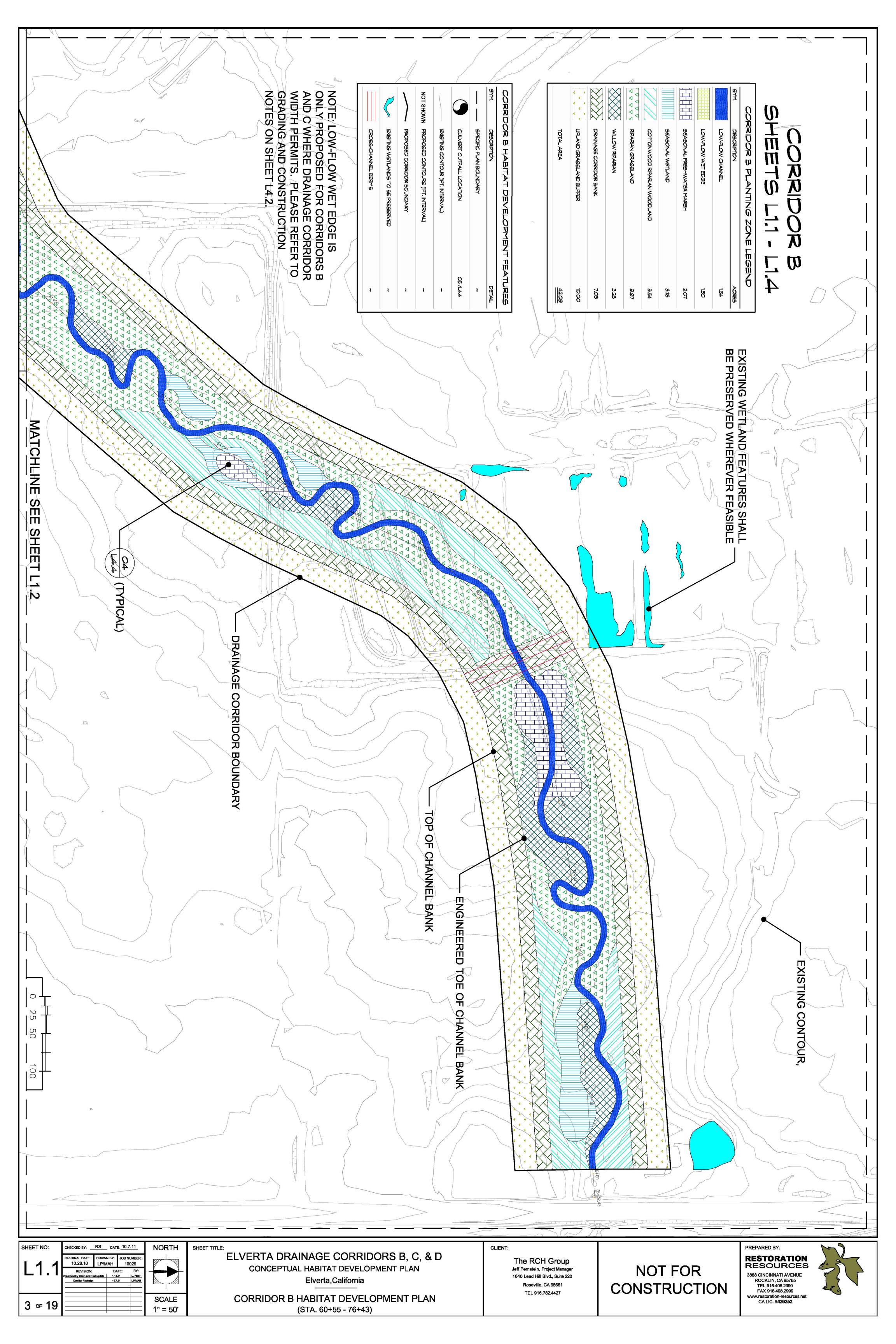
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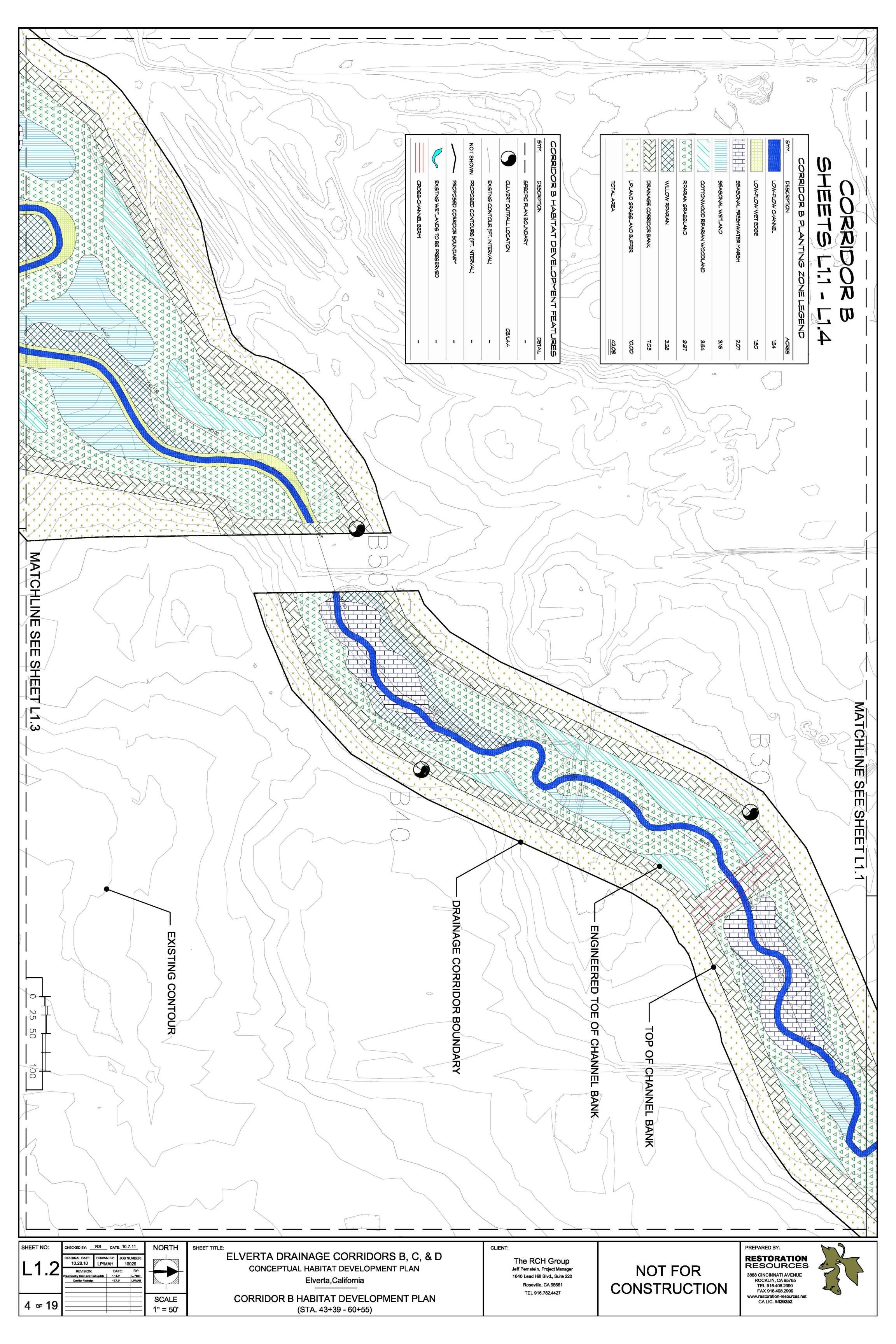


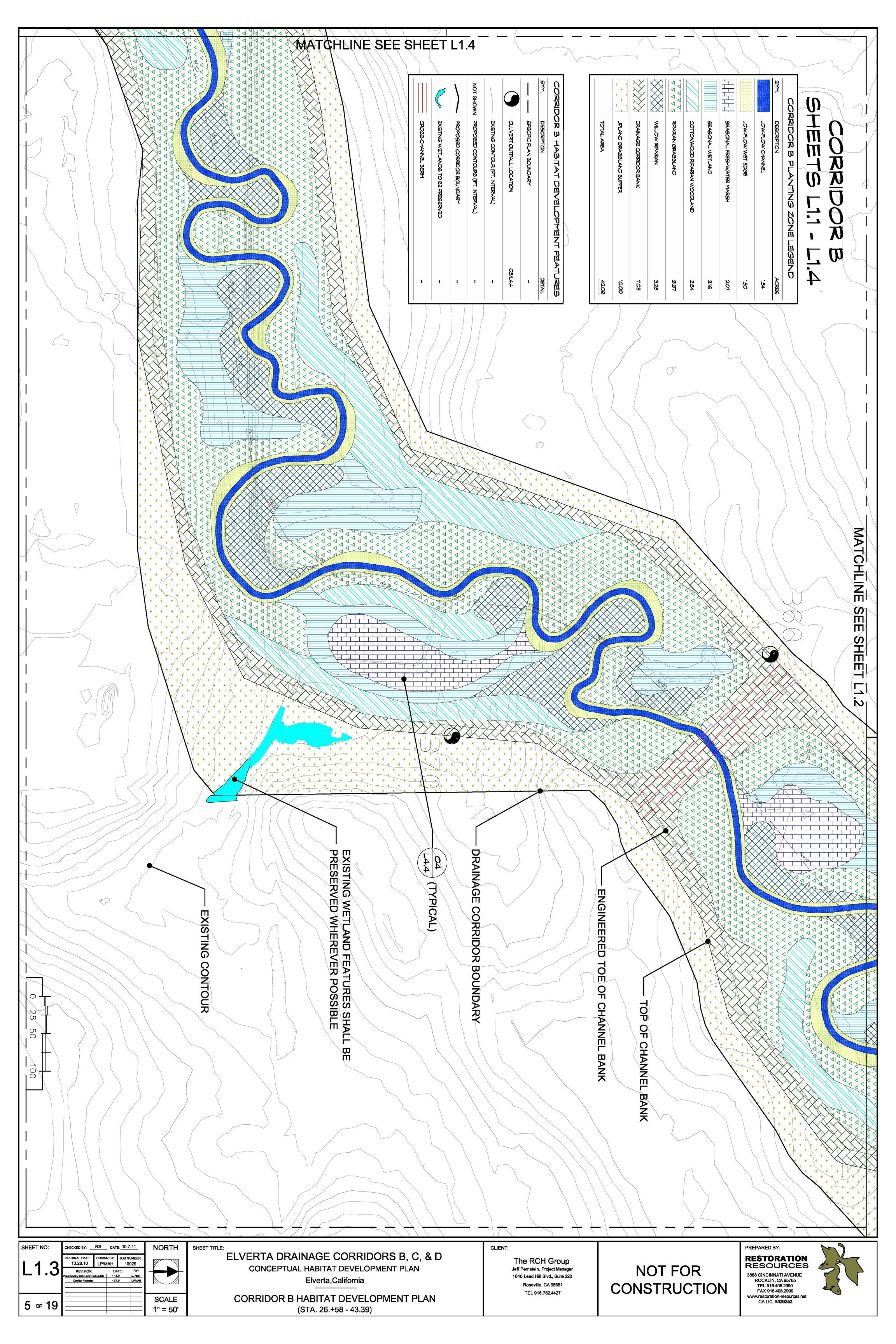


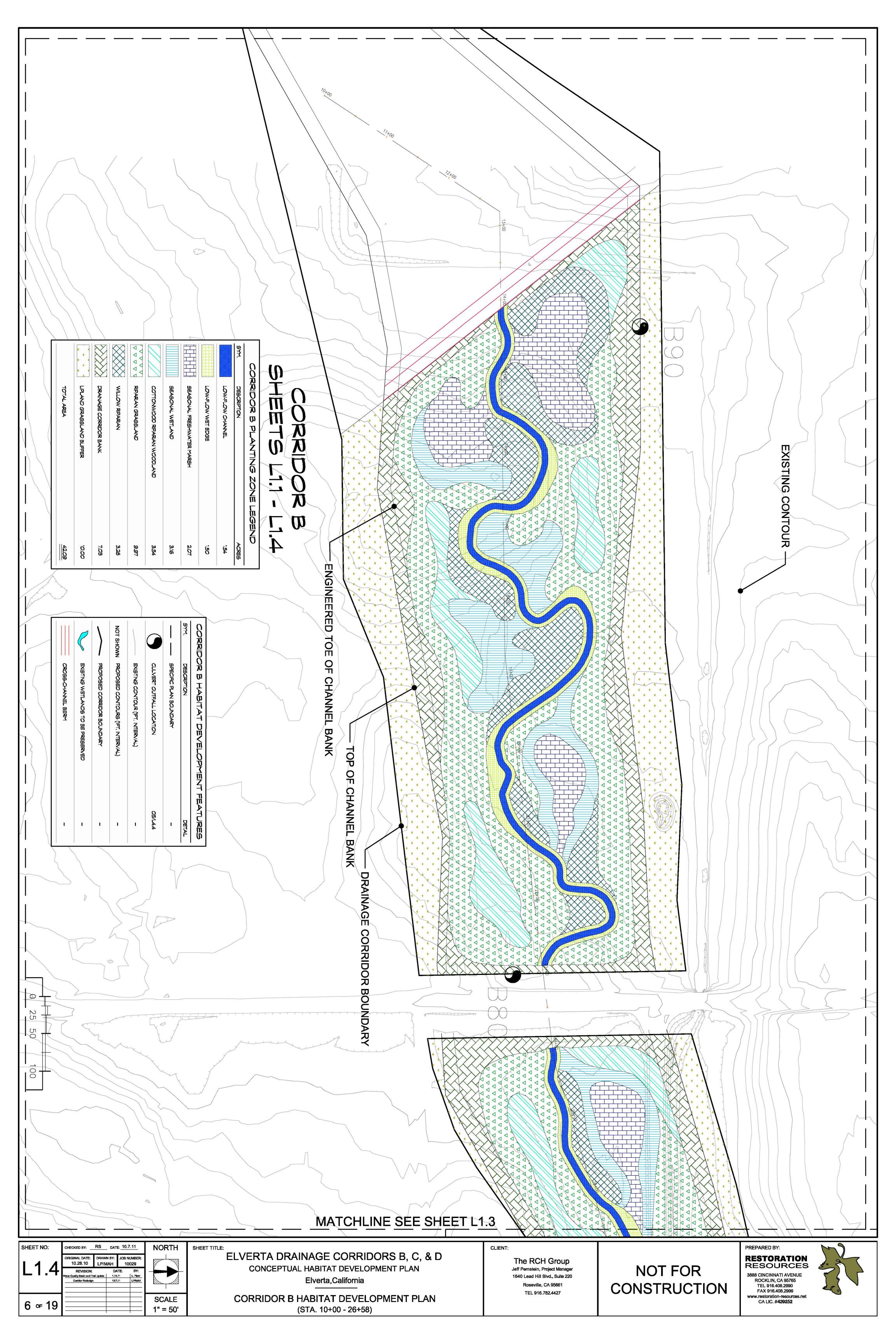


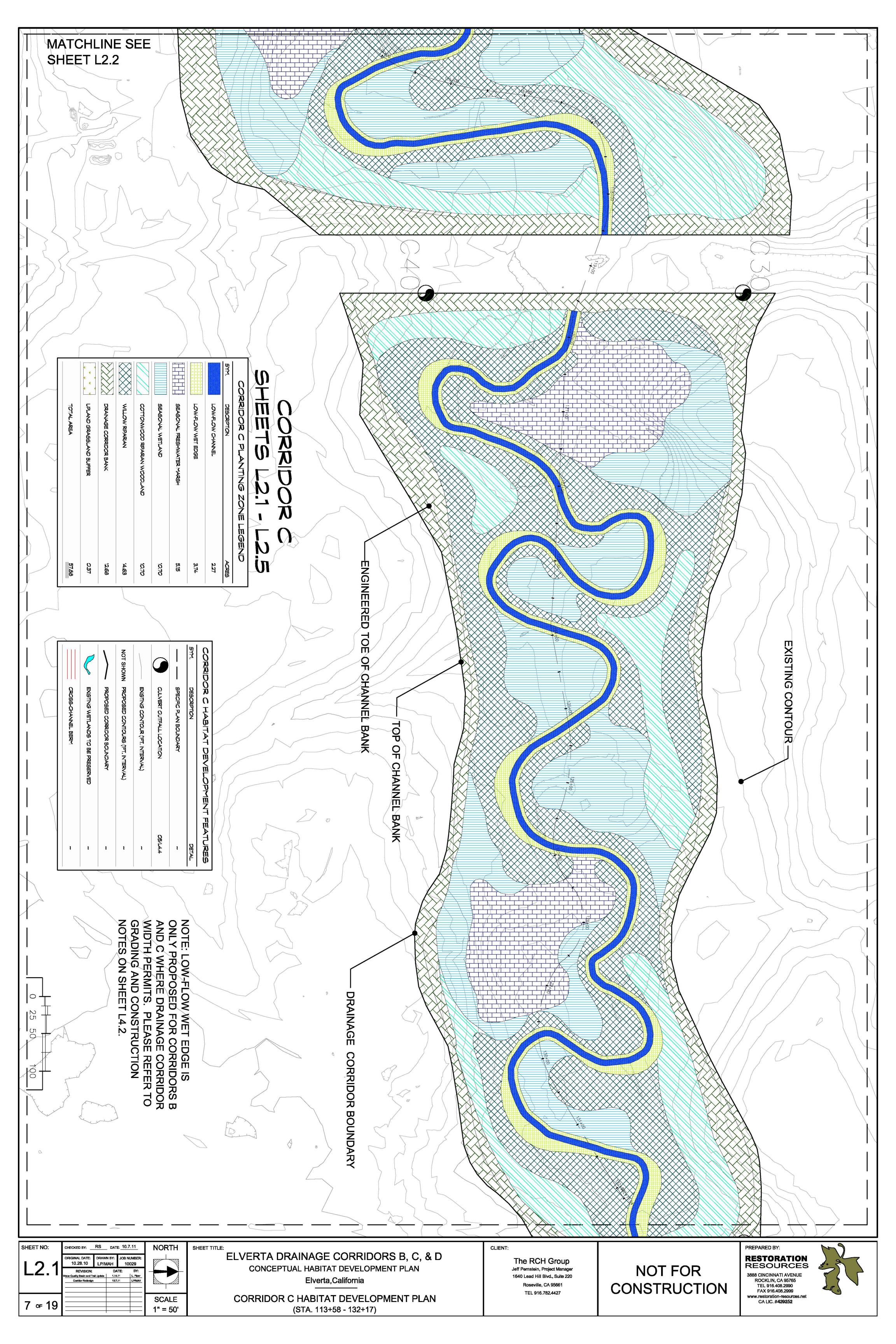


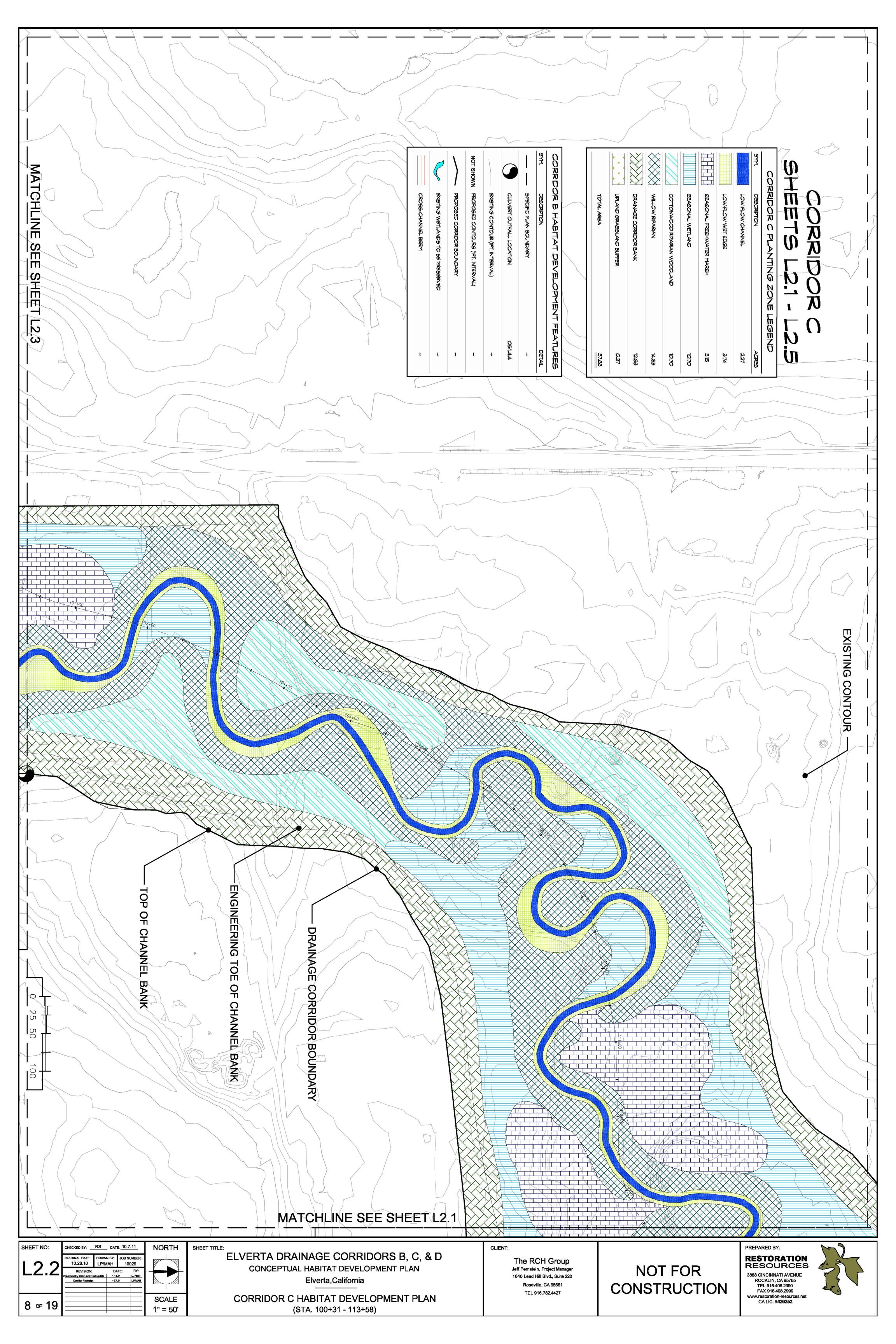


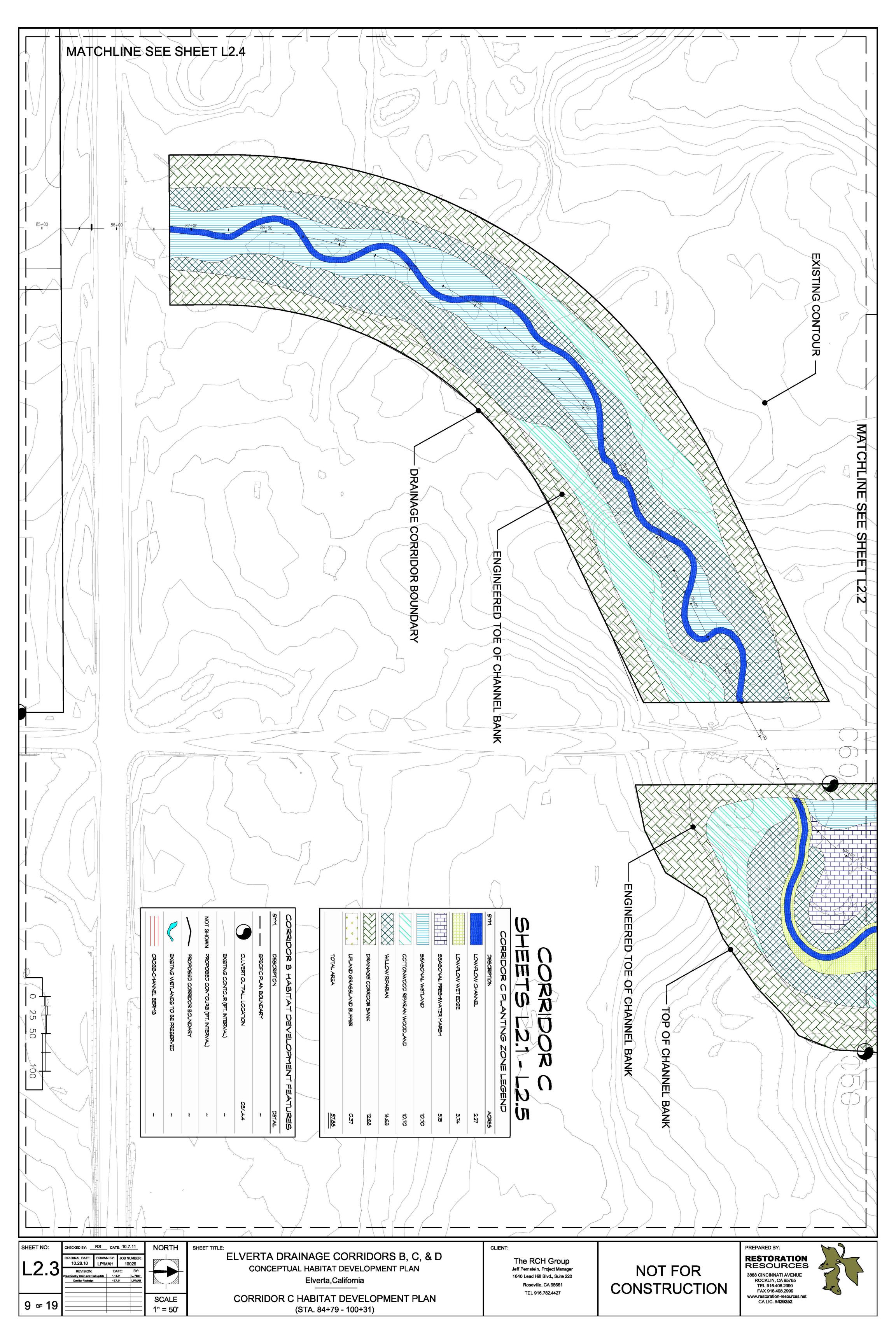


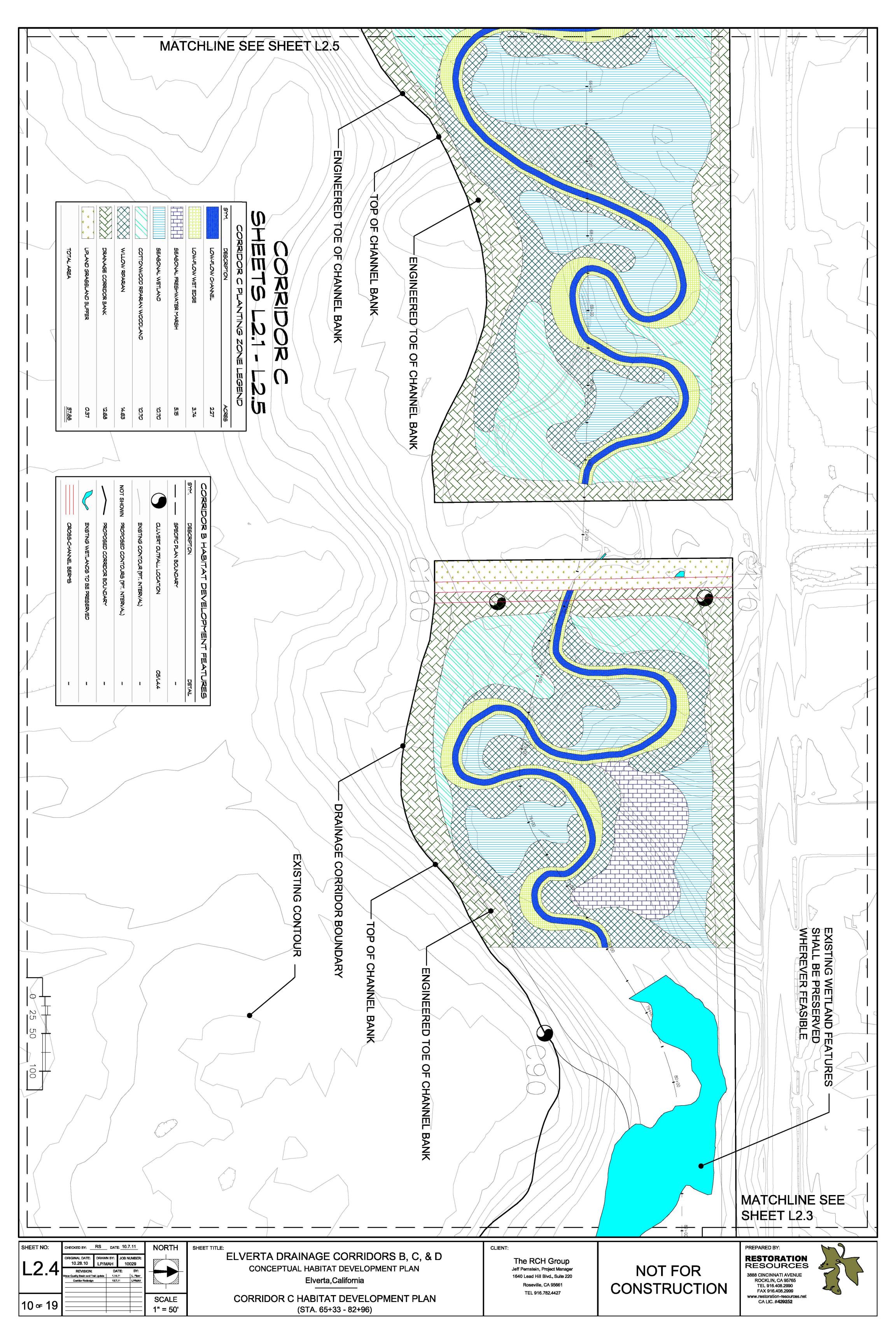


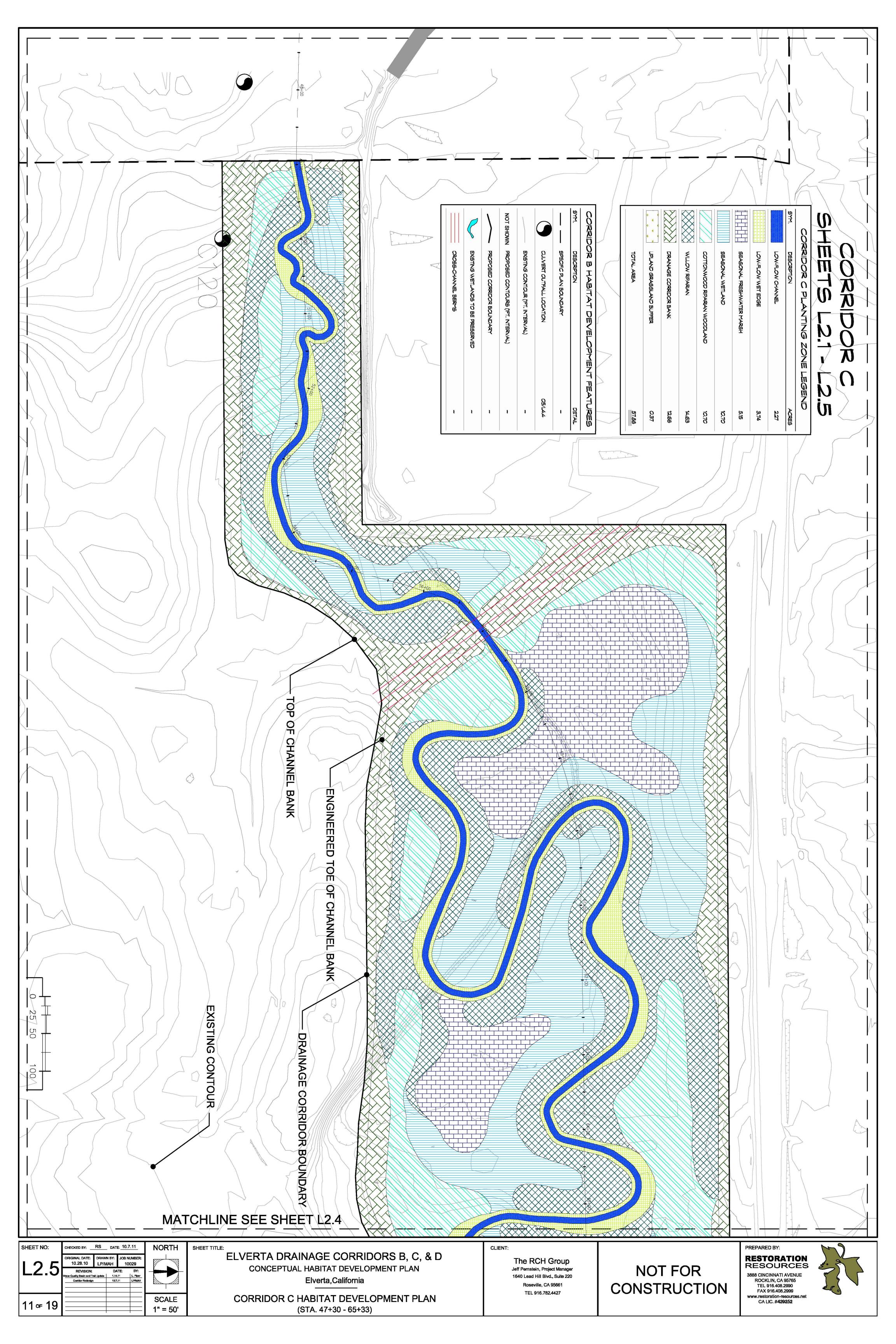


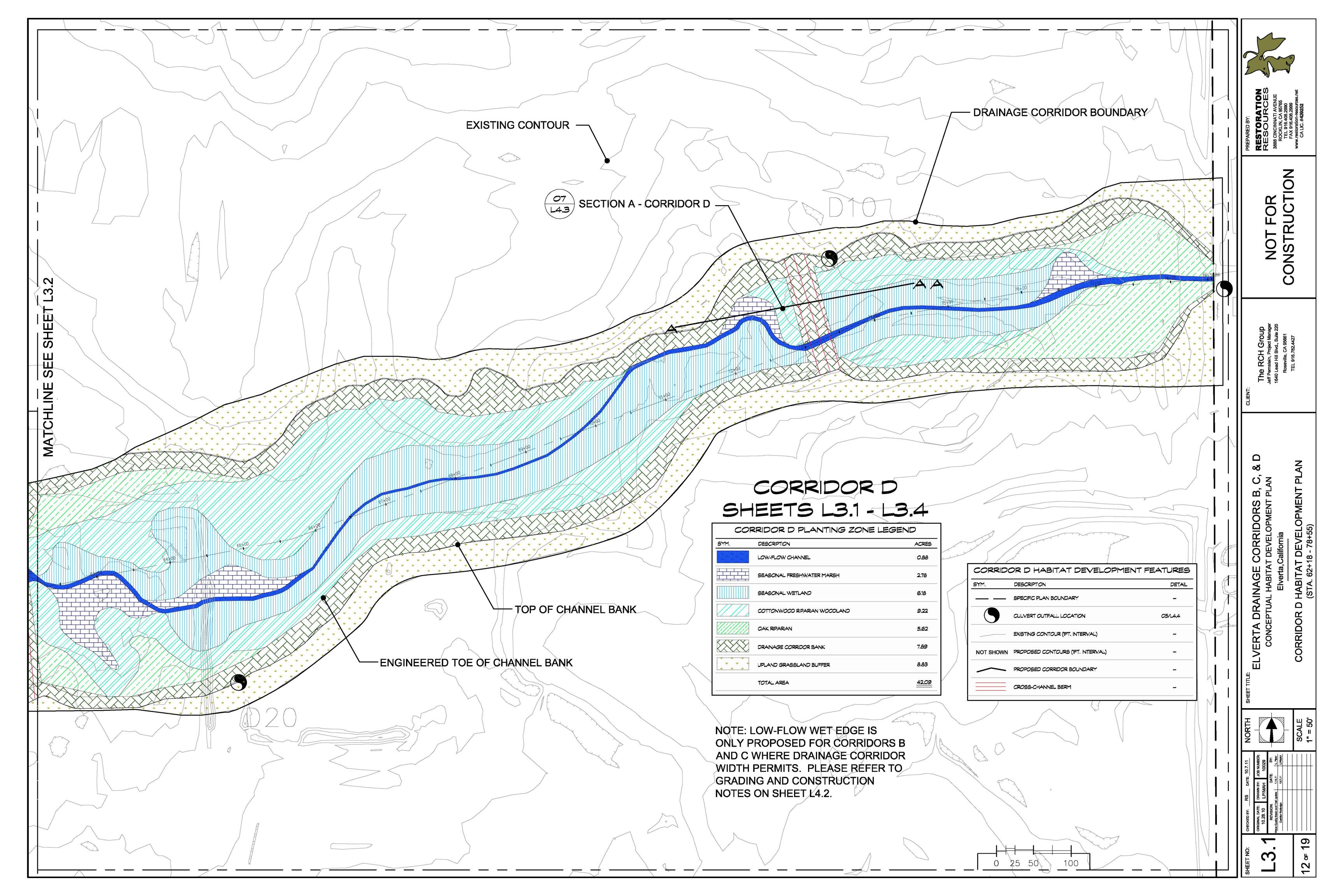


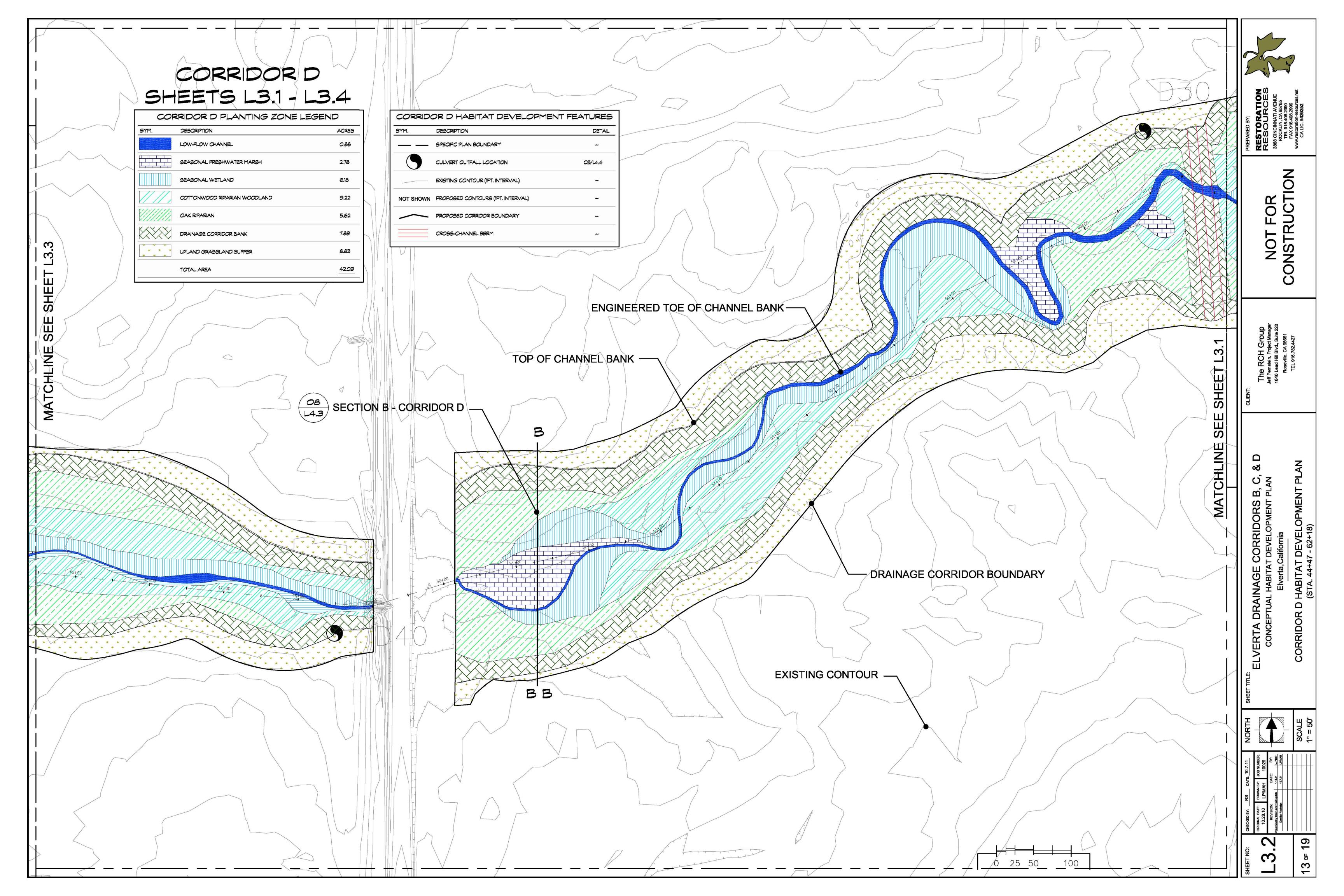


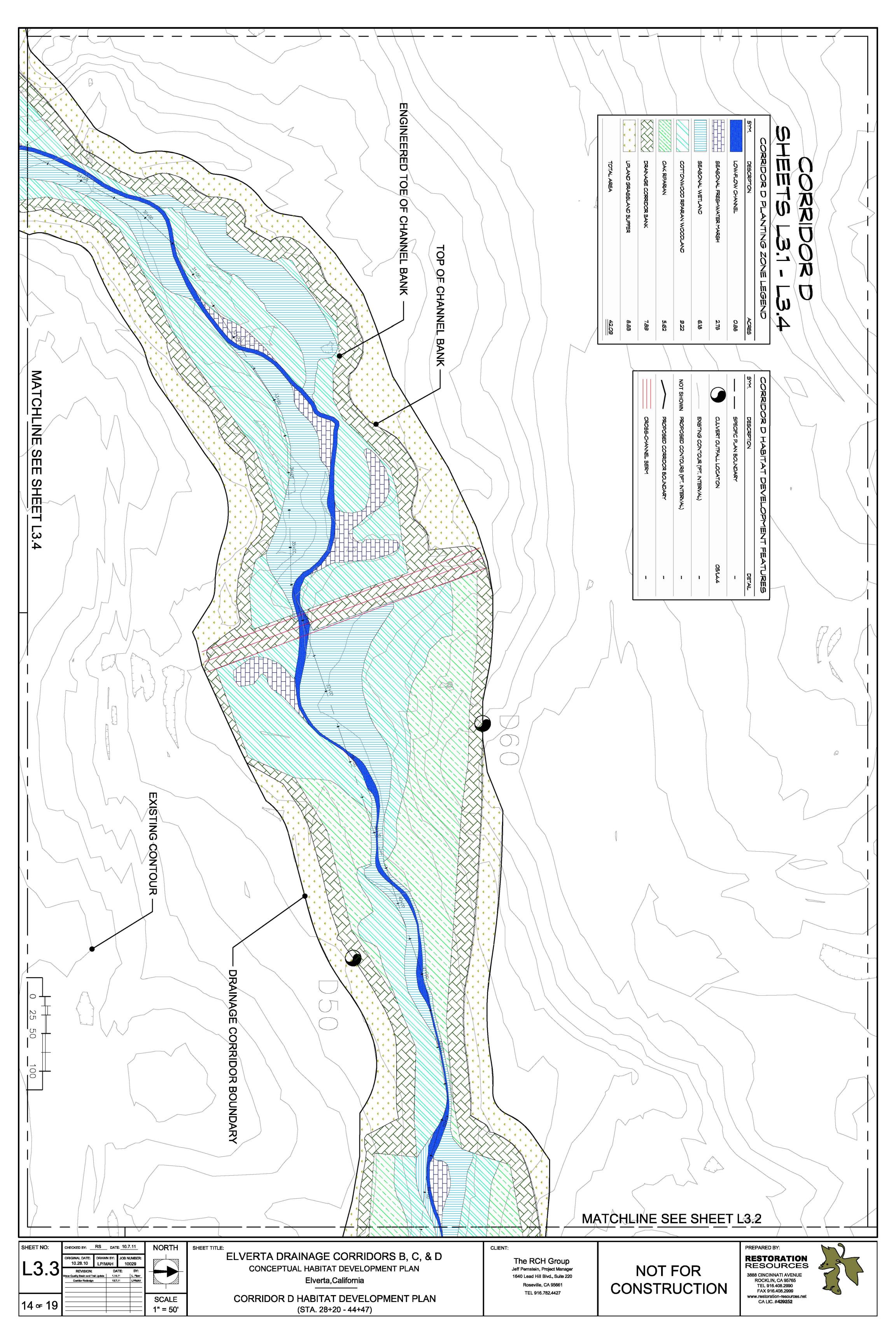


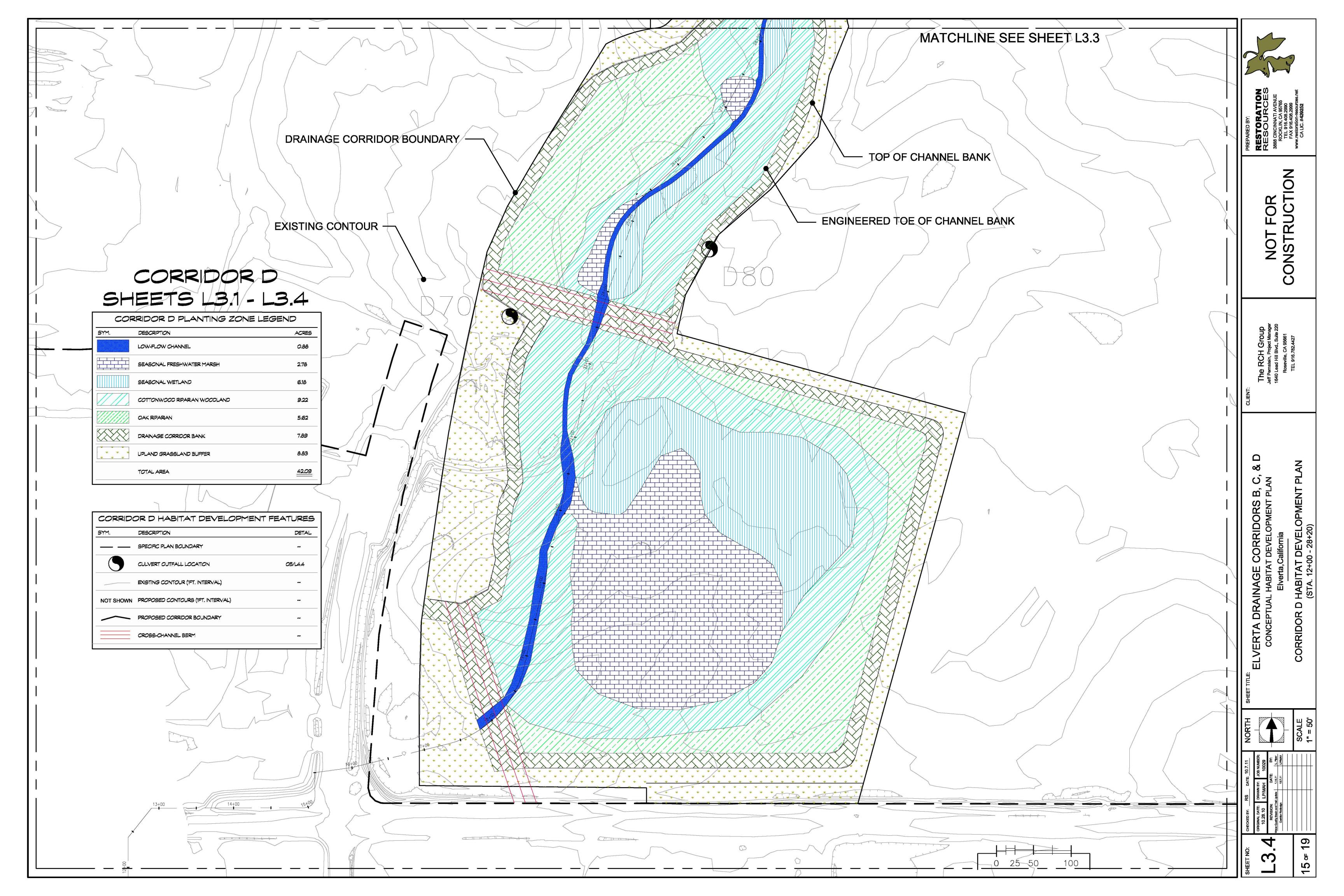












TREE AND SHRUB PLANTING

HABITAT TYPE: DRAINAGE CORRIDOR BANK AREA (acres): 1268 AC

TOTAL QUANTITY PER ACRE:

QTY/AC.

15

12

12

AREA (acres): 14.63 AC

QTY./AC.

5

15

5

15

15

30

15

20

AREA (ocres): 833 AC

QTY/AC.

35

15

20

25

30

BOTANICAL NAME/COMMON NAME

QUERCUS LOBATA / VALLEY OAK

QUERCUS WISLEZENI / INTERIOR LIVE OAK

SAMBUCUS MEXICANA / BLUE ELDERBERRY

RUBUS URSINUS / CALIFORNIA BLACKBERRY

VITIS CALIFORNICA / CALIFORNIA WILD GRAPE

RHAMNUS CALIFORNICA / COFFEEBERRY

ROSA ACICULARIS / WILD ROSE

HABITAT TYPE: WILLOW RIPARIAN

ALNUS RHOMBIFOLIA / WHITE ALDER

FRAXINUS LATIFOLIA / OREGON ASH

SALIX EXIGUA / SANDBAR WILLOW

SALIX LASIOLEPIS / ARROYO WILLOW

BACCHARIS SALICIFOLIA / MULEFAT

HABITAT TYPE: WOODLAND

POPULUS FREMONTII / COTTONWOOD

SALIX LASIOLEPIS / ARROYO WILLOW

BACCHARIS SALICIFOLIA / MULEFAT

11,400

RUBUS URSINUS / CALIFORNIA BLACKBERRY

VITIS CALIFORNICA / CALIFORNIA WILD GRAPE 30

TOTAL QUANTITY PER ACRE: 175

VITIS CALIFORNICA / CALIFORNIA WILD GRAPE

TOTAL QUANTITY PER ACRE: 120

CEPHALANTHUS OCCIDENTALIS / BUTTON WILLOW

BOTANICAL NAME/COMMON NAME

SALIX NIGRA / BLACK WILLOW

SALX LUTEA / YELLOW WILLOW

SALIX NIGRA / BLACK WILLOW

BOTANICAL NAME/COMMON NAME

AESCULUS CALIFORNICA / CALIFORNIA BUCKEYE

RESCURCES
3888 CINCINNATI AVENUE
ROCKLIN, CA 95765
TEL 916.408.2990
FAX 916.408.2999
www.restoration-resources.net
CA LIC. #429252

TREE AND SHRUB PLANTING

HABITAT TYPE: DRAINAGE CORRIDOR BANK
Slope of 5:1 & 15 - 15 wide

AREA (acres):
7.89 AC

QTY./AC.

15

12

12

AREA (acres):

QTY/AC.

15

35

30

15

15

AREA (acres): 9.22 AC

QTY./AC.

25

10

10

10

5.62 AC

TOTAL CONTAINERS 95

TOTAL CONTAINERS 125

TOTAL CONTAINERS 135

BOTANICAL NAME/COMMON NAME

QUERCUS LOBATA / VALLEY OAK

QUERCUS WISLEZENI / INTERIOR LIVE OAK

SAMBUCUS MEXICANA / BLUE ELDERSERRY

RUBUS URSINUS / CALIFORNIA BLACKBERRY

VITIS CALIFORNICA / CALIFORNIA WILD GRAPE

HABITAT TYPE: CAK RIPARIAN WOODLAND

RHAMNUS CALIFORNICA / COFFEEBERRY

ROSA ACICULARIS / WILD ROSE

BOTANICAL NAME/COMMON NAME

JUGLANS NIGRA / BLACK WALNUT

QUERCUS LOBATA / VALLEY OAK

BACCHARIS SALICIFOLIA / MULE FAT

BACCHARIS PITULARIS / COYOTE BUSH

RUBUS URSINUS / CALIFORNIA BLACKBERRY

HABITAT TYPE: WOODLAND

POPULUS FREMONTII / COTTONWOOD

BOTANICAL NAME/COMMON NAME

SALX NIGRA / BLACK WILLOW

SALIX LUTEA / YELLOW WILLOW

SALIX LASIOLEPIS / ARROYO WILLOW

BACCHARIS SALICIFOLIA / MULEFAT

RUBUS URSINUS / CALIFORNIA BLACKBERRY

VITIS CALIFORNICA / CALIFORNIA WILD GRAPE

VITIS CALIFORNICA / CALIFORNIA WILD GRAPE

QUERCUS WISLEZENI / INTERIOR LIVE OAK

AESCULUS CALIFORNICA / CALIFORNIA BUCKEYE

FOR RUCTION NOT FOF NSTRUC 00

19

16

### CORRIDOR

#### HERBACEOUS SEED AND PLUG PLANTING

UPLAND GRAGGLAND BUFFER / HABITAT TYPE: DRAINAGE CORRIDOR BANK		AREA (acres 16.72 AC
BOTANICAL NAME / COMMON NAME	DRILL SEED RATES (#LBS./ACRE)	SEED REQUIRE (LBS)
BROMUS CARINATUS / CALIFORNIA BROME	2	33
ELYMUS GLAUCUS / BLUE WILD RYE	4	67
MELICA CALIFORNIA / COLIFORNIA MELIC	4	67
NASSELLA PULCHRA / PURPLE NEEDLEGRASS	6	100
VULPIA MICROSTACHYS / THREE WEEK FESCUE	6	100
TOTAL	os 22	367

HABITAT TYPE: OAK RIPARIAN WOODLAND		AREA (acres): 5.62 AC
BOTANICAL NAME / COMMON NAME	DRILL SEED RATES (#LBS/ACRE)	SEED REQUIRED (LBS)
AGROSTIS EXARATA / BENTGRASS	4	22
ELYMUS GLAUCUS / BLUE WLD RYE	3	17
ELYMUS TRACHYCAULUS / SLENDER WHEATGRAGS	4	22
FESTUCA IDAHOENSIS / IDAHO FESCUE	5	28
HORDEUM BRACHYANTHERUM / MEADOW BARLEY	4	22
LEYMUS TRITICOIDES / CREEPING WILD RYE	4	22
TOTAL be	24	133

HABITAT TYPE: COTTONWOOD RIPARIAN WOODLAND Located from edge of 2 year floodplain plus 1" in elevation		AREA (acres) 9.22 AC
BOTANICAL NAME / COMMON NAME	DRILL SEED RATES (#LBS./ACRE)	SEED REQUIRED (LBS)
AGROSTIS EXARATA / BENTGRASS	4	37
ELYMUS TRACHYCAULUS / SLENDER WHEATGRASS	s 4	37
HORDEUM BRACHYANTHERUM / MEADOW BARLEY	4	37
LEYMUS TRITICOIDES / CREEPING WILD RYE	4	37
TOTAL Ibs	16	148
EUTHAMIA OCCIDENTALIS / GOLDENROD	4	37
GRINDELIA CAMPORUM / GUMPLANT	5	46
OENETHERA ELATA / EVENING PRIMROSE	5	46
TOTAL lbs	14	129

HABITAT TYPE: SEASONAL WETLAND Two year flood plain outside of low flow channel and basins		AREA (acres): 6.18 AC
BOTANICAL NAME / COMMON NAME	DRILL SEED RATES (#LBS./ACRE)	SEED REQUIRED (LBS)
AGROSTIS EXARATA / BENTGRASS	4	25
ELYMUS TRACHYCAULUS / SLENDER WHEATGRASS	4	25
HORDEUM BRACHYANTHERUM / MEADOW BARLEY	4	25
LEYMUS TRITICOIDES / CREEPING WILD RYE	4	25
TOTAL lbs	16	100
EUTHAMIA OCCIDENTALIS / GOLDENROD	6	37
OENETHERA ELATA / EVENING PRIMROSE	6	37
TOTAL lbs	12	74

	PLUGS (TREEBAND) PER ACRE	QUANTITY RE
CAREX BARBARAE / WHITE ROOT SEDGE	100	618
ELEOCHARIS MACROSTACHYA / PALE SPIKERUSH	75	464
GRINDELIA CAMPORUM / GUMPLANT	50	309
JUNCUS BALTICUS / BALTIC RUSH	75	464
JUNCUS EFFUSUS / SOFT RUSH	75	464
JUNCUS PATENS / COMMON RUSH	75	464
TOTAL PLI	UGS 450	2.783

HABITAT TYPE: SEASONAL FRESHWATER MARSH Low flow channel & basins upstream of weirs		AREA (acres): 2.78 AC
BOTANICAL NAME / COMMON NAME	PLUGS (TREEBAND) PER ACRE	QUANTITY REQ
JUNCUS EFFUSUS / SOFT RUSH	75	209
JUNCUS PATENS / COMMON RUSH	75	209
SCHOENOPLECTUS ACUTUS OCCIDENTALIS / TULE	100	278
SCHOENOPLECTUS ROBUSTUS / STURDY BULRUSH	100	278
TYPHA LATIFOLIA / COMMON CATTAIL	100	278
TOTAL P	LUGS 450	1,252

CORRIDOR

UPLAND GRAGGLAND BUFFER / HABITAT TYPE: DRAINAGE CORRIDOR BANK		AREA (acres): 13.05 AC
BOTANICAL NAME / COMMON NAME	DRILL SEED RATES (#LBS/ACRE)	SEED REQUIRED (LBS)
BROMUS CARINATUS / CALIFORNIA BROME	2	26
ELYMUS GLAUCUS / BLUE WILD RYE	4	52
MELICA CALIFORNIA / COLIFORNIA MELIC	4	52
NASSELLA PULCHRA / PURPLE NEEDLEGRASS	6	78
VULPIA MICROSTACHYS / THREE WEEK FESCUE	6	78
TOTALI	bs 22	286

HERBACEOUS SEED AND PLUG PLANTING

HABITAT TYPE: COTTONWOOD RIPARIAN WOODLAND		AREA (acres): 8.33 AC
BOTANICAL NAME / COMMON NAME	DRILL SEED RATES (#LBS./ACRE)	SEED REQUIRED (LBS)
AGROSTIS EXARATA / BENTGRAGS	4	33
ELYMUS TRACHYCAULUS / SLENDER WHEATGRASS	<b>3</b> 4	33
HORDEUM BRACHYANTHERUM / MEADOW BARLEY	4	33
LEYMUS TRITICOIDES / CREEPING WILD RYE	4	33
TOTAL lbs	16	132
EUTHAMIA OCCIDENTALIS / GOLDENROD	4	33
GRINDELIA CAMPORUM / GUMPLANT	5	42
OENETHERA ELATA / EVENING PRIMROSE	5	42
TOTAL lbs	14	117

WILLOW RIPARIAN / HABITAT TYPE: SEASONAL WETLAND Two year flood plain outside of low flow channel and basins		AREA (acres): 25.33 AC
BOTANICAL NAME / COMMON NAME	DRILL SEED RATES (#LBS./ACRE)	SEED REQUIRED (LBS)
AGROSTIS EXARATA / BENTGRASS	4	101
ELYMUS TRACHYCAULUS / SLENDER WHEATGRAS	<b>s</b> 4	101
ELYMUS GLAUCUS / BLUE WLD RYE	4	101
HORDEUM BRACHYANTHERUM / MEADOW BARLEY	4	101
LEYMUS TRITICOIDES / CREEPING WILD RYE	4	101
TOTAL Ibe	20	505
EUTHAMIA OCCIDENTALIS / GOLDENROD	6	152
OENETHERA ELATA / EVENING PRIMROSE	6	152
TOTAL Ibs	, 12	304
	PLUGS (TREEBAND) PER ACRE	QUANTITY REG
CAREX BARBARAE / WHITE ROOT SEDGE	100	2,533
ELEOCHARIS MACROSTACHYA / PALE SPIKERUSH	75	1,900
GRINDELIA CAMPORUM / GUMPLANT	50	1,267
JUNCUS BALTICUS / BALTIC RUSH	75	1,900
JUNCUS EFFUSUS / SOFT RUSH	75	1,900
JUNCUS PATENS / COMMON RUSH	75	1,900
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HABITAT TYPE: SEASONAL FRESHWATER MARSH Low flow channel & basins upstream of weirs		AREA (acres): 5.15 AC
BOTANICAL NAME / COMMON NAME	PLUGS (TREEBAND) PER ACRE	QUANTITY REQ
JUNCUS EFFUSUS / SOFT RUSH	<i>7</i> 5	386
JUNCUS PATENS / COMMON RUSH	75	386
SCHOENOPLECTUS ACUTUS OCCIDENTALIS / TULE	100	515
SCHOENOPLECTUS ROBUSTUS / STURDY BULRUSH	100	515
TYPHA LATIFOLIA / COMMON CATTAIL	100	515
TOTAL P	LU <i>G</i> S 450	2,317

TOTAL PLUGS 450

HABITAT TYPE: LOW FLOW CHANNEL WETEDGE Low flow channel elevated edge		AREA (ocres): 3.74 AC
BOTANICAL NAME / COMMON NAME	DRILL SEED RATES (#LBS./ACRE)	SEED REQUIRED (LBS)
AGROSTIS EXARATA / BENTGRAGS	7	26
ELYMUS TRACHYCAULUS / SLENDER WHEATGRAS	9 7	26
LEYMUS TRITICOIDES / CREEPING WILD RYE	12	45
TOTAL Ibs	26	97
	PLUGS (TREEBAND) PER ACRE	QUANTITY REQ.
CAREX BARBARAE / WHITE ROOT SEDGE	150	561
ELEOCHARIS MACROSTACHYA / PALE SPIKERUSH	100	374
JUNCUS EFFUSUS / SOFT RUSH	100	374
JUNCUS PATENS / COMMON RUSH	100	374

TOTAL PLUGS

#### HERBACEOUS SEED AND PLUG PLANTING

CORRIDOR

UPLAND GRASSLAND BUFFER / HABITAT TYPE: DRAINAGE CORRIDOR BANK	••••	AREA (acres): 17.02 AC	HABITAT T
BOTANICAL NAME / COMMON NAME	DRILL SEED RATES (#LBS./ACRE)	SEED REQUIRED (LBS)	BOTANICAL NAM
BROMUS CARINATUS / CALIFORNIA BROME	2	34	QUERCUS LO
ELYMUS GLAUCUS / BLUE WILD RYE	4	68	QUERCUS W
MELICA CALIFORNIA / COLIFORNIA MELIC	4	68	AESCULUS (
NAGSELLA PULCHRA / PURPLE NEEDLEGRAGS	6	102	SAMBUCUS N
VULPIA MICROSTACHYS / THREE WEEK FESCUE	6	102	RHAMNUS C
TOTAL	lbs 22	374	ROSA ACICL
			RUBUS URSI

	AREA (acres): 13.51 AC
DRILL SEED RATES (#LBS/ACRE)	SEED REQUIRED (LBS)
4	54
4	54
4	54
4	54
4	54
20	270
4	54
5	68
5	68
14	190
	DRILL SEED RATES (#LBS/ACRE)  4  4  4  4  20  4  5  5

HABITAT TYPE: WILLOW RIPARIAN / SEASONAL WETLAND Two year flood plain outside of low flow channel and basins		AREA (acres): 6.44 AC
BOTANICAL NAME / COMMON NAME	DRILL SEED RATES (#LBS/ACRE)	SEED REQUIRED (LBS)
AGROSTIS EXARATA / BENTGRASS	4	26
ELYMUS TRACHYCAULUS / SLENDER WHEATGRASS	3 4	26
ELYMUS GLAUCUS / BLUE WILD RYE	4	26
HORDEUM BRACHYANTHERUM / MEADOW BARLEY	4	26
LEYMUS TRITICOIDES / CREEPING WILD RYE	4	26
TOTAL lbs	20	130
EUTHAMIA OCCIDENTALIS / GOLDENROD	6	39
OENETHERA ELATA / EVENING PRIMROSE	6	39
TOTAL lbs	12	78
	PLUGS (TREEBAND) PER ACRE	QUANTITY REQ
-		2500 307 30

	PLUGS (TREEBAND) PER ACRE	QUANTITY RE
CAREX BARBARAE / WHITE ROOT SEDGE	100	644
ELEOCHARIS MACROSTACHYA / PALE SPIKERUSH	75	483
GRINDELIA CAMPORUM / GUMPLANT	50	322
JUNCUS BALTICUS / BALTIC RUSH	75	483
JUNCUS EFFUSUS / SOPT RUSH	75	483
JUNCUS PATENS / COMMON RUSH	75	483
TOTAL PLL	JGS 450	2,898

HABITAT TYPE: SEASONAL FRESHWATER MARSH Low flow channel & basins upstream of weirs		AREA (acres): 2.07 AC
BOTANICAL NAME / COMMON NAME	PLUGS (TREEBAND) PER ACRE	QUANTITY REQ
JUNCUS EFFUSUS / SOFT RUSH	75	155
JUNCUS PATENS / COMMON RUSH	75	155
SCHOENOPLECTUS ACUTUS OCCIDENTALIS / TULE	100	207
SCHOENOPLECTUS ROBUSTUS / STURDY BULRUSH	100	207
TYPHA LATIFOLIA / COMMON CATTAIL	100	207
TOTAL P	L <b>UGS 450</b>	<i>93</i> 1

HABITAT TYPE: LOW FLOW CHANNEL WETEDGE Low flow channel elevated edge		AREA (ocres): 150 AC
BOTANICAL NAME / COMMON NAME	DRILL SEED RATES (#LBS/ACRE)	SEED REQUIRED (LBS)
AGROSTIS EXARATA / BENTGRASS	7	≥11
ELYMUS TRACHYCAULUS / SLENDER WHEATGRAS:	<b>5</b> 7	11
LEYMUS TRITICOIDES / CREEPING WILD RYE	12	18
TOTAL lbs	26	40
	PLUGS (TREEBAND) PER ACRE	QUANTITY REG
CAREX BARBARAE / WHITE ROOT SEDGE	150	225
ELEOCHARIS MACROSTACHYA / PALE SPIKERUSH	100	150
JUNCUS EFFUSUS / SOFT RUSH	100	150

TOTAL PLUGS

100

JUNCUS PATENS / COMMON RUSH

#### TREE AND SHRUB PLANTING

HABITAT TYPE: DRAINAGE CORRIDOR BANK	AREA (acre 7.03 AC
BOTANICAL NAME/COMMON NAME	QTY/AC
QUERCUS LOBATA / VALLEY OAK	7
QUERCUS WISLEZENI / INTERIOR LIVE OAK	5
AESCULUS CALIFORNICA / CALIFORNIA BUCKEYE	3
SAMBUCUS MEXICANA / BLUE ELDERBERRY	5
RHAMNUS CALIFORNICA / COFFEEBERRY	4
ROSA ACICULARIS / WILD ROSE	9
RUBUS URSINUS / CALIFORNIA BLACKBERRY	9
VITIS CALIFORNICA / CALIFORNIA WILD GRAPE	8

HABITAT TYPE: WILLOW RIPARIAN	AREA (acres) 3.28 AC
BOTANICAL NAME/COMMON NAME	QTY./AC.
ALNUS RHOMBIFOLIA / WHITE ALDER	5
FRAXINUS LATIFOLIA / OREGON ASH	15
SALIX EXIGUA / SANDBAR WILLOW	5
SALIX NIGRA / BLACK WILLOW	15
SALIX LASIOLEPIS / ARROYO WILLOW	15
BACCHARIS SALICIFOLIA / MULEFAT	30
CEPHALANTHUS OCCIDENTALIS / BUTTON WILLOW	15
VITIS CALIFORNICA / CALIFORNIA WILD GRAPE	20
TOTAL QUANTITY PER ACRE:	120

HABITAT TYPE: WOODLAND	AREA (acres): 354 AC
BOTANICAL NAME/COMMON NAME	QTY./AC.
POPULUS FREMONTII / COTTONWOOD	25
SALIX NIGRA / BLACK WILLOW	15
SALX LUTEA / YELLOW WILLOW	10
BALIX LASIOLEPIS / ARROYO WILLOW	10
BACCHARIS SALICIFOLIA / MULEFAT	30
RUBUS URSINUS / CALIFORNIA BLACKBERRY	20
VITIS CALIFORNICA / CALIFORNIA WILD GRAPE	30
TOTAL QUANTITY PER ACRE:	140

FIELD VERIFICATION: FIELD VERIFY EXISTING SITE INFORMATION, INCLUDING PROPERTY LINES, TOP AND BOTTOM OF SLOPES, ROADWAY CURB AND GUTTERS, UTILITIES AND OTHER

- INFORMATION AFFECTING THE SCOPE OF WORK INCLUDED ON THESE DRAWINGS. IF ACTUAL SITE CONDITIONS VARY FROM WHAT IS SHOWN ON THE HABITAT RESTORATION PLANS, THE CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE AND THE PROJECT RESTORATION
- ECOLOGIST FOR DIRECTION ON HOW TO PROCEED.
- 3 <u>UNDERGROUND UTILITIES:</u> CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA 1-800-227-2600) 48 HOURS PRIOR TO ANY EXCAVATION.
- UTILITY COORDINATION: CONTRACTOR SHALL BE RESPONSIBLE TO CONSULT WITH APPROPRIATE AGENCIES AND PLANS, FOR THE LOCATIONS OF ALL UNDERGROUND UTILITIES, PIPES AND STRUCTURES. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COST INCURRED DUE TO DAMAGE OF SAID UTILITIES.
- EXCAVATION NEAR UTILITIES: EXCAVATION IN THE VICINITY OF UTILITIES AND EXISTING MATERIALS SHALL BE UNDERTAKEN WITH CARE. THE CONTRACTOR BEARS FULL RESPONSIBILITY FOR THIS WORK. ANY DAMAGE CAUSED BY ANY PERSON, VEHICLE, EQUIPMENT, OR TOOL RELATED TO THE EXECUTION OF THE CONTRACT SHALL BE REPAIRED IMMEDIATELY AT NO EXPENSE TO THE OWNER.
- <u>UTILITY COORDINATION:</u> CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION REQUIRED TO ACCOMPLISH ALL CONSTRUCTION OPERATIONS. ALL PIPING, CONDUIT SLEEVES, ETC., SHALL BE SET IN PLACE PRIOR TO INSTALLATION OF CONSTRUCTION ITEMS:
- 7. <u>DUE DILIGENCE:</u> CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS, AREA DISCREPANCIES AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATIONS.
- MATERIAL DAMAGE: CONTRACTOR IS RESPONSIBLE FOR REPLACEMENT OF ANY EXISTING MATERIALS THAT ARE DAMAGED DURING CONSTRUCTION.
- 9. STANDARDS: CONTRACTOR SHALL FURNISH WORK AND MATERIALS MEETING THE REQUIREMENTS IF THE SPECIFICATIONS AND INDUSTRY STANDARDS, IT IS NOT THE INTENT OF THE SPECIFICATION SECTIONS TO OUTLINE ALL THE TECHNICAL REQUIREMENTS OR TO SET FORTH THOSE REQUIREMENTS ADEQUATELY COVERED BY THE APPLICABLE CODES AND STANDARDS. THE PROJECT RESTORATION ECOLOGIST SHALL COORDINATE WITH THE CONTRACTOR ON ALL APPLICABLE REGULATIONS AND STANDARDS RELEVANT TO HABITAT RESTORATION.
- AGENCY COMPLIANCE: THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, CITY. AND DUNTY LAWS AND REGULATIONS AND PROJECT PERMITS NECESSARY TO COMPLETE THE WORK. THE OWNER SHALL OBTAIN AND PAY FOR ALL PERMITS, LICENSES, AND APPROVALS NORMALLY REQUIRED TO COMPLETE THE WORK. PRIOR TO THE START OF WORK, ALL NATURAL RESOURCE AGENCY PERMITS SHALL BE ACQUIRED. COPIES OF THESE PERMITS SHALL BE MADE AVAILABLE TO THE RESTORATION ECOLOGIST AND CONTRACT AS APPROPRIATE.
- 11. ADHERENCE: THE CONTRACTOR SHALL REFER TO AND ADHERE TO ALL REQUIREMENTS OF THE PLAN. A COMPLETE COPY OF THE PLAN SHALL BE KEPT ON SITE AT ALL TIMES DURING
- 12. SUPERVISION: AN APPROVED RESTORATION ECOLOGIST SHALL OVERSEE GRADING AND HABITAT CREATION ACTIVITIES ASSOCIATED WITH THIS PLAN. THE RESTORATION ECOLOGIST SHALL IDENTIFY EXISTING NATIVE VEGETATION TO BE STRIPPED AND STOCKPILED PRIOR TO GRADING. ALL LAYOUT STAKING SHALL BE DONE BY CONTRACTOR AND APPROVED BY THE RESTORATION ECOLOGIST PRIOR TO GRADING. FINAL GRADES SHALL BE APPROVED BY THE RESTORATION ECOLOGIST PRIOR TO APPLYING TOPSOIL VEGETATIVE INOCULUM, SEEDING AND PLANTING.
- 13. FIELD MODIFICATIONS: FIELD MODIFICATIONS TO THE HABITAT RESTORATION DESIGN MAY BE ALLOWED AS SITE CONDITIONS WARRANT AND ONLY AT THE DISCRETION OF THE PROJECT RESTORATION ECOLOGIST AND THE OWNER'S REPRESENTATIVE. ALL APPLICABLE REGULATIONS TERMS, AND CONDITIONS PERTAINING TO THE CONTRACT SHALL BE SATISFIED WITH ANY AND ALL CHANGES TO THE DESIGN.
- 14. AS BUILT RECORDS: THE CONTRACTOR SHALL SUBMIT TO THE OWNER'S REPRESENTATIVE AND RESTORATION ECOLOGIST "AS-BUILT" DRAWINGS IN PAPER (3 COPIES) AND REPRODUCIBLE FORM (EITHER PLOTTED OR PDF FORM) THAT SHALL SHOW ALL DEVIATIONS FROM THE BID DOCUMENTS MADE DURING CONSTRUCTION. THESE DEVIATIONS SHALL BE RECORDED USING CPS EQUIPMENT AND REPRESENTED ON A SET OF BASE PLANS TO BE PROVIDED. THIS RAW DATA SHOWING POLYGONS OF AS CONSTRUCTED ZONES SHALL BE SUBMITTED TO THE RESTORATION ECOLOGIST FOR USE IN FUTURE MONITORING AND MAINTENANCE.

#### CONSTRUCTION BMPS

- 1. A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE PREPARED BY A STATE CERTIFIED SUB-CONSULTANT TO THE CONTRACTOR.
- 2. A NOTICE OF INTENT (NOI) TO OBTAIN COVERAGE UNDER THE GENERAL PERMIT WILL BE OBTAINED BY THE CONTRACTOR AND THE RECEIPT OF THE NOI AND THE WASTE DISCHARGE ID (WDID) NUMBER WILL BE AVAILABLE PRIOR TO THE START OF CONSTRUCTION.
- 3. CHANGES IN THE PROJECT, WHICH MAY AFFECT THE SWPPP OR INCREASE THE RISK OF STORMWATER POLLUTION REQUIRE A NEW SWPPP AMENDMENT. ALL AMENDMENTS SHALL BE DATED AND SIGNED, AND DIRECTLY ATTACHED TO THE ORIGINAL SWPPP. A SITE INSPECTION MAINTENANCE/REPAIR FORM SHALL BE KEPT DURING CONSTRUCTION FOR EACH INCIDENT AS IT OCCURS, AND MAINTAINED IN A DAILY FIELD LOGBOOK BINDER TO FILE THE COMPLETED INSPECTION RECORDS.
- 4. THE SWPPP SHALL BE AVAILABLE AT THE CONSTRUCTION SITE WHILE THE SITE IS UNDER CONSTRUCTION DURING WORKING HOURS, COMMENCING WITH THE INITIAL CONSTRUCTION ACTIVITY AND ENDING WITH THE TERMINATION OF COVERAGE. IT SHALL BE LOCATED AT AN ACCESSIBLE AND KNOWN LOCATION IN THE ON-SITE OFFICE.
- 5. THE DISCHARGER IS REQUIRED TO CONDUCT MONITORING AND MAINTENANCE OF THE SITE DURING CONSTRUCTION AND AFTER CONSTRUCTION DURING THE RAINY SEASON. INSPECTIONS SHALL BE MADE BEFORE, DURING AND AFTER A MAJOR RAIN EVENT.
- 6. BEST MANAGEMENT PRACTICES (BMPS) MEASURES SHALL BE IN PLACE PRIOR TO THE ONSET OF THE FALL RAINY SEASON (OCTOBER 15) OR ANY ANTICIPATED STORM EVENT.

- 1. THE STAGING AREA SHALL BE DEFINED, AND HAUL ROUTES ESTABLISHED, WITH A ROCK ENTRANCE AT THE MAIN ACCESS LOCATION.
- 2. MANDATORY HOUSEKEEPING BMPS INVOLVE THE NEED FOR A TIRE WASH AREA, PERIODIC CLEANING OF ACCESS ROADS TO THE SITE ENTRANCES AND EXITS, ADDITIONAL PROTECTION OF NEARBY STORM DRAIN INLETS, AND/OR HAVING A CONCRETE WASHOUT
- 3. GENERALLY, SEDIMENTATION CONTROL BMPS SHALL CONSIST OF FILTRATION AND BARRIER DEVICES AT THE DOWNSTREAM SITE PERIMETER AND AT ALL INLETS TO ANY STORMWATER DRAIN SYSTEM. SEDIMENTATION CONTROL IS NECESSARY WHEN THE INITIAL MOBILIZATION OF SOIL PARTICLES DURING A RAIN EVENT NECESSITATES BMPS TO PREVENT A DISCHARGE INTO A PROTECTED BODY OF WATER. UNTIL PERMANENT VEGETATION IS ESTABLISHED, TEMPORARY SEDIMENTATION CONTROL BMPS MUST BE INSTALLED, SUCH AS THE FOLLOWING:
- A. THE CONSTRUCTION ENTRANCE WILL BE EQUIPPED WITH A STABILIZED CONSTRUCTION ENTRANCE TO PREVENT TRACK-OUT.

#### CONSTRUCTION BMPS CONT.

#### BMPS CONT.

- B. STRAW WATTLE OR COIR ROLL SEDIMENTATION CONTROL SHALL BE PLACED ALONG THE BASE OF GRADED SLOPES AND ANY AREAS DRAINING AWAY FROM THE CONSTRUCTION AREA.
- C. STRAW WATTLES SHALL BE PLACED AROUND THREE SIDES OF THE STAGING AREA AND AT THE BASE OF SLOPES, SECURED WITH WOODEN STAKES EVERY FOUR FEET. DOUBLE ROWS OF STRAW WATTLES SHALL BE PLACED IN MAJOR RUN-OFF LOCATIONS.
- D. SILT FENCING, SUPPLEMENTED WITH STRAW WATTLES WILL BE INSTALLED AROUND THE PERIMETER OF THE WORK AREA SO THAT ANY EROSION WILL NOT IMPACT ANY STREAM CHANNELS OR SURROUNDING AREAS, A PROTECTIVE SILT FENCE SHALL ALSO BE PLACED AROUND THE PERIMETER OF ANY EXISTING PROTECTED WETLAND AREAS SITUATED 50 FT FROM CONSTRUCTION AREAS OR DOWN SLOPE OF ANY CONSTRUCTION ZONES.
- 4. EXPOSED DISTURBED SOIL SHALL BE STABILIZED BY APPROPRIATE SEED MIXES AND STABILIZED WITH CERTIFIED WEED FREE STRAW AS SPECIFIED.
- 5. IMPLEMENT GENERAL SITE AND MATERIAL MANAGEMENT BMPS FOR MATERIAL AND EQUIPMENT THAT ARE IMPORTED TO THE SITE, SUCH AS PREVENTION OF LUBRICATION LEAKS FROM EQUIPMENT, FUEL, HYDRAULIC FLUID, AND TRANSMISSION FLUID, PROPERLY STORING IMPORTED MATERIAL (BOTH HAZARDOUS AND NON-HAZARDOUS) SHALL BE IN A PROTECTED STORAGE AREA WITH SECONDARY CONTAINMENTS, HAVING A SPILL CONTROL PLAN, MAINTAINING AND INSPECTING PORTABLE TOILETS, AND ENSURING ALL WASTE CONTAINERS OR DUMPSTERS HAVE
- 6. DOCUMENT ALL MATERIALS BEING IMPORTED TO THE SITE TO DETERMINE APPLICABLE GENERAL SITE AND MATERIAL MANAGEMENT BMPS, AND IDENTIFY SPILL CONTROL PLANS, AND ANY ADDITIONAL MANAGEMENT PRACTICES.

#### EROSION CONTROL

- 1. CONSTRUCTION AND GRADING SHALL BE SCHEDULED FOR THE DRY SEASON.
- 2. EROSION CONTROL (SOIL STABILIZATION SHALL BE USED TO PREVENT THE INITIAL MOBILIZATION OF SOIL PARTICLES DURING A RAIN EVENT). THE MOST EFFICIENT WAY TO ADDRESS EROSION CONTROL IS TO PRESERVE EXISTING VEGETATION WHERE FEASIBLE, TO LIMIT DISTURBANCES, AND TO STABILIZE AND REVEGETATE DISTURBED AREAS AS SOON AS POSSIBLE AFTER GRADING OR CONSTRUCTION OPERATIONS.
- 3. A WATER TRUCK SHALL BE USED ON-SITE DURING CONSTRUCTION IN ORDER TO TOP DAMPEN THE SOIL TO PREVENT WIND EROSION AND FOR DUST CONTROL.
- 4. DISTURBED AREAS SHALL RECEIVE EROSION CONTROL SEEDING OR SEEDING AS SPECIFIED ON THE PLANTING PLANS PRIOR TO THE ONSET OF THE FALL RAINY SEASON (OCTOBER 15TH).

#### TOXIC MATERIALS

- 1. THE CONTRACTOR SHALL PROVIDE A LIST OF ANY HAZARDOUS SUBSTANCES, PROVIDE THE MATERIAL SAFETY DATA SHEETS (MSDS), AND TRAIN ALL EMPLOYEES ON THEIR PROPER USE AND DISPOSAL INCLUDING A SPILL CONTROL PROCEDURE AND ANY REQUIRED PERSONAL PROTECTION MEASURES. THE DISPOSAL OF ANY TOXIC WASTE MUST BE IN COMPLIANCE WITH FEDERAL, STATE, AND LOCAL REQUIREMENT.
- 2. THE CONTRACTOR SHALL PROVIDE A DESCRIPTION OF ANY TOXIC MATERIAL (LUBRICATION OILS, CLEANING SOLVENTS, FERTILIZER, PESTICIDES, PORTABLE TOILET CHEMICALS, SLURRY WALL MATERIAL, ETC) THAT WILL BE TRANSPORTED TO THE CONSTRUCTION SITE AND MAY POTENTIALLY BE AFFECTED BY A STORMWATER EVENT. THE DISCHARGER SHALL IDENTIFY THE SPECIFIC BMPS ASSOCIATED WITH EACH TOXIC MATERIAL ON HOW TO CONTAIN THE TOXIC MATERIAL DURING A STORMWATER EVENT.
- 3. EXAMPLES OF BMPS INCLUDE: WATERPROOF COVER OR STORAGE AREA; IDENTIFICATION OF EMPLOYEE RESPONSIBILITIES BEFORE, DURING, AFTER USE OF ANY TOXIC MATERIAL IN A POTENTIAL STORMWATER EVENT SITUATION; USING OR STORING TOXIC MATERIAL IN AN AREA WHERE THERE IS A NATURAL OR MAN-MADE SECONDARY CONTAINMENT SYSTEM; AN INVENTORY SYSTEM FOR TRACKING. EXAMPLES OF BMPS FOR NON-TOXIC MATERIAL OR ASSOCIATED ACTIVITY INCLUDE: STORING NEGATIVE IMPACT MATERIAL IN WATERPROOF STORAGE CONTAINERS. MINIMIZING MATERIALS' EXPOSURE TO POTENTIAL RAINFALL. SECURING ANY HERBICIDE MATERIAL IN A LOCKED STORAGE CONTAINER, POSSESSING A MAP SHOWING WHERE THE MATERIALS AND EQUIPMENT ARE STORED AND UTILIZED, INSPECTING ALL IMPORTED MATERIAL, AND STORING MATERIAL WITH SECONDARY CONTAINMENTS AWAY FROM DRAINAGE INLETS OR DRAINAGE CHANNELS.
- 4. CONTRACTOR SHALL ALSO DESCRIBE ANY NON-TOXIC CONSTRUCTION MATERIAL (I.E. SAND, CONCRETE, AGGREGATE, SOIL AMENDMENTS, WASHING SOAP, AND WASTEWATER, ETC) AND ANY EQUIPMENT THAT MAY POTENTIALLY CAUSE A DISCHARGE OF MATERIAL INTO RECEIVING WATER, AND DESCRIBE ALL NON-TOXIC CONSTRUCTION MATERIALS, COMMERCIAL EQUIPMENT AND VEHICLES THAT WILL COME IN CONTACT WITH POTENTIAL STORMWATER DURING THIS PROJECT.

#### POST-CONSTRUCTION STORMWATER MANAGEMENT

- 1. THE GOAL OF THIS PROJECT IS TO CREATE A FULLY VEGETATED LANDSCAPE, INCLUDING NATIVE VEGETATION COVER IN THE WETLANDS AND SURROUNDING UPLANDS. IF PLANT GROWTH PROCEEDS AS EXPECTED, POST CONSTRUCTION EROSION WILL BE MINIMAL.
- 2. SILT FENCES WILL BE REMOVED AFTER CONSTRUCTION AND STRAW WATTLES WILL REMAIN IN PLACE UNTIL APRIL 15 OF THE FOLLOWING YEAR TO REDUCE SEDIMENT MOVEMENT DURING THE RAINY SEASON. THE POST-CONSTRUCTION STORM WATER MANAGEMENT SHALL CONSIST OF INSPECTING THE SITE, ASSESSING THE REVEGETATION PROCESS, AND OBSERVING EROSION CONTROL FABRIC AND STRAW WATTLES AND REPLACING IF NEEDED.
- 3. IN ADDITION TO THE VEGETATION INSPECTION AND RECORD KEEPING, THE CONTRACTOR SHALL ALSO INSPECT FOR ANY POTENTIAL RISK FOR STORM WATER POLLUTION. ADAPTIVE MANAGEMENT TO SOLVE ANY PROBLEMS IS REQUIRED IF ANY DEFICIENCY IS DISCOVERED DURING THIS INSPECTION.

### GRADING & CONSTRUCTION NOTES

- 1. <u>VARIABLE SITE CONDITIONS:</u> REFER TO GRADING AND DRAINAGE PLANS FOR SITE GRADING AND DRAINAGE INFORMATION. IF ACTUAL SITE CONDITIONS VARY FROM WHAT IS SHOWN ON THE HABITAT PLANS, THE CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE AND PROJECT RESTORATION ECOLOGIST FOR DIRECTION AS TO HOW TO PROCEED.
- 2. FIELD VERIFICATION: FIELD VERIFY EXISTING UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION AND ELEVATION IN THE FIELD PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION.

#### GRADING & CONST. NOTES CONT.

- 3. TOP SOIL STRIPPING & SALVAGE: PRIOR TO SITE EXCAVATION THE CONTRACTOR SHALL DISK THE SITE TILLING IN SOIL AND GRASS. THE CONTRACTOR SHALL THEN STRIP THE TOP 8" OF TOPSOIL (INCLUDING VEGETATION). THE ENTIRE PORTION OF THE CORRIDOR SCHEDULED FOR EXCAVATION SHALL BE STRIPPED OF TOPSOIL, TO BE STOCKPILED WITH A MAX. 4' IN DEPTH FOR LATER RE-APPLICATION.
- 4. TOP SOIL REAPPLICATION: ALL EXCAVATED AREAS SHALL BE OVER-EXCAVATED BY 6 INCHES AND ALL STOCKPILED TOPSOIL SHALL BE RE-APPLIED TO MEET FINISH GRADES AS SHOWN ON THE GRADING
- 5. CLAY SOIL SALVAGING & STOCKPILING: STRIP SUITABLE CLAY SOILS UNCOVERED BENEATH TOPSOIL LAYER TO ESTIMATED QUANTITIES NEEDED (ON PLAN) FOR APPLICATION THICKNESSES FOR WETLANDS (6-INCHES) AS DETAILED, AND STOCKPILE SEPARATELY FOR FUTURE USE.
- 6. PROPOSED GRADES: ALL PROPOSED GRADES ARE TO MEET AND BLEND IN WITH EXISTING GRADES AT PROJECT LIMIT AND EXISTING CONTOURS. PRECISE ELEVATIONS INDICATED ON PLANS SHALL BE VERIFIED IN FIELD AS TO AS-BUILT CONDITION.
- 7. TOP OF BANK AND CORRIDOR SIDE SLOPES: CORRIDOR SIDE SLOPES MAY BE SOFTENED BY LAYING BACK THE TOP OF SLOPE IN SPECIFIC LOCATIONS AND UPON APPROVAL BY THE PROJECT ENGINEER.
- 8. LOW FLOW WET EDGE: A LOW FLOW WET EDGE SHALL BE CONSTRUCTED IN THE LOCATIONS AND MANNER AS SHOWN ON THE PLANS AND DETAIL 06/L4.4 TO ALLOW FOR FLUCTUATIONS IN SUMMER NUISANCE FLOWS. THE LOW FLOW WET EDGE SHALL NOT BE CONSTRUCTED WHERE CORRIDOR WIDTH IS LIMITED OR ALONG THE ENTIRETY OF CORRIDOR D WHICH WILL ACCOMMODATE ADDITIONAL SUMMER FLOWS W/ CONSTRUCTED SEASONAL WETLAND HABITAT.
- 9. FINISH GRADES: FINISH GRADES AND FINAL PRE-PLANTING GRADING SHALL BE REVIEWED BY THE PROJECT RESTORATION ECOLOGIST IN THE FIELD PRIOR TO SEEDING AND INSTALLATION OF PLANTS.
- 10. <u>DEBRIS DISPOSAL</u>: THE DEBRIS CREATED BY LANDSCAPE GRADING OPERATIONS SHALL BE REMOVED BY THE CONTRACTOR AND LEGALLY DISPOSED OF OFF-SITE AT NO COST TO THE OWNER.
- 11. FILTER FABRIC: PLASTIC FILTER PLASTIC SHALL BE A PERVIOUS SHEET OF PLASTIC YARN, EITHER WOVEN OR NON-WOVEN CONSTRUCTION AND CONSIST OF A LONG-CHAIN SYNTHETIC POLYMER COMPOSED OF AT LEAST 85 PERCENT BY WEIGHT OF PROPYLENE, ETHYLENE, ESTER, AMIDE OR VINYLIDENE-CHLORIDE, AND SHALL CONTAIN STABILIZERS AND/OR INHIBITORS ADDED TO THE BASE PLASTIC IF NECESSARY TO MAKE THE FILAMENTS RESISTANT TO DETERIORATION DUE TO ULTRA-VIOLET AND HEAT EXPOSURE. THE PLASTIC FILTER FABRIC SHALL PROVIDE AN APPROXIMATE OPENING SIZE (AOS) NO FINER THAN THE U.S. STANDARD SIEVE NO. 100 AND NO COARSER THAN U.S. STANDARD SIEVÉ NO. 40. THE FABRIC SHOULD BE FIXED SO THAT THE YARNS WILL RETAIN THEIR RELATIVE POSITION WITH RESPECT TO EACH OTHER. THE EDGES OF THE FABRIC SHALL BE FINISHED TO PREVENT THE OUTER YARN FROM PULLING AWAY FROM THE FABRIC. THE FABRIC SHALL BE MANUFACTURED INTO A WIDTH OF 15 FEET. ACCEPTABLE PRODUCTS: MIRAFI 180N, REED & GRAHAM RG80N, OR APPROVED EQUAL, SUBMIT MFR'S PRODUCT INFO/DATA. FABRIC SHALL CONFORM TO THE FOLLOWING PHYSICAL STRENGTH QUALITIES: PHYSICAL PROPERTY TEST PROCEDURE ACCEPTABLE TEST RESULTS TENSILE STRENGTH ASTM D 5034 GRAB TEST 200 LB MINIMUM (ANY DIRECTION) PUNCTURE STRENGTH. STAPLES FOR SECURING FABRIC IN PLACE SHALL BE MADE OF 0.12 INCH STEEL WIRE AND SHALL BE U-SHAPED WITH 7.9-INCH LEGS AND A 2-INCH CROWN.
- 12. RIP RAP: SHALL BE DURABLE AND OF SUITABLE QUALITY TO ENSURE ITS PERMANENCE. ROCK SHALL BE NO. 2 CLASS ROCK CONFORMING TO CALTRANS STANDARD SPECIFICATION SECTION 72. ROCK SHALL BE 1/4 TON, QUARRIED GRANITE, ANGULAR IN SHAPE, SUPPLIED FROM AN APPROVED SOURCE (SUBMIT SUPPLIER'S PRODUCT DATA). ROCK SIZES SHALL BE 6-INCH TO 12-INCH DIAMETER AGGREGATE. APPLY RIP-RAP OVER FILTER FABRIC LAYER (KEYED AROUND ALL EDGES) OVER COMPACTED SUBGRADE. PLACE STONE TO PROVIDE A MINIMUM OF VOIDS, ARRANGED SO THAT EACH STONE HAS AT LEAST A 3-POINT BEARING ON UNDERLYING STONES. CHINK INTERSTICES WITH SMALLER STONES. THE FINISHED SURFACE SHALL BE EVEN AND TIGHT, AND SHALL NOT VARY FROM THE PLANNED SURFACE BY MORE THAN 3-1/2 INCHES MEASURED AT RIGHT ANGLES TO THE SLOPE.
- 13. STORM WATER SYSTEM OUT FALLS: A FLARED END PIPE WITH FABRIC AND ROCK RIP RAP SHALL BE REQUIRED FOR EACH STORM WATER SYSTEM OUTFALL. ROCKED OUTFALL LOCATION AND ARMORING SHALL BE APPROVED BY THE PROJECT ENGINEER PRIOR TO CONSTRUCTION. SEE DETAIL 05 SHEET L4.4 FOR TYPICAL ROCKED OUTFALL DESIGN.

#### DRIP IRRIGATION NOTES

- SCOPE: THE CONTRACTOR SHALL FURNISH ALL LABOR MATERIALS AND EQUIPMENT FOR THE PROPER INSTALLATION OF THE IRRIGATION SYSTEM. THE WORK SHALL BE PERFORMED ACCORDING TO THESE DRAWINGS AND SPECIFICATIONS, AND SHALL MEET THE APPROVAL OF THE PROJECT ENGINEER AND THE PROJECT RESTORATION ECOLOGIST. THE WORK INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING: SUPPLY ALL PIPING AND DRIP IRRIGATION MATERIALS NECESSARY TO PROVIDE ALL CONTAINER PLANTS WITH IRRIGATION. SEEDED AREAS AND HERBACEOUS PLANT PLUGS WILL NOT RECEIVE IRRIGATION), HAND-WATERING OF ALL WILLOW RIPARIAN PLANTS AND WATER APPLICATION TRENCHING AND BACKFILLING AS SPECIFIED, AND FINAL OPERATIONAL TESTING OF ALL SYSTEMS TO VERIFY ACCURACY OF "AS-BUILT" DRAWINGS. THE CONTRACTOR SHALL APPLY WATER BASED ON A PLANT MONITORING STRATEGY AND WATERING CHART ON SHEET L4.3.
- **GUARANTEE:** THE IRRIGATION SYSTEM SHALL BE GUARANTEED AGAINST ALL DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR AFTER FINAL INSPECTION AND ACCEPTANCE OF THE PROJECT BY THE PROJECT ENGINEER AND RESTORATION ECOLOGIST. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A WRITTEN GUARANTEE AS STATED ABOVE. THE GUARANTEE SHALL ALSO COVER REPAIR OF DAMAGE TO ANY PART OF THE PREMISES RESULTING FROM LEAKS OR OTHER DEFECTS IN MATERIAL, EQUIPMENT AND WORKMANSHIP. ALL REPAIRS, IF REQUIRED, SHALL BE DONE PROMPTLY AT NO ADDITIONAL COST TO THE OWNER
- WATER SUPPLY: IRRIGATION WATER IS TO BE SUPPLIED BY CONTRACT BETWEEN THE OWNER AND CONTRACTOR, WATER SHOULD BE AVAILABLE CONTINUOUSLY FROM APRIL 15TH TO OCTOBER 15TH EACH YEAR OF THE PLANT ESTABLISHMENT PERIOD TO PLANTINGS WHERE IRRIGATION IS PROVIDED.
- 4. P.O.C REQUIREMENTS: THE OWNER SHALL SUPPLY A MIN. 2" MAIN SUPPLY LINE WITH A MINIMUM PRESSURE OF 65 PSI AT 60 GPM AT EACH POINT OF CONNECTION (POC). THE OWNER SHALL SUPPLY A POC EVERY 3,000 FEET MAX. ALONG THE LENGTH OF EACH CORRIDOR.
- PERMITS AND FEES: THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND PAY THE REQUIRED FEES TO ANY GOVERNMENTAL AGENCY HAVING JURISDICTION OVER THE WORK. INSPECTIONS REQUIRED BY LOCAL ORDINANCES DURING THE COURSE OF THE CONSTRUCTION SHALL BE ARRANGED AS REQUIRED.
- COMPLIANCE: THE CONTRACTOR SHALL CARRY OUT ALL WORK IN COMPLIANCE WITH ALL APPLICABLE LOCAL, MUNICIPAL, STATE AND FEDERAL LAWS, RULES AND REGULATIONS. UPON COMPLETION OF THE WORK, SATISFACTORY EVIDENCE SHALL BE FURNISHED TO THE OWNER TO INSURE THAT ALL WORK HAS BEEN INSTALLED IN ACCORDANCE WITH ORDINANCES AND LOCAL
- ACCURACY OF INFORMATION: THE CONTRACTOR SHALL VERIFY, PRIOR TO CONSTRUCTION, THAT HIS CONTRACT DOCUMENTS REFLECT THE LATEST REVISIONS AND/OR PLAN CHECKS. BEFORE PROCEEDING WITH ANY WORK, THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND QUANTITIES, AND SHALL IMMEDIATELY INFORM THE PROJECT ENGINEER AND RESTORATION ECOLOGIST OF ANY DISCREPANCY BETWEEN THE DRAWINGS AND/OR SPECIFICATIONS AND ACTUAL
- SITE INSPECTION: THE CONTRACTOR SHALL BE ACQUAINTED WITH ALL SITE CONDITIONS. THE CONTRACTOR SHALL CONFIRM LOCATION OF ANY EXISTING UTILITIES ON SITE BY CALLING USA (800-227-2600) PRIOR TO ANY EXCAVATION OR PLANTING ACTIVITIES. SHOULD SITE UTILITIES NOT SHOWN ON THE PLANS BE FOUND DURING EXCAVATIONS, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE PROJECT ENGINEER. FAILURE TO DO SO SHALL MAKE THE CONTRACTOR LIABLE FOR ANY AND ALL DAMAGE THERETO ARISING FROM OPERATIONS SUBSEQUENT TO DISCOVERY OF SUCH UTILITIES NOT SHOWN IN PLANS.
- SUBSTITUTION: ONLY UNDER APPROVAL FROM THE PROJECT ENGINEER AND RESTORATION ECOLOGIST MAY EQUIPMENT OR MATERIALS BE SUBSTITUTED, PROVIDING THOSE SPECIFIED IN PLANS ARE NOT FEASIBLE OR AVAILABLE.
- 10. FINAL ACCEPTANCE: FINAL ACCEPTANCE OF THE IRRIGATION CONSTRUCTION WORK IS TO BE DBTAINED FROM THE OWNER AND THE RESTORATION ECOLOGIST, UPON SATISFACTORY COMPLETION OF ALL WORK AND DEMONSTRATION OF THE OPERATING SYSTEM.

#### IRRIGATION NOTES CONT.

- 10. EXCAVATION: THE CONTRACTOR SHALL PERFORM ALL EXCAVATIONS AS REQUIRED FOR THE INSTALLATION OF THE WORK INCLUDED UNDER THIS SECTION INCLUDING THE RESTORATION TO ORIGINAL CONDITION OF ALL SURFACES, EXISTING UNDERGROUND INSTALLATIONS, ETC., DAMAGED OR CUT AS A RESULT OF THE EXCAVATIONS.
- 11. <u>UNDERGROUND PIPELINES:</u> WHERE SPECIFIED, PIPELINES SHALL BE BURIED IN TRENCHES AND SHALL BE COMPACTED TO 90% AFTER BACKFILL. TRENCHES FOR PIPELINES SHALL BE DUG TO SUFFICIENT DEPTHS TO PROVIDE THE MINIMUM COVER FROM FINISH GRADE AS FOLLOWS:
- 12. MAINLINES: SHALL BE SCHEDULE 40 PVC PIPE UNLESS OTHERWISE NOTED, LOCATED AT A MINIMUM OF 18" BELOW GRADE, WHEN LOCATED ON OPEN FLAT OR OTHER DESIGNATED AREA. ABOVE OR BELOW GRADE, MAINLINE PIPE SHALL FEATURE CONCRETE THRUST BLOCKS

STAPLED WITH "U" SHAPED NO. 3 REBAR AT 15' INTERVALS.

- AT ELBOWS AND JUNCTIONS. 13. LATERAL LINES: SHALL BE SCHEDULE 40 PVC PIPE UNLESS OTHERWISE NOTED, LOCATED A MINIMUM OF 12" BELOW GRADE WHEN ON OPEN FLATLAND. UV RESISTANT LATERAL PIPE MAY BE LOCATED ON THE SURFACE WHEN ON STEEP SLOPES, IN WHICH CASE PIPE SHALL BE
- 14. <u>ROAD CROSSINGS:</u> AT ROAD AND PATHWAY UNDERCROSSINGS, PIPELINES SHALL BE PLACED IN PVC SLEEVES AT LEAST TWO TIMES THE SIZE OF PIPE AND HAVE A MINIMUM OF 24" OF

#### PLANTING NOTES

- FIELD VERIFY: CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL PERTINENT SITE IMPROVEMENTS INSTALLED AS PART OF OTHER PLANS, IF ANY PART OF THIS PLAN CANNOT BE FOLLOWED DUE TO SITE CONDITIONS, CONTACT THE PROJECT RESTORATION ECOLOGIST FOR DIRECTION AS TO HOW TO PROCEED.
- 2. SOIL TESTING: CONTRACTOR SHALL OBTAIN AGRICULTURAL SUITABILITY AND FERTILITY SOILS TESTING. ANALYSIS SHALL INCLUDE RECOMMENDATIONS FOR SOIL PREPARATION AND BACKFILL MIX AS WELL AS RECOMMENDATIONS FOR POST MAINTENANCE FERTILIZATION. SOILS TESTING LABORATORY AND LOCATION/NUMBER OF REQUIRED SAMPLE LOCATIONS SHALL BE APPROVED BY THE PROJECT RESTORATION ECOLOGIST.
- 3. SOILS TESTING REPORT: A COPY OF THE SOILS REPORT SHALL BE PROVIDED TO THE PROJECT RESTORATION ECOLOGIST PRIOR TO ANY WORK BEING DONE. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE OF ANY SOIL PROBLEMS THAT MIGHT AFFECT PLANT GROWTH PRIOR TO BEGINNING PLANTING.
- 4. SOIL AMENDMENTS: CONTRACTOR SHALL CONDUCT SOIL AMENDMENT PREPARATION AND PREPARE PLANTING BACKFILL MIX TO CONFORM TO THE SOILS REPORT RECOMMENDATIONS. BID REVISIONS, AS A RESULT OF THE OWNER'S APPROVAL OF CHANGE ORDER PRIOR TO THE CONTRACTOR'S INSTALLING SOIL PREPARATION AND BACKFILL MIX.
- 5. PLANTING PITS: IF PLANTING PITS ARE EXCAVATED USING A POWER AUGER, BREAK VERTICAL SIDES WITH A BALLIN BAR OR SPADE TO INTERRUPT CONTINUOUS CURVE INFLUENCE IN ROOT DEVELOPMENT.
- 6. COMPLIANCE: CONTRACTOR SHALL COMPLY WITH FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS PERTAINING TO THE INSPECTION FOR PLANT DISEASES AND INSECT INFESTATION.
- 7. <u>IDENTIFICATION:</u> CONTRACTOR SHALL VERIFY CORRECT SPECIES OF ALL PLANT MATERIAL, WHICH SHALL HAVE WELL-DEVELOPED BRANCH AND/OR ROOT SYSTEMS.
- 8. INSPECTION: PLANTS ARE SUBJECT TO PROJECT RESTORATION ECOLOGIST INSPECTION FOR SIZE, VARIETY, CONDITION, ROOT DEVELOPMENT DEFECTS, AND INJURY ON DELIVERY AND/OR THE PROJECT SITE AT ANY TIME BEFORE AND DURING PROGRESS OF WORK.
- 9. REJECTION: CONTRACTOR SHALL REMOVE REJECTED PLANTS FROM THE SITE IMMEDIATELY AND REPLACE WITH ACCEPTABLE MATERIALS AS SPECIFIED.
- 10. SUBSTITUTION: PLANT SIZE OR SPECIES SUBSTITUTIONS WILL NOT BE PERMITTED WITHOUT THE OWNER'S REPRESENTATIVE OR THE RESTORATION ECOLOGIST'S PRIOR WRITTEN APPROVAL.
- 11. QUANTITIES: CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL PLANT COUNTS AND AREA (SQ. FT.) OF PLANTING LOCATIONS. QUANTITIES SHOWN ON PLANS TAKE PRECEDENCE OVER WRITTEN QUANTITIES IN 'PLANTING LEGEND'.
- 12. <u>SELECTION:</u> PROVIDE MATCHING FORMS AND SIZES FOR ALL PLANT MATERIALS WITHIN EACH SPECIES AND SIZE DESIGNATED ON THE DRAWINGS.
- 13. LOCATION: EXACT LOCATIONS OF PLANT MATERIALS SHALL BE REVIEWED BY THE PROJECT RESTORATION ECOLOGIST IN THE FIELD PRIOR TO INSTALLATION. THE PROJECT RESTORATION ECOLOGIST RESERVES THE RIGHT TO ADJUST PLANTS TO EXACT LOCATION IN THE FIELD.
- 14. SPACING: ALL CONTAINER PLANTS ARE TO BE ALIGNED AND SPACED IN ALL DIRECTIONS AS DESIGNATED PER THESE NOTES AND DRAWINGS AND THE RESTORATION ECOLOGIST
- 15. SEEDED AREAS: SEEDED SLOPES STEEPER THAN 10:1 SHALL BE STRAW-MULCHED. RICE OR NATIVE GRASS STRAW SHALL BE APPLIED AT THE RATE OF 1.5 TONS PER ACRE TO SEEDED AREAS. STRAW MULCH SHALL BE HELD IN PLACE WITH AN ORGANIC TACKIFIER AND WOOD MULCH APPLIED IN A SLURRY AT A MINIMUM OF 500 POUNDS PER ACRE. NO FERTILIZER IS TO BE APPLIED TO SEEDED AREAS.
- 16. TAG REMOVAL: CONTRACTOR SHALL REMOVE TAGS, LABELS, NURSERY STAKES AND TIES FROM ALL PLANTS AFTER INSPECTION AND APPROVAL BY THE RESTORATION ECOLOGIST.
- 17. TIMING: PLANTING SHALL ONLY OCCUR AFTER THE INSPECTION APPROVAL OF FINAL FINISH GRADES HAS BEEN MADE. SEEDING OTHER THAN HYDROSEEDING WILL BE COMPLETED BETWEEN SEPTEMBER 1 AND OCTOBER 15, AND PLANTING OF CONTAINER PLANTS SHALL FOLLOW IMMEDIATELY THEREAFTER.
- 18 PREPARATION: THE ENTIRE AREA TO BE PLANTED SHALL BE REASONABLY SMOOTH AND CONFORM TO THE DESIRED GRADING PLAN BEFORE ACTUAL SEEDBED PREPARATION IS BEGUN. COMPACTED SUBSOIL SHALL BE RIPPED, DISKED OR HARROWED. GRADING PATTERNS SHALL OCCUR HORIZONTALLY, ACROSS THE FACE OF A SLOPE. TOPSOIL RECLAIMED FROM THE SITE SHALL BE REPLACED AT LEAST 6" IN DEPTH OVER THE SUBGRADE. FINISHED SURFACE ELEVATIONS SHALL MEET THOSE SPECIFIED ON THE GRADING PLAN.
- 19. STAKING: THE CONTRACTOR SHALL STAKE THE BOUNDARIES OF SEEDING AND PLANTING ZONES, AND FOLLOWING APPROVAL BY THE PROJECT RESTORATION ECOLOGIST, MAY BEGIN SEEDING. INDIVIDUAL PLANTING LOCATIONS FOR CONTAINER PLANTS SHALL BE MARKED WITH COLOR-CODED AND LABELED PIN FLAGS, FOR APPROVAL BY THE RESTORATION ECOLOGIST. PLANTING MAY BEGIN AFTER THE ECOLOGIST HAS DETERMINED THAT THE FLAGGED LAYOUT AND THE CONTRACTOR DESIGNED TEMPORARY IRRIGATION METHOD AND SYSTEM IS APPROVED.
- 20. INSTALLATION: IF CONTAINER PLANTS ARE USED, THE CONTRACTOR SHALL EXCAVATE PLANT HOLES TO A MINIMUM OF ONE AND ONE—HALF TIMES THE DEPTH AND TWO TIMES THE WIDTH OF THE CONTAINER SIZE. THE SIDES OF THE HOLES SHALL BE SCARIFIED TO ELIMINATE SMOOTH SURFACES (ALLOWING FOR ROOT PENETRATION) PRIOR TO PLANT INSTALLATION. SOIL AMENDMENTS IF REQUIRED SHALL BE THOROUGHLY MIXED WITH EXCAVATED MATERIAL PRIOR TO BACKFILLING OF THE HOLES. PREPARE BACKFILL BY MIXING AMENDMENTS BASED ON SOIL TEST AND SPECIES REQUIREMENTS WITH THE SOIL FROM EACH HOLE. THE PLANT HOLES SHALL BE BACKFILLED AND IRRIGATED TO SETTLE LOOSE SOIL BEFORE THE PLANTS ARE SET
- 21. CROWN: CONTAINER PLANTS SHALL BE PLACED SO THAT THE CROWN IS SET ABOVE EXISTING GRADE TO ENSURE POSITIVE DRAINAGE FROM THE CROWN TO THE WATERING BASIN AND ALLOW FOR SETTLING. SLOW-RELEASE 21-GRAM FERTILIZER TABLETS SHALL BE SET ADJACENT TO THE ROOT BALL APPROXIMATELY HALFWAY UP FROM THE BOTTOM OF THE ROOT BALL. THREE TABLESPOONS OF MYCOAPPLY MAXX SHALL BE SPRINKLED INTO THE PLANTING PIT AFTER ENOUGH BACKFILL HAS BEEN ADDED TO MAKE THE PIT READY TO ACCEPT THE PLANT. THE WATERING BASIN IS A RIM OF SOIL DESIGNED TO HOLD WATER NEAR THE PLANT. PLANTS THAT SETTLE BELOW THE BASIN BOTTOMS SHALL BE RAISED BACK TO REQUIRED LEVEL, WITH ADDITIONAL SOIL ADDED IF NECESSARY AT NO ADDITIONAL COST TO THE OWNER.
- 22. SCREENS: PLANT PROTECTION DEVICES FOR EXCLUSION OF SMALL ANIMALS SHALL BE INSTALLED AROUND THE WOODY PLANTS AFTER PLANTING. THEY SHALL BE CONSTRUCTED OF FINE MESH ALUMINUM SCREEN 24" TALL. EACH CAGE SHALL BE FORMED INTO A 12" TO 18" DIAMETER CYLINDER AND PLACED VERTICALLY AROUND THE PLANT. THEY SHALL BE SET A MINIMUM OF 2" BELOW GRADE AND STAKED WITH A PRESSURE TREATED REDWOOD 1"X1"X36" NURSERY STAKE OR APPROVED EQUAL.

#### PLANTING NOTES

- 23. CROSS-CHANNEL BERMS: NO WOODY PLANTS SHALL BE PLANTED ON TOP OF CROSS-CHANNEL BERMS.
- <u>WILLOW AND COTTONWOOD RIPARIAN PLANT SPACING:</u> TREE PLANTINGS SHALL BE PLANTED IN CLUMPS CONCENTRATED ADJACENT TO THE LOW FLOW CHANNEL. WILLOW CLUMPS SHALL BE PLACED AS TO MINIMIZE IMPACT TO DRAINAGE CORRIDOR STORM WATER FLOWS. LOCATIONS AND SPECIES COMPOSITION WITHIN EACH WILLOW CLUMP SHALL BE VERIFIED BY THE PROJECT RESTORATION ECOLOGIST PRIOR TO INSTALLATION.

#### SEEDING NOTES

- FIELD VERIFY: CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL PERTINENT SITE IMPROVEMENTS INSTALLED AS PART OF OTHER PLANS, IF ANY PART OF THIS PLAN CANNOT BE FOLLOWED DUE TO SITE CONDITIONS, CONTACT THE PROJECT RESTORATION ECOLOGIST FOR DIRECTION AS TO HOW TO PROCEED.
- SEED SPECIES AND QUANTITIES: CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL SEED SPECIES AND QUANTITIES IN POUNDS PER ACRE PER PLANTING ZONES.
- SUBSTITUTIONS: CONTRACTOR SHALL REPORT SUBSTITUTIONS TO SEED SPECIES AND QUANTITIES AND RECIEVE APPROVAL BY THE PROJECT RESTORATION ECOLOGIST SUBSTITUTIONS PRIOR TO INSTALLATION.
- LOCATION: EXACT LOCATIONS OF SEEDED PLANTING ZONES SHALL BE REVIEWED BY THE PROJECT RESTORATION ECOLOGIST IN THE FIELD PRIOR TO INSTALLATION. THE PROJECT RESTORATION ECOLOGIST RESERVES THE RIGHT TO ADJUST SEED ZONE LOCATIONS IN THE
- SEEDED AREAS: ALL DESIGNED WETLAND, UPLAND, AND DISTURBED AREAS SHALL BE SEEDED WITH SPECIFIED SEED MIX AT REQUIRED RATES. SEEDING WILL BE DONE WITH A RANGE DRILL SPECIFICALLY DESIGNED FOR LARGE AWNED NATIVE GRASS SEED AND SPECIALLY ADAPTED BY THE CONTRACTOR FOR ADDING MICORRHYZAL INOCULUM DIRECTLY INTO FURROWS ADJACENT TO THE SEED. AFTER DRILL SEEDING OCCURES NATIVE GRASS STRAW OR WEED-FREE RICE STRAW SHALL BE APPLIED AT A RATE OF 1.5 TONS PER ACRE OVER SEEDED AREA. ALL STRAWED AREAS SHALL BE CRIMPED IN PRIOR TO CONSTRUCTION
- TIMING: SEEDING WILL BE COMPLETED BETWEEN SEPTEMBER 1 AND OCTOBER 1 PRIOR TO ANY RAIN STORM EVENT.
- PREPARATION: THE ENTIRE AREA TO BE SEEDED SHALL BE REASONABLY SMOOTH AND CONFORM TO THE DESIRED GRADING PLAN BEFORE ACTUAL SEEDBED PREPARATION WILL OCCUR. COMPACTED SUBSOIL SHALL BE RIPPED, DISKED OR HARROWED. GRADING PATTERNS SHALL OCCUR HORIZONTALLY, ACROSS THE FACE OF A SLOPE. TOPSOIL RECLAIMED FROM THE SITE SHALL BE REPLACED AT LEAST 6" IN DEPTH OVER THE SUBGRADE. FINISHED SURFACE ELEVATIONS SHALL MEET THOSE SPECIFIED ON THE GRADING PLAN.
- STAKING: THE CONTRACTOR SHALL STAKE THE BOUNDARIES OF SEEDING ZONES, AND FOLLOWING APPROVAL BY THE PROJECT RESTORATION ECOLOGIST, MAY BEGIN SEEDING.

#### MAINTENANCE AND MONITORING

THREE YEAR MAINTENANCE & ESTABLISHMENT PERIOD

- 1. THE PLANT ESTABLISHMENT PERIOD SHALL BEGIN AT THE COMPLETION OF PLANT INSTALLATION AND ACCEPTANCE BY THE PROJECT RESTORATION ECOLOGIST AND OWNER'S REPRESENTATIVE AND EXTEND THEREAFTER FOR A PERIOD OF 3 YEARS.
- 2. THE HABITAT MAINTENANCE CONTRACTOR SHALL KEEP A LOG BOOK SPECIFIC TO THIS JOB. THE LOG BOOK SHALL BE KEPT CURRENT FOR ALL MAINTENANCE ACTIVITIES DONE, WITH DATE TYPE OF WORK, AND PERSON OVERSEEING THE OPERATIONS. THE BOOK SHALL BE AVAILABLE AT THE COMPANY'S OFFICE FOR INSPECTION AND EVALUATION IF REQUESTED AT ANY TIME BY THE OWNER OR AGENCY OVERSEEING THE MAINTENANCE CONTRACT PERFORMANCE.
- 3. THE FOLLOWING MAINTENANCE ACTIVITIES SHALL BE PERFORMED ON A REGULAR BASIS (WEEKLY OR MONTHLY, AS NECESSARY OR AS SPECIFICALLY STIPULATED BELOW).
- A. OPERATION AND MAINTENANCE OF THE DRIP IRRIGATION SYSTERM FOR CONTAINER PLANS. THE SYSTEM SHALL REMAIN IN GOOD WORKING ORDER FOR THE ENTIRE PLANT ESTABLISHMENT PERIOD.
- R WEED MANAGEMENT, INCLUDING PERIODIC MANAGEMENT OF COMPETING WEEDY VEGETATION UNTIL PLANTINGS ARE WELL ESTABLISHED, SHALL BE DONE TWICE-PER-YEAR, BETWEEN MID-MARCH TO THE END OF JUNE. WEED REMOVAL SHALL BE BY HAND, USING NO CHEMICALS, CONFINED TO A 3-FOOT DIAMETER AROUND INDIVIDUAL WOODY PLANTS, WITHIN THE PLANTING BASINS. MECHANICAL MEANS (WEED-EATER) MAY BE USED OUTSIDE THE 3-FOOT DIAMETER AREA AROUND EACH PLANT.
- C. FIRE PREVENTION-FIREBREAKS SHALL EITHER BE MOWED OR BY OTHER MEANS AS DIRECTED BY LOCAL AUTHORITIES, DURING SUMMER MONTHS TO CONTAIN OR MINIMIZE THE POSSIBILITY OF FIRE THREAT IN GRASSLAND AREAS.
- D. PROTECTIVE FENCING, SIGNAGE, CAGES, OR OTHER MEASURES SHALL BE INSTALLED AS NECESSARY TO PREVENT ACTIVITIES BY PEOPLE OR ANIMALS WHICH MAY TRESPASS OR

4. ADAPTIVE MAINTENANCE: ANALYSIS OF THE CAUSE OF FAILURES SHALL BE MADE, AND

- REMEDIAL ACTIONS SHALL BE RECOMMENDED TO CORRECT ANY PROBLEM IF A PERFORMANCE CRITERION OR FINAL SUCCESS RATE IS NOT MET, AS PART OF THE FULL RESPONSIBILITY FOR
- 5. THE CONTRACTOR SHALL HAND WATER PLANT SPECIES IN HABITAT ZONES THAT ARE NOT DRIP IRRIGATED AS NEEDED DURING THE DRY SEASON BASED ON A PLANT MONITORING STRATEGY AND PLANTING.
- 6. GENERAL CLEANUP SHALL INCLUDE MISCELLANEOUS LITTER OR DEBRIS THAT MAY COLLECT ON OR ABOUT THE SITE, WHICH SHALL BE REMOVED AND DISPOSED OF OFF-SITE. 7. PHOTO DOCUMENTATION AS PART OF EITHER THE MAINTENANCE OR MONITORING SHALL BE

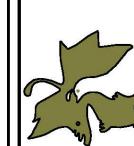
KEPT IN THE LOGBOOK WITH NOTATIONS AND DATES AS PART OF THE ONGOING RECORD OF

PROGRESS IN PLANT ESTABLISHMENT. 8. ANY SWPPS PREVENTATIVE BEST MANAGEMENT PRACTICES WHICH BECOME NECESSARY DURING THE OCTOBER TO APRIL SEASON SHALL BE CARRIED OUT BY THE CONTRACTOR AS NECESSARY TO ENSURE THAT THE PLANTING AREAS REMAIN RELATIVELY STABLE AND LESS

MAINTENANCE MONITORING AND REPORTING

PRONE TO WASHOUTS.

- . HABITAT MANAGEMENT CREWS SHALL KEEP DAILY MAINTENANCE LOGS WITH WRITTEN NOTATION RECORDS OF DATE, PERSONNEL, IRRIGATION SYSTEM OPERATION, PERFORMANCE, REPAIRS MODIFICATIONS, ETC. THESE LOGS SHALL ALSO INCLUDE DATED ENTRIES RECORDING ALL WEED CONTROL EFFORTS, GENERAL MAINTENANCE, REPLACEMENT, PROTECTIVE MEASURES, OR ANY OTHER ACTIVITY AFFECTING THE APPEARANCE OR PERFORMANCE OF THE PROJECT SITE.
- 6. A SUMMARY OF THESE LOGS SHALL BE INCLUDED AND SUPPLIED WHEN REQUESTED, AS PART OF THE ANNUAL MONITORING REPORT.
- 7. CONTRACTOR SHALL EVALUATE THE HEALTH AND VIGOR OF ALL CONTAINER PLANTS INSTALLED IN SEPTEMBER OF EACH MONITORING YEAR. ALL UNHEALTHY AND DEAD CONTAINER PLANTS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE PRIOR TO DECEMBER 31ST. THE RESULTS OF CONTAINER PLANT HEALTH AND VIGOR MONITORING AND PLANT REPLACEMENT ACTIVITIES SHALL BE INCLUDED IN THE ANNUAL MONITORING REPORTS.
- 8. ANNUAL MONITORING REPORTS WILL BE SENT TO THE OWNER AND PROJECT ECOLOGIST AND BY DECEMBER 31 OF EACH YEAR OF THE ESTABLISHING PERIOD.
- 9. THE MONITORING REPORT SHALL INCLUDE PHOTOS FROM PRE-ESTABLISHED PERMANENT PHOTO STATIONS, A DESCRIPTION OF ADAPTIVE MANAGEMENT ACTIVITIES CONDUCTED DURING THE YEAR, AND A WRITTEN NARRATIVE OF THE CONDITION OF TARGET VEGETATION ALONG WITH SUGGESTIONS FOR UPCOMING MAINTENANCE.

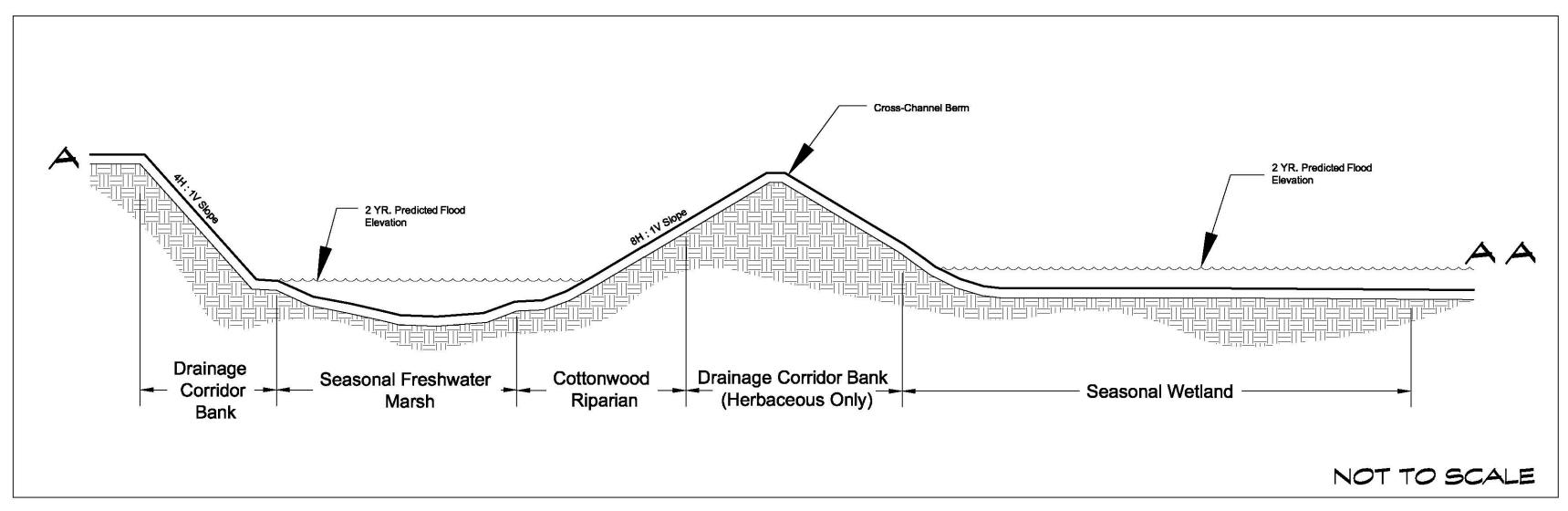


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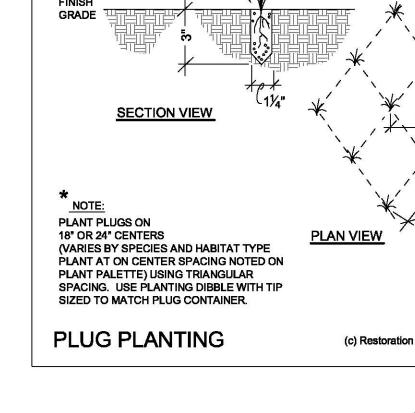
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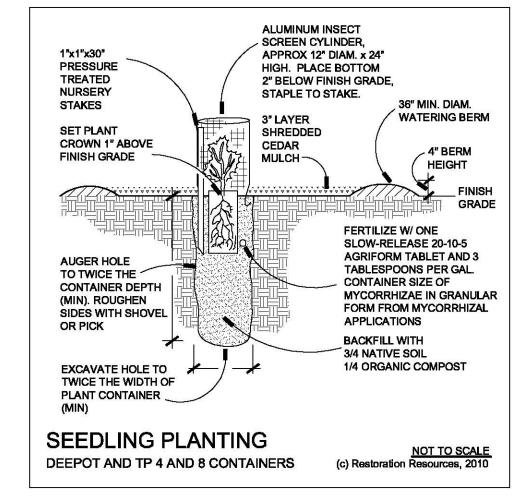
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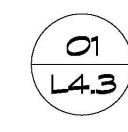
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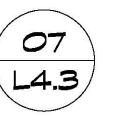


## SECTION A - CORRIDOR D

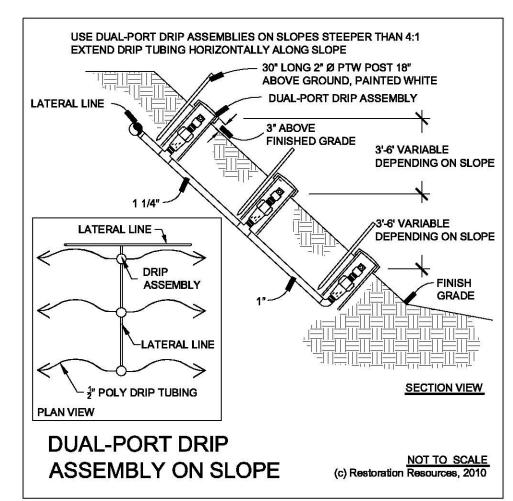


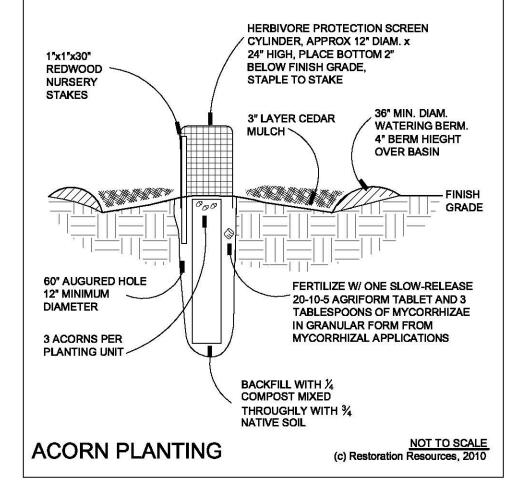


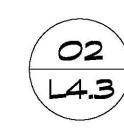


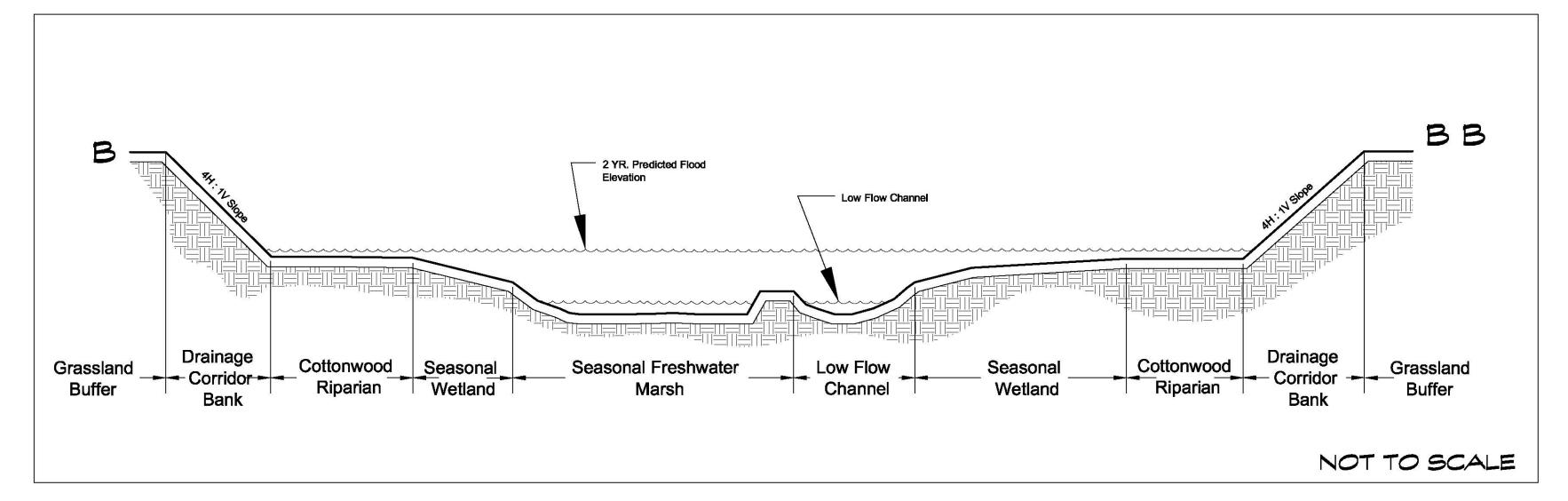








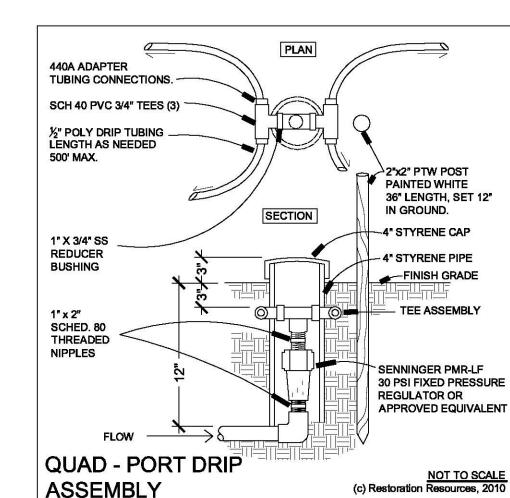


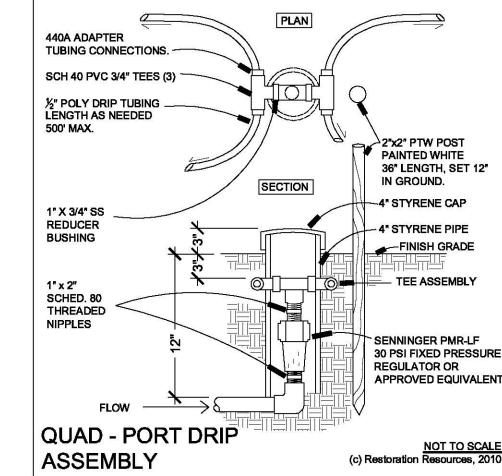


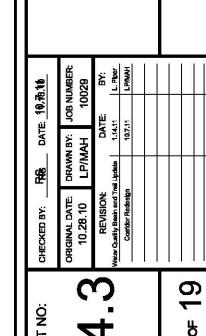
## SECTION B - CORRIDOR D











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WEEKLY IRRIGATION FREQUENCY WILL FLUCTUATE ON SPECIFIC DATES WITHIN THE IRRIGATION SEASON. WEEKLY IRRIGATION RATES WILL BEGIN WITH ONE APPLICATION PER WEEK STARTING APRIL 15TH AND THROUGH MAY 15TH. WATERING RATES WILL INCREASE TO THREE APPLICATIONS PER WEEK MAY 16TH THROUGH SEPTEMBER 31. APPLICATIONS WILL THEN DECREASE BACK DOWN TO ONE APPLICATION PER WEEK OCTOBER 1 THROUGH OCTOBER 15TH TO CONCLUDE THE IRRIGATION SEASON.

### CORRIDOR

HABITAT TYPE:	IRRIGATION TYPE	EMITTERS PER TREE	GPH PER TREE EMITTER	EMITTERS PER SHRUB & VINE	GPH PER SHRUB & VINE EMITTER	HOURS PER DAY	APPLICATIONS PER WEEK 4/15 - 5/15	APPLICATIONS PER WEEK 5/16 - 9/30	APPLICATIONS PER WEEK 10/1 - 10/15
COTTONWOOD RIPARIAN	DRIP	3	2	2	1	2	1	3	1
DRAINAGE CORRIDOR BANK	DRIP	2	2	2	1	2	1	3	1
WILLOW RIPARIAN	HAND WATE	R _	-			AS NEEDED	AS NEEDED	AS NEEDED	AS NEEDED

#### CORRIDOR B & C NOTE

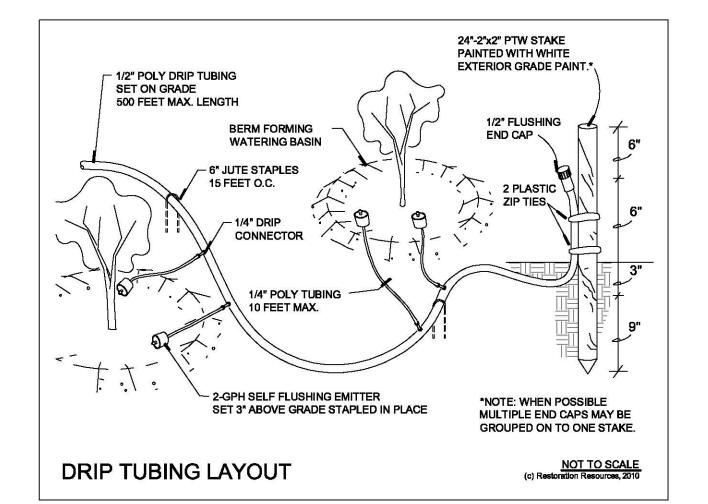
IRRIGATION FREQUENCY NOTES:

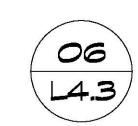
THE LOW-FLOW CHANNEL WET EDGE, RIPARIAN GRASSLAND, SEASONAL FRESHWATER MARSH, SEASONAL WETLAND, AND UPLAND GRASSLAND BUFFER HABITATS SHALL BE PLANTED WITH HERBACEOUS SEEDS AND PLUGS AND SHALL NOT RECEIVE SUPPLEMENTAL WATER DURING THE DRY SEASON.

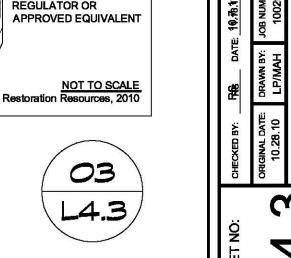
### CORRIDOR

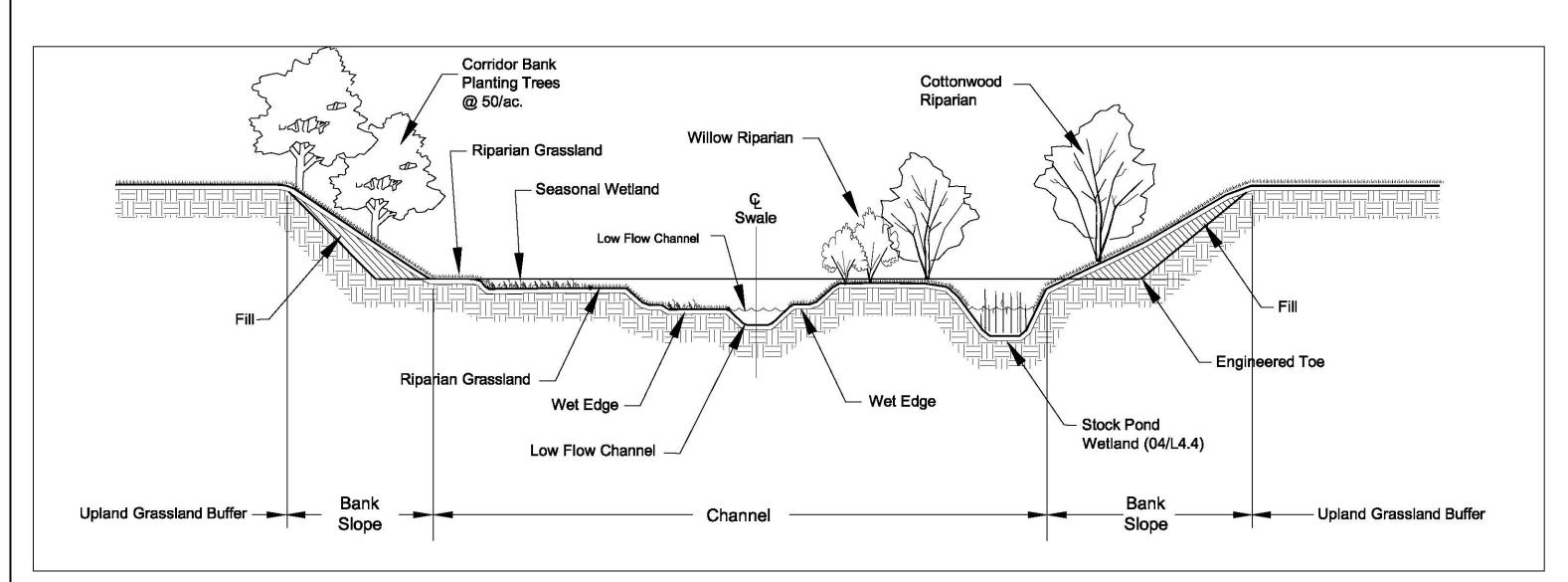
HABITAT TYPE:	IRRIGATION TYPE	EMITTERS PER TREE	GPH PER TREE EMITTER	EMITTERS PER SHRUB & VINE	GPH PER SHRUB & VINE EMITTER	HOURS PER DAY	APPLICATIONS PER WEEK 4/15 - 5/15	APPLICATIONS PER WEEK 5/16 - 9/30	APPLICATIONS PER WEEK 10/1 - 10/15
COTTONWOOD RIPARIAN	DRP	3	2	2	1	2	1	3	1
DRAINAGE CORRIDOR BANK	DRP	2	2	2	ī	2	1	3	1
OAK RIPARIAN	DRP	2	2	2	1	2	1	3	1
CORRIDOR D NOTE									

THE SEASONAL FRESHWATER MARSH, SEASONAL WETLAND, AND UPLAND GRASSLAND BUFFER HABITATS SHALL BE PLANTED WITH HERBACEOUS SEEDS AND PLUGS AND SHALL NOT RECEIVE SUPPLEMENTAL WATER DURING THE DRY SEASON.



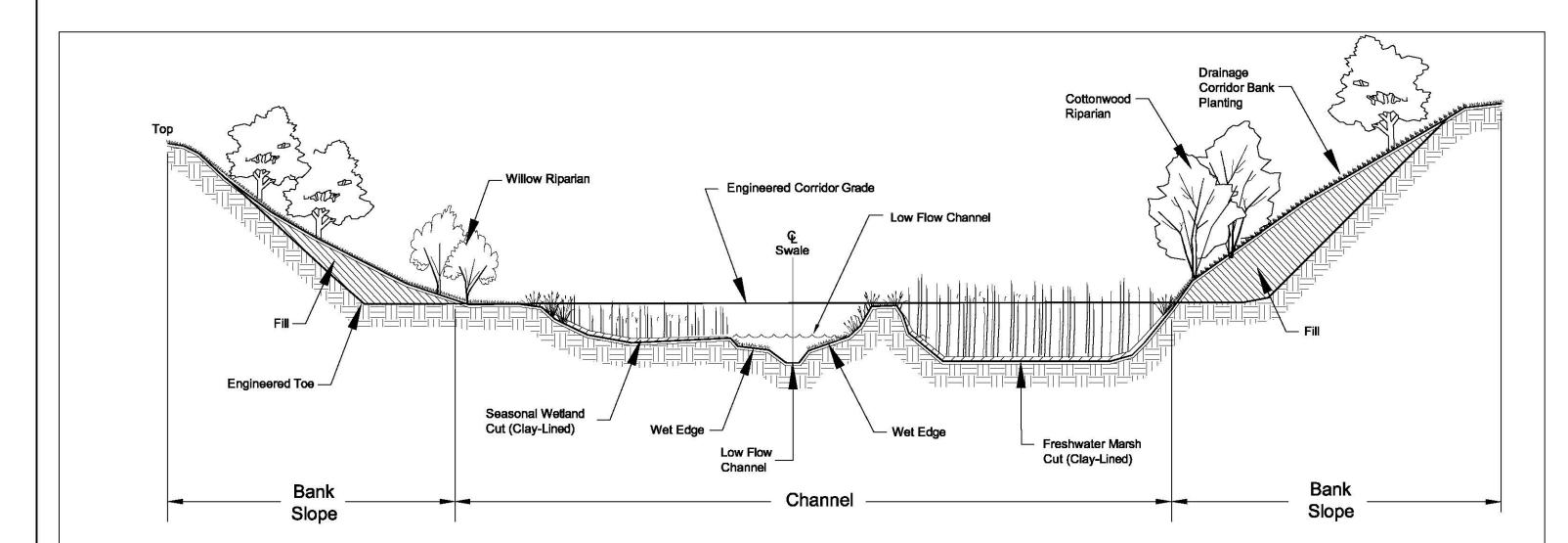






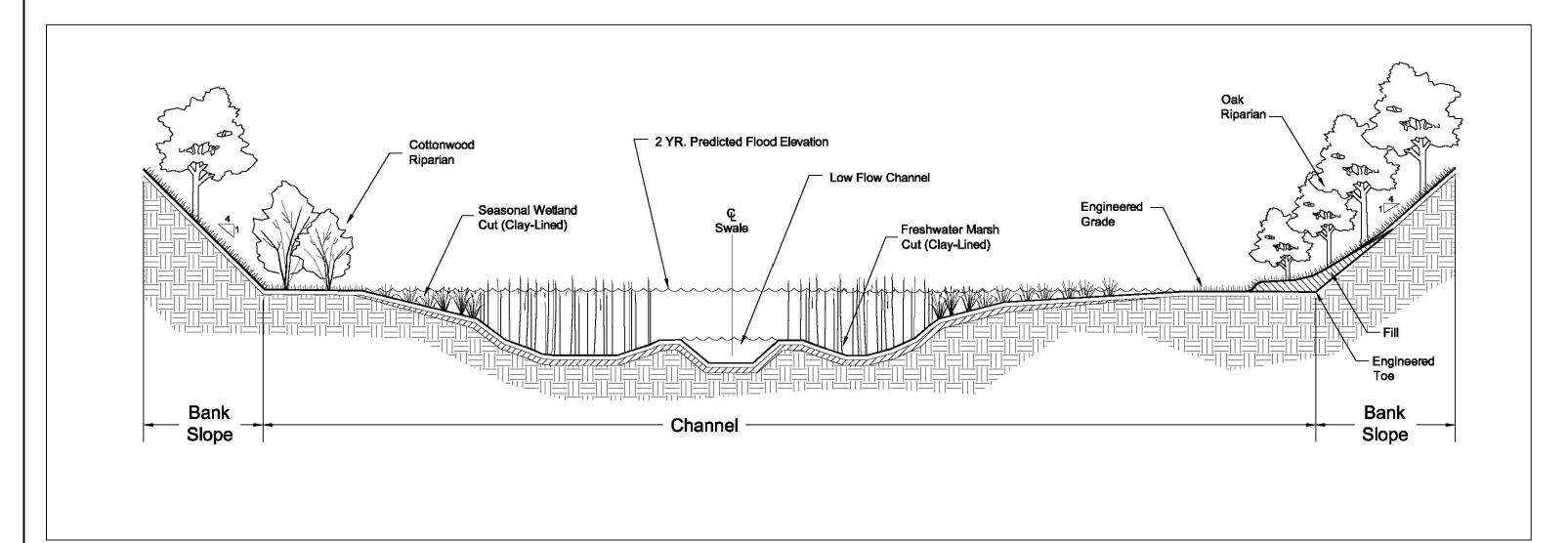
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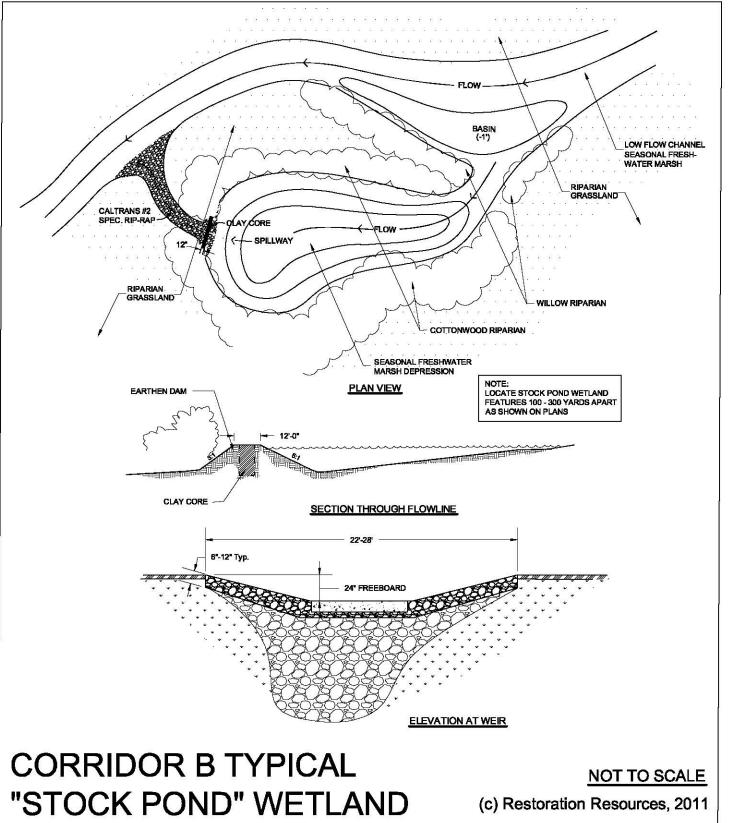
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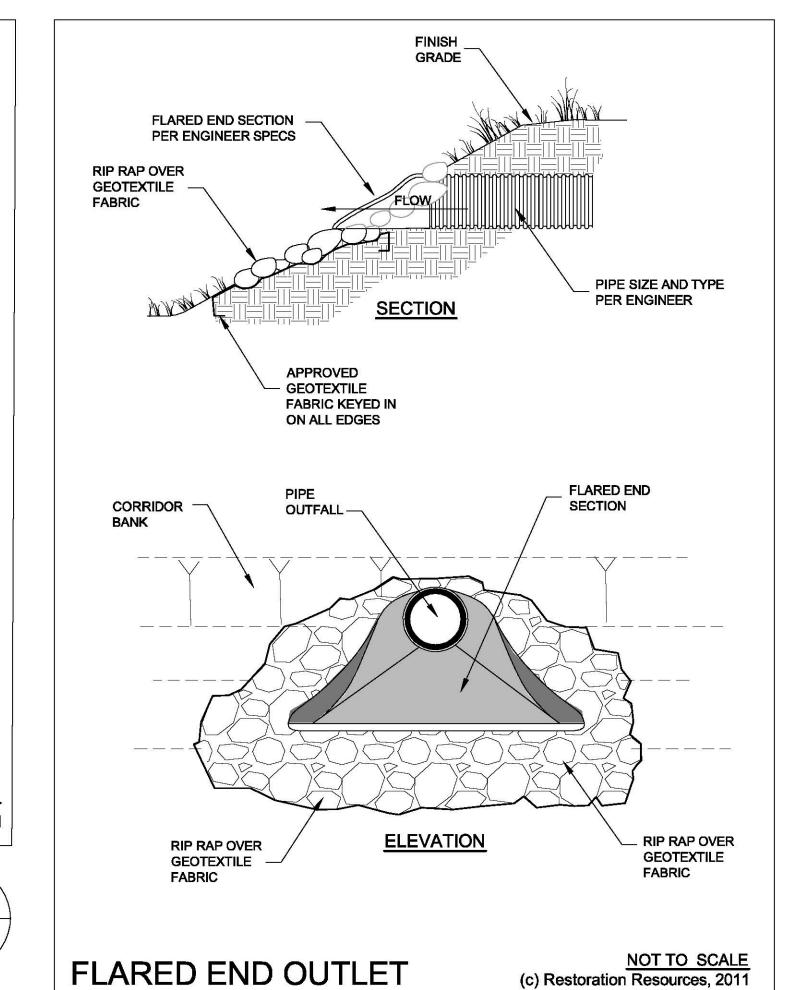




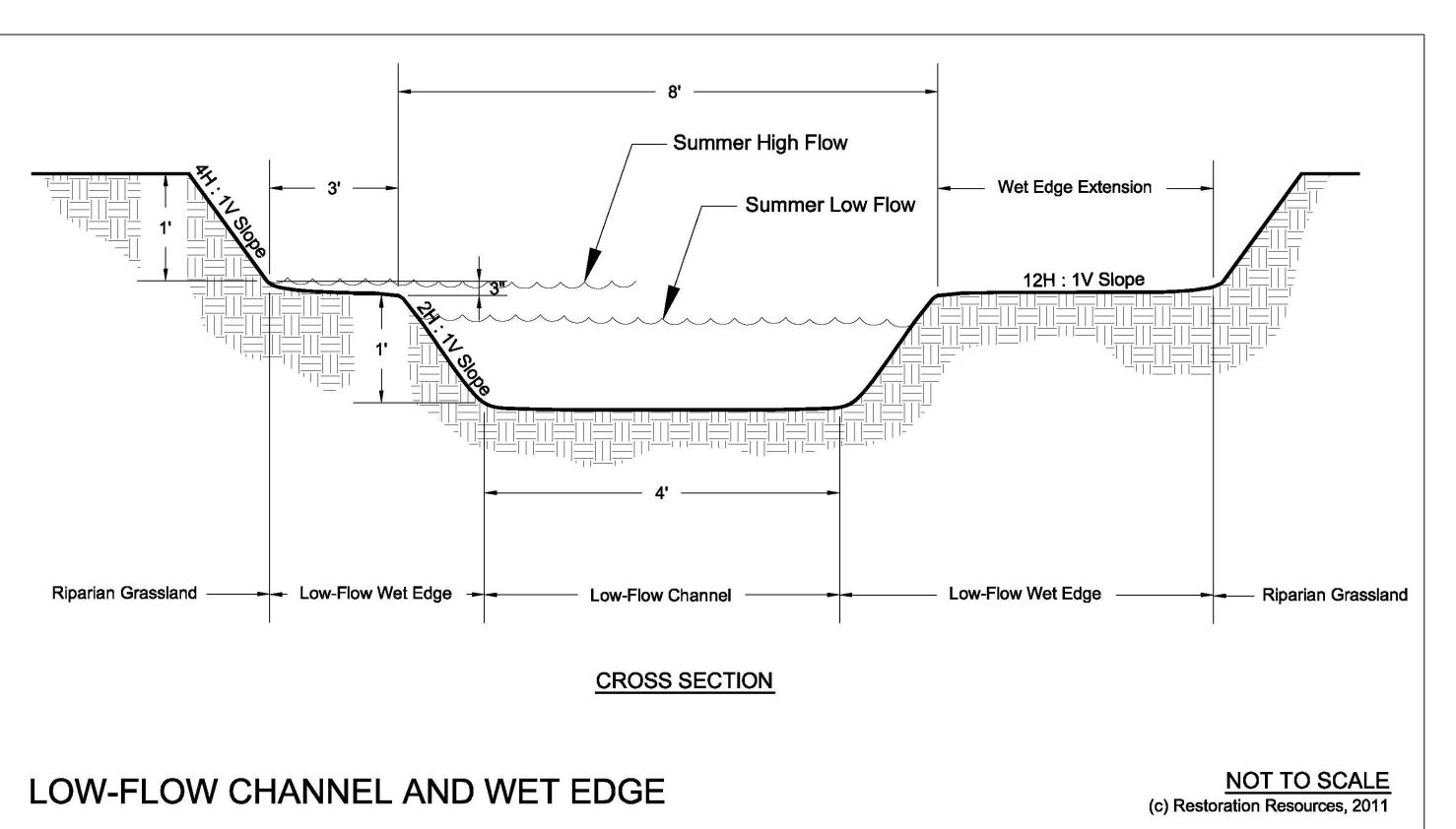
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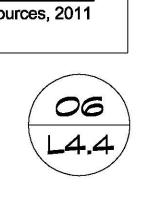












SHEET NO: CHECKED BY: R& DATE: 10,78,10

ORIGINAL DATE: 10,08 NUMBER: 10,029

ORIGINAL DATE: DRAWN BY: 10,029

TO 28.10

LP/MAH 10029

REVISION: DATE: BY: Confor Redesign 107.11 LPMAH

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